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Original Communications

SOME EXPERIMENTAL ROOT CANAL FILLINGS.

BY A. E. WEBSTER, D.D.S., M.D., TORONTO.
Royal College of Dental Surgeons.

It would seem that the Dental Profession has not yet decided upon a universal root canal filling material. *The Dental Review* is asking for contributions on the subject. The Ontario Dental Society gave up the whole time of its last meeting to the consideration of this very important department of dental practice.

Judging from the papers read at the Ontario meeting, one would conclude that gutta-percha is the material most frequently used, while a few of the gentlemen still adhere to creasote and cotton. Others, again, maintain that oxychloride of zinc gives the most satisfactory results. In this connection it might be well to notice how times change. It is only a few years since some dentists were ashamed or afraid to admit that they filled root canals with gutta-percha, while to-day the men who were cotton's most ardent advocates in times gone by are now ashamed to admit that they fill root canals with cotton. This change of practice has taken place without very much new evidence being added, except clinical, which is the same as it always was.

Dentists who use cotton as a root filling material claim that

it is perfectly satisfactory, while the advocates of gutta-percha, the cements, or any other material, claim equally good results. These statements can be harmonized in only three ways. 1st. One operator's opinion of success in root filling is not the same as another's. 2nd. Or it is not necessary to fill root canals at all, as is advocated by the mummification adherents. 3rd. Or any filling material is good enough. Without going into the discussion of these points any further, it may be safely said that the essayists and speakers at the Ontario meeting agreed that root canals ought to be filled.

If a root canal ought to be filled, there must be some reason for it. The best and only reason for filling a root canal is to keep something out of it that is not desirable. We are not considering those cases where root canals are filled to make a foundation for a filling in the crown of the tooth. That undesirable something is most likely moisture or granulation tissue, or both, with a probable pyogenetic infection. A consideration of the following experiments may assist in a measure in coming to some conclusion as to which of the ordinary root-filling materials in use will best keep undesirable substances out of a root canal.

It is fair to assume that a root filling material that will prevent the passage of moisture will prevent the passage of bacteria and granulation tissue. This being granted, the relative merits of cotton, raw cotton, gutta-percha, chloro-percha and gutta-percha, cotton and gutta-percha, and the cements, as barriers to the passage of moisture, and hence the passage of bacteria, can be seen from the following experiments. It is to be borne in mind that these experiments have nothing whatever to do with the solubility, destructibility, density, or irritating qualities of the materials used. They relate only to their power to act as barriers to the passage of moisture under the most favorable circumstances.

Glass rods about two inches long, with 3-16 inch bore, were drawn to a fine point at one end, while the other end remained its original size. In this way a cone was made about 3-4 inches long and resembling the root canal of a tooth. These cones were in every case open clear through. After these glass cones were filled with the root filling material, their small ends were immersed in a red-colored solution. This was accomplished by pressing the tubes through holes cut in a piece of cardboard, and the cardboard placed over a pan containing the solution. In this way the tubes were held in an upright position while their small ends were below the surface of the solution.

RAW COTTON.—Large end of tubes not sealed: Twenty-two tubes were as well packed as possible with dry, raw cotton, using fine strong instruments for the purpose. The ends of these tubes were placed in the solution for twenty-four hours. In twenty tubes out of the twenty-two the cotton was markedly colored. At the end of forty-eight hours the cotton in all the tubes was colored red.

ABSORBENT COTTON.—Large end of tubes not sealed: Seven tubes were filled with dry absorbent cotton in the same manner as those previously mentioned, and placed in the same solution for twenty-four hours, and in every case the solution colored the cotton.

ABSORBENT COTTON.—Large end of tubes sealed. It was said that if these tubes had their large ends sealed, as a tooth is sealed with a filling, that the cotton would not absorb moisture. To show the fallacy of this argument, twenty-six tubes were filled with absorbent cotton, as before described. The large ends of the tubes were sealed in the following manner: Cement, 2; Sealing wax, 4; Wax, 13; Glass, 7. Out of twenty-six tubes put in, twenty-four were colored at the end of twenty-four hours, thus showing that the sealing of the large end of the tube had but little if any effect on the absorbability of the material in the canal. There were two tubes sealed with the wax that were not colored.

ONYPHOSPHATE CEMENT (As I).—Twelve tubes, filled in the ordinary manner, and placed in solution for seventy-two hours. Four were colored in patches all the way up the canal; eight were colored a very slight distance at the end.

A lump of the same cement about the size of a bean was placed in the solution for seventy-two hours, at the end of which time the red color could not be washed from its surface, but yet there did not seem to be any considerable permeation of the mass. On further examination of the cement removed from the tubes, it was found that the color did not permeate the cement. In those cases where the color appeared high up in the tube, it was evident that the tube was imperfectly filled, and allowed the solution to pass up the sides. There did not appear to be any contraction of the cement, as was shown by the microscope and by the difficulty with which a mass was forced from a cylinder.

HAMMOND'S CEMENT.—Thirteen tubes were filled with this Cement, all of which were colored at the end of forty-eight hours. At the same time a mass about the size of a hazel nut was placed in the solution, and on examination at the end of forty-eight

hours was found to be completely permeated. On further examination of the cement taken from the tubes there was evidence of complete permeation. A glass cylinder was filled, and at the end of forty-eight hours the mass became so loose in the cylinder that it was easily shaken out. This would suggest that the mass contracted.

OXYCHLORIDE.—Thirteen tubes were filled with oxychloride of zinc. At the end of forty-eight hours, eleven out of the thirteen tubes were markedly colored. On further examination of the cement taken from the tubes, it was found that the color had permeated the substance of the mass. A mass about the size of a bean was mixed and placed in the solution for twenty-four hours, at the end of which time the color had permeated the whole mass.

GUTTA-PERCHA.—Thirteen tubes were filled with gutta-percha, using points heated and well packed in with hot instruments. The walls of the tubes were moistened with eucalyptus before the gutta-percha was introduced. At the end of forty-eight hours, six tubes were colored, while seven were not. In the same solution was placed a ball of gutta-percha, and at the end of forty-eight hours the color could not be readily washed from its surface, and yet it could not be made out that the color had entered the substance of the gutta-percha. On further examination of the gutta-percha in the tubes it was evident that in the six cases colored, that the solution ran up around the filling, as there was no color in the substance of the gutta-percha. In filling the tubes in the manner described, it was found that as soon as the gutta-percha cooled, that it contracted and did not perfectly fill the tube. Thus it would seem to be unwise to make gutta-percha plastic by heat to pack it into a root canal.

CHLORA-PERCHA AND GUTTA-PERCHA POINTS.—Ten tubes were filled with chlora-percha and gutta-percha points. The points were made slightly smaller than the bore of the tube, and pressed into place cold. An excess of chlora-percha was avoided as far as possible. At the end of forty-eight hours, seven tubes were not colored and three were. In one case the solution appeared to have run up the side of the tube and lodged in a vacant place in the filling.

COTTON WISPS, SOAKED IN CHLORA-PERCHA.—Ten tubes were filled with cotton wisps soaked in chlora-percha. In forty-eight hours, eight out of the ten cases showed marked coloring from the solution.

Below is a tabulated form of the experiments, arranged in the order in which they acted as a barrier to moisture:

MATERIAL.	NO. OF TUBES.	TIME.	COLORED.	NOT COLORED.
Chlora-Percha and Gutta-Percha Points	10	Hours. 48	3	7
Gutta-Percha	13	48	6	7
Oxychloride	13	48	11	2
Absorbent Cotton (large end of tubes sealed)..	26	24	24	2
Cotton and Chlora-Percha.	10	48	8	2
Raw Cotton.	22	48	22	..
Absorbent Cotton	7	24	7	..
Oxyphosphate (Ash).	12	72	12	..
Oxyphosphate (Hammond).	13	48	13	..

These experiments were undertaken and carried on as a means of teaching in the department of operative technique in the Royal College of Dental Surgeons. Each freshman has now a personal knowledge of the power of the above materials to resist moisture in a root canal.

INTER-PROFESSIONAL RELATIONS.

BY H. G. DUNBAR, D.D.S., STELLARTON, N.S.

The closing of the nineteenth century finds the dental profession in a prominent position, distinctively pre-eminent to its status of a few years ago, and not a few within its folds may be ranked among the world's ablest in research and scientific investigation.

Along with the decisive strides made in recent years in our profession, increases the difficulty of drawing a definite line between operations within our jurisdiction and those without it.

The close association between many diseases of the oral cavity and systemic disorders has rendered it somewhat difficult to differentiate, in many cases, between the medical and dental field of operation. Dentistry has risen from a position of obscurity to be unquestionably a speciality of medicine, and the sooner this fact is grasped by the public and both professions,

the sooner will some of the questions agitating our profession to-day be laid aside for good.

The object of this article is to pass a few words of comment on two questions that have been the subject for debate on numerous occasions. These two topics are: (1) The Use of Anesthetics; (2) The Use of Internal Remedies.

The dental graduate of to-day steps forth from college carrying his title, "Doctor of Dental Surgery," and yet how many dare to put into practice all the principles that title indicates. The college course is one place, but our actual office practice is quite another. In the dental college of to-day we find a special chair on anesthetics and anesthesia established; we find exhaustive lectures and demonstrations on physical diagnosis, and eventually we find the graduate placed on a level with the rural pedagogue who administers "laughing gas" for the edification of his scholars. Further we dare not go.

I venture to state that the dental graduate of to-day is just as capable of administering anesthetics as the medical graduate.

The average dental practitioner of to-day, when requiring a general anesthetic, except nitrous oxide, is under the necessity (?) of calling in, not a brother dentist, but a member of the medical profession. The weak front assumed by our profession in this matter tends to instil a lack of confidence in our patients, and little can we blame them when we take the initiative ourselves. I believe there even is a law in one or more of our provinces to prohibit dentists from administering chloroform! Does it not seem preposterous that in view of the progress that has been made in dentistry in recent years that we should sit idly by and witness the enactment of such a statute without vigorous opposition.

If the Dentist is an M.D. as well, the question of skill does not play any part in the public and professional verdict, but if he be a D.D.S. alone, the idea is at once conceived that he lacks the necessary ability to proceed.

A combination of the title, M.D., and the necessary skill to administer the anesthetics may be desirable, but in the absence of the former, what more is necessary than the latter? The standing of dentistry to-day in the eye of the public is not taken from the college curriculum, but from the mode of operating, the skill exhibited, and the general professional bearing of the every-day dentist.

The stumbling-block in the way of the profession in the use of anesthetics may be successfully removed by either a fuller college course or proper legislation. The latter seems the only

course, for judging by the attitude assumed by the medical profession, competency counts for nothing—possibly if it did we might find it harder to secure anesthetists. The conditions under which we would ordinarily consider a man competent to administer anesthetics would be: familiarity with the character of the agent used, its method of action, a full comprehension of the complications that may be associated with its use, and a thorough knowledge of the resuscitative agents with which to combat them. We may well ask, of what use are all the hours spent on the subject of anesthesia, and subjects bearing on it, if we make no more use of them than we do? Even under so safe an anesthetic as nitrous oxide accidents have occurred, but we find no voice of opposition from the medical profession. Is it because *they* do not use it? If so, may we not readily deduct a reason for their vigorous opposition to our using other general anesthetics? Again, why is no opposition raised to the number of dentists using obtunding agents hypodermically, those agents in many cases being of a secret or proprietary nature? Here is a chance for earnest guardians of the public welfare to call a halt. It might be noted even in this case as the others cited, that the use of these agents takes no money out of the medical man's pocket—this is just mentioned incidentally.

In regard to the use of drugs for internal administration our position may not be so sure.

We may first ask ourselves, Is the use of internal remedies necessary to a dental practice? In some cases it certainly is, and whether it should be undertaken in conjunction with an M.D. or not is debatable. If we undertake the matter alone, and any complications arise, we should certainly be involved in legal difficulties which might be unpleasant. Morally, we are certainly within our bounds should we practise dental therapeutics to the full extent of the term, but there is lacking that condition of the legal end of the line that is essential to undisputed right.

Simple as may be the operation of tooth-extracting, I doubt if less than seventy-five per cent. of the graduates could not be placed under the head of "incompetent," were we to classify them according to their skill in this direction. We hear no complaint, however, from them on this score, however much the public may suffer by their unskilful handling of the forceps. Summing the matter up, we can easily reach the conclusion that in order to remedy the existing evils in the dental profession to-day we must assist in (1) Favorable legislation—or at least legislation non-antagonistic; (2) the education of the public to recognize and appreciate the professional ability of the dentist

of to-day; (3) a clearer understanding with the medical profession. When we have secured the above we may hope to practice dentistry as it should be practised—a united profession, a just cause.

IMPORTANCE OF CHEMISTRY TO DENTISTS.

BY A. A. HUMBER, D.D.S., VICTORIA, B.C.

THE average student leaving college with his newly acquired qualification for practice is, one would think, in as good a position to express himself intelligently upon the fundamental principles relating to the science of chemistry as he ever will be, remembering that few dentists pursue its study to any extent after graduation. And yet how few know anything worth mentioning about the subject.

Only the other day the writer was informed by a student attending college that in his own opinion he was progressing satisfactorily in all his subjects of study with the exception of chemistry. Now, can it be that other subjects are so much easier, or is it that the colleges are to blame? The latter seems more probable. We all understand chemistry to be a life study in itself, but surely a knowledge of the names and properties of the commoner elementary bodies must be easy enough of acquirement. Without such knowledge we cannot truly claim to be scientific, and surely nothing but failure to grasp its importance prevents a more widespread acquirement of knowledge in this direction.

The simple reaction of sulphuric acid on tooth substance; the perfect understanding of the refinement of metals; the action of the peroxides of hydrogen or sodium, or of the potassium-sodium mixture are all happenings in our daily practice, and how few dentists really know what takes place when these agents are brought into play. When we stop to think that the future discoverer of a cement which will fulfil the requirements of the dentist will more than probably be a man who has at least dabbled with chemicals, and that if we had more in our midst who knew something of this subject we would perhaps at the present time possess a cement having qualities that would place it in the list of permanent filling materials. We ought all to recognize

the importance of students acquiring a careful knowledge of the elements of chemical science.

The writer seeks his excuse for touching this subject in the fact that graduates are, as a rule, so sadly deficient in this branch of their curriculum that it seems as if something should be done.

This something ought to be a matter for serious consideration at the colleges.

"RIFLE SHOOTING AS A NATIONAL PASTIME FOR CANADA."

BY W. GEO. BEERS, MONTREAL.

We make no apology for intruding the following paper in a dental journal. Many of our dentists are good shots—some of them crack shots—and all of them should be willing to do their duty to their country in any emergency. The object in view is the organization of non-military clubs in the Dominion—in brief, to make every boy and man a crack shot.

The following paper was delivered before the Victoria Rifles Reserves Association, Montreal :

In spite of the philosophies and prayers of the Peace Society, war seems to be necessary for the assurance of peace. The peace philosophers have gone on protesting, but the nations go on fighting; while the inventive ingenuity which has improved the implements of peace has intensely developed all instruments and methods of destruction. It is true that the power of a nation depends very largely upon moral influences, but trusting alone in Providence, and not in dry powder, is not even a popular creed with our pretentiously pious friends, the Boers. Therefore, we have not to discuss the philosophies of peace, but the practical facts of war, present or prophetic. The instinct of fighting, which is born in our blood, is nothing nobler, our critics say, than the love of pig-sticking and bull-fighting, and we are credited by some people with the feeling that we would as soon kill a man as a moose, just for the sport in it. However, when war is declared, and it imperils the interests of the peace-maker, he relies no longer upon his pen or his philosophy, but upon the man behind the gun.

Now, in time of war, the chief object of a soldier is to capture

or to kill his enemy. It is safer to kill him. It is equally the duty of the loyal citizen, whether for the time being he assumes the functions of the soldier, or has opportunity, as an unattached volunteer, to attack the enemy or defend his home. Officially, it is generally left to the regular soldier or organized militia to perform the duties of attack and defence, and while any other arrangement might be an embarrassing interference with the commander of a campaign, and of serious moment to the inhabitants themselves, guerilla warfare may be most valuable, and men who have passed the "age limit" thoroughly useful. At any rate, it should be the duty of all loyal citizens to equip themselves for emergencies, either to fill the places of the killed and wounded, or to do effective service in any other way. This sort of service was well illustrated by the "home-guard" of Canadian farmers during the Fenian Raids, and more extensively by the Boers during the present war. We have had in Africa, not only a splendid example of the obstinate courage, coupled perhaps with a touch of puritanical fanaticism, but a striking proof of the efficiency and mobility of comparatively undisciplined forces, owing success not so much to the genius of military knowledge or organization, as to an individual habit of strategy and self-reliance, which has revolutionized for every nation some of the theories and practice of modern warfare.

Taking the topography of the Transvaal, I imagine we may find similar conditions throughout our Eastern Townships and the Laurentian range—kopjes of a like and larger character, which would necessitate like tactics. In spite of the ingenuity displayed in the construction of rifles and artillery, the larger part of the attention of our land forces—much more so than of the naval force—has been given to the improvement and routine of drill and discipline—an almost unknown quantity with the Boers. If the Boer war has not shown the uselessness of much of this routine, it has at least revealed the fact that there are some things which the inexperienced may teach the expert, that the regular has some things to learn from the volunteer, and that for all-round service the Boer, Australian, New Zealander and Canadian are superior to the best disciplined troops in the world.

WOULD HAVE BEEN PITIED.

Had any one offered these and some very recent tactical suggestions to the War Office a few months ago, he would have been pitied for his presumption. We have seen enough and know enough in this country to measure the special characteristics of the rough and ready colonist-born, in contrast to the

more coddled native-born, and it is these very characteristics which, for the first time in European history, were splendidly displayed by our boys in Africa, whether with the spade, the pick-axe or the rifle. Surely we have reason to be grateful to the brave fellows whose deeds have added new lustre to our history. When we go abroad now, on whatever continent, we shall feel proud, we of British and French blood, to say, "I am a Canadian!" We know that war is a science, that its study involves, as in our own Military College, a long course of technical training, with a curriculum equal to that demanded by any of the learned professions. But the Boer war has exposed defects in our systems. It has proved that the finest scientific theories are not equally applicable to level and hilly countries, and that our military experts have frequently had to change seats with the narrow and disparaged farmers of the Transvaal. Of course the science of war is not like that of mathematics, an exact science; it is largely a science of improvisation. In the Transvaal our best generals have had opportunities for improvisation with a vengeance. Britain has blundered into the fact that too much attention has been spent on old-fashioned and new-fashioned drill, and too little on the development of the individual resourcefulness of the soldier, and far too little attention on individual practice at the ranges. Within the last few months we have seen the disappearance of the picturesque uniform, excepting for parade, and the abolition of the officer's distinctive dress, and even of his sword. Field glasses are now a necessity; while it looks as though we should revive the shield and buckler of the ancient Roman, not for close fighting, but for approaching an intrenched enemy. With the improvement of the rifle the sword has become practically useless to a man on foot, and we may take it as a certainty that officers will have to be equipped with light carbines and sword bayonets, as well as with longer range magazine revolvers. The glory of the bayonet cannot disappear, but the opportunities for its traditional use must be fewer. Effective fighting now means accurate marksmanship more than a strong arm. It means a good deal more than it meant a year ago. The Boers have taught us that the spade is quite as necessary as the rifle; the value of the man behind the kopje and the boulder, as much as the man behind the gun; the art of hiding as well as of hitting, and acting more upon one's own individual judgment in emergencies. Our North-West Mounted Police can teach these lessons to the very best military teachers in Europe, as our contingent taught Tommy Atkins how to handle the spade. The Transvaal, like our own Laurentian range, is a natural

Gibraltar, full of topographical traps, where good riders or riflemen can, as we have seen, hold at bay many times their number.

CANADIANS AS FIGHTERS.

At a meeting of the Board of Trade in Detroit, Mich., during the American Civil War, the late Hon. Joseph Howe, of Nova Scotia, in referring to the large numbers of Canadians, including his own son, who were fighting on the side of the North, incidentally remarked that "Young Canada would as soon fight as eat his breakfast." This fact has had further emphasis in Africa, and we are proud to have the testimony within the last few days from our own "Little Bobs" and the congratulations from our own beloved Queen. Australia and New Zealand have shown that we Canadians have no monopoly of pluck. Our British army needs no eulogy in this line, and we must give our foes, too, the greatest admiration for the same characteristic. But for many years Canadians have had to stand all sorts of insult from croakers like Goldwin Smith, and cads like Labouchere, who have persisted that in a great war we would not fight. Even Sir Charles Dilke, at a meeting of the Royal Colonial Institute, had the temerity to repeat the statement. Fortunately, Lt.-Col. Geo. T. Denison, of Toronto, was present, and in a splendid reply, proved to the satisfaction of the meeting that Sir Charles either knowingly suppressed the facts of history or was utterly ignorant. Mr. Souttar, M. P. for Dumfriesshire, in a recent interesting little work on the growth of the Empire, reiterates the opinion that our loyalty to the mother country hangs upon our opportunity to borrow money at 3 1-2 per cent., and to use his own words, "if the mother country should fall upon evil times, and want to beg or to borrow—should she, in fact, call on her colonies to contribute towards supporting the burdens they have helped to bring on her—they will answer by striking off all dependence." Recent events have surely done something to dispel such insular ignorance. The colonies of Britain have, every one of them, suffered more or less from this purely British prejudice and stupidity. It mattered not whether Conservative or Liberal were in power, there have always been diplomatic and official blockheads who could only profit by disaster. Imperial interests have always suffered from it in Africa, as they suffered from it at the time of the American Revolution, in India, the Crimea, Egypt and elsewhere. John Bull is brilliantly obtuse, and it is only because that heaven helps him, because he deserves it, that he has not been ridden over roughshod by his rivals in Europe. So far as Canada is concerned, our history and our

geographical limitations are full of these blunders, some of which have and always will handicap our progress. But Canadians, both French and English, have never once failed to prove that their allegiance was as purely a patriotic sentiment as ever existed in England. We have always shown our readiness to fight not only for our own homes and firesides, but for the rights of the Empire. Britain has never been in any war, or had any threat of war within our history, that has not evoked our loyal sympathy and offers of our assistance. As early as the American Revolution; in 1812; when we raised the 100th Regiment during the Russian war; when the whole British America sprang to arms at the time of the "Trent" affair, which was the occasion of the birth of our own corps. Canadians are far from quarrelsome, but the instinct of fight is born in the blood, and bred in the bone.

CANADIANS IN THE CIVIL WAR.

This was exhibited during the American Civil War, when 40,000 fought on the Northern side (25,000 of whom were killed or died of wounds). It was further shown by the large number of Canadians who enlisted during the war of the United States with Spain. It was shown when the Government of Sir John A. Macdonald offered to equip and pay all the expenses of a contingent to the Soudan; when another contingent was sent with Wolseley up the Nile; also when the Government of Sir Wilfrid Laurier sent the present contingents to South Africa; and in a personal way, when our greatest and noblest Canadian, Lord Strathcona, at his own expense, raised the troop of horsemen which bears his name. We must not let the Government of any party claim credit for sentiments or actions which belong exclusively to the people. Governments are but the stewards and mouthpieces of the people, and dare not oppose their patriotism. Conservatives, Liberal, English, French, however they may differ on questions of party, are loyal to Canada and the Empire. The Canadian people alone merit all credit for the sentiment which in every emergency has impelled them to arm for defence. We would make it uncomfortable for a Government which would oppose our desire to fight for the Empire in Africa, as well as for our own homes in Canada. It is perhaps deplorable that this instinct is so keen, that when we cannot get scope for it in our own Empire, we have had a finger on the trigger in the troubles of our neighbors. We must wait for the millenium to remedy this one of the other addition to the list of our national sins.

I once asked an American Senator his own reasons for

wishing the annexation of Canada. "Because," said he, "you Canadians are born soldiers, ready and reliable, and just the sort of people to help us or hurt us as such. You easily endure hardships that would kill most of our Americans. We never want you against us, and if we had you with us, we would never have any difficulty with England; you'd help us to settle some of our problems at home, and we would produce the best army and navy in the world. Our regular army, the best of them, haven't got the instinct of obedience, and the soldierly set-up of the Canadian volunteers. Your people have a military cut to them. Your young men move along the streets as if they were preparing for a hard fight. I have repeatedly mistaken regiments of volunteers in Toronto, Hamilton, Kingston, Montreal and Quebec for regular soldiers. In the Maritime Provinces and Newfoundland you have the pick of the world for a navy. We couldn't run our own fisheries without those sailors of yours. I've never seen anything like the physical stamina of your girls, and the children tumbling in the snow in winter, or pounding each other like little bears in summer, are a marvel to me. You Canadians have only to put the Queen's uniform on a French or English Canadian, strike up the 'National Anthem,' and you have a first-class fighter."

BRITAIN MAKES DISCOVERY.

The Mother Country has at last made the same discovery, and it is not likely that the services of the Colonial troops will end in Africa. Captain Barker, of our first contingent, writing from Belmont (January 8), said: "My men are proving themselves better marksmen than either Boers or Britons, and better all-round soldiers." The observing correspondent, Julian Ralph, writing of "those wonderfully active Canadians and Austrians," as he called them, said that the Canadians, when repairing the railways, did double the work done in the same time by the English troops, and that even Canadian clerks were at home with the pick-axe and shovel, just as we know they were when they scoured the decks of the troop-ship, and displayed a cheerful self-reliance and discipline in whatever they had to do. One of the Mounted Rifles, a private and a former bank-clerk, was being chaffed about the prospects of having to polish his officer's boots. "Yes, I'd do it, and not be ashamed of it. It's not Jack I'd serve, but Captain Jack—and in serving my captain, I serve my Queen, do I not?" In this rambling way, I am trying to show that Canadians are fit for any work of a soldier, and it was always so. I remember at the time of the Fenian Raid, one of the

regular colonels on the staff expressed his amazement at the rapid marching of the Victoria Rifles, over the broken-down corduroy road between Huntingdon and Port Lewis, and there was never on record finer exhibitions of military endurance than the marches in heavy-marching order of over six hundred miles in the North-West, by our French-Canadian regiment, the 65th. The record has been published in French, and I feel sure that we would welcome a translation.

No climate or sports in the world are so well adapted to develop physical endurance as the climate and sports of Canada. Our French-Canadian habitants are the very hardiest, as they are the very happiest, people in the world, and Doctor Drummond has made us feel towards them the loyal affection of a brother. In spite of petty differences, we "Canucks," French and English, are true to one another, and we have many reasons to thank Providence for placing us in this country together. If there are any particular enemies of our Dominion, a tour through the provinces and a good look at the two races ought to convince them that Canadians are pretty good stock, and quite able and willing to take care of themselves.

UNEQUALLED AS ROUGH RIDERS.

There are no rough riders in the world to match our Strathcona Horse. Our physical outfit is just as good as it ought to be. Major Malet, who was an officer in the army of the Potomac, estimated the Canadians as the best soldiers, physically, the world can produce. In the company of the 81st Regiment of New York Volunteers he had forty-five Canadians, "whose hardy prowess," to use his own words, "no toil could exhaust, and whose gay spirits no hardships could dampen." When the army was on the march, with the thermometer ninety degrees in the shade, his English and French-Canadians kept up their spirits and those of their comrades by lively Canadian songs, just as our boys did in Africa, when they turned the "The Maple Leaf" and "En Roulant" into lullabies for the refugee babies they carried in their arms from Sunnyside. Mayor Malet said that when the tired Americans threw away their blankets on the march, the Canadians picked them up, carried them with their own to camp, and had the fun of making their comrades buy them back at a dollar a piece. One of them who had gathered thirteen jocularly said to his brother Jonathan: "We'll carry you if you're wounded until we drop, but we'll not be flunkies, and if you're too lazy to carry your own blankets, then you'll pay to get them back." And as the night turned cold they were only too glad to pay.

Charles Marshall, who visited Canada in 1870, was one of the few Englishmen who understood the individuality and self-reliance of our people. He was struck with the manly independence of Canadians, and the utter absence of that disgusting toadyism to the nobility, and which the nobility heartily despise. He wrote as follows in his work, "The Canadian Dominion": "The Canadians themselves are a peculiarly warlike people, both in training and temper, presenting in this characteristic inherited from England a distinct contrast to the growing disposition of the United States. Certainly the Canadians, upon sufficient provocation, would fight for their country even if they had to fight unaided, and they would be very hard to beat." "It was difficult to conquer the South," they say with quiet assurance, "but to subdue the North would be impossible." "They are hardy, stubborn, valorous; a nation of soldiers more truly than any people of this age, with the doubtful exception of Prussia." Writing of our rural battalions, he quoted a report of the Dominion Government (March, 1870), as follows:

GOOD SOLDIER MATERIAL.

"It is impossible to see a hardier race, or finer material for soldiers. In many instances their physique is most remarkable, and they all appear imbued with a spirit of the greatest loyalty to their Queen and country, and the same spirit and aptitude for military service are exhibited by city battalions, which are composed mainly of intelligent and educated artisans and mechanics." The author further remarks, with prophetic interest: "For employment in a region of country like that of Canada, where the personal qualities of the individual soldier would still necessarily count for much, in determining the practicability and success of military manœuvres, the stalwart farmers, backwoodsmen and lumberers of the country would produce the finest army conceivable." "Great heavens!" exclaimed an English officer to me, at the sight of these tall, broad-shouldered, resolute-looking men, "what superb fellows I would make of these men if I might only lick them into shape." This was at a volunteer shooting-match at Ottawa.

Now, I do not offer these remarks in any jingoistic spirit, but in plain justice to ourselves as a people. As an Empire, we needed the jingoism and conceit taken out of us, and our humiliation in South Africa was no doubt deserved. We were getting into the belief that our conquests were divinely pre-ordained, and that when any fellow on earth sang "Rule Britannia" guardian angels really did flap their wings and join in the strain.

I thoroughly believe in contemplating and feeling pride in the growth and greatness of our Empire and the genius of our race for colonization, but we should seriously realize our responsibilities, and take to heart one of the lessons the brave Boers have taught us—that we are not the only salt of the earth, and that in the present war to have lost some of our savor.

Critics like Goldwin Smith, who sneered at our militia system, who wanted the Royal Military College closed, who denounced the few who organized the Imperial Federation League; who publicly condemned the erection of monuments commemorative of our victories and our heroic slain, who opposed the introduction into our schools of the Union Jack, and the cultivation of the patriotic and militant spirit, have at last crept into very small holes, where we mean to keep them until they die. The doctrines of national suicide in such propositions as annexation or independence—and which I think we have effectually smashed—may continue to amuse people of weak brains or weak back-bones, but Canada has spoken out her meaning to the world from the banks of the Modder and in the trenches of Paardeberg. She has put the blood-seal of her sons on the cause of Imperial unity. And it must be remembered that this is not the outcome of any transient or recent enthusiasm. Every man and woman who has stood by British sentiment from the foundation of the country has contributed a mite. It is the expression, too, most emphatically, in serious deeds, of the long and faithful preparation for many years by our volunteers, and has been brought about not altogether by the action of any political party, past or present, as much as by the many years of cheerful sacrifices on the part of the officers and men of our militia. Every one of us who shouldered the old Snider did our share, as well as those who to-day shoulder the Lee-Enfield. It is the deep sentiment of our whole people finding its natural outlet. It proves that our volunteers have not only educated and prepared themselves, but that unconsciously they have kept the flame of loyalty lit, and have educated the whole population, men, women and children. It proves that we have not been "playing soldiers" for purposes of parade, but training soldiers for purposes of defence and war, if needs be. I would rather to-day be any one of our boys who fought at Paardeberg, even if I had come home with a wooden leg, and live in a poor house, than the wealthiest man in America.

Apart from our militia system, we are well prepared for fighting. Lord Roberts soon found out that it would not take long to fit Canadians for the most daring work. We know how dutifully they did it.

DUTY OF CANADIANS.

Our duties are no longer provincial. Our duties can no longer be assured of confinement to the limits of British America. They began, not in the African campaign, but when our boatmen went up the Nile. Timid people need not fear conscription in Canada by the Imperial Government. Before it could be suggested, we should have more volunteers than would be wanted. Our greatest pride to-day is that we have proved our fitness for active Imperial service. Whatever our duties may be, the more dangerous they are, the more numerous the men anxious to do them.

HOW CAN WE INCREASE OUR FIGHTING FORCE?

I have neither the knowledge nor the pretention to criticize our militia system, and if I had, it is not my object. In the cultivation of rifle-shooting in Canada as a popular pastime, we could have an immense reserve force of strength from ocean to ocean at no expense to the Government, and which could embrace the male population, outside of the militia, from the ages of sixteen to seventy, after the example of the Boers. I have nothing to say against the "age limit," as laid down by the Queen's Regulations, further than this—theoretically it is all right, practically it is all wrong, except for the old-fashioned drill and discipline. So far as it applies to the active service in the field of the future, it will not hold water. Had it been applied in the Transvaal, the Boers would have been deprived of half their fighting strength, and most of their best shots. The other day Col. Peters, D.O.C. at Toronto, contended that rifle-shooting and accurate marksmanship was better than fine drill halls, marches past, etc., but there is plenty of room for all. But the absurdity of limiting the ammunition supply to forty rounds is apparent, in face of the fact that the American militia gets between 600 and 1,000 rounds each. This stinginess in cartridge supply has shown its results ever since the days of Wellington. At Vittoria, his soldiers fired 5,000 cartridges for every man killed or wounded. In the Franco-Prussian war, 250 shots were fired for every man hit. At the Modder River, one battalion of Grenadiers fired 52,000 cartridges, and one battalion of the Coldstreams 126,000. The Boer war differs, of course, in the longer ranges and the general invisibility of the contestants, but no one pretends to deny the immense waste of ammunition and the deficiency of our troops in good marksmanship. The agitation now is for better knowledge of the rifle itself, more accuracy in judging distance, the adjustment of sights, gauging the wind, etc.

BOERS AND THE RIFLE.

The rifle is the Boers' first and last love. Taking such a simple fact as that in 1,000 yards range, with the wind blowing three miles an hour, a bullet will be deflected about fifteen feet, it is easy to see the defect of a system which allows a volunteer only forty rounds a year for practice. However, leaving the militia to look after its own business, the value of organized local clubs in city and country for the scientific study and practice of long-range shooting, seems worthy of attention. Quite independent of Government supervision, and unattached to any militia body, the practice could be indulged in with the same personal and patriotic interest. One of the most feasible plans would in some cases be the incorporation of rifle clubs as part of our athletic clubs. I have not attempted to elaborate details or propose any particular scheme, but to suggest, that the popularity of the rifle and range practice should now become the chief national pastime of our people.

RIFLE NOT FINAL DEVELOPMENT.

Of course we need not imagine that the magazine rifle is the final development of destructive ingenuity. Perhaps before we know where we are we will be fighting in mid-air, and ballooning may be brought to such perfection that we shall have our air-troops as well as our land-troops. At any rate, we might as well to-day rely upon bows and arrows as the old rifles which we thought perfection when our corps was first organized. In connection with scientific additions to the rifle, Dr. Conan Doyle has invented an appliance, "weighing nothing, costing about a shilling, taking up no space, and interfering in no way with the present sight," which is adapted for high-angle firing, and which is intended to get at an enemy in a trench or behind cover. During the present war we have learned that direct fire is of little avail where the enemy is behind cover and is wise enough to keep there. Dr. Doyle's apparatus, affixed to the rifle, would enable a man to know at what angle to hold the rifle to drop bullets, like rain, at any given range. Another British inventor has great confidence in a discovery he has made, a small apparatus by means of which the marksman aims with both eyes open. It is a hinged clip, fixed to the band of the rifle on the left hand side, which obstructs so much of the sight of the left eye as is unnecessary, and permits the remainder of it to collaborate with the right eye, showing, from tabulated results, nearly double the accuracy of rifle practice. I mention these inventions to show

that the best-improved rifle is not yet accepted as satisfactory. At the same time, there is no gainsaying the fact that the regular and volunteer soldiers have never had sufficient training in the best we possess. Not many weeks ago a British officer, who went out in an armored train with a lot of picked men to dislodge some "sniping" Boers, discovered that dozens of Boer bullets struck the trains, but not a Boer was hit. Upon investigation he found that some of his men were firing at 300 yards with the 1,000 yards sight up! To use his own words, "It's the old story over again." Now, I have been told as a fact, that in many of our volunteer corps, there are men who may have fired a *feu de joie*, or wasted blank cartridges on a sham fight, but who in two years never once practised at a range. The sham fight on a public park is a pretty picture for people to witness, but it is a sham all the same. Rifle practice at the ranges is a pretty picture too, but it is "business." A good deal of our sham fighting would be of more value if it was done for a week or two among the land and water obstacles of the Laurentian hills rather than on the parks or at the camps. I loyally venture to offer this suggestion for the consideration of our Militia Department. It would be much more practically useful than the annual ten-days' outings which have become of traditional uselessness.

SWISS LOVE RIFLE SHOOTING.

The Swiss carry their love for rifle shooting wherever they go. I was lately reading of the few who live at Singapore, hiring ground, erecting targets, barriers, a small bungalow, etc., and every Saturday afternoon, specially, having friendly contests. We have in our large extent of country every favorable facility such as we may imagine small countries like Britain and Ireland cannot enjoy. In England, the facilities for carrying rifle men of the towns to country ranges are being extended, and the National Rifle Association has recently issued an interim report to the members of both Houses of Parliament, to the Lord Lieutenants of Counties, Chairmen of County Councils, Mayors of boroughs, and to the secretaries of rifle associations, as well as the commanding officers of the volunteers, discussing questions which must necessarily be discussed in Canada. I do not know if it would be within the jurisdiction of our own C. R. A. to co-operate with any scheme outside of the militia. If so, it might be very desirable. If not so, there would be no obstacle whatever. As an old athlete, and a firm believer in the moral and physical value of such institutions as the M.A.A.A. and the S.A.A., I would not like to be accused of wishing to subordinate

them entirely to the practice of rifle shooting, but why should they not embrace rifle-practice quite as much as indoor and outdoor athletics, each and all contributing to develop the strong mind in the strong body, ready to make any sacrifice for the land we love and the Empire we hold? The willingness to fight is no compensation for the inability to shoot. Most of our summer resorts could easily organize clubs and readily secure ranges. In connection with the question of ranges, an editorial in a recent number of the *British Medical Journal*, approving of the objects of the National Rifle Association, the writer shows that among the Teutonic races of the continent, in Switzerland, Austria and Germany, where rifle-practice is a national sport, this difficulty has been overcome by shortening the ranges, and states that the testimony of experts appears to prove that marksmanship can be perfectly well acquired at shorter ranges. If you look at the *Daily Graphic* of February 13th, you will see a sketch of a protected short range, such as used in or near continental towns, and which it seems to me might be as possible in the heart of a city as a curling or a skating rink. "It is only 200 yards in length, and can be safely erected, if need be, in the outskirts of a town. A man who can acquit himself well at this distance will hold his own at any range. The Boer, whose marksmanship we have reason to respect, seldom fires even at springbox at a distance of over 300 yards, and most of his big game is killed at distances considerably less than 200 yards. Sites for short, protected ranges on the continental patterns, could be obtained in the near suburbs of most towns in Great Britain, and in addition to providing ranges easily reached from the centre of the town at all seasons of the year, for those who have not the time or the money to go far afield, they would afford opportunities of practice in the winter months." It is easy to see that all this is even easier of application to our conditions in Canada.

FROM ATHLETIC STANDPOINT.

I feel pretty sure that I have exhausted your attention, though by no means the subject. But, before closing, let me say that I did not begin this as a sermon, and I do not wish to end it as one, but that, as an old athlete, I have long felt that too much time and attention are now given to sports in Canada, as well as in Britain. It would be deplorable, a sign of national degeneracy, were our young men to lose their love for outdoor sports and indoor gymnastics. But until the peace philosophers succeed in their worthy aim of getting the lion and the lamb to rest by each other's side unmolested, we have to shoulder national re-

sponsibilities, and even in Canada our history has shown that we cannot do this successfully unless we are trained to shoulder the rifle. Canada and the Empire have new and larger claims to-day upon the manhood of this Dominion. We have to look to our defences and our readiness for war a good deal more seriously. Our brave boys in Africa have made world-wide history for us, and a world-wide record for themselves. A country which can produce such stuff for soldiers can to-day hold up its head with pride and courage, even in the face of the old fighting nations of Europe. But our boys do not need to go to Africa to serve Canada and the Empire. They can serve their daily employers with the utmost fidelity, and serve their country too, by training their bodies and brains in more or less active ways, to do their duty as soldiers of the Queen at home. By making rifle-practice a national pastime, thousands who may not have the privilege of joining the militia, can do their duty, and, in or out of the uniform of the Queen, by avoiding those miserable dissipations and habits which enervate young manhood and age them before their time. The glory of a young man is his strength, and it should be the pride of young Canada to take the best possible care of his body, upon which his country has the first claim.

When I see healthy young Canadians, fitted by nature to serve their country's defence, making fools of themselves by excesses, I feel that they are not only paving the way for their own future physical and moral wreckage, but that they are selfishly destroying the best defences of the country. Canada's physical outfit largely depends upon her young men. Expert rifle shots and good marching men who are able to endure exposure and fatigue, are never made out of moral cowards or bar-room soakers. The opportunities for manliness, and even for heroism, are far more prevalent in the streets of our cities than on the veldt or kopjes of Africa.

British Columbia Legislation

CHAPTER 19.

An Act respecting Dentistry.

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of British Columbia, enacts as follows:

1. This Act may be cited as the "Dentistry Act." Short title.
1895, c. 16, s. 1.

2. It shall be unlawful for any person to practice, or attempt to practice, the profession of dentistry or dental surgery in the Province of British Columbia who is not a member of any College of Dentistry of any of the Provinces of the Dominion of Canada having authority to grant certificates of license to practice dentistry; or who is not a member of any College or School of Dentistry having like powers; and who does not produce sufficient evidence of such membership and testimonials of good character; and who does not pass a satisfactory examination before the Board of Examiners duly authorized by this Act, and pay the required fees: Provided that nothing in this Act shall be so construed as to prevent physicians and surgeons and others from extracting teeth, but no person extracting teeth under the powers conferred by this section, excepting properly qualified dentists, physicians or surgeons, shall collect payment for such extracting of teeth. 1895, c. 16, s. 2.

No person to practice without a certificate.

Exception in case of physicians and surgeons.

Who may collect fees.

3. A Board of Examiners, consisting of five practising dentists, residents of this Province, is hereby created who shall issue certificates to persons in the practice of dentistry or dental surgery in this Province, and whose duty it shall be to carry out the purposes and enforce the provisions of this Act. 1895, c. 16, s. 3.

Board of Examiners.

4. The members of the said Board of Examiners shall be appointed by the Lieutenant-Governor in Council, who shall select them from ten candidates, members of the British Columbia Dental Association, the said ten candidates' names to be submitted by the said British Columbia Dental Association. The term for which the

Appointed by Lieut.-Governor.

Term of office.

members of said Board shall hold their offices shall be five years, except that the members of the Board first to be appointed under this Act shall hold their offices for the terms of one, two, three, four and five years, respectively, and until their successors have been duly appointed. In case of any vacancy occurring in such Board, such vacancy shall be filled by the Lieutenant-Governor in Council from twice the number of names of members of the British Columbia Dental Association submitted to him. 1895, c. 16, s. 4.

Record of persons authorized to practice.

5. The said Board of Examiners shall keep a record in which shall be registered the names and residences or places of business of all persons authorized under this Act to practice dentistry in this Province. The said Board shall elect from its members a President, Secretary, and Treasurer, and shall meet at least once a year, or quarterly if required. A majority of the members of the said Board shall constitute a quorum. 1895, c. 16, s. 5.

Appointment of President and Secretary.

Persons desiring to be examined.

6. Every person desirous of being examined by the said Board touching his qualifications for the practice of the said profession of dentistry shall, at least one month before the sitting of the said Board, produce to and leave in the hands of the Secretary the satisfactory evidence of the qualification and requirements of Section 2 of this Act, and pay to him the required fees. 1895, c. 16, s. 6.

Fees for certificate.

7. To provide for the proper enforcement of this Act the said Board of Examiners shall be entitled to the following fees, to wit: For each certificate issued to persons engaged in the practice of dentistry in this Province at the time of the passage of this Act, the sum of ten dollars; for each certificate issued to persons not engaged in the practice of dentistry at the time of the passage of this Act, the sum of thirty dollars. 1895, c. 16, s. 7.

Remuneration to examiners.

8. There shall be allowed and paid to each of the members of the said Board of Examiners such fees for attendance, not exceeding ten dollars per day, and such reasonable travelling expenses as the said Board shall allow from time to time; said expenses shall be paid out of the fees and penalties received by the said Board under the provisions of this Act. 1895, c. 16, s. 8.

9. All moneys shall be held by the Treasurer of said Board as a special fund for meeting the expenses of said Board, he giving such bonds as security as the Board may from time to time direct. 1895, c. 15, s. 9.

Application of funds.

10. The said Board at its first meeting, and from time to time thereafter, shall make such rules, regulations, and by-laws not inconsistent with the provisions of this Act as may be necessary for the proper and better guidance of the said Board, which rules, regulations, and by-laws shall first be published for one month in the British Columbia Gazette, and in one or more newspapers circulating in the Province. Any or all of which rules, regulations or by-laws shall be liable to be cancelled and annulled by an Order of the Lieutenant-Governor in Council. 1895, c. 16, s. 10.

Rules and regulations to be made and published.

11. The Secretary of the said Board shall, on or before the fifteenth day of January in each and every year, enclose to the Provincial Secretary an annual report of its proceedings, together with an account of all moneys received and disbursed by said Board of Examiners; also a list of the names of all persons to whom certificates have been granted, and the qualifications therefor, and such list shall be published in the Gazette. 1895, c. 16, s. 11.

Annual report to Provincial Secretary.

12. In case a charge is made against any licentiate of unprofessional conduct, or other misconduct provided for by the by-laws to be passed under the provisions of this Act, the Board of Examiners shall have power to hear and determine the same, and for this purpose to summon witnesses before them and administer an oath or affirmation to such witnesses, and if any licentiate shall be found guilty of the charge preferred against him he shall forfeit his certificate and title, and the same shall be cancelled, subject to appeal to a Judge of the Supreme Court if brought within ten days; such forfeiture, however, may be annulled and the said license and all rights and privileges thereunder fully renewed and restored by said Board in such manner and upon such conditions and terms as the said Board shall think fit: Provided, however, that nothing in this Act contained shall empower the said Board to deal with any criminal or other offence provided for by law. 1895, c. 16, s. 12.

Hearing of charges against licentiates.

Appeal to a Supreme Court Judge.

Persons
practising
without
certificate.

13. If any person after the period of three months after the passage of this Act, not holding a valid certificate, practises the said profession or calling of dentistry, or dental surgery, or wilfully and falsely pretends to hold a certificate under this Act; or takes or uses any name, addition, or description implying that he is duly authorized to practice the profession or calling of dentistry, or dental surgery, he shall be guilty of an offence against this Act, and upon a summary conviction thereof before any Justice of the Peace for any and every such offence, pay a penalty not exceeding one hundred dollars or less than twenty-five dollars, to be recovered on summary conviction, and the half of any such penalty shall be paid to the Board of Examiners; and it is further provided that no person who is not qualified under the provisions of this Act shall recover in any Court of law for any work done or materials used by him in the ordinary work of a dentist. 1895, c. 16, s. 13.

Penalty.

Curriculum
of studies
for students.

14. The said Board shall also have the power and authority to fix and determine from time to time a curriculum of studies to be pursued by students, and to fix and determine the period for which every student shall be articulated and employed under some duly licensed practitioner, said term not to exceed three years, and the examination necessary to be passed before the Board, and the fees to be paid into the hands of the Secretary of said Board, before receiving a certificate of license to practice the profession of dentistry. 1895, c. 16, s. 14.

Cost of
Publications
in Gazette,
by whom
borne.

15. All notices required by this Act to be published in the Gazette and all expenses to be incurred under this Act, shall be at the cost of the Board, to be paid out of the funds mentioned in section 9; in case of deficiency, to be levied by assessment against the members of the profession. 1895, c. 16, s. 15.

Proceedings of Dental Societies

VERMONT BOARD OF DENTAL EXAMINERS.

A meeting of the Vermont Board of Dental Examiners will be held at the Bardwell House, Rutland, Wednesday, May 23rd, 1900, 7.30 o'clock p.m., for the examination of candidates to practice dentistry. The examinations will be in writing, and include Anatomy, Physiology, Histology, Bacteriology, Chemistry, Metallurgy, Pathology, Therapeutics, Surgery, Materia Medica, Anesthesia, Operative and Prosthetic Dentistry, together with an operation in the mouth. Candidates must come prepared, with instruments, rubber dam and gold. Applications, together with the fee, ten dollars, must be filed with the Secretary on or before May 10th.

St. Johnsbury.

GEO. F. CHENEY,

Secretary.

Selections

OVERCROWDED PROFESSIONS.

The *Chicago Times Herald* issues a warning against the overcrowding of the professions which has often been given before, but is as much needed as ever, if one may judge from the small attention paid to it. It says that the increase in the number of lawyers in Chicago has been far in advance of the growth in population or the increase in litigation. In fact, it is very well known that there is not enough legitimate law business to go round, and the young lawyers who are not unscrupulous enough to "make law business" are compelled to eke out an existence by peddling insurance and selling real estate on a commission. It is estimated that out of a total of 4,000 lawyers in Chicago 500 are conducting the litigation of the city and only about 200 are making \$5,000 or over each year. The doctors are somewhat better off, from the fact that sickness increases in proportion to population, while litigation does not, but the fact remains that there are in the city four or five times as many doctors as are needed, and the consequence is that only a small proportion of them are earning a reasonable income. "As a matter of fact almost any artisan now commands a better annual income than

three-fourths of the lawyers and doctors, while the mercantile pursuits are much more profitable in spite of the modern tendency toward big combinations." Now, if this is true of Chicago, which has gone ahead during the last ten or twenty years at a greater rate than any other big city on this continent, it is ten times as true of the communities which have been making slower but steadier progress. There is a great future, either in law or medicine, for the young man of exceptional ability who is willing to devote himself entirely to his profession and combine intellect and hard work. But for the youth of average ability and industry, such as our schools turn out in large numbers year by year, there are far brighter prospects in business or the workshop. He will earn more money, have a happier life, and do more good as a successful business man or mechanic than as a medical man or lawyer whom the world has no need of.—*Montreal Gazette*.

Reviews

Gould's Pocket Medical Dictionary, enlarged to 30,000 words and 837 pages. Fourth edition. Price, \$1.00. Philadelphia: P. Blackiston, Son & Co.

One of the best proofs of the popularity of Dr. Gould's dictionaries is found in the fact, that the circulation has passed the one hundred thousand mark, a position that could only be attained by thoroughly good books. Among other features of this handy little volume, the remarkable amount of literary material contained between its covers, the method in which the volume is printed and bound, and its price, \$1.00, are conspicuous. With the possible exception of some religious books not strictly subject to commercial laws in their production, we do not think there is as cheap a book published. The table of eponymic terms embraces the diseases, etc., named after certain persons, such as "Rigg's Disease," which is herein called "Fauchard's Disease"; "Paget's Disease"; "Osler's Phenomenon"; "Shepherd's Fracture"; "Nasmyth's Membrane," etc. It is an invaluable little companion for the pupil and the teacher: a veritable *pons asinorum*.

Dominion Dental Journal

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No. 4

THE FUTURE OF THE JOURNAL.

In June, 1868, the first issue of the *Canada Journal of Dental Science* was the birth of Canadian Dental Journalism. With the editorial existence of the DOMINION DENTAL JOURNAL, as well as of its predecessor, the present editor has had an unbroken connection—meaning for him, as perhaps none but editors can imagine, a ceaseless interest in the politics and progress of the profession in the seven provinces; an amount of necessary and unnecessary correspondence, concerning and not concerning journalism; a constant chase after contributions, and the deep feeling of disappointment, that when one had done the best his opportunities afforded, better could easily have been done had the labor not been so pressingly single and personal.

We are perfectly aware of the fact that there are very good friends of ours in Ontario, who inherit the feelings of localism

to which we pointedly referred in the second number of the *Canada Journal of Dental Science* (July, 1868, page 55). It is even more natural now than then, to feel that the Journal should be more distinctively and more closely associated with Ontario. We emphasize to-day the very words used in the editorial thirty-two years ago: "We can assure our friends that it is a matter of perfect indifference to us whether the Journal is printed in Quebec or Ontario, so long as it is established, and we have a Canadian Dental Journal." It will be remembered that we readily yielded to the hints given us, and that we transferred the chief editorship and publication to our dear old friend, Dr. Chittenden, of Hamilton, and that he held the helm until the end of the second volume, when he returned its care to its founder in Montreal. There are practitioners in Ontario to-day who know something of the efforts we then made, and have ever since continued, to draw capable men from their shells into the editorial chair. We have never been able to overcome the feeling that the Journal should be edited in Toronto, at the very fountain-head of Canadian dental inspiration. From the beginning, we made it a rule to give the "Premier Province" the precedence, in the position allotted to original communications, etc., and if there has been any dearth of Ontario matter, it has been the fault of Ontario licentiates themselves. The publisher is a Torontonian, and has relieved the editor of the business burdens which he alone carried with the *Canada Journal of Dental Science*. The Journal is exclusively Ontario property: printed and published in Ontario. The staff is well represented in Ontario, and the editor, though himself an Ontario Licentiate, would have had just as much interest in it as he has now if somebody in Ontario had occupied his position. Ontario was the cradle of Canadian Dentistry. The college buildings in Toronto are a magnificent monument to the professional body, and especially to such able and conscientious men as Drs. Willmott, Wood, Teskey and Stuart. We do not forget or underrate the pioneer work of Drs. Day, Relyea, Chittenden, Callender, Clements, Stuart, Scott, Nelles and others. No doubt there may be in Ontario, as there are in Quebec, sore-heads who revel in the luxury of discovering the defects of these

pioneers, and who flatter themselves that they are the salt of the profession, and yet who have personally displayed nothing more than a magnificent genius for feeble incapacity. When some one kicked Socrates, he said to those who suggested retaliation: "Do you think that if an ass happened to kick me I should resent it?" There are kickers and kickers. There are honorable opponents who obstruct measures from a conscientious point of view. There are some whose criticism is dependent upon pharisaical egotism, if not upon a pathological stimulation of the sensory cortical centres. Some are amazed why the incense of professional admiration is not constantly burned before their perfection; others are the victims of a deluded imagination. Editors of journals, workers and thinkers, and leaders in all departments of our progress, must expect to run foul of these odd fish. It has been truly fortunate that the interests of the profession in Ontario have splendidly survived this puerile criticism and petty spite. College matters are on a solid foundation. The honest administration of professional affairs in that Province is a gratifying page in our history. As the soldier-sons of Canada have proven in Africa that they are fully the equal of the best troops in the world for courage and endurance, so the governmental policy of dentistry in Ontario offers to us a fine tribute to the personal and professional character of its pioneers and especially to their predecessors, who have built a mountain from a mole-hill. We feel that the full editorial control of this Journal should be held in Toronto. It would be better for the Journal and the profession.

THE GIPSY IN OUR BLOOD.

We reiterate the regret that Canada will not be officially represented at the forthcoming International Dental Congress next August. It is not because the Dominion has sent several thousands of her sons to fight for equal rights in Africa, and is prepared to send many thousands more, but just because the professional gipsy in our blood is not half as strong as the personal,

and that in spite of the many attractions, there is not the keen interest in the convention business that existed some years ago. Paris is delightful, and everybody hopes to go there before they go to Heaven; but it is a far-off city, and with the memory of the Columbian Exposition, many dread the inevitable consequence of inordinate crowds. The real joy of gipsying is never in the noise and amenities of city life. Any dentist intending to visit Paris next August would naturally include, besides the direct professional gratification, the prospect of a thorough rest and outing. We fear the gypsies among us would cut the Convention and take to the woods. We are glad to see that H.R.H. the Prince of Wales is taking an active personal interest in the general Exposition, and were Canadians as near France—a land with which Canadian history is so much identified—we are sure that next August the Dominion would be depleted of its dentists.

Editorial Notes.

We have always had the conviction that provincialism in dental science, art and literature is neither good for the professions nor the public. When Dr. Charles Brewster, in 1860, corresponded with the dentists of "Canada West" and "Canada East," asking their opinion of incorporation, he distinctly suggested one Board of Examiners to represent the two provinces. The suggestion was unanimously accepted, but it was found legislatively impracticable. (See DOMINION DENTAL JOURNAL, Vol. 2, page 33.)

It would indeed be fortunate if the discussion promoted by our associates, Drs. Woodbury and McInnis, finally resulted in the elaboration of a scheme, both educational and legislative, which would remove the present provincial barriers, and make every part of the Dominion as free as any one part to the legitimate practitioner. Provincialism protects the weak against the strong, but it is a question if the weak have any particularly good reason to exist, according to the unsympathetic logic of justice. Everybody has a sentimental right to live, but it would be good for a community if there were some better way than we possess of disposing of people whose existence is a moral damage to a profession and a community. Sentiment compels us to coddle and dry-nurse criminals; and ignorant sentiment forces us to tolerate the quack and the vulgar "parlor" dentist. But an

educated sentiment would develop more public respect for dentistry as a profession, and we might even hope that prominent members of the local Legislature of Quebec, who, like the Hon. Mr. Leblanc, air their bigotry and ignorance on the floor of the house, would in time find it an unprofitable diversion to be the supporters of measures which experienced Boards of Examiners know to be injurious to public interests. From personal experience of over a quarter of a century, we have no hesitation to declare that the profession in Quebec will always meet men like Leblanc, too dense or too prejudiced to appreciate the best interests of the public and the profession, and who can be depended upon to encourage applicants for private bills and other legislation obstructive to these interests. We suppose it is only charitable to infer that they know no better. It is an instinctive policy of lobbyists to conciliate such representatives, but it has become a traditional reproach that we can only deplore without finding a remedy. The licentiates of Quebec have had pitchforked to them a lot of absurd laws, which seem to have been conceived chiefly in the interests of lawyers. Both French and English have very little for which to thank the Legislature, and we look forward to some enlargement of our methods of education and registration which will improve these matters. There has not been a Local Legislature of whatever party in any other Province of the Dominion which has deserved less gratitude from the profession than that of Quebec. It was only the other day that a non-resident, successful applicant for a private bill—a party who acknowledged his inability to pass the matriculation examination—told us that he got his measure through the Legislature in spite of the opposition of the profession in general and the Board in particular, “because he had influence.” The citizens of Quebec Province have a very good conception of that mysterious word when applied to the local Legislature.

THERE must be something in the study and practice of Dentistry which fairly well equips its practitioners to preach. Some of us take to pen and ink as ducklings take to water. Others feel “the gift of the gab” loosening their instincts and muscles, and “orate” they must, whether it be in the village debating club, or the town council. But the people who feel the impulse to moralize, and preach noble sentiments fitted for the pulpit or the professor’s rostrum, seems to us much more numerous in dentistry, judging from a long experience of journalism, than in any other branch of medical science. It looks as if it was a

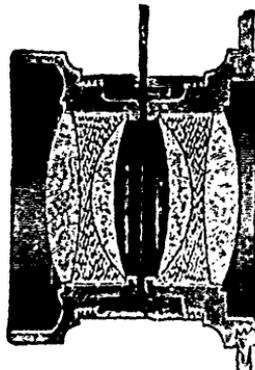
pre-ordained arrangement, and that the dental profession needed a good deal of preaching. One of the funniest contributions we ever received was from a good old soul, a dentist in the backwoods, who sent us sixty pages of letter paper, from the text (Job xix. 20): "I am escaped with the skin of my teeth." We imagined it was a learned dissertation on Nasmyth's membrane, but it had no reference whatever to anything scientific or practical. It was purely and simply four sermons that might have been delivered from any modern pulpit. The text was apparently a clever bait to catch the editor. Perhaps most of us have mistaken our vocation, and were intended for preachers. If the dental and clerical professors are transposed, we are sure the latter are quite satisfied. But we have heard some of our dentists give better sermons than most of our preachers.

SENECA said, that a fact that is not sufficiently understood is never too often repeated. No doubt the iteration of the "overcrowded" subject is monotonous, but it is not confined to this Journal. Even the lay papers see the force of the fact, as the editorial from the *Montreal Gazette*, March 22, will show. The unprofessional methods to which so many dentists now resort to obtain business, ought to convince doubters of their error. The fact that in one city alone fifteen licentiates were sold out by the sheriff within the last three years, and that there are dentists who pride themselves on their dignity, who use what they think "legitimate" means of drawing "work" from outside sources to which no respectable physician would descend, and which would ensure to the meanest lawyer the loss of his gown, ought to cause these sceptical people to examine the notes in their own eyes.

EVERYBODY knows Dr. L. P. Haskell and his Post-Graduate School of Prosthetic Dentistry. In conjunction with Dr. Yant, he has arranged to give a special course in Montreal, similar to that he has given in Chicago for ten years, and for two years in Berlin, Hamburg, Vienna, and Paris. The course will comprise everything pertaining to prosthetic dentistry; there will be no lectures; only clinical instruction. Many Canadian dentists have taken the course in Chicago, but now it will be brought to their own doors. The course will be given in the rooms of the Dental College on St. Catherine and St. Lawrence Sts., and all information can be obtained from Dr. G. H. Yant, 92 State St., Chicago. The tuition fee is \$50, which must be paid strictly in advance.

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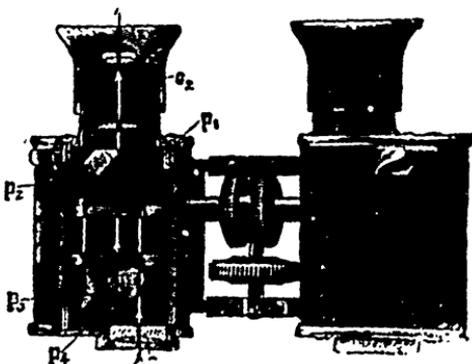
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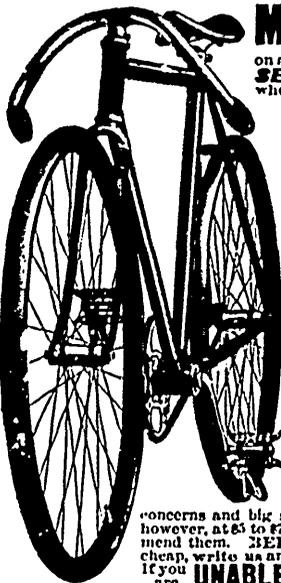
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NEW YORK

SOME dentists imagine it increases their popularity to deny the overcrowded condition of the profession. An Ontario Licentiate, a D.D.S., a perfectly respectable and sober man, who has been obliged to peddle his services among Montreal dentists for a dollar a day, is not of the same opinion. For the second time in three months he has called upon the editor of the Journal with the statement that he had not had a bite to eat for twenty-four hours. However, that does not matter to Blind Selfishness. If he gets his three square meals, he can get the rest of his happiness out of his hallucinations.

DR. KLOTZ draws our attention to the fact that he finds it impossible, without a breach of journalistic etiquette, to do justice to the German journals, which he receives in exchange. The original communications bear the ominous heading "*Nachdruck verboten*" (reprint forbidden) while the selections are usually from journals on this continent.



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