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Dominion Dental Journal

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No. 9

Original Communications

CATAPHORESIS IN DENTISTRY.*

By GEO. K. THOMSON, D.D.S., Yarmouth, N. S.

I read several articles on "Cataphoresis," in which I immediately became deeply interested, and concluded to obtain a cataphoric battery as soon as possible. I then thought that as it was a subject which was proving generally interesting to the profession the world over, perhaps it would be interesting to our society to listen to a short paper and experience of one of ourselves with it. I hope, therefore, that although the contents of my paper may not be new to us all, it may help to bring this method of rendering our dental operations painless more directly before the profession in Nova Scotia than it has yet been brought. The derivation and meaning of the word cataphoresis will perhaps be first in order. It is derived from the Greek "cata," downwards, and "phoresis" from "phorein," meaning to trend, bear, travel, *i.e.*, "to travel downwards"—downwards, because electricians of old supposed the current always travelled downwards from positive to negative pole, as in electroplating. Subsequently the term has been used to express the more special application of the phenomena to tissue. Cataphoresis, then, is the flow of fluids with the currents from the positive to negative pole. As used in dentistry, it means the flow of fluids, containing in solution medicines in the shape of obtundents or analgesics, antiseptics and disinfectants, from the positive to negative pole, through tooth tissue, which may be very sensitive, which we wish to obtund or bleach—the cementum of the root, which must be thoroughly disinfected in treatment, or

* Read at Dental Association of Nova Scotia, August 26.

the germs and alveolar process surrounding the teeth to be extracted.

It is not by any means a new discovery, for it has been known and practised for more than a generation, but some difficulties which presented themselves to the first users of cataphoric medication have been overcome within the last few years, and it is now being adopted by those surgeons and dentists who have the welfare and comfort of their patients at heart, and who strive for the true advancement of their profession.

According to Professor Morton, in *Cosmos*, of May, 1896, the principle of cataphoresis was known as early as 1833, when iodine was introduced into the tissue of a Frenchman; but as far as is known Dr. W. B. W. Richardson made the first important investigations in this direction in 1859, since which time until 1886 no record of any work along these lines has been discovered. For the history of Dr. Richardson's experiment I would refer you to the *Dental Cosmos*, of August, page 703.

In 1886 Prof. Wm. J. Morton, of New York, experimented successfully with cocaine cataphoresis, but Dr. Henry W. Gillette, of Newport, has done the most important original work as applied to dentistry.

The latter, in a paper read before the American Dental Association, in August, 1895, stated, "It has enabled me to say to my patients that I can prevent all pain in preparing sensitive cavities," and at the present date it is possible with the improved apparatus to perform all dental operations painlessly except extraction, and in regard to the latter the experiments so far lead us to believe that it will soon be included in the list of painless operations performed by means of cataphoresis. To those of us who are not familiar with electrical terms I would here give a few definitions of those used in speaking of the operation: A volt is such a unit of electro-motive force as will produce a current of one ampere in a circuit whose electrical resistance is one ohm. An ohm is such a unit of electrical resistance as will limit a flow of electricity to a current of one ampere when under an electro-motive force of one volt. An ampere is the rate of flow of current which will pass through a circuit, the resistance of which is one ohm under an electro-motive force of one volt. A milli-ampere is 1-1000 of an ampere.

For a successful operation on sensitive dentine it is rarely necessary to use more than from one-fifth to three-fifths of a milliampere, and the current is generally felt by the patient when the milli-ampere metre registers one-tenth. In the few cases in which I have performed cataphoresis my patients have been pleasantly surprised at the results in the excavation of most sensitive cavities. From a record which I keep, I quote the following cases:

Mrs. C. J.—Cavity on posterior surface of first right upper bicuspid—sensitive to heat, cold and touch—applied guaiacocaine (Morton) with current of 1-10 ma.—not unpleasant—gradually increased to 2-5 ma. Total time of application fifteen minutes. No unpleasant sensation on preparing cavity.

Miss D.—Treatment of lateral incisor root, preparatory to crowning. Had abscessed several times, and was in very bad condition; applied current of 3-5 ma. for ten minutes with pyrczone for half the time, and euthymol the remainder. Did not have to treat again, and put Logan crown on a few days afterwards.

Mr. G.—Bleaching right central. Prepared twenty-five per cent. aqueous solution of pyrozone, as suggested by Professor Morton. Applied current of 1-1.5 ma. for fifteen minutes. Operation not as successful as I expected, but made tooth much lighter.

Miss B.—Nerve extraction. First right upper bicuspid; exposed pulp, and painful on the slightest pressure. Applied fifteen per cent. solution of cocaine in electrozone for thirty minutes as follows: 1-10 ma. in five minutes, gradually raised to 1-5, in three minutes more to 2-5, another 1-5 in five minutes; another 1-5 in one minute. In twenty minutes meter registered 4-5; gradually raised it 1-5 more in five minutes, making a current of 1 ma. in thirty-five minutes. At thirty minutes removed current, opened up canals, removed nerve. The only pain noticed by patient was when disconnecting the nerve. Operation very satisfactory to both patient and myself.

Mrs. O.—Cavity on cervical margin of lateral incisor; exceedingly sensitive. Applied cocaine, fifteen per cent. solution, in electrozone for fifteen minutes. Cavity quite sensitive in making retaining grooves, but patient felt that she could not have endured operation without cataphoresis.

I notice that Dr. Carleton Brown, of Elizabeth, New Jersey, at the New Jersey Dental Association, stated that he had succeeded in materially reducing the time required for analgesia, but I have not as yet made any progress in that direction. I have no doubt, though, that it takes much longer to produce analgesia in dense and sensitive dentine than in that less so. Dr. Brown stated that he used a fifteen per cent. solution of cocaine in electrozone, and had anæsthetized a cavity in one minute and a half.

Now, Mr. President and gentlemen, I am not here this evening to advocate any special cataphoric apparatus or electrodes. I simply relate to you my short experience with the operation. Since Dr. Gillette's first experiments with cataphoresis, the batteries and electrodes have been much improved. Dr. Peter Brown, of Montreal, has been working in this direction, and very kindly sent me some photos of clamp electrodes he has introduced. There is

no doubt in my mind that cataphoresis is destined to work a revolution in the practice of dentistry, and I am sure we will all welcome any discovery which will make the operations we perform comfortable to our patients as well as to ourselves.

CATAPHORESIS,*

By DR. CYRUS A. ALLEN, Buffalo.

In the hurry and push of a daily practice, large as I know we all possess, it is difficult to introduce radical changes in methods. This I believe to be particularly true when it comes to the acceptance or even consideration of methods savoring of the "painless" character. However, the busy man must not forget that science progresses and must be considered, and that all who would "be in at the finish" must conform themselves to its changing conditions. This declaration should not be construed in any manner as urging the endorsement of every new claimant. I think you will agree with me that even in our noble profession there are often pretensions to truth and fact which experience never can verify. However, failure along lines of declared truth should not close our eyes to the possibilities of advancement.

Ever since my earliest recollections I have been accustomed to the atmosphere of dental operations, and I must confess, with all courtesy to my good father, who was a pioneer in our art, and who was always *inter primos* in his life-work, that those early memories were not of the nature to make a boy respect his father. However, as time has gone on, we realize that he was even of the first, and that the professional crudities then extant were largely responsible for the degree of respect in which our art was held in that early day.

The general public has so loved the results of our labors, no matter by what discomforts received, that to-day we have in America alone about 25,000 dentists, with more to follow, judging from the liberal inducements offered by colleges to possible students in this field. But with advances made in other scientific and professional fields in recent years there has come a popular demand for "painless dentistry," which to most of us is a synonym for quackery—something alluring to the public. For the benefit of humanity and the good name of our profession, I would that the adjective "painless" had been omitted from our language. However, its existence and disgraceful application may have been in

* Read at joint meeting of Buffalo and Toronto Dental Societies, Niagara-on-the-Lake, July 18, 1896.

some small measure of use to our profession ; for if its profligate use, employed to bunco the public, has awakened us, then is it an instrument of good.

An era of quackery and charlatanism has been abroad among us ; ignorance and cupidity, with their train of misapplied energies, have produced results dangerous and often fatal to a public ever ready to try some "new thing." The fatal, to say nothing of harmful results following the injections of various secret preparations for painless operations, compel the conservative mind to hesitate when any new scheme is presented to alleviate human suffering. However, I believe from my own experience, added to the clinical demonstrations of trusted friends, that cataphoresis opens a field wide and useful in dentistry, and absolutely free from the lurking dangers which always accompany the use of unknown and secret preparations.

Let us consider some of the more conspicuous designations for cataphoric treatment in our special field : (1) Its employment in sterilizing medications in roots, etc. (2) Arresting abscesses, incipient or otherwise, by the iodine treatment. (3) For obtunding sensibility previous to the lancing of abscess after pus formation. (4) For the treatment of pyorrhœa alveolaris. (5) For the treatment of acute pericementitis. From my own clinical experience the application of this treatment has a wide, and at present little understood usefulness. (6) For bleaching of discolored teeth. (7) For the obtunding of sensitive dentine preparatory to the insertion of fillings, an application which at once appeals to all practising dentists. (8) For the preparation of teeth and roots for crown adjustment—another wide field of usefulness. (9) For the immediate extirpation of inflamed, congested and diseased pulps. (10) And others without number, according to the development of future experience.

May it not be well here to define cataphoresis? This modern term comes from the two Greek words, "cata" and "phorein"—"cata" with its signification, downward, and "phorein," to bear, to travel. Collectively, then, these two words would mean in general application, "travelling downward." But in its application as we are employing it to-day, why should we say downward and not upward? This may be explained from the fact that the older electricians possessed themselves of the idea that there was a positive potential which was always upward, and a negative which was always downward.

The term "cataphoresis" was used later on to express the more special application of the phenomena to tissue. We may then abruptly define cataphoresis as "flow of fluids from the positive to the negative pole." If this be true you will readily agree with me that if these fluids should contain elements in solution which

would make them medicines, these medicines must flow from the positive to the negative conveyed by the current; and that if you make application to the one tissue by the positive pole and any remote part by the negative, and this solution should have a tendency to flow with the current, then these medicines will travel in that direction.

To what extent then do remedies under this influence travel? This is a matter which must be left largely to future demonstration. So far as I am personally concerned, I know absolutely nothing in regard to it of a definite character. Some good authorities, however, claim that if you apply to one side of elevated tissue (as the alveolus) the negative pole, and to the other the positive pole, loaded with a solution of cocaine, the anæsthetic effect will only reach half-way through that tissue. More than this, that the remaining half will not only not be influenced by the cocaine, but will also be rather increased in hypersensitiveness.

It will be well here to discuss somewhat the mechanism of the apparatus, for, simple as it is, you should have some definite knowledge of its operation. I will call your attention to (1) The voltage which concisely represents the pressure of the current, as indicated by the numbered attachments. May increase at pleasure. (2) The milliamperedial records simply the flow of the current through the tissue. A mechanism attached to the apparatus, which is designated as the current controller, is intended simply to furnish in the smallest quantities further pressure upon the tissue as may be suggested by the case in hand.

We now come to the question of current strength which may be required. My clinical experience seems to suggest that a large voltage is not at all necessary in securing the desired results. Indeed, so firm am I in this conviction, that I boldly assert that from one-half to one and a half milliampered registrations will be sufficient to anæsthetize perfectly almost every case which may present itself. Another very important reason why a low voltage should be applied is for the comfort of our patients, which we should under no circumstances lose sight of.

Another very important element in the success of this method consists in the *uniform* and *continuous constancy* of current application. If the current be spasmodic, interrupted or unreliable in any degree, it will not only impair the results sought, but will also seriously disturb the comfort of the patient. There is nothing which so quickly develops remonstrance from the one operated upon as an interrupted current or the sudden elevation from a low to a high voltage. To this general rule, emphatic as I would make it, there are some exceptions which do not figure in the general summing up. The importance of continuous application of current should be borne in mind even to the end, that when a renewed

application of the anæsthetic solution is desired, no disconnection should take place, but rather that the solution should be added with appliances *in situ*, in order to avoid the disagreeableness of a broken current and its reappliation.

We have indefinitely referred to solutions and anæsthesia in general without any special reference to what these solutions should contain. I would lay it down as an emphatic law of necessity that all cocaine solutions should be prepared for each individual case, for the reason simply that with certain atmospheric conditions only a few hours may suffice to absolutely destroy their efficacy. The leading chemical laboratories of the country prepare in tablet form many of the remedies used by us in such attenuated quantities that the most bland solution may be prepared by even the novice, simply by reading the directions on the preparation. A method employed by me for cocaine anæsthesia is to place upon the marble slab a small quantity of the pulverized crystal which may be readily picked up by a piece of cotton of the proper size well moistened, and then carried directly to the cavity. The previous moistening of the cotton will furnish a sufficient medium for the conduction of the current, together with the alkaloid, to the place desired.

Some days since, in the use of this agent, I added a mild solution of chloride of sodium, or common salt, upon a suggestion which I received from a recent publication. The result in this case, which was a badly inflamed pulp aching continuously for the past eight hours, was most happy, as the current contact continued only for nine minutes, which produced a condition whereby I was allowed to remove the thin lamina of dentine overlaying the pulp, and immediately thereafter proceeding to the successful removal of the pulp itself with scarcely any pain to the patient. This case, I learn from my record book, gave me the quickest and happiest result which I have enjoyed since employing this method. Whether the result was directly dependent upon the addition of the salt solution I am unable to state, but am inclined to the belief that a cocaine solution is not altogether a perfect conductor of the electrical fluid, and if this be so it suggests to us very forcibly that there should be always an addition made to our solutions which will render them perfect conductors.

In regard to the application, it may be briefly stated that the positive pole, which is indicated by the star upon the apparatus, should always be applied directly to the tissue upon which the operation is to be performed. The application of the electrode may be either upon the same or the opposite side of the anatomy, and from my own clinical experience there seems to be no preference in the matter, although it has been authoritatively published that the applications of the positive and the negative should be

upon opposite sides. The manner of application to any given cavity will be suggested by the ingenuity of the operator himself, only bear in mind that he shall have perfect contact with the solution contained in the cavity of the tooth. The varying cases which may present themselves will suggest differently shaped appliances, which may be made upon a moment's notice with pliers and wire of suitable gauge.

Anæsthetizing the soft tissue upon any part of the anatomy may be readily accomplished by the application of the agent, held firmly in position by the cup-shaped device furnished by the manufacturer, or any which you yourself may prepare. It is hardly necessary to go minutely into the details of each case, but rather is it better that these minor affairs should be left entirely to your own judgment.

While I regard this new method in our hands as a means of ameliorating human suffering and thereby tending greatly toward the removal from our profession of many traditions of horror, I would urge a word of warning against its unintelligent use. This warning word is particularly directed toward those of limited experience in the treatment of certain lesions of the teeth. Labial and buccal cavities are here our greatest concern. With absolute immunity from pain in an extensive labial cavity, I fear that the unwary or inexperienced may bring this good device into discredit by the wholesale destruction of pulps by virtue of too free removal of tissue and placing a filling of perfect conductivity in dangerous proximity to these organs.

Toxic results I know not of. Intercourse with my professional friends, and reports in our dental journals, relate no fatalities from this new departure. Nor do I learn from friends or from my own clinical experience that there is even the slightest systemic disturbance such as might be expected upon liberal cocaine absorption. Whether this agent enters into the tissue only in a circumscribed area, or whether its absorption systematically is prevented through some subtle influence of the electrical fluid, I am wholly unprepared to state. But the fact remains that I have yet to observe any systemic derangement from my own experience.

It may be asked if we claim perfect results from cataphoric treatment in all instances. By no means; on the contrary, my case book presents a total of widely varying results all the way from absolute failure to the most exalted success. In a careful study of these records I do not find any suggestion that individual temperament has been a dominating influence. This observation, I believe, will hold good only so far as it does not include those magnified extremes where Nature seems almost to present anomalous conditions. Magnified temperaments frequently furnish peculiar clinical phenomena, often erratic and even ungovernable

by the usual methods. We all are aware that individuals vary greatly in their physical capacity for the electric current, while outwardly there may be no manifest difference in temperament; therefore, we may conclude that the individual nervous organization, with its capacity to repel or welcome the medicated current, will largely determine the clinical results. For it must be constantly borne in mind that anæsthesia can only be produced after and by the influence of the current's passage through the tissue, accompanied by the proper agent. The simple application of the current and agent to the desired parts can avail nothing in themselves. The current and agent must absolutely pass through the tissue. When this takes place, even to the minute extent of a fractional mill, the dial will indicate the fact. Ordinarily the deflection of the needle will be immediate, but not always, for if the case in hand be one that so curiously repels the electrical fluid—through some unknown constitution of its own—then we may expect no movement of the needle. I find these cases the most difficult to anæsthetize, having consumed one hour and forty-five minutes in one instance in the removal of a pulp. The happiest result which I have recorded was complete anæsthesia of a pulp in seven and a half minutes, the period of application being usually ten to fifteen minutes in my experience—the time required for the relief of cavity sensitiveness being on an average about half that required for the pulp, and in some instances much less.

Much of the true science of this wonderful and humane treatment we have yet to learn. Serious and even discrediting results may develop, but at present we can with conscience recommend cataphoresis in your daily labors.

Proceedings of Dental Societies.

ONTARIO DENTAL SOCIETY.

The eighth annual meeting of the Ontario Dental Society will be held in the new College building, No. 9 Avenue Street, Toronto, on September 30th and October 1st and 2nd, 1896.

Ontario Dental Society officers, 1896: President, Dr. W. A. Leggo, Ottawa; Vice-President, Dr. W. A. Brownlee, Mount Forest; Treasurer, Dr. C. P. Lennox, Toronto; Secretary, Dr. J. A. Marshall, Belleville. Executive: Drs. W. A. Leggo, W. A. Brownlee, C. P. Lennox, J. B. Willmott, R. J. Husband, A. M. Clark, H. S. Wood, G. E. Hanna, J. A. Smith, J. A. Marshall.

DEAR SIR,—With unusual pleasure we forward you the programme of the eighth annual meeting of the Ontario Dental

Society, and extend to you a most cordial invitation to be present. The Committee has made great efforts to provide an interesting "Bill of Fare," and anticipate an enthusiastic and profitable meeting.

The interest of the occasion will be enhanced by the proceedings in connection with the formal opening of the new College building, the Lieutenant-Governor having been invited to perform the ceremony.

At an early date you will receive from the Directors of the R. C. D. S. an official invitation to be present.

We have only to add that the ladies of your families will be heartily welcomed to these meetings.

Purchase first-class single fare tickets and secure a certificate with each ticket, as arrangements have been made with the Grand Trunk and Canadian Pacific railways for reduced return fares.

J. A. MARSHALL, D.D.S., *Secretary*.

Belleville, September 1st, 1896.

PROGRAMME.

Wednesday, September 30th.

2 P.M.—Reading minutes of last meeting ; Unfinished business ; Enrolling members and payment of fees ; Reports ; Election of officers ; New business.

8 P.M.—Paper, "Porcelain Work," Dr. J. F. Ross, Toronto ; discussion opened by Dr. C. P. Lennox, Toronto. Paper, "The Dental Preceptor," Dr. Sparks, Kingston ; discussion opened by Dr. Moyer, Galt. Question, "Are compound fillings desirable? If so, give proper combinations and the utility ;" answers by Dr. R. J. Morrow (Peterboro'), Dr. W. A. Leggo (Ottawa), Dr. Moyer (Galt).

Thursday, October 1st.

9 A.M.—Paper, "Cataphoresis," Dr. Waldron, Toronto ; demonstrated clinically by Dr. Swann, Toronto ; discussion opened by Dr. J. F. Brown (Port Hope). Paper, "Review," Dr. Relyea, Oswego. Question, "Why do amalgam fillings so frequently fail?" answers by Dr. O. A. Marshall (Picton), Dr. G. E. Hanna (Ottawa), Dr. G. S. Martin (Toronto Junction).

3.30 P.M.—Opening of the new College building. Programmes will be issued in a few days by the Secretary of the R. C. D. S.

8 P.M.—Retiring President's address. Paper, "The Common Sense of Hypnosis," Dr. Thomas Fillebrown, Harvard Dental School, Boston, Mass., with clinic ; discussion opened by Dr. J. B. Willmott, Toronto. Paper, "Fermentation and its relation to dental caries," Prof. J. J. Mackenzie, Toronto ; discussion opened by Prof. Teskey, Toronto.

Friday, October 2nd.

9 A.M.—Paper, "Silver nitrate," Dr. Baird, Uxbridge; discussion opened by Dr. Klotz, St. Catharines. Incidents of office practice, "Anchylosis of Maxillas," Dr. Adams, Whitby. Question, "Is pulp capping advisable? If so, what conditions must be observed to justify to the operation?" answers by Dr. W. E. Willmott (Toronto), Dr. C. E. Klotz (St. Catharines), Dr. A. H. Allen (Paisley).

DENTAL ASSOCIATION OF NOVA SCOTIA.

The sixth annual meeting of the Dental Association of Nova Scotia was held in New Glasgow, N.S., on August 26th and 27th. From the first session to the last the interest continued to grow, and it proved to be most profitable and instructive.

Dr. Blackstone, of Manchester, N.H., and Dr. Belyea, of Brookline, Mass., held clinics of great interest—the former illustrating the possibilities of certain kinds of gold cylinders in contour work; the latter, on quick setting of Logan and Richmond crowns.

Mr. Towne, of the S. S. White Dental Manufacturing Company, also gave illustrations of some interesting phenomena in hypnotism.

Dr. Webster, of Pictou, and Dr. G. K. Thomson, of Yarmouth, gave thoughtful papers.

Excursions to the Albion Coal Mines, Trenton Steel Works, and moonlight sail to Pictou through a most picturesque section of Nova Scotia, made up part of the programme.

The meeting will be held next year in Wolfville, the centre of Evangeline's Land in "Old Acadia."

Clinic performed before the Nova Scotia Dental Association on August 27th by Dr. G. K. Thomson, of Yarmouth: Patient, Dr. J. A. Johnson. Approximate cavities in upper right canine and lateral incisor; decay extended to margin of the gum and the nerve nearly exposed in both and exceedingly sensitive. Applied 16 per cent. solution of electrozone and cocaine; current of cathodic battery applied and gradually raised in fifteen minutes from one-tenth to one milliampere; the current was then removed. No pain was experienced from excavating, and no response from cold air syringe. During the operation no unpleasant sensations were experienced.

THE responsibility resting upon the teaching and clinical staff of a dental college is very great; the duties are severe, and demand many personal and financial sacrifices.

Abstracts.

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

DR. H. H. SULLIVAN uses ordinary corks as handles for bench files. They are light and answer all purposes.—*Items of Interest.*

The Stomatological Gazette reports that Dr. Clyde Payne gave to the Stomatological Club of California, formula for a fusible metal for die and counter die: Tin, 4 parts; lead, 3 parts; bismuth, 15 parts; cadmium, 3 parts. Fusible at 150° F.

INVESTING.—Mr. Girdler uses the dust of burnt anthracite coal instead of sand or asbestos, in conjunction with plaster, for investing cases for soldering, and claims that the plaster does not crack so readily on the application of heat.—*Asst's Quarterly Circular.*

LIQUID SILEX.—The solution known by this name, or a soluble glass, chemically the sodium silicate, ($\text{Na}_2 \text{Si O}_3$) is quite as effective a medium to prevent the adhesion of plaster to vulcanite as is tin foil, but certain precautions are necessary to procure the best results. The material should be kept in a moderately warm place and tightly stoppered. As soon as its viscosity becomes greater than a thin syrup, throw it away and buy a new bottle. Should it lose its perfect clearness discard it. The writer finds that about one-third of the four-ounce bottles in which it is sold is useful, the remainder is usually so deteriorated as to be worthless. Dilution with hot water and warming the solution restores its appearance; but, for dental purposes, not its virtues. The model, after investment, and also the teeth and entire investment, are freed of adherent wax by pouring over them a stream of boiling water. The excess of water is absorbed by means of bibulous paper. As soon as the wet appearance disappears from the plaster, it is ready to receive the silicate, not before.—*Ohio Dental Journal.*

REMOVABLE PORCELAINS FOR CROWN AND BRIDGE WORK.—Dr. W. S. Mason, Red Bank, N.J., has invented a system of detachable porcelain facings to be used in crown and bridge work. A metal dovetail on the back of the facing fits accurately in a groove in the backing, and when ready to insert in the mouth the groove is filled with chloro-percha and the facing pressed to place and finished off carefully. Dr. Mason enumerates the advantages of his plan, thus: (1) You do not have to place your tooth under the flame of the blow-pipe. (2) You have a solid

backing without bubbles, as all parts are drop forged. (3) You can heat up and cool off investment quickly. (4) Small amount of solder used—just enough to join the parts together. (5) Saving your porcelain from being etched by borax. (6) You are able to fit a bridge, releasing the strain by cutting and resoldering, and not have the porcelain interfered with. (7) The time saved in making bridge over the old method, and the freedom from the annoyance of having to spend half-a-day trying to repair a break. With this system the making of a repair is only a matter of a few minutes. If you put a tooth of mold 22 on and it should break, you may order an exact duplicate and slip it in position, keeping yourself in good humor and giving your patient the greatest amount of satisfaction.—*Abstract of article in Dental Cosmos.*

METAL DIES DIRECT FROM IMPRESSION.—Dr. E. I. Woodbury, *Dental Cosmos*, has a method of making dies in metal direct from the impression. The material for the impression is fine clay or a clay compound, with an equal part of plaster, which is the aluminous compound he uses. It will not shrink or expand, and is also a good investment for soldering. He uses a perforated tray, made in parts composed of an alloy of two per cent. copper with aluminum. This will stand the heat of the temperature at which the metal is poured. It is perforated for drying and permitting the escape of steam. Any die metal may be used, but the Doctor prefers Pastel's Babbitt metal. The metal is poured in a semiplastic condition and tamped in the mold to avoid the spheroiding involved in the old procedure, when the metal had to be poured very hot. The nearer we come to the mouth the better will be the result. In the old process of sand molding there were several transfers, and each step involved changes and defects. In this process there are but two changes—the impression, and the pouring and pressing down of the molten metal. Lead and tin are used for the counter die. The flasks are made in three parts. The impression is held in the lower part, filling in around it with the investment compound. The middle part of the flask is made to hold the metal. The impression is trimmed to relieve pressure in the proper places, as the metal model cannot be trimmed afterward. After drying and heating the investment portion, the Babbitt metal is melted to mere fluidity, then stirred to make it plastic, poured into the impression and tamped down well to make it fill all portions well, and prevent spheroiding. It is cooled in water. Dry it well and smoke to prevent adhesion, and pour the counter die metal. There are four special advantages: (1) The short time required to make a die; (2) The low temperature at which the metal can be poured; (3) All irregularities can be taken sharply; (4) The ease of the process by which even a novice can get good results at once.

Selections.

A PLEA FOR CONSERVATIVE ORAL SURGERY, WITH PRACTICAL ILLUSTRATIONS.*

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

There is, perhaps, no other department of surgical practice in which the general surgeon, trained in the medical schools alone, is so deficient as in oral surgery. He clings to the ways of the ancients, and makes no effort to improve his methods in oral and facial surgery. The fault is not so much his as it is that of the system under which he was educated. For, notwithstanding all that has been demonstrated by Profs. Garretson and Tomes, the medical colleges persist in declining to annex to their curricula the special line of work regarding the facial region which would seem to be of paramount importance, in view of the æsthetic factor involved.

The medical student of to-day receives no training in oral and facial surgery; so that the general surgeon may be excused for not practising that which he has not been taught. Even our modern text-books contain many of the identical illustrations and much of the advice upon this topic which were published in the "forties." The surgeon trained under such auspices must, in order to advance in oral surgery, create, by his own observation and skill, better methods. To such a one, the Langenbeck operation, the opening through the face for the resection of the jaw, for the removal of tumors and necrosis, trephining below the eye to gain access to the antrum of Highmore, the resection of nerves by cutting through the face, may seem justifiable. But to the man who has seen such operations performed through the oral cavity, so that no visible external scar is left, such practice seems like butchery, and the practitioner who still persists in the old way is almost guilty of malpractice.

That the condition of oral surgery as practised by the average general surgeon is entirely because of the lack of better teaching in the schools, and that he will accept better methods when their value is demonstrated to him, is evidenced by personal experience. Just prior to the writer's appointment on the staff of the New York Post-Graduate Medical School, every general surgeon of the faculty who had a vote cast it against him, and he was informed that it was because they did not wish to see this

* Read before the Atlanta Meeting of the American Medical Association.

specialty established. It was not long, however, before some of these, recognizing the beneficence of the conservative method, applied for instruction and were frequently found at his clinic.

The late Prof. Garretson met with a similar, though more resisting, opposition twenty-five years ago, in consequence of which he was forced to join with a dental college, when the work that he did, great as it was, fell short of what it would have accomplished had he been connected with a medical school.

Why the faculties of the medical institutions persist in ignoring the advances which have been made in oral surgery, which it would seem have reached a point to demand their incorporation into the medical curriculum, is past comprehension. In view of the facts, one might almost question whether it is due to selfishness, self-sufficiency, or politics that this field is so entirely neglected. Certainly the present course is not in the line of scientific advancement.

It seems now time that America, if she wishes to lead in medicine, as in many other professions, should establish a medical institution devoted to the higher education of students in the department of oral surgery and other neglected subjects, such as nervous diseases, rheumatism, gout, and the treatment of the kidneys, and thus give free and unencumbered scope to the inquiring mind willing to devote itself to this work, and give the world the benefit of the results of its investigations.

To illustrate the need of a better knowledge of oral surgery among general surgeons, allow me to quote the following cases from practice :

April 19th, 1893, Mrs. M., about thirty-five years of age, was brought to me by her dentist, giving the following history : For several years she had had trouble with her teeth, some of them being abscessed, the trouble coming and going from time to time. About February 18th, the left side of her face became swollen, and a severe pain was felt in the jaw, the swelling gradually extending to the temporal region. A week afterwards the presence of pus was detected. In the meantime her physician applied alternately cold and hot applications, principally poultices, which resulted in the discharge of pus into the mouth. Three weeks later the face was still swollen and hard, and the jaws were closed. The temporal abscess was aspirated, and the pus drawn off ; but as the difficulty showed no abatement, the patient was brought to the city for treatment. My examination showed the cheek slightly swollen, with considerable swelling in the temporal region. The deep fluctuation showed the formation of pus under the temporal muscle. There was a hardened lump of the size of a peanut near Stenon's duct, and the jaws were almost closed and rigid. The inferior left bicuspid, which had been abscessed and troublesome for many years, had been extracted some two months previously,

but the socket had refused to heal ; there was also periosteal and sub-periosteal inflammation throughout the entire labial and buccal surface of the inferior maxilla on the left side extending from the central incisor back to and up along the ramus of the jaw. From this inflammatory centre, in my opinion, both the temporal abscess and the one in the cheek had formed, and I demonstrated it to the dentist as the cause.

June 1st, the patient again presented herself at my office with the following additional history, begging me to operate for her : She had been advised to go to a general surgeon whom she was assured was a specialist in oral surgery, in fact a specialist in every branch of surgery. He had performed six torturing operations in six weeks without satisfactory results, and stated as an excuse for the seventh operation, which he proposed doing, that he had not known and did not know the cause of her trouble, and that he would make an incision from the temporal region to the lower portion of the cheek, a distance of about six inches, opening up the face to the bone to ascertain where the cause lay. This she refused to submit to and left the hospital.

Examination revealed the following conditions : The patient showed a great loss of flesh ; was feeble, anæmic and feverish, tongue badly coated, bowels constipated ; she had been obliged to submit to the loss of her hair to facilitate the dressing of the wounds. The jaws were rigidly set, and the patient swallowed even liquid with great difficulty. The face was badly swollen and indurated, pitted on pressure, and bore a strong resemblance to liver.

An abscess which pointed in the cheek near the angle of the mouth was almost ready to break through the skin. There was also a deep red spot under the left eye, accompanied by a puffy condition with fluctuation, such as one often observes in antral disease ; another of similar nature, about an inch in circumference, was situated at the external angle of the eye. There was an ugly suppurating, granulating wound immediately anterior to the ear, and extending from the middle half to an inch above it, gaping open for an inch, from which pus flowed freely. Protruding from this was a drainage tube, which passed down through the wound and opened into the mouth immediately below Stenon's duct.

The zygoma was separated from the malar bone by necrosis, its periosteum was denuded along the entire posterior surface, and the bone also necrosed. While the disease had become greatly aggravated since my first examination, and the patient's health had been much impaired, the most unfortunate complication was facial paralysis confined to this side. This the patient said had followed one of the operations at the hospital.

Realizing that there was no time to lose, we concluded to operate at once. Under ether, an opening was made through the

mucous membrane into the cheek abscess immediately below Stenon's duct, near where the drainage tube entered the mouth, and several ounces of pus were evacuated.

The granulations and sac were curetted away, leaving only the skin unbroken. The wound was antiseptically packed. An incision was made through the gum and periosteum extending from the cuspid back to and along the ramus of the jaw. This was found full of pus and granulating tissue which extended to the top of the coronoid process, beyond which I could readily pass a probe up to and under the aponeurosis of the temporal muscle. Granulations and debris were also thoroughly curetted away and the wound packed. A similar condition existed under the temporal muscle which was treated in the same manner. Several ounces of pus and debris were removed. The wound which was made at the hospital was treated in like manner. The necrosed bone along the lower border of the zygomatic arch, and the malar bone which had become separated as above noted, was likewise removed. The necrosis here was quite extensive, and extended over the entire tuberosity of the superior maxillary. The inflamed places under and at the angle of the eye were not opened into at this time, as we hoped that as these greater wounds healed, the minor troubles would also disappear. The wounds were dressed twice daily for a week, during which time large quantities of pus continued to flow until the indurated condition disappeared. As this diminished the wounds were dressed daily. The temporal wound was the slowest to heal. Finding the inflammation under and at the angle of the eye showed little signs of abating, although cold compresses were applied constantly, I concluded to open and remove the cause.

On June 6th, by use of cocaine to relieve pain, I passed a knife through the mucous membrane just above the left superior second bicuspid, and by means of a grooved director, dissected away the tissues until the abscess at the angle of the eye was reached. I then made an incision in the periosteum one-half inch in length, through which I was able to curette and remove fully two drachms of pus and several flakes of dead bone. This wound was treated in a similar manner to the others, and readily healed. The abscess immediately below and near the internal angle of the eye was treated in a like manner, and with like results, the opening through the mucous membrane being made on a line with the lateral incisor. All wounds were healed within two weeks, and the swellings and the induration of the face entirely disappeared. The ugly scar in the temporal region was then dissected out, and the parts were drawn together by sutures and adhesive plasters, until healed, leaving only a slight linear scar.

The patient was dismissed and returned to her home, June 22; with all the wounds healed, the complete use of her jaws and the-

appearance of her face returned to its normal condition, save the marked paralysis which resulted from the treatment between April 19th and June 1st. Before leaving the city she presented herself at the office of the surgeon who did these first operations, and showed him the results of conservative oral surgery, asking him to note well the facial paralysis which he admitted to her he was the cause of.

Loyal to my fellow-practitioner I shielded him from his error, and prevented suit being brought for malpractice by her husband against this surgeon, who claimed to be a specialist in everything, by stubbornly declaring that I would be a witness for the defendant and swear that in my judgment he treated the case as taught in our college and text-books and according to his best ability.

To impress more definitely upon the minds of the readers of this paper perhaps the most potent cause of temporal abscess, I will narrate the history of another and similar case to the one already given.

Mr. L. presented himself with the characteristic swelling in the temporal region and complaining of great pain. Deep fluctuation was readily observed, denoting the presence of pus beneath the temporal muscle. The gums along the alveolar border extending back of the cuspid were highly inflamed and œdematous. The root of the first bicuspid tooth was found almost covered by the gum and abscessed. This had from time to time given him considerable trouble. Attributing to this the cause of the trouble, I removed it and found that I could pass a probe beneath the periosteum as far back as the wisdom tooth. An incision was made through the gum and periosteum extending well back along the ramus. This enabled me to pass a large probe beneath the periosteum up the ramus and beyond the coronoid process, following the temporal muscle until I had reached the abscess, the pus from which flowed freely down beside the probe and out into the mouth. The bone immediately under the periosteum was covered with granulations and pus. This, along with that underlying the temporal muscle, was curetted away. The wound in the jaw was packed, while that in the temporal region was douched and sterilized twice daily, and applications of ice were made to the exterior. The stiffness of the jaw at once began to improve, and in a few days it was normal in its action. The treatment covered a period of ten days, when the patient was dismissed cured, and now nearly four years have elapsed without any sign of return.

The origin and progress of this case were identical with those of Mrs. M. already mentioned, and had she had similar treatment at the same stage of her disease, the result would have been as happy as in this case and without any external disfigurement.

A similar but more perplexing condition than that referred to above, is one with the following history and results: Four years

prior to May, 1892, the patient, while suffering from a severe pulpitis caused by exposure of the pulp in the inferior left third molar, had the tooth extracted, which was immediately followed by excruciating pain, but of a vastly different character from that which he had previously suffered. He likened the pain unto a severe bruise. The pain continued to increase, and the following day he returned to the dentist and insisted upon his extracting the second molar, although it was not decayed. This the dentist did reluctantly, thinking that perhaps the extraction of the wisdom tooth might have ruptured the nerve, because of the fact that the ends of the roots were bent like a hook. The pain continued for several days, when another dentist was consulted, who continued the process of extracting teeth, but with no relief.

Medical counsel was then sought, but the case baffled all treatment for several months. The patient's health diminished, and the pain continuing in the jaw, he sought relief at the hands of the third dentist, who, like a true knight of the forceps, removed the remaining teeth of both left superior and inferior jaws. The shock to the nervous system and the profuse hæmorrhage which followed, owing to the weakened physical condition of the patient, gave him temporary relief. But the old trouble soon returned, and he found himself back under medical treatment—from which he realized no improvement, finally abandoning his business and becoming an invalid.

After the lapse of two years, he sought the aid of a general surgeon, who, concluding that the trouble was in the gums and alveolar process in the inferior maxilla, cut and chiselled them entirely away, but to no avail. For two years more suffering and medical treatment continued until the patient was little short of a wreck and all but insane. He had lost forty-six pounds in weight, was emaciated and anæmic, and he grew despondent and longed for death to relieve him of his agony.

Diagnosis of the seat of the trouble was based upon the early history of the case at the time of the extraction of the wisdom tooth. It was plain that the inferior dental nerve had been lacerated in the locality of the wisdom tooth, and that no relief could be hoped for until the nerve was severed between it and its centre. To make sure of the result, I decided to remove the entire nerve within the jaw. An incision, about an inch long, was made through the mucous membrane, directly above and back of the location of the wisdom tooth, and the tissues were separated until the nerve was reached as it entered the inferior dental foramen. The nerve was caught up and held with the bull-dog forceps, and severed at this point.

An incision was then made over the mental foramen, the tissues dissected away, and the dental nerve, where it emerged, was separated. The forceps was then tightly grasped and with a

steady tension the nerve was drawn out of the canal its entire length. The hæmorrhage was readily controlled by means of hot water, but owing to the general flabby condition of the tissues, and to the fear of a secondary hæmorrhage, the wound was packed and allowed to fill in by granulation. The patient soon recovered from the ether, declaring on his return to consciousness that "for the first time in years" he "was free from pain." The parts healed rapidly and no untoward symptoms followed the operation, save a little numbness noticeable at times in the left half of the lower lip. The patient soon recovered health, strength and weight, returning to business in two months, and there has been no return of the trouble.

I will next report a very remarkable case which came to me in April, 1892, as it may materially assist in the treatment of orchitis—being the details of one of several cases coming under my observation.

Mr. B., aged thirty-seven years, with no specific history, was referred to me by Dr. L. Bolton Bangs, of New York City, to whom the patient had been brought for consultation, with the request that I examine his jaw to ascertain whether there was any oral lesion to account for a pain complained of that day. On inquiring into the dental treatment received by Mr. B., I drew from him the following statement: Five years before the gums over the inferior left wisdom tooth, which was retarded in its eruption, became suddenly swollen and very painful. He applied to his dentist, who, in attempting to extract the tooth, broke off the crown, leaving the root, over which the gum healed, completely embedding it. Since that time he had realized uncomfortable sensations on that side of the face with some soreness of the inferior second molar which baffled the skill of those hunting for the cause.

The patient supposed the root to have been extracted at the time the crown was separated from it. Three years following this visit to the dentist, he was attacked by excruciating neuralgic pains in the left side of the face, which, until two months before calling on me, unfitted him for business. This pain gradually worked its way down the left side of the body, extending to the groin and left testicle, which became inflamed, swollen and troublesome. All efforts on the part of his surgeon to relieve his suffering were unavailing.

One of the peculiar features of the treatment in this case is, that when hot or cold applications were made to the testicle, the pain ceased in it, but immediately appeared in the left side of the face. As soon as the applications were removed, the pain returned to the testicle.

After examining him, I concluded it was a case of metastasis, such as is frequently connected with mumps. I sent the patient back to Dr. Bangs with the following note: "I believe I have

found the cause of this long and persistent neuralgia, and that, if I operate the patient will no longer have need of your services, as the orchitis will disappear with the healing of the wound."

The patient was not long away, for the wide-awake specialist sent him back with a note stating, "You cannot operate too quickly to suit me, you have awakened my curiosity. I am interested and will be pleased to follow the case with you."

Examination revealed a slight necrosis of the alveolar process immediately back of the inferior second molar, the pulp in the distal root of which was dead and abscessed, the pulp in the anterior root being vital and exposed. There was a large cavity in the distal surface of the tooth, below the enamel, concealed by the gum, hence the long continued soreness of the tooth. I extracted this tooth and removed the slight diseased condition made by the abscess.

The cavity in my opinion was caused by secretions forming between the second molar and the wisdom tooth, which abutted horizontally against it. There was no satisfactory evidence of the extraction of the root of the wisdom tooth, and the gum over it appeared normal. But, to be sure that all possible cause for the pain was removed, I laid open the gum, cut through the periosteum and bone, and suddenly struck upon the root which had so long been buried. In examining to ascertain its position in the jaw, I plunged my probe into the living pulp of the root. You can better imagine the result of this thrust than I can here tell it. The patient's actions reminded me of the antics of a jumping-jack when the string is pulled. Under an anæsthetic I dissected out and removed this root. The wound healed readily, all pain ceased with the operation and the patient made a complete recovery. There was no swelling of the testicle the day following the operation—all pains and soreness disappearing within forty-eight hours. It has not since returned, the patient being restored to perfect health.

It gives me great pleasure to mention here the praiseworthy attitude of Dr. Bangs in contra-distinction to that of the surgeon who handled the case of Mrs. M.

The next case is one in which the cause is so plainly discernible that it is liable to be overlooked. An old lady in her "sixties" had for many years suffered intensely from facial neuralgia. After repeated failures of medical skill, the patient was transferred to the general surgeon, who, in six years did several operations in the right superior and inferior maxillæ, resecting the nerves and deforming and disfiguring that side of the face. When I was called to see the patient all the teeth had been extracted from the right side of the mouth, but the pain remained incessant—less, however, at night, and when she lay upon her right side, or when her face was swathed in flannel and protected from cold blasts of air.

Her general health in consequence of her long continued suffering was greatly enfeebled. Examination of the mouth was unsatisfactory, so I looked further for the cause, which I apparently found in two large "seed" moles, one of which was situated immediately in front of the ear, and the other three inches below on the affected side of the face. A few drops of cocaine were injected beneath the tissues at the base of these moles, and the skin dissected sufficiently for a small ligature to be thrown about them and firmly tied. The moles were snipped off with scissors and the stumps cauterized with nitrate of silver. The ligatures came away with the sloughs which formed, and the wounds healed without further treatment.

An examination of the moles revealed an exposure of the nerves, which were also intensely inflamed.

Several months subsequently I received a letter from the patient's son, stating, "Since the simple operation which you did for my mother, she has not experienced the slightest pain and daily blesses you."

Similar cases are common where patients have travelled nearly the world over consulting physicians in search of relief at an enormous expenditure of time and money.

The operations described are not new to those familiar with the progress of oral surgery as worked out by the more advanced members of the dental profession, but the fact remains that the general information given to the medical student is insufficient for the proper handling of these cases.

I speak within bounds when I say that maltreatment at the hands of men ignorant of the higher development of this branch of surgery has given me the greater number of my patients.

There is no question that the more cultivated dentists know the surgery of the mouth better than the surgeon who has been only generally trained; know better also the relations of disorders of the oral cavity with contiguous and distant tracts, and are better prepared to diagnose the cause of many obscure lesions connected with those relations.

I would therefore recommend to the surgical profession, particularly to those who have had no special opportunities for studying the diseases of the mouth, the calling in of a skilful dentist, preferably one who has been medically educated, at least for the benefit of his judgment in diagnosis, whenever there is room to suspect oral complications.

Our medical schools will not do their entire duty by their students until they add to their list of teachers dentists of the ability to instruct their students in diseases following affections of the teeth; and our text-books will be lacking until they give proper attention to oral surgery as viewed from a conservative standpoint.

—*N. Y. Medical Journal.*

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EDITOR:

W. GEORGE BEERS, L.D.S., - - 47 UNION AVENUE, MONTREAL, P.Q.
To whom all Editorial Matter, Exchange, Books for Reviews, etc. must be addressed.

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THE ONTARIO DENTAL SOCIETY.

The eighth annual meeting to be held in the new College building, in Toronto, from the 30th of the present month, until the afternoon of the 2nd of October, should, for many reasons, be the largest gathering the profession in Ontario has ever held. The programme, which appears in full in another page, is of practical interest, sufficient in itself to draw the members together. But the political feature of the occasion will be unique, inasmuch as it marks the great educational progress in Ontario, and the splendid facilities now provided for aspiring students. No one would, perhaps, be so foolish as to believe, that Ontario should relapse into the educational condition it occupied even ten years ago; but there are many who do not hesitate to declare, that the profession is overstocked, and that some higher standard of selection and entrance than now exists should be devised. It is indeed a humiliation, that this auspicious occasion of the opening of the new building, should be coincident with the most degraded ethical acts on the part, not by any means of recognized quacks, but by those who are forced by circumstances of over-crowding and the fight for existence, to resort to quack methods. This question cannot be avoided. It may possibly not trouble or affect the small minority whose practice is secure, or the few who enjoy collateral means of increasing

their income. It makes no odds who makes light of the facts. They are facts that stare us in the face and touch us in the pocket, as well as in our professional self-respect. If any man will rise to deny them, the reasons for his disclaimer can be personally and selfishly explained.

However, it seems to be accepted, that if young men insist upon crowding into the already over-crowded profession, they must be provided for. It is true that when a given space of room is "full," it can hold more—if new-comers are allowed to stand on the heads and shoulders of those already in. One needs but little atmospheric knowledge to understand that this condition means that only the fittest can survive. But there should be no need in our great Dominion, with its small population, why any man should obtain his living by destroying that of his neighbor. It can be seen then, that the Dental profession and their representatives, have inaugurated an educational policy in Ontario of the purest unselfishness.

WORK AND PLAY.

Very few practising dentists realize the amount of time and thought, which an editor of a monthly journal has to devote to its interests. Even if every page was scissored from our contemporaries, it would be considerable work. Dr. Geo. S. Martin, in his "Abstracts," condenses every article, and makes a careful search through all the exchanges. The editor monthly looks over every page and item of every dental journal, and several medical and educational, besides keeping up a fire of correspondence for information, etc., which every day gives him work to do. Of course all the labor is supposed to be done in one's leisure, but when the task is congenial, it is quite certain to encroach upon the most valuable hours of one's legitimate work. We have succeeded by a great deal of personal effort in getting a good deal more original matter than most of our contemporaries. Sometimes we have metaphorically had to go on our knees to get it. There are an awful lot of lazy fellows in the Canadian profession, who would rather go duck or deer hunting, or trout fishing, than stay over hours in their office, or sit down to write an article for the JOURNAL. We are built exactly that way, and there is no memory of the greatest professional success in operating, which can rival that of a week among the Laurentian Hills, where the cobwebs and the rust of daily toil disappear like the mist before the sun. Thank God for not having included the shooting of game in the ten commandments.

A UNITED PROFESSION WANTED.

If there was ever a time in our Canadian professional history when men who want to do well should unite their forces against men who seek to do evil, it is the present. We have never before witnessed so many cases of aggressive unprofessionalism, of men who openly use quack methods of advertising—the woods are full of them. What are we to expect of the future? What is to be the harvest of the policy of *laissez faire*? Shall we do anything—or nothing—to counteract the public falsehoods and pretences of the quack advertiser?

Why is it that our provincial societies do not enlist the active interest of the large majority, instead of the weak minority of practising dentists? Why are the members of the Board, and the faculties of the Colleges, left to do so much work alone? What right have men to air their grievances through the JOURNAL and in letters to the editor, to which they will not put their names, on the overcrowding of the profession, quack advertising, if they take no part in the only organization where these questions can be discussed? The absentee is an unconscious abettor of the mischief-maker. The voice of the profession in a convention is echoed in the public press, and can be made to influence public opinion. The voice of the quack advertiser goes on forever, at first in high-sounding pamphlets and advertisements, and then—when funds fail—in the mere repetition of the advertiser's name. This JOURNAL is not sent to the public press, and therefore has no such public influence. The only influence it can directly exert is upon the dentists themselves, and we venture to believe it has been salutary. It is our business to stir up the profession, not to arouse or influence the public. When those who use quack methods flock together to do mischief, it is surely time for those who wish to do well, to unite in the interests of the profession and the public. The Provincial societies are the proper places to discuss these matters with a practical object. It has been pretty clearly proved in this country, that the policy of letting things drift never cures an abuse. We want firm and manly aggression on the part of honorable men. It is neither fair nor likely to be fortunate to expect the few leaders to be the only workers.

THE physician who is mean enough to use his diploma as a cover for quack medicine men, is invariably in the position in his profession to which his instincts lead him—at the bottom. The dental birds of a feather generally keep him company.

CANADIAN DENTAL JOURNALISM.

A BIT PERSONAL.

Twenty-seven years ago, we ventured to issue as a monthly the first number of the first dental journal in Canada. With becoming modesty, it is not out of place to say that it has done some service to the Canadian profession, which a foreign journal could not as well accomplish. Its editor has been in the swim of most of the Provincial organizations, and has unceasingly kept in touch with their political as well as their scientific progress. Necessarily, the politics of dentistry must engage a great deal of one's thought. The social, and indeed the scientific unity of the profession, must be founded and perpetuated upon a solid ethical basis. From the first issue of the *Canada Journal of Dental Science* to the present number of this journal, we have never swerved in the least degree from the ethical and educational principles first announced. It has made us some enemies, who are the enemies of all dentists who are ethical, and whose enmity we prefer to their friendship. It has made us a host of firm friends and helpers, whose frequent differences of opinion we respect, and whose criticism we gratefully receive. The JOURNAL is the organ of the profession in Canada. If its editor has hit hard blows at quackery and quack methods, it was done only on behalf of the profession and the public. If he has erred in many ways, as no doubt he has, it only goes to show that an editor is but human. One has not to apologize for that.

ONCE upon a time there were two well-deserved slurs against the Canadian dentists, the gravamen of which was, that they were not a reading profession, and that they had no such unity of purpose as our enterprising brethren over the border. It is still a reproach to some extent, that the travellers for our dental depots meet quite a number who either boast of their independence of such aids to knowledge, or for various reasons, object to adding to their expenses the paltry cost of one or more dental journals!

WE have received letters from several parties who say they are "personally insulted" because of our remarks about quack advertising. We take it as a personal compliment that we have succeeded in making these people feel sore. It would be still more complimentary if we could succeed in making them ashamed. Some of the foolish young fellows who took fright and sailed in for quack advertising, are, we know, ashamed of the policy into which they were led. But there are several congenial skallywags who could blush no more than an elephant.

THE *Post-Graduate*, in commenting on the prosperity of quacks, says: "The fact is, that the United States of America are not yet sufficiently civilized for the daily newspaper to have a real appreciation of what the profession of medicine does know and does not know. In other words the average reporter, and possibly the average editor, still believes in clairvoyants, the seventh son of the seventh son, the bone setter, and the healer who neglects the barber and cultivates the sublime art of curing disease which does not exist." We have repeatedly drawn attention to the use made by quacks of the press, and various suggestions have been offered as to the best means of exposing them. The Provincial societies, we repeat, should devise some plan which the members could carry out in their own localities. The public is not responsible for its ignorance of dentistry. The dentists themselves are largely responsible for this ignorance. The popular belief—it is not a superstition—that the "parlor" advertiser is able to do all he advertises, is perfectly natural. What are respectable dentists doing in their own communities?

THE meeting in Toronto this month should be made social as well as scientific; political as well as practical. We are in the very thick of questions touching the sentimental as well as the serious burdens of our professional lives. Men talk for a twelve-month, and worry for years about present and impending difficulties, who are curiously silent when they meet upon the only occasions when they can be discussed. Men who stiffen their "backbone," and mean to have it out on the question of ethics, become as bland as cooing doves, and as pliant as mollusca. There is no need for angry words, which only defeat their object. There is no reason why any licentiate, animated by respect for himself and his profession, should not inquire as to the present or prospective difficulties.

THE general public have not now an exaggerated idea of the dignity of the dental profession. They have of that of the other professions. The juxtaposition of the Hair Dresser and the Dentist in John Eaton's departmental store in Toronto is an object lesson in professional dignity, is it not? They should take down the thin partition and hug each other.

"THE overcrowding of the professions;" "the abuses of hospital practice." Such are the leading subjects of discussion in the London, (Eng.) medical journals.

ONE of our quack-method advertisers had his card dropped into the book-racks of all the pews in several churches of Montreal!

If the dentists who are ethical and honest were half as persistent in their exposure of quack methods as the quacks are persevering in their falsehoods, the ethical and the honest would soon drive the false and the pretentious to the wall. But there are timid men who have so little fight in them that they would rather suffer than complain. There are others whose ideas of ethics go to the extent of believing, that it is unethical to bother themselves about the matter. There are others who believe in exposure of the imposters, and education of the press, but they like others to do it. If the fighters get hurt, they escape. If they smash the quacks, they share in the "profits." "There are others."

Correspondence.

PULL TOGETHER.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—The bombardment of quackery and quack methods, in which you have been engaged for the last year, has had, directly and indirectly, good results. I have made your articles subjects of monthly conversations with those of my patients who were in any way influenced by quack advertisements, and I have taken opportunities to bring them before the special notice of the editors of our two papers, and I am glad to say that I succeeded in getting both of them to copy in full, the article in the June issue, on "The Neglect of the Teeth in Country Districts." It did a lot of good. Every one of us can use the pointers before our patients and with our local press. We can show the editors that it is in the interest of the public to do so, and I hope we will discuss this subject at our meeting in Toronto.

I know quite a number of our young men who have been dissuaded from using quack methods, by the articles in the JOURNAL. Perhaps you do not please everybody. You may even have enemies. I would like that we should know who they are. The JOURNAL is an absolute necessity to us, and conducted as it is, is doing a splendid organizing and protective work for us. It may not succeed in ridding the profession of all quack methods, but it will certainly reduce them to a minimum, and if the respectable dentists of the Dominion, and of Ontario especially, would each put in their oar, the pull together in defence of the dignity of the profession, and the protection of the unsuspecting public, would be strong and effective.

Yours,

L. D. S.