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# DOMINION DENTAL JOURNAL.

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## Original Communications.

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### Microbes, and What They Are Doing.

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By D. V. BEACOCK, Brockville, Ont.

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There are three conditions requisite to produce septic fermentation, viz., warmth, moisture and microbes.

Pathogenic fermentation produces ptomaines. An open wound is a constant invitation to floating germs; these soon generate pus.

Now, what is pus? Ask any number of physicians or dentists, and note how the answers will vary. One says dead matter is pus. Another replies, pus is dead blood. One tells us it may be defined as the result of a pathological state, pyogenia. Another, the viscous matter of a sore, a well-known product of inflammation. Webster defines pus as the matter of an ulcer.

Dr. Thomas, in his medical dictionary, defines pus as a bland, cream-like fluid found in abscesses or on the surface of sores.

Dr. Robert Hunter, in his dictionary, states the word is from the Greek and Latin, and in the Sanscrit is called *puya*, meaning to stink. He says it consists of pus corpuscles, liquor puris, and other histological particles, and may be healthy or laudable, sanious, ichorous or watery, purulent or serous, and may become cheesy and ultimately calcify.

In Cleveland's dictionary we find pus defined as matter produced by suppuration, a cream-like fluid, heavier than water.

Virchow calls pus dead or destroyed tissue.

Dr. Black's is undoubtedly the best definition ever given us. He defines pus as the liquefaction of the plastic exudate, by the operation of microbes, death of the ameboid cells, from the changed chemical character of their matrix. Here we see the exudate or matrix of these ameboid cells so changed that it fails to support them; they die, and the resultant mass is pus. These cells are called white blood corpuscles or leucocytes when they are in the blood, when they are outside in the tissues, they are called ameboid or wandering cells. They pass into the tissues from the blood vessels by a process called diapedesis, which means a oozing through without rupturing the walls of the vessels confining them. These cells are the white blood corpuscles, or more properly undeveloped connective tissue walls, and one of their functions in nature is to repair injuries. The plastic exudate thrown out during the process of inflammation, forms the matrix in which these ameboid cells develop. They are always found imbedded in it, and it is absolutely essential to their final development into living tissue.

By ameboid properties is meant not only the capability of free movement, but the possession of a power which enables a cell to take foreign particles into its interior.

An exposed pulp is in a similar condition to an open wound, and both must be kept entirely free from contact with pus producing germs. If once they enter this plastic exudate, it begins to liquefy, its chemical character is changed, it fails to support the ameboid cells, consequently they die; they are then known as pus corpuscles.

In open wounds this process always takes place on the outer surface; these ameboid or undeveloped connective tissue cells continue to pile up in the form of living granulations, some of them floating away in the liquefying mass that ought to have formed their matrix. In this way the matrix or exudate is kept constantly filled with ameboid cells, tending to develop into healthy granulations. On the contrary, the liquefaction of some of this plastic exudate carries off some of these cells in the form of pus.

If the former exceed the latter process, healing by what is commonly known as first intention takes place; if on the other

hand, the latter process exceeds the former, destruction of tissue is the result.

The accumulation of the waste products of the pyogenic fungi occurs in the pus of abscesses, rendering it unfit for the continued growth of the fungi which produced it. The operation of the fungus thus becomes limited to the fresh exudates thrown in from the wound. This is in turn limited as the walls of the wound become more solidly packed with ameboid cells, that is, living matter which is not so readily attacked. Microbes of pus formation cannot maintain themselves continuously in contact with living healthy tissue. This is a plain proof that vitality is one of the best germicides.\* All pus, no matter where found, whether upon the surface, in closed abscesses, or situated deep within the living tissues, is filled with micro-organisms.

The aim of the modern surgeon is to obtain the healing of wounds without suppuration. To this end he eliminates all micro-organisms, and uses dressings to prevent the access of germs to the wound. The intelligent dentist applies the same principle in his treatment of exposed pulps. Chronic and acute inflammations and abscesses of the mouth are due to the same pathological conditions which produce like results elsewhere in the body.

Modern aseptic dentistry consists in sterilization by germicides, dessication, etc. A fresh wound, if made aseptic, will heal by first intention ; but if pyogenic germs are allowed to enter in any manner whatever, pus will be formed and trouble ensue, provided anti-septics are not carefully used.

In all those cases where the pulp chamber is opened for the first time, as in the removal of a living pulp, or a pulp destroyed by the operator, we should never have an abscess occur, indeed, it should be impossible except through direct infection.

An intelligent physician or dentist can now do almost anything he pleases, providing he conforms to aseptic and antiseptic methods.

In this way bacteriology may be said to have revolutionized the theory and practice of dentistry and medicine.

Aseptic treatment means to preserve a clean wound from septic infection. Antiseptic treatment simply means the prevention of further extension of existing trouble. The one may be said to prevent fire, the other to extinguish it. For a similar reason anti-septics are not disinfectants ; they do not destroy micro-organisms,

they only prevent or inhibit their growth. A germicide may be all three, antiseptic, germicide and disinfectant.

To the physiologist, bacteria are subjects of the greatest interest. Only think of the occult manner in which they produce the deadly and poisonous ptomaines, the mysterious character of fermentation, which is in numerous instances produced by them, lactic fermentation or the souring of milk, ammoniacal fermentation, vinous fermentation, the rotting of fish, meat and other nitrogenous substances: in fact, all putrefaction is the result of the ceaseless activity of these countless organisms.

When we investigate or carefully examine bacteria and their doings, from a pathological standpoint, we reach the very climax of wonder, wars, pestilence and famine. In fact, nature's most dire cataclysm sinks into insignificance compared with the destructive work of these pathogenic and infinitesimal organisms. It is fortunate for the human race that only a small proportion of bacteria, comparatively speaking, are pathogenic; the great majority are benign, their great work being for good in the world's economy. In acting the part of scavengers, they simply return the elements of organization back to their original source with renewed activities for newer and higher combinations.

Every man among us lives by changes wrought in the chemical constituents of his environment. Each one of us is daily producing changes in quantities of chemical compounds known as food material, and constantly giving it back to the material world in chemical forms completely changed. The microbe is doing no more or no less.

The pathogenic germ is man's enemy, the benign germ is his friend. Bacteria are necessary as well as useful, for without them our farmers and gardeners would have little better than a desert or barren waste to till. Even our digestion is to a certain extent dependent on the family of benign germs, and millions occupy every portion of our bodies, no doubt for a beneficent purpose, although we may not realize it.

Paradoxical as the above may appear at first sight, it is nevertheless true that many of these germs are physiological. Pasteur isolated no less than seventeen different micro-organisms in the mouth; some of these dissolved albumen, caseine, and others converted starch into sugar. It therefore follows that the fermentative

change they produce in food is a most important feature in digestion.

Even the very pus that these micro-organisms have been so persistent in elaborating has a beneficial purpose as a remedial process, such as granulation, etc., and frequently takes the place of far more morbid processes. It also affords a mechanical means of removing foreign bodies, *e.g.*, thorns, splinters, bits of broken glass, etc., from soft parts into which they may have been driven, and likewise in the formation of abscesses, may sometimes serve to eliminate morbid matter from the system.

All nature moves in a continuous change of cycles. Grass and herbs spring from the earth, air and water; herbivorous animals live and thrive on these, thus changing the constituents into other forms of food. These again are eaten by man and animals, and are again changed into other forms to be again transformed into other material, making food for microbes and finally returned to the earth from which they all originated. Thus we see the whole animal world may be said to be preying on each other; even one set of microbes are destroyed and eaten by others (phagocytism), and these again by others, so that Swift's couplet is quite applicable:—

“The very fleas that do us tease,  
Have lesser fleas to bite them,  
And these again have lesser fleas  
And so *ad infinitum*.”

Out of the eight different processes by which the animal tissues are enabled to protect themselves against the action of bacteria, there are two which are very efficient, *viz.*, phagocytism, and what may be denominated the bactericidal condition. Phagocytism, whether under normal or pathological conditions, is one of the manifestations of *vis medicatrix* nature. Under this condition, cellular activity prevents the development and increase of micro-organisms.

Under the latter a chemical condition is induced, which not only destroys microbes, reduces their nutrition, but retards their growth and multiplication.

It is by the activity of the ameboid cell or phagocyte that the gills and tails of tadpoles are removed during their metamorphosis.

Between the pyogenic microbe and the phagocyte there is a constant war even unto death.

Hess, to prove that the phagocyte cells were really aggressive in attacking pyogenic organisms, caused to be inserted, under the skin of a dog, a small capsule of glass with only a minute opening in one end. Into this capsule he had previously injected a quantity of Agar-Agar infected with staphylococci. The capsule, after a sufficient time, was removed from among the tissues. The phagocytes were found to be engorged with cocci.

You have all no doubt heard or read of Metchnikoff's vivid description of an abscess. He likens specific inflammation to a warfare, in which the invading army is represented by micro-organisms, and the resisting force by leucocytes. Even in details the analogy was maintained. Notice of the arrival of the invaders was telegraphed, so to speak, by the vaso-motor nerves; the line of communication, the avenues of mobilization, were represented by the blood vessels. The aim of the invader is to secure the territory, to multiply rapidly, to live at the expense of the host, and to manufacture and circulate substances injurious to him. The aim of the resisting forces is to encircle the enemy, inclose him, digest him, and render him inert in battle. Many phagocytes die in the process, and if in large numbers, the heaps of the slain represent pus. An abscess therefore is a battle-ground, densely packed with dead bodies.

As dentists we have to admit that pyogenic fungi are ever present in the mouth, consequently every wound we inflict is in peril of becoming infected by them.

Dr. Miller says that every tooth extracted which is not performed under antiseptic precautions, is nothing less than an inoculation, and whether the subject proves refractory or not will depend upon a variety of circumstances, such as the size of the wound, resistance of the parts, the character and number of bacteria entering the wound, the health and vitality of the patient.

Dr. Sternberg says he found in his own mouth at all times, sufficient microbes in the saliva to kill a rabbit in twenty-eight hours after being injected.

Microbes produce disease by manufacturing substances by their physiological processes of growth and development, which is injurious to health. Many are found to be quite harmless, others are dangerous in the highest degree.

Microbes may be carried through the circulation to a focus of

inflammation, and there set up a suppurating process. For instance, if the ear of an animal is injected with pus forming microbes, a wound in the extremities of the body may become infected through the circulation.

It is quite evident that microbes may easily become the cause of many of our diseases. For instance, a wandering corpuscle from some suppurating tissue, getting entangled in some debilitated part of the system, begins its work of generation, and thus boils, carbuncles, swellings, and many other serious troubles result. These cells or corpuscles are not the cause, it must be remembered, until they have become demoralized by microbes or ptomaines.

It is still a matter of doubt as to what and how these ptomaines or waste products are produced. In many cases they are the excreta of microbes themselves, in other cases they are the result of the splitting up of more complex substance, or coalescing of simpler bodies by the disturbance of molecular state of the compounds caused by the growth of the micro-organism. Waste products of microbes are analogous to the waste products of the other forms of life. In a large proportion of cases they are active poisons. They are *always* poisonous to the form of life that produced them, that is, providing they exceed certain proportions. Strange as it may appear from the above, it will be seen that microbes actually manufacture their own germicides, as certain substances which they elaborate are the excreta of germs which are poisonous to them, just as the excreta of any animal is poison to it.

Prof. Hamilton asks: What is the immediate cause of putrefaction, and of septicemia, or blood poisoning, if bacteria are not? and states his belief that the cause is the resultant products of bacteria, known as ptomaines, which have been found to be crystalline alkaloids.

Dr. Black mentions that he has often passed a platinum suture wire, after making it red-hot, to disinfect it, into a foul root canal, and then into stiff cultivating media, four or five inches, and has seen the development of microbes along the track of the wire from one end to the other. Now, he asks, if these organisms can be carried into stiff gelatine in this way with a perfectly smooth platinum wire, what may we expect from a barbed broach thrust through a foul root canal into the healthy tissue beyond?

Prof. Miller states, in looking over the literature of the subject, he



had found fifty cases of death resulting from abscesses caused by diseased teeth, or from dental operations performed without proper antiseptic precautions; and says, doubtless there have been hundreds of such cases, but the practitioner is not willing to have them made public. Serious results may also follow the wounding of the soft parts of the mouth, by the accidental slipping of germ laden burs, drills, excavators, etc., while working on the teeth. A young lady graduate had the misfortune to accidentally wound her finger while using the dental engine. The wound proved fatal.

You will, no doubt, be inclined to ask, What has all this to do with dentistry? I can only answer, very little, to those who think our profession consists in simply knowing how to manipulate the gas-bag, forceps and vulcanizer. On the other hand, it means a great deal to those who look upon dentistry as being a branch of the healing art. The mouth being the portal, or entrance to the system, it exerts a much greater influence over our general health than either patients or physicians are willing to admit. Only think for a moment, that the mouth may at any time become the focus of infection in many ways, and thus lay the foundation for some of the most dangerous diseases, and some of the worst of these may be brought about by the dentist's inability or carelessness. It behoves us as dentists to make ourselves well acquainted with the science of bacteriology, for the literature of medicine is *filled* with triumphal records of aseptic and antiseptic surgery.

Anyone who has occupied himself with this subject knows that the loss of appetite, nausea, and general ill-health are often brought about by improper attention to the mouth, causing a chronic state of putrefaction, the products being absorbed by the mucous membrane, with serious results to the general health, and these patients finally retored to good health by simply putting the mouth in a normal condition.

Tuberculosis is an infectious disease that is readily conveyed from one person to another, and is caused by a micro-organism which attacks the lungs. Expectorations follows; the bacilli are in the sputa, these may lodge in a decayed tooth, on the gums, or in other parts of the oral cavity. Has it ever occurred to any of you that these micro-organisms may be conveyed from the mouth of a consumptive to the mouth of a healthy person, for it is said that when direct inoculation occurs by means of an instrument in the hands of a dentist or physician, it is almost certain to prove fatal?

I sometimes think we do not realize the fearful responsibility resting upon us as dentists in regard to this matter. Let me illustrate: We use the gum lancet, or extract a tooth in a mouth in which there are specific ulcers; the instruments are covered with infecting pus; we wipe or clean them off, or at least we think we do, and imagine that they are clean, while in reality they are in the best possible condition for inoculation; an innocent lady takes her seat in your beautifully upholstered chair, her gums are lanced, or a tooth extracted with this same instrument. What is likely to be the result, I ask, of such a slipshod performance? I will leave you to draw your own conclusions, and say nothing of the long train of *unfortunate consequences* that may follow, even to  *succeeding generations*.

It cannot be too strongly impressed upon our minds that all instruments should be not merely cleansed, but thoroughly *sterilised* after use, or the next confiding patient may become inoculated.

We should ever remember that the law of asepsis rules every part of the great territory of antiseptic work, and in no department more than in dentistry.

If cleanliness is next to godliness anywhere, it is certainly doubly so in the mouth.

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### Cases in Practice.

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By S. S. DAVIDSON, L.D.S., Ottawa, Ont.

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In December last, Miss A. M. applied for relief from an aching tooth. Upon examination I found her suffering from a badly abscessed left upper central incisor, implicating the lateral, cuspid, bicuspid and first and second molars on the left side, the wisdom tooth not yet being erupted. All these teeth were in a very disgusting state, pus oozing from around their roots, and emitting an odor far from pleasant. She was wearing an artificial denture containing a right central, lateral and cuspid.

The history of the case as gleaned from the patient, was as follows:—Some two or three weeks previous she noticed the left central becoming sore to the touch, which gradually increased, the

tooth becoming loose with slight swelling of the surrounding tissues, accompanied by great pain. Living in the country, some distance from the city, she applied to the family physician, who lanced the gums immediately above the tooth, telling her that would remove the difficulty, and sent her home. However, the pain and swelling increased, and when she came to me her features were fearfully distorted, and the state of affairs mentioned before existing. I immediately removed all the teeth on the left side, getting a great discharge of pus. Upon probing I found the bone was also diseased; but as the diseased portion was not yet separated from the living, dismissed her for a week, giving her a wash of boracic acid, 1 oz. to a pint of water, with instructions to use frequently in order to keep the mouth clean. In a week I again saw her, and found the diseased bone still firm, and the discharge of pus still undiminished. Dismissed for another week telling her to still use the same wash.

On January 2nd, I next saw her and found the diseased bone had become separated. A physician was called in, chloroform administered, and the bone extending from the central to the first molar removed. After thoroughly cleansing by syringing with warm water and carbolic acid, 1 in 40, the cavity was plugged with lint saturated in boracic acid, and the patient dismissed with instructions to change twice daily. Saw her again in a week and found everything going on nicely. Healthy granulations had been thrown out and every indication that healing would be rapid. She was then told to discontinue the use of the lint plug and simply syringe the cavity twice a day with the boracic solution. On the next visit she complained of pain in the region where the central had occupied, and upon probing I found a smooth, pointed surface, which I concluded was a tooth, but as I could not under the circumstances arrive at any definite conclusion, she was asked to call again in a week, which she did, and I found a fully developed right cuspid occupying the position which the offending central had occupied. This was extracted. Healing went on rapidly after this, the cavity filling up with healthy tissue to such an extent that a casual observer would scarcely believe that such a large piece of bone had been removed. An artificial denture was inserted, and when I last saw the case, May 28th, there were no indications of any return of her trouble. No doubt exists in my mind but that the cuspid endeavoring to erupt was the exciting cause of the disturbance.

This is the only case of the kind that has ever come under my notice, and as it deeply interests me, I would like to hear from the members of the Association any similar experience which they may have had.

*Case No. 2.*—On June 14th, a physician practising in Ottawa, and well known for his hunting propensities, came to my office to have a lower wisdom tooth treated. After this was accomplished he asked me if there were any other teeth in that vicinity that required treatment. Examining the second molar I found what I thought to be an amalgam filling in the grinding surface, which had the appearance of years of service. I remarked that the filling in this tooth was still giving good service. He declared he never had a tooth filled, and never before had required the services of a dentist. Upon closer examination I found the cavity filled with a grain of No. 4 shot. This had been jammed in so hard that it completely stopped the opening to the cavity. Around the edge an oxide had formed, and to all appearance was preserving that tooth as well as the most carefully inserted gold filling. The only way the worthy doctor could account for it, was in eating a tempting morsel of wild duck, of which he is very fond. The shot being imbedded in the meat, had been crowded into the cavity unknown to him and there remained. Strange to say, he would not have it removed and replaced by a more costly filling, remarking, "That is good enough for me."

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### Osseous Union of Temporary Teeth.

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By W. A. ROBERTSON, D.D.S., Cookston, Minn.

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While fusion of the teeth is uncommon, specimens are to be met with in almost every dental collection, showing that it occurs often enough to make it of practical importance to the dental practitioner.

Having just come into possession of an interesting specimen of this class, I thought it might be of interest to some of your readers to have it described. This specimen is of particular interest from the fact that one of the teeth is a supernumerary, and

as the teeth belong to the temporary set, it is of somewhat rare occurrence, so that a short history of the case may not be amiss.

About three years ago the patient was brought to us by his mother to have some filling done on his front teeth. We were struck by the fact that there were five superior incisors, there being three on the left side, two of which overlapped and were decayed. Upon preparing them for filling we found they were united, and drew the attention of the mother to this fact, at the same time asking her to save them for me when they were taken out. A few weeks ago they became so loose and sore that the application of a thread was all that was necessary to accomplish their removal.

Upon close examination there is perfect union of the roots, one of which is considerably absorbed while the other is almost entire. There is a shallow groove in front and a deeper one behind, showing the point of union of the roots. The fusion is perfect from the cervical margin to the apex of the root, and has the appearance of having originally included the crowns as well, but owing to the enamel being undermined by decay and broken away, it is not complete now.

In a case like this we might expect to find an extra permanent incisor, on the ground of the accepted theory of development of the permanent teeth, viz., from the cords of the temporary teeth, and we will watch this case with interest on that account, and report if such is the case.

The teeth are both well developed and are almost uniform in size, so that it is impossible to say which is the supernumerary.

There is described in the American System of Dentistry (page 419, Vol. III., fig. 115), a case very nearly similar, and the cut conveys a good idea of this one except that there are three teeth in place of two. It is from the collection of Dr. Douglas, Rosino, Michigan, and is the only one I can find recorded of union between a supernumerary and central incisor of the temporary set.

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## **A Convenient Method of Replacing a Broken Tooth on a Gum Section.**

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

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Cases are often presented of gum sets having one or more teeth broken, but in which the gum is uninjured.

With a corundum wheel on lathe or engine, I cut out the balance of the tooth around by the artificial gum margin, leaving the gum intact. I then grind a plain tooth to fit, and attach as in any ordinary case. This saves the expense and risk of replacing the whole block ; also, the time and inconvenience of cutting through the gum to the top of the block and fitting in a gum tooth. Furthermore, the joint is much less conspicuous.

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## **Eclectic and Speciality Dentistry.**

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By OLIVER MARTIN, L.D.S., Ottawa, Ont.

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Up to the present time the dental profession differs from the medical profession, which has been divided into a number of branches, or specialities, in order to arrive at greater perfection. Although this had been mentioned by dentists some years ago, and lengthy arguments for and against this system of practice raised, it appears that the eclectic principle proved itself the favorite, not, however, without careful analysis in order to discover if they were not losing a step in advance ; and after mature consideration, the dentists came to the conclusion that the more general knowledge and practice possessed by each dentist, the better fitted was he for any special branch, that it increased his judgment, and rendered his hands more skilful. There is no doubt this is the correct view, one that practice has rendered infallible, still it is difficult for certain temperaments to be eclectic ; and dentistry, in spite of the desire to be eclectic, is, to some extent, a speciality. Very few dentists but have a fancy and appear to succeed better with a particular kind of work ; whether better adapted by nature for a

certain style of work, or the force of mere fancy, remains to be seen. It is, however, true that after being instructed in all the modern branches of the dental art, in the dental colleges, they, after a few years' practice, fall into a special groove and lose the skill of eclectic practice. Why, we find dentists in every direction differ in opinion on the merits and demerits of certain ingredients, the use of rubber in preference to gold, the great value of amalgam, the superiority of soft gold over adhesive, and the reverse; in fact, all that is used by the dentist has been censured by the dentist—yet we will know the true value of all. If we take the dentist who has abandoned metal work for rubber, he recommends it to all his patients as the only true base, simply because he has become skilful with rubber, at the sacrifice of all other kinds of work. Another says: "I do not believe a perfect filling can be placed in a tooth with any other kind of gold but soft gold. I have never been as successful with other forms of gold as I have with sponge." "Adhesive gold makes the strongest filling," says another; and so on, from the ingredients used in the treatment of teeth to the base for artificial teeth, the cause is the practice with any one or the other of these preparations, which make the dentists better acquainted with their peculiarities, and enable them to manipulate with more skill. I well remember the introduction of shred gold, and my first attempt in its use, although I did not there and then condemn it, yet it was a failure; but with practice I found it to be a very useful form of gold. It is the same with the heavy plate gold for finishing a filling. Knowing in what manner sponge gold was made, I often suspected the presence of a trace of acid, which has frequently produced a slight discoloring of the tooth around the filling. I placed my sponge gold in spirits of ammonia for one night, and when dry, passed it through the flame of a spirit lamp; after this it worked and answered beautifully. When a dentist makes himself acquainted and skilful with the different forms of gold, his table is always supplied with them for special cases, and the ability of working them all with equal skill proves such a man of greater skill than the speciality dentist. It is admitted that with many great efforts are required to keep up the eclectic system; still, when young he can frame his organization to it, and by understanding its great value, never abandon it. As regards

artificial teeth, every dentist should have a specimen of the different kinds of work, so as to give his patients an opportunity of selecting, as much depends on their fancy for their successful use. The difference in price often changes this fancy, still the dentist who can show a specimen of every kind of work known at the present time, is thought more of by his visitors. Often the patient says: "I do not like the appearance of rubber. I do not object to the price if you can give me something that I like better." When the dentist cannot accommodate such a patient, it places him in rather an awkward position. If it is not possible for a dentist to be skilled in all branches of his profession, let him keep in practice as many as he can. These remarks apply more to the young and active practitioner than to the old dentist who has fixed ideas and fingers that cannot change. In all that has been used in the treatment of teeth, many good and valuable medicines have been discarded for want of knowledge or practice with such to enable the dentist to understand its peculiarities. True a number have been introduced that have shown no superiority, after a careful test, to ingredients that the dentists have been well acquainted with for many years. If we take creasote for example, it has not been excelled for the treatment of teeth. Its soothing effect is like magic; it will arrest decomposition more effectually than all the medicines that have been introduced to take its place. If we look at its composition, it speaks for itself. We know the power of charcoal as a disinfectant. It will prevent the decomposition of meat. Smoke is a carbon in the form of a gas or vapor, produced by the burning of vegetable matter; the oil of creasote is extracted from this gas, which is a carbon in a concentrated form. This is why its power is so great in arresting decomposition, the decay being the irritant to the nerve fibriles that permeate the tooth bone. The quickness of creasote to check decomposition or quiet the irritant is indicated by the removal of pain; mixed with a little tannin, it mummifies the decayed matter. A few drops of alcohol mixed with it, to increase its penetrating power, will cure any abscess. The name of methyl has been given to this mixture. A mixture of creasote, tannin, and alcohol will mummify a canary bird immersed in this composition for twelve hours, without changing a feather. It acts on the decay in the same manner. When preparing a tooth for the filling, the cavity should be touched with



creasote, or creasote and alcohol, to clarify the inside of the cavity of every particle of loose matter. There is no doubt, however, but it renders the bone brittle, when used too frequently in a tooth. Creasote up to the present time has not been excelled ; there are, however, many improvements in medicine, all of which, like a new instrument, require practice in order to use them successfully, and this is what gives the eclectic dentist the constant practice in every branch of the profession.

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## Proceedings of Dental Societies.

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### The Fourth Annual Meeting of the Ontario Dental Society.

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The fourth annual meeting of the Ontario Dental Society was held in the lecture room of the Y.M.C.A. building, Toronto, on July 19th and 20th. The meeting was opened on Tuesday afternoon at 2.30, with the Vice-President, Dr. H. R. Abbott, of London, in the chair.

The minutes of the last annual meeting were read and adopted.

Drs. Hipple and Beam were appointed auditors, and after they had completed their work the Treasurer presented his report, which was received and adopted. The election of officers for the year was then proceeded with, resulting in the election of the following : President, Dr. H. R. Abbott, London ; Vice-President, Dr. W. A. Leggo, Ottawa ; Secretary, Dr. W. E. Willmott, Toronto ; Treasurer, Dr. F. Kilmer, St. Catharines ; Executive Committee : Drs. Hipple, H. Wood, A. H. Allen, J. Stirton, together with the officers of the Society ; Membership and Ethics Committee : Drs. Pearson, Beam, and Bosanko.

TUESDAY EVENING—8 o'clock.

As Dr. McElhinney, of Ottawa, could not be present, Dr. F. J. Brown, of Port Hope, read a very interesting and instructive paper on "Electricity, its Application to Dentistry." This seemed to be rather an unfamiliar subject, as the paper provoked very little discussion.

The retiring President's address was due next, but as he was not present, Dr. W. E. Willmott filled in the time with a paper on "Antiseptics."

## DISCUSSION.

Dr. C. N. JOHNSON (Chicago)—Was surprised to hear that quotation from Dr. Stubblefield's paper, as he had always considered hydrogen peroxide of no value when it showed an acid reaction. Always thought neutral sample would work better. Would say nothing about aristol, as he had not used it, but of the other powder antiseptics preferred iodol. Gave a case where a very severely lacerated wound healed rapidly and satisfactorily under iodol. Very rarely used iodoform. Considered a dental office bad enough for the patients no matter how comfortably furnished and how pleasant a perfume, without making it smell worse than any drug store, with iodoform over the drawers and instruments. Impressed upon the members the great necessity for thoroughly antisepting their instruments after each patient, and recommended a solution of boro-glycerine as the best. Would warn the members to be very careful in injecting hydrogen peroxide into an abscess unless there was a free opening for the escape of the gases.

Dr. N. PEARSON (Toronto)—Wanted to say something good for peroxide. Had had very satisfactory results from treating abscesses through the sinus.

Dr. R. G. McLAUGHLIN (Toronto)—Tried peroxide in several cases as Dr. Pearson mentioned, and had satisfactory results from some, but others were quite unsatisfactory. These he injected with campho-phenique after the peroxide and was pleased with the results. Asked Dr. Johnson what he considered the best drug to use in cases where the pulp is not quite dead to facilitate its removal.

Dr. JOHNSON—Considered a solution of tannic acid in glycerine the best he had come across for that purpose.

Dr. F. J. CAPON (Toronto)—Had experimented with aristol and cassia in cases of pyorrhœa with very satisfactory results. Would never be without campho-phenique in his office. Recommended the wire brush on the engine for cleansing burs and did not think it impaired the cutting edges in any degree.

The President then called on Dr. Bosanko for his retiring President's address. The doctor read a very interesting and profitable paper on "Dentistry on the American Continent." After a few remarks on the paper by Dr. C. A. Martin, Ottawa, the meeting adjourned.

WEDNESDAY MORNING—9.30 o'clock.

Meeting opened with Vice-President in the chair. An animated and profitable discussion was provoked by a paper prepared and read by Dr. J. Stirton, of Guelph, on "Diagnosing Diseases of Teeth."

DISCUSSION.

Dr. H. T. WOOD (Toronto)—Was very much pleased with the paper, and little was left to be said. It showed the advancement made in dentistry in the last twenty years. Pleased such an admirable paper should be written by one of our own young practitioners. Dentists were called on to do more than the ordinary physician, he has to go beyond the present feeling of his patient. Never depends altogether on what a patient tells him; he may take their word as a foundation, but must go further, and see ahead to prevent future trouble. When a patient presents for examination, the first thing is to cleanse the teeth thoroughly, and then look carefully for caries. Removing the tartar, and polishing off the discolorations, often discloses cavities which otherwise would not be noticed, and of which the patient is ignorant. This would prevent the annoyance of the patient coming back in a few months showing a cavity, and wondering why the operator had not seen it before.

Dr. W. A. LEGGO (Ottawa)—Thought the noticing decay by the color was a very important point, and impressed the idea of polishing off any discoloration on the tooth to show any color of decay.

Dr. F. G. CALLANDER (Toronto)—A dentist is supposed to know the normal state of a tooth, and when an abnormal condition presents he should be able to spot it, and then endeavor to restore it to the normal. He must be familiar with every tint and color of the normal tooth. First free from foreign deposits, and get the true shade of the tooth. Many cases of caries are due to child

diseases, and generally are associated with some constitutional disturbances. Knowledge from experience is the only guide in these cases. Reading cannot do all, but we must be observant, and put the observations into practice.

Dr. D. V. BEACOCK (Brockville)—Was sorry for the loss of those six teeth. Would have diagnosed them as pulp stone and treated for same. Would have tried it at any rate, and if that did not relieve the trouble, it would be time enough then to extract.

Dr. W. A. LEGGO—Would like to have a discussion of the treatment of such cases, even though outside the scope of the paper. Thought it impossible to save some teeth in this condition on account of the restricted state of the root canals.

Dr. F. G. CALLANDER—Had a case thirty years ago—a lady suffering intensely. Could see no defect in the tooth. She was determined to have it out; he would not extract it, so she went to a physician, and had not only it but at times another and another, till every one was out, giving her temporary relief after each extraction, and in the end the pain was even worse than before any tooth was taken out. Had several cases since where pulp ossification was suspected, and on examination found to be so. Has removed as many as five nodules from one tooth, which relieved the pain.

Dr. A. H. HIPPLE (Stratford)—Would like to know any way in which he could diagnose between exostosis and pulp nodule.

Dr. BEACOCK—If no other cause can be found for the ache, and you suspect pulp nodule or exostosis, enquire whether it aches worse at night after the head has been lying at rest for some time and then moved from side to side for a few moments. If so, it is not likely to be exostosis, and it would be wise to drill in and see. If that relieves the pain all right, you have the tooth in place; if it does not, then you have the satisfaction of knowing you have done your best and then, and only then, would extraction be allowable.

Dr. F. J. Brown (Port Hope)—Thought the case in question might have been a reflex action, due perhaps to some derangement of the stomach.

Dr. F. KILMER (St. Catharines)—Had a case of a gentleman seventy-four years old. An intense ache in the upper left second

bicuspid ; no decay ; no soreness on pressure, but if pressed over the root high up it gave intense pain, and pressure on the infra orbital foramen gave pain. Sent him to a physician for constitutional treatment. Came back in three weeks and insisted on the tooth coming out ; took it out ; after two months the same pain. Was sure the tooth was not affected, but the trouble was due to some nerve irritation apart from the teeth. Would not extract it, so patient went to another operator and had it out ; in six months just as bad as ever. Thought the cause must have been from the closure of the foramen through which the nerve passed.

Dr. JOHNSON—Considered the paper the best he had heard before the Society. In regard to the case cited, he agreed with Dr. Beacock ; was satisfied if the essayist had broken open the teeth he would have found a nodule inside. Never sent a patient to a medical man unless he could have a consultation with him before he saw the patient. In answer to Dr. Hipple's question, he would diagnose a pulp nodule by exclusion. If no caries, no tartar, no marked pain on application of heat and cold, nothing in the mouth or out to point to neuralgic pain, and the teeth solid, firm, and healthy, then nine times out of ten you would find a pulp nodule. Drill and treat ; if no relief then, extract, and exostosis is sure. With regard to the mention of secondary dentine, he thought there were two kinds, either pathological or physiological. On approach of caries or irritation to the nerve there is physiological secondary dentine formed, but pulp nodules or secondary dentine growing into the pulp chamber, irregular in form, is undoubtedly pathological.

Dr. Stirton answered the criticisms in a few words, and the meeting was presented with the report of the Membership and Ethics Committee, recommending several candidates for membership. On a ballot vote they were all elected.

Dr. Johnson invited the Society to visit Chicago during the World's Fair, while the International Dental Congress was in session.

Dr. A. H. Weagant, of Cornwall, read a splendid paper on "Copper Amalgam." The discussion was opened by Dr. R. G. McLaughlin, Toronto, who considered this subject next in importance to the question of root filling. There are two kinds of persons on this subject—those who will have nothing to do with

copper, and those who make a hobby of it. Used it for a few months in the beginning of his practice, but gave it up. However, after some experiments with it, he began again, and the more he uses it the better he likes it. Operators are more likely to make a mistake with copper amalgam than with any other kind. There is a danger of getting it too dry, but there is one comfort in that case, because you know the filling will not be a success. Found that it will not discolor the tooth. The fact that it cups on the grinding surface shows either it is not hard enough to withstand mastication or it was not manipulated properly.

The essayist answered several questions. Numerous cases were cited both in favor and against, but the general consensus of opinion was that for certain cases there is nothing better, especially in buccal and proximate surfaces where the grinding surface is not implicated.

On motion of Dr. Pearson, seconded by Dr. Hipple, the names of Dr. C. N. Johnson, of Chicago, and Dr. W. G. Beers, of Montreal, were placed on the list of honorary members.

Meeting adjourned.

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### Dental Association, Province of Quebec.

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A most interesting and important convention of the dentists of this province was held on the 27th September, in Montreal. The following licentiates were present : Messrs. Brewster, Trestler, Beers, S. Globensky, J. Globensky, Leblanc, Andres, E. B. Ibbotson, J. Ibbotson, McDiarmid, Berwick, J. C. Nichol, S. Nichol, Brown, Barton, Gentles, Labonte, Maufette, Bernier, Giles, Fitzpatrick, Kerr, Sears, Brosseau, Bourdon, Gendreau, McLean, Young, Dixon, Vosburgh, Pepin, of Montreal ; Casgrain and Dorval, of Quebec ; Wells, of Huntingdon ; Porter, of Danville ; Moulton, of Stanstead ; Cleveland, of Richmond ; A. W. Hyndman, L. Hyndman, of Sherbrooke ; Stackhouse, of Lachute ; Lauder, of Cowansville ; Sutton and Jenks, of Coaticooke ; Lanthier, of Three Rivers ; Brassard, of St. John's ; Nolin and Mongeon, of Sorel ; Dr. Beers, President of the Board of Examiners, in the chair.

After the usual routine business the Treasurer, Dr. S. Globensky, read his report, showing the most favorable balance in hand that has existed since the Association was organized twenty-three years ago, in spite of a succession of onerous law suits, heavy expenses in obtaining new legislation, etc. The Secretary, Dr. Bourdon, read a full report showing the great increase in the number of dentists in the Province, and the exceptionally large number of about eighty students. The loose system of matriculation under the old law made easy entrance to the profession. Owing to certain discreditable means used by a few to impose upon the ignorance of the public, by quick advertisements, and false representations circulated in the public streets, the following obligation was now imposed upon all graduates: "I—do solemnly promise and swear that I will uphold the honor and dignity of the profession, and adhere to the by-laws and rules of the Dental Association of the Province of Quebec to the best of my ability." The Secretary further referred to the immense labor which fell upon the retiring Board, in securing legislation, as well as in litigation and the success achieved. Mention was made of the imposture practised by a student upon the members of the Local Legislature, in stating falsely that he possessed certain qualifications to consideration for a Private Bill, and its indignant rejection by the Legislature, owing to the opposition of the Board.

The President then gave his retiring address, recapitulating the sound financial position, and paying special compliments to the Secretary and Treasurer for their zealous labors. No previous Board—and the speaker had been on the Board ever since its organization—had been called upon to make such personal sacrifices in promoting

#### THE CONSOLIDATION OF THE PROFESSION

as well as in protecting the public from the expert charlatan, whose moral conscience was too low to aspire to professional decency. The organization of the Odontological Society had proved a great success under the guardianship of its first president, Dr. E. B. Ibbotson, and its present chief officer, Dr. F. A. Stevenson. The Montreal General Hospital had appointed Dr. R. H. Berwick on its staff as dentist; a strong feeling in favor of better means of education prevailed, and the organization of "the

Dental College of the Province of Quebec" was an assured success. Nothing in his experience on the Board gave him greater satisfaction than the perfect harmony which had existed unbroken for twenty-three years between the two nationalities in the profession, and the generous courtesy extended by the French officers of the Board to their English brethren who did not clearly understand the French language. The President then gave a hasty review of the amendments to the Act of Incorporation, which, with the by-laws of the Board, in English and French, would be placed in the hands of every member within a few days. The Board, empowered by the Act, had passed a resolution to ask for affiliation of the College with the Universities of McGill and Laval for the purpose of obtaining the degree of Doctor of Dental Surgery; and it is now necessary that any person in future wishing to study dentistry, must pass the matriculation for admittance to the study of medicine, before the regular examiner of these universities only and before indentureship. All students who have not already followed the lectures are obliged to attend the required lectures in anatomy, physiology and chemistry at McGill or Laval, which open in the beginning of next month.

The College had leased the building, No. 2 Phillips Square, and will begin the course on Wednesday, November 2nd, at 8 p.m.; the Act of Incorporation making attendance compulsory upon all students who may present themselves for examination to practise dentistry in this province, while its course would be open to those intending to go forward for the degree of D. D. S. There were difficulties to contend with. That was just what gave zest and strength to those who had undertaken the work. As for any petty opposition, it would find an early grave. The College must exist, and the public

#### MUST HAVE EDUCATED DENTISTS,

and anyone who opposes this demand must simply stand aside, whether they like it or not. The profession had too long endured the reproach of forcing their students to leave the country to get a college education, and while fully conscious of the responsibility, and modest in their pretensions, the men who had undertaken the duties as teachers were determined to do their duty, and to do their best. The provisional appointments to the four chairs were



then announced, and Dr. E. B. Ibbotson moved, seconded by Dr. J. C. Nichol, a resolution, which was unanimously carried, that the meeting cordially approved of the work done by the Board, and confirmed the organization of the College and the appointments made, and expressed the hope that the details would be developed harmoniously, and that the profession generally would stand by the College. On motion the sum of five hundred dollars was voted as a contribution from the Association to the equipment fund of the College. Dr. McDiarmid offered to be one of five to contribute \$100 each. Dr. Brewster and three others offered \$100 each. It was then moved by Dr. C. H. Wells, of Huntingdon, and resolved, "That this meeting, representing the dental profession of the Province, express its disapprobation of all unprofessional methods of advertising, which not only in themselves savor of quackery, but are resorted to for the purpose of imposing upon the unsuspecting public by false representations."

#### DR. WELLS ECHOED THE SENTIMENTS

of every honorable member of the profession in exposing the tricks of the boastful advertiser. It was not intended to prevent modest and reasonable advertising, should one wish to do so; but to show that, in every country, this scheme of entrapping the public by theatrical tricks of advertising was immoral and dishonest, and no reputable practitioner ought to find such methods necessary. Dr. Nolin suggested that the Board consider the advisability of voting by proxy.

The choice of a new Board of Examiners for the next three years was then proceeded with, by ballot, and resulted in the election of Messrs. Beers, Globensky, J. C. Nichol, and Gentles, of Montreal; A. W. Hyndman, of Sherbrooke; Casgrain and Verner, of Quebec—Dr. Beers stating that he would not consent to retain the position more than a few months on account of the College. The meeting then adjourned.

#### THE FOLLOWING APPOINTMENTS

have been made to the College: W. Geo. Beers, Dean; J. H. Bourdon, Registrar; R. H. Berwick, Treasurer. The lectures are to be given in English and French, as follows: Professors of dental pathology, therapeutics, and materia medica, W. Geo. Beers, L. J.

B. Leblanc. Professors of dental prosthetics and metallurgy, S. J. Andres, S. Globensky. Professors of dental surgery and general pathology, R. H. Berwick; other appointments yet to be made. Professors of operative dentistry, F. A. Stevenson, J. H. Bourdon. Dr. Chas Brewster, C. F. F. Trestler, Jas. A. Bazin, and H. D. Ross were elected honorary professors. The following gentlemen have consented to act in the important work of clinical instructors: J. C. Nichol, G. W. Lovejoy, N. Fiske, E. B. Ibbotson, J. Ibbotson, F. McDiarmid, J. G. A. Gendreau, P. Brown, J. Globensky, J. Gentles, A. H. Beers, W. J. Giles, Montreal; H. D. Ross, E. Casgrain, T. A. Venner, H. Jenks, J. Paradis, Quebec; C. H. Wells, Huntingdon; A. Lanthier, Three Rivers; J. Lauder, Cowansville; A. W. Hyndman, J. Hyndman, Sherbrooke. The following gentlemen were elected honorary "clinical" instructors: Dr. D. V. Beacock, Brockville; Fred. I. Capon, Toronto; and George K. Weagant, Cornwall. A special instructor, a graduate of Chicago Dental College, has been appointed to introduce the system of operative technique taught in that fine institution. Drs. Lovejoy and McDiarmid kindly presented over \$200 worth of materials, and in discounts saved the College about \$500 in the purchase of chairs. Dr. Newell Fiske presented an operative chair and a vulcanizer. Dr. P. Brown gave a part of the electrical apparatus, besides doing the fitting of the entire equipment. Dr. Brown will demonstrate the applications of electricity to dentistry, which he has made a special study.

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Dental Association of Nova Scotia.

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The second annual meeting of the Dental Association of Nova Scotia was held at Halifax, N.S., September 28th and 29th, 1892.

The officers elected for the ensuing year are: A. C. Harding, Yarmouth, President; H. E. Eaton, Parrsboro', First Vice-President; H. Clay, Pugwash, Second Vice-President; Frank Woodbury, Halifax, Secretary. W. C. Delaney was elected representative to the Dental Board.

The meetings throughout were of more than ordinary interest. Papers were read by A. C. Cogswell, entitled, "Dentistry, Past,

Present and Future"; F. W. Stevens, entitled, "Preservation of Deciduous Teeth"; M. P. Harrington, entitled, "Devitalization of the Dental Pulp and Filling Root Canals"; A. J. McKenna, entitled, "Necrosis"; F. W. Ryan, entitled, "Symptomatology"; H. Woodbury, entitled, "Crown and Bridge Work"; W. C. Delaney, entitled, "Dentistry as a Fine Art." The papers were all of a high order and provoked much discussion. A clinic was given by F. Woodbury. It consisted of filling a root with nerve canal open at apex, and setting a Bonwill crown. A resolution was passed that the papers read before the Association be published in pamphlet form, for distribution among the members of the profession in the Province.

The S. S. White Dental Manufacturing Company made a very fine exhibit of instruments, supplies and electric appliances before the Association.

A resolution was passed thanking them for the exhibit, and requesting that they make a similar display at the next annual meeting.

The Dental Board held its annual meeting for organization, on September 28th. The members are as follows: A. C. Cogswell, President of Board; H. Woodbury, George Hyde, J. A. Merrell, M. P. Harrington, W. C. Delaney; Frank Woodbury, Secretary-Registrar.

The next annual meeting of the Association and Board will be held in Halifax, in September, 1893.

FRANK WOODBURY, *Secretary.*

137 Hollis Street, Halifax, N.S.

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National Association of Dental Examiners.

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The eleventh annual meeting of the National Association of Dental Examiners was held at Niagara Falls, commencing Monday, August 1, 1892.

The sessions were presided over by the Vice-President, Dr Magill, the elected President, Dr. L. D. Shepard, of Boston, explaining his resignation from the State Board of Massachusetts,

which necessarily carried with it his resignation of the presidency of the Association. The resignation was accepted with regret, and Dr. Shepard was unanimously accorded the privileges of the floor.

The following State Boards were represented at the sessions :

*Colorado*—George J. Hartung.

*Georgia*—D. D. Atkinson.

*Iowa*—J. T. Abbott, J. B. Monfort.

*Indiana*—S. T. Kirk.

*Maryland*—T. S. Waters.

*Minnesota*—L. W. Lyon.

*Massachusetts*—E. V. McLeod.

*New Jersey*—Fred. A. Levy.

*Ohio*—Grant Mollyneaux, Grant Mitchell.

*Pennsylvania*—W. E. Magill, Louis Jack, J. A. Libbey.

*Tennessee*—J. Y. Crawford,

*Wisconsin*—Edgar Palmer.

*Kansas*—A. H. Thompson.

The following Boards were admitted to membership :

*Virginia*—J. Hall Moore.

*North Carolina*—V. E. Turner.

*Oklahoma*—D. A. Peoples.

*South Dakota*—C. W. Sturtevant.

*District of Columbia*—Williams Donnally.

At the instance of the Committee on Colleges, the following communication was sent to the National Association of Dental Faculties :

NIAGARA FALLS Aug. 1, 1892.

*To the National Association of Dental Faculties.*

GENTLEMEN,—Whereas, a very considerable abuse has arisen by the improper use by students of the various certificates of the schools, such as the “standing” and “passing” certificates, to support students and graduates under age in their attempt to illegally engage in practice ; we therefore ask your Association to request the various colleges to have their “standing” and “passing” certificates of such uniformity of terms in each case that they can be

used for no other purpose, and that they be printed in few words and small type, and be signed only by the Dean.

Respectfully,

NATIONAL ASSOCIATION OF DENTAL EXAMINERS.

FRED. A. LEVY, *Secretary*.

A Committee of Conference was appointed, consisting of Drs. Truman, Marshall, and Swain, on the part of the Faculties' Association, and Donnally, Palmer, and Monfort, on the part of the Examiners' Association, which, after consultation, agreed upon a favorable report.

Dr. Lyon offered the resignation of the Minnesota Board, which was laid upon the table, as it had evidently been offered as the result of a misunderstanding, and the Board was requested to withdraw it.

The following resolution, offered by Dr. Crawford, was adopted :  
*Resolved*,—That when a member of any State Board becomes a teacher of a dental school, his resignation from his Board should follow.

A resolution protesting against the classification of dentists as manufacturers, and the collection of census statistics from them under the provisions of House Bill No. 7696, commonly known as the Willcox Bill, was adopted. The resolution was similar in terms to those adopted by other dental societies.

The Committee on Colleges reported that they had received reports showing that the actual number of students in attendance at the last sessions in the schools recognized by the Examiners' Association was 2,881 ; of graduates, 1,357. In the schools not recognized by the Association the students were 236 ; graduates, 96.

The report also considered desirable advances to be made in educational methods, and offered the following memorial, which the Secretary was directed to transmit to the National Association of Dental Faculties :

The National Association of Dental Examiners would respectfully memorialize the National Association of Dental Faculties to authorize two advances in the system of dental education.

These are : First, that your Association require the universal enforcement of a higher grade of preliminary education of candi-

dates for matriculation. This proposition lies at the foundation of dental education, in which is involved the quality of the graduates of the future, upon which depend the advancement, the standing, and the dignity of the dental profession.

The second proposition is that complete preparation be made in each school for laboratory technique in the studies of histology, pathology, and in each of the departments of dental surgery and dental prosthesis, and that this method of teaching be made a requirement of the schools.

The committee also reported the following amended list of colleges which they recommend as reputable :

Baltimore College of Dental Surgery, Baltimore, Md.

Boston Dental College, Boston, Mass.

Chicago College of Dental Surgery, Chicago, Ill.

College of Dentistry, Department of Medicine, University of Minnesota, Minneapolis, Minn.

Dental Department, Columbian University, Washington, D.C.

Dental Department, National University, Washington, D.C.

Northwestern University Dental School.

Formerly Dental Department of Northwestern University [University Dental College].

Dental Department of Southern Medical College, Atlanta, Ga.

Dental Department of University of Tennessee, Nashville, Tenn.

Harvard University, Dental Department, Cambridge, Mass.

Indiana Dental College, Indianapolis, Ind.

Kansas City Dental College, Kansas, Mo.

Louisville College of Dentistry, Louisville, Ky.

Missouri Dental College, St. Louis, Mo.

New York College of Dentistry, New York City.

Northwestern College of Dental Surgery, Chicago, Ill.

Ohio College of Dental Surgery, Cincinnati, O.

Pennsylvania College of Dental Surgery, Philadelphia, Pa.

Philadelphia Dental College, Philadelphia, Pa.

School of Dentistry of Meharry Medical Department of Central Tennessee College, Nashville, Tenn.

University of California, Dental Department, San Francisco, Cal.

University of Iowa, Dental Department, Iowa City, Ia.

University of Maryland, Dental Department, Baltimore, Md.

University of Michigan, Dental Department, Ann Arbor, Mich.

University of Pennsylvania, Dental Department, Philadelphia, Pa.

Vanderbilt University, Dental Department, Nashville, Tenn.

Western Dental College, Kansas City, Mo.

Minnesota Hospital College, Dental Department, Minneapolis, Minn. (defunct).

St. Paul Medical College, Dental Department, St. Paul, Minn. (defunct).

American College of Dental Surgery, Chicago, Ill.

The report was adopted.

The following officers were elected for the ensuing year: W. E. Magill, Erie, Pa., President; J. Y. Crawford, Nashville, Tenn., Vice-President; Fred. A. Levy, Orange, N.J., Secretary and Treasurer.

Adjourned.

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## Editorial.

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### The Joys of Journalism.

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A journalist started out to please everybody. At the end of the first volume he committed suicide. Had he taken precautions, he might have lived to die of softening of the brain. He might have asked advice from everybody; sometimes "taken it from nobody," and learned the folly of trying to please anybody. A sailor who never expects ruffled waters ought to stay ashore. An editor who is not as ready for a fight as for friendship, ought to get a berth on the journal of the peace society.

A friend thinks this journal ought not to be "the official organ" of any of the provincial societies. He is alone in his wish. When the societies selected it as such, their members were not so stupid as to ask it to give up its independence, and the pretence that it is not independent because it publishes these society proceedings—for that is the only "official" connection it has—will not hold water. It is quite as independent as any of its critics.

It is said that the JOURNAL ought to be "cosmopolitan." No definition is given of the term. It makes no pretensions to be a

journal of the world, though it goes pretty well over it wherever it is wanted. To make it more cosmopolitan, our friends only need to make it more practical. We get more sermons than we need, though a good sermon now and then is a good thing. We observe that our exchanges never copy the sermons. They, too, have more than they want.

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### “ Bridge Work ” Advertisers.

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We have repeatedly been asked to draw attention to the fraud and imposition practised upon the public by the noisy advertisers, who pretend to possess superior knowledge in dentistry, and whose chief trick is that referred to in the following resolution passed at the last meeting of the Conn. Valley Dental Society. As a rule these blatant advertisers are obliged to hire itinerant mechanics to do the work they profess to have “invented,” and having no higher object than making money at the expense of personal decency and professional honor, they almost invariably find their level in public contempt and professional failure. We urge our readers to secure the publication in full of these resolutions in their local press.

At the annual meeting of the Conn. Valley Dental Society, held at Greenfield, Mass., June 1st, 2nd and 3rd, 1892, the following preamble and resolutions were unanimously adopted :

Whereas, advertisements, cards and notices by dentists referring to “teeth without plates,” crown and bridge work, etc., frequently appear in the public prints, and

Whereas, such advertisements, cards and notices are misleading to the public, in that they claim or imply that these devices are new, and that in constructing these appliances they possess a superior skill over other practitioners, and

Whereas, these devices are not new, but have been constructed and applied for many years past by various members of the dental profession, and

Whereas, the code of ethics governing dental societies says : “It is unprofessional to resort to public advertisements, cards, hand-bills, posters, or signs, calling attention to peculiar styles of work, lowness of prices, special modes of operating ; or to claim



superiority over neighboring practitioners," and that "Dentists are frequent witnesses, and, at the same time, the best judges of the impositions perpetrated by quacks; and it is their duty to enlighten and warn the public in regard to them," and

Whereas, the objects of dental societies are to cultivate the science and art of dentistry and all its collateral branches; to elevate and sustain the professional character of dentists, and to promote among them mutual improvement, therefore

Resolved, for the information and protection of the public, this society condemn such advertisements, cards and notices as not only unprofessional, but usually deceptive either by statement or implication.

GEO. A. MAXFIELD, D.D.S., *Secretary.*

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### Royal College of Dental Surgeons, School of Dentistry.

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The announcement for the academic year 1892-93 has been issued to licentiates. Dr. Hipple has been added to the staff of the School, as Instructor in Bridge and Crown work. The Board of Directors are: Drs. H. T. Wood, President; J. B. Willmott, Secretary; L. Clements, Treasurer; R. M. Fisher, Registrar; and C. A. Martin, Geo. C. Davis, C. H. Bosanko. The Board of Examiners for 1893 are: Dr. Thos. Rowe, Presiding Examiner and Examiner on Physiology and Histology; Dr. W. A. Legge, Prosthetic Dentistry; R. M. Fisher, Medicine and Surgery; J. G. Roberts, Operative Dentistry and Pathology; A. H. Hipple, Chemistry; H. Wood, Materia Medica and Therapeutics; G. C. Davis, Anatomy; N. Pearson, Practical Dentistry and Metal work. The School consists of Drs. J. B. Willmott, Operative Dentistry and Dental Pathology; L. Teskey, Principle and Practice of Medicine and Surgery applied in Dentistry; W. W. Stuart, Regional Anatomy; J. B. Willmott, Prosthetic Dentistry; L. Teskey, Visceral Anatomy, Physiology and Histology; W. W. Stuart, Chemistry; W. E. Willmott, Materia Medica and Therapeutics; A. H. Hipple, Bridge and Crown work; W. E. Willmott, Demonstrator and Teacher of Practical Dentistry.

The announcement gives the Act in full with the amendments of 1891 and 1892, and the consolidated by-laws of the R.C.D.S.,

Ont. The students in attendance, session 1891-92, were as follows: Junior Class 42, Senior Class 24. In the department of dentistry, University of Toronto, eleven gentlemen graduated as Doctors of Dental Surgery.

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### The Dental College of the Province of Quebec.

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We are sure our friends in Ontario and the other provinces will pardon us for giving so much space to the new movement in the old Province of Quebec. Ontario, as the first parent of dental legislation and education in Canada, welcomes every addition to its family.

The profession in Quebec Province followed the lead of Ontario, and secured incorporation in 1869. Quebec as a province, however, could not expect to imitate the push and progress of dental association in Ontario, and it is only now that it has succeeded in getting a dental school, and even in this respect, in justice to the two legal languages, it may pay Ontario the sincerest flattery, that of imitation in some things, but it cannot follow any lead in everything. The Dental College of the Province of Quebec is negotiating to be affiliated with McGill University (English) and Laval University (French), and lectures are to be given in both languages. The English students will take the necessary medical lectures at McGill, and the French at Laval, while the two dental faculties will use the one building, and continue to exhibit that fraternity and good feeling which has never had an interruption. The degree of Doctor of Dental Surgery will be given by McGill and Laval. and the course of study will be three years, and embrace all the requirements of the National Association of Dental Faculties. Candidates for the license to practise in the Province must be indentured for four years, and also take the College course. The standard of matriculation has been raised to that required for the entrance upon the study of medicine, and must be passed before indentureship.

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### Dr. A. H. Hipple.

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Our readers will regret to learn that our co-editor, Dr. Hipple, has decided to locate in Omaha, Nebraska. He was appointed Examiner in Chemistry last winter, and at the midsummer meeting of the Board was elected one of the lecturers of the school, and was to give a series of sixteen lectures on crown and bridge work. In several ways he will be very much missed. His many friends will wish him success, and we shall expect now and then to hear from him in these pages.

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### Arrogant Critics.

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Every thinking man is more or less a critic. But there are critics and critics. When a new idea, or an old one renovated, is presented for discussion, some critics will examine it with but one object—the unselfish desire to get at the truth. Others will measure it by their one and only standard of mathematical certainty—its exact correspondence with their own preconceptions. Dentistry, like other occupations, is not exempt from the professional Thersites, who love to bring the modest efforts of their fellow-workers into ridicule; who set themselves up, not only as connoisseurs, but as professional scolds, and who think “when they open their mouths, no dog should bark.”

One cannot be too severe upon the advertising quack and impostor, but it is discouraging to men who mean well, but who do not assume infallibility, to find their humble efforts sneered at by some arrogant critic, who is never happy but when burning the incense of admiration before his own productions.

As a rule, the truly great men in any sphere are not those who find it necessary to depreciate thought and labor they have not themselves performed. The truly great are those who welcome every honest search for the truth, and whose criticism is crowned by their charity. Many a worthy young man is deterred from literary and scientific effort in associations by the stupendous arrogance of some self-elected “Great I am,” whose over-bearing

conceit blinds him to the fact that another man may possibly be right, and he altogether wrong. The profession is, however, full of generous critics and noble men, who make no pretence themselves to omniscience, and who do not expect it in others. We have pleasant recollections of the charity such men extend to their confreres, in personal associations with the Odontological Society of New York, and no doubt the success of that illustrious body is due not only to the zeal and ability of its members, but to the fact that in criticism they never forget they are gentlemen.

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### Reviews.

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*567 Useful Hints for the Busy Dentist.* By WM. H. STEELE, D.D.S. Published by the Wilmington Dental Co., 1413 Filbert St., Philadelphia. \$2.50.

This is an age of condensed meat, milk, and knowledge. Many men bolt their knowledge as they bolt their food. They want science in tid-bits; they have no time to read what is not *multum in parvo*. If they are scripturally inclined they read nothing but the Book of Proverbs. Dr. Steele knows this class of humanity, and he has catered to them in a wide range of extracts from most of the journals. It is an *omnium gatherum* of practical use after the manner of Dr. Catching's Compendium.

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*Materia Medica and Therapeutics.* A manual for students and practitioners. By L. F. WARNER, M.D. Philadelphia: Lea Brothers & Co. Pocket size. 224 pages. \$1.

This is a Number Five of the Students' Quiz Series, and we can say of it, as we said of its predecessors, that it is a most valuable ready reference and memory-refresher to the practitioner as well as the student. It is prepared in the interesting form of questions and answers, and continues the value of didactic instruction, as well as of the regular "grinds." Dental students will find it most useful.

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*Anæsthetics: Their uses and Administration.* By DUDLEY W. BUXTON, M.D., B.S., Member of Royal College of Surgeons, Administrator of Anæsthetics Dental Hospital of London. Second edition. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street, 1892. Price, \$1.50.

The reputation of Dr. Buxton as a specialist in anæsthesia has long ago crossed the ocean, and Messrs. Blakiston have done a service to all branches of medicine and surgery in the issue of this American edition. It is doubtful if sufficient and scientific attention is paid in dental colleges to the subjects embraced in this valuable little work, such as the preparation of the patient, the choice of the anæsthetic, as well as the best methods of administration. To dentists, especially, a warning may be necessary with regard to the indiscriminate use of certain anæsthetics in pulmonary and renal diseases. The chapter on nitrous oxide gas is very thorough, discussing the physiological action, apparatus, etc. In fact, the work is one which every dentist should possess, because it is one which every dentist needs.

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WE are requested to say, "look out for the 1892 edition of *Catching's Compendium of Practical Dentistry.*" Sold only on subscription. B. S. Catching, Atlanta, Ga.

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## Abstracts From The Journals.

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### Chicago Dentists.

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Dr. W. W. Allport, in the *Dental Review*, says that dentistry is by no means the lucrative calling that many suppose it to be. Out of nearly seven hundred dentists in Chicago he challenges anyone to name five who are doing a business of over \$15,000 a year, ten more who are doing over \$10,000 a year, and twenty more who are doing more than \$5,000 a year, while there are large numbers whose net income does not reach \$1,000. The

chief reason for this he finds in the horde of improperly educated graduates annually turned out of the dental colleges. The majority of them are not in reality qualified to practise, and in order to live they resort to methods which lower the standing of the profession and reduce the profits resulting from its practice.

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### Oral Hygiene.

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Dr. J. Taft has an excellent article in the *Dental Register*, in which he impresses upon dentists the necessity of instructing their patients in the care of the mouth and teeth. When a patient places himself in charge of a dentist, everything that will minister to the welfare of that patient should be done, but too frequently the dentist contents himself with an operation upon one or two teeth, and dismisses the patient with the mouth in such a condition that the best work possible in the way of filling is of little permanent value. There is too little taught in dental colleges, and too little written in the journals, upon the subject of oral hygiene. It should be discussed more in dental societies so that practitioners would have a better conception of the relation they should bear to their patients. While this is true, however, he thinks that neglect does not arise so much from ignorance as from a lack of recognition of the importance of the subject.

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### Clean Instruments.

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Dr. George S. Allen, of New York, in the *International Dental Journal*, recommends the use of a one to one thousand solution of bichloride of mercury in rosewater, as an elegant and efficient disinfecting fluid for instruments. Contrary to the common opinion that steel instruments suffer from the use of any solution of the bichloride, he finds that they remain perfectly unaffected after being dipped in it hundreds of times. By the use of rosewater the bug-poison taste of the simple solution is entirely supplanted by an agreeable rose-flavored one. As the plain bichloride decom-

poses, he advises the preparation of a one per cent. solution from the tartaric sublimate tablets, and the addition of nine parts of rosewater to one of the solution when it is wanted for the disinfection of instruments or for use in the mouth.

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### Valley Tan.

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With the single exception of the American Indian, it is said there has never existed any people so low in intelligence that they have not devised some means of obtaining alcohol in sufficient strength to produce intoxication. Probably there is no product that is so universal among mankind. Even the inhabitants of the frozen North get alcohol by distilling the products of the arctic fir-trees. It is a singular fact that the American Indian, who never of himself obtained alcohol by any process of distillation, has the most ungovernable appetite for it. There never was a native Indian who would not get drunk if the opportunity offered.

The Mormons of Utah never allow the sale of alcohol among themselves, when they are masters of the situation. Yet their religion does not conquer their appetites, for they have an illicit form of it called Valley Tan, which is indigenous to Mormondom. It is said to have all the characteristics of a distillation from sage brush. It looks bitter, smells loud, and tastes yellow, but it gets there just the same.

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### The Rate of Increase.

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Linnæus said that three flies would consume a dead horse quicker than a lion, and he was undoubtedly correct. The fly produces 20,000 larvæ daily, and as each of these comes into the world all ready for business, it may readily be seen with what rapidity they can multiply.

It has been estimated that if everything were favorable,—if all the waters on the globe were composed of the proper culture media and none were destroyed—the product of a single bacterium cell might, in three days, fill all the oceans to their nethermost depths, so almost infinite is their rate of proliferation. And yet in size they may compare with man as the latter does with Mont Blanc.