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President's Address, British Columbia Dental Association.

By T. J. JONES, L.D.S., Victoria, B.C.

GENTLEMEN,—The interval of our separation has elapsed, and we are brought together, in accordance with our preconcerted plans, to inaugurate, in a more formal manner, the British Columbia Dental Association.

I greet you as individual members of a noble profession. It is fair to presume that we have accorded to us by the community in which we live our appropriate status, and that we each of us wield the influence to which we are justly entitled.

But what shall be the character of our Association, and what can we do for each other and the public around us? These are questions which address themselves to us on the present occasion, with great pertinence and fitness. Shall our organization become a mutual admiration society, or shall we lay broad and deep the foundations of an honorable structure, that shall wield an influence for good when we shall have passed away, as our fathers have gone before us? I trust that a mere existence will not satisfy the purposes and designs of those I see around me on this occasion. While it does not become me to dictate, it may, nevertheless, be appropriate to suggest. To save us from disintegration and disso-

lution, there must be a common interest, and that interest must be perpetual. We shall find this interest in our mutual improvement, if we do not withhold our individual contributions to the common stock. Now, there may be individuals who could get along very well without the aid of such associations; but I should do no injustice to such if I should say that no one man knows everything, and he must be a very dull scholar who cannot learn some valuable lesson from an inferior mind. It is the great aggregate of little things that constitutes the great mass, and if every member of this Association will contribute his mite, it will be found that each of us will carry home with him more than he brought. A single suggestion, a simple hint, is often of the greatest value, especially when we are pursuing a course of investigation or experiment, and have come to a standstill for want of a simple hint which some brother may supply.

Now, there are some things which we can never learn until we reach a given point in our mental operations. We must have the susceptibility even to make a hint available, and coming together as we will, each from his office or laboratory, with some special line of thought ever before us, it is but fair to presume that, while each of us may add to the common stock, all of us may be enriched as individuals. The mind is always quick when upon those subjects that most deeply engage our attention. How, then, is it possible, when so many are working in the same field, that we can spend a few days together, earnestly canvassing the same subjects, without deriving a marked advantage? He who never gets out of himself knows not what it is to live. We best serve ourselves when we are serving others well. Our object should be to make the most of ourselves by enlarging the scope of our own lives; and thus it will always be that, while we are nobly and honorably working for the public good, by a reflex influence, as certain as the law of gravitation, we are lifted up into a noble sphere of individual existence. This thought should ever save us from mean and petty jealousies. If a worthy brother can outstrip us in the race for personal eminence and distinction, let us not try to pull him down to our own level, but bid him "God-speed," and push on fast after him, till you meet him in the broad road to fame.

Dental science is kindred to medical science, and medical science

intermeddles with all knowledge. Let us have courage to follow wherever truth may lead the way, and we shall always be safe. Our Association contemplates the development of truth as it exists in dental science, and we have before us an important field to harvest. In some respects, we will reap the fruit of those who have toiled in this field before us, and have sown broadcast around them the precious seed which now waves as a golden harvest. In other respects, we are in a field of undeveloped thought. We are following a lead that will open up a new mine of professional treasures. Some of us come, picking up the precious grains which have been left unnoticed by others. But, let our relative positions be what they may, there is work enough for us all. We do not all excel in the same specialty. We do not all take equal interest in the same class of operations. Our peculiar genius and habits fit us for some one class of operations better than another. Some can scarcely endure the laboratory ; they prefer the operations of the chair. Others, following the bent of taste and of inclination, prefer dental mechanics. And this is well. Let each one follow the department best suited to his taste, and he will find that in such a sphere he will surely win distinction. But in our Association we bring together our various contributions, and we are all enriched together. In coming together thus, bringing with us the results of our varied experiences, and in the true spirit of professional courtesy and brotherhood, one result must certainly follow, to wit : the elevation of our noble profession as a whole, and our individual status. But, in order that we may reap the full benefit of this Association, it is quite important, it seems to me, that a strong effort should be made by all its members to see that it is enriched with elaborate papers on different branches of dental science.

Gentlemen, let us labor to this end. Let us leave such footprints behind us that those who come after us shall feel that we have not lived in vain. Perhaps I should apologize to you for detaining you so long from the business of this convention by my somewhat incoherent address ; but, throwing myself on your indulgence, I beg to express my fervent desire that we may live to see this, the British Columbia Dental Association, eminently successful and prosperous.

Caries.*

By A. I. HOLMES, D.D.S., L.D.S.

When the source from which osseous structures derive their nourishment and vitality is destroyed, death follows as a necessary consequence.

This occurrence is called necrosis, or mortification of the bone, and sometimes authors speak of it as caries.

But, as caries of the bone is generally classified as a separate disease, I will speak on that subject later on in my paper. Necrosis may occur in any part of the body, but I will confine myself to that part most necessary to the dental surgeon: the oral cavity, and principally the alveolar.

The trouble may occur in the alveolar of either jaw, but is more liable to take place in the lower than in the upper. This, no doubt, is caused by the smaller blood and nerve supply in the lower jaw, thus weakening its vitality under that of the upper.

Though it is a plain fact that the alveolar process in either jaw, although like other bones, supplied with bloodvessels and nerves, their recuperative powers are weaker; and then to be deprived of a portion of its delicate, life-giving substance, by necrosis and exfoliation, or other causes, the injury is not so readily, as is often in other osseous tissues, repaired by the restoring efforts of nature. Again, necrosis may be confined to the socket of a single tooth, but more frequently it extends to several, and often through a portion of the alveolar border, and occasionally the entire alveolar, penetrating a part or the whole of the jaw.

When teeth are subjected to necrosed loosening, as is plainly shown by the natural necrosis that nature supplies for the expulsion of the temporary, they become dark by the destruction of their pulp, and are ultimately removed and fall out. Exceptionally, a number can be made to remain firm, and become useful.

Of all these cases the condition of the pulp-chamber of such teeth as have lost their pulps should receive prompt attention, to prevent the discharge of poisonous matter by way of the apical foramen, as such sources of irritation will, until it is removed, prevent a proper and perfect healing.

At first, the indications of trouble in the jaw that precede necrosis is not to be distinguished from maxillary or alveolar periostitis. The necrosed portion may be limited to bone in direct relation with inflamed periosteum, frequently excited by scurvy, syphilis, certain eruptive fevers, mercurialization and action of phosphorus, or, extending deeper, it may involve the entire alveolar border, and perhaps the palate and into the Highmore antrum, if it be the upper jaw affected. As it progresses, instead of confining

* Read before the British Columbia Dental Association, July 17th.

itself to local or circumscribed swelling, the gums become congested and swollen over considerable area, unhealthy purulent pus oozes from the margin of the gums, detaching them from the bone, the teeth loosen, and in a few weeks the maxillary and alveolar plates also become disintegrated by the necrosed process. These pieces of bone lie dead and sequestrated, bathed in pus.

In all cases of necrosis the ingenuity of the operator must be depended upon to overcome the difficulties that may present themselves. Consequently, no set rules can be given to accomplish their treatment.

I, in the first place, generally remove the loose roots or teeth that are past redemption, then make free incisions into the swollen area to give relief to the blood-pressure, and give free vent to the pus that may be collected under the periosteum. Syringe the parts out with a warm solution of Listerine, peroxide of hydrogen and carbolic acid.

Too much stress cannot be placed on the remarkable value of Listerine in these affections.

When the patient is suffering great pain, instruct the use of heavy doses of antipyrine and Dover's powders, also call attention to the importance of keeping the bowels active.

Dismiss for further development. My method of treatment thus far will aid to stop periostitis and osteitis, and prevent necrosis, which is generally the result of continuous inflammation. But, in cases that are so far advanced, giving signs of disintegrated necrosed bone substance, I find the absorption and extrusion of the dead bone may usually be effected by the use of a ten per cent. solution of aromatic sulphuric acid, brought directly in contact with the area of the diseased part.

My method of using it is to inject through the fistulous openings, and directly in contact with the diseased bone, by means of a hypodermic with a blunt point, keeping it there for several minutes, followed by a washing of H_2O_2 .

But, in extreme cases, where large sequestra are exfoliated and honey-combed carious bone is formed, I give assistance for their immediate relief by the use of the knife, aided by a four or a six per cent. solution of cocaine. Follow this by the weak sulphuric acid injections and mild washes, and in a short time we may generally dismiss our patient, cured.

But, before concluding the treatment of necrosis, and going to that of caries of the jaw, I wish to state that, after consulting many of our best authors as to the best treatment, I find that of Dr. J. T. Martin, to my opinion, a very good one. It is as follows:—

If seen in the early, active stage, give a good cathartic, say six to ten grains of calomel, followed in from four to eight hours by a large dose of saline cathartic, well diluted; follow this by ten to

fifteen grains Dover's powder, or equivalent of some other opiate, to allay all pain, and repeat the dose as often as needed. If the skin is hot and dry, give drop doses of tincture of aconite every half hour in water, until the skin is moist and the action of the heart is modified. . . .

By the action of these remedies the blood is diverted from the part, the pain checked, the irritation quieted, the force of the heart modified, and the general temperature lowered; in other words, the part put at rest.

He says it is of great importance to keep the bowels active wherever there is inflammation about the head or face. Lance the gum, with free incisions, down to the bone.

He has two reasons for this: 1st. Local blood-letting relieves the blood-pressure; and, 2nd, it gives vent to any pus collected, thus preventing extensive separation of the periosteum, and extensive necrosis in many cases.

He then advocates the painting of the gums and parts freely with tincture of iodine, hot fomentations applied over swollen parts, and similar remedies.

We can plainly see that his treatment so far is to combat periostitis and otitis, and to prevent necrosis, caries or abscess, which are the results of continued inflammation.

He says that whenever necrosis of the lower jaw is discovered, the best method is to meet indications generally and locally, until the necrosed bone is separated from the living, and then assist nature in getting rid of the irritant by enlarging the opening and removing the sequestrum, or sequestra, as the case may be.

Keep the patient supported with remedies, as iron and bitter tonics. He also says that in these cases the supporting powers of quinine cannot be overestimated. Locally, the sinuses should be cleaned by stimulating alteratives, as solutions of iodine, Listerine, H_2O_2 , carbolic acid, etc., which will bring about a cure, if careful attention be adhered to.

CARIES OF THE ALVEOLAR PROCESS AND MAXILLA.

When acute form is present, it is associated with inflammation of the gums and periosteum; periostitis being early observed.

It, like necrosis, is not very common, differing from the latter in being free from the odor, when kept cleaned, which characterizes necrosis. The causes are various, and one very common one is the pressure of the dead teeth and roots. Though ulceration and destruction of the tissues, resulting from syphilis or lupis, is one of its greatest causes. I have seen, on several occasions, caries in its most frightful forms, resulting from this affection, among the Indians of this country, where it has been led into the palate, destroying it until a terrible deformity followed, making a common

cavity of the mouth and nose, and even involving the face to a great extent.

Caries, when well established in the maxilla, has one or more openings in the gum or neighboring parts. These canals or openings, in the majority of cases, are surrounded by fungus granulation. Harris states that in the early stage there is increased vascularity and congestion, which terminates in ulceration; the bone cells become enlarged by the breaking down of their walls, and filled with semi-organized lymph, the accumulation of which is attended with the rapid advance of the destructive process. While, according to Virchow the bone breaks up in its territories, the individual corpuscles undergo a new change (granulation and supuration), and remnants composed of the oldest basis substance remain in the form of small, thin shreds, in the midst of the soft substance.

However, the whole process is a degenerative ostitis, in which the osseous tissue changes its structure, loses its chemical and morphological character, and so becomes a soft tissue, which no longer contains lime.

In treating caries, where it is not very extensive, I would first make an incision, expose the diseased part, and, if need be, I would at once pack them with iodoform gauze, or, what I think better, the boracic acid gauze, if it can be obtained, thus getting its antiseptic effects, and obviating the disagreeable odor that comes from the iodoform. Pack it, and dismiss the patient for a day or so, and, on his return, wash it with a warm solution of Listerine, and make an examination of the parts, so as to see how far the disease has gone, whether it has involved several roots or one root of the tooth or teeth, as it may be; then we know how far to proceed intelligently with our operations. The sense of touch will enable us to determine whether the bone is softened; we may, without the aid of vision, be able to make proper surgical operations, and not go beyond the territory involved by the diseases. I prefer a long, sharp bur, passing it into the osseous cavity, excising the ends of the roots of the tooth, and the caries bone, if thought necessary. Never fail to open each nerve cavity, and clean out the remaining debris at the proper time.

Why should we cut these roots off? Simply because they stand up there, and do not serve any useful purpose, and are often a source of irritation; they interfere with the formation of new tissue, consequently it will be far better to dispose of them. Having done this, we cleanse the cavity, as before directed. When the boracic gauze is not obtainable, the iodoform I believe to be better, if used with crystals of boracic acid, as they are dissolved more slowly than pulverized acid; they are more constant in their action—in other words, we retain the antiseptic agent longer by using this crystal which dissolves more slowly than the other agent.

Having packed accordingly, a few days later we make another ocular examination, and if we see little red granulations shooting up here and there over the surface of the part, it will soon be well, for we know it is an effort on the part of nature to close the cavity and effect a cure. In these cases, what I deem far better than fabric for the closure of the wounds, is wax. It may be softened and moulded to the cavities; remove the excess up the surface, and then replace. I do this because a wax plug is better than a fabric plug, and is more cleanly. It doesn't take up any secretions, and excite further irritation. I always, from time to time, remove the inner surface of the plug, to relieve it so that granulation may go on.

By-and-by the cavity will be filled to an extent which will prevent the retention of a plug longer, and the desired effect accomplished.

Address of Retiring President.*

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

The retiring president's address of a dental society in America, where there are about one hundred of such organizations, each with a retiring president, with an annual retiring address, as a literary fabrication has no latitude, though it may have longitude, and discount rubber dam in the way of stretching. There is no ligature to keep it down, though it may have holes in it and leak badly. It may embrace everything, from Adam and Eve in the garden of Eden down to the twentieth century, and the beginning of the millennial dawn in 1914, by Chas. T. Russell.

Eve, we may safely say, was the first female dentist, for we are informed that she inserted her own teeth into an apple, and they worked so effectually that there was brought about a constitutional change, and eventually a radical physical metamorphosis, which has continued ever since.

Later on, we are informed that Job was saved by the skin of his teeth.

Jonah, very innocently and unintentionally, contributed an item of interest by being the first dentist to implant natural teeth, though he was unfortunate in his choice of a patient, who after three days of constant persevering effort, fired the teeth and dentist both out of his office; and though the poor fellow was out time and labor on the transaction, he was in for a lot of experience, by which, a sadder and a better man, he went on to Nineveh, and started a successful practice. Owing, perhaps, to want of atmospheric pressure, the teeth would not stay, or it might be possible that imperfect

* Read before the Ontario Dental Association, July 21st.

adaptation to the mucous membrane by reason of bad compound, caused local irritation or stomachalgia, and patience ceased to be a virtue. Any way, the attempt was a failure as a dental operation. We are again reminded by the finding of teeth filled with cement, and even gold, in representatives of the human family that "walked in Thebes' streets three thousand years ago," that we are not the originators of the science. We are the present connecting link, striving by personal endeavor and individual and collective research into the hidden mysteries of nature and science, to unfold and make plain the intricate windings of by-paths, to the consummation of the time, when "the prince of the powers of darkness shall be chained up, and the King of kings shall establish His throne upon earth, and the grim monster death on the pale horse, shall cease for a thousand years to call upon the sons of men to pay the penalty attached to his condition.

There are those present before me, no doubt, who will be still ringing the changes on bacteriology, Koch lymph, predisposing and exciting causes, hereditary predisposition, and such like subjects, in 1914, when they will be so well understood that a new science will be added to our school of practical science, called the science of living, or, the greatest and crowning science of all, the production of happiness by a skilful application of all existing sources. Teeth will not decay, because we can overcome every condition which is conducive, and which is now wrapped in mystery. Orthodontia will be needless, because irregularity will cease, owing to correct procreative affiliation. Our occupation will be gone, and we may write "Micawber" over our doors. That is, supposing this era does dawn upon us in 1914.

As the annual meeting of our Society has again arrived, and the programme is placed before you, I feel proud to have to say that it is a good one, and ought to be listened to with satisfaction and profit by every member of the Society.

It is a very onerous duty which falls to the lot of the committee on "programmes" from year to year, to so vary and provide food for reflection and thought, as to render the meetings attractive and instructive.

I would recommend to your consideration the idea of appointing a committee early in the session, say the first day, whose duty it would be to appoint essayists and name the subjects for the next annual meeting; and, if thought desirable, have committees arranged to deal with subjects and collect information and compile reports to be handled by such committees at the meetings.

In this way work would be distributed, better results obtained, and much worry and hurry at the approach of the time for meeting be done away with.

The writer had entertained the idea of instituting correspondence with the leading men of the profession, pointing to a gener-

alizing of the laws of the various provinces of the Dominion, and a recognition of the right to practise in one province to be held good in another; or by a standard of qualification to be agreed upon, to be recognized in the various provinces as a sufficient guarantee of proficiency and ability, and license to practise in any province. Say for instance, the degree of D.D.S., as issued by the University, be recognized as a standard just as much as B.A. and M.A., and entitle the holder to all privileges granted to holders of these certificates anywhere in the Dominion.

I am not aware of any private interests that would suffer by such a course, while it might stimulate the profession, and those who contemplate entering upon its study, to greater enterprise and more home teaching, by seeking their education within our own borders. This could only be carried out by the University authorities of each province, adopting the plan of instituting a school of dentistry, or obtaining authority from the local legislatures to deal with the question, and appointing examiners and lecturers in conjunction with their other work.

The question of dental education is always agitating our ranks, and is in every periodical introduced by the most advanced minds and men of large experience. The way to impart the most practical training, and instil the greatest amount of theoretical and useful knowledge in the shortest time, with the least exertion of money and energy, is a question upon which there is a difference of opinion. Ingersoll holds the opinion that the lecture room as ordinarily conducted is a delusion, and that the text-books in the hands of the student, such as we might reasonably expect to find them, is much more satisfactory and profitable in the way of obtaining correct knowledge. Certainly, in the multiplication of the text-books of the most reliable and advanced literature of the profession, during the last few years, a long stride has been given in this way, for in this matter of "making many books there is no end;" and the seeker after knowledge is not at a loss for authority and precedent, as the best minds are applying themselves to writing and publishing the results of observation and research, in all the branches of the special features which we are called upon to pursue. The idea Ingersoll wishes to advance is, that by less theoretical lectures and more practical training and experience in college life, the student is much better taught, so that after spending twelve or eighteen months in the college, the student is quite prepared and competent, and feels so, to take upon himself any responsibility that may turn up; and not, as I have heard stated by graduates, "they are just ready to begin to learn how to do work." Another says he has not seen enough good practical work to give him confidence in his own ability to do it, and he must see some good operations to test his theories and add to his ideas.

If colleges were a sufficient means to the end, would post-

graduate schools be in such demand? Our own school is among the best and most thorough; the professors are capable, painstaking and exhaustive in their teaching, and stand co-equal with the best on the continent. Our students can stand alongside of any students anywhere in any respect, and any calling, and do no discredit to themselves in all matters of theory and book learning; but after all, are they as competent to take charge of an office and bring about the most desirable results as they should be, or as we might reasonably expect them to be? I am sure it is a difficult thing to draw the line in a stated subject, and know just how far to go without doing an injustice. As for instance, one student said to me: "We have now been grinding for two weeks, every day, on the urine, and just what good that is going to do me in the practice of dentistry I can't see." Another says, we are spending hours on Reagent's, chemical experiments, etc., that might be better employed on patients, gaining experience in operating and mechanical work. These are all very well in their way, and good and useful, as will be found out in good time by the student, and I would not agree with them to have such apparently non-essentials taught; but we must have the essentials, and have them well taught, if we leave the others to the persevering plodder up the hill of science to be pursued after graduating, and at leisure. Why not reverse the order of the present procedure, by making good, practical, thorough, competent dentists right in the colleges, and let the post-graduate schools work up the fine art by embellishments to suit individual tastes?

It has occurred to me, on different occasions, that our matriculation might be changed so as to allow a student of the School of Practical Science without matriculating, as now required, to become articulated. In addition to the present matriculation to accept the certificate of Practical Science Course, if indeed it would not be a step in the right direction to recommend a student taking the course in preference to some that are now required, such as Latin, Greek, mathematics, ancient history, geography, and modern languages, to the extent necessary now, and substituting such subjects as are taught in the School of Practical Science. The primary object of the preliminary education of the student is to develop, liberalize and enlarge the mind and ideas, and prepare the mental calibre by exercise and brain work to apply the energies to the task of absorbing and assimilating the more direct information relating to a professional career. This is necessary in all walks of life of the higher pursuits, and it matters not so much as to the study, so long as the reasoning faculties are brought into play and the mind developed.

Scientific research is always interesting; and fascinating to many; and is becoming more and more the fashion every year, and might be very properly adopted as a standard of matriculation, and the certificate as issued by the School of Practical Science accepted by our

College. I am aware of the fact that no very high standard of education is required for the entrance upon the lectures. A common school education is sufficient, or say the entrance examination; but is this not sufficient, along with the knowledge obtained at the school in certain subjects? We could not expect, it is true, that a student would go through with all the subjects taught, as they are numerous, difficult and not essential, though very useful in any sphere. I apprehend that such a course would be a liberal move, and the means of a more solid foundation and broadening of our platform, enabling the students whose tastes preferred this line of study to exercise it in preference to arts and languages, or history and geography.

We must be scientific dentists or be failures. The dental science is intimately connected with the other sciences—inseparable from medicine and metallurgy; geology and mineral teeth sound euphonious. Bacteriology and caries, animalculæ and bugs, germicides, hygiene and sanitation must be understood and occupy our attention, if we are to keep pace with the onward march of the times. Our coming men must be breast-up in the race, side by side and shoulder to shoulder with progress, or get left.

While on the subject of education, is there not a want felt in the direction of education among the masses? Should there not be a more systematic and comprehensive means of imparting knowledge to the children in the public schools? They are taught hygiene, temperance, agricultural chemistry, botany, and other kindred subjects. Why not have dental histology, and care and treatment of the teeth to an extent that would be advantageous in early life, and the lessons taught thus early be a means of usefulness in the years to come of mature age and useful to the rising generation? It has, no doubt, come to the notice of every practitioner that the children are made to suffer by the ignorance of the parents in regard to their teeth.

I feel it my duty to call your attention to the fact that, since our last annual meeting, certain members have fallen from grace and violated the rules of the Society. This is a painful duty to perform, and I would much prefer to have left it undone, or rather to not have the occasion for it. Upon two separate occasions of our annual meetings we have presented the opportunity to qualified practitioners to sign our constitution and become members of our Society. Scores have responded to the announcement and cheerfully subscribed to the few articles of agreement, called Code of Ethics, experience having demonstrated the necessity of having some means of controlling the membership or regulating our actions. Others have not done so. The greater number are quite agreed as to the necessity of this course, but have not taken advantage of the same from want of opportunity, but all the respectable

profession may, as time goes on and the meetings grow in interest, feel the necessity and profit of joining with us in the endeavor to keep up with the times. Now, what shall I say of those who have freely and voluntarily subscribed to the articles of faith, and have been weighed in the balance and found wanting? Shall I dignify their action by noticing it? Shall I lower the dignity of our honorable calling by bringing to your notice the contemptible, dishonest, disreputable and utterly unprofessional practice made use of by several who have libelled themselves by signing our books and afterwards doing the things which they ought not to have done? Fortunately they are not men possessed of any professional standing, of no reputation mentally or morally, of no social standing; and the fact of them resorting to such unworthy means of replenishing the decaying public patronage and bringing grist to the unworthy mill, is a sure indication that they are total failures along the orthodox lines, and are in need of an artificial stimulant; which fact the discerning, intelligent and well-informed better class of the community are quick to correctly interpret and appreciate at its proper value.

We do not need to search for an apology for this line of action very long, as we invariably find at the bottom either a low moral tone, a mental obscurity, or a mercenary mendacity that eclipses any good light that may have existed in their composition by contact with superior beings in earlier days, and so far forgetting the fact that they have been privileged to be called into an honorable profession, and distinguished above their meed by a degree above their ability to maintain, and superior to their manhood to aspire to; and, like water, they gravitate to the level of the sordid cesspool of their original natures, forgetting to return to the fountain of the cause of their temporary distinction, anything of the lustre of fame or light of loyalty to the profession that may have been the means of elevating them from the obscurity of their origination and their early education does not fit them for, or their vulgar tastes and coarse natures prevent them from, appreciating. You may be called upon to take action upon those recent recreants. Your constitution calls upon you to do so, and it provides for it.

I would suggest in this connection, that a change be made in the rules by amending them, so that a direct vote of the Society will be necessary to elect a member after being vouched for by a mover and seconder. I would also bring to your notice for consideration the inadequate means at the disposal of the proper officers provided by the low annual fee. With more money, more good could be done and more attractive programmes provided, which would mean better attendance and enlarged fields of useful and important subjects.

In conclusion, as the time of the withdrawal of my term of office as your President has arrived, I must embrace the opportunity of

returning to you my most earnest and sincere thanks for the honor you have seen fit to place upon me by permitting me to occupy that important distinction, trusting that the Society will continue to prosper and extend its sphere of usefulness, by adding to its numbers and attractions, until it fulfils its richest destiny and becomes the rallying point of advanced thought and professional lore for the Dominion and a shining light in the dental world.

First Dentition.*

By W. A. LEGGO, D.D.S., L.D.S., Ottawa, Ont.

The subject of first dentition contains so many points of importance to us as dentists that we cannot always hand the treatment to the physician.

I intend bringing forward only a few of the most important points, omitting histology, time and order of eruption, and not going minutely into the many complications of difficult dentition, with which it is not our province to deal.

As usual, authorities differ somewhat, so I think my object will be best attained by quoting or using some ideas gleaned from our journals and other authorities.

Infancy and childhood are important periods of life, for in them we meet many diseases rarely found in other periods of life, of which difficult dentition is one, and which causes at times much trouble and anxiety.

Normal dentition is a physiological process which may be completed without any apparent discomfort to the infant, while difficult dentition is often directly or indirectly the cause of many infantile diseases; wherefore difficult dentition may be considered a pathological process.

The development and advance of the teeth are accompanied by more or less swelling around the dental follicles, being greater with some teeth than with others. The large blunt molars are apt to cause more than the small sharp incisors. Within certain limits this swelling or congestion is physiological and not a disease, but when there is an unusual amount of swelling, and the gums become tender, painful, and redder than in ordinary dentition, and when the saliva is increased and accompanied by the usual signs of discomfort, we have a pathological condition—*inflammation of the gums or gingivitis*. Sometimes the inflammation over the tooth is so great that an abscess forms, which must be lanced. These symptoms are easily detected, and are not dangerous. They are caused by the rapid growth and increased sensibility of the dental follicle.

* Read before the Ontario Dental Association, July 21st.

Other complications occur in other parts of the system, as diarrhœa, irritability of the stomach, convulsions, etc., through the influence of the disturbed nervous system. Barrier believes the diarrhœa of dentition depends usually on what he calls "a sub-inflammatory turgescence limited to the gastro-intestinal follicular apparatus," and occasionally it is due to defective or altered innervation. In which case, Smith says, it would then be similar to that form of diarrhœa which occurs in the adult from the emotions.

Generally there are other causes for the diarrhœa, as unsuitable food, clothing or locality; city infants, in hot weather, suffering most, dentition being only a subordinate cause. But there certainly is a looseness or diarrhœa connected with dentition recurring with each epoch, showing that dentition can be a cause of other diseases. It is generally admitted that eclampsia or convulsions is a common result. Barrier attributes convulsions in the teething infant to excitement of the nervous system, arising from the pain which is felt in the gums, and to a determination of blood to the dental apparatus, in which afflux the whole vascular system of the head participates. Other cases may often be found where dentition is only a subordinate cause producing a sensitive state of the nervous system, when any additional stimulus, as indigestible food, etc., may produce convulsions. When several teeth are advancing at the same time, producing much disturbance, and convulsions occur, dentition evidently takes first place as a cause. Infants who are burned or scalded are very liable to convulsions, which constitute the chief danger in such accidents. So the swollen and tender gums, proceeding from the advance of several teeth at the same time, may affect the nerves like a burn or scald, and produce the same results.

The treatment of all cases of difficult dentition must be twofold, local and constitutional. The occasions for local treatment in the mouth are easily detected and relieved. When complications occur in remote parts of the body, they are generally found without trouble.

The diarrhœa must be controlled and limited to two or three evacuations daily, as greater frequency endanger the safety of the child. (Smith.)

"Nervous affections, fretfulness, irritability, etc., may be relieved by bromide of potassium or chloral. Demulcent and soothing applications may be applied to the gums. The infant may hold a rubber or ivory ring in its mouth with apparent benefit, but a tooth should not be rubbed through with a thimble or other hard substance, unless the point of the tooth has reached the mucous membrane, for the friction will increase the inflammation."

As regards lancing, much difference of opinion is expressed. The English authorities favor it, while the French oppose it. (Rilliet

& Barthez). The lance is less frequently resorted to now since bromide of potassium and chloral have come into use as nervous sedatives, even convulsions generally quickly yielding to their influence, if the state of the bowels be properly regulated. As a general rule, lance when the gums are tense, hard and white, showing that the pressure impedes or prevents circulation. The cut will then remain open. But the greatest trouble is long before the tooth has reached this point, perhaps a month or so before eruption. What course to pursue here divides the ranks. To lance or not to lance.

Trousseau says, "that the tooth is not released by lancing the gum over the advancing crown," and Smith, "that the gum is not rendered tense by the pressure of the tooth, as many seem to think, for if so the incision would not remain linear, nor the edges unite, as they ordinarily do by first intention in a day or two."

This speedy healing of the incision, unless the tooth be on the point of protruding, is an important fact, for it shows that the effect of the scarification can last only one or two days. How long would medicinal treatment last if not repeated? What objection can there be to lancing again if the trouble recur?

He says further, "the early repair of the dental follicle is probably conservative so far as the development of the tooth is concerned. It may help us to understand how active, how powerful the process of absorption is, if we reflect that the roots of the deciduous teeth are absorbed by the advancing second without much pain or suffering from the pressure." He claims that if the calcareous particles of the teeth are so readily absorbed, what is the foundation for the belief that the fleshy substance of the gum is absorbed with such difficulty.

This seems plausible, but, on the other hand, we must remember that the absorption of the roots is slow and gradual, and that the root is not largely endowed with nerves and vascular tissue like the gum, and therefore can bear the pressure with ease; quite a different matter to the same pressure applied to the tender sensitive gum, for although gum tissue is comparatively insensitive in its normal condition, when inflamed it is exceedingly tender to the least pressure.

Naturally, growth and absorption are so nicely balanced that little or no trouble results; but when growth is more rapid than absorption, pressure, irritation, etc., follow, and this pressure is not always the same; it may be excessive for a few days, then relax while nature takes a rest before another effort is made, giving a recurrence of the same symptoms of swelling pressure, tenderness and irritability, which I think the direct result of pressure, caused by the fact that the tooth advances more rapidly than absorption makes way for it.

There is also another source of pain not to be overlooked, viz :

the reflex pressure caused by the gum upon the pulp of the tooth, which may be quite as painful as the tender gum, for at this time the root is imperfectly formed, the foramen large, and the pulp is large in proportion, well supplied with nerves and vascular tissue. The pain thus produced must be real toothache, and the nervous results those so often noticed in other parts of the system.

Unless there are other symptoms than the swelling and congestion no interference is necessary. An abscess, of course, requires lancing. Fever or diarrhœa should be relieved by medicine. If symptoms are aggravated, and convulsions threatened, all measures safe and speedy should be employed.

Lancing will generally give relief at any period, and it may be necessary to lance several times over the same tooth, but no harm can follow such a course any more than giving medicines enough to tide over the same periods of suffering. The germs of the other teeth cannot be injured if the lancing is done only over the advancing tooth. Should excessive bleeding occur, it may be controlled by pressure, powdered alum, etc., rubbed into the cut, which, if not successful, constitutional treatment should be employed (ergot of rye, etc.). Cases of excessive hæmorrhage must be very rare.

Lancing is often opposed from the belief that the scar formed would retard the eruption of the tooth. This is erroneous, for scar tissue is less highly organized than the normal, therefore more easily absorbed.

White says, "The uniting medium in the repair of a solution of continuity possesses less vitality, is less perfectly nourished, and is easier of disintegration than the original tissue. The tendency of scar tissue to break down is a matter of common observation even among the laity; and, except in the case of gum lancing, is not disputed by any medical authority. Gum tissue should be no exception, and it therefore follows that the pressure of the tooth against the gums would cause absorption more rapidly than if the lancet had never been employed."

After the crowns of the molars and the points of the cuspids have appeared, there may be more or less trouble. The molars may be bound down by fibrous bands between the cusps, which should be cut, and around the cuspids a tough ring is sometimes formed, which is stretched tighter and tighter as the crown protrudes. This should also be severed. The cuspids are more apt to be troublesome after they have pierced through the gum than before, owing to the advance of the cone-shaped point. Our duties as dentists are plain and practical, and when we meet with any complication outside our profession, the physician properly takes charge of the infant.

There will be found in most communities a deeply rooted

aversion to the use of the lancet, stronger among the less intelligent masses, but by no means confined to them. So strong is this prejudice, that in many parts of the country it is a common belief that if a child's gums are lanced it will surely die; whereas, in point of fact, I have known of more than one case, where, in the opinion of well-known professional men, death has resulted from a failure to lance at all or to lance in time, even with their best medical treatment. Is it not our duty as dentists to combat this prejudice, if it is only such? To study out the authorities on this point, and if each member of our profession can reach the conclusion that lancing is harmless and beneficial, to do his best to stamp out this unreasoning prejudice against it? In my own mind there can be no doubt as to its efficacy, having often seen the touch of the lancet give instantaneous relief to children previously suffering almost to the point of convulsions. If such a relief can be obtained without any evil results, surely it is our duty to give it a trial.

Pyorrhœa Alveolaris.*

By F. KILLMER, D.D.S., L.D.S., St. Catherines, Ont.

Pyorrhœa alveolaris, next to caries of the teeth, demands more attention from the dental surgeon than, perhaps, any other disease of the human mouth. It is essentially a disease of the peridental membrane, a suppurative inflammation by which the peridental membrane is separated from the root of the tooth, and destroyed fibre by fibre. At first, there will be seen only an irritation of the gingival margin about the teeth, which cannot be distinguished from a simple inflammation caused by tartar. If this has existed for some time, the gums appear more or less swollen, of a dark or bluish-red in color. Close examination will show that the lower margin of the membrane is destroyed in such a way, that a thin dull blade will pass up by the side of the root, and pressure upon the loose gum will cause a slight discharge of pus. This destructive process extends towards the apex of the root, following the fibres of the dental membrane, and as it follows lengthwise of the root it also more slowly widens, until it results in the destruction of the entire membrane. Rarely does it attack the entire gingival margin of the peridental membrane at once, more frequently by the formation of a pocket, which oftener passes up the length of the root to its apex before completely encircling it. It attacks the teeth indiscriminately, no particular tooth or side of tooth being more liable to the disease than another.

* Read before the Ontario Dental Association, July 21st.

When the disease is confined to one side of the root, the tooth is very liable to be displaced, gradually moving so that it protrudes in a direction from the diseased surface, or, when proximal sides of the roots are the seat of the disease, the teeth gradually separate. The margin of the alveolar process usually disappears as the destruction of the membrane advances. The gums either become hypertrophied and puffy, or gradually recede, exposing a large portion of the root. There is usually more or less of a deposit of serumal calculus under the margin of the gums, little nodules and thin scales often extending far up on the root, precipitated, no doubt, from the normal condition of the blood, owing to the low state of inflammation and retarded circulation.

This calculus, being a result of the progress of the disease, rather than having anything to do with its origin, when present, causes greater inflammation, making the disease thereby much more apparent.

A loosening of the teeth commences, which increases until they drop out, or become so troublesome that they are extracted. The time between the first appearance of the disease and the falling out of the affected teeth varies from a few weeks to several years.

A great variety of theories have been advanced as to its etiology—the salivary and sanguinary calculus theories, the theory that constitutional and hereditary causes were the prime factors in the production, mercurial taint, a catarrhal condition, and a specific infectious disease which owes its origin to the life and growth of micro-organisms. Each of these theories has its strong supporters, the last two having, perhaps, the preponderance of support. If asked to give the etiology of this disease, I would quote from Dr. Miller, who says: "Three factors are to be taken into consideration in every case of pyorrhœa alveolaris: (1) Predisposing circumstances, (2) local irritants, (3) bacteria." Any predisposition, which may be either hereditary or acquired, that increases the susceptibility of the periodontal membrane to inflammatory action, or any local irritants, such as tartar, improper use of tooth-picks, fillings extending beyond the cervical margin, use of ligatures, pressure of dentures at the roots of teeth, arsenious acid escaping from cavities in devitalizing pulps, or any other local cause that will irritate the gingival margin to a condition of inflammation, must be considered as one of the prime factors, responsible for this pathological condition. I would bracket predisposing conditions and local irritants as one factor and bacteria as the other; for where the former exist the latter have a soil favorable for their development, and it is from the bacteria or certain poisonous substances produced by their physiological process of growth that we have the suppuration characteristic of this disease.

That pyorrhœa alveolaris has no specific bacterium, can be fairly

claimed from the experiments of Dr. Miller, where in twenty-seven cases of teeth affected he made culture experiments, which yielded twenty-two different kinds of bacteria, a large number of which possessed pyogenic properties. In these experiments he was not able to determine the constant occurrence of any one particular or specific bacterium. Whether it is the micro-organisms themselves that penetrate the inflammatory infiltration, and break asunder the mutual connection of the proliferated corpuscles, preventing the reorganization of the fibres of the peridental membrane and inducing suppuration, or whether it is their chemical products, in either case the bacteria are the active agents in its suppurative destruction. The fibres of the membrane for the greater part of the root run from the apex toward the crown and outward toward the alveolus. If by any cause this membrane becomes inflamed so that there is a dissolution of the basis substance, the cells of each fibre are set free, and so long as these cells remain in mutual contact, they may reform into the fibre again; but just in this state there is every condition favorable for the development of the bacteria that so constantly infests every human mouth, and, as indicated above, the presence and growth of these micro-organisms break asunder and destroy the proliferated cells of the fibres of the peridental membrane, causing the disease to advance more rapidly lengthwise of the root, thereby forming the pocket so characteristic of the disease. Bearing in mind the three factors to be taken into consideration in every case of pyorrhœa alveolaris, the treatment becomes at once apparent. All predisposing conditions, if constitutional, to be removed by constitutional treatment, local irritants by their absolute removal, and the destruction of bacteria by the use of germicides.

In treating the disease, the first thing to do is to remove carefully and thoroughly all foreign substances from about the teeth. If the disease is somewhat advanced, which it often is when coming under the dentist's care, the utmost patience is necessary for the removal of every particle of deposit and necrosed and disintegrating bone.

Before commencing this operation, syringe out the pocket thoroughly with a solution of bichloride of mercury in peroxide of hydrogen (one grain to an ounce). This removes all pus and bacteria, and renders the pocket thoroughly aseptic, a condition necessary when more or less cutting of the gums and alveolar process must necessarily attend the thorough removal of all foreign particles. If necessary to gain admittance to the diseased part, to work with more certainty, split the gum over the part diseased, especially if the disease exists between the teeth. The gum will readily fall in over the part operated upon, and the tissue will reform more rapidly. When this operation has been completed and all resulting debris has been thoroughly syringed away, then

antiseptic and gerimcidal, together with local stimulating, treatment is indicated. The former to destroy the active agents in the progressive destruction of the tissue in the formation of the pockets, as has already been indicated in this paper; the latter to stimulate to healthy activity the impaired dental membrane, for in proportion to its weakened condition it furnishes a soil favorable for the development of bacteria, likewise in proportion to its healthy physiological condition it will starve out and render them inert. A remedy possessing these properties is found in the mixture of one part oil of cinnamon, two parts carbolic acid and three parts oil of wintergreen, known as the one-two-three mixture. I have used this with success, but after several applications have found it best to considerably dilute the mixture with oil of anise, to prevent the destruction of the granulating tissue, or to use instead equal parts of aromatic sulphuric acid, listerine and tincture of calendula. This proves most satisfactory in stimulating the low vitality of the tissue and inducing healthy granulations for the restoration and reattachment of the lost parts. Previous to applying the mixture, carefully syringe out the pocket with peroxide of hydrogen. When the pockets have advanced to such an extent that the teeth are much loosened, it is essential that by some means, either by ligatures, by swayed caps, by continuous fillings made through the cutting edges of contiguous teeth, or by any means whatever which the ingenuity of the dentist may devise, they should be held immovable, so as to aid in the production of new tissue about the root. Whatever means may be employed to hold the teeth immovably in position, absolute cleanliness must be maintained.

If the teeth affected with pyorrhœa alveolaris are treated carefully and intelligently, in a manner similar to what has been briefly indicated in this paper, the great majority of them can be rendered healthy and useful, to the comfort and satisfaction of the patient.

Disease of the Antrum.*

By S. WOOLVERTON, L.D.S., London, Ont.

Alveolar dental abscess is a common surgical affection, attended with great suffering, and more or less serious consequences, according to the condition of the patient, the structure of the alveolar tissues concerned, and the location of the tooth.

The relation of the antrum of Highmore to the roots of the teeth in the upper jaw is such, that when disease of these organs occurs, the discharge is liable to enter this cavity, and nearly all diseases which we are called on to treat will be found to come from

* Read before the Ontario Dental Association, July 21st.

abscessed teeth, and the removal of the offending tooth, or teeth, will usually be the cure of the trouble.

In examining a human skull, properly divided for this purpose, we find this sinus presents great variations in individual cases. In some cases there is a heavy lamina of bone between the roots of the teeth and the cavity, but occasionally a case is met with in which the roots of the teeth actually project into it, covered, however, with a thin lamina of bone, in addition to the mucous membrane. Is it any wonder, therefore, that serious consequences will often arise from this, especially if the pus is not fully discharged by way of the nostril on the affected side? The pus may also find its way into the cavity, even when there is a considerable thickness of bone between it and the root of the tooth.

The disease may be either acute or chronic. In the acute forms of abscess the general law is, that the burrowing of the pus will go on in the direction in which there is the least resistance; on the other hand, the movement in chronic forms is very gradual, and is largely guided by gravitation, and therefore sinks to the lowest point. The rule is, that we will find the point of discharge below the source of the pus, and this is the reason that we find that by far the larger number of alveolar abscesses that discharge on the face are situated on the lower jaw. The burrowing of pus in the chronic forms of abscess form a very important element in their history. This presents the widest variations, and is sometimes the source of much perplexity to the physician or dentist. The diagnosis and treatment of the disease, although plain, are in many instances wholly misunderstood, and too frequently are we called upon to treat chronic cases that might have been cured at a much earlier stage of the disease, and it is a matter of regret, that some medical men (and even dentists) have so little knowledge on this subject; hence the need of specialists in this line.

The treatment of the alveolar abscess, in a vast majority of cases, presents but little difficulty. It consists in a thorough evacuation of the pus from the cavity, and cleaning and disinfecting it, and relates more especially to the removal of the cause perpetuating the discharge of the pus. Among the many antiseptics in use, there are none which answer all the requirements better than carbolic acid and peroxide of hydrogen.

The medication should take place through the opening, which will generally be found through one or more of the sockets from which the teeth have been taken, and these may easily be enlarged if necessary, and not through the natural opening from the antrum through the middle meatus of the nose, as I have seen it done, without beneficial results. It is said by some, that we obtain better results by using an atomizer than from the syringe, in applying our remedies, the spray more thoroughly reaching the

parts, but in my opinion, a common rubber bulb syringe is superior to either. In the treatment we are apt to do too much than not enough. Nature is frequently the best physician, and treating intelligently, so as to assist nature, is generally sufficient, and in cases of this kind you will be astonished to see how favorable the symptoms become, and the artificial opening closing with healthy granulations until the whole trouble passes away.

I will now relate the history of two of the most important cases that I have met with. In each instance the first upper molar was the exciting cause of the trouble, and both on the left side of the face. My observation of this disease leads me to think that this trouble is more apt to occur on the left than on the right side of the face. Why this should be so I will leave older heads to determine.

AN ACUTE CASE OF ABSCESS OF ANTRUM.

About two years ago a laborer in the car-shops of London came to consult me about a discharge that was coming from the inner canthus of the eye, and for which he had been under treatment by a physician for some weeks, who was treating it locally. The discharge was very profuse, and exceedingly offensive, so much so, that I had no desire to treat it. After hearing the history of the case, and establishing a true diagnosis of the disease, by examining the teeth on the affected side, I found that the first superior molar had a dead pulp, and was painful on percussion. I removed this tooth, and found a direct opening into the antrum. I then sent him to his physician with instructions to treat through the opening thus made. I saw him a short time afterwards, and he had made a rapid recovery, but with an ugly scar at the corner of the eye, where the pus had forced its way out. Timely treatment would have prevented this, and saved weeks of suffering as well as expense, as he was not able to attend to his work in the meantime.

Case No. 2, Chronic.—Miss B., of London, aged 19, suffered from this disease, for which she had been under treatment for more than six years previous, with four different physicians, who failed to bring about a cure, owing to a wrong diagnosis of the case. True diagnosis, as we all know, is the first requisite in the treatment of any disease. She had been treated for nasal catarrh symptoms. Offensive breath, appetite gone, languid and despondent, and had almost given up hope of being cured. Necrosis had also set in, and the spongy bones around the natural opening from the antrum were softened and coming away. This tended to make the treatment much more tedious than it would have been otherwise. When I first saw her there was a profuse discharge of mucous from the nostril on the affected side. The lower eyelid

was quite red and swollen, the conjunctiva was much inflamed, and there was a sense of heaviness in the left cheek, and other symptoms that accompany this disease. The diagnosis offered no difficulty in this case. The treatment was simple and efficacious. The removal of the first superior molar, which I found in a carious condition, allowed me a free entrance into the antral cavity. The opening in this case allowed me to treat freely, and had no difficulty in keeping it open by means of small pieces of slippery elm bark inserted into the opening. The cavity was kept clean by frequent and copious washings of warm water and salt. The case was under treatment for about six months. During this time I used injections of carbolic acid diluted, carbolated iodine, tinct. opii camph., and last but not least, peroxide of hydrogen.

The patient made a complete recovery, and her general health has been very much improved.

Her last physician told her that a cure could not be effected without her undergoing a surgical operation, and she had almost resolved to go to Toronto to have the operation performed, when she came to me for consultation.

Electricity in Dentistry.

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

It has been my intention, for some time past, to write an article, or a series of articles, on the uses of electricity in dentistry, with a view towards guiding the practitioner who may have neither the time nor the inclination to make a critical examination of the subject, in the practical use and relative value of the various electro-dental appliances at our disposal. I am inclined to discuss this subject for various reasons. I have several times been asked by brother practitioners to put my experience into a form by which others might be benefited; and, moreover, I cannot fail to recognize that, owing to lack of knowledge of electrical science on the part of many members of our profession, they have frequently been sold appliances of no practical value, and for which they paid exorbitant prices. Electricity has many valuable uses in dentistry and in medicine; but, owing to its intangible character, its seemingly unlimited powers and its mysterious manner of acting, to which is added the general ignorance of the public relating thereto, it has become the mainstay of charlatanism, the never-failing and universal specific of the quack.

It is my intention to discuss this subject under two general

heads, viz.: Electricity as a motive, illuminating and heat-producing power ; and, Electricity as a therapeutic agent : the first to include its application to lathes, engines, lamps, plugs and annealers ; the second to refer to its use as a cautery, a stimulant, and anæsthetic.

As a motive power, electricity possesses advantages over all other means. It is cleanly, almost noiseless, easily controlled, and not unduly expensive. The extent of these advantages depends upon the source of current. Where the current can be obtained from the street circuit, thereby giving the user nothing to do except to turn on or shut off the current according to requirement, the advantages reach their maximum. Where a street circuit is not available, as in many small towns, making it necessary to resort to batteries, the advantages are reduced to a minimum ; in fact, they become so unimportant that I would strongly advise any one whose knowledge of electricity is *nil* to let batteries severely alone, as, even under skilful management, they are occasionally unsatisfactory, while, under carelessness and ignorance, they become worse than useless.

Given a fair knowledge of the care of batteries, and a reliable battery, there is a certain amount of satisfaction, but I have often wondered whether the temptation to use such power arose from its real value or from the interest taken in experimenting, for it is a fascinating study, not to mention the air of learned mysticism that seems to hover about a place wherein there are electrical appliances. For the average practitioner, foot-power is as much superior to battery power as is power derived from a street circuit superior to foot-power. The electric dental engine that is run from a street circuit is the best of its kind, since it gives great speed, variety of position and complete control. Another appliance that has been but infrequently used by us is a ventilating fan, which is suspended near the chair, and which is a positive luxury in hot, sultry weather. The fan not only keeps the patient and operator cool, but prevents the ever-troublesome fly from making a temporary resting-place of their features. To run the polishing lathe by electricity is a luxury that all could appreciate but few attain. When one has labored all day at the chair, and, owing to some unavoidable circumstance, a plate has to be finished at night, the idea of polishing without labor is an invaluable satisfaction. The mouth lamp is another and, perhaps, the most useful appliance given us by electricity ; for the others, we had progenitors and have substitutes, but this stands alone as one of chained lightning's exclusive boons. It facilitates examinations and renders us independent of dark days, when delicate operations are most difficult, while for extracting at night it cannot be equalled. I have constructed an appliance, which is attached to my operating

bracket. It is made adjustable, so that the light may be thrown directly upon the part and from either side; thus, while supplying the oral cavity with sufficient illumination, it is completely clear of the movements of the forceps or other instruments.

The lamp-holder is made somewhat after the manner of a naval search light, on a small scale, there being a conical reflector at the back. This lamp does not go inside the mouth, but throws a shaft of brilliant light instead. I have also a small lamp arranged to go inside the mouth, but have not found it nearly so satisfactory. Its chief drawback is heating, while its bulk is undesirable. I am aware that mouth lamps are manufactured and sold, and therefore do not claim any originality except in matters of detail. When electrical power is available, I would suggest that no dental office is fully equipped, both for the comfort of the operator and the welfare of the patient, if the practitioner does not, as far as possible, use the advantages offered by electricity as a motive and illuminating power.

With reference to its use for annealing and other heating purposes, excepting cautery, which I shall mention later on, I do not see wherein it is greatly superior to alcohol. It may be that I have not seen the latest appliances for these purposes, but so far the alcohol lamp seems to be the best up to date for annealing, as is the hot-air syringe, or kindred appliance, the best for drying purposes.

Dental Legislation in Canada—The Chain Complete.

PRINCE EDWARD ISLAND.

An Act respecting the practice of Dentistry and Dental Surgery.

[Assented to 15th July, 1891.]

Whereas it is desirable to regulate the practice of dentistry in the Province of Prince Edward Island.

Be it enacted by the Lieutenant-Governor, Council and Assembly as follows:—

1. This Act may be cited as "The Prince Edward Island Dental Act."
2. That no person shall practise the profession of dentistry or dental surgery in the Province of Prince Edward Island without having first received a certificate as hereinafter provided, entitling him to practise dentistry or dental surgery.

3. That such certificate shall be issued by the Provincial Secretary, upon production to him of diploma of graduation in dental surgery from the faculty of any Canadian Dental College, or the faculty of any Canadian university having a special dental department, or from any such institution duly authorized by the laws of Great Britain or any of her dependencies, or from any dental college in the United States of America recognized by the National Board of Dental Examiners of the said United States of America; or from any recognized dental institution of any other foreign country which required at the time of issue of such diploma or license, attendance at a regular course of lectures, and an apprenticeship of not less than two years; or a person who has been in regular practice in Prince Edward Island as a dentist or dental surgeon for a period of six months, immediately preceding the passing of this Act; and it shall be the duty of the persons claiming to be entitled to the certificate required by this section to produce to the said Provincial Secretary evidence, satisfactory to him, of his being entitled thereto.

4. And it is further enacted that notwithstanding anything herein contained such certificate as aforesaid may be issued to any dental student who at the time of the passing of this Act was actually apprenticed to any surgeon dentist in this Province, and who shall actually at the time of applying for such certificate, have served an apprenticeship of at least two years, and who shall also produce a certificate to the Provincial Secretary from such surgeon dentist testifying to the effect that the applicant was duly apprenticed before the passing of this Act for at least one month, and has at the time of application completed an apprenticeship of at least two years. Provided always, that nothing herein contained shall be construed to require physicians, surgeons, or others to take out such certificate for the purpose of qualifying them to extract teeth.

5. That before any such certificate is granted, the applicant shall pay the Provincial Secretary the sum of five dollars.

6. After three months from the passing of this Act, any person not holding a valid certificate issued by the said Provincial Secretary as aforesaid, who practises dentistry or dental surgery, except extracting teeth, shall be guilty of an infraction of this Act, and shall be liable upon summary conviction, before the stipendiary magistrate of the city of Charlottetown, or the stipendiary magistrate of the town of Summerside, or before any two Justices of the Peace for the county in which the offender resides, to a fine of not less than five dollars, nor more than twenty-five dollars, besides costs of suit, to be levied by distress of the defendant's goods and chattels, or in default thereof to be imprisoned for a period not exceeding one month.

7. That no person who has not received the certificate required

by this Act, shall recover in any court of law any fees of money for any professional services, or operation performed by him, nor for any materials provided by him in the practice of dentistry, or dental surgery.

8. That nothing in this Act shall be construed to prevent surgeons or physicans from temporarily filling teeth or otherwise attending to them, for the prevention or cure of toothache.

Selections.

"Save Your Teeth."

AN EXPERIENCE IN A DENTIST'S CHAIR.—"A LITTLE NONSENSE NOW AND THEN," ETC.

When a dentist says to you that he can "save your teeth," tell him that you would rather die toothless than be ground to atoms, stabbed to the nerve centres, prodded with a buzz-saw and gagged with large sections of India rubber sheets, merely to save a few bits of undesirable bone. The first thing the dentist did to me when he undertook to "save" my teeth, was to tip me back in a chair and prop open my mouth with a stick. Then he lined my mouth with rubber and attached weights to that portion of the lining which hung outside. Then he put a bib under my chin and stood off a little way and gloated over me. I tried to tell him what I thought of him, but was past articulate speech. "Pleasant afternoon," he said, taking up a battle-axe and stepping on a high stool where he could overlook the field of operation. After he had quarried the cavity, and blasted it out, he called an assistant and bade him turn a treadle. A big bumble bee immediately flew out of the revolving spokes and charged at the newly made cavity as though it was a flower cup full of honey. I saw stars. I heard a million slate pencils squeaking over a gritty surface. I felt cold hands toying with each particular vertebra of my spine, and a Waterbury watch seemed merrily winding in each ear. I tried again to speak, but my efforts were in vain. I would have given uncounted gold just to swallow. How little we appreciate our blessings until deprived of them! How unmindful of my opportunities had I been all through those vanished years when I could swallow or not swallow, as the mood overtook me. What countless

times I had performed that blessed act unwittingly, and now I would have sold my birthright (if I had one) for the power to repeat the blessed operation.

It is generally at this juncture when, between the pangs of delayed deglutition and the consciousness of feeble-minded drolling, the spark of reason bids fair to be extinguished forever, that the dentist begins to joke. What avails the majestic glance of a wrathful eye when the lower features are swathed in a damp sheet? My attempt at scornful protest was like the attempt of a teething babe to hurl the sevenfold curse of Rome. Alarmed perhaps at the pallor which I knew full well was creeping over my face, my tormentor finally removed the stick from between my teeth and gave me one more chance to swallow, and to appreciate to its full extent what the poet meant when he carolled the glad refrain, "Wipe off your chin."

"You can come again Saturday," said the dentist as I reeled across the floor and donned my hat. "I shall never come again!" said I in hollow tones like a voice from the tomb. "You will lose your teeth if you don't," said he. "Yes?" whispered I, leaning my tottering frame against the door post for support. "And what if I prefer to lose my teeth rather than lose my reason and my life? What I have suffered in your den, old man (he was a gray-headed villain of full sixty summers), has shattered my nerves for years to come. The horror I have endured with your buzz-saws and your battle-axes, your patent 7 by 9 drills, and your circular-action battering rams, have been more of a loss in mental strength and physical aplomb than to have laid down every tooth I have in the dust. When you have patented a process by which dentistry is made not any more painful than guillotining I shall call again; until then, old man, adieu!" (N. B.—Pride will make any woman tell the worst sort of fibs. Notwithstanding my vow, I shall be on hand Saturday, and that dentist knows it.)—*Chicago Herald.*

Editorial.

How to Treat Quacks.

To promote right-doing, and punish wrong-doing—that is one of the main objects of dental legislation. The restraints of law are indeed a severe personal "injustice" to law-breakers; but, fortunately, there are more law-keepers who wish to do right, and who will insist even upon "the professional liar" obeying the law.

There is just this difference between a thief and an illegal dental practitioner—the former finds the law against theft personally inconvenient, the latter against illegal practice, but the latter is as much a law-breaker as the thief. Society needs educating upon this point. If our efforts are to succeed in protecting the public from the imposture and mendacity of the few men in and out of our ranks who thrive by open lying, the licentiates who are not on the Boards have plenty of work to do. It is as necessary to watch and punish one quack as one thief. If thieving is made easy, the number of thieves will increase. It is only the fear of punishment that saves society from swarms of rascals. If the penal clauses of our dental Acts are not enforced when the opportunity offers, the temptation to defy them will grow.

Expulsion from the local societies, personal as well as professional ostracism from any sort of personal or professional intercourse, should be the treatment meted out to quacks. When men despise the common decencies of professional life, and make fraudulent boasts of superiority, while other dentists know they are inferior, and are not personally able to do what they boast about, why should respectable dentists voluntarily degrade themselves to their level, by recognizing them in the office, or even in the street? A drunkard may be pitied. A dentist who acts the quack ought to be shunned like a pickpocket.

New Brunswick and Nova Scotia Associations.

We regret that we have to defer the report of the first annual meetings of the above sister associations until the next issue, when Dr. Cogswell's paper on "Dental Ethics" will also appear. The reports were not received until this number was almost completed.

Dr. W. C. Barrett in Harness Again.

Everybody who knows Dr. Barrett will feel like congratulating the Chicago Dental College and the *Dental Advertiser*. The College has secured his services on its staff for a course of lectures on "Comparative Dental Anatomy." The *Advertiser* has just announced that it has secured him for its editor. The profession will reap the benefit.

"Thanks all the Same."

We have to thank the S. S. White Co. for advanced sheets of the report of the National Association of Dental Examiners, and the National Association of Dental Faculties. Unfortunately they were sent to the wrong address, and we did not receive them until all our contemporaries had published them.

The Chain Complete.

Little Prince Edward Island holds out its hand from the Atlantic, in this issue, to British Columbia on the Pacific. Our Canadian chain of dental incorporation is complete. There are matters that might be greatly improved in all our Provincial Dental Acts, but, as the old saying goes, "half a loaf is better than no bread."

Code of Ethics—Article II., Section 3.

The editor of the *Advertiser* gently raps our knuckles for our remarks in our last issue on the above subject. Perhaps it would have been better had we said nothing or said more, as our good friend quite misunderstands the position we assumed. We are utterly opposed to such associations as the Goodyear Dental Vulcanite Co. and the International Tooth Co. Our object was to plead for the relaxation, in some measure, of the severity of the code applied, not to such companies as those referred to, but to individual inventors, who impoverish themselves while in scientific discovery, for our benefit as well as their own, and who cannot afford to give away the result for nothing.

In our next issue we shall explain our views more fully, and perhaps more accurately; but we do not think they differ much, if any, from those held by the editor of the *Advertiser* when, referring to the Bonwill engine and mallet, he wrote as follows ("Independent Practitioner," Vol. VIII., page 330): "The propriety of securing a monopoly of manufacture by patenting the various devices and improvements made has long been a vexed question in dentistry, but we believe that few object to remunerating the frequently protracted studies and long course of experimentation necessary to perfect an invention, by paying a reasonable royalty

upon any really meritorious and original device. It is the taking out of patents upon trivial modifications, too often the securing of them upon devices and methods as old as dentistry itself, against which practitioners protest. One feels outraged when a claim is made for royalty upon and damages for use of some device which he has employed for many years, but for the essential point of which some dental pirate has secured a patent in secrecy and by stealth. Such claims are scarcely worth contesting, for it is usually cheaper to pay the amount than to fee lawyers. The inventions of Dr. Bonwill do not belong to this class, and all will rejoice that he has received a fair reward for the time and labor spent in perfecting them."

Just so. To repeat: "Members of societies who depart from the code have no right to complain if they are forced to conform to them, or forced to retire. But it seems to us that an inventive genius merits some substantial reward for the labors of a lifetime. How shall we encourage this, and yet keep such men in our societies?" Surely the editor of the *Advertiser* does not want to "encourage them with a club." The question cannot stand that way. We need all the inventive talent we can keep in our societies. The litigation of the International Tooth Crown Company *vs.* Edward S. Gaylord *et al.*, recently decided in the Supreme Court of the United States, against the Company, though it did not practically affect us in Canada, was watched with deep interest, and the result is rejoiced in by the profession in Canada. We can have no sympathy with such fraudulent actions. But there is no analogy between the Company and the individual cases which prompted our remarks.

From many sides we have received sensible letters, thanking Dr. Johnson for his plain talk in our last number. There are some dry bones in all the Provinces that need to be stirred. It is a particular cause for regret that the able papers read by Dr. Johnson could not be produced in this journal, because our worthy contemporary the *Dental Review*, of Chicago, had a prior claim. We would advise our readers to get the August and September issues. 66 Madison St., Chicago.