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# DOMINION DENTAL JOURNAL.

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TORONTO, MAY, 1895.

[No. 5.]

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## Original Communications.

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### Death.

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By Dr. A. J. McDONAGH, Toronto.

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*Mr. Chairman and Gentlemen :*

The title of my paper to-night does not suggest an excess of merriment to the average man ; however, it is a subject we are all very much interested in.

I do not propose to give a sermon on the moral side of the question, which, however, would be a comparatively easy task, but to enunciate a few facts concerning that last act which all must perform before they leave this terrestrial sphere.

In order to understand death properly, we must understand life. Now it may not seem an essential part of a dentist's education to understand all forms of death, and I do not know that it is ; but it certainly behooves us to understand those forms with which we have to deal, and to be able in a scientific way, and when possible, to prevent any such catastrophe in our office.

Well, to return to our subject of life, which, by the way, is something that we all understand and which no one understands.

Life is not any tangible thing, and therefore we cannot place or replace it at will, but it is, as the American courts in several States said of electricity, "Something which is nothing." It seems to be beyond and almost independent of the body. Everything in nature seems to have a certain kind of life in it, the vegetable as well as the animal kingdom ; but the life in both is very similar and depends apparently upon the particles, or rather the cell-life of the particles,

but we frequently see a person in which part, and a large part, of the cells are dead, still the person is said to be alive. For instance, a person may have one leg dead so thoroughly that it has become mortified, and still live; but there are certain parts of the body, which if we know them to be dead, we say the person is dead—for instance, the heart or the cerebrum, or if the lungs have ceased to act—whether we are sure the heart has ceased to act or not. Personally, I think we say persons are dead in a great many cases before they really are dead in fact, and my belief was strengthened the other day by reading in an old magazine about a graveyard which was being transferred to another place, in which, when the coffins were opened, six corpses had turned after being buried; and I have heard of several men who were supposed to be dead, and who were restored to consciousness before being buried. Why, when they were advocating a law in France to compel people to keep a corpse for a certain length of time, one of the strongest supporters of that law was a man who had been on the way to the burying-ground to be buried. And in his case, as well as in several other cases of which I have heard, a competent medical doctor pronounced the patient dead. Now all this, and much more that I could mention, goes to show that we are too hasty in pronouncing death.

Of course a dentist has not the responsibility of pronouncing death in cases of fever, etc. However, he may sometimes be called upon to refuse to believe a person is dead.

Supposing a man has been under the influence of chloroform, and does not recover as soon as you think he ought, you have no right to come to the conclusion that he is dead. You can take for example dormice. In the winter time they fall into a sort of stupor, which we might call latent life; you cannot without great care and patience discover any sign of circulation or respiration. They may not breathe more than a few times in an hour; however they are not dead, and if by any means you can increase the oxygen taken into the lungs you will very soon see the return of life. It is the same with many forms of animals. Their stupor seems to be sort of anæsthetic stupor caused by the great amount of carbonic acid gas contained in the system, normal with them, of course. On the other hand, with man it is not normal to have a great amount of carbonic acid gas in the blood. The blood is the great supporter of life. It is on which depends all our variations in health. Keep your circulation perfect, and you will be physically perfect. But diminish the supply, or pollute the supply in any part, and immediately have you bad results, vitality being directly reduced in the part or in the whole body, as the case may be. How soon an arm or a finger will become diseased and die! And how very quickly you lose consciousness when the

brain is deprived of its normal supply of good blood. To this fact some say the anæsthesia of nitrous oxide is due. However, although to a certain extent it is true, I do not altogether believe that theory.

Now, under an anæsthetic we have the blood in an impure state from two causes. One is the CO<sub>2</sub> and effete matter taken into it in the natural way, and another is the anæsthetic which is forced into it to a greater or less degree, according to the anæsthetic used. It paralyzes, to some extent, the powers of the brain, and also of the muscles of the heart. This is done by acting on the great nerve-centres in the brain. No living cells are destroyed, only the functions. Now, it seems quite clear that as long as the organs are in their perfect state they can be induced to move again. For example: You take the leg of a man that has died, to all outward appearances, and inject into it oxygenized defibrinated blood, and immediately you can detect nervous irritability, and get response by applying a battery. However, if you wait till the cell-life is dead, which takes place as soon as *rigor mortis* has disappeared, you will get no response. This, to my mind, is a strong proof that life has not left the body till after *rigor mortis* has left.

There is one thing certain: that is, that *rigor mortis* is either a part of life, or is a result of life, because we never have it unless immediately after, or at least a short time after, we know positively the person was alive.

There is one fact that goes very far to prove that life does not depart, at least, till *rigor mortis* sets in, and this is the fact that a person who dies without great exhaustion requires a much longer time for the phenomena of *rigor mortis* to show itself than one who dies after great exhaustion. This is exemplified on the field of battle. If you notice, the men who are slain at the beginning of the fight are not in a state of *rigor mortis* as soon as those slain in the evening, for the reason that they are then fresh, the cells of their bodies are still alive in great numbers; whereas, those killed towards night are worn out, half dead anyway. They have a great overplus of dead cells, both of the tissue and of the blood; consequently, *rigor mortis* follows almost immediately.

I may as well here describe what "*rigor mortis*" is supposed to be. I say "supposed to be," for I find a great divergence of opinion. Probably, like life, no man knows just what it is, or why it comes. However, the one opinion I was most taken with was this: that *rigor mortis* is the effect of chemical change which takes place after the nerves have ceased to have power any longer, making the muscles stiff and rigid in something the same manner as blood coagulates.

Now, this fact of life remaining, at least till *rigor mortis* sets in—if it be a fact, and I firmly believe it is a fact—is of the greatest

value to us, not only in cases of slow recovery from anæsthesia, but in cases where death takes place from other causes, such as from fright, which sometimes occurs, or from pain caused by the extraction of a tooth, which also sometimes occurs. You can see, if this theory is correct, death might have been averted. The principal thing to do in all such cases is not to be too quick to believe that death has occurred. You may see all the signs of death. The heart may apparently stop acting, and the brain may cease to show any signs of life. Never mind that; they may only be in a dormant state, and if you do the proper thing you may force them back into activity.

The greatest stimulant to the brain, you must remember, is good blood, and your object must be to get good blood into it; and the greatest stimulant to the heart is the action of the lungs. Here you have your work marked out for you. All you have to do is to follow common-sense methods; and the best method, in fact the only method of the present time, is to continue artificial breathing—not half-hearted or intermittent, but thoroughly, and for a much longer time than has heretofore been done. I would say not to give it up for two hours. This may seem a long time, but we have cases to prove it. I cited a case for you, in my paper on anæsthetics, of a girl in a hospital who had died of a certain disease, and was dead for nearly two hours when the professor brought his class to show them how to restore breathing by drawing forward the tongue, when, lo! to his astonishment she started to breathe and the heart started to act, and the poor girl had to die a second time.

A case similar to this, although different in many respects, was brought to my notice by one of our practising physicians. The other day he was assisting another physician in a case of *accouchement*, and the child was apparently dead. They put it in warm water and tried to bring life to it, but it would not come; so he took it into another room, and by keeping up artificial respiration for an hour and a half succeeded in fanning the slight spark of life into a flame, and some day in the future that child will be able to look upon him as his deliverer from the exclusion of all earthly pleasures. Whether he will blame or praise the doctor, I know not; however, time will tell.

You probably all know how it was discovered that you could assist a patient back to life by standing him on his head. It came about in this way: A prominent man, experimenting with chloroform, poisoned some rats with the fumes of the drug, and a half hour or so afterwards his son tied the tails of the rats together, and was carrying them out when one of the rats, after being thus treated for a time, kicked, and the boy told his father, and the father then brought all the rats back to life. This gave him the idea that human beings could also be brought back to life, and

experience has shown that such is the case. The influx of blood to the brain causes the brain to act on the heart, and the heart returns the favor, and by keeping the lungs in motion the blood is purified, consciousness returns and all is merry as a marriage-bell; however a marriage-bell will next minute toll for a funeral if necessary, so do not stop operations too soon.

I would like to impress on you the fact that the cessation of the breathing, the prolonged unconsciousness, or even the ceasing of the heart's action, does not mean death. Now the last spoken of, nearly always is taken to be a positive sign of death; but if you think for a moment you will see that, even if that were true, you have no way of telling that the heart has ceased to act. You cannot see it, and outside of this the heart does rest, stop perfectly still for a short time, every beat it takes; now, why cannot this period of rest be increased to a minute, ten minutes or an hour, and then be made to cease, and the heart resume its functions?

In the case of the girl who was dead for so long, that I mentioned a while ago, it is absurd to say the heart had not stopped beating; undoubtedly it had, and resumed its beat.

From the foregoing remarks you will see, the great necessity of keeping your head about you and not getting frightened, as you have every reason to believe that all you have to do is bring the patient back to life by hard work.

In speaking of artificial respiration, a few paragraphs back, I forgot to say the patient should be in an inverted position.

Well, I think I have said enough on this subject, perhaps I have overstepped my twenty minutes already; however I would like to mention the fact that although death from disease is supposed to be such a terrible thing, really it is almost a pleasant thing, as some men who have been conscious when dying have told. The CO<sub>2</sub> which is generated and not carried away acts as an anæsthetic to the brain, and all the senses become benumbed; one feels an absence of pain, and a delightful feeling of rest overcomes the dying. The contortions of the muscles are no more indications of pain than the screaming in the excitable period of ether anæsthesia, or the crying on the recovery from gas; they simply in death mean that some of the nerve-centres are becoming paralyzed.

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## A Cheap and Convenient Crown.

By R. E. SPARKS, Kingston, Ont.

It is generally conceded that the banded crown is the strongest and most permanent. In addition to the post, we have the cap for attachment. This adds strength, and protects the root from decay. The necessary expense, however, is in many cases a barrier to having this kind of crown adjusted. So we have to look around for the next best thing which will come within the means of the patient. Among the latter, the Logan, the Bonwill and other crowns answer a good purpose. Many of the older operators have laid aside an assortment of wooden crowns, which they have long ago discarded. Those who have not could get such an assortment at but little outlay, as they are cheap. They have some advantages over other cheap crowns. The Bonwill are weakened by the large hole through them necessary for their retention. There is danger of their disturbance before the amalgam is hardened; the Logan is not as easily fitted to the root, owing to the large post standing up in the centre. There is danger of splitting the crown if the post has to be bent at an angle to accommodate the crown to the root. To use a wooden pivot crown, prepare the root as for any other case. The crowns are made to approximately fit a groove across the root from labial to palatine surfaces. It is well to make this groove, as it gives additional strength to the attachment, and, with a rounded stone to grind the root, it is easier to cut the groove than not. In all these cases, unless the root be very short, I prefer to have the joint above the gum margin, as I find the cement less liable to dissolve out than if the joint be exposed. Select a crown and grind to fit the case. Take German silver wire of a size to fit the hole in the crown; cut to length for post; bend to any angle necessary. Roughen the surface of the two ends. To do this, nothing is so quick and neat as a jeweller's screw-tap. This is found very useful in the laboratory, some of the uses of which I may mention in another article. Having prepared the post, cement one end into the crown, taking care to have the bend, if any, in the right direction, and cement to the root. The post might be cemented to both crown and root at the one mixing; but very little time would be saved, as more time would have to be allowed before giving freedom of the mouth. This would be necessary, to prevent the crown from being disturbed on the post. It is economy of time to have a number of posts made up of various lengths, and having a screw cut, or other abrasion of each end. I was of the

opinion that a few inches of thread-cut wire of proper size might be kept on hand, and post of length to suit any particular case be snipped off when needed. *I found, however, that the densest part of the wire was the outer layer, and that, when that was cut through by a thread, the wire was very much weakened.* I would, therefore, prefer leaving that part of the post crossing the joint as strong as possible. [Italics ours.—ED. D. D. J.]

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### To Make Good Posts for Bonwill Crowns.

By R. E. SPARKS, D.D.S., Kingston, Ont.

Draw some fine wrapping wire through a solution of chloride zinc; then through a spoonful of molten tin. Now fold it upon itself in lengths, as long as and often as length and size of case require. Molars will usually take about six strands, bicuspid four, depending upon size of wire. A slight twist will hold them together in the centre. Unite them with a little soft solder or tin. This may be done with a soldering-iron, or by placing a little solder or tin upon the twist and holding it over a gentle flame. Snip off the ends and you have a post, to all parts of which amalgam will adhere, and having free ends to run into root canals at one end, and the other passing through the crown. After the surplus has been cut off, amalgam packed, etc., the free ends may be crumpled into the cup on the end of the crown and covered with amalgam. They are quickly made; but it is economy of time to have a supply of various sizes and length on hand, and select one to suit the case.

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### Translations.

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#### From German Dental Journals.

By KARL E. KLOTZ, L.D.S., St. Catharines, Ont.

ACCIDENT TO THE EYE CAUSED BY A FRAGMENT OF ENAMEL.—(Dr. Wm. Hirschfeld, Paris).—The following is a detail of an accident which happened to me, and I think will be of interest to my colleagues: Some time ago I excavated and prepared a cavity in an upper second bicuspid, and in cutting around the margin of the cavity a small piece of enamel the size of a pin's head flew into my eye, without remaining there over a second, and dropped down.



As a consequence the eye began to tear, but after wiping it dry there was no pain, and I went on with my work. During the day I scarcely thought of the mishap, but the following morning there was slight redness of the eye, showing that there was inflammation, but no pain nor flow of tears (epithora). I paid no further attention to it till the third day, when it began to pain and get very red. I consulted a young physician, a neighbor with whom I was acquainted. After examining it, he said that the fragment had slightly scratched the epithelium of the eye, and that the slight inflammation would pass off again without help. I went to work again, but the eye was troublesome, and instead of getting better, the following morning it was very red, and the tears flowed freely. It was also very painful with the slightest movement of it. I now consulted an oculist, whose diagnosis was not so favorable. The sharp edges of the splinter cut an irregular wound on the cornea. He stated that I must rest the eye and bathe it frequently with sublimate: in two days he would examine it again to see if it was free from infection. At the appointed time I visited him, but he found little improvement. The eye was now treated with atropin, and after using it for three days the pain left. After eight days he discharged me with the remark, "The wound is not thoroughly healed, but you may try to keep the bandage off in the house and work a little, if possible." There was no pain with the bandage off, but daylight was unbearable. On the evening of this day (the 14th) the symptoms were again unfavorable; the pain began again, also redness, and the tears flow freely all night. I now consulted another oculist, and he diagnosed the case as follows: "The splinter of enamel, which was infected, cut an irregular wound diagonally on the cornea. This wound should have been cauterized immediately. Fourteen days have now elapsed since the accident, and the infection has spread considerably. The infiltrated edges of the wound are plainly visible on the cornea. At present there is inflammation of the iris and conjunctiva. The prognosis is favorable, but it will take at least four weeks to bring the eye to its normal condition. Whether your sight will be impaired or not by the cicatrization cannot yet be determined." Treatment: Through the rapid progress the infection made in the two weeks, and the only means by which a cure can be effected, it was found necessary to perform an operation to extirpate every trace of the infected parts, which was done, after frequent applications of atropine for forty-eight hours. After three days it showed that the first operation was not quite successful, and a second was decided upon, which was more fortunate—it prevented the further spreading of the infection. The after-treatment was with atropine, and in exactly four weeks I could move the eye freely. The small cicatrix prevented me from seeing clearly for about one week, but;

against all expectation, this defect gradually diminished to but a speck, and I cannot notice a difference between now and before the accident occurred. I will admit that such unfavorable accidents do not often occur in our practice, but what happened to me one day may happen to a colleague to-morrow, and the question is, how are we to guard ourselves against them? I remember one of the professors at the college recommended the use of spectacles with ordinary window glass. I doubt if this advice would meet with general approval. It will be better to keep the head away as far as possible from the patient, particularly when cutting enamel, scaling, or work where a chip may fly into your face. Every dentist should also have an antiseptic wash in his office, so that, should a particle of something strike the eye, it could quickly be washed with the antiseptic and prevent further trouble. Should, nevertheless, disquieting symptoms appear, do not hesitate to consult a good oculist. We cannot always judge ourselves if it is only a little irritation or an infected injury we have to deal with. Immediate consultation with the proper person would have saved me from the loss of six weeks out of my office. To a busy dentist that means something.—*Monatsschrift für Zahnheilkunde.*

**A HAIR SWITCH ON THE NOSE.**—A girl was brought into the Rochus Hospital to the clinic of Dr. Lumnitzer, of Budapest, who had lost her nose through a disease. The doctor concluded to make a new nose with the help of the skin of her forehead. As the girl had a very low forehead, the doctor was compelled to shave part of the hair off her head to procure enough skin. The operation was successful, the skin taken from her head where the hair was shaved off came to the tip of her nose. The scars healed very kindly, and in a short time the girl had a very respectable nose, but with one drawback, viz.: on the tip of her nose grew a splendid switch of long hair. The doctor thought that by shaving and moving the skin the roots of the hair would be destroyed, but they were not; and if the girl is not very diligent with the razor, she can braid a nice switch on the tip of her nose.

**CARE TO BE TAKEN WITH GAS CYLINDERS.**—A gentleman carrying a cylinder of gas allowed it to fall to the floor at the Waterloo Station in London, whereupon it exploded and killed him. Since then the railroad authorities will not carry cylinder of gas, unless in prescribed steel cylinders, and these well packed in a case. Another accident: A cylinder of gas exploded in the office of a dentist in Bordeaux. It was kept in a small room, the floor of which caught fire. The heat caused the cylinder to explode. Fortunately, no one was in the room at the time of the explosion, so no person was hurt.

**A MISUNDERSTANDING.**—"Hold on, hold on," cried the timid patient, when the dentist took hold of the tooth with the forceps. "Certainly, don't worry about that," at the same time the dentist pulled out the tooth. "Why did you not stop when I told you to 'hold on?'" "I held on as firmly as I could." "But I meant for you to let go." "Why did you not say so?"—*Zahntechnische Reform.*

**DIES FOR SWEDGING.**—A very good way to make dies is: After the model is trimmed same as for moulding in sand, cover with tin foil well burnished to the palatine surface. Place model on a smooth surface, foil upward, and pour plaster of Paris over it; when hard, remove model, and you will have a good mould lined with tinfoil. Dry this and heat; pour your zinc or babbitt into it.

**DENTISTS IN RUSSIA.**—It is evident that they do not want the country overrun with dentists in Russia. A Ministerial Order has been issued, permitting only a certain number of dental students to be admitted yearly. The greatest number of dentists in Russia are Jews.

In cases of slightly wounded pulps, Dr. Spaulding uses gum camphor dissolved in alcohol. After the evaporation of the alcohol, the wound heals kindly under the remaining camphor. Cap with phosphate cement and fill.

Soap stone is the best material to warm rubber before packing in flask; it heats very quickly, and retains the heat longer than anything else.

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## Abstracts.

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By GEO. S. MARTIN, D.D.S., Toronto, Junction.

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**ANOTHER METHOD OF MOUNTING A LOGAN CROWN.**—I prepare the root in the usual way, make a cap of gold to fit it, drilling a hole over the root canal somewhat larger than the enlarged canal, place the cap in position on the root, and grind the crown which I have selected to fit the cap perfectly, then remove the cap from the root, fasten the cap and crown together with a little wax cement in as nearly their correct relation to each other as possible. I then place them on the root while the wax is still soft, so that any necessary changes may be made, remove the

two together and invest in plaster and sand, pack soft gold foil in the countersink round the pin until it is nearly flush with the cap, flow solder over this, and the crown is complete. Great care must be taken in soldering. — *Dr. E. R. Stevenson, in Dental Cosmos.*

Dr. M. D. Jewell, of Richmond Springs, says that he was brought up on plaster, but now prefers modelling composition, especially for lower dentures. It took him a long time to learn how to use it, but he finally succeeded. In getting his impression with it in partial cases he found it difficult to prevent the drawing from the palatal portion, but he learned to remove it from the mouth after the impression was partially taken, and soften the surface of the composition over the flame, and then replace it in the mouth and press firmly to place. In this way he gets a good impression. In using plaster he soaks the cast thoroughly with water before packing, then he gets a perfect cast without pits or roughness. He objects to the use of soap, as it softens the surface, but uses shellac, varnishing the plaster thoroughly, then lathering it well with soap. In this way he gets a perfectly smooth cast.—  
*Extract Dental Cosmos.*

An editorial in the *Dental Cosmos* calls attention to a movement in Mississippi having for its object the prohibition, by legislative enactment, of the use of nostrums. "The ghastly list of fatalities," the article goes on to say, "attendant on the ignorant use of cocaine preparations is long enough to demand a halt, and that the use of this drug be placed on a clearly defined legitimate basis." We have such a narrow margin of safety in the use of cocaine, in accurately known doses, that the use of a nostrum containing the drug in which its existence is either denied or of unknown quantity is little short of criminal. The mere passing of a resolution condemning the use of a nostrum is of no avail; nothing short of legislative enactment prohibiting its use will have any effect. If such an interpretation of the Act could be had as would prohibit the injection of a nostrum into the circulation, it would necessarily deprive the illegal quack of the only attractive feature of his business, and prevent his preying upon the ignorance of the community in the painless extraction of teeth. There is no excuse for the use of a cocaine nostrum, and "their continued use in the light of our present knowledge is simply paying high tribute to the greed of the nostrum-vendor, and dallying with a source of danger which, when its logical result in the shape of accident ensues, should deprive the author of it of all sympathy from his colleagues or mercy from a jury."

## Proceedings of Dental Societies.

### Ontario Dental Society.

The seventh annual meeting of the Ontario Dental Society will be held in Toronto on the 16th, 17th and 18th of July.

The officers and Executive Committee will do everything they can to make this meeting one of the best and most interesting ever held in Ontario. We would, therefore, urge every dentist to be present.

The programmes, which will be sent out later, will contain some special attractions.

Arrangements have been made with G. T. R. and C. P. R. Cos. for reduced fares.

CARL E. KLOTZ, *Pres.*

W. A. BROWNLEE, *Sec.*

### Royal College of Dental Surgeons of Ontario.

I send you herewith the report of the Dental examinations of the R.C.D.S. The annual meeting of the Board was held a few days ago. The most important business other than routine was the giving of notice that, after Sept. 1st, 1896, the certificates recognized for matriculation will be Departmental Second Class A. P., with Latin or Matriculation in Arts in the Canadian Universities.

The Board has also decided to build a college building, commencing the work this summer and leaving it completed for the session of 1896-7. For site, building and equipment, we purpose spending proximately \$35,000 to \$39,000.

Yours, etc.,

J. B. WILLMOTT.

The following students have passed the senior examination, and are admitted Licentiates of Dental Surgery: J. C. Bansley, W. C. Brown, W. J. Bruce, H. F. Burgess, C. Bowerman, W. Bell, W. J. Brownlee, C. W. Corrigan, W. B. Cavanagh, I. P. Cunningham, L. H. Dawson, Geo. Emmett, E. W. Falconer, E. Fitzpatrick, J. A. Fleming, Wm. C. Gowan, Wm. F. Ganton, Richard Graham, W. T. Griffin, Wm. S. Hall, A. Irwin, Fred W. Ivory, Wm. C. Kennedy, C. B. Lillie, R. A. Marquis, W. H. Mosley, A. E. Mullin, R. G. McLean, T. E. Oliver, E. W. Oliver, K. Peaker, J. P. Raleigh, J. F. Ross, H. C. Skinner, N. Schnarr, W. W. Thornton, J. N. Wood, A. J. Wyckoff, F. Walters, H. Wightman, R. A. Willmott.

The following will take supplemental examinations: Anatomy—W. A. Brethour, J. L. Leitch, A. McIntyre, J. Young. Medicine and Surgery—J. L. Leitch, T. H. Levey, O. A. Marshall, J. Young. Chemistry—T. H. Levey. Operative Dentistry—A. McIntyre.

The following students have passed the examination at the end of the junior year and are admitted to the senior class: R. H. Armstrong, J. J. Brown, T. E. Ball, W. Burnett, F. Brittin, J. A. Bothwell, J. M. Bell, A. E. Cummings, S. J. Campbell, L. G. Campbell, S. E. Foster, O. H. Hutchison, T. A. Hart, J. E. Johnston, G. R. Kennedy, W. E. Lundy, T. S. Mercer, L. M. Mabee, G. C. Mathison, H. McQueen, J. F. McMillan, C. E. Pearson, G. A. Roberts, A. P. Rogers, J. A. Simpson, W. G. Switzer, W. F. Templar, W. S. Westland, E. D. Washington, W. F. Adams, H. A. Croll, A. T. Sihler, P. Smith, W. C. Trotter.

The following juniors will take supplemental examinations: Anatomy—R. H. Henderson. Chemistry—R. L. Revell, J. G. Somerville.

The following will take these subjects over again in their senior year: Materia medica—F. Butler. Anatomy—F. Butler, J. G. Somerville.

The following have passed the freshmen examination and are admitted to the junior year: W. H. Bulmer, F. Buchanan, F. H. A. Baxter, T. E. Dean, W. H. Graham, W. J. Hill, W. D. Knight, J. A. Macoun, J. McLennan, W. A. B. Macdonald, C. E. Pearson, J. P. Pulkinghorn, H. E. Silk, J. Steele, F. T. Bridgland, W. Buchanan, C. W. Currie, M. F. Forsyth, C. K. Henderson, G. G. Jordan, G. T. Kennedy, G. A. Miller, W. McGill, R. G. McClure, J. R. Paton, S. P. Reynolds, N. J. Sills, M. W. Wright, C. E. Bean, H. J. Bannerman, M. J. Clark, F. G. Gilmore, G. Hume, A. R. Kinsman, J. A. Lambertus, S. M. Milne, A. A. McLean, R. J. McGahey, G. A. Pugh, A. L. Sutton, G. S. Richardson, W. D. Staples, W. J. Williams.

The following will take supplemental examinations: Histology—E. L. Brereton, H. J. Kennedy. Bacteriology and Comparative Dental Anatomy—H. J. Kennedy. J. A. Lambertus will complete technique.

The following will take the metal work over again, in whole or in part: R. M. Armstrong, G. H. Kennedy, A. P. Rogers, H. A. Croll, W. C. Trotter, F. Buchanan, T. E. Dean, G. G. Hume, H. J. Kennedy, J. McLennan, N. J. Sills, S. J. Campbell, G. C. Mathison, J. G. Somerville, R. H. Henderson, W. H. Bulmer, H. J. Bannerman, G. G. Jordan, J. A. Lambertus, R. J. McGahey, S. P. Reynolds, J. N. Shearer, M. W. Wright, S. E. Foster, W. F. Adams, R. L. Revell, F. T. Bridgland, M. J. Clark, C. K. Henderson, G. A. Miller, G. A. Pugh, H. E. Silk, W. D. Staples.

### Dental Association of the Province of Quebec.—Board of Examiners.

The regular annual examinations began on the 3rd of May and were concluded on the 6th.

In the matriculation examinations, Dr. H. Aspinwall Howe and the Rev. Abbe Verreau were the examiners. There were seventeen applications for admission to study, and the following received the matriculation certificate: John K. Cleary, Thos. D. McGregor, Arthur F. Craig, William Boultenhouse, Achille Forest.

There were twenty-three candidates for primary examination, of whom the following were successful :

Passed in Anatomy—A. Langlois, H. Lanthier, H. Lemieux, F. Paquette, A. O. Rioux, Jos. Versailles, D. Waters, T. Coleman, H. G. Fauteux, H. C. McConnell, R. J. McHarg.

Passed in Chemistry—T. Coleman, H. G. Fauteux, H. H. Kerr, R. J. McHarg, J. Panneton, F. H. Bradley, A. J. Jack, A. Langlois, F. Paquette, A. O. Rioux, D. Waters, E. A. Cleveland, J. H. O'Connor.

Passed in Metallurgy—T. Coleman, J. C. Dion, H. G. Fauteux, E. C. Martel, R. J. McHarg, A. O. Saucier, F. H. Bradley, L. C. Cormier, A. J. Jack, H. Lanthier, H. Lemieux, F. Paquette, J. Roy.

Passed in Physiology—J. N. Boisvert, T. Coleman, H. G. Fauteux, R. J. McHarg, J. Panneton, A. O. Saucier, F. H. Bradley, J. A. Jutras, A. Langlois, H. Lanthier, H. Lemieux, F. Paquette, A. O. Rioux, A. D. Gareau, Jos. Versailles, D. Waters, J. H. O'Connor.

There were twenty-two applicants for licenses, of whom the following passed and were granted the diploma of Licentiate of Dental Surgery: Thomas Coleman, J. C. Dion, J. M. Delisle, E. Dubeau, H. G. Fauteux, S. Gaudreau, A. W. Gravelle, J. Lamarche, J. R. Lalonde, R. J. McHarg, Jos. Panneton.

Herr Namaan H. Keyser states that he has soldered aluminum without the use of any flux at all, by heating the metal and scraping the surface so as remove the oxydizing film until the metal is what is called "tinned," then union takes place easily enough. The alloy used consists of tin 50, silver 25, aluminum 25, and melts at 75°, but almost any tin solder will, it is stated, serve equally well.—*Ex.*

## Selections.

### The Ideal Dentist.\*

Dropping in upon our revered friend, Dr. Gerrish, of Exeter, this summer, he told me of a deplorable case of empercism. This being only one of many such where egregious ignorance, lack of conscience and venality are the leading factors, I resolved to address you on "The Ideal Dentist."

The ideal dentist must be first a man, and second a dentist. No one is a man who has not some sort of a moral basis for his life and conduct—some standard of honesty and fair-dealing, some care for the honors of his profession and the good of his patients, as well as for his own. To be a man, one must never forget that he is a member of the community in which he lives, and must not sacrifice the interests of the public in the pursuit of his own, for, as our friend from Worcester told us last year, "Society has its way of getting back at the most cunning of empirics." It is good work, work of permanent value, that in the long run wins for the dentist a solid reputation and a growing income. He who would be a man and a successful dentist must not be cheated by even Huxley's saying, "Self-assertion is the essence of the cosmic process." Egoism is not to be underrated, but even the dentist must push his individuality into his generation in such a way as to win his own approval, and be a guide, not a warning, to future practitioners. Paul, Luther, Columbus, Lincoln, pushed themselves—they live, but they did this not at the expense of but by benefiting their kind. A showman may get rich by humbugging mankind, but most dentists who try it come to grief. Lincoln had the key to the situation when he so wisely said, "You may deceive all the people some of the time, and some people all the time, but not all the people all the time."

The man who has assiduously devoted his time and energy to perfecting himself in operative or prosthetic dentistry should abate nothing of his claims and should speak with the positiveness of his convictions, but his chief reliance must always be on the value and quality of his work. A strong personality, suave manners and a pleasing exterior are great factors in a dentist's success to-day. Affability and a winning smile are patient-getters, and even football hair, tall hat and bell skirts may have their attractions; but good honest work is the surest if not the quickest road in achieving

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\* President's address, read at the banquet of the New Hampshire Dental Society, Oct. 11th, 1894, by G. H. BOWERS, D.D.S., Hasting, N.H.



an enviable reputation. It is possible for a dentist to be conscious of his own ability and put a just value on his services, and yet temper with an urbane modesty his egoism and thus render it unobjectionable. A supremely conceited man is a painful sight and an obnoxious companion, with no stomach for dental conventions, which he is convinced could teach him nothing. He arrogates to himself the conceit that he is the only man who could have performed a given operation or successfully accomplished such a difficult piece of work, while there are many who are doing equally as well or better, for dental science moves on.

That happiness and prosperity are the sure perquisites for doing, is a wise maxim. Frances De Sales well says, "To obtain perfection it is not necessary to do singular things, but to do common things singularly well." In the inception of doing, attend closely to the trifles, and by a steady going forward, doing the duty of the moment honestly and conscientiously, a permanent temple is reared. Our work is constantly revealing *us*; *how* a man does tells what *he is*. It is important, therefore, to consider first the ideal man—for it takes such to be an ideal dentist. An ideal man alone can resist the temptations of our profession and withstand the allurements growing out of the pressure of competition with nostrum empiricists and cheap quacks. But even the highest-toned individual, with the loftiest conception of his profession, even one who is "every inch a man," with a just but not over-weening estimate of his own skill and worth, cannot neglect a few practical considerations which have much to do with the make-up and success of the ideal dentist. However great a man and whatever his skill, he cannot afford to overlook many seeming trifles to which I now call your attention.

The ideal dentist is sympathetic. How often people come to us and say, "We have always been to Dr. Z. We liked his work, but he was so rough and unsympathetic that we have resolved to make a change." A cold, indifferent and repellent manner must annoy and aggravate nervous and sensitive patients. Even skill and conscientious painstaking alone will not win and hold such. To propitiate this large class by sympathy and gentleness unlocks treasures of wealth and wins a reputation for the dentist. The grateful patient will never tire of extolling the virtues of such a dentist.

The ideal dentist will seek first to put himself in harmony with his patients. He will win their confidence and respect by diverting their thoughts and fears by pleasant and agreeable suggestions. We know how near to this ideal some of our Massachusetts friends have come. We have noted their gentle persuasiveness, their soothing touch. If we have not their subtle hypnotic endowment to assuage the mental anguish consequent upon a dental operation,

we can cultivate it. A pleasant exterior and kind words will put us in touch with our patients.

The ideal dentist will consider well a matter of such vital importance as "personal appearance." "The apparel oft proclaims the man." Whether the suit be coarse or fine, whether it be cut in the latest style of sartorial art or not, his general air must be one of scrupulous neatness. It is a pretty safe custom of judging the thoroughness of a man's work by the care he bestows on his appearance. The shiftless man will do shabby work. We weave into our very garments that which comes out in the daily routine of our professional career.

In a paper read before the Connecticut Valley Dental Society this spring, the essayist said: "The diamond stud is an indispensable adjunct to the *fin de siècle* dentist." A diamond stud may be a very desirable addition to a man, but it may also call attention to the unworthiness of its setting. A dress coat and tall hat may become a gentleman, but they only make the savage ridiculous. So the diamond stud, to the discerning eye, makes all the more glaring any defects in the individual parading it. What we are appears, and any flaw or lack in us becomes all the more noticeable by the means we take to hide it. The ideal dentist shuns all temptation to vie with Barnum in humbuggery.

The ideal dentist aims to provide a light, neat and airy office. It will be well ventilated, and free from all objectionable odors. He will have it open to the play of the sweet, pure air as it is wafted from the wings of rosy-fingered Aurora.

The ideal office is attractive, presenting to the eye of the patient an inviting composite picture—a blending of the artist's studio, the humorist's salon and the Bohemian's retreat. In it there will be no display of the instruments which thrill with nameless terrors the nervous. In the ideal office of the ideal dentist all the latest contrivances for the convenience and comfort of patients will be provided as far as possible. The ideal dentist will at least play the part of a gentleman, greet patients with a smile, and seat them in his easiest chair, touching business with the graces of society.

The three requisites for an ideal dentist *are* ability, availability and responsibility. The first is native, the second acquired, and the third imposed.

The Dental Convention gives to men of ability the curriculum in which their native abilities may acquire availability. The Dental Convention is the dentist's forum for the exchange of ideas and comparison of methods. The thought, time and energy put into such conventions are wise and profitable investments, whatever those too conceited to admit that there is anything for them to learn from others may think or say. The ideal dentist.

does not cheat himself with any *laissez faire* policy. He feels that he must contribute his share in the general advancement from which he will profit. He will seek to maintain and upbuild his society, and not refuse to be harnessed to the car of Progress. It is impossible for any dentist, with native ability, to return to his practice after listening to carefully-written essays, after seeing the beautiful work of the clinics, without a large increase of availability; and it is no light matter to win a new sense of and a nobler pride in his profession. The Freemasonry here generated not only stimulates personal ambition, but that nobler emulation to advance and elevate the profession. No one can become an ideal dentist by cutting himself off from his fellows any more than an individual can be a civilized being—in solitude.

Responsibilities are imposed by abilities made available by the labors of others, as well as by his own best endeavors. Our profession has its ethics, which no ideal dentist dreams of disregarding, and those who do are overtaken sooner or later by self-imposed penalties. I have hinted that our availability is in a measure a joint stock product, which imposes upon every practising dentist an obligation to contribute his share, according to his ability, to the general stock of available skill and experience, and to share in the expense and duties of his society. And now we come to another feature of the ethics of our profession.

In the development of civilization competition grows ever wider and sharper. We cannot escape, nor do we wish to do so, from this law of progress; but we may avoid most of its demoralizing complications by cultivating a regard for the ethics of our profession. Advertising is the most seductive siren in our field, especially to those possessing a much vaunted or attractive secret—some exclusive nostrum. He who only cares for ephemeral success and quick returns, goes in for cheap and dishonest advertising. In the majority of cases, the secrets and nostrums advertised are like the Shibboleths of other quacks and parvenus. Such are deterred by no considerations of honesty. That such practices undermine and drag down the profession of dentistry has no weight with them. Many of these quack impostors and pretenders seem to prosper by practising upon the credulity of the people, although most reap the reward they merit. The legitimate practitioner, confident of his general knowledge and of the sterling quality of his work, is sometimes sorely tempted to disregard the principles of "our Alma Mater," and ignore the rules of its ethics. He sees the quack aided and abetted by the public press. It often seems as if professional reticence means self-effacement. But there is lots of *lie* in surface appearances. Recall the tragic story which our friend from Worcester told us last year—the cheap man, who depends upon anything short of the best work, goes to the wall—for all nature is pledged to the

survival of her darling (the fittest) and the success of the most worthy. Having ability, and seeking to make that available, let us cherish a proud confidence of ultimate success. As we thus meet for mutual aid, higher efficiency and good fellowship, let us encourage each other to maintain the highest standard of our professional honor. Let whosoever may become the dupe and plaything of his own selfish interests, let whosoever will become an odious fester on the body politic ; but let us preserve our own self-respect and a due sense of the ethics of our profession, by studying, not how best to bank on public credulity, but how to excel in the service we can render.

And now, gentlemen, having, however poorly, painted my ideal dentist, it remains for me simply to congratulate you on your laudable purpose, manifest by your presence, of realizing this ideal of reaching this high mark of excellence.

The legal profession stands practically where it has always been, the minister still dwells on the return of that scamp of a prodigal, and the physician even now proclaims his merit for removing tumors when the success of the operation suggests the old proverb, "dead men tell no tales ;" but our profession is yet in its infancy. It is advancing by Pitantic strides. It is plainly destined to reach undreamed-of heights and to beggar the wildest fables in its achievements. Never before has man lived amid such triumphs of greatness and skill. Our intellectual and practical progress is greater than even we ourselves fully realize. Who before interrogated science with such astonishing success? It is our proud task, and ours the sublime privilege, of exercising our gifts and employing our intelligence in adding to the comfort and health of our fellows. Slowly, but gradually, the dentist is climbing the pinnacle of professional fame by the sure path of usefulness. We are rearing the great temple of dental art. Every wave brings its gifts, every breeze wafts its fame ; science whispers its glories, and posterity shall bless it. We do well to be awed by our wonderful achievements and exalted by alluring prophecies. Let the grateful world venerate its priests and trumpet the names of our geniuses who have sacrificed so much that we might render so exalted a service.

Standing on these nineteenth-century heights, I am moved to the liveliest congratulations, because there does not exist under heaven a profession so grand and noble as ours. It is based on science and sound education ; it rises through enlightenment. It is protected and fostered by our institutions, and reflects the supremest in this enlightenment. Original inquiry and individual achievements bring their costliest to its service.

The commanding might of its practical energies are directed by a genius that will lift the dental profession until it reaches the skies. *Let it rise.*

### Saving an Old Tooth.

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"A little nonsense now and then  
Is relished by the wisest men."

The doctor stretched my mouth open until he could see my heart beat. Then he said cautiously: "I think we can save that tooth." Running a long, inquisitive wire into the tooth to a depth of about sixteen inches, he stirred up something known as a "nerve." In response to my fervent yell he asked, "Does that hurt?" I wiped the tears out of my eyes and said simply, "Yes." Then he got some Zahn-Arzt crowbars and pried here and there at the tooth, occasionally waking up that cussed nerve which had been growling ever since at its unceremonious handling. Then he said: "We will have to kill the nerve first, and fill the tooth afterwards."

"How long will that take?" I asked anxiously.

"Oh, you can't tell about that," he replied; "you can have it pulled if you prefer it," he added. I went to the glass and smiled at myself. It was as I feared. If that tooth was yanked out, my smile was ruined.

There is nothing so unpleasant as a fore-shortened smile. The absence of a tooth at either end of it gives it a wolfish character. A tooth out of the centre of a smile simply wrecks it. No, I could not afford to have that tooth pulled.

Stimulated then by the strongest ingredient in the male character, viz.: vanity, I resolved to take my medicine, and so the pact was made.

I began to make regular trips to his office, and soon became inured to scenes that at first chilled the glad blood in my veins and caused the soft and significant goose-pimples to start from my flesh as a trumpet-call. People with a strained expression of countenance met there, and the doctor's little room, which I had mentally named the chamber of horrors, re-echoed with groans, yells and imprecations. And yet he was a gentle-hearted man. He did not revel in those pandemoniums of whoops and sobs, but the stern necessities of dentistry compelled them.

His instruments of torture, called by courtesy dental tools, were many and varied. He was very skilful in his profession, and when he took a job he did it in first-class style. The dental tools are simply copies in miniature of articles used in the Spanish Inquisition and on refractory prisoners in the Tower of London. There are monkey-wrenches, rasps, files, gouges, cleavers, picks, squeezers, drills, daggers, little crowbars, punches, chisels, pincers, and long wire feelers with prehensile, palpitating tips, that can reach down through the roots of a throbbing tooth and fish up a

yell from your inner consciousness. When a painstaking dentist cannot hurt you with the cold steel, he lights a small alcohol lamp and heats one of his little spades red-hot, and hovers over you with an expectant smile.

Then he deftly inserts this into your mouth, and when you give a yell he says, "Does that hurt?"

Well, the first thing to do was to kill the nerve. The nerve is a long, starved angle-worm growth that starts in the tooth somewhere and grows down and up with three distinct tentacles or feelers. One of these connects with your brain, one with your heart and the other with your soul. Every time the nerve is touched an electric shock goes to each of these terminal points, and you feel as if you had been shot, stabbed and burned with a hot iron at one and the same time.

The doctor toyed with this nerve of mine for some weeks. Whenever the combination was made I used to kick out with one foot and cry, "Ow!" or grab his hand and say appealingly, "Oh, don't." Then he would say: "We won't hurt you."

Sometimes he would lull me into a fancied security and I would be counting 300 or saying to myself, "Even this will pass away," when all of a sudden 4,000 rattlesnakes would dart their venom into me simultaneously, a hundred mules would kick me, a score of bumble-bees would sock their stingers into me and the world would come to an end. Then I would know that he had stepped on the nerve with the "teaser." The "teaser" is the boss "feeler," being fine as a horse-hair and of the most undoubted yell-producing power.

After a long while the nerve capitulated. I had lost eleven pounds in the process, but a great gain had been made. The tooth was now as tender as a mush-and-milk poultice, and even to tickle it with an ostrich tip would produce exquisite agony. He used to soothe it from time to time with various lotions, and finally he began to quarry out the dead bone a little. This was gruesome work, for there were tender places all over the tooth, as thick as spots on a leopard, and every time he jammed a chisel into one of them I almost fainted. I was kept in a continuous cold sweat for weeks thinking about it before I went, going through with it while I was at the office, and thinking about it after I had left.

After he had amused himself by digging and blasting out a lot of little galleries in the upper part of the tooth he began to "treat" the root apertures.

This is a most ingenious and refined cruelty and by some dentists is preferred even to nerve-killing. The process is to first feel around with the "teaser" on the sensitive roots; next to put a little cotton dipped in carbolic or nitric acid, creosote or

turpentine, around the "teaser" and stick it away down into the same place. This hurts powerfully. It cleanses the roots of impurities, though. A lighted match would be less painful, but the aperture is not large enough to admit one. After this some cotton filling is stuffed in and you are told to come back in three days. That night you wake at twelve o'clock with "your soul in arms and eager for the fray." You dig out all the filling and pace up and down the room, saying at intervals, "Oh, gosh! why didn't I have it pulled?"

Then you go back and the treatment is renewed. The doctor varied the upper filling by putting in hard rubber filling after awhile. This is put in soft and hot, and hardens when it gets cold.

When you wake up with this hurting you at night you can't get it out. A red-hot hairpin may get some of it out, but you are liable to glance off and get your gums into the sear and yellow. So you generally recoup by taking the Lord's name, as some say, in vain, but it soothes you, anyway.

When the roots are ready to fill, a gladsome joy pervades your entire system. The birds sing, the skies are bright, roses bloom, men and women are better, the whole world has changed in the twinkling of an eye. The day the roots are filled you go home and kiss your mother, and eat your supper on both sides of your mouth. For, mark you, when a tooth is being filled, the jaw it adorns is practically side-tracked until the crucifixion is over.

The last scene in the drama was when the doctor put in the top filling. The roots had already been plugged with a red putty, which had hardened into a regular tooth cement. I lay back in the chair and the tap, tap, of the hammer and punch sounded as melodious as Joaquin Miller's line of "A woodpecker pounded a pine-top shell."

I was wrapt in a dream of delicious joy. Not like some of my acquaintances would I be forced to launch myself into society with a fragmentary, misfit smile. No, indeed. And when the whole thing was through I shook the dock's hand and he told me that he had never meant all along to so kill me by inches, but that dentistry was dentistry.

Then I went to the glass and smiled. "*Veni, vidi, vici.*"—  
ERNEST MCGAFFEY, in *Chicago Herald*.

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### Sensitive. Dentine.

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It was lately asserted by one who stands as a teacher, that there can be no sensitiveness where there is no nerve, and the remark has been frequently repeated and seemingly accepted as aphoristically true. Whether this be so or not depends upon what is meant

by sensitive. Sensation, sensory, sensibility, sensitive, sensitized, sensorial, sentient, and sense, are all derived from the Latin *sensus*, to feel. The signification of the word sensation, as it is ordinarily employed, is an impression conveyed to the centres by an efferent nerve, and this implies the functional activity of nerve tissue. That impression may be pleasurable or painful, or it may even be unrecognizable. There may be a reflex action produced by an efferent nerve, which is the result upon an efferent filament of an impression that was unknown and unfelt at the time. Hence, sensation does not always imply feeling, but the mere ability to respond to irritation.

A sense is a faculty which, through the aid of specially developed organs, is able to receive either external or internal stimuli, and to transmute them into impulses which, when conveyed to the sensorium, we call sensations. These sensations usually imply feeling, or consciousness of them, but not necessarily so. It is probable that the author of the exceedingly indefinite remark quoted, intended to assert that a tissue without a nerve-supply was incapable of receiving and conveying recognizable impressions, or those which shall result in efferent impulses. This is not true, for there are too many instances in point which disprove it. All unicellular organisms are without differentiated tissue, and yet they respond to external and internal stimuli. The *amœba* withdraws itself at once in response to irritation. The lower jelly-fishes, the protozoa, including sponges and rhizopods, are sentient in the interpretation of endeavoring to escape disagreeable impressions. Even vegetables are in some instances responsive to rude assaults, and the sensitive plant shrinks from the touch of a disagreeable object. The dentine of a tooth, when in an irritable condition, becomes exquisitely responsive to external impressions, and yet it is without nerves or nervous tissue supply.

The secret of this seeming physiological contradiction undoubtedly rests in the physical structure of protoplasm, which is the basis of all animal and vegetable life. It is composed largely of the proteids, and is that which contains the essential elements of all vital tissues. It is the indispensable constituent of every living cell, and in this sense may be considered the essence of life. Of itself it is the vital principle of bone, muscle, connective tissue and nerve, and is endowed with some of the properties of each. It enables the *amœba* to move without muscles, to contract without nerves, and to digest without organs. By its aid the infusoriæ keep their cilia in constant action, and thus fulfil the muscular functions of organized existence. It is, in fact, an epitome of structural life, and it forms the broad plane upon which vegetable and animal meet, and in which their separate lives blend into a harmonious unity. It is the initial point from



which radiate the various branches that have been differentiated into all functional vitality. Viewed from the protoplasmic standpoint, there is no chasm which separates the lowest vegetable from the highest animal. It is the common ground upon which existences stand, and from and through which the evolutionist traces every development of organic matter.

The dentinal fibrillæ, the gelatinous albuminoid contents of the dentinal tubuli, partake of this protoplasmic character. They are without structure, and hence contain no nerve tissue. But they are composed of the elements that enter into the structure of tissue, they embrace the proteids that are found in the germinal part of the seeds of plants, and like the structureless sarcode of the protozoa, while without sentient feeling they are capable of response to external impressions. The dentinal tubuli have this albuminoid composition, and they are in relation with organized tissue. Their connection with the tissue of the pulp is continuous, and that tissue is fully organized and has an abundant nerve supply, through which the impulses originally received by the protoplasmic, gelatinous dentinal fibrillæ, are conveyed to the sensorium.

Protoplasm being non-vascular, it cannot exhibit the usual phenomena of the inflammatory process, but that there may be some of the pathological changes that attend that condition must be indisputable. If it responds to external stimuli it must also be responsive to that which is internal. If it is subject to irritation at all, the continuous application of provocatives must result in an exacerbated, exalted receptive condition, that makes it unduly and abnormally susceptible to exasperative agents. And that is just the condition of exposed and irritative dentine. In its normal condition, while the fibres may convey external impressions, it will be but faintly, and they will not be of a distinctly painful character. Under the goadings of repeated stimuli and of continuous exposure to external influences, they take upon themselves that exalted condition that greatly increases their receptive and transmissive power, and the impressions conveyed to the pulp and to its nervous filaments, and thence to the nerve centres, become of a distinctly painful character.

The dentinal fibrils being of an albuminous nature, when their connection with living matter is severed and they are subjected to the influence of the air and external agents, coagulation will be spontaneous, as this is the first step in the process of their melting and breaking down.—DR. W. C. BARRETT, in *Dental Practitioner and Advertiser*.

## Correspondence.

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### The Examination of Examiners.

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*To the Editor of the DOMINION DENTAL JOURNAL :*

SIR,—I cannot say that I fully agree with such a sweeping revolution as you proposed in the January issue, in the matter of the examination of the fitness of teachers to teach and examiners to examine. It would be a very difficult matter to adjust, and it would not be fair to limit the selection of teachers and examiners to licentiates who possess superior degrees, because a superior degree, as you have yourself repeatedly shown, is not always a proof of superior ability, either theoretical or practical.

I am well aware that fitness to teach and to examine is not possessed by many who otherwise are excellent practitioners. There must not only be previous education, and no small measure of special training, but on the one hand a good knowledge of the subject, and on the other an honorable determination to lay aside personal feeling against special candidates. It needs no ability to ask hard questions, but it needs some for the examiners frequently to answer them.

Dental students at present are not asked to take the complete curriculum in anatomy, physiology and chemistry of the student going forward for a medical and surgical degree. I believe they should ; but in the meantime examiners who ask questions taken from those asked in the second year of medical schools go beyond the limits of law or fair play. Until dental students are obliged to take a full medical course, it must be clear that such severe examinations are unfair. Moreover, it is apparent that examiners sometimes ask questions which we know they are educationally incompetent themselves to answer or even explain. It does not seem to occur to some of them that the object of examination is, not so much to discover what the candidate does not know as much as to find out what he does know. There is probably no single dentist on the continent, of the utmost ability and experience, who could not be nonplussed by some of the vague and controversial questions frequently asked by examiners, whose ability and experience are limited.

If there is suspicion of premeditated determination to "pluck" a candidate ; if it can be proved that individual examiners have declared or even hinted, before examinations occur, that particular

candidates will be "pretty smart fellows if they pass me," the examiner should be personally impeached and prosecuted, and a writ of mandamus issued by a rejected candidate against the Board as a body. If members of Boards have a responsibility to themselves, they have also one to the profession, and they have one to the public. If malice and persecution of educated candidates can be established, while favoritism has been shown to candidates of inferior opportunities and ability, the matter should be taken into the courts, in the interest of the honorable members of the profession as well as in that of the public we serve.

I would be disposed to doubt the practicability of examining the examiners. But having known instances of premeditated "foul play" towards well-educated men, who had unfortunately obtained the personal ill-will of one or two examiners, I would favor a test case in the courts, and compel examiners to produce the answers of a candidate who felt convinced that he was unfairly and unjustly dealt with. An examiner who would let his personal prejudices affect his decision ought not only to be shunned and despised by his brethren, but impeached in the courts. The examiners are elected to act with fair play. I am sure the majority of them invariably do so, and are incapable, as honorable men, of doing otherwise, and would be only too anxious to protect their own honor from the dangerous duplicity, intrigue or malice, even of one of their own number.

Yours, etc.,

LICENTIATE.

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*To the Editor of the DOMINION DENTAL JOURNAL :*

SIR,—In the January issue you made a very wise and proper suggestion, that there should be some way of assuring us that examiners are qualified to examine, and I wish respectfully to contribute my mite towards the arguments that may be suggested to show that it is not only wise but just.

I am in possession of all the questions asked in an examination, and copies of replies given by three candidates who were rejected; and I submit them to your judgment, and ask you if you believe that fair play was shown, or if you believe that there was justification for rejection. Two of the examiners openly told the students that certain answers were altogether wrong, and put their opinions against those of the very highest authorities on questions about which there is no controversy! One examiner, for instance, told a student that arsenic is not a tonic! Dr. T. Lauder Brunton, in his text-book of Pharmacology (the greatest authority in England), places arsenic at the head of his list of those tonics which act on

the blood (page 358), and says that, like antimony and phosphorus, it has "a special action on tissue change," and that it is used "for its local action on the intestinal canal *as a tonic*," and "as a tonic in cases of nervous disease."

Dr. H. C. Wood, in his "Therapeutics," page 505 (the greatest authority in the United States), says: "When arsenic is administered in small repeated doses, it may act *as a tonic* . . . and in certain cachexias it increases the muscular strength and the general vigor. The history of arsenic-eating indicates that the drug has some positive tonic influences over nutrition." (!!)

"Gorgas' Dental Medicine" is our text-book. What does it say? Page 143: "Arsenious acid in large doses is a virulent, irritant poison; but in doses of one-sixtieth to one-twelfth of a grain, properly administered, *is a tonic*, increasing the appetite and improving the secretions, both in quality and quantity." (!)

I could quote dozens of authorities. I ask your opinion on other answers enclosed, which were disputed, to show that some of the examiners themselves were grossly ignorant of the subjects, and even of the answers to their own questions! And it is before such men that we have to submit our prospects of practice!

Other circumstances of partiality are so clear that, for my part, I am ready to appeal to the profession as a body, and would not fear to bring the matter before the courts.

Yours, etc.,

A REJECTED CANDIDATE.

[We withhold our remarks on this subject at present.—Ed. D. D. J.]

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## Editorial.

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### New Boys and Old.

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The practical dentist who was born since the *regime* of rubber is perhaps ignorant of the personal skill that was required in the older days, when prosthetic dentistry was confined to the metals. We were lately examining some cases on gold and platinum, made over forty years ago by the older practitioners of Toronto and Montreal, and an expert crown-and-bridge worker remarked as he handled them, "I had no conception that such work could be done. Such beautiful jointing of fourteen gum teeth, such banding, lining, soldering, and finishing, and with the rude implements used in those days, surprises me." At the same time we were shown a lot of single and double crowns, partial plates, and various contri-

vances modernized by the name of "bridges," which proved two things: first, that there was as much mechanical ingenuity among that class of men, and more common sense (not to speak of honesty), than exists among the cranks who run the crown-and-bridge fads to such extremes to-day; second, that they were personally skilled and were able to do their own mechanical work from start to finish. The fact is, mechanical dentistry has degenerated. In days of yore the student had a much more thorough practical training in all its branches, lasting during an indentureship from five to six years. Every dentist manufactured his own plate, solders, and even many of his instruments. We remember the joyful time in the laboratory, grinding and preparing the "body" and "gum" for continuous gum work, and the hours spent at the furnace in which the latter was heated. There is no modern porcelain to-day to rival the continuous gum work made in our Canadian cities thirty years ago. The dentist, as a rule, was an expert in working the metals, and was much more of a chemist and metallurgist in his own laboratory than the average practitioner to-day. There are hundreds of modern dentists who could no more make a set of teeth on gold from start to finish than they could explain the microscopical character of the osteoclasts. The fashion to-day is to hire mechanics and take personal credit for their work. The instinct of trade and commerce is the guiding star in many an office.

It is not particularly pleasant to make these statements, but they are true. We see no use for journals which fear to speak the truth even at their own expense.

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### Ontario Dental Society.

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The officers and Executive Committee are making a great effort for a good meeting of the Ontario Dental Society, to be held in Toronto on the 16th, 17th and 18th of July.

They hope to be able to present to those attending a programme of useful and instructive papers and clinics, which cannot otherwise but be of benefit; and everyone may go home loaded with information, knowledge, and new ideas, as well as old ones revived.

It is by attending regularly the dental meetings that enables the dentist to keep up with the times. Papers are read and thoroughly discussed; new ideas are brought out; clinics are given where many a little manipulation can be seen which would be difficult to describe in words in a journal; and last, but not least, one has an opportunity to meet and become acquainted with his colleagues, thus forming a friendship which is renewed every year, if they should not have the pleasure of meeting during the interval.

### A Serious Question.

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The profession in Ontario is to be congratulated on the steady educational progress being made, and the fact that in spite of imperfections to which every institution is heir, and possibly mistakes from which few, if any, have been free, the representative bodies show an honest earnestness, without the least suspicion of partiality. It is evident, however, that the business of making dentists is progressing too fast, and that the supply is already far beyond the demand, the result being a serious and in many cases a shameful lowering of fees, and the inevitable degeneracy of skill. No man will continue giving ten dollars' worth for two, unless he is a knave and has some dodge in reserve, or a fool who has not sense enough to see the certain ruination before him. We are gathering materials for a public exposure of the "Cheap Jack," and will be under obligations for assistance from those who are familiar with facts. We hope to be able to show that the public is being badly swindled by this class, while the profession has already received a blow from which it will take years to recover. It has now become a question if something should not be done to slacken the rate at which men are crowding into a profession already overcrowded.

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### Post-Card Dots.

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29. When is the latest date upon which the annual due must be paid to the Dental Associations of Ontario and Quebec?

Ontario : On or before the 1st November.

Quebec : On or before the 3rd day of next September, when the regular meeting will be held for the election of a new Board.

30. Is there any provincial difficulty in the way of educational reciprocity between the provinces of Canada?

The provinces of Canada can only legislate for their own provincial interests respectively. They may legislate against each other ; and while they may legislate for each other, their jurisdiction is really limited to their own boundaries. This provincial autonomy has its weakness as well as its strength. One province, backward by reason of local circumstances which time alone can remove, may be utterly unable to educate its students and yet legislate against all education elsewhere. The province having the highest standard, preliminary and final, is justified in legislating against lower standards. The "difficulty" is to raise the other provinces to that standard. That is entirely their own business. When it is done, reciprocity can be better discussed.

31. A teacher in one of our colleges told us that there is no such thing as "Colophony," "Olibanum," "Myrospermum peruiferum," "Myrospermum toluatanum," which is given as the components of "Pheno-Banum," or "Quick-Cure." Please explain.

The teacher probably was honest, and told all he knew. Even teachers can be taught. "Colophony," under the head of "Colophonia," is described in Harris' Dental Dictionary. It was so called from Colophon, the city from which it was first brought. "Colophony" is in Dunglison's Medical Dictionary, 1860 ed., p. 225. "Colophony," under the head of "Resins and Balsams," is in Fowne's Chemistry. It is even in most of the common English dictionaries, and is there spelt "Colophony," and in Ogilvie's is referred to as "a mixture of two different resins named the *sylvic* and *pinic* acids." "Olibanum"—in Dunglison's and appendix of United States Dispensatory (Wood & Bache), page 1371, etc., etc. "Myrospermum peruiferum," or balsam of Peru, in Poresia's Materia Medica, pp. 717, etc., etc. "Myrospermum toluatanum," a balsam of Tolu in Poresia, pp. 720, etc., etc. H. I., Que.

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## Reviews.

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*World's History and Review of Dentistry.* Edited, compiled and revised by HERMAN LENNMALIN, D.D.S. From the most reliable and authentic resources available. A compendium of facts and historical data regarding the dental profession. Chicago: W. B. Conkey Co., 351 Dearborn St. 420 pages. \$5.

This work is valuable and yet disappointing. The editor tells us in the preface that "the selection and compilation of ponderous matter from a voluminous correspondence and tons of data and statistics" was no child's-play. One ton is 2,240 lbs. avoirdupois. We fear the labor has excited the imagination of the editor in the matter of weight. However, the book is the only one of its kind and very useful to anyone who wants to know the *status* and requirements anywhere in North America, Central America, West Indies, South America, Europe, Africa, Asia and Australia. All the laws of the different countries are published in the book; also the names of the colleges, journals and associations, and the number of dentists in each State of the Republic. It is well worth the money.

*Transactions of the American Dental Association, 1893-4.* Philadelphia: S. S. White Co. We have to thank the Publication Committee for a copy of these transactions, neatly issued.