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Dominion Dental Journal

VOL. VIII.

TORONTO, DECEMBER, 1896.

No. 12.

Original Communications

DENTAL COLLEGE OF THE PROVINCE OF QUEBEC.*

Exactly one hundred and thirty years ago dentistry was introduced from England into the United States by John Woopendale, a former student of the dentist to King George III. The first dental collégé, journal and association have respectively a history not yet sixty years old. In Ontario, as an organized body, it is, to a month, the age of Confederation; in Quebec, a year younger. It is the youngest of all the professions, yet it deals with the most prevalent disease in existence. It has become a giant in its practical development; its failings are but those of puberty. Let me here repeat something I said elsewhere: "Medicine can trace its history to the early periods of Grecian civilization; Law to the schools of jurists in the reign of Tarquin; but the statements of Herodotus and later writers are not sufficient to prove that Egypt was in any sense the cradle of Dentistry. The gold said to have been found in the teeth of mummies from Thebes was proved to be nothing but the same gilding with which the mummies were covered. The replacement of lost natural teeth by substitutes of bone or sycamore wood set in gold has, it is true, been discovered in ancient Egyptian sarcophagi; but this does not substantiate the claim that they were made by specialists in dentistry, but rather by the gold and silver smiths who worked in the great synagogue at Alexandria. One can easily imagine an Eastern girl standing

* Opening lecture by the Dean, Dr. W. Geo. Beers.

before the goldsmith and, as she smiles at his blandishment, revealing to him the loss of a front tooth. With instinctive ingenuity he offers to carve for her a substitute of bone to fill the ugly gap and to fasten it to the adjoining teeth, as he fitted her ear-rings, by golden loops. Still, we must let the antiquarians in our profession enjoy their hobby, and trace, if they can, the practice of dentistry as coeval with the flood. When we remember that the Jewish rabbins averred that the worms of the grave had no power over Abraham, Isaac, Jacob, Moses, Aaron, Miriam, Benjamin and David, it may happen that some inquisitive dentist, travelling in Hebron, may excavate their molars from ancient burrows, and exhibit to us operative dentistry that will put us to shame. Or it may be that some Canadian, fishing for trout in the Laurentides, may discover artificial teeth as contemporaneous with the *Eozoon Canadense*."

It is not, however, my object to discuss our history outside of the Province of Quebec, or even to eulogize the undeniable progress made in our science and art in Europe and America. The politics of dentistry have engrossed a great deal of our thought and time. They have materially improved the practice of dentistry. We are met here specially and seriously in our own interests, but I do not hesitate to say with emphasis that we are here much more in the interests of the public; that we may do what we can to raise the standard of our education and the tone of our practice; that we may encourage diligence and skill, and discourage among our future practitioners who constitute our students, the temptations to that slipshod practice which is simply mechanical and purely commercial. We have been confronted by educational circumstances which, curiously, exist nowhere else. To the science and theory of the profession, splendid, and in many ways unrivalled, contributions have been made by England, France and Germany; but practically it is intensely of English and American origin and growth, and the literature of the best practical text-books has been almost altogether English, while the prolific dental schools of our Republican neighbors have recently decreed that they will not receive students who do not understand English. The embarrassments of the former and the difficulty of the latter, so far as Quebec is concerned, were in a measure met by the way, in 1868, when we put our heads and our hands together in a united French-English Board of Examiners, and, in 1892, in a united French-English Faculty in this College. In the former the examinations are in both languages; in the latter the lectures and examinations are likewise in French and English. In this way, for nearly thirty years there has existed an unbroken concord, which might serve as an object-lesson to more important political organizations.

Just now the responsible authorities and stewards of the profes-

sion feel that they are justified in recalling some events in professional and public interest. Some of us, as quite young men, do not forget the reasonable scepticism and the unreasonable opposition when the dusty and dry bones of dental education were disturbed. Some of us remember those who condemned a principle of protection in dentistry, which they commended in medicine and law, and which they are very properly not averse to extending to-day to some branches of trade. The desire to get an education in our own Province to meet the needs of our French students specially, and our English as well, was denounced by some as an altogether unnecessary aspiration, and a few resented it as "tyranny." Had they been in the wilderness with Moses, no doubt they would as instinctively have resisted the passage of the Ten Commandments as a tyrannical encroachment upon their civil rights. We had to contend with half-hearted friends and whole-hearted foes; we had to lobby in the Legislature and fight in the courts. For a time, almost any Tom, Dick or Harry who had influence in the former could get a private bill, or could get our public bill smashed beyond recognition, and while our own Canadian students were forced to comply with the letter of the law, there were privileges extended to foreigners denied to ourselves! It was only by persistent application to the Legislature, with very little influence there; not one syllable of support from the press; with not one cent in any shape to this day from the public, and with even some of that treachery and jealousy in our own ranks, with which all unelfish efforts have to contend, that we got the workable legislation that enabled us to open this little college. It is a small institution, but we have no one to thank for it but our own profession. When the public want to make it better and bigger, they know the secret. //

You can see that we have had almost a thirty years' war on behalf of the profession and the public. We do not wish to erect monuments to the memory of the wounds got and given. We were hit hard by our foes, and quite wrong they were. We hit back hard, and quite right we were. But we are reaping to-day some of the results of the mischief sowed. I often think that the public does not deserve the sacrifices we made in its interest. If our work had been instigated by any hope of public appreciation, it would never have been completed. The public, as a rule, is satisfied to be ignorant of its best needs in relation to medical and dental practice. It is not a student of medicine or dentistry. It goes to both more blindly than it goes to law. It frequently regards the claims of higher education in both as personal or professional clannishness. It will sometimes take sentimental sides with the law-breaker; and even the law-maker has been the friend of uneducated men who wanted to get into the professions by a subterfuge, or a side door. It takes many of its educational

ideas from quack and sensational advertisements, and ethical and honest men cannot, or will not, compete with this method of public instruction. The portion of the public who confide in the skill and integrity of ethical practitioners, do not doubt that they do the best that is known, and that the pretensions of infallibility and superiority, which are for the first time discovered in the public self-eulogy, has good reason to be suspected. Dentistry especially occupies a peculiar position in relation to the public. The diseases of the teeth are supposed not to involve questions of life and death. The man who flies to the physician if he has a pain in his stomach, is not so fearful of the consequences of neglect when he goes to the dentist with a pain in his tooth. He has, or should have, thirty-two teeth; he thinks it is not in any way serious to lose one, or all. If he had as many eyes as he has teeth, and could retain the functional value of ten by losing twenty-two, or if he could get them replaced by artificial substitutes, that would serve him nearly as well, he would, no doubt, find degenerate oculists, who would accommodate his stupidity; and even encourage it. The people who have blue eyes and who would like to exchange them for hazel, could then revel in the operation, like the people who now delight to sacrifice the teeth Nature gave them for the tombstone and crockery horrors of the quack. Thousands of valuable teeth are sacrificed to public ignorance of their value, as well as of the caricature which so frequently is produced in the rage for cheapness. It is extraordinary that in this Province of many schools and eminent universities, so much ignorance should prevail of the functional importance of the natural teeth; their direct and collateral relation to many local and distant diseases, and the disfigurement of face and feature, and the interference with proper digestion which badly constructed artificial teeth may cause. So forcibly has this appeared to the Provincial Board of Examiners and the Faculty of this school that many public requests have been made to us to issue a warning through the press against dental humbug. Do you believe it would avail? I do not. It is not possible for any self-respecting man to indulge in sensational means of advice, or of attracting attention, and such official action would be so regarded. We know that these sensational advertisements are invariably the trump card of open quackery, or the last resort of those who think it will be of commercial profit to imitate the methods of quackery.

It ought to be clear to the humblest understanding that no intelligent dentist could afford to ignore any modern improvement in dental science or art, which has passed the stage of speculation and proved to be a public boon. There is not a solitary idea or acquisition of any value known in modern dentistry which is monopolized by any practitioner, however eminent he may be. It is

not likely that those who are regarded by their confreres with that distrust which denies them admission even to voluntary professional societies, control the skill or the tact which ethical men aspire to possess. There is much in modern dentistry, as in medicine and surgery, which, in the hands of the incompetent or ignorant, is dangerous to health and life itself. It may be as well to say here, *en passant*, that no respectable dentist ignores claims upon his professional philanthropy, and that there are no financial circumstances, however humble, which cannot be met by honest and ethical practitioners, either in their own practice or in the case of the deserving poor in the infirmary of this College.

At its best, dentistry to-day is circumscribed in its practice. It is the poorest paid of any of the professions for its best, and the highest paid for its worst. It exceeds any other profession, none excepted, in the cost of its maintenance. The temptations in it to deceive are intensified by the credulity of many of its patrons. It has no such financial collateral opportunities as other professions enjoy. There is no public promotion or public reward for anything its members can supply. It has gratuitously served the poor in this city for half a century in the practical philanthropy of its practitioners, in their own offices, in lieu of any public infirmary. The students of this College, under the direction of a staff of our best dentists, have attended to over a thousand patients, solely at the expense of a very few of the dentists themselves. We have never asked for or received one dollar of public aid that we might better equip this school, and better serve the poor, and, I imagine, we are not more respected for our modesty. The profession is over-crowded, and the natural results are in evidence in the depreciation of fees, and the increase of professional cost of practice, and, no doubt, if the public appreciation of the teeth in this Province is not more enlarged, we will by and by be able to say of the dentists, as was said of the English curate, that they are the best educated paupers in the country.

We at least know the importance of our profession, and have some faith in its future. If we had not we would close this school. The condition of the teeth *per se*, especially the teeth of children; the many known and unknown, to the public, local diseases, caused by dental disease; the constitutional, and especially the nervous affections directly due to diseased teeth, give wide scope for practice. Her Majesty the Queen once said to her household dentist, Sir Edwin Saunders: "Yours is a very important profession, for while some need the skill of the oculist and aurist, almost all need that of the dentist." If the public, and physicians especially, fully appreciated this fact, the services we are able to render would be better known and earlier sought, and the allurements of sensational advertising would have less effect. We are all more or less

victims of some form of imposture. There is a glamor about it, even with the clearest evidence of fraud. The simulation of sincerity and the boldness of the claims, and the pretence of philanthropy, often pass current in the very face of truth. But there can be no more shameful fraud than that which is practised upon the credulity of the sick and suffering, no imposture which more merits restraint by the strong arm of the law, than the sharp practice of the medical and dental humbug.

As a profession we are heavily handicapped by reason of the limitations of our field of action, and by the fact that even the large majority of medical men do not even theoretically appreciate the inseparable relationship between the diseases of the teeth and those of other organs, and are not frequently enough disposed to send such patients to the dentist. We are handicapped by the public ignorance, which extends superstitious veneration to the consequences and treatment of the simplest pathological case in the practice of medicine, and which regards extraction as the sure remedy for all the ills to which the teeth are heir. The scientific treatment, sometimes prolonged, and occasionally a failure, is discredited by the quack, who glories in his humbug, and who profits by his shame. Professionally, many men are discouraged by the ignorant chase for cheapness, and the readiness of so many to submit their mouths, in a way they would not entrust the care of their cattle, to the lowest bidder. It has become one of the modern additions to a new form of insanity. It is impossible to speak dispassionately in this connection. A mortality of over four thousand in this city was not enough to eradicate the dread of small-pox. The periodical visits for the last twenty-five years of unknown medical and dental humbugs, have not been sufficient to open the eyes of the public to the reasons for occasional success that is blazoned abroad, and the scores of failures, which are discreetly concealed. Even such precious organs as the eyes, with their special relationship to dental affections, were for a long time in Montreal confided to the care of those who were not specialists, and are sometimes trifled with to-day by mechanics, whose experience cannot be reliable. But the teeth—heaven help them! Better lose the teeth than lose your hair, say many, for you can easier conceal the loss of the former with a cheap artificial set than you can hide the loss of the latter with a wig. Nature meant the first set of teeth to do service for seven years; but many people think it no wrong to the child to let them decay, and to let the poor youngsters suffer their loss. A quaint jumble of gross credulity and misty tradition hangs about the popular idea of the functions. The value of the teeth, why they may decay in health as well as during illness; why they are so commonly the cause of diseases of the nervous system, the alimentary canal, the

respiratory organs, etc.; why the very cure of affections of the eye, the ear, the throat, the lungs, the stomach, depend upon primary treatment in the mouth, bewilders and blinds the large majority of victims. Not long ago a child was told by the head of one of our public schools that the proposed operation of saving a front tooth would be a failure, and that it would be better to lose a tooth than lose a lesson!

I would not be so foolish as to impute any purely selfish or dishonorable practice to the press, in its relation to the question of medical and dental advertising; but we venture to believe, that the generally accepted custom of measuring professional value by inches, in its advertising, and judging the practitioner who does not advertise at all, or who does so in a modest notice, as not worthy of the same attention as the one who advertises by the yard, is, to say the least, unfair to the public. Does it not seem strange that the greatest impostor can actually force falsehoods into our homes, through some of the most respectable newspapers, providing he pays for them as advertisements? Whatever excuse may be made for this, with reference to goods which one can examine and judge for himself, what defence can be made of its application to the care and treatment of human disease? A portion of the press, which editorially declares it a part of the duty it owes its readers, to protect them from injury or imposture, seems to absolve itself from this mission, if the impostor is willing to pay for it "in the proper place." The known charlatan whose plea for public approbation would be indignantly rejected in the editor's sanctum, is welcomed in that of the publisher, and the more "inches" in which he asserts himself, the warmer the welcome. This Janus-sort of arrangement enables the publisher to adhere to his "principles" in one room, and to retreat from them in the other. It is a curious illustration of the "principles" upon which a part of the newspaper press is conducted, that the most shameful humbug in medicine and dentistry, even that which has been proved to be detrimental to health and morals, can find conspicuous and pictorial admission to its columns, provided it is paid for at the current rates of advertising. In this way the press is *particeps criminis*, actually a co-partner in the profits of deception. It seems to pay to be editorially moral. It pays, too, to overlook that sort of thing elsewhere. The public is apt to believe the most extravagant pretensions, because they are "in the papers." It often does not stop to reflect that there is no truth in this self-glorification. It cannot very well know that the pretence of controlling certain methods of treatment and appliances is false, and that they are known to every practitioner.

I do not overlook in this connection the peculiar position of the country practitioner. It is a necessity in our widely scattered

population that the country dentist should visit places distant from his own office. This service may be made of great advantage to the farming community, or it may be made a pretext for the greatest imposture. Our city population is no exception to the rage for cheapness. They rush to the bargain counters of the departmental stores in blind competition; they often spend two dollars to save one. The quack may not know his business, but he knows human nature. He is more of a knave than a fool; more likely to rob his patients than himself. The public demand for cheap manufactures can be met by shoddy work, by cutting down the wages of employees, by compromising with one's creditors. That for the cheap treatment of disease has no such facilities. Any manufacturer can cheapen his productions to suit his customers; but there is a point at which it would pay him better to withdraw his capital and discharge his employees. Any farmer's wife can sell her butter for ten cents a pound, or eggs for five cents a dozen; any country storekeeper can sell his goods below cost; they can, too, give them away for sweet philanthropy's sake, but it does not "pay." The quack medicine men who give advice free, and who seem so generous, are neither as philanthropic nor as clever as they pretend to be. They make fortunes—not out of philanthropy, but out of public credulity. The "tricks of trade" in dental practice are just the same. The travelling quack pretends to skill he does not possess; it is easy for him to deceive; it is just as easy for him to lie. It is necessarily his chief stock-in-trade. He has little or no professional education; the little he knows he has picked up at hap-hazard. If he did not depreciate educated men who act honorably, and misrepresent them, the mean beggar would starve. Anything has been good enough for him, and he thinks that anything in dentistry should be good enough for farmers! Even if he wanted to be honest now he cannot; he has forgotten, if he ever learned it.

In one sense it is humiliating to be obliged to allude to some of these questions. In some respects it is almost a waste of time. Notwithstanding the fact that we are working for the profession at large very much more than we are for ourselves, the profession at large does not give this work proper support.

The men who have done the hardest work for the profession in Canada, are men who needed social and other relaxation quite as much as the men who did nothing. But they gave time and thought and money of their own, that dentistry might rid itself of the ignorant quack and the sharper who resorts to quack-methods. It would have "paid" these workers better, had they given this time and thought to their own private business. More men have made fortunes by minding their own business, than by busying themselves about the higher interests of the profession. The

public do not care a fig for your professional devotion, outside of your duty to the public. And, as a rule, the profession is ungrateful. All the same, there are men who will continue to do unselfish work. They have a reward, which those who only make money cannot understand or appreciate.

ROYAL COLLEGE OF DENTAL SURGEONS,
TORONTO.*

Mr. Dean, Members of the Faculty, and Gentlemen:

Regard and respect for the worthy Dean, the accident of official position, and the feeling that the time was opportune for a member of the medical profession to give to the dental fraternity some token of sympathy and kinship, have led me to accept the courteous invitation to give the opening lecture of the College in its new home.

It is at once a pleasure and a duty to add my hearty felicitations on this auspicious occasion, to those expressed last week when the building was formally dedicated as the domus of the Incorporated Dental Profession of Ontario. It must be a cause of genuine pride and gratulation on the part of the Faculty to have a building and equipment unsurpassed, if equalled, by any on this continent. I am sure the confreres of Dr. Willmott will heartily concur without a tinge of jealousy in the statement, that the present elaborate, if not perfect, facilities for teaching are largely due to the ability and untiring energy of their Dean, who, in his double capacity of responsible head of the Institution and Secretary of the Royal College of Dental Surgeons of Ontario, has shown that he was pre-eminently the right man in the right place. He, on his part, will doubtless accord the due meed of praise to that veteran of your profession, Dr. H. T. Wood, whose faith and zeal have found at last so happy fulfilment.

Let me add, your Dean long ago showed his breadth of character, foresight, and wisdom by calling to his aid gentlemen of my own profession, each an expert in his own sphere; and the present enlarged faculty shows the same generous recognition.

Those who have spent part of their course in the less pretentious quarters must have rubbed their eyes on entering this perfectly arranged and fitted building, and those beginning their studies must have *opened* their eyes at the first sight of its complete interior.

Some of the entrants, it may be, have been wont to watch the

*Address by R. A. REEVE, B.A., M.D., Dean of the Medical Faculty of Toronto University, at the opening of the twenty-second session, October 6th, 1896.

simple process of extraction and filling in unpretentious environment, and have had a peep now and then into the sanctum,—a rather unkempt place, to be sure, and may have said, well, this does seem easy work, and it is apparently honorable and profitable withal. We, too, will be dentists. And you have come, and are possibly somewhat dismayed as you try to take in what an hour in the Institution reveals. And you ask, Why all this paraphernalia, this elaborate provision for such a simple result?

Gentlemen, it is all right, and in strict accord with the spirit of these latter days, and in keeping with that of the great University with which your school is affiliated, and which is destined by and by to be your Alma Mater. She has made great and successful efforts to keep in the van in the march of progress, as her magnificent science buildings and other halls of learning attest, so as to provide that thorough teaching and broad culture now regarded as essential to the highest success in life.

Your College and Faculty biding their time, and yet attent, have wisely caught the afflatus from the academic groves hard by; and if my own profession had not its own imposing and substantial chambers, the speaker would indeed feel chagrined as he looked about him; and if the medical department of the University could not point to the fine laboratories and other halls at her command, he would feel sorely abashed in view of your splendid equipment.

A glance at the curriculum of your school, and at the list and scope of subjects, the mastery of which is requisite for the University "D.D.S.," clearly shows that those who at last reach and get without that wicket-gate at the end of the course, to open which neither guile nor magic pass-word avails, but only the touch of a trained and competent hand,—have passed an ordeal that stamps them as worthy to join the honorable company already in the field.

Surely this must commend itself to your better judgment. Think you, would Alexander have prized his matchless Bucephalus if to tame the noble steed had not taxed to the full the vim and fibre of the conqueror of the world?

And the mere fact that those who have at heart the best interests of the profession of your choice, and also your own, have seen to it that the goal can only be reached by up-hill work and plenty of it, should, of course, enhance your estimate of the dignity and worth of your calling.

Those are most regarded who respect themselves, and I believe this crowning effort of your profession will go far to put an end to that false idea of your real status which in sundry places finds vent in unseemly ways. He reads wrongly the signs of the times, who does not see that the day long ago foretold in another realm, the spiritual, has also come in due time in the secular; and that

there are no things so minute as to be small or insignificant, which concern the weal or woe of mankind.

True, your horizon is in a sense circumscribed and your field of operation limited, but if your work is to that of the medico as is the art of the engraver or etcher to the role of the painter, yet there is room for that genius which is the mastery of minutiae, and call for concentration of energy and of the senses, that is especially trying to hand and eye, and, indeed, brain.

The dental surgeon often requires pluck and vim of high order in the *mouth* of difficulties, and there can be no better test and example of honest work than he gives, with the temptation to stop short of the best in order to lessen the present suffering of those who would be the first to upbraid him for his neglect of duty.

But it would be an unfair and narrow view to limit your functions to mere mechanical work. The public cannot know, and the medical profession, I fear, have not rightly appreciated that, though, as in the case of the doctor himself, much that occupies him is, so to speak, of a routine nature, the dentist has to be prepared at the outset and always for the rarer and complicated cases that demand judgment as well as skill; as, for example, in dealing with the not infrequent irregularities of the jaws and teeth, where the influence of heredity and of the evolution of family types has to be gauged long before age has solved the problem. Then the *facial expression* may be marred for life by ignoring the influence of the teeth upon the action of the lips and mouth; and not a little discretion is needed in improving the contour of the jaws, deciding as to the sacrifice of teeth, not to speak of the care and knowledge required in neglected cases of so-called alveolar abscess, or misdirected and non-erupted molars, especially the "wisdom" teeth, now known to be the cause of inveterate neuralgia, or of obscure and dissecting suppurative processes, or of chronic spasm of the masseters. Then, in addition to the study of the embryology and evolution of the teeth, the dentist requires, of course, to be familiar with the influence of heredity, of faulty hygiene, and of various constitutional diseases, and of the reciprocal relations of teeth and health and health and teeth. He has to avoid the danger of all specialists, the ignoring of the greater in the less; and while it is not his duty to treat systemic causes of dental disease, it is his prerogative to teach hygiene, and to act as the coadjutor of the family physician by hints and suggestions, both timely and helpful; and also at times to give him the aid of his special skill in diagnosis or treatment. The dental surgeon has not warrant to play the role of physician or general surgeon, but I opine, he will in the near future be a closer ally of both in efforts to conserve those valuable factors in the well-being of the human economy, whose importance is still underrated. Medicine owes not a little to Dentistry, as Prof.

Thomas Fillebrown told us last week, but I am glad to know the debt is being repaid.

Here the speaker wishes to pay a tribute to an honored senior predecessor, Dr. W. T. Aikins, who for many years used his great influence in pointing the moral of bad teeth, as well as to enforce the laws of hygiene in general. But if the dentist and the doctor are to act more freely in concert hereafter, the former must not trench on the domain of the latter, and the physician, on his part, must let alone the legitimate work of the dental surgeon. He will aid the latter not by virtue of less but of greater knowledge, for he will have clearer light as to the need of early care, and as family supervisor will relegate to the dentist many cases that in the past have been let go to the bad. He will be the more on the alert from his knowledge of family traits and hereditary tendencies. He will not be above utilizing his little laryngeal mirror to detect hidden caries. Not extracting teeth himself, he will also know when they should *not* be extracted, in contrast to his old-time forerunner, who knew how to extract teeth and did it, but unfortunately did not know when *not* to sacrifice them. He will certainly *not* let carious teeth set up periostitis and burrowing sinuses which he would be prompt to arrest in other places; nor hasten disfiguring perforating ulceration of the cheek by applying poultices externally, when the removal of an offending tooth or a simple incision to the bone would relieve about as promptly as the timely cut does a progressing whitlow. He will certainly not advise nor consent to the removal of numbers of healthy teeth for the cure of neuralgia of centric or truncal origin; nor fail to bear in mind the effect of diseased teeth upon the ear, eye, etc. He will correct the baneful effects of family traditions and prevent much of that suffering and danger to health due to fatuous neglect from ignorance. How long, think you, would folk wait if serious disease set in at different points of a rib, for example, which is, roughly speaking, the equivalent of the adult teeth in the aggregate?

If other than a benign Being overruled the destinies of the race, one could imagine that wonderful evolution of the deciduous and permanent teeth becoming a matter of history, and as a just retribution a toothless race appearing on the stage, left wholly to the aid and art of the dentist, the most wicked of whom could hardly, in his wildest dreams, have hoped for such largesse of opportunity! In this connection I must cite two incidents, one dating many years ago: At the tea-table, with the older folk, were three children of from four to eight years, and before them lay three kinds of cake, two of preserves, two plates of quartered pickled cucumbers and a modicum of bread. The young folk took freely of the cucumber, preserves and cake, and also tea, and shortly went to bed. This gave me one clue to that early and general decay of

the teeth so prevalent in the adjoining Republic, and which is only too common here, and on the *increase*, it is to be feared, by virtue of heredity and of the faulty nutrition now so often found as the result of an irritable, nervous organization. Incident number *two* was also across the border, and in a hotel, the mis-named home of so many of the rising generation: A youngster, so small that he had to sit in a high chair, while waiting for *his* order of two hard-boiled eggs and coffee to be filled, was seen to consume two crullers cooked in fat as his *first* course!

It has been said that dentistry should take place as a specialty of medicine, and there is force in the contention, as those will admit who have studied the matter, or listened, perchance, to the arguments presented here last week by one well fitted to put the case strongly. But circumstances alter cases, and, in this Province at least, with a status and standard hardly equalled elsewhere, your profession can assuredly continue to work out its destiny and preserve its autonomy; and also be a trusted ally and coadjutor of that larger body which embraces in its scope the prevention and cure of all the bodily ills, natural and acquired, that afflict mankind. While you are acting well your part, my own profession is continually taking higher ground, so that ere long the new man may be regarded as a sort of general specialist, the little knowledge of a branch that is so often a dangerous thing giving place to that ready insight and careful decision destined to be most fruitful of beneficial results. This will be the natural outcome of the longer courses and more deliberate preparation of these times, with their greater facilities for practical instruction, and the increasing number of the implements and improved methods of research.

Now, dentistry has an ancient history of its own, as has medicine, and from that point of view cannot be called a specialty on a par with those that have evolved in later times or in these latter days. In centuries long dead and buried there grew from a common root-stock two stems, one stronger and larger than the other, the larger tree having various branches and diverse fruits, the other a single trunk to the top, yielding less fruit and but of one kind, and that valuable. To-day we see the two, Medicine and Dentistry, each in a healthy state, and bearing respectively good fruit to meet the needs of humanity. They are practically distinct and are yet fundamentally one: It is said the lesser should be grafted on and become a branch of the larger and more wide-spreading; but since the result of the grafting process would be uncertain, and the supply from the one does not interfere with that of the other, and the smaller is yielding the best fruit of its kind, and plenty of it, and the foliage of the two already in places familiarly intertwine, while the roots are grounded in the same soil and draw

upon the same resources, it would seem the wiser plan to leave well enough alone—especially as there are active legislative pruners on the scene who seem to us of the professions rather ruthless in their designs and methods. To change the simile, Dentistry has a history, language, and ample and growing literature of her own that call for pride and satisfaction. The State has no foes, and its intestine troubles are growing beautifully less: Why then, its rulers naturally ask, should it give up its individuality, autonomy, and prestige to become a mere section of a larger State. That too, when the latter has not a few enemies without and within its borders, and illimitable unexplored land to redeem and cultivate

Let one who wishes to be a friendly critic say, what he would rather not have so good ground for alleging, that the blemish on the escutcheon of your profession is a tendency too manifest on the part of some to a purely commercial spirit, which is unworthy the free-masonry that ought to prevail amongst the members of the various professional confraternities, and is utterly out of harmony with that higher kind of communism which condemns all meretricious methods of gain and any misinterpretation of that plain word "fair-play," the Golden rule epitomized.

Gentlemen, some of you will soon be actively engaged in your life-work, and making your influence felt for good or ill. Let me exhort you to do your part individually and collectively as members of your profession to keep your fair fame unsullied, to preserve your particular field in the broad domain of activities free from noxious weeds and other sources of weakness; and, as far as possible let it not be said that your worst enemies are those of your own household. Bear in mind that whatever action on your part, concerted or not, even in your student days, tends in any way to lower you in the estimation of the thinking public, will assuredly react and tell against your best interests, present and prospective. There are times and seasons and an eternal fitness in things, whether of the new order or old. Each member of a profession has, in a sense, the honor of the whole body in his keeping, and this trust should be sacred: Errors of judgment on your part there will be, but let us hope of *intention*, never. It may not be out of place to say—I believe I have the warrant of your Faculty for saying—that if any of you feel uppermost the desire to live a life of mere gain, then it would be well for you to reconsider, for the time will soon be here, if it has not already come, when those who have mere gain for their chief aim must keep out of the professional walks and choose those other more direct, and too often more devious, avenues to the goal of their ambition. If you have the proper animus and reason rightly, however, I opine you will stick to your present choice, for observation shows that the vast majority of men only attain at best a competency which;

so far at least in this country, is the assured reward of energy to all who plod patiently and steadily on the round of their chosen sphere of action and give the best that is in them to their own life-work, turning a deaf ear to the many siren voices that would lure them from the straight and narrow path of duty, and so divide their energies as to cheat them of final success in its truest sense.

QUICK REPAIRING.

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

We will suppose a single tooth, or even a section, becomes loose or is broken. First file the rubber away for the reception of the new material. Then drill a hole under the adjoining teeth, slanting. If a section, drill three holes, also from the inside of the plate, counter-sink and cut pins quite near the heads, indeed long enough to come through the plate and to be bent at right angles. Place them in position and pour plaster to keep them in place. When the plaster has set put your teeth where you want them. If a section, you will have the two side pins with heads inclined and three with crooked ends. If a single tooth you will have four heads quite close together. While holding the plate in the left hand place enough of Wood's fusible metal to fill the gap and with an amalgam plugger, either held in a small alcohol blaze or in hot water, you can secure the teeth equally as well as with vulcanite, and in half an hour at most. The question now comes to the front, What is Wood's metal? The late Dr. B. Wood, of Albany, N.Y., experimented for a long time, hoping to get a filling that would supersede amalgam. The formula was given in the August number of the JOURNAL. I used it for a time, and in some cases with great satisfaction. There is a very small percentage of shrinkage owing to the low temperature at which it can be fused. For small lower crown cavities it is excellent. The profession did not take kindly to it, and it fell into desuetude, though it can be obtained at some of the dental depots yet.

A STITCH IN TIME.

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

Who is there in the dental profession that has not often wounded himself? The left hand is generally the victim, as the right hand holds the instrument. These little mishaps are very annoying and troublesome, particularly if not immediately attended to. If it is a cut, and to any great depth, I allow it to bleed freely as there will be less inflammation. I keep a fine needle, with a white silk thread in, well waxed. A small wad of bibulous paper saturated with four per cent. of cocaine is placed upon the wound, and a finger on the same hand can hold it there for ten minutes, after which it can be sewed as easily as if it were leather. It will heal by first intention. The parts being brought together, the bleeding will cease at once and you can resume work. This has saved me much pain, inconvenience, time and money.

[Try Dr. Iever's "Quick Cure." It surpasses anything else.—
ED.]

Selections.

THE INFILTRATION METHOD OF ANÆSTHESIA.*

By H. V. WURDEMANN, M.D.,

Director and Secretary Wisconsin General Hospital Association; Oculist and Aurist to the Children's Hospital, the Milwaukee County Hospital for Chronic Insane, and to the Elms Hospital; Instructor in Eye, Ear and Throat, Elms Hospital; Secretary Section on Ophthalmology, American Medical Association; Milwaukee, Wis.

Just six months ago we brought to the notice of the medical profession our† conclusions obtained by following out the line of experiments instituted but a few months before by Schleich,‡ of Berlin, relative to the anæsthetic properties of water, and its application in surgical practice. The experimental stage has been passed and we are now able to substantiate some of his statements made in our first article, which at that time were not yet proved.

A brief resumé of Schleich's experiments may be advisable. This investigator was employed in research for the production of a better and less harmful method of local anæsthesia than that which

* Revised by the author for Parke, Davis & Co.

† "Explanation and Demonstration of the Infiltration Method of Anæsthesia." *Journal American Medical Association*, Dec. 29th, 1894.

‡ Schleich, "Schmerlose Operationen," Berlin, 1894.

has hitherto obtained. He first experimented with hypodermatic injections of cocaine and other drugs, finding that a 2 per cent. solution of cocaine was the weakest which would produce anæsthesia when introduced beneath the skin. A couple of syringefuls of this solution would be the toxic dose, and such an amount would be necessary in many trivial operations. It is well known that cocaine injection is dangerous to life, and even small quantities of the drug may give rise to very unpleasant symptoms.

Our investigator discovered that by injecting the solution into, but not under the skin in the surprisingly small quantity of .002 to 1.00, a practical anæsthesia would result throughout the whole thickness of the skin and insensibility more profound than that by hypodermatic injection of a solution one hundred times this strength could be obtained. The logical deduction followed that the drug itself could not be the main agent in causing the anæsthesia. Injections of distilled water were tried, and produced anæsthesia, but these were painful, *i.e.*, the infiltration of the water into the skin produced a burning pain which transcended that of a knife. Complete anæsthesia, however, followed the infiltration.

Could it be the infiltration alone that produced the pain of injection and later obtunded the sensibility? Injections of the normal salt solution (.6 per cent.) were made, but no anæsthesia followed, yet the injection itself was painless. The proposition to be solved then was as follows: If infiltration of water alone into the tissues produced pain followed by complete anæsthesia, while the injection of .6 per cent. sodium chloride was painless, but made no alteration in the sensibility of the nerve ends, there must be between these two extremes a salt solution of a certain strength which would at the same time be so similar to the normal fluid of the blood as to cause little or no pain in infiltration, and yet be sufficiently like water to produce anæsthesia of the parts so injected. Experiments proved that a .2 per cent. salt solution met these requirements. Solutions above or below these strengths were either painful to inject or produced no anæsthesia. Operations may be painlessly done by a .2 per cent. salt solution. I have personally experimented with various fluids. The ethers and alcohols are similar to water in that they cause burning pain on injection, followed later by anæsthesia. Ether, however, produces capillary hæmorrhage and alcohol coagulates the albumen of the tissues, and both substances, aside from this, are too irritative to be of use in this method. The various oils are not painful to inject, but afford no anæsthesia. They are usually absorbed without producing material change in the tissues.

Cocaine, .2 per cent.; morphine, .2 per cent.; ac. carbol, .2 per cent.; bromide of potassium, 3 per cent.; methyl violet, 1 per cent.; caffeine, 2 per cent.; sugar, 3 per cent., and other substances in

aqueous solution were found to allow of the anæsthetic action of water upon the nerve filaments. The anæsthetic drugs, cocaine, ac. carbol, and morphine have a special characteristic: *i.e.*, their addition in very small quantities to the .2 per cent. salt solution prevented the paresthesia incident to injection of simple saline solution and the infiltration of inflamed or hyperæsthetic areas could be made without pain.

The narcotics were more active when used in the .2 per cent. salt solution and could be used in even lower attenuations, for instance, .01 per cent. cocaine in a .2 per cent. salt solution prevented paresthesia. It was also found that if the solutions were used cold, their efficacy was increased many fold, and that when used at the temperature of the body, little or no anæsthesia followed.

The following formulae are advocated by Schleich: *

R.	Cocaine mur	.....	.20
	Morph. mur	.....	.025
	Natr. chlor	.....	.20
	Aqu. dest. ad	.....	100.

M. Sterilisat. adde. sol. ac. carbol. 5 per cent. gtt ij.

S. Solution No. 1, strong. For operation upon highly inflamed or hyperæsthetic areas.

R.	Cocaine mur	.....	.10
	Morph. mur	.....	.025
	Natr. chlor	.....	.20
	Aqu. dest. ad	.....	100.

M. Sterilisat. adde. ac. carbol. 5 per cent. gtt ij.

S. Solution No. 2, medium. For most operations.

R.	Cocaine mur	.....	.01
	Morph. mur	.....	.005
	Natr. chlor	.....	.20
	Aqu. dest. ad	.....	100.

M. Sterilisat.

S. Solution No. 3, weak. For superficial operations upon nearly normal tissues.

At my request, Parke, Davis & Co., of Detroit, Mich., have prepared soluble tablets from which these solutions may be extemporaneously made by dissolving one tablet in one hundred cubic centimeters (about $3\frac{3}{8}$ fluidounces) of distilled or boiled water. These will be found convenient in practice.

All are to be kept strictly sterile; glass stoppers or scorched

* The "keeping" qualities of these solutions are improved by the addition of a few drops (gtt jji) of a 5 per cent. solution of trikresol, as recommended by Parke, Davis & Co.

cotton, such as are used in bacteriologic experiments for the bottles; small quantities to be poured out in smaller vessels for each operation. Just before operation the solution should be cooled by laying the bottle containing it on ice. The common form of hypodermatic syringe with the finest of needles is all that is usually needed. Dr. Charles Denison, of Denver, Col., has given us an aseptic syringe of larger capacity, with piston packing of asbestos, which is particularly applicable for aseptic injection. The syringe is kept in good order by being frequently soaked in a 5 per cent. carbolic solution and the needle sterilized after each operation.

The discovery of these truths, so valuable for the question of local anæsthesia, is due simply to a slight change of method; the application of the solution within, and not under the skin. The anæsthesia is caused by the replacement of the normal fluids of the tissues by a fluid of less specific gravity (the water) which causes anemia, compression and cooling, producing thereby a temporary

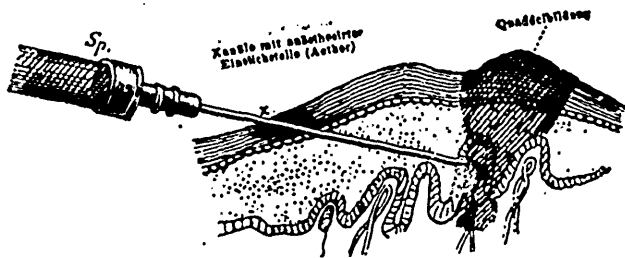


FIG. 1.—Diagram of a section of the skin, showing formation of the first wheal.

paralysis of the nerve filaments. The pain of the infiltration of indifferent solutions is abolished by the minute doses of narcotic drugs (morph., cocaine, carb. ac.).

It is perhaps well to here go into the technique of the production of local anæsthesia by this method. The field of operation is made aseptic in the usual manner. Having the required formula, the solution aseptic and cold, we fill the sterilized hypodermic syringe; pinching the skin slightly between the thumb and forefinger of the left hand, the needle is then passed obliquely under the epidermis to the papillæ, intra-cutaneously, until the lumen is fully inserted. A few drops are then injected, thereby producing a white elevated wheal, the infiltration extending throughout the whole thickness of the skin. (See Fig. 1.) There is immediate and complete anæsthesia throughout the extent of the infiltration, which lasts from ten to twenty minutes according to the density of the tissue so edematized. The needle is then reinserted at the periphery of the wheal and the area infiltrated to the required extent and depth. No tissue offers any deviation from the dictum. Every structure is made anæsthetic that can be artificially edematized; this holds

good for skin, mucous and synovial membrane, periosteum, fascia, muscle, lymph glands, nerves, viscera and even bone.

Anæsthesia exists only within the area infiltrated by the solution, and outside of that, normal sensation remains. In operations of, or through the skin and mucous membranes the first wheal is increased to the size of a dime by increased pressure on the piston; the needle is moved and reinserted at the periphery of the wheal, but still within it, and a new wheal raised. In this way the line of

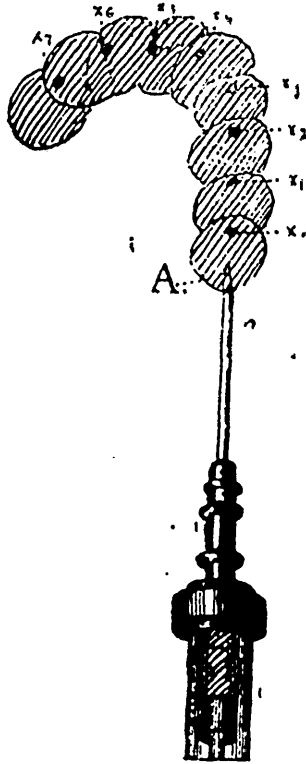


FIG. 2.—Formation of the cutaneous wheals. A—Spot made anæsthetic by ether spray for the first injection.

incision is marked out to any desired length or breadth. (See Fig. 2.) In general surgical operations we would then infiltrate the underlying tissues, by slowly pushing in the needle and injecting a few drops at a time until the deeper tissue is edematized.

By cooling the spot selected for the formation of the first wheal by ether or rhigolene spray, or on mucous membranes by touching the spot with a strong solution of carbolic acid, or applying cocaine, the first injection may be made, if so desired, without ever feeling the prick of the needle. This is seldom necessary, as a very fine needle may be inserted without pain even in very tender tissues

such as the eyelids. The succeeding injections may now be made without causing sensation. There is no sensation to the infiltration proper.

Where the tissues are inflamed the sensibility is pathologically increased. Here it is indispensable that the infiltration be begun in sound tissue and carried over into the part to be operated upon. (See Figs. 3, 4.) The dilated blood and lymph channels of the inflamed skin allow us to anæsthetize quite a large spot from one puncture.

The injection should be done slowly at first, and when the infiltration is only felt by its tension we may rapidly flood the part to the required extent. Under no circumstances must fluid be

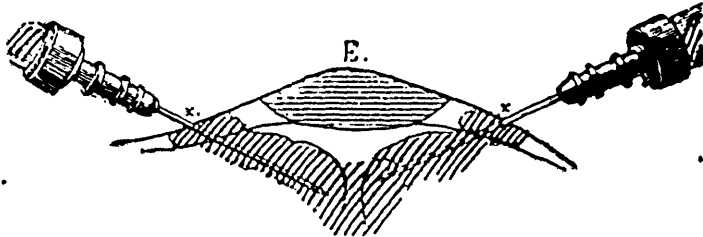


FIG. 3.—Infiltration of inflamed surfaces.



FIG. 4.—Infiltration of abscess.

primarily injected into an abscess, an exudation or a pathologic focus. The only result is increased tension and pain. We must not lose sight of the cardinal fact that the anæsthesia exists only within the area infiltrated by these solutions and that outside of that there is normal sensation. The method rests principally on the production of a complete artificial edema of the tissues. Whenever we wish to operate with exact anæsthesia, the field of operation must be tensely filled with the solution so that it exudes from the cut surface.

It should be remembered that our use of attenuated solutions of the narcotic drugs has nothing akin to the doctrine of the followers of the dogma "*similia similibus*," etc. These statements may be readily substantiated upon your own persons, as I have done many times on myself and other physicians. I need not call to your attention the well-known dangers of chloroform and ether anæsthesia and the waste of the surgeon's time, the discomfort to the patient, and the necessity for skilled assistance. Cocaine injection

of the solutions of the usual strengths (5 to 10 per cent.) is certainly far more dangerous to life than the administration of chloroform. The higher solutions of cocaine surely diminish the exudative process and retard the healing, and in some cases actually destroy the trophic filaments, so that gangrene has been known to occur. Nothing of the sort has been found to result from the infiltration of the solutions recommended in this article. Anæsthesia is complete and occurs immediately, and lasts long enough for almost any external operation. There is no objection at any time to repeating the injection if feeling should return during the operation. Indeed, we might safely operate for hours upon a small area if so inclined. The advantages of the method are also evident from its simplicity, safeness and celerity.

The method has gained credence and is now in common use by many busy practitioners. Operations have been done, from the removal of ovarian tumors and amputations, down to the opening of boils without pain, and with satisfaction both to the physician and patient. I have personally done half a hundred operations upon the eyelids, etc., by this form of anæsthesia, as well as various operations upon other parts of the body while prosecuting the investigation. My first operation was done upon a deep-seated felon. I have assisted at a number of circumcisions, excisions of tumors, and minor operations, making the injections myself. I have had reports from many surgeons in different portions of the United States, of its use for operations varying in severity from ingrowing toe-nail to hernia, in which the anæsthesia has been satisfactory. Healing has been by first intention, and in only three instances have we had reports in which it has been delayed.

For most office operations the Schleich method is an invaluable contribution to our therapeutics. It should do away with the injection of dangerous solutions of cocaine and take the place of general anæsthesia for many operations.—*Journal of the American Medical Association.*

SIMPLIFIED TREATMENT OF TEETH WITH EXPOSED PULPS.*

By WITOLD LINDEMANN, of Rybinsk, Russia.

The pulp laid bare during excavation is covered with iodol cement, which serves as a simple capping; this can, however, only be accomplished in those cases in which the exposed part has only the circumference of a point. The slight hæmorrhage which occurs here almost regularly is stopped by means of carbolic acid

* Translated from the *Correspondenz-Blatt für Zahnärzte.*

solution, and any pain there may be is removed by the application of a small pellet of cocaine, or a strong solution of cocaine. Thereupon the neighboring carious parts are removed with the utmost care as far as this is possible.

For the present the cavity must not be dried out with hot air; but it is thoroughly syringed out several times with luke-warm water in order to get rid of the congealed blood. A phosphate cement which does not set too quickly is then mixed with iodol (cement and iodol-powder in equal parts) to a very soft consistency; a mixture thus prepared is very sticky, and remains plastic for a considerable time.

The cavity is then rapidly and thoroughly dried with amadou, and a portion of the cement, the size of a hemp-seed, is placed upon the exposed pulp. This iodol cement should be applied very lightly by means of a smooth stopper moistened with oil; directly the patient feels pain, the pressure must at once cease. The cement may also be pressed home by means of a dry pluglet of cotton-wool dipped in talc powder.

It is well only to close the cavity provisionally and not to insert the filling until the following day; the slight pains which are generally experienced during the setting of the cement will then gradually have passed away.

It will be observed that the cement has become sufficiently hard to protect the pulp against the pressure exercised during the insertion of the filling; the cement, however, is usually distributed too unequally in the cavity, therefore it has in part to be drilled out again—of course with great care, so as not to lay the pulp bare again.

As this mode of capping can be carried out without the employment of metal caps, it is especially suitable for all cases in which the small dimension of the cavity and also the approach to it do not permit of the application of a cap.

I have employed this method in many cases without meeting with any failures.

In places difficult of access, and also where pulpitis has appeared (even if of a slight character only), it is advisable not to attempt the capping at all, but merely to cauterize the pulp; for this purpose shreds of cobalt or arsenious paste may be used.

Kirk's arsenious paste (with a slight modification) one may prepare one's self, of an excellent quality, by extremely finely triturating in a porcelain mortar arsenious acid (two parts), which is difficult to pulverize, with one part of pumice and a little carbolic acid in such a manner that even with a 150 magnifying power no arsenic crystals can be distinguished; hereupon are triturated with the mass two parts of cocaine, and one part of menthol; other additions are superfluous. A very small quantity of this paste is laid upon a pellet of cotton-wool the size of a pin's head, and this

plug is applied direct upon the exposed pulp. A temporary closure of the crown-cavity with sandarac or mastic solution, however, requires a little knack.

In order to avoid the inclosure of the paste, and prevention of its action by the resinous solution, the cotton wool soaked with the resin should never be laid direct upon the arsenious paste; the two plugs should always be kept separate by means of a pledget of cotton-wool moistened with water. The action of the arsenic will then be undisturbed, and the hardened resin will not exercise any pressure upon the pulp.

At the expiration of twenty-four hours the pulp in most cases will be so void of sensibility that it can be partly removed; otherwise the cauterization should be repeated.

For the removal of the pulp, I do not in such cases employ nerve extractors, but bore out the crown pulp by means of an aseptic engine-bur, and also partly the pulp of the root. It is not necessary for this purpose to introduce the bur deeper than from two to three mm. into the root-canal. The debris caused by the bur is removed by means of powerful syringing with warm water, whereupon the cavity is carefully prepared for the reception of the filling. After a thorough drying out of the cavity a piece of soft charcoal, the size of a hemp-seed, impregnated with oleum cassiæ, is laid in the pulp chamber, and pressed into the root-canals with a good-sized plugger in such a manner that it comes to lie upon the pulp-remains which are still sensitive; should the space permit, one can place a second piece of the charcoal in thus prepared. The oil of cassia which is expressed is then removed, together with any traces of blood which may be present, by means of cotton-wool, and the cavity is hermetically closed with cement or plaster of Paris. Plaster of ordinary consistency is prepared and held in readiness upon a glass-slab; of this a small quantity is laid upon the charcoal which is in the cavity. Should the plaster not adhere to the oily layer of charcoal, it is pressed tight by means of a dry plug of cotton-wool dipped in talc-powder; it will then adhere to the tooth-substance, and cover the charcoal. If the latter is insufficiently covered, a little more plaster is added, and condensed with cotton-wool. One must then wait for the plaster to harden before inserting the filling.

For the covering of the charcoal C. Ash & Sons' chloride of zinc cement (Superior) is the most suitable of all the cements known to me. The phosphate cements, which in a plastic condition do not possess any affinity for water, are more difficult to use, and cannot well be fixed on the floor of the cavity. Nor can the chloride of zinc cement by itself be fixed with the aid of pluggers; on the other hand, it can be introduced with ease if the cement, mixed moderately soft, is pressed down with cotton-wool plugs dipped in talc powder.

The sealing of the cavity with cement is certainly much more reliable than with plaster of Paris. After the hardening (the cement will harden under water), the crown cavity is carefully prepared for the introduction of the filling. All undercuts, etc., and also the cervical margin, are cleared of plaster, or, rather, of incompletely hardened cement, and every trace of superfluous material is removed. The cofferdam is then applied, the cavity dried, and filled in any way desired.

Of 243 teeth, which I have filled during the last two years by this method, I had to record in the early part of this time only four failures, which, however, are to be accounted for by insufficient cauterization and defective cleansing of the pulp cavity; yet even in these cases the pains (pulpitis) which supervened disappeared on the repeated application of arsenic. Periostitis did not, however, occur in a single case. I prefer, therefore, this method to any other, and have discarded definitely the filling of the roots after the cauterization of the pulp.

With pulpless teeth this method cannot be adopted; in the treatment of these teeth the antiseptic filling of the entire root-canal cannot perhaps be avoided.

Discoloration of the dentine is not to be feared by the employment of this method, if due care has been taken to cover the charcoal at the transparent dentine layers.

HOW TO STERILIZE INSTRUMENTS WITHOUT DANGER OF RUST.—Iron, steel and nickel only rust when exposed to the combined action of carbonic acid, moisture and oxygen. If any one of this triad is absent or neutralized, the metal remains unaffected. Certain alkalis neutralize the carbonic acid in water, and when this is neutralized no rust forms on metals when immersed in it. After careful experiments, Levia has found that the best alkali for the purpose is natrium hydroxydatum causticum (NaOH). He adds a small quantity of the crystals to boiling water, and after they are entirely dissolved and mixed, he immerses the instruments and boils them *ad libitum*, with never a trace of rust nor tarnish when they are taken out. One-fourth of one per cent. or even less of the natrium is sufficient, but it must be pure, with no sulphur, as this causes rust. If knives and scissors are wrapped in gauze to protect the edges, they can be effectively sterilized in this way without the slightest injury of any kind. It is equally effective and non-injurious for drainage tubes, etc., but it is not adapted for aluminum nor silk and it softens brushes. If the instruments are left afterward wet and exposed to the air, rust will form, but they can be kept several hours, if necessary, in sterilized water to which 1.5 to 2 per cent. of the natrium has been added.—

Wein. klin. Rundschau.

Reviews.

The American Text-Book of Prosthetic Dentistry. In contributions by eminent authorities. Edited by CHAS. J. ESSIG, M.D., D.D.S., Professor of Mechanical Dentistry and Metallurgy, Department of Dentistry, University of Pennsylvania, Philadelphia. Illustrated with 983 engravings, 751 pp. Philadelphia and New York: Lea Brothers & Co. 1896.

List of contributors: Drs. H. M. Burchard, C. J. Essig, W. W. Evans, C. L. Goddard, G. Molyneaux, R. Ottolengui, A. Tees, A. H. Thompson. If we said nothing more than that this work is very much the best in its line in our literature; that it is written and edited by masters in their art; that it is up to date in every particular, and that it is a credit to its publishers, we should say, perhaps, all that is necessary to encourage every practical dentist and student to buy it. A work of a purely scientific character naturally finds a somewhat restricted market, but there are probably not half a dozen dentists in existence who would not find it practically profitable to give this book their careful attention. It is a practical course on prosthetics, which any student can take up, during or after college, and it would not be the fault of its contributors, if any mechanical dentist was not much the better after thoroughly digesting it. The contents are divided into twenty-one chapters, as follows: "The Dental Laboratory, its Equipment and Arrangement," by Dr. Essig; "Metals and Alloys used in Prosthetic Dentistry," by Dr. Essig; "Principles of Metal Work," by Dr. Goddard; "Moulding and Carving Teeth," by Dr. Essig; "The Preparation of the Mouth, Choice of Material and Type of Denture," by Dr. Burchard; "Taking Impressions of the Mouth," by Dr. Burchard; "Making Models and their Preparations," by Dr. Burchard; "Dies, Counter-dies and Moulding," by Dr. Burchard; "Swaged Metallic Plates," by Dr. Burchard; "The 'Bite' or Occlusion," by Dr. Grant Molyneaux; "Selecting and Fitting the Teeth; Attachment to the Plate; Finishing," by Dr. Burchard; "English Tube Teeth; their use in Plate, Crown and Bridge-work," by Dr. Essig; "Continuous-gum Dentures," by Dr. Tees; "Cast Dentures of Aluminum and Fusible Alloys," by Dr. Goddard; "Vulcanized Rubber as a Base for Artificial Dentures," by Dr. Essig; "Celluloid and Zylonite," by Dr. Evans; "The Temperaments and the Temperamental Characteristics of the Teeth in Relation to Dental Prosthesis," by Dr. Thompson; "Artificial Crowns," by Dr. Burchard; "The Assemblage of United Crowns (bridge-work)," by Dr. Burchard; "Hygienic Relations and Care of Artificial Dentures," by Dr. Essig; "Palatal Mechanism," by Dr. Ottolengui.

From experience in the Quebec school, we still see no difficulty in the way of getting a really deserving class from among the inmates of certain charitable institutions in Toronto. There is no use appealing, as a rule, to any one but the lady directresses of these institutions. The question of payment for materials could be met by a small reserve fund in such institution, upon which the infirmary could draw, in proportion to the cost. Has any attempt been made practically to reach these organizations?

TOO CHEAP.

The *Toronto Star* had the following editorial note a few weeks ago :

"A large clothing manufacturing concern says that the public demand for cheap clothing compels a reduction of 10 per cent. in wages. This public desire is one of the curses of modern society. The demand for cheap goods, especially clothing, is so reducing prices that those who do the work cannot earn a fair living. When will the public cease to cry, 'Cheaper, cheaper, cheaper!' and give the workers a chance to live?"

Very fitly it may apply to dental practice. While it is easy to understand that by reduced wages and large sales, fair profit may be made in these branches of manufacture, it is just as easy to understand that the notoriously cheap dentist is a quack, and is not such a fool as to give the best for the poorest fee.

A GREAT SURPRISE.

A recent visit to the college in Toronto was to us a very agreeable surprise, as we had not been able before to see it in running order. From top to bottom it is a model, equipped and conducted in the most systematic manner. The students have no sort of excuse to-day for not learning their profession. We venture to believe that there is no better arranged dental school on the continent.

DR. HAROLD WOOD.

Our worthy friend, Dr. Wood, President of the R. C. D. S., has the deepest sympathy of his many friends in the recent death of his son, Dr. Harold Wood, in his 28th year, after over seven years' illness.

We omitted in the last issue to say, that Dr. Beers withdrew his resignation, when his colleagues, discovering that they had been deceived, withdrew their names from the petition referred to.