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# DOMINION DENTAL JOURNAL

(Official Organ of the Canadian Dental Associations.)



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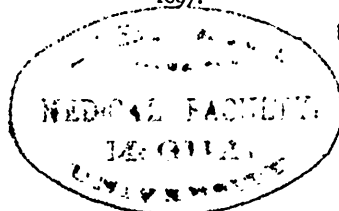
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SIR EDWIN SAUNDERS

# Dominion Dental Journal

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## Original Communications

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### SIR EDWIN SAUNDERS.

In this sixtieth anniversary year of the reign of our beloved Queen, it occurred to us, that this JOURNAL might not inappropriately publish the portrait of Her Majesty's dentist, Sir Edwin Saunders. Apart from the distinction conferred upon him, Sir Edwin has been a life-long benefactor to the cause of dental education in England, and through his efforts and generosity, the present fine structure occupied by the Dental Hospital of London, and the London School of Dental Surgery, in Leicester Square, replaced the less commodious premises in Soho Square, and was opened in March, 1874, to which another wing was added, in 1883, by the munificence of Sir Edwin. The politics of dentistry in England demanded upon the part of a few gentlemen the most unwearied energy, not only in organization, but in defeating the faction which wanted free-trade in practice. When the editor of this JOURNAL, in 1868, established the first dental journal in Canada, Sir Edwin wrote him a kindly note of encouragement, and from time to time has shown an interest in the organization of the profession in this American outpost of the Empire. The photograph, which was sent personally to the editor, was not sent for publication, but we venture to believe that Sir Edwin will accept this Canadian tribute, in the same spirit with which he received the portrait now hanging in the hospital in Leicester Square. Through the distinction conferred upon him and the late Sir John Tomes, the dental profession has been honored, and enjoys in the presence of Her Majesty an equal social rank with medicine

and surgery. Sir Eric Erichsen, when presiding at the presentation of the portrait of Sir Edwin to the Dental Hospital of London, remarked that "Sir Edwin Saunders has well deserved the honors that he has gained, for he has not only secured—and was happy in so securing—at an early period of his life, the confidence of the most illustrious personage in this realm, but he has retained it, I may say, down to the very present time; and that honor which it pleased Her Majesty to confer upon him, might not only be considered a personal distinction, and a distinction conferred upon his branch of the profession, but also a mark of personal favor shown by Her Majesty to a trusted servant, and to one from whom she had received the greatest possible comfort and solace. But it had not been the lot of Sir Edwin Saunders merely to owe his position to the favor of princes—of whom it may be truly said, *Principibus placuisse viris non ultima laus est*. He has done much to deserve public gratitude and public favor outside of his profession."

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### PROFESSIONAL ENTHUSIASM AND PRACTICAL SUGGESTIONS.

By S. B. PALMER, M.D.S., Syracuse, N.Y.

To the readers of the DOMINION DENTAL JOURNAL, and professional brethren in Canada. The discharge of official duties in connection with the Board of Censors for the Dental Society of the State of New York for twenty-seven years has allowed me to become acquainted with a large number of young graduates who have presented diplomas, from various colleges in the Union, for certificates to register in the State of New York. This duty is now performed by the Board of Regents, under direction of the University of the State of New York, whose requirements are, that no one can matriculate in any dental college in this State without a four years' course in a High School, after January, 1897. Nor can any diploma be received from out of the State, for registration, unless accompanied with a like certificate of preliminary education. This is a progressive step to entitle the dental profession in the State of New York to rank with that of medicine. The acquaintances above mentioned have largely been with young graduates, and it is cheering to witness the student as he stands upon the stage to receive the diploma and degree, and farther on, when producing his qualifications and rights to a certificate for registration. The enthusiasm manifested on such occasions is not to be criticised—it is a natural stimulant adapted to that age and condition.



Schiller very aptly puts it in the following lines:

"Into life's ocean the youth with a thousand masts daringly launches;  
Mute in a boat sav'd from wreck enters the greybeard the port."

The writer is mute in regard to instructing those of experience with his own, but we trust the younger members will kindly receive suggestions for practice from any and every source.

The first point suggested is upon the many ways of doing; and various results obtained. That is, in discussions much time is consumed and no point definitely settled because the conditions are lost sight of. Operative dentistry is a science. One simple canon put to practice would harmonize differences and present facts. "Under the same conditions, with the same materials, the same causes will produce the same effects." We will illustrate our teachings by practice.

More than a score of years ago, I commenced to reinsert gold fillings which had become loose or fallen out, most generally contour fillings in the incisors. It is practical and successful, and in teeth, as we often find in age where the structure is soft, a replaced plug will remain longer than a new one, because there will be no decay under a filling set in cement. Most failures occur from lack of cleaning the surface of the gold. Take any displaced gold filling and heat it—it will turn black from the carbon which coated the surface. The quickest method to clean, or most effectual because it gives a roughened surface, is to scrape the surface with an excavator or point of a finishing file. Unless the cement comes in contact with the gold, there will be no adhesion. The same treatment will apply to bands for regulating as well as for crowns.

The object of introducing this subject is that the inexperienced may understand that success or failure is the effect of causes which should be well understood, and thereby the evil avoided. There has been wide differences of opinions in relation to the use of gold for filling a class of teeth defined by the usual calcified teeth of children. Of course age does not determine the condition, only we find that at the age of twelve years teeth are not sufficiently calcified to warrant the use of gold, without a lining of some material that will supply the lack of the mineral element in the dentine. We find this condition at various ages up to twenty or more years. Knowledge and good judgment would teach any operator the folly of transgressing or violating a natural law, and the law is this: When the organic constituents of dentine are out of proportion to the mineral matter, to a degree that the filling is in contact with living tissue instead of normal dentine, that surface portion, by reason of thermal changes, becomes devitalized. Nature does not deposit lime salts to harden dentine in contact with metal, as it does under a nonconductor like gutta

percha, and what is the result? The lining thus devitalized becomes a field for culture of bacteria, etc., according to the doctrines taught by Professor Miller. It is well known that the writer holds to views, which have been set aside by the declaration of the highest authority in the world. There is no conflict in science. I give hearty endorsement to the general teachings as to the cause of dental caries. It is well known that the writer has advanced ideas respecting secondary decay, or decay around gold fillings, or, in other words, that gold exerts electrolytic influences, by which the lime constituents of dentine are dissolved prior and independent of the process of fermentation and the production of lactic acid by micro-organisms. This belief comes from experiments scientifically conducted upon another phase of conditions with results true to the circumstances; they do not conflict with other investigations, but are pronounced as without foundation. This, however, is of little moment and not worth mention at the present time, except as mention may be made of principles belonging to this theory that have been declared without foundation. The practical benefit of mentioning the treatment of teeth that must be filled with gold, where time or circumstance would prevent the better way of first filling with gutta percha, is to line the walls of the cavity with some nonconducting material such as chlorobalsam or other hard varnish and cement, such as used for setting crowns. The object of this lining is to fill the tubuli and roughened surfaces of the walls, of the cavity with a material which will fill the minute spaces into which gold could not be forced. We have already mentioned the effects of leaving the cavity walls as might be done safely with normal dentine; that is, the devitalized surface decomposes, which process is carried on by the united effects of electrolysis and fermentation. Every observer knows that the dentine becomes more quickly inflamed under a loosened gold filling, than it would with a loose pellet of gutta percha or vulcanite. We have found at the close of a day's work that a gold filling had started from its anchorage. On return of the patient the next morning the dentine was exceedingly sensitive. Had the filling been tin, very little chemical change would have occurred, or even cotton without medication would have saved much sensitiveness. Right here comes in the other force of lactic acid from micro-organisms. In either case one remedy will answer, namely, insulation, or in the case of normal dentine, a perfect filling. First let us consider varnish, which may be used under any gold filling except upon enamel where contouring is necessary. Varnish is not admissible upon enamel, that is, the gold has no mechanical bite, but slides and allows the filling to crumble. Before leaving this lining, there is no place where it does better work than under gutta percha. It is not necessary to have the varnish dry in any case. When gutta

percha is placed in a lined cavity, each piece becomes cemented to the place, the surface of the warm material unites with the gum, and the heat also forces the melted lining into every fissure or scratch in the dentine. When such fillings are removed the lining is the last that remains to be scraped away. The same insulation is practical under amalgam, as it prevents discoloration of the dentine and enamel, also chemical action upon the plug which comes in contact with the dentine. Again, its use is indicated where the dentine is inflamed or in close proximity with the pulp. The crowning principle is this, without moisture there can be no microbes, no galvanic current, no decay. The next and not less important foundation for fillings is cement, zinc phosphate, etc., which is indicated specifically as follows: As a lining or compound filling under amalgam, for shallow buccal cavities to be faced with amalgam, as anchorage for gold fillings in teeth with frail walls which would not bear solid all gold fillings. In accordance with the law given at the introduction, each condition demands special treatment to insure positive results.

I find that this article is already too long, and I will close by repeating that in all operations try and get definite ideas of what is needed to be done, know and remember how it was done, and also note the results. Let science be your guide; with care, thought and close observation you will be able to materialize theories into facts.

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## METAL PLATES.

By L. P. HASKELL, D.D.S., Chicago, Ill.

In response to your request for an article, I hardly know what to write about, as you have given me no text. Perhaps the subject above indicated will be profitable, in view of the vast amount of injury done to the alveolar process by the retention of undue heat, owing to the non-conductibility of rubber, of which I have been a close observer since its introduction about thirty-nine years ago, having previously had thirteen years' experience in metal plates. As aluminum is now so cheaply produced, and making as it does a rigid, light, cleanly, unobjectionable plate, there seems to be no reason why any patient should wear rubber for *permanent* work. Not only this, but better results in fit and adhesion can be obtained in difficult cases than in the use of rubber.

A plaster impression I hold to be indispensable in all cases. It must be taken high over the cuspid eminence, as plates should be higher, and gum fuller, here, in all cases, than elsewhere, in order to restore the contour of the lips.

No air-chambers are needed, but as the centre of palate is hard, and the only portion of the upper jaw which never changes, while the process to a greater or less extent absorbs, a "relief" should be placed over the hard centre to prevent at present, or in the future, rocking of the plate. This consists of a thin film of wax extending well up near the margin of ridge and the edges, chamfered thin so as to leave no evidence of it on the plate. This is the only change I make in the model. The sides of the model should be flared so it will deliver itself readily from the mould.

The sand should be oiled, for then it can be used many times without re-oiling and so is always ready for use; and there is no danger of holes in the die, from the presence of steam, as when water is used for moistening. Use a large flask for moulding so as to have plenty of room for packing. This can be made of sheet-iron, four inches in diameter and three in depth.

Babbitt metal is the only alloy which has all the qualities necessary for a dental die, viz., non-shrinking; sufficiently hard not to batter; tough enough not to break; and a smooth surface. The proper formula is copper, 1 part; antimony, 2 parts; tin, 8 parts. This can be had at all the dental depots. Nothing has so simplified the *fitting* of metal plates as the use of this metal, as forty-five years' use has demonstrated.

As pure lead cannot be poured upon Babbitt metal without danger of adhering to it, the melting temperature is reduced by the addition of tin—5 parts lead, 1 part tin. Coat the die with whiting, and stir the metal until it begins to thicken, then pour quickly.

Oil the dies to prevent the metal from adhering to the plate, being careful to wipe off all traces before annealing again. Aluminum is annealed by holding over a Bunsen flame until a pine stick chars on the surface. It should be used not less than 24 gauge up to 22.

By the use of the "loop punch" the rubber is held firmly to the plate. The plate should be tried in the mouth before arranging the teeth, to be certain that it is all right. Be sure it presses up closely at the rear so the air cannot get under it.

The teeth should always be arranged by the mouth, and remembering that there are more failures from faulty articulation than from all other causes.

## SUGGESTIONS.

By G. LENOX CURTIS, M.D., New York.

In making a diagnosis, it should be remembered that similar symptoms may indicate vastly different diseases, and that two causes may exist with apparently the same symptoms. One found, treated and cured, lessens the disease, but by no means eradicates it.

The cause of bad and offensive breath, the purulent condition of the gums, is often taken for rhinitis, and treated as such, without favorable results, when, in fact, it is due to caries, abscessed teeth, antrum disease and necrosed bone. None better than the dentist is able to diagnose such complaints, and all such patients should be sent to him for examination. His constant working in the mouth makes him master of these affections, and many a tooth which the physician condemns to the forceps would be saved if left to his judgment. I am well aware that in the country village where there is no dentist, physicians are called upon to extract teeth, some doing so indiscriminately, and often, I am compelled to say, just for the fee. If the course in our medical colleges included lectures on diseases following affections of the teeth, the importance of saving them, and their bearing upon the physical health of the patient, it would be a great boon to suffering humanity, increase the usefulness of the physician, and reflect credit upon the schools. I do not mean here a course in dentistry, but the teaching of oral surgery, as the former should be left for the dental colleges. In the human economy there are no superfluous organs; all are intended to last a life-time, and in this day, as well as in generations past, we require all our teeth for perfect mastication, and for the articulation of speech. There is nothing more distorting to the contour of the face than the loss of teeth and wearing illy designed substitutes. The physician who attempts curing indigestion, dyspepsia, anæmia and the like, where there is improper mastication of food, the mouth bathed in filth from caries and abscessed teeth secreting pus, where the gums are inflamed and diseased from the lack of cleanliness, is working against hope, and does both himself and his patient great injustice.

How many cases of offensive breath that obstinately resist treatment, come from these sources, especially from the diseased antrum, caused by abscess from diseased teeth! The physician should as conscientiously examine the mouth of every patient when he is considering the general health, or in case of any cranial symptoms, like neuralgia, as he would take the temperature or the

beat of the heart. I believe that fully 90 per cent. of diseases of the face and neck are traceable to affections of the teeth. Facial neuralgia, aptly termed the "devil's disease," nearly always, is due to this physical condition, being rarely ever cured from the internal application of medicine. Only recently I was called to diagnose a case of obstinate, purulent discharge from the nose, which for seven years had baffled continuous treatment from the surgeon, physician and nasal specialist. My diagnosis of double antrum disease was based on finding two abscessed teeth on either side of the mouth emptying into their cavities. Within five minutes, by use of a trochar and canula, I was able to draw away fully two ounces of as offensive pus as was ever met with. There no longer remained doubt as to this being the cause of her years of torturous treatment and sickening breath.

How quickly a dentist would be censured for invading the domain of the medical fraternity by treating a case in general practice, and why should not a physician be condemned for pulling a diseased tooth which could be saved? Would he be justified in beauty cutting off a finger because of a felon?

In a recent visit among the *habitants* of Canada, my attention was called to the pale faces and the poorly nourished physique of many of the women, both old and young. Why was this? An investigation showed that the knight of the forceps had not been idle. He had made frequent rounds and with disastrous results. Here was a clue to follow, and many a tale I listened to, where the bucolic dentist of the farm-house had plied his trade, emulating the village physician, in the joint effort to ruin the facial beauty of the fair sex.

An interesting case bearing on this subject is one occurring in the practice of Dr. J. J. Stowell, of Pittsfield, Mass. Preceded by severe pain in one side of the face which extended to the eye, neck and arm of the affected side, which was followed by paralysis of the arm and strabismus in that eye. Physicians were consulted both in New York and Boston, and for many months the patient was under their treatment, all the while complaining of the pain in eye and face, with a dead, heavy feeling on that side of the head. An oculist, of no mean repute, insisted upon "clipping" the muscles of the affected eye. This not correcting the trouble, glasses were fitted, but all of no avail. For more than a year continual treatment of the eye, accompanied by medicine for general health, was continued until the patient was nearly exhausted physically as well as financially. At that time having to go to Dr. Stowell for dental treatment, he at once found the cause for her long suffering, and why the physicians were at fault. He offered his services, and in one minute's time the cause was removed by the extraction of a partially erupted wisdom tooth,

which, having abscessed, diseased the jaw, so that a large sac of pus had formed. The pus had flowed copiously. In two weeks' time the patient was well, arm and face in normal condition, while for a time all pain was gone. Then came the trouble caused by the clipping of the muscles, which is well known to oculists, and most difficult to overcome. She almost completely lost the use of that eye. On learning what the dentist had done, the oculist, so the doctor tells me, wrote him a most abusive letter, setting forth that he had grossly interfered with his practice, and in so doing had been most unprofessional. Is not this another and most striking plea for more thorough teaching in medical institutions? Like money, teeth are most appreciated when lost. Good teeth is good health.

30 West 59th Street, New York.

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## TWO CASES OF ALVEOLAR ABSCESS.

By A. H. BEERS, M.D., C.M., D.D.S., Cookshire, Que.

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There is nothing remarkably wonderful in these cases, but they may prove interesting to some of the DOMINION DENTAL JOURNAL readers.

The first is a case of neglected abscess, allowed to open externally. A girl, aged eighteen years, presented herself, complaining of general jaw-ache and neuralgic pains radiating over left side of face and head. There was a large indurated mass about the angle of the jaw, with the large opening of a sinus through which a sero-purulent fluid was discharging. The acrid discharge had caused a dermatitis of face and neck. This state of affairs had existed for *two years*. She had this mass decorated with a piece of pink court plaster, which she frequently changed, and was donned for her appearance in public. At home she had been poulticing it for a considerable time, and was evidently perplexed at her lack of success in curing the discharge.

On examining her mouth, I found an extraordinary filthy state of affairs. The roots of the lower twelfth year molar of same side, were completely hidden from view by the congested and hypertrophied gum. After much difficulty, I succeeded in extracting these roots, ordered an antiseptic mouth wash, after syringing the parts with a warm solution of boracic acid, and stopped the poulticing. After touching exuberant granulation about the orifice of the sinus with copper sulphate, I applied a dry dressing.

The patient was considerably run down and anæmic—undoubtedly due to the discharge which had lasted so long a time. For this she was put upon iron and cod liver oil. Three weeks afterwards I saw the patient again. All pain had disappeared, the sinus had closed up, and her general systemic condition was improving. There is left a puckered and disfiguring scar, probably for life.

The second case was that of a little girl of eight years. The popular idea that a tooth should not be extracted when the face is swollen, was responsible for the greater part of her suffering. Her parents belonged to the class who persistently neglect their own and their children's teeth—considering it a nuisance to get them, to have them, and to get rid of them. There was a tense swelling the size of a lemon, extending over and beneath the body of the lower jaw on left side. On palpation, fluctuation was distinctly felt. She had difficulty in opening her mouth. Intense pain in jaw and general feeling of malaise. Her breath was very fetid, tongue coated, temperature 101°. A lower six-year molar was the cause of the trouble, which I immediately extracted. There was no sign of abscess sac about the root, nor could I get any flow of pus into the mouth by probing the socket, so decided that the suppuration was deeply seated in the jaw. Cold cloths were prescribed externally, and a solution of boracic acid, as hot as could be borne, to be held in the mouth. The next day the external swelling showed no signs of abating, but was rather increasing, if anything. After carefully cleansing the face, I made an incision, deeply into the most dependent part of the swelling, taking care to avoid the facial artery. Directly an abundant flow of pus appeared, and she exclaimed at being at once relieved of the pain. After syringing out the abscess cavity, poultices were applied for that day. The next day the poulticing was discontinued and a dry dressing applied. Everything progressed favorably, the scar left being linear and hardly perceptible. If it had been allowed to go untreated much longer, there certainly would have been a more disfiguring result, as in the former case.



## Correspondence.

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### OUR CHICAGO LETTER.—No. 1.

By C. N. JOHNSON, L. D. S., D. D. S., Chicago.

*To the Editor of DOMINION DENTAL JOURNAL:*

SIR,—Your request for a Chicago letter would assuredly have been met with a sugar-coated refusal, on the plea of a never-ending routine of other duties, had it not been for two things. First was the feeling, that it would be ungracious to refuse anything to a man who had done so much for dental journalism, dental legislation, and dental education in Canada as you have; and second, the sentiment of a fellow-feeling in the matter. Your correspondent, in his association with dental journalism, has oft and anon been faced with the problem of obtaining something to fill his pages, and he knows full well the sense of gratitude that wells up in an editor's heart, (and editors have hearts, despite all preconceived notions to the contrary) when somebody says "yes" to his requests. So here is your Chicago letter, such as it is, and, as the bad boy said when he handed an India-rubber counterfeit of a plug of tobacco to an innocent Dutchman, "May you chew it to your heart's content."

Speaking of dental journalism, did it ever occur to you—but of course it did—how much work the average editor does without remuneration? At night—for it is mostly the busy fellows who edit journals—while others are reading, or attending the theatre, or going out in society, or mayhap playing billiards or whist, this pusher of the blue pencil is worrying his brain over a mass of mangled manuscript, or grinding out material of his own for that precious little imp, the printer's boy, who is sure to be found forcing his ink-besmeared anatomy into the editor's office the next morning asking for "copy." Then the proofs. It is vain imagining to think of depending altogether on some one else to read proof. The editor is by tradition held responsible for all the errors that appear in his publication, and if he trusts to an assistant to do the proof-reading, he will one day be made to blush, by seeing some absurdity staring at him in cold type in the journal which contains his name as editor. Then there are the complaints of contributors and readers. The editor must be thick-skinned as to his own feelings, and thin-skinned as to the feelings of others, if he expects to get on reasonably well with his constituents. Altogether the position is one of care, work and worry, and yet it would seem that there must be something fascinating about it, for

we seldom find a man who has once edited a journal subsequently resting content in retirement. It may be that the habit of drudgery fastens itself upon one as tenaciously as any other habit, and that the ex-editor can find nothing outside of editing which so completely fits his capacity for drudgery.

Be that as it may, we should be duly thankful that there are to be found in the profession men who, like yourself, are not only capable of doing, but are willing to do, this work; dental journalism has accomplished much for the profession. And I know of no country where there is a greater field or a greater need for dental journalism conducted along proper lines, than in your own dear old Dominion. Your young men are for the most part starting out in the profession with a good fundamental education, and this in great degree equips them for writing and makes them prospective contributors. I trust, Mr. Editor, that you may succeed in what I know has been one of your hobbies in the past—the enlistment of many of these young men into the ranks of dental contributors. They owe it to you as a pioneer editor, and to the reputation of Canadian dentistry, to so fill your pages with good material, that the **DOMINION DENTAL JOURNAL** will rank among the best of its kind in the world.

But, bless me, here I am running on about dental journalism in Canada when the thing you asked for was a letter relating to Chicago affairs. A word or two about our dental societies may prove of passing interest to your readers.

Chicago has at present the following: Chicago Dental Society, Odontographic Society, The Hayden Dental Society, and The Odontological Society. A year or two ago there were also in existence The Chicago Dental Club, and The Atkinsonian Dental Society. The club was scarcely ever a club in the true sense of the term. It was much like any other dental society, except that it drifted in the direction of introducing subjects for discussion which had a medico-dental leaning. Papers were frequently read by medical men, and the leaning in some of these papers was—not to attempt to pun—nothing much but lean. The result of these experiments tended to prove to those who suffered under the infliction, that the average medical man, broad-minded though he may be, is not calculated to teach dentists much about dentistry—not much about the region of the mouth. I well remember one evening, when a respected member of the medical profession read a paper on some such topic as “Neuralgia of the fifth nerve,” and after several of his dental friends had quite freely discussed the subject he arose and said: “Gentlemen, I am slightly disconcerted. I came here expecting to throw some light on this subject, but I have been met considerably more than half way. Some of you gentlemen taught me more than I ever knew before in regard to

this ailment, and I simply wish to take off my hat to you fellows." I have often wondered since then whether the average dentist, if placed in a similar situation, would have been broad-minded enough to make so frank an acknowledgment.

Well, the interest in the meetings fell away. Some enthusiastic member would occasionally give it a convulsive spurt by reading a paper on the needs of the society, but the old wheel-horses got to shaking their heads. They were discouraged. At every annual election some victim who had not been in the habit of attending the meetings, and knew nothing of the dry rot working in the society, would be mustered in and elected president. The new incumbent would set sail to revive the society with all the fervor of a raw recruit, but by the end of a year he was usually as sick at heart as the sickest of the lot. This went on for some years, when one day the society simply slept away. It passed out so quietly and peacefully that very few knew it was dead. It seemed that there had been so little life left in it that it caused no convulsion when the final kick came. Peace to its ashes. It was not always peaceful when alive.

The Atkinsonians were a little coterie of congenial spirits who met monthly and dined. While dining it was their habit to discuss all sorts of topics from eatables to ethics. I remember, that in the early days of the organization, the subject of ethics was taken up regularly at each meeting, and vigorously discussed from as many points of view as there are to a star-fish. This progressed for more than a year, and the announcement is here made public for the first time, that the question of ethics was just about as near a solution when we were through it as it was when we began.

The Atkinsonians were finally merged into the Chicago Auxiliary of Delta Sigma Delta, a Greek-letter college society, having a representative membership throughout the United States. Meetings of the Auxiliary are held every two months, and an evening of royal good entertainment is enjoyed. But this, Mr. Editor, is a sufficient trespass upon your space for one letter, and I must leave a further consideration of the subject for a future issue.

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### HINTS FOR MEDICAL PRACTITIONERS.

*To the Editor of DOMINION DENTAL JOURNAL:*

SIR,—I am very glad to learn from you in person, that you propose making some special effort to draw the attention of medical men and medical journals, to the functional importance of the teeth, and the duty they owe to us as a distinct profession, though not by any means an entirely separate one, of recognizing the use

we can be to patients who have, or who may have, various diseases of the teeth and gums. Now to make the department you propose of practical value, it must have the co-operation of dentists. How can we co-operate? Whenever, for instance, any article relating to this new department appears, it is very easy for the dentist to loan the journal to physicians in his locality. I feel sure that very few of them would not appreciate it. The few of them who are superior to further education are of no consequence. The large majority are only too anxious to know anything which will enable them better to serve their patients.

Yours, L. D. S.

## Question Drawer.

Edited by DR. R. E. SPARKS, Kingston, Ont.

*Q.* 27.—Has the moon's phases any influence upon animal tissue? Would the fit of a set of artificial teeth be in any way affected by such influence?

*A.*—The moon's phases have no more influence on animal tissues than they have in the production of lunacy; and the fit of a set of teeth is no more affected by the moon than the fit of a coat. Every person is affected more or less, consciously or unconsciously, by variations in the temperature, pressure and composition of the air; and the nervous system, and fine nerve terminations are naturally the first to suffer from such variations, but the moon has no known effect upon the human body.

A. P. KNIGHT, M.D.,

Prof. Animal Biology, Queen's College, Kingston, Ont.

*Q.* 28.—It often happens that upon removing pulps that have had arsenical applications, it is found that near the end of the root or roots, the nerve is extremely sensitive. This is particularly so in the case of molar roots. What is the best method of treatment?

*Q.* 29.—What is the best treatment of toothache and neuralgia so frequently found in pregnant females?

*To the readers of the DOMINION DENTAL JOURNAL:*

We have just concluded a two years' experiment of the Question Drawer. The result has not been encouraging to a very high degree. It was thought that the opening of the department would call forth a perfect fusillade of enquiries regarding vexatious matters which crop up in every-day practice, and that these enquiries would elicit answers from many who might be willing to help a perplexed brother, but who might not be inclined to select

a subject and write an article on it for publication. Our duties, in taking charge of the department, were only supposed to be to arrange those questions and answers for the publishers. This has been a pleasure when there has been any arrangement to make. For some months our duties in this respect have been very light. Indeed, so little interest was manifested by the profession that we asked the editor-in-chief to close the department, or give it into other hands who might make it a greater success. He has urged us, however, to continue another year.

Realizing what a benefit it would be to the profession if only interest enough were taken to ask and answer questions, we have consented to do so. Let us have questions on all practical subjects connected with our profession, and answers to all practical questions. Let us help to make ours one of the foremost dental journals.—ED. Q. D.

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## Translations

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### FROM GERMAN DENTAL JOURNALS.

By CARL E. KLOTZ, L.D.S., St. Catharines.

**EUCAIN IN DENTAL PRACTICE.** (By Zahnarzt Louis Wolf, of Berlin, in *Zahntechnische Reform*).—Prompted by the well-known report of H. Kissel, dentist, of Berlin, on eucain, I have undertaken to experiment largely with this new local anæsthetic in my practice, where I have abundant operative material to give it a good and fair trial. I consider it the duty of every dental practitioner to try to test such new remedies as tend to alleviate the pain of dental operations, and to do away with the use of narcotics, such as chloroform, ether, bromether, etc.

Following the information of Dr. Kissel, I injected 1 to 1½ g. of a 10 per cent. solution of eucain at one time. This was sufficient to extract five contiguous roots in the lower jaw; in extracting the sixth root, pain was felt. No unpleasant after effects were noticed; that is, such as would appear immediately after the injection or operation, but the patients complained of œdema. My efforts were now directed towards finding ways and means to overcome this difficulty, in which I have been successful, as will be seen farther on. As I took it for granted that the swelling was due in part to the quantity of eucain solution in a single vesicle on the gums, I tried the method of injecting a small quantity at each root or tooth, particularly in such cases where a number of teeth had to be extracted, and which were not adjacent, but scattered.

Although the swellings were not nearly so large, still they were present. In the course of my experiments with about two hundred cases, I have come to the conclusion that, if the gums are thoroughly disinfected before injecting, which may quickly and easily be done with peroxide of hydrogen, and after the extraction to prick the gums with the point of the syringe and by pressure of the finger remove the liquid, then very little swelling will appear.

I have used eucain for the extraction of all teeth in both upper and lower jaws, preparatory to inserting an entire set, and the results as to the anaesthetic effects were in every respect all that could be desired.

In about two to five minutes after the injection of 0.3 g. for the extraction of a tooth, the patient feels a numbness of the part injected, and has the sensation that the injected part is insensible, also has perfect confidence in its anaesthetic effects.

In a great many cases where I was in the habit of using chloroform, I now use eucain. In one case, for the extraction of one tooth and fifteen roots for a lady patient, I used altogether 3.5 g. of a 10 per cent. solution. At this time I did not know that the maximum dose was 3.0 g. *pro die*, and which I overstepped by 0.5 g. The patient's head felt benumbed, which lasted only for a few minutes; this little disturbance was so slight that the patient declared she would much rather endure the slight headache, than the disagreeable after effects of chloroform.

Very noticeable was the effect of eucain in a case where I intended to extract thirty-one roots, but after I had extracted nine of them, I had to stop, as the patient became uncommonly frightened and nervous. After three days she came back of her own free will, so fully convinced of the effectiveness of the eucain that she had the remaining twenty-two roots extracted at one sitting, for which I used 3.1 g. eucain. The swelling in this case lasted for three days and then gradually disappeared. Notwithstanding the small quantity of 0.3 g. for one, or 0.4 g. for two adjacent roots, I can always fully anaesthetize the parts with it. In extracting, the patient experiences the sensation of touching the tooth with a steel instrument, and of lifting it out of its socket, but feels no pain whatever.

Quite recently I had a case of extracting ten teeth for a patient whose development, both bodily and mentally, was retarded through scoliosis, and dreaded an operation of even one tooth. After considerable persuasion, she submitted to the extraction of one root, for which I used 0.3 g. eucain, and this was so successful that she submitted to the extraction of the remaining roots without any hesitation.

In another case, fourteen teeth were extracted in one sitting, for the painless extraction of which the patient expressed his gratitude.

A physician for whom I used the eucain for the extraction of a tooth, stated that he will never have any other anæsthetic used in future.

I have found in unintelligent female patients a certain amount of distrust or suspicion towards all new remedies, and have frequently seen the patient's companions, who accompanied them to the office, and whom I had asked to be present and witness the operation, shake their heads in astonishment as I extracted root after root in quick succession, without the patient showing the slightest symptoms of pain by either sound or mien.

While I was still experimenting, I had occasion to visit the place of manufacture of eucain, and was informed that recently eucain was prepared which was free of methylalcohol, and that to the presence of this methylalcohol might be attributed the swelling after injecting. Since using this new preparation, I have not had any complaints about œdema, not even in the last cited case of the extraction of fourteen roots. But I do not know whether I shall attribute the non-appearance of the swelling to the absence of the methylalcohol or to my method of removing the eucain solution from the gums by pressure after extraction.

The eucain not containing the methylalcohol has a little drawback, inasmuch that it crystallizes slightly at the margin of the solution on the bottle. It would be advantageous, therefore, if it could be placed on the market in a prepared solution of 1 to 10, similar to the solution of cocaine used for injecting.

I have never noticed any acceleration nor diminishing of the pulse, and dizziness, fainting or nausea have never appeared, not even when the maximum quantity, 3.0 g., was injected.

In conclusion, I can only repeat that I consider eucain as a valuable adjunct to our armamentarium, and in my practice it will completely displace chloroform and nitrous oxide.

The advantages of a local over a general anæsthetic are apparent. How unpleasant very frequently in a chloroform narcosis is the excitation or vomiting, and how very unsatisfactory sometimes is the operation with nitrous oxide, when one must extract rapidly, so as to complete the extraction before the patient awakes from the effects. Bromether is also unpleasant on account of its odor. And last, but not least, is the advantage of not having to make an appointment with a physician to administer a narcotic, and many a practitioner has had the experience that the patient out of fear did not keep the appointment. On the other hand, with eucain one can proceed with the operation without anxiety, as I judge the anæsthetic effects last about from ten to fifteen minutes.

I am very grateful to colleague Kissel for bringing this matter before us, and I shall continue my experiments with eucain both in my clinics and in my private practice.

I will report later any new, interesting and uncommon cases.

Dr. Heller (in the *Deutsche Monatsschrift für Zahnheilkunde*) says that the swelling after injecting eucain mentioned by both Drs. Kissel and Wolf, will always appear, and cannot be prevented by antiseptic precautions. It is also the same whether one uses eucain containing methylalcohol or eucain not containing it, and pricking the gums and pressing out the liquor does not prevent it. He also draws attention to the pain that regularly occurs when injecting eucain into the gums. A great advantage eucain has over cocaine is that it is effective in periostitis, where cocaine has failed in the majority of cases.

Dr. Ahrenfeld (*Rundschau*, No. 220) reports over 250 cases in which, with one exception, he extracted the teeth without pain. He thinks that the swelling can be prevented by using a minimum dose. After a great many experiments, he has found that 0.3 g. of an 8 per cent. solution is sufficient.

[I have used eucain in my practice only for a few weeks, and am very favorably impressed with the results. The indications are that I will also use it in place of chloroform or nitrous oxide where the patient will agree to it, for being a new remedy, it is very difficult to convince some patients that it is as effective as chloroform. It certainly has a great advantage over all other local anæsthetics, as a greater area is affected with it than with any other, hence more teeth can be extracted with one injection. I have not used it long enough to mention any particular cases. The slight swelling I have noticed; one occurred in the extraction of an abscessed root, when it lasted about forty-eight hours, which was the longest duration of any I had, but the patient suffered no inconvenience from it. —CARL E. KLOTZ.]

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## FROM FRENCH JOURNALS.

By J. H. BOURDON, L.D.S., D.D.S., Montreal, Que.

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AMALGAM OF ALUMINUM.—Dr. Carroll has compounded a new amalgam, which he has presented to the New York Society. Its superiority, he claims, over others would be that it does not retract its density, hardness, and does not oxidize. He made the following experiment: Made several fillings on extracted teeth, which he placed in a box, with a silver coin and a rubber eraser. The fillings were remarkably white; as for the coin, it was black, on account of the sulphur contained in the rubber.—*Zahntechnische Reform, from l' Ondontologie.*



TO TAKE AWAY ODOR OF IODOFORM.—All persons using iodoform know how difficult it is to remove its odor from the hands, or from instruments. Use spirits of turpentine on the hands or instruments ; it can be added to water, and in using soap, makes it very efficacious.—*Le Progrès Medicale*.

BARBER OF THE STRAND.—Paul Baron, 164 and 47 Strand, London, and William Browett, an employée, had for some time the habit, after giving their client a shave or hair-cut, of suggesting to him to have his teeth cleaned ; and after the operation would ask an exorbitant price. The case was brought before the court, and both Baron and Browett were given fifteen months and twelve months, respectively. It served them right.—*Odontologie*.

STATISTICS OF ANÆSTHETICS (By Dr. Gurtl, of Berlin).—From 1890 to 1893, chloroform given 166,812 times caused 63 deaths—1 out of 2,649 ; ether, 26,320 times, 2 deaths—1 out of 13,160 ; ether and chloroform mixed, 8,014 times, 1 death ; compound with alcohol, 4,190 times, 1 death ; bromide of ethyl, 7,541 times, 2 deaths—1 out of 3,770 ; nitrous oxide, given in large quantities, no deaths. In 1885, death from chloroform, 1 out of 1,946. Having used chloroform made by Pictet, it is purified at an exceptional low temperature. Most of the deaths are due to impurities that are found in ordinary chloroform. There is a tendency in Germany to use ether. This year 11,600 administrations of ether were given to 6,200 last year, although every author signalizes the danger of giving ether in causing hyperæmia, bronchitis and pneumonia.—*La Odontologia*.

DENTISTRY IN JAPAN.—Japan has numerous dentists, as well as native ones, who are very successful. A dental department is attached to the Medical Imperial University of Tokio. This town contains fifty-six dentists, having each four to twelve students, following every operation. The peculiarity in having so many students is this : One will work the dental engine, another work the syringe, and the third one prepares the gold foil. This division of operative dentistry is altogether scientific. Many Japanese are graduates of our American dental colleges, and are very skilful. Japanese are very fond of having their teeth filled with gold, so as to have cavities drilled in sound teeth and filled with gold. As a reason for such action, they will say that it is a sign of advanced civilization. San Francisco receives every year about one hundred Japanese dentists. Tokio has dental manufactories, making all that a dentist may need, such as lathes, instruments and teeth. There are four American dentists in Japan, but their practice has diminished considerably on account of the rise of so many Japanese dentists.—*Pacific Stomatological Gazette*.

AN UNCOMMON CASE (By Dr. Daish, *Monatsschrift für Zahnheilk.*)—A young girl of thirteen years of age came for consultation at our office on June 22nd, for a swelling on the left side of inferior maxilla. The first molar and first bicuspid were sound, next was second temporary molar, and still in place; it was removed in hope of reducing the swelling, at the same time to assist the second bicuspid to erupt. The roots of the temporary tooth had undergone very little resorption; pus had escaped after extraction; poultices were prescribed for a few days. The patient was brought back a few weeks after.

Still there was suppuration, attended with repulsive odor. On August 13th, she was sent to the hospital; next day chloroform was given, and a search was made to find the second bicuspid. The swelling was about the size of a fowl's egg. An incision was made from the first molar to first bicuspid. A large quantity of pus escaped with fetid odor.

After long exploration, the probe located the tooth, but without ascertaining the position of the roots. In vain the extraction was attempted. It was decided to pack iodoform gauze into the wound and wait for a few days. The dressing was renewed daily, the wound having been washed with boracic acid.

On the fourth day, the tooth was probed again; it had come near the first bicuspid, not far from the orifice. Unfortunately, on exploring, the probe pushed it back in its former position, from which it was impossible to dislodge it. The following day, in taking out the dressing, the tooth was near the orifice. With many precautions it was taken out with an elevator.

The young girl stayed three weeks at the hospital, the treatment being used daily with permanganate of potash, boracic acid and iodoform gauze.

From information tendered by the patient, the disease had been caused by falling down stairs four years before. A few days after the accident, the second temporary molar got very sensitive; could hardly masticate; but the child never complained about it, and no consultation was asked for. When the tumor got so very painful, it was suggested to consult Dr. Daish.

On examining the extracted bicuspids, I came to this conclusion: The root of the tooth was in the process of formation; then by the fall had been so much disturbed, had brought on the death of the pulp, and mortification had set in before its entire development.—*From Progrés Dentaire.*

# Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

PROTECTION OF NEARLY EXPOSED PULPS.—W. J. Phillips, in *Dental Office and Laboratory* says : " Make a wafer of gutta percha and moisten one side with eucalyptol ; lay with moistened side down over point of near exposure, and cover with oxyphosphate. When this is hardened fil as desired.

ANY dentist who lowers prices for professional service advertises his own incompetency, and not only lowers the standard for the finer art and the higher grade of work in his chosen calling, but prevents dentists of a higher and more worthy class from exerting their better talent and influence for the advancement of their chosen art and science.—*Microcosm*.

THE BLOOD PRESSURE A FACTOR IN THE ERUPTION OF THE TEETH.—Mr. F. E. Constant, L.D.S., Eng., contributed a thoughtful essay at the meeting of the British Dental Association, in which he advanced the novel theory that the blood pressure exerted in the vascular tissue which lies between a developing tooth and its bony surroundings, is the active mechanical factor in the process known as the eruption of the teeth.

WHY do the teeth of the American human family decay as they do? Because they do not know how to cleanse the oral cavity. Teach your patients how to irrigate the oral cavity. Make them use elbow-grease, common sense and pure water. Make them pass the water through the interdental spaces, and gargle. Make your patient take a hand-glass and go to the window so that he can see when he has really cleaned his mouth. Ninety-seven out of every one hundred American citizens do not know how to clean their own mouths.—*Dr. J. F. Crawford, in Ohio Dental Journal*.

DR. J. FRANK ADAMS, Toronto, uses a most admirable varnish for cavities before filling. It is made by taking

Virgin rubber ..... grs. v.  
 Chloroform ..... fl ℥ ij.

Dissolve thoroughly by succussion. This takes about two weeks.

Gum mastich ..... ℥ ij.  
 Chloroform ..... fl ℥ i.

This latter dissolves with ease. Mix the two and shake well.

BRUSH THE GUMS.—Many of us fail to impress upon our patients that the gums need brushing as well as the teeth. If the patient will do that properly it matters little whether he uses borolyptol or water.—*C. S. Stockton, in Items.*

A LOCAL ANÆSTHETIC.—

Chloroform .....	10 parts.
Ether.....	15 parts.
Menthol.....	1 part.

When used as a spray for one minute it produces local anæsthesia for three minutes.—*Dental Office and Laboratory.*

JOIN A DENTAL SOCIETY.—It is said of the twenty-five thousand dental practitioners in the United States that only about five thousand belong to the dental societies, which shows an alarming indifference to professional interests that is difficult to explain. That the greatest benefits are derived from society efforts, goes without saying, and this alone should be sufficient inducement to any dentist to join the good work.—*W. H. Chilson, in Dental Review.*

SHOCK.—“It is my opinion,” rays Dr. Garrett Newkirk, in the *Dental Review*, “that extra susceptible children, or young people, should not be kept in the chair, as a rule, more than half an hour at a time; adults (usually they are women) not more than an hour—as much less as may be. We prepare too many cavities and fill them at one sitting. We do not use temporary stoppings of gutta percha as frequently as we should, waiting for recuperation from shock. We think possibly not too much of the teeth, but too little of the individual behind the teeth.”

CATAPHORESIS.—Dr. Custer says, in the *Dental Cosmos*, of cataphoresis: In regard to cataphoresis, a few things are desirable. The current must be constant. It must not change or there will be a shock. Then it must be applied gradually at first, and then raised as seems to be required. The Edison or a galvanic current are the best. The anodes must be held perfectly quiet. The sensibilities of the patient are so delicate that the pulse of the operator can often be felt. Then the enamel is not a good conductor, but acts like glass or porcelain. The denture must be laid bare to the last tubule, for it is through the moisture of the tubuli the current flows. Every tubule must be exposed or it will remain sensitive. The cocaine must reach the pulp through the tubuli or their sensitiveness will not be allayed. Then all metals must be kept isolated. The clamp must be kept away or it will carry off and waste the current.

AMALGAM.—Dr. C. Edmond Kells says, in the *Ohio Dental Journal*, life is too short to spend on such useless work as filling cavities in back teeth with gold. It is far more satisfactory to spend a fraction of the time, a fraction of your strength, give but a fraction of discomfort to your patient, and accomplish the same result, namely, the saving of the tooth by using amalgam. If you take the same pains in the use of amalgam as in the use of gold, you will get as good results.

CONCERNING VULCANITE.—Dr. Cyrus A. Allen, in an article in the *Dental Cosmos*, claims that vulcanite is destroyed, to a certain extent, if the temperature of the vulcanizer be raised above 300° F. If the air enclosed in the pot be not expelled, at least 15° should be allowed, and at least another 15° should be allowed for loss of registering power of the thermometer due to radiation of heat, the conduction of currents of air, temperature of room, etc., so that with the usual way of vulcanizing, instead of 320°, we have at least 350°. The consequences he summarizes as follows: (1) Destruction increasing proportionately with temperature, elevation and loss of elasticity. (2) Extreme contraction, resulting in the plate having no membranous contact across the posterior part. (3) Broken or cracked sections, or "slivered" at joints. (4) Sponginess of vulcanite at thickest portions, which may be manifest over a considerable surface, or may appear only at certain points in size and shape, like a split pea.

MASTICATING.—If we say we know how to masticate properly, we sin against light and knowledge. We had better say we do not know. I have often asked dentists how much they urge their patients to masticate properly. Some of them say they never speak to their patients about it, and very rarely have I heard one say that he gave any special information or urged his patients to masticate thoroughly. It is not only the mastication, but the thorough insalivation that is required. Those persons who masticate their food most thoroughly have the best teeth. They have the least dyspepsia and the best nourished tissues in the body all through, and are better able to withstand all attacks of disease than those who do not masticate thoroughly. I know from observation that the majority do not masticate their food in anything like an adequate degree. I have noticed in this village a number of dentists, and I have observed that they take their meals in a few moments' time, the food not being thoroughly masticated nor thoroughly insalivated. I believe if the dentist can impress on his patient the importance and the necessity of thorough mastication then he has done one of the greatest services for his patient that is within his power. It is better than treating the disease and conditions which we so frequently meet. It is

hygiene of the mouth and the teeth, and it is for the benefit of the entire organization of the patient as well as of the teeth. The mother, the father, the nurse, and anybody in care of a child, should notice it as early as three years of age, and teach it to masticate thoroughly and properly. The habit will stay with it through life and prevent many of the ills and distresses that assail us.—*Dr. Taft, in International Dental.*

THE *Dental Review* calls attention to the advantages of lubrication of discs, and polishing strips for finishing fillings. Many are of the opinion that the use of vaseline will interfere with the cutting qualities, but such is not the case. The unpleasant grating and heating complained of by the patient are prevented and the danger of discs tearing off the rubber dam is done away with. Discs are also made flexible, and thus are made more serviceable in shaping contour fillings.

THE HERBST NEEDLE.—The following is a description of filling cervical cavities with gold by the help of the Herbst needle, which we copy from the *Dental Record*, London: "The rubber dam is adjusted in the usual manner, in the present case exposing eight of the anterior teeth; the dam secured by clamps on the first bicuspid on either side. The rubber is carried up between the teeth by a thread; the tooth to be stopped is thus in view, and it only requires the Herbst needle to be applied—so that the gum and dam may be held out of the way—but our work on the cervical portion of tooth may be proceeded with. The needle in use is one made from a broken bur, the latter being ground to a fine point on the side of a carborundum wheel by gentle pressure and rotation; the latch end is broken off and any roughness at fracture smoothed away. The point is inserted beneath the free edge of the dam and passed upwards until the needle point has passed by the seat of caries, and the sound cement is felt to have been reached. Until now, the direction of the point has been upwards and backwards; when the true position is believed to be attained, the direction is changed so that the needle stands out at right angles to the cement, the position to be retained throughout the operation. Securing the needle is very simple; one of the fingers of the left hand is placed on the projected rounded end of the needle, while the forefinger and thumb of the right grasp the middle so as to release the left hand from its hold on the needle; the left hand thus being free, it is used to stretch the dam forward and draw it over the end of needle; the rubber, by its contraction towards the teeth, pulls the needle into firm contact with the cement." If any of our readers will follow the above described method and attain any sort of success, we will be glad to be apprised of it.

## Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

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[In this place we propose making a new departure in dental journalism. It is intended to appeal specially to the editors of medical journals, and medical men generally, to whom even a hint is often better than a harangue. Our readers could, if they would, supply us with appropriate material, either original or selected. Necessarily the latter must be abridged as much as possible, giving the source from which the selection was made. We are under deep obligations to Dr. Curtis for the promise of original contributions, the first one of which appears in this issue.—ED.]

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MR. EDGAR BROWNE contends that in lamellar cataract without history of fits the teeth are usually good.—(*Ophth. Review*, page 354, 1886.)

FUNCTION OF THE TONSILS.—Dr. Fox thinks their function is connected with the re-absorption of the surplus saliva, and it is suggested that these glands absorb the poison of scarlet fever, diphtheria, etc., from the saliva. The poison of a common tonsillitis has little more than a local effect; that of a scarlatinal tonsillitis is able to reproduce itself in the system indefinitely without deterioration.

RELIEF OF TOOTHACHE.—A satisfactory remedy for the relief of this unfortunately common ailment is always acceptable. Dr. Gills, of Briançon, has reported to the Société de Thérapeutique de Paris (*Therapeutical Gazette*) that he has already relieved toothache due to dental caries by means of hot antiseptic mouth-wash consisting simply of a hot, aromatized 1 to 10,000 solution of bichloride.—(*Medical Standard*.)

DEFECTIVE TEETH AND CATARACT.—Several cases reported with double zonular cataracts, and teeth presenting marks due to arrest of development. Attention may be drawn to the close analogy between the development of the crystalline lens and that of a tooth. Any cause interfering with the growth of the lens, or of a tooth, might produce the peculiar zonular cataract in the one, and the defects in the enamel of the other, which had been variously assigned to the action of convulsions, rickets, or mercury.—(*Record*, London, Eng.)

HÆMORRHAGE AFTER TOOTH EXTRACTION.—Pass a double silk thread through both sides of the torn gum, either with an ordinary curved needle, or a handled needle, and tie firmly over the alveolar border. Remove in forty-eight hours.—(*Cosmos.*)

AN ANTISEPTIC WASH FOR THE MOUTH.—The *Presse Médicale* for July 18 contains the following formula :

℞ Thymol .....	gr. iv.
Benzoic acid .....	gr. xlv.
Tincture of eucalyptus.....	gr. ccxxv.
Essence of peppermint.....	gr. lx.
Chloroform .....	gr. xv.
Alcohol .....	℥ iij.

M. Twenty drops of this solution in a glass of water may be used at a time.

CHANGES IN THE TEETH DUE TO ABSENCE OF ENAMEL FROM THE PERMANENT TEETH ("Mercurial," "stomatitic," "strumous" and "rickety teeth").—The change occurs in lines running horizontally across the whole set of permanent incisors and canines. When slight it affects only the part near the edge, the enamel beginning as a sudden terrace or step, a little distance from the edge ; in bad cases several such "terraces" are present and the whole tooth is rough, pitted and discolored. The first permanent molars show a corresponding change on the grinding surfaces. It is this imperfection that is found present in nearly all cases of lamellar cataract, though the dental condition is common enough in persons without that or any other form of cataract.—("Diseases of the Eye," Nettleship.)

METHOD OF PREVENTING DISAGREEABLE AFTER-EFFECTS OF ETHER AND CHLOROFORM NARCOSIS.—Fraenkel (*Zeitschrift für praktische Aerzte* ; ref. in *Bull. Gen. de Therap.*, Sept. 26 1896, page 235) makes use of the following mixture as a hypodermic a quarter of an hour before the administration of the anæsthetic to prevent the disagreeable after-effects of ether or chloroform :

Morph. hydrochlor .....	0.15 gmc.
Atroph. sulph .....	0.015 gmc.
Chloral hydrate.....	0.25 gmc.
Distilled water .....	15 gmc.

He gives about  $1\frac{1}{4}$  c.c. Under these previous injections patients are very sensible to the action of chloroform, generally the hypnotic effect coming on after using 25 to 30 gmc. of the anæsthetic. In cases of heart lesion this mixture was not used. People who ordinarily bore morphine badly did not do so if given in this form.—(*American Medical and Surgical Bulletin*).



## Selections.

### THE FOUR DEGREES OF WEAR OF BROCA.

By CHARLES H. WARD, Osteologist, Rochester, N. Y.

While anthropology as a science claims France as her birth-place, so to the subtle skill of French savants do we owe many of the modern methods of exact registration.

Notably successful in lifting craniometry to the dignity of a science, was the late Paul Broca,—a man of wonderful patience, of indefatigable industry, and, withal, a bold and successful generalizer.



FIG. 1.

Let us examine one of his minor inventions. In the comparison of skulls of various races of man, no point of interest must be allowed to escape unrecorded. To this end a fixed standard is imperative. Instead, therefore, of describing the teeth of a skull as "slightly worn," "much worn," etc., he established the following scale of comparison, known as "the degrees of wear, of Broca." To quote from his disciple, Topinard: "In the first the enamel alone is worn" (see fig. 1); "in the second, the tubercles of the crown have disappeared and the ivory is exposed" (fig. 2); "in the third, some portion of the height of the tooth is reduced" (fig.



FIG. 2.



FIG. 3.

3); in the fourth, the wear has extended to the neck" (fig. 4). "The last is seen in old age, but is more often the result of particular habits, as that of chewing the betel-nut, among the Malays, or working with the teeth on skins, among the Esquimaux."

In my series from which the above illustrations were taken, it is interesting to note that not one skull of a civilized race could be found from among a hundred or more, showing this fourth degree of wear. While the first, second and third degrees of wear are exhibited on modern European teeth, the fourth is a skull taken from an ancient grave on San Maguil Island, Coast of California.



FIG. 4.

That the degree of wear is not an index of age, but, rather of diet, is true among aboriginal and semi-civilized types. In civilized communities, where physical (as well as mental) habits conform to certain ethical standards, the third and fourth degrees of wear, where found, would indicate great age.—*Odontographic Journal*.

[We have to thank the publishers of the *Odontographic* for the use of the illustrations. In the early days of the North-West, when pemmican was a chief diet of the native tribes, as well as of the whites, the above fourth degree of wear was common, and may be found in skulls to-day. We have seen cases where, without the least appearance of caries, the entire dentures of both maxillaries were worn away fully one-half, even to the obliteration of the pulp chamber. In our student days, we remember the late Sir George Simpson, then Governor of Hudson's Bay, describing this condition to Dr. Brewster. His own natural teeth were worn to the gums. Dr. Brewster made him a set of single-gum teeth, strengthened in every way possible, and the wear and tear imposed upon these was remarkable.—ED. D. D. J.]

## ON THE TEETH OF SCHOOL CHILDREN.\*

By PETER UNGHIVARI, of Szegedin,

Latterly the hygiene of the school has become the object of special attention to the authorities concerned in Hungary and in many other states. In order, however, to obtain an exact knowledge as to the influence of the school upon the development of the body, and also its favorable or noxious influence upon the condition of health of the children, a general hygienic supervision is scarcely sufficient; the examination must be placed in the hands of specialists. In Sweden particularly far-reaching arrangements have been made in this direction.

Encouraged by the example there, and in some districts of England, I have, of my own accord, carefully examined the teeth of one thousand school children, and do not consider it amiss to publish the facts gleaned from this investigation.

These one thousand children of both sexes, ranging in age from six to twelve years, were examined in the school year 1890-91, in the school of this city, and in the Jewish normal school. The examination took place in the morning between the hours of 8 and 9 o'clock, in the presence of the teachers engaged there.

The examination was attended with great difficulties, for in addition to those arising from extraneous causes, I was obliged, in order to work systematically and to fix the data completely, to prepare for myself two tables, whose separate headings I had to keep constantly before my eyes.

In the collection of the facts the procedure was as follows: For every child to be examined I prepared a page to receive the record, and on the two sides of the page were diagrams of the two sets of teeth. On one side were noted, besides the name and age of the child, the carious milk teeth, and the eruption of the permanent teeth (*Zahnwechsel*), and on the other side the carious permanent teeth. In consequence of this scheme from ten to fifteen children at the most could be examined in one hour.

The results of my investigations, as may be seen from the two tables, are as under:

1. The milk molar teeth in much the greatest number were destroyed by caries. The cause of this is partly due to defective cleansing of the mouth and teeth, and partly to the fact that those milk teeth which first decayed were neither treated at the right time nor extracted. Owing to this neglect not only the health of

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\* Translated from the *Oesterreichisch-Ungarische Vierteljahrsschrift für Zahnheilkunde*.



the milk teeth, but also that of the permanent molars first appearing, is jeopardized.

2. The sex exercises no influence upon the proportion of good to bad teeth, for in both sexes it is the same. In each child is found 3.5 carious milk molars.

3. In the first permanent molars, the so-called sixth year molars, the percentage of carious teeth is also very great; on an average there are two carious molars per child.

The deleterious influence of these defective molar teeth upon the digestion, owing to insufficient mastication of the food, and also upon the remaining teeth, is known well enough. It is therefore advisable to remove such defective teeth as quickly as possible in case they can no longer be preserved, for the molar teeth following, owing to the more roomy space thus made for them, then develop better, and can more easily be kept clean.

The thorough examination of such a large number of children has convinced me that parents give little care to the teeth and mouths of their offspring, indeed in many cases they do not seem to have any idea of the simplest necessities. Even parents belonging to the well-to-do classes underestimate the influence of the care of the mouth and teeth upon the organism, and consider one daily, often not careful, cleansing of the mouth in the morning sufficient, and as regards the milk-teeth, are of opinion that they are scarcely of any importance to the child. It would therefore seem to be indicated to request parents to insist upon their children cleaning their mouths and teeth after every meal, and especially in the evening, with toothbrush and tooth powder, and to present the children to the dentist at regular periods.

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## Proceedings of Dental Societies.

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### TORONTO DENTAL SOCIETY.

An interesting and profitable meeting of the Toronto Dental Society was held at the office of Dr. A. J. McDonagh, Spadina Avenue. Instead of an essay, Dr. Harold Clark gave a talk on "Devices and Expedients," which proved of value to all present. From among the many valuable hints given by Dr. Clark, we glean the following:

Temporary stopping for retaining medicaments.—

Fluid—Saturated solution zinc sulph.

Powder—Zinc oxide . . . . . 10 parts.

Powdered acacia . . . . . 1 part.

Varnish for cavities—

Gum benzoin.....	} Equal
Canada balsam.....	

Dissolved in chloroform pretty thin.

This varnish is useful to overcome shock from thermal change in cavities, may be used under oxychloride to avoid pain. Will also assist in retaining first blocks of gold in inserting a filling, or will retain gutta percha.

The best solvent for arsenic is glycerine.

It is a good idea to take impressions of typical cases of natural teeth to make models, and in setting up artificial teeth work to these models.

To avoid separated teeth coming together before the cavities are filled, attach to your ligatures a loop of piano wire at such tension that the teeth are held apart until fillings are finished.

The Toronto Dental Society, at the regular November meeting, elected for the next twelve months the following officers: Honorary President, Dr. G. S. Martin; President, Dr. H. E. Eaton; Treasurer, Dr. A. J. Husband; Secretary, Dr. G. Adams Swann. Committee on Membership and Ethics: Drs. Harold Clark, F. D. Price, J. J. Loftus. Programme Committee: Drs. W. E. Willmott, A. J. McDonagh, W. C. Trotter.

## Reviews.

*Illinois State Dental Society Transactions.* Thirty-second annual meeting held at Springfield, Ill., May, 1895. Publication Committee, Drs. LOUIS OTTOFY, A. W. HARLAN, E. NOYES. The *Dental Review.* H. D. Justi & Son, 1896.

The Society is getting old, but its proceedings are ever new. Even their practical papers have a rich flavor of the prairie.

*A Chord From a Violin.* By WINIFRED AGNES HALDANE, Chicago: Laird & Lee, Publishers.

A charming brochure, a well-told story, by a young Canadian-born lady only seventeen years old, the daughter of Mr. and Mrs. S. P. Douthart, Chicago. It has been remarked as a curious coincidence—that the tale reminds one of the famous story, “The First Violin,” which was written by Jessie Fothergill, when she, too, was but seventeen years old. As the work of so young a lady, it shows promise of future success.

*The Bur.* Official organ of the Alumni Association, Chicago College of Dental Surgery. Published quarterly. Editor, C. N. JOHNSON, L.D.S., D.D.S. Yearly subscription, 50 cents.

We would not be surprised if this little *Bur* became a regular "revelation" bur, and should cut its way into bigger and broader space. Dr. Johnson is just the operator, both with pen and bur, to make it possible.

*Appleton's Popular Science Monthly.* Edited by WM. JAY YOUNG. New York: D. Appleton & Co. Single number, 50 cents. Yearly subscription, \$5.00.

It would require a rare library to fill the place of this special favorite. Not only does it attract the best writers on a large variety of social and scientific questions, but it is freshened each month to modern progress in a way that even text-books cannot possibly equal. In the December number, such contributors as Herbert Spencer, Hon. D. A. Wells, Andrew D. White, etc., would be enough to give a feast of reason to the reader. The entire make-up of each issue is worth the year's subscription. There is no rival to this periodical, and those who do not read it regularly do not know what they miss.

*Dental Chemistry and Metallurgy.* Fourth edition. Revised enlarged, and with many illustrations. By CLIFFORD MITCHELL, A.M., M.D. Chicago: The W. T. Keenan Co., 96 Washington Street. Pp. 586.

We have a suspicion generally of text-books which enlarge with each edition. Some of our best works are marred by tedious amplification. Judicious weeding is as necessary as wise planting. These remarks, however, do not apply to the fourth edition of Dr. Mitchell's invaluable work, a text-book without which no dental student can master dental chemistry. To the average medical and dental tyro, chemistry is the *bete noir* of the primary studies. The author has avoided massing together the common teachings of text-books in chemistry, at the sacrifice of that which is more specially demanded by the dental student, and has given us a work which has no rival. Besides the chapter on physics, chemical philosophy, inorganic and organic chemistry, very valuable chapters are devoted to the teeth and the saliva, with laboratory courses embracing experimental illustrations. The work has been adopted as a text-book in the dental colleges in Ontario and Quebec Provinces. It is a book that every student should own, not borrow. It should be introduced into medical schools.



# Dominion Dental Journal

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NO. I.

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## WHY WE NEED A CANADIAN JOURNAL.

The Publishers and Editor of this JOURNAL have made mutual arrangements which, it is hoped, will be in the interest of its patrons, subscribers and advertisers. They intend, with the co-operation of the editorial staff, to do their best to make it indispensable to the Canadian profession. Of course it must look for much assistance from contributors. With this number it is permanently enlarged.

But do we need a dental journal in Canada? Here and there a few of our confreres would be satisfied with those of our cousins over the border. It must be evident, however, that no foreign journal could do the work we need, any more than a city newspaper would suffice for the local interests of outside towns and villages. It is short-sighted policy to think otherwise. This journal is the only one which can devote so much space to home news. It is quite right to take others, but a Canadian journal and Canadian interests in our profession are inseparable. No other can take its place. Canada is wide awake from Halifax to Vancouver. Every commercial and industrial interest has its organ to speak specially for Canadian interests. The day is past when Canadian schools study the history of every other country under the sun, and not that of Canada. Dentistry must keep pace with this sentiment. Dentists in this Dominion would think it unfair if Canadians made

it their practice to go over the border for their dentistry. Does it not occur to them, that it would be inconsistent if they were to depend in the same way for their professional literature? We are sure our generous brethren in the United States, who have so often given us proof of their professional and personal good-will, will hold the same opinion. The large additions to our ranks in every Province increase our responsibilities. Apart from the matter of fair play, it will pay every dentist in Canada to own this journal.

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### UNSELFISH WORK.

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It is a hopeless task to argue with people who have no faith in human unselfishness. Sometimes, in taking a broad view of the political and professional labors of the leaders, the teachers and the journalists of the United States, as well as of Canada, we are tempted to believe that very few of them, in contrast with gentlemen who occupy the same relations to the profession in Great Britain, enjoy the gratitude of their contemporaries. It has almost become one of our articles of faith, that the climate—nothing like putting it down to something which cannot offend any one—is not favorable to coeval thankfulness, and that even a fair appreciation of zealous duty must be left to a later generation. Indeed, it would be no surprise if the critics of the workers were to quote this creed as a proof of official vanity.

An editor of a journal especially, is so placed that he becomes the receptacle of all sorts of criticism, and frequently of abuse. He is occasionally not only a sort of father-confessor, but an arbiter, an adviser, a sentinel, with some leading principles to guide him, from which he cannot consistently swerve. If there is one principle more than another which the editor of this journal desired from the first to stamp into the practice of Canadian dentistry, it is this—that however desirable it is that practical and scientific development should get the fullest encouragement, it could not in itself entitle dentistry to be dignified as a liberal and respected profession, unless we were animated by a moral and ethical custom.

We have not had any unpleasant controversies over scientific questions, even when disagreement of opinion was very wide. But history has repeated itself in our difficulties with two classes in the profession. From the beginning of our legislative efforts, we have been persistently attacked by quacks and those who use quack methods. Of course they hate us. And that is some compensation. Men who are honest and ethical, as most of our dentists are should like to be detested by detestable people. We are rapidly exterminating open quackery in Canada. But it is a slower process

with others who only deserve opprobrium because they use the methods of quacks. It seems, too, that it will be still slower with a very honorable class among us, among whom are some of our very best men, hiding their lights under bushels—a class who do not believe in bothering themselves about the politics of the profession; who do not like controversy, and who, in fact, would rather pay what they consider an unjust tax than trouble themselves to resist it. It is an enviable condition, in one sense, but it is unfair. Why should others have to do the very thinking, as well as the work for them, and their protection? What more claim has the profession upon those who enter the breach of every difficulty and bear the brunt of battle, than upon those who sit idle? If there are men willing to give the time and study and money of their own which every worker has to give, that even the idlers may derive equal advantage, have they not, at least, a claim to encouragement? Do they get it as a rule? Official positions to busy men are not worth a straw. There is no gift in the franchise of the profession in any Province of Canada which will compensate a man financially for the sacrifices it entails. The profession has no right to demand that those who occupy official positions will spare them even the trouble of thinking of their own interests. And those who are so narrow-minded as to accuse such officials, without the slightest reason for suspicion, of thinking and working in their official positions for themselves, would likely be fierce in their resentment if the tables were turned, and they were themselves in office accused of the same peccadillo.

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### PATRONIZE OUR ADVERTISERS.

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A traveller of a certain dental depot in Canada has evidently received his orders to do as much mischief as possible to this JOURNAL. No dental dealer in the Dominion has been given, or will be given, any preference whatever for which he has not paid. We cannot give the most conspicuous pages to everybody, but every page of our advertising is worth examination.

Our advertisers enable us to give our readers a very much larger and better journal than we could otherwise give. The small subscription price would not pay the cost of production, and our greatly increased list of subscribers get a direct benefit through the patronage we get from our advertisers. Every dentist in the Dominion, has a personal interest in dealing as exclusively as possible with advertisers who contribute to maintain the only Canadian journal we possess. We will feel under obligations to other friends, who may send us proofs of damage being done to this JOURNAL by travellers whose firms do not choose to advertise.

### COLLECT AND KEEP THE JOURNALS.

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Very few in Canada seem to realize the money value of preserving their journals and having them bound. It is perhaps a curious fact, that the marketable value of old dental journals is more than double, and in some cases quadruple, that of medical periodicals. We paid \$8 00 a volume for the first twenty volumes of the first dental journal published—the *American Journal of Dental Science*, which we possess complete to date. We believe it is the only complete set in Canada. For over twenty-eight years we have been gathering from all possible sources, odd and missing numbers to complete other periodicals, and to-day the value of the journal collection alone is about \$1,500.00, not counting duplicates. It is on record that its weight in silver coin was paid for the first twelve numbers of the *Canada Journal of Dental Science*. We would not give the early volumes of the *American Journal of Dental Science* for their weight in gold. Collect and keep your journals, and bind them. Get the earlier volumes—if you can. The young men of to-day are to become the stewards and leaders of the profession. They should know its history.

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## Post-Card Dots.

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1. Did Prof. Wedl publish an Atlas as a supplement to his work on "Pathology of the Teeth," or is it incorporated in any edition of the latter?

In 1869, Verlag Von Arthur Felix, of Leipzig, published a very fine Atlas, arranged and explained by Profs. Heider and Wedl. The German text was preserved, but it was translated into English. There are sixteen plates, embracing one hundred and forty-five figures.

2. Will you suggest to me a special work wherein I can learn of the origin and development of the teeth and jaws?

Drs. Legros and Magitot published a work in France, "The Origin and Formation of the Dental Follicle," which was translated into English by the late Dr. M. S. Dean, and published by Garrsen, McClung & Co., Chicago, 1880. The translation included all the illustrations of the French work, with a number of additional illustrations.

3. How many dentists are there in the United States?

In 1800 there were 100. To-day about 27,000. The largest number are in New York State; then Pennsylvania, Illinois, Ohio, Massachusetts; the fewest in Alaska.

4. Who was the dentist of Geo. Washington?

Dr. John Greenwood, born in Boston; died in New York in 1816.

5. When was gold first used as a filling for teeth?

Chapin Harris said that it was about the year 1800 its use became common. Dr. Eleazar Parmly saw gold first inserted in 1815 by Dr. Waite, of London, Eng.

6. What became of the artificial sets of teeth worn by George Washington?

They are in the museum of the Baltimore College of Dentistry. The lower plate is carved out of one piece of ivory; the teeth are of ivory, fastened on with rivets. The upper plate shows a very rude repair by two thin strips of iron rivetted on the plate.

7. Who introduced arsenic as a devitalizer of the pulp?

Dr. J. R. Spooner, of Montreal. It was announced to the profession in 1836 by his brother Shear Jashub Spooner, in his little work, "Guide to Sound Teeth."

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