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Original Communications

ABOUT POPULAR EDUCATION AND THE REASONS FOR IT.*

By N. PEARSON, L.D.S., Toronto.

The paper read by Dr. Martin is an admirable one and timely. In Toronto and elsewhere, no doubt, the time has come to make a move in the direction indicated, and the Toronto men ought to be the pioneers. Here we suffer first and all the time. There is no manner of use in appealing to the ethical nature of men who advertise the superiority of their professional attainments and boast of secret methods only known to themselves in the most immodest and flagrant manner. These methods of flaunting hypocrisy and immorality are the life substance of their professional existence. They can't live without it. It is a necessity with them or they would not be doing it. If a man is a success, would he have any need of saying that he is the only living specimen of "a howling success" in any line, or that he possesses secrets not open to any other scientific experimenter, and expect a discerning public to believe such consummate trash in this age of advanced thought? Such men can't be successful for long. The better class of reasonable thinking people are not caught, but the ignorant are; and herein is the course of duty laid out for us.

Our duty is to organize and to teach this class of the community wherein their interest is at stake, and how to protect themselves from such immoral and fraudulent impostures. Take the unwary and ignorant public into our confidence, as it were, and teach them how to avoid the net placed before them and into which they are

* Read at meeting of Toronto Dental Society.

daily falling. Every respectable, reputable dentist is made aware of cases of discreditable, avaricious and dishonorable transactions, not to say anything of malpractice and permanent injury done in many instances, while dishonesty and misrepresentation are too common to be mentioned. We can't make use of these innumerable instances. We don't wish to. They are better left alone to work out their own ends. No good end can be obtained by abuse. No invective, no language, no pleading, no reasoning can touch natures of the sort who are not possessed with instinct enough to acknowledge a sense of obligation to any professional *core de honor*, therefore we are justified in proceeding to use any weapon of defence that is at once honorable and dignified, and I know of no better way than to use honest money and honorable methods of teaching the ignorant how to act and when and who they ought to employ as dentists.

There is no manner of doubt that the present evil is largely due to the disastrous effect of departmental stores having inaugurated in the minds of the people a mania for bargains and cheap counters until the dementia has so seized hold of them that it is applied to everything and everybody, and "something for nothing" may be the motto written on the popular brain, and the cry is adopted by the irresponsible and avaricious hog in dentistry and made use of to support a professionally immoral and tottering career a little longer and to indiscriminately slaughter the elements of legitimate trade and revenue for those deserving support.

I would advocate a thorough organization of the profession of Toronto, and a formation of a fund to be expended by a committee of the organization in printing and distributing literature, advertising liberally in the daily press, in an impersonal way, facts and reasons and information that would appeal to common sense and justice.

We are quite aware that we would have no reasonable hope of appealing to the daily press to suppress any advertisement, no matter how flagrant a breach of ethics it might be, or how fraudulent the tendency might be, or who would be deceived; that is no concern of the press, but by a judicious use of these same columns we might, in the name of a recognized, honorable society, place alongside of such, an advertisement, and by paying for it at the same rate, counteract or counter-irritate the effect and do some good. We might appoint a committee on advertising and carefully consider each article to be submitted and select points of merit and telling facts, original and selected. In reading over the various journals I have been struck very frequently, as, no doubt, every dentist has, with an article that ought to be read by every parent in the land, and, indeed, why should not every parent in the country be in possession of every good idea about the teeth

of themselves and their children, except the technical and practical. Indeed, it strikes me that we have been asleep too long and, the time has come to wake up and be doing something, and be interested not only privately but publicly—large and good and sensible. Let us get hold of the public ear and not only open it and interest it and enlarge it with wholesome common sense, commendable facts that will create respect and admiration and confidence, but at the same time stuff it effectually (*à* *contra*) against the evil effects of designing imposture.

If the time is ripe and there is good to be done by putting the idea into execution, no desirable object is to be gained by pursuing details any farther in a paper, as a few willing workers will carry on the work very much better so vaguely outlined here. It has occurred to me, however, that every dentist in the city should be personally canvassed and have a chance to cordially identify himself with the move as quite a separate and distinct organization from any other, and be convinced that he is personally and largely financially interested in its success, and a tax of at least ten dollars is expected to stand opposite his name, to be returned to him ten-fold indirectly in the near future, for without money nothing can succeed, and he is a pusillanimous poltroon if he is going to be benefited to any extent at the expense of somebody else, and by the labor of love of willing hands.

POPULAR DENTAL EDUCATION.*

By G. S. MARTIN, L.D.S., Toronto Junction.

We have all, I have no doubt, had our day dreams in which we pictured a dental utopia—a condition of things under which an intelligent, non-irritating public formed our clientele, where our work lay not in the line of difficult operations to repair the ravages of disease caused by neglect, but in the direction of rendering such operations unnecessary. In this utopia our patients came to us not when driven by pain to have teeth extracted or nerves destroyed, but came at regular stated times for examination. The children were placed in our charge at two or three years of age and brought to us regularly, so that no temporary teeth were allowed to ache; no operations, distressing alike to patient and operator, were required, and as a result relations of intimacy were established between the interested parties. Our patients were intelligent enough—(imagine it, if you can, ye careworn and weary practitioners!)—intelligent enough to leave the care of their teeth and mouths entirely in the dentists' hands; intelligent enough to

* Read at meeting of Toronto Dental Society.

understand that the temporary teeth are but twenty in number, and that the teeth coming after six years of age are of the permanent set; intelligent enough.—

But why continue the recitation of what we dreamed? We all know the dream and the rude awakening we have received, as some poor ten-year-old victim is dragged in by its benighted parent to have a first permanent molar extracted.

I have been led to select this subject because of a deep and growing conviction, that something ought to be done in the matter of educating the public at least in the direction of this ideal state dreamed of; in fact that something must be done before we have done our duty by the public. Our duty is not discharged, you will agree with me, when we have given so much work for so much legal tender. If we are to maintain our claim to rank as doctors of dental surgery, we must be in a wide sense not only operators but educators as well. The importance of the question I have raised will be more readily grasped if you consider that it involves problems that are recognized as of vital importance in our profession, such as "How shall we prevent the shyster from undermining our profession?" and "How prevent overcrowding of the profession?"

We find in dentistry conditions found in no other profession, due perhaps to the fact that it is the youngest of the professions. Tell a man that it takes several years' close study before one can legally practise dentistry and his answer is, "Does it take that long to learn to pull teeth?" When I left school-teaching one of my trustees said it was a pity a man of my intelligence should go pulling teeth. Unpalatable as the thought is to us, it remains a fact that to the great mass of people we are known as tooth-pullers and not as tooth-savers. The extreme public idea is well illustrated by the speech of Senator J. A. Stewart a month or two ago in the Georgia Legislature, when speaking of the proposal to make a more stringent dental law. "There is nothing," said he, "in going to school so long, anyhow. There are just two jaws and thirty-two teeth, and any schoolboy in the State can learn all about dentistry in two weeks. Any man with any common sense knows how to pull a tooth. The whole business ought to be repealed. It is foolishness to dignify dentistry with all this consideration. I can teach any young man who has sense enough to come in out of the rain all that it is necessary to know about dentistry in a fortnight."

Lest it be thought this is the opinion of an illiterate man—a "Georgia cracker"—you will be interested to learn that this Senator speaks in the double capacity of legislator and physician, and is thus twice armed.

As in medicine the itinerant medicine man, or the seventh

daughter of a seventh daughter, takes precedence in the eyes of the uneducated over the regular practitioner, so in dentistry the long-haired Indian medicine vendor from the wild and woolly west, who camps on the vacant lot and pulls teeth gratis with orchestral accompaniment, is always a better dentist than the man who pays rent.

A dentist may spend years in trying to build up a practice, and just as he is congratulating himself some miserable cur who has managed to procure a license, a hypodermic syringe, half a dozen forceps and a vulcanizer, opens "parlors" (these fellows always call their offices parlors), and our friend finds himself with ample leisure to figure out "Where am I at?" Not that I would not argue that good work and straight dealing will tell in the end, and does all through with an intelligent minority, but we all meet enough of this to dishearten the bravest of us. The trouble seems to be this: The only men who keep themselves in evidence before the public are the advertising men, and they, in proportion to the loudness of their advertisements, impress the public with their very commercial ideals. It is for us to decide whether there cannot be devised means of educating that shall counteract these "ads." we see displayed *ad nauseam* in our dailies. The public mind as at present constituted cannot discriminate between quackery and honesty, and cannot appreciate such a thing as professional ethics at all.

The other crying need of the public, and one fraught with much danger to health, is the total lack of any education among a large proportion of the people as to the functions, importance and necessity of care of the teeth. Perhaps not a week passes without evidence of this need being brought before the dentist, until he asks in despair, "Is there any other thing about which the people are so ignorant as the teeth?" It may be said we can educate at the chair as opportunity presents. So we can, and so we all do, but our regular patients are not the ones needing the education in the sense that thousands do who have no regular dentist, and who never take their children to one or go themselves unless driven by pain and the teeth past saving permanently. There must be devised some broader method of educating the people than yet proposed. We cannot blame the business man if he judges our profession by his own commercial standards. We must do missionary work first.

There is no use abusing the newspapers for printing for so much per inch the flaming "ads." of these knights of the forceps and the hypodermic, offering store teeth at \$3.00. The publisher cannot be expected to discriminate between the quack and the regular in any profession unless it be in favor of the man who takes six inches space instead of one. As well ask them to refuse the full

page "ads." of the departmental store without offering something in exchange.

There is very little use abusing the quack in the columns of the dental journals—these men don't read the journals. Writing about the quack in our journals for other dentists to read, may have a moral effect on those who read, particularly the young man entering practice, but the quack himself is not to be reached by these methods. If he reads, his thick skin will protect him; he is not sensitive; he is joined to his idols and will remain so until the public are so enlightened as to the importance of the teeth and the necessity of securing skilful treatment that he will find it does not pay to offend their eyes with lavish display of printer's ink.

What then must be the means of accomplishing this? First, I think some means should be devised of educating the medical profession. The influence of the physician in the family can scarcely be overestimated. If medical men were more thoroughly educated regarding the functions and importance of the teeth, they would insist on their patients paying regular visits to the dentist and keeping the grinders in shape, instead of, as many of them do now, condoning and abetting the destruction, not only by giving no intelligent, timely advice, but also by using the forceps in and out of season. There are many notable exceptions among the medical profession, but we fear by far the great majority are sadly, culpably ignorant of the simplest principles of dental conservation. I could give names and addresses here in Toronto, of children kept out of school over a year, while the physicians treated "running sores" so offensive that it was adjudged dangerous to the public health to have them attend school; yet these same offensive running sores were nothing but cases of alveolar abscess, and were cured by a dentist by the extraction of a diseased tooth. How to reach the medical profession is to my mind one of the hardest problems before us, but we cannot expect much from the public when their medical advisers even in fair Toronto are so ignorant. There should be instituted in connection with the final year in the medical schools a course of lectures on the importance of the teeth, and the possibilities of modern dentistry in their preservation. In country places the resident medical men have to do a great deal of dentistry, and they should be taught to do it intelligently.

Next I would say, educate the public school teachers, as it is through the medium of the schools we must hope to reach the children, and through the children we will reach the homes. The text-books on hygiene contain little or no information regarding the teeth, about as much as Senator Stewart, M.D., of Rockdale County, Georgia, gave to the Senate when he said: "Two jaws, and thirty-two teeth." Maybe he read up a school text-book before speaking.

Physiology and hygiene are usually taught orally only, the pupils not being supplied with text-books.

Some one has said that if man is to be taught anything he must be taught while young. The reason so many are neglectful of the most ordinary care of their teeth is because it has never been taught in youth, and thus has not become a habit. A child is taught to wash his face and hands, but is not taught to clean his teeth. Teachers send children with dirty hands out of the room, but allow those with teeth tenfold dirtier and more disgusting to remain. Is it any wonder that men and women allow their teeth to get filthier than they would tolerate in the case of their feet.

I lost my temper once with a man in my chair who boasted that he had never cleaned his teeth in his life. I had just extracted the first tooth he had lost. He said he believed if I cleaned them they would all decay; just as if I would take all the enamel off them, in order to make future work. I said, "Do you wash your feet?" He became indignant, and asked me what I meant. "I don't know," I said, "but you applied the same principle to your feet as to your teeth—afraid to clean them lest they become sore." I then advised him not to attempt a trip to England, or he might be put in quarantine for "foot and mouth" disease.

I would suggest as the best method of spending the surplus that seems in danger of accumulating in our treasury, that the Toronto Dental Society offer prizes or take some such method of getting members to write essays on the teeth, the best of these to be printed and distributed, in the name of the Toronto Dental Society, among the teachers of the city, and as widely as we can spread them among our patients. Coming officially from a society, the pamphlets would have an effect no amount of advertising pamphlets from private individuals could.

Our Public School teachers, let me say, are among the most intelligent patients we have, and numbers of them have spoken to me of the poor little ones crying at school with the toothache, and having to stay out for days with swollen faces. They will welcome any assistance we can give them in educating the children. I have no doubt the inspectors would sanction a properly worded pamphlet placed in our teachers' hands. Something in the pamphlet line should be prepared for free distribution in the homes of the city, if our surplus would allow. I think, however, that this is a matter which should occupy the attention of our Provincial Society. A committee from the Ontario Dental Society presenting a memorial laying before the Minister of Education the crying needs of the case would, I think, result in much good in the way of having a text-book on hygiene containing a chapter written by a dentist on the teeth and their proper care.

The Provincial Dental Society should issue a pamphlet, or series

of them, for free distribution by its members through the Province, setting forth in popular phraseology such information as the people need.

Arrangements could be made by which a properly constituted committee from this or the Ontario Society, or both, could supply a series of short articles to the newspapers from time to time, so that really valuable information can be supplied the people, instead of much of the present unreliable so-called "health notes" to be found in our papers.

This is a subject the importance of which grows on one as he thinks of it, and I hope this Society will seriously consider the propositions made.

If all the dentistry needed were done, there would be no need of alarm at the tremendous rush of students to our college, but, on the contrary, we would be unable to manage the work that would present, while to the public health no one other reform would be so beneficial.

To sum up: (1) Dental education for the people is a necessity; (2) the physician and the teacher must be educated, that they may use their great influence intelligently in the homes and schools; (3) the public must be reached, whether by means of pamphlets or short newspaper articles, in language easily understood. The education must come from our dental societies to be authoritative, and must in no sense advertise any one in particular.

FILLING CHILDREN'S TEETH.*

By F. D. PACE, L.D.S., D.D.S., Toronto.

Whatever may be thought of the methods of treatment herein prescribed, they will be freely given. For if they do not fully accord with the practice of some of my learned friends they will the better stimulate discussion and bring out many valuable suggestions. I wish to confine myself to the subject of "Filling Children's Teeth." But first, by way of introduction, let me make a crusade against the too common practice of ruthlessly extracting the baby's teeth, because they cause pain. I believe that to persuade a child to sit in a dentist's chair and perhaps, under a promise to "just look at the tooth," or "won't hurt any," to tear out a tooth, is a crime not less than feloniously breaking a man's arm or some other equally calamitous injury. The man could more easily recover the use of his arm and his nervous energy than the child could recover from the injury done the lost member, the life-long

* Read before Toronto Dental Society.

dread of the dentist's chair, the lack of confidence in all dentists, and the consequent permanent neglect of the teeth. I shall not attempt to pass just sentence of punishment on such a dentist. He will get his bitter reward sometime, somewhere. Neither shall I prescribe methods of painless extraction of baby teeth. They should, as a rule, never be extracted before the time for their replacement by permanent teeth, and Nature more kindly performs this operation than the dentist usually does.

As much care should be taken to preserve temporary teeth as the permanent ones. This requires a very careful handling of the little ones. The dentist being a stranger, they naturally shrink from him. Some dentists, anyway, would make a child's blood run cold by the savage visage and gruff manners they present when a little sufferer is offered for treatment.

One mighty big preparation for the operation is to get himself in shape. His heart should be full of love and sympathy, his face full of smiles, his tongue full of encouraging words as his head is full of knowledge. He must first get the child's confidence by causing as little pain and weariness as possible, and by medicines relieve the suffering. If he succeeds this time he can easily retain a life-long patient.

First, as to the filling of temporary teeth. Soon after the age of six months, and thereafter every six months, the child's teeth should be examined. Abrasions or shallow cavities that will not easily retain any filling, especially those in the posterior teeth and above the buccal gum margins, may be treated by applying a twenty-five per cent. solution of silver nitrate. A little care should be taken by using a napkin or cotton to prevent the caustic touching the mucous membrane.

If necessary, finish the operation with an application of sodium chloride or common salt to prevent further action of the nitrate, and so prevent injury to these soft parts.

Any small cavities should be lightly excavated, their margins well trimmed and amalgam for the posterior and oxy-phosphate for the anterior used. Large cavities on the grinding surfaces of the molars should be prepared in the same way. Remove the debris and as much of the decalcified dentine as can be done quickly and without causing much pain. Be careful to trim the margins well, leaving no decay there. Apply silver nitrate or carbolic acid to the softened dentine remaining, and fill nearly full with oxy-phosphate of zinc, finishing with amalgam. Let me here put in a protest against the too common idea among dentists that fillings in the temporary teeth may be of the most temporary nature, as they may be refilled, if necessary. In this country, the child having large cavities filled may be only four or five years old, and the fillings may need to serve as many more years. If the

temporary filling soon fails the tooth may be neglected and suffered to sadly degenerate before being again attended to. Besides, if the fillings soon fail the parents lose confidence in the permanence of that particular dentist's operations. So I advise to use amalgam to protect the oxy-phosphate fillings and no preference for copper amalgam either. Large cavities in the anterior teeth are usually on the approximal surfaces.

All approximal cavities, anterior or posterior, are, as a rule, better filled with gutta-percha. The pink gutta-percha used for base plates is perhaps the best, as it can be easily, quickly and comfortably manipulated, and, because of the sulphur incorporated in it, it is antiseptic. In preparing these cavities, cut away as little as possible of the margin and excavate with small hand instruments. The engine is a savage instrument except in the hands of a very skilful and careful dentist. Apply a disinfectant in the cavity for awhile before filling. The gutta-percha should be warmed on a slab over a glass of hot water, or better, on a square bottle having hot water within. Insert in the tooth in as large pieces as can be used, quickly packing in place with instruments slightly warmed in water or alcohol flame. If two approximal cavities open toward each other, reaching perhaps quite or all together up to the gingival margin, make one filling of the two. If the teeth are close together as temporary molars usually are, do not fear to pack the gutta-percha tightly in. If it is exposed to trituration, it will the better force the teeth a little apart, a condition so desirable for causing the first permanent molars to erupt toward the back of the jaw. An approximal gutta-percha filling in the anterior tooth may be finished by drawing the smooth side of a thin polishing strip against it, first having dipped the strip in chloroform.

If a pulp is nearly exposed so that the tooth is exceedingly sensitive or if it has been exposed in excavating and is not wounded, prepare a paste by mixing about equal parts zinc oxide, carbolic acid and oil of cloves, and placing a small amount gently over the exposed or sensitive part. Over this place a piece of asbestos paper, then gently flow over this oxy-phosphate of zinc sufficient to prevent pressure being conducted from the surface filling of amalgam or gutta-percha. Occasionally it is advisable, especially in very large cavities, to finish with oxy-phosphate. A paste often used is a mixture of iodoform in glycerine.

Dr. Perry, of New York, advocates the capping of pulps in temporary teeth that have been for some time exposed, but not aching. We think in such case a very temporary stopping should be inserted, with instructions to the patient to return in a few days for final treatment. The comfort of the tooth during this interval will determine the subsequent treatment, whether it be to remove

the capping and devitalize the pulp or finish the filling more permanently.

If, however, the pulp has for some time been exposed and painful, it should be devitalized. Prepare a paste by mixing cocaine crystals, arsenious acid and oil of cloves, regulating the proportions of the cocaine and arsenic by the condition of the tooth. If very much inflamed, use more cocaine and very little arsenious acid. Put a little of the paste on a particle of paper and gently lay over the exposed pulp. Thus an application can be made that will probably allay the pain, or at least cause a very little. In about twenty-four hours, when devitalized, open into the pulp chamber and clean out the canals as far as can easily be done, being careful to not penetrate through the apical foramina. Thoroughly sterilize the cavity and root canals. Fill the canals and pulp chamber with the pink gutta-percha, before referred to. It can be forced in with pluggers or blunt probes, each succeeding particle driving that before inserted quite to the end of the root canal. When the roots are becoming absorbed, this will be found to be better tolerated by the tissues than most other root fillings, and will probably itself quite readily be absorbed. Finish with a good filling and do not leave any opening for drainage.

Often children are brought to us for treatment with a baby tooth violently abscessed, the little patient suffering extremely and afraid to be touched. Gently wash or excavate the debris out of the cavity and, if possible, without causing pain, remove enough softened dentine to gain a small opening into the pulp chamber. Into this opening pack a small piece of cotton dipped into a saturated solution of iodine in tincture of aconite. Usually it is not necessary to put any on the gum, but if any escapes from the cavity about the gum margins it will do good rather than harm. The prompt action of this medicine in such a diseased condition is wonderful. The apical foramina are so large that the antiseptic and disinfecting qualities easily reach any infected parts in the alveolar tissues and any decomposition in the tooth is quickly checked. Nature quickly responds to the stimulant thus offered, the pain is quite sure to soon disappear, the parts are healed and resume their normal vitality. The filling of teeth in this condition is not so simple as in most other conditions. Probably gutta-percha for root and crown fillings is to be preferred. At any rate, it should be some material that may be easily removed if there is a return of pericementitis.

We often find temporary teeth devitalized and yet giving no trouble. The crowns may be gone and only roots remaining. Do not extract, as Nature needs these roots to preserve the arch for the approaching permanent teeth. Nature is very kind in the getting rid of baby teeth, and if dead teeth are comfortable we may best prevent trouble by leaving them alone. A crown filling with an

opening made through the side to the pulp chamber for drainage is good practice.

We have now come to the consideration of the permanent teeth until about the fourteenth year. During these earlier years the structure of these teeth is so soft that cavities once seated soon develop and seriously hinder their preservation. The least suspicion of decay should be noted, the softened structure cut away and a filling inserted.

The first permanent molars are the first teeth usually needing attention. Gold is not recommended during this period with but few exceptions because of the soft nature of the enamel prisms, they being injured by the force necessary to insert a gold filling. One exception is in filling a dead tooth where, of course, there will be no improvement in the tooth structure. Tin foil is much recommended for small temporary fillings in permanent teeth. Amalgam is probably better, being more lasting. Approximal cavities, both posterior and anterior, if not large, should be filled with gutta-percha. In fact, the general treatment of the filling of the permanent teeth during this period is much the same as that of the temporary teeth. After the fourteenth year all cavities, as a rule, are better filled with gold. Oxy-phosphate of zinc is a treacherous filling in these early permanent teeth. It is too often suffered to entirely fail and allow the tooth to become seriously decayed before being again attended to. It should never be placed at the gum margin of approximal cavities. If it is to be inserted in approximal cavities, first partially fill with gutta-percha or amalgam and finish with the oxy-phosphate. However, it is excellent as a lining in deep cavities to prevent irritation of the pulp.

Root canals in permanent teeth should not be filled with medicated cotton. The excuse that it may easily be removed in case of trouble is very good, but trouble is apt to begin sometime and its removal be necessary. The root-filling of permanent teeth is too important and lengthy a subject in itself to be discusep in as paper of this nature, so must be lightly passed. Fill the posterior lower molar roots and the palatal upper molar roots and all roots that are easy of access as follows: With a smooth broach pass into the canal some oxy-phosphate or oxy-chloride of zinc, lining it if possible quite to the apex. Having a tapered piece of lead wire prepared, pass it into the canal, forcing home with a plugger. The lead can be compressed and will force the plastic into the remotest parts of the canal. The lead salts are antiseptic, and if the canal has before been well prepared and sterilized, pericementitis will never be likely to arise. Canals more difficult of access are better filled by forcing in gutta-percha with a blunt probe. Chlorapercha is not preferred. This concludes the most important cases in the filling of children's teeth.

ANÆSTHESIA.

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

No department of science which so immediately concerns the well-being of the human family has, within the last five decades, made more notable advance than that of anæsthesia. The fact that surgical operations could be performed without pain was a desideratum. It has robbed the operating table and the dental chair of their dread; the barbed edge of the scalpel is no longer grating upon the nerves of those who know that sooner or later they will be obliged to pass through the long-delayed ordeal. That some anæsthetic will supersede the use of electricity at the doomed death chair is only a matter of time. Even chloroform will unquestionably extinguish the vital spark if continued long enough. Why in this enlightened age should pain be unnecessarily inflicted by any corporate body—leave that to the murderer and the assassin. Ether, as an anæsthetic, was first introduced in 1845. I was then practising in Belleville, Ont. After a few trials, I was so pleased with the results that I determined to place it before the public forthwith. I soon found a patient, and convened an audience consisting of the mayor of the city, the sheriff of the county, several barristers, doctors, editors, and a druggist. Having arranged all preliminaries, I placed my patient in the chair. I had little knowledge of ether or its possibilities. I was no connoisseur, but the experience I had gave me confidence, and I ventured. I knew the utmost care was necessary, and assuming an air of confidence, I commenced the administration. It was a perfect success, and placed me at once in the confidence of the community.

Ether, as an anæsthetic, became popular, and our surgeons at once accepted it and availed themselves of it in all important surgical operations. Having become quite an expert in its administration, I was called upon, frequently, to assist. Two of our best men operated for ankylosis of the lower jaw, which proved a success. The patient was under the influence of ether for about three hours. In 1844, Mr. Colton, of Hartford, Conn., entertained his friends one evening by an exhibition of laughing-gas. One of the company, while under the influence of it, amused them by his antics, in which he severely injured one of his legs. He was not conscious of it, however, until after the effects had passed off. Dr. Horace Wells, being one of the audience, at once conceived the idea of its being used in extracting teeth, and commenced experimenting. In order to test it, he was put under its influence, and had a tooth out, which he assured them was painless. So sanguine was he that he went to Boston, was introduced

to the surgeon of the General Massachusetts Hospital, and gave a clinic for the express purpose of demonstrating that operations could be performed painlessly. That experiment, however, was only a partial success—so much so, that the students laughed at and derided him. He returned to Hartford disheartened, became melancholy, and eventually took his own life. After his death gas was under a ban and fell into desuetude for fifteen years. Chloroform was discovered in 1847 by Dr. Simpson, of England. Its efficacy and easy administration rendered it very popular, and for the time being put ether in the shade. I adopted it, and used it for nearly two years, not for a moment suspecting that there was a dangerous element in our new-found friend—"that there was death in the pot"—when word came from Toronto that a man died in a dental chair in that city from the effects of chloroform administered for the purpose of having a tooth extracted. It came like a clap of thunder from a clear sky. Since residing in this city, I learned that the unfortunate man mentioned above was from this place.

Soon after the advent of chloroform, which was used then almost exclusively, a prominent barrister came to my office, accompanied by his good lady and their family physician, with a view of having some teeth extracted for her. After an examination, the doctor and myself concluded that the removal of the entire upper teeth was necessary, they all being past saving. I placed the forceps in condition, and the doctor commenced the administration of chloroform, and when ready I undertook my part of the operation. There were fifteen teeth and roots to be extracted, and when the last tooth was out, I turned to the doctor and husband, whom I found were convulsed with laughter, holding their sides. I enquired what they were laughing about, when they pointed to the floor where the teeth were scattered. I had thrown them in every direction for ten feet around. Our patient then amused us. First she sang a verse of some grand old Methodist hymn, then she preached a short sermon as follows: "What is the use sending B— F— to Parliament? He has no children. And there is that curly headed husband of mine going about the country making political speeches, and I am obliged to write them for him. We were so anxious that our last baby would be a girl, but then we could not help it." She then pronounced the benediction and came to herself.

After the sad event in Toronto, dentists were not willing to use ether or chloroform unless in the presence of a physician. In 1862, nitrous oxide was introduced again, and soon found its way into general use, not only in this country, but in Europe and elsewhere, and is just the article for dentists. I have used it for thirty-five years, and without any mishap. For protracted operations, however, ether and chloroform combined are generally used. Soon

after I commenced to use laughing-gas, a hardware merchant came in to have a tooth extracted. I gave him gas, and when I supposed he was all right I reached for my instrument, when he rose from the chair, walked over to the corner of the room, faced me, and put himself in a pugilistic attitude and looked at me with a grin. I waited a few moments, and he came back to the chair and said, "That stuff won't do for me." I gave him chloroform and finished the operation successfully. After I had been using it for some time, at the close of one of my day's work I found a bag of gas that my last patient refused to take. Knowing that it would evaporate before I would require it again, I concluded to test it myself, and accordingly took the operating chair and commenced to inhale. I continued until I lost control of my powers, and, as I supposed, heard my assistant and student, full fifty feet away in the laboratory, laugh vociferously, indeed so loud that it quite annoyed me. When I recovered, there stood my men, and in a reproachful tone I said, "What were you fellows laughing about?" They began to laugh again, and said, "It was you that laughed." They had the laugh on me.

OLD-TIME MEDICAL DENTISTRY.

By L. D. S.

I am very glad you have introduced a Medical Department in the JOURNAL, because we dentists have much to learn from medicine and surgery, and medical men are ready to admit that dentistry has made such progress, scientifically and practically, that they may, now and then, learn something from us. In my early practice in a country village, I had a great deal to contend with from the obstinacy of one of the old school physicians. He was a man who laughed at antiseptics, jeered at the gynæcologists, and who declared that there was more ignorance in medical practice to-day than in any century since medicine became a science. It had been the custom of the villagers to go to him for relief from toothache, and his great old stand-by was a hot poultice of linseed whether it was odontalgia from exposed pulp or from an abscessed root. Many of his patients carried "his mark" of his lancet on their cheeks, as witness to his practice in the swelling which occurred from his poultices. My protests would have cost me my practice, as he was a power in the village, but one day the poor old man was thrown from his waggon, and died in twenty-four hours. Since then, there have been no more poulticing and lancing for alveolar abscess in the village of L—.

These remarks have been prompted by witnessing, to-day, the necrosis of the external plate of the alveolus of the mandible, due

to his very last effort at extraction. I was away at the time, or he would not have attempted the case, having generously abandoned the care of the teeth upon my arrival. The patient's cheek was poulticed for five days and nights, and he was in bed when the old gentleman died. At present I have the case progressing nicely, and the patient is attending to his business. The accident in extraction, for such it was, was caused by the patient grasping the physician's hands, for though the old turn-key of Garangeot was used by him, his skill in its use was truly remarkable. He placed his patient on a low stool on the floor, the head was held between his legs, and the grip of the tooth, as well as of the patient, was made secure. The doctor had several experiences of fractured alveolus, and two cases of fractured jaw, but with the old key such results were not uncommon among dentists.

A MEDLEY OF INCIDENTS IN DENTAL PRACTICE.

By T. TROTTER, L.D.S., Warton, Ont.

On reading a recent excellent number of the *DOMINION DENTAL JOURNAL*, I was impressed by your appeal for contributions from dentists throughout the country, and not having made any wonderful inventions or any startling discoveries I thought I would note a few incidents and facts which have occurred in a dental practice of over thirty years.

THE POWER OF "A NOTION."

Many dentists have erred, and do err, when being consulted about supplying their patients with artificial dentures. I have frequently had ladies show me sets of teeth made by Dr. So-and-So, and say: "They are no use to me, and the doctor told me they would be as good as my own." In most of these cases the teeth were neatly made and fitted well, but the expectations of the patients had been raised beyond possible realization. Art has never equalled nature in any of its productive departments, and no person has ever, no matter how artistic the work, become fully satisfied with a set of teeth without first exercising patience and perseverance in learning to use them. I have always made it a point, when a patient has positively ordered a set of teeth, to lower this patient's expectations almost to the point of discouragement, and the result has generally been that the patient was agreeably, and not disagreeably, disappointed; but every dentist is supposed to meet with some "cranks," and those cranks often very forcibly illustrate the power of a notion.

Some months ago I made an upper denture for a young lady who was visiting in W——. I took the teeth, according to request, to the residence of the young lady's hostess, and the moment I placed them I saw they were an excellent fit, but my patron seemed to have no proper idea of the effect of placing a large foreign substance in the mouth, and although it was with difficulty she removed them, immediately after doing so, she exclaimed: "I'll never wear such a thing as that in my mouth." Just then the hostess entered the room and said, "O my dear, you cannot expect to get new teeth to suit you in one trial; a friend of mine had four sets made before she was suited." I saw the trouble that the hostess had made for me, but in as good humor as possible soon left the house, requesting my patient to give the teeth a trial of a few days. In about a week she called at my office and was a real personification of disappointment. I hit upon a short cut of getting over the difficulty and told the young lady I would take a new impression, which I did, and promised the teeth in three days. Before the end of three days I removed the polish from every part of the rubber plate, and going again to my patient I said to her, "I want to try your teeth in before I finish them." Both ladies were present, and expressing regret that I had had so much trouble, pronounced the change in the teeth admirable, and to-day there is not a lady in Ontario better satisfied with an upper denture than is my at one time despairing patient. It cannot be said that I sacrificed the principle of truth, and, "Where ignorance is bliss, 'tis folly to be wise."

WHO FIRST TRANSPLANTED A TOOTH IN CANADA?

My parents were among the first settlers in the county of Halton, between Hamilton and Toronto, and when a little boy I have heard my mother relate her experience in having a tooth extracted. An old school teacher (not by any means an advanced prohibitionist), at that time performed the functions of dentist for the settlement. My mother called on the teacher to have a first molar extracted; he placed her squat on the floor, and taking his "turn-key," with an unsteady hand, soon sent a sound molar spinning across the floor. He saw his mistake and "took out the right tooth." My mother was much annoyed, and picking up the sound molar, kept it in her hand until she reached one of the many fallen trees on the concession line. Seating herself on the tree she patiently persevered until she placed the molar in its old position, and that molar went with her to her grave at the age of seventy years.

In 1862, the manager of the Ontario Bank in G—— called upon me, suffering tortures, as he said, from the root of a lower bicuspid, the crown of which had years before been broken off below the

alveolar process. The cuspid in front of the root and the first molar had inclined towards each other, so that at their cutting surfaces they almost touched. I explained that to get the root it would be necessary to extract the cuspid, which could be replaced after removing the root. The manager laughed at my idea of replacing a tooth after its extraction, but returned early the next morning and said, "I'll get half a dozen teeth out to get rid of this — little sinner." I extracted the cuspid, after which I removed the root, and replacing the cuspid warned the manager that he would suffer some pain and tenderness for a time. The manager returned in a few days, and taking his pen from behind his ear forcibly tapped on the replaced cuspid, and after warmly shaking my hand, said, "All right, my boy." Since then I have had not a few similar cases, and have frequently partially removed "ulcerated" teeth and replaced them with success. Whether or not I am entitled to any priority in replacing extracted teeth, I do not know, but it was many years after the operation which I have described that the subject was exhaustively discussed at dental conventions, and in dental journals.

EXFOLIATED BONE.

The specimen of exfoliated lower maxillary bone, which I herewith send, I removed from a niece of a prominent Canadian missionary who lost his life in the North-west. Without entering into a technical description of the case, I may say that the whole trouble was caused by some "ulcerated" roots. The little girl was about eleven years old and of a highly nervous temperament. After she began to suffer she was attended by two physicians, who pronounced her to be suffering from *throat disease* and *brain fever*. The swelling was so extended that the child had to subsist on fluid nourishment, and for several days was deprived of her senses. You will understand that I cannot give you the details of the case when I say that the child was brought to me after she was able to walk about. At that time the muscles of the left cheek were quite contracted and rigid, but on carefully forcing the mouth open I found the piece of bone completely detached from the maxilla, and the surrounding tissues and remaining portion of the maxilla in an advanced state of granulation. You will observe that the piece of bone has carried with it the twelfth molar and I suppose has caused considerable alteration on one side of the face.

The case emphasizes some remarks you made in the last JOURNAL in reference to medical students and practitioners more fully recognizing the fact that the dental process is one of the most important parts of the human organism. I felt somewhat for one of the child's physicians, on the day I removed the bone. After removing it the mother was examining the bone by my office

window when one of the doctors happened to be passing up the street, and the lady seeing him, rapped on my window and cal'd him up. She met him at the door, bone in hand, and, not lovingly, said, "Doctor, there is your brain fever." Had the case come to me at an earlier stage I could be able to write a more interesting and perhaps to some a more instructive account of it, but I trust the meagre recital and the specimen will afford you a text.

I am afraid I have made a very poor attempt writing my first article for a dental journal. The fact is I am built on a very pronounced bullish Canadian model, and having indulged in scribbling on political and other every-day subjects, I have drifted into the habit of writing in "the language of the people." I'm afraid my article will not suit the tastes of those dental writers who run a serious risk of accident, by hanging upon their lower maxillaries the latest editions of our medical and dental dictionaries.

I despise unnecessary egotism, but I want to say a word in regard to dental ethics. In my professional career, in advertising and in my dealing with patients, I have endeavored to run as close as possible to the recognized code of dental ethics, but many times my resolutions have received rude shocks. Time and time again I have had around me dental graduates, doctors whose methods of "advertising," and their plans of dealing with patients, would rival the most enterprising proprietor of any patent medicine. About two years ago I read in the DOMINION DENTAL JOURNAL an article by a contributor, very warmly thanking the editor for being the means of converting him to the code of dental ethics. I happened to pick up a paper published in the town where this contributor practised, and was not a little surprised to find about an eighth or a quarter of a column given to the contributor's dental "advertisement," wherein he set forth his claims and wound up by saying "Best sets of teeth at \$5.00." Dental ethics is a fine subject on paper, but if the authorities who confer the title of "doctor," do not more fully impress the recipients of the distinguishing mark with the importance of carrying out the true practice of dental ethics, the reform will be very slow and meagre.

Correspondence.

"CAPPING NERVES."

To the Editor of DOMINION DENTAL JOURNAL:

DEAR SIR,—I find in April issue of the JOURNAL, at page 100. an article on "Capping Nerves," which is misleading, and to outsiders might lead to the impression that in Ontario the majority of dentists were wanting in skill and enterprise in this connection, when we know the opposite to be the fact. There is no cause for anxiety on the part of anyone in regard to the recent graduates or those to come later on, because they are taught intelligently and have the natural ability to select the fittest methods and apply them with discretion to the case in hand, and the older or not recent graduates are no doubt using a discretion taught by long experience and their failures and successes with many patients when and how to cap or not to cap nerves. This applies at all events to those who are operators and not plate work advocates.

The notion of "indiscriminate slaughter of nerves" and "dead men and no tales" is an exaggeration. I remember making use of this term but applied it to the indiscriminate slaughter of the natural teeth to replace them by artificial, and it may be possible that I have used the term indiscreetly and have been misunderstood. As my name was used in my absence at the meeting of the Ontario Society here last summer, I have taken the liberty of writing you not in answer to the article above quoted so much as to serve, if possible, the good end in view of ventilating the subject still farther, although there are several points I do not agree with in the paper read. Every dentist has a conscience (except the "catch penny"), he also has judgment. If he uses his judgment his conscience may be safely left alone and need not trouble him. If he attempts to use his conscience and the patient's judgment or inclination or ability to pay, there may be a conflict in which scientific ability, skill and experience do not figure to the extent that we might think proper. The matter of fees, I apprehend, is generally left in abeyance until the judgment part is settled, and should have nothing to do with the final conclusion of the course to be pursued.

Intelligent patients appreciate satisfactory results and pay for skill and good judgment, and try to get it as cheaply as possible sometimes, but when this argument is advanced as one likely to influence the line of procedure, my conscience is going into rebellion and is out of the consideration.

I may be out of touch with advanced ideas on the subject

of "capping nerves," but I must claim the right of using my own judgment and experience in any case in hand, not subscribing to a hard and fast rule to try to cap every nerve in the hope that it may add a year or two to its life, or even more sometimes. There is a probability that the writer and myself are at one and the same in our object so far as capping nerves go, and possibly practice daily after the same manner, but I never cap a nerve that comes to me in a congested, disorganized condition which will require extended treatment or restored intra-canal wall and metal plug. In a case where there is wall enough to prevent actual contact with very little congestion and no exudation or infiltration, and age and vitality warrants it, I might try the experiment with reasonable hope of success, but after the age of say full maturity, there is very little to choose between the two processes with expert root-fillers and cappers. There is no doubt that a tooth can be made as useful and as durable as the others in most cases (not always so) generally; but this is no argument to prove that it ought always to be devitalized, and is never treated so, I apprehend, except as a last resort, and not a leading principle without discrimination, as we have been led to believe.

In the matter of actual capping, if I were to determine to do so as I am frequently compelled to, I would proceed somewhat as follows, always using the dam and calling your attention to the "somewhat," first as meaning that in ten different cases there might be as many variations—no hard and fast rule or patent right, original and only way; if the nerve is painful a slight touch of cocaine or other anodyne, followed with germicide generally applied to the cavity and a touch of ethreal gum direct or on paper, oiled silk, goldbeaters' skin or court plaster, and this covered with zinc oxide and sulphate or chloride, oxy-phosphate or any mild, quick-setting cement that would resist pressure and avoid any metal plug for many months, filling to the surface with a plastic cement of the time-serving variety.

If it were any object to save a nerve that had become slightly demoralized (disorganized if you prefer it), in which pus were present or a weeping of serum, I would not hesitate a minute about applying pyrozone of 5 per cent., or 25 per cent., in preference to anything else, and follow with creasote and cap when convenient (at once or after) and expect good results; but as implied before, I can see no great good to be obtained by doing so, as far as usefulness of the organ is concerned in general, but in isolated instances might be expedient, and have not the slightest objection to anyone doing so, particularly if conscience says so or experience in root filling is not his forte and capping nerves is.

Take into consideration the extremely sensitive and delicate nature of the organ in question and imagine a material of the

texture of any of the cements in contact with it to the extent of a pinhead or a grain of shot, and follow with fair reasoning and without any prejudice the natural and logical conclusions we may arrive at. If we use oxide of zinc and creasote there is not likely to be a resistive setting sufficient to prevent pressure, and that may be fatal. There is also going to be absorption of serum by the oxide, and it will then cease to be antiseptic and become irritant. I would prefer placing a smooth non-irritant substance of fibrous nature over the point of contact and a little larger than the exposure, and follow with a varnish or cement or both. It might be as well, perhaps, to add a word of caution in regard to the use of 5 per cent. or any other strong drug to the nerve-tissue. I am not to be understood to mean that they can be used in full strength and in any quantity, and a grave mistake may be done in doing so. A touch of one may be safely used while a hundredth part of a drop of another may be fatal, and in many cases dilution is advisable.

N. PEARSON, L.D.S.

OUR NEW YORK LETTER.—No. II.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—Greater New York is now catching its breath from the tiring exertions of the Grant festivities, which have been simply immense. Likened somewhat will be the Queen of England's Jubilee. Greatness in the thought of man is becoming greater day by day. But man, whatever his aspirations, must, sooner or later, cease to be an occupant of earthly activities. No trio of men have been more before our calling than Heitzman, Abbott and Boedecker; but the two first are absent from their earthly places, Heitzman in January, and Abbott this present month suddenly, at the age of sixty-one; and Boedecker is in failing health. They have all been industrious, and their books are in the libraries of our literature, and these will be measured by the intelligence of the future. The position that Dr. Abbott has occupied in the New York College of Dentistry has given him a very large contact with the future portion of our profession, and what it will add of wealth to our merit the coming days must only record. There has been a good deal of commotion concerning the future of the college. Some say it has been only a family matter. Pity that it should have found so much publicity in the newspapers. It is said that Dr. Maxfield did not know what he was talking about when he ventilated what he thought he knew before the Massachusetts Society, and then found a publication of his statements in the March number of the *International Dental Journal*. We believe that the colleges do owe a certain amount of accounting to those that are interested in the future welfare of our calling. We believe a good deal in the inward

good purposes of those that make up the college instructors. Yet, there is so much that is in need of correction that we emphasize that the congress of faculties and the Board of Examiners owe a vast deal to be manifested of wisdom that has yet come to light, and we predict that the time is not far distant when it will become manifest; that such pressure will be put upon those made responsible by the position they occupy that they will not be able to resist it. But this is not all. The associative bodies have a responsibility in a conduct of society management that will augment for good in the direction of progress. There was never such signs of degeneracy of professional lines as now. This is seen by the great increase of attractive establishments all through Broadway, of our city. We say, attractive. Yes, by the quarters, and the lavishing with gilt lettering of promises given for all kinds of crowns, bridgework, and et ceteras. It is no more so in New York than many of the large cities. We think much could be found in the facts that have been thought to exist, that there are great commercial advantages being secured in other directions, and that there was a short cut by which the ducats could be secured, possibly in a quicker way. It was thought—by some—that legislation would be a protection from these incursions, but it does not so prove, and we do not think it will. Bona-fide intelligence will only mark the discrimination last, by the profession first, and the public will follow in proportion as they see the demonstration of superiority manifested. The financial question was never so much agitated in New York by dentists as now. We are not in it; we are content to try and faithfully give such service as the forty-five years' diligence has enabled us to render, and live in gratitude that it is so well. We often hear it remarked that no such fees as formerly can be secured in New York. In some measure this may be true. We do not think it should be so among skillful men. Is this true of skillful surgeons, oculists, aurists, dermatologists, and et ceteras? We think a little questioning on the part of some, "Have we honorably sustained those that have sought to establish just fees along professional lines?" "Are we a liberal profession?" Not altogether yet; not even "stomatologists." Possibly they will help to bring about hoped-for better times.

Report says that Dr. Boedecker has an imperial call from the Kaiser's family, Berlin, Germany, for professional services. We are glad if it is so. Most any of us would breathe quicker if some day a cablegram should come from any of the potentates of Europe inviting our services. We think we would try and arrange to go. We do not know of any American dentist in this country receiving such a call. We are quite sure it—if so—would have got out. Doubtless, Dr. Evans stands at the head of the list for royal

patronage. We have understood that Dr. Sylvester has had at least some of the German royalty. He is an American dentist in good standing in Berlin.

These things do emphasize a man's position some, in the estimation of the world. Doubtless not a little ambition is generated at Washington, every new administration—as to who will get the President.

The late Dr. Abbott had the honor of extracting the teeth of our much honored Grant, when he was a victim of cancer; but how much more honor it would have reflected upon some dentist had his mouth and teeth been kept from the destructive "Riggs' disease," that was making worse progress as far as the time of his presidency. When he was in the hands of the late Dr. Wordsworth, and on a visit to the doctor's office, he called our attention to the General's teeth and mouth; then every tooth was standing in a pocket of pus. Why was he not attended to? We were not asked to attend to the case, but we do not hesitate to say that we could have given him a clean bill, and more, that he would never have had a cancer so long as it had been kept so. Every true doctor knows that such a condition of teeth and mouth as General Grant had would only invite a larger disorder. These things speak loudly of our value to the public. Intelligence can only lift us to our merited place. This must be first and foremost; other things may assist, that is all. Only the power of a second Atkinson could break the power of this age, which is, first and last, political and commercial, the first for self, the second for the gain that can be gotten out of the situation. We do not think true professional men should be at all exercised over the strife for self and gain. We ought not to desire only patients that rightfully belong to us because we are qualified to serve them. Dr. Atkinson was wont to say that not a few practitioners had patients that did not belong to them, and more than they could righteously serve. One thing is true, that too many do not rightly appreciate their possibilities for qualification. The ambition to be "the best dentist living," does not actuate enough of our calling. Every man that feels that he is the "best dentist living" (according to the light he has had) can justly demand and command a maximum fee from those that are able to give it, and for the rest he cheerfully serves the remainder for what their circumstances will permit them to give. This has been our rule of practice from the start and will be to the finish. We have monied patients that have never questioned our fees, and their mouths and teeth testify in our favor by results. So we have the same to show by the less favored. We see a good deal of "high grade" on milk carts and bakeries and of ceteras, and we think that it should be our thought even that our standard should be "high grade."

Pardon us for one allusion. The *British Journal* for April 1st wonders how we should know concerning Dr. Leon Williams' practice, and they would not even know they could know. Well we are Americans, and of the "Yankee" origin, and they are known the world round as "good guessers." That explains it; "a real Yankee gets there," and the more the opposition the more sure he is. We wish the Englishmen would come over and see us, more of them and oftener, and see our office buildings with one hundred and fifty practising side by side.

GREATER NEW YORK.

New York, April, 1897.

Question Drawer.

Edited by DR. R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

Q. 30.—What is the difference between adhesion and atmospheric pressure applied to the adaptation of sets of teeth?

A. Adhesion is the force in virtue of which one body remains attached to the surface of another with which it is brought in contact, hence this is the main underlying principle, which is never ignored by the rational dentist in adapting artificial plates. Atmospheric pressure is the well known weight of the atmosphere appropriated by extracting the air from a chamber in the surface of contact of the plate, which accomplishment and stability are so doubtful that it cannot be relied upon, hence should be abandoned on account of its lessening the surface of contact, thereby impairing the adhesive force. T.

Q. 31.—How do you calculate percentage solutions?

A.—1. A recent issue of the *Medical Brief* gives the following: "The calculation is based upon the number of grains of water in a fluid ounce; exact weight, 435 grains. Multiply this by the percentage desired; or in other words, take one grain of the drug for every hundred grains of water. Thus, to obtain a 4 per cent. solution, multiply 435 grains by four, which gives $18\frac{2}{10}$ grains, or, roughly speaking, 18 grains to the fluid ounce of water."

G. W. B., Montreal.

2. One grain of drug added to 100 minims of water gives a one per cent. solution, or $4\frac{1}{3}$ grains added to one fluid ounce gives the same result, as there are 480 minims in an ounce. Having this as a guide it is easy to calculate any percentage. Practically a minim is the same as a drop, though to be absolutely correct a drop is greater than a minim. In counting drops use a druggist's

dropper, which consists of a small glass tube, having a rubber bulb attached. This article can be purchased at any drug store, and costs about ten cents.

E. A. RANDALL, Truro, N.S.

QUESTIONS.

Q. 32.—Tell a young dentist how always to get a correct bite.

Q. 33.—Give a recipe for a solution to relieve the after-pains of tooth extraction.

Proceedings of Dental Societies.

ONTARIO DENTAL SOCIETY.

The Ontario Dental Society will hold its ninth annual meeting at Toronto, July 13th and 14th. A good programme is being prepared, and a cordial invitation is extended to the profession to be present.

W. A. BROWNLEE, *President*.
G. S. MARTIN, *Secretary*.

DENTAL ASSOCIATION OF THE PROVINCE OF QUEBEC.

At the last meeting held in Montreal the following gentlemen received the license: Messrs. E. Giles, G. Kent, W. Waters, J. Saucier, I. K. Macdonald, D. J. Berwick. The examination for the degree of D.D.S. by the College resulted in the success of Messrs. I. A. Munro, W. S. McLaren, D. J. Berwick.

VERMONT STATE DENTAL SOCIETY.

At the twenty-first annual meeting of the Vermont State Dental Society, held at Montpelier, March 17, 18 and 19, the following officers were elected for the ensuing year:

President, Dr. C. S. Campbell, St. Albans; First Vice-President, Dr. J. A. Robinson, Morrisville; Second Vice-President, Dr. K. L. Cleaves, Montpelier; Recording Secretary, Dr. T. Mound, Rutland; Corresponding Secretary, Dr. Grace L. Bosworth, Rutland; Treasurer, Dr. W. H. Munsell, Wells River. Executive Committee, Dr. H. Turrill, Rutland; Dr. C. W. Steele, Barre; Dr. J. E.

Taggart, Burlington. State Prosecutor, Dr. G. W. Hoffman, White River Junction.

Next meeting to be held at Rutland, the third Wednesday in March, 1898.

THOMAS MOUND, *Recording Secretary.*

AMERICAN DENTAL ASSOCIATION.

The American Dental Association will hold its next meeting at Old Point Comfort, Va., Tuesday, August 3rd, 1897. This will, probably, be the most important meeting of the American Dental Association held in years, as it is expected that the entire question of reorganization will be presented for settlement. It is, therefore, earnestly desired that each organization in affiliation with the American will make a responsive effort to have a full delegation present at Old Point Comfort, and have this representative body instructed in regard to the position held by your Society in relation to this question.

It is further suggested that each Society should devote, at least, one evening to the discussion of the question: Whether a change in the relations of the two so-called National bodies, the American Dental Association and the Southern Dental Association, be desirable? In this way thought may be crystalized, and each delegate be prepared to meet the subject with the intelligence its importance demands.

Each State and local Society which has adopted substantially the same Code of Ethics as that governing the conduct of members of the American Dental Association is entitled to one representative for every five members and fractional part thereof.

Blank certificates for delegates may be had on application to the Corresponding Secretary.

By order of the President, Dr. James Truman.

EMMA EAMES CHASE,

Corresponding Secretary American Dental Association.

April 16th, 1897.

QUESTIONS SUBMITTED FOR DISCUSSION BY LOCAL SOCIETIES.

FORMULATED BY THE COMMITTEE APPOINTED BY THE AMERICAN DENTAL ASSOCIATION.

1. Pyorrhœa Alveolaris; what is it and how many varieties are there? Are all local in origin or constitutional, or both? What is the treatment, local or constitutional, or both? What may be regarded as a cure? Is the disease likely to recur?

2. *a*—What is the cause of dental caries? *b*—Why is caries so much more active in some mouths than in others? *c*—What changes take place where caries ceases its activity in mouths heretofore predisposed? *d*—Are there recognizable signs by which we may know whether or not caries will cease with advancing age?

3. To what extent are we justified in giving our patients systemic treatment?

4. To what extent and when, are we justified in using cataphoresis? Is there danger of injuring the dental pulp or other tissues by its use?

5. What can we do to increase the attendance at our dental societies?

6. In view of the recent investigations, has amalgam been a blessing or a curse to humanity?

7. Are there any proofs that the mercury in amalgam fillings is injurious to the health of the patient?

8. What are the best materials for filling teeth and the prospective durability of fillings in different cases?

9. What are the best methods of bleaching teeth?

L. P. BETHEL	} Committee.
A. W. HARLAN	
J. N. CROUSE.	

Medical Department.

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

MR. HEATH, writing on "Honeycombed and Syphilitic Teeth," in *London Dental Record*, says: "Syphilis usually hastens eruption of the teeth, the temporary incisors being occasionally erupted at birth destitute of roots, but only in a very small percentage of cases does it produce the characteristic malformation we are considering. It is a curious fact that when ulceration of the palate occurs as a result of congenital syphilis the teeth nearly always escape."

WE had always been of the opinion that toothache was the same torturing malady the world over. With Burns, we believed it to be the "hell o' all diseases." If we might judge from a late order of the Director-General of the Cantonal Post, the kind Geneva letter-carriers and other employees of the postal depart-

ment in that part of Switzerland have must be of a different type. All such employees are warned that hereafter if they absent themselves from duty because of toothache they will be scheduled under "Absences for pleasure and preventible irregularities." If Swiss toothache is a pleasure, we wish they would exchange with us and take some of ours.—*Editorial Note in Amer. Med. Surg. Bulletin, April 25, 1897.*

CONGENITAL TEETH—THREE CLINICAL CASES.—Dr. J. W. Ballantyne (*Gaceta Médico Catalana*, Dec. 15, 1896) concludes an article on this subject as follows: 1. Congenital teeth form a rare anomaly, which for a long time has been known to physicians and the laity. 2. Their presence exercises an evil effect upon lactation, in part by the effect of the imperfect occlusion of the child's mouth and in part by wounding the mother's nipple; it can also originate sub-lingual ulceration. Infantile diarrhœa and general atrophy are the most remote consequences. At times, however, the symptoms are absent. 3. Congenital teeth have little or no prognostic significance as to the corporeal or mental vigor of the child that presents them. 4. The teeth usually found are the lower incisors—at times the upper incisors—and very rarely the molars of the inferior or superior maxillus. 5. In some cases we have a history of heredity. 6. As congenital teeth ordinarily are incomplete and badly developed, and apparently are inconvenient rather than advantageous to the child, it is recommended to practice their avulsion shortly after birth—an operation which can be easily executed excepting in very rare cases, and which is free from complication. 7. The appearance of premature teeth in certain well-known historical personages is an interesting fact, whose importance on the other hand has been greatly exaggerated.—*Amer. Med. Surg. Bulletin, April 25, 1897.*

A LARGE MOUTH CONCRETION.*—Mrs. G., æt. 32, consulted me in September, 1896, for a large growth of long standing, which had filled up the right buccal cavity and had caused ulceration through the upper lip and great deformity of the face. The history was as follows: At the age of twelve years she had suffered from "fever," which had lasted a considerable time and had been followed by a slow convalescence during which, she stated, that the teeth in the right side of the lower jaw had become loose and dropped out one by one, but without any pain or ulceration of the gums. The teeth had all dropped out in about six months, and then she began to notice a shell-like mass on the gums from which the teeth had fallen, apparently in the area occupied by the

* Shown at the meeting of the Montreal Medico-Chirurgical Society, October 16th, 1896.

molar teeth. For ten years this growth was gradual and gave her practically no trouble. Then deformity of the face began to be noticeable and increased steadily. It was, however, only within the last year that marked increase in the size of the mass had been observed and troublesome symptoms had developed. On examination, the growth was found to fill the whole right cheek and to have produced great flattening of the right side of the face and the right nostril. It had ulcerated through the upper lip at one point, and the whole lip was greatly swollen. The point which presented at the angle of the mouth was evidently calcareous, but I mistook this for a simple coating of calcareous matter. The fetor was horrible and the mouth was so sensitive that no manipulation was possible. I looked upon it as a growth from the upper alveolar border, probably originally of the nature of epulis, but having recently (coincidentally with the history of rapid increase in growth and symptoms) become malignant, and advised removal of the upper jaw. She went home, but returned and was admitted to the hospital on October 12th and prepared for operation on the 19th. When she was fully anesthetized I was able for the first time to make an examination of the mouth. I then found to my surprise that the mass consisted simply of a large concretion the size of a large hen's egg lying free in the mouth, having formed a cavity for itself by displacement of the soft parts and absorption of the alveolar border of the lower jaw. It was so large that I removed it with considerable difficulty. A couple of teeth were embedded in its lower border, and it was clearly an enormous growth of "tartar" from the teeth. The ulceration of the mouth and lip healed rapidly, and the patient was discharged in a week quite well, except for the deformity which had occurred during the growth of the mass. The mass, which was oval in shape, measured $13\frac{1}{2}$ cm. in its greatest circumference and 11 cm. in its smallest circumference.—*James Bell, M.D., Surgeon to the Royal Victoria Hospital, in Montreal Medical Journal, April, 1897.*

THE JUDICIOUS EXTRACTION OF THE FIRST PERMANENT MOLAR.—The medical profession have so many opportunities of instigating this treatment that its value may be demonstrated and insisted on. These teeth are often found the only defective ones in otherwise healthy mouths; their calcification commenced several months before birth, the proper completion of this function is liable to disturbance both by deviations in health of the mother and the many ailments of early infant life. Imperfect calcification of the teeth cannot be repaired after birth by medical treatment and intelligent diet and care, as rickets and many other infantile troubles, hence that susceptibility to decay now so prevalent. In the mouths

of the young the first permanent molar is frequently found to be largely decayed, with commencing cavities on right and left, originating cavities in the contiguous teeth. It is obvious that the removal, with an anæsthetic, of the first permanent molar rids the mouth of three cavities, and by exposing the commencing cavities retards or arrests their further decay, and, what is equally important, renders their treatment by filling easy and effective, and obviates the pain, of which the young are naturally intolerant, of the preparation for filling of cavities difficult of access between crowded teeth. As there are four first permanent molars, their removal rids the mouth practically of twenty cavities. Overcrowding and the disfigurement of prominent and projecting front teeth are much modified by the removal of these molars in youth.—*W. Whitehouse, L.D.S.Edin., Consulting Dental Surgeon to the Royal Hospital for Women and Children, etc.*

Abstracts.

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

WHY do some dentists dress in imitation of the barber or the bar-keeper? Give it up. Some things are as hard to understand as the Scotch dialect.—*Western Dental Journal.*

DANGER IN CATAPHORESIS.—The danger of cataphoresis lies not in its application to the patient, but in the ease and boldness with which the dentist can operate. If he be careless he could easily penetrate or expose the pulp, not eliciting any pain; he might be careless and not protect the pulp.—*Dr. Buxbaum, Dental Cosmos.*

STOP it, gentlemen, right off! We mean the manufacture of disks from paper whose sand or grit is made to adhere by means of fish glue. This kind of sand-paper is bad enough when used in the laboratory, but when heated, as are disks, in the mouth, it develops a rankness fully capable of driving a dog out of a tan yard.—*The Odontographic.*

TO REFIT RUBBER DENTURES.—Scrape or file the palatal surface of the old plate; use mixture of thin plaster and replace the plate in the mouth; close teeth tightly together with plate in place; varnish the impression as usual; flash, and pour the impression; separate the flash; remove thin coat of plaster; then roughen the plate and pack enough rubber to fill the space.

TO MAKE A PERFECT CAST.—Marble dust and glycerine—about 4 ounces glycerine to a quart of marble dust—makes a beautiful cast. I have been using it for a long time, and like it better than anything else I have ever tried; in fact, can find no fault with it.—*Chas. P. Grant, Dental Office and Laboratory.*

To add gold to an old gold-filling when a tooth has broken, leaving a gold filling otherwise in good condition. Cleanse the surface of the filling with alcohol and chloroform, and dry with bibulous paper and hot air. Anneal the surface with the flame from a minute ball of cotton on a probe dipped in alcohol and ignited, heating as hot as can be borne by the patient. Then pack new gold on the surface, the union between old and new gold being indistinguishable.—*Dr. J. Wilson Moore, in Cosmos.*

LOW FUSIBLE METAL.—Dr. R. Mathew makes a low fusible metal which melts below the boiling point of water, and is very hard. It is composed of forty-eight parts of bismuth, thirteen of cadmium, and nineteen of tin. It melts at so low a temperature that it can be packed with the fingers. A common plastic impression can be taken to the laboratory and poured at once without waiting to dry—can even be poured in water, for counter-dies use common modelling compounds. Soften and place it in a ladle, and place the die on it and drive it with a plunger and hammer; then place the plate on the model and swedge it in the counter-die after it gets hard. Do this three or four times, but this will not draw it close enough: now use shot in the latter part of the process.—*Cosmos.*

SURE CURE FOR FELONS.—I wish to give the readers of the *Digest* a sure cure for felons—that is, taken in the incipient stage. A felon, as you know, is many times caused by burns, bruises, and the like, and very often by the long continued and constant pressure of small instruments, making dentists very prone to them. The first sign is a little sore point under the skin, feeling as if a needle-point or piece of glass had become imbedded there, and tender to pressure. Then go to the druggist and get a fresh piece of "fly blister," one quarter inch square, place it over the tender spot and hold firmly in place with court-plaster. Put it on before retiring at night, and in the morning a blister filled with serum will be present. Remove the fly blister, prick the blister, letting the contents out, then protect the sore spot for a few days and you will escape a felon. I have found this to always be a sure cure, if used in time, and no harm is done if a sore spot is wrongly diagnosed as a felon.—*F. J. Fessler, D.D.S., in Digest.*

Reviews.

Compend of Dental Pathology and Therapeutics.—By HENRY H. BURCHARD, M.D., D.D.S., Special Lecturer upon Dental Pathology and Therapeutics, Philadelphia Dental College. Pp. 138. Philadelphia: The S. S. White Dental Manufacturing Co. 1896. Price \$1.75 net.

The idea of just such a work for students has often occurred to many teachers. Mr. Oakley Coles issued in London, Eng., twenty-one years ago "The Dental Student's Note Book" covering very succinctly his lectures on Dental Pathology, and Prof. Gorgas' works are well known; but this volume of Dr. Burchard's has special merits which in a measure the others lack. It will remind the medico of the old college "Ludlow's Manual of Medical Examinations," and a veritable *pons asinorum*. Much may be said in favor of such works: something may be said against them. Dr. Burchard distinctly says that his volume "is not prepared as an aid to students in memorizing answers," but to represent guiding principles. Students who cram for exams will have this book if it costs them their dinner for a month. But there are hundreds of wiser students in and out of college, who are all at sea on the principles of this work, and who will find it a mental crutch or an inspiration to further study, just as they take it, and that is saying a good deal. The facts, so far as the science of dentistry can claim to have reached verity, are up to date. For one who is not a careful reader and who is not fond of research, this volume will be a great help, because it is the result of much study on the part of the author, and will save a lot of reading. For one who loves the scientific literature of our profession, this work will make him hungry to know more. If he faithfully reads this, he will be sure to go further and read more.

A Practical Treatise on Mechanical Dentistry.—By JOSEPH RICHARDSON, M.D., D.D.S. Seventh edition. Revised, enlarged and edited by George W. Warren, D.D.S. 691 illustrations, many of which are from new and original drawings. 677 pages. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1897. Price \$5.00.

One can obtain a suggestive idea of the progress of dental prosthetics, by comparing the first with the present edition of this valuable work; not only in the abandonment of practice and principles which in their time were highly extolled, but in the

evolution of more modern methods. The reproach of vulcanite still continues, but the author anticipates that in the "not distant future," a better base will take its place. The introduction of vulcanite made the practice of prosthetics so easy that it brought into the profession an inferior class of dentists, and even caused some degeneracy among the better class. One of the best blows that could be aimed at the quack and the cheap advertiser would be to convince the public that this filthy non-conducting base is only used by respectable dentists, as a rule, under protest. The base most desired would be one that could be used with plain teeth. Not much that is new can be added to the subject of the vulcanite base, but the *rationale* of the process of vulcanizing, which is generally a bug-bear to students at examinations, is very clearly discussed in a long extract from a paper by F. Alb. Boeck, of Berlin. The author fairly well covers the ground of fuels, appliances, metals, alloys, etc., while the treatment of the mouth preparatory to the insertion of artificial dentures, the materials and appliances used, and the entire routine from start to finish are very comprehensive. The author gives importance to the subjects of irregularities, defects and the appliances used, and concludes with a chapter on electricity and its application to dental mechanics. The work of the publisher is above the average, the paper, type and illustrations are beautiful. It is a welcome relief to find so many original illustrations. Altogether the work is well worthy of the highest commendation.

THE history of the Bubonic Plague is told, and its nature described, in *Appletons' Popular Science Monthly* for May, by Prof. Victor C. Vaughan, of the University of Michigan, who also considers the conditions that contribute to its spread, and presents the results of the latest studies of the bacillus by which it is supposed to be engendered.

"Is there danger of the plague being imported to this country?" "Yes," Prof. Victor C. Vaughan answers in the May number of *Appletons' Popular Science Monthly*, "there is danger, but this, being foreseen, may be easily avoided." No effective treatment of the disease, however, which is a septicæmia, is known. Professor Vaughan's whole article is a valuable contribution to the knowledge which the public is seeking of this fearful disease.

Dominion Dental Journal

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"DEPARTMENTAL" DENTISTRY!

Among the newest additions to the degradation of dentistry in Canada and the United States, we have to add its practice by regular licentiates in the departmental stores! Competition and over-crowding in a profession forces their meanest elements to the meanest work, precisely as it does in trade and commerce; and as there are monopolists in business who would ruin their rivals as light-heartedly as a thief would pick a pocket, so there are miserable dentists ready to hire out their personal and professional decency, in a fraternal union with barbers and butchers, under the pay and patronage of a departmental store. The splendid attitude of the *Star* and the *Saturday Night* of Toronto with respect to the commercial octopi of Yonge and King Streets should have the united support of the dental profession not only in the Queen City but in every town and village of Ontario. We have already had practical proof of the readiness of the monopolists to ruin not only every other branch of the retail business for their own aggrandizement, but to degrade the respectability of our profession. The conditions to make the practice of dentistry everywhere in Canada much more exacting and barely remunerative, already exist, by reason of circumstances which the Boards and Colleges cannot, if

seems, very easily ameliorate. But if its practice is to become a catch-penny adjunct of store-keeping, we had better face the music and either get out of the profession or get into trade. If those who never co-operate with the workers had but done their duty in the past there would have been little or no possibility of this disgrace upon our diplomas. As there are incipient criminals who are only deterred from blossoming into full blown scoundrels because of their fear of the penitentiary, so there are here and there dental licentiates who would retail whiskey over a bar in the intervals of practising dentistry, did the law permit them. The personnel of our Canadian profession is, as a rule, equal in educational and social standing to any in the world, and it is a great misfortune that the Boards have not the fully recognized power to revoke the license of the few scallywags who jockey in practice, and use their parchments as a means of serving their low instincts. Every respectable dentist who is not an active supporter of our associative labors might just as well be classed among the evil-doers. As we before remarked, to do nothing for the spread of ethical principles is equivalent to taking sides with those who do everything to undermine them. The inaction of many of our otherwise worthy members may yet deprive us of the best of our privileges, and give full swing to the new additions to our degradation.

We urge our profession to co-operate with the efforts made by the *Star* and *Saturday Night*. They can do it by refusing to buy at the departmental stores. If they want goods cheap, they can get them just as cheap elsewhere, and if they like to be swindled, they can get that too without patronizing hypocritical professions of honesty.

A BUSINESS EDUCATION.

In our last issue, Dr. Gardner, in a very interesting paper, "Is a business education not necessary to the professional as well as to the commercial man," touched upon several points of very great practical importance to the financial future of the profession. It is an undoubted fact, that as a rule, professional men are specially distinguished by their sublime ignorance of business principles, and learn too late by costly experience, elementary rules of conducting business, without which even the street-corner vendor would be a failure. It is almost a pity that the professions are open to practice to candidates under twenty-five years of age, because young men who have just entered their teens, however clever and infallible they are, must necessarily enter upon the

responsibilities of practice absolutely ignorant of business ideas. The suggestion to add a business education will meet with opposition from such kids as the students who induced the Quebec Legislature to knock off a whole year from the four years' qualification, and from those shining lights who want to give assistants who will not have their qualifications tested by the Canadian Boards, certain privileges of practice. The suggestion, however, is one which must commend itself to all serious and honest men, and one which should merit the gratitude of students. In the case of one of our own students in whom we had a special interest eight years ago, we put him through the Business College, with substantial results every day since in his career as a medical and dental graduate. There is no reason why Dr. Gardner's suggestion should not assume something of a more practical form, and we would strongly urge the advisability of adding graduation in a Business College to the dental matriculation.

THE NEW TARIFF.

Our readers and our advertisers will be glad to hear that the new tariff in Canada has placed all dental and surgical instruments on the free list. Mr. Fielding said: "We give the dental and medical professions a boon which the younger and less wealthy members of the professions will appreciate, when we put all surgical and dental instruments on the free list." This, however, does not seem to apply to chairs, and other such dental furniture. The duty on artificial teeth remains at 20 per cent. It would have been only justice to have placed teeth on the free list, as they are not manufactured in Canada. However, half a loaf is better than no bread, and we expect that our friends, the manufacturers, who so generously do their share in helping us to maintain a journal, will reap a large benefit from the privilege of free trade in instruments.

A GOOD IDEA.

At a recent meeting of the Chesley, Ont., School Board a resolution was passed appointing Dr. W. A. Crow to examine school children's teeth and make a report to parents.

CORRECTION.—For solid gold crowns, in Dr. Sparks' article in last issue, read "solid gold cusps."

HOW TO WRITE A PAPER.—Scratch out your introduction and begin where the subject really begins ; condense the body of the paper ; end the paper where the subject ends. Successful papers, almost without exception, are those written with one definite and predominating thought, on which every fact is brought to bear and toward which every argument is directed. Conclusions alone are, as a rule, sufficient, with pertinent facts so marshalled as to give them proper support. The various minute details of the stages by which these conclusions are reached are usually uninteresting, and had better be touched lightly or omitted entirely. An expert editor, by remorselessly stripping away the padding, is usually able to make an abstract that will present all the author's ideas and conclusions in one-fourth the space of the original paper. Many a man who has had something of real value to say has first smothered the life out of it with padding, and then dug a grave and buried it in the midst of a five column paper compiled from some text-book. It would be far better for professional literature if every man would content himself with writing what he really knows, instead of writing what he has only read. One new fact discovered, one new, live, practical idea, is a sufficient subject for one paper, though it may be a short one. Two or three subjects for a single paper will render it weak or actually inert. A shot gun is adapted to small game, but large game is only brought down with a rifle. A single paper on a live subject, if it hits the mark squarely, will do more to establish a man's reputation than ten diluted and watery compilations.—*Atlanta Medical and Surgical Journal*.