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# DOMINION DENTAL JOURNAL.

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VOL. V.

TORONTO, MARCH, 1893.

No. 3

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## Original Communications.

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### Regulating Teeth.

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By G. V. N. RELVEA, L.D.S., Oswego, N.Y.

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It is not my intention in a brief article to inquire into the causes of irregularities, nor how to treat them, nor even the devices by which they are regulated, but simply note some incidents, both of patients and operators. The late Amos Wescott, M.D., of Syracuse, one of the leading operators in western New York, used to say that the best way to treat irregularities of teeth, was to send them to some other dentist. I say if your patient is willing and another dentist is willing to undertake it, by all means give him the benefit, as regulating at best is tedious, vexatious and usually not remunerative.

Dr. Wescott, however, had gained such a reputation in this particular branch of the art, that a wealthy southern gentleman, with his beautiful daughter called at his surgery for consultation. On examination the doctor found a case of extreme contraction of the superior maxillary. The expanding of the arch was a new idea in those days, but the doctor being then in his best, and seeing a "fat fee" in prospect, did not do as he advised other dentists to do, by sending them to another office, but, nothing daunted, resolved "to try." He took an impression, laid a draft with the model before an ingenious jeweller, who constructed a

gold apparatus (it was before the days of vulcanite), adopting the jack-screw principle (by which hotels in Chicago used to be elevated heavenward while the guests were at their breakfast), and in time the entire arch was expanded sufficiently to cover the lower teeth. In a word, it was a complete success, the father delighted, the young lady proud of her improved appearance, the doctor congratulated and rewarded with a "fat fee" of one thousand dollars.

Let me here say that for the purpose of forcing a stubborn eye-tooth, or indeed any tooth, back into the arch, the jack is the surest. Much harm, however, can be done with it unless properly used. I will instance a case. A young man came to my rooms much grieved over the loss of a lateral incisor and bicuspid in the superior maxillary. As near as I could learn, the tooth to be moved was walled in by the front incisor and eye-tooth. A dentist of our city had drilled a pit in the lateral for the point of the screw, and then placed the foot of the jack against the opposite bicuspid and commenced the pressure. The resistance was too great for the foundation, but the dentist blindly persevered until the bicuspid was forced out of the socket and it had been extracted. The lateral decayed where it had been drilled, and it was also extracted. The jack-screw principle is correct, and I use it, but not without a good foundation for the foot. I place a vulcanite plate about an inch square against the two bicuspid and the six year molar. It is best to vulcanize it in the base so it will not drop out when the tooth yields.

One word more before I close. Dr. Clark, of New York city, says (and wisely): When undertaking a difficult case of irregularity, be sure to get half the fee in advance. Your patient will be more likely to persevere, thus having an equal interest, and the operator encouraged on account of his reputation and the balance of the price in prospect.

#### INCIDENT.

About two years since I made a small vulcanite plate for a young lady on the cantilever principle. Two superior bicuspid were supported by one root, the other having been extracted. A metallic tube was secured in the root with phosphate. A standard was placed in the tube with the lower end bent, then the impres-

sion was taken, the standard coming out with the plaster cast. A model was obtained, and the tooth with the standard united with vulcanite. The phosphate disintegrated the plate, and the tooth came out and the whole was swallowed. She was conscious of its locality, but failing to bring it out or up, the idea of nausea occurred to her, and she accordingly thrust the handle of a silver spoon down the throat, which produced the desired effect, and she came with the tooth in hand and it was to-day again placed in position.

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### Items.

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By G. V. N. RELYEA, L.D.S., Oswego, N.Y.

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After taking a plaster of Paris impression, brush it over with soapstone before pouring. An old worn-out toothbrush is the best. I also coat the model and the opposite with the same before packing. Sometimes I also add a coat of soapsuds.

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Every dentist should prepare his own devitalizer. Put a small quantity of creasote in a large-mouthed bottle, then mix in an equal amount of arsenic, stir thoroughly, into which mixture drop your pellets of cotton sufficient to absorb the mixture.

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### Dental Dots.

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By D. V. BEACOCK, L.D.S., Brockville, Ont.

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Inoculation of bacteria in plants or animals causes their increased numbers, not by multiplication merely, but by modifying the medium in which they move. The normal microzymes more rapidly develop into bacteria.

Microzymes play a very important part in both healthy and morbid processes. They assist in the ripening of fruit, etc. Many of the so-called phenomena of spontaneous generation find their explanation in the all-pervading and minute organisms. Torula are very similar bodies, and are the germs of the yeast fungus.

Bichloride of mercury, or corrosive sublimate, is the most efficient

antiseptic, disinfectant and germicide known ; it acts by coagulating protoplasm, the cell-contents of all organisms.

To delay the setting of plaster of Paris, use a little vinegar ; borax will also retard its setting. Sugar, salt and sulphate of potass. will materially hasten the setting, as well as harden it ; marsh mallow toughens it. Marble dust, mixed with plaster, prevents its expansion, makes it stronger and better able to withstand heavy pressure, especially good for celluloid work.

The sapphire, ruby, oriental topaz, are all mere colored varieties of the mineral substance so well known to dentists as corundum, a pure crystallized alumina, the oxide of the well known metal, aluminum

Hydrochloric acid has no effect on mercury ; sulphuric acid must be heated to effect it much ; nitric acid acts on it lightly ; by taking advantage of this, mercury can be purified easily from lead and many other base metals or impurities with which it is often mixed. Using one part acid to eight parts water, heated to 140 F., will not attack the mercury, and is sufficiently strong to eat up the baser metals the mercury may contain. Another way to purify mercury is to shake it well in pulverized sugar, then filter through a paper cone by making pin holes in the bottom of it. The mercury will filter through leaving the sugar in the paper.

Few probably know the reason why the nine noble metals get their name. When being heated they give up their oxygen, while the base metals do not ; this makes the difference between a base metal and a noble metal.

The advancement of dentistry during the past century cannot be equalled by any other department of science.

Slip a rubber tip, such as is used on the little glass drop tubes, over point or face of your small rivetting hammer, tie it fast with a piece of wire twisted round ; you can hammer away at a plaster model without defacing it, when fitting in an air chamber-pattern or any piece of gold, or other metal, to the model.

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## Silver Amalgam : Is it Injurious to Health?

By MARK G. McELHINNEY, D.D.S., L.D.S., Ottawa, Ont.

Matters relating to the general health are of great importance, and should be carefully studied by all, and more especially by those whose business in life is the amelioration and cure of disease.

The physician and the dentist are continually coming into contact with suffering humanity, and it is as much their duty to enlighten and warn those seeking their services, as it is to study, and, if possible, to cure the immediate cause of suffering; but, in this capacity of teacher, the professional man should be careful to teach only that of which he is certain, and avoid, above all things, the teaching of doctrines that are likely to prejudice the patient and injure his fellows.

While I believe most emphatically in the utmost freedom of opinion, thought, and discussion, I question the right of anyone to state dogmatically any opinion for the guidance of those not fully capable of weighing and considering the same, especially if that opinion be a theory that is, in itself, scarcely established upon fact.

From time to time patients come to us wishing to have amalgam fillings removed, because certain physicians have told them that their ill-health was directly traceable to the presence of these fillings. Often patients will object to having amalgam fillings inserted because certain physicians consider amalgam injurious to health.

If amalgam is injurious, conscientious dentists should discontinue its use. If it is not injurious, conscientious physicians should not prejudice their patients against it.

When an allopathic physician is not quite sure of his diagnosis, he throws the blame on the kidneys, the liver, or other internal organ more remote, and the subsequent history of the case usually shows that he was right. When some homœopathic physicians get to their limit of diagnostic ability, they blame it on amalgam fillings, and the patient immediately collides with a dentist.

In one who is a believer in homœopathy, an amalgam filling often makes trouble. In thousands who never heard of that system, amalgam still continues to serve a useful purpose and without harm.

There are, undoubtedly, many good things in homœopathy. It is a beautifully symmetrical system of medicine, as Kant's philosophy is a beautifully symmetrical system in metaphysics, yet Kant sometimes sacrifices utility to the transcendent beauty of his system.

To establish the contention that amalgam is injurious, it is first required to prove that there is an evaporation of free mercury from amalgam during the hardening process, and, secondly, to prove that the amount of mercury set free is sufficient to produce an effect upon the system. During the past twenty years several tons of amalgam have been put into teeth on this continent by men whose education and skill will compare favorably with that of any other profession, yet no positive evidence of injury has been observed. Amalgam has the field; the charges against it must be proven by its accusers. In default of proof an explanation is due the dental profession for the reflection upon its intelligence and integrity implied in the condemnation of one of its chief methods of treatment.

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### A Point in Hygiene.

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By B.

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There is one point in the prophylactic treatment of the teeth which is not strongly enough enforced, and which may be as plainly mentioned by a few lines as in a volume. In more than one sense the bristle-brush has begun and continued much mischief, in the destruction of the gingival margin, as well as the actual wearing down of the teeth. There is, of course, structurally perfect enamel which resists the most or worst a stiff brush can accomplish; but the gums are ever the same, and they are subjected to an amount of stiff scouring which few people would endure if given to their fingers. I imagine, from my experience of teeth in England and Scotland, and of British teeth in Canada, that John Bull loves a stiff brush as he loves a cold "tub," and treats his teeth to a life-long course of rubbing he would never venture to give a precious flint, and in cases where they do not need it any more than a flint. But the point I wish to note par-

ticularly is, that the brush *per se*, bristle, badger-hair, or what you will, is not sufficient, even with good powder or soap, and that even tooth-picks and floss silk do not suffice. In close or irregular teeth, thin or imperfect enamel; in all forms of local or constitutional affection; in the use of medicines; after the use of the carbohydrates, nothing takes the place of a good mouth-wash, and the art of making it reach everywhere between the teeth. I prefer hot water as a mouth-wash to powder and brush alone. The brush packs food and debris between the teeth. Close your fingers, wash across them with a nail brush, then open them, and see proof. The teeth are more difficult to get between than the fingers. Floss silk often forces debris up to the gingival margin, tooth-picks often destroy the connection of the gums and pericementum. After each meal, after any dose of medicine, after the use of powerful acids in fruits or in liquids, before going to bed, and upon rising, during illness, etc., brush your teeth with powder and carbolic soap if you like, but, if you want to do the best you can do, after doing that, use Dr. Miller's antiseptic, even if you have to cultivate a taste for bichloride. I use it a dozen times a day if I want it, but I only use it twice a day (a.m. and p.m.), as prescribed, and at other times follow it with lots of hot water with a few drops of Cologne. Here is the prescription:

Acid thymic . . . . .	0.25.
Acid benzoic . . . . .	3.00.
Hydrarg. bichloride . . . . .	0.80.
Tinct. eucalypt . . . . .	15.00.
Alcohol absolut . . . . .	100.00.
Ol. gaultheriæ . . . . .	gtt. xxv.

Of course one can use this to produce toxicological action. So one can kill himself with a razor. Therefore, born fools should not handle either.

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## Proceedings of Societies.

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### Manitoba Dental Association.

DEAR SIR,—I received to-day a copy of the DOMINION DENTAL JOURNAL for February, and being moved by your earnest appeals for contributions from Secretaries, I send the following:—



The Board of Directors and Examiners of the Manitoba Dental Association met in the Manitoba Hotel, Winnipeg, on Tuesday, January 10th, 1893. The regular routine of business was gone through, with one important feature, *i.e.*, the extension of the term of indentures for students in this province; whereas formerly but two years and six months were required, now four years' study is necessary before a student can come before the Board for examination and license.

Preliminary steps were also taken to the forming of a Dental Society in this province, and if the movement meets with success, you will no doubt hear of us as we go along.

I do not know how much you are acquainted with the Manitoba Dental Association, nor how much you are interested, but if you have any desire to know further of it, I shall be pleased to inform you on the subject as far as it is in my power to do so.

Sincerely yours,

L. W. MCINNIS, D.D.S., L.D.S.

*Secretary of Board.*

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### The Pan-American Medical Congress.

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The Pan-American Medical Congress, to meet in Washington, D.C., September 5th to 8th, 1893, being an assured success, the Dental Section promises to be well represented.

No other section of the Congress can claim a greater number of men of scientific attainment. In artistic and mechanical skill, in accurate and delicate manipulation where surgery is involved, in bacteriology and histology and rapid progress in its speciality, no other surpasses that of the dental profession. Able papers on the following subjects will attest the above assertion: Cleft Palate; Hare Lip; Orthodontia; Dental Anatomy, Histology and Pathology—New Growths of Every Character Pertaining to the Mouth and Teeth; Diseases of the Maxillary Sinus and Alveolar Processes; Periostitis, Pulpitis and Their Results; Operative Dentistry; Bacteriology; and Mechanical Dentistry, in addition to many other suitable topics.

This Congress being an outgrowth of the American Medical Association, the requirements for membership in this section are

identical with that of the A.M.A., viz., any reputable practitioner, holding the title of D.D.S, or M.D.S. can become a member the same as if he possessed the M.D.

To members of the profession in our sister countries we extend a hearty invitation to visit us and participate in the meeting, either by writing papers or by being present to hear or discuss them. This is especially desirable since the Congress belongs equally to all American countries. Many of you will, no doubt, visit the great World's Fair. This is also the year for the World's Columbian Dental Congress in Chicago. This meeting, however, in no way interferes with the P.A.M.C., since the Columbian comes August 14th to 19th inclusive, and the P.A.M.C., September 5th to 8th inclusive, in Washington, thus offering two attractions in the way of scientific dentistry, in addition to the great Fair. Many of the officers of the one congress are officially connected with the other.

To the Columbian you are an invited guest ; at the Pan-American you are participating in an institution as much your own as ours.

To the dental profession in the United States we would suggest that in taking part in this, the first meeting of the P.A.M.C. we are the hosts, and our duties as such need not be rehearsed.

The excess of dental practitioners in the United States over our sister countries will necessitate a careful selection of topics and papers in order to present the highest standard, the object being not numbers, but quality of material and ample time for discussion.

The social feature of the Congress will be no small part of the attractions.

Respectfully,

M. H. FLETCHER,

*Executive President of the Section on Oral and Dental Surgery  
of the P.A.M.C.*

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### Educational Changes in Quebec.

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Certain changes having been made in the Dental Board of Examiners of this Province, and the "Dental College of the Province of Quebec," the revised list is as follows. *Dental Board of Examiners*: President, S. Globensky, L.D.S. ; Vice-President, Edward

Casgrain, D.D.S., L.D.S., Quebec ; Secretary, George W. Lovejoy, M.D., L.D.S.; Treasurer, J. C. Nichols, L.D.S.; Registrar, T. A. Venner, D.D.S., L.D.S., Quebec ; A. W. Hyndman, L.D.S., Sherbrooke ; E. B. Ibbotson, L.D.S., Montreal. W. Geo. Beers retires after a continuous connection from the birth of the Board twenty-five years ago.

*Dental College* of the Province of Quebec: Honorary Professors, Charles Brewster, L.D.S., C. F. F. Trestler, M.D., L.D.S., J. A. Bazin, L.D.S., H. D. Ross, D.D.S., L.D.S. (Quebec), S. J. Andres, L.D.S.; Dean and Professor of Dental Pathology and Therapeutics (English), W. Geo. Beers, L.D.S., (French), L. J. B. Leblanc, L.D.S.; Professors of Dental Prosthetics—(English) Newell Fiske, L.D.S., (French) S. Globensky, L.D.S.; Professors of Dental Surgery and General Pathology—(English) Geo. W. Lovejoy, M.D., L.D.S., (French) — Delisle, M.D.; Professors of Operative Dentistry—(English) F. A. Stevenson, D.M.D., L.D.S., (French) J. H. Bourdon, L.D.S.; Professor of Dental Jurisprudence, Arthur P. Globensky, Esq.; Sessional Demonstrators, J. C. Nichols, L.D.S., J. G. A. Gendreau, L.D.S., E. B. Ibbotson, A. McDiarmid, L.D.S., J. Globensky, L.D.S., J. S. Ibbotson, L.D.S., W. S. Nichols, L.D.S., W. J. Giles, D.D.S., L.D.S., W. G. Throsby, L.D.S., A. Hope Beers, M.D., D.D.S., L.D.S. (Montreal), Edward Casgrain, D.D.S., L.D.S., H. E. Ievers, L.D.S., J. Paradis, L.D.S. (Quebec), A. Lanthier, L.D.S. (Three Rivers), C. H. Wells, L.D.S. (Huntingdon), A. W. Hyndman, L.D.S., G. E. Hyndman, D.D.S., L.D.S. (Sherbrooke), J. Lauder, D.D.S., L.D.S. (Cowansville). Honorary Instructors, D. V. Beacock, L.D.S. (Brockville), Geo. H. Weagant, L.D.S. (Cornwall), Fred. Capon, D.D.S., M.D.S., L.D.S. (Toronto).

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## Correspondence.

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### World's Congress—Important Notice.

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SIR,—The following communication was received from President Bonney, of the World's Congress Auxiliary, which necessitates a change in the time of meeting, and also a rearrangement of the order of business for the World's Columbian Dental Congress :

“ The Dental Congress has been assigned generally to the week

commencing Monday, August 14th, 1893. The 'ongresses of Science and Philosophy have been assigned to the week commencing Monday, August 21st, 1893. With more than a hundred congresses to provide for, you will readily understand the extraordinary difficulty of making suitable arrangements for each, but the extra provision which has been made for the places of meeting will render practicable arrangements, which, under the ordinary circumstances, would be simply impossible. When the congresses were first proposed, we expected to have only one large audience room, with a suitable number of smaller halls; but as the World's Congress work enlarged the places of meeting were also made more adequate. As the World's Congress Art Palace is now planned, there will be two large audience rooms, capable of accommodating three thousand persons each, and more than twenty smaller halls, which will seat from three hundred to seven hundred persons each; thus providing for no less than thirty-six large meetings, and three hundred and sixty smaller meetings in a single week, by holding morning, afternoon and evening sessions. Among the other congresses assigned to be held in parallel with the Dental Congress, are those of Pharmacy, Medical Jurisprudence and Horticulture. For all these the accommodations will be adequate. You understand, of course, that everything in the nature of an exhibit is required by the Exposition authorities to go to Jackson Park. The congresses deal not with things, but with men, not with matter, but with mind."

In accordance with the above statement, the time of meeting will be from Monday, August 14th, to Saturday, August 19th, inclusive.

Please note this change in your journal.

Yours very truly,

A. O. HUNT, *Secy.*

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### The Old and the New Education.

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SIR,—From a long observation of dentists, I have come to the conclusion that, so far, the old education had some mysterious effect in producing active and able men that the new has not. I am a college graduate myself, and know of what I write. Looking back for the last twelve years at the list of graduates of one of the lead-

ing colleges over the border, from which I graduated, I discover only about half a dozen names, out of several hundreds, of whom we ever hear from in the pages of any of the United States dental journals! I discovered also that even until a recent time, the large majority of the most active and able men over the border in the dental societies, journals, etc., are men who never attended college, or who were given the degrees honorary.

No one can for a moment doubt but that the same is true in Canada, not only of the men who began and largely carried on the reform movement in the profession, but of the same to-day. In the last announcement of the R. C. D. S., there are one hundred and thirty-six "licentiates who are doctors of dental surgery." How many of these have we heard from in our journals and societies? I am ashamed to answer this question. I believe they are able to contribute their quota to our literary and scientific needs. Why do they not? Of course there are several very honorable exceptions; but what of the ninety-and-nine?

Yours,

OLD TIMER.

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## Obituary.

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**R. Hugh Berwick, M.D., L.D.S.**

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We have to deplore the death, after a long illness, of one of the most brilliant and promising of our Quebec Province dentists, at the early age of twenty-six.

Dr. R. Hugh Berwick was indentured as a dental student to Dr. S. J. Andres, of Montreal, and after two years' application he began the study of medicine at McGill Medical University, in which severe effort he, no doubt, suffered permanent injury to a constitution by no means strong. After completing his dental course and receiving his license to practise, he completed his medical studies, and graduated as Doctor of Medicine in McGill two years ago, intending gradually to confine his attention to oral surgery. Last year he was appointed dentist to the Montreal General Hospital, and faithfully did valuable service in that connection. He was a most active member of the Odontological Society of Quebec; was

its treasurer one year, and read several valuable papers, which we sincerely regret we could not induce him to publish. Under the head of "Reviews" we publish a posthumous review by him of a book received.

At the organization of the Dental College of the Province of Quebec he was chosen to fill the important chair of Dental Surgery, Histology and General Pathology; but about two weeks before the session began he was obliged to go to the Montreal General Hospital, without having entered upon his work, where he died of phthisis on the 20th of January last. As treasurer of the College he had entered upon his duties, and assisted the organization in every way in his power.

Resolutions of regret at his death were passed by the Faculties and students of the College; also by his medical confreres.

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## Selections.

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### Filling the Roots of Second Molars.

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The following question has been sent us, with the request that it be answered in these pages:

"If a superior second molar, with pulpitis and pericementitis to the extent of soreness is presented, and you decide to destroy and remove the pulp and fill the roots, how would you proceed in detail, the patient being in good general health and the mouth in fair condition?"

The second molar presents but few complications that are not found in the first. It is further back in the mouth, and hence a little more difficult of access, but the roots or pulp chambers do not differ materially. The first symptom that demands attention is the pulpitis, for the pericementitis is dependent upon that. If there be considerable congestion of the pulp, it sometimes is not easy to destroy it without considerable pain. Usually, however, this will yield when the cavity of decay, which we will assume is the cause, has been cleaned out, and the pulp thoroughly exposed and bled. If not, tincture of aconite will give relief.

Of course it makes a great deal of difference where the cavity of decay is. If it is in the occluding, or mesial surface, there will

be little trouble. If it is upon the distal aspect, the task will demand more care and skill. In either case, the cavity should be thoroughly rinsed with warm water, using repeated douches. With enamel chisels the cavity should be opened up so as to allow free access. The rubber dam should be applied, and the cavity dried out with the hot air blast. Usually this will obtund the tissues sufficiently to allow working without severe pain. If it does not, carbolic acid may be used, and the decayed tissue and debris should then be as thoroughly removed as possible. All pain will by this time usually have ceased. If it has, the pulpitis will give no further trouble. If not, medication with aconite may be necessary. If there be excessive tenderness in the living pulp, this may be overcome by applying a solution of cocaine.

I know of no better devitalizing application than that recommended by Dr. Miller, in the July number of this journal. It consists of equal parts of arsenious acid and cocaine hydrochlorate, mixed into a paste with a sufficient quantity of carbolic acid. A little—a very little—of this should be placed in a minute cup of tin or lead, prepared as follows: From a sheet of taggers tin, or rolled tin, or lead, punch out, or with the shears cut out, a disk of a sufficient size to cover the bottom of the cavity. Place it upon a piece of soft wood, and with the rounded end of an excavator handle indent it until it has a cup-shaped depression. Put the arsenious acid mixture in this, and carry it to place over the exposed pulp.

My usual way is to cover this with a pledget of cotton dipped in chloro-percha. Miller recommends the oxy-sulphate of zinc, or even plaster of Paris, and these no doubt have their advantages. But by the use of the protecting disk, pressure upon the exposed pulp by a cotton plug may be avoided. I leave this application in the cavity about forty-eight hours. It may probably be left longer without danger, but at the end of two days I usually find the pulp thoroughly devitalized, and without much sensation.

At the end of this time the dressing is removed, using the rubber dam as before. The pulp chamber is opened thoroughly, and an antiseptic introduced. This may be one of the essential oils, or it may be our old and much abused, yet excellent friend, carbolic acid. I propose to coagulate the ends of the dentinal fibrillæ, if it has not already been done, which is most probable. The cavity is

then sealed up again for another two days, when it is once more opened under the same precautions as before. A delicate Donaldson barbed broach is now introduced into the root canals, turned a little and withdrawn, usually with the pulp clinging to it. I do this for each of the three roots—if I can—then introduce pledgets of cotton upon a delicate smooth broach, carrying them as near to the apex of the roots as possible, and again seal the cavity up, unless there be some urgent necessity for haste.

When I am ready for filling the roots, I do it with chloro-percha, pumped into each with a smooth broach. When I am satisfied the root canal is full, I introduce a gutta-percha point, and that root is supposed to be effectually sealed for all time.

I said that I go to the apex of each of the three roots if I can. Unfortunately this is not always practicable. I may state it stronger than that, and say that it is not often possible. The conformation of the roots will not permit. There is usually but little difficulty in finding and reaching the apex of the lingual root, but the other two are not as accessible. In the first place, both the anterior and posterior buccal roots are frequently curved, the flexure usually being forward. This makes the anterior root canal hard to find and follow, even if the opening be patulous. If the cavity of decay be upon the distal surface, it is absolutely essential that it be extended up through the coronal surface, quite to or past the central pit. The openings of all the roots must positively be uncovered.

If with a delicate broach I find that I cannot penetrate either canal, or for but a short distance, I seal the cavity up with gutta-percha, first introducing into it a small pledget of cotton, wet with an antiseptic, and leave it for a week or ten days. By this time the contents of that canal will have sloughed away, or at the least will have separated from all attachments, and will come away of its own accord, without putrefaction. I can then treat and fill the canals as well as possible. If they are too small to admit the most delicate broach, I have not much fear of their containing sufficient matter, even though it have putrescent possibilities, to cause any harm. I cannot believe that the contents of the dentinal tubuli ever become septic. The tubuli are too small to permit the entrance of putrefactive organisms, or if not, the amount of putrescible matter is not sufficient to produce septic complications.



To a much less extent is this true of those root canals that are too small for the entrance of a fine broach. If time enough be given for the sloughing of the canal contents, and if then they are subjected to the penetrating action of an antiseptic, and finally if the mouth of the canal be hermetically sealed with gutta-percha, I will take my chances with it. There is, in fact, nothing else to do, for my wildest flights of imagination do not reach to the point of successfully drilling out such roots as these, with any possible kind of a drill.

The posterior buccal root has even another possible complication. It is apt to be wide and flat, and very thin in the centre, the canal having the same characteristics. At either lateral border of the root there may be a channel, while in the centre it is very much constricted, or even obliterated. There may be chambers somewhere along the course of the canal, which it will be utterly impossible thoroughly to clean out. There is absolutely no way of removing any pulp tissue from them, except by the slow process of allowing it to disintegrate and slough out, antiseptics being excluded, for they would tend to prevent this. If the pulp chamber be open, this may sometimes be permissible, trusting to the penetrative power of antiseptics thoroughly to cure them afterward.

But with the utmost care and thoroughness there will be cases presented in which it is quite impossible to be sure of the condition of the roots. At least I find it so in my practice, for I am not one of those who can see to the bottom of an impenetrable root canal. But with thorough antiseptic treatment, I have little fear of any subsequent trouble from such roots.

It may be urged that all this is a very tedious and prolonged process. Well, if the dentist is not prepared to give to the case all the time and attention necessary, he had better not undertake it. The proper treatment and filling of the roots of a superior second molar tooth is a process that requires care, and patience, and skill, and he who does not possess enough of the last two to insure the first, can never take rank as a successful operator.—*Dr. W. C. Barrett, in Dental Practitioner and Advertiser.*

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## Teeth and Toothache.

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Of teeth it may be said that that man is happiest who is unconscious of them. We do not mean as an ornament. It is true that some peoples, as Montaigne says, "take great care to black their teeth, and hate to see them white; whilst others paint them red." Europeans have a taste of their own in the matter, and love to see them white. For proof consult contemporary fiction *passim*, where even the villains have a fine set to show, and know it. Let Herrick sing of the rubies and pearls of his Julia's mouth; teeth for the present purpose are not jewels. They are to be regarded as the "*fons et origo mali*," and that evil is toothache.

Toothache is as old as sin, and as universal. To erring man it might figure as a form of final torture. It must have been part of the punishment of our primeval parents, whose doom we inherit. The first that an infant knows of teeth is pain; from the cradle to the grave they are an active source of annoyance. Some there be, indeed, who say not without pride that they never had a touch of toothache in their lives. But call not a man happy till he is dead. Hereafter writhing in anguish, they shall assuredly repent the premature boast. And there are strong men and the like who misuse their teeth to lift surprising weights, or, emulating that terror of the Spaniards and hero of the *Revenge* Sir Richard Grenville, chew glasses up without a grimace. "Blind mouths" (to pervert Milton's phrase), they do not look to the end—the fevered gums, the dull unceasing ache, the shooting spasm, as if a red-hot needle were thrust into the brain. If a man does altogether escape the fell disease, one is tempted to ascribe to him a low order of nervous organization. He must be "only an animal, only sensible in the duller parts." Nay, he is even lower than that, for animals, too, have toothache, and especially such as possess a high degree of intelligence. The dog and the horse are well-known sufferers. On the authority of a quaint old French book on the subject, we may add the wolf; and the hippopotamus "endures quite a great pain from its teeth, so that it is constrained to get out of the water to find a remedy."

This book is one of the earliest modern authorities on toothache that we have discovered. It is scientific, as science went in 1622. Its author, one Maistre Arnauld Gilles, was apparently court dentist

for he dedicates his book to Marie Henriette de Bourbon, sister to the reigning king ; and it is published at the appropriate sign of the Three Golden Teeth, in Paris. It is remarkable, we may say in passing, that the literature of toothache is so meagre. An ailment of such ancient standing in the world's history might be expected to obtain more frequent and detailed notice. Such modern treatises as exist are purely technical, and undeserving of the name of literature. There is in them nothing historical, nothing human and sympathetic to the view of the sufferer. Even in the ordinary life of to-day there is no disease which gains us so little pity from our friends. It is not fatal, they say, and are apt to be impatient with our groans. And we ourselves, once the attack is over, straightway forget what manner of torture it was, and go unthinkingly about our daily business. Now, this is surely wrong. It may be true that toothache never killed anybody directly ; but assuredly, if analogy goes for anything, it has been the cause of crime and death. Imagine an absolute monarch with an obstinate tooth. It would be a grim amusement to him, almost a necessity, to sign a death-warrant. There have been martyrs to toothache in another than the ordinary usage of the term.

But to return to Maistre Arnauld. The first thing to note is that he advises the specialization of dentistry. "It is very necessary that dentists should have no other vocation." He has known instances where patients have died from hæmorrhage because the ignorant drawer of teeth did not know how to stop the bleeding. The world, he says, by way of peroration may think the title "Drawer of teeth" strange, and perhaps despise it. But Maistre Arnauld glories in it as very useful to the public, "and does not do, like an infinity of others, who, coming to this town [of Paris], call themselves grand operators. He is happy to do his task well, to take the little fee that is given him, and is never ill-content." It is only lately that in England the Royal College of Surgeons recognized dentistry as a special branch of medicine. Some twenty-five years ago their dental certificate was established. Before that, the craft was confined to tooth-drawing mainly, and had for its professors the local barber, blacksmith, or watchmaker. We are now beginning to see that unlicensed practitioners do a lot of mischief. The ancient Egyptians were before us in this field ; for Herodotus tells us that no doctor in Egypt was permitted to prac-

tise any but his own peculiar branch, and some attended solely to diseases of the teeth. Proofs of their skill have been found in some mummies at Thebes whose teeth were stuffed with gold.

So much for the disease ; but what of the cure ? Maistre Arnauld gives several prescriptions, but they are commonplace compared with more ancient remedies. Here are two methods from Pliny : Put your hands behind your back ; bite off a piece of wood from a tree which has been struck by lightning, and apply it to the ailing tooth. Or you may fumigate the tooth with the tooth of another of the same sex—how that is done we are not told—and bind the canine tooth of an unburied corpse to it. Habdarrahman on Egyptian medicine advises that the molar of a dead man—whether buried or not apparently does not matter—be hung over the groaning sufferer, and the pain will abate. Others, again, say : “ Burn a wolf’s head and keep the ashes. They are a great remedy.” It is difficult to cap the piquancy of such cures ; but Sir Thomas More has done it, and his prescription has the advantage of not requiring such inaccessible materials. “ I have heard it taught me,” he says in 1557, “ for the toothache to go thrice about a churchyard and never think on a fox’s tail.” This reminds one in its malicious pleasantry of “ Don’t nail his ears to the pump ” ; for the suggestion of foxes’ tails in connection with churchyards, though not very obvious to the common man, must always and inevitably recur to those who tried the cure.

The man in dental anguish sometimes curses with Burns “ the venom’d stang that shoots his tortured gums along.” Sometimes, on the other hand, he prays. St. Augustine in his *Confessions* relates how he once suffered from “ *dolor dentium* ” (toothache), apparently in an aggravated form, for he could not speak. Thereupon he wrote on wax a prayer to God for the other brethren to repeat ; and as soon as all were on their knees the pain went. “ But what a pain ! ” he says—“ never since my tender age had I experienced the like.” Southey, in his *Life of John Wesley*, tells of that eminent preacher that when his own tooth ached he prayed, and the pain left him. Unfortunately, ordinary men do not seem to have such efficacious faith. When the excruciation begins they must bare it philosophically ; and on Shakespeare’s authority toothache finds out just the weak place in the philosopher’s armor of patience. In the middle ages the devout who were racked with

pain had a special patron to whom they could turn for deliverance. St. Apollonia, a martyr under the Emperor Philip, among other cruel indignities had her teeth pulled out. In consequence, she became toothache's tutelary saint, as her emblems—one of which is "holding a tooth in pincers"—sufficiently testify. And there would seem to have been yet another martyr, St. Blaize, who took cognizance of the disease. He was honored in the little town of St. Blazey, in Cornwall, where candles offered upon his altar were supposed to be an infallible cure for toothache.

Perhaps something may be added on the subject of toothpicks. These are said to have been invented in Italy. Certainly they were in common use among the Romans. In Martial's Epigrams there are frequent references to the "*dentiscalpium*," sometimes reviling its abuse, sometimes praising its use. The particular form of toothpick which Martial preferred was a pointed strip of mastic-wood; but, in default of that, he recommends a quill. Singularly enough, the useful instrument was regarded as an innovation in Queen Elizabeth's time. The Bastard, in *King John*, sneers at

Your traveller—

He and his toothpick at my worship's mess.

Travellers in France and Italy, it seems, brought toothpicks back, and used them ostentatiously; and all those who affected foreign fashions sedulously imitated them. Commonly a case of toothpicks made of wood was carried about by fine gentlemen. A more violent eccentricity of fashion is pointed at by Sir Thomas Overbury, who describes a courtier as walking in St. Paul's "with a picktooth in his hat, a cape cloak, and a long stocking." Apparently the "Johnny" of the present day, who is so unremitting in his use of the homely quill, has inherited the toothpick and his flourishing display of it from the coxcombs that thronged the court of the Virgin Queen.

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## Editorial.

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By a typographical error, the name of Dr. Rodrigues Ottolengui was incorrectly spelled in our last issue.

We are glad to announce that Dr. James Stirton, of Guelph, has accepted the position of co-editor of this journal, and will attend specially to the interests of the Ontario profession. We would thank our exchanges to send their *duplicates* to his address.

### Dentists in Quebec.

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To the square mile, Quebec will soon have more dentists, lawyers, churches, convents, charitable institutions and rum shops than any other civilized place of its size. It is not the wants of the public that are bringing this about. So far as dentistry is concerned, the reason may be found in the fact that there are always a lot of young men in search of easy and money-making employment, and there are lunatics at large who imagine that dentistry embraces these to perfection! The other reason is, that the loud-advertising dentists have led the public to believe that any fool can be a dentist, that any dentist can make more money than he knows how to use; and that somehow or other, a dentist need not pay his landlord or his tailor, if he does not feel inclined.

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### Dr. G. V. N. Relyea.

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Our readers will be glad to hear this month from Dr. G. V. N. Relyea, now of Oswego, N.Y., formerly of Belleville, Ont. Dr. Relyea was one of the pioneers of the first legislative movement in Ontario, and was one of the members of the Board of Provincial Examiners and Trustees, of the R. C. D. S. of Ontario, with Drs. Day, Chittenden, H. T. Wood, J. O'Donnell, J. S. Scott, F. G. Callendar, A. D. Lalonde, C. Kahn, J. B. Meacham, G. L. Elliott, and J. Leggo. Dr. Relyea was one of the very active men of the time, and was appointed one of the regular Board at a subsequent meeting of the Provincial Board, held in Toronto.

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### World's Dental Congress.

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It will be noticed that the time of meeting has been changed. From Monday, August 14th, to Saturday, August 19th, inclusive, is the date now assigned the Dental Congress. We intend soon issuing special information as to rates, accommodation, etc., for dentists from Canada. A scheme is on foot for the centralization near the grounds of the accommodation, where the dentists of the Dominion might have a little Canadian Congress of their own, to get known to each other.

### Our Cousins Over the Border.

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Occasionally some of our cousins from over the border steal away from the monotony of the dental chair to brace up for a few days in our glorious winter climate. After imperilling their necks on the Canadian toboggan, stiffening their shanks on the snowshoe, revelling in the delights of sleigh-driving over the dry and intoxicating Canadian snow, they go home again and say kind and complimentary words of the Canucks, even in spite of a frost-bite. Every busy dentist instinctively appreciates the misery of his confrere who is tied to practice; and we never yet met one who did not introduce himself with an apology for "encroaching upon your time." It is really too bad that we cannot keep an hour a day just for a good gossip with such welcome visitors. We Canadian dentists are under great obligations to our good cousins for many professional courtesies, and yet we cannot possibly discover any adequate means of reciprocity. It often strikes us, that if we could turn out all the politicians in both countries, and put the dentists in their places, the broad Republic and the broad Dominion would pull together in perfect commercial and political amity, the one under the Stars and Stripes, and the other under the Union Jack.

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### The Kids.

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One of our little patients dreamed she saw the devil. Her parents had threatened her with the dentist, and that was enough to shape the personality of the objectionable party. He had the traditional horns, hoofs and tail. In one claw was a pair of dental forceps. His face was that of the family dentist!

It is easier to keep than to get the confidence of young children; but there are kids, seven years old, who march into the office with all the beautiful trust of a child who has never been deceived, and whose confidence is as complimentary to the parents as to the dentist. It is your fussy, nervous, talkative woman who spoils these youngsters. If they cannot make them associate the dentist with Santa Claus, they can, at least, educate them in such self-reliance and self-trust, and especially they can leave them and the dentist alone. Most of us can best manage children when the parents or governesses are out of the way.

## Personal.

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There are over thirty dentists in the Masonic Temple building, Chicago. They are all high up.

There is to be a new dental college in New York. New York is big enough for two good ones.

Dr. R. Ottolengui has made a hit lately as a novelist. He is soon to abandon the misery of life and become a benedict.

Dr. W. D. Miller has issued, through a firm in Leipzig, a second German edition of his work on the "Micro-Organisms of the Mouth." We will soon have it in English.

One odd number, April, 1892, of the *Dental Headlight*, Nashville, Tenn., has also strayed over here in the last thirteen years. Any others found coming will be gladly received by special.

Dr. R. A. Holiday has retired from editorial connection of the *Southern Dental Journal*, Atlanta, Ga., and Dr. H. H. Johnson succeeds him. What about that Congress of Dental Editors next August in Chicago?

Dr. W. C. Barrett was recently made a member of the Delta Sigma fraternity of Chicago. What a weighty contract they had if they had to "bounce" him. But perhaps they have got past the common blanket for that purpose in Chicago, and do it by steam or electricity.

Three odd numbers of the Texas *Dental Journal* have been blown over the border in the last ten years, probably by a cyclone. If any of our readers between Canada and Texas find any more addressed to the DOMINION JOURNAL, they would oblige us by sending them by special express.

Toronto and Montreal were recently hastily visited by Dr. Chas. J. Essig, Professor of Prosthetics and Metallurgy in the University of Pennsylvania; Dr. T. C. Stellwagon, Professor of Physiology, Philadelphia Dental College, and Dr. Frank Abbott, Dean of the New York Dental College. We have to thank Dr. Essig for a copy of the transactions of the Pennsylvania and New Jersey State Dental Societies, July 21, 1892. The discussions on dental education are specially interesting to us in Canada, and we will take an



early opportunity to show our friends a few points in which we in Ontario and Quebec have been ahead of them for nearly a quarter of a century.

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## Reviews.

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*The Essentials of Histology, Descriptive and Practical.* By E. A. SCHAFER, F.R.S., Jodreel Professor of Physiology in University College, London; Editor of Histological Portion of "Quain's Anatomy." 311 pages, 315 illustrations. Philadelphia: Lea Brothers & Co. \$3.00.

The editor has received the third edition of Schafer's *Histology*, which, in its new revised and enlarged edition, will make this already popular text-book much more appreciated by students. The work is nicely bound, and the printing is admirably done. The different sized type used for the headings and words which are to be emphasized, makes it much more easily read and reviewed. The book is nicely divided into lessons. The first few lines of each relate entirely to practical histology, describing the different or most approved methods of preparing the tissues treated of in the chapter for microscopical examination and study. We have read the chapter relating to the tissues of the mouth with much pleasure and we will take much pleasure in recommending it to dental students. The cuts or diagrams are numerous and very good. The appendix contains much valuable information, giving the formulæ for the different fluids used for preserving and staining the tissues, also how each tissue should be prepared. It is written in a clear and concise manner, and easily understood. It is nicely divided into chapters, which contain about the required amount of material for a lecture. At the beginning of each chapter there are a few notes on the mode of preparing the tissues described in the rest of the chapter. What most interests us is the chapter on the digestive tract and organs. In this the histology of teeth is briefly and clearly described, and the illustrations are good. The teeth are briefly but clearly dealt with, and the plates are very good, and all that we regret is the brevity. We would strongly recommend it as a text-book for medical and dental students.

R. H. BERWICK, M.D., L.D.S.