

ITEMS OF INTEREST.

VOL. XIV.

PHILADELPHIA, OCTOBER, 1892.

No. 10.

Thoughts from the Profession.

THE WORLD'S CONGRESS AUXILIARY OF THE WORLD'S COLUMBIAN EXPOSITION.

PRELIMINARY ADDRESS OF THE COMMITTEE ON A DENTAL CONGRESS.

It is the aim of the World's Columbian Exposition to gather the evidences of the material progress and achievement of the civilization of the world, and to so arrange them that every department of human endeavor may be studied and examined through all its various grades of development.

It is also their desire to represent the intellectual and scientific development and achievement of the entire civilized world by a series of great Congresses, to be held during the progress of the Exposition.

In pursuance of this object, the World's Congress Auxiliary was organized by the World's Columbian Exposition, and it has received the recognition and support of the Government of the United States.

It is the plan of the World's Congress Auxiliary to bring into communication, through these Congresses, the best thinkers and workers in every department of knowledge, including religion, science, philosophy, literature, art, agriculture, trade, labor, etc., and by the presentation and interchange of ideas, methods, theories and practical experiences, to promote the advancement of all that is noblest and best of our present civilization.

Committees have therefore been appointed to organize a series of Congresses, representing nearly every field of thought, and of speculative and practical endeavor.

The field of professional achievement, medicine and surgery, in their various special applications, will form a very large and interesting feature of the work of the World's Congress Auxiliary.

Dentistry is an important department of medical science, and an outgrowth of our modern civilization. Its present perfection is in considerable degree due to the thought and labor of American minds.

The history of modern dentistry is covered by a period of less than two generations, and yet it has advanced from the rude operations practiced by the blacksmiths and barbers, to one of the most scientific and exact of the specialties of the healing art.

Scientific Dentistry had its birth in the United States of America. This country has the proud distinction of having organized the first school for the teaching of dental science, and the establishment of the first periodical journal devoted to the interests of dentistry, while very many of the most useful appliances and scientific methods have originated on this side of the Atlantic.

It is therefore eminently fitting that dentistry be represented at the World's Columbian Exposition by a display of the progress which has been made in the development of its materials, instruments, appliances, processes and methods of a practical nature, and in scientific research, literature and professional education.

With this end in view the dentists of the United States took steps in August, 1890, to organize such a World's Congress, by the appointment of a General Executive Committee, to whom the whole subject of organizing and conducting the Congress was referred.

The work therefore of the Committee on Dental Congresses appointed by the World's Congress Auxiliary will be chiefly in coöperation with that General Executive Committee, in publishing to the world from time to time the progress of the work of organization, in promoting the interests of the Congress in every way within their power, and keeping it in harmony with the general plans of the World's Congress Auxiliary.

Every effort will be made to secure the best talent in the presentation of scientific subjects, and in practical demonstrations.

The World's Columbian Exposition, through its Directory, will provide ample accommodations for all the various World's Congresses to be held in Chicago in 1893. The Memorial Art Palace now in process of erection on the shore of Lake Michigan, and located near the center of the city, will be devoted to this purpose. This building will contain two large audience rooms, with a seating capacity of about three thousand each, which will be used

for the general Congresses of the various departments, besides numerous smaller rooms, suitable for the chapters and sections of the Congresses, thus affording for the Dental Congress ample accommodations for clinical demonstrations of a suitable nature.

During the sessions of the Dental Congress several popular evening meetings will be held, to which the general public will be invited. At these meetings, which are intended to be educational, illustrated lectures will be delivered by some of the most eminent men of the profession on topics which are deemed to be of vital importance to the public. These meetings will be especially under the control and management of the World's Congress Auxiliary. When the suggestions of the Advisory Councillors of the Dental Congress shall have been received as to the most interesting and vital questions to be presented, a program will be arranged for publication.

A cordial invitation is extended to the dentists of the world to take part in the scientific work of the Congress by the presentation of papers and discussions, or demonstrations of new or improved methods and appliances.

America, and Chicago in particular, will have a hearty welcome for all who may come.

An earnest effort was made to bring the meeting of this Congress in close connection with others of the Department of Medicine, but that effort having proved unavailing, arrangements have been effected under which the meeting of the dental profession will be held on or near August 17th, and is expected to continue during the week or ten days following. Definite dates and details will be given in the program.

Communications in reference to the special work of the Congress should be addressed to Dr. A. O. Hunt, Secretary World's Columbian Dental Congress, Iowa City, Iowa, U. S. A.

Communications in reference to the general work of the World's Congress Auxiliary, and suggestions from the Advisory Councillors, may be addressed to the Chairman of the Committee.

DR. JOHN S. MARSHALL, *Chairman,*
No. 34 Washington street, Chicago.

DR. A. W. HARLAN, *Vice-Chairman.*

Dr. G. V. Black, Dr. C. N. Johnson, Dr. George H. Cushing,
Dr. N. Nelson, Dr. A. E. Baldwin, Dr. A. W. Freeman,
Dr. E. S. Talbot, Dr. George A. Christman,

Committee of the World's Congress Auxiliary on a Dental Congress.

THE WOMAN'S COMMITTEE OF THE WORLD'S CONGRESS AUXILIARY ON A
DENTAL CONGRESS.

DR. HATTIE E. LAWRENCE, *Chairman.*

DR. MARIE T. BACON, *Vice-Chairman.*

Dr. Emma Beanham, Dr. Louise Peterson, Dr. Rebecca McIntosh.
WORLD'S CONGRESS HEADQUARTERS, CHICAGO, June, 1892.

PARTIAL LIST OF THE ADVISORY COUNCIL OF THE WORLD'S CONGRESS AUX-
ILIARY ON A DENTAL CONGRESS.

Dr. W. D. Miller, Berlin, Germany.	Dr. J. B. Patrick, Charleston, S. C.
Dr. F. Busch, Berlin, Germany.	Dr. C. C. Knowles, San Francisco, Cal.
Dr. Thos. W. Evans, Paris, France.	Dr. F. J. S. Gorgas, Baltimore, Md.
Dr. E. Magitot, Paris, France.	Dr. G. V. Black, Jacksonville, Ill.
Dr. G. W. Sparrock, Lima, Peru.	Dr. J. E. Garretson, Philadelphia, Pa.
Dr. W. B. Macleod, Edinburgh.	Dr. R. Finlay Hunt, Washington, D. C.
Dr. A. W. W. Baker, Dublin.	Dr. E. Bacon, Portland, Me.
Dr. E. Sjöberg, Stockholm, Sweden.	Dr. Benjamin Lord, New York City.
Dr. Chas. S. Tomes, London, Eng.	Dr. A. L. Northrop, New York City.
Dr. W. H. Coffin, London, England.	Dr. W. W. Allport, Chicago, Ill.
Dr. W. G. Beers, Montreal, Canada.	Dr. W. W. Walker, New York City.
Dr. H. C. Edwards, Madrid, Spain.	Dr. L. D. Carpenter, Atlanta, Ga.
Dr. E. Decaudy, Paris, France.	Dr. J. Y. Crawford, Nashville, Tenn.
Dr. C. Platschick, Pavia, Italy.	Dr. W. J. Barton, Paris, Texas.
Dr. J. Arkövy, Buda-Pesth, Hungary.	Dr. J. Taft, Cincinnati, Ohio.
Dr. C. Redard, Geneva, Switzerland.	Dr. C. S. Stockton, Newark, N. J.
Dr. J. G. Van Marter, Rome, Italy.	Dr. L. D. Shepard, Boston, Mass.
Dr. W. H. Morgan, Nashville, Tenn.	Dr. H. J. McKellops, St. Louis, Mo.
Dr. W. H. Dwinelle, New York City.	Dr. A. O. Hunt, Iowa City, Iowa.
Dr. R. B. Winder, Baltimore, Md.	Dr. H. B. Noble, Washington, D. C.
Dr. Elisha G. Tucker, Boston, Mass.	Dr. G. W. McElhaney, Columbus, Ga.
Dr. W. W. H. Thackston, Farmville, Pa.	Dr. J. C. Storey, Dallas, Texas.
Dr. J. B. Rich, Washington, D. C.	Dr. M. W. Foster, Baltimore, Md.
Dr. J. D. White, Philadelphia, Pa.	Dr. A. W. Harlan, Chicago, Ill.
Dr. W. H. Eames, St. Louis, Mo.	Dr. J. S. Marshall, Chicago, Ill.

PARTIAL LIST OF THE WOMAN'S ADVISORY COUNCIL ON A DENTAL CONGRESS.

Dr. Lucy H. Taylor, Lawrence, Kan.	Dr. M. T. Benfield, Honolulu, Hawaii.
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Dr. Annie D. Romborgen, Philadel- phia, Pa.	Dr. Bella Meller, Vienna, Austria.
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Dr. Clara W. McNaughton, Washing- ton, D. C.	Dr. Marie M. Schneeyans, Elberfeld, Germany.
Dr. Kate C. Moody, Mendota, Ill.	Dr. Emma Lacey, London, England.
Dr. Martha J. Robinson, Cleveland, O.	Dr. Clotilde Lenta, Rome, Italy.
Dr. Annie F. Reynolds, Boston, Mass.	
Dr. Marie Holst, Aarhus, Denmark.	

NATIONAL ASSOCIATION OF DENTAL FACULTIES.

The ninth annual meeting of the National Association of Dental Faculties was held at Niagara Falls, August 1st, 1892.

Twenty-six colleges were represented, as follows :

- Baltimore College of Dental Surgery.—R. B. Winder.
 Boston Dental College.—J. A. Follett.
 Chicago College of Dental Surgery.—Truman W. Brophy.
 Harvard University, Dental Department.—Thomas Fillebrown.
 Kansas City Dental College.—J. D. Patterson.
 Missouri Dental College, Dental Department of Washington University.—W. H. Eames.
 New York College of Dentistry.—Frank Abbott.
 Ohio College of Dental Surgery.—H. A. Smith.
 Pennsylvania College of Dental Surgery.—C. N. Peirce.
 Philadelphia Dental College.—J. E. Garretson.
 University of Iowa, Dental Department.—A. O. Hunt.
 University of Michigan, Dental Department.—J. Taft.
 University of Pennsylvania, Dental Department.—J. Truman.
 Vanderbilt University, Dental Department.—W. H. Morgan.
 Northwestern College of Dental Surgery.—B. J. Roberts.
 Louisville College of Dentistry.—Francis Peabody.
 Indiana Dental College.—J. E. Cravens.
 Northwestern University Dental School.—E. D. Swain.
 Dental Department of Southern Medical College.—William Orenshaw.
 Dental Department of University of Tennessee.—J. P. Gray.
 School of Dentistry of Meharry Medical Department of Central Tennessee College.—G. W. Hubbard.
 University of Maryland, Dental Department.—John C. Uhler.
 Columbian University, Dental Department.—H. C. Thompson.
 Royal College Dental Surgeons Ontario.—J. B. Wilmott.
 American College of Dental Surgery.—John S. Marshall.
 University of Denver, Dental Department.—George J. Hartung.
- The *ad interim* committee reported that it had investigated a charge preferred against the University of Maryland, Dental Department, by the College of Dentistry of the University of California, of graduating a person in less time than the rules demanded ; that it found no rule of the Association had been violated, and had so reported to the parties in interest ; that it had dismissed an effort for the reinstatement of the American College of Dental Surgery, Chicago, as not within the jurisdiction of the committee,

with the advice to reorganize the college before attempting to influence the Association to change its action, which reorganization has since been accomplished.

The committee also stated that its value in settling such irregularities had been so clearly apparent it recommended that it should be made a standing committee, to be elected by the Association, instead of being appointed by the President.

The report was received and placed on file, and the recommendation with regard to the status of the committee was adopted.

The following, laid over from last year, were adopted :

Resolved, That in charges against any college, no final action shall be taken till all parties concerned shall have at least thirty days' notice.

Resolved, That at all future meetings of the National Association of Dental Faculties the delegates shall consist of members of faculties, and demonstrators will not be received.

The following, also over from last year, were laid on the table :

Resolved, That after June, 1893, the yearly course of study shall be not less than seven months, two months of which may be attendance on clinical instruction in the infirmary of the school, now known as intermediate or infirmary courses.

Resolved, That after the session of 1892-93, four years in the study of dentistry be required before graduation.

The following resolutions lie over under the rules :

Offered by Dr. Winder :

Resolved, That hereafter graduates of pharmacy be placed on the same footing as graduates of medicine, and be entitled to enter the second year or junior class, subject to the examination requirements of each college.

Offered by the Executive Committee :

Any college failing to have a representative present for two successive sessions without satisfactory explanation, shall be dropped from the roll of membership of this Association.

The chair, having been asked for a ruling on the admission of graduates of pharmacy to the junior class, decided that under the rules they could only be admitted to the first year or freshman class.

The Executive Committee offered a report recommending the restoration of the American College of Dental Surgery to full membership, which, after an explanation by Dr. Marshall of the reorganization of the college, was unanimously adopted.

The Executive Committee reported on the application of the

Western Dental College, of Kansas City, recommending that it lie over for one year. The report was adopted.

The report of the Executive Committee recommending the rejection of the application of the Tennessee Medical College, Dental Department, of Knoxville, Tenn., for irregularities in conferring the degree of D.D.S. and in the reception of students, was adopted.

The application of Howard University, Dental Department, Washington, D. C., was laid over for another year.

The following applications for membership, also reported by the Executive Committee, lie over under the rules :

United States Dental College, Chicago.

Homeopathic Hospital College, Dental Department, Cleveland.

Detroit College of Medicine, Department of Dental Surgery.

The report of the Executive Committee recommending that the Baltimore College of Dental Surgery be censured by the Association for conferring the degree of Doctor of Dental Surgery on Charles F. Forsham, M. A., LL.D., of Bradford, England, *in absentia* and honorarily, in violation of the rules of the Association, was adopted.

Dr. Truman offered an amendment to the rule regarding the conferring of the degree of Doctor of Dental Surgery honorarily, absolutely prohibiting the exercise of that privilege to the members of the Association, but the amendment was lost, after discussion, it being the general sense that the present rule is a sufficient safeguard against the unworthy bestowal of the honor.

Dr. Cravens offered the following amendment to the constitution, which goes over under the rules :

Amend Article VII so that it shall read as follows :

ART. VII. Any reputable dental college, located in any State of the United States, may be represented in this body on submitting to the Executive Committee satisfactory credentials, signing the constitution, conforming to the rules and regulations of this body, and paying such assessments as may be made.

A communication from the Post-Graduate Dental Association of the United States, suggesting the establishment by the colleges of short courses of training and teaching especially designed and arranged for practitioners, was received and referred to the Executive Committee.

The manuscript of a "Compend of Materia Medica and Pharmacy for Dental Students," by Dr. E. L. Clifford, of Chicago, was referred to the Committee on Text-books, with power to act.

Dr. Marshall offered the following resolution, which was adopted :

Resolved, That the Secretary be instructed to notify the National Association of Dental Examiners that the National Association of Dental Faculties considers it out of its province to legislate on the relative values of the L.D.S. and D.D.S. degrees.

The following were elected officers for the ensuing year : J. D. Patterson, Kansas City, President ; H. A. Smith, Cincinnati, Vice-President ; J. E. Cravens, Indianapolis, Secretary ; H. A. Smith, Cincinnati, Treasurer ; F. Abbott, of New York ; J. Taft, of Cincinnati, and A. O. Hunt, of Iowa City, Executive Committee ; James Truman, of Philadelphia ; Frank Abbott, of New York, and Thomas Fillebrown, of Boston, *ad interim* Committee.

The President appointed as the Committee on Schools, Drs. J. A. Follett, Boston ; S. H. Guilford, Philadelphia ; E. D. Swain, Chicago ; C. N. Peirce, Philadelphia ; T. W. Brophy, Chicago

Adjourned to meet at the call of the Executive Committee.

NATIONAL ASSOCIATION OF DENTAL EXAMINERS.

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

The sessions were presided over by the Vice-President, Dr. Magill, the elected President, Dr. L. D. Shepard, of Boston, explaining his resignation from the State Board of Massachusetts, which necessarily carried with it his resignation of the Presidency of the Association. The resignation was accepted with regret, and Dr. Shepard was unanimously accorded the privileges of the floor.

The following State Boards were represented at the sessions :

Colorado.—George J. Hartung.

Georgia.—D. D. Atkinson.

Iowa.—J. T. Abbott, J. B. Monfort.

Indiana.—S. T. Kirk.

Maryland.—T. S. Waters.

Minnesota.—L. W. Lyon.

Massachusetts.—E. V. McLeod.

New Jersey.—Fred. A. Levy.

Ohio.—Grant Mollyneaux, Grant Mitchell.

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

Tennessee.—J. Y. Crawford.

Wisconsin.—Edgar Palmer.

Kansas.—A. H. Thompson.

The following Boards were admitted to membership :

Virginia.—J. Hall Moore.

North Carolina.—V. E. Turner.

Oklahoma.—D. A. Peoples.

South Dakota.—C. W. Sturtevant.

District of Columbia.—Williams Donnally.

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

NIAGARA FALLS, August 1st, 1892.

To the National Association of Dental Faculties :

GENTLEMEN :—Whereas, a very considerable abuse has arisen by the improper use by students of the various certificates of the schools, such as the “standing” and “passing” certificates, to support students and graduates under age in their attempt to illegally engage in practice ; we therefore ask your Association to request the various colleges to have their “standing” and “passing” certificates of such uniformity of terms in each case that they can be used for no other purpose, and that they be printed in few words and small type, and be signed only by the dean.

Respectfully,

National Association of Dental Examiners.

Fred. A. Levy, Secretary.

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

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

The following resolution, offered by Dr. Crawford, was adopted :

Resolved, That when a member of any State Board becomes a teacher of a dental school, his resignation from his board should follow.

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

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

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

These are : First, that your Association require the universal enforcement of a higher grade of preliminary education of candidates for matriculation. This proposition lies at the foundation of dental education, in which is involved the quality of the graduates of the future, on which depend the advancement, the standing, and the dignity of the dental profession.

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

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

Baltimore College of Dental Surgery, Baltimore, Md.

Boston Dental College, Boston, Mass.

Chicago College of Dental Surgery, Chicago, Ill.

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

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

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

Northwestern University Dental School.

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

Dental Department of Southern Medical College, Atlanta, Ga.

Dental Department of University of Tennessee, Nashville, Tennessee.

Harvard University, Dental Department, Cambridge, Mass.

Indiana Dental College, Indianapolis, Ind.

Kansas City Dental College, Kansas City, Mo.

Louisville College of Dentistry, Louisville, Ky.

Missouri Dental College, St. Louis, Mo.

New York College of Dentistry, New York City.

Northwestern College of Dental Surgery, Chicago, Ill.

Ohio College of Dental Surgery, Cincinnati, O.

Pennsylvania College of Dental Surgery, Philadelphia, Pa.

Philadelphia Dental College, Philadelphia, Pa.

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

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

University of Iowa, Dental Department, Iowa City, Ia.
 University of Maryland, Dental Department, Baltimore, Md.
 University of Michigan, Dental Department, Ann Harbor, Mich.
 University of Pennsylvania, Dental Department, Philadelphia,

Pennsylvania.

Vanderbilt University, Dental Department, Nashville, Tenn.

Western Dental College, Kansas City, Mo.

Minnesota Hospital College, Dental Department, (defunct.)

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

American College of Dental Surgery, Chicago, Ill.

The report was adopted.

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

Adjourned.

ANKYLOSIS—A CASE.

The following instance of complete ankylosis of the jaws on both sides is of a lady, aged thirty. There is a heavy growth of cicatricial tissues occupying the space of the second and third molars. The soft tissues in and about the whole region was deeply scarred, the result of pytalism and surgical operations to break up the adhesions of the soft parts and the bones as well. The bicuspid and cuspid were in place, but the incisors both above and below had been taken out, that the patient might take nourishment through the orifice left.

The first molars were in direct apposition, and their masticating surfaces occluded. The right lower was so painful it was extracted.

At the age of six years mercurial salivation occurred, which was very extensive. At the age of ten years, and again at twelve years of age, extensive surgical operations failed to cure, or even better the effects of this horrible disease. The patient then gave up all hope of relief, suffering great pain, mentally and bodily, besides disfiguration of the face, mouth, and associate parts.

Happily, the days of calomel and mercurial salivation are passed, and so are the terrible operations then in vogue. A suggestion that another operation might possibly bring relief was met by the patient with a flat refusal, though disfigured, weak and suffering, taking her food only in liquid form, mumbling her speech in broken words, a dreary waste of existence. Was she right? Is her case beyond hope? *W. H. H. Barker, Miller, South Dakota.*

THE SOUTHERN DENTAL ASSOCIATION.

Reported for ITEMS OF INTEREST by Mrs. J. M. Walker.

The Southern Dental Association convened in twenty-third annual session on Lookout Mountain, near Chattanooga, Tenn. That immense caravansery, Lookout Inn, was opened specially for the occasion, and no grander place was ever selected for such an occasion. The meetings were held in the chapel attached to the Inn, a roomy pavilion open on all sides to the cool breezes and the pure mountain air. The superb apartments of the Inn offered ample space for the dental exhibits; the "north porch" offered fine light for the clinics, to which Wednesday and Thursday mornings were devoted, while the immense dining hall not only easily seated the three or four hundred guests at meals, but was resplendent with grace and beauty in the occasion of the grand ball on Thursday night, and resounded with wit and eloquence at the banquet tendered the Association by the State of Tennessee Dental Association, at which the tables were graced by the ladies in attendance, contrary to the usual custom of excluding them on similar occasions.

The meeting was called to order Tuesday, July 26th, by the President, Dr. Gordon White, Nashville, Tenn., and opened with prayer by Dr. Jonathan Taft.

Dr. J. T. Crawford presented the President with an elegant silver-mounted gavel, made, he said, from the wood of an historic tree, grown on an historic spot, offered on an exalted plain.

Dr. W. W. Walker, Chairman of the Executive Committee of the World's Columbian Congress, addressed the Association on the work that has been accomplished by the various committees, and also on the financial aspect of the affair, with such good effect that at the last session \$200 from the treasury of the Association was ordered sent to the Treasurer of the Congress.

Dr. B. Hally Smith, Chairman of the Committee on Dental Education, in his report from that committee, said that while fully recognizing the debt of gratitude due by the colleges to the efficient Dental Examining Boards, and the dental laws of the different States, constituting a complete and adequate machinery adapted to the work of excluding imperfectly prepared candidates from the profession, and forcing a constant elevation of the standard of requirements, yet that incidental and collateral questions were arising whose adjustment involves the rearrangement of some of the machinery that has been provided for the profession and the public. He said that for decades and centuries, the history of progress itself has been the history of some famous college, in its conservation of what was

valuable in knowledge, and its propagation of what was alive and fructifying in thought. The similar influence of our dental colleges should not be underestimated. The position of the Examining Boards is the direct outgrowth of laws designed, not primarily for the elevation of the standard of dental education, that being an incidental and indirect effect—but for the protection of the public from the evils and injuries which they may receive at the hands of incompetent and ignorant practitioners. While it is a source of pride and congratulation that the execution of these laws has been entrusted to the Examining Boards composed of competent and efficient men, who have thoroughly and conscientiously discharged their duties, recognizing their double duty to the State and to the profession, protecting the interests of the one and advancing and elevating the standard of the other—yet there is nevertheless some slight inharmony among the elements that should work together for the good of *all* concerned, *viz.*, the public (or patients), the profession at large, the colleges and the students. As citizen to citizen that responsibility is discharged when protection is afforded from quacks and charlatans. In this matter the power of the boards is entirely discretionary; it may be so exercised as to become either perfunctory or prohibitory. The standard must necessarily be shifting and the tests unsatisfactory, and insufficient examinations before a Board often fail completely to show what a student *does* know, while apparently making clear a few things that he seems *not* to know. A test, extending over three years, and covering every variety of instruction and practice he is likely to meet with in practice, must be more convincing. The conclusion is that a diploma from a competent faculty, granted after three years of faithful study, and initiatory or student practice, should have a preponderating weight in the establishment *vel non* of a candidate's fitness to practice his profession." The profession rightfully claims from the colleges an adequate and thorough course of instruction, competent and scholarly instructors, and honorable, conscientious labor. And the pledge of the college is to eliminate by thorough and conscientious instruction, the immature and the unadapted, from the ranks of those seeking entry into the dental profession. This responsibility of the colleges must of necessity be higher and greater than that of examining boards. The former undertake to prepare, the latter simply to exclude. Many a young man proposing to enter dentistry is now, in his present relation to the unrelated and unconnected college and board, "between the devil and the deep sea." While convinced that the proper place to study dentistry is the dental college, yet he sees college graduates

whose diplomas prove neither a defense nor an honor at the hands of an all-powerful board. He naturally concludes "what is the use of wasting my time and my money in going to college to prepare myself by a three-year course of study and practice for my life work, when the evidence of that work is as nothing in the balance?" The result is an undervaluation of systematic training and continued study—irregularities in preparation, and a lowering of grade in requirements, skill and science. As a step towards harmonizing these incongruous elements, the proposition made by Dr. Smith is, briefly, the examination, once for all, of candidates for graduation, by the Examining Board of the State in which the college is located, the student feeling, when he has graduated under these test conditions, that he has earned the right to go forward in his profession, learning in the daily exigencies of his work, more than either colleges or boards can teach him. With no dread of examination after examination hanging over his head, as circumstances may lead to change of location, he will rely more on faithful study and adequate preparation, rather than uncertain kind of ability to perform those mental gymnastics miscalled examinations.

This able and well-considered address, of which but a brief epitome is here given, was discussed at length by members of various State Examining Boards, including Drs. Chisholm and Young, of Alabama; Browne, of Georgia; Wright, of South Carolina; Turner, of North Carolina; Jones, of Florida, and others. Dr. Chisholm spoke of the inanity which had compelled the enactment of dental laws, and the vast improvement in preparation of candidates for examination and license to practice, and thought that the day was approaching when examinations by the board would be such but in name, and a diploma a sufficient guarantee of ability, skill, and preparation.

Dr. Turner thought the State examination proposed by the essayist impracticable, the laws of the different States not harmonizing.

Dr. Jones said the dental laws of all the States should be uniform, and the license of one State Board good in all the States—too much red tape in the business.

Dr. R. C. Young looked on the three-term course of the colleges as the most gigantic step as yet taken by the profession, and one brought about by, and due entirely to the influence of, the State Examining Boards. In closing the discussion, Dr. Smith said his friends wished him to exonerate himself from a false impression that had been created as to his opposition to examining boards. He said that the boards have done much that's laudable and commend-

able in harmonizing and establishing proper relations between the profession and the colleges. He would rather have those who have been under his instruction, pass before the most strict and rigid board than go out unprepared. But he thought when he had worked with a man for three years he knew what that man knew. A man may get nervous and paralyzed as it were, before a State Board, and his failure to pass be no proof that he is incompetent to practice dentistry.

Dr. Chisholm cited cases from the earliest examinations before the Alabama State Board, where men holding college diplomas were unable to say whether a child had deciduous bicuspid; another who thought it would take "about five years" for the broken off corner of a tooth to build itself up again, etc., etc., but said that of late years, and because of the work of the different State Boards, men came from the colleges much more thoroughly prepared. He desired to direct the attention of the college faculties to the two branches, chemistry and etiology, as requiring more attention.

Dr. R. R. Truman, in the discussion of prosthetic dentistry, said that after restoring the parts to a physiological condition, substitutes for lost portions should harmonize as closely as possible with the surrounding organism in appearance, feeling, and function. While the principles of mechanics are unchangeable, we must remember that we are dealing with living structures, subject to physiological and pathological changes. In taking an impression the cup should be cut, bent, or twisted, or even a special one made for the case in hand, so as to secure exact conformity to what is desired. After the impression cup fitted with material has been put in impression, the cheeks drawn out, the lips drawn first down and forward and then pressed upward, bringing the plaster firmly against the alveolar border, the cup, while really held up firmly, should be given an apparent movement, as though to draw it down and out, so as to allow the muscles to relax; if driven up too tightly the tissues will be hard and unnaturally compressed. To aid in retaining a lower plate in position, a ridge may be made around the border by adjusting a piece of wrapping twine saturated in wax, which, when reproduced on the plate, will afford a line on which the lip will take hold, causing it to adhere with great tenacity.

Dr. W. C. Browne (Atlanta) allows the patient to bite on the impression cup and thus hold it firmly up in place, relieving both patient and operator from uncomfortable positions while waiting for the plaster to set. When the tissues are hard and the mouth flat, he inserts a piece of soft flexible rubber, the size of an air

chamber, which affords better adhesion in difficult cases. He also uses the soft rubber for lining lower plates.

Testimony to the great value of the Marshall anchor plate, was given by a number of members of the Association who have been using this method since it was given to the Association by Dr. Marshall (Oxford, Miss.), at the meeting at Morehead City last year. The method has been found to give universal satisfaction, especially when anchored to one tooth only.

Dr. George Evans (New York City) described his method of making a double crown or cap which he also illustrated in clinics. Having adjusted a crown to the tooth in the mouth, he makes from it a die of Melotte's fusible metal, around which he wraps No. 30 to 32 pure gold wire. A narrow strip of No. 32 gold soldered on the outside of the wire crown forms a telescoping crown of very exact fit. To prevent the solder from flowing on the inside, or where it is not wanted, the parts may be painted with whiting. To remove the fusible metal from the crown, a little of the same is melted in a cup, and the crowned die dropped into it, when the gold crown will float to the surface of the melted fusible metal.

Dr. H. E. Beach (Clarksville, Tenn.), after adjusting a band to the crown of the tooth in the mouth, removes and fills it with plaster. To this model he adjusts a band of tin foil as a pattern by which to cut and trim his gold for a telescoping band. A lug for attachment to the plate is soldered on afterwards.

Dr. Thompson (Atlanta) gets a metal model of the tooth with the crown on, to which he adjusts his telescoping band. He uses pure block tin which melts readily, casting it directly from the impression. He bends the ends of his band back in opposite directions, giving good attachment to the rubber of the plate.

Dr. Browne (Atlanta) uses tinner's solder instead of pure tin, as being more easily procurable. He takes his impression and sets it on the stove to dry at the same time with his ladle of metal; by the time the metal is melted the plaster will be dry enough. He pours the metal in very slowly, building it up the sides of the flask as it hardens.

Dr. S. B. Cook (Chattanooga), in case of undercuts or overhanging margins, lays strips of mica across, dividing the model into sections which are readily put together.

Dr. R. R. Truman (Nashville), when there is no tooth to which to adjust a telescoping band, attaches a Richmond or Logan crown to a sound root, attaching the plate by clasps to the porcelain crown.

The election of officers was held on the afternoon of the second day, with the following result: President, Dr. B. Hally Smith, Baltimore, Md.; First Vice-President, Dr. R. K. Luckie, Holly Springs, Miss.; Second Vice-President, Dr. S. B. Cook, Chattanooga, Tenn.; Third Vice-President, Dr. L. P. Dotterer, Charleston, S. C.; Corresponding Secretary, Dr. D. R. Stubblefield, Nashville, Tenn.; Recording Secretary, Dr. S. W. Foster, Decatur, Ala.; Treasurer (re-elected), Dr. H. E. Beach, Clarksville, Tenn.

Dr. J. N. Crouse addressed the Association in the interests of the Dental Protective Association. A vote of thanks was tendered Dr. Crouse for his able address, the earnest and hearty coöperation of the Association promised, and a committee of three in each Southern State appointed to bring the objects of the Dental Protective Association more fully before the members of the profession in the South.

Dr. B. Holly Smith addressed the Association on the subject of the "Wilcox Bill," and the successful fight recently made to prevent the classification of dentists among manufacturers and ordinary mechanics by the Census Bureau in the requirement of certain statistics and returns. The protest and resolutions offered on the subject were adopted, and a committee appointed to raise funds towards defraying the expenses of the fight.

Dr. W. J. Barton (Paris, Texas,) read a report from the Committee on Pathology and Therapeutics, after which Dr. John S. Marshall (Chicago) spoke on the uses of Electricity as a Therapeutic Agent. In his own practice he has found it a valuable agent in the treatment of hypertrophied conditions of the pulp and dental membranes, of benign tumors of the gum and alveolar process, and in testing teeth for vitality. In the continuous galvanic current, the positive current produces anemia and depletion, the negative congestion and plethora. The Farradic current stimulates the absorbent organs, reducing hypertrophy and neoplasms. A galvanometer must be used to measure the strength of the current, not more than three-quarters milliampere, which may be very gradually increased, continuing treatment from ten minutes to half an hour. Such remedies as aconite, iodine, etc., may be used on the sponges of the electrodes, by which they are rendered more promptly effective than by mere topical application. In testing a tooth whose vitality is doubtful, other responses being vague, the Farradic current applied through the positive pole affords an unfailling test. A live tooth cannot stand one-half milliampere, while on a dead tooth the strength of the current may be increased to two or three milliamperes.

EXPANSION OF RUBBER.

Some of us are not yet convinced that the occasional fracture of teeth in vulcanizing is caused by expansion of the rubber.

Since I commenced trying to prevent fracture of teeth, in a modest way, I have made numerous experiments in vulcanizing without flasks, and, when the thickness of the rubber did not exceed a half inch, and there was sufficient time for vulcanizing, the plaster has never burst; though, if the heat is applied very rapidly, so that the sulphurous gas hasn't an opportunity to escape, it often breaks the brittle plaster. In either case I have noticed a marked contraction in the rubber after vulcanizing.

Dr. Murphy, in a frantic effort to prove the correctness of his theory, asks if I have never seen the small globules of rubber that appear on the surface of my plates as they come from the vulcanizer; and adds that they are "one of the highest evidences of expansion." These globules were there before it went into the vulcanizer. They occur when the flask is closed in the press.

When we want a smooth surface we cover the plaster with tin foil; but if the rubber possessed such expansive force, and the plaster so soft as is claimed, the frail foil would be forced into the plaster. The plaster is soft after vulcanizing, but did not assume this softened condition till the rubber plate had become quite hard.

Sulphurous gas is a powerful agent, and when heated expands, and when all avenues of escape are cut off something must give way. If the expansive force of rubber was sufficient to fracture porcelain gums, we must conclude that the greater the thickness of rubber behind the gums, the greater the danger of fracture. But this is not so.

It is not true that a plaster investment enclosed in a metallic flask affords no resistance to expansion, if it were, why in vulcanizing rapidly without flask does the plaster sometimes burst with a loud report, and *not* when vulcanized *with* flasks?

When the case is packed and closed immediately (especially if too much rubber has been used), if it is placed in cold water and allowed to thoroughly chill, and we then trim off all the surplus rubber that has exuded, and again heat up the flask to a high temperature and keep it there a little time, we will find more rubber will press out. Plastic rubber offers resistance to the closing of the flask, so that when the two halves of the flask are brought closer together, and press out the rubber, it is not expansion of the rubber that causes the rubber to ooze out, but a more perfect closing of the flask.

If these observations induce any dentist to look to the manner of closing his flask, the time of vulcanizing and the cooling, rather than to the expansion of rubber, fewer gum sections will be broken.

J. H. Boyett, Waco, Texas.

LABORATORY HINTS.

Closing the Vulcanizer.—Always examine the packing groove in the cap before screwing on the vulcanite boiler. Many leaks are caused by small particles of plaster or other dirt getting in here, thus preventing the cap from closing down to its place.

Bending Glass Tubes.—The dentist will find this useful in making or fitting up any thing where glass tubing is to be used. This process can be used for shaping tubes of one inch or less in diameter. Take common river sand and run it through a fine sieve, in order to remove the coarse articles. Now, fill the tubing it is desired to bend with the fine sand; put a cork in each end of the tube; make a small hole in each cork with a drill, for the escape of steam which may generate in heating. Hold the part of the tube to be bent obliquely above the flame of an alcohol lamp, gradually lowering it into the flame as it heats; when pliable enough, bend to the desired shape. Have a pan of hot sand ready, and instantly imbed the tube in it; this will cool it slowly, keep it from cracking, and leave it with a good temper. For handling the tube while manipulating it, use asbestos paper to protect the hands. Sand has long been used for this purpose, but so far as I know the above method is original.

Easy Way to Make Metal Dies.—Take the impression, and make the plaster model as usual. When the model is hard, shape it as you want the metal die; cover it with heavy tin foil; making a perfectly smooth fit. Now, lay the model on a piece of glass, tin side up; and cover it all over with plaster, from one-fourth to one inch thick, making it thick on palatine part, and then on rim, especially if there is a good deal of undercut; when the plaster sets remove the model. If the rim breaks in separating, replace and back up with new plaster, mixed thin; this gives a tin lined mold for casting in. Put the mold over the kerosene stove, and when hot pour in the zinc, or babbitt metal. The metal should not be too hot when poured; have it just so it will scorch white paper without burning.

In putting the tin on the model, and in separating the model from the mold, care must be used not to tear or puncture the tin. Smoke the die, or coat with whiting and cast the counter as usual.

Dr. Wm. H. Steele, Forest City, Iowa.

EXPRESSION IN ARTIFICIAL DENTURES.

It is a profitable and interesting study to consider the relation of each tooth or class of teeth in their normal arrangement. Our work will give evidence of artistic improvement in proportion as this is gained. The expression, shape and size of the teeth may be studied with advantage in connection with the subject of temperament. Patients in whom the bilious type prevails, we shall find, require the dark or bluish tint, and long, narrow shape, not so strongly marked in this latter particular, however, as in the purely nervous temperament, where the teeth are almost invariably narrow. Whether dark or light in shade, where the sanguine temperament prevails, the length should be less marked in relation to the width, and the shade should approximate to a white with a yellowish tinge. The lymphatic patient usually requires a short, broad tooth, though in some of this type the natural teeth are longer and not so broad, presenting the appearance attributed to those of the sanguine temperament. The color is white, often chalky, but sometimes showing that pearly gloss and glistening enamel peculiar to young ladies of a scrofulous habit, who may be classed as having a temperament of their own.

Considering the arrangement of the teeth, we need devote but little space to suggestions concerning the central incisors, mere instinct, should judgment be wanting, would seem capable of arranging these teeth properly. It may be remarked here, however, that the leaving of a little wider space between them than is presented between the other teeth, tends, I think, to lessen their artificial appearance. Their cutting edges should be on a line with each other. To the lateral incisors belong more of the responsibility of a perfect expression than is generally accorded them. The peculiar cast of the countenance will assist us in the arrangement. Should the face be markedly thin the best result will be obtained by throwing the laterals slightly in. If it is noticeably round and full they may set directly up to the line of the centrals, and at times a little in advance. The body of the tooth may project, if the cutting edge does not obtain the desired expression of fullness. The canines in the sections manufactured for vulcanite base are lacking in the prominence which a natural expression demands. Could the body of the tooth be thrown out and at the same time twisted, so as to present more of the mesial surface to the eye, the improvement, I think, would be apparent. In setting single teeth, when these details can be carried out we may throw the neck of the cuspids a

little back toward the bicuspid, giving it more hang or draw than is observable in the sections, and with a better effect. With many the intensely artificial appearance presented is owing to a too great projection of the bicuspid. As sections are now manufactured, if we set the gum surface of the front and bicuspid blocks perfectly even with each other they will be altogether too prominent, giving that peculiar ghastly appearance so often complained of, and at once stamping the work artificial. The twist of the cuspid mentioned above would tend to remedy this defect by partially concealing the bicuspid; but as this is not attainable it is my own practice, and I believe the preferable one, to set in the bicuspid blocks regardless of the jag or shoulder produced. The molars may be said to naturally gravitate to their own positions. It is, however, a common practice, especially when an entire set is being constructed, and there are consequently no natural lower teeth to serve as a guide, to make the upper molars too long. In the natural arrangement we often find them considerably shorter than the bicuspid, the cutting edges of the teeth, from the second molar to the lateral, occasionally describing quite a curve. We also find the molars so inclined that the inner cusps are considerably lower than the outer. In artificial dentures the reverse is often the case. With regard to the lower teeth I may remark that they are so little exposed to view, in comparison with the upper, that much less difficulty is experienced in securing their correct expression. Excessive length of the six oral teeth is, however, sometimes met with a slight crowding of the incisors, producing a remarkably natural appearance, but in the employment of sections it is of course impracticable, and when single teeth can be used I should set them regular. A word of warning concerning the selection. We should bear in mind the fact that the teeth will appear white when placed in the mouth in contrast with the red color of the lips and the darkness of the mouth generally. It is the universal experience that our lady patrons are prone to desire teeth of a much lighter shade than a natural expression would possibly admit of. In yielding to their wishes in this respect we shall in the end do ourselves more injury than by following the dictates of our own judgment at the risk of incurring their temporary displeasure.

The sum of our whole instruction is, therefore, seek a natural expression of your denture; not necessarily one that is artistically correct, or each tooth in harmonious relation with its neighbor, but as a whole in harmony with the other features, the expression, and especially with the expressions of speech and laughter.

REQUIREMENTS TO ENTER A DENTAL COLLEGE.

In looking over the announcements of the various dental schools, it has been of interest to observe what are called the requirements for admission to these schools. Each has to say what it requires, but in reading the statement one is inclined to take it "with a grain of salt."

The actual requirements are those without which a man cannot take the course comprehensively. The order of his faculties is so low, or the amount of common-school training is so little, he cannot listen to and understand the lectures. No one would question the justice of rejecting such a candidate for admission. But, on the other hand, it cannot be denied that a man might be (and scores of such cases could be pointed out) a brilliant operator, and be able to treat all pathological conditions that come within the line of his profession, as well as the best, and still not know a word of Latin. The question then arises, Is the Latin language an actual requirement? There is no doubt that the profession would occupy a higher plane if every member was a Latin scholar; but as dentistry *per se* is largely mechanical, there is great doubt of Latin being an actual requirement.

In one announcement the requirements for admission are as follows: "Beside the common-school branches of English, arithmetic and geography, there is one selective study, which must be German, Latin or physics." Now, further than a pleasure and accomplishment, German is of small value to a dental student. German medical literature is a rich field, but in the specialty of dentistry it is not so valuable—certainly of little or no value to a student, who can get more than he can digest from his English text-books. German, like Latin, is highly desirable, but by no means an essential. Physics is really of more use than either of these languages, for one could not practice dentistry a week without becoming acquainted with the action of some physical law.

In one school botany is required. This seems almost an injustice to the applicant. Schoolmaids of sixteen usually study botany till they come to some long word like monocyledenous, and then leave off the study. If that be the requirement, perhaps the demand is not too great; but if it is required to have become familiar with botany as a science, it is too much to be demanded from a dental student, for in general dental practice the use of vegetable drugs is not extensive, and a knowledge of the botany of the plants that are used is not at all necessary. The magnitude of botanical

science is known to but few, and the importance of the study is not appreciated by many, yet it bears so little on dental education that very little of the study is given in lectures on dental materia medica. If this branch is taught in medical colleges, it is in a most elementary manner, and the only school of science in which the subject is treated in an exhaustive manner are schools of pharmacy or natural history. It is like requiring a student to have taken lessons in fencing; indeed, the latter would be of more benefit, for the use of foils would practice one in manual dexterity, which is essential to success in dental practice.

So that while it is desirable to raise the standard of preliminary requirements, peculiar and irrelevant subjects should be avoided, as being unfair. If any language be required, it should be nothing more than a moderate proficiency in Latin, and, I think, no modern language should be looked for, any more than the study of music. Many of the students who apply for admission do know Latin and German and botany, and much more, but they have, as a rule, high school certificates or diplomas, which makes it unnecessary to examine them. The more they know the better, and no school will refuse them for knowing too much; but it is not to such as these that the examinations are given; it is to those who have never been to a high school—which means that they have not studied Latin, botany and like branches.

The writer recalls the requirements of entrance in schools in which he studied during several years' tuition in the East. It was at the time when the question of preliminary requirements was first agitated, or perhaps at the time when they began to mean something. In the dental class were men whose education was thorough and in some cases classic.

There were also members of the same class to whom the writing of the words Wednesday and February, without the aid of a dictionary would have been an orthographic feat equal to the cleaning of the Argean Stables. A gentleman of this class, two days after taking his degree of D.D.S., wrote a note to the writer in which the plural to the word tooth was spelled teath. This was one of many such errors.

Going from a dental college to a school of medicine where the professed requirements were in no case demanded, I found, of course, a class of students of various grades of education, some of whom were lacking, in a grave degree, the amount of common-school training which should be demanded of any one desiring to pursue a course of medical study.

I then went before a committee of three gentlemen, of another

school, who were appointed by their faculty to give preliminary examinations to applicants for admission to the medical class. My only object in leaving the first school was that, having no preliminary requirements, they were graduating in large numbers men, some of whom had very little education of any kind. The course of instruction in this institution was quite equal to that of the college to which I went; indeed, I believe it to be as good as any in America.

Before the above mentioned committee, there were at that time nine applicants for admission. Of these nine, five were rejected. Here are a few of the questions that were asked:

What is the difference between mind and soul?

Parse the R in a given written Latin prescription.

How would you go to Duluth from St. Paul by water? etc., etc.

I have a special interest in these examinations, as I have for the last two years given entrance examinations for a school with which I am connected. I believe the standard for these examinations should be made higher, by which I mean more thorough, but by no means the introducing of odd or useless requirements.

I am informed by a dean of one college that in case a student fails on entrance examination he puts him in a preparatory class for one year. In this class he goes directly to the forge and learns to make his own instruments, runs his own impression cups, etc., and it was stated that this gave him a valuable knowledge of the qualities of metals. It seems too much like putting your student at weaving his own napkins to become familiar with the qualities of cotton and bibulous paper. And this is at the expense of a year's time; time, that to my mind, had better be spent in making up the lacking fundamental school branches.

Metallurgy, particularly that of the finer metals is unquestionably of value in the practice of dentistry, but that a student whose lack of education unfits him for beginning his college course, should spend any part of a preliminary year in making impression cups, instruments, etc., seems to be far from the proper course.

There are some men who are great champions of the idea of being able to make one's own instruments. Are you acquainted with any surgeon who makes his own knives and saws? Examine an instrument made, tempered and finished by a tyro, and, notwithstanding the fact that he is a dental practitioner, it will be a crude affair compared with the same instrument of a first-class manufacture.

I dare say it takes as long to learn to make instruments as it takes to learn to make fillings. So we see that if preliminary examinations are for the good of the profession and in protection of and in

justice to the colleges, it is also the right of the student to ask for an examination which shall demand only the actual requirements or taking the proposed course of study. This subject is not one which concerns colleges and students solely, but is of great importance to the profession in general, and, therefore, to each of its members.

A happy solution of the problem of what and how much to demand in the way of preliminary education would be found if the National Association of Dental Faculties should take on itself to formulate an examination each year, to be used by all schools alike, making it a rule that the examination papers be preserved for subsequent inspection, if need be.

In this, or some similar way, there might be prepared a set of questions, which would only require a thorough training in the branches of a good common English school, and yet be a justice to the student, a justice to his college, and a justice to his profession.

—Theodore Stanley, in *Western Dental Journal*.

AMALGAM—ITS USES AND ABUSES.

A brighter day is dawning. Justice is being meted out to this much abused and useful servant to mankind. The veil of prejudice is being lifted, and the truth seekers are beginning to see that the material is not at fault so much as the operator.

Who can read the records of the so-called "amalgam war," without a pitying contempt for the arrogant intolerance that refused to test this material, and suspended from membership in the American Society of Dental Surgeons honest and earnest men, unless they would sign an agreement not to use "the stuff." And how they blush when later on we read, that some one who severely denounced amalgam, or who held their tongues, when they should have spoken in its defense, were slyly using it all the time, but would not say anything in its defense for fear of the influence it might exert on the young men of the profession.

It is well that amalgam should have its hour of trial, as proof of its value and power. Gold had charms to every dental artist who became expert in its manipulation; its trials were great, and its weakness was seen by those who were its friends.

I remember reading in one of our dental journals a few years ago, of a leading dentist in New York city who said, "If a tooth is worth filling at all, it is worth filling with gold." A prominent dentist said to Dr. Bonwill, "I am surprised at your advocating the use of amalgam when you have the best machine in the world with which to pack gold. You should fill all teeth with gold."

But in spite of all its ups and downs, amalgam has come to stay. It fills a place that no other filling can do. I look with alarm at those who make a specialty of crown- and bridge-work, and sacrifice teeth that amalgam could save.

We have no idea how neglectful we are, in not looking into the manipulation of alloys. Could the same interest be aroused in this subject as in other subjects, we would be making a vast stride in progress. Could you be assured that amalgam could be as easily and successfully used as porcelain crowns, I believe the latter would be as infrequent with you as it is with me.

Because gold cannot be used it is folly to say no effort should be used to save the tooth with amalgam. The use of amalgam will enable you to save a class of teeth which you have hitherto condemned.

Failure is more due the operator than the material. It is no trouble to find amalgam fillings that have done service for twenty-five or thirty years, and the same may be said of non-cohesive gold.

Amalgam has its uses and virtues that no other material possesses; it also has its limitations and defects. It is a plastic substance which is easily manipulated, and a cavity can be quickly filled with comparative small cost of time, labor and money, which would take hours to fill with gold.

Some dentists fill the worst class of teeth with amalgam, and fail, and then complain that it is not fit to use, it will not save teeth. They could not fill them with any other filling and preserve them.

I do not say amalgam is the only filling material to use. I do say it should be used a great many times where it is not. We must be governed by the location, the conditions of the tooth, the ability of our patient to stand prolonged operations, and the financial ability to pay. I have often heard the remark from patients, that "I am always sick after having my teeth filled, for my former dentist insisted I should have them all filled with gold."

Failure to secure an amalgam that has the best qualities, irrespective of price, is another cause of ill success. Get a good amalgam and stick to it.

Fear to ask as high a price for an operation as is justifiable, when nothing else can save, has caused slighting. Because your filling is amalgam, do not fail to do your best work. See that your alloy is well amalgamated, avoid slovenly inserting it, leaving masses of the material at the cervical margin, projecting to irritate the soft tissues, or neglecting to polish the filling when hard. Such neglect is as bad practice as it would be to leave a gold filling unfinished.

Some will say "it takes too much time." We should not value our time too highly to overlook those small things, which, if well done, are bound to give good results.

Do our work thoroughly, cost what it may.

—L. E. Day, in *Western Dental Journal*.

LINING PLATES WITH SOFT RUBBER.

About two years ago a patient came to me to have an upper and lower denture fitted. I never saw a more unpromising mouth. It was as flat as flat could be. In the lower jaw there was no ridge whatever. The party had been in the hands of two or three gentlemen who are skillful dentists, and there had been made a number of plates of different kinds,—aluminum plates, electro-deposit plates, and so on; and they were all beautifully made, and accurately adjusted and occluded, so far as I was able to discover; but they would not stay in place. I took an upper and a lower impression, and laid them one side. While I was thinking about what I should do in the case, I was walking along the street one day and I saw some boys playing with suckers on the sidewalk, wet pieces of leather attached to a string; and I said to myself, if I could get a flexible surface to those plates, I believe they would adhere. I wrote a note to Dr. Kingsley and asked him to send me over some pieces of velum, or soft rubber. This came through a suggestion of Dr. Van Woert. I made a lower plate as we usually do, lining it with soft rubber. The adhesion of the upper plate was very defective; but the lower one which I made was perfectly firm. I then prepared a new upper plate, and lined it with velum, with a like good result. The upper one is worn in the mouth till the present day; the lower one I made over for reasons which I will state further on.

When I packed the plate, I dissolved some ordinary rubber in chloroform; coated the model, and then placed on the soft rubber. I found that this way left hard places, little particles of rubber vulcanized hard. Then some soft rubber was taken and dissolved, and used to fasten the velum on the model, and it did much better. I only covered the inside with the soft rubber, leaving a sort of ridge around the outside of the plate to finish. I found that the soft rubber left a little too much hard rubber on the outside, that cut down into the soft tissues. The lower plate was made over, lining the entire under surface. I packed it first with a piece of blotting

paper, to get the thickness ; then packed with rubber as we usually do. The finishing was difficult. It was rough, and uncomfortable to be worn. A disk was placed in the dental engine, and revolved rapidly, trimming down the plate until perfectly smooth.

The plate is not as clean as a hard-rubber plate, and it is only in those cases where it is exceedingly difficult to retain a lower plate that I would recommend its use. You must impress on the patient the necessity of keeping the plate clean. And it is not as durable as a hard-rubber plate. But I think we are justified in using such plates in mouths of persons unable to wear anything else. This patient had had no comfort for some years. I have used this style of plate in perhaps half a dozen cases, and every time it has been worn with satisfaction.

In upper dentures you sometimes find you can retain them in this way. Try this method of lining the plate when nothing else will do. Sometimes in partial cases you find the rubber plate will rub the teeth ; and in such cases if you place a little velum or soft rubber around the teeth on the plate, it will act as a spring or sponge and hold it very nicely. There are many ways that will be suggested to you as you use it. The plate has to be made a little thicker when the soft-rubber lining is used, to compensate for loss of strength. I sometimes vulcanize my soft rubber lining with my plate by a second vulcanizing, never carrying the heat above 200 to 300 degrees and vulcanizing longer in proportion.

—Dr. Osmun, in *International*.

AN INTERESTING OPERATION.—In the Militaro-Hygienic Society of the Finnish Department (session of November 15th, 1891), Dr. Matti Äyräpää presented a female patient, for whom he had performed a plastic operation to restore the efficiency of the nostrils, which had become impassable through small-pox scars. He cut the scar, which was about 1 cm. wide, with a knife, and on the third day, when wound began to heal, he proceeded to cover the defect. But, as there was not a piece of skin to be found for the purpose of transplantation which had not been changed by scars, the doctor took the necessary skin from the belly and the thigh of a frog. After six days this was perfectly grown in. Two weeks after the operation, the frog's skin lost its pigment and resembled the normal cuticle.

—*Zahnärztliches Wochenblatt*.

TEETH AS ESSENTIAL ORGANS.

To supply the function of mastication, man was given thirty-two teeth, which, so far as any one knows, were what he needed. These no doubt included provision for not only the regular actual need, but somewhat in excess of that need, to supply extraordinary conditions, yet only sufficient to insure the health of all when not exercised to their greatest capacity.

It is supposed civilized man uses his teeth less than the savage; certainly he so prepares his food that he may use them less; but perhaps it would be better to prepare the food with less reference to softness, and to use the teeth more.

It also happens, as a general rule, that the teeth of civilized man are more subject to disease. It is not settled whether dental diseases are due to civilization, or are merely coincident to it.

I don't know that the new race of Americans, with their soft teeth, are more civilized than their hardy English and Scotch cousins, or that the peasantry of Normandy, with their notoriously bad teeth, are more highly civilized than the French nobility. Yet if civilization is the whole explanation, we should have to come to some queer conclusions of what was civilization.

Because civilized man uses his teeth less than the savage can we logically conclude that he ought to have fewer teeth, just enough, for instance, to preserve their health by actual use.

Some have assumed to answer this question affirmatively, and have slighted their importance by extracting them; especially the wisdom teeth. They claim the other teeth are not disturbed in their general relations or functions, and the features not visibly deranged. Even after all the second and third molars are lost, they believe the remaining are undisturbed in their relations or functions, and the person might be able to divide his food sufficiently to enable it to reach the stomach, and if he had time to spare, or the food was made pultaceous by cooking, mastication would be sufficiently performed.

To what point might we go on dropping off teeth from the end of the arches and the race not suffer?

We can't safely reduce this question to its lowest terms and say that civilized man needs just twenty-four or twenty-eight teeth, and no more, and remove the excess. It would be more logical to restore their use and proper exercise.

Excepting for the gravest reasons, to remove a tooth one must assume that all the biological relations between that tooth and all the surrounding parts are unimportant.

But the size, shape and relations of the jaws to each other have to do with the number of teeth that they contain, and with the relation of the muscular attachment and nervous distribution. The position, form and size of glands are related to such forms and positions; so also is the size and shape of the jaws related to the general architecture of the face.

One must assume that the changed manifestations of action and reaction which would be exerted on the entire machinery of the face are unimportant, and that the total derangement would not be disadvantageous to the whole body.

It is to assume to know the means and ends of creation, and he no less surely sets himself up in the Creator's business, to become an unsuccessful rival to the Almighty.

Civilized man may be thrown on the same resources as savages.

In wars, voyages of discovery, in famines and poverty incident to great public calamities, the hardships of civilized man may exceed those of savage man.

We see that though some conditions of civilization would seem to render the possession of thirty-two teeth unnecessary, many contingencies are likely to arise (and possibly to any individual) when the functions of the teeth up to their full limit may need to be called into action.

We see nature's abundance was limited in the supply of teeth to man, for while it is undoubtedly in excess of his ordinary needs, possibly to provide for such a misfortune as the accidental loss of a tooth, she was not sufficiently extravagant in the supply to provide against wholesale destruction of grinding surfaces, either by extraction or by excision of teeth; neither was she so extravagant as to supply a sufficient number of teeth to provide against widespread disease of these organs; nor did she provide for a third dentition after entire loss. Nature may do better at times if left to herself.

I have often seen the jaws stripped bare of every tooth that had dared to erupt before the age of sixteen years; but that does not prove that nature is prolific in tooth supply, but that we have some most audacious and criminal dentists.

In fact, prolific or extravagant supply of organs is everywhere denied, under the law of adaptation according to need. If an organ was evolved to meet a need, it was by such gradations that time entered in a proportion, that years were ciphers and ages only units of measurements, and evolving thus, there was permitted all those accessory developments of structure and functions in such relations

that the equilibrium of the entire organism was maintained during the entire process of such an evolution.

Where supply at first seems most prolific, and in excess of need in the provision for reproduction of the individuals of a species, perhaps only one out of ten thousand embryos of some fishes develop to maturity.

Why this excess of embryos? To meet the necessity of the great destruction to which the young of the species are exposed; a lessened number of embryo would mean extermination of the species after a time.

There is always a check in nature; the fight for existence is a close one, and slight advantages determine the result. The fittest survive.

The teeth of man are not becoming rudimentary, they are not undergoing suppression, under the law of natural selection. Any slight variations we may observe from the common type *may* be multiplied in future ages into a regular production, but the *chances* are that these changes will be transitory. They are merely as the ripples on the surface of the ever-varying but unchanging ocean.

We find many abnormalities of teeth, both in man and in the lower animal, but there are few as compared with the number which sufficiently approach the type to be considered true.

The wisdom tooth is at times suppressed, at others it is the lateral incisor, or it may be any other tooth; and, on the other hand, we have supernumerary teeth appearing contemporaneously with either the first or second dentition, and occasionally a few teeth develop after all have been lost. But these are the exceptions.

—J. B. Davenport, Paris, France.

When we see a young dentist peering round here and there, sparing no pains to find "the lay of the land" in every direction, and insinuating himself into the good graces of every one he meets, and becoming a favorite with old dentists, concealing nothing and learning of all, we make up our mind this young man is going to succeed. But when we see one coming home from college in a dandy suit, to be admired and waited on, and sitting down in the parlor in egotism and self-consciousness, to wait for rich patients, we do not count on him.

CONTOUR FILLING.

It may be laid down as the rule that the contour of all fillings which will be subjected to great strain should be such as to most fully protect them from any force of impact that would tend to dislodge them or to drive them away from the walls of the cavity.

This rule, of course, only applies after the restoration of such natural contour as may be essential for hygienic or esthetic reasons, and may be more profitably followed in proximal and crown surfaces in molars and bicuspid.

In these, where the decay extends below the point of natural contact of the proximal sides, it is essential to reproduce the natural contour, to such an extent that the fillings may, when finished, touch again at the same point. This is necessary, to preserve the interproximal space toward the necks of the teeth, and also to prevent food from crowding between the teeth and on the gums, where it sometimes causes serious disturbance.

Beyond this point a restoration of natural contour is rarely, if ever, to be tolerated.

From the point at which restoration of the natural contour on the proximal sides ceases to be essentially up to the termination of the filling in the crown, the surface should gradually slope, or, to reverse the statement, the surface of the filling should slope downward from its most remote edge, either mesially or distally, to the point at which it is desirable to commence the restoration of the original contour on the proximal surfaces.

The anchorage of such fillings should be made as strong as possible without weakening the tooth. There should be, if possible, a strong, square base at the cervical portion of the tooth—a firm seat, that shall be at a right-angle with a perpendicular line drawn on the proximal surface, and the walls should be made as nearly parallel as possible.

Unless the walls are extremely thick and the dentine very firm, it is better not to make any undercuts or grooves, but to rely entirely on the proper seat and thorough anchorage in the crown. If they are thin, or the dentine of poor quality, grooves and undercuts must not be made. If the square seat cannot be obtained, as large retaining pits should be drilled as can be done without endangering the pulp. Of course, this is only a general rule, and subject to such modifications as the peculiarity of each may render necessary.

Where such shapes as have been described are given to fillings of this character, the force of impact tends to slide over the surface and not to drive the filling away from its seat.

If, on the contrary, the filling is built up so that its grinding surface presents a horizontal plane even, the force of mastication will tend constantly to drive it outward from the center of the tooth. If the restoration of the original contour is carried still further, and the marginal ridge is raised in the normal form, the strain on the filling will be much greater, and its value correspondingly impaired.

Now, in many cases, where the cusps of the natural teeth which antagonize the gold filling are very long, it is necessary to grind them off, as well as to shape the surfaces of the fillings as above described. Without thus grinding off the cusps, it would, in some instances, be impossible to get sufficient thickness of gold to insure any stability of the filling.

It will undoubtedly be urged by some that such extreme precautions are not necessary, if cohesive gold is solidly built up, as it can be, from secure anchorage made at all possible points.

Such a defense of the practice of restoring the natural contour in situations that have been considered, can only come from a want of knowledge of the materials we have to deal with and the principles on which our operations are based.

If two fillings could be placed in precisely corresponding situations by the same hand, one contoured as laid down in the above rule and the other contoured proximately to the original shape of the tooth, and we could be assured there would be no recurrence of decay,—of the first it might be predicted with assurance that it would last indefinitely,—while of the second it could positively be asserted that it would fail. The latter might, under favorable conditions, last for some years, but it would eventually be certain to give way simply through the agency of mechanical force.

A grave error that many operators fall into, is the belief that gold can be so thoroughly impacted into strong tooth structure as never to be disturbed or displaced, except after a recurrence of decay.

Such a belief ignores the fact that the ability to resist mechanical force has a limit, and when the force exceeds that point something must give way.

The great malleability of gold renders it impossible for it to sustain through a series of years the constant impacts imparted in the act of mastication, without eventually being drawn away from its bearings on the edges of the cavity, and even were it less malleable and did it not yield to the force of impact at all, the structure of the tooth would eventually give way to the incessant pounding to which the filling would be subjected.

The cases thus far considered are the most important and those most likely to fail from improper contouring, but there are others where the observance of this same principle will prove of great value, though it can be carried out to only a limited degree.

In the building down of incisors where a considerable portion of the labial wall has been lost, it is desirable to slightly slope the cutting edge of the filling from its most distant mesial or distal proximal corner up to the point of contact with the tooth. This would unquestionably lengthen the usefulness of such fillings as compared with those that were absolutely restored to their original contour. In all such restorations—sharp corners should always be slightly rounded.

With regard to the anchorage of such fillings—the same rule holds good as given before.

There is one other situation in which the restoration of natural contour would be undesirable, and that is in proximal fillings in the upper incisors, where the palatal angle of the filling should be cut away so as to leave a self-cleansing surface.

—*J. W. Cormany, in Review.*

SOME OPINIONS OF COPPER AMALGAM GLEANED FROM THE "INTERNATIONAL."

I have had experience with copper amalgam to my sorrow. I used it a great deal at one time, and regard Russell's as finer and cleaner than any of the others. The amalgam will apparently appear to work well, and will seem to give perfect satisfaction. In a brief period the filling is bright but wasted, and in such cases it has been my experience that the tooth is exceedingly sensitive around and under that filling. I have had a different experience from some of the gentlemen, inasmuch as instead of finding the fillings soft, so they could be taken out with a spoon excavator, they seemed to me to be as hard as steel. It is difficult to make the two things agree. I have come to one conclusion in regard to this amalgam, and that is, never to use it except in cases where we have very soft, white teeth, where the saliva is inclined to be acid. Take, for instance, teeth which are pearly white, and in which the decay is rapid. I have seen many where it has been in such mouths for several years, and doing beautifully, as black as ink, the lines perfect, no sign of decay. I met a case of that kind a few days ago, and I was pleased to see how beautifully the teeth were being saved; but I think such are exceedingly rare.

The subject, to my mind, is still in doubt. There are so many cases where fillings have been put in at the same time and apparently under the same conditions, where one will be good and the other will have left the cervical wall, so that an excavator can penetrate the material. Take two proximal cavities, where one filling will be good, black, and not deteriorated. Perhaps in the adjoining filling one part will be good and the other part wasting, and yet bright in color. It seems to me an experiment, and the safest thing is to let it entirely alone, with the exception of a few cases under the conditions which I mentioned.

Dr. Watkins.

From a limited use of copper amalgam, I come to the conclusion that it is a very uncertain material, and I have not employed it for fully two years. I have had some success in making good permanent fillings, but very many more failures. Whatever antiseptic influence it has, it does not prevent decay from beginning and progressing directly in contact with it. I failed to find in it any constant qualities that were desirable, and when I became convinced that I could not make fillings that I could rely on, I abandoned its use.

Dr. Howe.

At one time I used considerable copper amalgam, but for the last eighteen months I have not inserted one filling of it. While my successes have been greater than my failures, the failures have been very lamentable. I have had a success on one side of the mouth, and a failure on the other. I, therefore, came to the conclusion that it is too unreliable for me to use. I can get a better result on buccal surfaces with gutta-percha. I think my patients have swallowed enough copper amalgam to satisfy me, and I shall not use any more.

Dr. McQuillan.

I do not know much about copper amalgam. I do know it is very unreliable, and do not use it; and wish I never had, and the greatest mistake of my professional life was made when I did. I think, however, I should be partly excused for having taken it up. I am going to put in a plea for myself, as well as for the profession, because, if you think back for ten years, you will remember that there has been considerable said about it, coming partly from the other side, and said in such a way as to leave the impression on the minds of the profession at large that it was a material which did not shrink. Of course, for many years we have been searching for just such a material. When some of us saw some fillings in different mouths that were looking well, and not having the appearance of shrinkage, I think we were all justified in concluding we had the material we wanted, and had something we could depend on. We

had heard of its success, and had seen cases where it had succeeded ; but not a word yet about the failures. In my own experience, the first series of cases I saw were very remarkable indeed. Dr. Darby sent a patient to me with a number of these fillings, and I think they were the first I had ever seen that I really knew were copper amalgam fillings. I was profoundly impressed with the appearance of these, and, never having any suspicion of danger of waste at the cervical margins, or mechanical wear on the surface, and having no hint of the unusual danger of discoloration in dead teeth, I was ready to commence its use. Dr. Rich, of course, is right in saying that we should not use anything of which we are ignorant ; but we must do the best we can, and we felt that we did know something about this amalgam. The danger of discoloration we did not suspect, for I have no knowledge of any hint having been given in the literature on the subject ; but this I found to my regret subsequently.

I have some black monuments standing in the mouths of patients, which I would give a great deal to efface. There is no hope of changing them, because it cannot be done. *Dr. Perry.*

I have recently had several opportunities of observing copper amalgam fillings in the mouths of patients of some of the best-known English dentists, and I think their proportion of successes is not greater than ours, for I found but few of the fillings doing good service. I began to use copper amalgam about eight years ago, and for several years I used it for cavities in soft teeth with considerable satisfaction ; but for the past two or three years I have used it but seldom. The amalgam which has been referred to by Dr. Bogue, prepared after the Rogers method, seemed at first to be almost universally reliable, but recently the quality has evidently deteriorated. I have had the pleasure of seeing in the mouths of some of Dr. Bogue's patients copper amalgam fillings, made probably fifteen years ago, which were almost perfect, and certainly doing as well as any filling possibly could have done under the circumstances, for, of course, they were not used in a high class of tooth substance. I think, however, if Dr. Bogue should go a little more fully into his personal experience, he would tell us that he does not use copper amalgam frequently now, and has less confidence in it than he had some years ago. *Dr. S. E. Davenport.*

I briefly state some of the experience I have had with copper amalgam in the past few years, though I have seen a great deal of it during the time I was in England. The gentleman whom I was with had a great deal of faith in copper amalgam, and claimed to obtain better results with it than with any other he used. This

amalgam we made ourselves. In this country I have not employed any in practice till four or five years ago. I commenced to use it when it became famous here, so to speak, and I very soon found there were many failures on account of shrinkage and wasting. About three years ago Dr. Herbst, of Bremen, wrote me about using amalgam, saying that he had very wonderful results if he added to it, before putting it into the tooth, a little fine silver foil. I tried that, and it worked as described—namely, that the edges will stand beautifully, and there will almost be no wasting. At that time I made some experiments in glass tubes, and filling them with carmine, but I never saw any of the fluid between the tube and the amalgam. I tried the same experiment with copper amalgam, and I was surprised at the success. The discoloration of the copper amalgam which we usually observe is almost entirely gone, and it gets very much harder and wears better. It is done in the following way: When the amalgam is heated very carefully and put into the mortar, a little mercury is added, and the amalgam crushed and rubbed thoroughly; then to about eight grains of copper amalgam I add one leaf of the ordinary fine silver foil, which you obtain from any gold beater. Then I put it into the tooth with the Herbst burnishers, and I must say I have not seen a failure around the edges, or much discoloration. Without the addition of silver to the copper amalgam I have seen discoloration and wasting of the edges.

Dr. Bödecker.

W. D. Miller thinks it of great value, but its faults of wearing and washing out are serious.

J. N. Farrar believes that for preserving teeth it is equal, and in many cases superior, to any other amalgam. The great objection to its use is its color.

E. T. Darby says it does well on masticating surfaces. Not so well on proximate surfaces. The same material, worked in the same manner, will produce different results in the same mouth.

W. W. H. Thackston says he has not used it, but his observation of it is unfavorable.

W. H. Robbins formerly employed it freely; has since removed all—some thousand fillings—and does not use it now. Is sorry he did use it.

J. L. Williams has considered it undesirable, and has been saved from much "experience" with it.

D. M. Clapp, from limited experience, finds numbers of failures out of all proportion to successes. As a rule, does not preserve from decay better than ordinary amalgam. Stains teeth badly.

C. S. Wardwell, from limited experience, finds it objectionable.

E. J. Niles considers it undesirable on account of its wasting.

R. R. Andrews considers it unreliable. Washes out.

H. B. Noble used it sparingly for two or three years. Found nothing to commend it over other amalgams.

Louis Jack finds it has been of value in some cases, yet in many more, results have been so indifferent he felt compelled to abandon its use. Results have differed greatly from causes which do not appear, though the material was the same apparently, and prepared in the same manner. Suspects possibility of serious consequences following the imbibition of the wasting material. Has not found the material prevents the recurrence of caries.

H. C. Quimby has observed many teeth badly stained by its use; thinks that it may have a value, but its unsightly appearance has deterred him from using it; thinks other amalgams equally preservative.

J. S. Latimer used it about a year; its unsightly appearance, and slow setting, and its rapid wasting caused him to cease using it.

W. A. Potter says that its color is so objectionable that his use of it has been very limited.

C. S. Stockton has "practically ceased the use of copper amalgam because of its uncertain results."

C. N. Peirce: From a limited experience, its use "has not been satisfactory, because of its frequent disintegration at cervical borders."

J. A. Woodward: Its use has been limited to small proximal cavities of bicuspid and molar teeth. It has failed to arrest decay as frequently as other amalgams that I have used for similar cavities.

V. C. Pond has used all the well-known makes, and does not find they differ much; finds decay to recur about margins of fillings, a large proportion wasting, and many discoloring the tooth substances.

G. L. Parmele has had good results in some cases; on the other hand, has been disappointed, first, by failure to harden and washing away; secondly, by extension of caries; does not employ it as much as formerly.

How much more we should accomplish, and how much more happy in the doing, if we could keep in mind that great things are made up of little things; and that little things well done are sure to have such affinity for each other, and become so harmoniously woven together as to finally surprise us with their aggregate greatness and beauty.

Our Translations.

PENTAL NARCOSES.

CHARACTER OF THE NARCOSE.

In quiet persons who inhale gradually and confidently, and whose mouth and nose are so carefully covered by the mouthpiece of the Junker's apparatus that no gases from pental reach the eyes, the narcose occurred in one, two, three minutes, without any change in the expression of the face, or irritation of the conjunctiva with tear secretions, or any irritation of the nose and larynx.

The narcose is marked by the falling backward of the head, widely separated eyelids, mostly enlarged, seldom diminished pupils, light twitching in the fingers, or by the hand of the patient falling down of itself after being raised. Where these symptoms are not sufficiently pronounced, I am nevertheless perfectly certain, after the use of about 10 ccm. of pental, that the narcose is complete, although in the majority of cases I have used only 5-6, and often only 3 ccm. After patiently waiting for some time, I find that the mouth always opens of itself, and I have been able to draw in one narcose 6-8 teeth, as well as several roots.

In all my cases I have failed to observe any derangement in the action of the heart, or respiration, or chest pressure. But I must admit that I have been very careful in the last 200-300 narcoses. I have only seldom narcotized anemic persons with weak heart action, and for nervous persons I have employed pental in only very small quantities, and with free access of air, or refrained from narcose altogether, when the excitement of the patient would not subside after earnest exhortation.

In general, I have observed that all pental narcoses come off more favorably in the morning than soon after dinner or late in the afternoon.

When the operation is over, and the patient has not completely regained consciousness, I never try to hurry the awakening, and by so doing I believe I can explain the reason why I have never observed headaches after the narcose. In some cases, indeed, where persons come to me complaining of headache, they told me after the narcose that they did not feel any trace of it then.

A most peculiar after effect of the pental narcose is a real, burning hunger, which the majority seek to satisfy with great relish by

a reach meal. This circumstance stands in brilliant contrast to the after effects of chloroform or even bromethers. In my quite extended experience with pental, I have never found any burdening of the stomach, or nausea and vomiting.

EFFECT ON THE ORGANISM.

Pental being produced from amyhydrates by taking away one part of hydrogen, it is well to consider the action of amyhydrate on the organism. Amyhydrate has hardly any influence at all on the heart activity; in middle quantities it acts chiefly on the cerebrum, and in larger quantities on the spinal cord and the medulla oblongata. Only in very large doses reflexes disappear, respiration ceases, and lastly follows the stillstand of the heart. The blood pressure is very little influenced.

The only difference between amyhydrate and pental is that pental is insoluble in water and usually volatile, and therefore taken up by the body through the lungs very quickly, even much quicker than ether, while the amyhydrate is easily soluble in water, and is gradually absorbed by the stomach, wherefore its action is much slower, 15-30 minutes.

The effect is the same, only the time in which it takes place is different. It follows that the process of narcotizing with pental must proceed as slow as possible, and under an abundant access of air.

There were two cases of death after pental narcose, but whether they were really produced by pental remains an open question. One case, reported by Dr. Schirmer, is very remarkable. The doctor was about to administer pental when he found that the patient was staring at him, and the motility and sensibility were so much depressed that he presented a picture of one narcotized. The pulse could no longer be felt, cold perspiration and such shallow respiration, with pupils enlarged *ad maximum*, that the doctor was obliged to start artificial respiration. The whole thing occupied about twenty minutes. If these symptoms had occurred during the pental narcose, they would be surely ascribed to the anesthetic. This case also shows how much care and circumspection is necessary in the administration of this anesthetic, and that pental narcose, as well as any other has its dangers in inexperienced and careless hands.

CONCLUSION.

After working with pental a whole year, and performing about nine hundred narcoses, I can sum up my experiences in the following short sentences:

1. Pental is an active anesthetic in all cases.

2. Unconsciousness is reached slower than with bromether, but it lasts longer, and the patients come out of it gradually.

3. Even a very slight excitement is extremely rare. Burdening of the stomach, nausea and vomiting have not been yet observed by me till now, still less aphasia, trembling, trismus, etc.

4. Neither the heart action nor respiration are accelerated as a rule.

5. In quiet persons often 2-3 ccm. are sufficient for the narcose—10 ccm. being required in almost all cases for the extraction of 5-10 teeth.

6. Very excited, strongly anemic persons, with weak heart action, do not bear the pental as well as healthy ones.

7. The best method of administering pental is with Junker's apparatus.

8. The narcose is reached in 1-3 minutes.

Pental is presently, in view of its sure action and the remarkably good condition of patients after the narcose, the best anæsthetic for all operations of short duration.

—Prof. Holländer, of Halle, in *Journal für Zahnheilkunde*.

INFLUENZA AND THE TEETH.

BY DR. HUGENSCHMIDT.

Among the symptoms observed in the early stages of the disease among children, was redness on the borders of the palate, which then spread over the whole surface, and different buccal and dental affections which did not present themselves in my practice in ordinary times. In some these complications, together with the general symptoms of the disease, constituted the only apparent localizations of the grip. In convalescence I have also observed an ulcerous stomatitis, the ulcerations pervading the whole buccal cavity and presenting peculiar characteristics which do not belong to any other disease of the mouth.

Besides two complicated aphtous cases, I collected seven light cases of aphtous stomatitis. Three occurred in one family. The mother, attacked by a pulmonary form of the grip, had a light aphtous stomatitis, while of her three children, two girls aged seven and nine years, a few days later showed the light symptoms, with an aphtous buccal eruption.

In the other cases of sickness, the ulcerations began in the gums. At the early stage of the attack of the grip, the patient complains of intense dental and gingival sensitiveness, being incapable of brushing the teeth, on account of the pain produced. The

back under teeth are especially sensitive, and this is a peculiarity to note, that the teeth of that region seemed always more sensitive than other parts of the mouth. As this is the one continually bathed by the saliva, may not there be in this salivary liquid, in suspension, products of a toxic or toxin character? May not the salivary glands contribute these toxic products, developed in the organism by the grip?

On examining the mouth, we notice the gums are swollen, the teeth are mobile, very sensitive, which indicates that the periosteum or dental ligament is attacked. From twelve to twenty-four hours later ulcerations appear, situated more often at the neck of the tooth, at the junction of the tooth and the gum; these soon spread so as to invade the whole breadth of the gums. Then they invade the buccal cavity, the palate, the lips, the cheeks and the glands.

I must say that I have never seen more than eight ulcerations disseminated in the mouth when the disease started from the gums, while the number of ulcerations was considerable, when it originated in the glands. In the first, the ulcerations seemed very refractory in their march backward, while on the contrary, for the wounds starting in the glands, the march forward seemed more favorable.

The most common form of buccal manifestations is the single gingivitis, without ulcerations; the gums are swollen, very red, accompanied by alveolar periostitis, the teeth are sensitive to touch and mastication. This form appearing at the outset of the attack of the grip, lasts three or four days, and is often accompanied by neuralgia of the maxillary branch of the fifth pair.

If there are any teeth whose pulp is destroyed, these will become points of concentration of the infectuous process, and there will be alveolo-dental periostitis and abscess. Dental abscesses have been very common in persons suffering from the grip. In rheumatism and gout, the grip leaves behind for a long time, an extreme sensitiveness of the neck of the teeth; while in others affected with infectuous alveolar arthritis, I have noticed an aggravation of this condition.

There have been other buccal affections which did not come under the consideration of the specialist, but so far as my own observation went, I found during the two epidemics of 1889-90 and 1891-92 in the buccal cavity:

1. Ulcerous stomatitis (rare form).
2. Ulcerous gingivitis (more common).
3. Simple gingivitis with generalized alveolar periostitis (most common form).
4. Suppurated alveolo-dental periostitis (very common).
5. Facial neuralgia (when the patient thought the teeth were the cause of it).
6. Eruption of the wisdom tooth.

For treatment I have employed, in stomatitis and ulcerous gingivitis, antiseptic buccal gargles, boric (water, solution of thymol), to be used every half hour during the day. Painting the wounds with Gaucher's mixture for false diphtheritic membranes:

Crystallized phenic acid.....	5 gr.
Alcohol, at 90°.....	10 gr.
Tartaric acid.....	1 gr.

In the evening, before going to sleep, painting the gums and buccal cavity in general with:

Salol	6 gr.
Liquid vaseline.....	40 gr.

During convalescence, to stimulate cicatrization of the ulcerous parts, boric water is replaced by a solution of creoline at $\frac{1}{2}$ per cent., which is used in gargling three times a day.

Solid food being impossible, on account of the extreme sensitiveness of the affected region, I have used milk, milk punch (one part of rum or cognac or cherry, and ten parts of sweetened milk), to be taken in spoonfuls as often as necessary; meat extracts, different ices and oysters. As a tonic, sulphate of quinine in small doses, not more than ten centigrams a day.

In single gingivitis, *without ulcerations*, accompanied by light generalized alveolar periostitis, I have painted the gum once a day with:

Tincture of iodine.....	5 gr.
Tincture of English aconite (Fleming).....	1 gr.
Chlorhydrate of cocaine.....	0

When there are buccal ulcerations, besides alveolar periostitis the following mixture will give good results, and the absorption of the medicament is not to be feared:

Tincture of iodine.....	5 gr
Tincture of belladonna,	
Laudanum of Rousseau.....	āā 2 gr.

M.—Apply on the gum with a pencil; the application is painful during a few seconds.

In facial neuralgia, a ball of cotton as a kernel and soaked in the following solution:

Menthol.....	3 gr.
Chloroform.....	5 gr.

In eruptions of the wisdom tooth, wash the buccal cavity with a solution of sublimate in $\text{r}\overline{\text{000}}$, scraping off the gum with a knife, to expose all the masticating surface of the tooth; then wash again with sublimate, and finally dress up with a ball of cotton charged with aristol and placed in the cavity formed by the gingival excisions; the patient must keep the mouth in an aseptic condition, during several days, and can himself renew several times a day his aristol dressings.

Items.

A *Roman Odontological Society* was formed in Rome, with a board composed of Mr. Francesco Sirletti, as President; Ribolla and Chamberlain, Vice Presidents; Betti, Secretary; Van Marter, Sr., Guido Sirletti, Angelo, Directors. —*L'Odontologie.*

Dr. B. W. Richardson, the well-known scientist, says that in a population of 35,000,000, total abstinence would save 200,000 lives per year. According to this ratio, total abstinence would save the United States at least 320,000 lives annually, or, to put it in another form, the use of intoxicating drinks costs this country 320,000 lives per year, or 876 per day.

ROOT FILLING.—Taking for granted the roots are in a thorough aseptic condition and ready to fill, I use chloro-percha, with a brooch of piano wire No. 13, wrapped with a shread of cotton. Work as much of the chloro-percha into the roots as possible. Then I take a small pellet of warm gutta-percha stopping about the size of the pulp chamber, and press it into pulp chamber, with a warm burnisher, till the soft chloro-percha is forced through the apex of roots. This will be indicated by a slight twich of pain to the patient, but will last only momentarily. After waiting a little while for the gutta-percha to harden, remove the excess with a sharp bur, and proceed to fill as usual. For the last two years I have had remarkable success with this method.

A. G. Bowman, D.D.S., New Orleans, La.

EDITOR ITEMS:—Through the columns of your esteemed journal I will endeavor to inform some of my brethren, who swelter in their offices during the hot summer months, of the great advantage of an electric fan. I have used one for the past two years, and now I can't imagine how I have done without such a thoroughly practical luxury for so long. Instead of dreading to return to business in the morning, it is always a pleasure, because I know I can perform my day's work with perfect comfort to myself, and my patient does not suffer in the least degree from heat. I have visited several offices of

my professional brethren, and have never seen (only in my own office) one of these delightful little machines in operation. And for this very reason I write this communication to the *ITEMS*, and if the editor will publish it, I will feel that I have at least offered a suggestion to its many readers that may prove of vast import. The complete outfit can be procured for about twenty dollars, and what is twenty dollars where so much comfort is concerned?

J. E. Hancock.

MR. EDITOR.—The editor of a leading dental journal finds fault with the dental laws of some of the States (Massachusetts, New Jersey, Minnesota and Colorado) for “refusing to acknowledge the diplomas of the most reputable colleges, and requiring an examination of even the most carefully educated men themselves before admitting their right to practice.” This editor charges these State Boards of “thus arrogating to themselves functions that belong only to superior beings.” “For,” he says, “we assume that the laws passed are those asked for by the profession of the State.” Now we can only speak for the State of Colorado. The fact is, the majority of the profession in this State did not want any dental legislation. The originators had a bill prepared that excused graduates of respectable colleges from examination. This met with such an overwhelming opposition from the non-graduates that a compromise bill had to be prepared, which required an examination from every practitioner, without regard to “previous condition of servitude.” This we thought a little severe at first, but the law seems to work well. Then you remember what the celebrated Solon said of his laws: “If they are not the best possible, they are the best the Athenians are capable of receiving.” An amendment by the last Legislature, however, makes it unlawful for any one to receive a license who has not a diploma or a license from the examining board of some other State. *J. H. Parsons, Bolder, Colo.*

Dr. E. O. Peck, of Morristown, N. J., uses a tablespoonful of copperas to counteract the offensiveness of his cuspador. This has been our practice for many years. We are not sure but we got our idea from Dr. Peck some fifteen years since.

The use of the hypodermic syringe can be made less tiring to the fingers by warming gutta-percha and molding it over the finger rests and on the head of the piston, then, when injecting, place two fingers under the finger rests and the piston in the palm of the hand.

S. C. Slade.

Notices.

"The Step by Step Primer," by Eliza B. Burns, 24 Clinton Place, New York, is a unique affair. It is intended as a pronouncing series of lessons in the first steps and principles of spelling and reading. If you want to guide your child into the art of reading, without the tediousness of the ordinary methods, send Mrs. Burns twenty-five cents for this pleasant little reader. This is the lady selected by Peter Cooper, many years before his death, for the educational department of his Cooper's Institute in New York; and she is still there, a genius to his memory.

USEFUL HINTS FOR BUSY DENTISTS is a thousand pertinent suggestions brought within the compass of a book of 300 pages. These are a summary of 567 short articles from current dental magazines. Dr. Steele's own contributions are all good. We do not find a page in the book that is not excellent.

It is said that the chief skill of an editor is seen in the use of his scissors. By this test Dr. Steele would make a good editor. Two dollars and fifty cents sent to Wilmington Dental Company for this book could not be better spent. Dr. Steele says he has compiled it "for the busy dentist," but we believe it will be quite as profitable to those who would like to be busy; for certainly, if these hints and facts and skillful processes are made a practical use of, they will be sure to bring a good practice and a good income.

The first annual meeting of the West Virginia Dental Society will be held at Wheeling, Wednesday, October 5th. Members of the profession are cordially invited.

H. H. Harrison, President, Wheeling, W. Va.

Geo. I. Keener, Secretary, Morgantown, W. Va.

NEW JERSEY EXAMINATIONS.—The next meeting of the New Jersey State Board of Examiners will be held at the Commission rooms, No. 88 Broad street, Elizabeth, N. J., commencing Tuesday, October 18th, 1892. Candidates will please file their applications with the Secretary before October 4th. Blanks and information furnished on application.

G. Carleton Brown, Secretary,

No. 88 Broad Street, Elizabeth, N. J.

Monthly Gossip.

DR. WM. E. BLAKENEY.

CARBOLIC ACID makes sure work as a caustic.

CHRONIC INFLAMMATION is recognizable by the changed functions of the part, and is comparatively painless.

BICHLORIDE OF MERCURY is a perfect germicide, but it should be used with great caution.

PROFESSOR PEABODY characterizes Christian Science, so-called, as nothing but fanaticism, and the professor is good authority.

WHY IS IT that more attention has been given by the profession to therapeutics than to pathology?

THROBBING PAIN indicates congestion of the pulp; the most practical treatment of which is the extirpation of the pulp at once.

THE ESSENCE of Chinese cassia is said to be a powerful antiseptic, even in a 1-4,000 solution.

INFLAMMATION is the same thing everywhere, modified only by peculiarities of structure and intensity of action.

"DISEASE OF THE TEETH," says Dr. Talbot, "affects the general system, and the disease of the system affects the teeth."

"IT IS CERTAIN," says Dr. Dodge, "that the excavation and filling of a cavity always retards, and frequently ends forever the morbid process."

DR. W. H. WHISTLAR claims that as the dentist operates on living tissues it is *prima facie* evidence of a stupendous obligation.

IT IS THE opinion of Dr. G. F. Cheney that combination fillings of gold and tin, or gold and amalgam, should be classed among the pulp protectors.

DR. W. B. CONNOR thinks he is safe in making the assertion that nature has not produced as many irregularities as has been occasioned by the early extraction of the sixth year molars.

MANY DENTISTS CLAIM that dentures should not be worn at night on the ground of cleanliness, and to allow the mucous surfaces a period of rest to recover their natural tone.

EXPOSURE OF THE DENTINE causes an irritation of the dentine fibrils, and is indicated by an uncomfortable sensation in the use of cold and warm drinks. To counteract this use a stimulating antiseptic.

TO REDUCE THE inflammation in pulps, Dr. Williams recommends the use of bicarbonate of soda, applied to the cavity on a loose pledget of cotton and covered with sandarac. The surrounding parts the doctor saturates with chloric ether.

"IN MANY CASES," according to Dr. E. S. Talbot, "the antrum does not extend forward to the canine fossa, and if it does it will not extend more than one-fourth to one-half inch back of the third molar."

DR. KINGSLEY claims that the very best rubber for elastic purposes contains about five per cent. of sulphur and ninety-five per cent. of the finest and best Para rubber, without coloring.

"THE DEPENDENCE of all dental colleges for support on fees from students" says, Dr. Taft, "makes the getting of students of such paramount importance that there are cases, perhaps, of unfit persons being admitted and graduated for the sake of the fee."

IF ANY ONE BELIEVES Dr. Norman W. Kingsley does not jump to bite when he attacks an opponent, he should read his scathing arraignment of Dr. Talbot, published in the August issue of the *Cosmos*. And the trouble all came from an alleged "jumping the bite."

WHY SO MANY DIFFER in their methods of treatment of the roots of teeth, in the opinion of Dr. S. Hubbell, is because of the "many conditions presenting themselves, from the healthy root canals through all stages of inflammation, decomposing and dead pulps, complicated with diseases of the peridental membrane, and alveolar abscess."

"IT IS NOW ESTABLISHED by researches in bacteriology," says Dr. Dodge, "that, except at the very beginning, caries depends very little on external conditions, and, therefore, if the long recognized effects of sickness and pregnancy are facts, some cause must exist which acts within the teeth." I believe the doctor would have some trouble in demonstrating the truthfulness of this assumption.

AN ALLOY of ninety-five parts of tin and five parts of copper will connect metals with glass with great tenacity. By adding from one-half to one per cent. of lead or zinc, the alloy may be rendered softer or harder, as required. To prepare the alloy, pour the copper into the molten tin, stirring with a wooden mixer, and afterward smelting. The *Phar. Record* says that this alloy is also good for coating metals, imparting to them a silvery appearance.

DR. J. SMITH DODGE believes in "broadening the horizon of dentistry toward hastening the day when dental disorders shall be rather prevented than cured." In imagination the doctor sees the dentist of the future receiving a new patient. "There will follow," he says, "a series of questions covering the ancestry, the habitual surroundings, the personal history and habits of the patient, and at last the dentist will give his judgment," which will be based, I suppose, on an intelligent grouping and examination of conditions necessary to the diagnosis.

DR. E. D. SWAINE, in the *Dental Review*, tells us why we make so many failures in our practice. In speaking of the use of deeply serrated gold packing instruments, he says: "It can be readily understood that where comparatively large pellets are used, the long sharp points pass entirely through, and not only fail to pack the gold against the walls of the cavity,—but even pulverize it, leaving under the gold a layer of chips of dentine, thereby preventing the possibility of a moisture-proof filling."

THE *Dental Record* publishes a paper by Dr. E. Mosely, entitled "Preparation of Cavities," in which is the following: "Retaining points, or starting points as they are better called, are sometimes necessary; but as they are painful to the patient, injurious to the tooth, and trying to the operator's patience, it is as well to do without them if possible. . . . Commencing the filling with non-cohesive gold or tin, steadying the first portions of the filling with an instrument held in the left hand till sufficient has been packed to remain firmly; screw-posts fixed into the dentine or root canals, and lastly setting a well condensed cylinder with a zinc plastic," are the doctor's methods of starting a filling.

WHO WILL NOT respond a hearty "Amen" to the sentiment contained in the following from an editorial in the *Cosmos*? "The time has long since passed," says the editor, "when the availability and fitness of woman for the practice of dentistry can be successfully questioned; and whatever may have been the differences of opinion as to her qualifications, both physical and mental, for this work when measured by the standard of male requirements, the fact remains that in dentistry, as in all branches of the great healing art, woman has found and successfully occupied a field of usefulness in which the sum total of those distinctively feminine qualities which go to make up an ideal womanhood have been invaluable, and are, after all, the essential factors of her success in these departments."

Our Question Box.

WITH REPLIES FROM OUR BEST AUTHORITIES ON DENTISTRY.

[Address all questions for this department to DR. E. N. FRANCIS, Uvalde, Texas.]

Question 46. *Lady, aged twenty-five has an abscess at the left upper incisor, caused by drilling through the side of root. Four years ago the tooth was removed and transplanted with no improvement in the condition of abscess, much absorption of alveola has taken place and the quantity of putrid matter discharged is becoming troublesome. No pain. What shall I do?*

Extract the tooth immediately.

L. D. Carpenter.

Extract tooth for fear of necrosis of jaw.

John S. Marshall, M. D., Chicago.

Continued absorption is a very objectionable symptom. Unless the patient has very perfect remaining teeth I should not hesitate to extract to prevent further absorption.

J. H. Batchelder, Salem, Mass.

I would make a free opening into abscess pocket, and by the use of cotton moistened with aromatic sulphuric acid, would so expose the parts that a thorough examination could be made; would look for cause and remove it. If the presence of the implanted tooth keeps up the discharge, I would remove it at once. No implanted tooth has a healthy union when there has been pus present all this time. If the tooth can be retained, make an effort to retain it. If necrosed alveola is present I would treat for that, and remove at proper time. If patient is of a syphilitic taint treat constitutionally as well.

A. P. Johnstone, Anderson, S. C.

Question 47. *A Gentleman of forty years, wearing full rubber plate, complains that anything at all acid, coming in contact with the mucous membrane in the region once occupied by the cuspid and bicuspids of the upper left side, causes acute pain. The teeth were removed ten years ago, and there is no perceptible inflammation of the parts. What causes the trouble?*

Affinity of acid for the nerve filaments of the parts.

L. D. Carpenter.

Ask me something easier, I have never heard of such a case, and can see no cause for it.

L. P. Haskell, Chicago.

The cause, in all probability is inflammation of an impinged alveolar nerve, which has been caught in the cicatricula tissue of the gum during the process of healing after extracting. I would advise cutting away the gum and a portion of the alveolar ridge, at the point effected.

John S. Marshall, M. D.

A lady, about same age, who had worn a set of teeth some years, complained of similar sensation. On close examination with a probe I found a cuspid which had never erupted. I extracted the tardy appearing tooth, and,

after what I considered the proper time, made a new set. She has never experienced any trouble since. In this case I should scrape the plate coming in contact with the membrane effected and wait results.

J. H. Batchelder.

[Prof. Haskell has had a world of experience in prosthetic dentistry, and has naturally had much experience in peculiar cases, but in this he asks for "something easier," so we may safely consider this a remarkable case in some respects. The suggestion of Dr. Batchelder of scraping the plate is a good one, and as all treatment is somewhat experimental, we would suggest touching the affected part with nitrus argenti, and if other remedies produce no beneficial results, the suggestion kindly made by Dr. Marshall should be considered.

E. N. F.]

Question 48. *What is the quickest method of removing stains, caused by annealing and swaging, from the rugæ of an aluminum plate?*

Plates should be pickled, always before annealing, to remove the lead or tin that rubs off on to the plate during the process of swaging. If this is not removed it is melted into the plate and ruins the surface.

A. P. Johnstone.

The best way is to avoid making stains. In swaging any metal, always oil the dies. This prevents, to a great extent, base metal—the cause of stains—adhering to the plate. Then, before annealing, again wipe off all traces of base metal.

L. P. Haskell.

Question 49. *Our newspapers are decorated with: "Dr—fills teeth without pain by the Hale method." What is this method? If it is good our patients desire a benefit—even though the doctor claims an exclusive right.*

I have never heard of this method. Some dentists have a remarkable tact of discovering new methods and appliances, and as the ignorant are always looking for something new, they draw a certain class of transient patients.

Newspaper decorations have no effect on that class of patients who appreciate good work, and are the permanent ones and who pave the way of financial and professional success.

Small-pointed and well-sharpened excavators, manipulated with a steady hand, will in the end bring better profits than the much advertised chemical methods that so often ruin the operator and the teeth as well. If you desire newspaper patients, get up a method of your own, put it in print and depend on cheap talk and imagination for the rest.

Question 50. *I have heard of several operators, through ITEMS, advocating combination fillings of gold and amalgam. Will not such fillings discolor in time? Is gold added while amalgam is still in plastic state? I would like particulars regarding manipulation of such fillings.*

There are various methods of using combination fillings. In gold and amalgam we have two in general use, and one that is experimental and some-

what doubtful of success. Many operators use "dry amalgam" (small quantity of mercury), and after building up the required distance, gold foil or plastic gold is burnished or malleted lightly on it till all surplus mercury has been absorbed. The gold is built up with pressure, particularly against the walls, to prevent forcing the amalgam from place. After filling a portion of cavity, it will be necessary to burnish the gold sufficiently to protect it from moisture later on. Burnish only the gold, and never allow the burnisher to draw any of the amalgam on the surface of gold. When the filling is completed the patient is dismissed, after a trifle trimming of amalgam at cervical wall, and appointment made for next day for the finishing and polishing. The other method is to allow the amalgam to thoroughly harden; then to drill retaining pits and complete the filling next day. See editorial in ITEMS, page 511.

[Thanks for your kind praise of ITEMS.]

Question 51. *I would like to know through ITEMS' Question Box how a good suction for dentures can be secured in hard, flat mouths?*

This has been answered in back numbers. Success depends on relieving hard parts from pressure by a judicious scraping of impression, or the addition of tin foil (or other substance) to model, to relieve pressure on hard palate and prevent rocking. In using rubber you must allow for contraction after vulcanizing and the springing of plate on posterior palatal edge.

NORMAN MAKES A FEW REMARKS.

After reading some of the questions and answers in the ITEMS, the following ideas suggest themselves:

Dentition sometimes begins before birth, and has continued till the sixty-fifth year. Nature plays many quirks and capers with our anatomical development in part punishment for our disregard of her laws.

We live an artificial life; our food, after adulteration goes through an unnatural process of cooking, which converts many of the nourishing qualities into gases and chemical changes, while the boiling process extracts the nourishment from our vegetables—the waste material is placed on the table, the nutritive qualities thrown away.

After indulging in a swollen jaw at intervals extending often over a period of six years, we erupt our wisdom teeth, have them extracted, and wonder why God didn't make more room in our mouths and produce a better quality of goods.

Many of us look on teeth as ornaments or sign-boards for the

exhibition of dental mechanism and skill. We bring babies up on condensed milk, candy, soothing-syrup and ginger-snaps, and then expect nature to produce a scientific slight-of-hand performance and place a fine set of teeth in a half-developed child's mouth. We make our crops a study, and know how to produce the best results with the least expenditure; our poultry and stock have been improved on the most scientific principles, with increase in size and muscular development, but the human system is neglected; our teeth are becoming poorer, our jaws smaller and incapable of accommodating a full set of teeth, while our race is becoming nervous and debilitated.

Watch the sickly, ill-formed children and half-developed men of our cities, and compare them with the sturdy youth of years ago. How few of us come up to the average weight and size of comparative measurements till old age tacks on an unhealthy bloat from improper living.

Lost manhood and nervous debility is the cry of the charlatan, and their asylums are reaping a harvest in all parts of the land.

Why did the fillings of long ago last from twenty to thirty years while those of to-day so often fail? If we will examine some of those teeth, the question is soon answered.

Food plays an important part in our troubles, but there are other causes.

Civilization is a mind developer but a body degenerator. We live in an age of nervous strain and excitement; our brain does the work insuring our daily bread, while our muscular system is inactive.

I notice in our question box some answers touching the subject of exercise for dentists, but most of them prefer a horse to do the work and furnish the muscular part of the entertainment. If we could carry the horse we would derive some benefit in exercise, and the horse would get the recreation. Where does the exercise come in? We support our weight by pressure in the stirrups—dentists, most of the time, support their weight on their feet.

There is some exercise of muscles in balancing, especially if the horse is of a frisky denomination—but I think the practice of dentistry is a balancing process most of the time; at least I thought so when I tried to get up the morning after my first day's practice. This is not the exercise the dentist requires, it will do for recreation or airing, but good hard exercise in a gymnasium, or at the wood pile, is what the dentist requires, and your humble scribe will undoubtedly be the last to take it—but such is life.

For Our Patients.

TWO INCIDENTS.

A young lady requested me to extract a tooth for her. A friend who accompanied her said to her, "This is the doctor who extracted a tooth for you without pain."

"Oh, did he? How nice of him!"

The tooth removed, the young lady started for the door, when her friend asked: "Did you pay the doctor?"

"No; I thought you said he extracted without paying."

She paid.

A man selling fruit stopped at my door and asked me if I would buy. I replied, I did not wish any.

"Well, doctor, will you pull this tooth for me?" at the same time pointing to a loose lower incisor.

"Yes, just step into the office."

No sooner was the tooth out than the man said: "Do you know, doctor, you are just like Dr. Mac——, of Fredericton? He pulled a tooth out for me and never charged me a cent."

What could I do before such cheek? He deposited a few oranges on the table and departed.

W. H. Steeves, D.D.S., St. John's, N. B.

THE HORRORS OF DENTISTRY.

If any conqueror had the conquered in their power as thoroughly as a dentist has his patients, there would be little anxiety on his part as to the terms of surrender. We sometimes forget that our patients are of the flesh, we hardly treat them as tenderly as we do a piece of mechanical dentistry in our laboratory. Yea, even worse, for while grinding on a plate tooth we will keep our emery wheel wet so as not to heat the tooth and cause a breakage, but when running a bur around a live tooth at a speed never to be equaled by a fast mail, do we think of the heat being generated and carried by the sensitive nerve fibres to the brain, and from there to every point of the compass in the patient's body? If you examine the teeth of all dentists there is no doubt you would find a condition of things which you would condemn in any other body of men as intelligent—the old saying about shoemakers going without shoes is exemplified in our profession as regards the dentist having poor teeth.

This state of affairs is largely due to the fear of bodily pain he will undergo if he gets into the grasp of one of his kind, and it is a fear he cannot overcome, for after needlessly bringing affliction on others, he certainly must expect the same treatment.

You can not properly prepare a cavity without giving pain, and the more thorough you are, the more you afflict. But why should it not be the minimum not the maximum amount? We are thoughtless and become hardened and calloused to the suffering we cause; of course, it is unnatural that we should be so tender-hearted that our sympathy should cause us equal suffering with the patient. The parents in olden days informed their children that the punishment they gave caused them an equal amount of suffering. Now, while this perhaps was a myth, it consoled the culprit some. Why not place yourself in the attitude of the parent and let your patient see that the suffering you are causing is not premeditated and unnecessary, but you are doing it for their good and your heart bleeds for them; this, if done in an unostentatious manner, is consoling to the afflicted one.

When you are shaping a cavity in a sensitive tooth, and the little diabolical stone-burred implement of torture is ploughing through dentine, making the desired undercuts, you undoubtedly can see by the pallor and cold sweat visible on your patient's face that he is desperate, and when you go over a certain spot you can see that this is the spot where all of the nerve fibres of this tooth have settled; now make the undercut at this place deep, and do not stop once while doing it, for while your bur is not at the melting point, it may become so if you persevere. Do not for one instant let your instrument glide over to another portion of the cavity and perform some grading there, just go ahead as if you were digging a sewer and want to finish before the rain sets in; your patient appreciates this haste on his behalf; he may have an important engagement the next week and desires more time to regain his lost strength. This is not fiction.

Another chance of taking your patient back to the age of the inquisition and chamber of horrors, is where you have a tooth which must have clean canals before filling. Of course there are nerves in them which you attempted to kill the day before, but slow death is tedious, and your time valuable; just buckle on your armor and look back to the days of chivalry when it was the custom to be stabbed and bled; gather up your tools of war and with barbed swords go after it; you can get it if you try, or perchance you have a mallet and wooden plug, if so, drive it out; it has got to come; never mind the patients, their feelings in the matter are of

no consideration; don't try slow poison and a sure and painless death and decent funeral, that takes time, and time is money.

Separations are supposed to be painful whether between lovers or teeth. I am growing old, but still am a lover, and only have one love; if I must be separated from that one I have no desire to be wrenched away as suddenly as the guillotine or the chair of electrocution would do it. Time is wanted, let it be gradual.

In many instances we prepare cavities without the use of the rubber-dam, and use a water syringe to clean away the *débris*. Be sure and see that the water is cool and refreshing; a spray of cold water thrown into a cavity is very bracing, and it takes time and trouble to have warm water for this purpose.

There are troubles on earth which do not give pain, but bring on uncomfortable feelings, which, after undergoing for a period, would be gladly exchanged for actual pain. In using the rubber-dam if you are careful you can make your patient about as uncomfortable as one could desire, especially when working on the posterior teeth; be sure and use a clamp, a rubber-dam clamp, and a damn clamp, whether taken in connection with rubber or not. Very often a ligature would answer the purpose as well, but then the patient could close the mouth and swallow when desiring, thus necessitate losing a few seconds' time. Now, if you put on the clamp, being careful to take in a portion of the gum, you have your victim where he can neither swallow nor complain, as it seems to be the belief of some that you gauge your prices according to the pain and discomfort on the patient's part. There is no doubt but that a damn clamp is conducive to high prices.

Now, I am not enumerating all of the pains we can afflict, neither do I believe we all afflict them needlessly, but there is no doubt but what these facts are true. Many a dentist has lost patients merely because he gave needless pain. The following clipping, while slightly exaggerated, is still so appropriate to the subject that I can not refrain from quoting what may be a chestnut to many of you:

"When a dentist says to you that he can save your teeth, tell him that you would rather die toothless than be ground to atoms, stabbed to the nerve centers, prodded with a buzz saw, and gagged with large sections of India rubber sheeting, merely to save a few bits of undersirable bone.

"The first thing the dentist did when he undertook to save my teeth was to tip me back in a chair, prop open my mouth with a stick, then he lined my mouth with rubber, attached weights to that portion of the lining which hung outside, then he put a bib under my chin and stood off a little way and gloated over me. I tried to tell him what I thought of him, but was past articulate speech. 'Pleasant afternoon,' said he, taking up a battle axe, and

stepping on a high stool where he could overlook the field of operations. After he had quarried a cavity and blasted it out, he called an assistant and bade him turn a treadle. A big bumble bee immediately flew out of the revolving spokes and charged at the newly made cavity as though it was a flower-cup full of honey. I heard a million slate pencils grating over gritty surfaces. I felt cold hands toying with each particular vertebræ of my spine, and a Waterbury watch seemed merrily winding in each ear. I tried again to speak, but my efforts were in vain. I would have given uncounted gold just to swallow. How little we appreciate our blessings till deprived of them. How unmindful of my opportunities had I been all through those banished years, when I could swallow or not swallow as the mood overtook me. My attempt at scornful protest was like the attempt of a teething babe to hurl sevenfold-curses at Rome.

"Alarmed, perhaps, at the pallor, which I knew full well was creeping over my face, my tormenter removed the stick from between my teeth, and gave me one more chance to swallow and to appreciate in full what the poet meant when he carolled the glad refrain, 'Wipe off your chin.' What I suffered has shattered my nerves for years to come; the horror I endured with the buzz saws, battle axes, patent 7x9 drills, circular action battering rams, has been more of a loss in mental strength and physical aplomb than to have laid down every tooth in the dust."

This sketch was undoubtedly written by some one who had been there, and while not complimentary to the dentist or to the profession, the reproof was deserved.

The child holds the slipper in horror, man fears death and his mother-in-law, woman fears the mouse, and all hold in horror the dentist. If your office is near the roof, many patients climb the long flight of stairs instead of using the elevator, putting off the evil moment as long as possible. I have seen strong, healthy men faint in the chair, not from any pain inflicted, but from fear of what might come. This is unnecessary to a great extent, and it is a discredit to the profession that such a state of affairs exists. A short time ago, one of the most prominent dentists in this section told me he could prepare a cavity and the patient would suffer comparatively little pain, but could not afford the time it took. Now, while I did not argue the question, my opinion is that it is criminal to prepare a cavity inflicting excruciating pain when one is able to do it nearly painlessly. Lack of time is no excuse; the man who has a practice that the loss of a few moments' time is of value, is certainly able to charge prices which will pay for all time lost, and the reputation he gains for being gentle and considerate will more than pay for all lost.

There are other things besides pain which the public has a horror of. The dentist who keeps his office in a filthy condition, carpet out of sight, windows nearly so, cuspadore prominent, by odor as well as sight, lack of cheerfulness on his part, displayed by

prominent finger nails in mourning, instruments with accumulations of ages ; or, perhaps, he may be perfect as far as cleanliness is concerned, but has the barbers' disease, a tongue hung on a pivot, which imparts all desired information, whether sought for or not ; or, he may be afflicted with one of those breaths we have all come in contact with, a sort of medley composed of the component parts of a packing house, soap factory and fertilizing establishment. Imagine the sensation of a lady patient when securely fastened to a chair, having this thick, congealing mass falling on to her face, gently wafting into her delicate nostrils, coating the mucous membrane, and being drawn down into her lungs. The chamber of horrors contained no horror much worse than this. These men are not few, and, as a rule, it is an infliction which can be avoided ; keep your mouth clean, use listerine, chew gum, keep your breath diluted, and your patients will appreciate the change. Many are in this condition and do not realize it ; it is like the distilled essence from the packing house, which we Kansas Cityans enjoy ; it has come on us gradually, and we heed it not.

Now, I have been giving the dark side of dentistry and dentists. I do not think all dentists are brutes ; I am a supposed dentist, and have put great value on myself ; but I sometimes have dirty carpets, dull windows, malodorous cuspadores, and some of the other pleasantries, but I try to make it the exception, not the rule.

—Dr. Root, in *Western Journal*.

We are all important. As we look from our own little place on to the great whirling world about us, we appear insignificant. "The world can get along very well without me," we instinctively ejaculate ; "what am I ?" But in the mighty wheels of Providence, — wheels whirling within wheels, we each have a place. Unless we make inharmony for ourselves by being out of place, we are carried on harmoniously to prosperity and glory. We not only have a place, but an important place, both in the world's progress and in our own destiny.

I believe the thorough cleaning of the teeth before any filling is done should be persisted in, and a proper charge should be made for the labor. In fact, the more "little things" a dentist does for nothing the more he is expected to do. It is demoralizing to both dentist and patient.

Editorial.

SAVING EXPOSED PULPS.

Saving exposed pulps of teeth is no new effort. Yet practice and results are still conflicting. As it is in the treatment of teeth, the pulp of which is killed, or is already dead, the treatment and the probability of success, varies with every dentist. Dentists who have failed till they have abandoned all attempts, blame the peculiar climate of their location, or their patients' lack of vigor, or the character, or condition, of the teeth, or any thing rather than themselves; others proclaim boldly they save a large majority of exposed pulps.

Some contend that the preservation of the pulp of teeth, especially in adults, is of little value anyway; that a dead tooth is as good as a live tooth, if properly treated. Therefore, they prefer killing a pulp, however slightly exposed, or however healthy; and they are not loath to cut a sound tooth off and punch out its life, if they want it as a stump in bridge-work. Others are confident there is no surety in the condition of a dead tooth, that it is liable to give trouble at any time, even a long time after the best treatment.

When shall these conflicting statements and processes and results give place to treatment that is uniform and successful?

CATCH UP AND KEEP UP.

The laggards are legion, the bright ones are few. Wake up, tumble up, any way to get up, only come up and take your proper place. Then march to the music of success. It is a shame to see so much talent buried in laziness. You can do something if you try, you can do something well if you will. Yet you live from hand to mouth, unhonored and unknown. The idea of your being "a professional man," and yet not leading! Be ashamed of yourself and come to the front. Throw off your rough old clothes, your slovenly ways and your obnoxious habits. Clean yourself up, dress and look and act professionally, and come among the honored. Rub up your best ideas and get more from others. Take your stand with dignity

and be somebody. You have been cooped up in that smoky, dingy, dirty out-of-the-way place so long you smell bad, and look bad and are bad. There is nothing attractive about you. Shake yourself and come into the sunlight, cheer up and look happy, laugh and grow fat, show yourself a man and start anew. Burn up your old office and every thing in it, and your old self with your rum, beer and tobacco. Now with your new inspiration and esthetic appearance and taste, come where you will have good company, good pay and good cheer. You are growing musty and seedy and crabbed where you are. Better get some one to kill you, if you are still determined to be a laggard and a nuisance.

GETTING RICH.

It is easy enough to get rich, however poor we may be, if we possess the three keys which unlock its treasures—patience, perseverance, prudence. It is easy enough to get poor, however rich we may be, if we spend more than we earn.

Getting rich does not depend so much on the fewness of necessary expenses, as on our ability to curb the multitude of our frivolous, hurtful and expensive extravagances.

We may gratify all our natural appetites normally, and grow rich, happy and noble; it is the indulgence of artificial appetites, that bring poverty, enervation, and misery.

Our *needs* are few and frugal, and if we are satisfied with them, their gratification brings solid pleasure, unalloyed comfort, and restful prosperity; it is our innumerable, trivial and expensive *wants* that make us slaves to work and worry, debt and depression, unrest and discontent—our wants run ahead of our income, and draw us into entanglements, embarrassments and complications, that bring poverty amid plenty, failure amid prosperity, and discontent amid pleasure.

The hinderances, therefore, to a wealth of gold, health and enjoyment, and the cause of our great burden and depression, unrest and anxiety, and circumstances and conditions in our chase after pleasures, which prove *anignis fatuus*, leading us into the mire, are

our imaginary wants. They exhaust us and then laugh at our folly in chasing them ; they disqualify us for rational things and a normal condition, and fill us with inflamed passions and unhealthy longings that make us forget this is where leeches fasten on us, crying, as they bite and suck our life blood, " Give, give, give ! "

The greatest blessing that can come to such a man is to be obliged to utterly abandon his position. The very sheriff, with his writ to take all, is his best friend. If he can only escape with his life—his spirits broken, home ruined, and the whole surroundings of his life deserted—he will gain more than he will lose, if it brings a life of simplicity, economy, and simple, peaceful contentment ; for the most he has lost is deceitful appearances, and his effort to live on bubbles ; what he gains is the foundation rock on which he can build a lasting palace of happiness, prosperity, and comfort.

A spendthrift puts his money into a leaky pocket. It is never satisfied and never full. He is ever spending more than he has, and spends it on what is frivolous, unreal, and unsatisfying. He never has money in bank, or even for the comforts of home or the necessities of business. But wealth is half attained when we can enjoy an economy that allows us to save a little from each day's income ; for economy begets method, carefulness and sobriety, and these are sure to bring forth foresight, thoughtfulness and skill, which will grow into thrift, popularity and solid prosperity.

BE SURE YOU ARE RIGHT.

A gentleman came to me once with a severe toothache.

" This is the one, doctor ; take it out as quickly as possible."

" Let me see," said I.

" No, no," he replied ; " for God's sake, take your forceps and out with it ; it is killing me."

" I cannot take a tooth out without knowing I am right," I persisted.

" My God, then I'll go to one who will ;" and up he jumped in a passion and flew across the street.

In an hour back he came, saying :

"Doctor, I see I was wrong in the tooth I wanted out; it is the next one, the wisdom tooth. It is aching like thunder, and Allen is not in, or I would go back to him. Now out with it, for God's sake."

"Now just let me examine it a little, and see if you are right?"

"Oh, my God, *no*; I know I am right now. Don't torment me for a moment. Take it out; you see I can't be wrong now."

"I will not take a tooth out that I am not myself convinced should come out."

"By the holy spoons, I'll never again enter this office!" and he slammed the door in my face with a bang.

But again he returned.

"Now, doctor, kill me; do anything you will, but cure my thundering and lightning toothache. If I had stuck to you in the first place I would not have lost two sound teeth. My wife told me to come to you in the first place, and she is mad at me because I didn't stay here, and I am, too. But, doctor, there is no use talking; I have it now. It is the first molar, and there I have had the two back of it taken out for nothing. You will see; just feel how loose it is."

I felt, and sure enough it was so loose I could almost have removed it with my fingers.

"But, my friend," said I, "that is not the tooth that has been troubling you; let me look at the teeth above?"

He laughed right out.

"You think I am a darn blasted fool—an idiot? May be it's my wife's tooth that's aching? I have brought her this time to hold me down, no matter what you might say. But now, gall darn it—"

"Husband, remember your promise. You said I might tie you hand and foot if you stirred, and I'll do it, sure."

"But he is so unreasonable."

"Open your mouth and keep still."

He did open his mouth and keep still. Every upper tooth was sound on that side of the mouth till I came to the third molar. Here, quite hidden by the cheek, was a deep cavity.

"That's the tooth," said I. "Now allow me to convince you

by gently touching the exposed nerve." As I did so, he just "hollered" right out:

"You have got it! You have got it! By thunder and lightning and a big storm!"

In a moment I had my half dollar and he had peace.

The looseness of the first molar below had been caused by the extracting of the sound tooth behind it.

Few of us see the importance of the present. We regret many errors and blunders of the past, but do not use the present to correct them; we promise ourselves grand improvements for the future, but we are not ready to commence them now. We spend much of the present trying to forget the evil and incompetent past, and would fain jump into an ideal future; but we are indifferent to both, as a present experience.

Yet how golden the moments which separate these two eternities? Only in this great present can we improve; or are we our master for weal or woe? All influences here cluster round us to do us service. For the moment we choose; then we press on to be the servant of our choice.

Thus, the past has made us what we are, the present is our changing time for better or for worse, and the future takes us for what in the present we choose to be.

How difficult to separate ourselves from our business, to make our patients take our work and ignore our character, to be popular as a dentist and repulsive as a man! Our most appreciative and desirable patrons will have clean work from clean hands, and the man that cleans their mouth must have a clean mouth himself. Foulness in body or character is repulsive, and will repel our best patients.

Said a clean-looking, pleasant, quiet lady, as she opened our office door: "Sir, do you use tobacco?"

"Of course, not," we replied.

"Then I will come in. I have been to two dentists, and their

breath and clothes smelt so intolerable of this nasty stuff, that I became disgusted."

As she paid us for our work, we thought we would just keep account of what might come directly from her influence. She came from a neighboring village, and by inquiry we found she was of a wealthy and refined family. Within a year she had sent us more than three hundred dollars' worth of work.

After extraction, hot water to rinse the mouth assists in forming a clot, and thus stopping hemorrhage; cold water prevents the formation of the clot and increases hemorrhage. And hot water is more agreeable to the patient. In spite of cold water, a clot will generally form, but it will be much weaker, and, therefore, secondary hemorrhage is more likely. The first fresh blood from a wound is much the best as nature's healer, and the less it is interfered with the better. Often there is no call for even hot water, unless the mouth is rinsed with cold water.

Occasionally antiseptics may assist, but these are not usually as potent as we imagine. The pressure of the patient's finger on the part for a few minutes is generally sufficient to assist nature in filling the cavity with clot till the torn blood-vessels close. If this simple remedy is not sufficient, plug the cavity with cotton. The idea that this must be saturated with acetate of iron is not so important, and sometimes injurious, for the clot it forms is often so tanned that it easily breaks away, causing secondary hemorrhage. If anything is used on the cotton wad, let it be chloride of zinc or nitrate of silver, or the two combined.

Six years ago I saw a central incisor Dr. Younger had then recently implanted in the mouth of a colored porter in S. S. White's dental depot in New York. It is still doing good service. Since then its mate has so far decayed as to be abscessed, and is likely to jeopardize the usefulness of the implanted tooth. What a shame! How many thus neglect their teeth, even after very expensive work has been done on them.