

# JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

Vol. 6 . . . . . MARCH, 1939 . . . . . No. 1

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By THE AMERICAN COLLEGE OF DENTISTS

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## AMERICAN COLLEGE OF DENTISTS

*Convocations* have been held on this schedule (since organization in *Boston*, Aug. 20 and 22, '20): (1) *Chicago*, Jan. 26, '21; (2) *Milwaukee*, Aug. 13 and 18, '21; (3) *Montreal*, Jan. 25, '22; (4) *Los Angeles*, July 16 and 19, '22; (5) *Omaha*, Jan. 23, '23; (6) *Cleveland*, Sep. 12, '23; (7) *Chicago*, Mar. 5, '24; (8) *Dallas*, Nov. 12, '24; (9) *Louisville*, Sep. 22, '25; (10) *Philadelphia*, Aug. 22, '26; (11) *Chicago*, Jan. 26, '27; (12) *Detroit*, Oct. 23, '27; (13) *Minneapolis*, Aug. 19, '28; (14) *Chicago*, Mar. 24, '29; (15) *Washington, D. C.*, Oct. 6, '29; (16) *Denver*, July 20, '30; (17) *Memphis*, Oct. 18, '31; (18) *Buffalo*, Sep. 11, '32; (19) *Chicago*, Aug. 6, '33; (20) *St. Paul*, Aug. 5, '34; (21) *New Orleans*, Nov. 3, '35; (22) *San Francisco*, July 12, '36; (23) *Atlantic City*, July 11, '37; (24) *St. Louis*, Oct. 23, '38. [Next: *Milwaukee*, Wis., July 16, 1939.]

*Sections and dates of meetings in College year of 1938-39* (between convocations).—(1) *Kentucky*: Dec. 2, '38; June 13, '39. (2) *No. Calif.*: Nov. 30, '38. (3) *Maryland*: Apr. 12, '39. (4) *New York City*: Nov. 25, '38; Feb. 24, '39; May 5, '39. (5) *Minnesota*: Feb. 23, '39. (6) *New England*: Apr. 12, '39. (7) *Wisconsin*: Apr. 17, '39. (8) *Colorado*: June . . , '39. (9) *Pittsburgh*: Dec. 14, '38; Feb. 8, '39; Mar. 23, '39; Apr. . . , '39; June . . , '39. (10) *Iowa*: May 2, '39. (11) *Illinois*: Dec. 12, '38; Feb. 12, '39. (12) *St. Louis*: Dec. 12, '38. (13) *Oregon*: Feb. 24, '39; Mar. 11, '39. (14) *Texas*: Apr. 15, '39. (15) *Florida*: Nov. 11, '38. (16) *Indiana*: Jan. 9, '39.

*Objects*: The American College of Dentists "was established to promote the ideals of the dental profession; to advance the standards and efficiency of dentistry; to stimulate graduate study and effort by dentists; to confer Fellowship in recognition of meritorious achievement, especially in dental science, art, education and literature; and to improve public understanding and appreciation of oral health-service."—*Constitution, Article I.*

*Classes of members* (each member receives the title of Fellow—"F.A.C.D."): (1) "The *active* members consist of dentists and others who have made notable contributions to dentistry, or who have done graduate, scientific, literary, or educational work approved by the College." (2) "Any person who, through eminent service, has promoted the advancement of dentistry, or furthered its public appreciation, may be elected to *honorary* membership."—*Constitution, Article II.*

*Forfeiture of membership*. "Membership in the College shall be automatically forfeited by members who (a) give courses of instruction in dentistry under any auspices other than those of a dental society, dental school, or other recognized professional or educational agency; or (b) give courses of instruction in dentistry in a privately owned undergraduate or postgraduate dental school; or in a school that is associated with an independent hospital or dispensary but is not an organic part of it; or (c) exact exorbitant fees for courses of instruction in dentistry under any auspices." . . . —*Constitution, Article II.*

## JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

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## AMERICAN COLLEGE OF DENTISTS

### REPORT OF COMMITTEE ON NECROLOGY<sup>1</sup>

J. BEN ROBINSON, D.D.S., F.A.C.D., *Chairman*<sup>2</sup>  
*Baltimore, Md.*

Fellows of the College: It is with a deep sense of loss and with a feeling of sorrow that we report the deaths of twenty-four distinguished Fellows of the College, which have occurred since the last Convocation.

These Fellows have gone in and out among us, some of them for many years and each, in his field and in his own locale, has contributed to the welfare of the profession and to the public whom both he and we serve. Their lives have been constructive in their influence at home among those who knew them best and among us, where existed a common ideal as regards the ministering function of our profession.

We will miss them, but the power of their influence will live as long as our memories last. We wish to submit the following resolution:

Whereas, Almighty God, in His wisdom has seen fit to take them from us; be it

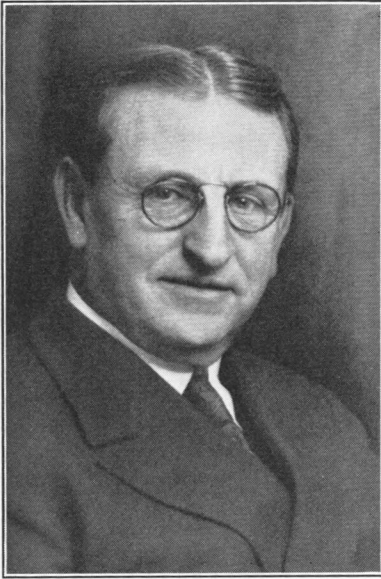
Resolved, That we here assembled, humbly bowed, express our deepest sympathy in the loss of these Fellows and comrades; and be it

Further Resolved, That we record this expression of our sorrow in the archives of the College and send a copy to those who mourn their death.

<sup>1</sup>Presented at the convocation in St. Louis, Mo., October 23, 1938. The portraits on pages 2-13 were presented at the convocation with the Committee's report.

<sup>2</sup>The other members of this Committee (1937-8): B. B. Palmer, J. E. Gurley, Howard C. Miller.





CHARLES FREDERICK ASH, D.D.S.

1870-1938

Fellowship conferred in 1922

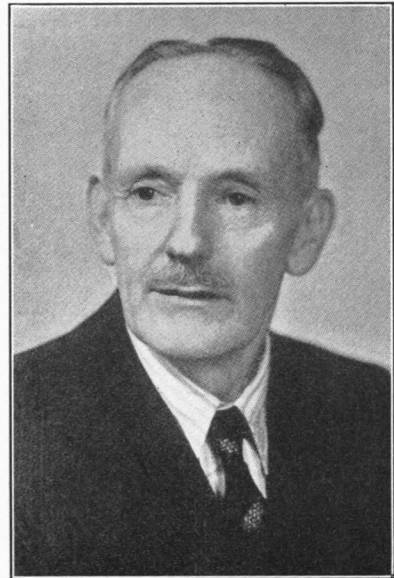
Graduated New York University Dental College 1894; past president the Second District Dental Society of New York and of the First District Dental Society of New York; honorary member of the American Dental Society of Europe; past president of the Brooklyn Dental Society; past first vice-president of the American Dental Association; past supreme grand master of the Delta Sigma Delta Fraternity; Fellow of the New York Academy of Dentistry; director general of the Preparedness League of American Dentists. Member of the Camp Fire Club of America, Bankers Club of New York and the Lotus Club. "Great of heart, of mind and of attainment in his profession; sound of judgment, skilful in operating, ingenious in difficult planning, of calm and constant courage in time of misfortune or panic."

THEODORE BERNHARD BEUST,  
M.D., D.D.S.

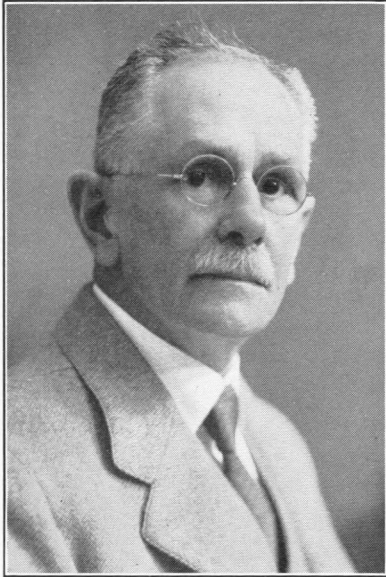
1871-1937

Fellowship conferred in 1928

Graduated Louisville College of Dentistry, 1892; practiced in New Albany, Ind., and Dresden, Germany. Began teaching in Louisville College of Dentistry; distinguished and capable researcher. Chairman Commission on Dental Research, the American Dental Association; president the International Association for Dental Research in 1935; chairman the Louisville Section of the American Association for Dental Research; member the American Association for the Advancement of Science.







FRANK ALEXANDER DELABARRE,  
D.D.S., M.D.

1867-1938

Fellowship conferred in 1928

Graduated the University of Pennsylvania School of Dentistry, 1894; Professor of Orthodontia Tufts College Dental School; chief of the Orthodontia staff and dean of the post-graduate school of Orthodontia, Forsyth Dental Infirmary, 1911-1919; member the Massachusetts Department of Public Health; past president of the American Academy of Dental Science, of the New York Society of Orthodontists, the Massachusetts Dental Society; president-elect of the American Association of Orthodontists; member the American Society for the Promotion of Dentistry for Children; of the European Orthodontological Society; past supreme grand master the Delta Sigma Delta Fraternity. "With a rare insight into the essential virtues of life, he moved among his fellowmen with a sureness and balance

that stamped him at once as a man of judgment and vision. He left a rich heritage of memories . . . among his wide circle of personal and professional friends."

WILLIAM SLOCUM DAVENPORT, SR.,  
D.D.S.

1869-1938

Fellowship conferred in Paris, France, by Dr. H. E. Friesell in 1927. Died, Paris, France, February 26, 1938. Officer in the Legion of Honor and a Knight of the Order of Leopold, which honor he received for personal services to the Belgian royal family. A well-known painter, several of his paintings are in American museums, among them the Brooklyn Art Museum. In his youth was a personal friend of the artist Whistler. Assistant chief of the face and jaw section of the American Ambulance Corps in World War, where he did remarkable work in grafting live bone tissue in the reconstruction of wounded faces. For this he received the knighthood in the Legion of Honor.







ARTHUR DAVENPORT BLACK,  
A.M., M.D., D.D.S., Sc.D.

1870-1937

Fellowship conferred in 1921

*Founder*

Graduated Northwestern University Dental School, 1900. Secretary American College of Dentists, 1921; Fellow of the American College of Surgeons; founder of the Omicron Kappa Upsilon, honor dental fraternity; honorary member Royal Society of Medicine of England, the German Academy of Natural Sciences and the Swedish Dental Society; president of the Chicago Centennial Dental Congress; past president of the Illinois State Dental Society, of the American Institute of Dental Teachers, of the International Association for Dental Research; author of the Index of Periodical Dental Literature; dean of Northwestern University Dental School. Author of many textbooks and scientific articles on medicine and dentistry. "He was a

man of vigorous intellect, of intrepid courage, of peerless leadership; but transcending these were his unchallenged honesty, his unsullied integrity, his spotless character. . . . The high esteem in which he is held proclaims the lasting dignity of an exemplary life and recognizes those common virtues of humanity which are behind true greatness."

FRANK A. GOUGH, B.D.S., D.D.S.

1872-1938

Fellowship conferred in 1926

Graduated University of Buffalo, 1895; New York University Dental School, 1896; graduated from the Angle School of Orthodontia in 1900; past president the Second District Dental Society; past secretary the Second District Dental Society; many years business manager "The Angle Orthodontist." "The vigor of his personality, his stimulating mind and his enthusiasms were a constant source of inspiration to those associated with him. He was a true and loyal friend, an indomitable supporter of the truth."







FREDERIC R. HENSHAW, D.D.S.

1872-1938

Fellowship conferred in 1922

Graduated Indiana Dental College, 1897; past president of the Indiana State Dental Association, of the Indianapolis Dental Society of the American Association of Dental Schools; past vice-president of the National Association of Dental Examiners; member of the Indiana State Council of Defense during the World War; former member of the Indiana State Board of Health; past supreme grand master of the Delta Sigma Delta Fraternity; dean of the University of Indiana School of Dentistry.

FRANK W. HERGERT, D.D.S.

1880-1937

Fellowship conferred in 1929

Graduated North Pacific College of Oregon School of Dentistry, 1903. Past president the Seattle Dental Study Club, the Seattle District Dental Society, the Washington State Dental Society; president of the Pacific Coast Dental Conference from 1929-1932; honorary life member of the Seattle Dental Study Club, the Seattle District Dental Society and the Washington State Dental Society; past supreme counselor of Psi Omega Fraternity. He was the nucleus of the dental profession of the Pacific Northwest, beloved by all.





FRANK A. HAMILTON, D.D.S.

1872-1937

Fellowship conferred in 1926

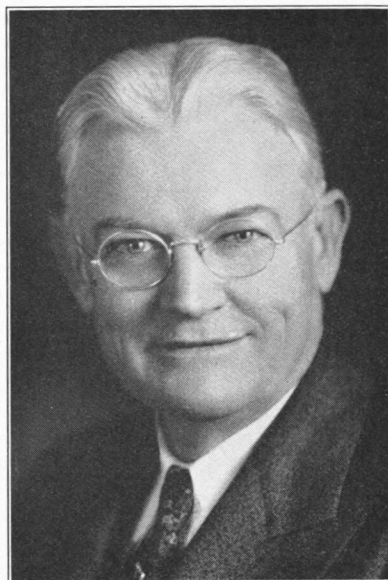
Graduated Indiana University School of Dentistry, 1895; past president of the Indiana State Dental Association, of the Indianapolis Dental Society, of the Indiana University School of Dentistry Alumni Association. A life member of the Indiana State Dental Association.

CLAUDE NEWTON HUGHES, D.D.S.

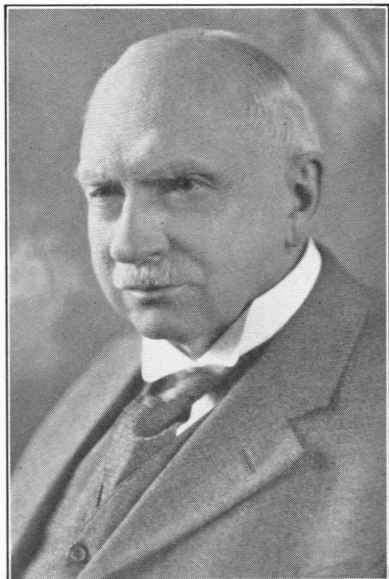
1881-1938

Fellowship conferred posthumously, Oct.  
23, 1938

Graduated Atlanta Dental College, 1907; past president of the Atlanta Society of Dental Surgeons; dean of the Atlanta Dental College, 1910 to 1917; secretary of the faculty; professor of prosthetic dentistry; member of the executive committee and of the board of trustees of the Atlanta-Southern Dental College, 1917-1938. Honorary member of the Mississippi, North Carolina and Florida Dental Associations and honorable fellow of the Georgia Dental Association.







CHARLES NELSON JOHNSON,  
M.A., L.D.S., M.D.S., LL.D., D.D.S.

1860-1938

Fellowship conferred in 1921

President, 1926-27

Secretary pro tem. at the first meeting of the College, August 20, 1920. Graduated Royal College of Dental Surgery, Toronto, 1880; graduated Chicago College of Dental Surgery, 1885; past president of the American Dental Association, the Illinois State Dental Society, the Odontographic Society of Chicago, the Odontological Society of Chicago, the Chicago Dental Society, the Alumni Association of the Chicago College of Dental Surgery, the American Association of Dental Editors; recipient of the Jarvie medal from the New York State Dental Society, the Jenkins medal from the Connecticut State Dental Society, the Callahan medal from the Ohio State Dental Society; editor of the *Journal of the American Dental Association*, and former

editor of *The Bur*, *The Dental Review* and *The Desmos*; past supreme grand master of Delta Sigma Delta Fraternity; the most prolific writer in the history of dentistry. "He gave to dentistry unselfishly and unstintingly the full benefit of his unusual talent; he brought to it a great capacity for action and applied to it an inexhaustible energy. His greatest interest was his profession, his greatest ambition was to serve his profession, his greatest motive was to promote his profession, his greatest love was his profession. No one has come nearer making the humble doctrine of service to humanity the cardinal and guiding principle of his life."

H. LEONIDAS KEITH, D.D.S.

1883-1938

Fellowship conferred in 1937

Graduated Southern Dental College, 1909; past president the Fifth District (North Carolina) Dental Society; past secretary the Fifth District Society; former member North Carolina State Board of Dental Examiners.





FREDERICK C. KEMPLE, D.D.S.

1871-1938

Fellowship conferred in absentia May 20, 1938

Graduated University of Pennsylvania, 1895; graduated Angle School of Orthodontia, 1906; president, First District Dental Society, State of New York, 1919-20; president, American Society of Orthodontics, 1915-16; Charter Fellow, New York Academy of Dentistry; served several years as editor of *Desmos*, magazine of Delta Sigma Delta Fraternity; and for twelve years on Board of Governors of New Rochelle Hospital; one of the founders of the International Association for Dental Research.

CHARLES LANE, D.D.S.

1884-1938

Fellowship conferred in 1926

Graduated Royal College of Dental Surgeons, Toronto, 1906, Chicago College of Dental Surgery, 1909; former Regent of the American College of Dentists; past president of the National Society of Dental Prosthetists; professor of Operative Dentistry and dean of the University of Detroit, School of Dentistry.







ARTHUR CLYDE La TOUCHE, D.D.S.

1876-1938

Fellowship conferred in 1923

Graduated Northwestern University Dental School, 1899; secretary of the faculty and professor of Operative Dentistry of the School of Dentistry, University of Southern California; life member of the Los Angeles County Dental Society and the Southern California State Dental Association.

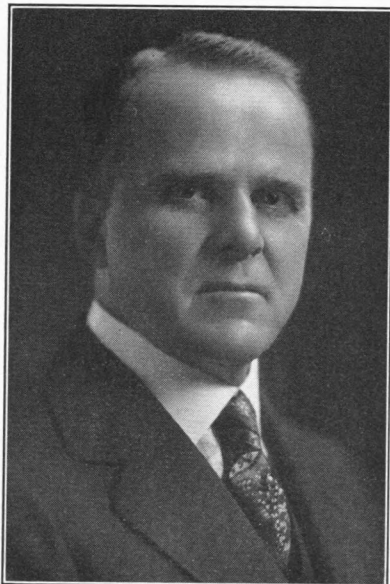
ARTHUR R. McDOWELL, D.D.S.

1890-1938

Fellowship conferred in 1927

Graduated the College of Physicians and Surgeons, San Francisco, 1917; past president of the American Association of Dental Schools; professor of Operative Dentistry and dean of the College of Physicians and Surgeons, San Francisco. In a few brief years as the dean of his school he was successful in bringing that institution up to a class "A" rating. He was a natural as well as trained educator, having been in educational work all of his life, even before taking up dentistry. He was one of the real leaders of the west.





W. D. N. MOORE, D.D.S.

1873-1937

Fellowship conferred in 1927

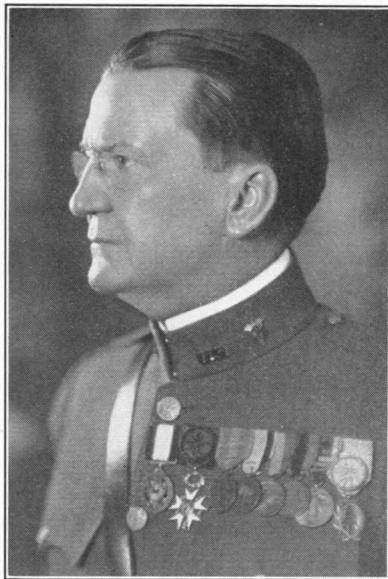
Graduated Chicago College of Dental Surgery, 1902, the Royal College of Dental Surgeons, Toronto, 1903; member of the faculty of the Chicago College of Dental Surgery; past president of the Chicago Odontographic Society.

COLONEL ROBERT TODD OLIVER,  
D.D.S.

1868-1937

Fellowship conferred in 1926

Graduated Indiana Dental College, 1888; appointed in 1901 by War Department as Contract Dental Surgeon, U. S. Army—the beginning of the present U. S. Dental Corps; promoted in 1916 to Captain, Dental Surgeon, U. S. Army; chief of the Dental Corps of the American Expeditionary Forces in World War; made Colonel, Dental Corps, U. S. Army, while in France; past president the American Dental Association; decorated with the distinguished service medal of the U. S. government and The Legion of Honor, and the Double Palm d. Academie of the Republic of France.







W. MARVIN ROBEY, D.D.S.

1879-1938

Fellowship conferred posthumously,  
October 23, 1938

Graduated the School of Dentistry, Vanderbilt University, 1901; past president of the North Carolina Dental Society; past president of the Charlotte Dental Society; editor of the *Dental Section, Southern Medicine and Surgery*.

ALBERT R. ROSS, D.D.S.

1876-1938

Fellowship conferred in 1923

Graduated Pennsylvania Dental College, 1903; past president the Indiana State Dental Association; trustee of the American Dental Association; past secretary of the Indiana State Dental Association.

"Unselfishly and without thought of personal aggrandizement, he lent his influence to any cause that promised progress for his profession."





URA GARFIELD RICKERT,  
D.D.S., M.S.

1879-1938

Fellowship conferred in 1923

*President 1930-1931*

Graduated the University of Michigan, School of Dentistry, 1916; past president Michigan State Dental Association, and of the International Association for Dental Research; editor of the *Michigan State Dental Journal* and member of the Board of Editors of the *Journal of Dental Research*; member of the American Association for the Advancement of Science and the American Society of Bacteriologists. "He will long be remembered by a host of those within and without his profession who honor him for the wise counsel, sound teaching and friendly interest which he so freely and so willingly gave."

JOHN SCHOLTEN, D.D.S.

1890-1938

Fellowship conferred in 1923

Graduated College of Dentistry, University of Iowa, 1914. He was active in association work and was for years secretary of the Iowa State Dental Association and secretary of the Iowa Section of the College.







EDWARD F. SULLIVAN, D.M.D.

1894-1938

Fellowship conferred in 1932

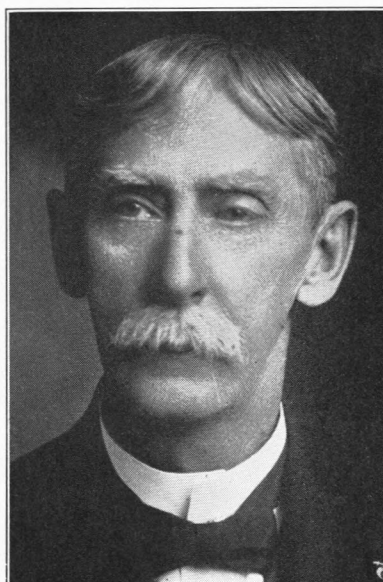
Graduated Tufts College Dental School, 1917; former instructor Tufts College. He passed on at a young age—his activities were centered in the American Society for the Promotion of Dentistry for Children, in which he was successful.

RICHARD C. YOUNG, D.D.S.

1860-1938

Fellowship conferred posthumously,  
Oct. 23, 1938

Graduated at the Philadelphia Dental College, 1877; past president of South Carolina Dental Association and past president of the Alabama Dental Association; former instructor Southern Dental College of Atlanta and Atlanta Dental College.



## AMERICAN COLLEGE OF DENTISTS

### DENTAL HEALTH FOR AMERICAN YOUTH<sup>1</sup>

C. WILLARD CAMALIER, D.D.S., F.A.C.D.

*President, American Dental Association, Washington, D. C.*

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#### I. INTRODUCTION

It gives me pleasure to appear before you this afternoon to discuss the problem of Dental Health for American Youth. Until comparatively recently dentistry has not had a proper position in the health programs of the schools and it is probably within the memory of all present when there was no dental program in the schools of the nation. However, the question of the health of school children is now receiving a tremendous amount of attention, but unfortunately the methods of education and treatment vary to an enormous extent. At the recent meeting of the World Federation of Education Associations held in Tokio, Japan, Professor C. E. Turner, Chairman of the Health Section, reports:

"Organized health education, as the most recent and one of the most valuable developments in school health, is still handled in different ways and under different administrative procedures. There are few if any more important problems than that of securing trained and effective leadership in health education. . . .

"We want to know the best methods of training-school health person-

<sup>1</sup>Address delivered at the Convocation of the College in St. Louis, Mo., Oct. 23, 1938.

nel and the best health education procedures in different types of educational systems. We need more objective methods for determining the health status of school children. To what extent will education suffice, and to what extent must we provide health services in securing the medical care which our school children need? What is the relative value and what are the relative costs of the different elements in our school health program? What elements of the physical education program in various countries are worthy of wide adoption outside the country in which they evolve? What specific treatment and school administrative procedures are most helpful in specific diseases like trachoma, malaria, or hookworm?

"Much has been accomplished in school health education and there is keen interest in its further development throughout the world. Nevertheless, much remains to be done. The world is only beginning to recognize the tremendous power for improving the national health which rests with the teachers in the public schools. Every nation still has much to do in improving the training of prospective teachers both in health subject-matter and in health education methods. Some schools are using full-time school physicians and dentists, while others are using a minimum amount of part-time medical and dental service and relying upon health education to interest families in securing medical attention from the regular medical practitioner. All would probably agree to the governmental principle that services should not be rendered to people if the public can be taught to secure those services for itself. There is yet no agreement as to the best medical and dental policy."

## II. THE PRESIDENT'S INTERDEPARTMENTAL COMMITTEE

In the first section of the report presented to the President of the United States from the Sub-Committee on Medical Care of the President's Interdepartmental Committee for Coordination of Health and Welfare Activities, we find this statement:

"In apparently well children, malnutrition and defects of vision, or hearing, of the lymphoid tissues of nose and throat, and of the teeth, are relatively frequent. Many of these defects are remediable, and when they are remedied, the child is saved from further illness or from maladjustments to his environment.

"In one nation-wide survey in which dental defects were included, it was found that for every 1000 children entering school there were approximately 1300 defects that needed dental attention."



And we find this recommendation:

"Because of the enormous accumulated neglect in dental care among adults, such funds as are available for dental care should be directed especially toward preventive and other dentistry among children."

### III. PUBLIC HEALTH COMMITTEE OF THE A. D. A.

According to a recent report submitted by the Public Health Committee of the American Dental Association, the following information indicates to a considerable degree the part that dentistry plays in the various states of the Union, with special reference to the activities emanating chiefly through departments of health:

a. Fifteen states have a dentist on the governing board of their respective state health departments.

b. Fourteen states have a separate and distinct dental division or bureau as integral parts of their state health departments.

c. Thirty-two states are conducting some form and measure of dental activity through their respective state departments of health. Nine states are considering the establishment of some dental activity. Four did not contemplate the inauguration of dental activity in any form or to any degree.

d. In the majority of cases, dental activity was carried on by a dental subdivision of some other division or bureau.

e. Twelve states have been conducting public health dentistry, in some form, for a number of years.

f. Nineteen states had started dental activity since the Social Security bill became a law.

g. Twenty states had a full or part-time licensed dentist in charge of their respective dental programs.

h. In the remainder of the states conducting dental programs, supervision was in the hands of a hygienist or a layman educator.

In order to evaluate properly the foregoing, it is necessary to give a brief outline of that part of the Social Security Act which deals with public health and of necessity some of the activities included above, although undoubtedly some of you are familiar with it.

#### IV. FEDERAL CHILDREN'S BUREAU

Under section 501 the Federal Children's Bureau receives three million eight hundred thousand dollars (\$3,800,000) annually for the promotion of the health of mothers and children, especially those in rural areas and areas suffering from severe economic depression. Under section 601 the United States Public Health Service receives eight million dollars (\$8,000,000) annually for the purpose of assisting states, counties and other political subdivisions in establishing and maintaining health services. Of this amount allotted, one million dollars (\$1,000,000) is allotted for the training of public health personnel. Under section 603 an additional two million dollars (\$2,000,000) is allotted to the United States Public Health Service for research and administration of the act. This makes an aggregate appropriation under the Social Security Act of thirteen million eight hundred thousand dollars (\$13,800,000) a year for public health.

#### V. CONFERENCE OF STATE AND PROVINCIAL HEALTH OFFICERS OF NORTH AMERICA

Much has been said with reference to the proper set-up for dental service under the state and city health departments. It is my opinion that the best results can be obtained by the establishment of separate and distinct divisions or bureaus under the state departments of health. In connection with this particular matter, in April, 1937, the Conference of State and Provincial Health Officers of North America, meeting in Washington, passed the following resolution:

"Resolved, That an Oral Hygiene or Dental Health program should be established by each and every state board of health or state department of health, and furthermore, that such program be under the immediate direction of a licensed dentist qualified by special training and experience for this position."

The Committee on Professional Education and Qualification of the Association of State and Territorial Health Officers, last year gave careful consideration to this matter and has officially

established what they believe to be the proper professional qualifications of dentists in this work. They can be obtained, if you are interested, from the Central Office of the American Dental Association.

#### VI. DENTAL PUBLIC HEALTH TRAINING

If our profession is to take its rightful place in this field, there must be proper and adequate facilities for the training of dental public health personnel. There are several schools for the training of medical public health personnel, and in two schools, namely, Harvard and Michigan, a full course of eight months is given specifically for the purpose of training dentists in dental public health service. Harvard grants a degree of C.P.H. and Michigan a degree of M.S.P.H. This is not only an important but a most necessary step in the progress of dentistry; important because of the recognition by these schools of the field of dental health in relation to the public, and necessary because of the increasing demand for dental directors in departments of health and the need of further qualification of those already employed. Another step in the right direction is to be noted, namely, the establishment in the Long Island College of Medicine of a course in dental science as a part of its public health program.

#### VII. DENTAL ADVISORY COMMITTEE

Last year, upon recommendation principally of our former President, Dr. Leroy M. S. Miner, Secretary Perkins of the Labor Department appointed the following dental advisory committee to the Children's Bureau: Dr. Harvey J. Burkhart, Dr. Leroy M. S. Miner, Dr. Lon W. Morrey, Dr. W. N. Hodgkin, Dr. Gerald D. Timmons, Dr. A. Leroy Johnson, Dr. Bert G. Anderson, Dr. Guy S. Millberry, Chairman, and your President. The committee was called into conference in Washington on November 16th and while no definite action was taken the following is a summary of the discussion and consensus of opinion of the members:

1. Dental activities in the field of maternal and child health should

be concentrated on prenatal, infant, and preschool programs.

2. Nutrition is a primary factor in dental health and emphasis should be placed on this subject.

3. Dental hygiene or oral hygiene is important from the standpoint of cleanliness and dental hygiene services are desirable.

4. In the dental program in the order of their importance, education, nutrition and corrective services should be given consideration.

5. In order to evolve a more effective preventive program in dentistry it is highly desirable that funds for research be made available.

6. The qualifications of a director of a dental division or unit in a state department of health should be as follows:

"A licensed dentist with five years of experience, preferably with training and experience in the field of children's dentistry and training in public health."

7. Postgraduate courses in the field of children's dentistry should be held in communities throughout each state for the local dentists.

8. There should be a dental representative on the maternal and child health advisory committee in each state.

The first of last year Dr. Alfred Walker of New York was appointed representative of the American Dental Association to the conference on better health for mothers and babies called by the Secretary of Labor January 17 and 18, 1938. Dr. John Oppie McCall was Dr. Walker's alternate and served in Dr. Walker's absence. The other members were Drs. Leonard, Wisan, Owen and Michaels. The Committee has submitted its report and you may be sure that dentistry's position was well indicated.

#### VIII. ATTITUDE OF A. D. A. RELATING TO CHILD DENTAL HEALTH

The American Dental Association is vitally interested in child health, referring particularly to dental health, and is now taking a militant attitude in regard to it. It minces no words in its slogan "Dental Health for American Youth," and is very earnest about it. With approximately 90 per cent of the children of the United States suffering from dental caries, the Association realizes that this is a distinct and undisputed health menace that must be attacked, and this can best be done by the profession itself. It is



unquestionably our business to assume leadership, and with the assistance of the community much good will be accomplished for present and future generations.

In its approach to this preventive problem, the profession thoroughly realizes that it must have the support of the physician, the nurse, the nutritional expert, and others, because good general health usually means good teeth.

The large program, therefore, is education of the parent and child. The immediate need, while important, is a small part of its long-term program. Prevention of dental diseases in childhood is the paramount issue before us because of the potentialities for future benefit. Such a program is feasible and of practical application for all children and parents of America, and should produce beneficial results, not only for the dental health of the youth of our nation but their general health. It will bring about advanced school standing, improved behavior habits and personal hygiene, lessening of delinquency, and uplift in the character and health of the citizens generally.

Much is being accomplished along these lines, and those states, counties, cities, and towns with dental programs are to be congratulated on their efforts. The American Dental Association, however, is not wholly satisfied and, no doubt, dentists as a whole are not satisfied either.

Time prevents a detailed discussion of the program, but the American Dental Association, in cooperation with all interested groups, should work definitely to accomplish these objectives. In doing so, however, American dentistry should improve its public health viewpoint and take its rightful position in the health service of the country. It should develop the principle of prevention and make the theme of this year, "Dental Health for American Youth," a reality and not merely a play on words. It should give serious consideration to the health needs of the indigent and the low-income groups. If that is done, there need be no fear of criticism and we will continue to serve the public efficiently and with its full approbation.

## AMERICAN COLLEGE OF DENTISTS

PROCEEDINGS OF THE ST. LOUIS CONVOCATION, OCT. 23, 1938.<sup>1</sup>

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### I. EDUCATION

A. W. Bryan, D.D.S., *Chairman*<sup>3</sup>  
*Iowa City, Ia.*

The Committee on Education wishes to record its deep sorrow in the loss during the year of one of its members. Dean Arthur D. Black, one of the acknowledged leaders in dental education, had rendered valuable counsel and service for many years. His passing is felt keenly by the entire profession.

The responsibilities of this Committee have been somewhat changed from previous years since the consideration of dental research, formerly included in its duties, has been delegated to a separate committee. This leaves our work confined purely to education, and we have always interpreted that our efforts should be largely directed to the consideration of the undergraduate phase of that field.

<sup>1</sup>See, also, proceedings for 1937: *J. Am. Col. Den.*, 4, 77-126; 1937, Sept.

<sup>2</sup>For reports to the College, see *J. Am. Col. Den.*, 5, 228-272; 1938, Dec.

<sup>3</sup>The other members of this Committee (1937-8): L. M. S. Miner, J. B. Robinson, L. M. Waugh, R. S. Vinsant, A. D. Black, A. H. Merritt.

During the past few years much has been happening in dental education. It is common knowledge, of course, that a very comprehensive survey of every phase of dental education was made by the American Association of Dental Schools and, following the investigation, every dental school in the United States adopted the uniform standard of two years of arts and sciences for admission and four years of dental training for the degree. New problems arose at that time, one of which was the matter of standardized qualitative requirements for the admission of students to dental schools. Your Committee feels that this subject is of such importance that it should be considered as one of the main topics of this report.

*Standardized Qualitative Requirements for Admission  
of Dental Students*

When the Curriculum Survey Committee of the American Association of Dental Schools made its report in 1936, a resolution was adopted by the Association supporting the principle that the next two years should be used as a period of experimentation to determine the best policy in the specification of qualitative entrance requirements. It was requested that no standardizing or regulatory body should set up standards during that time. The resolution, before being voted upon, led to much discussion, but was finally passed by a large majority. More than two years have passed since this resolution was adopted, but the Association took no action to determine a policy in this matter at its last meeting.

One of the most serious factors in this question is the tendency of individual state examining boards or state departments of education to set up standards of their own. This leads to confusion with a variety of standards which works hardship upon the graduates of many schools. This tendency of individual boards to set up standards is even extending into the dental curriculum itself, as indicated by a recent ruling of a board that candidates would not be admitted for examination unless the school from which

they were graduated included a separate and distinct course in a certain subject which is no doubt now being carried in most schools by inclusion in other courses.

Granting that there are some distinct disadvantages in a closely prescribed program of predental subjects, is it not a fact that the circumstances referred to above warrant the acceptance, for a reasonable period of time at least, of a uniform standard set up by a representative regulatory body? That body is, of course, represented by the Council on Education. It is reasonable to expect, however, that a certain amount of flexibility should be allowed in any standard set up. Mention was made in one of the meetings of the Schools Association that an application for admission to one of our leading dental schools was denied because the applicant lacked a few hours' work in a prescribed subject, despite the fact that he possessed the Ph.D. degree and presented several times the total number of credits required for admission. It is not believed that the dental schools desire that requirements be carried to any such closely bound prescription, and any standards that may be set up should provide a certain amount of flexibility to take care of such cases. However, there should be a basic uniformity acceptable to the schools and it is to be hoped that when such a standard is set up the various examining boards will adjust their requirements to it. This result should not be difficult to bring about, since both groups are represented by membership in the Council on Education.

#### *Present Uncertainty in Classification of Dental Schools*

A large portion of the report of this Committee in the past three years has been devoted to the serious problem confronting the American Dental Association in the reorganization of the Dental Educational Council. With a solution accomplished by the formation of the Council on Education, the schools and the examining boards are now faced with another difficulty. The Council on Education has requested that the use of previous ratings of



dental schools be discontinued. This leaves the boards of dental examiners of all of the states without a basis for admission of candidates to examination for license, and some of them are dependent upon such a rating by their rules and regulations. At least two state boards have already expressed their intentions to make their own classifications unless the Council provides one soon. It is not difficult to visualize the confusion that would result in the event that ratings were made by individual states and the expense and difficulty involved in making the survey necessary for a fair and equitable evaluation of all schools. It is presumed, of course, that the Council is giving consideration to an early solution of this matter and mention is made of it in this report only because of the approach to the schools by several boards.

#### *Undergraduate Contacts with Journalism*

Three years ago this Committee brought to the attention of the American Association of Dental Schools the importance of emphasizing professional journalism in the education of the dental student. The Association passed a resolution upholding the principle that the student should be given as much contact as possible with professionally controlled journalism and that no active participation should be taken by the faculties in distributing throw-away types of publications to them. In the past three years dental students have had more actual contact with good journalism than at any previous time, because of their junior membership in the American Dental Association. A few copies of the *Journal* in the library, as we formerly had, did not fill the bill; but now each student, with the slight expense involved in membership, may have his own copy of an official publication. Individual possession stimulates more reading and generates an interest in all phases of organized dentistry. An analysis of reports from the American Dental Association offices shows that progress has been quite satisfactory in getting dental students interested in junior membership, but that there are still many who fail to take ad-

vantage of the privileges afforded by this plan. Surely, an extra effort directed on this program by dental faculties will be commendable and worth while.

## II. DENTAL RESEARCH

Albert L. Midgley, D.M.D., Sc.D., *Chairman*<sup>4</sup>  
*Providence, R. I.*

The Committee on Dental Research of the American College of Dentists was organized promptly following the Convocation of the College in Atlantic City, July, 1937, and held its first meeting during the week of the convention of the American Dental Association.

It was voted to confine the activities of the Committee, for the present, to a study and solution of three problems of paramount importance in the advance of dentistry: (1) The William John Gies Grants-in-Aid and Fellowships; (2) the William John Gies award for outstanding achievement in research; (3) attainment of an effective medico-dental relationship.

The Committee held its second meeting in Chicago, during that of the Chicago Dental Society, and formulated tentative plans for the development of these three items.

The Committee was represented at the meeting of the International Association for Dental Research, held in Minneapolis in March, 1938, where its proposed plans were presented and discussed in detail. The International Association for Dental Research then appointed a committee of three of its members, Thomas J. Hill (Chairman), A. W. Bryan, and Frank Cushman, to cooperate with the Research Committee of the College in assisting it in the presentation of the claims of research with the view of securing endowment, in determining how the fellowship funds shall be administered, and in arranging an appropriate man-

<sup>4</sup>The other members of this Committee (1937-8): P. C. Kitchin, L. R. Main, P. J. Hanzlik, Howard C. Miller, A. B. Luckhardt, L. M. S. Miner, W. D. Cutter, J. E. Gurley.

ner and occasion for the recognition of distinguished achievement in research.

Since the American College of Dentists considers the promotion of research one of its two most important objectives, the Committee on Dental Research proposes to give substantial help to the cause by open and vigorous assertion of the claims of dental research upon public confidence and support. We believe that a convincing demonstration of these claims depends in part—may I add, almost in toto—upon a close, effective, and mutually cordial medico-dental relationship, not only in professional and hospital practice but in the laboratory as well, where the interrelated problems of dentistry and medicine offer a basis for intimate cooperation and present a common point of view. Separate studies would be in no way neglected or subordinated, while a coordinated program of research in problems of value to both professions will provide stimulating rivalry and avoid duplication of effort.

Recognizing the values of the quality of the work of a well-organized, deputized, and supervised Committee, the study of the three items under consideration were delegated to three sub-committees of the Committee on Dental Research of the College:

1. Sub-Committee on the William John Gies Grants-in-Aid and Fellowships: Arno B. Luckhardt (Chairman), Paul C. Kitchen, L. R. Main.
2. Sub-Committee on the William John Gies Award for Outstanding Achievement in Research: John E. Gurley (Chairman), Paul J. Hanzlik, Howard C. Miller.
3. Sub-Committee on the Medico-Dental Relationship: Albert L. Midgley (Chairman), William D. Cutter, Howard C. Miller, Leroy M. S. Miner.

The report of the Committee on the William John Gies Grants-in-Aid and Fellowships outlined the aims and objectives of the Committee, the purposes of grants-in-aid and fellowships, the use of moneys to be appropriated, and, in minute detail, discussed the time of appointments, what the application for grants-in-aid

and fellowships should cover, obligations of recipients, publication of results, and the desirability of developing a committee for the selection of topics for investigation, under what auspices they should be conducted, and to whom they should be distributed.

The Sub-Committee on the William John Gies Award suggests the following items for consideration:

(1) That it is proper to make a public recognition of one who in any field of science has made an outstanding contribution to the progress of dentistry during a calendar year.

(2) That recognition should be made annually if warranted. The American College of Dentists will make such recognition only by investigation on its own part, of the individual and the quality of his attainment.

(3) That the award be made in the form of a cash gift, the amount to be determined annually by the Committee.

The Sub-Committee on Medico-Dental Relationship has sought the support of editors of all non-proprietary dental journals in securing publicity, and has contacted all the deans of the medical and dental schools in the United States and Canada, informing them that the College has inaugurated plans to promote research of high quality in dentistry, and that these plans include grants-in-aid and fellowships to applicants in support of investigation. The College solicited the cooperation of the deans and faculties, not only in giving this information to prospective applicants but also in presenting recommendations regarding the worthiness of projects for which aid may be desired. Replies from a large number of the medical and dental deans indicate definitely their interest and concern in the development of our program and a desire to cooperate in a better understanding of what the medico-dental relationship really is. It is the purpose of the Committee to assemble opinions, suggestions and requests set forth in the replies from the medical and dental deans and heads of departments of the various medical and dental schools, and develop the data into composite form, with the hope of drawing deductions



that will lead all interested to cooperate with the College in its promotion of research.

A second letter was sent to the deans of medical and dental schools in the United States and Canada, presenting briefly the values of the medico-dental relationship and requesting the deans to furnish the Committee with a list of about ten items or principles that should be adopted and developed which they considered important in the attainment of an effective medico-dental relationship. The deans were requested to submit these items or principles in two separate groups: (1) according to *importance*; (2) according to *feasibility*; presenting in the first group the items or principles in the order of their importance, listing first the item or principle which they thought the most important; second, the next in importance, and so on; and in the second group, first the items most difficult to attain and last the least difficult to attain.

It was made clear that the purpose of the request was not to learn what was being done in any one of the schools but merely to receive the opinions of the deans and heads of departments as educators as to what should be done.

The Committee has not reached definite conclusions upon many of the details incident to a solid development of its activities, for its study and survey of all items and their relationship is still in progress. Hence, the Committee has no recommendations at the present time to offer for consideration by the Regents.

### III. HOSPITAL DENTAL SERVICE

Howard C. Miller, D.D.S., *Chairman*<sup>5</sup>  
*Chicago, Ill.*

Your Committee on Hospital Dental Service made a survey of hospitals of the United States by means of a questionnaire sent

<sup>5</sup>The other members of this Committee (1937-8): E. A. Charbonnel, Leo Stern, C. W. Stuart, J. E. Gurley.

to a selected group of hospitals, and with the assistance of the American Medical Association in securing valuable information. The report of these findings was presented at the last Convocation of the College at Atlantic City.

The next step was to develop a program from the data compiled, a task that presented a difficult problem as there are many factors to be considered in preparing such a program. Some of these factors may seem to be very simple, but all are associated with changes of rules, development of new plans, and even the hurdling of some fixed traditional barriers.

It seems proper at this time to offer an analysis of the factors confronting your Committee, with a view to informing the College and asking approval of the program as it is being developed. This report will, therefore, be in the form of a discussion of the present issues as seen by the Committee, and will conclude with recommendations.

### *Adequate Dental Service*

Until such time as a Committee shall be appointed to define "Adequate and Inadequate Dental Service" (a recommendation that was contained in the 1937 report of this Committee) and shall make a report of its findings, other Committees will necessarily have to assume a definition for such service.

The Committee on Hospital Dental Service does not desire to infringe upon the duties of such a Committee, but in order to avoid further delay in its work, it has submitted what may be termed "adequate service" so far as meeting the needs of various types of hospitals is concerned.

Finding that one of the greatest problems of the different hospitals desiring to install any type of dental service has been just what and what not to do, this Committee has attempted to set up a working definition in answer to this important question.

Adequate dental service is that dental care which eliminates pathologic conditions within the oral cavity; prescribes the most

complete control of oral manifestations of constitutional diseases for the greatest length of time; tends to maintain the normal functions of the teeth to the highest degree of efficiency by means of dental operative procedures; all of which must be completed in a manner that is most satisfactory to the patient, from the health and economic standpoint.

Perhaps it will be well to analyze the subject of hospital dental service from the standpoint of the patient, the business executive of the hospital, the medical practitioner, and the dental attendant.

The reactions of the patients vary: Charity patients are usually unable to see why an oral examination is necessary when they report for treatment of pain elsewhere in the body. They are frequently individuals who, when advised to have a number of infected teeth removed, are never satisfied with the most perfect restoration. Other patients come in the class of psychoneurotics, who imagine all sorts of illnesses, including more than their share of dental troubles, therefore actually demand more service than other patients of the same social standing. Patients who come under the semi-pay, and most of those on private service, will accept the service of the dental staff of the hospitals, but patients included in the higher financial bracket will insist upon seeing their own dentist regardless of the type of service he is qualified to render, and the number of days delay before they can visit his office.

The business executive of a hospital has to consider the character of his hospital, whether the patients remain as wards of the hospital for an average stay of two days to three weeks or longer, the type of diseases being treated, and also whether the hospital is substantially funded by political administration such as federal, state, county or municipal, or whether the funds are made available from private subscription and incoming hospital fees.

With very few exceptions the executive administrator is only too anxious to offer the most adequate services possible within his working budget, those which most nearly meet the ideals of the

hospital staff, and have the approval of the lay parties to whom he is responsible (hospital board).

The medical practitioner usually demands that the dental associate render a service such as will give the patient the greatest possible benefit, and the most complete dental protection, with practical economy. He asks that the dental profession justify its claims for certain values derived from dental services, and is skeptical about some of the theories concerning dentistry until he is assured that the dentists on the staff are aware of their responsibilities.

Dentists who affiliate themselves as staff members of hospitals should have a knowledge of hospital routine and organization. They should be capable of making a complete and thorough oral examination, which should include a consideration of radiographic findings and their correlation with the history and clinical signs and symptoms, corroborated by other tests and aids that are at the command of the dentist of today. They should be capable of discussing intelligently with the physician the laboratory reports and clinical findings, and of relating mouth conditions, when necessary, to these findings. They should have a rational understanding of focal infections and their relation to general health, and must always bear in mind, and impress upon the medical attendant that dental service frequently involves the loss of teeth with consequent impaired function, and that careful consideration must be given to the physical, mechanical and esthetic result.

There are many other phases that must be sponsored and accurately investigated, with conclusions reached through scientific research, if dentistry is to occupy its rightful place in the hospital organization.

#### *Classification of Hospitals*

Before determining the extent of dental service to be performed, the hospital and the type of service it is equipped to offer must be considered. Hospitals may be grouped as follows:

(1) Federal, (2) state, (3) county, (4) municipal, (5) institu-



tional (universities and teaching institutions), (6) fraternal, (7) endowed, (8) private corporation—not for profit, (9) private corporation—for profit, (10) privately-owned, (11) industrial, and (12) sanitarium.

According to the type of service offered, specialized hospitals may be classified as homes for aged, such as those for soldiers, members of fraternal organizations, and private individuals; orphanages, orthopedic, and eye, ear, nose and throat hospitals; hospitals for the insane, and nervous and mental diseases; hospitals for the treatment of the blind, tuberculosis, cancer, pediatrics and contagious diseases.

Hospitals may be operated upon a charity, semi-pay, or full-pay basis. Combinations of these plans exist in the majority of instances. Dental service must, therefore, vary according to the type of medical service offered and the ability of the hospital to establish and maintain a dental department.

Federal hospitals should offer complete dental service. They have sufficient funds and the patients are, by law, wards of the government, and remain in the hospital for long periods of time.

State welfare hospitals, such as penal institutions, orphan asylums, and institutions for the insane, should offer complete dental service as their patients remain wards of the state for an unlimited length of time.

County and municipal hospitals, which usually offer general medical care, should be equipped to provide general dental service. Private, semi-private, endowed and fraternal hospitals offering general medical care should provide dental service of a similar character.

In university hospitals (teaching institutions) wherein the patient is confined but for a limited time, dental operations of an emergency character only should be offered in addition to the necessary oral surgery procedures.

Sanitarium are convalescent hospitals and as such should offer complete dental care.

Specialty hospitals, such as those caring for orthopedic cases, nervous and mental cases, insane patients, and for the treatment of tuberculous individuals, should provide complete dental care.

Eye, ear, nose and throat hospitals should have dentists on their staff who are fully conversant with the relationship between oral diseases and optical, auricular and nasal disturbances, in order that they may assist the medical staff in treatment of such cases. The need of complete dental care in these hospitals is questioned, as the service consists primarily of the eradication of oral foci of infection.

Orphanages and children's hospitals should offer complete dental care for children, including orthodontic service.

Contagious hospitals should offer a very limited dental service because only emergency cases are treated and no other dental service, with the exception of mouth hygiene, is indicated for the treatment of such diseases.

Institutions for the treatment of cancer should limit dental service to minor surgery. Dental staff members should be capable of making radium applications and fixation appliances, and should be able to carry out proper procedures in the treatment of such conditions within the oral cavity. In the majority of these cases dental restorations are not made until a considerable period of time has elapsed following treatment.

The importance of adequate mouth hygiene before the administration of a general anesthetic has become a fixed tradition in the minds of members of the dental profession. Undoubtedly such care is of value to the patient, and all hospitals probably should be equipped to provide this service. However, lack of sufficient data resulting from scientific investigation makes it inadvisable to present a definite recommendation that all hospitals offer this service.

#### *Recommendations*

1. Encourage the appointment of dentists to hospital staffs according to their qualifications, training and ability. Such appoint-

ments should be made upon the merit of the individual, rather than upon personal friendships or contacts as so often has occurred in the past.

2. We recommend that the American Dental Association prepare and maintain a permanent record of its members, showing their scholastic training, their special training and other qualifications, in order that hospitals seeking competent dental staff members can secure authentic and unbiased information regarding applicants. The American Medical Association has for years maintained such a service.

3. The American Medical Association and the various hospital organizations should be asked to amend their rules to the effect that only dentists who are members of the American Dental Association be appointed to the dental staff of class A hospitals. The present rules require that all staff members of class A hospitals must be members of the American Medical Association.

4. We recommend that a course in oral pathology and oral hygiene be given for student nurses.

5. We recommend that the dental staff provide periodic dental examination and prophylaxis for student nurses.

6. We recommend that a course in oral pathology and gross dental diagnosis be given for hospital internes and residents, provided these two groups desire such a course.

7. We recommend that dental radiographs be made by the dental department, for dental radiography differs markedly from medical radiography, hence, the dental radiographer is better qualified for this work.

8. We recommend weekly ward walks for dental students in small groups where possible. Such training would assist the dentist in being better informed on hospital routine and organization.

9. We recommend that dental students be allowed to assist in oral operations where conditions are favorable.

10. We recommend that all hospitals having dental depart-

ments be encouraged in developing one or more phases of dental research.

11. We recommend an approach to proper officials of the American Medical Association, the American College of Surgeons, the American Hospital Association, and all organizations actively interested in hospitals, asking their cooperation and assistance in the establishment of dental departments in hospitals.

12. We recommend that sufficient copies of this report be prepared so as to supply those desiring information regarding hospital dental service. Requests for advice and assistance have greatly increased during the past year.

13. We recommend that next year's Committee on Hospital Dental Service prepare a plan for minimum standards of hospital dental service, which may be used as a model for hospitals establishing a dental department. Such a plan should include: Management, basic standards, staff organization, attending and visiting; how appointments may be made, with proper rank and title; resident and interne staff appointments, length of service, number of internes and their duties; minimum requirements of equipment; interdepartmental relations; record forms; rules and regulations, and other requirements that may be necessary for a proper and efficient functioning dental department in the hospital.

(Recommendations approved by the Regents and the Committee instructed to develop plans for putting into effect.)—*Ed.*

#### IV. LEGISLATION

W. N. Hodgkin, D.D.S., *Chairman*<sup>6</sup>  
*Warrenton, Va.*

Pursuing the policy of your Committee on studying trends or phases of legislation rather than duplicating the detailed activity of similar committees of other organizations, the history of dental

<sup>6</sup>The other members of this Committee (1937-8): W. A. McCready, G. S. Vann, B. L. Brun and M. L. Ward.



legislation suggests a seemingly interesting and opportune topic for consideration. Acknowledgment is made that legal aspects of the subject are freely quoted from notes furnished on request, by Dr. Franklin Porter, attorney for the Committee on Legislation of the American Dental Association. This acknowledgment is made both in the interests of due courtesy and that you may know the opinions are those of a legally trained mind.

The subject is professional integration and is, therefore, inherently bound up with the history of dental legislation.

Faced with the necessity of control of unqualified persons flooding the profession, the solution of the problem appears to have been approached from different viewpoints by the early practitioners of the several states. It must be recalled that for many years after the establishment of the first dental college the profession was made up largely of non-graduates, many of whom were regarded as worthy and acceptable members by the leaders of the period.

Differences of opinion led to the enactment of two distinct patterns of dental legislation; the first a prohibitory law seeking by stringent provisions to prevent the practice of dentistry by any save regularly authorized persons; the second, a limited integration of the profession, by acts incorporating dental societies and stated at the time to be "a law which seeks rather to mould public opinion than to repress the unqualified—which endeavors to elevate the incompetent, rather than drive him from practice."

The "prohibitory" classification would include the Alabama act of 1841; Ohio, 1868; Georgia, 1872; New Jersey, 1873, and Pennsylvania, 1876. Examples of the "limited integration" classification would include the 1845 act of incorporation of the Virginia Society of Surgeon Dentists, a similar act incorporating the Dental Society of the State of New York in 1868, and a subsequent incorporation act in Kentucky. Dental colleges increased

<sup>7</sup>History of Dental and Oral Science in America, James E. Dexter, 1876.

in numbers and with this increase in dental graduates, all dental practice acts tended toward the prohibitory pattern, so that today we are scarcely aware of the fact that any other type existed.

It is noteworthy that there is now an incipient and atavistic trend of interest in the integration form of dental law, not with the idea of leniency, which a mixed professional group suggested in the early integration acts but with the need of meeting other problems, which changing political theories present. Thus, the 1935 integration act of the State of Oklahoma, placing the administration and enforcement of the dental law in the hands of the profession, and the consideration of a similar law during the past year in the State of Washington, are significant.<sup>8</sup>

It may be well to define professional integration, noting its structural outline and the advantages it appears to offer, though time and space preclude detail. Quoting from Dr. Porter:

"The integration of a profession may be defined as the organization of the members of that profession into a corporate entity in conformity with appropriate statute.

"Such an organization is created by the legislature, which provides for the organization, government, membership and powers of the corporate entity, the creation of which rests within the inherent powers of the state. Membership in the corporation becomes a prerequisite to the right to practice in that particular profession, and those holding licenses issued by the state are members of the integrated profession on an equal basis. The corporation makes rules for admission, for conduct of its members and discipline is administered by the organization rather than the courts. The creation becomes not a private corporation but a public corporation and as such is a functional part of the state itself. The executive officers of the integrated profession become a part of the structural set-up of the state government and the acts of the governing board are subject to review only by the Supreme Court of the state."

Chief among the advantages accruing from acts of this pattern is that they appear to be the answer to the possible encroachment of political control which concerns many in the profession. State's

<sup>8</sup>California is now considering such a law.—[*E.d.*]

rights, as they pertain to dentistry, would be supreme in the state where the profession functions as an integral part of the state government, for necessarily any encroachment of an outside agency would be a direct invasion of state's rights.

Of further interest to state boards of examiners, who are charged with control of illegal practitioners, it would not be possible for any attorney for the defense to represent them in court as agents for a larger dental group persecuting a smaller group who differed in ideas on ethics. As recognized parties of the state government they can be regarded solely as engaged in safeguarding the public.

Your Committee does not advocate sweeping revision of present laws to embrace the integration principles but does believe that there are potentialities which promise enough to deserve studious examination.

Should the question of constitutionality of such acts arise it may be recalled that this has been answered by the supreme courts of various states. The legal profession of seventeen states have now organized their bar associations under this arrangement and tests in courts have brought ample sanction to establish the validity of this type of organization.

#### V. SOCIO-ECONOMICS COMMITTEE (*Recommendations*)<sup>9</sup>

George W. Wilson, B.S., D.D.S., *Chairman*<sup>10</sup>

The Committee finds excellent possibilities for the successful solution of its problems by the formulation of plans based upon the following in principle, either singly or in combination, and recommends them for early experimentation, to city, county and state dental societies.

<sup>9</sup>This report was made in full to the Regents and in abstract to the College. For abstract see *J. Am. Col. Den.*, 5, 243; 1938, Dec. These recommendations were approved by the Regents and are published for information of members.

<sup>10</sup>The other members of this Committee (1937-8): E. H. Bruening, Wm. R. Davis, B. B. Palmer, M. W. Prince, C. E. Rudolph, Maurice William.

1. Because of the nature of dental service and consequent problems involved, the Committee believes that the most simple, effective economical and desirable method of providing dental care to the whole population is to be found in preventive dentistry programs for children of pre-school and school age, which are based upon education and conducted by city, county and state departments of health, under professional cooperation or control. The principal professional service which dentistry has to offer is *preventive dentistry*.

2. By applying the principle of voluntary health insurance (Committee recommendation of 1936) either independently or in close cooperation with state medical organizations. The State Medical Society of Wisconsin has already adopted a plan to permit and even encourage within its own body a mutual involuntary insurance system, to be operated independently of outside third parties. Not all aspects of dental service are adaptable to a medical service plan, where a stipulated amount is paid into the fund, because it would raise the premium so excessively that the low income group could not buy it.

Some types of service which may be termed oral medicine, and possibly surgery, could be successfully included in voluntary insurance plans along with medicine from an administrative point of view. Your Committee can see a grave danger to the autonomy of dentistry if adequate dental service, as defined in Part II of this report, were split into two divisions, namely, the medical and restorative and administered separately. This would encourage the hopes and aspirations of some dental laboratories to serve the public directly with mechanical dentistry.

3. The plan now being experimented with by the Missouri State Dental Society. It applies the principle of professional altruism and sacrifice, rendering necessary service according to the patient's ability to pay a "contribution" toward a "fee".

4. Philanthropic plans or programs of which the Kellogg Foundation and the Children's Fund of Michigan are typical ex-



amples. In many cases community funds could be used to assist in a preventive program.

5. Miscellaneous charitable organizations and service clubs could be enrolled in many communities to assist in educational programs and supply corrective service in many locations.

The Committee is of the opinion that dental care for the indigent is the responsibility of society, and the state as an instrument for the collection of funds by taxation, is obliged to execute that responsibility. The methods of distributing dental health service for the low income group and the medically indigent, is the responsibility of the profession, because they are not wards of the state, but self-sustaining citizens, to a varying extent, and as such should have the privilege of free choice, of dentist, with resultant health service benefits.

The Committee finally recommends that dental organizations fulfil their professional obligations and assume the responsibility of serving this group, with adequate dental service, according to their broad humanitarian understanding of needs, and in keeping with their ability to pay a just fee.

This attitude we believe will assist immeasurably in solving our complex socio-economic problem, and guarantee to those in need, and who wish to be served, adequate service, and to dentistry a rightful and secure place in the field of health service.

#### VI. CENTENNIAL CELEBRATION<sup>11</sup>

Harold S. Smith, D.D.S., *Chairman*<sup>12</sup>  
*Chicago, Ill.*

Your Committee on Centennial Celebration (1939-40) wishes to state that there is little now to report since the last meeting of the College.

<sup>11</sup>Presented at the Convocation in St. Louis, Mo., Oct. 23, 1938.

<sup>12</sup>The other members of this Committee (1937-8): H. C. Miller, J. C. Ferguson, Harry Bear, E. A. Charbonnel.

No contacts have been received from a similar Committee of the American Dental Association, thus it is impossible to arrive at any conclusion as to what part the College might take in its desire to cooperate with the Association in these matters.

During the year certain suggestions have come to the Committee from various Fellows of the College regarding a possibility of efforts upon the part of the American Dental Association and the American College of Dentists to enlist the interest of government officials in the idea of minting a coin, or striking a stamp commemorative of the one hundredth anniversary of the dental profession. Correspondence on these matters has been carried on between the Chairman of the Committee, and the President and some members of the American Dental Association. At this time there is nothing definite to report on these two points.

Until such a time as a clearer understanding can be secured as to the wishes and desires of the American Dental Association regarding a centennial celebration (1939-40), it would seem that the College will be unable to make definite progress in its plan for a celebration unless it should be desired that the College act independently.

*(Concluded in June issue)*

AMERICAN COLLEGE OF DENTISTS  
HOSPITAL-DENTAL SERVICE FROM THE STANDPOINT  
OF HOSPITALS<sup>1</sup>

CLINTON F. SMITH, M.D.

*Past President, Protestant Hospital Association, Chicago, Ill.*

It is a privilege to appear as your guest, this afternoon, and talk to you about one of the youngest departments to be added to the services of our American hospitals. We who are responsible for the management of hospitals are happy to welcome this new service and are enthusiastic in seeing it developed to the fullest and most practical extent. To accomplish this end there are many factors to be considered:

1. We must always bear in mind the real purpose of a hospital as an institution and its responsibility to the community in which it is located.
2. The relation of the hospital to the physicians and surgeons on our staff as well as the other members of the healing professions who may be in the neighborhood but are not active in that institution.
3. Our responsibility to the members of the board of directors who represent the corporation which makes the hospital possible.
4. The position of the superintendent in making the institution a financial success.

There are many others, but these four cover the problems in the broad sense.

A hospital is fundamentally a home for the sick. To be more specific, it is an institution for the care of the sick, who are con-

<sup>1</sup>Address delivered at the third annual meeting of representatives of sections, Chicago, Feb. 12, 1939. For proceedings of first and second annual meetings, see *J. Am. Col. Den.*, 5, 120; 1938, Sept. See, also, this number, p. 47.

fined to bed and require a very highly specialized care that they may be returned to health and usefulness to society. Subordinate purposes of the hospital are those of education and research. A real contribution is made to the education of young physicians, nurses and hospital librarians. By means of complete case histories, statistics, and pathological findings, gross, microscopic, and post mortem, much knowledge is gained. This is valuable research.

Any service which fits into this program is entitled to a place in the hospital and on a par with the other departments. The major types of oral surgery constitute an example of such a service which all class "A" hospitals are glad to recognize. Many of the minor oral surgery patients fall into this classification as a group, not by virtue of the oral condition itself but due to some complication such as a damaged heart, tendency to bleed, and numerous others.

There are other services, more or less specialties, which would not rate departmental independence except by virtue of the assistance they give to other activities, such as X-ray, pathologic and biologic laboratory departments. In some of the well-financed governmental institutions repair and replacement of lost teeth by a staff of dentists has proved to be a very practical service.

There is a long list of general hospitals in the United States, all of which are obligated to their local communities to care for the sick. Just where the duty of the hospital begins and the obligation ends is an unsettled question. Perhaps the problem will be understood when some authorized group defines "Adequate Medical and Dental Care". At present, however, each group of workers seems to have a different interpretation of the subject. Tradition has established a moral obligation to our private patients which is of unlimited assistance to the staff in rendering the best possible service. The rules of standardization of the American College of Surgeons and of the American Medical Association are of material help, because of their definiteness.



The semi-pay and charity patients are more of a problem because they are more nearly dependent upon the hospital for their care.

All members of the staff donate their services in the care of these patients. We must, therefore, limit patients who are admitted to our charity or out-patient department to those who are destitute. In order to be sure that these patients make truthful statements, we employ visiting nurses who investigate cases. We must under no circumstances furnish medical care to patients who can afford to pay as there are so many destitute families dependent upon society.

The number of charity patients accepted each year varies with the amount of money we are able to allot to that department annually. One of the most serious problems is that of keeping the services we offer charity patients within our financial means. Extras, such as radium, deep X-ray treatments, etc., although few in number, add up to a yearly total which is surprising. It is economically impossible for general hospitals to furnish such services. The practical method is to maintain a cooperative arrangement with institutions which make a specialty of such conditions.

This is true also of dental service. Patients who require this type of care are sent to institutions where that is furnished.

Some of the specialty hospitals, especially those owned and financed by the government or municipalities, have sufficient financial backing to furnish complete care, both medical and dental, including all specialty services.

#### *Conclusions.*

Now that I have presented the problem from the standpoint of a superintendent of a general hospital, one that is funded by a group of liberal citizens in the community, and which is representative of the average institution, the question arises: How can dentistry play a role and take its rightful place in organizations of this character? I trust a few suggestions will not be out of place.

1. Every hospital functions in direct proportion to the calibre of the doctors on its staff. How can a man in my position be assured that an oral surgeon or dentist is worthy of being appointed to our hospital staff? Such a man should be capable of conducting his department in a manner which will not be a burden to the institution financially or otherwise. It would be most helpful if some organization such as yours could be prepared and willing to offer us unbiased and confidential information concerning applicants. Frankly, we do not want men whose training limits their activities to observing a certain number of cavities in teeth, but we must have dentists who are of the greatest possible help to all departments.

2. Develop a program which is limited in scope but of greatest assistance, then let the department grow and expand as have other services.

3. Encourage a closer medico-dental relationship by gaining the confidence of the physicians and surgeons. This is dependent upon the type and calibre of person you furnish us, but one of the best ways to build such a relation is to see that the dentist and one of the foremost physicians conduct a survey of some particular group of cases, then publish their findings under joint authorship.

4. Furnish us men who are competent to instruct our nurses in your specialty, particularly oral surgery.

5. Encourage statistical surveys of case histories in the *various* hospitals of the country along one line of endeavor to learn facts instead of traditional beliefs and let all medical men and all dental men hear of the results.

6. Rules should be laid down by authoritative bodies which will insure hospitals of obtaining competent men for hospital staffs, but rules which work a hardship on hospitals, rules that have not been tried in hospitals of specific types and classes, rules which must later be modified, are a detriment. Such rules demoralize hospital administration, destroy the confidence of patients and staff, and thereby *prevent* the development of dental departments, or any of its specialties.

## AMERICAN COLLEGE OF DENTISTS

### PROCEEDINGS OF THE THIRD ANNUAL MEETING OF REPRESENTATIVES OF THE SECTIONS<sup>1</sup>

OTTO W. BRANDHORST, D.D.S., F.A.C.D., *Secretary*  
*St. Louis, Mo.*

The third annual meeting of the Representatives of the Sections of the American College of Dentists was held on February 12, 1939, in dining-room No. 2, Stevens Hotel, Chicago, Ill. It was preceded by a luncheon attended by about fifty Fellows, under the auspices of the Illinois Section.

Dr. C. W. Stuart, President of the Illinois Section, presented Dr. Clinton Smith, Past President of the Protestant Hospital Association, who spoke on "Hospital-Dental Service from the Standpoint of Hospitals." His presentation was well received.

Dr. Howard C. Miller responded briefly, expressing appreciation.

Dr. Stuart then presented President Merritt, who presided.

The minutes of the previous meeting of the Section Representatives were read and approved.

The Secretary reported on the resolutions that had been referred to the Regents, stating (a) that the Regents had approved the creation of an Oral Pathology Register in the Army Museum in Washington, D. C., and instructed Dr. Stuart to proceed with same; and (b) that after considering the interest manifested in the Committee reports on Friday, October 21, 1938, at St. Louis, to which sections were asked to send representatives, it was

<sup>1</sup>This meeting, preceded by a luncheon at which the Illinois Section was host and held at the Hotel Stevens, was attended by representatives of sections and other members of the College. For proceedings of the first and second annual meetings, see *J. Am. Col. Den.*, 5, 120; 1938, Sept.

deemed inadvisable to attempt the creation of a House of Representatives at present.

*New York:* Dr. Alfred Walker, representing the New York Section, spoke briefly, extending the invitation of the New York Section to the College to hold its mid-winter Regents' meeting in conjunction with the fall meeting of the Greater New York Dental Society. This was referred to the Regents.

*Wisconsin:* Dr. W. J. H. Benson spoke for the Wisconsin Section and extended a warm invitation to all Fellows to attend the Milwaukee meeting.

*Maryland:* Dr. E. W. Swinehart of Baltimore outlined the plans for the Dental Centennial to be held in Baltimore in March, 1940, and extended an invitation to the College to participate.

*Minnesota:* Dr. Walter Hyde extended greetings from the Minnesota Section.

*Pittsburgh:* Dr. E. G. Meisel outlined the activities of the Pittsburgh Section, saying that they were planning a dinner meeting for their next one with invitation to be extended to others for the program meeting to follow. He also reported that the Section had pledged 100 per cent support to the *Journal of Dental Research*.

*Illinois:* Dr. C. W. Stuart, speaking for the Illinois Section, stressed more interest in graduate study and urged that plans be developed for the reporting of certain oral diseases.

*St. Louis:* Dr. T. E. Purcell, reporting for the St. Louis Section, again brought to the attention of those present the laboratory situation and urged that dentistry be brought back into the dental office.

*Texas:* Dr. Konrad Lux brought greetings from the Texas Section.

Kentucky, Northern California, Iowa, Colorado, Florida and Indiana Sections were not represented.

The meeting adjourned at 3:05 p. m.



## AMERICAN COLLEGE OF DENTISTS

AD-INTERIM ACTION OF THE REGENTS

1938-39, SERIES NO. I

OTTO W. BRANDHORST, D.D.S., *Secretary*

*St. Louis, Mo.*

Place—Stevens Hotel, Chicago, Ill., February 12, 1939.

Sessions—Morning, 9:30-12:30, and afternoon, 3:30 to 7:30.

Attendance—Nine.

*Accreditation of Sections:* Request of the Fellows in Florida and Indiana for accreditation of Sections in the respective states granted.

*Recommendation of Representatives of Sections (as of Feb. 13, 1938<sup>1</sup>):* Establishment of Oral Pathology Register in Army Museum, at Washington, D. C., approved.

The matter of establishment of a House of Representatives deferred.

*Recommendations of Standing Committees:* Recommendations of Committees on Certification of Specialists, Hospital Dental Service, Commission on Journalism, Socio-Economics, and Public Relations duly considered and instructions outlined.

*Centennial Celebration at Baltimore:* It was voted to hold special convocation of the American College of Dentists in conjunction with the Centennial Celebration in Baltimore in March, 1940.

*Distribution of Back Numbers of the Journal of the American College of Dentists:* It was voted to make back numbers of the *J. Am. Col. Den.* available to Fellows without cost.

*Deaths:* Since St. Louis meeting, we regret to report the death of the following Fellows: A. M. Barker, San Jose, Calif., Dec. 22, 1938; A. W. Crosby, New Haven, Conn., Nov. 11, 1938; Joseph Samuels, Providence, R. I., Feb. 14, 1939; Walter G. Thompson, Hamilton, Can., Jan. 8, 1939.

<sup>1</sup> See *J. Am. Col. Den.*, 5, 120; 1938, Sept.

## AMERICAN COLLEGE OF DENTISTS

### HONOR SOCIETIES

#### COPY OF A CIRCULAR STATEMENT TO THE MEMBERS<sup>1</sup>

For centuries, in all parts of the world, societies have been organized to honor men and women for meritorious achievement or exceptional service. In accord with this custom, there are "honor societies" in various branches of education and in the health-service professions. In the United States, Phi Beta Kappa, for more than a century, has been the general honor-society for undergraduates in academic colleges. Omicron Kappa Upsilon is the general honor-society for undergraduate dental students. The American College of Dentists — the first general honor-society among dental practitioners in the United States — was established, in 1920, not only to honor dentists of outstanding merit, but also to stimulate the development of dentistry and to further the advancement of the dental profession. The honor of membership in the American College of Dentists arises mainly from the achievements of the College, and also from the opportunity to participate intimately in the increasing service by the College for dentistry and the public. Omicron Kappa Upsilon and the American College of Dentists now meet all professional and public desirabilities for general honor-societies in dentistry in the United States.

In all nations, and in all divisions of interest, the society that first announced its purpose to confer honors in a definite relationship, and was thus accredited, has been accorded complete freedom of action in its field. The creation of a second general

<sup>1</sup> Statement adopted at a joint meeting of the Board of Regents and Censors of the American College of Dentists, in Chicago, Ill., on February 12, 1939.

honor-society among practitioners of dentistry in the United States — nearly a decade after the establishment of the first — ignored the custom of respecting the priority of the existing organization; imposed upon the members of the second society the obligation publicly to justify its purpose and exposed the dental profession to the judgment that a portion of its membership lacks regard for the amenities of professional association.

International honors are conferred almost entirely by national organizations. In this way Americans have honored men in other countries, and have been honored by societies abroad. To give a second dental general honor-society in the United States a name implying that this organization is primarily "international" in import, and the American membership only a section thereof, would disregard important realities, among which is the fact that the American College of Dentists, although established as the original one in this field by outstanding dental leaders in the nation in which dentistry is most advanced, has never become the United States section of any "international" body.

The American College of Dentists, endeavoring to promote dental progress (to indicate only two of its major purposes), aims to bring under professional control all journals purporting to represent dentistry, and also to eliminate irresponsibility from graduate dental-instruction. An "international" dental society that included in its membership those in American dentistry who are the chief exponents of commercialism in these two important professional fields — and which society has been conspicuously lacking in public manifestations of new professional aims and objectives — would not deserve the cooperation of dentists who have taken the pledge of membership in the American College of Dentists.

The annual report of the Commission on Journalism to the American College of Dentists, at the annual convocation of the College in Atlantic City, N. J., on July 11, 1937, unanimously stated in part:

"Your Commission believes that the (American) College (of Dentists) should by formal action indicate that every Fellow of the College has the privilege of honorable withdrawal previous to accepting membership in any other purported, honorary, dental organization carrying in its membership the most conspicuous proprietary journalists. Your Commission is in full accord with the spirit of liberalism that should always dominate the ideals, aims, and objectives of the College. While the College should never attempt to coerce thought and opinion, it does have the right to expect that in spirit and in all associations every member will actively cooperate for the attainment of the ideals, purposes, and objectives to which the College is dedicated."<sup>2</sup>

This recommendation, in accord with the well-known conditions indicated above, led the College, at the same convocation and after general discussion, unanimously to adopt the following resolution:

"Resolved, That the American College of Dentists will not admit to membership any person holding fellowship in any similar honorary dental organization. Fellows of the American College of Dentists who are also members of a similar organization are requested to consider the propriety of early withdrawal from one or the other."<sup>3</sup>

A copy of the foregoing resolution, in a circular letter signed by President Rudolph and Secretary Brandhorst, was sent (in 1937) to each member of the American College of Dentists. The resolution was also published (in 1937) in the *Journal of the American College of Dentists*.

Members of the American College of Dentists who now hold dual membership such as the resolution mentions, and who have not yet made the choice indicated therein, are hereby requested to show, in statements addressed to the Secretary of the College before July 16, 1939, why — if they continue such dual membership — they should be entrusted with any of the responsibilities of fellowship in the American College of Dentists.

<sup>2</sup> *J. Am. Col. Den.*, 4, 91; 1937, Sep.

<sup>3</sup> *J. Am. Col. Den.*, 4, 77; 1937, Sep.



## ONE HUNDRED YEARS OF AMERICAN DENTISTRY<sup>1</sup>

MARCUS L. WARD, D.D.S., F.A.C.D., *President*  
*American Dental Association, Ann Arbor, Mich.*

As we approach the one hundredth anniversary of the organization of the first dental college in the world, we may review our accomplishments as a profession with a considerable amount of pride. It is expected that at our anniversary celebration we shall have reviewed all of the principal landmarks in our development and have forecast for us our future obligations. A few of these may be mentioned merely as a reminder that the time is near at hand and that a celebration of the kind to which we are entitled should be begun at once in order that our meeting in Baltimore in 1940 will be a milestone in our existence.

<sup>1</sup> Next year, 1940, will witness the celebration of the 100th anniversary of the establishment of the first dental school, The Baltimore College of Dental Surgery. This celebration will be staged in Baltimore. But the year 1939 becomes a part of this 100th anniversary, since the first dental journal, *The American Journal of Dental Science*, was established in 1839. The first dental society, The American Society of Dental Surgeons, was organized in 1840, a few months after the Baltimore College of Dental Surgery was chartered. Thus, the year 1939-40 becomes the 100th anniversary of the establishment of dentistry as a separately organized profession and our celebration may be carried on during the remainder of this year and the early part of next, at least so far as publicity is concerned. By this means, the professional world and the public may come to know what we have done and are doing. In San Francisco, in September, the profession of the West is planning a meeting beyond the ordinary and which they hope will, in reality, inaugurate the entire year's program. Briefly stated, San Francisco will hold the opening meeting of the year's celebration, Baltimore will stage the "main show", while the intervening months and a few in advance will be devoted to matters of publicity and preparation of our minds that we may properly observe this period.

To that end, this and other similar articles will be distributed among the members of the American Association of Dental Editors, asking that they be used in their publications.—[*Ed.*]

As is well known, dentistry was not recognized as anything but a technical procedure that might be practiced by artisans, tradesmen, jewelers, and ivory turners until some far-sighted persons engaged in health service organized the Baltimore College of Dental Surgery in 1840. This college, with several others of its type, struggled for recognition until Harvard University included a dental college in its program. Probably nothing in our early history had greater significance than the recognition of the worth of dental service by as great an institution as Harvard was when it recognized dentistry as worthy of educational attention in 1867. This was the beginning of the organization of dental schools in the universities of this country.

Another landmark in our progress was the discovery by Miller in 1889 that caries was of bacterial origin. This seemed to justify the action of Harvard and the other universities which had followed it in placing dental education upon a university basis. In the period from 1909 to 1915 researches which were begun in several institutions in this country confirmed the suspicions that dentistry had always held, that some systemic disorders had their origin in the field of dentistry.

We may say, therefore, that the first one hundred years of our existence may well be divided into two parts, the first part having to do with the recognition of dentistry and the proof that it belonged among the health services. This period extended from 1840 to 1915, or seventy-five years.

The last twenty-five of our first one hundred years are concerned with what dentistry has done about the new obligations which confronted it with the proof that it must share health service responsibilities with medicine. At our one hundredth anniversary celebration it will be interesting to note the emphasis that will be placed upon the last twenty-five years of our existence. During this time one transition after another has taken place which have brought about more constructive changes in the profession than have ever been brought about by any other profession in an

equal length of time. In 1917 the schools which had previously been divided on private and university lines united for the first time in their history upon an educational program to meet the new obligations.

Along with the educational development have come corresponding developments in the technical and scientific aspects of the profession. It is probable that no other profession has had more rapid technical and scientific development in the last fifteen years than has dentistry. This applies both to the biologic and the physical sciences and their application to the service which dentistry renders. From a sociological standpoint it must be said that we have only just begun a transition of the profession in this respect. During our first seventy-five years we were trying to prove our right to an existence; our last twenty-five years have been devoted to the development of the profession. It is probable that during the next few years we will be engaged very largely in sociologic changes in which it is hoped that the profession will manifest its characteristic get-together attitude and meet, as it has all other obligations, those related to the great sociologic changes that are taking place today.

Our one hundredth anniversary may well be made a symbol of sacrifices that have been made by a profession which has had to prove a right to its existence and develop its educational and scientific aspects with little or no financial support or educational guidance from the universities of the country, and until recently without sympathetic support of the profession of medicine. When we celebrate our one hundredth anniversary, this occasion should be made the beginning of a new era during which our objectives will largely be in the form of adjustments. Our services will need to be adapted to the social changes, our educational program focused more upon community contacts and responsibilities, and our legislative efforts must include provisions for the maintenance on the part of the profession of a welfare attitude and competency to safeguard the public's interests.

## AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE<sup>1</sup>

PROCEEDINGS OF THE SUBSECTION ON DENTISTRY  
FOURTH ANNUAL MEETING: RICHMOND, VA., DEC. 28, 1938.

*Compiled by* THOMAS J. HILL, D.D.S., F.A.C.D.  
*Secretary of the Subsection, and Dental Representative in the Council  
of the American Association for the Advancement of Science,  
Western Reserve University, Cleveland, Ohio*

The fourth annual meeting of the Subsection on Dentistry of the American Association for the Advancement of Science was held in the W. H. Taylor Room, Clinic Building, Medical College of Virginia, Richmond, Va., December 28, 1938. The Local Arrangements Committee, consisting of Dr. Harry Bear, Chairman, Dr. Harry Lyons and Dr. J. Frank Hall, cared for the local arrangements.

Presiding officers during the meeting were: Morning session, Dr. W. J. Gies, President-elect, International Association for Dental Research. Afternoon session, Dr. Harry Bear, President-elect, American Association of Dental Schools. Evening session, Dr. D. F. Lynch, Secretary of the Research Commission of the American Dental Association.

A luncheon was held at the Rueger Hotel during the noon hour, and in the evening the Richmond Dental Society entertained the dental members present at a dinner at the Richmond Hotel.

The program consisted of a symposium on the cause of dental caries. There was much of interest in the papers, which elicited an active discussion. Abstracts of the papers follow, in the sequence of their presentation.

<sup>1</sup>A brief analysis of these proceedings appears in *Science*, Feb. 3, 1939, p. 110, and is commented upon editorially in *J. Am. Col. Den.*, 5, 292-5; 1938, Dec. For proceedings of the third annual meeting, see *J. Am. Col. Den.*, 5, 73; 1938, March-June. See, also, Footnote No. 1, *ibid.*



## I. MORNING SESSION

1. CAUSE OF DENTAL CARIES. *J. J. Reed, D.D.S., Beloit, Wis.*

Caries is due to starch lodgments on the enamel. A normal salivary ptyalin clears the mouth of starch. Without starch there can be no caries, except the sugar decay to which there is no immunity. Susceptibility to caries causes loss of function of the salivary glands to secrete ptyalin normally. It is a generally accepted proposition that diet can control caries. It must then be shown how faulty diet causes a loss of function to secrete a normal ptyalin. The acid-forming foods cause caries by depletion of alkali reserve, which in turn causes  $\text{CO}_2$  retention. The retained  $\text{CO}_2$  in the salivary gland as elsewhere causes an intoxication of the capillaries and stasis results. Stasis precludes oxygen supply to the salivary glands, hence their inability to function and a low ptyalin content of saliva results.

2. FACTORS CONCERNED IN ETIOLOGY AND CONTROL OF DENTAL CARIES. *Ralph H. Brodsky, D.M.D., New York, N. Y.*

Dental caries is a locus of some systemic imbalance. Its exciting etiological factor may be bacterial, but the action of this factor is dependent upon the preparation of its field. Among the predisposing factors governing the preparation of the field are those of heredity, environment, and diet.

Experimental evidence has shown that individuals placed on balanced diets, consisting of what appear to be liberal quantities of calcium and phosphorus, essential minerals, and the vitamins, have manifested a considerably lessened incidence of dental caries as compared with the manifestations of other similar groups of individuals living under the same general environmental conditions, but whose diets were deficient in some of the essential food factors. This result was not coincidental, for it was corroborated by reversing the groups of individuals studied—those which previously received the balanced diets now received the deficient diets. The groups originally receiving the deficient or poor diets

and manifesting rampant caries, now, receiving the balanced diets, manifested approximately the same incidence of dental caries as did the original good diet groups. The hereditary and environmental factors probably account for the small incidence of caries developed in spite of the good diets.

3. DIETARY STUDIES AS AN AID IN DENTAL DIAGNOSIS AND TREATMENT. *Mrs. Anna dePlanter Bowes, B.S., M.A., University of Pennsylvania Dental School, Philadelphia, Pa.*

During the past two years detailed dietary studies for one week have been made by senior dental students for patients. Each senior selected two individuals—one a child, the other an adult—whose dental condition made a dietary study desirable as a possible aid in diagnosis and treatment. To correlate this work with its application to private dental practice similar studies have been made for special patients of a local dentist. Detailed reports will be presented on the findings to date.

4. OCCURRENCE OF CARIES IN TEETH OF GUINEA PIGS. *Paul E. Boyle, D.M.D., Harvard Dental School, Boston, Mass.*

Caries occurs in the incisor and the molar teeth of the guinea pig. It commonly affects the occlusal surfaces of the teeth where the dentin is exposed to the oral fluids, although it also occurs in the cementum-covered surfaces. The incidence of caries as diagnosed from histological study of sections of decalcified teeth is approximately the same in animals on an adequate diet as in animals maintained on diets deficient in vitamin A or in vitamin C. The type of caries is histologically identical with caries of human teeth occurring on exposed dentin or on cementum-covered surfaces.

5. FOOD MASTICATION AND DENTAL CARIES. *Meyer Klatsky, D.D.S., New York, N. Y.*

Dental caries always begins on the outer surface and never in the interior of the tooth; this leads to the very logical conclusion that tooth decay is caused by external environmental factors. From investigations by Miller, Black, Williams, and others, we know

that the factors causing caries are: (a) acids which dissolve the enamel of the teeth; (b) acid-forming micro-organisms; (c) food debris; (d) plaques, and (e) caries-susceptible areas in the teeth, harboring food debris and micro-organisms where caries can progress undisturbed. When these factors prevail, the mouth is in an unhygienic state and the teeth are susceptible to caries. The hygienic state of the mouth depends mainly upon the degree of function of the teeth and entire masticatory apparatus. When the teeth are exercised properly during the normal process of mastication, and the masticatory organs are active and exert great pressure and stress upon the food and teeth, the mouth is kept in a clean and hygienic state. On the other hand, when the muscles of mastication are weak, undeveloped and do not exert much pressure on the teeth during the process of chewing, the teeth remain in an unclean and unhygienic state. Gnathodynamometric measures show that modern, civilized people are exerting very little stress with their teeth in comparison with the biting-stress exhibited by savage, uncivilized tribes. This explains why the mouths of civilized people are naturally in a less hygienic state and the teeth more susceptible to caries than those of savages. It also shows that, in the case of civilized races, the hygienic state of the teeth is in direct proportion to, and the incidence of caries in inverse proportion to, the biting-stress exerted by the masticatory apparatus. The anatomic and physiologic state of masticatory apparatus and the hygienic condition of the teeth depend largely upon the physical properties of the diet used by the individual. The soft, sophisticated nature of food consumed by modern man is responsible for the improper development and lack of function of the masticatory organs and for the unhygienic state of the oral cavity which promotes caries. The study of the function of the masticatory apparatus is of great importance to the dentist. We have made up a moving-picture entitled: "The Physiology of Mastication. Cine-photography and Cine-fluorography of the Masticatory Apparatus in Function." Cine-fluorography means the making up of a moving-picture of the image seen on the

fluoroscopic screen. By means of Cine-fluorography we are enabled to see the inner parts of the masticating organs while the mouth is functioning. It shows the changes in the temporo-mandibular joint and in the various movements of the lower jaw as affected by different kinds of food eaten by the individual. It also shows the process of deglutition which is so closely allied to mastication, and which is of such great interest to the dentist. (16 mm. film.)

6. NUTRITION AND DENTAL CARIES IN RATS. *Gerald J. Cox, Ph.D., Pittsburgh, Pa.*

Nutrition as related to dental caries should be studied in three phases, namely, (1) nutrition during the period of formation of the teeth, (2) foods which initiate caries, and (3) factors which affect the rate of progress of decay. A system of study has been devised which makes the above separations. Occlusal and fissure caries in rats produced by corn meal diets is the experimental basis of study. Improved methods have been devised for observation of the lesions. To date, resistance to caries has been increased in young rats whose mothers received, during pregnancy and lactation, (1) increased vitamin D, (2) a meat diet or (3) a fat diet. There was no change in resistance on (1) increasing the calcium and phosphorus content of the diet above the "normal", (2) varying the calcium to phosphorus ratio between 0.26 and 1.44, and (3) varying the protein content of the diet from 10 to 55 per cent. Extreme reduction of calcium intake by the mother reduced the caries resistance of the young. Fermentable carbohydrates promote the rate of decay in rat molars, but do not initiate caries. No variation of rate of decay has been produced by foods acting through metabolic channels.

7. EXCITING CAUSE OF DENTAL CARIES. *L. M. Waugh, D.D.S., F.A.C.D., New York, N. Y.*

The exciting cause of dental caries is the part of the problem upon which I desire to report. The predisposing or systemic factor is recognized as being of utmost importance in the final



solution. It implies bodily resistance and susceptibility. This explains the sugar tolerance without caries in different individuals and in the same individual at different periods. Regardless of the resistance factor, however, dental caries cannot occur unless the exciting cause is active in the mouth. Therefore, it would seem that the determination of this is the first prerequisite to the solving of this vexed problem.

Eskimos of Labrador and Alaska, on a native diet of proteins and fats, exclusive or nearly so of fermentable carbohydrates, are free from dental caries.

In Labrador, the survey was made from 1921 to 1927, inclusive.<sup>2</sup> Caries was found only in those who had been supplied with the refined foods of white man. Of these foods refined or white wheat flour and pilot bread, hard tack or sea biscuit were the first foods taken to them. This prevailed for an unknown number of years prior to 1884; pilot bread was used more in the north and flour more in the southern part. Tooth decay was unknown until after 1900, when molasses and some sugar was introduced by traders. The principal native foods were seal, walrus, whale, fish, caribou, polar bear, birds and their eggs. These were eaten mostly raw and frozen in the winter.

The incidence of caries in the most southern missions of Makovik and Hopedale, where approximately 33% of carbohydrates were eaten: in 37 old adults, there was found .027% of caries; 22 young adults, 18 to 25 years of age, showed .105% of caries; children under 14 years, teeth and gums deplorable, dento-alveolar abscess common, much extraction by missionaries, caries over .40%<sup>3</sup>. Most northern missions in Hebron, Nain region, carbohydrates about 18%: 48 adults showed .04% caries; 17 children under 14 years showed .11%. In the Ungava Bay, Port Bur-

<sup>2</sup> Waugh, L. M., *Journal Dental Research*, 8, 428; 1938, June.

<sup>3</sup> Ratio of decayed teeth to the total number of teeth examined. However, every child under age 14 had some decay. If based on this, caries incidence would be 100%.

well district, beyond northern missions, consuming about 8% carbohydrates and very little sweets: 76 primitive nomadic Eskimos, all ages, 2283 teeth, 6 cavities—.003% of caries.

In Alaska, study made from 1929 to 1938.<sup>4</sup> Practically identical conditions prevail in the Arctic, in North Bering Sea and also in the Tundra district of the Kuskokwim-Yukon Delta and adjacent islands. The principal foods are reindeer, whale, walrus, in addition to seal, fish, birds, eggs and caribou. Pilot bread, sea biscuit or hard tack first taken to lower Kuskokwim in 1886 in small quantity by Moravian Missionaries. Natives had no other bread. In 1904 the supply of pilot bread increased and refined white flour was taken in as traders and whites invaded villages on the Kuskokwim River adjacent to Bethel. White sugar was introduced to natives in 1906 in small quantities, as was also brown sugar; only a few of the most prosperous could afford it. Decay of teeth first noticed in 1914. It has increased in direct ratio to amount of sweets consumed by each individual, the sugar-free natives being unattacked when examined in the winter of 1937.

The variance in native and wild foods in different Eskimo districts seems to have no influence on the inception of caries. In most northern parts there are no berries or vegetables, while in Kuskokwim-Yukon Delta there are years when they can gather sufficient of both to store a small quantity for winter use in addition to eating them fresh for three or four weeks. They are put in containers without sugar and usually ferment or sour before being used.

A field study was made among natives of the lower Kuskokwim River-Hooper Bay district, where dwell the most primitive of Eskimos. In 1935, L. M. Waugh and D. B. Waugh<sup>5</sup> did a series of bacteriological experiments in the field to determine the presence of oral lacto-bacilli as related to the incidence of caries

<sup>4</sup>Waugh, L. M., *ibid.*, 10, 387; 1930.

<sup>5</sup>Waugh, L. M., and Waugh, Donald B., *Journal Dental Research*, 15, 317; 1936, Sept.

and found that 85% plus of the caries-free mouths showed no lacto bacilli. In 1936, Theodor Rosebury and L. M. Waugh<sup>6</sup> did a similar series of experiments and found 80.6% of carious mouths contained lacto bacilli and 86.4% of caries-free mouths showed no lacto bacilli. In 1938, Donald B. Waugh and L. M. Waugh did a series of diet experiments in connection with caries indices and lacto bacilli. These experiments were performed on natives of various ages in three different settlements of the lower Kuskokwim River in southwestern Alaska. A total of 46 persons were included in the experiment: 22 on natural sugars, 15 of whom were caries-free; and 24 on the refined sugars, 11 of whom were caries-free. The time periods for the individuals varied, but most were for five to six weeks duration. In the group on natural sugars, no inception of caries took place, and there was no increase in oral lacto bacilli. The increase in caries in the carious mouths of this group showed what might be considered a normal increase in cavities for that period of time. In the refined sugar group, caries was initiated in a large number of the mouths and every case showed the presence of oral lacto bacilli at the conclusion of the experiment. Thus 100% fed on natural sweets remained caries-free throughout the experiment, while 73% on refined sugars that were caries-free at the start showed definite and considerable caries at the end, averaging 3.60 cavities per mouth.

#### *Brief Summary*

Caries must be regarded as a strictly bacterial disease. Therefore, decay of the teeth is impossible unless this infection is active in the mouth. This cannot occur without the proper food or pabulum for the growth of the specific bacteria. Our studies among the Eskimos of Labrador and Alaska prove conclusively that decay of the teeth of primitives does not occur until so-called "white man's or civilization" food is taken to them.

<sup>6</sup>Rosebury, Theodor, and Waugh, L. M.

The foods first taken to the Eskimo by white man consisted principally of white flour and sweets as molasses, refined sugars and candies of various kinds. They are almost "passionately" fond of sweets, especially the children, who eat them continually when procurable. Of the flour, they make a native bread by mixing with water and cooking in a frying pan wet with seal oil, producing a hard bread about one-eighth to one-fourth inch thick and usually about 10 inches in diameter. This keeps for weeks. It is eaten much as is Swedish bread or rye krisp. If they can get baking powder some is added, causing it to rise, and the resulting bread is one-fourth to one-half inch thick and less hard and brittle. This forms only a small part of their diet as flour is too costly. The best hunters can buy but little and only following a good "catch" of fur or fish. Some buy soda biscuits and hard tack or sea biscuits occasionally.

In my studies of the primitive Eskimos, both of Labrador and Alaska, I found that tooth decay was practically non-existent so long as the diet was free from refined sweets. This has been true even in the same family, some children having had access to candy showed decayed teeth, while the other children, who had not eaten candy, were free from tooth decay. My studies indicate that refined sweets as candies, molasses, sugar, etc., are the essential causative factor. When procurable, the children's teeth begin to decay in a surprisingly short time and progress is as rapid and extreme as with our children. Other factors may combine with the sweets; among them is refined wheat flour. I have, however, not been able to find an instance in which foods containing flour would cause caries without the presence of refined sweet.

This work on the sugars should be repeated. From our findings with hitherto immune Eskimos we believe that dental caries can be induced in any human, no matter how strong his predisposing or resistance factor may be, and that this can be done by the feeding of refined sweets, especially such as will adhere to the teeth. We do not feel that sweets are the only factor but



we do consider that they are the most concentrated and active factor either separately or when mixed with other fermentable carbohydrate material. They serve as activators in the latter case. This conviction leads me to offer a helpful slogan for caries prevention to be popularized among the laity, which is:

*"An Unsweetened Tooth Cannot Decay."*

8. DENTAL DECAY. *Waite A. Cotton, D.D.S., New York, N. Y.*

The three local factors in dental decay are: Food debris, stagnation, and bacteria. All of these factors are always present in decay and they cannot be eliminated. According to Miller's theory, which is generally accepted, acid is produced by action of bacteria on carbohydrates. As no mouth is 100 per cent free of the above-mentioned factors, then there must be something in the environment of the teeth to prevent the formation of acid capable of removing the calcium from teeth. The environment of the mouth consists of two secretions, one is saliva and the other is mucous. The saliva is a digestive secretion and has never been proven to *have any consistent bacterial inhibiting action*, is variable in both quantity and quality, and is not evenly distributed. The mucous glands which are located in the cheek, lips and edge of the tongue discharge their secretion on each tooth buccally and lingually, and is not easily washed off by saliva or water, is always present, and *does contain bacterial inhibiting qualities* as shown in the experiments of Stewart, Knudson, and Arnold. (Reported in the *Journal of Dental Research*, Feb. 1935.) With normal teeth and gums and a normal functioning mucous secretion, decay cannot take place.

## II. AFTERNOON SESSION

9. METHOD TO DETERMINE SUSCEPTIBILITY TO DENTAL CARIES.  
*J. R. Blayney, D.D.S., M.S., Walter G. Zoller Memorial  
Dental Clinic, University of Chicago, Chicago, Ill.*

The discussion centered about a description of a method to determine the presence of caries activity in a local area. All

superficial debris and food deposits should be washed away. If the area from which the plaque is to be taken is a proximal surface, the ligature should be passed through the contact point to aid in the removal of the food deposits from the interproximal space. The region is now washed with sterile water, dried, and the area from which the plaque is to be taken thoroughly wiped with sterile cotton pellets. In this manner we make sure that the material we gather is in intimate contact with the enamel surface and is not food debris remaining in the embrasures. The tooth looks perfectly clean to the unaided eye. With a very small sickle-shaped scaler so angled that the blade will lie flat against the tooth, the thin bacterial membrane is lifted from the surface. It is relatively easy to gather this material from the gingival third region of the buccal or labial surface or from a proximal surface between the crest of the septal tissue and the gingival portion of a contact point. Some of the plaques are of a grayish-white color and appear as a tenacious membrane, while others are coarsely granular and white. After the material has been lifted from the tooth surface it is immediately carried to a cover-glass upon which a small drop of distilled water has been previously placed, then spread evenly over the entire area. On many occasions, for the purpose of making an additional check upon our ability to recognize the organisms seen in the smears, we have transferred a loopful of this material to a tube of Jay's medium for incubation. The smear is fixed by drying in air and then stained by the following procedure:

1. Stained in steaming 15 per cent aqueous gentian violet for 15 min.<sup>7</sup>
2. Wash in water until no more color is removed.
3. Stain in steaming Gram's iodine—5 min.
4. Wash.
5. Decolorize in 95 per cent alcohol.
6. Wash in water to remove alcohol.

<sup>7</sup>Aqueous alcohol solution, gentian violet 15 cc., distilled water, 85 cc.

7. Blot.

8. Clear in xylol, blot, and mount in dammar.

After the study of thousands of smears so prepared from areas which have been examined and carefully followed clinically over a considerable period of time, we have come to recognize the difference, on a morphologic basis, between plaques removed from very early initial carious lesions and those from areas which are immune or have been arrested. While it is extremely difficult if not impossible to describe an exact word-picture of either a positive or negative plaque, we may say that in the main the positive or susceptible plaque contains small coccal, coccobacillary forms, or short parallel rods, apparently the aciduric organisms cultivated in Jay's medium, associated with entwining threads or filaments.

10. DENTAL CARIES: SALIVARY STUDIES. *Edward H. Hatton, B.L., M.D., Chicago, Ill.*

Saliva incubated for four hours at body temperature with glucose and human enamel materially increases its calcium content if the subject supplying saliva has active dental caries, otherwise, not. No one organism added to sterile saliva produces comparable solution of calcium in such mixtures, although a combination of acidophilus and yeast does. The enzyme system of acidophilus is lacking in phosphatase essential for rapid conversion of sugars to enamel dissolving acids; such deficiency is supplied by yeast. Acids, other than lactic, e.g., pyruvic and phospho-glyceric, formed by sugar degradation in saliva-sugar-enamel mixtures attack enamel more vigorously. The behavior of saliva in mixtures containing sugars and human enamel supplies new information concerning the carious process and is the basis for clinical test for research purposes.

11. CAPACITY OF SALIVA TO SUPPORT IN-VITRO, GROWTH OF BACILLUS ACIDOPHILUS. *Thomas I. Hill, D.D.S., F.A.C.D., Cleveland, Ohio.*

This paper presents evidence relative to the intensity of the inhibiting power of salivas to *L. acidophilus* growth when these

salivas are taken from mouths of people who are caries-susceptible and caries-free. This work is based upon the capacity of the saliva, to which dextrose has been added, to sustain or destroy the growth of *L. acidophilus* when those organisms have been added to the saliva. The following technic was used. Saliva activated by chewing paraffin was collected from caries-resistant and caries-susceptible people, centrifuged to remove extraneous matter and placed in separate tubes. To each 4 cc. of centrifuged saliva is added 1 cc. of 12 per cent dextrose and 1 cc. of 1 to 10,000 dilution of a forty-eight hour culture of *L. acidophilus* in dextrose beef broth, pH 5.1. After thorough shaking, culture plates are made at intervals for twenty-four hours. Between times of plating, the tubes containing the saliva are kept in an incubator at 37°. The culture plates are made by plating 0.1 cc. of saliva, plus dextrose, plus added organisms on tomato juice agar (Hadley modification of Kulp formula). These plates are incubated for four days.

The results obtained indicate the following conclusions:

1. They substantiate previous observations that caries is associated with the presence in the saliva of *L. acidophilus*.
2. There is present in saliva some factor which influences the growth, in vitro, of *L. acidophilus*.
3. There is a variation in the intensity of this unknown factor and its presence or absence is consistent with the presence or absence of dental caries in the mouth.
4. Time, increases in temperature, and dialyzation do not destroy this unknown factor.
5. The unknown factor can be removed by absorption into the bodies of dead *L. acidophilus*.

12. HEREDITY AS AN INFLUENCE IN RESISTANCE OR SUSCEPTIBILITY TO DENTAL CARIES. *Alfred Walker, D.D.S., F.A.C.D., New York, N. Y.*

In the past, studies relating to the problem of dental caries have, for the most part, been devoted to investigating the *cause*



of the disease and have failed to devote sufficient attention to factors responsible for *resistance* or *immunity*. While much valuable knowledge has resulted from the work already done, the problem is still unsolved. The conclusion often reached, that the transition from immunity to susceptibility to dental caries in primitive peoples is due solely to changes in food, has not yet been proven. A minority but nevertheless a considerable number among civilized peoples, though they subsist on diets which supposedly do not afford protection against dental disease, do nevertheless manifest high resistance or immunity. Studying diseases from the standpoint of factors influencing resistance or immunity is neither new nor without promise of results. For example, in the October 8, 1938, issue of *Science* under the heading of "Plant Pests", Dr. William Crocker, in discussing plant disease, mentions "Cabbage Yellows", which threatened to wipe out the cabbage industry. Through concentrated study with seeds grown from a few cabbage heads which resisted the disease, although growing in the midst of an infested field, a cabbage plant was developed which grows perfectly in diseased soil—thus saving the industry.

13. FAMILIAL RESEMBLANCES IN CARIES EXPERIENCE OF SIBLINGS.<sup>8</sup> *Henry Klein, D.D.S., Sc.D., Washington, D. C.*

The results of a study on familial characteristics of dental caries are presented. The basic data were derived from records of dental examinations of essentially all of the elementary school children of an urban community, Hagerstown, Maryland (population 30,000). The major steps in the analysis were as follows: From the dental records of 4,416 white children two defined groups were selected—one, those relatively immune to caries; the other, those showing relatively high susceptibility to caries. Dental records of the brothers and sisters, of grade school age, of the "immunes" and "susceptibles" were then assembled and

<sup>8</sup>Abstract of report by Henry Klein and Carroll E. Palmer, Public Health Reports 53: 1353-1364, August 5, 1938.

analysed to show the level of caries in the two contrasted groups of siblings. The results of the analysis indicate that siblings of "susceptibles" have somewhat over twice as much caries in the permanent and in the deciduous teeth as do the siblings of the "immunes". Since the material for study constitutes a relatively large sample of children, it is possible to conclude that the existence of familial resemblances in levels of caries experience is definitely established.

At the present time, no specific explanation is offered for the observed familial differences.

14. INHERITANCE IN RAT CARIES. *H. R. Hunt, Ph.D., and C. A. Hoppert, Ph.D., East Lansing, Mich.*

The role of inheritance in human tooth decay is a disputed question. The attempt is made here to determine whether inherited differences appear in rats when the food, litter size, age when the caries ration begins, etc., are held constant. The caries producing ration comprises rice (66 per cent, coarsely ground), whole milk powder (30 per cent), alfalfa leaf meal (3 per cent), salt (1 per cent). 119 rats from three sources developed caries from 28 to 168 days after the introduction of the caries diet. Two inbred lines, early and late caries developers, are being formed by mating siblings within each line. Conspicuously susceptible siblings, from fraternities which are uniformly early developers, are selected for mating in the early line. Highly resistant siblings from resistant fraternities are bred in the late line. The third generation of the resistant and the fourth generation of the susceptible line have been reached. Conclusions would be premature at present. However, family differences within, and between, the two lines are evident. The extremes within the fourth generation of the early line are the appearance of caries 16 and 51 days after the beginning of the caries diet. Corresponding limits for the (nearly completed) second generation of the late line are 35 and 249 days, with sibship averages ranging from 81 to 132 days. The work is being continued.

*(Concluded in June issue)*

## EDITORIALS

### AN INTRODUCTION—A EULOGY—A PROPHECY—A CONFESSION

Introduction: The last issue of the *Journal* carried an editorial valedictory. A valedictory is a farewell oration. Therefore, readers of the *Journal* were advised of the fact that there was a retiring editor and that there was to be an incoming editor. In so far as it could have been humanly possible, it was the plan of the incoming editor to pass over this change in editorship with as little note as possible, purely out of respect to him who has thus yielded that position. That such is an impossible task is, of course, clearly to be seen, for one man could scarcely be expected to be held accountable for the errors of another, neither would he desire to receive encomiums not due him. But the fact remains that the College and the profession have become so accustomed to the beneficent influence of this man that we are loath to give it up. What pleasure it should give one to perform a task in his name or without notice of a change in name, providing, of course, that such could be done to the entire satisfaction of all concerned! However, there are at least two reasons why this desire could not be carried out: it would be humanly impossible to meet all requirements of satisfaction and the retiring editor presented an editorial valedictory. A change has been announced. By way of introduction, then, it may be suggested that this announcement was unnecessary, for readers will note the difference at once and to the credit of the one retiring.

The *Journal* has seen five years of life and, may we hope, of usefulness? We have been fortunate to have had the guiding hand which we have, and thus to have made a good start in the right direction. It is ours to keep it on the "straight and narrow path", that it may be competent in directing our thinking and,

perchance, something of our understanding. This succeeding editor has had a splendid course in graduate education,—socially, professionally, and editorially. It will be his aim and his constant effort to keep the *Journal* on that high plane which it has already reached. It will require the help of all our readers—their constructive criticism—our board of editors, and the officers of the College. The advance of the past few years has been even more than the most optimistic might have predicted. But as we look into the future, we ought to be encouraged. It requires that each will do his best and that each will do something. The spirit of the little verse should be our motto:

“Count that day lost  
Whose low descending sun,  
Views from thy hand,  
No worthy action done.”

A Eulogy: Such an opportunity should not pass, nor can it, without paying proper respects to the one who now relinquishes this post of possibility and this opportunity of valued service. Neither can it pass without naming the man and the recitation of a few of his accomplishments for dentistry. The name of the gentleman is William John Gies, and who among us do not know the name and the man? Neither is there one among us who does not feel a great debt of gratitude for his magnanimous efforts and multitudinous accomplishments.

Go back into the years immediately preceding this last quarter-century and contemplate what dentistry had to offer either to the public or to the men and women who styled themselves dentists. We had certain mechanical appliances which we could make and, empirically, there were a few ministrations at our command. Recall the early days of Research, the battles we had in providing funds and the denial even of the value of Research. This review in one's mind brings vividly to the fore the name of this man who gave himself over to the almost impossible task of convincing us of the needs which we would not or could not or did not see.



namely, the need of Research, in order that we might do our work more effectively; the need of suitable publications, that this new knowledge might be properly disseminated among us, and, concomitantly, that we should develop from the status of a craft to that of a Health Service Profession.

Time and space will not allow a complete recitation of Dr. Gies' activities and contributions to dentistry and the dental profession. This has been done on a previous occasion and in another issue of the *Journal*<sup>1</sup>. These three, however, together with all the collateral services, which are at once apparent, are sufficient to make us, the recipients, stop and think and realize that there is so little we can say. We can say "thank you", and of course such expression from the heart does pay a great debt. Beyond that, as we go in and out among ourselves, we can remind each other of the benefactions of this man, and to each other we can express our gratitude that he did thus labor. Further, as we meet him from time to time, we can let our faces carry that expression of gratitude and good-will, which may be so easily recognized, and on occasion, too, we can speak to him and say, "I really do thank you for all you have done".

Referring, for the moment, to certain of the addresses delivered at the testimonial given to Dr. Gies at Atlantic City, in 1937<sup>2</sup>, Dr. L. M. S. Miner, in presenting a scroll, read the inscription: "To William John Gies, M.S., Ph.D., Sc.D., L.L.D., F.A.C.D., who has brought to the service of dentistry the scientific outlook of a research worker, the educational ideals of a university teacher, the ethical standards of a moral philosopher, the literary abilities of an author and editor, the energy and enthusiasm of a sportsman, the practical wisdom of an experienced executive, the sympathy and good counsel of a loyal friend, this testimonial is affectionately presented, in token of our enduring gratitude and veneration." Surely this describes the man. It is

<sup>1</sup> See *J. Am. Col. Den.*, 4, 161-239; 1937, Dec.

<sup>2</sup> Ibid.

ours now to carry on. We will still have his counsel for he is not disconnected from that which, nor those whom, he loves. He has simply been relegated and in accord with his own desire, to another rank, not lower, but in this instance, higher.

A Prophecy: Someone has said that the difference between a prophet and a priest is that the former is always in trouble, whereas the priest has no trouble. If that be true, it may be best not to prophesy and it may be a wise man who will not lend himself to the business of prophesying. However, as there are three dimensions in mathematics, so are there three dimensions in life—the past, the present, and the future. These are more or less constantly in front of us and it may be well to pause and have a look. Again, someone has said that the past might in some cases be better forgotten, the present is gone while we think about it, so the future is all there is left. That being the case, the only thing we can do is to look into the future.

This is an epochal hour in the history of dentistry and if members of the profession are wise they will pause and reflect. First of all, within the year 1939-1940, there will be celebrated the one-hundredth anniversary of the birth of dentistry into the educational field. In 1840, in the city of Baltimore, the first dental school was opened. During the months prior thereto a curriculum was arranged. We must not let this opportunity pass without reviewing these one hundred years and noting the advance that has been made. In fact, the greater part has been made within the professional lifetime of many of us.

The present is overloaded with matters of paramount importance to us. During the past years we have been concerned with the development of the health service aspects of dentistry and its transformation from the status of a craft to that of a true profession. We are now on the threshold of a new professional era as a result, when on the horizon appears a new field of exploration.

We have been concerned with the development of the service

which dentistry should provide, but have overlooked to too great an extent the method or system of provision. Now we have put up squarely before us certain social, political, and economic questions, to which we had given no thought. This is of the future and is very important for our consideration.

Should one possess the fortitude to prophesy, he should also possess the wisdom to prophesy safely. It would be hazardous to portend the exact social, political, and economic set-up of the future. It cannot be done, but we can be forewarned to make an effort to maintain a guiding hand and we can generalize. Socially, dentistry has not served all the people in the way they should have been served. Some effort has been made, it is true, but there are still great numbers requiring better service. This must in some way be extended if for no other reason than the matter of health and well-being for the rest of us. This writer has always maintained that the extension of the Public Health Service could be made available in such a way that the low-income group could be efficiently served. Politically, we may be brought into an entirely new field—we should see that no third party is put into the arena, and if that third party should be a governmental bureau, manned by a layman, the results would not and could not be all that might be desired. Economically, we have a still stranger thought. Many of us have been willing to work and we have spent less than we earned. In fact, we may be inclined to look upon the science of economics as that science which teaches us how to make money. The reverse is true. Economics has to do with the distribution of money. There are two fundamental laws which we have overlooked. A long time ago man was warned that he should eat "by the sweat of his brow". This is the first law, and the second is that he should spend less than he earns. Too many people do not wish to comply with either of these. As a result we find ourselves, sometimes, in chaos. We are in a chaotic state just now. The best thing we can do is to get back to these fundamental principles. Then, with a little effort in some

directions, dentistry will find itself rendering its full service.

With these forces at work, however, and the apparent uncertainty which obtains, we must not lose our confidence, our common faith, or our optimism. While one would not trust blindly to luck nor admonish another that it will all come out well, yet it will come out well if we keep our confidence and our optimism, and labor diligently for that which is best for all. But the first thing that is best for all is work and more work.

The real prophecy so far as our profession is concerned is that we will in the future be more concerned with the social, political, and economic conditions than we have in the past. We will have this added to our scientific and professional knowledge. We will be better and wiser, and even more useful—that is, provided we qualify.

A Confession: The confession will be short. It is not an apology, for such should not be made by one who has accepted a responsibility. If he for some reason be not able to do the job, he should promptly decline. Or he can leave the matter of apologizing to his auditors or his readers. Yet this writer does wish to acknowledge the humbleness with which he begins this task, and especially in that it has become his lot to follow one so eminent. Several years ago Dr. Gies himself introduced a resolution providing that none could be elected to succeed himself more than four times. Dr. Gies really did not serve five elective years. He could have served one year more. But it was his desire that the spirit rather than the letter of the precedent he sought to establish be observed. His successor had to come now. This writer then was so honored—honored with the office and honored in being Dr. Gies' successor. It will be his to do the best that he can and with full recognition of all that is involved. As Jefferson said about Franklin, "I succeed him, no one can replace him."

—J. E. G.



## OUR ADVERTISEMENTS

*A policy intended to safeguard professional interests and to encourage the worthiest industrial endeavor*

The basis and conditions of our policy relating to advertisements are set forth below (*J. Am. Col. Den.*, 2, 199; 1935):

I. Advancement of the material aspects of civilization is largely dependent upon the expanding production and distribution of commodities, and their correlation with individual needs and desires. Successful practice of modern dentistry, on a broad scale, would be impossible without an abundance of the useful products of dental industries. Leading dental manufacturers and dealers have been providing invaluable merchandise for the dental practitioner. The business of supplying dental commodities has been effectually organized and, as an auxiliary to oral health-service, is more than sufficient to tax the greatest ingenuity and all the attention and integrity of each dental producer and distributor.

The American College of Dentists aims, in the public interest, to strengthen all wholesome relations and activities that facilitate the development of dentistry and advance the welfare of the dental profession. The College commends all worthy endeavors to promote useful dental industries, *and regards honorable business in dental merchandise as a respected assistant of the dental profession.* Our Board of Editors has formulated "minimum requirements" for the acceptance of commercial advertisements of useful dental commodities (*J. Am. Col. Den.*, 2, 173; 1935). These "minimum requirements" are intended, by rigorous selection on a high level of business integrity and achievement, to create *an accredited list of Class-A dental products and services*, and include these specifications: Advertisements may state nothing that, by any reasonable interpretation, might mislead, deceive, or defraud the reader. Extravagant or inappropriate phraseology, disparagement, unfairness, triviality, and vulgarity must be excluded. Advertisements relating to drugs or cosmetics, foods, dental materials, education, finance—to any phase of interest or activity—will be accepted for only such commodities or services as merit the commendation, approval or acceptance of the National Bureau of Standards, American Dental Association, American Medical Association, Council on Dental Therapeutics, Dental Educational Council, Better Business Bureau, and other official bodies in their respective fields of authoritative pronouncement. *The*

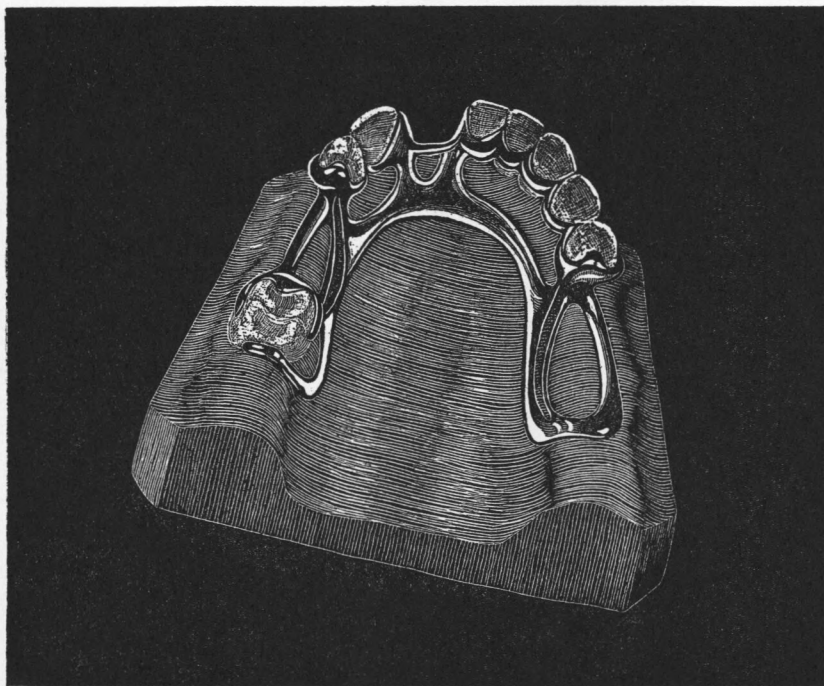
## ADVERTISEMENTS

*welfare of the consumer is our paramount consideration.* In accordance with the recommendation of the American Association of Dental Editors, the placement of advertisements will be restricted to the advertising section.

II. An advertisement, to be accepted or repeated, not only must conform with the said "minimum requirements," but also *must meet the special test applied through a questionnaire* that will be repeatedly exchanged confidentially with numerous referees in all parts of the United States, and which contains the following inquiries:

*Questionnaire for referees on acceptance of advertisements.*—(1) Has \_\_\_\_\_ (person, company, service, etc.) always been honorable and fair in (his, their) dealing with you personally? (2) If not, indicate confidentially your experience to the contrary. (3) Has \_\_\_\_\_ (commodity, service, etc.) always been, in your use of it, what its advertisers claim for it? (4) If not, indicate claims that were unwarranted when made. (5) Would the accompanying (copy of a proposed) advertisement of \_\_\_\_\_ (commodity, service, etc.) be warranted, in your judgment, as a recognition and encouragement of useful dental commercialism? (6) If your answer to Question 5 is Yes, will you agree to test, *critically*, the above-named commodity (service, etc.) and to respond at intervals to our further inquiries as to whether all the claims published currently in its behalf, in advertisements *in the Journal of the American College of Dentists or elsewhere*, are justified?

III. The advertisers whose claims are published on the succeeding pages stand high in commercial character and on the recognized merits of their products (services, etc.). They are not among those who seek advantage from misrepresentation, and need no assistance from a prejudiced or insincere journalistic policy. They are above the temptation to try to control or influence any aspect of the conduct of this *Journal*, which in all its phases is completely independent, and fully representative of the professional ideals and the professional obligations of the American College of Dentists. We commend each advertiser in this issue to the patronage of all ethical dentists.



## 20 Years of practical research

Williams "XXX" casting gold has the benefits, not only of extensive scientific study, but also the practical research of actual dental practice—twenty years of it! And during this time, Williams "XXX" has been progressively improved, the addition of *Indium* being the most recent metallurgical improvement. Today, Williams "XXX" *with Indium* is one of dentistry's finest partial denture casting golds. Information on request. Williams Gold Refining Co., Buffalo, N. Y.; Fort Erie, N., Ont.; Havana, Cuba.

**WILLIAMS "XXX" WITH  
INDIUM**  
PARTIAL DENTURE CASTING GOLD

## NOTES AND COMMENTS

Although America leads the world in dentistry, it is a leadership based more upon ingenuity of a mechanical sort than upon the amount or character of research done on the anatomy, pathology or physiology of the oral cavity. Almost no dentists are trained in such a way that they can do research of a quality comparable to the research of medical and surgical problems. Until our dental schools are brought more closely into line with our medical schools much of the mechanical brilliance of American dentists will remain that and nothing more, and the essential curative and preventive measures will go unstudied.

Owing largely to the support and stimulus of the Carnegie Corporation an auspicious beginning in this field has been made. But the field is vast, and large sums are necessary adequately to cover it.

—*The Rockefeller Foundation—A Review for 1938, page 33.*

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### THE JOURNAL OF DENTAL RESEARCH— WILLIAM J. GIES ENDOWMENT FUND

An effort was begun a little more than a year ago to raise an endowment fund of \$50,000 for the permanent support of this Journal. It should not be necessary to advance argument in behalf of this campaign for every practising dentist knows the value of *The Journal of Dental Research*. We have a total of cash and pledges to date of a little more than \$20,000. This leaves a balance of approximately \$30,000 to be raised.

A committee has been appointed to conduct a campaign for this fund. The campaign is being initiated among the members of the College and the members of the American Dental Association. May we count on the support of every member of the College!



## AMERICAN COLLEGE OF DENTISTS

### STANDING COMMITTEES (1938-39)

*By-laws*—W. J. Gies (39), *chairman*; H. M. Semans (41), M. S. Aisenberg (40).

*Centennial Celebration* (establishment of dentistry as a separately organized profession—(1939-40)—H. S. Smith (41), *chairman*; Harry Bear (43), W. H. Mork (42), D. F. Lynch (40), J. H. Ferguson (39).

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*Hospital Dental Service*—Howard C. Miller (43), *chairman*; Leo Stern (42), C. W. Stuart (41), E. A. Charbonnel (40), R. W. Bunting (39).

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*Necrology*—B. E. Lischer (43), *chairman*; F. H. Cushman (42), J. V. Conzett (41), R. R. Byrnes (40), William Shearer (39).

*Nominations*—J. B. Robinson (42), *chairman*; H. O. Lineberger (43), W. F. Lasby (41), P. V. McParland (40), E. P. Brady (39).

*Oral Surgery*—M. W. Carr (41), *chairman*; W. I. Macfarlane (43), E. R. Bryant (42), J. R. Cameron (40), C. W. Freeman (39).

*Prosthetic Service*—W. H. Wright (43), *chairman*; A. P. O'Hare (42), W. H. Grant (41), F. M. Hight (40), A. H. Paterson (39).

*Public Relations*—J. O. Goodsell (43), *chairman*; Wilmer Souder (42), O. W. Brandhorst (41), Nathan Sinai (40), T. E. Purcell (39).

*Research*—A. L. Midgley (42), *chairman*; W. D. Cutter (43), P. C. Kitchin (43), J. E. Gurley (42), A. B. Luckhardt (41), L. M. S. Miner (41), P. J. Hanzlik (40), Irvine McQuarrie (40), L. R. Main (39), A. M. Schwitalla (39).

*Socio-economics*—C. E. Rudolph (43), *chairman*; G. W. Wilson (42), W. R. Davis (41), B. B. Palmer (40), M. W. Prince (40), E. H. Bruening (39), Maurice William (39).

### Announcements

*Next convocation of the College*: Milwaukee, Wis., Sunday, July 16, 1939.

*Next sessions of the Regents of the College*: Milwaukee, Wis., July 14, 1939.

*Fellowships and awards in dental research.* The American College of Dentists, at its annual meeting in 1937 [*J. Am. Col. Den.*, 1937, 4; pp. 100 (Sep.) and 256 (Dec.)], inaugurated plans to promote research in dentistry. These plans include grants of funds (The William John Gies Fellowships) to applicants, in support of projected investigations; and also the formal recognition, through annual awards (The William John Gies Awards), of distinguished achievement in dental research. A standing committee of the International Association for Dental Research will actively cooperate with the College in the furtherance of these plans. Applications for grants in aid of projected researches, and requests for information, may be sent to the Chairman of the Committee on Dental Research of the American College of Dentists, Dr. Albert L. Midgley, 1108 Union Trust Bldg., Providence, R. I. [See "The Gies Dental Research Fellowships and Awards for Achievement in Research," *J. Am. Col. Den.*, 5, 115; 1938, Sep.]

### JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

Issued quarterly. Subscription price: \$2.00 per volume. Presents the proceedings of the American College of Dentists and such additional papers and comment from responsible sources as may be useful for the promotion of oral health-service and the advancement of the dental profession. Address: Journal of the American College of Dentists, 350 Post St., San Francisco.

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