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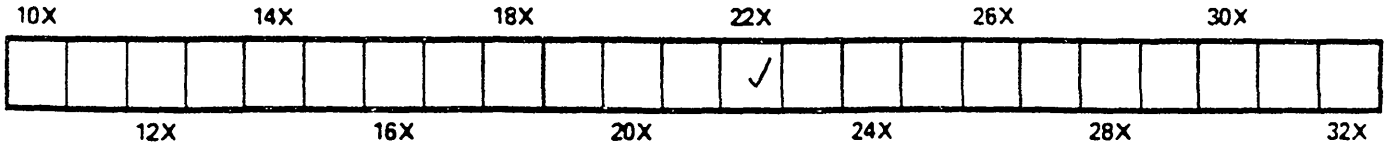

DOMINION DENTAL JOURNAL.

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Address.

*BY W. GEORGE BEERS, L.D.S.

Mr. PRESIDENT, LADIES AND GENTLEMEN,—When I accepted the invitation to join the boys to-night, in a ceremony which might make the mouths of the founders of Canadian dental reform water with envy, I thought at first it was to be a quiet sort of family farewell, where one could unbend a bit, like teachers and pupils who both love football; and yet, where one's gray hairs would perhaps entitle him to talk kindly, like a father, experienced words of caution with the warmest words of cheer. I flattered myself that the task would be light and congenial, and that the happy graduates would endure me, because it was to be the very last of a long list of lectures they had survived, and because, too, they might hope to catch from one's confessions, some of the needed warnings which active practitioners have "learned in suffering to sing in song," and for which I know I would have been grateful when I first launched forth eager for the fray, to set the world on fire. You know there's nothing running to such waste as the burning passion to bestow advice. It is a perfect drug in the market of moral ethics. It is a possession with which even misers are extravagant. It would not be difficult then, to give our graduates the

*At the Closing Exercises of the Royal College of Dental Surgeons of Ontario.

benefit of one's own mistakes, in order that they might avoid them, and to point out those faults and follies of a professional career through which most of us have had for discipline to pass. It was formerly a superstition that every child should have measles, chicken-pox, and croup, just as the belief exists to-day in some parts of the Province of Quebec that physical life is not complete without variola. In much the same way, it seems to be a heresy to deny, that a man can steer clear of reefs and rocks against which the most of voyagers strike; but were this true, and were the beacons and signals of no avail, would not every shoal and lee-shore of life be strewed with human wrecks, and many a hopeful heart perish in despair? There are perils of a peculiar character in the practice of dentistry, and pitfalls of more than ordinary obscurity; there are duties a man will specially owe to himself and his own nest and nestlings, superior to those that can possibly belong to the public, however nobly unselfish, and willing a man may be to lay down his life, if needs be, for his brethren; there are perplexities and temptations, and there are splendid occasions to do the duty of unselfish, earnest and truthful men. But, however parsimonious of self-praise, or prodigal of self-censure, the telling of all this would dispose us to be before our confreres; we do not like to make a public exposure of our own imperfections, or even successes, before the patients.

And it was enough to take one's breath away to learn, at the eleventh hour, that I was to be permitted, for at least thirty minutes this evening, to be "intoxicated with the exuberance of my own verbosity," and in such a literary, legislative and university centre as this advancing city, and in presence of distinguished gentlemen, whose public life makes speechifying to them mere child's play, and who, if they talk in their sleep, do so, I am sure, with classic and Corinthian polish.

However, Mr. President, with all the dangers and drawbacks before me, were I to say that I am sorry to find myself here, then like Montaigne's page, I "would not be found guilty of telling the truth." It is indeed a great personal pleasure to be allowed to add another link to the long chain of my connection with the dental movement in Ontario; to meet face to face and hand to hand, a new detachment of earnest and leavening recruits, bound in dentistry in this Province to do, not to dream, and who seriously mean in

zeal and honesty, to do some such service for their profession, and therefore for our great Dominion, as has been done for law and medicine by our University teachers, and for our trade and commerce by our educated agriculturists and merchants. We have lately commemorated in Ontario and Quebec the events which led to our first educational efforts twenty-one years ago, and I confess I like to look back on the coincidence, perfectly freed from any political thought, that the birth of this reform in Ontario was contemporaneous with that of the Dominion, and that when our statesmen were in session in Charlottetown discussing the union of the Provinces, our Ontario dentists were in session in Toronto, planning the reform and consolidation of the profession. It was a pioneer work, like that done by the first settlers of this Province along the shores of the St. Lawrence, Bay of Quinte, Lake Ontario and Lake Erie, when the rude log-hut, the yoke of steers, a pig, a gun and an axe formed the stock-in-trade, perhaps, of the fathers of some of the gentlemen here; and we, whose lives are cast to-day in pleasanter places, have good right to revere and respect those old-fashioned days of sturdy hearts and wooden ploughs. There are a few practitioners still in our ranks who were practising dentistry in Canada before most of us were born, and when I have heard from their lips the struggles they had to endure, as they perambulated the country with their box on their back like modern rural peddlers; when I even recall the regular custom in Montreal when I was indentured as a student, and was notarially bound not to reveal to our rivals "the secrets" of the profession; when we contrast those days with the present free-offering which every respectable dentist makes of his knowledge; when we compare the past in Ontario, within the memory of confreres who are here to-night, with the success achieved in its teens by this school, with the proud affiliation with one of the leading Universities of the Dominion, giving for the first time in the dental history of the Empire, a distinctive and unsullied dental degree, I feel that the responsible stewards of this institution have not only done an enduring service to the profession, but a practical one for the State. I have had constant and active association with the profession from that important epoch, and I know the sacrifices the promoters of legislation and education had to make. I was familiar with the unreasonable opposition of well-meaning sceptics, who had no more

faith that a dental Act of Incorporation would elevate dentistry in Ontario, than that a charter would avail to secure a railway to the moon. I remember the war-whoops of hate raised by a few, who condemned a principle in dentistry they unconsciously commended in medicine and law; and who, had they been in the wilderness with Moses, would, I firmly believe, have fought against the passage of the Ten Commandments, as an unnecessary and dangerous piece of legislation. Even many who to-day loyally acknowledge the value, and aid the objects of association, then stood silent in fear. It was thought by the most moderate opponent that legislation was impracticable; that the idea of a school was Quixotic, for "*Quis custodiet ipsos custodes:*" that it could become nothing better than a fickle and feeble imitation of the clap-trap system, which was then manufacturing Doctors of Dental Surgery over the border in one session of four months. It was said that a dental school in Toronto would have to pawn its parchments to pay its way; that it would have to hawk its degrees about the Province for sale, and, as was satirically said of the diploma of a foreign College, that it would thus "be enabled to get rid of its debt—by 'Degrees.'" Those were the prophets of despair, who seem to have lineal descendants in other spheres of our national life; whose crest should be "the white feather;" who have as many hands as Gyges to raise against the gods; and who, at least, seem like men standing on their heads, to see everything the wrong way.. The success we see to-day is due to the fact that Ontario dentistry has leaders of quiet faith and earnest courage, who have quitted themselves like men. Had our friend Dr. Willmot and his associates shaped their actions on the fear or fury of obstructionists, you, gentlemen, would have had to pick up your experience in the Province in the old imperfect way, or cross the lines to get what you could not get here. There is neither exuberance of fancy nor exaggeration of fact in these statements. The gentlemen who shouldered the responsibility of conducting this school, did not imagine that the mere readiness was sufficient professional equipment, or that their duty should be set to music. They had not the presumption of the son of the Vicar of Wakefield—a chip of the old block—who, you remember, went to Amsterdam to teach the Dutch English, but who found when he got there that he had forgotten to learn Dutch. Your lecturers qualified themselves

to teach. You have received didactic instruction, in this first Dental Sc' ɔol in Canada, equal to any you could get on this continent; and if some features are not as yet made as attainable as in colleges in the United States, remember that one of those foreign schools has just passed its fiftieth year; that others have had twenty-five, thirty and forty years of existence, as richly endowed institutions in large and populous States. And yet not one of these colleges has so far exacted anything like the high standard of matriculation, or the conditions of studentship demanded of students in Ontario and Quebec. The D.D.S. of Canada so far represents an educational standard as to preliminary examination, only surpassed by the requirements of the Dentists' Act in England; and if we believe that general cultivation and a liberal education is as necessary to the highest sphere of success in medicine and law, it cannot logically be denied in its application to the highest attainments in dentistry, if our teaching, our associations and our literature are to expand. It is patent to us all that under the primitive system of training students, the profession produced many excellent men; some whose native genius and ingenuity "burst the bars of invidious birth, and broke the force of circumstance;" but the future of the profession will be settled on a higher plane, by the preservation, or even the increase of the standard of the admission examination. No fact in connection with education in the medical, dental, law, and even many of the theological schools of the United States, seemed to a Canadian more inexplicable, than the absence, until about twelve years ago, of any sort of preliminary. To such an extent was this neglect carried, that not only were thousands of men graduated as doctors and dentists, ignorant of the most elementary branches of an English education, but up to the last few years, diplomas were conferred upon men of foreign speech, who did not understand one word of the language in which the lectures were delivered. Though our American cousins have not raised the standard of the preliminary to that of Canada and England, we must congratulate them upon the proposed increase in the period of study; and it will probably not be deemed altogether a breach of the unpretending modesty which in some respects we feel towards the older and more richly endowed United States schools, if we recall the historical fact that the first movement towards the abolition of a pro-

vision which recognized five years of any sort of practice as equivalent to one session, was the direct result of the peremptory action of the Quebec Board, in cutting off from recognition two of the leading schools for too elastic an interpretation of this provision. In a measure our humble efforts in Canada, even years ago, were fairly received over the boarder, but my conviction still exists, that the American diploma of D.D.S. had no claim for recognition until the abolition of the five years' clause, and the exaction of a preliminary. I think what I have said may, perhaps, elevate the respect you should entertain for the degrees you have received to-night; and it is well to remember that towards this school and the profession in Canada you now have reciprocal duties to perform. Have faith in your own Canadian school as you have in your own Province and in the Dominion, and if defects appear, do not imitate the folly of the farmer who, failing to reach the caterpillar, cut down the ancestral tree, under whose spreading boughs he had been soothed by a mother's lullaby. And if circumstances, which no man can always foresee, force you to seek foreign founts of inspiration, or perhaps of life-work, even though the collective wisdom of the "Associated Dental Faculties" refuse to recognize the plea of your parchment for professional union, generous and noble cousins, whose warm hearts and open hands have often aided our movement in Canada, will be the first to wish you "God speed."

Is it not a suggestive reflection that dentistry, as a recognized science, is the youngest of the professions, and that there are gentlemen in this room, in the prime of life, who were born before the first dental association, the first dental college, and the first dental journal? Medicine can trace its history back to the early periods of Grecian civilization. The medical schools of Cos, Rhodes, Cyrene, and Croton date back from 400 B.C. Hippocrates, "the father of medicine," was 500 B.C. Law goes back to the schools of jurists in the reign of Tarquin, 448 B.C. Enthusiastic dental antiquarians, who will never be happy until they believe they have disinterred excavators and pluggers used in the Ark, try to make some bold statements of Herodotus, and passing remarks of later writers, give color to the belief that ancient Egypt was the cradle of dentistry. It was declared that gold fillings had been found in the teeth of mummies from Thebes, but it was discovered that, like other parts of the mummies, the teeth

had been merely gilded. It is a fact, however, that the idea of replacing lost human teeth by substitutes of bone or sycamore wood set in gold, has been traced to Egypt by modern discoverers in ancient sarcophagi; and, I dare say, that some of you may have seen and handled the specimens in possession of our friend and confrere, Dr. Barrett, of Buffalo. These do not, however, substantiate any claim whatever that the work was done by specialists in dentistry, but more certainly by the ordinary gold and silversmiths, who, for instance, worked in the great synagogue at Alexandria, and who, as in Jerusalem and other places, divided the working of metals into separate branches. It is easy for you to draw upon your imagination—that is what it is for—and picture to yourself an Eastern beauty standing before the framer of a buckle or an ear-ring, and, as she perhaps smiles at his blandishments and blarney, discovers to the goldsmith the loss of an incisor. With instinctive ingenuity, and no doubt a lively sense of friendship to come, he offers to carve a substitute of bone to fill the gap, as he carved the buckle, and then fasten it to the adjacent teeth, as he would fit the ear-ring, by golden loops. Still, we must let our antiquarian dentists amuse themselves; and when you remember that the Jewish Rabbins aver that the worms of the grave have no power over Abraham, Isaac, Jacob, Moses, Aaron, Miriam, Benjamin, and David, it is not unlikely that some Chicago dentist, disguised as a Turk, strolling through Hebron, should excavate some ancient molars from a burrow, and believing they were those of Abraham, Jacob, and Miriam, contribute them to the attractions of the next "World's Exposition." Or perhaps, some of our Toronto graduates, when hunting deer or fishing for trout in the Laurentides, which Sir William Dawson's fossil discoveries verify as the oldest parts of Creation, should discover that Dental Bridge work is contemporaneous with the *Eozoon Canadense.*

But, seriously, the progress of dentistry—especially instrumental and mechanical—within the recollection of the first students of this school, has been marvellous. Young practitioners would no more think of accepting most of the theories and methods of treatment prevalent twenty years ago, than they would adopt the vagaries and materia medica of Celsus. And yet, I fear, we go into raptures without sound reason, over the claims that many make as to the progress of the purely scientific on this continent. We cannot

deny that the most scientific and profound literature in our specialty is altogether foreign to our hemisphere; that until certain books were compiled to order, some of which are bare-faced plagiarisms of British or German productions, American dental colleges were taught the science of dentistry from these foreign text-books. Most of our advancement has been made along mechanical lines, the mere prosthetic, and little or nothing in the investigation of those embryonic conditions which lie at the base of the predisposing causes of poorly calcified teeth. No complaint of this sort can be made as to the study of the relation of fermentation to caries, the fungi of the mouth, etc., so carefully investigated by Dr. W. D. Miller, of Berlin, Germany; but when we reflect that the special disease of caries is increasing in all civilized countries, not merely like a transient epidemic, which we prepare to battle with until we can safely predict its disappearance, but as a physiological certainty in by far the largest proportion of healthy children of healthy parents; when we consider the fact that probably not a hundred people could be found in this city between the ages of fifteen and twenty who have escaped diseased teeth, and that the majority of children do not attain their sixth year free from this calamity, when we reflect upon this connection of caries with a period when nutrition is most active, and "decay" should be anomalous, it would seem that there is here a neglected field for scientific research. I look with horror on such statements, that in one dental office, or rather *abattoir* in New York, 15,000 teeth were extracted last year; that from four to five tons of gold, forty-five of silver and tin, besides several tons of other plastics, were used in the United States alone last year; while it is estimated that 6,000,000 of artificial teeth were inserted, and 20,000,000 of human teeth sacrificed by neglect.

Where is this to end? Is the hypothesis, founded upon the laws of descent and adaptation, that the offspring of those who have lost their teeth early, might be born without tooth-germs, to become probable? Is there to be a generation born without teeth, as they say our distant ancestors predicted that which has come to pass, that their distant successors would be born without tails? Can we grow better teeth? Can we do anything to control nutrition during the formative period? What are the disturbing and favoring influences of calcification? Do you not think that the imper-

fect character of dental education on this continent has had the most to do with our solid ignorance on such important questions?

As the youngest country on this continent, we have no reason to be ashamed of our position. Naturally enough, the organization of the profession occupied the chief attention. Quebec's effort in 1842 to secure legislative protection died still-born. It followed the lead of Ontario in 1869; but if yo· had the misfortune to be obliged to deal with its Local Legislature, and to meet the many peculiar intrigues with which hungry lawyers and unscrupulous applicants are able to confront the Association, you would thank your stars more than you do, that dentistry in this Province is not at its mercy. With the two official languages, and a French majority, it gives me the greatest pleasure to say, that in the twenty-one years of our existence we have never had one syllable of national discord, and that French and English are as honest friends to each other as brothers can possibly be. Manitoba, British Columbia, and the North-West Territories now have legislative protection. New Brunswick has made a move, which, we trust, will pull all the Maritime Provinces into line.

I feel I have exhausted you, if not my time. Some of our guests may think that, as a body, we vastly overestimate our professional significance and work; but I am reminded of a recent remark of Her Majesty the Queen to Sir Edwin Saunders, her Household Dentist: "Yours is a very important profession, for while some need the skill of the occulist and aurist, almost all need that of the dentist." If in any sense dentistry in Canada is popularly depreciated it may be largely our own fault; but I know no better way to change this misfortune, than through the education and appreciation of medical men, who come into earlier contact with family ailment, and who really have exclusive opportunity to warn and advise as to the care and importance of the teeth. With some such co-operation, the ethical and financial questions would solve themselves, and it would not be a dentist's impending fate, as was said of the English curate, that he will likely become "the best educated pauper in the parish." As the graduates of this school increase in number, and spread throughout the land, this educational intimacy will become more easy; the public will learn to believe that the loss of the teeth is a loss of function; that their preservation from youth to old age is possible, and that there is something better

under the sun, in the way of artificial substitutes, than the "Cheap Jack" vulcanite fiend has the ability to supply.

It may not have occurred to you that, as a profession, we deal with the most prevalent disease of the age; a disease which may begin in the cradle, and follow ninety per cent. of its victims through the seven ages to the grave. Do you not think then, that if the Canadian public as intelligently appreciated their teeth as our neighbors, that Canada could maintain twice the number of dentists? And yet we know that, as a fact, it is a poorly paid profession. All through the old Province of Quebec, the forceps of the country physician suffices for the dental demands of ninety-five per cent. of the rural population; and one would imagine that the sneer of Robespierre during the French Revolution, when he was asked and refused to spare the life of the eminent chemist, Lavoisier, whom he sent to the guillotine, had become paraphrased: "The Republic doesn't want chemists."—"The Province doesn't want dentists."

Gentlemen graduates, before we part, let me say a word on a subject which is always in order, from the mother's lap to the school-room; from the University halls to the very pulpits. We may differ as to what, and where, and how Christianity should be interpreted. We are sure to sympathize with Charles XII., when, after failing to make twelve watches run together, he was struck with the folly of trying to make all men think alike on matters of religion. But if we are sincere, above baser party ties, to promote the weal of the land we live in, that it might become great, glorious and free, then neither race, nor religion, nor color can separate us from the duty we owe to do some patriotic service for our land. What boots it to the soldier in battle whether or not the comrade beside him worships at his shrine? but it matters much to him whether or not he will be true or traitor. I sometimes fear that a portion of our political press and the army of our political tramps would bring us to that state of society to which Dr. Arnold, of Rugby, alluded in his History of Rome, "where patriotism becomes impossible—the inner life being so exhausted as to inspire the citizen with neither respect nor attachment." I feel I owe no apology for reminding you that, as good citizens, you owe loyalty and patriotism wherever you dwell.

It is wise and worthy to start into professional life hopefully and honestly. You need not think you can make short cuts, or take

crooked ways. If you do, you will lose time, and will have to come back and start again straight. It is better to have too much enthusiasm in your profession, than too much contempt; better to broaden your life-work and thought by collateral culture, than to circumscribe it by narrow views. It is better to build castles in the air—and doubtless you'll build many—than not to build at all; better to sing Psalms with the professional Davids, than grunt Lamentations with the professional Jeremiahs; better every day to turn introspective thoughts as a moral duty, in search of your own peccadilloes, than to think you can win popularity or renown by insidiously hunting for those of others. It is better to be even a second or third class dentist, than to imagine that you and the Premier are misplaced, and that he is in your place; better, and happier, and healthier, a thousand times, in the long run, to feel that your every-day duty, for which you've here been trained, is exactly the appointed work God has given you to do. And if you feel impelled to kick up a dust in Olympus, and cheek the gods, and teach humanity what nobody else has been able to tell it, go first and talk it over with some quiet woman—your mother, if God has spared her—and I fancy you'll come back with your metaphorical tail between your legs. Remember we are here to-night just to lift you tenderly and cheerfully out of your professional cradle. We have taken away your feeding-bottle; we've covered you with parchment, and given you "God bless you." In fact, professionally, you've been born, baptized and married all at one stroke: and take now one of the first, oldest and best hints that has been given to man since the world was created: Take a silent partner—you probably have already one in view—who will love you, and encourage you, and help you, and swear by you, even if you go home like a cowardly brute and beat her with a stick.

As a guest who rejoices in witnessing to your marriage to dentistry, let me tell you that even in the days of your professional honeymoon, you will have days of doubt and difficulty, but dutiful courage and cheerfulness always bring palmy days. You may believe me that you could not be happy unless you were sometimes miserable, just as you'll never have true success unless you have occasional failure. You will get your dose of discipline like the rest of us, but stand it like men, and you'll confess that you got it just where it was needed when the clouds roll by. You'll have

days of despair, perhaps, when you'll lie on your back and almost wish you were in your coffin, but duty and courage transmute them into days of happiness, when you wouldn't change this lovely earth for any premature hope of heaven. It will often compensate you in arduous work, in which no man in Canada ever became rich, to feel that you do humanity a daily service; that every day you prevent or ease pain, and that if you give pain, it is only that pain may cease. Now, gentlemen, to work. There is your duty. The dentist waits in his office. The procession will soon begin for you. The healthiest infant, as well as the invalid, the richest as well as the poorest; the worthiest scholar, the wisest *savant*, the greatest statesmen, even the kings and queens of earth must walk in, take their place in the chair, and submit to sit before us, with open mouth. I think it is quite time for me to close mine.

Original Communications.

Dentistry in the Canadian North-West.

By W. D. COWAN, Regina, N.W.T.

The dentists of the North-West Territories certainly cannot be reproached for inactivity and unprogressiveness. It is but as yesterday since white men took possession of this great land, and yet already we find it dotted all over with thriving towns and villages, every one of importance of which is now supplied with at least one generally competent dentist. It was not always thus, though, for until quite recently the country was overrun with men who claimed to be dentists, but many of whom no doubt knew but little of a dental college examination, and who were unsettled and irresponsible to their patrons. Thus for a time the dental profession had, to a great extent, lost the confidence of the people, and it will yet take a long time to reinstate our profession in its proper place in the eyes of the people. We who are now here are reaping the fruit of the seed sown by our predecessors, and in hundreds of cases where dentistry—true dentistry—might successfully be practised, our patrons will permit of nothing but absolute malpractice.

They no doubt feel that it is better to be rid forever of any possibility of trouble than to repeat former experiences. However, it is my impression that, ere long, the North-West Territories will a proudly boast of her dental profession as can the people of the older Canadian Provinces, (and certainly they have reason to be proud), for we have here already in this vast country men who are not only proud to acknowledge themselves dentists, but who are gifted with plenty of push, energy and ambition, not of that selfish nature which looks only to self-advancement, irrespective of the annoyance it causes to his fellow-practitioners, but to the advancement of the profession as a whole.

Best of all, however, it becomes apparent immediately on acquaintance, that the dentists here have the highest possible conception of what a dental education ought to be, and of the position a thoroughly qualified dental profession ought to occupy. Truly, then, we have good grounds for believing that the North-West will yet be a strong factor, in helping to maintain the leading position in the world as held by the Canadian dentists.

Of course, it will be a long time before we can well support a dental educational institution out here, but until such time as we can have one, I think no fear need be expressed of us discriminating against our excellent Royal College of Ontario, by admitting to practice here graduates of other colleges of inferior standard. That is the sentiment I have always heard expressed throughout the Territories; and although the standard, I am glad to say, has been changed in many of the colleges since our first "Dental Ordinance" was drafted, yet I think all will agree that we have done very well for a beginning (although we did not get one-half of what we asked) and that we have established ourselves on a good solid, all-Canadian basis. I believe these Territories can support a greater percentage of dentists than any other part of Canada (in fact, there are more dentists here now per population than in any other part of the Dominion). It may be that a great part of the people, living as they do at a considerable distance from any dentist, have neglected their teeth in the past, and are now compelled to attend to them; but allowing for this, and considering only those who are favored by locality, I must express my surprise at finding the condition of mouths I have found here. Judging from my experience in Ontario and five of the American States, I must say the people

here are the best dental patrons I know of. It is asserted that "the higher the civilization and the higher the living, the greater the dental requirements." If such is the case, then the North-West Territories must hold a very exalted position, and be very comfortably situated. There is no stinginess about our patrons here; they want their work done well, and are willing and ready to pay for it.

There is one thing I notice here which calls for mention, and that is the excessive number of abscessed teeth. I could easily understand it were they generally very badly decayed, but the number of abscessed teeth is entirely out of proportion to the number possessing any outward lesion, or at most a small cavity. I so often see teeth abscessed and for which I can give no other reason, that I have concluded that it is due to the extreme rarity of the atmosphere compelling people to breathe entirely through their mouth, it being impossible on a clear cold day to breathe through the nostrils. The extreme cold air coming so often in contact with the tooth and causing so many changes of temperature, I believe, kills the pulp; result—abscess. If it is not this, I should like some of my fellow-practitioners to enlighten me, as to the reason of the death of the pulp in so many cases where there is no cavity, no canal formation and apparently no other cause.

However, such teeth seldom lie dormant any length of time, but generally make themselves known and felt immediately after the death of the pulp, and in such cases, of course, they are easily treated. That such is the case, I think, is evidenced by the fact that often—very often—when these teeth are opened into, a small amount of pus is found, but when this has been removed my experience has been that, by using a brooch, a considerable portion of the pulp can be taken out dead but sufficiently intact to allow of its removal. Now this, I do not think, would occur had the pulp been dead any length of time, and did it occur but occasionally, I should not feel surprised; but, as I have met it here so much more frequently than in other localities, I think it worthy of mention.

The North-West Territories of Canada Dental Society are called together for their first annual meeting, to be held at Regina on July 1st and 2nd next. It is expected every dentist in the Territories will be present, and amongst the most important works

that will be proposed will be the making of the Society an educational body and the appointment of a committee to secure information with regard to the teeth of our aboriginal Indians, before civilization will have advanced so far upon them to effect any change. So far, my experience with the Indians and half-breeds has been somewhat limited, and to make it unlimited would be anything but pleasant, for they have frightfully dirty mouths. To clean their teeth, of course, is a thing they never do. As a general thing the jaw of the Indian is massive, the alveolar process being of extreme thickness and strength; and that the structure of their teeth is better and stronger than that of the white man I am thoroughly convinced. I myself have never seen a pure Indian with a decayed tooth, and in this I am supported by Dr. Dodd, of the Mounted Police here, who has spent five years amongst them; and he asserts that in the five years he has never seen a pure Indian, living in Indian style, that had a decayed tooth, but he does assert that he has lanced "gum boils" (Medical parlance) for them; so that I would infer that the Indians are also subject, to some extent, to the same trouble as I have already referred to as existing amongst our white population here, viz.: death of the pulp without any corresponding lesion.

I have extracted only a couple of teeth for half-breeds, but I must say this division of the family have not by any means the teeth that their aboriginal predecessors had. The half-breed teeth are not good, but occasionally very bad, and especially where their surroundings are anything respectable.

One young lady, a half-breed, who had been reared the greater part of her life in one of Regina's best homes, enjoying, I presume, all the luxuries of civilized life, has teeth that are presenting every appearance of decay in at least a dozen different places, while some of them have already gone so far that nothing but the outer shell of enamel is left. One of these I had the pleasure of filling, although she came to me to have it extracted. Seeing a good opportunity for experiment, I cleansed the tooth thoroughly, and found a perfectly healthy and live pulp entirely exposed. I did not resort to either arsenic or capping, but mixed my amalgam and inserted right on top of the pulp. She gave signs two or three times during the process of being hurt, for I pressed it down pretty hard, but she went away with it perfectly easy, and no further

trouble has been experienced since. The last time I saw it the filling was perfectly sound, and on that occasion I also noticed that those teeth which were only commencing to decay when first I examined them, were now decayed considerably, they decaying equally as rapidly as is common among the white population.

Two other half-breeds of about eighteen years, who have been most of their life working as servants for white people, and living as servants generally do, have teeth equally as bad as the first case. Their teeth were of a somewhat chalky nature, and five of them contained six cavities. These I filled, and as yet the fillings are good.

All of those whom I have been able to examine, and who live as near as they can to the manner of the white people, have a decidedly poor tooth for their race, much worse than those half-breeds who live a semi-civilized life, and the latter much worse than the pure Indian. But even those half-breeds who follow generally the life of the Indian have not as good teeth as the Indian, so that I am forced to the conclusion that not only does the manner of living seriously affect the tooth, but also that the children do not always inherit the mother's teeth.

Dentistry in Prince Edward Island.

By J. S. BAGNALL, D.D.S., Charlottetown, P.E.I.

In this fair and fertile Province of Canada, dentistry has not yet attained the standing it is entitled to. Here, at present, the wants of something like 120,000 people are ministered to by seven dentists ; and, so far as the law is concerned the graduate from an office is placed on exactly the same footing as the Doctor or Licentiate of Dental Surgery. In short, the young man who has spent a few weeks in an office has, legally, just as much right to practise the profession as the man who has spent both time and money in mastering the details of the profession. It scarcely need be said that the consequences of this legal looseness are generally as disastrous to the mouths of the patrons of such novices, as they are annoying to the duly qualified practitioner. In Ontario, Quebec and British Columbia the laws governing the practice of dentistry

are very good, and in the neighboring Provinces of New Brunswick and Nova Scotia the people are moving in the matter of securing better protection for both dentists and patients. Perhaps Prince Edward Island will shortly make a move. Here also, I may add, the click of an electric mallet has never been heard, neither has the thorough examination of a set of teeth with the electric light ever been made. It is true the dental engine, the automatic mallet and all standard anæsthetics are used. The principal inducements offered are cheaper work in one office than another, some special kind of gas, rubber or other material used and some wonderful office secret?

But as the world moves on so must dentistry in this Province. Even now the horizon seems to be brightening up, indicating better days to come.

Alveolar Abscess.

By J. G. ROBERTS, L.D.S., D.D.S., London, Ont.

An alveolar abscess is a cavity containing pus, with or without a fistulous opening, having its incipiency between the external and internal plates of the alveolus.

CAUSES.

(1) Putrescent pulp; (2) tartar accumulations; (3) necrosed tooth or root; (4) carious bone; (5) necrosed bone; (6) foreign materials, as broaches, fillings, or perforations, etc.

Alveolar abscesses are most likely to occur in those persons of a manifestly inflammatory diathesis, or where there is a local inflammation from some local exciting cause. In cases of constitutional predisposition the abscess in time assumes a chronic character, secreting and discharging pus continually, generally accompanied with little pain, though soreness is usually felt around the tooth affected.

Abscesses may be either acute or chronic, according to length of duration.

Symptoms of acute abscess: Violent throbbing pain, redness,

Synopsis of paper read at London, Ont., June 28th, 1889.

heat, swelling and fluctuation, with sense of fulness in tooth from gases arising from putrescent pulp. These symptoms last from eight to ten hours to three or four days.

The patient usually suffers from prostration. Tongue is coated, and rise in temperature is noticed. In chronic cases the changes take place more slowly. Pain is less severe. Infiltration of pus into the surrounding tissues, particularly in persons of strumous diathesis.

Alveolar abscesses may discharge pus: (1) Through canal of tooth; (2) at edge of gum between root and surrounding tissues; (3) through external or internal plate; (4) into antrum of Highmore; (5) back into pharynx.

TREATMENT.

Remove cause. If from tartar, then remove tartar with suitable instruments, being careful to leave no small particles below the margin of the gum. If abscess be caused from sanguinary calculus, then remove all foreign particles below the gum and inject a stimulating astringent application, as $H_2 SO_4$ (aromatic). This will dissolve small nodules from the root, and also stimulate the parts to healthy granulation.

Several treatments are usually necessary to restore parts to their normal condition.

Sometimes $H_2 SO_4$ (aromatic) is not strong enough to accomplish the object desired. Then $H_2 SO_4$ 30% or 40% may be employed. If abscess be caused from necrosed or carious bone, tooth or root, thoroughly remove all diseased bone, being careful to scrape bone down to the healthy part. Here care should be exercised in selecting suitable antiseptics. $H_g Cl_2$ (1 in 1,000), carbolic acid (1 in 40). In cases of weak constitutions it is necessary to give constitutional treatment; tonics, etc., to assist nature. The iron and quinine preparations are frequently employed. If abscess be caused from foreign materials, as particles of broaches projecting through apical foramen, remove these and treat to restore the parts to normality.

Probably the most frequent cause of alveolar abscess is putrescent pulp. The first part of treatment is to get rid of all putrescent material. If pulp has died under a filling, open pulp chamber thoroughly so that free access may be had to all roots. Stir up putrescent nerve, and wash out with warm water.

When canal has been thoroughly opened and cleansed, press walls of abscess together to evacuate pus.

Wash parts thoroughly with warm water, and inject a solution of carbolic acid, bi-chloride of mercury, or per-oxide of hydrogen. Pump hydrogen per-oxide up canal with hypodermic syringe or cotton wrapped around broach until there is no effervescence.

Insert a small rope of cotton loosely into canal, and leave for a day or two.

If abscess have a fistulous opening, inject creosote or strong solution of chloride of zinc through canal with hypodermic syringe until the solution passes out through the fistulous opening. This solution should be strong enough to burn off the glary membrane lining the sac of the abscess, and allow healthy granulations to take place.

If abscess form on the root of a tooth that has been treated and filled, we may apply palliative treatment to abort the abscess. If this will not do, then stimulate to suppuration. If the abscess return, drill through process and remove the abscess and sac.

Synoptical History of the Dental Art.

By CHAS. A. MARTIN, L.D.S., Ottawa.

Sometimes patients ask how far back does the origin of dentistry as an art date. Many believe that half a century ago very little was known on the subject. Others give as the extreme limit of the origin of the art, one hundred years. In order to give an intelligent answer to these questions, I sought for old works where information could be gathered. The one selected as containing more information than any I have seen, was published in London in the year of 1846, by James Robinson, Surgeon Dentist to the Metropolitan Hospital, etc., of extracts from which this paper is principally composed. Assuming that some of my hearers may not have had opportunities of ascertaining facts concerning the origin of our art, I deemed it would instruct them, and interest all, by compiling this synoptical history.

The origin of medicine, like that of many other arts, is involved

in considerable obscurity. To heal the sick, mitigate the pangs of suffering humanity, and stand between disease and death, were considered god-like attributes; and, therefore, the ancients, who leaned to the theological rather than to the natural truth of things, affirmed medicine to be a divine emanation and impersonated it firstly in Apollo, and next in his son Æsculapius; and thus its early history is mixed up with mythology and poetry.

Although we cannot imagine a state of society so happy as to be free from pain, disease, and death; although accidents, the changes incident to the growth and decay of the human body, the invasions of pestilence and the casualties of battle, must at all times have called attention to medicine, and rendered the practice of the art a necessity, still we have no authentic history of its rise and early progress. Eusebius mentions Atholes, an Egyptian monarch, as having written several treatises on anatomy; but the existence of this king is doubted by others; and Thouth, an Egyptian, who, according to Diodorus, lived B.C. 2,000, is generally supposed to be the first who wrote on medicine, which in his time was not cultivated as a separate art, but was practised indiscriminately by priests and warriors, poets and philosophers.

Although the increase of luxury, and consequently, of attention to personal appearance, must have rendered the subject of dentistry one of considerable importance; and although the eye and ear had long been objects of particular observation and separate practice; yet it is not till the time of Hippocrates that we meet with any notice of the diseases of the teeth, or of those who practised the art of dental surgery. This is more extraordinary, as the significance of these organs, to say nothing of their ornamental or useful functions, was acknowledged in a remarkable manner by the ancient Egyptians, so that one of their most severe and infamous punishments consisted in the abstraction of a front tooth. There is no doubt, however, that the manufacture of artificial teeth and other branches of dentistry, existed after a fashion, much earlier than history informs us. The loss of a front tooth, whether by disease or not, would naturally, under any circumstances of Egyptian law, give rise to unpleasant suspicions, and every exertion might be expected to be made to supply the deficiency. Accordingly, Belzoni and others have dicovered artificial teeth in the sarcophagi of the Egyptians. These, it is true, are rudely made,

and from being of wood, are ill adapted for performing mastication; nevertheless it may fairly be inferred, that their effect on the articulation of the voice, and the support they afforded to their natural brethren, would suffice to point out dentistry as a pursuit for the ingenious and mechanical.

We have historical evidence, that in the palmy days of Greece and Rome, the diseases and general appearance of the teeth met with considerable attention. At the commencement of the Christian era, we find, in the writings of Celsus, very explicit instructions respecting several important operations on the teeth; and during recent excavations at Pompeii and Herculaneum, various dental instruments have been discovered, much resembling some of those in use at the present day.

Aristotle speaks of forceps for extracting the teeth. Pliny also and Martial mention various tooth powders; and the wearing of artificial teeth evoked the satire of more than one Roman poet. (Martial makes habitual allusions to artificial teeth as worn by the ladies of Rome in his time.)

Among the Greeks, a peculiar affection, called stupor of the teeth, is particularly described in connection with the presence of tartar. This people looked upon dentition as a mysterious and significant event; and those who died before its fulfilment were denied the funeral honors of the adult, and ignominiously buried, instead of being burned in the usual manner.

As a distinct art, however, dentistry received but little attention from the ancients. The writings of Hippocrates and Galen, which formed the medico-dental text-books, contain receipes for electuaries, powders, and elixirs for beautifying the teeth, but nothing on what may be called the proper art and science of dentistry (dentism this author calls it).

In the early part of the eleventh century, Albucasis, an Arabian physician, wrote on diseases of the teeth, and gave drawings of a number of instruments used in his time for extracting, scraping, and the other dental operations then in practice. But it was not till the end of the sixteenth century that the art began to receive that undivided attention to which it is entitled both by its difficulty and usefulness.

No less than thirty-eight treatises on the subject were published about that time. These abound, indeed, with what is nowise useful

at present, but still the spirit that produced them is an evidence that the subject was beginning to be considered of importance, and that time and experience alone were required to raise dental surgery to its proper standing among the arts.

The first attempt to classify diseases of the teeth was made by M. Fouchard, of Paris, who has been denominated the father of dental surgery. Before his time, the practitioners of the art seem to have considered the teeth merely in their mechanical phase, taking little account of them as complex, organic structures, entering by their own vitality into the formation of the living body. M. Fouchard had the merit of directing attention not only to the construction and separate treatment of the teeth, but also to the indications which, in common with the adjacent parts, they furnish of the general health.

This was an important advance in the subject. For that the teeth not only represent the apparent, but also the *innate* fundamental constitution of individuals, is unquestionable; nay, so intimately are beauty and firmness in these organs connected with health, that the celebrated Delabarre (to whom we are indebted for an excellent work on the subject), recommends those mothers who have constitutionally bad teeth to refrain from suckling their children, lest they entail not only bad teeth, but debilitated constitutions on their offspring; and he points out, that in choosing a wet nurse, "her eyes should be lively and animated, her hair and eyebrows brown or light-colored; her lips red; her teeth sound and good; her gums hard and well colored." We before mentioned that, by the end of the sixteenth century, thirty-eight treatises had appeared on the teeth. France, in the 17th century, had also its Muller, Martin and a few others. The first idea of porcelain teeth is due to a French apothecary as early as 1774 (by Dr. Jullen, in *Dental Science*).

But so much had the subject grown in consideration at the end of the eighteenth century, that no less than one hundred and fifty-eight works connected with it had been given to the European public. To enumerate these works would be inconsistent with this paper, but it may not be amiss to notice a few of the most important. Thus Bunon published in 1723; Menton in 1746; Le Cluse, in 1755; Bourdet, in 1758; Bunon again in 1759. In 1766, the celebrated work of Jourdain made its appear-

ance; and in 1770 Thos. Birdmore produced a work on the teeth, which, by its value and importance, obtained him the appointment of Dentist to George III. From 1766 to 1768, Robert Woofendale, a pupil of Birdmore, practised in the city of New York—the first regular dentist, it is said, in this country. In 1784, Dr. James Gardette, a Frenchman by birth, was established in Philadelphia, and remained in practice there forty-five years. He was the first to apply the principle of atmospheric pressure to sustain artificial teeth in the mouth, which he discovered in 1800. John Greenwood, said to be the only dentist in New York in 1790, struck up a gold plate by swaging in 1799, and claims to be the first person who had done so in America. He was Washington's dentist, and made him several sets.

About this period the famous John Hunter turned his attention to the subject and presented the world with his "Natural History of the Teeth," a production which, while it enlarged the sphere of dental knowledge, piqued the pride and aroused the ambition of the English practitioners of the art.

The inaugural dissertation on the structure of the teeth of men and animals, published in 1798, by Robert Blake, gives evidence of the rapid strides that has been made in the anatomy and physiology of the teeth. The most important of the works at the time are those of Fox, 1803; Bell, 1829; Nasmyth, 1839; Owen, 1840; also those of Snell, Waite, Robertson, Jobson, and Koecker; besides which, we might enumerate several smaller works by S anders, Clendon, White, and others, many valuable detatched papers in transactions and periodical publications.

France, in the nineteenth century, had well-qualified dentists and writers for the times. Delabarre, Desorabode, Maury, Laforge, Duval and many more. Within the last century dentistry has advanced far more rapidly in the United States than in any other country. Thus, we have Gardette in 1821, and the talented Hudson, the friend and companion of Tom Moore, a noble Irishman, skilful and thorough in his work; the first, as is now supposed, to fill the fangs of teeth to the apex; Parmley, L. S. Parmley, and Flagg, in 1822; Trenor, 1828; Fitch, 1829; Brown, 1833; Spooner, 1836; Goddard, 1843; and in 1845, Dr. Harris, one of the editors of the *American Journal and Library of Dental Science*, published a most able and comprehensive work, entitled the "Principle and

Practice of Dental Surgery," which in 1866, had reached its ninth edition. And many other productions on the subject have appeared in America, and especially in the periodical just alluded to.

That some of the opinions of the ancients respecting the teeth should be useless for our purposes is by no means surprising. Hippocrates describes them as glutinous extracts, from which the fatty part has been burnt up by heat, and affirms they are harder than the other bones because they have no heat in them. It is hard to appreciate the meaning of this at the present day. Aristotle, however, (who, as is usual on all subjects, has some excellent generalizations respecting the teeth of man and animals,) declares them to be the only bones that grow through the whole of life; because, he says, they would soon be worn away by attrition, unless they were continually renewed. This, at all events, is intelligible and suggestive, whatever may be thought of the conclusion which Aristotle deduces from it. He adds, that the growth is manifest in those teeth that have lost their corresponding opposites in the other jaw.

In the *Dental Cosmos* of January, 1887, is a translation from a little German book published in 1541, and supposed to be the earliest volume devoted to the teeth. The *Cosmos* says: "The style is so quaint, the description so peculiar, and the directions so droll, that we feel sure of the appreciation of our readers in affording them an opportunity of its perusal. We have placed it in our book-case beside the "American System of Dentistry," in illustration of *Then* and *Now*.

A word respecting the present state of dental art and science. The conditions of success appear to be not different in this from what they are in other branches of knowledge and practice. They are all summed up in one phrase, *United Labors*. Whatever of discrepancy there is in the works of our chief authorities, is greatly owing to the isolation in which they studied, and to the want of a general means of collating their ideas. Again, whatever of progress we find in that country which takes the lead in the dental art, appears to be due to an absence of prejudice and jealousy which allows free communication of ideas, and association of common interests among the members of the profession. For the Association of Dentists in America has not only given its members generally a status in society unknown to dentists elsewhere—has

not only repressed those characters who intrude themselves upon the public here (England) and given merit its station, and honesty its pre-eminence, but has also contributed largely to the advanced state in which dental science stands in the United States.

In Canada, there still lingers to a large extent this disposition to isolation, and of fee competition. Our colleges and associations have, no doubt, broadened the views of individual dentists, and will ultimately (though apparently slowly) bring about the desired epoch when we shall be united in our labors.

That a change—a great change—has taken place in Canada within the past thirty years, is quite evident to those practising then and at the present time. Then, the individual dentist was all absorbed within the narrow limits of his office and laboratory in the production of his own material, instruments and appliances; keeping secret any discoveries or inventions he might chance to make, in order to, if possible, excel his collaborator. It were laudable to excel if the object be the general advancement of the profession; but, unfortunately in many cases, selfish desire to draw custom and obtain local popularity was the sole aim. The mechanic's son would obtain a situation with a dentist to work in the laboratory, and in a surprisingly short time he knew it all (or at least he thought so), and would launch out with a kit of instruments of his own make, encased in a box, and travel the country—for in those days it required a large territory in order to obtain sufficient patients. Occasionally meeting with intelligent people of an inquiring mind, who asked questions concerning the disease of teeth, he soon discovered the necessity of studying the subject; some, more studious than others, did so, and became prominent, with a good reputation; others, relying solely on the silver piece, mercury bottle, and a file, for filling teeth, and a key of Garengot and a lance for extracting, had to give up and give place to the one who got a furnace, moulded and baked his own mineral teeth with forge, crucibles and rolling mill, manufactured his gold plate and solder, swaging into shape and fitting to the mouth plates that have given satisfaction and comfort to the wearer for upwards of twenty years, and obtained for the mechanical artist a wide reputation that endures to this day. Others, who had the means at command, and were ambitious and progressive, went to dental colleges in the United States, and returned with a diploma, giving

them considerable prestige over their less fortunate collaborators. Desiring to bring dentistry from a perambulating workshop up to the dignity of a profession, they established a college in Toronto, with the laudable object of perfecting the future dentist, and had an Act passed in Parliament compelling practising dentists to obtain a license, the requirements of which you are all familiar with. About this time vulcanite or dental rubber came into use, (I remember well the clumsy, ponderous vulcanites then used). The cost of dental plates was considerably lessened, causing a new era to be inaugurated. Teeth with dead pulps that heretofore were filled and a hole bored into the chamber, to give vent to gases and decomposing debris, were quickly extracted to be replaced with ones more certain of success; and rumor has it that sound and serviceable teeth were sacrificed to improve the symmetry, and sometimes to increase the pecuniary value of the work. The abuse of rubber and amalgam by unscrupulous mountebanks, caused the high grade dentist to decry the use of such vile mercury salivating materials. Much correspondence ensued, a thorough analysis and extensive tests were made, resulting in the retention of these materials for dental purposes. The manufacture of these materials have been continually improving, and are to-day a great benefit to a large portion of the people. The introdution of teeth with artificial gums in blocks, greatly enhanced the beauty of rubber plates; instead of joints between each tooth, five joints only in each set are required to be adjusted, enabling the skilful artist to closely imitate the continuous gum process which so beautifully resembles perfect nature. Atmospheric pressure has been a grand stride forward over the cumbersome spiral springs; also relieving natural teeth from the numerous clasps which have destroyed so many.

The pivot tooth with the hickory peg has given place to numerous ingenious devices in artificial crowns, and modes of fastening, all superior to the wooden peg; and as the wooden peg has been known to last for twenty years and more, with the increased knowledge acquired for preparing roots, the improved cements, and with gold and platina pins and screws, the modern pivoting process should be everlasting; and a greater scope is given to the dentist for producing artistic beauty. Within the last ten years most wonderful progress has been made; gold filling is rendered com-

paratively easy, by the improved methods of preparing the gold; the oxide and phosphate filling materials are a great acquisition; the amalgams are not the eyesore they were wont to be in the past, although some are advocating copper fillings; they certainly are not pretty, too much resembling the old coin silver fillings, still they are beneficial in particular cases. It would make this paper too long and perhaps tedious, were I to enumerate in detail the numerous inventions, both in material and appliances, which have been introduced to the profession within this short period. I will merely name celluloid, cast metals, and aluminum as being used as bases for artificial teeth, with apparent success, by their advocates. Gold is again coming to the fore, in the bridge-work process. That some of these new modes will be enduring, and become permanent fixtures in the profession, is hopeful; but it is evident that some are on the wane, the boom has passed, expectations are not realized by the experience of time. Implantation is the latest (a demonstration of which is promised at our clinics). If this method proves a permanent success, it will certainly be preferable, in many cases, to plates, or *bridge-work, nous verons.* But why continue? The many dental periodicals now published by our United States brethren (to whom we owe so much for our present status) are teeming with able editorials and cleverly written articles on every detail pertaining to our profession, filled also with illustrations, so well executed as to give a clear conception of the various modern appliances.

Up to the present time the whole modern system has been carefully compiled, and given to us in three volumes, entitled, "American System of Dentistry." As has been shown, the progress of this branch of art, from the earliest period, has kept pace with the physical defects, and consequent remedial requirements. The new recognized profession of the dental art, has proven to the world that it is a necessity—in fact, indispensable. Members of our profession are vieing with each other, to produce something still better than anything now extant, in order to ameliorate the sufferings of their fellow-beings, and by ingenious devices, replace defective organs with artistic substitutes, and rendering contact with one another more agreeable and pleasing to the eye, thereby fulfilling, in part, a duty due to humanity.

I may here remark on the great benefits to mankind conferred

by the advanced dental art. Picture to yourself the condition of society in the (so-called) civilized countries, if artificial restoration did not exist. The contorted features, sunken lips and cheeks; nose and chin trying to make both ends meet; imperfect articulation, making speech difficult, and painful to listen to; isolated, elongated, irregular and fragmentary teeth, giving a carnivorous appearance to a once pleasing, smiling countenance. These are but a few of the many features that could be enumerated, to show in what a fearful condition society would be without the aid of dental art. See the changed being, once these defects are removed; the form becomes more erect, the step more lively, the action of the body more graceful, and the whole adorned with a pleasing open countenance.

Again the woman who, having become inured to the monotonous drudgery of the household, becomes sometimes careless of her personal charms, her teeth are consequently neglected; but let her become a widow, and ten to one the dentist is the first applied to, for repairs, and a new lease of life secured. A perfected symmetrical anatomy prevents the mind from seeking seclusion.

What will be the next discovery? What other new departure will be forthcoming? What will be the final? cannot be conjectured. Let us contemplate the ideal dentist of the future. The dentist formerly acquired his art in the office of his predecessor, and it was not considered necessary for him to study in any more extensive sphere. As time went on, and the lucrativeness of the calling attracted more and more able and cultured men, aspirations rose higher and higher; dentists began to demand a more extensive education, and the dental colleges were founded. I have already referred to the benefits accruing from the establishment of a dental college in this Province; every dental practitioner should be an advocate of collegiate education. He should be an open and determined champion of all that tends to elevate the status of the profession; for, by so doing, he will not only add to his own reputation, but will serve his vocation well, and guard the community from the arts of the empiric. Educate the members of a profession and you give rank and position to the profession itself. In this day of religious strife, let us hope that our graduates who are to be the future professors in our colleges, will devote their entire energies to develop skilful and competent dentists.

Will natural teeth continue always to be filled? or will a time come when they will be invariably restored by artificial incorruptible substitutes to or additions thereto? Will gold always be used to fill teeth? Hear what the *New England Journal of Dentistry* says about the gold supply of the world, it is computed to be about $200,000,000 every year. About $1,000,000 worth of this gold is put into the teeth of people, and as this gold is almost invariably lost from further consumption, it might not be quite uninteresting to inquire if that is right, from an economical standpoint. It will, of course, not make a great difference to us at present what becomes of the gold. The supply will be sufficient for our wants and those of our children; but the question may come up, do we not do something wrong against future generations following us, by burying every year about two tons of gold in the teeth, and finally in the earth.

The plastic filling material now in use is not durable. That a cement will be discovered superior to any now extant, I have no doubt. I had formed an idea that a substance like Portland cement might be found durable, and intend to experiment on it; but if I or some one else succeed, nothing new will have been discovered, since I find the following:

"CLASSIC DENTISTRY.—Dr. Xavier Landerer, of Athens, sends the following to the London *Chemist and Druggist:* 'It may be safely asserted that the ancients cleaned their teeth and used tooth-powder. If the necessary attention were given, relics would be found in the graves of the women. The word *odontotrimma*, the tooth-scourging stuff or tooth-powder, is found in ancient Greek, and in the Greek Pharmacopœia is applied to tooth-powder. It is interesting to find that the ancients had made some advance in dentistry. A friend of mine (now dead) occupied himself in collecting ancient Hellenic skulls, wishing to show that they did not differ in shape from those now carried in Greece. Among several hundreds of these skulls, some, perhaps, 2,000 years old, we found two with 'stopped' teeth. One was filled with a mass as hard as stone, which, on analysis, proved to be hydraulic lime, made from volcanic ash, Santorin earth, and lime. Marvellous as it may seem, the hollow of one tooth in the other skull had been filled with gold thread or gold leaf. The metal used was pure. The skull itself, though deprived of the stopping, is now in the Archeological Museum.'"

As a caution to those who might imagine that they had discovered something new in mechanical dentistry, let me read this clipping:

"An English dentist advertises in the *English Mechanic*, 'Teeth without a visit to the dentist,' and says he has invented an apparatus (which has obtained her Majesty's Royal Letters Patent in England, also France, Germany, Belgium, America, and the Colonies, May and August, 1878), enabling persons at a distance to take the necessary impression of their own mouths, which can be forwarded by post, and the required artificial teeth supplied without a personal interview. This is a step in advance of the dental art as practised in this country.'"

The implantation of teeth was certainly a great surprise and astonishment to me; that such a process can be permanent I can scarcely believe yet, still it is being done and proving satisfactory in some cases. Wishing to astonish my hearers, I conceived the idea of suggesting the implantation of metallic bolts or pins, so that artificial dentures could be supported, with removable nuts or hinged fastenings, easily managed by the wearer. To my astonishment, I found in the *Dental Cosmos* for March last, a description *with illustrations*, of a method for implanting metallic capsules! For this same purpose, still this is old—listen:

DENTISTRY IN POLYNESIA.

"The dentists of the Solomon Islands, though somewhat heroic in their treatment, are said to be but little inferior to their European brethren. When a man wishes to have a tooth or two replaced, a couple of assistants hold him firmly, while the operator, propping the patient's mouth open with pieces of bamboo, proceeds down along the gum until he has cleared the surface of the jaw-bone. Into the cavity thus made along the gum he inserts a piece of tortoise-shell or mother-of-pearl of the requisite length, and then binds the gum up on each side of the new tooth with a kind of vegetable glue. After a few days' feeding on liquid diet, the wound generally heals; and it is a common sight to see old men with almost all their teeth replaced in this fashion."—*British Journal of Dental Science.*

Many suppose that bridge-work is something new; but it is not. The insertion of artificial teeth has been practised in China ages before it was introduced into Europe. The material used is bone or ivory, and the tooth, having been sawn and filed into the proper shape, is fastened to the adjoining teeth by a copper wire or catgut string. If two or more teeth are required, they are made in one

piece and a hole drilled the whole length, through which a double string or wire is passed, which loops over the natural tooth at one end, and is tied to the tooth at the other. The cost of a single tooth will be from five to ten cents, and the charge for half a dozen would be from thirty cents to half a dollar.

May we not justly exclaim, there is nothing new under the sun? Our thoughts and conceptions are of nature and we cannot go beyond it. After exhausting all resources in mechanics and art, will the future dentist turn his attention towards the production of better natural organs? By precept and example, will he commence to repair the existing physical defects, by as much as he is capable of removing the causes that are violating nature's laws, and be satisfied to receive the gratitude of a perfect progeny?

Electricity as a Motive Power in Dentistry.

By PETER BROWN, L.D.S., Montreal.

The question of providing some motive power for the dental engine has led many inventors to investigate the merits of the electro motor, in its application to the dental engine. Electricity is coming rapidly to the front as a motive power, and the rapid strides made in its various applications have not been lost sight of by those interested in applying this wonderful agent to various uses in dentistry.

The electro motor has many advantages, strongly indicating it as the only perfect machine for applying power to the dental engine.

Prominent among these is the small space required, comparing it with other motors (as an illustration, it may be mentioned that a one H. P. motor requires a floor space of only twelve inches square); then it can be placed out of sight of the patient; it is noiseless, clean, and requires very little attention.

To dentists living in cities or towns where a supply of electric power cannot be obtained from a central power station, the use of batteries must be resorted to, but this must not be looked upon as a very great objection. Many improvements have been made in the construction and durability of galvanic cells, rendering them

much more cleanly and free from unpleasant odors, and less troublesome to keep in proper order, than the form of cell heretofore in use. Batteries can be obtained to-day that will supply for a month or more, without any further attention than the addition of a little water occasionally, all the power required in operating a dental engine.

Where a supply of electricity can be taken from a power station, there is no end to the uses it may be put to in the dental office and laboratory.

With an electric motor properly adjusted to the engine, one may work through the most fatiguing operation with ease. With the foot-power it is necessary, as we know, to stand on one foot while using the engine, which is a very tiresome position in itself, but when the other foot is obliged to work the treadle of the engine, it is doubly tiresome. While with the motor you may take any position the nature of the operation will allow you, and at the end of a long day's work, you will look upon the electro motor as one of the greatest boons that modern invention and sciences have given us.

Another advantage of the electro motor is the perfect steadiness it gives the cutting instrument. There is no swaying of the body as there is when moving a treadle, and it can be run slowly without that decidedly unpleasant jar, the instrument receives every time the crank of the driving-wheel passes over the centre.

It is maintained by good authorities that one of the best methods of excavating sensitive dentine with a minimum of pain, is by the use of a very sharp bur run at a high speed. Now, in order to get a high speed with the ordinary engine we have to exert quite a little force, and in doing so the body is moved about, and the steadiness required is much disturbed ; while with the motor a speed of from 2,000 to 5,000 revolutions per minute can be easily obtained, by the simple operation of closing a switch, leaving the operator perfectly steady and at rest.

Many will object to introducing the electro motor so near to the chair, saying that it looks too much like machinery ; but were there not objections on the same ground made to the dental engine itself on its first introduction, and how many dentists are there to-day without that valuable instrument? When the advantages of the electro motor become better known among the dental profession, there will be few who will be without it.

Then there is the objection of introducing the electric current from a power station into our houses, on the grounds that it is dangerous to life and property. The dangers from this source have been very much exaggerated; the low tension current is not at all dangerous when properly insulated. We have a deadly agent in our houses now in the form of illuminating gas, and serious consequences may result from a leaky joint or improperly closed tap Yet we do not go about with fear and trembling when we use this agent in our houses. When electric wires are covered with proper insulating material, the fluid they carry is as safely confined as the gas or water in their respective pipes. The amount of knowledge required for the successful operation of electrical appliances in dentistry is not necessarily very great. Certainly, a fair amount of information will help one wonderfully out of a difficulty, and will prove valuable in successfully using electricity in practice.

This force is coming into such general favor and use, that every one should have a little general knowledge of it, which may be easily obtained from one of the numerous text-books on the subject. The time is not far distant when we shall have our houses heated, lighted and ventilated by electricity; the obnoxious gas jet will give way to the clear and steady light of the incandescent lamp, which gives us light with a minimum of heat, and does not vitiate the atmosphere of our rooms, and fill our lungs with carbon. This lamp is to be strongly recommended in making examinations of the teeth, or in operating on dark or cloudy days when the light is unsteady. With proper fixtures the lamp may be made to concentrate its light on the mouth, and also shaded from the eyes of the operator. The incandescent current may also be used to run the electric mallet, the electro cautery; and applied to a fine platinum point is the best means of drying out root canals before filling.

Packing and Vulcanizing.

By B. H. CATCHING, D.D.S., Atlanta, Ga.

Pack with dry heat; set the flask on the oil or gas stove, with flame turned low; turn it over occasionally. When hot enough to begin the evaporation of water from the plaster, lift the flask from the stove and turn the screws; place the reverse side to the heat

when returning to the stove. A few minutes and a few turns, it is closed; the rubber is not scorched, and the plaster has been made harder. Dark joints are less liable to occur if, in connection with the dry packing, vulcanizing is done in steam.

Put in the boiler about half an inch of water; place in it a small block of wood, on which set the flask to keep it out of the water. Raise to the vulcanizing point very slowly, say forty-five minutes, at least, to reach 320°. The piece will have to be cut from the flask, as the plaster gets very hard and does not granulate after several days, as is the case with water packing and vulcanizing.

Sometimes, in packing this way, a loud exploding report is heard; be not uneasy, it is only the discharge of pent-up steam. Aside from other advantages, this method is cleanly. Keep the vulcanizing boiler scoured clean. A little dilute sulphuric acid will aid this materially.

Modelling Compound.

By J. ———, St. John's, Newfoundland.

A friend who visited me lately, and to whom I gave some of my home-made modelling composition, suggested to me to send you some samples, and hinted that the profession in Canada would like the recipe. I may say, that while I use plaster of Paris a great deal, I find many occasions to use modelling compounds, and that for pattern plates and temporary fitting of plates, I use it exclusively. The composition is as follows—but I must frankly say that it is not my own, but that I received it from a generous confrere in England some years ago:

French chalk	14 parts.
Gum kowrie	8 "
Stearine	4 "

Melt the latter first; add the second; then the chalk, not too much at a time. Stir it constantly. Color with carmine, and pour it into saucers in thin cakes.

By the way, if your proposition to form a Dominion Dental Society takes shape, count Newfoundland in, for though she isn't in the Confederation yet (but will be), she counts in the progress of dentistry in British America.

The Dental Porcelain Art.

BY W. GEORGE BEERS, L.D.S.

The following will give a fair idea of an improvement in operative practice that even in its short existence to date, has made wonderful progress, and seems destined to occupy a leading position in the art of dentistry;

It means that both children and others can have their teeth filled in a reliable manner, with durable and permanent fillings, and not have to sit in a dental chair for several hours with their mouths filled with the disagreeable rubber dams, to say nothing of the long and tedious malleting necessary to fill a tooth with gold.

It means that this new method reduces the necessity of using the disagreeable rubber dam to a few exceptional cases.

It means that all operations are not only more durable, but, most important, free from pain or fatigue either to the dentist or his patient, and that many operations heretofore not possible are brought within the range of most satisfactory results.

It means that when your teeth have been repeatedly filled with gold, and as many times given out, leaving such a small remnant of the crown that there is no more hope for the usual methods, it is then the porcelain process comes to the rescue, and provides an opportunity for the very best and most perfect work.

It means that the most thoroughly decayed, irregular and undeveloped teeth present conditions more favorable for complete and artistic work than those that are only partially decayed, and in such cases where but a few scattered teeth and roots are remaining, by means of the porcelain process, an entire restoration may be provided, filling the intermediate spaces by bridging from the sound teeth, using the latter as a support on which to fasten them, and thus avoid the necessity of wearing a plate over the roof the mouth.

It means that the rage for extracting teeth so common among men of low degree in our profession, will necessarily become unpopular, and that the men who make a wholesale business of it will have to change their practice or change their business

This class of men fail to realize that it requires the strongest steel instruments and the most powerful arm to wrench nature's pegs from thoroughly established sockets, representing a retaining means of hundreds of pounds to the square inch, and yet they will persist in destroying the very best foundation as a practical means of attaching partial sets of teeth, thus reducing the possible chance of wearing an artificial denture from hundreds of pounds to the feeble adhesion of the saliva, which at best is never more than a few ounces, so that a cough or sneeze will many times eject the entire denture from the mouth. Want of proper knowledge of the method of treating diseased teeth, and lack of skill to make the attachments on the remaining teeth, poverty and ignorance, create the demand for the man who will prefer to destroy the human face divine, and then give in return a chromo set of ready-made teeth for the munificent sum of $5.

The process of burnishing metal foil into the cavity of a decayed tooth to secure an impression, and then melting either gold, silver, or any suitable metal, or porcelain, glass, rubber, etc., into the mould, to form a solid section or plug, and the cementing the prepared section into the cavity, or amalgamating it into the cavity of a decayed tooth by means of a new combination of plastic metal that is absolutely impervious to the action of the fluids of the mouth. Also the forming of a metal jacket or overcoat of very thin metal that fits over a defective tooth and completely envelops it, and placing thereon a thin coat and a veneer of porcelain, and then placing it in the muffle of a furnace and melting the enamel so that it becomes united to the prepared jacket, which when finished forms an enamelled cap. It is then filled with plastic cement and pressed over the defective tooth, and becomes thoroughly established, thus restoring the defective organ, so that it is not only useful for mastication, but also presents the exact color and characteristic appearance of its fellow members.

Also the building up of the roots by certain methods especially adapted to this class of work. A particular plan of first lining the cavity of the tooth with an adhesive metallic foil previous to inserting fillings, crowns, etc. Certain forms of porcelain veneers and porcelain artificial crowns, to be attached to the roots of the teeth. Certain forms of gas furnaces, constructed especially for the convenient use of the dentist, that will enable him to perform opera-

tions with great facility. This, together with twelve other patented devices, all pertaining directly to the art of dentistry, are the inventions of Dr. C. H. Land, of Detroit, Mich.

The improvements contemplate methods of practice that aim especially to preserve, restore, and to save the natural teeth, provides facilities by which dentistry may be elevated from the barbaric methods of extraction, and made to assume a position in harmony with kindness and humanity.

That the long and tiresome operations of filling teeth with gold may be dispensed with, not only protecting the defective organs in a much superior manner, but also making them assume their original appearance in shape, size, and color.

It means that the setting of artificial crowns and fillings may be established with cements that are absolutely impervious to the action of the fluids of the mouth, and that they will not only be held in position with a wonderful tenacity, but, in addition, the plastic metal adheres so firmly—both to the walls of the cavity in the tooth and to the porcelain or gold section or porcelain crown—that it is utterly impossible for moisture to work between, and in case it did, the material is indestructible, so far as the secretions of the mouth are concerned.

In this new process the union of the amalgam with the glass or porcelain, exerts an adhesive force of over one hundred pounds to the square inch of surface covered. This enables the dentist to attach very thin veneers of porcelain to old amalgam fillings. Also, porcelain cavity stoppers may be made to fit into the cavity of a tooth, and then amalgamated in place and held with a wonderful degree of tenacity. Artificial crowns of porcelain may be amalgamated to the roots of teeth without the necessity of resorting to the use of pins, posts or screws, the adhesion of the amalgam being much stronger than the usual platinum pins. In connection with the amalgam no cements of any kind are used; it is strictly a metallic union, therefore absolutely impervious to the action of the fluids of the mouth.

It means that the excessive use of the ordinary silver or amalgam filling, which turn so black, may be relegated to the things of the past.

It means that the use of the ordinary white filling as a material for the attachment for crowns may be reduced to the minimum.

Our Canadian College.

Royal College of Dental Surgeons of Ontario.

The annual meeting of the Board of Directors, for the purpose of examining students and transacting routine business, was held on the 4th March and three following days. All the surviving members were present. Since the last meeting Dr. Chittenden, President, had died. The vacancy was filled by the unanimous election of Mr. H. T. Wood, of Toronto. On taking his seat Mr. Wood was also unanimously elected to the presidency, an office which he had previously filled for several years.

The Secretary presented 32 applications for final examination, 39 for intermediate, and 1 for master of dental surgery.

In view of the large number of papers to be read, it was quite clear that justice could not be done them in the limited time during which the Board usually sat. It was decided, therefore, to dispose of the papers of the final class, and take those of the intermediate class home, and make a report at a later date through the Secretary.

As usual, there were several petitions from students who had not in all respects literally complied with the requirements for admission to final examination. The only one, however, of importance was that of the son of the late Dr. Chittenden, who in the effort to preserve the practice of his father for the benefit of himself and his mother and family, had felt compelled to absent himself from lectures to a much larger extent than twenty per cent., the maximum allowed by the rules. Considering all the circumstances, and the service which Dr. Chittenden during his life had rendered the profession, it was decided to admit him to examination.

The feeling of the Board was that it would be wise in the future to have the examinations conducted by a presiding examiner, the papers sent to the examiners, and the meeting of the Board held after these had been read and valued. As, however, their term of office was nearly expired, the matter was recommended to their successors.

As most of the successful students were remaining to write for D.D.S., it was decided to have public closing exercises of the

College. The President and Secretary were appointed to co-operate with the students and faculty in the matter.

On motion of the Secretary, Messrs. Davis and Fisher were appointed a Committee to report at a future meeting on the relations of the School of Dentistry to the Board.

The Secretary reported that, in accordance with the resolution adopted at the last meeting, he had forwarded to the Secretary of the National Association of Dental Faculties an official application for the admission of the Royal College of Dental Surgeons to membership in the Association. The required documentary information was also furnished. These were promptly acknowledged by Dr. Cravens, the Secretary, and also by Dr. Abbott, Chairman of the Executive Committee, to whom they were sent by Dr. Cravens. No information whatever has been received as to the action of the Association in the matter. The Board, while feeling that it had not been treated courteously by the Association, directed the Secretary to correspond with Dr. Marshall, the present Secretary of the Association, as to the fate of the application, and if it had not been finally refused to allow it to remain for further action.

The names of those who passed the final examination will be found in report of the closing exercises in another column.

The following is the result of the intermediate examination: Passed—H. I. Stingle, J. H. Fell, A. H. Mabee, W. R. Wilkinson, O. Lillie, W. F. Corbett, E. R. Howes, J. T. Willmott, Wm. Richardson, J. A. Black, J. E. Wilkinson, S. W. Frith, M. A. Morrison, M. J. Sisley, H. Hart, D. C. Smith, H. D. Boyes, S. Anderson, H. Clarke, W. R. Winters, D. Stirton, O. W. Daly, C. H. Lount, J. J. Simon, J. McBride, Thos. Coleman, F. B. Ross, G. J. Musgrove, G. S. Martyn, C. W. F. Lennox, Thos. Irish, C. D. Greene, J. E. Holmes, T. C. Trigger. These have to take supplemental examination in October: F. R. Porter, W. H. Marrs, G. Henderson and H. E. Harris, in physiology. F. R. Porter and T. D. Fawcett, in chemistry; F. A. Lackner and W. H. Marrs, in surgery; T. D. Fawcett, in *materia medica;* H. E. Harris, in operative dentistry.

After a humorous valedictory address by Wm. Mills, L.D.S., on behalf of the graduates, Dr. J. Branston Willmott, Dean of the Faculty, delivered the following address to the class:

MR. PRESIDENT, STUDENTS AND LADIES AND GENTLEMEN:

Before entering upon the duty specially set down on the programme, permit me a word on two points.

Our lives are largely made up of events which tend to awaken emotions of sadness and sorrow, and of events which stir within us sensations of gladness and pleasure.

As we assemble here this evening there comes to many of us a feeling of sadness and sorrow as we miss the familiar form and cheerful face of him who was for many years the honored President of our College. During the year, Dr. C. S. Chittenden has ceased from his labors and entered into rest. Though in our professional and social gatherings we shall see his face and hear his kindly voice no more, his memory will long be lovingly cherished by those of us who have had the pleasure and privilege of close association with him. Among the pleasant events of this occasion is the presence with us of Dr. Beers, of Montreal, a gentleman who has long enjoyed a continental reputation as a brilliant and racy writer of both general and technical literature, and who is more widely known in professional circles, both in the Old World and in the New, than any other dentist in the Dominion.

The fact that he is here to deliver *the* address of the evening is especially gratifying, inasmuch as it assures you the pleasure of listening to an accomplished speaker, and reduces the responsibility devolving upon me to the delivery of a few parting words to the students.

And now, Mr. President, I come to the discharge of the duty to which you have called me.

Gentlemen of the Graduated Class of 1890:

On behalf of the Faculty, I return sincere thanks for the kind words to which Mr. Mills, speaking for you, has given utterance. The exceedingly pleasant relations which have existed between the members of the class, and between the class and us, during the past session, have been very gratifying to your teachers, and for them I assure you that the attendance, attention and attainments of the class have been in an unusual degree satisfactory.

Permit me to express the hope that these friendships may long continue unbroken.

"Like pilgrims on the hills of life
We cross each other and are gone."

Possibly we shall see little of each other in the future; let us hope that we will all have the kindliest recollections each of the other.

To-day you have received from the President, in the diploma which certifies your legal right to practise your profession, the first-fruits of reward for many weary days and nights of toil. You have to-night been admitted into the ranks of an honorable profession. Allow me to remind you that to your keeping that honor has to-day been committed. We send you forth to your life's work with a confidence that you will steadfastly maintain that honor. May we never have occasion to regret that even as regards one of you that confidence was misplaced.

I am reminded that this very day most of you have been writing, side by side with the students of the Medical Faculty, for the honors of our Provincial University. I desire to impress upon you that this University recognition of dentistry as a liberal profession, and the ranking of its graduates in this department with its graduates in other departments, lays upon the members of the dental profession, and especially upon those who have received a University Degree, an additional obligation to guard well its honor and integrity.

The life of a student, while not by any means free from cares and anxieties arising from various sources, is nevertheless full of hope and pleasant expectation. For you these days are over, and you are entering upon the more serious work of life. The months, it may be the years, which immediately follow entrance upon professional life are, not unfrequently, in many respects the darkest, the most trying, the most discouraging, the most dangerous of a man's whole career. Reasonable expectations are not promptly realized, visions of success fade away, unexpected difficulties are projected into the path. "Hope deferred makes the heart sick." This weary, almost fruitless waiting is what "tries men's souls" and the metal of which men are made. Upon this stage you are now entering. Happy for you if it be short, still happier for you if that trial comes not upon you. It is wise, however, for you to enter upon it realizing to the full what may possibly be in store for you, and be prepared to meet it manfully.

It is not necessary, probably, for me to exhort you to join in the Scotchman's prayer, "Lord, give us a good opinion of ourselves," but I would urge upon you to cultivate such a confidence in your ability to succeed by legitimate means as shall enable you, during this trying period of which I have spoken, to look calmly on at the unprofessional methods of your *confrères* without feeling any temptation to join in them.

When you have been duly certified by the properly constituted authority as "qualified to practise dentistry," take it for granted that an intelligent public will believe that you are "qualified," and abstain from particularizing your own attainments and advantages, for in so doing you but suggest to outsiders that you must have very grave doubts yourselves, as to your fitness for the duties you have undertaken. And in many cases, probably, the "doubt" would be very well founded.

It will not require a very prolonged study of the dental advertisements in the daily and weekly press, even of this city, to convince the inquirer that dentistry is not yet out of the mire and dirt of quackery and charlatanism. With better advantages and grander opportunities than had those who went before you, let it be your aim to help manfully and earnestly to lift it to a higher plane. Determine to achieve professional success by honorable, straightforward methods or not at all.

In a very important sense it is true that "all things come to him who waits," but he must wait in the industrious, intelligent use of the appropriate means. We exhort you, therefore, to enter upon your professional career with becoming modesty, with a patience that knows no weariness, an industry that knows no lagging, a persistence that makes no note of hindrances, a determination to succeed that recks not of failure, an integrity of purpose that knows no flinching, and if the stuff be in you, enduring success will speedily be your reward.

We have hitherto spoken only of professional success, but this ought to be regarded as a means to an end, rather than the end itself. That life may be classed as wasted which merely succeeds in accumulating wealth and assuming the importance which its possession secures. The gathering together of riches for the service of self merely is a mean, sordid and petty employment for an intelligent, responsible and immortal being. We urge you to a higher,

nobler, purer ambition. That man has made the greatest success of life who has developed the most noble personal character and has brought the greatest amount of blessing to his fellow-man. As I look around the circle in which I move, the thing which grieves me is that so few young people, even those who are most serious and intelligent, give any time, or thought, or attention, to preparing themselves for service to their fellows in any capacity; every energy is devoted to making money or to preparing to make money, or to mere pleasure and amusement.

We would that you should have a higher aim, a nobler purpose. While seeking to obtain the fullest measure of success in your chosen calling, do not devote your whole time and strength to the service of self.

"Not enjoyment, and not sorrow,
Is our destined end or way,
But to act that each to-morrow
Finds us further than to-day."

Be something more than dentists; be citizens, philanthropists, Christians. The ambition to serve your fellow-citizens in some capacity is a proper and worthy one. The gratification of this ambition means self-denial, preparation, work. "Opportunity waits for the man who is prepared." All around us are opportunities for usefulness with wide open doors, waiting for the man or the woman who is prepared to enter in.

Find me a municipality whose affairs would not be better administered if citizens could be found who, with an ambition to serve their country, as councillors or aldermen, had given time and energy to preparation for this service. Where is the church that could not be more efficiently officered if men were available who had given time and care to preparation for this form of service? In the staff of every Sabbath-school, in the board of every charitable institution, in the management of every benevolent association, there are places always open to those who have fitted themselves for such work. I want to emphasize the thought that in all the infinite variety of ways in which one may serve his fellows, the "opportunity waits for the man who is prepared."

I speak to-night to young men just entering on the active duties of life, to young men whose future is in their own hands. Your position in the community in which you reside will in the years to come

depend very largely upon the course which you mark out for yourselves at the outset.

Humanity, civilized; intelligent humanity, may be roughly divided into two great classes—those who are always "waiting for something to turn up," and those who have determined to turn something up, and have set more or less diligently to work to do it To which of these classes will you belong?

The great American humorist once remarked "that some men were born great, some men achieved greatness, and some men had greatness hove onto them." In this democratic country it is safe to say that in the sense in which the word is used none of you were born great. Amid the strife and competition of life you are not likely to find other men putting themselves to serious inconvenience to force greatness upon you. If, therefore, you are to rise at all in any department of life's activities above the level of your associates, it is only by persevering adherence to a well-formed purpose that such pre-eminence can be secured.

"Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

Other tempting lines of thought suggest themselves, but time will not permit.

And now, gentlemen of the class of 1890, as the tie which has so pleasantly bound us together during the months that are past is severed, and you go forth to carve for yourselves "niches in the temple of fame," in the fullest and best sense of the expression, we cordially bid you "*God speed.*"

Dr. W. Geo. Beers, of Montreal, delivered the closing address of the evening.

An excellent musical programme was furnished by Napolitani's orchestra.

Royal College of Dental Surgeons.

The public closing exercises were held on the evening of March 28th, in the Normal School Hall.

The exceedingly unpleasant character of the weather prevented the friends of the students attending in as large numbers as was expected.

Dr. H. T. Wood, President of the Board, occupied the chair, and after Rev. Dr. Kellogg had offered prayer, in a few words called attention to the advance made in dental education since the incorporation of the profession in 1868.

The Secretary of the Board presented the following graduates, who received from the President the Diploma of the College conferring the title of L.D.S., viz:

G. P. Allen.	C. M. French.	A. F. Pearson.
J. A. Armstrong.	Benjamin Gollop.	William Revell.
D. Allen Black.	W. R. Hamilton.	Wesley Richardson.
Thomas Butler.	J. H. Johnston.	M. W. Sparrow.
Geo. F. Belden.	Oliver Martin.	Jas. F. Simpson.
M. F. Binkley.	Archibald Milloy.	W. H. Steele.
A. Stanley Burns.	Sylvester Moyer.	W. J. Trotter.
Ira Bower.	William Mills.	A. W. Thornton.
Milton Cavanagh.	W. D. McLaren.	F. W. Tweddle.
J. F. W. Chittenden.	Walter F. McPhee.	J. J. Wisser.
Denton Dulmage.	M. G. McElhinney.	

Mr. J. P. Marshall, a Licentiate of five years' standing, received the Diploma conferring the title of Master of Dental Surgery.

In the absence of the Hon G. W. Ross, who was detained by his parliamentary duties, the medals were presented by Dr. W. B. Geikie, Dean of the Trinity Medical College.

The medalists were presented by Professor Teskey:

College Gold Medalist.....O. Martin.
College Silver Medalist.....D. A. Black.

Editorial.

We regret very much that some selections of Dr. Beacock, for which he claimed no originality whatever, and which, he informed us at the time, were chiefly taken from *The Practical Dentist*, appeared under the head of "Original Communications" in our two last numbers. The compilation was complimentary to our confrere, and if any blame is to be attached to any one, it is certainly not to Dr. Beacock, who was perfectly ignorant of the use we intended to make of the printed copy, which he uses to educate the community in which he lives.

A Valuable Work.

Our friend, Dr. B. H. Catching, has retired from the *Southern Dental Journal*, as editor, intending to issue annually, on subscription only, at $2.50 a year, "Catching's Compendium of Practical Dentistry," a compilation of all the practical matter of the current dental literature during the year classified, indexed, and bound in one volume. As a reference book it will be invaluable, and will be an ever handy dental library in itself. The first volume will appear in January, 1891, and will be an epitome of all the practical matter of the current year. The wonder is that no one seems to have thought of this excellent idea sooner.

The Expansion of Canada.

It is really too bad that this Dominion will grow and prosper in spite of croakers and cowards. The Maritime Provinces are waking up to the necessity for Legislative Dental Protection, and very soon their legislatures will do what Dr. A. C. Cogswell asked them to do twenty years ago—give the public and the profession mutual protection. On another page we publish the ordinances passed in British Columbia and the North-West Territories. The organization of "The North-West Dental Society," with headquarters at Regina, looks like business. It is enough to make the political croakers gnash their teeth. At any rate, if they damage them, they will find a growing army of excellent dentists where a few years ago the population was chiefly pagan Indians. The growth of dentistry means that civilization and population have made headway. Keep it up John Bull, jun.