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Practical Points in Operative Dentistry.

By C. N. JOHNSON, L.D.S., D.D.S., Chicago, Ill.

MR. PRESIDENT AND GENTLEMEN OF THE ONTARIO DENTAL SOCIETY,—In preparing a paper on Practical Points in Operative Dentistry for your Society, the writer first of all looked over your programme so that he might avoid touching on any subject treated by other essayists. But the scope given the present paper by its title leads us naturally to the consideration of so many little points in practice that it will be small wonder if we at times approach the discussion of matters already introduced in the meeting. This, however, is not always an evil. Diversity of opinion on any subject is often a good spice to season a meeting and make it interesting.

The purpose of the paper is not so much to present new methods as to advocate the desirable features of methods already known but not perfectly developed by the average operator.

First, let us consider the use of the matrix. Here is an appliance which, on the one hand, has been lauded to the skies, and on the other has, with equal emphasis, been condemned to the bottomless pit. Probably the truth of the matter may be stated something like this: The matrix, properly used in skilful hands, with

careful discrimination as to suitable cases for its use, and good judgment as to selection of appliance, is capable of affording the operator the greatest possible aid in the insertion of fillings in that class of cavities recognized as the most difficult ones we have to treat. With equal truth we must admit that it is an appliance which, in the hands of a careless operator, unwilling or unable to comprehend the true principles governing its use, is capable of leading to the very worst kind of failure.

A careless man will insert a more defective filling with the matrix than without it, while the man who manipulates it properly will do better work with it than without, or at least, will do the work fully as well, and with a great saving of time and labor. The matrix, if properly applied, instantly converts a complex cavity into a simple one. It provides us with a fourth wall, where otherwise we would have only three. It gives us a guide and support against which to build the filling, where without it we would have nothing but an open space with no outline to govern us. It leaves the filling in such a condition of surface and contour that little labor is required in finishing. It gives us a pocket at the conical margin into which the filling may be started without the necessity for drilling anchorage pits or grooves. The tooth at this point is usually extremely sensitive. It often occasions more pain to the patient to drill these pits than to otherwise complete the whole preparation of the cavity; and any appliance which will tend to lessen the sufferings of our patrons has at least one great point for its recommendation.

In fact, the matrix has proved such a source of comfort to the writer that he would as soon think of discarding any one of the old stand-bys of the operating case, as to attempt to practise without this much-abused appliance.

But we must not forget the dangers connected with its use. The objections urged against it have much force of logic, unless we are keenly alive to its limitations. One of the principal arguments of its opponents is that when the matrix is brought against the margin of the cavity, an acute angle is formed at the junction of tooth and matrix, into which it is difficult, or almost impossible, to wedge the gold. This often leads to poor adaptation of gold to the margins, which in turn results in failure of the filling at that point. The answer to this argument is, that no matrix should

be used which is made of a thick, stiff, unyielding material. The material should be of such a nature that it will yield to the pressure of the plugger, and admit of being forced slightly away from the margin at any given point. Then the matrix should not be applied tight to the tooth. It should be sufficiently loose so that in connection with its pliability the operator will have no difficulty in carrying the gold well between the matrix and tooth, thus effectively overlapping the margins. For this purpose wedge-shaped pluggers should be used, with the outline of the point made slightly convex to conform with the curve of the cavity borders. The gold should be carried well up the sides of the cavity in advance of the centre, so that direct pressure *against* the margins may be had. By observing these precautions there will be little danger of defective margins.

Another argument often urged against the matrix is that it obstructs the view of the cavity. This holds good when the broad band matrix is used on a mesial cavity in a molar or bicuspid. This should never be done, as the matrix in that case certainly does hide the cavity. But when the matrix—no matter how broad—is placed on a distal cavity it not only does not obstruct the view, but in many cases brightens up the cavity by reflected light.

In a mesial cavity a matrix seldom is needed, except just at the cervical margin to form a pocket for starting the filling. The writer has used for this purpose broken pieces of watch-spring, which are about the required curve to fit the tooth at the neck. These are narrow and do not hide the cavity, and are held in position with a loosely adjusted wedge.

As to the kind of matrix most universally applicable, the writer has found the Brophy band matrix to work the most satisfactorily in his hands. It is quickly applied, is so thin that it can readily be passed between the teeth, and sufficiently springy to admit of being forced away from the margin of the cavity, as occasion demands.

The writer has sufficient faith in the matrix and in the dental profession, to believe that when the latter fully understands the former, there will be a corresponding alleviation of the weariness and annoyance experienced by the average operator in filling these large distal cavities in molars and bicuspids.

(Exhibit Brophy and Dunn matrices.)

Now a few words about the *hot air* in operating. Every dentist recognizes, or should recognize, the advantage of hot air in drying pulp canals previous to filling. If we get perfect dryness in a pulp canal we destroy the possibility of decomposition, and thus limit the tendency to the formation of gases or other irritants likely to cause trouble in the future. This is so well established that it is a matter of much wonder to find many dentists still filling pulp canals without due precaution in this particular.

Another instance where the writer has found it advantageous to use hot air is in opening into pulpless teeth not having a fistulous outlet. You all realize the danger of setting up inflammation in a tooth of this kind, and you are all equally aware of the tendency to trouble and sometimes to abscess subsequent to the first treatment. This is specially annoying from the fact that usually the tooth has given no pain prior to the operation, and the patient naturally lays the blame to the operator. The writer has lately almost come to the conclusion that the patient is right. In the last two or three years, in a practice where he is constantly treating teeth of this nature, he cannot remember one case where trouble has followed the opening of a pulpless tooth. The method of treatment is as follows: Flood the cavity and chamber well with an antiseptic; absorb this, carrying with it as much debris as possible. Repeat the process several times, and in short, work out all the debris as perfectly as may be without forcing anything through the apical foramen. Always keep the antiseptic in advance of the broach. After using the medicament in this way till the canals are cleaned, flow alcohol into the cavity and canals and absorb with cotton. Then use hot air on the canals for some time, after which flood again with an antiseptic, and seal the cavity, leaving a little cotton in the chamber but none in the canals. If this is done with care, the results will usually be a satisfaction to the operator and a comfort to the patient. In fact, the writer cannot remember a single case of pericementitis following a treatment of this kind since he used the hot air.

Again, where arsenic has been applied to a pulp and allowed to remain a few days, it is often found that the pulp will respond quite actively to pressure, so that it cannot readily be removed. Usually a pulp in this condition will not respond to heat, and after using hot air on it for some time it will lose its sensitiveness to pressure,

and may be removed with little trouble. The drying also shrinks the pulp, and this facilitates its removal.

Speaking of sealing the cavity, brings to mind the fact that many operators are notoriously careless in this respect. In using arsenic for destruction of the pulp, or in the treatment of pulp canals prior to filling, it is a matter of much moment that the cavity should be perfectly sealed.

Where arsenic is used it is evident to every operator, that if any be allowed to escape from the cavity serious trouble will ensue; and the other fact is no less true—though not so universally recognized—that where a pulp canal is being treated, and not properly sealed against the ingress of deleterious agents between treatments, the action of our medicaments is greatly repressed if not at times entirely overcome.

The common method of sealing the cavity is by the use of sandarac varnish on cotton. To the mind of the writer there are two objections to this. First, it is doubtful if by this means the cavity is always well sealed, and second, it is a most unpleasant material to use in the mouth. When a large cavity has been sealed with sandarac and cotton for a few days, the odor on removing is exceedingly offensive. These facts have led to the almost entire abandonment by the writer, and he now uses the preparation known as Gilbert's Temporary Stopping. It is a preparation of gutta percha, with probably a large proportion of lime incorporated in it, and is the most effective and convenient sealing material on the market. It requires but little heat to soften it to the consistency of putty, and may be inserted as readily and quickly as cotton and sandarac. It is not so dense or tough as to give any trouble on removal at a subsequent sitting, and altogether is the most satisfactory material ever presented for this purpose.

Tin and gold in combination as a filling material. Much has been said and written on this subject, but it is the opinion of the essayist that the material is not used in the profession to the extent that its merits should demand. Under certain conditions it is the most desirable filling material that can be used, and the reason it is not employed more is probably due to the fact that its manipulation is not well understood by the average operator. Tin and gold should never be malleted. It should be inserted entirely by hand pressure, and even then it must not be manipulated too

much. Malleting will invariably result in chopping up the material, and over-manipulation will also make it crumble. Deeply serrated points driven with slow, but vigorous, hand pressure, will produce the best results.

Now as to the cases suitable for its use. It may be used with good effect along the cervical margin of deep approximal cavities in molars and bicuspid, when gold is to form the bulk of the filling. Its advantages here are ease of adaptation, rapidity of insertion, and its tendency to prevent shock from thermal changes. It is softer than gold alone, and may more readily be adapted to the walls and margins; it can be inserted in less than half the time that gold can, and it is a poorer conductor of heat than gold, so that cavities filled with it at this point are not so liable to respond to heat or cold after filling.

Another place where tin and gold is indicated is in the teeth of children, where we otherwise would use amalgam. In the small crown cavities of molars and bicuspid, up to the fourteenth or fifteenth year, it is the best material to use. It is preferable to amalgam, because it does not change form. It is preferable to gold, simply for the reason that in many of these cases gold is out of the question, and even if gold is inserted, it will likely have to be renewed in a few years. Tin and gold is not so much affected by moisture during manipulation as gold is, and in these small cavities can be inserted as rapidly and readily as amalgam, if its manipulation is well understood. This may seem a strong statement, but it can be demonstrated.

In case the filling wears down and requires renewing in a few years, gold can then be used and the cavity will be found in better condition than if amalgam had been employed as the first filling.

The objections to tin and gold are its tendency to turn dark, and its lack of hardness to withstand mastication on large surfaces. In small cavities the essayist has had no trouble with the filling wearing away, and in the cases mentioned has found so much satisfaction from its use that he trusts the members of your Society who have not used this material will at once make its acquaintance.

The method of preparing is to place a piece of tin foil on an equal amount of gold foil, and twisting the two into a rope. A piece large enough to fill the cavity should be used, and the whole rope worked into the cavity, much after the manner in which non-cohesive gold was used by the dentists of a generation ago.

The next subject for consideration is that of *Crystalloid Gold*. The essayist is desirous of bringing this material prominently before the profession of Ontario, as it has proved a source of the greatest comfort to him in his practice. It is his belief that by its use in the cases indicated a large number of cavities now filled with amalgam may almost as readily be filled with gold to the advantage of the patient and the satisfaction of the operator.

In treating on this subject, the writer feels he cannot do better than read a short article of his published several months since in the *Dental Review*. It substantially contains his present views, and probably has not been read by any of your members.

Various forms of so-called plastic or sponge gold have from time to time been offered to the profession, but none of them has come into general use. A partial reason for this is the peculiar nature of the material, which calls for peculiar methods of manipulation not easily grasped by the ordinary operator. But probably the greatest drawback to its use by those who have studied it most, is its tendency to become granular on the slightest mismanagement.

An equal rapidity in manipulation would entail a greater waste of plastic gold than of foil or pellets. In short, plastic gold has not tenacity of fibre enough to make it work conveniently as a filling material.

But it has two desirable qualities which should not be lost sight of. It is more readily adapted to the walls of cavities, owing to the ease with which its particles—not being fibrous—will slide over each other and spread under pressure. Then again, the same characteristic conduces to an even surface on the filling, which is not always so readily obtained with the ordinary foil. It is doubtful if fillings made from plastic gold have the strength—would stand an equal strain if built into contours—that have those from a more fibrous material, but the report of operators who have had long experience with it, seem to favor the conclusion that a better surface will be retained after years of wear than with any other form of gold.

To overcome the disadvantage of plastic gold and at the same time retain its desirable qualities, Mr. R. S. Williams, of New York, hit upon the idea of enclosing between two sheets of foil, a layer of plastic gold. The foil is exceedingly thin, so it does not materially

interfere with the plasticity of the material under the plugger, and yet it imparts to the mass a sufficient degree of toughness to make it work kindly.

It comes in four numbers. Nos. 1 and 2 are recommended for starting fillings; No. 3 for general and contour work, and No. 4 for use in connection with amalgam, where the latter has been placed along the cervical margin of deep cavities.

The writer has had no experience with No. 4, and very little with No. 3; but for starting fillings Nos. 1 and 2 come nearer being the ideal filling material than anything that has ever been offered the profession.

If it is not used in every office where gold fillings are inserted, it is because its good qualities are not recognized, or its proper manipulation not understood. From reports concerning its use it is feared that few operators handle this gold properly. It should never be used in flat pieces cut from the pads as we get them from the manufacturer. The layers of foil on the outside are so thin that used in this form they are liable to be punctured or torn, when immediately we have the same difficulty as with ordinary plastic gold—a crumbling of the material which makes it very unsatisfactory. One or two experiences of this kind are enough to discourage the operator, and it has too often been thrown aside without realizing that the fault was in the manner of working instead of in the material.

To properly start a filling with crystalloid gold one should note the kind of cavity to be filled and prepare the gold accordingly. If a small, round, "well shaped" cavity—often the most difficult in which to secure a firm foundation—a strip should be cut from the gold somewhat wider than the depth of the cavity. This should then be rolled quite tight until the pellet is so large that—standing on its end—it will fit snugly into the cavity. A plugger with point nearly as broad as the area of the cavity, and having shallow serrations, should then be used and the whole mass driven into place with hand pressure. If used in this way the gold will in every instance stay firmly impacted in the bottom of the cavity, and will not roll or tilt when other gold is added to it. An ordinary crown cavity in a molar or bicuspid—especially the upper—is more than half filled by this one pellet, and with the assurance that adaptation is good if the force is properly applied.

Tests made out of the mouth show that crystalloid gold under pressure will conform to surfaces which are very uneven, and the firmness with which it is anchored in the bottom of an ordinary cavity proves that it must fit the walls accurately.

If the cavity is a proximal one in a molar or bicuspid, the strip should be cut sufficiently wide to reach across the floor of the cavity from buccal to lingual wall. It should then be rolled large enough so that when laid lengthways in position it will cover well the cervical margin, and admit of being wedged firmly into place with broad pointed pluggers. Pressure should first be directed on one end of the pellet toward the cervico-buccal, or cervico-lingual corner, and then—though this is not always necessary—that end may be held firm with an instrument in the left hand, while the other is driven into place in the opposite corner.

There is not the same tendency for this gold to curl up after being condensed as with other forms, and if enough material is used to cover well the bottom of the cavity, and a broad plugger which will carry the mass before it instead of puncturing it, the feat of starting a filling in almost any cavity is rendered extremely simple.

This certainly cannot be said of ordinary gold, for although non-cohesive gold has been advocated for this purpose as being all that was desired, the fact is that we have found a large discrepancy between the theory and the practice. Non-cohesive gold will not in all cases stay where it is placed, and while much preferable to cohesive in this respect, it cannot be compared with crystalloid.

The main point, then, in starting a filling with crystalloid is to roll it carefully into pellets of proper size, which lessens the tendency to crumble. When rolled in this way it makes a tough, putty-like mass, which when manipulated with broad pluggers will prove a great comfort to those who have had difficulty in making the first portion of a filling firm.

The convenience of having pellets on hand has led the writer to roll up a variety of sizes during spare moments, thus saving time at the chair.

Of course, the gold should never be annealed for starting the filling, but if No. 1 be used for completing the operation it requires annealing to a red heat.

As has been intimated, the writer's experience with the latter has been too limited to express an opinion. His preference yet is for the ordinary foil or pellets in the bulk of the filling, but for finishing, the No. 3 crystalloid laid flat instead of rolled into pellets, and firmly malleted, makes a much more even surface than ordinary foil; and if time proves it to wear well, it certainly will be preferable for this purpose.

To those who have not used crystalloid, the advice is to give it a careful trial, and the hope is expressed that it will prove as great a satisfaction to others as it has to the writer.

And now a few words about *filling teeth with gold*. Here, again, the essayist will crave your indulgence to read an editorial written by him on this subject, and published in the same journal.

This is one of the oldest subjects to be found in our periodical literature, and yet one with probably greater possibilities than any other which the profession has ever written upon. Filling teeth with gold has something of interest in it for the operator, for much of his success in practice depends on his ability to properly perform this operation.

The difficulties encountered by many in the manipulation of gold result largely from a failure to study the peculiarities of the material. Lack of comprehension regarding its capabilities and limitations lead many an operator into serious error, even when he may be an expert in the use of instruments. The one great point to be borne in mind in filling with gold is, that the ordinary forms of foil, or pellets, as we receive them from the depots, will condense only in the direction toward which the force of the plugger is applied. The so-called spreading of gold is a myth, so far as most of the gold we use is concerned. A good fibrous gold will not spread under the instrument, to any appreciable extent, and any gold which is granular enough to do this is unreliable when the wear and tear of mastication is brought to bear upon it. Gold of this nature may be used in the bottom of cavities to start fillings, but should never be built out to a point where there is any strain placed upon it.

The main requirement, then, for perfect adaptation is to direct the pressure *against* the walls of the cavity. This cannot always be done successfully with the mallet blow, especially in cavities difficult of access, and where nothing but a curved instrument

will reach all points. Wherever force is required at an angle diverging much from the shank of the plugger, hand pressure may be used to better advantage than a blow from the mallet. It seems to be a matter of habit with some operators to use the mallet indiscriminately in all regions and at all times. This mallet mania has done much harm, not only in preventing perfect adaptation along difficult walls, but also in chipping delicate margins of enamel. Small pin-head cavities can often be filled as rapidly and to much better advantage with hand pressure, and in all proximal cavities the cervical margin may be covered just as effectively and with greater safety in this way than by mallet force.

When hand pressure is used the best results in adaptation may be obtained by carrying the mass of gold in front of the instrument to the position where it is required, and then directing the force with a tilting or wrist movement, laterally as well as directly—a sort of “insinuating” force which will work the gold into every minute corner. This method is a half-wedging, half-condensing process which, when intelligently carried out, insures good adaptation with little danger to the margins.

Probably the point where the greatest number of gold fillings fail will be found along the wall which stands nearest the operator; as, for instance, the lingual wall in a distal cavity of a left lower molar, the anterior lingual wall of a grinding surface cavity in the same tooth, or the anterior buccal wall of a grinding surface cavity in a right lower molar. These are the walls which look away from the operator—walls which he cannot see without the mirror and against which he cannot impact the gold with direct pressure. It would be a poor operator, indeed, who did not get good adaptation against walls which face him, but with these hidden places in the cavity it is quite another matter. There is only one certain method of gaining perfect adaptation at these points, and that is by the use of right-angle pluggers manipulated with vigorous hand pressure. In that way an operator can “pull” the gold against the wall and by working with the mirror can be sure of his filling as he goes along. A strong plea is here made for the use of right-angle pluggers for this purpose, with the belief that if used conscientiously, there will be fewer failures to record in this class of cavities. The handles of the plugger should be large so as to admit of firm grasping in the hand when in use.

Much as we have just said in favor of hand pressure, we do not wish to discountenance the mallet. Used judiciously it is one of the greatest aids to gold filling, and we have one point to mention whereby it may be employed with more comfort to the patient than is ordinarily the case. From the time the mallet is started on the filling it will prove of great benefit to hold an instrument in the left hand with the point firmly placed on the gold or on some portion of the tooth, to steady it during the operation. If left to itself the tooth at each blow from the mallet will be slightly forced in and out of its socket, and this continued irritation sets up an inflammation which renders the operation extremely painful as it nears completion, where heavy malleting is necessary. If held firm by an instrument much of the soreness is avoided, and the operator is enabled to make a hard surface to his filling without too much protest from the patient.

Another point: When operating on the teeth of the left side—especially the lower ones—it will often bring the work under better command, if the operator will step to the left side of the patient. In this position he can condense against walls which, while he was on the right side, was difficult of access. In fact the dentist should change his position at the chair as often as is practicable, not only for the purpose of better reaching his work, but to give his body needed relief from too long-continued standing in an unnatural attitude. When a cavity on the left side of the mouth proves wearisome, try the experiment of moving to that side of the patient and see if matters do not work better for the change.

In addition to the foregoing, the essayist would like to say a word about the finishing of gold fillings.

In using the sand-paper disks on proximal fillings in molar or bicuspid care should be taken not to dress the filling away too much at the point of contact with the adjoining tooth. Leave it round and full at this point so as to retain the contour. The disk may be pressed in at the neck and made to cut at that point by directing it with a thin instrument held in the left hand.

To prevent the disk from heating smear it with perfumed vaseline. This will lubricate it so it will not be likely to catch in the rubber dam, and will also make it pliable and tough. Oil is sometimes used for this purpose, but is more liable to fly from the disk and soil the clothing. If vaseline is used the filling will not be heated

by friction, and this applies as well to sand-paper strips for anterior teeth as for disks. This is an item which, if followed, will save much pain and annoyance to the patient.

In conclusion, your essayist wishes to disclaim any attempt to treat in detail the points considered in the paper. The nature of the subject would necessarily preclude such a course, and it has been his main purpose to present as briefly as possible some of the many points pertaining to operative dentistry which have proved of peculiar interest to him in his practice.

His greatest hope is that you may enter freely into a discussion of the subject, to the end that new views may be brought out, and that the occasion may result in benefit to every member of your Society.

How to Treat Close Bites.

BY R. E. SPARKS, L.D.S., Kingston, Ont.

We often meet with cases where we are called upon to replace teeth which have been long out, and where the lower teeth have become elongated by a lack of antagonism, and bite very close to the upper gum. This is particularly noticeable in the case of incisors, where one or more may have been lost. Suppose a case. A rubber plate is desired, and the question under consideration is, how can we attach teeth to the plate sufficiently firm to stand ordinary use and allow the bicuspid and molars to antagonize? My plan is as follows: I select a flat back tooth, if possible; if not, ordinary rubber teeth, and grind off the shoulder, making them flat-backed. I then back them with gold plate, or, if for any reason I do not care to grind off the shoulder, with platina, burnishing it to the uneven surface of the back. I then cut a clinger long enough to reach from the tooth which I wish to attach, back into the plate far enough beyond the articulation for a good attachment. A few holes are punched throughout the length of the clinger, except at that point opposite the articulation, where the greatest stress is brought to bear, and where the least thickness of material can be used. The clinger is then bent to approximately follow the shape of the gum and palate, and attached to the tooth by means of a little wax, keeping it up slightly from the cast that

a little rubber may press under it. I then remove it and invest in a little plaster and asbestos, and flow solder sufficient to make a strong attachment between tooth and clinger. After pickling for a short time in dilute sulphuric acid to remove borax and discoloration from soldering, the backing may be filed, or ground and polished. It may then be replaced upon the cast and treated as any other tooth. When packing, it is well to draw out a little rubber thin, and slip it under the clinger to ensure a good attachment. Under favorable circumstances, the clinger and backing may be cut in one strip, bending up one end for a backing. But it frequently happens that the clinger will require to stand at a lateral angle from the backing, in which case it is necessary to make each separately. Besides, these can often be made from scraps of gold plate, none of which might be long enough for backing and clinger complete.

This plan of treatment is very little extra trouble and expense, and when its advantages are explained to the patient, will usually ensure an extra remuneration. It would save our reputation, and save us much annoyance from repeated re-attachment of such teeth.

PATTERNS FOR BACKING TEETH.

To save time and annoyance in backing teeth, punch a hole in a piece of stiff paper, sand-paper or light cardboard (I use sand-paper because it is always handy), slip it over the end of one of the pins and press it gently down upon the other pin. This gives you an impression exactly where the other hole should be made. After punching the second hole, place the paper upon the tooth and with shears or scissors trim it down to the size required. Place the tooth in position (of course, the tooth should be ground to fit before backing), and cut the pattern to fit the surface to which it is to be soldered. Then remove the pattern, lay it upon the plate calculated for backings, and mark the edges and holes. The backing can then be cut to the size and shape required, and holes punched with a certainty of being far enough up, low enough down, close enough together, far enough apart, etc., which is so uncertain without a pattern.

Celluloid Again.

By E. L. FULLER, D.D.S., Amherst, Nova Scotia.

Having noticed in your journal, Vol. I., No. 4, an article headed "Celluloid in Mechanical Dentistry," the perusal of which brings very forcibly to my mind the old adage, "We should speak well of the bridge which carries us safely over!"

If you will kindly allow me a short space in your columns I would like to say a few words in defence of a material which I have used in connection with other materials, such as vulcanite, gold, etc. (as I do not confine myself to any one material as a base for artificial dentures, but consider them all good in their place), for the past ten years, and have found it to be perfectly satisfactory not only to myself but to my patients, and I have many who have used vulcanite and celluloid, and prefer the latter; and I have yet to be convinced (and by sounder argument than the writer has laid down in his article, and I think I can show the unsoundness of the same later on), that it is not all that is claimed for it.

The writer commences his article by "claiming that it is the cheapest material used;" he also refers to its cheapness again by comparing it with the "cost of vulcanite." I would ask the writer if the amount of vulcanite used in packing a full upper denture costs more than a celluloid blank? how much more expense there is in vulcanizing a case than in pressing a celluloid? Is there any difference in the amount of plaster, wax, etc., used? If there is any difference in cost of material otherwise than the difference in cost of plain and gum teeth, it is so small that I do not think any of us, the writer included, would care to figure our expenditure down as fine, or that our patients would give it a moment's thought.

As to the difference in using plain or gum teeth, as far as the welfare of our patients are concerned, the matter of cost should not be taken into consideration.

The writer next states, "that if not properly made it contracts after being moulded." I do not quite catch his meaning; does he mean that if the blanks are not properly made before being placed upon the market, or that if they are not properly manipulated by us? But as he refers to the manipulation further on, I will take it for granted at this point that he means they are not properly manu-

factured. The writer certainly will not claim that they are all improperly made, therefore, why condemn the material as a whole because we may receive one or two poor blanks? We often have placed upon the market poor amalgams, and the consequences are poor fillings even with proper manipulation. Is this any reason why we should condemn amalgam as a filling material? or celluloid as a base for artificial dentures? I say decidedly, no.

He next says "it will absorb the secretions." If properly manipulated (and we, as professional men having the welfare of our patients at heart, will not place in their mouths work that has not been properly manipulated) I claim it will not, which I will explain (and to save time and space) by referring the writer to the directions for the proper and successful manipulation of celluloid in the pamphlet sent out with the New Mode Heater (Campbell's). I will simply call attention here to the fact that, in order to prevent the absorption of secretions, the surface of the plate must not be disturbed after removing from the flask.

He next continues his condemnation under two headings, viz., "Advantages and Disadvantages of Celluloid." I fully agree with him as to the advantages named, but there are a few which he has neglected to mention, and which are of no less importance.

They are first and, I think, the more important, the color which, when compared with the natural gum, is not excelled by any of our manufacturers of porcelain gum teeth, or pink vulcanite. He refers to the color as being "preferable to vulcanite," but claims under the head of "disadvantages" that it is a "very poor imitation of the beautiful porcelain gums." I do not think it was the intention of the manufacturer to imitate the porcelain gums, but to give us a material which would be more natural, and in connection with which we could use plain teeth, thereby enabling us to make a more natural-looking denture than could be done with gum teeth. Second. Its strength when compared to vulcanite. Has the writer ever had a celluloid plate returned to him broken in halves or cracked? I doubt it. Under the head of "disadvantages," the writer says, "that without careful manipulation misfits are frequent." I take it for granted that he speaks from practical experience, and if such is the case then he admits that if carefully and properly made we would have no misfits. Surely he will not admit that he does not carefully manipulate all his work, but, that his argument condemns

the operator, or his carelessness of manipulation, and not the material, is plain to be seen. He next says, it is "often porous." I will not contradict him on this point, other than to say, that in my experience with it I have never seen a porous celluloid plate, but perhaps he has; I should like to ask, however, what caused it to be porous? He says, it is not only "easily warped when being made, but by extreme heat, sometimes tea or coffee." If allowed to get stone cold before being removed from the flask it cannot warp, and if not allowed to do so it has not been properly manipulated (again the fault of manipulation and not material). In regard to extreme heat, it takes water at 212° F. to spring a blank so that it will remain sprung. Has the writer any patients who take their tea or coffee at that temperature?

He says, "the teeth do not hold as well as vulcanite to the pins." I do not see that his comparison has anything to do with celluloid, as he has simply compared the strength of teeth, and not celluloid, with that of vulcanite in their hold to the pins; but that celluloid will hold as well to the pins as vulcanite, I know from experience. He next says, "it is no use for gum teeth." I suppose he means to be used in connection with gum teeth. I have used it in connection with gum teeth with very good results, although I prefer the plain teeth, and think they should be used with it.

He states, under the head of advantages, that the camphor taste disappears if the plate is properly manipulated, in which I fully agree with him. He then says, the camphor taste is so objectionable that you must immerse in alcohol at 95° over proof for four days before inserting, in which case, according to the writer's previous statement, the plate could not have been properly prepared (again the fault of the manipulation and not the material). I have never found a patient yet who claimed the camphor taste remained in the mouth over forty-eight hours. He claims that there is "fraud" practised upon the public by men whose "only idea in the profession is to make money." I agree with him, that there are such men, but that they should be classed as members of the profession? No.

He also says, "that very high fees are charged for what is very inferior work." I also agree with him in that, but summing up the writer's article, I find in nearly all his arguments against celluloid, the fault is entirely with the manipulation and not the

material, therefore the work is inferior, but not the celluloid. I do not claim that it is the best material for artificial base, but that it has its place in our laboratory, and when used in its proper place is far from deserving the condemnation the writer has given it; and I am not surprised, after his arguments, that he should be ashamed to say that it was the best material, but am surprised that he should so openly condemn a material in the manipulation of which he is at fault; and because he has not been successful is no reason why he should condemn it when, no doubt, some others like myself, who understand its manipulation, have been successful.

[In order not to extend a controversy which we consider useless, we append to Dr. Fuller's article, two of many such authoritative replies received by Dr. Globensky, with which the latter is content to leave the matter. ED. D. D. J.]

CHICAGO, January 14th, 1890.

S. E. GLOBENSKY, L.D.S., Montreal.

DEAR SIR,—In reply to your's of the 10th inst., in regard to celluloid. It is something very unusual to find a dentist who still makes use of it for a base. It is so much the inferior of vulcanite, except in the one point of color, that I do not endorse it at all.

Respectfully yours,

G. A. THOMAS.

CHICAGO, June 23rd, 1890.

DEAR DOCTOR,—In reply to the query about celluloid, will say that I used it almost exclusively instead of rubber for five years, and becoming thoroughly disgusted with it, abandoned it entirely; and now feel quite ashamed when a patient comes in wearing one of the cases which I formerly made. I consider it the worst material ever used in the mouth.

Yours truly,

L. P. HASKELL.

I know of no one who uses it here.

Adhesion vs. Atmospheric Pressure.

BY E. A. TESKEY, L.D.S., St. Thomas, Ont.

Having had considerable inquiry for information regarding the adhesion theory, which I, in common with many others, believe offers the best explanation of the retaining force of artificial dentures, and having received an invitation to contribute to the DENTAL JOURNAL, I venture to offer this short explanation, setting forth some of the arguments why it is preferable to the old theory of atmospheric pressure. Adhesion is an attraction which all bodies possess for one another when brought in contact, and accounts for friction, the wetting of a body after immersion in water, the suspension of a drop of water from the end of the finger in opposition to gravity, and the rise of water in small tubes above the level of the surface, known as capillary attraction. A familiar experiment will explain the action of this force more clearly. Place together two pieces of glass with a drop of water between them to occupy the inaccuracies of the surfaces; it requires considerable force to separate them, and you have a very clear demonstration of the attraction of adhesion. The amount of force necessary to separate them depends principally on three conditions: First, intimacy of contact; second, the area of the surface of contact; third, the direction of the opposing force, a much greater strain being required when at right angles to the plane of contact. Let us now apply these facts, and see how they coincide with our every day experiences. First, the amount of force necessary to retain an artificial denture depends upon the intimacy of contact; this no one will deny, for it sometimes requires our greatest efforts to secure a fit, therefore, it must be admitted that the laws in each case are wonderfully alike, if not the same. Second, the retaining force of an artificial denture depends largely upon the area of contact. This is corroborated by the experience of all dentists who make artificial teeth. Third, the force retaining an artificial denture is influenced largely by the direction of the antagonistic forces, which, in this case are mainly gravity, and the tension of the muscles of the mouth. What practical man will not tell you that the greater the area of the horizontal surfaces (other things

being equal) the more retaining force is exhibited, consequently to what other conclusion can we arrive than that it is the same law in each case that produces the same results? Now, then, to treat the matter fairly and without prejudice, that we may arrive more readily at the truth, let us study the "atmospheric pressure theory," and learn how the two compare. It asserts that by means of an air space in the central part of the denture, from which the air is withdrawn by suction, and the pressure of the atmosphere upon the surface of the plate, is the retaining force demanded, and implies that this chamber must be air-tight, secured by the contact of the plate with the tissues that surround this space. Now, that we have somewhat of each theory in our minds, we are prepared to face difficulties with explanations from each, and to draw conclusions. Why do artificial dentures exhibit greater retaining force on soft than on hard palates? The adhesion theory answers, that on soft palates a greater intimacy of contact is secured on account of the yielding nature of the tissues, which, in a measure, compensates for the inaccuracies of the rigid plate. The air-pressure theory asserts that you cannot maintain as complete a vacuum on a hard palate as on a soft one, because the tissues do not assist in excluding the air to the same extent.

With both answers before us, we must conclude that the air-pressure theory fails from the fact that if any air be permitted to re-enter the chamber, sufficient could enter to establish an equilibrium, and atmospheric pressure ceases as a consequence. If this explanation be not correct, why is not the retaining force as great in each case? Why does a plate exhibit retaining force when there is no air chamber? Adhesion theory answers, because the maximum surface of plate has an intimate contact with the palate. The other theory has no answer; neither can it give a satisfactory explanation why it is that the retaining force does not cease when the tissues enlarge and fill the vacuum. Why is it that high V-shaped arches exhibit but little retaining force? The answer of the adhesion theory is that the opposing force, which is principally gravity, is exerted at right angles to a very limited surface on the ridge of the mouth, and the mucus furnishes a lubricant, lessening the friction in the sliding motion, which is the result of lateral tension. The atmospheric theory furnishes no answer to this difficulty, and until it does we are

warranted in assuming that the adhesion theory furnishes the only explanation for the retaining force referred to.

With these facts before us, we can come to no other conclusion than that we have been misled by assuming that atmospheric pressure offered an explanation of the retaining of artificial plates, and I think I am safe in asserting that, under the conditions imposed, it is impossible to create a vacuum by withdrawing the air, or any portion of it, from the ordinary air chamber, and that this chamber, instead of being a benefit, is actually a detriment, by lessening the surface of contact. I think the foregoing is sufficient to prove that all that is necessary to secure retaining force is perfect adaptation, and in future let us know this force as adhesion, instead of the vulgar name of suction.

Replantation.

BY J. W. SANGSTER, Sackville, N.B.

As the subject of replantation of the natural teeth has been considerably discussed in dental journals of late, I thought I would like to try it, which I did with the following treatment and results, which I copy from my note-book :

" February 15, 1889.—Patient a healthy young man, aged 18. Tooth first inferior bicuspid, decayed on crown, pulp dead, suffering from acute alveolar abscess. Removed tooth carefully, syringed socket well with first tepid water, then phenol sodique. Removed from tooth all abnormal growth, shortened root about one line, cleansed and filled pulp canal with cement, crown with amalgam, washed in tepid water and laid it down while I proceeded to syringe socket with a solution of bichloride of mercury, 1 to 500, then syringed with phenol sodique, dipped tooth in a 20 per cent. solution of carbolic acid and placed it in socket, forcing it down with some pain.

" The next day found gum and face swollen, and tooth very sore to the touch. Painted gum with tincture iodine and aconite.

" 17th. Swelling still on. Painted face outside with tincture iodine.

" 19th. Improving fast ; swelling in face nearly all gone.

" 21st. Improving. Patient eating and sleeping with comfort.

" 22nd. Still improving.

"25th. Inflammation all gone, except a little around socket. Tooth fairly firm ; patient says he can masticate with it very well."

During the process of healing there seemed to be no suppuration whatever, which I attributed to the antiseptic treatment the tooth and socket received previous to replanting. From that time to the present the tooth has been thoroughly comfortable, and as useful an organ as he has in the mouth—indeed, he says he has no reason to know any difference. I don't think it quite as firm as before the replanting. While others might, by treating and filling pulp canal, save a lower tooth with abscess formed on root, I have met enough ignominious failures to have prevented me to try this, and believe the method adopted the only one by which I could have saved this tooth. The one immediately behind this one had been lost on account of alveolar abscess.

Last summer, while taking an outing at the sea-shore, I one day happened to look at the teeth of a gentleman, and noticing that the left lower lateral was in the place of the cuspid, and the cuspid in the place of the lateral, I remarked that nature had made a mistake in placing his teeth. He said it was his mother who had made the mistake, that when he was about twelve years old (he is now thirty) he had these two teeth knocked out by a kick from a horse ; his mother picked up the teeth and replaced them in the position they now occupy. They are sound, strong and firm, with no distinguishable change of color from the others that had not been disturbed.

Proceedings of Dental Societies.

Eastern Ontario Dental Association.

The eleventh annual meeting of the Eastern Ontario Dental Association was held at "The Russell," in Ottawa, on the 19th and 20th of June, 1890.

The following officers and members were present : Messrs. J. A. Liddell, of Cornwall, President ; J. C. Bower, of Ottawa, Vice-President ; J. Robertson, of Ottawa, Secretary-Treasurer ; John H. Parnell, R. E. Sparks, A. A. Smith, Geo. E. Hanna, C. A. Martin, A. Fisseault, Geo. H. Weagant, A. H. Weagant, Geo. Hutchison, C. B. Mansell, S. S. Davidson, L. Clements, W. Brace, A. Cameron.

President Liddell called the meeting to order at 8.15 p.m., after which the minutes of the previous meeting were read by Secretary Robertson, and adopted.

The following Licentiates were admitted members of the Association :

Ira Bower, proposed by J. C. Bower, seconded by J. Parnell.

D. Callendar, proposed by S. S. Davidson, seconded by A. H. Weagant.

A. F. Pearson, proposed by John Robertson, seconded by Geo. Hutchison.

W. G. McEllinney, proposed by J. Robertson, seconded by S. S. Davidson.

J. A. Armstrin, proposed by S. S. Davidson, seconded by J. C. Bower.

A. A. S. Burns, proposed by W. Brace, seconded by A. Fisseault.

A letter was read from G. J. Clint, of Almonte, regretting his inability to be present, and enclosing his membership fee.

Communications were also read from Dr. Beers, of Montreal, and Dr. Willmott, of Toronto, also regretting their inability to attend.

Dr. G. E. Hanna then gave a verbal report relative to the Ontario Dental Legislative Act, after which the Treasurer's report was received and adopted on motion of G. E. Hanna, seconded by W. Brace.

OFFICERS APPOINTED FOR ENSUING YEAR.

Dr. J. A. Parnell, of Ottawa, was nominated for President by Dr. Geo. Hutchison, seconded by Dr. Ira Bower. There being no opposition, Dr. Parnell was unanimously elected.

On motion of Dr. Hanna, seconded by Dr. Weagant, Dr. A. A. Smith, of Cornwall, was elected Vice-President, Dr. C. B. Mansell, of Carleton Place, having been proposed, but declined.

Dr. A. S. Burns, of Smith's Falls, was proposed for Secretary-Treasurer, but declined. A. T. Pearson, of Ottawa, was elected on motion of Dr. J. Robertson, seconded by Dr. Geo. Hutchison.

The retiring President, Dr. Liddell, then addressed the Association, expressing his great satisfaction on seeing so many members of the Association present, admonishing members to be workers,

not dreamers ; complimenting the profession on being in affiliation with Toronto University, and rejoicing over the fact that a journal devoted to dental work had been established in the Dominion.

After dealing ably with important topics, such as illegal practising of Dentistry in the Province, etc., Dr. Liddell heartily thanked the members for the honor conferred on him by electing him to the honorable position of President of the Association.

President Parnell, of Ottawa, then assumed the chair.

On motion of Dr. Sparks, seconded by Dr. C. A. Martin, a vote of thanks was tendered the retiring officers, to which all made appropriate replies.

Dr. Callendar, of Toronto, was then requested to address the Association. In doing so, Dr. Callendar forcibly brought home to each member present the conviction that it was his duty to use every legitimate means possible to elevate the standing of the profession.

Dr. C. A. Martin addressed the Association, thanking the members of the profession generally for electing him a member of the Board of Directors for so long a period, and gave a good account of the advancement made by the profession during his stay on the Board. Dr. Martin, however, felt convinced that some change in the running of the College at Toronto was necessary, and asked the members present for their views as to the changes necessary, and how such changes could best be brought about, so that he might present such views to the members of the profession present at the annual meeting, to be held in Toronto on the 14th of July.

After a lengthy discussion as to the changes necessary, Drs. Clements, Hanna, Ira Bower, W. Brace and M. S. McElhinney were appointed a committee to draft resolutions embodying the desired changes.

After due consideration, the Committee brought in the following resolutions, which were afterwards adopted by the Association :

I. Resolved, That it is the opinion of this Association that the Dental Act be so amended that the election of the Board shall take place by ballot, forwarded by mail, on a plan similar to that adopted by the pharmaceutical and medical professions.

II. Also resolved, That a member of the Faculty of Royal College of Dental Surgeons at Toronto shall not be eligible for membership on the Board of Directors.

III. Further resolved, That no medical graduate be appointed examiner unless he be in actual practice as a dentist.

On motion of Dr. Hanna, seconded by Dr. Hutchison, Dr. C. A. Martin was entrusted to lay these resolutions before the meeting to be held in Toronto in July.

The meeting then adjourned, to meet next morning at nine o'clock.

FRIDAY.

At nine o'clock, President Parnell called the meeting to order, all members being present.

Dr. Sparks, of Kingston, read a paper on "Aluminium, and its application to Dentistry." After giving source, preparation, physical properties, etc., the author gave an account of its use as a filling material and as a base. He thinks that the difficulty in its manipulation as a filling material will in time be overcome, and that it will yet be a valuable material for such purposes. He thinks, too, that by "Carroll's Method" the best results can be obtained when used as a base. Dr. Martin thinks those objectionable features it now possesses will soon disappear.

Dr. A. A. Smith read a paper on "Causes of Secondary Decay." The author thinks that improperly prepared cavities, as well as unsuitable filling material, has a great deal to do with secondary decay. He also thinks that galvanic action may lead to secondary decay. He thinks that by shaping walls of the cavity properly, and judiciously selecting appropriate filling material, secondary decay will largely be overcome.

After full discussion of these papers, in which most of the members participated, a hearty vote of thanks was tendered the authors.

Dr. McElhinney then gave an exhaustive account of the electric vibrator, as to its working and results.

Dr. Callendar gave an account of the process of porcelain filling, and its method of manipulation.

Drs. Lovejoy, of Montreal, and McCullough, of Perth, were admitted members of the Association, on motion of Dr. Brace, seconded by Dr. Hanna.

Moved by Dr. Sparks, seconded by Dr. Hanna, that the

sympathy of this Association be tendered to the wife and family of our late and much esteemed member, Dr. Dulmage, and that a copy of resolution be sent the bereaved family. Carried.

The meeting then adjourned to Dr. Bowen and Armstrong's office at 1.30 p.m., where a number of important and interesting clinics were performed, after which the members amused themselves sight-seeing, to meet again at 8 p.m., at the complimentary banquet at the "Russell," given by the resident practitioners to the Association.

On Saturday, most of the members left for their respective homes, to meet next year at Brockville at the call of the President.

(Signed) A. T. PEARSON, D.D.S.,
Sec.-Treas. E. O. D. A.

Ottawa, June 21, 1890.

The Banquet.

THE EASTERN ONTARIO DENTAL ASSOCIATION BANQUET.

The banquet tendered the visitors by the resident practitioners of Ottawa took place on Friday evening, June 20th, at the Russell House. The arrangements were complete in every detail, and a most enjoyable evening was spent by those present.

Dr. Charles Martin occupied the chair, and in his usual genial and witty manner welcomed the visitors to the capital. Several of the Ottawa members, in view of the banquet, having abstained from food for several days previously, the preliminary speech-making was cut short, and the melodious strains of the orchestra, to which a goodly number of inferior maxillariés kept time, with the occasional accompaniment of a soft gurgle or a porcine murmur of satisfaction, was the prevailing condition of things. At length the spell was broken. In words rich in metaphor, and burning with the eloquence of a Demosthenes, the Chairman opened the business of the evening. Toast after toast was drunk and received response. The Queen, the ladies, the press, our brethren, sister professions, and retiring officers—none were slighted—each toast received its due, especially the ladies, for are they not the beacon star of dentistry?

The songs were of rare interest, and given with great excellence of rendition.

The merry lay of Dr. Parnell made our very mouths water, while the blood-curdling details of Dr. Smith's made the very flesh creep, and should one carping critic say that Dr. Davidson's was not quite so good as the others, that critic would be forced to admit that it was "near it." A number of the visitors having to leave early in the evening to catch their train, the company arose and gave them a royal send-off, then turned again to their fleshpots.

A most encouraging feature of the evening was the absence of wine, thus dentistry once more claims a place in the foremost rank of progress, for while occasionally at the banquets of other professions, the members are rescued from beneath the groaning board, from a dental banquet each goes home with naught but indigestion. Thus the short record of a most enjoyable evening spent, when the wild jostlings and selfish jealousies of outer life are forgotten, when each greets his neighbor with the name of brother; may it long remain in memory a step towards that universal brotherhood that shall bind all in unselfish striving for the good of all, and cement our profession and our people in one vast commonwealth of love.

ARTO.

Royal College of Dental Surgeons.

Pursuant to announcement, the tenth biennial meeting of the Royal College of Dental Surgeons of Ontario was held July 15th, in the lecture-room of the Y. M. C. A. building, Toronto. Upon motion, Dr. G. E. Hanna, of Kemptville, was elected Chairman, and Dr. A. H. Hipple, of Stratford, Secretary.

The report of the Board of Directors was read by the Secretary, Dr. Willmott, showing that during the last two years 52 students have passed the final examination of the College and been granted licenses to practise dentistry, and that the degree of D.D.S. has been conferred upon 57 candidates by Toronto University. The raising of the standard for matriculation has been found to greatly reduce the number of matriculants. Since Latin has been made compulsory there have only been 18 matriculations, while during the corresponding period previous to that there were 36. The attendance last session was the largest in the history of the College, 74 students being in attendance; but the raising of the standard is expected to reduce this to about 50 in the course of a year or two.

The Board recommended that in future the examinations be conducted upon the same plan as that pursued by the Medical Council, so as to give the examiners more time for the examination of papers. The Board had also taken into serious consideration the advisability of improving, if possible, the efficiency of the Dental College, but had not been able to reach any definite conclusion. Upon motion, the report was received.

Dr. Rowe, Treasurer of the College, read the financial report, which showed that at the time of the last report there was a balance on hand of \$2,820.27. The total receipts for the two years from examination fees, interest, etc., were \$2,915.29, and the disbursements, \$2,417.08, there being a net gain in two years of \$498.21, and a cash balance on hand of \$3,318.48. The report was received.

An informal discussion then took place in reference to the financial management of the College. Under the present arrangement the Board of Directors control the College and appoint the professors, but at no fixed salary. The Faculty receives the lecture fees and pays all expenses, including the remuneration of the professors. A resolution was introduced by Dr. C. A. Risk, seconded by Dr. A. F. Webster, to have the Board assume entire control of the finances, and pay the professors a fixed salary. The members of the Faculty present expressed a perfect willingness to enter into such an arrangement, and it was stated that a majority of the Board favored the plan also. The discussion showed very plainly that the matter is one which requires careful consideration. The fixing of the amount of salary might not be an easy matter. It was suggested by one, for instance, that the salary paid should bear the same relation to the salaries paid to the professors of leading American colleges, as the number of students in the one does to the other. This Dr. Willmott claimed would be unfair. He thought that the length of time they had been engaged in teaching, and the proficiency and experience they had thus acquired, should rather be taken into account. Then, too, it was found that some who were quite willing to have the Board take the financial management out of the hands of the Faculty, were not willing to allow themselves to be taxed in case the revenue should not be sufficient to pay all the expenses. Others again, while they favored the change, thought that the matter should not be acted upon hastily, and, upon a vote being taken, the motion was lost.

The election of a board of directors for the ensuing term was then proceeded with, the following being elected : Dr. J. B. Willmott, Dr. H. S. Wood, Toronto ; Dr. R. M. Fisher, Warton ; Dr. Geo. C. Davis, London ; Dr. C. A. Martin, Ottawa ; Dr. L. Clements, Kingston ; Dr. C. H. Bosanko, Barrie.

Ontario Dental Association.

The first session of the second meeting of the Ontario Dental Association was held the same evening, July 15th. After the reading of minutes, officers were elected for the ensuing year as follows : Dr. N. Pearson, Toronto, President ; Dr. C. V. Snelgrove, Toronto, Vice-President ; Dr. C. H. Bosanko, Barrie, Secretary ; Dr. A. W. Spaulding, Toronto, Treasurer.

Dr. Woolverton moved, seconded by Dr. Spaulding, that the President appoint a committee to draft by-laws and revise the constitution and code of ethics of the Society. The motion was carried, and a committee composed of the mover, seconder, and Dr. Killmer, was appointed.

Dr. Bosanko, of Barrie, having extended to the Association a very kind invitation to hold its next meeting in that town, it was unanimously decided to hold the next meeting in Barrie, commencing on the second Tuesday of July, 1891. The officers of the Society, together with Drs. Willmott, Hipple, Oakley, McLaughlin and Burt, were appointed a committee to make all necessary arrangements for the next meeting of the Society. The retiring President, Dr. Geo. C. Davis, of London, was then called upon to deliver his retiring address, a full report of which will be found elsewhere in this number. After thanking the Doctor for his excellent address, the meeting adjourned.

WEDNESDAY MORNING.—Dr. A. W. Spaulding, of Toronto, read a paper on "Amalgam Fillings." [As this, as well as other papers read, will be published in full in some future number of the JOURNAL, it is not thought necessary to give an abstract of it in this connection. The discussions being self-explanatory appear in this report.—ED. D. D. J.] Dr. J. Frank Adams opened the discussion, taking up at length the various points in the paper. A general discussion on the merits of amalgam followed. Dr. Woolverton

thought that amalgam fillings properly inserted are very useful, but the tendency is to put them in hastily and without giving sufficient attention to details. Dr. Pearson had found that many amalgam fillings break down the walls of a cavity by expansion of the filling. Dr. Killmer explained that an amalgam filling contracts in the direction of its longest diameter, and expands in the direction of its shortest diameter, which might break down the weak walls of a cavity. Dr. Johnson, of Chicago, was inclined to attribute the breaking down of the walls to other causes. He thought they usually gave way because they were left unsupported, or were trimmed down too thin. Dr. Cheesebrough thought it a good plan to start a cavity with soft amalgam, rubbing it well into all the little corners and crevices of the cavity. As the filling progressed he used more dense amalgam, the mercury gradually working to the surface. Dr. Killmer thought that there ought not to be any corners and crevices in a cavity. Dr. Willmott pointed out that if the amalgam works to the surface in one direction it does so in all, and that fillings put in in that way have free mercury at the bottom of the cavity, which gradually evaporates, leaving the fillings porous. The discussion then drifted off into a general expression of opinions respecting copper amalgam; Dr. Woolverton was of the opinion that it should be used sparingly and cautiously. Dr. Hipple reported the case of a patient in whose mouth the use of copper amalgam had on two separate occasions caused severe odontalgia, which was relieved when the filling was removed and an ordinary amalgam filling substituted. Dr. Spaulding had had the same experience, and Dr. Ziegler said that he has a patient in whose mouth he cannot use gold, on account of the severe pain which always follows the insertion of even the smallest gold filling. Dr. Johnson said he had never had any such experience, but in several cases patients that did not know that copper had been used, had come back several days later complaining of a copper taste in the mouth. He looked upon copper amalgam as being preferable to the ordinary amalgam in the case of a nearly exposed pulp, as the former is a poorer conductor of heat. He also considered its non-shrinking qualities of great value. Dr. Willmott said that he had had considerable experience with copper amalgam. When properly manipulated he thought it gave good results, its chief advantage being that it stays where you put it. Unless the amalgam is over-

heated it is not necessary to squeeze out the excess of mercury. If properly handled, Weagent's amalgam can be made to set hard in five minutes without removing any mercury, but the exact amount of heat to be used can be learned only by experience. Dr. A. H. Hipple, of Stratford, read a paper on "Implantation of Teeth." The discussion was opened by Dr. James Stirton, of Guilph. He thought the implantation of artificial teeth quite within the range of possibility. Bullets and other foreign bodies are sometimes tolerated by bone tissue, and become firmly imbedded in the same. This being the case, why should not a porcelain tooth be encapsuled and retained? Dr. Willmott said he regretted that Dr. Hipple had not incorporated in his paper the report of a case of implantation he had performed in the mouth of a little girl eight years of age. He believed it to be the first case of its kind on record. He would ask Dr. Hipple to give the Society a report of the case, and also add it to his paper before handing it in for publication.

Dr. Hipple said, that in the case referred to, the little girl fell from a desk at school and knocked out the right permanent central, which the teacher, unfortunately, ordered to be thrown into the stove. Upon examination he found that the anterior wall of the socket had been almost, if not entirely, broken away, and the gum badly lacerated. He advised implantation, and performed the operation two weeks after the accident. The child being very healthy, the continuity of the gum was by that time fully restored, and the socket filled with bone tissue. The patient was placed under chloroform, and a new socket drilled. The tooth inserted had been extracted about five years before, and had been soaking in a solution of bi-chloride of mercury for about a week. After insertion the tooth was held in place by a thin platinum cap, burnished down over the two centrals, and cemented in position. This came off at the end of three weeks, when it was found that the tooth was firm when pressure was applied in any direction but forwards. The cap was replaced and left for two weeks longer, when it was finally removed. At the end of four months the tooth was firmer than its fellow, and as useful in every way, and what was perhaps more remarkable was that at no time since the operation had the patient complained of the slightest pain.

Dr. Marshall spoke of a tooth implanted in his own mouth by Dr. Willmott, two years ago. The tooth was firm and very useful

until about a year ago when the crown broke off, leaving the root, to which he intends to attach a crown. The breaking he accounted for by the fact that the tooth implanted was a cuspid ground down to the shape of a lateral, which weakened it greatly. The operation he said was painful but not excessively so.

Dr. Willmott thought that teeth intended for implantation should be kept moist from the time of extraction until used. After a tooth has been out of the mouth for some time and become dry it is very brittle, nor will it regain its original strength by being soaked in water. Just a few days before a dried tooth intended for implantation had dropped from his hand to the floor, and shivered into pieces, although the distance was not more than three or four feet.

Dr. Johnson said he was afraid that implantation was being carried to extremes. The result is not always satisfactory. Breaking of the crown is quite a frequent occurrence, and, in many cases, there is extensive absorption of the root. Under certain circumstances implantation is certainly justifiable, but care should be used in making the selection of cases.

WEDNESDAY AFTERNOON.—Dr. R. G. McLaughlin, of Toronto, read a paper on "Root Filling," which evoked a lively discussion. Dr. Cheesebrough thought that zinc chloride was not the best root filling. If the apex of a root can be hermetically sealed by means of a little cotton saturated with oil of cloves, as the essayist claimed, why not fill the whole root with cotton?

Dr. Johnson thought Providence was very kind to some operators. He didn't want the craze for filling roots with cotton to get a hold in Ontario, as it did in Philadelphia a few years ago. His plan for filling roots is to twist a little gutta percha into a cone, in such a way that grooves run from the apex to the base. By lubricating the root canal with eucalyptus oil or chloroform the cone can be easily forced to place, the fluid following the thread on the cone, and escaping at the base. He looked upon a solution of gutta percha in eucalyptus oil or chloroform as the best root filling, and he did not believe that such a filling would absorb fluids.

Dr. Willmott said that a great deal is claimed for root filling which is never realized. He did not think it absolutely necessary to fill roots to the apex, however desirable it might be to do so. To fill the buccal roots of a second molar, for instance, is perfectly

impossible in nearly every case, and yet thousands of such teeth have been successfully treated and filled after the death of the pulp. What is really necessary is to either totally extirpate the pulp, or else render it thoroughly antiseptic, in which case a small portion remaining will do no harm. He favored the use of cotton as a root filling, and if used with skill, he thought the results would be as good as from the use of any other material. Let each use the material from which he gets the best results, and in the manipulation of which he has become expert. He would say, however, that he considered gutta percha, *per se*, the very worst material for root filling, on account of its tendency to absorb fluids and become offensive.

Dr. R. M. Fisher, of Warton, read a paper on "Anæsthetics," in which he dealt at length with their history, phenomena, and physiology. The discussion which followed was mainly in reference to the use of cocaine as a local anæsthetic.

Dr. Woolverton had used cocaine extensively and with good results. He did not inject it, but applied a strong solution to the gums with a pledget of cotton, using considerable pressure. He had never known any unfavorable results to follow its use in this way. Dr. Rose had also used cocaine with good results, but was careful in selecting his patients.

Dr. Johnson warned the members to be very careful in its use. Its action is uncertain, and not very well understood. He knew of several cases in Chicago where patients had nearly died from its effects. He himself was thoroughly afraid of it. Once when a patient came in and insisted upon having it used he rubbed a little water on her gums in the same way that he might have used a solution of cocaine, and after he had extracted the tooth the delighted patient declared that she never felt the least pain.

Dr. Willmott gave a verbal report of "Two unusual cases of oral surgery," which excited much interest. He has been requested to prepare a paper on the subject for publication in this Journal, and has promised to do so.

WEDNESDAY EVENING.—Dr. Luke Teskey, of Toronto, read a paper on "Hæmorrhage and its results." The discussion was opened by Dr. Martin, who gave a humorous and interesting report of a number of cases of excessive hæmorrhage that had come under

his notice. He looked upon pressure as the most valuable means for arresting hæmorrhage in the mouth.

Dr. Clements spoke of a case in his own practice where the simple application of some heated beeswax for the sake of securing an impression of the parts, had arrested the hæmorrhage after a number of other remedies had failed.

Dr. Willmott rose to correct a false impression that had grown out of a remark, made by him in the afternoon, in reference to some of the instruments used by surgeons. He did not wish to be understood as saying anything derogatory to the ability or professional standing of any physician.

President Pearson, continuing the subject, thought that physicians should not infringe upon the domain of dentists. When a medical man undertakes to pull a tooth he makes a great mistake. Thousands of good teeth are annually extracted by physicians, which might be preserved and made useful for years, if the physician were to send the patient to a dentist instead of attending to the case himself.

Dr. Luke Teskey rose to defend the members of his own profession. He thought that physicians have a much higher regard for dentists than the latter usually give them credit for.

Dr. Willmott thought there was not so much danger of physicians trespassing upon the domain of dentists, as of dentists infringing upon the province of medical men. Dentists could make no greater mistake than in trying to perform surgical operations.

Dr. Martin thought that physicians did altogether too much tooth-pulling. They extract teeth for other people, and send their own family to the dentist. (Laughter.)

Dr. Clements said that he had always found medical men exceedingly kind and liberal. He thought it extremely unwise that anything should be said reflecting on the medical profession. The matter then dropped.

Dr. C. N. Johnson, of Chicago, read a paper on "Practical Points in Operative Dentistry," a full report of which will be found in another column.

Dr. Willmott could not fully endorse the remarks of the essayist in reference to the use of matrices. He thought that only very skilful operators are likely to get good results from them. He quoted the words of an American dentist, who said, that "next to

the man who never used a matrix, the happiest dentist will be the one who quits first." Unless we can make a matrix conform to the concavity at the gum margin of a cavity, we will have imperfect fillings at that most important point.

Dr. Klotz said that for some time he had been using matrices made by himself out of strips of German silver. Each of these he bent over at the middle so as to form a V shaped appliance. This he placed between the teeth and packed soft impression compound into the open space, until the soft metal conformed almost perfectly to the contour of the tooth. When the compound hardened the whole appliance became very rigid. It could be easily removed by holding a heated burnisher against it for a few moments, so as to soften the compound.

Dr. Pearson was glad that Dr. Johnson had spoken so strongly in favor of hand pressure in inserting gold fillings. He believed that gold malleting had destroyed more teeth than it had saved. After some further discussion, the subject was dropped and business resumed.

Upon motion of Drs. Hipple and Woolverton, it was resolved, that at future meetings of the Society a stenographer be employed to report the proceedings, and that the DOMINION DENTAL JOURNAL be the official organ of the Society.

Dr. Willmott moved, seconded by Dr. McLaughlin, that the committee on constitution and by-laws be allowed to report progress and sit again. Carried.

The meeting then adjourned to meet in Barrie, July 14th, 1891.

THURSDAY,—The forenoon of this day was devoted to clinics and clinical lectures, at the Dental College on Louisa street.

Dr. R. E. Sparkes, of Kingston, inserted a gold filling by hand pressure alone. He demonstrated that gold could be perfectly welded without the use of the mallet, and with much less discomfort to the patient.

Dr. C. V. Snelgrove, of Toronto, had arranged to put on a Richmond gold crown, but the patient failed to appear. He demonstrated his method of obtunding sensitive dentine by means of ether spray, very satisfactorily, however. He began by first inserting a small pledget of cotton saturated with ether, and when the pain of the cold had passed away, he followed it up with ether spray from

an ordinary atomizer. In a short time the dentine was insensible to pain, and could be excavated without difficulty.

As no suitable patient was forthcoming, the fourth operation on the list, the implantation of a tooth, by Dr. Willmott, was not performed.

Dr. C. N. Johnson performed several operations. He inserted a large gold filling in the posterior approximal surface of a left bicuspid, starting the filling with crystalloid gold, using pellets for the body of the filling, and using No. 60 foil, well annealed, for the surface. He also filled an anterior cavity in an upper molar in the same way, to demonstrate the rapidity with which such a filling could be inserted. A cavity in the cutting edge of an upper cuspid he filled with a combination of gold and platinum. This he claimed makes a more desirable color than gold alone, harmonizing better with the complexion, particularly in the case of brunettes.

At one o'clock, the members of the Society practising in Toronto tendered a complimentary banquet to the visiting members, at "Harry Webb's." The committee in charge of the affair, and to whom much credit is due for its successful management, was composed of Drs. N. Pearson, F. J. Adams, C. V. Snelgrove, J. W. Oakley, A. W. Spaulding, J. B. Willmott, R. G. McLaughlin, Jesse Mills, A. H. Cheesebrough, H. T. Wood, E. Keefer and J. A. Troutman. Nearly eighty members sat down to the repast, which was a choice one. Dr. H. T. Wood sat at the head of the table, the vice-chairs being filled by Drs. N. Pearson and C. V. Snelgrove.

After the dinner, speeches were indulged in. The chairman, Dr. Wood, in a few neat remarks, welcomed the guests in the name of the city dentists and the Ontario Dental Society.

Dr. J. B. Willmott followed. An exceedingly pleasant duty devolved upon him. It was his duty to introduce to the meeting a representative of the profession from the United States, a young man whom he had first known as a most appreciative student in the Toronto Dental College. (Applause.) He did not believe there had ever been a more attentive or appreciative student in the College since its institution, than their brother practitioner from across the line. Soon after he left the College he had removed to Chicago, where he had broadened with the breadth of that interminable western country, and was now recognized as one of the

brightest young men in the profession. Yet he had always remained loyal to the Toronto Dental College, and had secured the recognition of its graduates by the State Board of Illinois (Applause).

Dr. C. N. Johnson, of Chicago, was then introduced. He was deeply sensible of the kindness that had been shown him since his arrival. He hoped that the profession in Ontario would continue to make special efforts to encourage social and professional intercourse among its members. There was something about the dentists of Chicago which made him admire them above all others. They were the best set of fellows he ever met. As President of the Chicago Dental Society, he extended a cordial invitation to the members of the Ontario Society to visit them in 1893, when they come to the World's Fair. He was proud of the fact that he was a Canadian, and with all due respect to the American institutions, he had no hesitation in saying that the teaching in the Toronto Dental College was more systematic than that of any other college with which he was familiar. (Applause). He had only one fault to find with it, the students were not required to do enough practical work. Instead of having to insert three gold fillings for examination, he would like to see them required to insert at least ninety satisfactorily. He looked upon the present staff of the College as being a most efficient one, and he could see no reason why the graduates should not be the peers of any in the world, as the standard for matriculation was head and shoulders above all others.

Dr. C. V. Snelgrove then introduced Drs. Martin and Clements, of the Eastern Dental Association.

Dr. C. A. Martin, of Ottawa, called attention to the fact that the chairman had welcomed the visitors, and given them the freedom of the city, at the *close* of the Society's meeting. He was wise. He had seen some of them before. (Laughter.) He was glad to see the various sessions of the meeting so well attended, and was particularly pleased that so many had arranged to be present at the banquet. Social gatherings, such as these, break down the little prejudices which dentists are apt to form towards each other. (Applause.)

Dr. Clements in a few well-chosen words thanked the members for the kindly manner in which Dr. Martin and himself had been entertained, as representatives of the Eastern Dental Society.

Hand-shakings and farewells were then exchanged, and the visitors left town by the afternoon trains.

Retiring President's Address—Dr. Davis.

GENLEMEN OF THE ONTARIO DENTAL SOCIETY,—I welcome you here to-day to our annual meeting, I congratulate you on the success of the Society, and I commend you for the interest you have in it's welfare, as demonstrated by your attendance. As retiring President, I have to express regret that I have not accomplished as much for the Society as you had a right to expect, and the honor of the position held by me demanded; in extenuation of my apparent neglect, I plead pressure of other business, yet my heart is in this Society and I earnestly desire its success. In the near future I shall be released from the performance of public duties for which at present I am responsible, and then, as a private member of this Society, I shall endeavor to make amends for my seeming dereliction of duty as your President. I will to-day briefly discuss some matters of vital importance to our chosen profession. Naturally we will at first speak respecting our Society and the manner in which it can be improved. As you are well aware, the late Ontario Dental Society was dissolved because it contained a few members whom the majority considered were not fit and proper persons to be members of an organization formed for the purpose of advancing the interests of the profession at large. I will here remark that I consider this move was entirely justifiable, and those members of that defunct Society who worked for its dissolution, were true, loyal and devoted members of the dental profession; it was their idea that a Society of Dentists should be formed, governed by a code of ethics which should be signed by every individual desiring membership in the same. Our Society to-day is the outcome of that movement. We have a code of ethics governing this Society which I consider should be heartily endorsed by each and every member of the dental profession.

It is a lamentable fact that our profession contains unprincipled men, whose only thought in life is the acquisition of the "almighty dollar," who care not what means they adopt, provided they can secure the patronage of the ignorant of the community. I do not

mean to say that they are dishonest in the strict sense of the word, yet they adopt unfair, dishonest, and disreputable means to attract patients to their respective offices. This Society is formed primarily for the purpose of binding together for improvement and intellectual advancement those dentists who will not countenance such nefarious means of gaining a living such as I have mentioned, and who also desire that laws shall be enacted which, taken in conjunction with the hearty support and loyal sympathy of the vast majority of the profession, shall result in the building up and the perpetuation of a professional standing for dentists which will be equal, if not superior, to any other profession. Now, brethren, what can we as individual dentists, do to secure this great desideratum? We can loyally and enthusiastically support this Society. We can give the members of the Board of Directors of the Royal College of Dental Surgeons our support and sympathy in their arduous work, and we can exert ourselves to increase the membership of this Society. Considering briefly the improvement of the Society, need I impress upon you the great desirability of attending the annual meeting of this Society? You should regard this as an imperative duty; you should attend even if your presence involves great personal sacrifices. Again, respond heartily to the invitation extended to you to read papers at the annual gathering; you will be materially benefited by carefully preparing the same, and you will confer a great benefit on your auditors. Again, come prepared to intelligently discuss the papers prepared by others, "read," and be informed, and our discussions will be interesting and profitable to all. Again, see that good officers are elected to the respective offices in your gift; have live, energetic and competent men in the places of trust and honor.

Again, see how rigidly you can observe the code of ethics, do not strive to be just within the mark just sufficient to save you from expulsion. I have noticed with pain and regret that some members have not been careful in this respect. Let this slight admonition from your retiring President suffice. You know full well that we can never arrive at that standard of professional excellence for which we are striving, if we are not all, each and every one, careful of every professional act. These remarks are pertinent to the subject of advertising more than anything else. I will not speak at length on this subject, as it was ably discussed at London last year

by our esteemed and respected friend, Dr. Willmott. Again, cultivate a spirit of friendliness, of good-will one toward the other, and do not reserve all this kindness, all this courtesy, for our annual meeting, exhibit it one toward the other in your daily intercourse. Be friendly, be kind, be courteous. It will not be long before we all will leave this scene of strife and turmoil, and journey to the great beyond. Many of the faces that smiled on me some eight years ago, at my first Dental Society meeting, are missing to-day. You miss some of the familiar faces that were accustomed to be present at our annual gatherings.

Should not our depleted ranks teach us kindness and courtesy to each other? Brethren, there is a living here for us all. If the majority of the dentists in your city or locality desire to have a meeting to discuss some matter of importance to them, attend the same. Do not plead press of business as the cause of your absence. Do not say that actually you have so much to do that you cannot possibly spare a moment. Your practice is so extensive that it consumes every minute of your valuable time, hence you cannot go. Be present, if you do lose a few dollars. Now, you who have extensive practices show that you respect and appreciate your less fortunate neighbors who have less. I believe in dental democracy. I believe that every dentist, so long as he lives up to the code of dental professional ethics, and is a respectable member of society, is equally as good as his neighbor. Let me impress this point on you strongly, viz., that both as a society and profession our success depended largely on the manner that our successful dentists treat those who are not so favorably situated as they are. Let me repeat this: members of this Society be kind, be courteous, be thoughtful one to the other. Do not, I beg of you, be guilty of the ungentlemanly conduct of telling how much you do. How that policemen have to keep the crowd from ruining your furniture in their mad rush to secure your distinguished services, while your dental brother across the street, with a thin, wan and pinched face, betokening poverty, watches with envious eye your success. Brethren, do not work entirely for yourself. Do a little for this Society, for your chosen profession. If you cannot take a prominent position in this Society, you can, at least, be mindful of the feelings of those who are professionally associated with you. There are reasons for these remarks of mine, and I trust that they will be received in the true spirit, and that much good will result from my words.

I now come to speak concerning a matter of great importance to the profession, that which is a source of anxiety to many, and respecting which there exists great diversity of opinion, viz., the establishment of a dental college. I believe that we should have a properly equipped dental college, we should possess a building which would be a credit to the profession, and that should be supplied with all the necessary appliances for the imparting of a sound, practical, and theoretical dental education; in conjunction with these essentials, the college should have a competent faculty. Given all these requirements, we would not only have students from our own Province, but from all parts of the world. How are we to secure all this? By hearty co-operation and united action after a free, calm, and unprejudiced discussion of the subject in all its details. Allow me to say that I have not one word to say in disparagement of the work performed by the Dean of the College, Dr. Willmott. No one in Canada has done so much for the profession as he. Our present professional standing is largely, if not wholly, due to his efforts. The profession are under great obligations to him, and any future arrangements that are made in regard to the College and the Faculty, cognizance should be taken of what he has performed in the past. I wish further to say that I am perfectly satisfied with the Faculty. They do their work well, they are learned, intelligent and common-sense gentlemen, and the result of each year's examination abundantly prove their fidelity to the trust reposed in them. Now this is all right for the present; but, as sensible men, should we not make some provision for the future? In the natural course of events we cannot expect to have in the future our College in the same quiescent, peaceful, and flourishing condition as at present. Is it not, then, the height of folly to have our College managed just for the present; no thought of the future? For a moment, suppose that all the Faculty desired to leave our employ, where would we go in search of our College? If death overtook those in charge we would then be compelled to assume all responsibility. I therefore emphatically remark that the Dental College should be managed by the Board of Directors of the Royal College of Dental Surgeons that all fees should be paid to the Board, they to assume all liabilities. The time to do this is when the College is prosperous, when everything in connection therewith is in the above mentioned condition. The

Faculty should be well paid for their services, they should know what amount they are to receive as a reward for their labor. They would not be in the same feast and famine condition as at present, viz., one year prosperous, large salary ; next year unsuccessful, small salary. What do I propose? This, that the Dental College should be owned and controlled by the dental profession, acting by their representatives, the Board of Directors of the Royal College of Dental Surgeons. The Faculty should be employed by them, and be absolutely under their control. The Board should grant a sum of money towards the erection of a college building, this amount could be increased by voluntary subscriptions from the members of the profession, and each year, as per arrangement agreed upon, each member should be compelled to give a certain sum, viz., three dollars, towards this laudable object. I know that all this will involve great work and great anxiety, but I say we owe a duty to the future ; and because the College, as at present constituted, supplies present needs, there is no excuse for us shirking our duty and leaving this important matter to be settled by posterity. I would like to speak concerning the importance of subscribing to a dental journal ; all I have said *re* attending our annual meeting and reading papers will apply with equal force in this regard. Subscribe for a good dental journal, and send items of interest to be published for the benefit of the profession. I will not further occupy your time. I again thank you for the honor conferred on me a year ago when you elected me as your President. I trust you will forgive my many shortcomings ; my hope, my desire is this that this Society will prosper ; that it will be a means of good to each and every member of the profession. Gentlemen, again I thank you.

Our College.

There is no denying the fact that considerable disaffection among the members of the dental profession in Ontario has grown out of the management of the Dental College. The discussions that have taken place at the last three meetings for the election of Directors show this only too plainly. It is our opinion, however, that all who took part in those discussions have the best interests of the profession at heart, and that it would not be a very difficult matter to effect an arrangement which would be satisfactory to all parties concerned, and to that end we would like to make some practical suggestions. As the matter now stands, the Board of Directors appoints the professors, prescribes the curriculum of study, dictates the length of the session and the amount of fees to be charged, and makes the Faculty a grant of \$150 annually. All other matters pertaining to the management are in the hands of the Faculty. Each student in attendance at lectures pays \$100 annually to the Registrar of the College, and from the sums thus received the Faculty pays all expenses, and divides the balance among its members. Now there can be no doubt that, with an attendance of over seventy students, such as there was last session, and an income of over \$7,000 a year, the professors get very well paid for their services; but it must be remembered that so large an attendance is very unusual, and as the standard of matriculation has been raised, is not likely to occur again. Then, too, it should not be forgotten that when the school was first established the professors did not receive anything like a fair remuneration for their services, and a little extra pay now should not be begrudged them. While we believe, however, that the Faculty should be liberally dealt with, both on this account and on account of the excellent services they have rendered in the past and are now rendering to the profession, yet we are of the opinion that the school established by the Board of Directors, and regulated by them, should be maintained by them, and that if the profession is liberal to the school, it should know the extent of its liberality. It is true the Faculty is responsible to the Board, and the Board to the profession, but as a matter of fact the working expenses of the College are never made public, and to this fact,

perhaps, more than to any other, is due the dissatisfaction of so many members of the profession. All this would be avoided if the Board were to assume entire control of the College and pay the lecturers a fixed salary. It may be said that the plan was once tried and proved a failure, the Board not being able to pay expenses. At that time, though, the attendance was small, and the expenses comparatively heavy ; moreover, the Board itself had no resources worth mentioning, and no means of obtaining help from the profession at large. Now, however, the situation is quite different. The number of students is much greater than formerly, and even after paying the professors a liberal salary, there is not likely to be a deficit. The Board has a comfortable surplus on hand of over \$3,000, and by a resolution passed almost unanimously in 1888 by the members of the College, the Board was empowered to have the law so amended as to provide for the payment by all licentiates of an annual fee, for the building and equipping of a Dental School. This being the case, we can see no danger of financial failure.

Another change which we think should be made, is in the manner of conducting elections. At present a licentiate who wishes to record his vote can do so only by attending the meeting in Toronto. As a result, only a comparatively small number of the licentiates ever vote at all. Possibly if the voting was done by mail the number of votes registered would be still less, but no one could then say that he had not had an opportunity. We doubt whether there is any class of dentists that takes more interest in the elections, and would be more likely to vote, and vote intelligently, than the recent graduates, and yet they are the very ones who, under the present arrangement, can least afford the loss of time and expense attendant upon a journey to Toronto. We know that when it was proposed a couple of years ago to change the manner of voting, the proposal was voted down by a large majority. It was thought then that the advantage of meeting together overbalanced the objection. But now that we have a Dental Society which will probably hold a meeting every two years in the city of Toronto, and which will undoubtedly be well attended, there is no reason why a meeting of the College should not be held at the same time, for the discussion of business matters, even if the voting or part of it should be done by mail.

We are of the opinion, too, that the Board of Directors should be a Board of Management only, and that the examiners of the College should be appointed by them. Years ago, when the College was first established, the Directors were probably elected because of their fitness to examine candidates, but such is not always the case now. We have not a word to say against the present Board. We believe it is composed of men well fitted to fill the position they occupy, but we do say that there have been men acting as examiners in past years, whose total unfitness for the position made them appear ridiculous to the students, and caused their fellow-examiners considerable trouble. So long as we elect men members of the Board not because of their fitness to examine, but because we endorse the particular line of policy they have espoused, we are bound to have this difficulty, and as matters now stand we can see no way to remedy it; except by having the Directors appoint examiners whose ability and fitness for the position are unquestioned.

We doubt whether it would be wise to attempt too radical changes at once. There are legal points to be settled, and some of the changes suggested would have to be made by the Local Legislature, so that time should be given to their consideration. We are in hopes, however, that some changes will be made, either in the line suggested on in some other direction, which will be satisfactory alike to the Profession, the Board and the Faculty, and which will restore harmony among the licentiates of this Province.

Editorial.

City vs. County.

One of the greatest mistakes many newly-fledged licentiates make, is rushing to the cities to settle. There are circumstances which justify some in choosing a city career in beginning; but it is a mistake to suppose that there is either less money or fame in a country practice. A beginner in the city has to compete with numerous and old-established practitioners; he has to begin with a maximum of expense and a minimum of income; he is tempted, when practice comes slowly, to cheapen his fees and lower what might become a good reputation. Unless he has capital to fall back upon, he must undergo no small share of worry in trying to make both ends meet; and at best, he frequently finds at the end of ten years, that he is financially no better, if not worse, than when he started. It has been a struggle against debt and difficulties and maintaining appearances.

On the other hand, there has been scarcely an exception to the success of young men who began in the country and the smaller towns. It is safe to say that by far the most prosperous, and certainly the healthiest, among our licentiates, have been those who hung out their "shingle" in our villages, and whose income, in spite of lower fees than prevailed in the cities, has almost invariably exceeded their outgo.

The provinces have a score of places with populations varying from 2,000 to 3,500 with no resident dentist. Nova Scotia, with its English population, has many small towns which badly need a dentist. We have repeated applications from country towns and villages for resident dentists, who will get whatever practice is to be had.

A Dentist in Parliament.

Dentists throughout the Province of Ontario, are, no doubt, glad to know that for the next four years, at least, a member of the dental profession will sit in the Provincial Legislature, as member for North Perth. Dr. Ahrens, the successful candidate, was born in the town of Berlin, in 1851, served as a student in the office of Dr. Wells, of Waterloo, graduated from the Toronto Dental College in 1878, and immediately after began the practice of his profession in the town of Stratford. As a dentist he has been very successful, and his popularity as a citizen may be judged from the fact, that he is the first liberal candidate elected in North Perth for twelve years. We trust that Dr. Ahrens, through the influence he will be able to exert as member of Parliament, will see that the rights of Ontario dentists are not infringed upon in any way, and that we shall have no more dentists licensed "by Act of Parliament."

The Ontario Meetings.

The reports elsewhere of the "Ontario Dental Association" and the "Eastern Ontario Dental Association," show that the profession in the premier Province of the Dominion is fully alive to its interests. There should be no difficulty in making this JOURNAL a monthly, if our subscribers would take the hint of Dr. Davis, "*Subscribe and contribute.*"

With reference to the death, on the 26th of April, in the office of Dr. Gendreau, Montreal, of a young man while under the influence of the vegetable vapor introduced by Dr. Mayo, of Boston, a full report will be presented in our next number. In the meantime, the feeble attempt of interested parties to blame the vapor as the direct cause, in face of the fact that it has proved itself to be the safest anæsthetic on record, and in every way much superior to nitrous oxide gas alone, has failed. As manufactured in Boston and Montreal, its effects are pleasant, deeper, calmer and safer than the purest nitrous oxide ever made.

Reviews.

A new Medical Dictionary. By GEO. M. GOULD, A.B., M.D., Ophthalmic Surgeon to the Philadelphia Hospital. A compact, concise vocabulary, handy in size, low in price, convenient for reference, authoritative, based on recent medical literature. This is not a mere compilation from other dictionaries. It includes several thousand words not contained in any other work of its size, and until the present year not in any other medical dictionary. Small octavo, 520 pages, half dark leather, \$3.25; with thumb index, half morocco, marbled edges, \$4.25. P. Blakiston, Son & Co., 1,012 Walnut Street, Philadelphia.

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