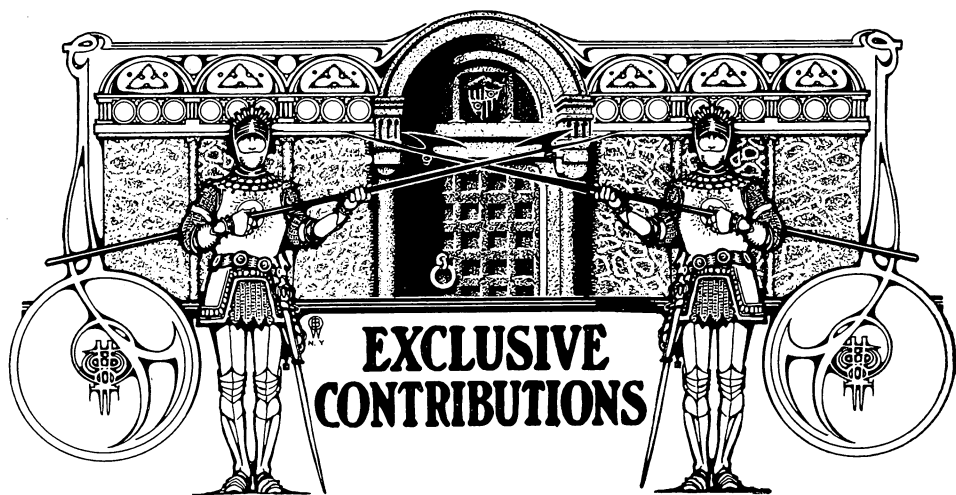


JONATHAN TAFT. M.D., D.D.S.



Report on Root-Filling Test.

By WESTON A. PRICE, D.D.S., Cleveland, Ohio.

The following is the report of a test of skill in root-filling, which arose out of the discussion of an illustrated paper, on the "Uses of X-Rays in Dentistry," at the meeting of the first Canadian Dental Association, at Montreal, in September, 1902. Dr. James Magee, of St. John, New Brunswick, made the claim that the number of roots that could not be filled perfectly is exceedingly small, and that he could fill to the apex 90 per cent of the roots of molars.

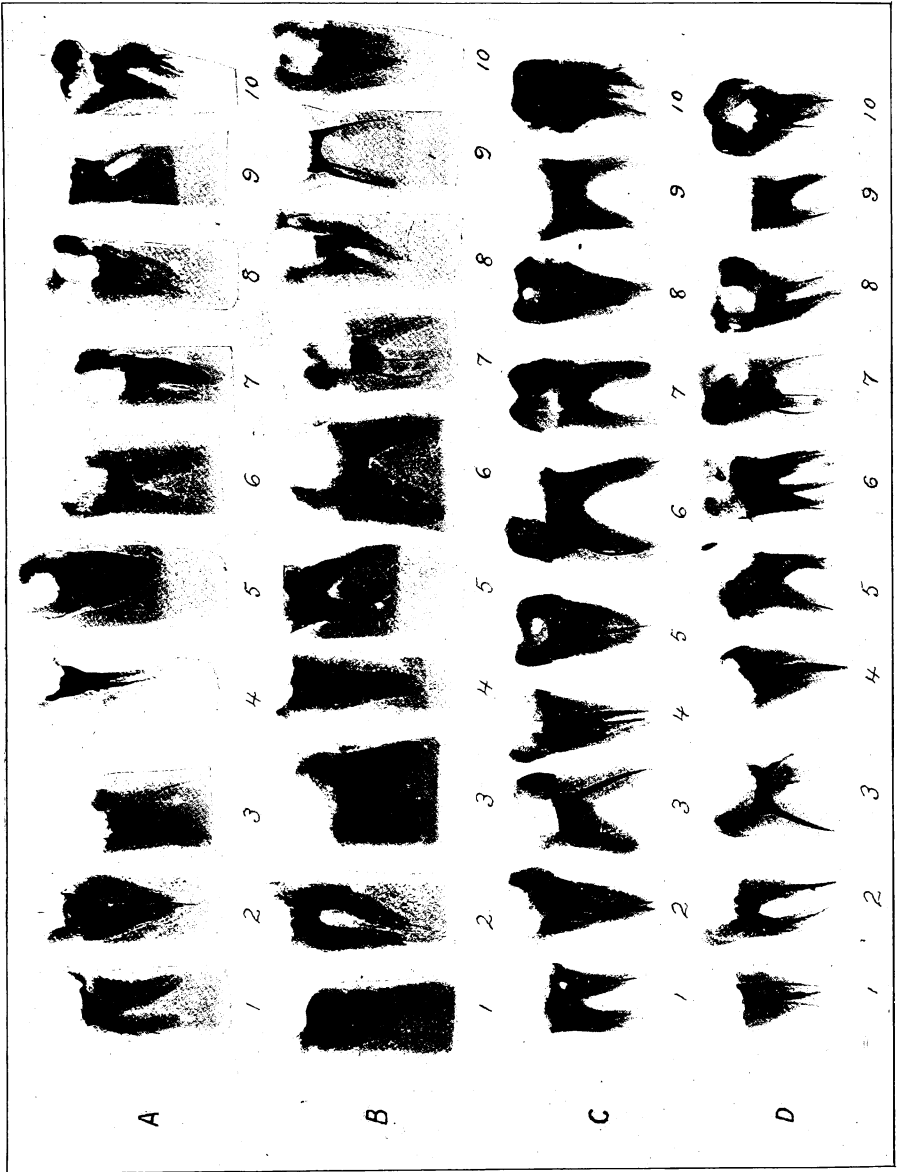
Dr. McInnis, of Regina, N.W.T., took exception to the claim, asserting that it would be impossible, whereupon Dr. Magee promised to give Dr. McInnis a forfeit if he could not perfectly fill the roots of ten teeth that Dr. McInnis would select, and set in plaster blocks. Dr. McInnis offered to modify this, making the test seven out of ten teeth, and the teeth to be selected by Dr. McGee himself.

As I had shown X-Ray pictures, including scores of imperfectly filled roots, it was requested that I be the judge, and that Dr. Magee send the teeth to me for skiagraphing.

At first there was much delay in the delivery of the specimens, and later greater delay on my part in making the X-Ray pictures and writing this report. The illustrations show the result condensed.

Ten teeth were received, embedded in little blocks of plaster of paris, in good condition, which, when they came, were too thick to show

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good pictures, and needed to be shaved down. They were arranged in a row, and skiagraphed. (Row A.) One to ten shows one portion of these teeth while still embedded in the plaster blocks in which they were filled, and row B a view of the same teeth, from right angles to view A. The plaster was then soaked off, and removed as carefully as possible, and two more skiagraphs made at right angles to each other, shown in C and D. By following a number downward, you have four X-Ray pictures of a tooth and its root-fillings.

No. 1 is an inferior molar, and the mesial root had two canals, both of which are filled through the mesial side of the root, and where the distal canal turned near the apex the root-filling leaves it and enters the wall. The apex is not filled in either root, beside the perforations shown.

No. 2 is also an inferior molar, and the root-fillings of both roots extend through the apex, as shown in A, B, C and D.

No. 3 is a superior molar, and is fairly well filled, except one root, shown in D.

No. 4 has not the apex of either root filled.

No. 5 is also an inferior molar, and has the root-filling perforating the mesial wall, and the apex not filled.

No. 6 is a superior molar, in which neither of the buccal roots is filled to the apex (one of the best, however).

No. 7 is a superior molar, in which the mesial root is not filled to the apex.

No. 8 is an inferior molar, with small canals, with neither of them filled to the apex.

No. 9 is a superior molar, well filled.

No. 10 is an inferior molar; the mesial root has two canals, but both are perforated, and the canals open from there to the apex. The root-filling buckled outside the root. The distal root is not filled at the apex, though nearly to it. From a mechanical standpoint, nearly all these roots are far from being well filled to the apex, though they are much better than the average found in the mouth.

This test proves what is true, I believe, of all dentists, that even our best efforts at root-filling are not as good as we think. Not more than three of these ten teeth can be said to have their roots well filled.





Comment on Dr. Price's Report of Root-Filling Test.

By JAS. M. MAGEE, St. John, N. B.

In the first place, it is obvious I have not filled completely to their apices the roots of seven out of the ten teeth submitted to me. That was the number stated in the challenge of Dr. McInnis; so I have failed to meet the challenge. However, a careful examination of the pictures will prove that had I not been hampered by conditions which are not present when we operate in the mouth, I should at least have succeeded in breaking even with Dr. McInnis.

I knew I had penetrated the sides of two of the teeth; the third I was uncertain of. During our conversation as to how the test should be made, Dr. McInnis declared the canals must be filled to the ends or the case was a failure. That is right. Dr. Price took the stand that should the filling protrude beyond the apical opening the case was a failure. Between these two *bunkers*, I wondered where I would come in. Nevertheless, I decided that the best way was to keep on opening until I reached the plaster through the tooth, and then try to so fill the canal that the filling would not protrude. In the mouth we know by sensation when we reach living tissue, and having reached it we dare not go further. We can measure positively the length of every canal to the point where sensation has been felt, and we can fill exactly to that point. In the mouth also when we introduce a solvent for the gutta percha it remains in the canal. In these cases the plaster absorbed what went to the ends of the roots, and consequently in many instances the gutta percha did not have sufficient solvent to permit its reaching the apical opening.

I will not make any excuses for the punctures, because no honest dentists will even claim total exemption from that mishap.

Dr. Price's report states that I have filled only three teeth properly, including among the failures that where the filling protrudes beyond the apical opening.

Since I was antagonizing Dr. McInnis, rather than Dr. Price, I think as I at least filled to the opening, it should be counted for me. However, that would not have placed me in anything like a safe position, because several of the teeth show an imperfectly filled condition.

The last picture shows a rather peculiar condition. The filling forms a loop outside the tooth. Evidently there was a bubble in the plaster just where the opening was made. This could not occur in the mouth. The other canal, which illustrates the undeveloped apical end of a third molar root, shows the tip end unfilled. When the tooth was imbedded the plaster

filled in this hollow, which I always describe as resembling the crater of an extinct volcano. That is a case which in ordinary practice, noting the age of the patient, and the extent of caries, would not properly be considered a fit one for root-filling. That, however, does not exculpate the puncturing.

In conclusion, let me state that I am not in the least discomfited. I feel just as confident now that I can "fill completely to their apical openings the roots of more than seven out of ten molars such as are met with in ordinary practice." This means such teeth as we decide should be saved. If, therefore, Dr. McInnis or anyone else who shares his opinion that they cannot be filled in that proportion, will take the trouble to send me the teeth, I will gladly demonstrate it for future publication.

The conditions I shall claim for another test are these: The teeth are to be freshly extracted and extracted under protest. That is, each tooth sent must be one which the dentist would be rather anxious to save, but for which the owner demands removal. Details can be arranged between me and those who are interested enough in this matter to follow it up. The only points on which I shall hold out are the class of teeth to be sent me, and exemption from penalty of failure should the filling material protrude beyond the apical opening.

Reply to Mr. Fleck.

By Dr. W. V. B. AMES, Chicago, Ill.

In the October issue of *ITEMS OF INTEREST*, page 761, in article entitled "Arsenic in Cement Powders," by Herman Fleck, Ph.D., Denver, Col., attention is called to the fact that in a paper before the National Dental Association, 1899, I made the original claim that any arsenic contained in cement powders must exist there as zinc arsenite, and that zinc arsenite *per se* is an impotent agent as far as destruction of tooth pulps is concerned. He then says: "The experiments have often been quoted since then as a happy disposal of the arsenic question, but unfortunately a vital point has been overlooked. The arsenite of zinc is indeed inert, it is true, but can the same be said of the mixture of this arsenite powder with the phosphoric acid liquid compound?"

Mr. Fleck then proceeds to describe the combination of as much arsenic with zinc as is possible, duplicating my process as described by me in 1899. Then, according to his description, sufficient of Ames's liquid



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was mixed quickly with each batch to form a *thin mix*." (Italics mine.) My supposition is that this "thin mix" was one which either would not make cement or was not allowed to make cement, as continuing he says, "The mass was mixed with distilled water after a few minutes and filtered. Basic zinc arsenite is insoluble, so, therefore, any arsenic found in the clear filtrate must be free as highly potent arsenious acid." Mr. Fleck then says that the clear filtrate was tested with hydrogen sulphide, causing a copious precipitate of arsenic sulphide* proving the presence of arsenious acid, which possibility I was said to have overlooked in the paper mentioned. In this paper, published in *Transactions of N. D. A.* of 1899, and in *Dental Cosmos* of October, 1899, the following paragraph may be found: "That the inert zinc arsenite compound might not under some unpardonable conditions be changed into potent arsenious acid, I will not claim, but I have proven to my own satisfaction that the arsenic present is in combination with the zinc, and that this combination is wholly devoid of poisonous properties *per se* and that the combination is not broken up to the extent of forming potent arsenious acid except under rare and unjustified conditions."

Now, to return to the experiment of Mr. Fleck, I will have to say that he brought about what would be an unpardonable condition within the cavity of a vital tooth. Passing by the fact of having a mixture containing the maximum proportion of arsenic instead of a possible infinitesimal trace, the mixture was a *thin* one, and then mixed with water. Had Mr. Fleck made a stiff mix, or any mix which would have made cement in reasonable time, crushed this and submitted it to distilled water, filtered and tested filtrate for arsenious acid, he would not have had a copious precipitate of arsenious sulphide. In other words, there was no analogy between Mr. Fleck's experiment and conditions which are justified in filling teeth with oxyphosphates.

I have felt called on to at least show that a careful perusal of my writings would have made it plain that I had not "overlooked" the fact that arsenite of zinc might be broken up by phosphoric acid and arsenious acid developed. Since I have been called on to do this, I will say that if I were looking for chances to split hairs I might criticise some other statements in Mr. Fleck's article in October, 1903, issue of ITEMS OF INTEREST, as well as the one entitled "Chemistry of Oxyphosphates," ITEMS OF INTEREST, December, 1902. It will not be amiss to say that at present I would not write as I did in February, 1900, ITEMS OF INTEREST, "The obtaining of arsenic free raw material is a discouraging undertaking." In a recent article I have said, "*Practically* arsenic free metallic zinc and zinc

*Arsenious sulphide.

oxide are obtainable. With the use of such raw materials and the treatment of solutions of these with hydrogen sulphide as an extra precaution, the arsenic *if present* must be in such indescribably small quantity that this question must amount to 'much ado about nothing.'"

The mathematical aspect of this question as treated by Mr. Fleck in October ITEMS OF INTEREST would, in proper dental cement, make the amount of arsenic, in whatever form, be, as he says, an *infinitesimal* portion of an unimaginably small quantity.

The Band for Preserving the Teeth.

By DR. W. FARLEY, Paris, France.

Dentistry, insofar as concerns the preservation of teeth by means of "filling" is a failure in the field of the back teeth when the latter are attacked on a line with or below the gum. It is estimated that the life of an amalgam filling will average four years. Also that four-fifths of all fillings are amalgam. Amalgam, then, can not be called a permanent filling. It is not serious enough for the pretenses of a profession. It is more a barber's material when employed in such cases. This will not do. Let us spend less time in discussing ethics and more time in discussing the preservation of ordinary teeth, which, heretofore, have evaded our boasted skill. If I were addressing a room full of students, I would tell them that a tooth which is decayed below the gum margin cannot be preserved with a plastic filling, seldom with gold, *but*, as a rule, always with a band. Any careful dentist can crown such teeth and preserve them, but this may be going too fast on his part; and, besides, is it always necessary to crown such teeth? I emphatically state that it is better to crown them outright than to fill them, but there is, however, a compromise between crowning and filling, and this compromise is effected by means of a band. Although requiring rather mature skill, such as follows from prolonged experience, this band method for preserving the teeth might be successfully practiced after the student has undergone a special training in its adjustment. The *modus operandi* is as follows:

Case, an upper first bicuspid. Separate with a diamond disk, and grind around the tooth sparingly. Fit a band the same as for a gold cap. Trim the articulating edges and draw them in flush to conform to the tooth. Contour the part which is to restore the decayed portion by soldering either a piece of pure gold or platinum of a sufficient thickness to



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allow the band when in place to *knuckle* against the neighboring tooth. To prevent moving, when permanently fixed, solder a platinum pin, taken from a broken porcelain tooth, inside of the band so that it will project into the cavity. Now cut the buccal part of the band away so as to leave a narrow strip of gold at the gum margin. This exposes most of the remaining portion of the natural crown. The palatal side should be left as high as possible. The band is thus ready to be cemented in place (preliminary treatment anticipated). Wash the tooth with alcohol, dry, mix cement, fill in the cavity, also smear it around the tooth, push the band in position, using a foot-plugger and hand mallet to drive it gently home. Particular care must be exercised in forcing the cement all over. A sure way is to push it up with a pellet of cotton.

In some cases a pivot can be fitted in the root. When this may be found useful, the band can be cut away excepting where it restores the contour broken by decay. Instead of finishing with a cement, amalgam, or gold foil surface, the grinding part may be restored with a block of porcelain or pure gold. The best way is to finish with gold foil or amalgam. For operators who have full confidence in their ability, such a band as prescribed can be employed as a matrix in building up the vacuum with gold foil. I prefer, when using the band as a matrix only, to begin with tin cylinders introduced on the wedge system of Dr. Schuyler, of Rochester; using three and continuing with gold cylinders and finishing with cohesive foil.





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The Davis Crown in Bridge Work.

By H. J. COMBS, D.D.S., Chicago, Ill.

Before entering upon the modus operandi of this new system of bridge-work, permit me to call your attention to the character of material used in obtaining impressions, forming dies and counter dies.

This material, "dental lac" (made by the Varion Specialty Co.), takes the place of metals and renders the work easier of accomplishment and safer from accidents. It is used as a part of a swaging device (see Fig. 1), and, upon cooling, becomes exceedingly hard and is therefore particularly valuable for the method to be explained.

Davis crowns are used in constructing the bridge work under discussion.

In order to make this method of bridge work as clear as possible, I select as an example a case extending from the right superior cuspid to the right superior central. Cut the roots off just beneath the gum margin. Bevel these roots by removing all the enamel and, for the purpose of swaging a cap, take an impression of them. To take this impression use a small piece of base plate wax. Hold it between the thumb and finger and press sufficiently to form a sharp outline of the root.

The next step is to pour plaster into the wax impression, remove the wax and carve the root to as great a depth as the free margin of the gum will admit the band. A narrow band is preferable. Over the plaster model of the root (Fig. 2-a) a little powdered soapstone should be rubbed to prevent adhesion of the dental lac, it being necessary to make a sharp impression in the same, to be used as a die and counter die.

In making these dies warm the dental lac, press the plaster model of the root into it and allow it to cool (Fig. 2-b). Dust the impression thus made with powdered soapstone. Now warm the counter part of dental

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lac and, with the fingers dipped into the powdered soapstone, to prevent adhesion, work it into a cone and press it against the impression made by the plaster model (Fig. 2-c). This will finish the dies.

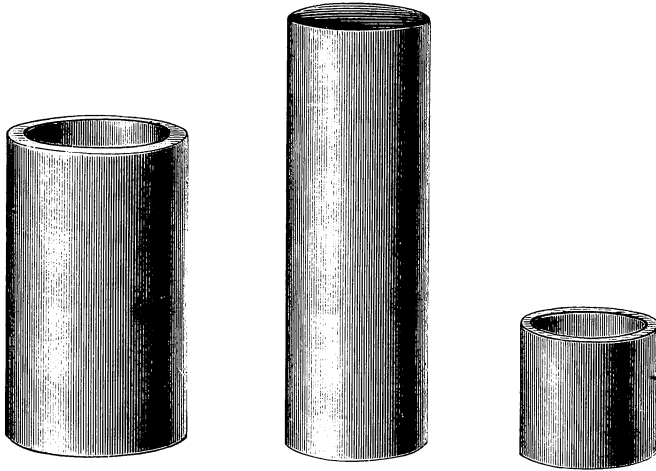


Fig. 1.

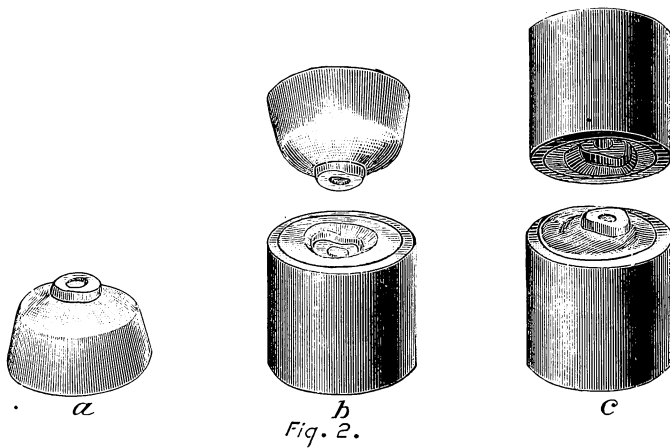


Fig. 2.

Having completed the dies, place the material, 34 to 36 gauge platinum, over the counter die and swage, using the swaging device shown in Fig. 1, with soft vulcanite rubber plunger to prevent the possibility of buckling. Place this cap over the die and swage it to fit over the root.

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This method will be found advantageous in making dummies for bridge work or backing single crowns.

The platinum cap is now placed on the root in the mouth, and if the fit is not perfect, it can be made so by carefully burnishing it to the root.

When this has been accomplished, punch a hole through the cap, insert the post and solder it in place (Fig. 3-a). This post may be made of platinum or a Davis crown post may be used by cutting it off just below the shoulder, preserving that part with shoulder attached for use in

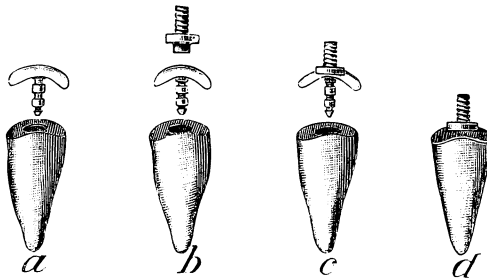


Fig. 3.

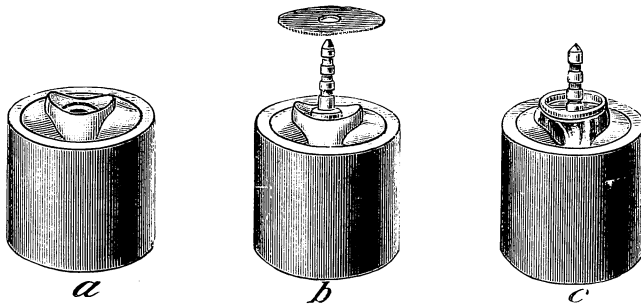


Fig. 4.

the crown (Fig. 3-b), or, if the root canals are in proper relation to the holes in the crown, the Davis crown post may be used intact (Fig. 3-c). To do this, it is necessary to place the caps in position on the roots (Fig. 3-d) and fit the Davis crown post and crowns as nearly as possible. Place a little soft wax over that portion of the post to be inserted into the root and press it to place with the crowns. We are now ready for the bite and impression.

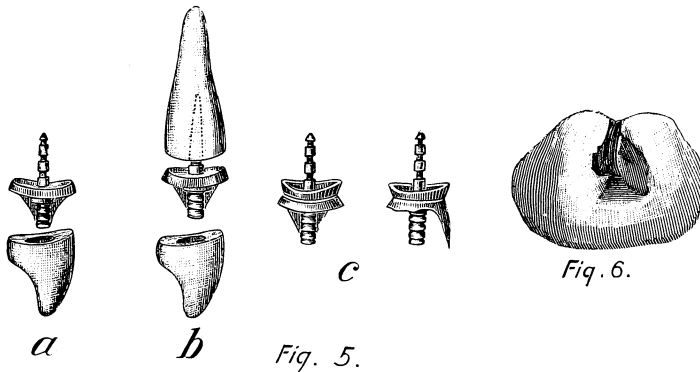
To facilitate their removal for separate investment and soldering, run a little soft wax around the post and inside of the caps before pouring the

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model. Select the teeth suitable for the case in hand, grind their cervical, and, if necessary for a perfect occlusion, their occlusal surfaces, care always being necessary to allow for a sufficient thickness of gold to properly support the work when completed.

In order that the coping may be brought well into the approximal space, the cuspid should be hollowed out on the distal approximal surface. This forms a festoon of gold and allows the solder, used to join the copings, to rest directly on a portion of the cap, adding materially to the strength of the latter.

To finish the cuspid, after grinding sufficiently press the cutting edge into the softened dental lac (Fig. 4-a) protecting and holding it firmly while swaging the coping over the cuspid or porcelain tooth. Fit the



post, with the shoulder previously mentioned, into the tooth, being careful to seat the shoulder perfectly into the recess or socket of the tooth (Fig. 4-b).

For the coping punch a hole through 32 g. 22 k. gold (Fig. 4-b) and press it firmly over the protruding portion of the post and tooth and, with the soft plunger, swage it to place (Fig. 4-c).

It may be necessary to slightly burnish the sharp angles in order to secure a perfect fit. The post should then be soldered to the coping (Fig. 5-a—showing relative position). Care must be exercised that the solder shall not flow beyond the margin of the shoulder of the post inside of the coping. The danger of this may be obviated by a coating of whitening around the marginal line of contact between the shoulder and coping.

The coping of the cuspid may now be waxed onto the cap (Fig. 5-b)

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and then removed for investment and soldering (Fig. 5-c). To invest the abutments after the coping and cap has been waxed together, carefully fill cap and coping with investment material and trim it down until the

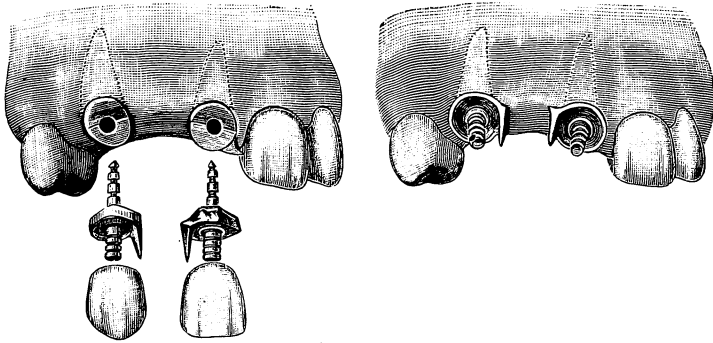


Fig. 7.

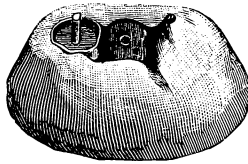


Fig. 8.

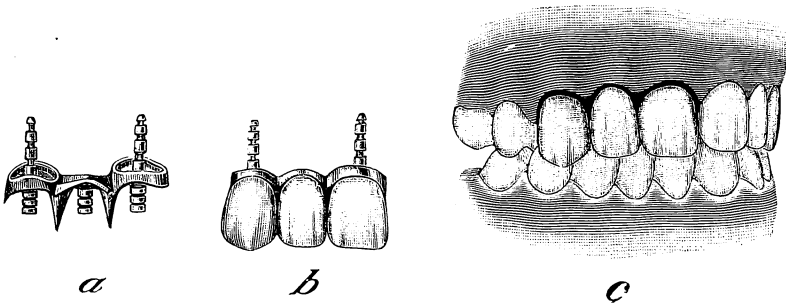


Fig. 9.

entire surface of both are exposed to the blow pipe (Fig. 6). If you do not succeed in flowing the solder all over the platinum cap, it may be easily accomplished after removing it from the investment by holding it in the pliers and flowing more solder over that portion not covered.



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Replace the porcelain tooth upon the coping and place on the model (Fig. 7). Both abutments having been finished, the work has now reached the point where the dummies are to be prepared. They are constructed in the manner described for the abutments, the tooth being ground to fit the model and a coping swaged to fit it.

To assemble the teeth for final investment, place a piece of tinfoil over the model between the abutment. This will answer three purposes: to prevent the wax from adhering to the model, to admit of easy removal of porcelain and give rigidity to the wax which facilitates the removal of the abutments and dummies for final investment and soldering (Fig. 8).

The soldering having been completed, and work finished, the porcelain teeth are then set in place with cement (Fig. 9-a-b-c).

It might be well to suggest that a record be kept of the number of the mould of each tooth used, and, if you should ever be called upon to repair the bridge, you will be glad to find that you do not need to remove the entire bridge and will spend but a few minutes in repairing.

Repairing Fractured Teeth.

By Dr. C. EDMUND KELLS, Jr., New Orleans, La.

In "The Principles and Practice of Crowning Teeth," recently published by Dr. H. J. Goslee, I note that his treatment of these cases is so unlike the method devised and used successfully by myself that I am led to offer it for the consideration of those who are interested in the subject.

My early cases happened to be men and the teeth (molars) apparently too good to be cut off and crowned, and in these cases narrow gold bands were fitted to the crowns and cemented in place, thus preserving them for many years in some instances. This method, however, I do not believe was original with me.

But several years ago a gentleman presented with a bicuspid split in two, and the crown was comparatively good. A gold band around it as just described would have been too conspicuous; a gold crown was not considered, as the making of crowns of that character had been abandoned some years previously, and a porcelain crown was practically a physical impossibility. I was in a quandary.

It then occurred to me to bolt the two pieces together, as any me-

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chanic would do were he confronted with a like proposition in his own line, and I proceeded as follows:

A piece of iridio-platinum wire of suitable length and diameter was threaded with the tap furnished with the Bryant bridge repair set, and upon one end was soldered one of the Bryant cone-shaped nuts.

The two parts having been previously brought together with brass ligature wire, as shown by Dr. Goslee, a hole was drilled through the tooth from the buccal aspect, and of such a size as would allow the threaded wire to just slip through. The openings upon both buccal and lingual surfaces were then countersunk, so as to allow of the nuts being sunk into the tooth.

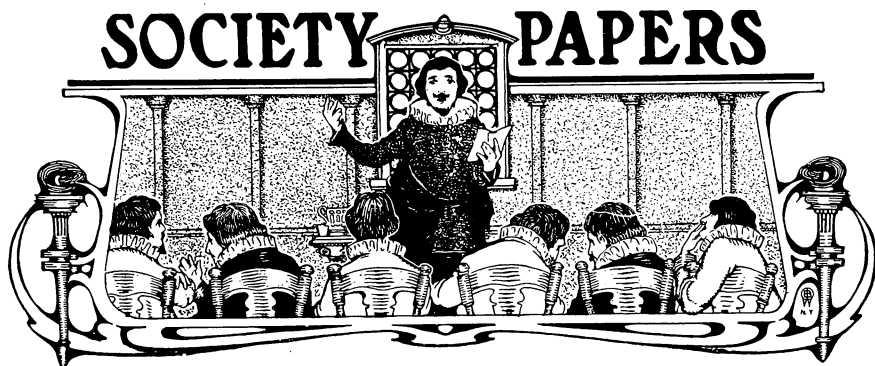
The bolt was now passed through the tooth, a second nut (also reduced to proper size) was put on the other end and the two parts brought firmly together, the tooth having been previously dried and the bolt and nuts coated with chloro-percha.

When the nuts were polished down to conform to the surface of the teeth, they appeared to be small fillings, and the buccal one, the only one visible, was quite inconspicuous.

This tooth was seen some eighteen months after this work was done and then appeared as solid as before being fractured. Since then a lady presented with the first upper molar in same condition and it was treated in same manner, and at last accounts the bolts had proven a success.

It is therefore evident that the principle employed, which is rational in theory, is equally as sound in practice, and I do not believe the æsthetic results obtained could have been equalled by any other method of procedure.





The Question of Interstate Reciprocity in Dental Licensure.

By E. C. KIRK, D.D.S., Philadelphia, Pa.

Read before the New Jersey State Dental Society, July, 1903.

The difficult and delicate task of rescuing our new born nation from the condition approaching anarchy into which it had drifted following the War of Independence, was successfully achieved by the Constitutional Convention of 1787 and the crystallized result of its deliberations as embodied in our Federal Constitution became at once the instrument of our national salvation and the energizing stimulus of our national life. So generous are its provisions and so completely did its framers provide for our complex and rapid development that in the one hundred and sixteen years since its adoption but fifteen amendments to the Federal Constitution have been found to be necessary.

A glance at the conditions of which our Constitution was the outgrowth will reveal the peculiar difficulties with which its framers had to contend and will throw an interesting side light upon an important aspect of the subject which it is the purpose of this paper to discuss.

The puritan colonists of New England and the cavalier element of Virginia, though both were of English blood and loyal to the Crown, represented thoroughly distinct social and political ideals, the former dissenters from the established Church of England and intolerant of its restraints came to the new world seeking relief therefrom, liberty to worship in accordance with the dictates of their conscience and such other incidental benefits as life in a new land might have in store for them. Settling in small communities which gradually extended throughout Massachusetts and beyond its borders into other portions of New

England a community of towns and villages grew up in each of which was developed through the influence of the Town Meeting, the idea of local government in which municipal regulations were enacted by direct vote of the people. The principle of local government was also strongly developed in the Virginia colony but, from the very nature of the settlement, it did not include the Town Meeting idea of New England as a factor. Both colonies having the traditional English belief in a representative form of government and existing under conditions where that form of government was strongly localized, the loyalty of the colonies each to its own plan of local government became practically absolute.

The political development of the other settlements naturally partook of the same character, their separateness and the lack of any means for rapid and easy intercommunication among them permitted the growth of the colonies which formed the original thirteen States, into as many separate communities having but little sympathy with each other and each with an abiding faith in its right to govern itself in its own way.

The stress of a common oppression and the necessity for united effort in securing relief therefrom was the factor which culminating in the War of Independence developed the germ of a National Federation subsequently expressed as the United States of America.

The conclusion of the Colonial War found these colonies without cohesion, the local government idea dominant in each and the Federal sentiment among them not as yet strong enough to secure a stable national government, nor the ways and means to effectively support or carry into effect the Acts of the Continental Congress which still survived as the first national representative body of the now "free and independent States."

The power of the national government to levy taxes through an excise or Custom House duties was not yet conceded and the government was without a judiciary or any means of enforcing its requisitions upon the States for funds which by mutual agreement it was authorized to make in proportion to the assessed valuation of the real estate of each State. The individual States assumed the power to coin money, levy taxes and duties on imports, emit bills of credit and make their promissory notes legal tender for debts.

The history of the formation and adoption of the Federal Constitution is the history of a struggle between the federalist and anti-federalist factions, the former contending for the supremacy of the national government in certain prescribed rights and powers affecting the nation as a whole, the latter contending for an almost absolute State sovereignty.

The national constitution as prepared and issued by the convention of 1787 after four months of careful deliberation may be regarded as a



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compromise measure which guaranteed to the Federal Government such extent of sovereign jurisdiction as was necessary to a vigorous and prosperous national growth and which at the same time conceded to the individual States complete sovereignty in certain other matters; such concession being necessary to secure the adoption of the constitutional articles.

Accustomed as we are at this period to regard as equitable, even as generous, the safeguards which our national constitution throws around the rights of the several States, it is surprising to read of the bitterness with which the anti-federalist faction opposed its adoption and not until three years after the Continental Congress had agreed to submit the new constitution to the States was it finally adopted by all of the original thirteen, North Carolina and Rhode Island acquiescing last, the latter joining with her sister States in May, 1790.

I have briefly recited these historical facts in order to recall to your minds the strong feeling in the nature of an inheritance which has come down to us, the jealousy of any interference with what we deem to be our rights in the matter of State or local government. Nevertheless, in spite of our strong sentiment in the matter of local government, a broader idea of citizenship is developing; our history of the past decade is not lacking in striking evidence of the fact that the national idea is growing in intensity so that we are concerned less and less with the fact that we are citizens of this or that State, and more and more with the fact that we are Americans. The events which have touched our national life as a whole have not failed to call forth our national patriotism in full measure and have healed completely our sectional differences of the past. But it is not alone these more obvious events which have tended to the growth of the national sentiment and broken down sectionalism. The wonderful advances which have been made in the means for rapid intercommunication and the development of commerce have necessitated the letting down of restrictive barriers between the States and the adoption of measures looking to a more reasonable and practical interstate comity.

Police Power of the States. Dentistry in its interstate relationships has come into unpleasant contact with a practical phase of the problem which agitated our ancestors and which in some of its varied expressions has given rise to contentions affecting State relationship ever since the States were federated under a homogeneous national government.

Among the rights reserved by the States and conceded by the Federal Constitution is sovereignty in the exercise of the so-called police power of the State. The recorded definitions of police power are held by

expert authority to be unsatisfactory when judged from the standpoint of critical analysis. The Supreme Court of the United States in one case*, cited by Burgess in his "Political Science and Constitutional Law," defines the police power of the Commonwealth to be its power "to promote the health, peace, morals, education, and good order of the people and to legislate so as to increase the industries of the State, develop its resources and add to its wealth and prosperity." Without considering the technical sufficiency of this definition from a political science standpoint it is conceded generally that the right to practice the healing art is a question of police power over which the State has absolute jurisdiction under the National Constitution. Similarly the control of education is a matter within the police power of the State and the right of the State to control these two points has never been successfully combated. Each State may without restriction enact laws determining what shall be the educational qualifications of those who practice dentistry within its borders and determine also within what limitations they may exercise their right to practice.

Hence it is that each State has enacted dental laws in accordance with the views of its own legislators, or at least in harmony with the suggestions of those interested in the promotion of that class of legislation in the several States. The result is familiar to us all—a heterogeneous collection of statutes all presumably directed toward the attainment of the same result yet differing to such an extent each from the other in regard to standard and practical working, as to operate as a disqualifying measure with respect to the dental licensee of any other State.

The hardship entailed by lack of uniformity of standard in dental legislation has made itself increasingly felt as the legislative machinery of the several States has further complicated the situation from time to time by new enactments or amendments to the old, and the sentiment in favor of some scheme of interstate reciprocity has grown steadily in proportion to the progressive entanglement of State legislation. We have inherited the fruit of the jealous guardianship of our ancestors over the matter of their State rights and are confronted with the difficulty of adapting to the conditions of our modern civilization the constitutional provision which they imposed. Throughout the whole period from the War of Independence down to and including the period of our late Civil War the belief in State sovereignty exerted a profound modifying influence upon the political life of our nation. So strong indeed has been this influence in shaping the relations of the States to the National Government that Professor Alexander Johnston has said concerning it, "Almost every State in the Union in turn

*113 U. S. Reports, 27.





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declared its own sovereignty and denounced as almost treasonable similar declarations in other cases by other States." It is this same State sentiment expressed as the right to autonomy in the exercise of its police power with which we have to contend in any effort to secure uniformity of dental legislation and reciprocal dental licensure.

If one may judge from the expressions of opinion recorded in our literature there is an increasing sentiment in favor of the right to practice dentistry anywhere in the Union by those who have once qualified under a proper State law. It is clear that the vital obstacle to be overcome is the lack of uniformity in State dental legislation; States having a high standard refuse to accept the licenses of States having a lower standard, and low standard States decline to accept the licenses of high standard States unless the recognition be reciprocal. This condition of affairs in 1892 was recognized in the report of the committee to which was referred the annual address of the President of the American Dental Association. Touching the question of unification and reciprocity the report stated that "it could not be hoped for unless the profession was willing to level downward rather than upward." While your essayist was one of the committee which gave expression to the thought just quoted, the development of our knowledge of the question in the subsequent decade has so far modified that view as to render some qualification of it necessary. The committee had in mind a plan of immediate unification of standards which seemed impossible at that time upon a basis which should include all the States unless those of lowest requirement should be accepted at their face value because their sudden elevation to the highest standard seemed impossible.

The development of professional thought in all its lines is by evolution and not by revolution. The problems of education and its correlated legislative control are matters of growth and it is necessary for our knowledge of these questions to ripen by study and experience before restrictive measures, designed with even the best possible motives, may be safely enacted and danger to the rightful liberties of the individual be avoided. Time must be given for a full discussion of the problem so that all parties in interest may be heard and the desired result be achieved by co-operation.

The plan of creating a national standard has been frequently proposed notwithstanding the fact that it would involve a direct interference with the police power of the State and would therefore be a violation of constitutional right. Or recognizing the fact that an obligatory national standard would be illegal it has been suggested that an optional national standard of high grade be created and that the national qualification be accepted at its face value by Boards of Dental Registration throughout the Union. This latter plan while attractive in some respects is objectionable

in that in effect it would be a delegation of State authority to a national Board, and it is questionable whether the State Boards could thus legally delegate their authority to a centralized Board to pass upon the qualifications of candidates.

The only safe plan of securing reciprocity is by first establishing uniformity of standard by State legislation and while that method seems so beset with difficulties as to be practically impossible of attainment yet it must be remembered that heretofore dental legislation has proceeded upon heterogeneous lines as a simple result of local government in each State, practically without consultation with other States and without any centralized plan of consultation as a directive factor. There is already noticeable, however, a decided tendency to uniformity of standard in certain groups in adjoining States even though the executive features of the statutes may vary to a considerable extent in these cases, as for example among New York, New Jersey and Pennsylvania, a group in which the professional standards are so nearly uniform as to require but slight adjustment in detail, to make reciprocity among them entirely practicable. Or again the group of New England States among which reciprocity is now an accomplished fact.

Interchange of Medical Licenses. Our medical brethren have grasped this fact of the possibility of securing reciprocity among groups of States having similar standards and have energetically utilized it to an extent which has practically accomplished interchange of medical licenses among a large number of States.

The Wayne County Medical Society of Michigan, in 1899, appointed a committee to further uniform medical legislation. Correspondence was opened up with various State Medical Boards and the conferences and agitation of the question thus created resulted finally in a meeting of the Examining Boards of Indiana, Ohio, Iowa, Kansas, Michigan and Wisconsin in Chicago, April 23, 1903, at which the following agreement was ultimately reached as a basis of reciprocal medical registration:

"For the purpose of establishing medical reciprocity among the States composing it, the American Confederation of Reciprocating, Examining and Licensing Medical Boards does hereby agree to the following propositions as a basis of reciprocal medical registration:

"(a) That as a prerequisite to reciprocal registration, the applicant therefor shall file in the office of the Board of the State of which he is a licentiate such evidence as will enable the said Board to certify that he is of good moral and professional character. Such certificates shall be filed with his application for reciprocal registration in another State.





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QUALIFICATION I.

“(b) That a certificate of registration showing that an examination has been made by the proper Board of any State, on which an average grade of not less than 75 per cent was awarded, the holder thereof having been at the time of said examination the legal possessor of a diploma from a medical college in good standing in the State where reciprocal registration is sought, may be accepted in lieu of examination, as evidence of qualification. Provided, that in case the scope of the said examination was less than that prescribed by the State in which registration is sought, the applicant may be required to submit to a supplemental examination by the Board thereof, in such subjects as have not been passed.

QUALIFICATION II.

“(c) That a certificate of registration or license issued by the proper Board of any State may be accepted as evidence of qualification for reciprocal registration in any other State. Provided that the holder thereof was, at the time of such registration, the legal possessor of a diploma issued by a medical college in good standing in the State in which reciprocal registration is sought, and that the date thereof was prior to the legal requirement of the examination test in such State.”

It will be noted that provision is made in the articles just read not only for the recent practitioner who has been licensed by a State Board upon examination, but also for reputable practitioners who were legally qualified at a period previous to the establishment of the State Board examination as a test of qualification. This is eminently just, for unless such provision were made it would exclude from the benefits of reciprocity a large class of men possibly eminent in professional standing and well qualified for dental practice, yet to whom the preparation necessary for passing a rigid and modern State Board examination would be at least a hardship if not prohibitory.

The foregoing plan is one which is worthy of our careful consideration. It necessitates in each State law a reciprocity clause giving to the Board of Examiners discretionary power in the interchange of licenses; but in many of our dental laws the reciprocity clause is already incorporated, or what is equally efficient in this connection, the Board is given discretionary power to license those candidates of whose qualifications they are satisfied.

The National Association of Dental Examiners is an organization competent to practically deal with the question authoritatively and the precedent which has been already established by the American Confederation of Reciprocating, Examining and Licensing Medical Boards is one which should be most helpful in bringing about the same result in our profession.

Two important advantages in the promotion of general reciprocity attach to the Michigan plan of beginning the work among States of similar standard. First the moral effect of reciprocal recognition when practically established among a group of States in stimulating a general reciprocity movement among all of the States. Secondly, the impetus which it would give to improvement in State standards and as a necessary consequence to dental education in general. It would be an effective check upon any tendency to lower the standard and at the same time a stimulus to any group of low standard States to raise their standards to that of the high standard group.

Many good things tending toward the general advancement of dentistry have had their origin in the profession of New Jersey and why should not her State Society initiate a movement in harmony with the precedent established by the medical profession of Michigan which would eventually make it possible for a qualified practitioner of any State to practice dentistry wherever circumstances might place him throughout the Union?

The Drug Aspect of Lesions of the Gums.

By A. W. HARLAN, A.M., M.D., D.D.S., Chicago, Illinois.

Read before the New Jersey State Dental Society, Asbury Park, July, 1903.

I have felt a great reluctance in coming before you with such a subject—not that too much has been written about it, but because what has been written falls too far short of the mark, to comprehend the intelligent and logical application of drugs to, and in the gums, and the administration of drugs internally, that will have an effect on the gum tissue and adjacent mucous surfaces. When we look at the gums as they surround the teeth and cover their bony sockets, we are led to think that the picture presented will always last; that the crescentic margins will never shrink, waste away nor become the seat of disease. So soon, however, as the loss of a tooth, the lodgment of a piece of wooden toothpick between the teeth, the passage of a file or disc between them, or the application of a clamp, separator, wedge or any other tool that will injure the gingival margin has begun the initial destruction we are confronted with a lesion that if neglected may become irreparable. Let the possessor of perfect gums neglect to clean the teeth for a few days or weeks, and there will be destruction

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of the gingival margin. Let him suffer from some malady that will confine him to his bed for a few weeks or months, and the gums will show the effects of such illness.

I need not dwell upon the many known causes of the beginning of destruction of the gums, for most of them are known to you. An abscess, a badly fitting clasp or plate attached to the teeth, the bands and bars of regulating appliances or ligatures, all have their effect upon the gums, and many of them leave their mark there for you or me to remedy as best we can.

Specific diseases and bad nutrition are chargeable with some defects of gum tissues. Tobacco and salivary deposits make their impress on the gums, and mouth breathing has a large part in distorting the teeth and disarranging them in their sockets. Any affection of the mucous membrane of the nose, mouth or pharynx that is more than transitory, will affect the gums. Lack of personal care and cleanliness of the teeth is responsible for many of the defects of gum tissue, and the injudicious use of tooth picks and ligatures or rubber bands will do much to make permanent, injuries to the gums. All foreign bodies between the teeth and under the free margins of the gums are injurious, such as insoluble particles of ingredients of dentifrices. All washes and lotions and pastes and salves, having free acids or corrosive acids, by rendering the teeth sensitive, injure the gums, because then they are not well cleaned.

You may guess that there are many other agencies that do harm in some way to the gums, but one which has not been dwelt upon by any writer during the past ten years is the growing habit of feeding children and adults with finely comminuted prepared breakfast and luncheon foods, many of which are predigested and placed before the sufferer in such a form that they do not require mastication at all! Why are we endowed with thirty-two teeth if they are not to be used to bite, tear and chew food? The teeth need the exercise and the gums need the friction, and as we look at it now they get neither the one nor the other in this age of ready-to-eat foods, many of which are no doubt nutritious, but not needed by the great mass of men and women who must work and exercise other portions of the body. If we are to keep our teeth in number, and form, and health, they must do their share of the work of the body to justify their place as organs. Foods and foodstuffs should be cooked or prepared in such a manner that they require mastication, and when eaten raw one of the pleasures of life is lost if they are bolted without mastication. You must realize that the gums are a part of the human economy, and you may take lessons from the lower animals, who eat slowly and carefully to insure perfect digestion. In order to have good,

Evils of Prepared Food.

satisfactory masticating teeth, the gums must receive friction from the food you eat or they should be rubbed in some manner to insure perfect circulation and health. Teeth without gums are denuded teeth, and in many cases they are useless teeth. If you would save your patient much distress keep his gums in order, or make him do it, or show him how to do it. The teeth need their natural contour; if this is lost the gums suffer. This contouring of teeth must be applied in the making of crowns and bridges in order to protect the gums. An irritated or inflamed gum from lack of contour of the teeth will remain so, and even degenerate if the contour is not restored. I look upon the proper care of the gums from the personal standpoint as of as much importance as the care of the teeth themselves.

**Lesions of
the Gum.**

A lesion of the gum may be local, a physical injury, or it may be pathologic. Many, if not all the injuries, will recover with little or no treatment, if they are superficial, or if the cause of the injury is removed quickly, as the cutting away of a protruding filling, the removal of any exciting cause of trouble between the teeth. A crown which is too long may cause serious trouble to the gums and sockets of teeth if not cut away, or even a large filling that does not occlude properly will cause much trouble; swelling of the gums, even death of the pulp has resulted from such cause. There is usually no drug aspect of the gums in purely local injuries, unless we include the application of an astringent, as zinc sulphate, lead water, boracic acid or one of the naphthol series in saturated solution. Most of the local hemorrhages are controlled by hot water, ferri-pyrine or adrenalin chlorid. Tannic acid, zinc acetate or alumnol could be used in such cases. When there is a suspicion of infection from a local injury 1 to 1000 corrosive sublimate, hot, 105 degrees F., or argyrol or mercuriol will suffice. In the absence of all of the above, first cleanse the surface with hot salt water and paint with carbolic acid 95 per cent, or treat the surface with 25 per cent trichlor acetic acid. Give the patient fifteen grain doses of soziodol, or four grain doses of quinine bisulphate every hour in one ounce of spirits.

Any case of local infection of the gums or mucous membrane of the mouth must first be cleansed, second disinfected with local applications, and third internal administration of a drug that will combat sepsis—salol, iodine compounds, boric acid, mercury, the coal tar derivatives, such as the naphthol series. These cases generally are cared for by practitioners of medicine, but any dentist should know what to do and do it at once.

The lesions of the gums, having a distinct drug aspect, are those brought about through neglect, or by the presence of organisms, usually



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pus producing organisms. A lesion defined as accidental, local or pathologic will need to be treated as such. Some general diseases have their effect upon the gums, as scrofula, syphilis, ptomaine poisoning, continued fevers and the exanthemata. Filth, poor nutrition and faulty assimilation are chargeable with gum lesions. The drug aspect of general diseases is limited to the local use of sprays, washes and general cleansers. Boracic acid, peroxide of hydrogen, sublimate solutions, Beta, or hydronaphthol solutions, silver compounds, iodine, zinc, copper and strictly acid solutions, acetic, hydrochloric, tri-chloracetic, etc. The poorly nourished and those who do not assimilate need change of air, water and their general surroundings, as much as they need internal tonics; sometimes indeed they get well without anything more than sea air or mountain breezes, with a change in diet and water. On several occasions I have sent my patients to French Lick Springs or West Baden, Indiana, and after ten days or two weeks found them much benefited by the use of the waters. In prescribing waters I find that drinking them is absolutely essential, as no benefit comes from the bathing alone. All cold waters simply give a shock and tone to the skin, and the heated waters by raising the temperature assist in eliminating poisons. None of the waters are absorbed to a degree sufficient to be considered as medicinal.

Some very excellent ideas on water may be found in Baruch's classic and in T. Sollman's work on Pharmacology.

The lesions of the gums requiring drugs are those proceeding from the apices of roots, the sides of roots and the surfaces of the gums themselves. In the latter the treatment is very simple. If the gums are cleansed with peroxide of hydrogen and then painted with the compound tincture of iodine, two or three coats, so as to get a new surface, and the patient is fed on liquid or semi-liquid food for two or three days, the gums will become clean and free from redness, irritation or a tendency to bleed. If a discharge exudes from between the gum and the root of a tooth, usually there is some concretion on the root, which must be removed mechanically or surgically, and the pouch or pocket cleansed or burned with some drug, as acetic, sulphuric, lactic, tri-chloracetic or citric acid in solutions in water of from 10 to 50 per cent. If the cutting and gouging have been well done, and the teeth are firmly lashed to each other or held by bands, and the medicine well injected in sufficient strength, Nature will have an opportunity to discharge all effete matter.

If the lesion proceeds from the apex, it means a dead pulp, and anything from cinnamon water to 95 per cent carbolic acid could be used through the root to irrigate the fistula and the root may be filled with your favorite root-filling: wood, bone, silk, oxychloride, wax, gutta percha, cotton, silver, copper or gold wire, salol or chalk. Abscesses do

not heal, to stay healed, unless the end of the root is sealed. Sometimes it is necessary to amputate the portion of root necrosed before the lesion will disappear.

I am a strong believer in keeping the gum margin intact, therefore I do not favor the indiscriminate use of wooden toothpicks, floss silk or rubber bands. The patient who expects to keep his gums in order must have his teeth well contoured; they must occlude well. All crowns or bridges should be contoured on the portions that are attached to roots of teeth. The gums must be scoured and washed and massaged daily to prevent tendencies to bleed. If the teeth are sensitive to the air or to touch, magnesia, chalk, soda or lime must be used to counteract this. If the gum has been denuded from the neck of a tooth and the patient is still young enough—say under forty—you can coax it to grow and recover the root in part by great care, and stimulating it gently with iodine and zinc iodide and 10 per cent resorcin painted on it at intervals of one to two weeks. This is very tedious and requires much patience; these remedies must be alternated and changed about every six weeks. When you are trying to build gum tissue the patient must use a Badger brush and a dentifrice composed of one part white castile soap and nine parts of precipitated chalk. Occasionally I add 20 grains of powdered quillai saponaria to a 10-ounce prescription. This may be perfumed with any oil and colored with carmine or cochineal.

Dentifrices and Mouth Washes.

The gums always do well when they are properly rubbed or massaged with water about 53 to 60 degrees F.; warm water is relaxing. Dentifrices are for the teeth, not the gums. Washes are for the gums, and the mucous membrane of the mouth. Washes are intended to be used as remedial agents and germ destroyers.

A very useful wash is composed of:

Hydronaphthol or Beta naphthol.....	3 i
Menthol.....	gr ij <u>ss</u>
Oil cinnamon or cassia } Oil wintergreen..... }	} a a Min V
Glycerine } Alcohol }	} aa..... ̄ ij
Distilled water.....	̄ x

M. Sig. Use as a mouth wash, full strength.

Mouth washes are like the hairs of your head—numberless, but as they are used they do not accomplish very much. In order to be effective the mouth must be scrubbed first, and then rinsed with cool water, and the wash is then introduced in a small quantity, 1/2 teaspoonful; the gums are rescrubbed for from one to two minutes, and the effect of the wash left



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to be diluted with the saliva. Even with this care the organisms are not all destroyed as a rule.

Any treatise on the gums would be incomplete if it did not consider the possibility of the use of the Finsen ray for the arrest of pus production. I have for a few months been using this ray in a limited number of cases, and it appears to me that we will have less use for drugs in the so-called pyorrhoea after a year or two, than we now have. There are still some difficulties to be overcome in the general use of the Finsen system, in its application to the gums, but they are not insurmountable. The bactericidal effect of the ultra-violet ray is produced in something like four to five seconds in a field, with full exposure, by a Bang lamp,* while the arc light exposure requires about five minutes to destroy a culture of the staphylococcus pyogenes aureus. A slight erythema lasting for some days may always be expected in the use of the ultra-violet—the invisible ray. If this is brought in contact with the hair follicle, the hair will drop out and the nails may become brittle.

In the treatment of the gums these accidents are not likely to occur.

Very shortly there will be on the market a sufficiently simple apparatus for gum treatment, which will make it possible for any one to use the ultra-violet or invisible ray, even in the treatment of other affections of the gums.

From many years of observation of the gums I am convinced that the instruction given by the dentist to the patient is not sufficiently clear or impressive to do the greatest good, therefore I appeal to you to give a demonstration every time you find any discharge from between the gum and the tooth to make it an object lesson. Cases of this kind may improve with drugs alone—but a certain amount of delicate and exact surgery is requisite to effect a cure which will not be permanent unless great care is exercised continuously by the patient.

*Turner Medical Electricity, 3d edition.



President's Address.

Read by Dr. C. H. MERRITT, Auburn, Maine,
Before the Maine Dental Society, Moosehead Lake, July 21, 1903.

The wheel of time having made another revolution we find ourselves here assembled to celebrate this, our thirty-eighth anniversary. As president of the Maine Dental Society, I bid you one and all a cordial welcome. We note with pleasure the presence of so many ladies. We trust this may prove a very pleasant and profitable session. To our distinguished guests we extend a hearty greeting, and we will do all in our power to make this visit as pleasant and profitable to them as it surely will be to us.

We would not forget to extend a welcome to our exhibitors, and feel grateful to them for their efforts in behalf of the society and for making such fine exhibits. It is very gratifying to note the harmony existing within our organization, and the individual effort that is put forth to give the Maine Dental Society the influence that it is our privilege to attain.

The mere fact that we meet in such a beautiful spot as this, with grand scenery, invigorating air and at a hostelry of world-wide fame ought to prove an inspiration to us to go forward to nobler and grander achievements.

Maine, perhaps, does not possess so many dentists within its borders as some of the other States, but this is no reason why we should be content to hold a second place. The influence for good of any society does not depend upon the quantity so much as upon the quality of its members.

Maine is surely a very prolific State and exerts a mighty influence in swaying the destiny of our nation. In dentistry, as well as in many other things, Maine's sons hold no second place. We can with justice feel proud of the grand old State and its sons and daughters who have gone forth and honored almost every position in life.

In looking over the records we find that Maine has not been backward in furnishing some of the brightest men of our profession today. If time permitted, I could recite a long list that would be familiar to you all. But to prove that Maine has furnished some of the brightest men in the profession to-day, it will only be necessary to mention the name of one whom we are proud to honor—Dr. J. Leon Williams, who was born at Vassalboro, and at once time was a student of Dr. Roberts, of Augusta.



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Membership.

As I have stated, Maine is a very prolific State; and notwithstanding all of the great men she has sent forth, we still have a grand supply left. We have them here affiliated with us today. As we cast a mental glance over the State, we see a great many who as yet are not members of the society. Such conditions should not exist, and if they do, we as members must be held responsible.

We cannot hope to get them in unless we are able to demonstrate to them the great advantages to be derived from society work; that to miss our meetings is a vital loss to them; that their best interests, as well as those of their patients, demand that they join with us in elevating the standard and ethics of our profession.

We should make a special effort to get in the younger men who are yearly entering the profession. This will mean a great deal to them, as well as to the profession, for as they cross the threshold of dentistry, they should be impressed with the importance of always maintaining and elevating the standard and ethics of the profession.

Get them started right by interesting them in society work, and we can be sure that they will always maintain professional ethics.

As they mingle with the older men in the profession, men who have seen years of experience and have solved many of the difficult problems which confront us in our every-day practice, they will receive a training that will save them from many a pitfall and incidentally they will impart to us many new ideas.

In conducting the affairs of the society, I trust you will not pursue a too conservative or narrow policy, but rather conduct them upon a broad and influential platform.

If our society is small, it is evidence in itself that we must put forth a special effort to increase its membership and usefulness. There is not the least doubt in my mind but that, if the matter is taken up in a business like way, we can double our membership in two or three years. To accomplish this purpose I recommend the appointment of a committee who shall have full charge of the matter; to formulate plans, etc., and to carry them into effect. We must be a wide-awake, progressive body and make our meetings a kind of post-graduate course for busy dentists, that they may come and have demonstrated to them the latest methods and original ideas of the profession. We should seek to get some of the brightest men of the profession to be with us, and to have an abundance of clinics. We should have each year at least from fifty to seventy-five clinics with what we get from outside. This is not too much to expect considering the bright men of the profession in the State, if each will do his part.

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To secure talent for our meetings means a great expense, owing to the situation of the State. Now, as I am convinced that the Maine Dental Society is taking a step forward to the position it is its privilege to occupy, we must exert ourselves to the utmost, both individually and collectively, to make each meeting of a higher order than the one preceding. To accomplish this we must have sufficient funds. In the past we have been greatly handicapped in this respect owing to the small number composing the society.

It is indeed very gratifying to note a change in conditions. Last year we initiated thirteen members; this year we have a list of twenty for initiation and about thirty applications.

This will put us on a solid foundation and in the future we will be enabled to conduct our meetings along broader lines. If we only improve our opportunities there is a great future in store for this Society.

Programme. As we glance at the programme presented to us this year, we have great reason to feel proud of the high quality and the distinguished guests we have.

I wish to congratulate the Executive Committee for the grand work they have done, for it has been work and lots of it from beginning to end. Upon the Executive Committee rests the burden and responsibility and upon them depends the success of our meetings. We must not think there is nothing for the rest of us to do. We all have a part to perform and a responsibility resting upon us, which it is our duty to meet. There is not a member present who has not received an invitation to offer something at this meeting. As I look over this assembly, I am forced to admit that I do not believe there is a man here who could not have presented something of interest at this meeting.

Gentlemen, you have shirked your duty.

In all societies we have those who stand back and say, "I have not any interest in the matter, for it is run by a ring." Now did you ever hear of a successful organization unless it had a head to direct it? I trust our "ring" will be so enlarged as to include every ethical dentist in the State. As you enter into the work and learn the difficulties attending the same, you will have nothing but praise for those who have sacrificed so much for the well being of the society. Now, brothers, instead of standing back and finding fault, just come up and put your shoulder to the wheel and give us a lift, for it will do you good and be an inspiration to us.

Another matter I wish to impress upon you is the importance of each member attending the business sessions of the society. In the selection of officers, electing new members, and choosing a place of meeting the success of the society depends, and it is our duty to be present and have a



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voice in these matters, that a decision may be for the best interests of the society and the greatest number.

Dental Law. In the past the Maine Dental Society has done a great work in elevating the standard of dentistry within its borders, but we should not be content with past labor and achievements, but rather strive to reach the higher goal. We need more stringent laws and laws which, if possible, will regulate the future conduct of those annually entering the profession. All law should be for the protection of the public, and it is our duty to see that the public is protected in reference to our profession. It is a great question with the profession today how best this can be accomplished. To my mind the easiest solution of the problem would be to have a law passed to have inserted in each certificate issued a clause whereby said certificate would be forfeited for unprofessional conduct, after due trial and strict examination. It is time we were taking some action in reference to this matter, and I trust it will be freely discussed at this meeting, and, if thought advisable, a committee be appointed to take charge of the same.

As individual dentists our influence ought to carry some weight with those in the Legislature who are our patients. Some years we have some of our own members in the Legislature. This is an opportunity that we ought to take advantage of before it is lost to us. "Opportunity knocks unbidden once at every gate. If sleeping, wake; if feasting, rise before it turns away. It is the hour of fate and those who follow me reach every state mortals desire; but those who doubt and hesitate, condemned to failure, penury and woe, seek me in vain and uselessly implore: I answer not, and return no more."

Public Schools. Another matter which demands the attention of the dental profession is that of our public schools, that the children should receive more instruction in reference to their teeth, their great importance to the physical economy, and the necessity of keeping them in as healthy a condition as possible.

We should agitate this matter at our meetings, and with our patients, especially those who have children, thereby creating a public sentiment in this matter. At all times let us be conscientious in our work, rendering to our patients our best service, neat about our person and our office, never speaking depreciatively of a fellow dentist who is striving to live up to the ethics of the profession. In this way we will be able to exert a powerful influence in the community.

To be able to render to our patients our best service, we must not keep in too narrow a sphere, but mingle with our fellows, attend society meetings, etc., for it is here that we meet some of the brightest and most

SOCIETY PAPERS

successful men of the profession, gaining new ideas and methods of work that will be of great assistance to us.

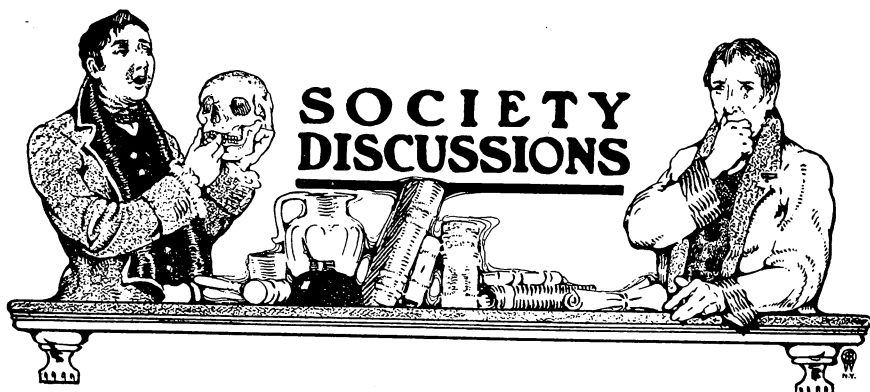
If any member breaks the code of ethics, go to him in a friendly spirit and talk the matter over. His conduct may be due to a lack of knowledge of what constitutes professional ethics. After being informed upon the subject, if he still persists in their violation, it is a duty we owe the profession and the individual member that he be expelled from the society.

A matter worthy of discussion is the advisability of changing the date of our meeting, as it now conflicts with that of the National Dental Association. This is surely a condition which should not exist. Every State society should be represented at the National. As it now is those interested in our society do not feel like neglecting it to go away and attend the National Society.

In conclusion, I wish to express to the Society my sincere thanks for the honors it has conferred upon me while one of its members. During my first year among you, I was placed upon the Executive Committee and the second year I was its chairman and vice-president. Last year you honored me with the presidency, the highest gift in your power. Words fail me to express my appreciation of the confidence you have placed in me, especially in view of the fact that I am a young member among you. It has been my endeavor at all times to work for the Society's best interests and its upbuilding. No doubt I have made a great many mistakes, receiving criticism for same, for which criticism I am thankful. And I assure those who may have criticized my policy that there is no ill feeling on my part towards them. For open, manly criticism I admire, and consider those giving the same as much my friends as those whom I am able to please.

Let us go forth to grander achievements, to the high mark of our calling, not being content with the small things but ever seeking to reach the highest position.





Thirty-Third Annual Session of the New Jersey State Dental Society, Asbury Park, N. J., July 15, 16 and 17, 1903.

Discussion of Dr. Kirk's Paper.

Dr. R. M. Sanger,
Orange, N. J. is unquestionably one of the most important subjects before the dental profession at this time; a question that worries the powers that be in every State of the Union; a question that is worrying the authorities in every dental educational institution. There are many interests, interests which do not appear on the surface; interests which savor not alone of high dental standing but strongly of commercialism, and where ethics and commercialism are opposed, as in some cases they stand opposed, on this question, it is a long road to a satisfactory solution.

As we all—and when I say “all” I mean the representative men such as are here before me—desire dental reciprocity I have no doubt in my mind that the time will come when it will be an established fact. Dr. Kirk has very clearly laid before you the difficulties that were present in the organization of this great nation: the thought we have fallen heirs to whether as children of the Cavalier or the Puritan, the fears that always are uppermost in our minds, that our inherent rights, whatever they may be, are about to be infringed, have unquestionably much to do with the troublesomeness of this question. That its solution will come along the lines that have already been started, to my mind seems an unquestioned fact. It rests with the Barons of our country, and by that I mean the Barons as they were represented in France, the diversified powers which Richelieu found and which after conquering, one by one, he finally succeeded in uniting into a nation; so our States and our dental institutions stand as

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Barons to be overcome by uniting them under the head of what is best for the common good: teaching them, as men have been taught in history, that in the final outcome, what is best for the individual is best for all. When we have reached that point we will have dental reciprocity and we will only reach it by degrees.

I am glad that Dr. Kirk has opened this question before you because I do not think there is any State in the Union more interested in furthering the establishing of dental reciprocity than the State of New Jersey, and I do not think there is any body of men in the dental profession that stands more ready to further the accomplishment of that desire than your Board of Dental Examiners.

There are certain movements on foot in the National body by which the dental institutions shall be judged, not by their circulars, not by their catalogues, not by their so-called requirements, but by their results: in the average of qualifications as proven by their students when they come before the Examining Boards. That is going to set a standard upon a new basis and one which I believe will prove to be correct and may possibly be the key to the solution of what diplomas shall be accepted throughout this country, the basis being the kind of students that the institutions turn out and not what their literature claims they are going to do. I can freely say this because, being connected with an educational institution, I cannot be accused of being on the other side of the fence.

I trust, Mr. Chairman and Gentlemen, that we are nearing the goal, but I must confess I am a little pessimistic as to its early accomplishment.

The very beautiful paper which we have heard read seems to me nevertheless, to some extent at least, to have taken the same academic form which much of the discussion on this subject always assumes. The

obstacles in the way of reciprocity are constantly being pointed out and no remedy offered. Various desirable plans on which reciprocity might be based have been advanced, but how these plans are to be brought to fruition never seems to be taken into consideration.

I wish to call your attention to one fact which the essayist has not brought out. All he has said about the desire of each State to manage its own affairs is true. All that was said this morning about the difficulty of having legislatures pass laws, is true, but I ask you to look over the history of dental legislation, to consider the conglomerate mass in which it is today and then ask yourself, "Where did those statutes originate?" Did they originate in the legislatures of the various States? No: they originated in the minds of dentists, and committees of dentists went into the legislatures and in a great majority of instances obtained the laws for which they asked; and the fact that the statutes are so dissimilar





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today in the various States, is largely the fault of the dentists and not of the legislatures. If forethought or foresight could have foretold the present state of affairs, I conceive that it might have been possible for a similar statute to have been offered in all of the State legislatures, and in that event I believe that at least in a number of the States identical or nearly identical statutes might now be in existence instead of the great diversity of laws which we have.

What is the moral of this? The movement to have general statutes has passed; the present desire is to unify them and the germ of the present restlessness is found in the wish to obtain that particular feature, reciprocity. Will we attain that by academic discussions and the reiteration of hopes that the time is approaching? I think not. I think some preconcerted plan is necessary. It seems to me that if we are to have reciprocity, in any shape, we are first to decide upon the form which is desirable, and we must then find a means of having coincident application for the passage of such an amendment in numerous States at the same time. I do not think it will be at all difficult to obtain the passage of such enactment by a great number of States, in which case the reciprocity which is desired, the reciprocity which has been mutually agreed upon by a number of States, by whatever plan it might be, could very quickly be put into operation in all those States in which the laws were passed. Persistence in this effort could bring the amendment up again and again before the legislatures in those States which at first denied it, and presently the number of States having this reciprocal law would be increased, so that eventually we should have reciprocity.

Therefore it seems to me if we desire reciprocity we must have concerted action; a representative committee from the various States, to formulate and adopt a plan and to go back into the various States and endeavor to have the plan carried into effect.

It has seemed to me that the National Board of Dental Examiners has been exceedingly remiss in this matter. If I mistake not, one of the first proclaimed objects of its existence was the procurement of this very reciprocity, for which we are all asking today. Instead of that, the history of the organization will show that it has been much more largely concerned in the scrutiny and attempted management of the colleges, and I believe that the same degree of effort aimed at reciprocity, by the National Board of Dental Examiners could attain the end. They are perhaps, as a body, not police officers because, as Dr. Kirk has said, they cannot delegate to a central body their powers. But it must not be overlooked that when they meet voluntarily at Asheville, if they agree upon a concert of action, each delegate returning to his State immediately has the power to carry such action into effect because, though while at Ashe-

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ville he may be only a delegate to a convention, in his own State he is a policeman and if all these policemen will agree at Asheville on a definite plan and go home and undertake to be a part of the committee to carry out the enactment of these laws, I prophesy that within a year a reciprocal clause, identical in language, could be obtained in ten or a dozen States of this Union.

We, as a profession, are not alone in the difficulties which are surrounding us. The lawyers in a measure suffer from similar troubles. Our loved State of New Jersey occupies an anomalous position, being the only State in the Union in which a lawyer from another State cannot practice law without an examination.

A lawyer from Pennsylvania who has been in practice before the higher courts for three years can secure from a judge of that court a letter which he can take with him to the State of New York and have some friend move, on that letter, that he be admitted to practice before the courts of that State, and that is universally done. I mention those two States merely as an example of all others. But in New Jersey a lawyer must pass an examination before being allowed to practice. Our medical friends are in no better condition, for they cannot go into other States under any reciprocal arrangement; they must pass an examination. A very prominent physician within the last few days said to me, "We are looking to you (that is to the dentists) to solve the problem of reciprocity for us." So you see our action is looked forward to with interest not only by dentists but by others.

I brought forward this morning in a measure a scheme which I thought might be a successful solution of this vexed problem, and some of you heard it, but it will not hurt you if I repeat it tonight, and those who were not here may possibly be interested. Let us take the familiar case of Dr. Osmun who is known to us all favorably and well. He has gone to California: suppose that he desires to practice dentistry there. Under my plan I would say to him, "You shall come before the Board of Examiners of the State of New Jersey and obtain from that Board a certificate, not taking the old one you got years ago, but taking one now, stating the fact that you are a reputable dentist, that you have been in practice for twenty-five years or more and that you are a good citizen." Dr. Osmun would then take that certificate to California, deposit it with the Examining Board of that State and ask for the privilege of practicing there. My point is that those gentlemen of California, knowing the character of the Examining Board of New Jersey and the high standard they maintain, and the kind of men they turn out, and knowing that the certificate given by them to Dr. Osmun is something like a letter of introduc-





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tion, will look at it in that light and say, "The New Jersey Board has given to Dr. Osmun a certificate of his character now, not one of years ago, but he is all they say at this time, and, as a matter of courtesy, he has the right because he has gone through all the preliminary and necessary examinations and qualifications, to practice dentistry and he ought to have the right to go and practice, if he knows how, wherever he pleases over this broad land."

That seems to me to be a movement which can be carried out, I do not see why it cannot be. It seems to me a much more feasible plan than that of asking the legislatures to pass a uniform amendment, which I doubt very much the practicability of doing. It seems to me there is nothing in the way of accomplishing my plan and the New Jersey Board would be glad, if any one came to it with such a qualification as I have mentioned, to say to him, "Come into our borders, practice dentistry and we will extend to you the right hand of fellowship."

I understood Dr. Ottolengui said this morning
Dr. Edwin W. Harlan. that we could not carry such a plan out as Dr. Stockton suggests without the endorsement of the legislature. If I am not mistaken there is a provision in the New Jersey law by which if the Board is satisfied that the applicant for a license has been in reputable practice they can waive the examination and issue a certificate without any examination. If that clause were in the law of the other States would not that make possible Dr. Stockton's plan?

Dr. R. M. Sanger. I think there is no such clause in our law.

This question came up nine years ago, the first
Dr. Emory H. Bryant. time I had the pleasure of meeting with the New
Washington, D. C. Jersey Society. I was then talking of just what my friend, Dr. Stockton, has been talking tonight, reciprocity, and I can say that I agree thoroughly with all of the gentlemen who have preceded me.

I have had a little experience in my life in this very line and the nine years that have passed since my first appearance before this society have not changed my ideas very much. Dr. Kirk's idea is very fine and would be practical if it did not hit the commercial side and furthermore if it did not legislate out of office some gentlemen who hold offices. Dr. Ottolengui's idea finds trouble in the same line. He said if the National Board of Dental Examiners would do so and so, they could get the law. The National Board of Dental Examiners will never do that, they might legislate themselves out of office if they did.

If you want a movement of this kind to succeed you must get the men of the different States interested in the subject, outside of the colleges and the Boards of Examiners. If you want any action taken you must get

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new men at the helm. They have been talking the same thing for the last ten years, ever since the National Board of Examiners was organized, and they have not done a thing. We have had reciprocity in New Jersey and in New York and that has broken up, practically. You have had reciprocity with other States and that never amounted to anything. Why? Because you have waited for some Board of Examiners to take the matter up. I have never seen a man in my lifetime, since I have been in dentistry, who had an office and wanted to get ride of it. Office holders hang on like grim death.

Dr. Osmun has gone to California, if I mistake not the Board of Examiners of the State of California would require him to pass an examination today after perhaps twenty-five or thirty years practice, just as they would require it of a young man just coming out of school. The certificate from the State Board of New Jersey would have absolutely no effect except, as Dr. Stockton says, as a matter of courtesy. If they would accept these things as a matter of courtesy it would be all right, but they will not, and the same commercialism comes in again, "We don't want you to come into competition with us, if you are a good man in the State of New Jersey, we don't want you in our State, you will take something away from us." (A voice, "No.") Yes, that is an actual fact, I have had some experience in that line. I was told in the city of New York by a man who stands as high in the profession today as any man in that city, that New York did not like new dentists, and that if a certain dentist came there he would not receive any aid whatever. Why one additional man in the great city of New York would be like a grain of sand thrown in the ocean, there would be a little ripple and that would be the end of it.

If you have any idea of getting reciprocity throughout the country you must take hold of new men who are willing to work and let them get out and hustle; let them appear before the State legislatures and you may get what you want but you will never get it from the colleges, through the State Boards of Examiners or through the National Association of Dental Examiners.

Dr. H. W. Harlan,
Chicago, Ill.

I have been listening to the discussion that has taken place this evening and it seems to me that under the constitution that we live under and the rules that govern our States, the only feasible method is to have amendments to our present dental laws. If we have uniform laws throughout the country so that the standard would be practically the same, we might have interchangeable certificates.

Some of you know that in Switzerland, which is divided into a number of Cantons, a man is not permitted to practice throughout the entire country. Certificates are issued for the canton of Geneva, or Lucerne,



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or whatever the name of it may be, while in all foreign countries the requirements for practice are becoming so that examinations have to be taken in the language of the country, and furthermore men cannot take examinations unless they have the qualification of an A.B. or B.S. or Ph.B. or Ph.D. degree; so that very shortly all Americans who desire to practice in any foreign country will have to attend their schools and pass their preliminary requirements for entrance into their schools. In the United States, while it would be very desirable for a gentleman in New Jersey to practice in New York, if the standard is not the same for examination or with reference to the recognizing of diplomas I think the State police regulations will still be maintained. Courtesy might be abused. In some States, Boards of Examiners are appointed without reference to their fitness for holding such positions. I was a member of the first Board of Examiners in the State of Illinois, appointed in 1881, and I served for five years and later was again a member and we had applications for registration of certificates from States, many of which were new, and as we found out were not based on proper requirements at all. There were certificates which were bought and some which were given on such slight examinations that it would have been an injustice to the people of the State in which I resided for our Board to extend any courtesy to the holders of such licenses.

The paper of Dr. Kirk on this subject is one well worth studying, and Dr. Sanger's remarks on the subject are, I think, very pertinent. I should say that it is more or less useless for us to discuss this matter very much because we must keep within the law and it is impossible to have a National Board of Dental Examiners, while we have the independent States, just as it is impossible for us to have a National Board of Medical Examiners except for those men who enter the army or navy. They have not been able to get a really properly constituted National Board of Health which is something desirable from every standpoint and reliance is had entirely on the Boards of Health of the different States to maintain a standard which will be a benefit to the community.

I do not think it is desirable for me to say very much on this subject tonight although I have decided views concerning it. I will content myself by simply saying that after listening to the paper and to the arguments of the different gentlemen who have spoken, I agree fully with them in the position they take that reciprocity as a whole is not likely or not probable so long as the laws of the different States are so varied.

The plan that Dr. Stockton has advanced tonight appeals to me more strongly than any other plan which has so far been advanced and the position that I take in this matter is that if adopted by the National Board,

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if reciprocity cannot be established with every State, this plan, it seems to me, will make it possible to bring about reciprocity with a larger number of States than any other plan I have heard advanced.

We cannot establish nor maintain, it appears, reciprocity with New York because the laws of New York require that a person applying there for examination or license must have a preliminary examination equal to a four years' high school course. New York State will not come down from that position and men coming from another State with a record of years of practice, reputable men, dental college graduates, cannot practice in New York unless they possess that preliminary. Many in New Jersey do not possess it and in such cases they are compelled, if they wish to practice in New York, to undergo examination or obtain the forty-eight counts, I think it is, which the Regents require and which are equal to a four years' high school course. There could be no reciprocity between New York and New Jersey inasmuch as here we require no such standard, our law reading that a candidate shall possess a preliminary education equal to that given by the common schools of this State. This phrase has been variously interpreted. By one administration interpreted to mean high school, by the same administration with a different light turned on, it has been interpreted to mean a common school; on the ground that a high school is a common school possessed only by the larger cities and greater centers of population. The same thing would probably be held true with other States and a candidate from New Jersey not possessing a high school degree or certificate, but having passed the New Jersey Board, his previous requirements being up to the standard, possessing a certificate from us, might be met by the New York Board of Regents and there refused because of lack of preliminary education. There might be no question as to his professional ability or moral character or anything else excepting that in his younger days he was unfortunate enough not to have received an education equal to a four years' high school course. So long as this condition of affairs exists there can be no reciprocity between the different States although all States do not have such a standard. Nor do I mean to say that a four years' high school course is too much as a preliminary requirement. It would be well for the profession if such were the standard all over the country, but it is not and I think that until an equal standard be established we cannot have reciprocity under the plan as suggested by Dr. Stockton.

Dr. Kirk. It is getting late and I will not go any further than to thank those gentlemen who have expressed their views on this subject so fully and to call attention to a matter concerning which perhaps there may be a little misunderstanding. I refer to Dr. Ottolengui's academic idea. If I interpret his





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term correctly I gather that he thinks the paper rather a general dissertation on the subject without any helpful ideas contained in it; but the Doctor seems to have overlooked the plan of reciprocity or reciprocal interchange of license which has been put into practical use by the medical Boards of certain Western States. The principle is that we could start reciprocity between States having similar laws, thus creating centers of reciprocity, as it were, throughout the Union.

What Dr. Harlan says is certainly correct. We cannot have reciprocity until we have uniformity of legislation. But there is such a thing as uniformity of legislation already existing, not throughout the States, but among groups of States.

I should be very glad indeed if some definite action could be taken. If I were a member of this society I would ask for a motion that either your State Board of Examiners be instructed or a committee be appointed to urge the furtherance of the plan which has been successfully put in operation and which is known as the Michigan standard and which was organized by the Wayne County Medical Society of America and to which I have referred in the paper, and given in detail.

The central idea is we must have uniformity. Therefore let us take advantage of such degrees of uniformity as we have and start reciprocity in that way.

Morning Session, July 16, 1903.

President Hindle called the meeting to order.

The Secretary called the roll and a quorum was found to be present.

The following applications for membership were received, and on motion took the usual course:

Seymour St. John Boughton, Newark, N. J. Sponsors: Drs. Gould and Marshall.

Raymond A. Mott, Madison, N. J. Sponsors: Drs. Holbrook and Gregory.

George S. McLaughlin, New Brunswick, N. J. Sponsors: Drs. Hindle, Truax and Hull.

Newton W. Bornstein, Newark, N. J. Sponsors: Drs. Dunning and Chase.

William Talbot, Newark, N. J. Sponsors: Drs. Dunning and Meeker.

The President then introduced A. W. Harlan, M.D., D.D.S., of Chicago, Ill., who read a paper entitled "The Drug Aspect of Lesions of the Gums."

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Discussion of Dr. Harlan's Paper.

Dr. R. M. Sanger,
East Orange.

When a man like Dr. Harlan presents a paper before any body of intelligent men, we know we are going to get something worth listening to.

Just what he was going to do with that old subject I could hardly guess, and had I found that the paper was on pyorrhea, I should have declined to open the discussion. It is a pleasure to thrash old straw sometimes because the straw is useful even if the thrasher is not, but when it comes to pyorrhea, we feel that it has been so thoroughly thrashed that even the straw rebels. But the subject as presented by Dr. Harlan is practical, thorough, dental prophylactics—a subject which cannot be thrashed too hard or too often in my opinion. It is remarkable to observe in this day of general intelligence the lack of information, or the carelessness in its use, on the part of the average dentist when it comes to a question of the instruction of his patient in regard to dental prophylactics. This is a day, as Dr. Harlan has said, of multifarious mouth washes. With a natural tendency of the human mind to look for a specific, the public has grasped the mouth wash (with the accompanying circular) and striven to convince itself that a specific has been found, and unfortunately many dentists have acquiesced in, even if they have not sanctioned, that position. It is a strange fact—well, hardly strange, but a fact—that as civilization advances the dental organs seem to deteriorate. Whether good living necessarily means bad teeth, or whether in our age of effete civilization we are too lazy to get that which is so easily attained, I am not prepared to say, but certain it is that the higher up we go in the scale of civilized life, the more abundant are poor teeth and apparently the more common is the neglect on the part of the patient. Many seem to think that the dentist can do it all, and so we are obliged, whether we will or not, to undertake the task, and we can only, I am sure, hope to aid to the degree in which we succeed in educating our clientele to do the work for themselves instead of expecting us to do it.

Breakfast Foods. The reference to breakfast foods is one of the indications. I heard an anecdote the other day to the effect that a gentleman said to a saw mill owner, "How is it that you are working now? I thought this was your dull season?" "Well," he said, "since they have started the breakfast food business, we are running the year around." The tendency of the age to live on predigested food is not only shown in poor teeth, but I think is equally shown in the anæmic children who are coming along to make the next generation. The only thing which is saving them from their own neglect is the popularity which outdoor exercises enjoy in this decade.



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Fitting Bands. Just a word on the practical side of the question in regard to injury to the gums and teeth in band fitting. I read a paper recently in one of the journals which said that the only correctly fitted band around the neck of the teeth was the one which was driven home with a mallet. I have seen bands put on in that way that had their only claim to a fit in the "fit" that the patient had while the mallet was being applied! The operator who has had a few bands fitted in that way finds a way of fitting them perfectly without the mallet. With reference to placing ligatures near the gums, I would like, if it were possible, to ask how many men anesthetize the gingival border before they place a band or tie a ligature? How many men take the trouble to apply a little cocaine or campho-phenique or some equally efficacious remedy?

Chewing Gum. Some years ago the S. S. White Co. introduced a dental chewing gum. I presume it is safe to say that most of you do not approve of chewing gum—for the other fellow—yet there was a principle underlying that very remedy, if we may so call it, which it is wise to consider. I know very well that if you recommended parents to have their children chew gum so often every day they would probably call in another dentist, but at the same time the massage produced by the act of chewing gum is of inestimable value sometimes.

That we hope great things from the Finsen ray is unquestionably true. The fact of the matter is that this is an age of electricity, and by and by, if we are not careful, our vocation may be gone, because they will just put the man who needs treatment in an electric cabinet, touch the right button and turn him out cured!

Dentifrices. A word in regard to dentifrices and then I am through. I wonder how many of us have weighed carefully the real purposes of dentifrices. How truly has Dr. Harlan said that the dentifrice is for the teeth not for the gum, yet how careless we are in recommending a proper dentifrice. Patients constantly buy a dental paste in one form or another because it tastes nice. They might just as well use something which is utterly valueless, because, as I understand it, the precipitated chalk in any dentifrice is put there for the purpose of friction. When you mix that with an emollient, you simply destroy its use and in its place seek to beguile the patient with something like menthol, which has a cooling effect and an agreeable taste, but which is of no use whatever so far as cleansing the teeth is concerned. I only speak of this in passing as a word of warning to those dentists who are in the habit of using and recommending non-frictional dentifrices.

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Dr. Louis G. Ceroy,
New York.

This society is to be congratulated on the treatise on gum lesions which it has secured from one of the few men qualified to discourse on the subject. The paper teems with good, wholesome, whole wheat kernels, different from that character of food to which Dr. Harlan took exception in his paper.

Dr. Harlan did not treat of individual cases, which would remove the paper from the category of a treatise, so I do not feel at liberty to treat the subject other than generally. As a prefix it may be said that the highly organized gum tissue is a wonderful physical barometer, reflecting general or organic disturbances by a change from the normal. Frequently this local manifestation of a general condition leads the patient to fear some gum lesion. The intelligent dentist recognizes something fundamental and advises the patient accordingly.

Probably we are but just beginning to recognize the importance of this tissue; certainly the average physician seldom takes it into consideration in his diagnosis.

Dr. Harlan would class these manifestations as pathological lesions and they would be subject to treatment accordingly.

One of the opening paragraphs of Dr. Harlan's paper reads "That a lesion (of the gums) if neglected may become irreparable." I would define that somewhat closer by saying that all injuries to these tissues, *if* involving the periodontal membrane, become irreparable. They may respond temporarily to stimuli, but the scar remains which in after years breaks down as a poorly resisting tissue, and that insidious malady, gingivitis, presents itself.

The paper quotes a number of irritants which operate as contributing causes of lesions. A few others might be added, such as necrotic lesions, irritation from poisons, bristles from tooth brushes, or small fish bones sometimes create disastrous irritations.

The floss silk, too, can do much damage through improper use or too rigorous use. If it is used carefully, it is practically indispensable, especially in mouths where the teeth are irregular or the jaws deformed. If the patient must use a tooth pick the quill is the only thing. The reasons are obvious.

Massage.

Just a few words about massage. In conditions of anemia, and in fact in many diseases of a different character, after the usual brushing of the mucous membrane of all surfaces of the mouth, massage that tissue, particularly over the alveolar processes, by grasping it between the thumb and forefinger and exerting a vigorous pinching influence, dragging the tissues from the apical part of the teeth to the cutting edges, exerting a mild



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twisting motion when the crowns of the teeth are in the fingers. This done two or three times daily will accomplish excellent results. The action of the epidermis on the mucous surfaces has a cleansing action and stimulates the mucous follicles in a way that the tooth-brush or other instrument does not. I have in mind cases where the gums have been diseased and the teeth loose from disuse that have become quite firm again under this treatment.

Prepared Foods. Dr. Harlan referred to prepared foods. That has been a recognized evil for some time past which together with the general malady human beings suffer from—inactivity and sedentary habits—results in general impaired functions. The child, in its endeavor to relieve the distress of hunger, accepts the palatable diet which is served to it by the parent, ignorant of the simple requirements for proper functional activity.

Exercise. Among the more refined, especially in cities, another insult to injury is heaped on suffering childhood by practically depriving it of muscular activity, which is necessary for proper functional activity of all organs of the body, particularly the digestive. Suppression of these functions at this period of the child's life results in chronic atrophic conditions of the growing organs which time and change to activity can never correct. For exercise the child is allowed to walk up and down the pavement, hitched to a nurse or, worse still, seated beside her for fear she might soil the spotless garment or person. Is it any wonder that lesions of the gums and teeth and stomach and the whole alimentary tract are prevalent in the growing generation and that malnutrition asserts itself early in life? Adults ignorantly suffer in somewhat the same way.

What constitutes exercise? Surely not walking as generally indulged in, but good brisk activity that will cause, above other things, free flow of perspiration. That is a requisite to eliminate the waste products stored in the circulatory system and which cannot wholly be gotten rid of by any other means. A few minutes of judicious exercise should not exhaust any individual, but, on the contrary, stimulate. Exhaustion is dangerous. My reason for placing so much stress upon exercise is because of personal benefits and injuries and the observation of others, in and out of practice, and of athletes who have been in training, gone out and returned to activity again.

The judicious, systematic sweat—pardon the inelegancy—with proper laving after will do much to correct the existing evils of gum lesions and many others, foreign to dentistry, and even solve the dietetic problem, for the whole system will crave those things which will regulate proper func-

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tional activity best. At present, the predigested food is a result of conditions rather than accountable for them.

Then, too, the irrational drinking, or not drinking enough water, for purposes of health as well as the infrequent use of it for bathing, requires careful consideration.

As to the drug aspect of Dr. Harlan's paper, I have not much to say. His medical knowledge is based upon such positive rules that any departure therefrom is simply judgment or idiosyncratic preference of a drug and its intelligent administration.

I am very much pleased with Dr. Harlan's reference to the Finsen ray. How we will welcome the ultra-violet principle with all its possibilities.

If Dr. Harlan will inform us where that practical Finsen principle may be obtained I feel confident the results pro and con of the experiments that will follow will monopolize much of the 1904 meetings of all societies.

**Dr. Wilbur Daly,
New York.**

Some eight years ago Dr. Harlan read a paper on coagulants and non-coagulants and their use in mouth washes causes a good deal of the trouble he speaks of. Their action may create irritation which increases on the periphery of the gum by the continued use of the improper mouth wash and it is the duty of the dentist to warn his patient against its use.

Another good point in Dr. Harlan's paper is his reference to physical exercise. The former by reason of abundant exercise produces the necessary chemical changes in his system to eliminate uric acid products and to produce a healthful alkaline saliva thus keeping up a proper stimulant to the gum.

Dr. Harlan spoke of the use of bichloride of soda. Ordinary mouth washes are of the ordinary myrrh type and the boracic acid preparations. This acid has a tendency to be a coagulant and works on the cervical margin by contraction and tends to denude the dentine of gum tissue and also affords a place of deposit of bacilli. Bicarbonate of soda dissolves certain mucous secretions on the surface of the teeth, especially where the mucous in the saliva is in larger predominance than ordinary in healthy saliva. The saliva is one of the first things that indicates malnutrition; its chemical conditions change and the waste products of the body accumulate in it. The bicarbonate of soda will wash the surface of the teeth and remove the film which accumulates and thus prevent the accretions of tartar and also prevent little gum lesions.



ITEMS OF INTEREST

Dr. C. S. Stockton,
New Jersey. I have enjoyed Dr. Harlan's paper very much and was particularly pleased to hear him say that the care of the gum tissue is as important as the care of the teeth themselves. Many years ago I heard Dr.

George A. Cushing make a somewhat similar remark and I have made it my constant practice to impress this upon the minds of my patients. It is almost my universal practice to first cleanse the gums to see if they are in proper condition before I do any filling.

At New Orleans recently my friend Dr. Rhein advocated before the Medical Association the training of young women as dental nurses, whose business it should be to attend to and treat scientifically the teeth and gums. That is a move in the right direction and will afford great relief to the busy practitioner if it can be carried out. It is a new field for young women and a very worthy one.

I have often shown my own gums to patients and told them that the care of my gums has been what brought about and kept a man of my age in the possession of a magnificent set of teeth. So I wish to emphasize the paper of Dr. Harlan and to thank him personally for being present on this occasion.

Dr. M. L. Rhein,
New York. I have listened with especial pleasure to the paper of Dr. Harlan for one reason particularly, and that is that I am pleased to find that he has at last publicly recognized the fact that there are other causes which will bring pathological conditions of the gums than those which are purely local. He and I have had quite an argument on this question for a number of years, and while I have always granted the large influence which local irritations and local neglect exert in causing pathological conditions of the gum tissues and the adjacent parts, we have always been at odds in regard to that class of lesions which I have claimed are the result of something besides purely local affections, and for that reason it has pleased me greatly today to hear Dr. Harlan publicly recognize the strong effect that general conditions of the body and various other causes than those that can be classed as local, have upon the degenerate condition, we find in the circulation of the gums and that are the exciting causes of so many troubles of this nature.

I have nothing but commendation to offer for almost all the essayist has said. I believe we place too much stress upon the value of drugs in local treatment, the local treatment that is necessary and essential to preserve the inherent physiological conditions of the dental tissues. It is barely possible that the enumeration of so many therapeutic agents as the Doctor mentions in his paper is apt to be misleading to a great many

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young practitioners, and it is unfortunate that in so short a paper he has covered such a large field of pathology. There is no question but that in the local treatment of the various conditions as enumerated by him, therapeutic agents are necessary to a certain degree, but I believe they can be limited to a much smaller number than those arrayed before us in this paper.

Breakfast Foods.

What the essayist said in regard to the use of modern breakfast foods is something that I desire to especially commend. There is no point that we can dwell upon with greater importance than the necessity of the use of the dental organs, if we desire to retain them in a healthy physiological condition. In this respect I might say that I differ absolutely with one of the gentlemen who has discussed this paper when he spoke about the fluids of the mouth necessarily being alkaline in order to be physiologically normal. It is just as detrimental to the mouth, perhaps more so, if the salivary fluids, or the oral fluids, are alkaline as when they exhibit an acid reaction. Between the two I do not know but that we would get less detriment from an acid than from an alkaline state. What we should seek is a neutral saliva, one neither acid nor alkaline. In this respect it is possible that the speaker, talking extemporaneously, did not mean to convey what he said because it is unquestionably of great value, therapeutically, to use an alkaline ingredient in order to neutralize the acid which is the most common form of aberration of the constituents of the saliva, and I doubt if it is possible, by the use of any form of alkaline, in any normal manner, to change the character of the oral fluid to a distinctly alkaline condition that will last more than a few minutes.

The whole trend of all forms of treatment at present in every branch of the healing art has been towards what has been dwelt upon so thoroughly by Dr. Sanger and Dr. Stockton, prophylactic treatment of the body in every respect. It has been my pleasure in years gone by to agitate what Dr. Stockton spoke of in his remarks before this society and that is that the highest duty that pertains to our line of work is to prevent all troubles of this nature by the proper care of the mouth, and if such care is taken we will not find any gum lesions to treat. The reason that in certain forms of constitutional conditions we obtain at the very start, you might say, the various lesions that manifest themselves in the gums is because the gums are the most neglected parts of the body. Dr. Harlan in his paper said that he considered the treatment of the gums, the daily massage of the gums by the patient as of as great importance as the care of the teeth. I wish to go a step further, I consider the treatment of the gums by the individual of more importance than the care of the teeth. If the gums are properly handled by the average individual, the teeth will



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take care of themselves, and I say that with the assurance of having seen it demonstrated over and over again.

Massage. The treatment of the gums by the tooth brush in the hands of the patient, intelligently used, so as to massage the gums as high as the line of union between the mucous membranes will permit, will so tone the capillary circulation of the gum tissues, if the individual gives sufficient time to this massage that the benefit to the teeth follows as a natural consequence without any action at all upon the part of the individual. I desire strongly to uphold the value of massage in connection with gum treatment. Massage under these conditions where we have either an alkaline or an acid reaction is the most important agent that we have in our hands for bringing about a normal state of the oral fluid. No local therapeutic agent is of any avail to remedy this matter for more than a few moments; I do not care whether the reaction is acid or alkaline, it will return; in half an hour you will have the original reaction and it comes from the pathogenic condition of the mucous particles in the gum tissue, in most cases. The most familiar form is that which produces as a result the numerous forms of erosion that create mischief around the neck of the tooth and the cause of which lies as I say in an abnormal condition of the mucous particles that send out their secretions through the system. I have found that the way to bring these mucous particles to a stage that is as near physiological as we can bring them, is by massage. Not only the massage by the individual, not only the massage obtained by the use of a tooth brush four times a day, but something more than that; the massage under the hands of what I may term a skilled dental nurse, two or three times a week, going over the surface of the mucous membrane covering the entire root surfaces of the teeth upper and lower, in a rational way, so as to bring about a better capillary circulation of those parts. This treatment with people who are young enough will not only remove that pathogenic condition of the mucous membrane but in a great many cases will tend to bring the gum itself over the neck of the tooth if the patient has not reached too advanced a stage of life.

The Dental Nurse. I am aware that the advocacy before this society some years ago of the method of training women for the purpose of cleansing and polishing the teeth at regular intervals and with the thoroughness that can only be accomplished by the use of sufficient time has influenced many members of this society to put the system into practice throughout this State. I believe there is more of that work done in the offices of the members of this society than is done in any other State. The Dental Society of the State of New York at its last meeting unanimously adopted a resolution by which it author-

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ized the committee on legislation to procure, if possible, such legislation at the next meeting of the legislature of the State of New York as would permit the handling of the mouth by dental nurses, without their being graduates of dentistry, in the manner spoken of by Dr. Stockton, and I believe that if such laws were passed in the different States it would be of greater value as a preventative measure than anything that could be accomplished by the use of therapeutic agents.

(Closing the discussion.) I thank the members of the society for their attention, and as there has been no objection to the form or the subject of my paper I do not think it necessary to take up any more of your time. The opportunity to present one's views before an important State dental society is certainly of benefit to him who presents them, whether it be of benefit to those who hear them or not, so whenever I have been invited to read a paper before a dental society I have also tried to present something that would in a measure compensate the members for the time occupied in listening. (Loud applause.)

Boston and Tufts Dental Alumni Association.

April 3, 1903.

The meeting was opened by the following brief accounts of incidents in office practice.

Dr. Hinsworth. I have recently had occasion to remove several gold crowns from bicuspid in the mouths of ladies, and have been surprised to find, in the first place, how trivial an excuse some dentists require for thus disfiguring a patient, when the tooth might quite reasonably have been filled with gold, and in the second place, if the tooth was to be crowned at all that it was not crowned with porcelain, making *some* effort to preserve the attractive and refined appearance which Nature designed fair woman to possess. Think of it! A first bicuspid in a lady's mouth, mesial surface and buccal wall in fine condition, distal surface badly decayed, involving a third of the palatal wall; cervical wall in fine shape, pulp alive and well protected. Fortunately, the tooth but slightly ground, and then covered with gold; ill-fitting at the neck, gum constantly irritated and inflamed. A glittering show





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every time the patient opened the mouth. Patient informed that it was the best thing modern dentistry had to offer in such a case, and she had been meekly bearing the cross during four years.

Now, in this case, I found no difficulty, after removing the crown, in preparing the cavity and inserting a contour gold filling, which would not ordinarily show at all, making a strong, durable piece of work, and a delighted patient.

Such I believe to be only a fair representation of *hundreds* of cases that disfigure the mouths of all classes of people we meet every day.

Time is not allotted me tonight to go into detail
Bicuspid Crowns. as to what I would do in all these cases; indeed, some of them may be justified by virtue of their necessity in carrying a bridge, but most of them could be dispensed with. Suffice it to say, many could be filled, while others could be crowned with porcelain, with or without gold band.

Occasionally we have a crown so badly gone that filling would be unwise, and yet with live pulp, which has receded nearly to the gum line; such a tooth may be dressed down, a nicely fitting gold band made and covered with gold, forming a cap which, when cemented on, will hermetically seal the end of the root. A special porcelain crown may be carved, with pins in the base instead of the side; these pins may perforate the top of the cap and, after being properly soldered, the crown, thus made, may be cemented on to the end of the root.

A first molar may be crowned with a gold band
Molar Crowns. wide at the neck, into which has been fitted a porcelain crown, either specially carved, or a countersunk pin crown, or even some of the ordinary porcelain molars. There are also, porcelain molar crown faces obtainable at some of the dental depots, which can be used where the bite is too short for a longer crown. Even second molars may sometimes thus be crowned to great advantage.

One point in favor of such crowns is, that after everything is in readiness, the band can be adjusted to the root, the rubber dam put on over it and the adjacent teeth, when you can proceed with deliberation, and know that your band fits properly at the neck before you mix the cement and adjust the porcelain to position. If necessary, a small vent hole may be drilled through the band on the palatal side near the gum to facilitate the adjustment.

Thus, I have thought best to occupy your attention for these five minutes and I hope that some of you, at least, may share in the feelings of impatience, not to say disgust, which I have felt, at the sight of so many unnecessary glittering signs of the handiwork of the men posing as the exponents of *modern dentistry*.

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Dr. James R. Piper.

Case I.

Some few years ago I had occasion to restore a lost lateral, on the left side, and in looking about to see how this restoration was to be made I was at a loss to find a particular system that would apply to this case. Gold bands are unsightly, and backings cemented to the palatal surface of the teeth on their side of the space, has its objections. I decided upon a bar. Of course in inserting a bar with a tooth attached, it is somewhat difficult to make the attachment and make the tooth secure, and at the same time permanent. So it occurred to me that Dr. Shaw had worked out a little appliance in the form of a bar bridge which is made from a common plate tooth, with vertical pins. The artificial tooth is backed up in such a way as to make a slot running horizontally across it. In this slot is carefully fitted a bar of iridio-platinum of the right width, and a hole is drilled through the backing and bar. In that hole threads are cut and a screw made to fit. Then the bar is taken off from the bridge and the cavities (there happened to be cavities in these teeth) so shaped as to permit of securely fastening the ends of this bar; the tooth is taken off from the bar and the bar cemented in place, the cement being cut out as the work progressed for the gold filling, which was the permanent retention. After the bar had been securely packed about with gold, the slot in the backing of the tooth was filled with cement, the tooth set on the bar and the screw adjusted. In this particular case this seemed the best method for restoring the lost tooth.

Case II.

The second case which I will report was a molar crown in the mouth of a lady whose teeth were somewhat conspicuous. The idea was conceived of making a wide band, just as you would for a gold crown. In the band is burnished a piece of very thin platinum (such as you would use for a matrix), allowing the platinum to come over the periphery of the gold band, thus making a little shelf to hold the porcelain from being forced into the gold band. The platinum band is removed from the gold band and porcelain cusps, made from high fusing body, baked into the platinum band, scoring the body on the under side, for retention. I have inserted them without scoring the porcelain. Then after the band is set the porcelain cusps are carried to place in cement and the teeth brought together and firmly held for ten or fifteen minutes. That worked very satisfactorily.

Case III.

When Jenkins's porcelain bodies came out I had occasion to make a temporary cap for a bicuspid. I wanted to do it quickly and as gold was unsightly, I thought the appearance could be relieved by baking the cusps of Jenkins's porcelain body directly into the 22 karat band. While a very strong body



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for porcelain inlays, I had doubts about this being strong enough for cusps. This method was used, however, and the cusps have withstood the stress of mastication.

The same method was used on molars and bicuspid, i. e., the Jenkins body baked directly into the 22 karat band. Whether I shall be sorry for doing this I do not know. They have been in use two or three years.

Dr. Miles. I would like to ask Dr. Piper how long ago was it he put in the bar bridge?

Dr. Piper. Perhaps three years ago. A good man having had experience with this kind of a bridge, and having suggested it, I adopted it. He has patients who have worn them several years.

Dr. Miles. Are you troubled with the bar loosening?

Dr. Piper. I put that question to others who have had experience and they say not, if properly made, no more than any bar. If the surface of the bar is round it will turn. Pack the gold about one side while the opposite is held fast with cement, and then replace the cement on the other side, and I do not think you will have trouble.

Dr. Miles. I recently inserted a similar bridge, using a Mason tooth and backing. I find it has loosened. I presume I did not make the cavities large enough to allow for sufficient gold to give proper strength.

Dr. Piper. I want to state that the specimens exhibited were made just before we came over here, and are not fine workmanship. They were hurriedly baked.

Tennessee State Dental Association.

The thirty-sixth annual meeting of the Tennessee Dental Association was held at Lookout Inn, Chattanooga, Tenn., July 23-25, 1903, Dr. W. K. Slater, of Knoxville, presiding. The meeting was a splendid one, pronounced by many to be the most interesting one held for years. The attendance was good, including quite a number of the profession from other States; some who would have otherwise been present, were kept away on account of some of the National meetings at Asheville, being held at the same time. Ten excellent papers were read and thoroughly discussed. The president's address was an especially happy effort, his principal theme being "Dental Ethics." The clinics were presided over by



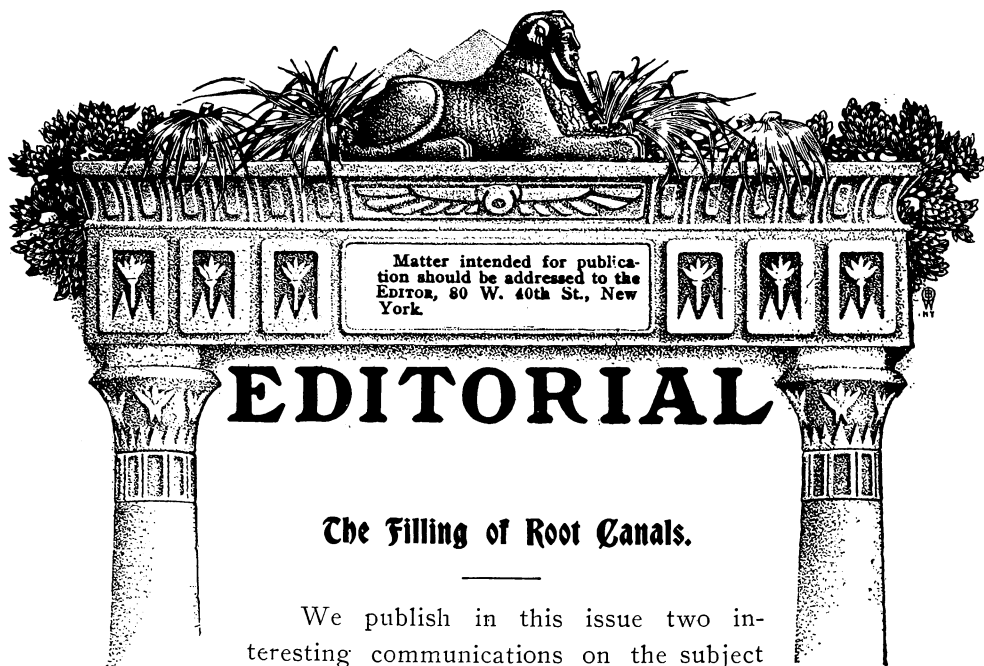
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Dr. A. A. McLanahan, of Springfield, and of course that part of the programme was not a failure by any means. Many very interesting clinics were given, the "Inlay Man" being very much in evidence. The treasurer, Dr. J. D. Towner of Memphis, reported the finances of the Association in good condition with \$156.52 on hand. Twelve new members were added to the roll, most of them being young men, which is, we take it, a good omen of better things ahead. The Association sent a full delegation to the National and Southern branch meetings at Asheville. The following officers were elected for the ensuing year: President, Dr. R. Boyd Bogle, Nashville; First Vice-President, Dr. J. D. Towner, Memphis; Second Vice-President, Dr. A. J. Cottrell, Knoxville; Recording Secretary, Dr. J. T. Crews, Jackson; Corresponding Secretary, Dr. W. K. Slater, Knoxville; Treasurer, Dr. W. P. Sims, Nashville; Members of Executive Committee, Dr. P. M. Joyner, Union City; Chairman Clinic Committee, Dr. A. R. McLanahan, Springfield; Essay Committee, Dr. W. C. Gillespie, Nashville; Dr. A. J. Cottrell, Knoxville; Dr. J. D. Towner, Memphis.

The next meeting will be held at Jackson on a date to be selected by the Executive Committee.

A. SIDNEY PAGE, Sec'y.





Matter intended for publication should be addressed to the Editor, 80 W. 40th St., New York.

EDITORIAL

The Filling of Root Canals.

We publish in this issue two interesting communications on the subject of root filling. At the first meeting of the Canadian Dental Association Dr. James Magee declared that molar roots can be filled to their apices in the majority of cases. Dr. McInnis challenged his claim and the result of the test is recorded in the report with skiagraphs made by Dr. Weston A. Price. Dr. Magee gives us his comments. It is an undisputed tenet in dental practice that after the removal of pulp tissue the root canals should be aseptically sealed throughout in order to preserve the tooth in a state of health. It is therefore of tremendous importance that the technique of root filling should be thoroughly mastered by those who wish to be successful practitioners. That the operation is neither simple nor easy is proven by the fact that there is perhaps more literature upon this than on any other one topic in dentistry. The present papers bring up the discussion in a new and most interesting aspect. Too much credit can hardly be extended to Dr. Magee for his willingness to have his operations subjected to criticism under the impartial light of the X-Ray. Dr. Magee claimed that he could fill the majority of molar roots to their



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apices. In the test made he failed. Yet he is still confident of his ability and attributes his failure in part to the conditions under which the test was conducted.

Let us then consider the conditions, and discuss the value of the test. The teeth were imbedded in plaster of paris. This proved a disadvantage because the investment absorbed the solvent upon which Dr. Magee in a measure relied for carrying his gutta percha to the apices. Again we learn that the plaster interfered with the skiagraphing. It is clear therefore that it was a mistake to have so invested the teeth.

Dr. Magee also says, "In the mouth we know by sensation when we reach living tissue, and having reached it we dare not go farther." This is true only to a degree. In dealing with roots from which living or partly devitalized pulp is to be removed pain of course is met; but in the presence of dead or putrescent canal contents, sensation would only be noted in one of two instances; first in using canal drills pain might be observed prior to actual puncture, but if, as suggested by Dr. Magee, he would then "dare go no further," the apex of his root would be no better filled in the mouth than in those teeth punctured by him in his tests. Secondly, we would meet sensation by passing a probe through the apex, but it is probable that this would only be true in the presence of a highly sensitive pericementum, made so from inflammation or abscess, or in case the probe be passed much farther than it should be beyond the actual apical foramen. A deft touch should indicate the arrival at the apex without passing through to a degree sufficient to cause pain, in the absence of acute pathological disturbance; but while this might be true in the mouth, it probably could not be accomplished where the foramen abutted plaster of paris.

Three points remain to be discussed. First the puncturing of side walls; second the detection of the apical foramen from within the canal; and lastly the cleansing of the canal.

Puncturing Canal Walls. The chief value of the test lies in the large proportion of roots punctured. While it is true that, in the mouth, the pain felt just prior to the actual puncture might have allowed the operator to save himself from this disaster, it has been pointed out that he would have been no nearer to a perfect root filling from this fact. Dr. Magee dismisses this



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aspect of the question by saying, "I will not make excuses for the punctures, because no honest dentist will even claim total exemption from that mishap." This is true of course, but where it has occurred it has been indeed a mishap, and moreover in most cases showed a lack of skill. It is the sort of accident which occurs to men early in their professional careers. It is inexcusable on the part of one who would claim skill enough to fill all molar roots to their apices. The truth is, that while we are told nothing of Dr. Magee's technique, it is probable from his results that he used some sort of canal drill or reamer. Time was when the present writer thought a reamer an important and necessary instrument, and it was during that period that he occasionally had the mishap of puncturing a root wall. With the adoption of the Schrier method of canal cleansing (sodium and potassium) the canal reamers were relegated to the bottom drawer of the cabinet, to be used but rarely and then only at the very opening of a canal. By this method the canal can be more thoroughly and more certainly cleaned throughout, and the puncturing of a root wall becomes an impossibility. The canal reamer, moreover, is a fruitful source of another danger; while opening the upper two-thirds of a canal it frequently carries debris forward and so tightly closes the rest of the canal that further cleansing is impossible. Thus if Dr. Magee used reamers in all of the roots, it accounts not alone for the punctures, but perhaps for some of the unfilled root ends.

Finding the Foramen.

If a canal is properly cleansed, using either the Schrier or the Callahan methods, which means removing the canal contents chemically rather than mechanically, the arrival at the apex can be noted by the fact that the delicate end of the canal probe first rests at the opening and then with extra pressure can be forced just through. Pain is not a needed exponent of this fact. But the tissue beyond the apex should be as it is in the mouth, cancellous bone. For this reason a better mode of conducting another test would be to obtain a fresh piece of beef bone sawed so that the human tooth roots may be forced into the cancellous portion thereof. It was in this manner that the writer perfected himself in forming sockets for tooth implantation, the beef bone being quite similar to the tissues in the mouth. By this means also would be avoided the absorption of the solvent.



**Cleansing
the Canal.**

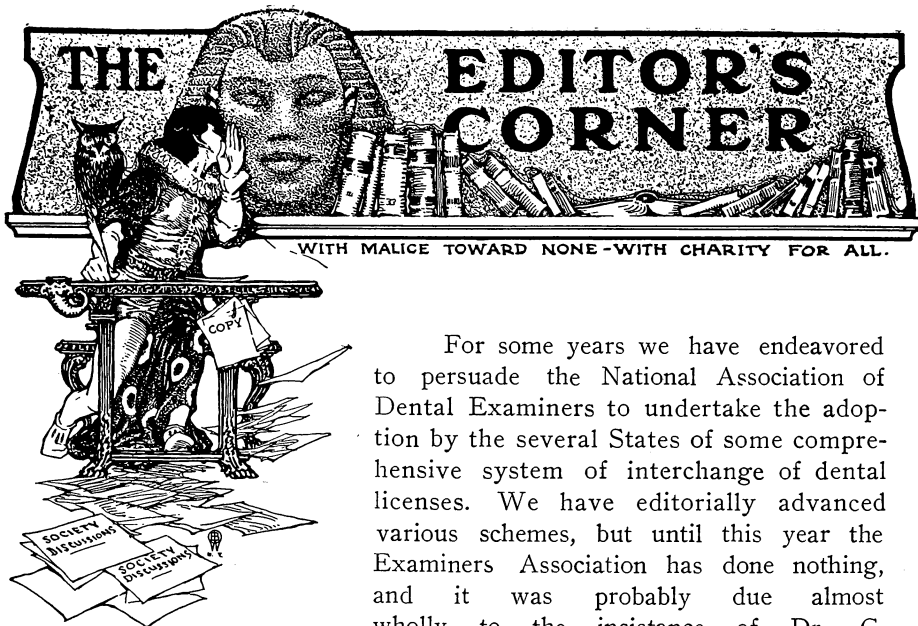
Dr. Price's report shows that in several instances the upper portion of the root canals remained unfilled. Unfortunately we are not told whether these places were properly cleaned or not. It is probable that they were not, if Dr. Magee relied solely on mechanical cleansing, and chemical cleansing might have been inoperative in dried specimens. It follows therefore that in another test, the teeth should be as fresh as possible. Dr. Magee's idea that the teeth should be extracted under protest is hardly logical. We often attempt to *save* teeth, under protest; teeth which we know would by the majority be relegated to the forceps; and it is just in proportion to our skill in saving this class of teeth that our root filling methods should be tested. A tyro can fill an easy root canal. It is the other sort that we are all interested in learning how to control.

May we hope that Dr. Magee will undertake another test, using freshly extracted teeth imbedded in beef bone?

Dr. J. Foster Flagg Dead.

As we go to press we learn with intense regret that Dr. J. Foster Flagg, for half a century one of the most conspicuous figures in the realm of dentistry, died at his residence, Swarthmore, on Nov. 25th. An account of his career will be published next month.





For some years we have endeavored to persuade the National Association of Dental Examiners to undertake the adoption by the several States of some comprehensive system of interchange of dental licenses. We have editorially advanced various schemes, but until this year the Examiners Association has done nothing, and it was probably due almost wholly to the insistence of Dr. C. S. Stockton that at last one step

was taken at Asheville. We have already published the resolution pertaining to this subject which was adopted by the Examiners at their last meeting. But the mere adoption of a resolution does not inaugurate a system of interchange. The various bodies which in the aggregate comprise the National Association of Dental Examiners have no police power when meeting in convention. The resolution therefore was but a recommendation. It is the act of each State Board after it returns home and resumes its statutory powers that counts, and so far as we have learned those who voted so cheerfully at Asheville seem to have been inoculated with "innocuous desuetude," ever since, with one noteworthy exception.

**New Jersey
Offers Interchange
of License.**

The Examining Board of the State of New Jersey has taken official action along the lines recommended by the National Association of Examiners, and has addressed a letter to each State Board in the Union offering to enter into an agreement of which the following is a blank copy.

Agreement entered into this day of 190 , between the State Board of Registration and Examination in Dentistry of New Jersey, Members of the National Association of Dental Examiners, and the State Board of Examiners of the State of, also members of the same body.

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Witnesseth, The party of the first part hereby agrees under the terms of the resolution passed at Asheville, to exchange with the State Board of Examiners representing the State of licenses to practice dentistry, and to issue license to the candidate presenting credentials properly filled out, accompanied with fee such as the laws of each State require.

In Witness thereof the president and secretary have signed their respective names and seals in duplicate.

ASHEVILLE RESOLUTION.

Resolved, That an interchange of license to practice dentistry be, and is hereby recommended to be, granted by the various State Boards, on the following specific conditions:

"Any dentist who has been in legal practice for five years or more, and is a reputable dentist of good moral character, and who is desirous of making a change of residence into another State, may apply to the Examining Board of the State in which he resides for a new certificate, which shall attest to his moral character and professional attainments, and said certificate, if granted, shall be deposited with the Examining Board of the State in which he proposes to reside, and the said Board, in exchange therefor, may grant him a license to practice dentistry."

President State Board of [SEAL]

President State Board of [SEAL]

Secretary State Board of [SEAL]

Secretary State Board of [SEAL]

Thus we are to have a test of the value of the resolution itself, as well as of a recommendation made by this body. That is we will now soon learn whether those Examiners who take action as members of the National Association of Dental Examiners will take similar action when at home and acting as legal officers. Should those States whose laws permit such interchange fail now to take advantage of the present opportunity, it cannot but reflect upon and diminish the prestige of the National Association of Dental Examiners.

The Buffalo Meetings.

Buffalo is to have the honor of being the meeting place of two of the most important dental associations in the country. On Dec. 29, 30 and 31 will occur the meeting of the Institute of Dental Pedagogics, and following this will come the third annual meeting of the American Society of Orthodontists. The programmes of both organizations are published in full in this issue, and none who read it can fail to be impressed by the high character of the essayists and the importance of the subjects announced. Indeed it is doubtful if so good a programme has been offered during the year. From present prospects it seems assured that the attendance will rival the Niagara Falls meetings of the National. No one who can possibly get away should fail to attend.



ITEMS OF INTEREST

Aseptic Towels for Dental Purposes.

Mr. F. B. Kilmer, Ph.C., sends us the following communication:

A short article appeared a short time ago in the *Dominion Dental Journal* and has since made the rounds of many dental journals in this country, entitled, "Are Towels as They Come From the Laundry Aseptic?"

In this article the author states that he has made a test of a towel that had lain in the locker in his office for a week, and asserts that it proved to be absolutely sterile. There is nothing remarkable in this statement, and it may be correct that the author did find a towel which had recently been in the laundry and which was aseptic but to reason from this that *all* towels which have passed through the laundry are aseptic would be dangerous. In the eyes of the modern surgeon a towel fresh from the laundry is a filthy rag. He would not judge such a towel by its appearance or its history but by its effects, knowing that it might contain death-dealing germs.

Given a hundred towels fresh from the laundry—ten, or twenty or fifty of them might be found aseptic; the balance might contain anything from disease-producing organisms to more or less harmless air germs. Who would be able to pick out by the eye which of the one hundred were aseptic, and which were not. Those who have had experience along this line know that infected cloth, and especially that infected with disease-producing organisms is very difficult to sterilize. The ordinary boiling and other processes of the laundry will not always remove dust, tetanus germs and other resistant bacteria.

A surgeon's towel or a dentist's towel after use is always more or less impregnated within the inner structure of the fibre with infection. It is a very difficult operation to absolutely remove this infection without a special apparatus, entirely different from that which obtains in the ordinary laundry. In addition, admitting that the towels are by chance during some process in the laundry made sterile, their subsequent handling by the operatives and transference to the dentist's office, and again rehandling by assistants, militates against their being aseptic.

It is not presumed that the dentist's towel for ordinary use need be aseptic from a surgical standpoint. If it were to be used as a napkin within the mouth it should be so, however.

In aseptic surgery there is no such thing as partial sterilization. To jump part way across a brook is worse than to have never jumped at all. A towel or a napkin is sterile, or it is infected; and the only towel or other appliance that can be depended upon in surgery is one that is known to have passed through a process of sterilization which meets the requirements of modern surgery.



EDITOR'S CORNER

Membership in International Congress.

The Committee on State and Local Organizations is a committee appointed by the Committee of Organization of the Fourth International Congress with the object of promoting the interests of the Congress in the several States of the Union. Each member of the committee is charged with the duty of receiving applications for membership in the Congress under the rules governing membership as prescribed by the Committee on Membership and approved by the Committee of Organization. These rules provide that *membership in the Congress shall be open to all reputable legally qualified practitioners of dentistry*. Membership in a State or local society is not a necessary qualification for membership in the Congress.

Each State chairman, as named below, is furnished with official application blanks and is authorized to accept the membership fee of ten dollars from all eligible applicants within his State. The State chairman will at once forward the fee and official application with his indorsement to the chairman of the Finance Committee, who will issue the official certificate conferring membership in the Congress. No application from any of the States will be accepted by the chairman of the Finance Committee unless approved by the State chairman, whose indorsement is a certification of eligibility under the membership rules.

A certificate of membership in the Congress will entitle the holder thereof to all the rights and privileges of the Congress, the right of debate, and of voting on all questions which the Congress will be called upon to decide. It will also entitle the member to one copy of the official transactions when published and to participation in all the events for social entertainment which will be officially provided at the time of the Congress.

The attention of all reputable legally qualified practitioners of dentistry is called to the foregoing plan authorized by the Committee of Organization for securing membership in the Congress, and the Committee earnestly appeals to each eligible practitioner in the United States who is interested in the success of this great international meeting to make application at once through his State chairman for a membership certificate. By acting promptly in this matter the purpose of the committee to make the Fourth International Dental Congress the largest and most successful meeting of dentists ever held will be realized, and the Congress will thus be placed upon a sound financial basis.

Let everyone make it his individual business to help at least to the extent of enrolling himself as a member and the success of the undertaking will be quickly assured. Apply at once to your State chairman. The State chairmen already appointed are as follows:





ITEMS OF INTEREST

General Chairman—J. A. Libbey, 524 Penn Ave., Pittsburg, Pa.

STATES.

ALABAMA—H. Clay Hassell, Tuscaloosa. ARKANSAS—W. H. Buckley, 510½ Main Street, Little Rock. CALIFORNIA—H. P. Carlton, Crocker Bldg., San Francisco. COLORADO—H. A. Fynn, Denver. CONNECTICUT—Henry McManus, 92 Pratt Street, Hartford. DELAWARE—C. R. Jeffries, New Century Bldg., Wilmington. DISTRICT OF COLUMBIA—W. N. Cogan, The Sherman, Washington. FLORIDA—W. G. Mason, Tampa. GEORGIA—H. H. Johnson, Macon. IDAHO—J. B. Burns, Payette. INDIANA—H. C. Kahlo, 115 E. New York Street, Indianapolis. IOWA—W. R. Clack, Clear Lake. KANSAS—G. A. Esterly, Lawrence. KENTUCKY—H. B. Tileston, 314 Equitable Bldg., Louisville. LOUISIANA—Jules J. Sarrazin, 108 Bourbon Street, New Orleans. MARYLAND—W. G. Foster, 813 Eutaw Street, Baltimore. MASSACHUSETTS—M. C. Smith, 3 Lee Hall, Lynn. MICHIGAN—G. S. Shattuck, 539 Fourth Ave., Detroit. MINNESOTA—C. A. Van Duzee, 51 Germania Bank Bldg., St. Paul. MISSOURI—J. W. Hull, Altman Bldg., Kansas City. NEBRASKA—H. A. Shannon, 1136 "O" Street, Lincoln. NEW JERSEY—Alphonso Irwin, 425 Cooper Street, Camden. NEW YORK—B. C. Nash, 142 W. 78th Street, New York City. NORTH CAROLINA—C. L. Alexander, Charlotte. OHIO—Henry Barnes, 1415 New England Bldg., Cleveland. OKLAHOMA—T. P. Bringhurst, Shawnee. PENNSYLVANIA—H. E. Roberts, 1516 Locust Street, Philadelphia. RHODE ISLAND—D. F. Keefe, 315 Butler Exchange, Providence. SOUTH CAROLINA—J. T. Calvert, Spartanburg. TENNESSEE—J. P. Gray, Berry Block, Nashville. TEXAS—J. G. Fife, Dallas. UTAH—W. L. Ellerbeck, 21 Hooper Bldg., Salt Lake City. VIRGINIA—F. W. Stiff, Richmond. WEST VIRGINIA—H. H. Harrison, 1141 Main Street, Wheeling. WISCONSIN—A. D. Gropper, 401 E. Water Street, Milwaukee.

For the Committee of Organization,
EDWARD C. KIRK, Secretary.

Congress Indorsed. *Whereas*, The Fourth International Dental Congress, which is to meet in St. Louis August 29, September 3, 1904, under the auspices of the Louisiana Purchase Exposition is to be the greatest event in the history of dentistry.

Whereas, As the Fraternal Dental Society of St. Louis is progressive and stands for the best in dentistry and its interests;



EDITOR'S CORNER

Be it Resolved, That the Fraternal Dental Society of St. Louis heartily endorses the Fourth International Dental Congress, and tender it their aid and support as a Society and as individuals.

W. L. WHIPPLE, President pro. tem.

E. E. HAVERSTICK, Secretary.

Unanimously adopted Sept. 8, 1903.

A Golden Anniversary Celebration. The dental profession of Philadelphia, represented by all of its organizations, will celebrate on February 27, 1904, the fiftieth anniversary of the graduation of the Class of 1854 of the Philadelphia College of Dental Surgery by a complimentary banquet to the surviving members of the class, consisting of Drs. Louis Jack, James Truman, C. Newlin Peirce, and W. Storer How.

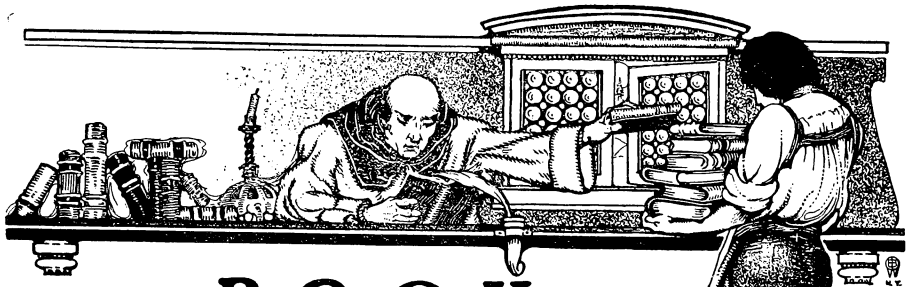
All dentists in good standing are invited to participate. The subscription price, including a banquet ticket and one copy of the souvenir historical volume to be published in commemoration of the event, has been fixed at ten dollars. The subscription list will be open until February 10, 1904.

The committee in charge of the celebration consists of the following members: Edwin T. Darby, Edward C. Kirk, R. H. D. Swing, Albert N. Gaylord, Earl C. Rice, I. N. Broomell, J. T. Lippincott, L. Foster Jack, G. L. S. Jameson, J. D. Thomas, Wilbur F. Litch, H. C. Register, Wm. H. Trueman, Robert Huey, Wm. L. J. Griffin, J. Clarence Salvas, D. N. McQuillen.

Applications together with the subscription may be forwarded to the chairman of the Invitation Committee.

ROBERT HUEY, D.D.S.,
330 So. Fifteenth Street, Philadelphia.





BOOK REVIEWS

The Histology and Patho-Histology of the Teeth and Associated Parts.

By ARTHUR HOPEWELL-SMITH, L.R.C.P., London; M.R.C.S., England; L.D.D.,
England.

The Dental Manufacturing Company, Ltd.

London, England.

In many respects this is an admirable book, and for this reason it has been a pleasant task to review its pages. Like many works of a scientific nature it is not entirely free from imperfections, but most of these are of minor importance, and are almost overlooked when the clearness, distinctness and completeness which characterize the book in general are considered. About the first impression received is to the effect that the author is not only familiar with the various subjects considered, but that he has the ability to impart to others that which he appears so well to understand. We are fully in accord with the author when he speaks of the "three great principles" which it is necessary to strictly observe if definite and reliable results are anticipated; "the selection of material, the preparation of that material for experimental and histological research, and the correct interpretation of results." To this is truthfully added "loose plans of procedure unfortunately militate strongly against that advancement of the science which is so earnestly desired."

The work is divided into three parts, dealing with the following subjects: "The Histology of the Teeth and Associated Parts;" "The Histogenesis of the Teeth of Mammals, Fishes and Reptiles," and "The Patho-histology of the Teeth and Associated Parts." Undoubtedly much



BOOK REVIEWS

thought has been devoted to the systematic arrangement of the various chapters, twenty-four in all, a matter not always considered.

Beginning with the tissues of the teeth, these are most carefully and thoroughly treated histologically. In Chapter II, which is devoted to Nasmyth's membrane, we are pleased to note that the author acknowledges this as of epiblastic origin, and that the theories partly established by Waldeyer and Rose are to be considered incorrect.

It would be hard to find a more carefully prepared discourse on the subject of enamel than that in Chapter III, which is given up to the consideration of the histology of this tissue. In the compilation of this the works of Kolliker, Waldeyer, Von Enner and Williams have been consulted and freely drawn upon, the result being, as above stated, a very thorough treatment of the subject. A questionable feature in this chapter is found in the passage which deals with the origin of this tissue, wherein the author states that "it is yet undecided whether enamel is a secretion or a conversion of these (ameloblasts) cells, but the balance of opinion would seem to be in favor of the latter." We see no good reason why the subject should be thus doubtfully treated. No writer nor investigator of recent times has been able to successfully contradict the well established and now seemingly accepted theory of Carpenter and Huxley that all calcified products are excreted, and that there is no such thing as an "actual conversion of living cells into calcified tissues." In further considering this subject in Part II, Chapter XII, the mass of accumulated evidence here collected, favoring the secretory theory is so convincing that it seems folly to look upon the subject as one under dispute. Also in this chapter mention is made of the theory at one time advanced by Kolliker that "enamel rods are produced by the dentine, from an exudation furnished by the dentinal canals." The author very wisely comments upon this as "unscientific and incorrect." Why make mention of it at all? It is an exploded theory, and only serves to confuse the student.

Chapter IV and V, devoted to the histology of the dentine and cementum respectively, are practically without fault, except it be the theory indorsed by the author regarding the presence of the so-called interglobular spaces in dentine; with this we are not fully in accord.

Chapter VII is given up to a brief consideration of the "Structural Modification of the Enamel, Dentine and Cementum," as found in the vertebrates. About all the varieties of enamel and dentine together with such slight modifications of cementum as are found in the lower animals are carefully, and, we believe, accurately described.

In describing the dental pulp the author has succeeded in getting together in condensed form about all the histologic data obtainable in regard to this important structure. Special attention is given to the vas-



ITEMS OF INTEREST

cular supply and to the nervous system, dwelling at some length upon the peripheral nerve terminations. While calling attention to the difference in the size and shape of the pulp cells other than the odontoblasts, and stating that the various stages of the growth of the organ has a decided influence in this respect upon these cells, no mention is made of the more important fact that the odontoblasts themselves are markedly influenced in the same way. Neither does the author include in describing the odontoblasts that their shape is largely influenced by their functional activity. Although considerable space is given to the form and change in form of the odontoblasts, both of these facts have evidently been overlooked.

In describing the alveolo-dental membrane, the work of Black has been largely drawn upon, both descriptive and illustrative. This must be considered as a favorable criticism because from no other source could the same amount of valuable information be found. We are sorry the author has not adopted the term alveolo-dental membrane, instead of periodental membrane. The nearest he came to this is in the list of synonymous terms employed in this connection, when the tissue is referred to as the "alveolo-dental ligament," which, however, does not apply to the entire structure, but only to that part in the region of the cervix.

Chapter X is devoted to "A Group of Minor Structures," first among these being the "absorbent organ." We are very much surprised to note that the author claims the origin of this to be "from the outer layer of the dental follicle of the permanent teeth." That the origin of the vascular papillæ, which through its cellular structure is responsible for this physiological root destruction is entirely independent of the permanent teeth or their follicular walls, can be readily proven by noting the fact that the absorptive process is successfully accomplished in those cases when for some reason or other the succeeding tooth is missing. The presence of a permanent tooth follicle is not essential to this process, which in itself is somewhat obscure, but the vitality of the pulp, the presence of a vascular papillæ at the extremity of the root, which is in most particulars similar to the formative papillæ, are necessary to the successful accomplishment of physiological root decalcification.

On page 191 in describing the dental follicle it is said that "The outer portion is less dense than the inner, but it cannot be removed as a separate layer from the latter, as neither is divided by a pronounced line of demarkation." Some years ago the writer made many dissections for macroscopic study of the dental follicle, and found it an extremely easy task in the fresh subject to separate these two layers. A comparative study of the two resulted in finding the reverse conditions present as to density, the outer layer being extremely dense and firm, while the inner was thin and transparent.



BOOK REVIEWS

With one or two exceptions, the space devoted to the development of the teeth, some eighty pages in all, is well written and very beautifully illustrated. With the introduction of a few illustrations made from macroscopic dissections of the parts under consideration, the subject could be made much more comprehensible. In treating the subject of the evolution of the permanent teeth, the author accepts without qualification the theory of Rose that the "epithelial inflection which goes to form the successional tooth is but the growing or free end of the *zahnleiste*, and not a budding from the neck of the enamel organ of the temporary tooth germ." We are not quite so confident in regard to this, in fact we doubt very much its correctness. So far as can be seen, the author fails to consider the subject of the origin of those permanent teeth which have no predecessors, a matter which should be specially and separately considered.

As the title of the book implies, a considerable portion of it is given up to the pathological conditions of the teeth and their environments. In Part III, which is devoted to this, the arrangement of the morbid affections of the teeth and contiguous organs "is built upon the morphology and minute anatomy of the tissues." Beginning with the hard tooth tissues the pathology of each is discussed under two general headings, developmental and acquired. After carefully reading the three chapters devoted to this, we have nothing but laudation for this part of the work. Dental caries is not described under the general heading of acquired diseases common to the hard tooth tissues, but a separate chapter is introduced for its consideration. Very careful thought is given to the etiology of dental decay, and the works of Miller, Black, Abbott and Rotenstein have been freely consulted and quoted on the subject. Most of the illustrations in this chapter are new, but in general they are under too low magnification to materially assist the very excellent text. Chapter XVIII, XIX and XX, "The Diseases of the Dental Pulp," includes "Hyperæmia," "Acute and Chronic Inflammation of the Pulp," "Injuries of the Pulp and Methods of Healing the Same," "Gangrene," and, finally, "Fibroid, Atrophic, Fatty and Calcareous Degeneration of the Tissue." The reader is carried through these in a manner both entertaining and profitable.

The final chapters are devoted to diseases of the soft structures, the alevolo-dental membrane, the gums, etc., and to these is added a chapter on odontomes. These show the result of careful study, and add much to the value of the work. We welcome the book, and commend it not only to those who desire to learn what is taught therein, but more particularly to those who from time to time are called upon to discuss such subjects as it contains: to such its value is without limitation.





Regarding the mechanical execution of the book, its typography, illustrations, paper, etc., are of a character beyond criticism.

I. N. B.

Micology of the Mouth.

By KENNETH WELDON GOADBY, L.D.S., England.

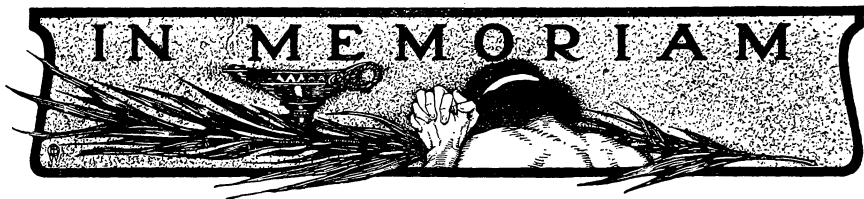
Longmans, Green & Company.

London, New York and Bombay.

This is perhaps the first attempt to produce a practical text book devoted solely to the bacteria of the oral cavity. The title of the book, "The Micology of the Mouth," was selected because the micro-organisms of this cavity include species belonging to a much higher order than bacteria. While the work is "primarily intended for the use of students of dental surgery, it is hoped the collection of facts related to the Micology of the Mouth may be of assistance to those engaged in research." As the work is largely intended for students, much space is devoted to laboratory technic. This is wise, because the study of bacteriology is one which requires a great deal of laboratory experience, perhaps more than research in any other direction. The general principles of biology, sterilization, etc., are considered, as are also the pathogenic bacteria of the mouth, with special reference to the relations which exist between pathological conditions of the mouth and general disease. Dental caries and fermentation are so closely related that considerable space is given up to their consideration. In addition to the foregoing, special chapters are devoted to "Bacteria in Tooth Pulp," "Bacteria in Dento-alveolar Abscesses," and "Bacteria in Pyorrhoea-Alveolaris." Altogether the author deserves much credit for his efforts to produce a book not heretofore found in the list of standard text books, nor in the dental library.

I. N. B.





Dr. Jonathan Taft.

Dr. Jonathan Taft, for fifty years a professor of dental surgery and the man who organized the dental department of the University of Michigan in 1875, died Oct. 15 after a short illness of but a few days. He literally died in the harness, for he was engaged in the active work of his profession to the time of his death.

Jonathan Taft was born September 17, 1820, in Russelville, Brown county, Ohio. His father, Lyman Taft, was a native of Massachusetts and came to Ohio in 1818. Young Taft was educated in the common schools and a small academy in Brown county, where he was a classmate of General U. S. Grant, and taught school for four years. In 1841 he began the study of dentistry in the office of Dr. George D. Tetor in Ripley, Ohio, and began practicing for himself in 1843 in Ripley. In 1844 he located in Xenia, Ohio, and practiced there until 1858. He graduated from the Ohio College of Dental Surgery in 1850 and in 1854 he was appointed professor of dental surgery in the same institution and occupied this chair until 1879, when he resigned because he had accepted a similar position in the University of Michigan. While connected with the Ohio College he was dean for the larger part of the time. In 1856 he began editorial work on the *Dental Register*, a monthly periodical, which position he held until January, 1900. In 1857 he moved to Cincinnati and established a fine practice which he relinquished in the summer of 1901 and moved to Ann Arbor.

During the winter of 1858-59 he wrote a treatise on "Operative Dentistry" which was so well received that it was adopted as a text-book in the colleges and has been relied on as an authority wherever the science of dentistry is known.

It has been translated into German and other languages. The second edition was issued in 1868 and the third edition in 1877. A fourth edition was called for and published in 1883 and a fifth edition is now in preparation and will be published in the near future.





ITEMS OF INTEREST

In 1875 he was invited to organize the dental department of the University of Michigan, and accepted the professorship to teach the principles and practice of operative dentistry.

The first session was held during the winter of 1875 and 1876. He was made dean of the department which he established on the highest educational basis known at that time, and he has ever since striven to keep its standard as much in advance of other institutions as the professional progress would allow. Through his efforts the course has been extended from two years of six months and a first year high school preparation for admission, to a course of four years of nine months and a high school graduation for admission, making it the highest educational standard known.

For nearly forty years Prof. Taft devoted his attention and most earnest efforts toward the organization and support of dental associations, regarding them as of incalculable benefit for the development and progress of the profession. He was a member of the American Society of Dental Surgeons in 1852; he became a member of the American Dental Convention in 1856, and was chosen its president in 1863. He was one of the twenty-four persons who organized the American Dental Association in 1859, and was its secretary from the date of its inception until 1863, when he was chosen its presiding officer.

He has been a member of the Mississippi Valley Dental Association for fifty-four years, and was a member of the Cincinnati Society of Natural History and of the American Medical Association, etc. His labors have been conspicuous in over seventy different professional associations, and during the past thirty-five years he has been in attendance at from fifteen to thirty society meetings annually.

In 1867-68 he was active in obtaining the passage of a law to regulate the practice of dentistry in the State of Ohio, which was enacted May, 1868, and which has proven, as was anticipated, of the highest benefit to the public and the profession.

Through his college work, his editorial work, and his general interest in professional affairs, he had much to do with advancing professional standards as well as attainments. He has always kept up with every advance made in the scientific as well as the technical departments of the profession and, by his suggestions, he has given inspiration and encouragement to many men who were laboring in these directions. He has always stood for high professional attainments and rejoiced in any advancement in dental, scientific or technical knowledge.

In his religious life he was a devoted member of the Congregational Church and occupied prominent places in the councils of this denomination, of a national as well as local character. He was for twenty-five years



superintendent of the Sunday school of the Vine Street Congregational Church of Cincinnati, and for nearly as long assistant superintendent of the Bethel Sunday school, a large mission school, having an attendance of from two to three thousand children. He was registrar of the Miami Congregational Conference for nearly thirty years. He was greatly interested in all benevolent objects and gave largely of his means and time to such calls. As a man he was beloved by all who came in contact with him.

While a man of the greatest will power, he was always kind and ready to make such concessions as would overcome trouble. In this respect he had a remarkable control of his natural disposition, which was always aggressive and single-minded. To do what he thought was right was always uppermost in his mind, but he readily made such concessions as would seem for the welfare of those about him.

In 1842 Dr. Taft was married to Hannah Collins, of Ripley, Ohio, who died in 1888, and in 1889 he married Miss Mary Sabine, of Cincinnati, who survives him. Two sons, Dr. Wm. Taft, of Brewster, N. Y., and Dr. Alphonse Taft, of Cincinnati, and one daughter, Mrs. A. T. Edwards, by the first marriage, are now living.

Resolutions of Respect to Dr. Jonathan Taft.

Whereas, After a long and useful career of sixty years, as practitioner, author, journalist and teacher, death has ended the life's work of Professor Jonathan Taft, who was universally loved and respected by the dental profession for his scholarly attainments and high ethical standing;

Whereas, In the death of Dr. Taft our profession has lost an advanced thinker and an able and enthusiastic exponent of the best in dental surgery; be it

Resolved, That the Fraternal Dental Society of St. Louis extend our sincere sympathy to Mrs. Taft in her bereavement, which is the bereavement of the whole profession, and express our high regard for the worth and character of this pioneer, who so ably exemplified the highest ideal of American dentistry.

Resolution by Dr. B. L. Thorpe.

Unanimously adopted October 20, 1903.

E. E. HAVERSTICK, Secretary.

W. L. WHIPPLE, President pro tem.





Francis M. Odell, M.D., D.D.S.

At a regular meeting of the First District Dental Society of the State of New York, held November 10, 1903, the following resolutions were adopted:

Whereas, On October 11, 1903, Francis M. Odell, M.D., D.D.S., an honorary member of this Society, and its secretary for some years in its early days, started on that unknown journey;

Resolved, That we, the members of the First District Dental Society in regular session assembled, testify to the loss we feel in his departure from our midst;

To the loss the community has sustained since he has ceased to be able to give them the benefit of his well-trained mind and his skilful hand;

To his skill which has preserved thousands of human teeth to remain a comfort to his former patients in their old age, which in itself is the highest praise we can bestow;

That we appreciate the work he has done for this society and the scientific advancement of dentistry during his active career;

That the fortitude and patience he displayed during the last ten years of his life, constantly battling with a dread disease which not only prevented his practicing his profession but entailed untold suffering, makes his character stand out in a manner most creditable and worthy of emulation;

That we console with his bereaved family; that a copy of these resolutions be sent to his widow, to the dental journals and also be inscribed on our official minutes.

W. E. HOAG,
S. GOLDSMITH,
M. L. RHEIN, Committee.

Dr. W. C. Barrett.

Whereas, In the fullness of time, having lived nearly the allotted three-score years and ten, our friend and associate, William Carey Barrett, departed this life on August 22, 1903. Death is the anticipated end of man, and we rejoice that our beloved brother sleeps the sleep that knows no waking, in the full consciousness that he had performed all the duties of life in a manner that we, his associates, may strive to emulate. May his spirit rest in peace. Therefore be it



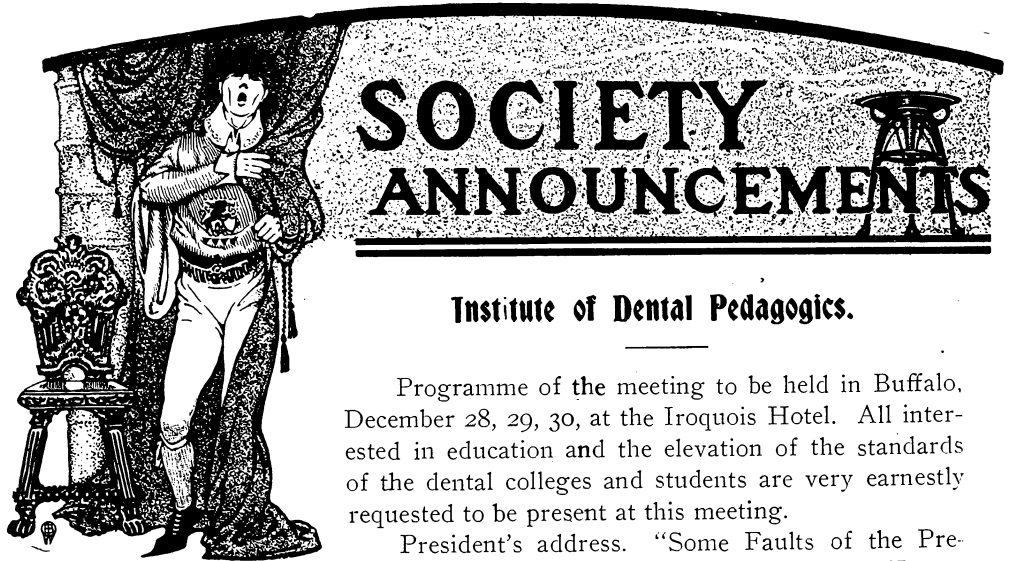
IN MEMORIAM

Resolved, That the members of the Odontological Society of Chicago, in full meeting assembled, testify their belief in the upright character and devotion to principles of their brother, W. C. Barrett, and they one and all mourn his sudden taking off. This society tenders to his family and friends their sincere condolence, and it is ordered that a page be set apart in their record book to permanently preserve this note for all time.

Resolved, That a copy be sent to the leading dental journals for publication and one to the widow of our friend.

A. W. HARLAN,
TRUMAN W. BROPHY,
JOSEPH W. WASSALL,
Committee.





SOCIETY ANNOUNCEMENTS

Institute of Dental Pedagogics.

Programme of the meeting to be held in Buffalo, December 28, 29, 30, at the Iroquois Hotel. All interested in education and the elevation of the standards of the dental colleges and students are very earnestly requested to be present at this meeting.

President's address. "Some Faults of the Prevailing Dental Training," Dr. J. D. Patterson, Kansas City. Discussion to be opened by Dr. John I. Hart, New York; Dr. B. Holly Smith, Baltimore; Dr. H. P. Carlton, San Francisco; Dr. Geo. E. Hunt, Indianapolis; Dr. R. H. Hofheinz, Rochester.

Prosthesis. Two papers. (a) "Methods of Teaching the Artistic Elements of Prosthetic Dentistry," Dr. A. O. Hunt, Omaha, Neb. (b) "Methods of Teaching the Anatomical Arrangement of Teeth," Dr. B. J. Cigrand, Chicago. Discussion to be opened by Dr. N. S. Hoff, Ann Arbor; Dr. G. H. Wilson, Cleveland; Dr. R. R. Freeman, Nashville; Dr. F. H. Berry, Milwaukee.

"An Ideal in Pathology," paper by Dr. D. R. Stubblefield, Nashville. Discussion to be opened by Dr. H. A. Smith, Cincinnati; Dr. T. H. Hartzell, Minneapolis; Dr. A. H. Peck, Chicago; Dr. O. L. Hertig, Pittsburgh.

"Orthodontia Technology." Two papers, Dr. S. H. Guilford, Philadelphia, and Dr. S. C. Case, Chicago. Discussion will be opened by Dr. W. E. Grant, Louisville; Dr. A. E. Webster, Toronto; Dr. H. B. Pullen, Buffalo; Dr. H. T. Smith, Cincinnati.

"The Value of Instruction in Dental History and Literature." Paper by Dr. H. L. Ambler, Cleveland. Discussion to be opened by Dr. Charles McManus, Hartford; Dr. J. H. Kennerly, St. Louis; Dr. B. J. Cigrand, Chicago.



SOCIETY ANNOUNCEMENTS

“Porcelain Technology.” Paper by Dr. H. J. Goslee. Discussion to be opened by Dr. J. Q. Byram, Indianapolis; Dr. Ambler Tees, Philadelphia; Dr. L. E. Custer, Dayton; Dr. H. L. Banshaf, Milwaukee; Dr. J. F. Ross, Toronto.

“The Dental Curriculum.” Paper by Dr. Geo. E. Hunt, Indianapolis. Discussion to be opened by Dr. G. V. Black, Chicago; Dr. J. B. Willmott, Toronto.

“How Shall Quizzes be Conducted?” Symposium by Dr. F. D. Weisse, New York; Dr. R. H. Nones, Philadelphia; Dr. L. P. Bethel, Columbus.

Exhibition of recent teaching appliances including books and charts. Dr. W. G. Foster, Baltimore; Dr. L. S. Tenny, Chicago.

Report of Master of Exhibits. Dr. Ellison Hillyer, Brooklyn.

Banquet, Wednesday evening.

American Society of Orthodontists.

Programme—Third Annual Meeting.

Buffalo, N. Y.

Hotel Iroquois. December 31, 1903.—MORNING SESSION.

President's address, Dr. Milton T. Watson, Detroit, Mich. “Macroscopic Tooth Development,” Dr. I. N. Broomell, Philadelphia, Pa.

AFTERNOON SESSION.

“A Study of Occlusal Relations of the Jaws of Cleft Palate Cases,” Dr. R. Ottolengui, New York, N. Y. “Some Examples of the Orthodontia of the Old School,” Anna Hopkins, D.D.S., St. Louis, Mo. Subject to be announced, Robert Dunn, D.D.S., San Francisco, Cal.

EVENING SESSION.

“The Importance of Specialization” Mr. Elbert Hubbard, East Aurora, N. Y.

January 1, 1904.—MORNING SESSION.

“How Much Orthodontia Should we Attempt to Teach Students in Dental Colleges?” Dr. N. S. Hoff, Ann Arbor, Mich. “The Great First Class of Malocclusion,” Herbert A. Pullen, D.D.S., Buffalo, N. Y. “Orthodontia in the Universal Exposition Dental Congress,” Edward H. Angle, M.D., D.D.S., St. Louis, Mo.





ITEMS OF INTEREST

AFTERNOON SESSION.

Reports of Cases in Orthodontia. Illustrated by the stereopticon: Dr. M. T. Watson, Detroit, Mich.; Dr. Lloyd S. Lourie, Chicago, Ill.; Dr. G. P. Mendell, Minneapolis, Minn.; Dr. F. M. Casto, Columbus, Ohio; Dr. A. H. Ketcham, Denver, Colo.; Dr. F. C. Kemple, Erie, Pa.; Dr. Norman G. Reoch, Boston, Mass.; Dr. D. Willard Flint, Pittsburg, Pa.; Dr. S. Merrill Weeks, Philadelphia, Pa.; Dr. Robert Dunn, San Francisco, Cal.; Dr. Rolof B. Stanley, New York, N. Y. Exhibition and informal discussion of anatomical specimens, illustrations, models and appliances pertaining to orthodontia. Report of Committee on History and Invention.

EVENING SESSION.

Art. (Illustrated lecture.) Mr. Lucius W. Hitchcock, Director Art Institute, Buffalo, N. Y.

January 2, 1904.—MORNING SESSION.

"Artificial Substitutes for Missing Teeth in Orthodontia," Dr. Hart J. Goslee, Chicago, Ill.; Dr. Joseph Head, Philadelphia, Pa.; Dr. Frederick A. Peeso, Philadelphia, Pa. Subject to be announced, Dr. Jose J. Rojo, City of Mexico, Mexico.

AFTERNOON SESSION.

"The Conformation of the Face in Relation to the Development of the Eye," Dr. Park F. Lewis, Buffalo, N. Y. "A Study of the Peridental Membrane from the Orthodontist's Standpoint," Dr. Frederick Bogue Noyes, Chicago, Ill. "A Classification of the Principles and Forces of Retention," Dr. Martin Dewey, Keokuk, Iowa.

RICHARD SUMMA,
HENRY E. LINDUS,
FRANK M. CASTO,
Board of Censors.

Southern Branch, National Dental Association.

The next regular meeting of the Southern branch of the National Dental Association will be held in Washington, D. C., February 23, 24 and 25, 1904.

This meeting will be of unusual interest and one which you cannot afford to miss. Washington is a most interesting city and an ideal place of meeting.

Fernandina, Fla.

CARROLL H. FRINK, Cor. Sec'y.



The South Dakota State Board of Dental Examiners.

The next regular semi-annual meeting of the South Dakota State Board of Dental Examiners to examine applicants for license to practice in the State will be held in Vermillion, December 8, 9, 10 and 11, 1903, beginning at 8 o'clock p. m. Positively no candidates will be received for examination after the 8th.

Only those who hold diplomas from reputable dental colleges, and those having had three years of actual practice in dentistry immediately preceding the examination, are eligible to take the same.

Candidates must come prepared to do all kinds of fillings. They must also bring with them teeth and necessary utensils for doing both bridge and vulcanite work.

The examination fee is \$10, and a subsequent \$5 will be required if applicant is successful in passing the examination.

G. W. COLLINS, Sec'y.

Pennsylvania Board of Dental Examiners.

Examinations will be conducted by the Board of Dental Examiners simultaneously in Philadelphia and Pittsburg, December 15-18, 1903.

For application papers or any information address Secretary.

HON. ISAAC B. BROWN, Sec'y Dental Council.

Harrisburg, Pa.

Northern Indiana Dental Society.

At the meeting of the Northern Indiana Dental Society, held at Wabash September 15 and 16, 1903, the following officers were elected to serve for the ensuing year: President, S. B. Hartman, Fort Wayne; Vice-President, J. A. Stoeckley, South Bend; Secretary and Treasurer, Otto U. King, Huntington; Supervisor of Clinics, L. A. Salisbury, Crown Point.

To serve with the above officers as members of the Executive Committee: A. H. Wagner, Huntington; M. Wilson, Rochester; C. E. Redmon, Peru; J. W. Stage, Goshen; M. W. Strauss, Huntington.

OTTO U. KING, Sec'y.



ITEMS OF INTEREST

First District Dental Society of the State of New York.

At the regular meeting of the Society, which will be held Tuesday evening, December 8, at 8 o'clock at the Academy of Medicine, a paper will be read by Edwin T. Darby, M.D., D.D.S., of Philadelphia. Subject to be announced. Clinic and exhibits at the Grand Central Palace, Forty-third street and Lexington avenue, in the afternoon at 1.30 o'clock, to which the dental profession is cordially invited.

B. C. NASH, Sec'y.

Southern California Dental Association.

The sixth annual meeting of this Association was held in the Dental College at Los Angeles on Sept. 28, 29, 1903.

The meeting was devoted mostly to clinics and it was the largest as well as the best meeting ever held in Southern California.

The Association has an active membership of 170, of whom 130 were present at the meeting; 43 new members joined.

The following members were elected officers for the ensuing year: President, Lewis E. Ford, Los Angeles; First Vice-President, Emma T. Reed, San Diego; Second Vice-President, P. R. Reynolds, Santa Ana; Treasurer, W. H. Spinks, Los Angeles; Secretary, Chas. M. Benbrook, Los Angeles.

The annual meeting in 1904 will be held at San Diego, Cal.

CHAS. M. BENBROOK, D.D.S., Sec'y.

455 So. Broadway.

Hartford Dental Society.

At the annual meeting of the Hartford Dental Society, held October 12, the following officers were elected: President, Dr. Edward Eberle; Vice-President, Dr. Albert W. Cowee; Secretary, Dr. A. E. Cary; Treasurer, Dr. Ernest R. Whitford; Executive Committee, Dr. C. E. Barrett, chairman; Dr. F. Dewey Clark, Dr. C. C. Prentiss; Librarian, Dr. Wm. A. Damon; Historian, Dr. Nelson J. Goodwin.

ALBERT E. CARY, Sec'y.

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 30 W. 40th St.
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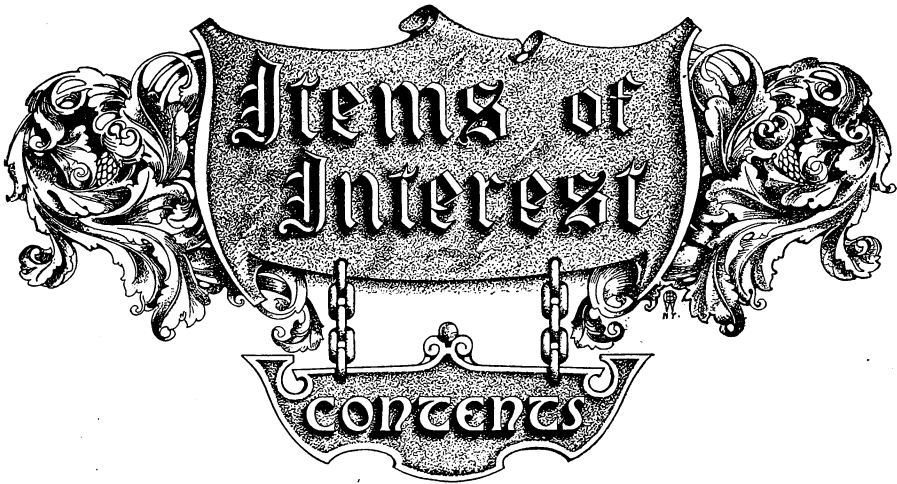
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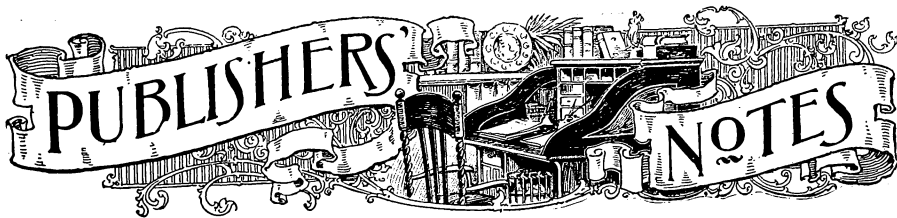
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Both to the dental student and practitioner it can be cordially and unreservedly commended as a text book second to none hitherto published upon the same subject.—*The Dental Brief*.

In this volume Dr. Goslee, in a particularly easy, graceful and entertaining way, takes up the subject of crowning teeth, and carries it along from its primitive introduction to the present. One of the most meritorious features of the work is, that practically everything which is considered by the author is made the subject of illustrations. Thus the "pivot tooth," the first crown of record, described in Fouchard's work, published in 1728, is very concisely illustrated; and so on throughout the whole volume, the various methods are practically shown by illustration. Chapter III. is devoted exclusively to soldering. It is unnecessary for THE BUR to call its readers' attention to the fact that Dr. Goslee is a master of the art of soldering. A careful perusal of this volume impresses one with its exhaustiveness, its thoroughness and its conciseness, and withal, by the extreme modesty of the author, who avoids, to a remarkable degree, injecting his personality into his work.—*The Bur*.

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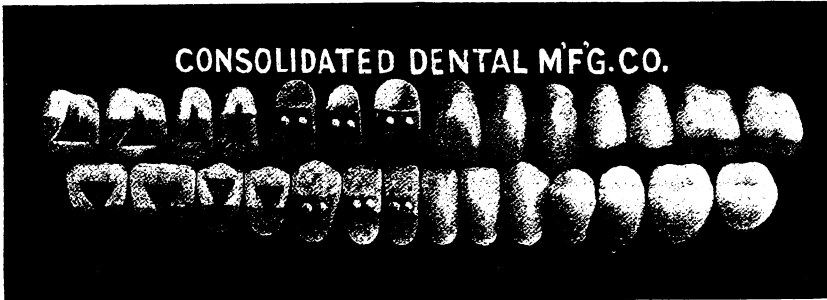
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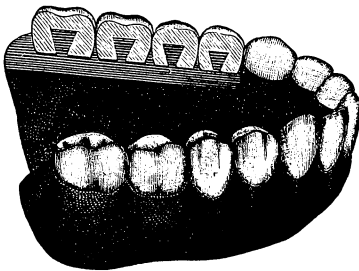


Fig. 1.

Sectional view of pinless bicuspsids and molars with palatal surfaces ground off showing how securely the wedge-like shaft of vulcanite attaches them to the plate.

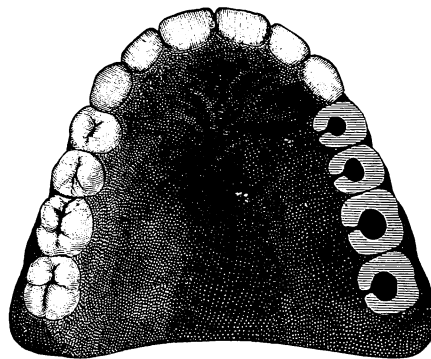


Fig. 2.

Sectional view of pinless bicuspsids and molars with occlusal surface and walls ground off close to plate, showing section of recess and the small vent which affords additional attachment.

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HERETOFORE in the production of teeth without pins, makers have been limited to dove-tails and cavities with parallel walls. In our tooth we have adopted a cavity with a perfect under cut (Fig. 3), resembling in shape a cone with the base toward the grinding surface of the tooth and the walls contracting toward the neck. The rubber when packed into it takes this shape, and the base being of larger diameter, the vulcanite is practically wedged against the neck where the cavity is of smaller diameter. The tooth and rubber, therefore, become absolutely inseparable except by breakage. This is guarded against by constructing the cavity sufficiently large to receive a generous core of rubber, while the walls of the tooth are of substantial thickness and will even allow of a small amount of grinding. The absolute impossibility of detaching the tooth from the plate is so plainly seen in the illustration that further explanation is not necessary. It is readily seen that the cavity itself is the lock,



Fig. 3.



Fig. 4.

and the attachment depends on no supplementary lug, under cut or other reinforcement. The rubber is not only locked, but vulcanized to the tooth. In the palatal wall of the tooth is a slot leading into the cavity through which the air, moisture and surplus rubber escapes in packing (Fig. 4). This insures perfect flow of the rubber into every part of the recess and besides affords additional, though not essential, attachment. A distinct advantage is the fact that this slot is entirely hidden from view when the denture is in the mouth. That portion of the tooth known as the ridge-lap (Fig. 4) is nicely concaved from the cervix toward the occlusal surface and easily adapts itself to the curve of the alveolar ridge. It can be ground to suit the same without impairing or weakening the tooth structure or security of attachment.

Pinless Teeth

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N the absence of pins we are enabled to make improvements in that part of the tooth usually occupied by them (termed the heel), giving the tooth a contour, which on the palatal walls closely resembles the natural set. A greater amount of porcelain being exposed on the side of the plate with which the tongue comes in contact, gives to the wearer a more comfortable and natural feeling than if vulcanite were used entirely.

It is a well-known fact that in artificial dentures the amount of strain on the posterior teeth is very slight compared with that on the anterior set. The necessity



Fig. 5.



Fig. 6.

of placing pins in a bicuspid in the same position as in an incisor does not exist. The point of resistance is different in the two teeth. While there is a tremendous leverage exerted by the anterior incisors and canines on an upper denture at the point where the pins are placed in the anterior teeth (Fig. 5), it is hardly noticeable in the posterior set, where instead of leverage, there is direct pressure on the occluding surface slightly relieved by the sliding movement of the teeth in mastication (Fig. 6). We have therefore confined ourselves to the manufacture of diatorics in bicuspid and molars entirely, believing that nothing superior to the platinum pin tooth is practicable for incisors and canines.

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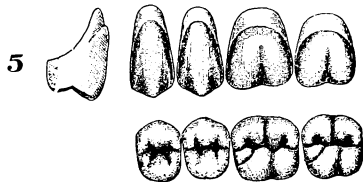
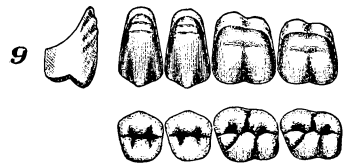
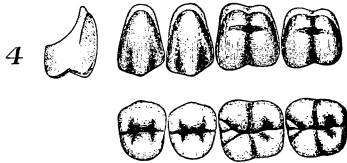
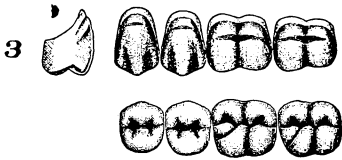
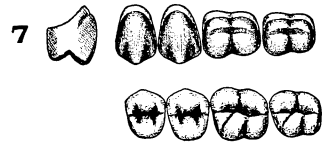
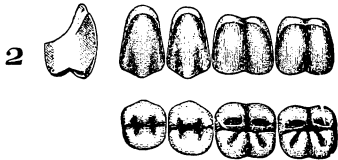
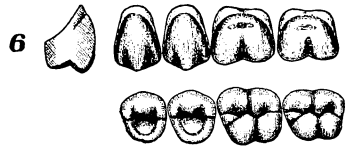
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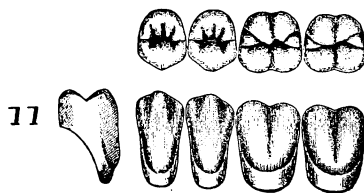
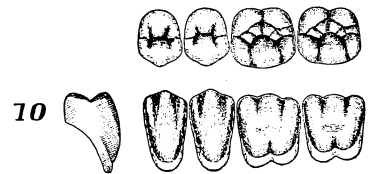
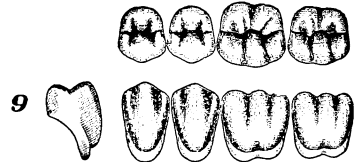
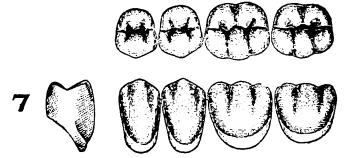
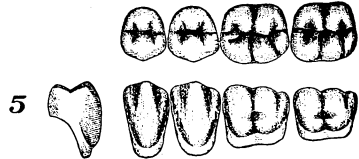
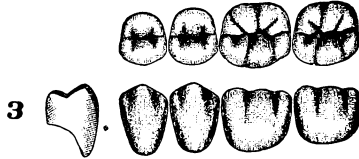
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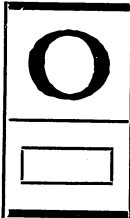
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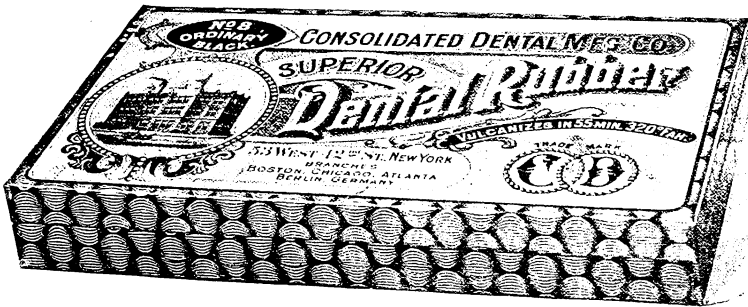
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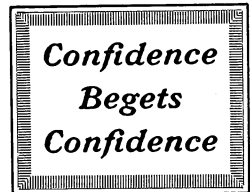
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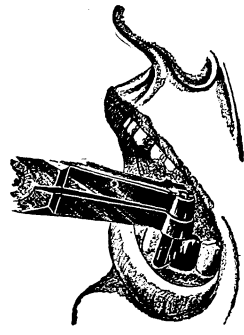


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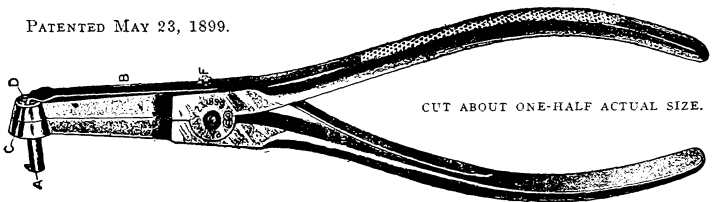


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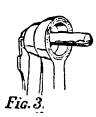
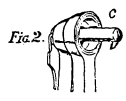
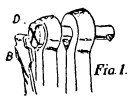
These forceps are entirely unique and superior to any other appliance on the market for removing gold crowns. The small knife blade point is inserted under the cervical edge and the plier rim is rested upon the occlusal end of the crown. Then by simply compressing the handles of the forceps the crown is easily slit lengthwise. In this way a crown or bridge anchorage can be readily and neatly removed and the slit crown replaced if wished, by soldering the slit edges of the crown after bringing them together. The great advantage of this slitter is the fact that by turning the knife, the front, side or rear of a crown may be slit with equal ease, and furthermore the point of the blade cannot slip off of the crown. All parts of the mouth can be reached with equal facility and without any danger of cutting the cheeks, as the rim prevents the knife from touching the cheeks, should it slip. Extra knives can be procured at a small cost should they become dull.

PATENTED MAY 23, 1899.

Catalogue
653 A
Number.



CUT ABOUT ONE-HALF ACTUAL SIZE.



The knife "A" is to be inserted under the cervical edge of the crown and the rim "C" rested upon the occlusal end of the crown. By lifting the spring "B" the knife may be turned in any position so as to cut any part of the crown or reach any tooth with equal facility. The slit "D" in the top of the knife piece prevents it from turning. The knife piece can be taken out or replaced by lifting the spring "B" and turning it on Fig. "F."

This forcep is made so that it can be taken apart easily and each piece thoroughly cleansed and rendered aseptic.

Figs. 1, 2, 3, 4 and 5 show the different positions of the knife.

PRICE COMPLETE, \$3.50
EXTRA KNIVES, - - .50

Consolidated Dental Mfg. Co.,

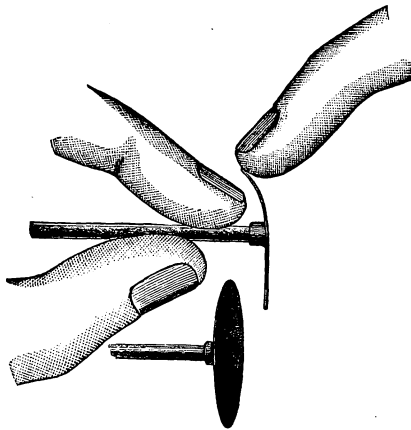
115 WEST 42d ST., NEW YORK, U. S. A.

No. 64.

LEAMING'S

"VULCAN" CARBORUNDUM AND CORUNDUM WHEELS DISKS AND POINTS.

FOR PLUG-FINISHING AND BRIDGE-WORKING.



No. 480.

These Wheels are made by a new process, rendering them very sharp and tough. They are practically unbreakable, and do not become gummed like ordinary corundum. The character of the binding material makes them so tough as to allow of remarkable thinness all the way through to the mandrel, thus rendering their use possible in places inaccessible with the old-fashioned wheels. Many operators use them as a substitute for the diamond, as they readily cut the enamel; and they can be used for preparing cavities in porcelain teeth.

Each wheel is trued and securely mounted on plain mandrel for the dental engine while in the mould, and is guaranteed to run absolutely true.

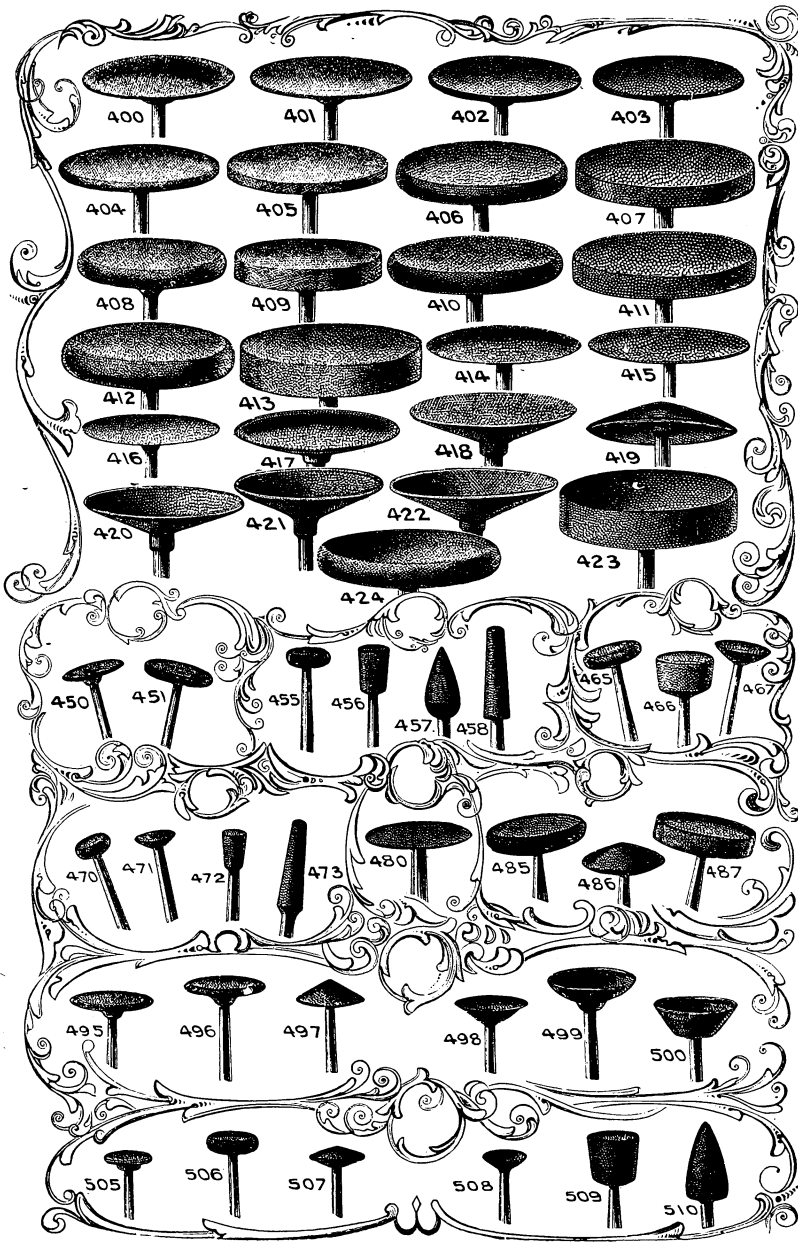
Attention is particularly called to No. 480 shown above. It is very thin and flexible, but tough and will bear a hard push edgewise. Intended for separating and polishing.

The Vulcan Disks and Thin Wheels can be had "Safe-sided" if desired; and will be furnished either side smooth, as called for. Order by number.

PRICE, PER DOZEN, \$2.50
" EACH,25

CONSOLIDATED DENTAL MANUFACTURING CO.
New York, U. S. A.

LEAMING'S "VULCAN" CARBORUNDUM AND CORUNDUM WHEELS DISKS AND POINTS.

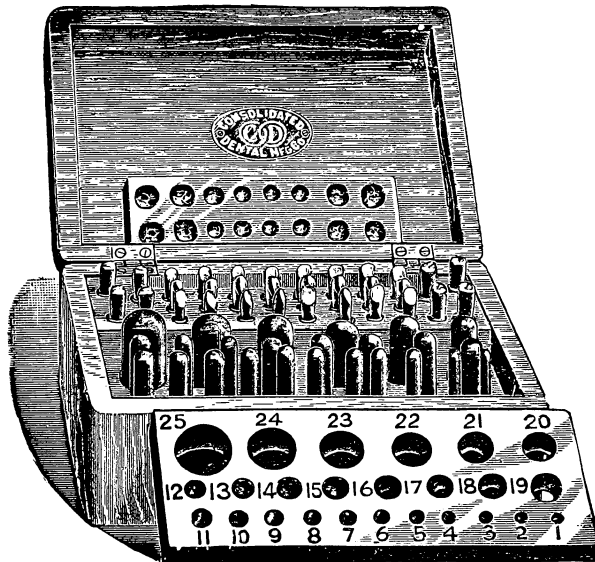


CROWNING SYSTEM

STYLE "A"

An Improved Apparatus for Making
Seamless Contour Crowns

No. 625a



CROWNING SYSTEM, \$15.00

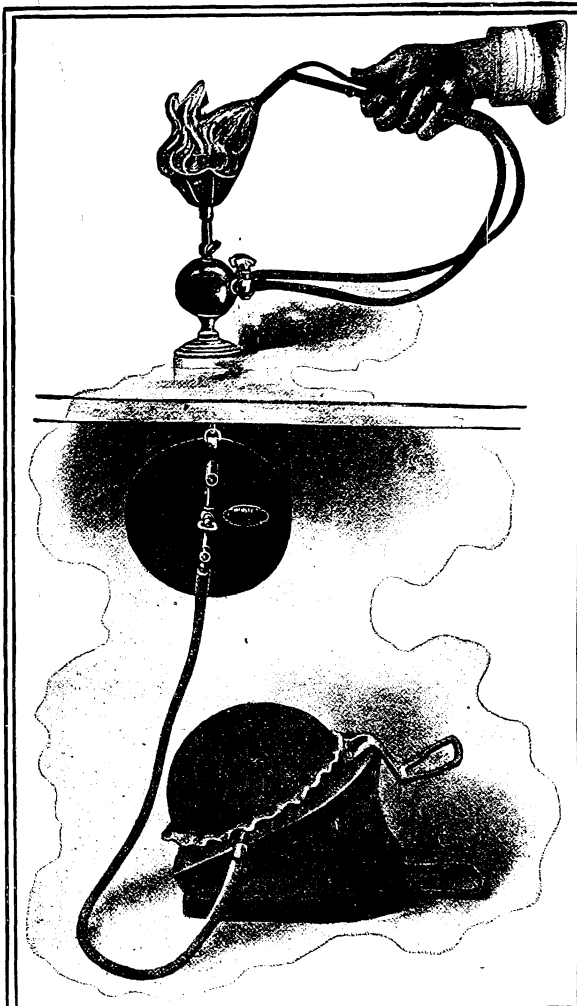
SHAPING HAMMER EXTRA, \$1.00

The usual draw plate, punches and die plate are parts of this system, but besides these there are 32 metal teeth furnished which are used to shape the crown after it has been drawn on the steel draw plate. By means of these teeth crowns can be made for the Central, Lateral and Canine teeth. This feature, which is not a part of any other system, makes it superior to all.

The system is put up in a finely finished oak case.

By following the instructions which we furnish with each outfit, any dentist can, with a little practice, produce a perfect crown; little or no skill being required in its use.

We manufacture a small shaping hammer with a round head especially adapted for use in connection with shaping crowns over the metal teeth in this system.



S A M ' S

Combination Blow Pipe OUTFIT

Produces Heavy Brush Flame
or Finest Needle Point Blaze

No Smoke, Puff or Blow-out

Admirable for Flowing Bridges
Soldering Crowns
Soldering Caps, Waxing Up,
Heating Water, etc.

Price, Complete, \$14.50

Price, Without Foot Blower, \$10.50

Beware of imitations. This is the original and genuine "SAM'S"

SAM'S FLUX

Unrivalled for Dentists', Jewelers', and Braziers' Use. Makes solder flow quickly and smoothly, and preserves the color of the gold

PRICE, 25 CENTS PER PACKAGE

SOLE AGENTS:

Consolidated Dental Mfg. Co., New York

BRANCHES—Chicago, Ill. Philadelphia, Pa. Brooklyn, N. Y. Baltimore, Md.
Detroit, Mich. Boston, Mass. Cleveland, O. Buffalo, N. Y.

DAVIS SHOULDER PIN CROWN

(PATENTED.)

(Catalogue No. 510)

In use on single roots this crown has many advantages. Every dentist knows of the difficulties incident to making a perfect fit of a porcelain crown to a natural root, "when the pin is baked into the crown." No matter how careful he may be in grinding up the crown for the case in hand, the pin is always in the way to prevent that accuracy in the preparation of the crown necessary for the best results. With the Davis Crown the pin is an afterthought. The crown can be handled in every convenient manner. You can grind it in any direction, and a perfect fit can be made in half the time as with one of those furnished with the pin fastened in. Then, after the crown is ground to fit the root, the pin can be set and cemented in any position required.

By avoiding the necessity of baking the pins with the crowns in the process of their manufacture, we are able to use a metal pin many times "stronger and stiffer than the platinum pin." This overcomes the stretching and bending of the pin after the crown is "set," and we can therefore use a smaller pin, and avoid cutting away the dentine, thus obtaining more durable adjustment.

In preparing a root for a Davis Crown an ordinary reamer is used, as Fig. 1 illustrates. After the root and crown are ground to fit, the pin is cemented into both, as is shown in Figs. 2 and 3. Any good cement may be used for this purpose, and will retain the crown securely. The concave shoulder of the pin gives great strength to both root and crown, as well as assisting in joining both securely together. The great strength and rigidity of these pins will allow of their being filed and cut to suit special cases, without impairing their strength for all practical purposes. If a flat pin is wanted, the pin may be filed to that shape and it will still be adequately strong. Fig. 5 shows how the pin can be split and adapted for bicuspid. When it is deemed necessary to band the crown onto the root, it can be practically done, as Figs. 6 and 7 illustrate.

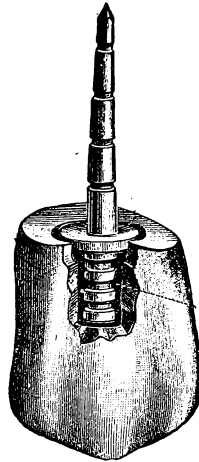
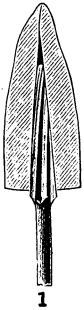
The "quality" and "texture" of the Davis Crown is very similar to that of English teeth, as the crown can be ground with a fine emery wheel, and, by using a little putty powder on a felt wheel, "can be polished" equal to its original appearance.

The "character" of the Davis Crowns is remarkable. In cutting of the moulds for their production nothing has been spared to make them faithful reproductions of natural teeth.

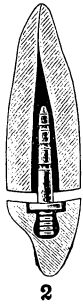
The Davis Crowns are manufactured in a great variety of forms and sizes, in centrals, laterals, canines and bicuspid. A very good assortment can be had in the mahogany case illustrated, which contains one hundred of various kinds, sizes and shades.

Davis Shoulder Pin Crown

PATENTED



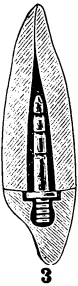
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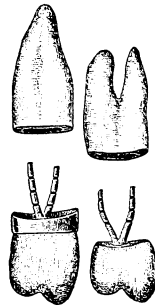
2



7



3



8

REPAIRING A LOGAN WITH A DAVIS CROWN

PHILADELPHIA, January 20, 1902.

EDITOR OF THE DENTAL BRIEF:

When a patient has had the unpleasant experience of having a Logan crown to break and leave the pin remaining in the root, I find the best way to repair the damage is to purchase a Davis crown, it being made without any pin, but has a cavity into which a pin can be inserted.

Grind a careful joint and trim the pin to fit as accurately as possible, then roughen the pin and cement the crown in the usual way.

This plan, I think, is preferable to cutting out the pin and inserting a new Logan crown, it being a tedious job, and there is a possibility that the drill may be deflected and go through the side of the root.

I have had very satisfactory results from this procedure.

WM. H. MANNING.

(Reprint from March Issue, *Dental Brief*.)

DAVIS CROWNS

FACTS:

Have loose pins. May be easily ground and fitted. Perfect fit in shortest time. Very little cutting of dentine necessary. Crowns cannot bend forward or backward because of concave shoulder. Quickly polished no matter how much ground. Large assortment of forms, sizes and shades. Broken Crowns replaced without removal of pin. Send for Booklet.

Life

IN A

Davis Crown

Until the advent of the Davis one of the problems of the dentist was the production of a porcelain crown which appeared alive in all lights.

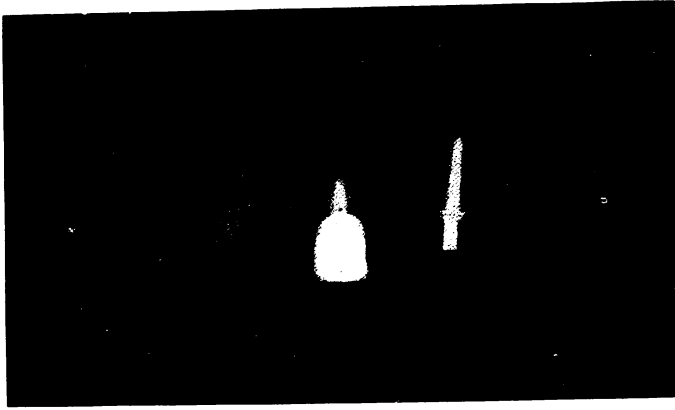
The Richmond proved a failure in this respect owing to the shadow from the backing.

The natural tooth, being translucent and composed of many colors, cannot be matched with a single color porcelain crown or one possessing less translucency.

The Davis Crown is translucent to a natural degree, the colors are blended in layers beneath a surface of very dense enamel. As a result it looks natural in all lights.

Manufactured by

Consolidated Dental Mfg. Co.



The above is the reproduction of a skiagraph of
**a natural tooth,
a root with Richmond Crown attached,
and
a root fitted with a Davis Crown.**

The Roentgen Ray easily penetrated the natural tooth and Davis Crown, but failed to do so in the case of the Richmond, on account of the metal backing.

It is a fact that one thirty-second of an inch of porcelain baked to the back of a facing, will change its color. A metal backing changes both character and color to a much greater extent, and is undoubtedly responsible for the artificial appearance of the majority of crowns and bridges.

The "Davis" may be used in bridge work, as a base for a baked porcelain, gold banded, or dowel crown. It represents the highest and most practical attainment in dental porcelain art, being artistic, adaptable, and, if broken, is easily replaced without removal of stationary work.

Send for Booklet.

CONSOLIDATED DENTAL MFG. CO.

DAVIS SHOULDER PIN CROWN

(PATENTED.)

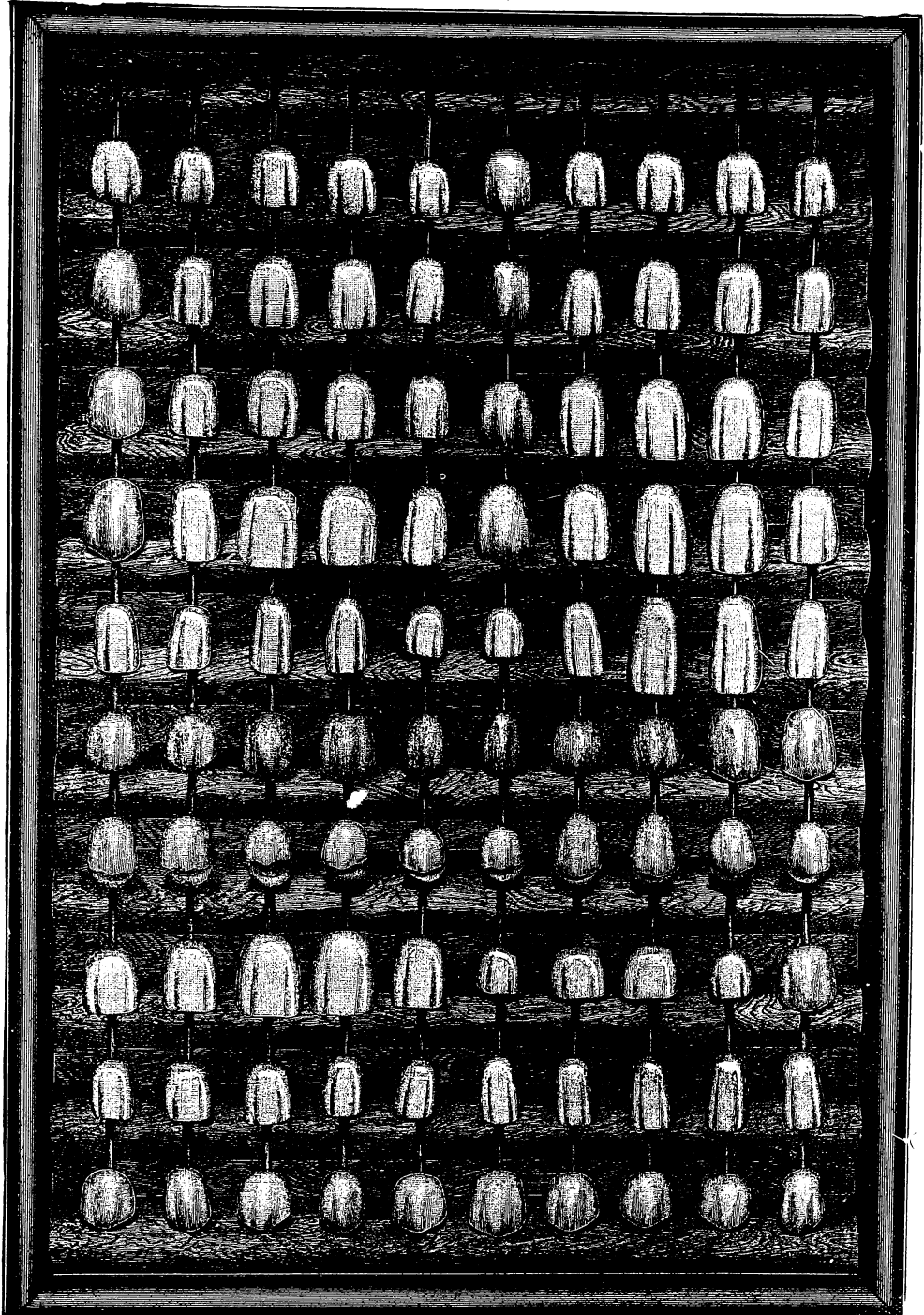
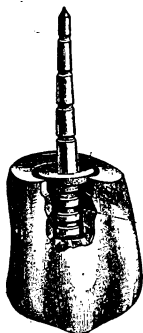


Illustration of Mahogany Case Containing 100 Assorted Styles. Price 40c. each. \$35.00 per hundred.

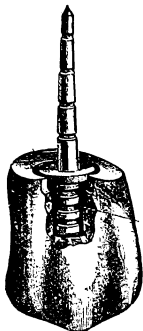


Something About the Pin

O
 F THE MANY FEATURES which have contributed to place DAVIS CROWNS in such universal demand throughout the profession, it must be remembered that a most important one is the fact that the pin is NOT ROUND. It has a FLAT SIDE to give it a purchase and prevent its turning.

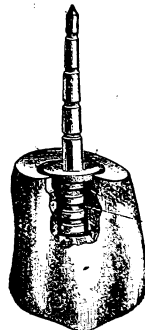
With a good cement (such as German Fused Oxide) the pin will remain in its position permanently, without any possibility of becoming loose. Being grooved also, it obtains an additional anchorage when the cement is hardened and moulded around it. The pin is thus fitted with the greatest accuracy and ease, and, in this alone, supersedes all threaded Crowns that have ever been made.

This is a striking advantage that appeals to all users of porcelain Crowns. The flat pin simplifies its application and adds much to the efficiency of the Davis Crown.

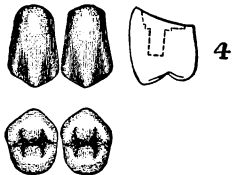
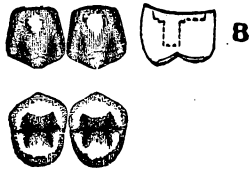
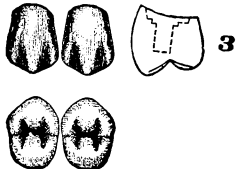
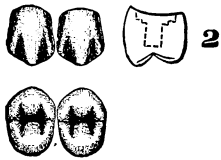


Price, 40c. Each; \$35.00 per Hundred.

Send for Booklet



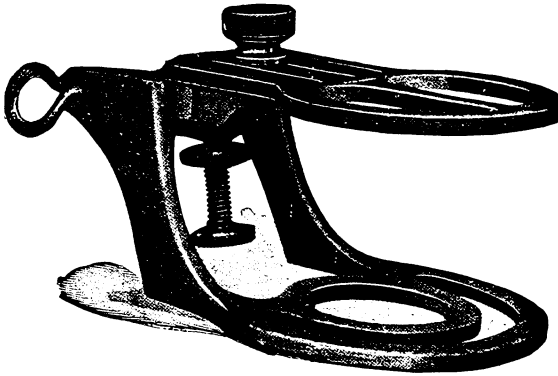
Davis Crowns



Davis Crowns



PLAIN ARTICULATOR.



Catalogue No. 566.

This standard form of Articulator is accepted as one of the best all-around styles for everyday use. We have improved the pattern by the extension of the Shoulder on upper part of lower casting, which is made flush with upper casting and prevents the wobbling movement common to the old style pattern, especially when it becomes somewhat worn.

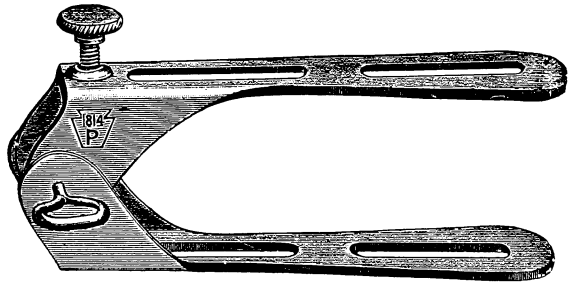
Price, 90 Cents.

CROWN ARTICULATOR.

Catalogue No. 567.

This is a very handy instrument for use in crown and bridge work. The set screw gives it the accuracy desirable in this kind of work.

Price, 25 Cents.



CONSOLIDATED ^{Dental}
 TEMPORARY ^M
 STOPPING ^F
^{G.}
^C
^{O.}
^S

For Filling Nerve Canals, Retaining Medicaments in the Treatment of Teeth, and in all cases where a Temporary Filling is desired.

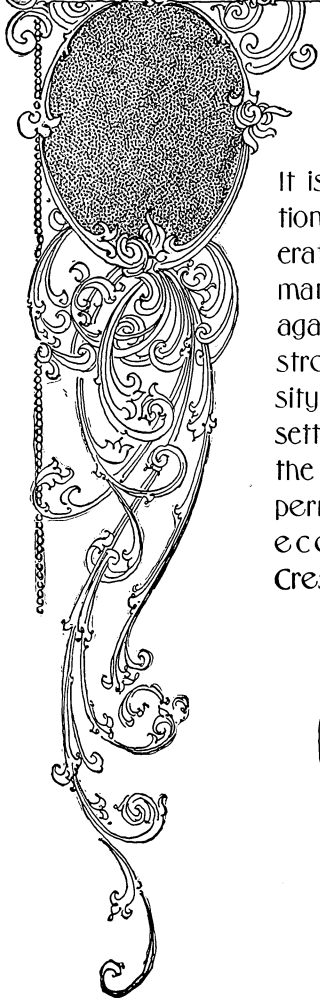
This stopping does not leak. It is rendered plastic at a very low degree of heat. It can be used with satisfactory results in operations quite close to the pulp. As a Trial Filling for Treated Teeth, it will be found superior to many others prepared for this purpose.

Directions for use with each package.

Put up in three styles: PINK, WHITE and ASSORTED.

Price per Package, 30 Cents

Crescent Alloy



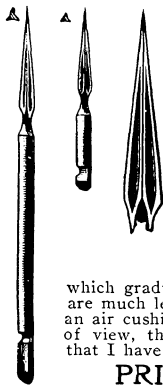
has grown into such large usage in the dental profession because of the purity of its ingredients and the perfection of its working qualities. It is prepared scientifically to produce conditions most desirable in an alloy. It sets moderately, allowing sufficient opportunity for manipulation. Its purity is absolute guard against discoloration of the teeth. It is very strong with ample edge strength, and its density will resist all the wear of mastication. In setting, there is absolutely no shrinkage and the use of this alloy insures a permanent filling. It is wise economy to buy Crescent Alloy.



In Shavings
\$1.50 per ounce.
**Consolidated
Dental
Mfg.
Co.**

PULP-CANAL REAMER

Devised by Dr. J. Leon Williams



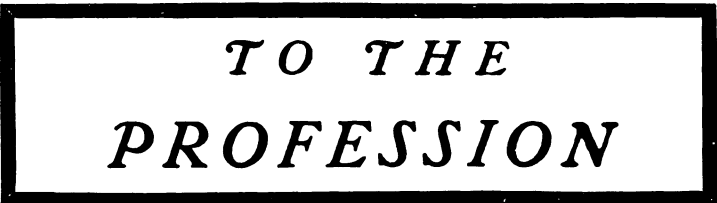
In describing this instrument Dr. Williams says: "It is a modification of the three-sided reamer, but the modification is much the most important feature of the tool. Each of the three sides is deeply grooved. The result of this grooving is two-fold. It makes an instrument which is as easily sharpened as an excavator, and which can, therefore, be kept in the finest cutting condition until worn out. The grooves also render the tool self-clearing. It never clogs, it cuts very rapidly, and there is not the slightest danger of forcing it through the side or end of the root. It leaves roots which have a curvature at the end in the best possible condition for treatment with sulphuric acid or by any other method, i. e., with a large cone-shaped opening giving an abundance of room for working and seeting. It cuts away more of the infected dentine with less destruction of the root than can be accomplished by the use of any other instrument. And, finally, it leaves the root canal exactly the shape required for the strongest and best form of pin for crown-work—a pin which is largest and strongest where it joins the crown and

which gradually tapers to a fine point in the end of the root. Crowns with a pin of this shape are much less liable to get loose because the pin can be made much longer. Also, one never finds an air cushion beneath a pin of this shape when cementing a crown in place. From every point of view, therefore, I regard this as much the most valuable instrument for opening pulp canals that I have ever used.

PRICE, EACH - - - - - 60 CENTS

THE BRYANT NERVE CANAL DRILL

(Patented.)



The following is Dr. Bryant's statement concerning his drills:
To the Profession:—While other canal drills are formed to resemble a cone or bud shape, having the greatest resistance at the base of the drill head, causing them to bind and choke up in the canal, and requiring so much forward pressure to enter the canal as to greatly increase the liability of twisting or breaking off the blades, we offer a canal drill based strictly on a mechanical principle, viz., a cone base to base.

This drill being thus shaped meets the greatest resistance at the center of the drill head, the cutting blade gradually increasing in width and increasing in thickness from the non-cutting or safety point to the center of the drill head, then, gradually decreasing in width and decreasing in thickness, to the base of the drill head; allowing the point of greatest resistance to come on the cutting-blades, at the center of the drill head where they are strongest, which enables the drill to enter the canal so evenly and rapidly that it requires about one-third of the forward pressure to enter a canal that is required of other drills.

These drills are especially designed to facilitate the operator in preparing all dead teeth and roots of teeth valuable for the retention of porcelain crowns, bridge work, etc., which becomes so laborious and unsuccessful with other drills.

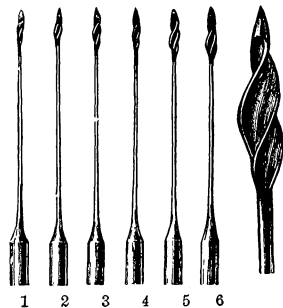
Our testimonials endorse all we claim for this drill, viz., a ready follower, a rapid cutter, complete ease of penetration, positively will not clog up in the canal, throwing all canal contents directly backward and down the canal; when dull, can be sharpened by running a fine emery disk on the cutting blades with a dental engine; they are made with a requisite size shank to insure strength for all work called upon, with enough flexibility of shank to properly follow and cut tortuous canals. They comprise a set of six numbers in straight drills for use in the canals of the upper teeth, also a set of six numbers to be used in the right-angle attachment for the canals of the lower teeth.

In preparing the canals of the different teeth we advise the use of several numbers, especially so in the canals of lateral, bicuspid and molar teeth. Their perfect adaptation and durability with the ease of their rapid cutting, the saving of time and labor to the operator, with assured success in all operations for which they are designed, without that constant dread of breaking or twisting off in the canal, will commend them to all conscientious and progressive operators for a trial.

Your patients will pay you a good price to save a dead tooth, or a root that is valuable for capping or crowning, even any method proposed by you to escape extraction. If you have had failures with other drills, try these and be assured of success, and success means the gratitude of your patient with a greater income to yourself.

My experience teaches that no part of dentistry will advertise your fame so largely and thoroughly as successful operations which, in saving extraction, promote the continued use of the natural teeth.

CHARLES H. BRYANT.



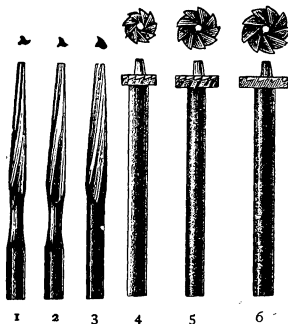
PRICE, EACH, 35 CENTS

DR. OTTOLENGUI'S ROOT REAMERS AND FACERS

Perhaps the most universally used of all instruments for adapting the natural root to a porcelain crown is the set invented by Dr. Ottolengui, illustrated below. The reamers (Nos. 1, 2, 3) have smooth ends and cut only on the sides. They are used to enlarge the canal after it is drilled to the proper depth to fit the pin of the crown. The top of the root is then readily shaped with Facers, Nos. 4, 5, 6, the guide point acting as a pivot.

Catalogue

54
Number



PRICES:

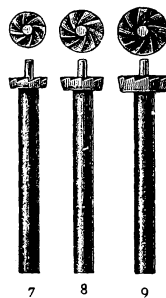
Nos. 1, 2 and 3, each, \$0.60
 " 4 and 5 " 1.00
 " 6 " 1.25
 " 7, 8 and 9 " 1.00

Catalogue

54A
Number

SAFE-SIDE ROOT-FACERS

These new Root-Facers supplement the Ottolengui Facers as means for paring the labial border of the root-end beneath the gum-margin to conceal the junction of the crown with the root. Obviously the rounded side of the new Facer renders it safe from liability to wound the gum at its free margin.



Catalogue

83
Number

CHAMPION DENTAL ENGINE OIL.

The enormous sales of this oil, against the numerous imitations and substitutes which have been put forth, speak most eloquently for its peculiar virtues.

It is very carefully prepared by processes adapting it especially for uses on delicate instruments, such as hand-pieces, etc. It is without color, taste or odor, and stands to-day as the "Champion" indeed of all lubricants offered for dental uses.

Price 15 Cents per Bottle.



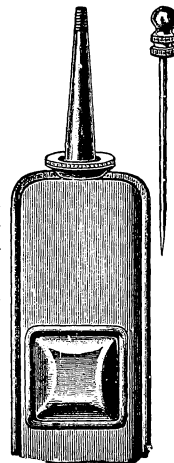
Catalogue

84
Number

OILER

The advantages of this Oil Can can readily be appreciated. It at once furnishes a most neat and convenient receptacle for keeping dental engine oil; and the pin is serviceable in cleaning out dirt and foreign matter from the bearings before applying the oil.

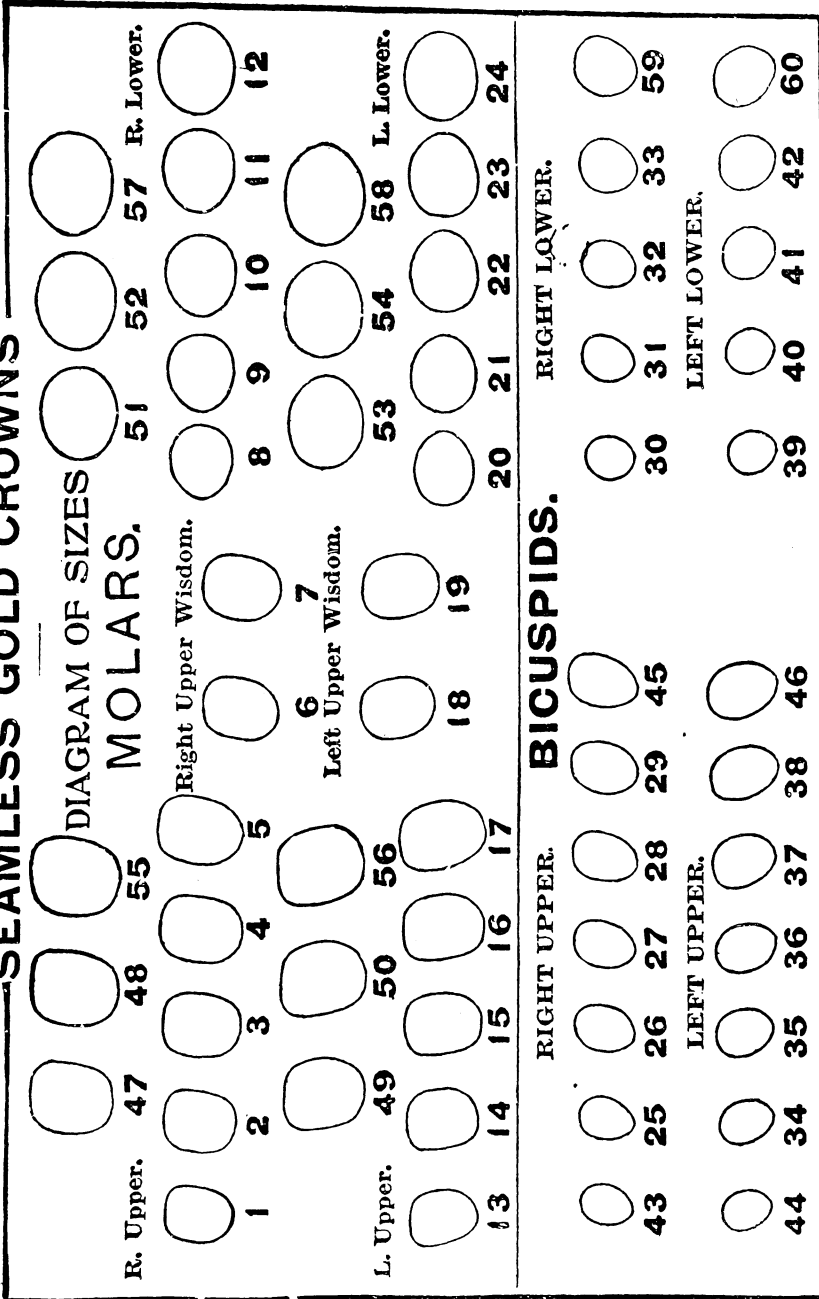
Price. 15 cents each.



SEAMLESS GOLD CROWNS

Order by Number

SEAMLESS GOLD CROWNS



NOTE:—To find the size desired, take a piece of fine binding wire and place it around the neck of the affected tooth, and by twisting firmly connect the two ends. Then carefully remove the wire and place it upon the diagram under the head of the tooth required, and select the one nearest approaching it in size, and order accordingly, stating number.

Seamless Gold Crowns

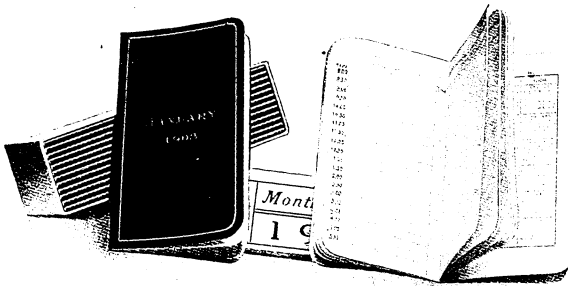
These crowns are our own make, and are warranted 22k. gold. In form and contour they are faithful counterparts of perfect natural teeth of their respective classes.

By making our crowns of adequate length, we have overcome the principle objection heretofore offered against the use of ready-made crowns, and with the large assortment we offer, the unusual as well as customary cases are satisfactorily provided for.

The diagram on opposite page shows the exact size of the respective crowns, at the neck. To ascertain the crown desired, place a piece of binding wire around the neck of the tooth; tighten by twisting the ends of the wire; remove from tooth, compare with diagram and select nearest size. Specify by number.

We furnish a complete assortment of the crowns in handsome case, there being 36 molars and 24 bicuspids, as the diagram illustrates.

Dentists' Appointment Diaries



**A LINE FOR HALF
HOURLY APPOINT-
MENTS EACH DAY**

75 cents a Set

Neatly bound in leatherette, with name of month in gold on front cover.

A set of twelve books packed in a box. Size of book $2\frac{1}{2}$ by $4\frac{3}{4}$ inches.

Neat, handy, small and fulfilling all the requirements of recording appointments.

ORDER FROM YOUR DEALER

Consolidated Dental  Manufacturing Co.
SOLE AGENTS.

Dr. Richards' Waste Cotton Receptacle and Tool Cleaner

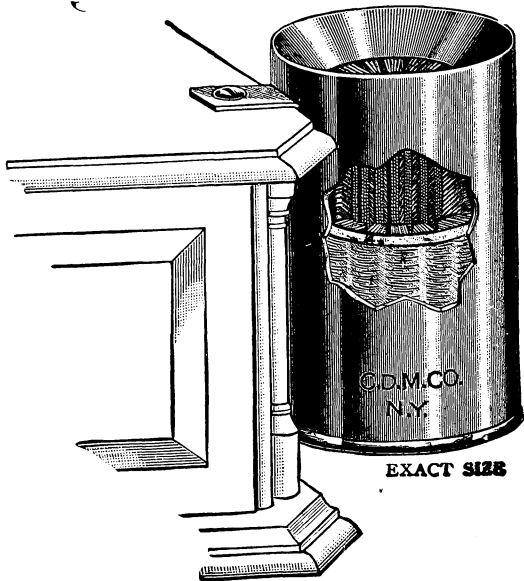
No. 25.

Invention of Dr. Wm. P. Richards

EVERYTHING GOES OUT OF SIGHT.

This is a very neat and practical device for removing the soiled cotton pellet from the pliers, saving much time and annoyance. By a quick twist of the instrument the cotton is removed at once, no matter how tightly wound.

The device consists of a metal cylinder containing a pad, with projecting wires, which catch the cotton and hold it securely, permitting the instrument to be withdrawn entirely clean. The cup at bottom slides out, also the wire pads, and can be cleaned equal to new. It is handsomely nickel-plated, and can be screwed to edge of bracket table, as shown in illustration.



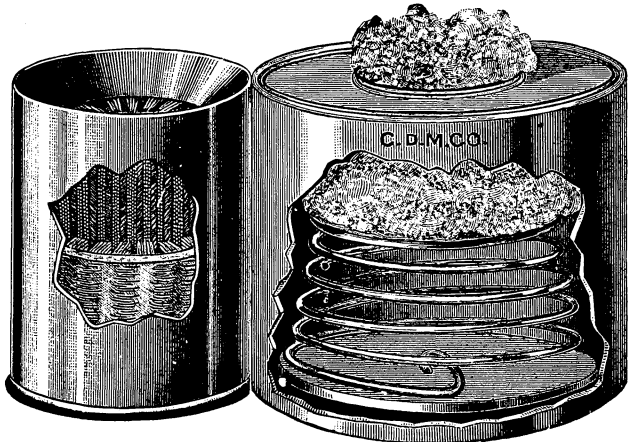
SCREWED TO EDGE OF BRACKET TABLE.

PRICE 50 CENTS.

No. 24.

Style C Cotton Holder

With Richards' Waste Cotton Receptacle and Tool Cleaner.



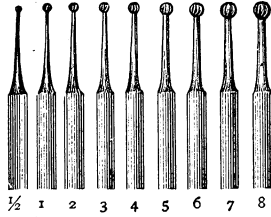
As illustration plainly shows, this device is simply a combination of Dr. Richard's invention, slightly modified with our style A, or Methot's pattern, Cotton Holder. Cut shows interior view of each of the cylinders. Every dentist can appreciate the advantages which this combination offers.

Price, Handsomely Nickel-plated, \$1.10

IN SEALED PACKAGES

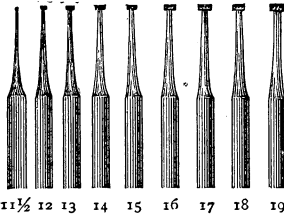
ROUND

½ DOZEN
OF A SIZE IN A
PACKAGE



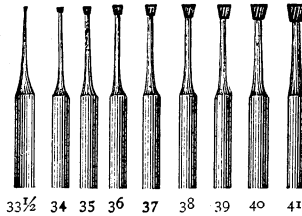
FOR SALE BY ALL
LEADING
DENTAL DEALERS

WHEEL



We supply
numbers 000 and
00 of each style
as well as
those
illustrated

INVERTED CONE



11½ 12 13 14 15 16 17 18 19

33½ 34 35 36 37 38 39 40 41

**“Realization”
Burs**



These burs are made by machine. The steel is specially tempered to a degree that maintains the razor edges, obviating much distress which patients suffer from dull burs. Realization burs do not grind. They are the best cutters ever produced in this style of instrument. The blades are accurately cut at the proper angle for quick and effective shaving of dentin. These burs “shave” smoothly and if too much pressure is not applied the patient feels little vibration or irritation. The shanks are perfectly true and fit accurately in handpiece, saving much wear and tear on that instrument.

PRICE

Nos. ½ to 7; 11½ to 18; 33½ to 40, per doz.....	\$1.00	Nos. 8, 19 and 41, per doz.....	\$1.50
Half-gross	5.50	Half-gross	8.00
Gross	10.00	Gross	15.00

We are now equipped to supply the above illustrated numbers, which we make for Davis and No. 2 Right Angle, as well as for C. D. M. Co., Universal and No. 7 Handpieces.

Consolidated Dental Mfg. Co.

The New C. D. M. Co. Handpiece

THE MOST MODERN AND SERVICEABLE HANDPIECE MADE



HIS handpiece represents C. D. M. Co. workmanship throughout and every part is designed and made by us for the purpose of serving the profession with the most reliable and serviceable instrument. Our special facilities and successful production of dental instruments for many years places us in a most advantageous position for manufacturing handpieces.

"Watchwork" best expresses the character of its construction. The skill of a watchmaker is not superior to that employed in making this handpiece. There are no parts to work loose. The entire mechanism is rigid and true with accurately balanced bearings. There is no sliding and no loss of power. The bur chuck is simple and positive and will run absolutely *true*. In this feature alone the C. D. M. Co. handpiece surpasses all others. It is very easily adjusted and oil does not escape. In strength, accuracy, light running and simplicity it can truly be called a "work of art."

During the short time it has been on the market the demand has taxed our capacity to its utmost, and the hundreds of C. D. M. Co. handpieces that are now giving satisfactory service is proof of their superior merit.

Price . . . \$10.00

Consolidated Dental Mfg. Co.

NEW YORK, U. S. A.

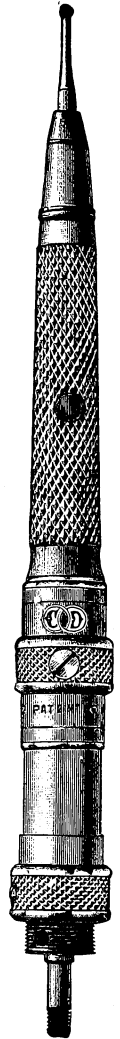
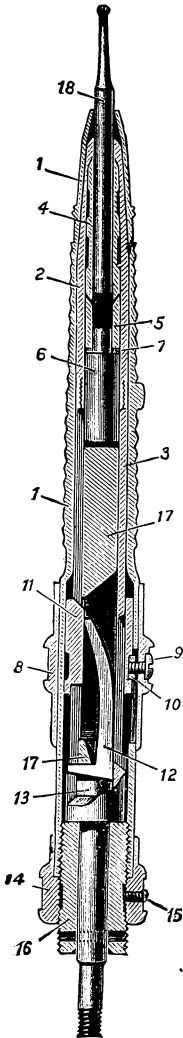
BRANCHES

Chicago, Ill
Boston, Mass.

Philadelphia, Pa.
Detroit, Mich.

Brooklyn, N. Y.
Buffalo, N. Y.

Baltimore, Md.
Cleveland, O.



The Triggs Dental Charts.

A Modern Card Index System of

DENTAL BOOKKEEPING.

It affords easy and rapid reference to all accounts, no matter how old; is simple in construction and inexpensive. We carry three styles of charts and can make special forms to order. Prices for stock charts, including case and index:



\$6, \$8, \$10 and \$12.

Write us for samples and any further information desired.



CHART NO. 3.

THE TRIGGS SYSTEM OF DENTAL CHARTS may be ordered from the Consolidated Dental Mfg. Co., Sole Agents, at its home office, No. 115 W. 42d St., New York; from its branch houses in Boston, Brooklyn, Buffalo, Philadelphia, Baltimore, Chicago, Detroit, Cleveland, and from any of the Company's agencies throughout the U. S. and Canada, and foreign countries.

SOMETHING NEW

Crescent Standard Gold Foil

A tough but easily manipulated gold

Specially Prepared for Low Fusing Porcelain Inlay Work

MADE IN No. 30 AND No. 40 THICKNESS

Its adaptability in forming a perfect matrix cannot be excelled, and it will hold its shape under difficult conditions

THIS INLAY GOLD IS PUT UP IN 1-8 Oz. BOOKS

PRICE, 1-8 Oz., \$4.25; 1 Oz., \$32.00.

CONSOLIDATED DENTAL MFG. CO.

The Best Antiseptic for a Dentist's Prescription

LISTERINE

A true prophylactic

Listerine exercises an inhibitory action upon the acid-forming bacteria of the mouth, and thus maintains the alkaline condition so necessary for the welfare of the teeth.

"THE DENTIST'S PATIENT". An interesting little brochure on the care of the teeth, will be forwarded upon request, together with a new pamphlet of 32 quarto pages embodying:

"LISTERINE UNDER THE MICROSCOPE". A tabulated exhibit of the action of Listerine upon inert laboratory compounds.

"COMPARATIVE VALUE OF CERTAIN ANTISEPTICS". An interesting showing of the comparative value and availability of various antiseptics in the treatment of diseases of the oral cavity.

"EXPERIMENTAL RESEARCHES". A report by members of the Association of Analytical Chemists of the Pasteur Institute, Paris, concerning the antiseptic action of Listerine.

LAMBERT PHARMACAL CO.

SAINT LOUIS, U. S. A.

Be assured of genuine Listerine by purchasing an original package.

WANTS, FOR SALE ETC.

NOTE.—Rate for advertising in this department of ITEMS OF INTEREST is ten cents per word including captions, "Wanted," "For Sale," etc., and address. Initials charged as words. Rate for agency advertisements is twenty cents per word. Advertisements should reach us by the 10th of the month to insure insertion in the following month's issue, and are payable in advance.
 CONSOLIDATED DENTAL MFG. Co., Publishers, 115 W. 42d St., New York, N. Y.

- 3623—WANTED.—First-class assistant, especially good on crown and bridge work. Must come recommended. DR. G. D. MORGAN, Johnstown, Pa.
- 3624—FOR SALE.—Two fine pieces of business property, rents for \$50.00 per month. Dental practice worth from \$150 to \$200 per month; established 16 years. This also includes fine front room for office and five good living rooms. This is the place for a dentist suffering from lung trouble or asthma. Altitude 6,400 feet. Write for particulars. DR. B. N. WILLIAMS, Las Vegas, N. M.
- 3625—WANTED.—A good operator, crown and bridge worker and extractor. Must be first-class man and understand administering gas. Good salary to right party. Address "ORIENT," care Consolidated Dental Mfg. Co., 5 Willoughby St., Brooklyn, N. Y.
- 3626—FOR SALE.—In the Orient, a very high class \$10,000 practice, established 50 years. Complete equipment, electricity, furniture, etc., including a large stock of teeth and other supplies. Money required. Address with references "RAJAH," care St. Louis Dental Mfg. Co., 209 N. 12th St., St. Louis, Mo.
- 3627—FOR SALE.—Dental practice, two operating rooms and laboratory, completely furnished, rent reasonable, good locality; well established. No. 5715 Main St., Germantown, Philadelphia, Pa.
- 3628—FOR SALE.—In Virginia seaboard city of 25,000 an ethical practice of \$6,000. Established seven years. Address "HEALTH," care "Items of Interest," No. 115 W. 42nd St., New York.
- 3629—FOR SALE.—\$2,500 practice in town of six thousand. One opponent. Poor health. Price no object. Address Box 335, Cloquet, Minn.
- 3630—FOR SALE.—At invoice, practice and outfit county seat 1,200 population; \$250 cash takes it; good business and a big opportunity. Located N. E. Nebraska. Reason two offices. Address "NEBRASKA DENTIST," 412 Paxton Block, Omaha, Neb.
- 3631—WANTED.—Position as assistant or associate. "DENTIST," 903 Capitol Ave., N., Lansing, Mich.
- 3632—FOR SALE.—\$4,000 advertising practice in good Pennsylvania town. Best location; sell for invoice. Address No. 3632, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3633—\$300 buys office and practice; chair and cabinet new. Suitable terms. Lock box 53, St. Clairsville, Ohio.
- 3634—FOR SALE.—Dental practice, western Pennsylvania county seat. Two chairs, electric appliance, rent reasonable. Address No. 37, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3635—FOR SALE.—Practice, Scranton, Pa., at invoice; established six years. Address No. 3635, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3636—WANTED.—A good extractor; state salary, giving a bond for five years. Pennsylvania. Address No. 3636, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3637—FOR SALE.—Gasoline engine, dynamo, lathe, air pump, reservoir, suspension dental engine, complete outfit cheap. DR. BOATNER, Trenton, Missouri.
- 3638—FOR SALE.—Cheap for cash, whole or half interest in \$6,000 advertising business. Pennsylvania. Address No. 3638, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3639—Salt Lake. Position desired in Salt Lake City with view to buying partnership or practice of employer. Address "D.," care "Items of Interest," No. 115 W. 42nd St., New York.
- 3640—Practice of three hundred a month; good Texas town. Good prices; no bad accounts; fine climate; good water; sell cheap. Address "TEXAS," care "Items of Interest," No. 115 W. 42nd St., New York.
- 3641—WANTED.—A1 operator of good character and address. Permanent position in New York office at first-class salary where good work is appreciated. Address No. 3641, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3642—FOR SALE.—Advertising office in a New Jersey town of 80,000. A snap. Address I. EASTWOOD, No. 248 S. 11th St., Philadelphia.

See following page.

WANTS. FOR SALE ETC.

- 3643—WANTED.—All around man with experience. Reference required. Address "ILLINOIS," care "Items of Interest," No. 115 W. 42nd St., New York.
- 3644—FOR SALE.—The finest opportunity ever offered. An advertising dental practice well known; best location New York City. Six thousand dollars; part cash, balance time; worth double the money. Must sacrifice account of ill health. Address No. 3644, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3645—WANTED.—An experienced mechanical man. Must be competent in all branches including porcelain. Permanent place with private practitioner in New York City. State age, experience and salary. Address No. 3645, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3646—WANTED.—Good filler and laboratory men. TAFT'S, Syracuse.
- 3647—Bargain! Morrison chair good as new. AVERBECK FISHER, Syracuse.
- 3648—Will sell half or whole interest in old established practice of 25 years standing in New England city. Address No. 3648, care "Items of Interest," No. 115 W. 42nd St., New York.
- 3649—Well established dentist compelled to move within twelve months will buy practice outright or associate himself with ethical dentist located in first-class neighborhood in New York City. Answer "CO-OPERATION," care "Items of Interest," No. 115 W. 42nd St., New York.
- 3650—FOR SALE.—Best location; best equipped office in Michigan City, Ind., at invoice, \$800 cash. Hurry. Make good advertising location. Reasons. A. W. L. GILPIN.
- 3651—WANTED.—Energetic graduates to build up practices in different States for interests; no outlay. Salary if preferred. Co-Operative Co. Address No. 3651, care "Items of Interest," No. 115 West 42d St., New York.

Items of Interest for 1904

The magnificent production of 1903 shows the high and excellent character of work we have now undertaken. With an equally handsome volume for 1904 in view, we think our readers will agree that no better investment in dental literature can be made for \$1.00. Several of the issues of 1903 are alone valued at more than \$1.00 each by many dentists and it is the production of such issues that we have prepared for 1904.

Your Early Renewal is Requested

SUBSCRIPTION BLANK IS ENCLOSED HEREWITH....

Consolidated Dental Mfg. Co.

ITEMS OF INTEREST.

TO NEW SUBSCRIBERS FOR 1904,
The October, November and December issues of this year will be sent without charge.

CROSELMIRE & ACKOR PLATINUM

In sheets or wire for all purposes.
Platinum Scrap Bought.

factory & Main Office: 42 Walnut St., Newark, N. J.
N. Y. Office: 10 East 23d St., Room 8

Recommended by Dental Authorities
for BLEACHING,
STERILIZING,
SAPONIFYING.



(DENTAL SODIUM DIOXIDE)
per 2 oz. tin 75c del'd., from dealers or
The Roessler & Hasslacher Chem. Co.
100 William St., New York.

The following claims are made for

Dentacura.



FIRST, that it is an ideal dentifrice and as one Dentist describes it, "A necessary adjunct to the Dental Toilet."

Second, that it minimizes the harmful bacteria in the oral cavity, thus producing an environment calculated in the highest degree to preserve the teeth.

Third, that the fact that it is pleasant to use will insure this protection while a less agreeable preparation would be but infrequently used or entirely neglected.

We invite the opportunity to convince Dentists of these facts. Samples and literature on application.

DENTACURA COMPANY,
NEWARK, NEW JERSEY, U. S. A.

It Pays TO USE THE BEST
 AND

**Gilbert's Non-Conductive
 Tooth Lining**

IS THE BEST

This is the original fluid lining.....

It prevents DEATH OF THE PULP,
 PAIN AFTER FILLING.

It is { VALUABLE FOR HOLDING THE
 FIRST PIECES OF GOLD IN
 PLACE WHEN FILLING,
 ANTISEPTIC,
 NON-IRRITANT,
 A NON-CONDUCTIVE.

After using it becomes a necessity

A postal will bring you a free sample if you mention this Journal,
 giving your dealer's name. Price per package, 35 cents.

Don't Fail TO KEEP ON HAND

Gilbert's Gutta Percha Nerve Canal Points

THEY ARE HAND-MADE AND OF THE BEST STOCK

It is impossible to make a better point

Price per package of 150 points, 40 cents.

Your dealer can supply you. If he won't, write us about it.

S. Oldred Gilbert

No. 1627 Columbia Ave.

PHILADELPHIA, PA.

Genuine only when the above signature is in red across the face of the label

**The Construction of Bridge
Work with DAVIS CROWNS
is one of our specialties.**

A trial will convince the most skeptical of the superiority of this class of bridge work over all others. Send for price list.

Our Hydraulic, Swaged Seamless Crowns and Plates are so well known that they need very little comment.

Gold plated sample crown sent free on receipt of 2 cents for postage.

**BERRY IMPROVED SEAMLESS
TOOTH CROWN CO.,
35 Randolph St., CHICAGO, ILL.**

BREWSTER PORCELAIN

You can do better work with Brewster Porcelain than you can with any other.

The Brewster reputation has been made with High Fusing, but it is now made in Low Fusing, too. You can fuse it in any furnace you like. It keeps its form and color under fire.

Write to us for a free sample so you can find out for yourself how much better it is than whatever low fusing you are using.

It fuses at the melting point of 14 K solder.

All first class dealers have it.

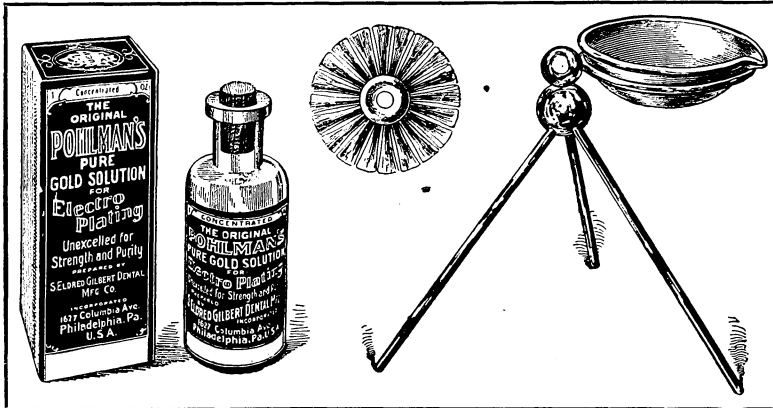
LEE S. SMITH & SON

SOLE AGENTS,

PITTSBURG

Made by the Brewster Dental Co., Chicago.

POHLMAN'S GOLD PLATING OUTFIT.



Not a cheap gold wash but an absolutely 24K Pure Gold Plating Applied without the use of a battery.

Invaluable for plating Regulating Appliances, Crown, Bridge Work (to remove traces of soldering), Jewelry and Metals generally.

INEXPENSIVE.

EASILY AND QUICKLY APPLIED.

*This is the original preparation for the purpose.
There is nothing "JUST AS GOOD."*

PRICE LIST.

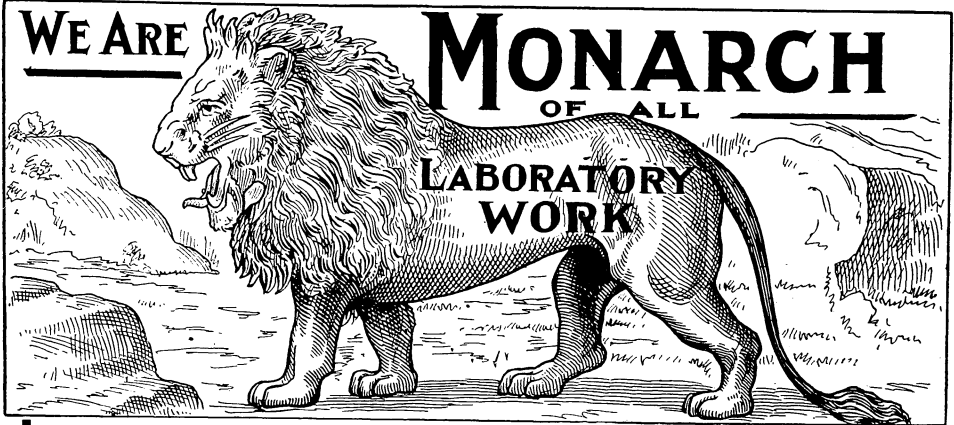
Outfit complete, as illustrated above,	\$3.00
SOLUTION SEPARATELY.	
2 oz. concentrated (makes 16 ozs. solution)	2.50
1 oz. concentrated (makes 8 ozs. solution)	1.25
2 oz. Diluted (trial size, ready for use)	.50
Solution Heating Outfit,	1.50
Brass Wire Lathe Brush Wheel,	.25

Your dealer can supply you. If he won't, write us about it.

S. ELDRED GILBERT DENTAL MFG. CO. Inc.

1315 Market Street, Philadelphia, Pa., U. S. A.

NOTE:—Dentists and Dental Students are always welcomed to our show rooms to examine our goods and see them demonstrated.



THIS IS A RECOGNIZED FACT.

Many dentists have told us this; let us hear the same from you. It is our long experience, personal attention to the work and individual interest, that makes our work so successful.

IS IT NOT SATISFACTION TO HAVE YOUR WORK DONE WELL?

MOLAR CROWNS,	\$2.00	INCISOR CROWNS,	\$1.50
BICUSPID CROWNS,	1.75	OPEN-FACE CONTOUR CROWNS,	1.50

"OUR SPECIAL" PLATE, all material furnished, \$2.50.

Our Plates are thin and strong, better than you ever received before. Our work will be a revelation to you.

WRITE FOR CATALOG.

MONARCH DENTAL LABORATORY,

Drs. CHRISTOPHER & GOLBECK, Prosthetic Specialists.

39 STATE ST., CHICAGO, ILL.

Mailing boxes sent free upon application. We are always open for advice upon any difficult cases.

NOT CRIED FROM THE HOUSETOPS!

BUT A SOURCE OF PROFIT TO THE DENTIST AND PLEASURE TO THE PATIENT

FLEXIBLE SUCTIONS

Are an absolute necessity to the up-to-date dentist. He wants to have every upper plate he turns out stay up. Our suction are especially intended for flat and shallow mouths, for rimless plates

or any kind of a temporary plate. The soft, flexible rubber suction clings so tightly to the roof of the mouth that it requires considerable muscular effort to pull them down with the hands. It cannot be done with the teeth or tongue. The most violent laughing, sneezing or coughing fails to dislodge them. No saliva in the cavity, no hard edge to hurt tissues. Perfect in every respect and money refunded if not as represented.

The Perfection Flexible Suctions are for sale by all leading dental depots. Price, 75 cents per box of six. Mail orders solicited and promptly filled on receipt of price.

Manufactured only by the Dental Suction Co., Larwell Block, Loudonville, Ohio.

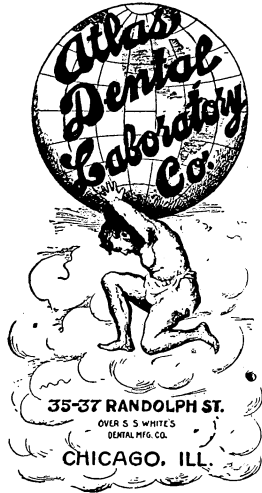
WEAR THE SMILE THAT WON'T RUB OFF!

SAM'L G. SUPPLEE



GOLD
PERFECTION PLATE.
PAT. APPLIED FOR.

has a Dental Laboratory at 874 Broadway, New York City, that is certainly a bright spot in this age of progress. You will find there crown and bridge specialists that cannot be surpassed, Gold plate workers who are the best in their line, and the famous Perfection Gold Plate is made by men who devote all their time to this branch alone. Continuous Gum, Porcelain Bridge, Rubber Plates, Regulating? of course.



W. J. TRUMPOUR, Mgr.

DR. J. C. McLEAN, Supt.

IT'S NO LONGER A QUESTION as to where dentists receive the best workmanship and materials or the most prompt service, as the

Atlas Dental Laboratory Company

is admitted by all first-class dentists who are in a position to judge, to have the largest and most competent aggregation of expert mechanical workmen ever before known to operate under one management, and their business methods are in strict harmony with their work and materials. Others may duplicate their prices, but that's all.

Is the best Too Good for You ?

Catalogues mailed upon application.

Highest prices paid for gold and platinum scrap.

ATLAS DENTAL LABORATORY COMPANY,

Over the S. S. White Dental Mfg. Co.,

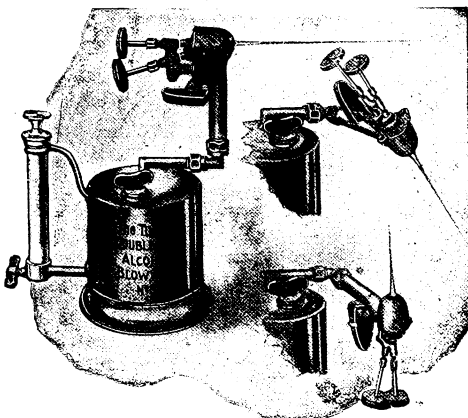
Telephone Central 1780.

35-37 Randolph Street, CHICAGO, ILL.

HEAT!

Over 3,000° F. is produced by the

TURNER ALCOHOL BLOW PIPE.



Burns Wood Alcohol under air pressure. Flame is small and needle-like and may be adjusted to any size from one to four inches in length.

Burner is mounted on a compound swivel and may be turned in any direction.

WRITE FOR CATALOG

PRICE, \$7.50 EACH

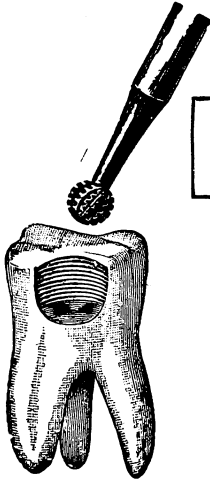
THE TURNER BRASS WORKS

30 N. Franklin St.

CHICAGO

Cross-Cut Burs

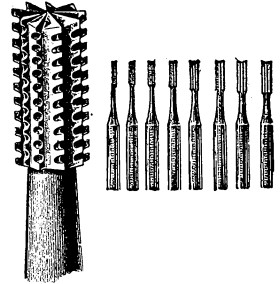
Enamel-Fissure Burs



\$2.00 per Doz.

All instruments stamped with this
 TRADE ← **DAZF** → MARK

Write for Catalogue
 For Sale by
 All Dental Depots and Dealers



ENAMEL FISSURE
 BURS.

This illustration represents a cavity cut by a CROSS-CUT BUR. The cut GROOVES ARE OF IMMENSE VALUE for fixing or holding whatever stoppings are used.

GUSTAV SCHARMANN

1181-1183 Broadway

Baudouine Building
 Corner 28th St.

NEW YORK

BEST and SAFEST

SOLD ROUND THE WORLD.

IT KILLS THE TIME

BUT WILL NOT CURE THE PATIENT

On your center table you should have THE DELINEATOR. It shortens every woman's waiting time.

"Mere man" does not appreciate THE DELINEATOR, but a million women think it is the greatest magazine on earth. It appeals to them with its Fashions and its careful illustrations of Style. It tells them about Cookery, about House-keeping, about the Hats they ought to wear, it offers them the Storiottes they like to read and advises on the thousand and one other details of women's daily life and interests.

ONE DOLLAR—THAT'S ALL

"Just get The Delineator"

FOR YOUR CENTER TABLE

THE BUTTERICK PUBLISHING COMPANY, Limited
7 to 17 WEST THIRTEENTH STREET, NEW YORK CITY

ACESTORIA

THE ONLY LOCAL ANTISEPTIC ANESTHETIC FOR EXTRACTION OF TEETH AND FOR ALL MINOR SURGICAL OPERATIONS

Containing the Essentia: Oils—Cajuputi, Cassiae, Gaultheriae, Caryophylli.
Antiseptics and Anesthetic—Menthol, Phenol, Glycerin, Plantago Maj. Hyoscyamus,
Jam. Dogwood.

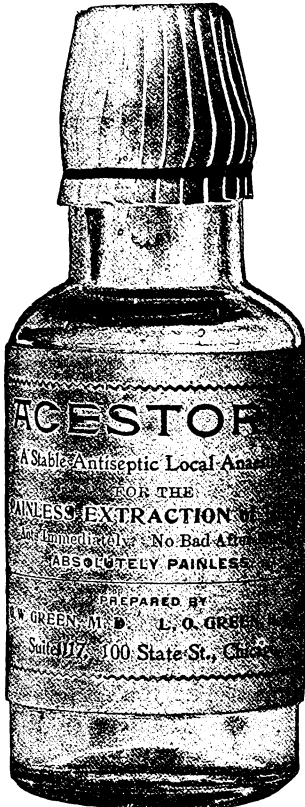
NITROGLYCERIN.

Sufficient cocain mur. is added to make a one per cent. solution, which, in the presence of nitro-glycerin, cannot produce any depressing or bad effect.

DEAR DOCTOR—We desire to call your attention to the ANTISEPTIC qualities of the local anesthetic, ACESTORIA.

A glance at the formula will satisfy you as regards antiseptic properties. To test its anesthetic action we desire to have you use a sufficient quantity to prove, positively, its value and our claim of having produced the IDEAL LOCAL ANTISEPTIC ANESTHETIC.

A few well known gentlemen who use and commend ACESTORIA:



- Dr. James E. Keefe, Pres. Chicago Post Graduate Dental College, Chicago.
- Dr. L. S. Tenney, Associate Prof. of Oper. Dentistry, Chicago College of Dental Surgery.
- Hart J. Goslee, D.D.S., Prof. of Prosthetic Dentistry, Chicago College of Dental Surgery.
- Dr. Elgin A. MaWhinney, President of the Chicago Dental Society, and Prof. of Materia Medica and Therapeutics, North Western University Dental School.
- Geo. W. Cook, D.D.S., ex-President Chicago Dental Society, and Prof. of Pathology and Bacteriology, Illinois University Dental School.
- Dr. Chas. E. Bentley, Prof. Oral Pathology and Surgery, Harvey Medical College, Chicago.
- James Harrison Prothero, D.D.S., Prof. of Prosthetic Technics, Prosthetic Dentistry and Metallurgy, and Supt. of Infirmary, Northwestern University, and Pres. Chicago Dental Laboratory Company.
- G. Walter Dittmar, D.D.S., Associate Prof. of Operative Technics, Supt. Infirmary, Illinois University Dental School.
- Dr. J. W. Birkland, Sec'y Chicago Dental Laboratory Company.
- Dr. H. G. Fischer.
- Dr. J. Elwood Dunn, 100 State St., Chicago.
- Dr. Robt. Tuller, 100 State St., Chicago.
- Dr. C. Deichmiller, San Francisco, Cal.
- Dr. R. E. Morriss, Kansas City, Mo.
- Dr. Lew F. Miller, Berlin, Pa.
- Dr. C. E. Wormer, Republic, Ohio.
- Dr. C. N. Booth, Cedar Rapids, Iowa.
- Dr. R. E. Smith, Sacramento, Cal.
- Dr. W. G. Devore, Tempe, Ariz.
- Dr. T. A. Upham, Nashua, N. H.
- Dr. D. L. Frazee, Plymouth, Ill.
- Dr. E. E. Miller, Berlin, Pa.
- C. P. Pruyn, D.D.S., M.D., Chicago.
- S. H. Arthur, D.D.S., M.D., Scranton, Iowa.
- J. Wooley, M.D., Chief Examining Physician N. Y. Life Insurance Co., Chicago.
- J. R. Boynton, M.D., Clifton Springs, N. Y., Surgeon.
- Frank E. Simpson, M.D., Examining Physician for the New York Life Insurance Co., Chicago.
- F. F. Feaster, M.D., Scherr, Grant Co., W. Va.
- J. C. Bonham, M.D., Ottumwa, Iowa.
- R. C. Brophy, M.D., D.D.S., Editor of the Bur.

We extend to you the privilege of writing to any of the above mentioned gentlemen, and asking their opinion of the virtues of ACESTORIA.

Price, 2 oz., \$1.50—1 oz., \$1.00. When ordering by mail send 8 cents for postage. If you cannot procure Acestorina from your dental depot order direct from

Dr. L. O. GREEN, 100 STATE ST., CHICAGO, ILL.

Manufactured by O. W. GREEN, M.D., L. O. GREEN, D.D.S.

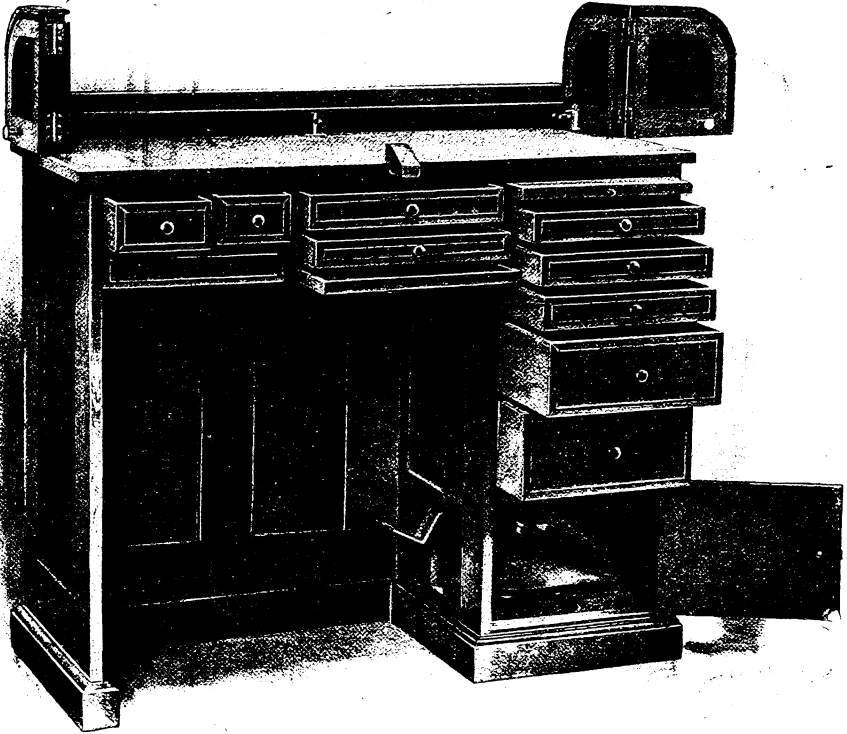
NOTE—ACESTORIA is used in the Chicago College of Dental Surgery.

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Elgin A. MaWhinney's paper on local anesthetics in the April No. of the Dental Review, '02. Note in particular his remarks on ACESTORIA.

Mechanical Cabinet No. 4



This Cabinet is intended for use in the operating-room. It is closed by a roll top.

Within the Cabinet is a system of piping for carrying the gas through the concealed stop-cocks to the blowpipe and Bunsen burner.

The cabinet is substantially built, with numerous dovetailed joints, which render it rigid and strong.

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PRICES: { Mahogany, \$70.00; Quartered Oak, \$60.00.
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All our Cabinets and Benches are fully described in our catalogue, "Modern Office Furnishings." Ask your dealer for it.

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\$1.50

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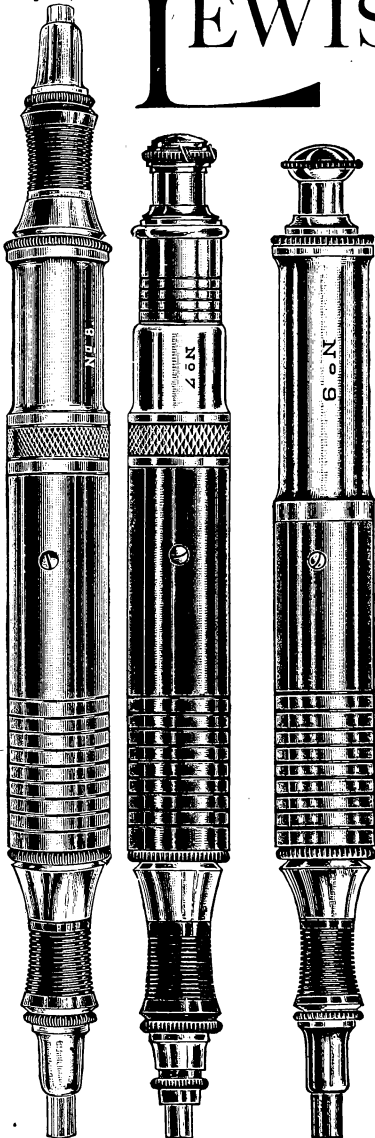
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LEADERS IN AUTOMATIC PLUGGERS ?

Patented
May 16, 1899.

LEWIS, of course



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The "S. & L." Plunger was the first successful spring Plunger brought to public notice, making its appearance in 1865. We have since been its exclusive manufacturers, and the esteem in which it is still held is shown by the constant demand for the "S. & L." Plunger in the five varieties now made by us.

THE LEWIS PLUGGER

retains the old mechanism in principles, but embodies improvements in construction and design which place it in a separate class. Modifications have been made in the catch plate, tension device, regulating device and in the design of the instrument, resulting in the production of a series of Pluggers strikingly handsome in appearance and perfect in operation.

The Lewis Plunger is made in three varieties.

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ALL LEWIS PLUGGERS HAVE BLACK HARD RUBBER GRIP

Catalogue "E," to be had for the asking, illustrates our full line of Pluggers.

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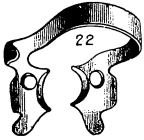
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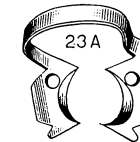
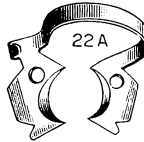
B. D. M. Co.'s specialties may be ordered through Consolidated Dental Mfg. Co., New York, and its branches.

Partial List of **IVORY'S MOLAR CLAMPS**

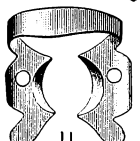
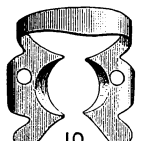
Different Sizes and Form



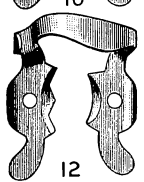
Nos. 22 and 23, right and left, are adapted to second superior molars and child's first molars, buccal and other cavities. Price per pair, \$1.60.



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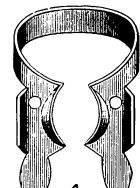
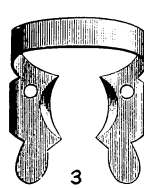
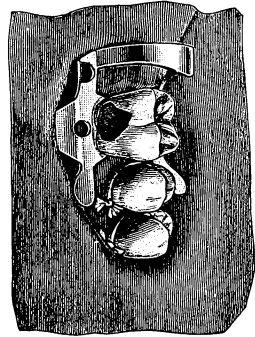


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THE JENKINS' METHOD.

The very great interest in Doctor Jenkins' System of Porcelain work and the great demand for instruction in the Jenkins' method have decided us to have an experienced manipulator of this material in New York and Brooklyn during the months of November and December. All who desire private instruction should take advantage of this opportunity and notify us at the earliest possible moment. There will also be public demonstrations at the various dental depots, due notice of which will be sent out. Arrangements for private instruction should be made as early as possible. There will be no charge for private clinics.

This is an opportunity which you should take advantage of if you wish to familiarize yourself with Dr. Jenkins' Porcelain Enamel and what can be accomplished with it.

Dr. Jenkins' Porcelain Enamel is the standard of quality by which other Porcelains are judged. If you are interested in Porcelain work and wish to investigate prior to the clinics, we would be glad to send you fused specimens, literature, etc., regarding this material.

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Just Let Go

and the cable and hand-piece of the

COLUMBIA ELECTRIC ENGINE

swing out of the way.

The motor is hung far enough in front of the chair to be out of the road, and the cable, when not in use, hangs perpendicularly from it.

To use it, pick up the hand-piece and go to work. To put it away, simply let go.

Could anything be more convenient?

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Send for our beautifully illustrated catalogue which describes these engines in detail.

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**Favorite Columbia
DENTAL CHAIRS**

raise easily, even when carrying heavy persons



The raising lever is long and is so arranged that every pound of foot pressure exerts many pounds of lifting force on the chair.

If you expect to pump a chair daily for years, it is worth while to make sure it will pump easily.

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ARE FAMOUS

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HAMMOND FUSED OXIDE CEMENT

FOR PERMANENT FILLINGS, CROWN AND BRIDGE WORK.

This cement has been on the market for 12 years and will please you. It has no equal for inlay and crown and bridge-work, holding with a grip that is unaffected by the varying conditions of the mouth. The liquid does not crystallize in any climate. The powder is very fine and without a peer.



This cement is not only the best, but is supplied in liberal packages in the following colors: Yellow, Gray, Cream, Green Gray and Deep Gray. Price, \$1.00, one color and liquid; \$1.50, two colors and liquid.

SOLD BY ALL FIRST-CLASS DEALERS

The following tests show for themselves, and are reproduced accurately from *Items of Interest* for November, 1898, pages 810 and 811, and were made by Dr. E. K. Wedelstaedt, of St. Paul, Minn.

Hammond's Fused Oxide, rolled (mallet)	177
Hammond's Fused Oxide, soft.....	94
Ames' Metalloid, rolled (mallet)...	170
Ames' Metalloid, soft.....	94 4-9
Justi's Insoluble, rolled (mallet)..	148
Justi's Insoluble, soft	70
Weston's Insoluble, rolled (as per directions accompanying cement) .	113
Weston's Insoluble, soft.....	6 3/4
Caulk's, stiff mix.....	79 3/4
Caulk's, soft	20
Britton's rolled	57 1/2
Britton's, soft	45

Hammond White Gold Alloy



If you have been disgusted with the black results heretofore obtained from Amalgam fillings, get it at once. For over twelve years it has proved to be the **WHITEST, CLEANEST and BEST** metallic filling ever placed in the Dentist's hands. It is produced by using chemically pure metals, with such nicety of manipulation that in melting the several different kinds the average of waste in the furnace is less than 5 grains in each 60 ounces, making it the **ONE** alloy always true to formula.

It contains only metals known to be tooth preservers, and the proportions are so finely adjusted that expansion and contraction exactly neutralize each other, the result being a filling as unchangeable as gold itself.

This Alloy is tough, has wonderful edge strength and takes the highest polish. It does not tarnish, and without exception has the whitest permanent color of any metallic filling in existence.

Put into a cavity with ordinary care it outlasts the best Amalgam ever before produced. Gold itself is not more durable or beautiful.

A filling of it highly polished, never dulls or loses its beauty. Use it to fill cavities in front teeth, for which purpose it stands alone.

It is susceptible of great range in contouring.

Mix it as you would an ordinary Amalgam.

It works up smooth and beautiful.

Be careful not to leave an excess of mercury in the filling. Work it out by pressure, or by **ADDING MORE ALLOY** when mixing.

If thoroughly amalgamated, it does not soil the hands even though you rub up a large filling.

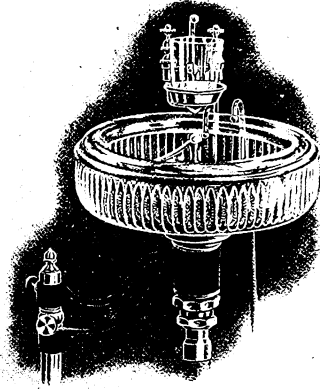
Polish and finish your filling well, for prices can be commanded for it almost equal to gold.

After using it, its continued whiteness, great edge strength and absence of shrinkage convinces the most skeptical it has no equal.

Price, per oz., \$3.00; 5 ozs., \$12.50; 10 ozs., \$22.50.

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The Weber Fountain Spittoon



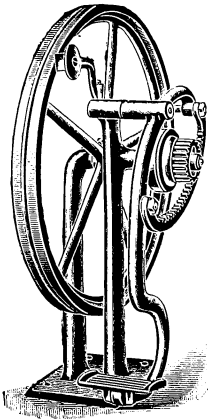
All we want you to do is to send for the book. If what we say in it is true, maybe we can do business. If not, we certainly don't want your money and you can have it back without talk after you have had the spittoon for 30 days if you ask for it.

If that is not fair, write your own guarantec and we'll sign it. You can't make it too strong.

The price of the whole thing with a glass bowl you can't break is forty dollars.

LEE S. SMITH & SON, Sole Agents, Pittsburg

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This is a drive wheel for lathes. It gives you four times the speed with one-fourth the effort. It isn't as good as a good electric motor, but it's near it. Your foot doesn't swing back and forth. Just give it a push and it's off. When it slows up give it another.

The mechanism is entirely new. There is nothing about it to get out of order.

If you could just put your foot on it once the chances are you would save twenty or thirty dollars on the price of a motor.

Price each \$10.00.

LEE S. SMITH & SON, Sole Agents, Pittsburg

The Blair

Fountain Spittoon.

What we guarantee: Absolutely noiseless. No back up or overflow. Handsomest made in the world regardless of price. The finest valve work ever put on a spittoon.

If you are so careless of your own interests as to buy a spittoon without seeing for yourself what we offer you, then you stand in your own light, and

Facts

presented to you are wasted
 You can verify every claim made by us
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No waste of gas or time. Perfect and prolonged anæsthesia. No cyanosis. No nausea. Every dentist that has seen this improved inhaler says we have what they have been wanting.

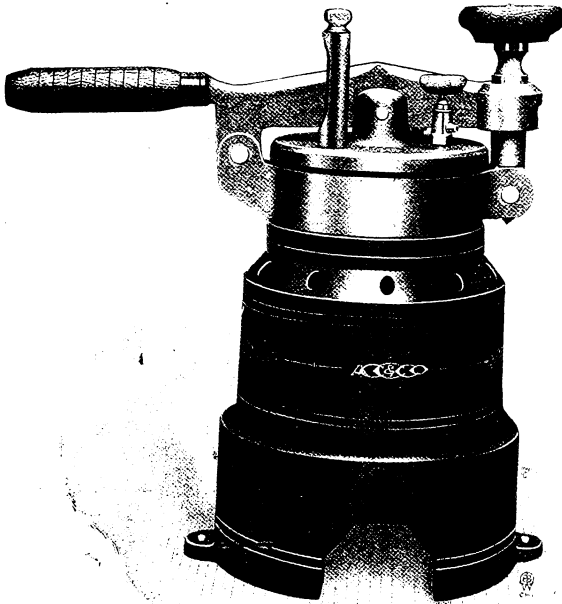
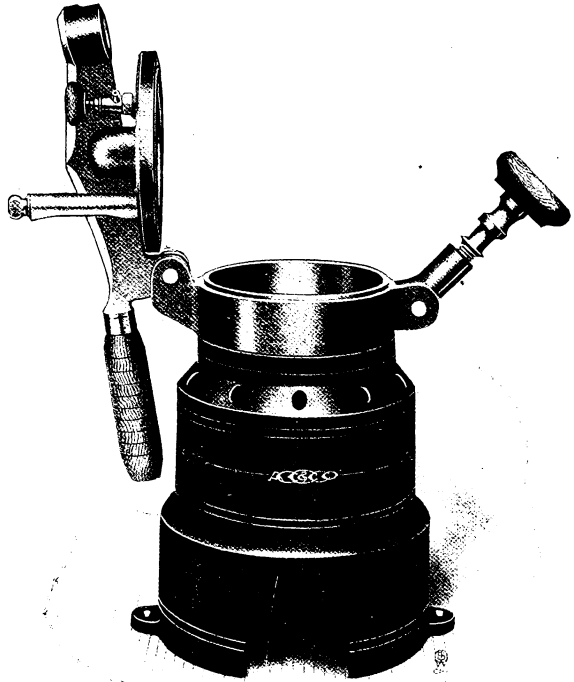
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Send for a catalogue
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\$40.00

**COMPARE The Single Bowl Clark Spittoon
with any other single bowl spittoon made.**

THEN NOTE CAREFULLY

The **WORKMANSHIP** on the metal parts.

The **SIMPLICITY** of the valves.

The quality of the tubing **AND** the covering.

The manner in which the **BOWL IS FASTENED TO THE METAL PARTS.**

The ease with which the **SALIVA EJECTOR CAN BE CLEANED.**

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The fact that there is **NO HOLE IN THE BOWL** to weaken it.

The general beauty compared with other makes.

The Clark Single Bowl Spittoon will appeal to you at once as being the **BEST SINGLE BOWL SPITTOON MADE**; **WE HAVE CHANGED THE PRICE TO**

\$40.00

If you want to buy the best for the money buy the Clark Single Bowl.

Bowls in Blue, Clear, Green, Ruby, Rose, Amber.

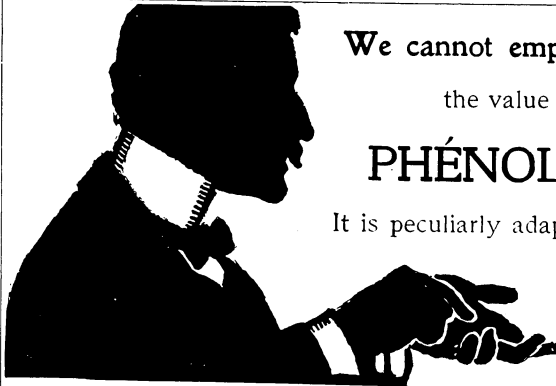
Tubing in Blue Green and Black, Green, Green and Black.

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It is peculiarly adapted to treatment of all
Oral Diseases.

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spongy, bleeding, foul
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Used for finishing Fillings, shaping Teeth
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For finishing Rubber Plates have great
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Convex Edge Fits all Parts of Plate
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And is Accurately Guided

Is Very Solidly Made, but

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Will finish a plate in half the time re-
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(Red Cross Goods, Johnson & Johnson)

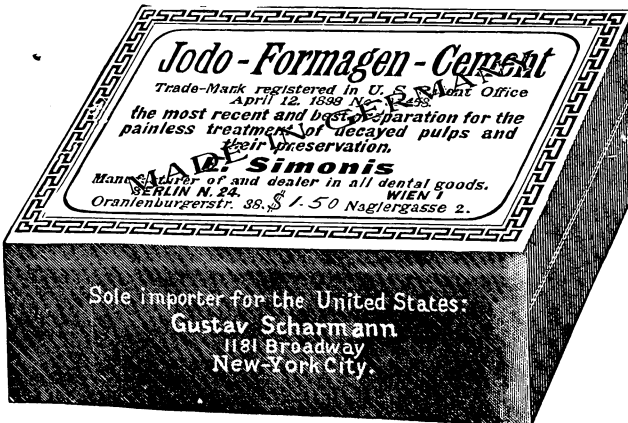
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Cottonoid	Sinacine Plasters

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"I have had excellent results with Bromo-chloron and consider it a valuable medicine for the dentist."

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"In the treatment of pulpless teeth Bromo-chloron has no equal."

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THE W. GREEN & CO. No. 4 DENTAL

"Noiseless," Polishing, Buffing and Grinding Electric LATHE MOTORS for Dentists, Machinists, etc.

Made from 1/8 to 2 horse power.

SPECIAL NOTE.

The strength of our direct current motors can be instantly reduced by aid of the adjustable switch or regulator attached to motor to any reasonable power desired. They can be attached in one minute to any ordinary electric light socket, and are *absolutely guaranteed*, therefore do not hesitate to place your order. Our motors are always ready for immediate use, no further adjustment being required. (Speed, 2,300 to 3,000 revolutions per minute.)

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W. GREEN & CO., Manufacturers of Lathes, Motors, Benches, Rolls, Brushes, Buffs, etc. **6 MAIDEN LANE**
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Keep the mouth as nature intended it should be

ALKALINE
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KRESS

Restores normal conditions and maintains perfect

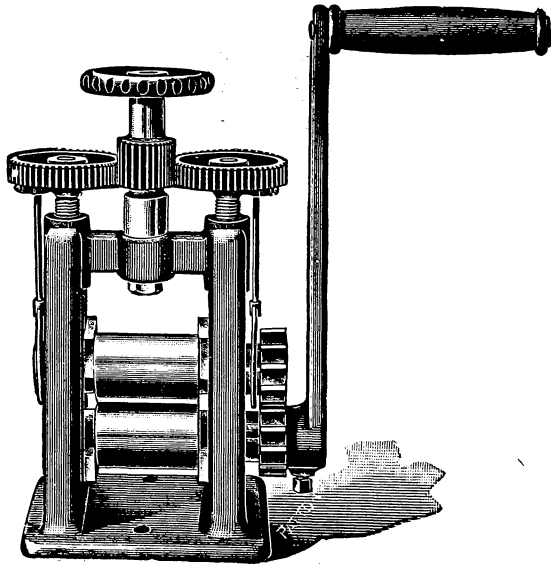
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The
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Dental
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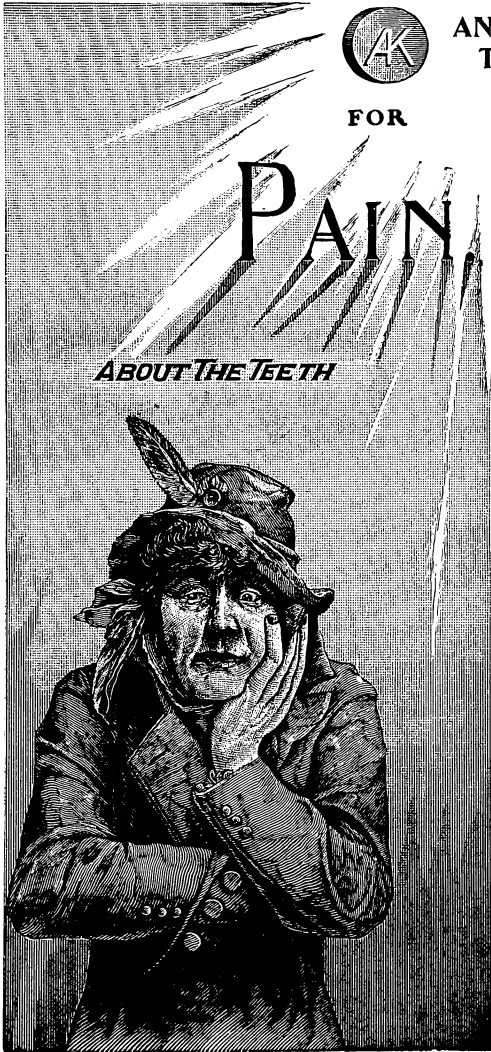
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ANTIKAMNIA &
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ABOUT THE TEETH

DENTISTS

having adopted Antikamnia Tablets or Antikamnia & Codeine Tablets in their practice readily certify to their pain-relieving merits in Odontalgia, Odontalgia Nervosa, Pericementitis, Trigeminal Neuralgia, Pyorrhæa Alveolaris, Caries Dentis, etc.

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I use Antikamnia & Codeine Tablets in my practice and consider them the best for relief of pain.

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Never Without Monograms

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(Dental Cosmos, April, 1903.)

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May we send you our brochure, "Beta-Eucain in Dentistry"?

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SCHERING & GLATZ, Sole Agents, New York.



ALL THAT MAKES

The extract of SUPRARENAL CAPSULES valuable as a powerful astringent; a powerful hemostatic; a powerful heart tonic, makes

SUP-RE-NOL

The Ideal Local Anesthetic

just that much better than any other local anesthetic on the market. ~Sup-re-nol does the work like no other anesthetic can. It is better. It is always dependable. Are you using it?

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Price: 1 oz., 75c.; 5 ozs., \$3.00; 10 ozs., \$5.00
A syringe free with a \$5.00 order.

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Pustolene, when used as directed, is a specific treatment for abscessed teeth and putrescent pulps, and when so used is guaranteed to cure a chronic abscess or putrescent pulp in from one to two sittings.

Pustolene being in paste form is always ready to use, and can be worked to the Apex of any Canal, no matter how tortuous it may be. Pustolene is composed of the most powerful antiseptics and germicides known; does not discolor the teeth, and has a very pleasant odor. As a Pulp capper, Pustolene has no superior. Try it. Samples and testimonials furnished.

For sale by leading Dental Dealers. Price, per pkg., \$1.00.
For sale by Consolidated Dental Mfg. Co.

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A Dental Requisite

Orthoform

A Local Anesthetic, quieting pain when applied to dental cavities or after extractions, without interference with tissue repair; the anesthesia lasting for hours and sometimes days

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WYCKOFF'S OBTUNDENT

BEST AND CHEAPEST

FORMULA

Cocaine Hydrochlorate.....	5 grains
Solution Trinitrin (1 per cent.).....	10 minims
Spirit Thymol Com.....	1-4 fluidounce
Distilled Water, q.s., ad.....	1 fluidounce

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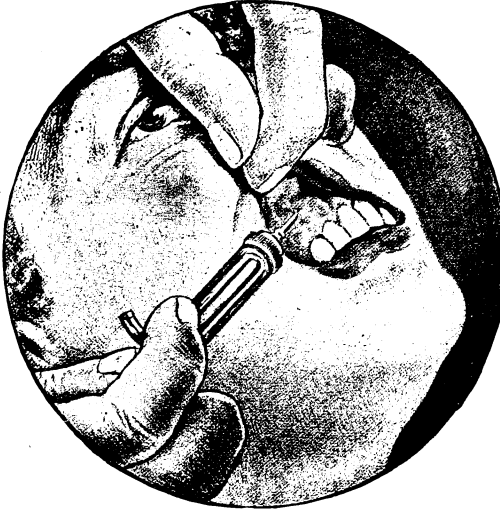
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Fig. 1. At birth



Fig. 2. Age 9 mo.



Fig. 3. Age 1 yr.



Fig. 4. Age 1-2 yrs.



Fig. 5. Age 3-2 yrs.



Fig. 6. Age 6 years



Fig. 7. Age 6 years



Fig. 8. Age 7 years



Fig. 9. Age 11 years

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Fig. 10. Age 13 years



Fig. 11. Adults. Process and part of root cut away, exposing pulp canals



Fig. 12. Old Age

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