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ISSUED MONTHLY.

EDITED BY

W. GEO. BEERS, L.D.S., *Montreal.*

C. S. CHITTENDEN, L.D.S., *Hamilton*

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LIVERPOOL, ENG.

AND

G. C. DABOLL, M.D.S.,  
BUFFALO, N.Y.



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### THIRD VOLUME.

#### THE CANADA

## JOURNAL OF DENTAL SCIENCE.

MONTHLY—\$2 A YEAR, STRICTLY IN ADVANCE: AN INDEPENDENT PERIODICAL.

☞ This number ends Volume 3rd. The next number will begin a *New Series*, with many improvements; and will be delayed a short time to perfect arrangements for the proposed changes.

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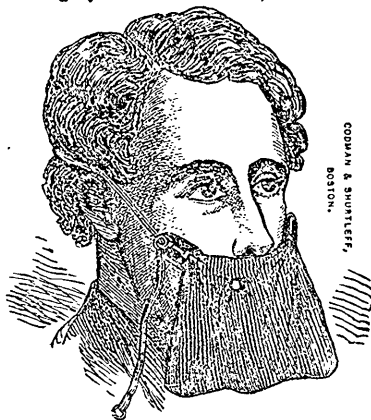
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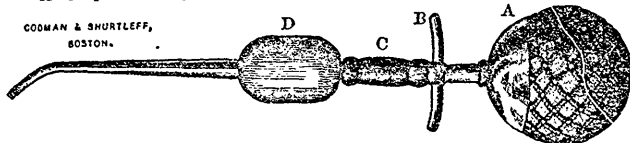
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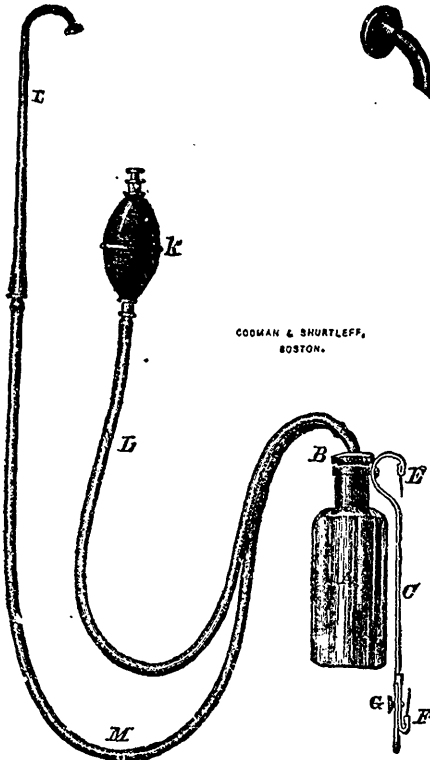
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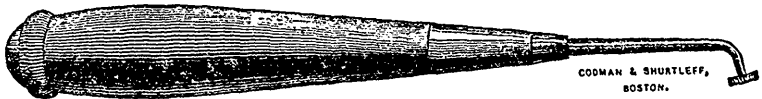
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W. GEO. BEERS, L.D.S., MONTREAL.

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*Corresponding Editors,*

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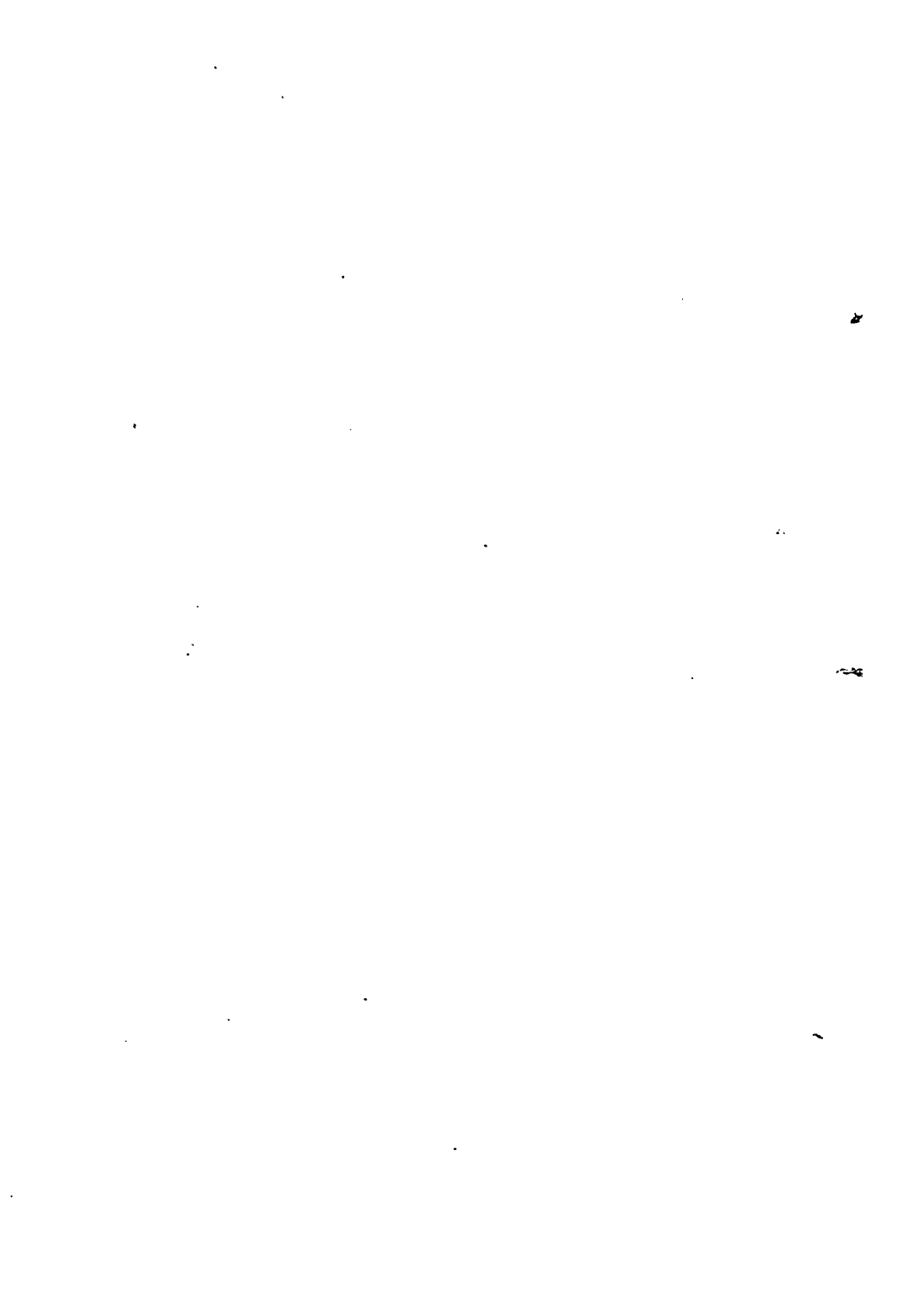




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*MISCELLANEOUS.*

Lo! the Poor Dentist. Hydrate of Chloral. A Proverb. Who first Scarified Gums? Dentists in China. Old Advertisement Curiosity. Administering Consolation. Holly Strips, 32.—A Proverb. Depression in Plates. Universal Fitting Sets. Eurydamus' Teeth. Cheap Dentistry, 96. Barbers as Dentists, 127. Cheap Retorts. Packing for Vulcanizers. Excess of Saliva. Destroying Sensibility in Extracting. Keeping Corundum Wheels Wet, 128. Professional Cacklers, 159. Nitrous Oxide in General Surgery, 160. Wonderful Work of Surgery, 255. Anesthetics, their Relative Safety, 256.



**B. W. DAY, M.D., L.D.S.,**  
FIRST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ONTARIO.



THE CANADA  
**Journal of Dental Science.**

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*ORIGINAL COMMUNICATIONS*

B. W. DAY, M.D., L.D.S., FIRST PRESIDENT OF THE "ROYAL COLLEGE OF DENTAL SURGEONS OF ONTARIO."

We are pleased to be able to complete this volume with the portrait of Dr. B. W. Day, late of Kingston, Ont., the convener of the meeting of Ontario Dentists held in 1867, which resulted in the successful organization of an Association and the incorporation of the Profession of Ontario. It is with unfeigned regret that we announce his departure from Canada to Chicago, and the consequent loss to the Canadian Profession of one of its ablest members.

Dr. Day is a native Canadian, having been born a few miles from the city of Kingston. He practised with marked success in that city since 1854, having always held a high reputation as a skilful operator and diagnostician, and one whose interest in his Profession, and whose opposition to superficial education, has always been consistent and sincere. In 1862 he graduated in medicine, after a complete course at Queen's College—one of the leading Medical Colleges in this country. In 1867, the meeting of Ontario Dentists convened by Dr. Day was held in Toronto, at which an Association was organized, and Dr. Day elected President. A committee was appointed to draft a Bill of Incorporation to be submitted to Parliament. The rest is a matter of history known to us all, and the following clause from the report of the committee, (Jan. 23, 1868,) on the President's annual address, will form the best comment we can make on the services rendered by Dr. Day to the Profession: "Your committee wish to record their appreciation of the valuable services of the President, Dr. Day. He has labored as perhaps few others have done. When success seemed doubtful, he still exerted himself for the elevation of our specialty, for which he is entitled, as he will receive, the hearty thanks of the whole Profession of this Province."

It is seldom that a scheme of value is consummated when it is originated, and it is a generally settled point that the accomplisher is more

deserving of honor than the originator. The idea of organization and incorporation was not new, and while credit is due to those who put forth efforts to effect reform and failed, the greater honor is due to those who tried and succeeded. The difficulties to be surmounted, the antipathies and suspicions to be calmed, and all the incidental obstacles to overcome in getting the Profession its present status in Ontario, was no mean labor, and Dr. Day and his co-laborers deserve lasting credit. To please all they failed to do, but there are few to-day who can dispassionately review the work performed and deny honor to whom honor is due.

For some years peculiarly encouraging prospects have been held out to Dr. Day by friends, to remove to Chicago. Previous to the great fire he had made preparations to start; and with his characteristic determination and continuity, and nothing daunted by the state of affairs, he left some weeks ago, and has already, we are glad to hear, exceeded his anticipations. As one of our leading operators in this country, and a thoroughly educated Dentist and Physician, we trust that the reputation he made for himself in Canada may be surpassed in the new field of his choice. He is undoubtedly a great loss to the Canadian Profession.

Dr. Day was first President of the "Royal College of Dental Surgeons of Ontario," honorary licentiate of Dental Surgery of the Province of Quebec, honorary member of the Quebec Dental Society, Surgeon to the 14th Batt. Vol. Rifles of Kingston, &c., &c.

The portrait is from a photograph by Sheldon & Davis of Kingston.

RELATIVE LIABILITY OF TEETH TO DISEASE.

By T. B. HITCHCOCK, M.D., D.M.D., Professor of Dental Pathology and Therapeutics in the Dental School of Harvard University.

Comparison of the following tables may prove of interest. One is from a French authority, M. Magitot, and gives the liability of the various teeth to Dental caries, based on a total of 10,000 permanent teeth, and is as follows:—

TABLE No. 1, MAGITOT.

Central Incisors .....	642	{	Superior.....	612	{	Right.....	304
			Inferior.....	30	{	Left.....	308
Lateral Incisors.....	777	{	Superior.....	747	{	Right.....	20
			Inferior.....	30	{	Left.....	10
Caries.....	515	{	Superior.....	445	{	Right.....	369
			Inferior.....	70	{	Left.....	378
1st Bicuspsids .....	1310	{	Superior.....	940	{	Right.....	20
			Inferior.....	370	{	Left.....	10
					{	Right.....	198
					{	Left.....	247
					{	Right.....	20
					{	Left.....	50
					{	Right.....	245
					{	Left.....	505
					{	Right.....	170
					{	Left.....	200

2nd Bicuspids .....	1310	{ Superior .....	810	{ Right .....	400
		{ Inferior .....	500	{ Left .....	410
1st Molars .....	3359	{ Superior .....	1540	{ Right .....	270
		{ Inferior .....	1810	{ Left .....	290
2nd Molars .....	1736	{ Superior .....	690	{ Right .....	298
		{ Inferior .....	1046	{ Left .....	312
3rd Molars .....	300	{ Superior .....	220	{ Right .....	910
		{ Inferior .....	140	{ Left .....	900
Total .....	10,000		10,000		10,000
Superior .....	6304	{ Right side face .....	4791		
Inferior .....	3696	{ Left " " .....	5,009		

The other table I prepared from records of teeth filled or extracted; it illustrates their relative liability to loss and disease. It presents several variations from the first table:—

TABLE No. 2, T. B. II.

Central Incisors .....	1140	{ Superior .....	1101	{ Right .....	571
		{ Inferior .....	39	{ Left .....	530
Lateral Incisors .....	1062	{ Superior .....	1000	{ Right .....	18
		{ Inferior .....	62	{ Left .....	21
Canines .....	654	{ Superior .....	545	{ Right .....	520
		{ Inferior .....	109	{ Left .....	480
1st Bicuspids .....	1062	{ Superior .....	791	{ Right .....	27
		{ Inferior .....	271	{ Left .....	35
2nd Bicuspids .....	1319	{ Superior .....	827	{ Right .....	262
		{ Inferior .....	492	{ Left .....	283
1st Molars .....	2188	{ Superior .....	1090	{ Right .....	52
		{ Inferior .....	1098	{ Left .....	57
2nd Molars .....	1757	{ Superior .....	786	{ Right .....	374
		{ Inferior .....	971	{ Left .....	417
3rd Molars .....	818	{ Superior .....	384	{ Right .....	146
		{ Inferior .....	434	{ Left .....	125
Total .....	10,000		10,000		10,000
Superior .....	6524	{ Right side face .....	5036		
Inferior .....	3476	{ Left " " .....	4964		

## RADICALISM.

BY E. A. BOGUE, M.D., D.D.S., NEW YORK.

There seems to be in our country a growing tendency towards Radicalism in dental practice; a notion, a feeling, more than a demonstration, that *we* are sure of the ground upon which we stand, as our predecessors were not; that the line of practice adopted by *us* must be correct, and therefore does not require any further investigation at our hands. So we fill every tooth with gold that requires filling at all; perhaps even we put upon our fee bill "nothing but gold used for fillings;" ignoring the many uses of gutta percha, tin and oxychloride of zinc, and amalgams; or we have become advocates for heavy foil, and we fill everything in the shape of a carious tooth with heavy foil, and mallet it home, producing a filling intensely hard, but illy adapted to the walls of the cavity, porous through its entire mass, and coarsely porous too, as much more as the foil is heavier than will easily pack to solidity with the usual pressure; or, we have taken to the restoration theory, and build out indiscriminately all broken or cut teeth to their original shape and size; or even exaggerate, in order to prevent future decay, from the contact of tooth with tooth.

Perhaps we are firm believers in the mallet, and decline to fill any cavity that cannot be reached by the mallet plugger—so we use the chisel, and spare not, with the end in view of being able to obtain direct access, the result being that we practically pronounce gold better than tooth substance.

To continue the list of extremes into which we run, would be but to enumerate our failures, for in just so far as we violate a natural law we fail of success in any undertaking, physical or moral, while our successes are all made by our harmonizing our acts with the processes of nature.

Much of this extremism, I am persuaded, has arisen from pecuniary considerations, either from the old idea that as gold is intrinsically valuable, *therefore* any operation performed with gold is more valuable than any other; or else from a pandering to the false popular idea to the same effect, not taking the trouble to teach first one's self and then one's patients, that oftentimes the most perfect gold fillings, inserted without strict regard to both anatomical and physiological knowledge, may be not only worthless, but positively injurious, giving rise to destruction of the pulp, discoloration of the tooth, abscess, and perhaps loss of the tooth or necrosis of the bone, or both.

How often are a few words of advice of more value than the best filling ever inserted, costing hours of labor and corresponding expense. If time were taken as the basis of all professional charges, much of this

inconsistent practice would, after a little, disappear, for it would be perceived that one's time would be rated valuable, precisely in proportion to one's acquirements, and he who was best able to diagnose (see through) a case, and treat it, would be the one who would secure the most desirable practice and the most remuneration, and he can then perfectly afford—pecuniarily—to use tin, or gutta percha, or any other material he may deem best for a filling, not only, but he will often see the need for variation from any one line of practice, just as the educated physician is not the man who goes about with calomel in one pocket and salts in the other, and deals them out with little regard to the pathological state of his patients.

There are many operations made in gold by dentists, that are so wearying upon both patient and operator, and so expensive pecuniarily, that the patients are deterred from visiting a good dentist again, the result being that there is positive loss to both patient and operator. It would have been better to insert tin or perhaps even amalgam (bad as amalgam is in the generality of hands.) I know several patients of great wealth, in whose mouths gold fillings, inserted by some of the best operators in New York, fail to preserve the teeth, while tin and gutta percha have proved to be quite as durable, easier to insert, less expensive, less painful, and more comfortable after insertion, than gold. Yet as large fees are paid for these operations, estimated by the time consumed, as was paid for the heavy gold fillings, costing from \$25 to \$75 apiece.

A little child, from three to six years old, requires fillings in its temporary teeth. How much better in every respect, a filling of thin and pure tin, susceptible of being placed in a few moments, or one of gutta percha, or oxy-chloride of zinc, that can be placed in one minute or two perhaps, than one of gold that, by its wearying power, will prevent the little patient from believing in the benevolent designs of the operator, and will destroy the influence for good for all future time. Yet a little more obedience to the evident laws of nature would have given the child the most complete preventive armory known to dental science.

Does any one ask how the scattered members of our profession are to attain to such professional skill? Simply by reading and comparing books with books, and men with men. I met, not long since, a dentist, living in the little city of Liege, in Belgium, who was fully up to the best standards of practice that are generally recognised among us. I asked him how he had accomplished it? He told me he took all the dental magazines that he knew of, in all the languages, and read them, carefully comparing the various views expressed, and putting in practice what to him seemed philosophical.

He often spends hours over one operation, and receives corresponding compensation, and yet all his colleagues receive a fixed fee.

So much for independent research and individual thought. It is sure to bear fruit.

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DANGER *VERSUS* SAFETY.

By A. C. COGSWELL, D.D.S., Halifax.

Correspond. Member Odontographic Society of Pennsylvania, &c.

In the November number of the *Canada Dental Journal*, I had the pleasure of contributing an article on "*Artificial Teeth in the Stomach*," giving the particulars of a case in point, in which a lady had been unfortunate enough to swallow a partial denture. As the case was, happily, one of rare occurrence, it elicited no small amount of conjecture as to the probable result, namely, would this foreign body become dissolved or remain in the stomach, and the patient live; or, would her life be endangered by its presence. I have no desire to anticipate the worst results; at the same time may not the chances be in her favor, as so long a time has elapsed since the case was swallowed. That occurred March 3, 1870, the particulars of which and the circumstances made the subject of a paper read before the Halifax County Medical Society, by the Hon. D. McN. Parker, and which appears in the September number of the *Canada Medical Journal*, in which the Hon. Dr. Parker has drawn one practical lesson applicable to especially the *wearer* of artificial teeth, if not, in some cases, to the *operator*, namely, "That badly fitting plates holding artificial teeth are *unsafe*, and should not be worn, especially at night."

Although cases of swallowing partial sets of artificial teeth may be of rare occurrence, it will not be surprising to hear of other cases, for *several reasons*: 1st. The number of parts of sets worn by many that have become loose by the loss of clasps or other attachments, as well as the absorption of the alveolar ridge. 2nd. The many badly fitting plates, made by travelling charlatans, whose desire is to do cheap work. *Quantity* and not *quality* being their motto. Constructing sets and partial sets on the poorest vulcanite base, or, if the better material be used, the vulcanite is *over done*, and *hurried up*, so as to be done up brown, causing the plate to be full of *air-holes*, *spongy*, and of a *dark brittle colour*, which must *necessarily easily break*, and if in a case of partial denture breaking at night, (which will be quite likely to occur when such cases are worn,) what is to prevent the pieces from passing into the throat, and thus endangering the life of the patient? Might this not become a serious

question, if it *is proved* that a material had been used for an artificial denture which was *unsafe*. This brings me again to another question, which may interest all parties, namely, will not repairing sets, or parts of sets, by repeatedly vulcanizing, make them *unsafe for use*?

No doubt the experience of every dentist has been that every time a plate is vulcanized after its completion, it not only loses its original colour but becomes more brittle, the elasticity becomes less every time, and after a piece has been subjected to the process of vulcanizing several times, especially a partial set, it becomes a question if it would not be safer to renew the plate entirely, or cut away the larger portion of the old vulcanite and replace it with new, not only for safety, but for the credit of the operator.

If patients who wear artificial teeth were impressed with the necessity of calling on their dentist at least once a year, many a word of advice could be given, and a few useful hints as to what might be required thrown in, to the advantage of the patient if not to the dentist. The lady whose case we have referred to as having swallowed her teeth, is still in good health. She has returned to the city and called to report herself, knowing we all felt an interest in her particularly; and not being discouraged from her experience of artificial teeth, had others replaced, and while the former may be still in the stomach, she experiences at least no inconvenience from them. Possibly they may not have quite such hard substances to crack, but certainly they are not in a position for her to choose.

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#### CAPPING THE NERVE SIMPLIFIED.

BY G. V. N. RELYEA, L.D.S., Belleville.

I have within the last year or more adopted the following simple course when I found the nerve exposed, or when accidentally or intentionally uncovering it. Let me explain what I mean by intentionally uncovering a nerve. I hold that it would be perfect madness to suppose that a tooth that has pained for days, or perhaps weeks, from a diseased or inflamed nerve, can be successfully treated or the nerve tamed without a little "blood-letting."

The tooth being free from disease externally, which can readily be ascertained by the slightest pressure, the conclusion arrived at must be an abnormal condition internally, either suppuration or congestion of the nerve. If suppuration, the case in all probability is complicated, involving other parts, and will require a line of treatment not properly coming under this head, but which I will consider in a future article.

If it proves to be inflammation, or even congestion of the nerve, the case is simple. I endeavour very gently to lift the dentine covering the engorged nerve, and the surplus blood being thus released from its imprisonment, will readily escape and the patient experience relief. I allow it to bleed freely for a minute, then apply a pledget of cotton saturated in carbolic acid. This I leave about five minutes, then remove and prepare my cavity. Should it continue to bleed while excavating, all the better. When I consider my cavity ready I apply more carbolic acid, and leave it while I get my gold and instruments in readiness. Next, I fold a piece of bibulous paper four thicknesses, saturate in carbolic acid, and cut about twice the size of the opening. The fingers will absorb the free acid, leaving it just sufficiently oily to cause it to adhere to the walls of the cavity. If the cavity is small I carefully place my cap over the opening, put in sufficient gold to cover the floor of the cavity, which I gently press to its place, then wedge and finish up as usual. Should the cavity be large, I fill close to the opening, then place the cap in its destined bed and proceed with my filling. So successful have I been under this treatment that the wounding of a nerve gives me no concern, and I not unfrequently fill from one to three cavities the same day, in the manner before stated, and, indeed, sometimes for the same patient. Many of the teeth thus treated I never hear of again, and judging from those I got a chance to examine, I can say with safety I do not lose one out of fifty teeth, though many of my patients are suffering when they come to the office, and they come fully determined to have their teeth extracted. If the plan I have endeavoured to explain very briefly and imperfectly is followed and done with *great care*, the patients will leave the office free from pain, and thank you a thousand times (that is, if they have any gratitude, but some have none) for having relieved them from pain and saved their teeth.

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#### AMALGAMS.

By Thos. Fletcher, F.C.S., London, Member Odontological Society.

The above subject having been broached a short time ago, a little further information on amalgams, as made and used in England, will, I have no doubt, be interesting. The ordinary amalgam, of silver and tin, as described, contains an enormous excess of free mercury, a simple proof of which exists in the fact that the mercury evaporates. The proper way to make this is to melt chemically pure silver and tin, in atomic proportions (108 parts silver to 118 parts tin) in a clean crucible, keeping the surface



of the metals covered with coarsely pounded charcoal. The temperature should be as low as possible, and the moment before pouring, the metal must be stirred with a stick. The surface of the ingot must be carefully cleaned and the whole reduced rapidly to filings with a revolving cutter, a magnet passed through the filings to removed any steel accidentally removed from the cutter, and the product put as quickly as possible into bottles well corked to prevent oxydation or absorption of moisture. If this is mixed with enough mercury to make a powder which adheres under pressure (about 7 grains of mercury to 24 grains filings), it will weld up under pressure as solid as coin, and the mercury cannot be separated under a red heat. If an excess of mercury is added it cannot be removed with pressure through a leather; any mixture so made will take up its own weight of filings, from the large excess of free mercury; and it is the presence of this excess which makes any amalgam comparatively worthless, and renders the washing with spirit necessary, as free mercury containing a small quantity of other metals oxydizes rapidly.

The other experiments with silver, gold, tin, &c., are of no practical value, owing to the same fault, viz. great excess of mercury.

With regard to platinum, which has been referred to as not forming an amalgam, I can only say that I have frequently used an amalgam of platinum, the process for making which was published a short time ago in the *British Journal of Dental Science*.

The great value of the addition of platinum to an amalgam has also been overlooked. It gives any amalgam the property of hardening with extreme rapidity, without contraction; an amalgam of platinum, silver, and tin, carefully made without excess of mercury, is hard enough to finish with file and water of Ayr-stone in about 10 minutes, and any amalgam of which the surface is carefully polished, will retain its color beyond comparison better than the ordinary surface, as it is generally left from its being too soft to finish at one operation. The objection to using platinum is the difficulty of working, from its peculiar behaviour in contact with tin. When these two metals are heated to redness together, they combine with the evolution of a heat so intense as to volatilize instantly a large proportion of the tin, and frequently to explode or split the crucible with the sudden expansion. For this reason, a fire-clay crucible should never be used, as it will not stand the sudden change of temperature. It is necessary that these two metals should be mixed first, as the platinum and silver, if fused together, require a temperature so high to fuse them that the tin would be driven off and an uncertain compound produced, which would not be a true alloy. The best plan is to have the platinum as a fine wire, melt the tin under charcoal, and push

the wire slowly down through the charcoal, standing clear in case of an explosion.

Unless gas or charcoal is used as a fuel, the metals must be kept covered with the greatest care, to prevent the action of the sulphur always contained in coke or coal. I have very little doubt that the amalgam of the future will consist of Platinum, Tellurium, or Nickel, or a compound of these. But for the price, (80s. per oz.) Tellurium has, I think every desirable property. It is white, hard, an extremely bad conductor of heat, and in general chemical properties, similar to sulphur. Nickel is so refractory and troublesome to work, that any experiments take a long time; but so far as I have gone, it appears likely to be a valuable addition alloy for amalgams.

15 Bold St., Warrington, England.

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EXTRACTS FROM THE PRESIDENT'S ADDRESS BEFORE THE ONTARIO  
DENTAL SOCIETY.

By G. V. N. RELYEA, L.D.S., Belleville.

When I came to this country, now over thirty years since, there was not a local dentist except in the larger cities, such as Toronto, Montreal and Quebec, and they could lay claim to only two or three at most. Then the towns and country depended upon the trunk-in-hand itinerant, and the unskilful operations performed by most of them, will be long held in remembrance by an outraged community. But I am happy to say a brighter day has dawned upon us; dentistry now stands, in point of merit and respectability, on an equal footing with any of the professions.

Dentistry has, within the last quarter of a century, worked its way up from comparative quackery to a scientific and honorable calling, and this advancement in the art has principally been accomplished through colleges, journals and conventions like the present. And now, gentlemen, I beg your indulgence for a very short time, while I give utterance to a few thoughts such as the occasion seems to suggest.

The profession we have chosen is truly honorable in its claims, essentially useful in its practice, and as such should be dear to each one of us. It is the real love for the profession, combined with the requisite qualifications, that makes the successful practitioner.

It cannot be denied, however, that we are in a great measure the creatures of circumstances, and if circumstances have made us what we are, and we are without an innate inclination for the profession, a very great mistake has been made, and the sooner we rectify the error the better for ourselves and the community in which our lot has been cast.

I take it for granted, however, that no one here has so mistaken his calling, but that you, one and all, hold a high and honorable position in the estimation of your patrons, both as skilful operators and worthy citizens, and that you maintain an unsullied reputation, which is an indispensable requisite to permanency in any calling.

A physician may be skilful, he may be thoroughly versed in any department of his profession, he may pride himself upon the number of his diplomas, he may enlarge upon the extent of his continental travels, the many hospitals he may have walked ; he may even claim pre-eminence in some specialty, and relate with eloquence the successful operations he may have performed ; yet, if he is wanting in integrity, his reputation will be of a questionable character.

A divine may have the eloquence of an angel ; he may draw after him the masses and electrify them with his perorations, delight them with his beautiful and chaste language, he may alarm them with his burning, withering invectives ; he may by his peculiar manner, cause the sinner to weep and the saint to rejoice ; yet, if with all these laudable and very desirable qualities he fails in setting a good example, he is a stumbling block to his people and a disgrace to his calling.

A lawyer may by his attainments, professionally be considered the end of the law ; yet, if he does not walk circumspectly, his reputation will sooner or later wane.

A dentist may be a skilful operator, he may have everything perfect in his office and turn off nothing but first-class work, he may even be courteous, polite, obliging, indeed, he may be a man of the highest attainments professionally or otherwise ; yet, if his character for integrity and moral uprightness is not of the highest order, he will only take a position questionable at best.

Without being considered presumptuous I beg to ask a few questions and point out a few errors.

It is said that cleanliness is next to godliness, and this proverb seems to apply to the dentist with double force. In this matter we all need line upon line.

Let us look into Mr. A.'s office. Are his windows free from cobwebs ; is his spittoon free from smell ; are his napkins and his towels clean ; are his instruments free from rust ? Do I hear an answer in the affirmative. Well. Now let us interview Mr. A. himself. Is he neat, clean and tidy in his dress and person ; does he keep his hands clean ; is his breath free from the taint of that abominable weed, the mention of which I would not stain this paper with ; in short, does he set a good example by showing a clean set of teeth ?

Let us interview Mr. A. a little further. Have you sympathy, can you feel for your patients; can you keep up their courage by a kind word; are you willing to apply soothing remedies; are you gentle and will you bear with your patients should the operation be severe and protracted?

Further; have you a "good morning" for your little patient should you chance to meet her on the street; and are willing to acknowledge your poor patients with a kind "*how do you do?*"

Again; can you control your temper should your patient become nervous and insists upon holding your hand with both hers while you excavate the cavity? Do you ever quarrel with your patrons about the fees after the work is done?

Are you punctual about appointments, and will you accept a reasonable excuse should your patient be behind time.

Are you polite and respectful to your older patients; will you bear with their infirmities and answer all reasonable and unreasonable questions?

Gentlemen, these questions could be multiplied; but I desist, and beg to assure you that, though rude and hastily thrown together, they are pertinent and worth your consideration.

Now a few words about our errors. Whence do we err? In this matter I will take my own practice and experience. Never attempt to do more than you can do well.

Have you a patient from a distance who wants a certain number of teeth filled, and limits you to time; my advice is, fill the best teeth, do it well, if it is only one in a day, and charge for time; and if the patient fails to get the rest done, they will lose more than you. The impression is that the dentist makes money. Now, I contend that when a piece of work is well done our patrons are the gainers. I care not what the fee is. I say again, do not undertake too much. Do I hear some one say I could do more if I could get it to do. Let me say in answer to this; do thoroughly what you get to do, and it will soon bring you more. There is an error among us which I shall term a malady. It is gold on the brain. I do not mean by this that mania which generally and assuredly attacks a community on the discovery of a piece or nugget of gold; nor do I mean that undue desire for the acquisition of it; but the mistaken ambition on the part of not a few of our good operators to make mammoth gold fillings and get fabulous fees. I am not by any means going to discourage any operator from making large gold fillings and getting as much as his conscience will allow, and the circumstances of his patients will justify; but what I will say is this, let every man, before he

attempts to fill a ten, fifteen, thirty, one hundred, or one thousand dollar cavity, just make sure that he is not undertaking too much. Unless you are doubly sure of success, better save your gold and your reputation. There are many contingencies in an operation of this kind, but I have not time to point them out. A case was reported to me not a great while since, where a good operator filled a tooth for which he charged \$18, and it proved a dead failure in less than twelve months.

The patient would unquestionably come back and complain; and allow me to ask would they not be justified in doing so? And again let me ask, how is a dentist to make an honourable amend under such circumstances? Therefore I say again, make doubly sure and avoid these shoals, unless you want to be cursed and have your reputation damaged. If you have a doubt about a filling, take it out and put in a good one, no matter about the time or cost. If your patient refuses to have it done, remind her that it is at her own risk. If there is any imperfection about a piece of mechanical dentistry that is to leave your office, and you have not time to remedy it, be sure to apprise your patient—never deceive.

Never tell your patient that a tooth is out when you know quite well that you have broken it. Your sin will be sure to find you out. It is said *open confession is good for the soul*, and I blush not in admitting that I too have erred. I filled three teeth for a young barrister, charged him \$14, and they are now filled with Townsend's best amalgam well washed in high wine, that is if they have not gone altogether. I erred in judgment. Look well to these matters.

Never deceive your patients. Does an anxious mother steal into your office to tell you that she is about to bring her darling child in to have a tooth extracted, and wants you to tell the child you are not going to do it, and thus get out the tooth. Give that mother a lesson on telling falsehoods. Tell her you will assist her in fighting it out, but you will never lie to her child.

A parent brings in a timid child to have a permanent molar extracted. The patient, an innocent sufferer, has been promised relief if she will have it out. She readily takes the chair, not knowing what is coming. Do you, under such circumstances, assure your patient that it will not hurt? What I have to say is, if you do, my wish is, you may never get another opportunity to hurt that patient.

## CHLOROFORM IN DENTAL AND MEDICAL SURGERY.

Read before the Montreal Dental Society. By J. H. WEBSTER, L.D.S., Montreal.

The following cursory remarks on ether and chloroform, and their administration as anaesthetics, in dental and other operations, have been hastily put together to contribute to the fund of information this evening, and I regret not having had time to do justice to a subject of so much importance as this, and one with which, as you are all aware, I am perfectly familiar.

Perhaps no ten professional men in this country have administered ether and chloroform as often as myself. I having been the first to introduce both into Canada; the first to manufacture chloroform, when the imported article was selling here for one dollar per oz., and the first to manufacture ether, so as to insure its purity and strength.

The first time that ether was administered outside of my Surgery was for an operation by Dr. Wolfred Nelson, assisted by his son, Dr. Horace Nelson, in the presence of several medical students and other spectators, for the removal of a tumor. The patient was a poor woman, living in Thompson's Yard, Griffintown. I administered the ether, and with such satisfactory results that many other medical men were induced to give it a trial. The next time that I was requested to administer it was in the Hotel Dieu Hospital, to an old man, for the removal of a broken silver catheter from the bladder. I at first declined, as it was the belief of six surgeons present that the man could not survive the operation, owing to his advanced age and weakness. I was, however, persuaded by Dr. Thomas Arnoldi to do so. The anaesthetic was successfully administered, the catheter removed, and in a few days the man was discharged, cured.

I had much to contend with in the introduction of ether, on account of the timidity with which many regarded its administration. A rather humorous anecdote may here be related. I had lent one of my instruments for administering ether to a friend of mine, a Professor in a medical college, who wished to experiment on a Tom cat, in the presence of his class; he succeeded in procuring a fine, large, healthy animal. When all was ready Tom's nose was put in the mouth-piece, well secured to it with a towel, to prevent air entering by the sides of the mouth-piece; at first there was a great struggle and some kicking by poor Tom; in a short time, however, he became quite docile, and allowed a leg to be amputated, his two ears to be clipped off, and his raw flesh to be seared with a red hot iron, without moving a muscle; and well he might for poor Tom was dead. Although it was midnight, my friend deemed it his duty to call on me immediately to relate the circumstance, and begged me to desist from

using the anæsthetic. I asked him if he was sure that Tom died from the effects of ether; he replied, "Yes! without the shadow of a doubt." I told him that I had very serious doubts myself, and would like to settle them immediately by examining the case. He having a key to the college, I dressed myself and went there with him, and there lay the cat, dead enough to be sure. The next thing was to investigate the cause of death. I took the mouth-piece and put my nose into it and was soon convinced that if the Professor had held me there for a few minutes as he did Tom, my fate would have been precisely the same. The mouth-piece was made with tin valves, iron wire through the hinges. By former use the saliva had got into the hinges and rusted the wire; the lungs of ten cats united could never have opened it; the cat was suffocated. I persuaded my friend to get another Tom for the next trial, which he did, and went through the same operation; this time the valves had been oiled and were in good working order: first the leg was amputated, the ears cut off, and the raw flesh seared with a red hot iron without the slightest motion. In a very few minutes the effects of the ether passed off, the cat opened his eyes, gave a stare and a squall, and made a lunge through a light of glass into the street and that was the last seen of that cat.

I am not at all timid in the administration of chloroform; as a proof, I have given it to my own daughter for four hours and forty-seven minutes, twenty-two and a half ounces of chloroform without the least bad effect. There are persons to whom I would no more think of giving it than an ounce of arsenic, but I have frequently given it in cases considered dangerous, and, in well known cases, where others have positively refused to proceed. I attribute my success in a great measure to confidence and care, two requisites which many administrators lack.

It is well known that fear counteracts the effect of most anæsthetics; the first point is to disabuse the patient's mind of any dread. I often succeed with patients considered unmanageable, by saying: "Now let us try a little to accustom you to it, and if it be disagreeable we can wait for another time; just inhale sufficient to observe its effect, keep perfectly quiet," and, if any spectators happen to be present, keep up a lively conversation with them. In the hundreds, I may say thousands, of cases in which I have administered I have not seen one that I could not get perfectly under the influence of ether or chloroform.

There is one point which I always regulate, as of vital importance, and one which I know to be much neglected that is the necessity for giving plenty of atmospheric air.

Mechanical appliances such as those of Clover, Sanson, Snow, and others, may hasten the anæsthesia and economise material, but, unless in careful,

experienced hands, I do not consider them as safe as the towel although very excellent for experienced administrators, for, it must be admitted, that many undertake to give chloroform, ether, and nitrous oxide gas, who do not know the first principles of administering them.

While pinning faith to the towel, I think there is a prevalent and dangerous method of using it, viz. : folded into a cone open at both ends, the large end covering the mouth and nose. Now it is very common to see this cone applied over the nose and mouth and held close to the face, so close that no atmospheric air can find entrance, except through the small end, which aperture varies in size from a ten-cent to a fifty-cent piece, while at times that hole is quite closed. It is very difficult to keep such a hole open in a towel, even though it may be quite stiff with starch, and in this way it is absolutely impossible to obtain a proper admixture of air to reach the lungs; the patient gags, chokes and coughs, and clearly learns that the anæsthetic is being forced on him instead of irresistably affecting him. If any method of administration be objectionable it is this.

Sansom, in his work on chloroform, shows that he took more pains to invent a mechanical appliance in which to give chloroform, than to investigate the use of the simplest method, the towel. "The greatest objection," says he "to the administration of chloroform in a handkerchief (towel) is its irregularity, and the utter ignorance we have of the strength of the vapor inhaled at a given time; at one moment a quantity of air strongly impregnated with chloroform may enter the lungs, at another a breath may be taken of almost pure atmospheric air."

Now, notwithstanding this high authority, and the fact that fifty-five per cent. out of one hundred and nine fatal cases ensued with the handkerchief, towel, or tent, it may be fairly assumed that the anæsthetic was in most cases administered by comparatively unexperienced persons, and, judging from the incautious way we see the towel used, that it was held so close to the face that the patient was actually *suffocated to death*. The above extract from Sansom, too, shows an exaggerated importance given to details, which my long experience proves to me are no reliable guide.

In the first place I prefer some of the very "irregularity" complained of by Sansom, and think it not only admissible but highly desirable to admit occasionally a "breath of almost pure atmospheric air." The cone if used should not be held nearer than two inches from the face. Dr. Richardson says that "to give chloroform on a rag is *wasteful*" this should be no consideration whatever. What has economy to do with safety. Death may ensue from *suffocation* when all air is excluded and it



is a fact that some patients will endure suffocation for a time from ignorance, fearing to interfere with the operation.

I never use the cone, but prefer a soft towel held open on the palm of the hand folded loosely and the sides frequently reversed, it gives a free admixture of air. This is the easiest, most pleasant and safest mode for the patient; I therefore hold it the best. Many argue that my method entails great waste, and it requires such a quantity of chloroform that it makes it too expensive; the cost is, in my opinion, the last thing to be considered. If you have a patient who is able to pay, charge him a fair price; if he be not satisfied, better decline administering it. If you have a poor patient rather make him a present of the operation than risk life. Of late I have used with great success a face-piece similar to Clover's, with a bag and guage, wherein I can mix whatever percentage of air with the chloroform I choose, more or less, or give pure chloroform, or pure, air as I think proper, and the patient continues natural respiration. At the same time I would by no means advise inexperienced operators to try this until they become perfectly familiar with the instrument.

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#### GROSS CARELESSNESS WITH ARSENIC.

By HARRISON L. NAPIER, London, England.

An instance of gross carelessness on the part of an inexperienced Dentist, came before me to-day, and I send it to you, as a mite of information from an English subscriber. The Dentist referred to is a late importation from New York, who thought he would come over here to enlighten the benighted British people, but who finally gravitated down to his proper sphere of a quack dentist.

A patient applied to him for relief from toothache in a proximal cavity in the second left upper molar. A large fungus growth of the pulp had almost filled the cavity of decay, and the gums and alveolar processes had receded from the neck of the tooth. A party who brought the patient affirmed that the first day the Dentist placed a bit of arsenic—having told the name of the remedy—in the cavity and over it a piece of yellow wax, that for four successive days the pain increased, and the Dentist re-applied the same amount of arsenic, stopped with wax, into the cavity. The fifth evening the face began to swell; the throat was so affected that breathing became difficult, and on Saturday, the 7th day, the patient died. This was the only time he had ever required Dental services; was a strong man of about thirty-five and temperate. "Our American cousin" has disappeared.

## REASONS FOR DOING CHEAP WORK.

By X. Y. Z.

A frank but simple confrere in my vicinity recently gave me his experience of cheap dentistry, which may be serviceable to us all, as tending to show the extreme folly of giving our services at the ridiculously low rates which characterize many a fair operator to-day in Canada, and which is fast driving many good men into other means of obtaining a decent living.

My friend enumerated, as follows, persons who considered they had a claim upon him for a reduction of fees:—

1. His clergyman and family.
2. All other clergymen, Protestant and Roman Catholic.
3. Particular friends of his Parents.
4. Clerks in his brother's store.
5. Friends of his cook and housemaid.
6. Members of two societies to which he belonged.
7. People from the country, who thought the Dentist ought, literally, to pay part of their travelling and board expenses.
8. His relations (who, of course, expected everything *gratis*.)

The fact is that we Dentists in Canada are not making much more than our "bread and butter," when, as a valuable Profession, we ought to rank in the matter of pecuniary profit, as well as of *status*, with medical men or lawyers.

A Cheap Dentist has no kind of encouragement to be a good Dentist; and I for one, am getting disgusted with the *self dis-respect* of half its members.

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 THE ABUSE OF PLASTIC FILLINGS.

Read before the Montreal Dental Society, by W. GEORGE BEERS, L.D.S., Montreal.

The ignorance or depravity of some men in the Dental Profession brings discredit upon its reputation—for there is no use flattering ourselves that our Profession is exempt from members who are ignorant because uneducated, and quacks because constitutionally depraved. There is no operation in Dentistry, but may be shamefully abused; and allowing for the stage of immaturity through which we all have to pass, and during which time we doubtless did work that would now bring a blush to the cheek, there is a frequent abuse of plastic fillings now extant to which I venture to draw attention for a few moments. It is dangerous to extol even a good principle or practice too much, because there is no principle or practice in Dentistry but has its limits and res-

trictions, and there are men in the Profession who will carry a practice to any extreme, so long as it is convenient and cheap.

Many of the best operators and thinkers in our Profession to-day are those who count their practice by decades, and whose intellectual and physical vigour overmatch the most of their young compeers. But there are a few practitioners of the old school still left who prefer an old way of doing a thing lest the trial of a new way should involve more study and investigation than they care to give; who have made up their minds to make the supply of Dental knowledge obtained in their youth do them for the rest of their lives, and who have a superstitious respect for the dry bones and dead ideas of their ancestors. They magnify men of their opinion, however obscure, into men of eminence, and dwindle those who differ with them, however famed, into nonentities. If they could have their way, experiment would never break the delusion of ignorance, and old opinions would be more weighty than modern investigation.

It is now generally conceded by those of the old opponents of amalgam who are progressive, not prejudiced, and who have the independence to think, test and observe for themselves, that the abuse of this plastic filling at the time of its introduction, by the use of an impure, uncleansed mixture of filed coin silver, which when amalgamated was seldom washed, and when used was never used well, led many to abstain from or abandon its use, and that thousands of good teeth were then extracted by leading practitioners which no other filling would save. It is also conceded that many cases exist to-day of teeth filled thirty years ago even with this dirty mixture; and moreover, that the amalgams of the present day and the present mode of manipulation bear no resemblance to the material and manipulation of 1845: that used as intelligent dentists use them, they will preserve teeth that anti-amalgamites admit they would extract, and that in the hands of skilful men who know how to use, not to abuse them they are at present invaluable.

There is a cowardly sensitiveness with some leading men in our Profession about openly discussing this question, lest they be ranked with those who use amalgam almost exclusively. If there are any doubts about a point of practice, it is dis-creditable to a man to enforce that practice at all; but those who use amalgam indiscriminately ought to be able to give as good reasons for their practice with it as with gold, and then unite in the condemnation of the men who abuse it, an abuse which is almost as prevalent to-day as ever, even though the material is purer.

The charges made against it so long ago have only been repeated by a very few, and they mostly men whose words are more consistent than their work, while on the other hand *its abuse* is strongly condemned by

those who know how to use it. If there had been any sound grounds for the charges made a quarter of a century ago, they would have gathered force, as they grew in age, with the growth of the Profession. Have they done so? Quite the reverse. And is it at all likely that in the remarkable progress which has characterized the Dental Profession during the last twenty years, that on this one question our leading operators and thinkers in Europe and America have been blind? Far more probable that those who oppose amalgam *in toto* with the persistent virulence and prejudice of the old time, have not been able to catch up to the rapid progress around them, but are to-day worse operators and poorer thinkers than in days gone by. If we were to judge from what we see and know of such men to-day, what kind of opinion of them could we consistently form? Take gold fillings and mechanical dentistry, and we daily meet with gross abuses of both in the mouths of patients who have been for years not alone under the care of quacks and superficially educated practitioners, but under the care of men who step down from their serene altitude to expose the abuses of Dentistry, and the history of whose professional lives is one of slander and conceit.

The abuse of amalgam cannot be denied; but what is there in Dentistry not abused? Is there any greater imposition and sham than in the abuse of gold? Considering the immense amount of amalgam used from year to year—and what a wonder we've never heard of an amalgam epidemic mortality, though it has been used so long, so much and so ill!—I think we ought to have more independent discussion on the subject, not to ventilate the egotism or boasting of men who condemn it in print (for capital) but who use it on the sly, and make their patients believe it to be something else, but to help to free us of some of the shackles on free thought and investigation which were imposed over a quarter of a century ago, and to which some of the old practitioners are still slaves.

I here present a collection of extracted teeth badly filled with amalgam, with the history of which I am acquainted, though not one of them was filled by me: and here let me digress to say, that it is an advantageous and profitable study to investigate the history of failures. No. 1, is a specimen of a very frequent result of filling such teeth, when so badly done. In the first place, the pulp had died from congestion, and had remained unfilled for two months after it had ceased to pain, and the face had been swollen a month before. The dead pulp was not removed previous to filling, nor, as you can see, was the decay half excavated, or proper preparation given to the shape and borders of the cavity. The very first principles have been ignored; a careless investigation failed to discover the

full extent of the cavity, and I should judge a lap of gum had been growing *over* the edge *and into* of the bottom of the cavity. In addition to this, a cusp of an upper molar antagonized too soon, and evidently prevented the rest of the teeth meeting. Now here we have a condition of things which could not be improved upon to produce as it did—periosteal irritation, inflammation and suppuration; a condition of things, too, which would as readily have been induced by gold or any other filling. To begin, this tooth clearly should never have been filled at all under the circumstances existing at the time; and if an attempt was made to save it, demanded considerably more care. Nos. 2 and 3 were filled in 1849, and were removed last year, being the only two in the mouth which had withstood the destructive siege of decay. These two cannot be said to be badly filled considering the lease of life they have had, but there are apparent extensions of decay, which could have been prevented by a more thorough trimming of the borders. Among the points which induce failure in the use of amalgam we may enumerate as most important points: 1st, previous condition of the tooth and periosteum which would diagnose the *laisser-faire* policy, if not extraction; 2nd, imperfect preparation, consisting of thin overhanging walls of enamel under which the filling is packed, but which ultimately crack and break down from mastication, exposing an unpolished edge of enamel and an easy entrance for decay; 3rd, leaving deep fissures already decayed or discoloured, which have their issue from or into the edge of the cavity to be filled; 4th, cutting the walls at the orifice so as to run two sides to a point in a sharp angle—these often running into contiguity with depressions certain to decay, and fissures already indicating its advances; 5th, leaving the extreme outside or inside edge of the cavity sharp and unpolished; 6th, leaving the filling too high, so that when it hardens one or more cusps of antagonizing teeth bear upon it too soon; 7th, not finishing the amalgam flush with the walls in approximal cavities, leaving overhanging ledges which press upon the gums, retain particles of food in contact with it and an adjoining tooth; and in crown, buccal and labial cavities, letting the amalgam lap over the edge of the cavity, and 8th, neglecting to finish or polish the filling a few days after inserted. I here present rather a disgraceful abuse of amalgam. A first and second molar having large approximal cavities, facing each other, were filled, as you see, with a very impure amalgam, and instead of being filled separately and independently seem to have been purposely united, so that in an effort to remove one, both were removed, and cannot now be separated without filing or breaking.

I do not know any better way to demonstrate the abuses of

amalgam than by the cases presented, or a better means of pointing a moral and teaching a lesson on the care demanded, even in the use of the easiest manipulating filling we possess. It is noteworthy that teeth badly filled with amalgam last longer in the aggregate—the filling often clinging to the tooth when it has only one retaining point—than those badly filled with gold; and my honest conviction is, that many calling themselves Dentists would do less harm to humanity, and bring less discredit upon Dentistry by using such a filling as amalgam—which, in their hands, may save the teeth—than an article which they know they cannot use properly.

It is well here, before leaving this subject, to say that there is no excuse whatever for using amalgam in the front teeth, and that, wherever it is inexpedient to insert gold, we have a temporary substitute in osteo-plastic or Hill's Stopping. Approximal cavities are more liable to discolor than those situated on the crowns, and the discoloration which would be of comparatively little consequence, should it ensue, in back teeth, is an objection in conspicuous cavities.

Those who oppose amalgam *in toto* are forced to admit that they have no permanent substitute where a soft filling is demanded, by reason of the looseness of the tooth or other circumstances; and have to admit that they extract teeth they cannot fill with gold, or temporize with other soft fillings which are only temporary. This brings us to the abuse of other plastic fillings; and here I present specimens of teeth, some of which could not be well filled with gold at the time, but others which could—which were plastered up every six months, until the edges chipping away and breaking down left the teeth only fit for the forceps. I have frequently met with vigorous healthy patients who had had amalgam fillings in the teeth for five, ten and fifteen years, who were persuaded to have them cut out as endangering the system and the teeth. The expert operator, after charging a heavy fee for cutting out the filling, exposed the pulp in several cases, inserted gold or tin foil, which in every case fell out—as boasting and conceit are not the essentials to make a gold filling hold in—and finally patched them up with osteo-plastic and Hill's Stopping. The consequence was that the teeth which, if left alone, would in all probability have lasted a lifetime, are now lying before you crownless stumps. The amount of suffering endured by the patient, the waste of time and exorbitant charge for such a result, would lead us to trust that a day may come when such outrageous imposition—for it is nothing less—can be made actionable, and such malpractice in the mouth be as criminal as malpractice in any other part of the body.

The abuse of oxy-chloride of zinc, Hill's Stoppings, and other such

plastic fillings, is wide-spread, owing partly to the ignorance and quackery prevailing in a large part of the Profession, and the inappreciative task of a large part of the public who neglect their teeth, and will not encourage, by reasonable recompense, the efforts to do the best that can be done with gold. The human teeth were not created for Dental experiment, and there has been enough of this to satisfy any one of the temporary nature of these plastic fillings. There are certain favorable constitutional conditions and circumstances in which they will last several years, but they ought never to be inserted as permanent, and teeth filled with them ought not to be considered as "finished" until replaced with a permanent material. We see a great many valuable teeth destroyed, particularly the bicuspid from this abuse or misuse of these fillings. Patients cannot and will not run to the Dentist every month in the year to have fillings replaced. A summer at the sea-side may ensure the destruction of half-a-dozen bone filled teeth in the same mouth. If you are not able to fill a tooth with gold it is better—but who would do it?—to send your patient to one who is, rather than see the teeth ruined. Better fill teeth not conspicuous, with amalgam, that will preserve them a lifetime, than with gold, which in your hands is only a deception, or with soft fillings which need renewal every few months. Plastic fillings, properly used, have been an immense blessing to the Profession and the public; abused they have been a curse. In the hands of dentists who are ignorant and genuine quacks nothing in Dentistry is safe or reliable.

The discovery of a soft filling of a suitable colour, as durable as gold or amalgam, and as easily introduced as the latter, would, perhaps, be a mingled blessing and a curse. To those who would use it honestly it would be a great and lasting good; but it seems to me it would bring about a degeneracy of the whole art of filling teeth, and quackery would flourish wider than ever. It would be just what the quack Dentist would desire, because then he would boast that he could insert it as easily as the best operator in the land. This, however, is questionable, but the abuse of the present soft fillings in use, as previously referred to in detail, would seem to predicate no better success with a better material, should one be found.

A Surgeon General in H. M. Navy, recently showed me a white filling in a lower molar which was inserted nearly twenty years ago by a native Chinese Dentist in Hong-Kong. It had every appearance to the eye of being oxy-chloride of zinc, but it was impossible, as it had withstood mastication and the action of the fluids of the mouth so long. He allowed me to try the drill on it; it was as hard as amalgam. We know that the Chinese were famed for their cement for household pur-

poses, and I am inclined to believe that this filling referred to above is something we do not possess. I offered to replace it with gold, *gratis*, if he would let me remove it, but he refused. It would certainly be a kind of sarcasm on the dental profession of Europe and America if we were to be indebted for the plastic filling to the investigation of Chinese Dentists. Can the American Dentists in Hong-Kong give us any information on this subject? I doubt if we will find the *desideratum* in the metals. Many experiments have been tried; one Dental-chemist having seven different plastic fillings in the teeth. All the oxy-chlorides dissolve and decompose by mineral acids and caustic alkalies. Some which are perfectly insoluble in water are invariably dissolved in the mouth. The crystalline silicates incorporated with anhydrous zinc oxide in osteo-plastics are coarser in some than others. Guillois cement for instance, has less glass than Smith's oxy-chloride of zinc, and the glass it contains is coarser. Compounds of zinc seem to be a failure for the object desired. Some have suggested  $Zn. Cl. 2, 6 ZnO.$ , as the most durable of oxy-chloride, if they could be properly formed. Mr. Tomes suggested oxy-chloride of magnesium some years ago, but its color, its slow setting, and its solubility in acids, make it objectionable. Peroxide of manganese with soluble glass have been tried; it is very hard and resists the action of water. Pulvarized silica and gum copal, and various other preparations have been proposed, but so far all have serious objections. No suitable metal has been left untried.

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### SELECTED ARTICLES.

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#### VULCANITE PLATE WITH THREE ARTIFICIAL TEETH, SWALLOWED AND RETAINED IN THE STOMACH OR BOWELS.

Read before the Halifax County Medical Society, June 6th, 1871. By Honble.

D. McNeill Parker, M.D., Edin., L.R.C. E., Member of the Legislative Council of Nova Scotia, Halifax, N.S.

Mrs. H., a lady's maid, aged 25 years, a pale, thin, and small woman, of delicate constitution, had worn for some length of time a vulcanized plate containing originally five artificial teeth, which had been manufactured and fitted by a Dentist, in Liverpool, England.

It occupied the front portion of the upper jaw and held teeth, to represent the two incisors and canine of the right superior maxilla, and the second incisor, and first bicuspid of the left bone; both the latter being absent at the date of the accident. The platinum pins (four in number)



which had connected the two lost teeth to the plate, projected from its surface.

Absorption of the alveolar process, and an altered condition of the gum, had caused the plate, which at first fitted well, to become loose, and hence difficult to be kept in position. On rising from bed on the morning of March 3rd, 1870, she sneezed violently, and this was immediately followed by a deep inspiration. The former act displaced the plate from its position, and the latter, (the deep inspiration) drew it instantly into the pharynx, where it was fixed for some little time, beyond the reach of the finger. The contractile action of the pharynx and œsophagus, by degrees forced it downwards, so that on her arrival at my office a few hours after the accident, she felt it near the lower part of the sternum ; and before I could use an instrument, she was aware that it had escaped from the œsophagus to the stomach.

I immediately passed a probang, but failed to discover it. She had suffered much from pain and difficult respiration during its descent. The pain continuing in the cardiac extremity of the stomach, an opiate was administered, rest was enjoined, and she was admitted shortly after to the Provincial and City Hospital for treatment. Efforts were there made to discover its locality, but without success. She was put on a diet of farinaceous food, with milk and prunes *ad libitum*. The latter (the prunes) were given with the idea that their outer and less soluble parts would be likely to become entangled in, and firmly connected with, the plate and teeth, so as to round off the sharp points, and thus lessen the risk of injury to the canal. She was soon dismissed by the surgeon in charge, relieved from suffering, but with the foreign body still in the stomach, or some other part of the alimentary canal.

Since then she has from time to time, suffered from general abdominal tenderness and swelling, nausea, vomiting, frequently recurring attacks of diarrhœa, accompanied by inflamed mouth, tongue, and pharynx ; (when these latter symptoms have been present, she has always, with one exception, tasted, throughout the attack, the vulcanite of which the plate was composed,) temporary suppression of urine, loss of voice, pain and numbness in left arm, hand, face, and sometimes of whole left side.

On several occasions she has been faint, powerless and unconscious for some hours. I have never seen her while thus attacked, but from the description of her then condition, given me by others, I may state that her symptoms resemble those of a person suffering from a form of hysteria not unfrequently met with in young females. It is necessary here to add, that she had on more than one occasion been somewhat similarly affected prior to the accident.

The menstrual function has never been interfered with, and I have generally found the heart's action undisturbed.

At times she has been apparently well, and for some weeks after her discharge from hospital her health was as good as usual; but recently she has failed in strength, and has more frequently suffered from some of the local or reflex symptoms above referred to, and will be obliged to relinquish her situation from physical inability to perform its duties.

#### REMARKS :

The measurements taken by me of the space occupied by the plate—as defined by the patient—would make its length about three inches, and its breadth fully one inch; but it is probable that the figures given by A. C. Cogswell, Doctor of Dental Surgery of this city, who has written an account of this case in the *Canada Journal of Dental Science* for November, 1870, are more accurate. He states the measurement to be respectively 2 inches, and  $\frac{3}{4}$  of an inch. Allowing these figures to be correct, it seems difficult to imagine how a plate of this size, with three teeth attached,—its curve being more acute than usual, in consequence of the formation of the superior maxilla of the woman—could have passed down the canal from the mouth to the stomach.

By a most unhappy circumstance, the deep inspiration which drew her loosened or detached plate into the pharynx, carried it thither, with its long axis directed backwards and downwards; else it never could have entered the narrow superior strait of the canal. Being properly directed by the contractions and propelling power of the stomach, it may have passed through the pylorus, but I think this is not probable. There is not, neither has there been, any persistent local symptom which would indicate with any degree of certainty its true position.

The efforts made to detect it in the stomach having proved abortive, the idea of snaring or hooking the plate by appliances which had suggested themselves to the surgeons of the hospital, could not be carried out,—hence she still wears the teeth, but in a locality where I fear they will rather retard than assist the process of digestion.

Within the past year a case almost identical with that now under discussion was recorded in the *London Lancet*, if I mistake not, in which an hospital surgeon not only discovered the site of the plate, but successfully extracted it by means of an instrument used for the purpose of removing coin or other foreign bodies from the œsophagus. To have hooked or seized such a body, in a large, distant, and dark cavity like the stomach, and to have caused it to enter the œsophagus in its long axis, precisely as desired, was, to say the least, a most happy result, and one

that might not be attained again, even by the same operator, in 90 cases out of a 100.

In this connection I may remark, that a practical difficulty may meet the surgeon seeking to remove such a foreign body as a plate, with teeth attached to it, from the stomach.

He might be able to seize it firmly, and yet fail to get it to enter the œsophagus; and still have further and greater difficulty in detaching the instrument from its hold of the plate or teeth, without doing serious violence to the stomach; and this difficulty might very readily occur where snares of wire or twine are used for such a purpose. Hence the necessity of being guarded in selecting the surgical appliance for such an operation.

The question arises—What will become of this foreign body if it is not passed “*per vias naturales*?” And a second inquiry very naturally follows the first—What will become of the patient if it remains in the alimentary canal? If I am correctly informed, the material of which it is composed is not likely to be dissolved by the action of gastric juice, or by any of the secretions it may come in contact with, should it pass the pylorus. Dr. Cogswell, in the article already referred to, says:—

“I felt desirous to know what mineral acids would dissolve vulcanite rubber, hence I experimented with the various muriatic, sulphuric, and nitric acids, found the two former had no effect upon the piece placed in it, but by applying nitric acid and chloroform, after 24 hours the piece had become quite like a sponge in softness, could easily express the coloring material from it, and in drying it could be rubbed up like powder between the fingers.” If these strong mineral acids have failed to dissolve, or chemically change the material of which vulcanite is composed, I think we may safely conclude that the secretions of the digestive organs will hardly be able to accomplish it, and that the plate in question will, if not passed “*per rectum*,” long continue in the canal without material alteration.

In reply to the second question—What will become of the woman should the foreign body continue in the canal? no certain statement can be given; but bearing in mind the history of recorded cases, somewhat analogous in their general features to that now under consideration, it may be remarked that it is possible, and even probable, that this vulcanite plate and teeth may be retained for years without destroying life, or even producing very alarming symptoms. On the other hand, grave symptoms may unexpectedly present themselves; the patient's life may be placed in jeopardy; or death may suddenly occur from inflammation, from ulceration, and perforation, or from its becoming impacted and obstructing the canal.

Dreading these not improbable contingencies, I objected to her being sent across the Atlantic to her friends in England, shortly after the accident occurred, on the ground that sea-sickness, if troublesome and violent, would be likely to produce irritation and perhaps fatal consequences.

The practical lessons to be learned from this case, are :

1st. That badly fitting plates holding artificial teeth are unsafe, and should not be worn—especially at night.

2nd. That much larger bodies than we could suppose may find their way (accidentally or otherwise) into the stomach.

3rd. That when received there, even large and irregularly shaped bodies, may—and often do—remain for a length of time without producing alarming symptoms.

September 14th, 1871.

I heard from this woman about the first of the present month, at which time she was a resident in the State of Rhode Island. She still wears the plate in the alimentary canal, and says that her health is quite as good as it was prior to the accident.—*Canada Medical Journal*.

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#### DENTAL.

The Dental Association of the Province are doing a good work, and one which will redound not only to the improvement of their own position, but to the great advantage of the general community. The practice of dentists in putting out show cases filled with all the paraphernalia of the Profession, the false teeth and unsightly gums, &c., which are much more repulsive than attractive to the public, and especially to those requiring the services of the owner, is being done away with. It will also add much to the respectability and standing of the Profession to remove these pettifogging advertisements which are so common at present on our best thoroughfares. Legal opinion having been taken, it was found that the Board had power to prohibit their use, which will, as soon as possible, be effected.

The Association has also obtained certain rights and powers from the Legislature by which they can deter any one from the practice of Dentistry who has not passed the examination of the Board, and obtained its license as a duly qualified person.

That this will wipe out a vast deal of quackery in our midst is certain, if properly applied, and if the Board but follows up and utilizes the powers it has obtained. What suffering might have been saved to many an unfortunate fellow mortal if this course had been adopted years since, we can guess at, but not compute. We believe, however, that a rapid advance is now being made in this science, and that Dentistry is taking a stand

from which the world will derive much benefit. In this it is going hand in hand with the sister science Pharmacy, which is at least being placed on a footing more in accordance with its own dignity and importance, and more in accordance with the safety and well being of the public—*Montreal Daily News*.

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### BIBLIOGRAPHICAL NOTICES.

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*Treatment and Prevention of Decay of the Teeth. A Practical and Popular Treatise. By Robert Arthur, M.D., D.D.S.* Thirty-eight illustrations. 256 pages. Philadelphia: Lippincott & Co., 1871.

We regret to be unable to notice this valuable little work *in extenso*, but promise to review it in full at some future time. In the meantime we can advise our readers, one and all, to buy the book and read it for themselves. The name and reputation of the author is alone a recommendation of the work.

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*Transactions of the Dental Society of the State of New York, 1871.*  
—We are indebted to the Secretary of this Society for a copy of these valuable transactions, forming a neat volume of 170 pages.

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*The Physician's Annual for 1872.*—A complete Calendar for the City and Country Practitioner. Philadelphia: S. W. BUTLER, M.D. 1872. Price, 50 cents.

This little work of 80 pages comprises a Monthly Calendar; Hospital Calendar of the principal cities of the United States; Chronological Record; List of Medical Colleges and Institutions; List of Medical Societies, Medical and Dental Colleges of the United States; with forms of Constitution for Medical Societies; Priced Catalogues of Medical Books, Surgical Instruments, &c., besides much other information of interest and importance to physicians.

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### EDITORIAL.

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#### EXPLANATIONS.

We feel that the unprecedented delay in issuing the last number of Vol. III, now (May 1872) demands some apology and explanation. During the month of October, 1871, a case involving the intent and value of the Dental Bills of the Province of Quebec and Ontario arose in the Superior Court of Montreal. We were asked to defer issuing this number in order to get in a report of this case, as we had decided to

delay issuing Vol. IV, until arrangements pending were perfected to improve the Journal, and insure invariable punctuality. This case has dragged its slow length along, and without any prospect of a speedy settlement. Therefore, we omit any report, and will give an epitome of it in a future number. Suffice it here to say that the attempt of the plaintiff to obtain the Licence through a supposed flaw in the act, and so avoid an *examination*, is by no means creditable.

Other circumstances have helped to delay matters. We will soon, however, be in a position to announce that the publishing department of the *Journal* will be in the hands of a firm accustomed to it, and that this great burden will be off our shoulders, and leave us free to attend to the editing department.

In future the *Journal* will be edited impersonally—dropping all names of editors from the covers and editorials.

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#### APPRECIATIVE PATIENTS.

One of the greatest pleasures of professional life is to find our services rewarded by an appreciative intelligence on the part of our patients. There are some men, otherwise intelligent, who have less regard for the care of their teeth than the cut of their whiskers, and who would be in infinitely hotter water by the loss of a shirt button than the sacrifice of a molar. They care little about them because they do not think about them, and do not clean them because they do not care. If you can persuade them to get decayed ones filled, you may take your oath that they have put you down as having had one thought for them and a dozen for yourself. On the other hand there are faces which we welcome in our office, like a bright clear day. They appreciate the value of their teeth; abhor "cheap and nasty" work, and respect the dentist as a professional man, not as a "tooth carpenter." They ask for information about their teeth—their anatomical, physiological and pathological character—; they remember your advice and act upon your warning. They are not satisfied to wait for the premonitions of pain, but visit you for inspection periodically, and appreciate it sufficiently to pay a fee to have it thorough. They take a pleasure in a good filling in a tooth, even if it is conspicuous; and the only way to gain their unswerving attachment as patients is to do for them the best that Dentistry can afford. They do not higgler about fees; they pin faith to your honor, and would rather pay double the value for a superior operation than anything at all for one done badly. Such patients are one of the best stimulus to honest endeavour.

## THE TESTIMONIAL TO MRS. HORACE WELLS.

The movement in England to present a substantial testimonial to the widow of Horace Wells, instead of erecting a monument to his memory, appeals to the common sense benevolence of the Dental Profession, and has met with much success. A few weeks ago we received a subscription paper from Mr. Fox, editor of the "British Journal of Dental Science," asking us to give the movement some aid in Canada. A little start has been made, and those who may feel disposed to contribute to this object may send their amounts to us before the first of June, 1872. Subscriptions will be thankfully received, however small; but the Committee in England desire none to exceed one guinea. Am unts sent to us will be acknowledged by the Treasurer in England, in the "British Journal of Dental Science," and No. 1 of Vol. iv. of this Journal.

The following paragraph lately appeared in a contemporary:—

"Some of the Dental papers are indulging in much pity for the widow of Horace Wells, stating that 'Mrs. Wells is in great need,' and shedding ink by the gallon over her deplorable fate. Well, if the lady is in 'great need,' why not put your hands in your pockets and give her some money to help her in her necessities? That would certainly be more becoming than telling the whole world of her sufferings! You pay a poor compliment to her feelings by parading her name and sufferings before the community. The truth is, that these editors want to make of their sympathies. That is all. 'Only this and nothing more.'"

In reply to this we have to say that, though Mrs. Wells is not in the very deepest want, yet she is in need, and has frequently been obliged to admit it. Now, it is a very successful principle to announce beforehand your contempt for an object of benevolence if you are anxious to avoid being asked to subscribe, and we think it would have been more to the credit of our impulsive contemporary if he had imitated the example of "these editors," and subscribed to the fund. "That would certainly be more becoming."

We may add, too, that it "would certainly be more becoming" if our "American cousin" and contemporary had shed a little decent ink on behalf of the widow of an American dentist, instead of leaving its origination to *confères* in England. We are sure that the large majority of American dentists cannot but commend the spirit which invoked this generous appreciation and friendliness in England.

## SUBSCRIPTIONS RECEIVED TO DATE.

W. Geo. Beers, Montreal, \$4; C. Brewster, Montreal, \$4; C. S. Chittenden, Hamilton, \$4; A. Bernard, Montreal, \$4; W. Young, Montreal, \$4.

## DEATH OF DR. B. T. WHITNEY, OF BUFFALO.

We sincerely regret to learn of the death of Dr. B. T. Whitney, Buffalo, well-known as an earnest dental reformer and educator, and also in connection with the vulcanizer interest and manufacture. One naturally reveres the men in our profession who have stood forth as landmarks of its progress, and whose name and reputation have been as household words, even in the days when dentistry was very far behind its present position. As one who has contributed by his devotion to his profession, and by his untiring investigation and study, to elevate the status of dentistry as a profession and the practical excellence of its members, Dr. Whitney's memory must ever be enshrined in the hearts of those who are not mere dental money-mongers, but who look forward to the noble position dentistry may some day attain, by faithfulness on the part of those who are now enrolled in its ranks.

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PROF. J. H. McQUILLEN.

The readers of this journal, as well as of every other, will regret to learn that Prof. McQuillen, after thirteen years' editorial connection with the *Dental Cosmos*, has relinquished his connection with that valuable periodical. The *Cosmos* owes its reputation in a large measure to his untiring ability and enthusiasm, and to the scholarly and scientific manner in which he has for so many years handled his pen in the cause of dental science, art, and education. We know fewer harder worked men in the Profession, taking into account his duties to his private practice, the *Cosmos*, the Philadelphia Dental College, and various societies in which he was interested. The readers of this journal have several times been indebted to his courtesy and kindness; and while in one sense the Profession will be a loser by the severance of his connection with the *Cosmos*, we are hopeful that, with more leisure on his hands and less responsibility, he will be able to devote more time to his special studies and investigations, and that the result will be seen in many an article from his pen in our dental journals.

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HONOR TO DR. BERNARD.

Our readers who know Dr. Bernard, President of the Dental Board of Examiners of the Province of Quebec, will be glad to learn that after serving the city of Montreal in various capacities as Councillor and Alderman for a successive number of years, he has been elected by his confrères to the highest office in the gift of the Council, viz., that of Chairman of the Finance Committee, a position demanding high administrative and financial ability.



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From a communication to the *British Journal of Dental Science*, by Charles James Fox, M.R.C.S., L.D.S.; we give the following extract:

"I have been for some time expecting to see some communication respecting this cement, recently introduced, as every one who tries it expresses privately extreme satisfaction with it. When this is the case, I think it is only fair to say so publicly. It is of the same nature as that commonly called osteoplastic, but it differs from it in this particular, that it can be mixed to a consistence much resembling putty, and in that state can be manipulated for some minutes without setting irretrievably. If you mix the other osteoplastics as thick as this, they set rapidly or crumble; if you use them in a thinner condition, they run about on the gums and teeth. When once set it is so hard, if it has been properly manipulated, as to turn the edge of the instrument, should it be deemed requisite to remove it. As to its durability, it is of course impossible to say much, seeing that it has only been introduced into England for a few months; but this much may be said, that, taking four months' experience with other cements, and four months' with this, I have found it so superior that I have entirely discarded all other osteoplastics, amalgams, etc. In small cavities in the incisors, or in shallow cavities where osteoplastics would wash out in a short time and dissolve away, Guillois' Cement remains at the end of four months as good as when it was put in. I cannot tell what further experience may prove, but so far—and only for four months' experience do I speak—I have not had one failure, which is more than I can say of any other."

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