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THE  
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OF  
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Editors and Proprietors,

W. G. BEERS,  
C. S. CHITTENDEN,  
R. TROTTER,

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ORIGINAL COMMUNICATIONS.

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NITROUS OXIDE, OR PROTOXIDE OF NITROGEN, AS AN  
ANÆSTHETIC.

BY B. W. DAY, M. D., L. D. S., KINGSTON, ONT., *President of the  
Dental Association of Ontario.*

This gas has been extensively used in all the principal cities of the United States and in the Dominion of Canada, with great success, for the last five years. As an anæsthetic for the extraction of teeth, it is certainly far preferable to any in use for that purpose. The fact of this gas, nitrous oxide, being purely a stimulant, acts upon certain parts of the body, particularly the blood, brain and nervous system. Its action resembles pure atmospheric air, which places it far beyond any stimulant in use at the present day. The principal advantage it has over other stimulants, as well as over all anæsthetics, for minor operations, is, that there is no depression or nauseous effects, which are usual after the administration of chloroform and æther. Nitrous oxide, as an anæsthetic, is single in its action, which elevates and supports the nervous system; while with all other anæsthetics, such as chloroform and æther, their action on the system is due to the sedative effect they produce.

The constituents of this gas, as an anæsthetic, is sufficient to recommend it; and I am of opinion, that the day is not far distant, when nitrous oxide, or protoxide of nitrogen, will be placed in our materia medica as a remedial agent for the cure of diseases, as well as an anæsthetic.

## QUALIFICATIONS REQUIRED OF A DENTAL STUDENT.

BY C. S. CHITTENDEN, DENTIST, HAMILTON, O.

An English writer once said, that in England, when a man finds himself fit for nothing else, he turns wine-merchant. In this country when a man finds himself in a similar condition, it is quite common, for him to "turn dentist;" and the consequence is, that dentistry—or perhaps it would be better to say, the dentist, is not held in such esteem by the public as both he and it ought to be. So many men, who were entirely unfitted for it, by early training and education, have rushed into the practice of dentistry, that the people do not feel that confidence in ours that they do in the medical and other professions; and now that the dentists of Ontario have, by means of their Association, and by Act of Parliament, placed themselves on a new and more substantial basis, it seems a fit and proper time to throw out a few hints as to the qualifications which a man ought to possess who *proposes* to study dentistry.

As by the terms of the "Act," a Board has been appointed "to fix a curriculum of studies to be pursued by students," nothing need be said with regard to that till after the Board shall have acted in the matter; and I will proceed at once to jot down some of the qualifications which it is *essentially necessary* that a man should possess *before he commences his dental studies*. In the first place, he should be a man possessed of a strong and healthy frame and a good constitution; for, although many delicate men have attained to the highest pinnacles of the different professions, men of health and strength succeed best as a rule.

He should possess a fair amount of intellectual capability, as well as untiring industry and perseverance. He should be the most cleanly of clean men. His person, his clothes, his hands, his mouth, and, in fact, everything about him, should be kept in the neatest and cleanest possible condition.

Shakespeare says :

"The man who hath no cleanness in himself,  
Nor is not moved toward washing with clean water,  
Is fit for gutters, stilt-slop puns, and fleas;  
Let no such man be trusted."

He should also be the most patient of men, or the thousand and one whimsies of those who are to come under his hands will sometimes cause him to lose his temper, the least exhibition of which may cost him, if not the loss of a patron, what he prizes as highly, his good opinion.

He should be a strictly honest man. The old adage, "that honesty is the best policy," is as truly and pointedly applicable to this as to any other calling. Indeed, it may almost be said, that it applies with more force to the practice of dentistry than to all others, for, unless a man's principles are so firmly fixed that nothing can induce him to swerve in the slightest degree from the strictest integrity, he will be too strongly tempted, to always act with perfect honesty in the constantly recurring opportunities for dishonourable practices which every dentist meets with.

He should never make use of deception in the slightest matter, but let every transaction be characterized with perfect truthfulness.

Dentists have'nt always been the most truthful of men.

*Il ment comme un arracheur de dents* is said to be a common expression among the French, when speaking of an untruthful person.

Let us hope that but few years may pass before that blot upon our profession will be wiped away. Hitherto, in this province, there has been no bar to the entrance into our profession of any one who saw fit to do so. The most unlearned and the classical scholar stand side by side.

In the eyes of the community, dentistry has been a catch-penny sort of business, and a certain amount of ingenuity, and the "being rather handy with tools," were about all the acquirements which the public considered it necessary for a man to possess in order to become a dentist. Such would, undoubtedly, be sufficient if dentistry is to be considered merely as a trade; but if it is to be a profession, and to take rank, at some not far distant day, with the *learned* professions, it would seem that a higher grade of literary and scientific education is requisite for those who propose to become students. At the present day, no one will for a moment deny the statement, that the man whose mind has been thoroughly trained in the attainment of a literary, scientific and classical education, is infinitely better prepared to grapple with the "hidden mysteries" of professional lore, than he who has not gone through such a course. The mind of an illiterate man is not capable of seizing the facts and principles of science and arranging them in the best manner for future use. His intellectual faculties require as long and patient drilling, to fully develop their capabilities, as the fingers of the skillful pianist do, to enable him to bring out the finest musical effects. In the study of dentistry, the student will meet with great numbers of technical words and phrases, derived from the Latin and Greek languages, which convey distinct meanings to the mind of the scholar, lighting up his path before him, while the uneducated man is

compelled to grope his way in comparative darkness. It is to be hoped that the Board of Examiners of Ontario, when fixing a curriculum of studies to be pursued by students, will also fix some standard of literary and scientific attainment for those who wish to become pupils. It may not be well to fix the standard at a very elevated point at first. It is possible that a change from no *acquirements at all*, to *very high educational acquirements*, would be a change too radical, and defeat itself.

The bill gives the Board the power "to fix a curriculum from time to time;" so that, if a moderately low standard be adopted at first, it can be raised at a future time. But, pray, gentlemen of the Board, do, at the least, make a good and thorough knowledge of the English language incumbent upon all who may wish to enter our ranks for the future. Unless some standard be fixed and rigidly adhered to by the Board, our profession will gain but half what it ought from the recent enactment. The bill is not all that we could wish, and it will probably be necessary to ask to have it amended at some future session of the Legislature. Still, if the Board and the dentists throughout the country act up to and carry out the real spirit of the bill, as it now stands, it will be but a few years before dentistry will take its proper place, side by side with the other professions.

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## REMARKS ON PATHOLOGY OF THE GUMS.

BY HARRISON ROSS, D.D.S., QUEBEC, P.Q.

Although, strictly speaking, the dentist is limited in his treatment of inflammation or other pathological conditions of the gums, to the removal of causes which act mechanically as irritants and to topical applications, such as the various astringent, sedative and cauterizing agents, &c., &c., I think it highly important that we should all understand thoroughly, the various diseases peculiar to the gums; as a great deal of trouble and suffering may be saved by timely attention.

Should the case require surgical or medical treatment, the properly educated dentist will readily form a correct diagnosis, and refer the individual to his medical adviser, for proper treatment.

By possessing the requisite ability to discern cases of this kind, and placing them in the proper hands, the dental surgeon will benefit his own reputation and that of his profession.

There is a species of inflammation of the gums which, in some individuals, is so persistent, that it may with propriety be termed chronic inflammation.

I have come across a few of these cases; the entire gum, but more particularly the inferior, becomes implicated in this variety of inflammation.

Among other symptoms of chronic inflammation, we find presented a thickened, soft, and very vascular appearance, with a tendency to grow over the teeth, and where there are broken down roots in the mouth, the gum is apt to envelope them entirely.

Dyspeptics, and persons suffering from gastric, intestinal, and hepatic inactivity, are, I think, more than others subject to this kind of sore gum. In many of these cases, the soreness of the mouth and gum being nearly sympathetic, the treatment indicated is first to get rid of the exciting cause by proper medication; after which, there will generally be but little difficulty in restoring the mouth to a healthy state.

A short time since, I had an opportunity of examining the mouth of a young lady who was at the time suffering from a peculiar form of *relitis*; the gums of this patient presented a very singular appearance, being considerably tumefied, the free edges moveable, so that an instrument could be passed a long way down between the gum and roots of all the teeth. There was so large a secretion of *epithelium* as to form a white coat over the entire body of the gums. This was thickest on the least elevated parts; easily rubbed off, and when removed, showed the *papilla* very much more prominent than is usual. On pressure being applied to the edges of the gums, there was a slight discharge of foetid, purulent matter. The most curious feature of this case, however, is, that the condition that I have described lasts but a few days at a time. It occurs about two or three times in the course of a year: and has continued to do so for about three years.

During the attacks, the pain and soreness which accompany the other symptoms, render the mastication of solid food a very difficult matter.—Several physicians and dentists have examined this mouth, and attempted to effect a cure, but without success.

This young lady enjoys excellent health, her teeth are tolerably good, and free from deposits of tartar or other irritating causes.

It is my intention to watch this curious case, and I shall endeavour by proper treatment to check its progress, when next the uneasiness about the teeth and gums, which precede its appearance, indicates that *relitis* is again about to set in. Should I be fortunate enough to effect a cure of this peculiar case, I shall have much pleasure in communicating the treatment employed, through the pages of the *Canada Journal of Dental Science*.

## DISEASES OF THE MAXILLARY SINUS.

BY J. O'DONNELL, L.D.S., PETERBORO, O.

*Read before the Dental Association of Ontario, Toronto, January, 1868.*

The subject I have chosen to bring under your notice, viz., Diseases of the "*Antrum Highmoreianum*," or "Maxillary Sinus," is one that, to a very limited extent, engages the attention of our profession in this country. It is a branch so closely allied to dentistry proper, that every person wishing to practice our specialty successfully, should be fully acquainted with.

It was not until the knowledge of anatomy had made considerable progress, that the existence of this cavity was discovered. An anatomist of *Padua*, named Casserius, who flourished during the latter part of the sixteenth and early part of the seventeenth centuries, was said to be the first who discovered it, but no correct description of it was given, it appears, until about the middle of the seventeenth century. The credit of which belongs to NATHANIEL HIGHMORE, who published a treatise on anatomy in 1651—hence its name.

The Maxillary Sinus or Antrum of Highmore, is a cavity in the body of the superior maxillary bone, under the orbit; it is somewhat triangular in shape, with its four angles looking towards the malar bone, the spheno maxillary fissures, the *infra orbital foramen*, and below towards the fangs of the *dens sapientie*. It has one and sometimes more openings, which communicate with the cavity of the nose between the middle turbinated bone. The cavity is supplied with nerves from the olfactory first pair, and from the superior maxillary branch of the fifth pair, the posterior dental supplies the molars and mucus membrane of the Antrum, while the *Infra Orbital* supplies the incisors, cuspidate and bicuspid, also, the mucus membrane of the Antrum. Its arteries are derived from the first division of the fifth pair or internal maxillary branch of the external carotid branch, as follows:—the cavity is supplied from below by small branches of the *superior dental* artery, and from above by branches of the *infra orbital* and other small vessels.

In all cases of disease of the *antra* those fibres and blood-vessels are ruthlessly attacked. Its action on the infra-orbital and posterior dental nerves, conveys the intelligence to the whole system that the symptoms of an alarming disease in this peculiar place is now felt. Deeply interested in the convalescence of this cavity, also, are the muscles in its neighbourhood, viz., *compressor nasi* and *levator labii superioris alacque*

*nasi*. These muscles, situated as they are and performing an indispensable duty, must necessarily feel the slightest attack upon the place in such close proximity. The walls of the cavity are so slight and extremely thin, that any attack on its lining membrane will cause them to distend. A tumour increasing in size, has been known to displace the orbit of the eye.

The floor of the *antra* is frequently of a rough and uneven appearance: this is caused by the fangs of the teeth in the region of the cavity, being of such length that they encroach on its space, merely forcing up the thin wall without directly communicating with the body. In a great many other cases the teeth penetrate the cavity. The walls vary in thickness from tissue paper to half an inch. In the young they are very thin and soft. As we advance in age, the work of ossification goes on within the cavity, without any perceptible change on the outside, until sometimes the walls are half an inch thick.

This cavity is subject to some of the most formidable and dangerous diseases that the medical man or surgeon is called on to treat, and perhaps there is no part of the human system that has been paid as little attention, and has been looked on with as cool indifference. "Diseases are sometimes met with here, over which the most eminent and erudite have not been able to exercise any control, and whose progress is only arrested with the life of the unfortunate sufferer."

All of the diseases of the maxillary sinus are not, however, of so dangerous a nature, and may be easily overcome by proper, timely and judicious treatment. Numerous operations have been performed for arriving at the seat of disease, all of which, I believe, have now dwindled down to the one simple but effectual operation of perforation of the floor. I have practiced this mode, entirely from the fact that, by reference to a good many authors, they nearly all advise it, and I have found the operation more simple and effectual. I might here state that a proper diagnosis of the case should be made before even attempting to operate; because the performance of a hasty operation, in the desire to make a brilliant display, may be as productive of mischief as delay, in a case of the most urgent necessity. "And again, before adopting the example of an operator, or applauding or condemning his notions, we should enquire and examine his reasons for any given mode of operation, notice whether he disregards sound principles based upon reflection and experience; under the influence of preconceived ideas, notice your particular case, and reflect which would be the most judicious mode under the circumstances, in fact, be sure you are right, then go ahead." In the early anatomical history of this cavity, we find the following some of the modes

of operation. DRAKE advises the extraction of one or more teeth, for the escape of collections. MEIBOMIUS, the younger, claims for his father the discovery of this method. COWPER, in addition to DRAKE, suggests the necessity of perforating the floor of the socket—a point upon which DRAKE is silent. JUNKER adopted the operations of DRAKE and COWPER. LAMORIER proposes for the evacuation of the sinus and the preservation of the teeth, to trepan the external wall of the cavity above the third molar. The accumulation of pus, when the nasal opening is closed, causes the walls to distend. In such cases, M. RUNGE suggests the perforation of the distended wall, and employs a bistuary (or scalpel), turning it several times on its axis, to make the opening sufficiently large to admit the finger. DESAULT used two perforators, one sharp and triangular, the other blunt, for the conclusion of the operation, to avoid wounding the opposite wall of the antrum. He selected for the site of the operation the "*canine fossa*." ARMHOLD also recommends the same place. ACREL also, in addition to perforating the floor, as recommended by COWPER, inserted a canula through a fistulous opening formed in the nose. JOURDAIN, an eminent French dentist, instead of evacuating the sinus in any of the ways above mentioned, advised to probe the cavity through the natural opening, and by suitable treatment restore it to health. This, however, has been wholly abandoned, on account of the difficulty of reaching the *antra*, by the peculiar structure of the parts. HUNTER, BELL, and other operators, either adopt one of the ways, viz., perforation of the floor after removing the proper tooth, or trepanning the *canine fossa*. HARRIS says, "when the natural opening is closed, the first thing to be done is to evacuate the cavity, and the most proper way to do this, is through the alveolar cavity of the second molar." Having said this much with respect to the anatomy of this cavity, I will now proceed to give some of the symptoms of disease, in a few observations respecting a few cases that I have treated, the mode of treatment, &c.

It is stated by writers on anatomy, that diseases of this nature are often transmitted from parent to child; that it is a form of disease incident to a scrofulous nature; that a child may, as in consumption, not be troubled with it in his generation, but that his offspring will suffer the penalty. The cases that I have seen were not of this kind, nor did they inherit them. In every one, I have been able to trace them to some constitutional vice on their part. Exposure, tampering and filling the system with powerful drugs, loose habits, violence, &c.

*To be continued.*

## " CONTRIBUTIONS. "

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

The appearance of a journal for the first time in any country, the pages of which are designed for the discussion and record of facts relating to the duties of a profession devoted to the relief of physical suffering, and restoration of parts destroyed by disease, denotes a progression in the history of the country, as also in that of the profession whose interests it is thus sought to advance. Such progress all earnest men hail with delight; and in proportion as the value thereof is realized, so will assistance be afforded right heartily and promptly by those who have the ability, and who really desire the advancement of their race. Looking back upon the short history of dental journalism, (and here let it be noticed that literature, like science, acknowledges none of the boundaries of hemisphere or country), it is easy to trace a gradual but certain emergence from the darkness of jealousy and secrecy towards the clear light of generosity, and free communication of thought and of fact concerning the details which go to make the sum of our duties, as guardians of the masticating powers of our fellow-men. During the past five years more particularly, there may be observed a growing tendency towards the recognition of a principle, thus broadly stated by the wisest of men. "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

This process of development furnishes good ground of hope for the success of a new journal, and at the same time removes all excuse from those who possess the small amount of talent necessary for committing to paper a concise statement of their individual practice in certain interesting cases: expressing their individual views upon new methods of treatment, which from time to time are suggested; and also (as may frequently happen) of making known to their brethren ideas which may occur to their own minds, whether of major or minor importance.

The majority, probably, are unable from various causes to give dissertations on matters of a purely scientific nature, and it may be, but seldom able to suggest anything absolutely new, but there are few amongst us who could not now and then sit down and simply narrate their experience, in reference to some particular, in operating or mechanical work; and these plain records of personal experience are invaluable as corroborative testimony in behalf of what has been introduced, while they furnish to the young practitioner a warranty for his guidance, which he can obtain in no other way. Short, plainly, but clearly worded communica-

tions, upon matters of every day occurrence in the office or the workshop, not occasionally but frequently made, these are wanted in all our journals, but more particularly to establish the reputation, and secure the circulation of one which, like many a practitioner, is a probationer for public approval.

The *Canada Journal of Dental Science* will form the only medium of communion between numbers of our professional brethren; and we have all felt, over and again, when trying for the first time anything new: "I wonder what Dr. A. or Dr. B. thinks of this." "Do they find it work so?" and the like. Let all, therefore, (and especially those who feel the need of this communion) resolve to avail themselves of the opportunities afforded in this journal, and set the example by determining to furnish their quota of facts and opinions. Thus it will become, what every well-wisher to the profession would desire to see it, a valuable addition to dental literature.

10 Oxford Street, Liverpool, England.

April 1st, 1868.

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## THE BEST METHOD OF TREATMENT OF THE DECIDUOUS AND POORLY CALCIFIED PERMANENT TEETH.

BY W. H. ATKINSON, M.D., D.D.S., NEW YORK.

*Read before the Brooklyn Dental Association, April 1, 1868.*

A full discussion of the subject set apart for our consideration this evening, clearly involves the whole range of that which is technically called "Operative Dentistry!" But that we may have a few points of beginning to discuss, and to open the subject, let us make a few aphoristic statements bearing upon the duties involved and the principles underlying them, and indicating the correct course to pursue when such cases present for our consideration and treatment.

1st. Make careful and thorough examination of the case, and then proceed to completely remove *all foreign substances* from between and about the teeth. This general direction holds good in the cases of deciduous or permanent teeth.

2nd. Should there be ununited figures in the teeth or cavities of decay, proceed to excavate and fill them.

3rd. Should the enamel be badly eroded and the dentine tender, so that the patient has difficulty in mastication, proceed, as before, to clean

the teeth as thoroughly as possible and then dress such places as it is possible to insert it, the cavities with pure creosote on cotton (common fibre or made into a jelly by mixing collodian creosote) covering with pledgets of cotton saturated with sandarac varnish. This should be done in and between the teeth so as to cover the external tender dentine; and then order the free use of lime water as a wash during the day—4 to 8 times, stuffing the pouches of the buccal cavity with pure precipitated chalk at night. Repeat this daily until some of the teeth can be partially excavated; at which time, fully saturate these with creosote, and fill with stiff oxychloride of zinc until gold can be inserted, which usually occurs in from 30 to 120 days.

Great care, close watching and the most scrupulous faithfulness is demanded of both operator and patient, which secured, will be crowned with the most marvellous and happy results!

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## PROCEEDINGS OF DENTAL SOCIETIES.

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### PROCEEDINGS OF THE DENTAL ASSOCIATION OF ONTARIO.

By J. B. MEACHAM, L.D.S., *Assist. Record. Sec. Brantford, O.*

ST. LAWRENCE HALL, TORONTO, Jan. 21st, 1868.

PRESENT.—B. W. Day, M.D., President; J. Stuart Scott, M.D., Recording Secretary; J. O'Donnell, Corresponding Secretary; W. C. Adams, Toronto, J. Bowes, Ingersoll; D. A. Bogart, Hamilton; C. S. Chittenden, Hamilton; S. B. Chandler, New Castle; W. H. Caid, Whitby; F. G. Callender, Cobourg; T. J. Jones, Bowmanville; Chas. Kahn, Stratford; A. D. Lalonde, Brockville; L. Lemon, St. Catherines; D. Pentland, Peterboro; Robt. Reid, Galt; M. E. Snider, Toronto; R. Trotter, Brampton; H. T. Wood, Picton. *Incipient Members.*—T. Nerlands, Port Hope; L. Van Camp, Berlin. *Visitors.*—B. T. Whitney, M.D., Buffalo, N.Y.; A. M. Roseburgh, M.D., as Delegate from the Medical Alumni Association of Victoria University. Dr. Dewar, member of the Medical Council of Ontario; Dr. G. W. Boulter, M.P.P.; *Honorary Member.*—Prof. C. V. Berryman, M.A., M.D., member of

the Medical Council of Ontario, and others, including a large number of applicants for membership.

J. S. Scott, M.D., moved, seconded by C. S. Chittenden, that the minutes as printed and distributed to members be adopted. Carried.

C. S. Chittenden moved, seconded by J. O'Donnell, that B. T. Whitney, of Buffalo, N.Y., be elected an Honorary Member of this Association. Carried.

J. O'Donnell, Corresponding Secretary, read letters from M. M. Johnston, B.A., New York, and from the Managers of several railways.

The President read his annual address. Referred to Committee to consist of H. T. Wood, F. G. Callender, and J. Stuart Scott, M.D.

J. O'Donnell moved, seconded by R. Trotter, that Act 8 of constitution be suspended, and that Dentists present be allowed to hand in their Credentials. Carried.

J. O'Donnell moved, seconded by J. Bowes, that the following members be a Committee to take into consideration the Bill already printed and report to-morrow at 3 o'clock, the President, the Secretaries, Messrs. Chittenden, Wood, Trotter, Reid, Callender and Adams. Carried.

On motion of C. S. Chittenden, seconded by J. B. Meacham, the Bill was then read without discussion.

Adjourned to meet at 2 p.m., to-morrow.

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## SECOND DAY.

ST. LAWRENCE HALL, TORONTO, Jan. 22nd, 1868.

PRESENT.—B. W. Day, M.D., President in the chair; J. Stuart Scott, M.D., and J. B. Meacham, Secretaries, and a full attendance of members and applicants for membership.

J. O'Donnell presented the first report of Committee on Credentials, recommending the following Dentists as worthy of membership: W. E. Hughs, L. Clements, J. B. Willmott, J. C. McConslan, M. P. Whipple, W. H. Branscombe, E. D. Greene, J. H. Bryant, balloted for and elected.

For Incipient Members: J. H. Padfield, E. D. Green, A. Burns, H. G. Weagant, R. G. Trotter, R. W. Comer, J. E. Huntingdon, R. S. Brown, balloted for and elected.

C. S. Chittenden moved, seconded by M. E. Snider, that the following Dentists be balloted for, notwithstanding their applications are incomplete. Carried. Namely: J. Zimmerman, H. McLaren, H. Meyres, L. Wills, J. Peck, elected. L. Van Camp and J. M. Branscombe, incipient members, were elected as active members.

Dr. Scott read the draft of the "Act respecting Dentistry," as revised by Special Committee for that purpose. He stated that the Committee had availed themselves of the advice and assistance of several prominent gentlemen. The draft of the Bill, as reported, met the approval of the Professors of the two Medical Schools in Toronto, and such members of the Medical Council of Ontario as had seen it.

He then proceeded to read the Bill clause by clause.

R. Trotter objected to the Provisional Board of Examiners, as not representing fairly the Province as to locality. He found a large proportion of the Board resided in the eastern portion.

On a motion being made to re-ballot for the Board, C. S. Chittenden said: As a member of the Board residing in the western portion of the Province, he considered it his duty to stand by the gentlemen who had been instrumental in carrying the measure almost to completion. He considered this motion as a want of confidence, and his only course was to resign.

A gentleman, whose name we are unable to obtain, said: He was also from the western portion of the Province; that this was the first meeting of the Association he had been able to attend; that it came with poor grace from members in attendance, for the first time, to endeavour to upset the proceedings of former meetings of the Association. The gentlemen on the board were elected by a meeting of nearly fifty Dentists, and all were invited to attend the last as well as this meeting. If Dentists had not done so they should not find fault now.

J. O'Donnell said he should follow the course adopted by Dr. Chittenden, and accordingly tendered his resignation.

Dr. Scott said he had, in connection with Dr. Day, secured the support of the Medical Council, the Medical Schools, and several members of Parliament; that he had always represented that the names in proposed Bill were placed there by the profession; that however desirable it might be to introduce fresh blood into the management, he feared the consequences, so far as getting the Bill passed this session was concerned. He recognised the claims of western members, and to meet the difficulty he had a motion to submit. If the motion carried he would remain upon the Board, if not he would follow the course taken by Drs. Chittenden and O'Donnell.

J. S. Scott, M.D., moved, seconded by H. T. Wood, "That two members be added to the Examining Board, to be elected from the members residing west of Toronto. Carried. Chas. Kahn of Stratford and J. B. Meacham of Brantford were elected, and the Bill as reported by the Committee adopted unanimously.

The Committee on Credentials reported the following Dentists worthy of membership, viz., A. May, A. C. Stone, M.D., I. C. Proctor, *Incipient*. J. B. Devlin, E. L. Rupert, L. L. Bennett,—elected.

Dr. Whitney, of Buffalo, addressed the Association on Dental Ethics.

Prof. C. V. Berryman, M.A., M.D., addressed the Association at length: He congratulated the Dental Profession on the success they had attained thus far, and urged the importance of united action. He said in raising the standard of requirements, it must be done gradually, and in a way to injure no one. In commencing to teach Dentistry, we must not be discouraged if we had to begin in a small way. That the Medical Profession would assist in any way they could when they saw a disposition on the part of Dentists to improve themselves. He felt honoured at being elected an Honorary Member; he was sure his humble efforts in carrying a resolution at the meeting of the Medical Council were only a duty, and a pleasant duty, towards an important branch of the Medical Profession.

It was of the greatest importance to sustain the Association. He did not suppose formerly that there were as many Dentists in the whole Dominion as he saw before him. Wishing the Association every success in carrying the proposed Bill through Parliament, he retired, having another engagement, upon the time of which he was encroaching. The speaker was frequently cheered, and a vote of thanks tendered him.

A. M. Roseburgh, M.D., as delegate from Medical Alumni Association of Victoria University, addressed the Association. He attended for the purpose of hearing the discussions, and would not take up the time with any remarks at present. He would say, however, he hoped and trusted we would succeed with our Bill before Parliament.

A telegram was received from a member of Dr. Relyea's family, stating *his* inability to attend on account of illness.

Adjourned to 9 a.m. to-morrow.

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### THIRD DAY.

ST. LAWRENCE HALL, TORONTO, 23rd Jan., 1868.

PRESENT.—H. T. Wood, Vice-President in the chair; J. B. Meacham, Assistant Recording Secretary, and a full attendance of members and delegates.

Dr. Wood having to attend a committee meeting, Dr. Clements of Kingston was called to the chair, when H. T. Wood moved, seconded by J. S. Scott, M.D., that this Association proceed in a body to Parliament

this afternoon, to be present when the petition asking for our Bill is presented in the House by Dr. G. W. Boulter, M.P.P. Carried.

Dr. Callender read a paper on operative Dentistry, followed by C. S. Chittenden's Essay.

*(To be continued in next Number.)*

ROYAL COLLEGE OF DENTAL SURGEONS, ONTARIO.—A meeting of the Board of Provisional Examiners and Trustees of the Royal College of Dental Surgeons, of Ontario was held at the Queen's Hotel, Toronto, on the 14th and 15th April, 1868. The full board was present, viz : B. W. Day, M.D., Kingston; C. S. Chittenden, Hamilton; H. T. Wood, Picton; J. O'Donnell, Peterboro'; J. S. Scott, M.D., Cobourg; F. G. Callender, Cobourg; G. V. N. Relyea, Belleville; A. D. Lalonde, Brockville; Charles Kahn, Stratford; J. B. Meacham, Brantford; G. L. Elliott, Toronto and John Leggo, Ottawa city. Mr. Relyea was called to the chair, and Mr. O'Donnell was requested to act as secretary.

The following gentlemen were duly elected officers of the Board :—B. W. Day, M.D., President; Mr. C. S. Chittenden, Treasurer; Mr. J. O'Donnell, Secretary; Mr. H. T. Wood, Registrar.

The chairman appointed the following a committee to draft By-laws for the government of the Board, and report to the meeting at 3 p.m., viz : Messrs. J. S. Scott, M.D., J. B. Meacham, F. G. Callender, J. Leggo, and G. V. N. Relyea. The meeting then adjourned till 3 p.m.

At the afternoon session, the committee, through their chairman, Dr. Scott, submitted a draft of By-laws, which was adopted with slight amendments. After a good deal of discussion on important points connected with curriculum, &c., the meeting adjourned at 6 p.m., till 7:30.

Moved by Mr. O'Donnell, seconded by Mr. Lalonde, "That Messrs. Day, Relyea, Meacham, Leggo and Scott, be appointed a committee to draft blank forms of application, affidavits, &c."

Students applying for the diploma of the College, must have a liberal English education, and after being articled to a Licentiate of Dental Surgery for two years, shall be required to pass an examination in the following branches :

Dental Anatomy,  
Dental Physiology and Chemistry,  
Principles and Practice of Dental Surgery,  
Dental Mechanism and Art,  
Operative Dentistry.

The thanks of the Board and the Professions of Ontario were tendered

to Dr. Boulter, M.P.P., and other members of the Legislature for their efforts for passing the Act legalizing the profession of Dentistry in Canada.

Mr. Relyea moved, seconded by Mr. O'Donnell, That this board, representing the dental profession of Ontario, having learned with painful emotions of the untimely death of the Hon. T. D. McGee, by the hand of the midnight assassin, wish to record their horror and detestation of so atrocious and bloodthirsty an act, depriving our country of a noble statesman and patriot; and deeply sympathize with his widow and orphans in their bereavement. The motion was ably supported by the mover and seconder, and also by Drs. Day, Meacham and Scott; the members of the board rising, as a mark of respect, when the vote was taken.

The board adjourned on call of the President.

The following resolution was adopted on motion of Mr. Chittenden, seconded by Mr. Relyea, "That this board most heartily approves of the proposal to publish the *Canada Journal of Dental Science*, as announced by Mr. W. George Beers, of Montreal, and recommend the profession to support it."

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DENTAL ASSOCIATION OF ONTARIO.—The next annual meeting of the above Association will be held in Hamilton on the 14th, 15th and 16th days of July next.

J. STUART SCOTT, M.D., *Rec. Sec'y.*

Recording Secretary's Office,

90 Queen st., West, Toronto, May 21, 1868.

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NOTES FROM THE PROCEEDINGS OF DENTAL SOCIETIES.—Under this heading we purpose from time to time, epitomizing the practical discussions of Dental Associations outside of Canada. Wisdom, like wit, is in narrow compass; and the elaborate debates in Dental, as well as other Societies, generally develop an amount of chaff and fine talk all the more readable for abridgement. A vast amount of sound information will likely be garnered into this department during the year.

At a meeting of the Maryland State Dental Society, July 30, Dr. Arthur submitted the following propositions, as the result of more than twenty-five years careful observation of the phenomena of Dental Caries; and stated his readiness to defend them against any one who felt disposed to dispute his conclusions. The challenge was accepted by Dr. Volck, for some future occasion.

1. That caries will attack the proximate surfaces of all the teeth,

except the inferior incisors of the great majority of persons in the United States, at the present day.

When caries of the superior incisors occurs on the proximate surfaces previously to the twelfth year, its occurrence, sooner or later, on the same surfaces of all the teeth, except the inferior incisors, is almost certain. In the greater number of such cases, caries will show itself before the twentieth year.

This predisposition to dental caries, is greater in the female sex.

2. That caries is not liable to occur at the points indicated, unless the teeth are in contact.

3. That an artificial, permanent, separation of the teeth will arrest superficial caries, or prevent its occurrence if the attack has not effectually begun.

4. That it is a popular fallacy to suppose that caries necessarily follows the removal of enamel.

5. That the most efficient means of preserving the teeth is to anticipate the attack of caries, by separating them, when it is ascertained that caries is likely to occur on the proximate surfaces."—*Amer. Journ. of Dent. Science.*

SOCIETY OF DENTAL SURGEONS OF NEW YORK.—Dr. C. P. Fitch believed we often overtreat, employing powerful escharotics, and unnecessarily, and ingeniously destroying healthy tissue. When inflammation follows the removal of a dental pulp, warm water is a very good dressing. In cases of suppuration of the pulp, the canal should be cleansed, and then filled with a concentrated solution of the permanganate of potassa, which is a better antiseptic than creosote. Some cases may be relieved by opening through the apex with a broach, and applying in the canal tinct, aconite root. Antimonium crudum, a homœopathic remedy, also, answers well in such cases.

Dr. W. B. Hurd uses chlorinated lime for cleansing roots of abscessed teeth, and finds no further treatment required, in nine cases out of ten. After thoroughly cleansing the roots with the chlorinated lime, he fills immediately. This method he applies to acute and chronic cases alike. He sometimes finds cases he cannot cure.

Dr. C. D. Allen relieves acute cases by local bleeding or leeching.

Dr. R. K. Browne claims that dental caries is not commenced by the loss of the earthy salts, but of the gelatinous. The dentinal fibrils, he claims, are neither coagulated liquor sanguinis, nor fibrin, but intercellular matter. There are no more nerve fibres in the dentine than in

cartilage. Beale has been unable to find nerve fibres in dentine, though he has sought, with the highest powers, now employed.

W. B. Franklin has succeeded in getting a solder for aluminum, and had made some improvements in manipulating the metal, by which he was enabled to produce three plates on the aluminum in the time required to make two on vulcanite.

Mr. Hindsman showed an aluminum slate soldered with an alloy of the same metal.

Dr. Fitch stated that Dr. Keep had formerly employed aluminum, but had abandoned it because it would not withstand the fluids of the mouth. He denied that rubber plates act otherwise than mechanically upon the mouth. They dam up the follicles, by which the mucus is retained until it becomes acrid, and produces sore mouth.

Dr. Simons, of Boston, stated that though a stockholder, to a small extent, in the Vulcanite Company, he had decided to abandon Rubber as a base, and employ gold and aluminum instead. He finds that full rubber plates have lasted on an average, six years in his practice.

Dr. C. E. Francis first fills the root permanently when he wants to bleach a tooth, and then fills the crown with chalk, and a solution of chlorinated soda. Had not much faith in it. The teeth generally get yellowish grey afterwards.

Dr. W. H. Atkinson, bleached by placing crystals of oxalic acid in the tooth, and then applying a drop of water on cotton. When the color returns the failure is generally ascribable to defect in the filling. Did not think creosote could have any agency in causing the failure, as he had never filled a tooth without first wetting the cavity with creosote. Has been called upon many times to bleach teeth having living pulps. The gentlemen who employ arsenious acid for obtunding sensitiveness in dentine, will keep us supplied with cases for bleaching. He believed the bleaching property of the oxalic acid, much stronger during the solution of the crystals than afterwards. A few minutes suffice for the bleaching. If the tooth is not decidedly improved in thirty minutes, he sends the patient away with the tooth open.

Dr. C. E. Latimer was cautious how he applied acids to teeth, knowing their destructive action. Bleached a tooth that day with hypochloride of lime placed in the cavity, and moistened with acetic acid. Required about thirty minutes. Did not wet cavity with creosote, but filled at once. Had met with badly coloured teeth having living pulps.—*Dental Cosmos*.

## EDITORIAL.

## INTRODUCTORY.

It is always gratifying to find the particular calling at which we labour, keeping pace in the general advancement of a young country. That Dentistry in Canada has taken a vigorous onward movement, is evidenced by the success attending the action of the members of the profession in Ontario, and by the necessity which has called into existence, as a sequence of this action, a home journal to support and extend the progressive, liberal and reputable principles of Dental Science, Art, and Education in and throughout the Dominion. The present is a period of transition from the unsociable to the associative; from the comparatively stagnant, to the progressive. New life has been infused into our speciality, and a more general readiness to respond to any effort towards improvement and elevation, pervades the professional mind. Pinning our faith to the happy results of this change, and believing it an opportune time to lay the foundation of a Canadian Dental Literature, we offer the "*Canada Journal of Dental Science*" as the literary repository, and representative organ of Canadian Dentistry.

No foreign journal can be expected to supply the wants, or adequately represent the interests of Canadian practitioners; and offering to meet this deficiency, this Journal claims their support. The position of a people without a press cannot be more lamentable than that of a profession, such as ours, without a medium of communication for its members. We trust this Journal will succeed in drawing out a literary talent, and a fund of practical information, which must naturally be dormant in a country that has heretofore never had a home inducement for publication.

It is the inevitable fatality of new experiments in any sphere, to be met with some opposition, from parties who suspect and distrust their motives, and from others who systematically decry any innovation. We anticipate in the outset of this Journal, a share of discouragement; but confidently believe that the members of the Canadian Profession, with a few exceptions, will sustain it for their own credit, and for the credit of the country and the profession it represents. If numerous letters, in answer to the prospectus issued, received from all parts of the Dominion, are at all significant, we feel confident the Journal will fill a gap, and merit hearty support.

The C. J. of D. S., will be independent of any section or clique, though devoted to the interests of any progressive party, because it is progressive. It will aim to improve and elevate the *status* of the profession in Canada, instruct and unite its members, and in honest effort

endeavour to do for Canadian Dentistry, what has been achieved for the profession of England and the United States, mainly through the instrumentality of periodicals of a similar kind.

The original project to issue quarterly, was changed to monthly by request of many friends in Ontario and Quebec. The importance of the movement in the former province, and the necessity of fostering an interest in the principles of the Association, demanded a more frequent issue than four times a year.

Among the list of friends outside of Canada, who have given the Journal assurance of literary aid when possible, we have pleasure in naming Mr. Edwin Saunders, Dentist to Her Majesty the Queen, Mr. Waite, of Liverpool, and other well known English Dentists. Generous offers of assistance in the same way came from Drs. McQuillen, W. H. Atkinson, A. S. Pigott, C. A. Kingsbury, and others in the United States. Neither editors nor subscribers can be insensible to such liberal kindness from members of the profession whose names are as household words.

To confrères in Canada, who have so far aided this undertaking, we return our sincere thanks, and hope before long to add the name of every Dentist in the Dominion. That a home journal can do inestimable good, no one can deny; and that it is now an absolute necessity nearly every one will admit. There is no reason, then, why every individual Dentist in Canada should not take an active interest in its success. With them lies the fate of our young Journal. Let them prove that there is sufficient enterprise in the country to support it.

W. G. B.

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### DENTAL LEGISLATION IN ONTARIO.

In January 1867, a convention of Dentists, called by Dr. B. W. Day, was held in Toronto, to consider the propriety of organizing a Dental Association, and of taking the necessary action to secure an Act of Parliament to require of Dentists an examination touching their qualifications to practice Dental Surgery. A committee was appointed to draft a Bill to report in July following, at Cobourg.

The session of the Association, at Cobourg, was well attended. Twenty-two additional members took part in the proceedings. The draft of the Bill was fully considered, and eight persons recommended to Parliament for members of the Examining Board.

A session of the Association was held in Toronto, in January 1868, when the entire profession of the Province was invited to be present. Fully ninety per cent of the Established Dentists of Ontario were in attendance, Ottawa, only, not being represented. A petition was presented to the Legislature, praying that an Act be passed to require Dentists to

pass an examination, signed by the Professors of the two Medical Schools, in Toronto, and the leading Physicians of Ontario, including several members of the Medical Council.

The Bill was placed in the hands of Dr. G. W. Boulter, M.P.P. The promoters of the Bill communicated with the Dentists of Ottawa, when they signed and returned the Petition, praying for the Act. Petitions were also sent in from the professional men of Belleville, including Albert College, the Dentists of London, and the Reeves and Deputy Reeves of Northumberland and Durham; the professional men of Cobourg, including Victoria University.

No opposition was offered to the Bill on its first or second reading. After it had been printed by the House, and sent by its Members to the Dentists in every Riding, a hundred or more letters were sent to Members, principally from the younger members of the Profession, all supporting the Bill, but each asking a modification to suit his particular case. As might be expected, several Members had amendments to propose. The promoters of the Bill were required to attend before the Select Committee of the House, to meet objections.

The committee desired to report the Bill as nearly as possible as adopted by the Convention held in Toronto, in January last. Slight changes were made, and two additional names added by the committee, to meet views of Members, who otherwise would move amendments, and the Bill was reported as amended. On the third reading, in consequence of further pressure, the Bill was again referred to the Select Committee, to which was added some members who had amendments to propose. This occurred within a week of the close of the session, when communication with Toronto was cut off by a severe snow storm. In reply to telegrams one member of the Bill Committee reached Toronto two days before the closing of the session, and another, one day before. The Select Committee were got together, when Mr. Rykert, the Chairman, presented a draft of the Bill, as he thought, would pass the House, without opposition,—keeping as nearly as possible to the draft adopted by the Association. The committee reported the Bill, and it was passed on the last day of the session.

We have been thus particular in stating the circumstances under which the changes were made in the Bill, as some of its promoters, who were not aware of all the particulars, have censured other supporters of the measure for being too active and too ready to yield to the views of others, when, as a matter of fact, the changes were made by the Select Committee of the House, to meet pressure,—from Members of the House, produced by the many letters sent in by the young members of the Profession.

The thanks of the Dental Profession are due to Dr. G. W. Boulter, M.

P.P., Mr. Rykert, M.P.P., Dr. Baxter, M.P.P., Dr. McGill, M.P.P., Prof. Aikins, M.D., Prof. Berryman, M.A., M.D., Dr. Dewar, and Dr. Whi ey for their valuable assistance in promoting this measure, for the elevation and improvement of our specialty. Hon. J. Cockburn, Q.C., Speaker House of Commons, and Mr. R. W. Scott, M.P.P., of Ottawa, also assisted the promoters of the Bill, by freely giving them the benefit of their parliamentary experience. Some features in the Bill are, perhaps, not desirable, yet it is impossible to meet the views of every one, or please all. It is as perfect as Bills usually are when first passed, and if carried out faithfully will result in much good to the Profession. J. S. S.

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“PROFESSIONAL PUFFING.”---The March number of the *London Lancet*, page 176, contains an article upon the above subject, in which Dentists in England are placed in a very unfavourable light. The editor says: “Let our readers take the newspapers of any day when books on Homœopathy, Hydropathy, Diseases of the Generative Organs, Brain and Stomach, *Dentistry*, Taking Cold, the Cure of Cancer, &c., are advertised, and he will see in the same column, books by Hospital Physicians, and other respected practitioners.”

It is unjust to place the Licentiates of Dental Surgery, who have received their Certificates from an Examining Board of the Royal College of Physicians and Surgeons upon the level of common quacks. In the same number of the *Lancet* we observe an advertisement of Ayer's ague cure, which, on this side the Atlantic, is looked upon as savoring somewhat of quackery. J. S. S.

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**SERRATED PLUGGERS.**—Serrated Pluggers have revolutionized the art of filling teeth with gold foil, as the use of breech loaders changed the science of war. Operators found they had to learn new principles and practice a somewhat different art from that applied with smooth pointed instruments. The object of the serrations is not to make deep pits in the gold, but to so roughen the surface of each condensed piece, that succeeding portions will adhere. A common fault, however, with new pluggers is that the serrations are too deep, and the points too sharp. Some points must be sharper than others, but none should be so pointed that deep pits are made in the gold which cannot be completely filled up. If the gold is a succession of strata, which has unfilled pits, however delicate, here and there, the operation cannot be satisfactory. It may often be found necessary, therefore, before using new serrated pluggers, to rub them easily on an oil stone to slightly blunt the sharp points, and then thrust them into hard wood to remove any edging. W. G. B.

A HISTORY OF DENTISTRY IN CANADA.—We purpose writing a history of Dentistry in Canada from the earliest period down to the present time, and invite assistance from our colleagues, and any others who may know facts of interest concerning the early practitioners. Would our friends kindly aid us by questioning the oldest inhabitants who know everything—and brushing up their own memories. Send us name, residence, date of practice, reputation held, and any facts of interest concerning professional or public life. As this will be a matter of some labour in collating, we intend accumulating *data* for several months before commencing the history.

W.G. B.

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### AN ACT RESPECTING DENTISTRY.

First reading January 30th, 1868. Second reading February 11th, 1868. Third reading March 3rd, 1868.

Whereas the profession of Dentistry is extensively practiced in the Province of Ontario, and whereas it is expedient for the protection of the public, that there should by enactment be established a certain standard of qualification required of each practitioner of the said profession, and that certain privileges and protection should be afforded to such practitioners: Therefore Her Majesty, by and with the advice and consent of the Legislative Assembly of Ontario, enacts as follows:

1. The persons named in Section two of this Act shall be incorporated and known as the “Royal College of Dental Surgeons of Ontario.”

2. Until other persons be elected as hereinafter provided, Barnabas W. Day, of the City of Kingston, M.D.; Curtis Strong Chittenden, of the City of Hamilton; Henry Tunstall Wood, of the Town of Picton; John O'Donnell, of the Town of Peterborough; Joseph Stuart Scott, of the City of Toronto, M.D.; Franklin Goodrich Callender, of the Town of Cobourg; George Van Nest Relyea, of the Town of Belleville; Antoine Denmark Lalonde, of the Town of Brockville; Charles Kahn, of the Town of Stratford; James Bogart Meacham, of the Town of Brantford, George L. Elliot, of the City of Toronto, and John Leggo, of the City of Ottawa, shall be trustees, and a Board of Examiners, of whom five shall be a quorum, to examine and grant certificates of license to practice Dental Surgery in this Province.

3. The Board of Directors to be elected, as hereinafter mentioned, shall consist of twelve members, who shall hold office for two years; any member may at any time resign by letter directed to the Secretary, and in the event of such resignation, or a vacancy occurring by death or other-

wise, the remaining members of the Board shall elect some fit and proper person from among the licentiates to supply such vacancy.

4. The first election shall take place on the first Tuesday in June, one thousand eight hundred and sixty-eight, at such place in the city of Toronto, as shall be fixed by by-law of the Provisional Board, and the Secretary of such Board shall act as Returning Officer at said election, and the persons qualified to vote at such election shall be the Licentiates of said Provisional Board, admitted without examination, as provided by section twelve of this Act, at least one month before said election, and the said Provisional Board shall issue such certificates to such persons upon their compliance with the requisites of said section, and it shall be the duty of the Secretary to publish in the *Ontario Gazette*, for two weeks immediately after said election, the names of the persons who have been elected members of the Board.

5. The said newly elected Board, as well as all Boards to be hereinafter elected, shall hold their first meeting on the third Tuesday in July, next after the said elections in the city of Toronto, at such place as may be fixed by the Board.

6. Every subsequent election shall be held on the first Tuesday in June, in every second year, after the said first election, and the persons qualified at the said election shall be those Licentiates who have obtained their certificates as provided for in the twelfth section of this Act.

7. The said Board shall, at their first meeting after their election, elect from among themselves a President, Treasurer, Secretary and Registrar, and such other officers as may be necessary to the working of this Act and the rules and regulations of said Board; and the said Board, shall from time to time, in the event of the President being absent, from any cause whatever, elect, from among their number, a person to preside at their meetings, who shall have the same powers, and exercise the same functions, as the President.

8. There shall be allowed and paid to each of the members of said Board such fees for attendances (in no case to exceed five dollars per day and such reasonable travelling expenses) as shall from time to time be allowed by said Board.

9. All moneys forming part of the funds of said Board shall be paid to the Treasurer, and shall be applied to the carrying of this Act into execution.

10. The Board shall have power and authority to establish and conduct a Dental College in Toronto, to appoint Professors, to fix and determine from time to time a curriculum of studies to be pursued by students, and to fix and determine the period for which every student shall be ar-

titled and employed under some duly licensed practitioner, and the examination necessary to be passed before said Board, and the fees to be paid into the hands of the Treasurer of the said Board, before receiving a certificate of license to practice the profession of dentistry.

11. The said Board may hold two sittings in every year for the purpose of examining students, granting certificates of license, and doing such other business as may properly come before them, such sittings to commence on the third Tuesday in July and January, in each and every year, which may be continued by adjournment from day to day, until the business before the said Board be finished, but no session shall exceed one week, said sitting to be held in the City of Toronto.

12. All persons being British subjects by birth or naturalization, who have been constantly engaged for any period less than five years in established office practice next preceding the passing of this act in the practice of the profession of dentistry, shall be entitled to a certificate of Licentiate of Dental Surgery, upon their furnishing to the said Board satisfactory proof of their having been so engaged, and upon passing the required examination, and upon payment of such fees as may be authorized and fixed by the said Board, for the payment of which the Treasurer's receipt shall be sufficient evidence, and all persons being British subjects, by birth or naturalization, who have been constantly engaged for five years and upwards in established office practice, next preceding the passing of this Act, in the practice of the profession of dentistry, shall, upon such proof as aforesaid, and upon the payment of the fees as aforesaid, be entitled to such certificate without passing any examination.

13. The said Board shall at its first meeting, and from time to time thereafter, make such rules, regulations and by-laws as may be necessary for the proper and better guidance, government and regulation of said Board and College, and said profession of Dentistry, as to fees and otherwise, and the carrying out of this Act; which said rules, regulations and by-laws, shall be published for two consecutive weeks in the *Ontario Gazette*; any or all of such rules, regulations and by-laws shall be liable to be cancelled and annulled by an order of the Lieutenant-Governor of this Province.

14. Every person desirous of being examined by the said Board, touching his qualifications for the practice of the profession of dentistry, shall at least one month before the sittings of said Board, pay into the hands of the Treasurer the required fees, and inclose and deliver to the Secretary the Treasurer's receipt for the same, together with satisfactory evidences of his apprenticeship, integrity and good morals; and it shall be the duty of the Board to hold a sitting for the purpose hereinbefore

mentioned, on the third Tuesdays of January and July, whichever shall first happen, next ensuing the said payment and delivery.

15. If the Board be satisfied by the examination that the person is duly qualified to practice the profession of Dentistry, and be further satisfied that he is a person of integrity and good moral character, they shall grant him a certificate of license and the title of Licentiate of Dental Surgery, which certificate and title shall entitle him to all the rights and privileges of this Act until such time as the Board shall be satisfied that he has been guilty of acts detrimental to the interests of the profession, when he shall forfeit his certificate, and it shall be cancelled; such forfeiture may, however, be waived, and the said certificate of License and all rights and privileges thereunder, fully revived by said Board, in such manner and upon such terms and conditions as to said Board may seem expedient.

16. Every certificate of license shall be sealed with the Corporation Seal and signed by the President and Secretary of said Board; and the production of such certificate of license shall be *prima facie* evidence in all courts of law and upon all proceedings of whatever kind, of its execution and contents.

17. The Secretary of the said Board shall, on or before the fifteenth day of January in each and every year, inclose to the Provincial Secretary a certified list of the names of all persons to whom certificates of license have been granted during the then next preceding year.

18. If any person, after the period of twelve months after the passing of this Act, not holding a valid and unforfeited certificate of license, practices the said profession of Dentistry for hire, gain or hope or reward, or wilfully and falsely pretends to hold a certificate of license under this Act, or takes or uses any name, title, addition or description implying that he is duly authorized to practice the said profession of Dentistry, or shall falsely use any title representing that he is a graduate of any Dental College either in Great Britain or other countries, he shall be liable to a summary conviction, before any two or more Justices of the Peace, for every such offence, and shall, on such conviction, be liable to a fine not exceeding twenty dollars, which said penalty, in default of payment, shall be enforced by distress and sale of the offender's goods and chattels; and it is further provided that no such person shall recover in any Court of Law for any work done or materials provided by him in the ordinary and customary work of a Dentist.

19. Nothing in this Act shall interfere with the privileges conferred upon Physicians and Surgeons by the various acts relating to the practice of Medicine and Surgery in this Province.

## SELECTED ARTICLES.

## ON THE USE OF OXY-CHLORIDE OF ZINC OVER EXPOSED PULPS.

Read before the Massachusetts Dental Association.

BY I. A. SALMON.

At a former meeting of the Society I took occasion to advocate the use of oxy-chloride of zinc over exposed pulps, as suggested to me by Dr. Keep, and at that time read to the Society the result of a few cases occurring in my practice treated in this manner. The result to that time having been so favourable, I have since used it with a great degree of confidence. Could our brothers of the profession be induced to give it a fair trial, I feel sure its use would be very generally adopted, and the present various modes of capping, so often necessitating the use of temporary fillings, and so uncertain in their results, would be dispensed with.

To use oxy-chloride of zinc successfully, considerable care must be exercised. It is important that the materials be pure, and properly prepared.

The oxide of zinc is often impure, containing white lead, chalk and other substances, that of a white colour is not considered of as good quality as the yellowish white.

Should there be an excess of the chloride of zinc, its escharotic property will be strongly marked. The strength of the solution used should be only sufficient to cause the mixture to set.

My method of manipulation is to cut from fine linen a small piece sufficient to cover that part of the pulp I desire to protect; having mixed the oxy-chloride, the piece of linen is saturated with it, a portion being applied to one or both sides, which is then carried upon an instrument and placed directly over the point desired to protect. More or less pain is occasioned, which, however, speedily subsides and does not return.

After a few minutes, and as soon as the mixture is firmly set, during which time moisture must be excluded from the cavity, I introduce the gold and proceed as in ordinary cases.

I have kept a record of most of the cases in which I have used the oxy-chloride of zinc, and have arranged them in the following tabular order ; as facts cannot be disputed, I will give it :

Why used.	No. of Cases.	When permanently filled.
To protect pulps (not exposed)	44	At the same sitting.
Over exposed pulps.....	27	21 at the same sitting. 1 in about one week 2 " two " 1 " three " 1 " four " 1 " eight "
Over exposed & bleeding pulps,	7	1 at the same sitting. 1 in about one week. 3 " two " 1 " three " 1 " four "
Making a total of .....	78	cases, in thirty-four (34) of which the pulp was exposed.

In every case which I have subsequently examined, I have found the tooth perfectly healthy and apparently as sensitive as before the application, and as far as I am aware have not had a failure.

*Dental Register.*

### PIVOT TEETH.

By the following method, which we obtained in a conversation with Dr. T. J. Thomas, a member of the late Graduating Class of the Baltimore College of Dental Surgery, artificial crowns can be attached to natural roots, and what in other cases is the exposed portion of the root, perfectly protected from the action of deleterious agents. Prepare the root, as for an ordinary wooden point ; then select a plate tooth of the proper size, shape and shade, and fit it by grinding accurately to the prepared root.

After this is done enlarge the pulp canal by reaming it out as large as the root will admit : that is, make a conical shaped cavity in the exposed surface of the root, allowing the margin of this cavity to be quite near to the circumference of the root, with slight undercuts on the anterior and posterior walls.

After this cavity is prepared, and that portion of the pulp canal beyond it, filled to the apex of the root with gold, make a square metallic

pivot of twenty carat gold alloyed with platinum, in the proportion of five parts of gold to one of platinum. This pivot is made in two parts, which parts are soldered together at the base of the artificial crown, and slightly wedge-shaped.

After this is prepared, a thin piece of platinum plate is bent around the pivot, thus making a square cylinder into which the pivot perfectly fits. After this is done, carefully draw the pivot out of the square cylinder, and solder the edges of the cylinder with pure gold. The pivot is then returned to the cylinder, and the excess of solder and also any rough edges which may exist on the cylinder filed off. After this is done the cavity in the root is carefully dried of all moisture and protected from saliva by means of napkins, and the square tube or cylinder, with the pivot inside of it, is placed in the centre of this cavity, which is filled around it with gold foil in as careful a manner as any crown cavity, allowing the gold to overlap the margin so as to perfectly protect all of the root from the action of deleterious agents. By such means, what in the case of ordinary wooden pivot would be the exposed part of the root is perfectly protected and inclosed by the gold filling, which at the same time gives support to the square cylinder in the centre of it. In placing the cylinder in the root with the pivot in it preparatory to inserting the gold filling about it in the cavity, the split or space between the two parts composing the pivot should range directly back, from the anterior to the posterior, and not from one approximal surface to the other. When this is done the pivot is drawn out from the cylinder, which remains firmly fixed in the root, and that part of the cylinder which may project filed down to a level with the surface of the filling. An impression of this surface is then taken with wax or gutta-percha, and a die and counter-die made of fusible metal, by means of which a disk of platinum plate is swaged to fit accurately the concave surface of the gold filling in the root. When this is done, the convex surface of this disk is thinly covered with wax, and the disk placed in its proper position over the gold filling in the root, and slightly pressed on it in order to obtain an impression by which to cut a square hole to correspond with the orifice of the square cylinder. After this square hole is cut in the disk, the outer end of the pivot is inserted in it, secured by means of wax, and the whole returned to the root (pivot in the cylinder) in order to make certain that the pivot is in its proper position, when it is carefully removed and secured by an investment of plaster and asbestos, in order that the pivot may be soldered to the disk.

This being done, the pivot and disk are again returned to the root, and if found correct, the protruding part of the pivot above the concave

surface of the disk is filed down to a level with this surface. This being done, the disk and pivot are returned to the cylinder in the root, and the plate tooth is placed in its proper position and attached to the disk by means of wax. The disk and pivot with the plate tooth thus attached are carefully removed from the root and invested in plaster and asbestos in order that a backing of gold may be made and the tooth thus soldered to it and the disk.

The tooth is now ready to be inserted, and by separating the two parts which form the pivot slightly at its apex or free extremity, this pivot will tightly fit the cylinder, the two halves acting as springs, which is the object in making the pivot of an alloy gold and platinum, and also in two parts.—*Amer. Journ. Dent. Science.*

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## MISCELLANEOUS.

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CONGELATION BY MEANS OF ATOMIZED SPRAY.—We make the following extract from an article contributed by Dr. Hardman, of Iowa, to the *Dental Register of the West*:—"It is true that, for extraction, it will not do for universal use; as where the sudden reduction of the temperature excites or aggravates pain, especially in neuralgic cases. It is also impossible to establish its influence to purpose about the molars of the lower jaw. Yet, a large proportion of cases exist where it can be used with facility, and is so completely anæsthetic, that patients feel highly delighted with it—will sit for ten or a dozen extractions, where they experience no more pain than is usual for one in the ordinary way. But this is not the extent of its use; the obtunding of sensitive dentine can be so completely and readily accomplished, and still leave the tooth and the nerve healthy, that here it is invaluable. And by it, in many cases, the exposed nerve can be frozen to insensibility, and at once extracted; making the successful treatment of the tooth much more certain and speedy. Again, in the treatment of alveolar abscesses, it will sustain an enviable reputation. My mode is to congeal by applying spray to the gums opposite to the diseased root, and then quickly, with a stiff narrow chisel or sharp drill, cut freely to the seat of the disease, cut up and remove the suppurating membrane, and then medicate with escharotics and alteratives. I use the Bigals instrument with direct spray; have used Richardson's instrument, but without satisfaction. It is evident that much improvement in instruments and in the application of this benumbing process can be accomplished, and the field for its usefulness much enlarged."

PREVENTION OF SICKNESS FROM CHLOROFORM.—A writer in the *British Medical Journal* proposes to prevent the frequent vomiting during and after the inhalation of chloroform by simply giving the patient a drink of a few drops of the anæsthetic in water, before commencing the inhalation. The experiment succeeded in eighteen out of twenty cases.

RUBBER WITHOUT SULPHUR.—A new preparation of dental rubber has recently been brought into notice, which is said to harden by the escape of the fumes of the bromine and iodine with which it is mixed. No sulphur is used in its preparation; it is not hardened by steam, but by dry heat; and its proprietors assert that it is far purer than the vulcanite, and has neither taste nor smell, and does not change color during the hardening process. It is known by the name of Dried or Iodized Rubber. It is made by adding to iodine one half its weight of bromine, the result being the proto-bromine of iodine, which when combined with rubber in the preparation of three ounces of the paste to a pound of the gum, produces a composition which will harden on being subjected to adry heat of 310° Fah. for one hour.

It is necessary in vulcanizing to use an oven made expressly for this compound. This oven consists of a cast-iron, cone shaped boiler, at least two inches thick in the bottom, with a heavy lid placed over it: no packing or screws being necessary, as dry heat is used. The weight of the lid resting on top of the oven is sufficient to confine the heat, which is generated by a small lamp placed under the apparatus.—*Amer. Jour. of Dent. Science.*

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#### NOTICES TO READERS, CORRESPONDENTS, &c.

Remittance of money, articles for publication, advertisements, and books for review, should be addressed to the Editor at Montreal. Money letters should be registered.

Contributors will oblige by writing as legibly as possible, and only on one side of the paper. We aim principally to develop native talent, and solicit contributions from the members of the Canadian profession. By the new post-office law, manuscript for publication can be sent, marked "Newspapers Manuscript" and unsealed, for 1 cent an ounce.

PROMPT PAYMENT.—Intending subscribers will oblige by remitting without delay. Our facilities for enlargement and general improvement will be thereby much increased. We cannot send future numbers to other than subscribers who conform to our terms—*payment in advance*. We cannot promise to supply "back numbers;" so those wishing to subscribe should do so at once, and not six months hence. We can

promise valuable contributions, from leading Dentists of Canada, England, and the United States.

**EXCHANGES.**—As both Editors requires exchanges, we would thank other Journals to exchange with us *in duplicate*, and address to each Editor respectively in Montreal and Toronto.

**TO THE MEDICAL PROFESSION.**—Prominent Dentists in England, the United States and Canada (many of whom are graduates in medicine) will contribute their experience with nitrous oxide gas, ether spray, and similar agents used in the practice of dentistry, and appropriate form in operations in surgery. The practice of physicians in treating diseases affecting the teeth will be specially reported, making the journal acceptable to any practitioner of medicine.

**ADVERTISING.**—The C. J. D. S. as the only medium likely to reach the Canadian profession generally, will be the best medium of advertising manufactures, &c., used in dentistry.

Owing to several disappointments, and drawbacks not likely to occur again, it was thought best to defer the *entrée* of the journal until June, rather than issue it late in May.

We send this number of the journal to every dentist in the Dominion whose address we have been able to secure. If every one who receives it would subscribe, we could enlarge to double the present size—as we hope at some future time to do—and issue a periodical second to none. As soon as circumstances admit we will increase the number of pages, and give illustrations. The first attempt of the kind in Canada, cannot be expected to rival older journals in size, but we give as much now, in one number as similar journals in the United States originally gave in three, and if properly sustained hope to imitate their present enterprise. The limited circulation the C. J. D. S. must necessarily have in Canada, where the profession has not such scope, is not as much needed and therefore is not as numerous as in the neighbouring country, constrains us to make the subscription higher than we would prefer; but we have faith in the spirit and good will of Canadian dentists, and feel assured the matter of a dollar will not stand in the way.

In addition to the Journal, each subscriber will receive *gratis* at the end of the year, a Directory of the profession in Canada. The list of subscribers and contributors will be published at the end of each volume.

*Dental Students* should become the *owners* of the first effort of the kind made in Canada. The undertaking, and its contents, will one day be historical; and students as well as teachers should be ambitious of enrolling their names among those who aid to make it successful.