

# JOURNAL OF 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; (25) *Milwaukee*, July 16, '39; (26) *Baltimore*, March 17, '40. [Next Convocation, *Cleveland*, Ohio, Sunday, September 8, 1940.]

*Sections and dates of meetings in College year of 1939-40 (between convocations):*—(1) *Kentucky*: Sep. 25, '39; June 12, '40. (2) *Northern California*: . . . . . (3) *Maryland*: . . . . . (4) *New York City*: Oct. 27, Dec. 3, '39; May 24, '40. (5) *Minnesota*: Feb. 29, June 15, '40. (6) *New England*: . . . . . (7) *Wisconsin*: Nov. 12, '39; Apr. 22, '40. (8) *Colorado*: June 21, '40. (9) *Pittsburgh*: Nov. 29, '39. (10) *Iowa*: May 6, '40. (11) *Illinois*: Dec. 11, '39; Feb. 11, May 9, '40. (12) *St. Louis*: Oct. 23, '39. (13) *Oregon*: Nov. 24, '39; Mar. 9, June 8, Sep. 14, '40. (14) *Texas*: Apr. 9, '40. (15) *Florida*: Oct. 12, '39. (16) *Indiana*: Jan. 8, '40. (17) *Southwestern*: Jan. 18, '40. (18) *Washington, D. C.*: Oct. 30, '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, for *remuneration*, under any condition other than those of an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital, or other accredited 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

## THE BALTIMORE CONVOCATION

(Dentistry's Centennial)

Belvedere Hotel, Baltimore, Md.

Sunday, March 17, 1940

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*The activities of the College were not an integral part of the Centennial celebration nor were they under the direction of the Maryland Dental Centenary Committee. However, they did constitute a valuable part of the program in that the College, acting as host to those participating in the day's exercises, contributed very definitely. The morning program was contributed by the American Dental Association, the Canadian Dental Association, and the American Association of Dental Editors; the luncheon, Omicron Kappa Upsilon; the afternoon session gave emphasis to dental education,*



*through the American Association of Dental Schools, and to research, through the International Association for Dental Research; the evening, the convocation of the American College of Dentists.*

—ED.

MORNING SESSION, 9:00 O'CLOCK  
(Ballroom)

ALVIN W. BRYAN, *President, American College of Dentists, Presiding*

FELLOWS OF THE COLLEGE AND GUESTS: The object in holding this meeting is well expressed in the message which you will find in the printed program and which reads as follows:

The American College of Dentists takes pleasure in presenting this program in commemoration of one hundred years of dentistry as a profession.

The program is presented as an introduction to three days of celebration which are to follow under the auspices of the American Dental Association and the Maryland State Dental Association.

The acceptance by the several organizations<sup>1</sup> to participate in this program is a demonstration of unity of purpose underlying all of our professional activities.

It offers an opportunity to each of the participating organizations to review its past and set new goals for the future.

In acting as host on this occasion, the American College of Dentists does so in a spirit of cooperation and with pride in being able to serve.

The first address<sup>2</sup>, "Dentistry Through the Century," will be presented by Dr. J. Ben Robinson, dean, Baltimore College of Dental Surgery, University of Maryland, chairman of the History Committee, Maryland State Dental Association, and member of the History Committee, American College of Dentists.

DENTISTRY THROUGH THE CENTURY  
J. Ben Robinson, D.D.S., *Baltimore, Md.*

Early American dentists established the basic elements which distinguish dentistry as a profession. These elements, three in number—education, literature and organization—"were not spontaneous developments of any particular moment but were the consequences of a gradually improving dental concept that evolved through the ages." The beginning of professional

<sup>1</sup>See Editor's note.

<sup>2</sup>All addresses included herein are abstracts of the originals, which are published in full, in the official Centenary Proceedings.



dentistry depended upon two factors; (a) contributions made through devotion of early pioneers, and (b) the creative ability of these same pioneers. These early pioneers date back into ancient Egypt, Greece and Rome, even to the Moslems of Arabia and Spain, coming on down through the years to the earliest pioneers of American dentistry who took the next step through bringing in the aid of science and the establishment of organized education. Thus the first dental school in the world, the Baltimore College of Dental Surgery, was instituted and became a dominant factor in further development.

The evolutionary development of dentistry moved along some eight lines, which have been carefully considered and which represent the progressive steps in this forward movement.

The practitioners of dentistry of the eighteenth and nineteenth centuries, no doubt, had most to do with the further development of dental service, and of dentistry, to a professional status. These are the men who established the first school in 1840, the result of the labors of the past century culminating in the latter few years prior to 1840. At all times there was an earnest desire on the part of some at least, the number being increased as time went on, to make dentistry what it is coming to be—a health profession based upon a knowledge of the biological sciences.

Dentistry, however, has always had its two phases, the scientific, to which reference has been made, and the technological. The immediate need of the past has forced a more rapid development of the latter. Hence, the function of dental service has been more easily seen than the underlying scientific principles. "Scientific prosthesis is a therapeutic process involving technical procedures. . . ." This is an important point in dental development.

A review of the literature, beginning at least within the latter part of the eighteenth century, pictures clearly the need of knowledge of the underlying biological sciences. With this knowledge much of the technical phase can be reduced and thus dental service become of greater value to the people.

Coming on to later years, even the present, we find the social sciences developing and thus we are brought face to face with a new relationship of the profession to society. "It is fair to say that dentists are willing to cooperate in any proposed plan of mutual participation in health problems." So you may now look to the new position which members of the profession are bound to take. With it all, the search for the cause of dental caries has progressively continued until today we have an international research association and the *Journal of Dental Research*.

Notable achievements have been made during these years in every field. The educational system has been taken over as a university discipline; literature began under professional auspices, passed over into commercial control, and is now back in the hands of organized dentistry; the early dental society



passed away, but we now have the American Dental Association with a membership of 45,000 from fifty-four state societies; research has been inaugurated and rapid advance is being made on that front. "Criticisms can be directed against any of these functions. . . . But if one considers the ideals of these organizations in terms of their purposes, their objectives, and the devotion of those engaged in them, the first century of dentistry has been eminently successful."

PRESIDENT BRYAN: Organization is one of the legs of the tripod upon which dentistry is built. I take pleasure in presenting Dr. L. Pierce Anthony, editor of the *Journal of the American Dental Association*, who will speak on "The Influence of Organization on the Development of Dentistry in the United States."

THE INFLUENCE OF ORGANIZATION ON THE DEVELOPMENT OF DENTISTRY  
IN THE UNITED STATES

L. Pierce Anthony, D.D.S., *Chicago, Ill.*

The three phases of the educational tripod—education, literature, organization—played nearly equal roles in the development of dentistry. Yet there can be no doubt as to the basic fundamental influence of organization. The history of the development of organized dentistry dates back to Fauchard in France and Birdmore in England, when they brought men together to discuss conditions to aid each other in the development of treatment, and as a society, to demand and arrange for further instruction. This has always been the basic work of the organized profession. In tracing the development of organized dentistry in America, names of many, some of whom have been known even in our own time, are familiar to many of us, and as the work of the organization has gone on, we have found new needs to develop. There has been not only this first need—that of pushing forward the educational phase, but we have always had, though not until later recognized, other needs. Legislative activity has increased with the years. The need of education of the public has constantly occupied the attention of the leaders in dentistry, and we have always had to wage war against the charlatan.

A further development of our literature has resulted ultimately in the undertaking to index the entire field of dental literature. In these latter years activities have multiplied greatly until today organized dentistry, as represented by the American Dental Association, or any other similar national organization, has become a great machine in doing its own work.

Some of the activities may be indicated—legislation, education, relief, research, process patents, dental index, insurance, Council on Dental Therapeutics and others; and in the field of our social relationships—economics,



public health and Red Cross. All of these together make up a great field of labor and manifest a great usefulness both to the profession and the public. An individual alone may accomplish some results in some directions, but for the making of any enterprise of greater usefulness, the cooperative effort of others is required. Hence, we have the International Association for Dental Research, whose business is research; the American College of Dentists, whose function is further development of professional status, ethics and interests, both social and professional; similarly with the International College, fraternities, honorary societies, etc., each with its field of activity. Until "today we stand at the threshold of an opportunity, by virtue of our solid organization, to launch forth an effort in the scientific field that will go far toward solving our most serious problems."

PRESIDENT BRYAN: The most cordial relationships in dental affairs have always existed between the United States and Canada. In these days when international borders are bristling with bayonets and machine guns it is refreshing to be able to welcome our neighbor from the north, who can visit us without passport and without search. Dr. Eudore Dubeau, past-president of the Canadian Dental Association, will speak on "International Relationships."

#### INTERNATIONAL RELATIONSHIPS

Eudore Dubeau, D.D.S., *Montreal, Canada*

In discussing the question of international relationships, one should speak of relationships at large, though based perhaps on a fuller knowledge of the relationships between our two countries. We do recognize, and so must others, that "dentistry in its present stage, as an autonomous profession is distinctly an American accomplishment, and throughout the world it is credited." We have five schools in Canada and all have taken advantage of our affiliation with the American Association of Dental Schools. Young European dentists have for the past many years been coming to the American schools to receive their education. We have had some in Canada, French speaking, because of our close association with American schools and their lack of desire to take up the English language.

The "International Relationships" between Canada and the United States are as perfect as they can be and we are both working jointly to prevent dental diseases by the establishment of research associations and the cooperation of our national bodies in an effort to educate the public. The International Dental Federation, established in 1900, has done a good work, and out of 32 nations belonging to that federation, we find England, France and the United States, each with an accredited membership of five, with many others attending their

annual meetings. This confirms the question of "International Relationships" on a broader basis.

"On behalf of the Canadian Dental Association, I desire to assure you of our absolute cooperation in the great and admirable work that you are doing."

PRESIDENT BRYAN: Dentistry is jealous of its literature and literature is another leg of the tripod upon which we have grown. We are privileged to have the president of the American Association of Dental Editors, Dr. Harold J. Noyes, who will speak on "Our Literature Through the Century."

#### OUR LITERATURE THROUGH THE CENTURY

Harold J. Noyes, B.S., D.D.S., M.D., *Chicago, Ill.*

"The evaluation of American dental journalism is associated with three aspects of growth in dental science: First, increase in dental knowledge and service, embracing clinical experience, research and experimental data, and correlation of this accumulated material within the profession, and other branches of learning; second, the consequent and contemporaneous development of the dental trades; and third, the growth and multiplication of professional organizations."

The first dental journals such as the American Journal of Dental Science, founded in 1839, and the Dental Register of the West in 1847, arose through the profession. Later the need of the profession for periodicals, and the dental trade for an approach to the profession, furnished circumstances inevitable to close association and mutual assistance. In the development of journalism, the increased material to be published and the concomitant need of finances, advertising became a very significant factor. By the latter part of the nineteenth century the commercial interests found that through advertising, the dental journal could be a profitable enterprise. There followed conflict between the commercial and professional aspects of dental journalism. We have now passed through a cycle until today we again find the great bulk of our literature back under the auspices of the profession. The activities of the American College of Dentists and the American Association of Dental Editors have been a material force in completing this cycle.

It is interesting to note the development and the change in format, paper, type, mechanical improvements and distribution as we have gone on through the years. The text and volume of our literature have changed materially because of the development of research, recorded clinical experience and the growth of the specialties. While the practitioner of today reads more extensively, yet the fabric of our contemporary journalism so poorly meets the expanding needs that he is, *comparatively speaking*, no better informed than



was the progressive dentist of 1840. An essential reason for this deficiency lies in the attempt to meet the problem by simple expansion in the number of periodicals and their page content. It would seem no more than good sense to gather together those concerned in the problems of journalism for the purpose of analyzing our requirements on the one hand, and facilities on the other, in order that through the comparison of these surveys we might attain progress through intelligent planning. The reduction in total publication expense alone would be worth the effort. The rejection of this attack, however, is mute evidence that the subjugation of individual organization interest to the common welfare of the profession has not yet been attained.

The proprietary journals that remain are those which serve the average reader among the 61,000 dentists in the United States, a function no non-proprietary dental journal has yet undertaken. "Were we interested in unnatural acceleration of the swing of the pendulum, we might take either of two courses: one, enter the field of the trade publications with journals which better serve the purpose; or, two, provide the technical organization which meets the didactic requirements of professional organization. The former seems premature in the light of the present status of professional journals. The latter compromises principles sacred to a profession dedicated to honest representation and interpretation of fact."

"Our literature through the *past* century grew beyond the bounds of the mechanism through which it received expression. The multiplication of its sources promises to continue and increase. Has our profession advanced sufficiently in the scientific approach to its development to profit by its history, analyze its requirements and plan its future? Must it inevitably take the hard and the costly way? Indeed, our literature of the *next* century presents a problem in dental journalism."

PRESIDENT BRYAN: The meeting will adjourn to the dining room on the first floor for luncheon, reassembling here at 2:00 o'clock.

#### LUNCHEON, 12 O'CLOCK

President Bryan presented Dr. George W. Wilson, president-elect, American College of Dentists, who presided.

Chairman Wilson presented Dr. Arthur H. Merritt, president, American Dental Association, and Dr. B. Lucien Brun, general chairman of the Centennial Committee.

Dr. Abram Hoffman, president of Omicron Kappa Upsilon, was introduced and spoke on "The Development and Progress of Omicron Kappa Upsilon."

## THE DEVELOPMENT AND PROGRESS OF OMICRON KAPPA UPSILON

Abram Hoffman, D.D.S., *Chicago, Ill., President*<sup>3</sup>

Omicron Kappa Upsilon is an honorary society founded by the Class of 1914, Northwestern University Dental School, in conjunction with the officers and members of the faculty of that school. The three words, Omicron Kappa Upsilon, mean or refer to "conservation, teeth and health." The society now occupies a place in the dental field corresponding to that of Phi Beta Kappa. Many schools institute honorary societies but this one has been generally adopted and has spread through 34 dental schools. She holds out as an ideal the following: "To encourage and develop a spirit of emulation among students in dentistry, and to recognize in an appropriate manner those who shall distinguish themselves by a high grade of scholarship."

AFTERNOON SESSION, 1:45 O'CLOCK  
(Ballroom)

President Bryan introduced Dr. Henry C. Fixott, Portland, Oregon, vice-president, American College of Dentists, who presided at the afternoon session.

DR. FIXOTT: President Bryan, Fellow Members of the American College of Dentists, and Guests: We are all hoping that our meeting today will contribute something worth while to the Dental Centennial Celebration being held here in Baltimore this week.

We are dealing with the romance of dentistry and when we think of romance we think of dreaming and dreamers. I am reminded of a poem by Edgar Allen Guest entitled, "We're Dreamers All." May I give you the last verse of that poem?

"Back of the sound of the hammer,  
Back of the hissing steam,  
And back of the hand at the throttle,  
Is ever a lofty dream.  
And all of us, great or humble,  
Look over the present need,  
To the dawn of a glad tomorrow,  
Which is promised in every creed."

Yes, we are all dreamers. We love to dream dreams of adventure, of accomplishment, of romance, and of success. There is a real

<sup>3</sup>President's Address.



thrill that comes to one who dreams dreams and then goes into action to make those dreams come true. There is truly romance in success.

The essayists and speakers on our program this afternoon are all dreamers. They would not be in the positions they hold if it had not been for their thoughtful, painstaking sifting of ideas and ideals; if it had not been for their love and devotion to their profession; if it had not been for the fact that they were more than dreamers—they were men of action. They have made their dreams come true and have furnished inspiration and vitality to their profession and to their respective organizations.

I deem it an honor and a privilege to be permitted to preside at this meeting this afternoon and introduce the speakers.

The first speaker is Dr. W. N. Hodgkin, president of the National Association of Dental Examiners, who will speak on "The Influence of Dental Laws."

#### THE INFLUENCE OF DENTAL LAWS

W. N. Hodgkin, D.D.S., *Warrenton, Va.*

Dental legislation became a necessary factor in the development of the profession from two standpoints; first, legislation is essential in the establishment of a profession and, second, legislation becomes essential in the protection of the public. Thus a responsibility is thrown upon the profession in the protection of the public.

There are many rungs to the ladder over which we have come since the year 1841 when the first dental act was established in Alabama. Since that time, states have rapidly enacted dental legislation for the two purposes indicated above. "No one who has attempted to draft a section defining the Practice of Dentistry or another listing Causes for Revocation of License, would pretend that thus far it has been possible to translate effectively into the language of legislation all the aims of the profession toward full protection of the public." However, much in this field has been developed and legislation has contributed no little to the development of the tripod—education, literature, society. "... it has often been necessary to readjust the main shafts of the tripod to secure steadiness and balance. In each instance the rungs of dental laws have given fixation and rigidity for actual service to the

newer alignment. When selected and fitted with a liberal and appreciative concern for proper relationship of the tripod to the base of public interest on which it must rest, these rungs have been and will ever be, of indispensable service to the structure."

CHAIRMAN FIXOTT: I know of no man who is better qualified to speak on the subject of "Research" than the next speaker. His devotion to the advancement of dentistry has inspired us for these many years.

Dr. William J. Gies, president of the International Association for Dental Research, will speak on "Research as an Important Factor in Dental Progress."

#### RESEARCH AS AN IMPORTANT FACTOR IN DENTAL PROGRESS

William J. Gies, Ph.D., Sc.D., LL.D., *New York City*

Progress in the growth of dental research has continued for many years. Referring specifically to the past one hundred years, such research achievements as these are outstanding:

- 1844—Wells, a dentist, suggested the use of nitrous oxide for surgical anaesthesia.
- 1846—Morton, a dentist, demonstrated ether as an anaesthetic.
- 1855—Charles Goodyear patented the process for making plates of vulcanite.
- 1862—Rubber dam was introduced.
- 1880—Kingsley published the first scientific treatise on orthodontia.
- 1882—Miller announced the chemico-parasitic theory of dental caries.
- 1895—Kells demonstrated the dental use of roentgen rays.
- 1896—Philbrook wrote on cast gold fillings.
- 1906—Taggart demonstrated the cast gold inlay.
- 1908—G. V. Black published his book on Operative Dentistry.

These are milestones in the scientific advance of dentistry, and are in themselves "sufficient to show the important relation of research to dental progress."

#### *Research*

"Research is an endeavor to establish new knowledge and clear understanding." It is a "fact-finding" process in which truth is sought, and beliefs or views previously held are made subject to further inquiry, the results of which should promote public welfare.



Research develops the "open mind" and eliminates preconceived ideas. A researcher must conduct his experiment to find out what actually happens, not to "prove something." His mind must be prepared by knowledge in related fields. "In the field of observation," said Pasteur, "chance favors only the minds that are prepared."

In this preparation of the mind, the term "research" is significant. It means to look back, to search again, "to re-investigate." It means acquisition of knowledge and understanding of theories, for the establishment of truth. Yet not always is research wholly dependent upon extensive knowledge, for an "unexpected event" or an "accidental observation" may serve as a stimulating motive to investigate, thus emphasizing "awareness," which is essential.

Knowledge, awareness and open-mindedness are important qualities of the researcher in that, through them, he sees things as they are.

"Achievement in research is unpredictable"; there is an "inherent uncertainty," which may require many years for discovery of decisive results. Many diseases, e.g., "common cold, cancer and caries," clearly demonstrate this uncertainty and the need for an open mind and more research to discover causes and assure prevention.

"Growth, in a person, depends upon and is sustained by the food he recurrently assimilates. A profession, like a growing person, is nurtured by the knowledge it recurrently acquires and uses. Research prepares and presents professional nourishment—it provides information, improves procedures, increases efficiency, and promotes wisdom. Discoveries in research, for a profession, by their invigorating and sustaining influences, are like vitamins in the food of a well nourished and active person. These discoveries provide 'what it takes', in a profession, to maintain vitality and to assure development."

#### *Research and Dental Progress*

Research in dentistry is essential. Progress is made in proportion to "dissatisfaction with existing conditions." To the degree that dentistry is dissatisfied with its ministrations, i.e., its service to the public, so will endeavor be made continually to better its ministrations. Cause must be known before either cure or prevention can be effectively applied.

Other factors contributing to "dental progress," either directly or indirectly—and which require much research—have to do with the "economic welfare" of the dentist, and with knowledge of dentistry by the public. The former consists of those conditions through which the dentist becomes a "contented health servant," while the latter gives the public a better understanding of what dentistry is and of the need for its ministration.

*Support for Dental Research*

The need for investigation is so obvious that the importance of increased activity in and support of research cannot be overstated. Effective research usually requires whole-time attention and reasonable remuneration. Researchers and clinicians should realize that results cannot be predetermined. Ultimately, as has been so many times and so ably demonstrated, their findings will be fruitful. Support for research and the *Journal of Dental Research* is urgent. The profession has made a beginning in the establishment of fellowships and grants-in-aid, and these must be extended. "Efforts by dental practitioners to understand such records in the *Journal of Dental Research* accord with the progressive educational spirit of the times. Support for the *Journal of Dental Research* is the kind of assistance and encouragement that dentists should cheerfully assure for those who are pushing forward the boundaries of dental knowledge, and who are thus steadily preparing the way for continual progress for the dental profession."

CHAIRMAN FIXOTT: Dr. Paul C. Kitchin, secretary of the Dental Section, American Association for the Advancement of Science, is eminently qualified to speak on the subject, "Dentistry and Science."

## DENTISTRY AND SCIENCE

Paul C. Kitchin, M.S., D.D.S., *Columbus, O.*

"The world of 1940 differs from the world of 1840 because of the application of scientific findings to agriculture, to industry and to the professions. As far as the first two are concerned, the application is responsible for an economy of surplus having replaced an economy of scarcity, with all of its attendant complicated sociological problems. Its effect on the healing professions has been to replace much empirical 'Art' with more precise and logical procedures of a scientific nature."

In the conquest of pain, Wells and Morton played a most important part and stand at the beginning. This same period saw, too, the development of "organization, intercommunication and cooperation" among people interested in orderly arrangement of knowledge, or better known, scientific endeavor. Societies for the development of knowledge were organized until in 1839 and 1840 a dental society and a dental school were established. Following 1840, schools, journals and societies were organized in rather rapid order, some of the journals having perhaps but one issue, and many of the societies passing out and new ones being organized. But through it all one could trace the growth of desire for better understanding, resulting in



organized instruction and organized education, generally referred to today as the scientific approach or as science.

Hayden and Harris are given credit as torch-bearers within the field of dentistry. The picture in the beginning was dark, the picture before being blank, and the difficulties appeared almost, if not quite, insurmountable. But time and the general forces of evolutionary development have brought about conditions such as we have today. Ultimately the American Association for the Advancement of Science, including all fields of knowledge, was established, and within the last few years dentistry has become a subsection of that great body. Within the field of dentistry, the International Association for Dental Research represents specifically our scientific arm of endeavor. It is interesting to note its growth, which through the past few years has been rapid, and no one in the profession today is without knowledge of its value.

"The basic problems of the dental profession will be solved through application of the fundamental sciences. Among the many progressive attainments which we are met to celebrate at this close of the first hundred years of the dental profession, the one that holds the brightest promise for the future is the correlation and integration of dentistry and science."

CHAIRMAN FIXOTT: Dr. Harry Bear, dean of the Medical College of Virginia, School of Dentistry, president of the American Association of Dental Schools, a dentist, a teacher, an administrator, will speak on "Dental Education: Milestones of Progress."

#### DENTAL EDUCATION: MILESTONES OF PROGRESS

Harry Bear, D.D.S., *Richmond, Va.*

References to the earliest records of the human race reveal some reference to the practice of medicine, but very little to that of dentistry. Medicine was practiced to some extent by priests, and dentistry, as it was known in that day, was doubtless included. Dentistry did evolve slowly as a part of medicine, knowledge of both of which was given through apprenticeship. Finally, dentistry developed into a craft, which was taught to an apprentice. During the eighteenth century many physicians included dentistry in their practices, although there were many able dentists—that is from the technical standpoint—who had gleaned some knowledge of biological or other conditions.

During 1818 and 1819, Horace H. Hayden conducted a course of lectures on odontology, and from 1823 to 1825 he lectured on dental physi-

ology and biology, both series of lectures being given in the University of Maryland, School of Medicine. Advance in the educational field was stepped up markedly with the opening of the Baltimore College of Dental Surgery in 1840; immediately prior thereto was the establishment of the first journal, and a few months later, the organization of the first society, that is, the first society which continued over a long period of time. In the early days of the development of the schools there was much discussion as to length of courses, conduct of courses, etc. All of this is interesting to the student of today as he picks out of it the course pointing straight ahead.

Starting with the original Baltimore College in 1840, within the next twenty-five years only four schools were developed, but by 1902 there were sixty schools. Today, because of further educational development and the fact that dental schools have become a part of university discipline, there are but thirty-nine schools in existence. In 1840 only the rudiments of an English education were required for admittance. This gradually changed until the dental student of today must have a minimum of two years of academic work in addition to high school before entering the dental school. The length of the course has increased from a matter of a few months to two years, three years, four years, five years, and finally six years—that is, two years of pre-dental, and four years of dental study.

Similarly, the state boards may be traced in their development. These have helped to elevate the standard of dental practice. Today we have a virile and active American Association of Dental Schools. This is the outgrowth of development. There were in the beginning, the National Association of Dental Faculties, 1884; American Institute of Dental Teachers, 1893; Dental Faculties of American Universities, 1908; and in 1923 these three organizations and the Canadian Dental Faculties Association were amalgamated into the American Association of Dental Schools.

The American Dental Association has finally assumed responsibility for a Council on Dental Education. Through the years this has been in a measure a voluntary council, though with certain authority assigned to it, but it has exerted a guiding hand in the development of the dental curriculum and of dental schools. With all of this, undergraduate education has increased, has changed from the mechanical through art, through art based on science, so that today just ahead of dentistry, is the field of science beginning to dawn. Graduate education has come to be a definite need, for many have learned that with these rapid changes they have to work more diligently. They have to review fundamentals, and learn the new knowledge, in order to keep up. Hospitals are offering internships and so the field widens.

All through the years, men have been confronted with the question,

"Why do teeth decay?" Step by step, efforts to determine the cause have increased until today we have many researchers all over the world seeking out the cause of dental ills and especially the basic one, the cause of caries.

That dentistry has changed from a craft to a science is well indicated by its admission as a subsection to the American Association for the Advancement of Science. Public health service is on the increase, dentistry now being recognized and included as a part of that service. Members of the dental profession are members of state boards of health and direct dental activity throughout their communities.

As to the future, "It is a happy omen today that all dental organizations are united in a common effort to improve dental education and thereby offer to the public a superior oral health service."

#### THE PILGRIMAGE TO THE TOMBS OF HAYDEN AND HARRIS

At 4:10 p. m. Sunday afternoon three bus loads of Fellows of the College and guests numbering one hundred embarked for the cemeteries on a pilgrimage to the tombs of the founders of the first dental school.

Arriving at the Greenmount cemetery the pilgrims proceeded to the tomb of Hayden, where the leader of the pilgrims, Dr. George W. Wilson, stepped forward and with the following words placed a beautiful wreath, prepared by the local committee, at the door of the tomb: "In behalf of the American College of Dentists and a grateful dental profession, I place this wreath upon the tomb of Horace H. Hayden in commemoration of the one hundredth anniversary of his great service and achievement for dentistry and all mankind throughout the world."

The pilgrimage then continued to the Mt. Olivet cemetery where the associate of Hayden was resting and proceeded to the monument of Harris. Again the group was arranged in a semicircle around this simple monument and the leader of the pilgrims, Dr. Wilson, stepped forward and spoke the following words: "In behalf of the American College of Dentists and a grateful dental profession, I place this wreath upon the tomb of Chapin A. Harris in commemoration of the one hundredth anniversary of his great service and achievement for dentistry and all mankind throughout the world."



EVENING SESSION  
(Ballroom)

Reception and Dinner, 6:30 P. M.

Twentieth Convocation of the American College of Dentists.  
8:00 P. M.

ALVIN W. BRYAN, *President, Presiding*

The Twentieth Convocation of the American College of Dentists was held in this evening session, beginning with dinner at 6:30, following which a processional formed in the lobby, and, made up of Officers, Regents and Guests, moved forward to the platform, Officers and Regents taking their respective places.

The Secretary, Dr. Brandhorst, stepped forward and presented the names of those whom the Regents had elected to receive Honorary Fellowship. President Bryan read the following citations, after each of which he conferred Honorary Fellowship in the American College of Dentists.

*Lyman J. Briggs, Ph.D.*, Washington, D. C.—Born in Assyria, Michigan, 1874. B.S. Michigan State College, 1893. Ph.D. Johns Hopkins University, 1901. Honorary Sc.D. Michigan State College, 1932. L.L.D. University of Michigan, 1936. Sc.D. George Washington University, 1937. Sc.D. Georgetown University, 1939. President, Washington Philosophical Society, 1916; Washington Academy Sciences, 1917; American Physical Society, 1938. Member, Board of Directors, Washington Academy of Medicine, 1937; Board of Trustees, National Geographic Society; Washington Academy of Medicine and many scientific societies. He has cooperated with the dental profession in work at the Bureau of Standards, is a scientist, a lover of research and a friend of dentistry.

*Timothy Oliver Heatwole, D.D.S.*, Baltimore, Md.—Born in Dale Enterprise, Va., 1865. D.D.S. University of Maryland, Magna Cum Laude, 1895. M.D. University of Maryland, 1897. Teacher, University of Maryland Dental School, 1895. Dean, University of Maryland, Dental School, 1911 to 1924. Life member, Maryland State Dental Association. President, Maryland State

Dental Association, 1909-1910. Delegate and Senator, Maryland Legislature. He is a scholar, dentist, educator and statesman.

*Thomas Parran, M.D.*, Washington, D. C.—Born in St. Leonard, Maryland, 1892. A.B., M.A., St. John's College, 1911-1915. M.D. Georgetown University, Medical School, 1915. Fellow, American Medical Association; New York Academy of Medicine, American College of Physicians. Honorary Fellow, Royal Sanitary Institute of Great Britain. President, American Public Health Association, 1936-37. President, American Neisserian Medical Society, 1936-37. Scientific Director, International Health Division, Rockefeller Foundation, 1936-38. Assistant Surgeon, United States Public Health Service, 1917. Surgeon, United States Public Health Service, 1925. Health Commissioner, New York State, 1930-36. Surgeon General, United States Public Health Service, since 1936. Snow Medal of the American Social Hygiene Association for distinguished service to humanity, 1936. Author of many scientific articles and a book, "Shadow on the Land." He is a physician, author, public servant and benefactor of mankind.

IN ABSENTIA—

*Sydney Robotham Miller, M.D.*, Baltimore, Md.—Born in Newark, N. J., 1883. B.S. New York University, 1905. M.D. Johns Hopkins University, 1910. Associate Professor, Johns Hopkins Medical School since 1916. Associate Professor, University of Maryland, Medical School since 1920. President, many medical societies. President, American College of Physicians, 1930-1. Author of medical papers and contributor to programs of the American College of Dentists. Intensely interested in close medico-dental relationship. He is a physician, educator and friend of dentistry.

Next, and with appropriate ceremony, the following names were inscribed upon the Mace of the College:

*Solyman Brown—1790-1876*

Artist, sculptor, poet laureate of the profession, editor and publisher American Journal of Dental Science, secretary in 1834 and

president in 1839 of the first dental society in New York; the American Society of Dental Surgeons was founded in his home in 1840; he was the original secretary and later president; he was a principal promoter of the American Journal of Dental Science; one of the first to receive honorary degree from the Baltimore College of Dental Surgery.

*Eleazar Parmly—1797-1874*

Founder and first president of the first dental society of New York, one of the founders of the American Journal of Dental Science, one of the founders of the American Society of Dental Surgeons (of which he was president, 1844-1853), one of the first to receive honorary degree from the Baltimore College of Dental Surgery, provost of the Baltimore College of Dental Surgery (1847-1852), a principal adversary of unethical practice; he was a good speaker, well educated, a constant seeker after knowledge, and a teacher; he wrote a little, including work in the field of poetry.

PRESIDENT BRYAN: It is my pleasure to extend greetings to all of those societies cooperating in the day's program, and now to call upon the following gentlemen to respond in the name of each:<sup>4</sup>

*On behalf of the American Dental Association, Harry B. Pinney, secretary.*

*On behalf of the Canadian Dental Association, Eudore Dubeau, past president.*

*On behalf of the American Association of Dental Schools, L. M. S. Miner, president-elect.*

*On behalf of the American Association of Dental Examiners, Minor J. Terry, past-president.*

*On behalf of the International Association for Dental Research, E. H. Hatton, secretary.*

*On behalf of the Dental Section, American Association for the Advancement of Science, J. L. T. Appleton, chairman.*

<sup>4</sup>President Bryan's greetings and these responses are published in the Proceedings of the Dental Centenary, with the exception of that of Mr. Rowlett, which also appears in this.



*On behalf of the American Association of Dental Editors*, Grace Rogers Spalding, vice-president.

*On behalf of Omicron Kappa Upsilon*, R. W. Bunting, vice-president.

*On behalf of the American Association for the Advancement of Science*, F. R. Moulton, secretary.

*On behalf of the British Dental Association*, Mr. A. E. Rowlett.<sup>5</sup>

Mr. President, Ladies and Gentlemen: I have the honor to represent the British Dental Association at this Centenary Meeting, but it would be ungenerous were I not to admit that my presence here is largely due to the contacts I have made with American dentists abroad in my capacity as treasurer of the Federation Dentaire Internationale, an organization that includes fifty nations and whose ideals were crystallized by the President, Dr. William H. G. Logan, at Zurich last year into a single phrase—International Scientific Solidarity.

This evening I have been deeply impressed by the dignity of your proceedings and by the pronouncement of your lofty ideals. Such meetings and such proceedings as we have witnessed tonight bring home to us the value and indeed the necessity of ritual. Academic dress and stately ceremony are sometimes held in derision by those who fail to understand their true function. Properly understood and carried out with restraint, as they have been on the present occasion, they serve as symbols of qualitative values which cannot be expressed in mere words or phrases. They are, if I may be allowed the expression, outward manifestations of inward and spiritual ideals.

American dentistry has long been famed as supreme in mechanical skill and operative technique, but it has been said that in your preoccupation with operative procedures the wider functions of dentistry have been to some extent neglected. During my short stay here I have been singularly fortunate in having met leading representatives of the profession. On the evening of my arrival I attended a meeting of the New York Academy of Dentistry. At Philadelphia I was permitted to attend the sessions of the American Association of Dental Schools; and here at Baltimore are gathered together leading men of the profession from every part of America and this evening I have listened to speeches embodying the ideals of a select group of American dentists. On all these occasions it has been a matter of

<sup>5</sup>President Bryan called upon Dr. W. H. G. Logan, President, F. D. I., to introduce Mr. Rowlett, who, in his impromptu remarks, referred to several European associations, some of which had asked him to represent them and all of whom he knew he could represent.—ED.

the deepest satisfaction to observe that American dentistry is being realized and accepted as an integral part of the health service of the community. This close association between dentistry and health was manifested in a striking manner by the bestowal, tonight, of your honorary fellowship upon the Surgeon General of Public Health, a happy augury both for the profession and for the public.

Public dental service is a great and difficult task but I am convinced that you will face it with steadfastness and courage, with a clear-eyed readiness to accept and to consecrate to the service of humanity the truths which you are learning in your research laboratories and universities. This wonderful Baltimore meeting celebrating the history of one hundred years of formal dental education gives me confidence that you will be successful in your task, and we can safely leave the future of the profession in the hands of those to whom her past is so dear.

After these ceremonies President Bryan announced the presentation of the initial William J. Gies Award to Dr. Peter J. Brekhush, introducing the chairman of the Committee on Dental Research, Dr. Albert L. Midgley, who spoke as follows:

PRESENTATION OF THE INITIAL WILLIAM JOHN GIES AWARD TO  
DR. PETER J. BREKHUS

Albert L. Midgley, D.M.D., Sc.D., *Providence, R. I.*

Bestowal of the William John Gies Award of the American College of Dentists is intended to emphasize our conviction that the prosecution of dental research is of threefold importance to all members of our profession, since our present and future usefulness must unquestionably depend upon (1) advancing the frontiers of knowledge, (2) stimulating a professional attitude of wide-awake interest in the solution of health problems, and (3) effecting a new relationship with the medical profession and with an enlightened public.

We intend that the bestowal of the award for distinguished achievement in dentistry shall glorify the recipient in the eyes of his fellow-workers, and add to the prestige of the quiet yet effective labors to which he and they are faithfully devoting themselves.

The Board of Regents voted unanimously that Peter John Brekhush of Minneapolis, Minnesota, should receive the initial award, conferred for distinguished service in the cause of dental education in this country.

Dr. Brekhush has behind him many years of service in the practice of dentistry and in the training of young dentists at the University of Minnesota. He

has done his share in bringing American dentistry to that position of unrivaled technical perfection which it holds today. That in itself is no small thing, and Dr. Brekhus, with his clear sense of reality, would be the last to disparage what has been achieved. It is not for this, however, that we honor him today, but for something that goes deeper and carries a greater significance for the future of our profession. Peter Brekhus has realized more clearly than many men that if dentistry is to render its full contribution to human well-being it cannot stop at craftsmanship, important as that is, but must take its place as one of the branches of scientific medicine and contribute its share to those magnificent advances which distinguish the art of healing in our day. He has insisted for many years on the supreme importance of dental research, has put young men in the way of contributing to it, and has himself, in a long line of investigations contributed to our knowledge of dental problems and the ways and means by which they must be met. In all this he has worked with the disinterested zeal of a man of science, knowing no satisfaction but the pursuit of truth and the acquisition of knowledge.

For these things we honor him today, as one who has blazed the trails and marked the paths of our future progress.

The citation on the scroll reads thus: "The William John Gies Award in recognition of meritorious service in dentistry is hereby bestowed upon Peter John Brekhus, Bachelor of Arts, Doctor of Dental Surgery, Fellow of the American College of Dentists, Professor of Dentistry in the University of Minnesota. Born in Norway, home of dauntless explorers, he was not content with winning for himself an education in America and a distinguished position as a teacher of dental science, but through many years, with quiet persistence and unswerving definiteness of purpose, has devised and carried forward a wisely-planned series of scientific inquiries into the composition of sound teeth and the incidence of dental caries. By the publication of the results of his personal and collaborative research, he has notably stimulated education and graduate study in dentistry, has extended the scope and content of dental science, and has greatly increased public appreciation of the contributions of the dental profession to human welfare."

Dr. Brekhus, by authority of the Board of Regents of the American College of Dentists, it is my happy privilege to bestow upon you the initial William John Gies Award, which is the highest mark of our respect and appreciation.

PRESIDENT BRYAN: How appropriate it is that we should plan this meeting with an address by one who has contributed so generously in every activity of the dental profession—education, literature, and organization! And what a coincidence that in finding that



man, he should now be at the head of the dental profession. I am happy to present one beloved by all—Dr. Arthur H. Merritt, president of the American Dental Association.

OPPORTUNITIES AHEAD IN THE LIGHT OF OUR EXPERIENCES

Arthur H. Merritt, D.D.S., M.S.

The opportunities that lie ahead are largely those involved in the field of research. With the change of practice of dentistry from cure to prevention we will need to look beyond ourselves and the public, whom we serve, into a wider field of social responsibility. Within our own field we need to work for and develop our own journalism. The great problem underlying that is that of finances. Dental education, of course, is the basis of all of our development, and whether in the organization, in literature, in our dental laws, all of our activities point toward a better educated dentist.

This involves detailed consideration of both the undergraduate and graduate fields. The line of demarcation between medicine and dentistry apparently grows fainter and fainter, or should we say, narrower and narrower, though nonetheless, clear cut. We must know more of medicine and medicine must know more of dentistry, in order that we may have a better understanding of the relation of oral conditions to bodily ailments.

All of this has as its purpose the possibility of a better service. We should be able to throw more light on the cause of common ills of mankind through research; we should learn to prevent rather than cure; we must have a part in providing dental care for those in need; we must fight commercialism in dental practice; we must aid in solving the problems of dental education. "The door of opportunity stands wide open, but as always, only those will be permitted to enter who are willing to pay the price of admission in toil, sacrifice and service."

PRESIDENT BRYAN: Two of the organizers of the American College of Dentists are still living. I shall first mention Dr. John V. Konzett, of Dubuque, Iowa. He is ill and unable to attend this meeting. I will entertain a motion that a message of good cheer be sent to him. (Motion was made, seconded, and carried.) The second organizer is with us tonight and I am going to ask Dr. H. Edmund Friesell to stand and make a bow.

The Convocation will now be adjourned.

## THE MARCH OF TIME

*Events that mark stages of progress in the growth  
and development of the dental profession.*

Goden said the founding of a dental journal, the organization of a dental society and the establishment of a dental college stand as the first great landmarks in dental progress. He described it as the tripod upon which a profession must be built if it is to become firmly established.

1839 The first dental periodical was published—"The American Journal of Dental Science."

1840 The first dental school was established—"The Baltimore College of Dental Surgery."

The first national dental society was organized—"The American Society of Dental Surgeons."

(In each of these Horace H. Hayden and Chapin A. Harris were the leading and guiding spirits.)

No academic requirements for admission to dental schools. Length of dental course, two years of three-five months each, but if student had spent five years in dental practice before admission this experience was accepted as equivalent to one year of work in dental school.

1841 Enactment of the first dental law by the State of Alabama.

1844 Horace H. Wells, a dentist, suggested that nitrous oxide might be used for surgical anesthesia.

1846 W. T. G. Morton, a dentist, demonstrated the use of ether as an anesthetic.

1847 Gutta percha came into use as a temporary stopping.

1855 Charles Goodyear patented a process of making dental plates from vulcanite. This patent expired about 1881.

1859 American Dental Association was organized. (See 1867, 1897, 1922.)

1862 The use of rubber dam in dental operations was presented.

1864 James E. Garretson was made Professor of Anatomy and Surgery at Philadelphia Dental School, which was the first recognition of Oral Surgery as a specialty in Dentistry.

1867 First University Dental School established, "Harvard Dental School."  
The Southern Dental Association was organized.

1880 Norman Kingsley published the first scientific treatise on orthodontia.

1882 W. D. Miller announced the chemo-parasitic theory of dental caries.

1883 The National Association of Dental Examiners was organized at Lexington, Kentucky.

- 1884 The National Association of Dental Faculties was organized.
- 1885 Requirements for admission to dental school—rudiments of an English education. Length of dental course, two years of five months each.
- 1893 The American Institute of Dental Teachers was created.
- 1895 C. Edmond Kells demonstrated the use of roentgen rays in dentistry.
- 1896 B. F. Philbrook wrote a paper on "Cast Gold Fillings."
- 1897 The National Dental Association was organized. (Merger of the American Dental Association and the Southern Dental Association.)  
Requirements for admission to dental school—equivalent to admission to a high school. Length of dental course, three years of six months each.
- 1899 Requirements for admission to dental school—completion of one year of high school. Length of dental course, three years of seven months each.
- 1900 The Federation Dentaire Internationale was established.
- 1902 The Canadian Dental Association was organized at Montreal.  
Requirements for admission to dental school—completion of two years of high school study.
- 1906 William H. Taggart demonstrated the cast gold inlay.
- 1907 Requirements for admission to dental school—completion of three years of high school study. Length of dental course, three academic years.
- 1908 G. V. Black published his book on "Operative Dentistry."  
The Dental Faculties Association of American Universities was formed.
- 1909 The Dental Educational Council of America was organized. Requirements for admission to better dental schools—graduation from high school. Length of dental course, three years.
- 1910 Requirements for admission to dental school—graduation from high school. Length of dental course, three academic years.
- 1914 Omicron Kappa Upsilon was organized.
- 1916 The first classification of dental schools occurred. Length of course in better dental schools lengthened to four years.
- 1917 Requirements for admission to dental school—graduation from a four-year high school. Length of dental course, four academic years.
- 1918 The first state dental health service was initiated by North Carolina.
- 1919 William J. Gies founded the Journal of Dental Research.
- 1920 William J. Gies founded the International Association for Dental Research.  
The American College of Dentists was organized.



- 1922 The present American Dental Association was organized with its "Code of Ethics" as a basis for professional practice and public service.

The United States Public Health Service was authorized to extend its services and research activities to include "all diseases of man and conditions influencing the propagation and spread thereof."

- 1923 The American Association of Dental Schools was organized by the amalgamation of the National Association of Dental Faculties, Dental Faculties Association of American Universities, American Institute of Dental Teachers and Canadian Dental Faculties Association.

- 1924 Requirements for admission to dental school—one year of approved work in an accredited academic college. Length of dental course, four years.

- 1926 The Carnegie Report on Dental Education was published, forming the basis for a new alignment of dental schools under the direct supervision of the universities.

- 1930 The Council on Dental Therapeutics was set up by the American Dental Association, forming the basis for the service to the public.

- 1932 The survey of dental literature pointed the way for the control of dental literature by the profession.

The American Association of Dental Editors was organized.

The American Association for the Advancement of Science recognized the dental profession as a scientific body by granting associate membership to American Dental Association, American Association of Dental Schools and the American College of Dentists.

- 1935 The American Association for the Advancement of Science granted *affiliate* membership to the American division of the International Association for Dental Research and created a sub-section on Dentistry of the American Association for the Advancement of Science.

- 1937 The Dental Cosmos was transferred to the American Dental Association.

- 1938 Twenty-three states had dental members on the Board or Advisory Council of Health and thirty-five states had a dental unit in the State Department of Health.

The Council on Dental Education was organized as a successor to the Dental Educational Council of America. Two years' credit toward a Baccalaureate degree as a requirement for entrance to the dental school, together with certain minimum quantitative requirements were established for 1941.

- 1939 Research Commission of the American Dental Association published the summary on "Dental Caries."

- 1940 Finds dental profession vitally interested in Public Health Dentistry.

Left to right:  
 MRS. F. E. RODRIGUEZ  
 DR. C. WILLARD CAMALIER



Left to right:  
 GEN. LEIGH C. FAIRBANK  
 MRS. F. E. RODRIGUEZ  
 DR. ALVIN W. BRYAN



Left to right:  
 HON. OSCAR L. CHAPMAN,  
 Asst. Secty., Dept. of Interior  
 DR. ALVIN W. BRYAN  
 REV. ARTHUR O'LEARY, S. J.  
 President, Georgetown  
 University, Washington, D. C.  
 LIEUT.-COL. TERRY P. BULL



## MAJOR RODRIGUEZ MEMORIAL PLAQUE<sup>1</sup>

C. WILLARD CAMALIER, D.D.S., *Washington, D. C.*

Ceremonies in connection with the dedication and unveiling of a plaque in memory of the late Major Fernando Rodriguez, D. C., U. S. Army, were conducted in Sternberg Auditorium, Army Medical Center, March 16, 1940, at 3:00 p. m.

The plaque was presented in behalf of the American College of Dentists by the president, Dr. A. W. Bryan, in recognition of distinguished service rendered by Major Rodriguez in research in dental diseases. Acceptance in behalf of the War Department was made by Lieut. Colonel Terry P. Bull, D. C., Director of the Army Dental School.

The program was presided over by Dr. C. Willard Camalier, president of the Washington section, American College of Dentists. Following selections by the Army Band and the invocation by Rev. Father Arthur O'Leary, S.J., Major Rodriguez and his accomplishments were eulogized by representatives of various groups and organizations with which he had been associated during his lifetime.

Dr. Marion Falls, president of the District of Columbia Dental Society, reviewed the activities of Major Rodriguez as a member of that society.

Dr. Harry Kaplan, chairman of the local chapter, International Association for Dental Research, spoke of him as a member of that association and related briefly his accomplishments in the field of research. Brig. General Leigh C. Fairbank, Chief of the Dental Division, Surgeon General's Office, outlined Major Rodriguez' career as a member of the Army Dental Corps.

Dr. John R. McIntyre, president of Georgetown Alumni Association, spoke of him as a student and alumnus of Georgetown University Dental School.

<sup>1</sup>Dedicatory ceremonies in connection with the unveiling of a plaque, in memory of Major Fernando E. Rodriguez, under the auspices of the American College of Dentists, Walter Reed Hospital, March 16, 1940.



Following this portion of the program Honorable Oscar L. Chapman, Assistant Secretary of the Interior, and Miss Liberda Iglesias, personal representative of Honorable Bolivar Pagan, resident commissioner of Puerto Rico, made brief remarks appropriate to the occasion.

Formal dedication, presentation, and acceptance of the plaque followed the introduction of distinguished guests, including Mrs. Rodriguez, who had made the trip from Puerto Rico for the express purpose of attending the ceremonies.

The plaque, a bronze tablet of approximately twelve by twenty-four inches, will be placed in the hall of the school building at the Army Medical Center. The inscription reads as follows:

*Fernando E. Rodriguez*  
*B.S., D.D.S., F.A.C.D.*  
*1888-1932*  
*Major, Dental Corps, U. S. Army*  
*His researches*  
*In the Bacteriology of Dental Caries are*  
*a Distinct Contribution to Dental Science*

Major Rodriguez entered the army as a 1st Lieutenant, Dental Reserve Corps, September 14, 1917, at Camp Upton, N. Y. Following a tour of service in Puerto Rico he reported to the Army Medical School, Washington (1921), as a student and investigator of the bacteriological aspects of dental diseases. As early as December, 1922, he published an original and fundamental work on the specific bacteriology of dental caries. Although a similar work with the same results was published in the June, 1922, issue of the *Lancet* (London), by English investigators, Major Rodriguez' work was original with him. Unfortunately, his findings were not published until the December issue of the *Military Dental Journal*.

The findings of his investigations are the basis of studies on the bacteriology of dental caries since carried on by other scientists. He made many other contributions to bacteriology, such as the development of technics, methods of analysis, and others. He gained national prominence as a scientist and his writings are frequently quoted.

Major Rodriguez died October 21, 1932.

FERNANDEZ E. RODRIGUEZ, MAJOR, DENTAL  
CORPS, U. S. ARMY<sup>1</sup>

JAMES B. MANN, D.D.S., M.D., *Washington, D. C.*  
*Lt. Col. D. C., U. S. Army, Army Medical Museum*



FERNANDEZ E. RODRIGUEZ

Fernandez E. Rodriguez was born in Puerto Rico in 1888 and received his early education in the elementary schools of San Juan before entering the University of Puerto Rico. Upon graduation he entered the Internal Revenue Service as Inspector of Customs and Examiner of Merchandise at San Juan, P. R. Later he was employed in the War Department as a Spanish translator. He entered Georgetown University Dental School, Washington, D. C., in 1910 and received his degree in dentistry from that school in 1913. After a

short period of private practice he entered the United States Indian Medical Service and was assigned to duty as consulting dentist, Southwest District, from 1915-1917.

On September 14, 1917, he was commissioned First Lieutenant in the Dental Reserve Corps of the United States Army at Camp Upton, N. Y., thereafter attending a course of instruction at the

<sup>1</sup>Published with the consent of the Surgeon General, U. S. Army, as part of the program, March 16, 1940. See page 41, this issue of the *Journal*.

Medical Officers' Training Camp, Camp Greenleaf, Georgia.

He had various assignments during the last war and afterward served in San Juan, Puerto Rico, from August, 1919, to February, 1921, when he was transferred to the Army Medical School, Washington, D. C., for duty as student and investigator of the bacteriological aspect of dental diseases. It was there that his most important research work was carried on. In 1924 he received a degree of Bachelor of Science from Georgetown University where he was Associate Professor of Bacteriology in the Dental School. Upon expiration of his tour of duty at the Army Medical School in 1925 he was assigned to the General Dispensary, U. S. Army, Boston, Massachusetts, until August, 1926, when he was again assigned to the Army Medical School. He was stationed at Baltimore, Maryland, at the time his illness necessitated his being ordered to Walter Reed Hospital, Washington, D. C., for treatment, at which place he died October 21, 1932.

Dr. Rodriguez began his investigations in dental disease while on duty with the Indian Medical Service. After extensive surveys he brought to the attention of the Commissioner of Indian Affairs that 80 per cent of the Indians of the Southwest portion of the country were suffering from pyorrhea and made recommendations as to its prevention and treatment. In a paper presented before the Panama Pacific Dental Congress,<sup>2</sup> September, 1915, he states: "In my judgment, and after tabulated facts in cooperation with government physicians in regard to systemic lesions having a probable origin from these extremely septic mouth conditions, pyorrhea occupies today, along with tuberculosis, the place of honor in being one of the greatest scourges affecting the vitality of the American Indian."

From data compiled from these surveys he also demonstrated that dental decay and premature loss of teeth was as prevalent among the Indian school children as among those in the schools for white children. He attributed this to the fact that the American Indian had emerged into a quasi-civilized stage as a result of governmental

<sup>2</sup>Rodriguez, F. E. The United States Indian Service Field Dental Corps. Transactions of the Panama Pacific Dental Congress, 1, 291; 1915.

and white influence. He found that the older generation, and those living in remote parts of the reservation, had relatively sound teeth which he believed to be due to lessened carbohydrate material in the food, and to the use of foods requiring thorough mastication.

His observations as to the prevalence of "mottled enamel" and his description of the condition found in the teeth of the Indians was a very important contribution to the limited knowledge on the subject at that time. While he expressed no definite opinion as to cause he did refer to the possibility of a contaminated water supply, high alkalinity of the soil or the use of certain wild vegetation for food as possible causes. His observations and descriptions of the lesions were in accord with others who were making thorough investigations of the problem at the time.

While on tropical duty in Puerto Rico he made extensive studies of oral lesions in certain tropical diseases, particularly sprue, the results of which were published in the *Military Dental Journal*<sup>3</sup>.

Having the opportunity to study the oral lesions in all stages of the disease his excellent description of the gradual development of the oral manifestations of sprue is as follows:

- (a) Simple hyperemia of the oral mucosa and tongue.
- (b) Denudation of the epithelium.
- (c) Formation of minute herpetic vesicles, single or in groups, at times coalescing and surrounded by an inflammatory areola. Gingivitis may or may not be present.
- (d) Rupture of the vesicles, leaving small, superficial erosions, somewhat painful.
- (e) Congestion and swelling of the fungiform papillae of the tongue, particularly about its tip and edges; later, superficial cracks on the dorsum. This completes the picture before passing into the chronic stage. The chronic stage as well as the acute stage may be accompanied by a sub-acute gingivitis, or a well-pronounced pyorrheal condition.
- (f) The chronic stage is characterized by an almost destroyed mucosa and its replacement by a structureless fibrous substance. The sub-mucosa appears much thickened and fibrous tissue is abundant. The muscular coat is thinned.

<sup>3</sup>Rodriguez, F. E. Oral Lesions in Tropical Diseases. *Military Dental Journal*, 4, 8-12; 1921, Mar.



The so-called "cracks" to which much prominence is given, now run in all directions, crossing each other at approximately right angles, the whole presenting an appearance of a mosaic with convex surfaces.

Stress was placed upon the variable clinical aspects of sprue and the importance of recognition of the early signs since in some cases the herpetic stage may be reached and then either with or without apparent cause the lesions may disappear only to return sometime later in a much more aggravated form more resistant to treatment. He also called attention to the fact that too much emphasis should not be placed on tongue lesions as a pathognomonic sign of the disease in the oral cavity since in some cases this organ might escape involvement and the oral mucosa, especially the inside of the lower lip, show evidence of the disease.

Several points of aid in differential diagnosis were given: "The lack of definite ulceration in pellagra—although Crombie's molar ulcer may be present. In pellagra there is salivation; in sprue this is not noticeable. In amebic dysentery, the stomatitis resembles quite closely sprue stomatitis, but the disease runs an entirely different course; the histopathologic changes in the mouth tissues do not occur as markedly as in sprue."

His work on the specific bacteriology of dental caries has been the foundation for much of the research in this field for the last seventeen years. By the development of an especially devised technique he was enabled to isolate and classify a high-acid-producing group of bacteria, *Lactobacillus odontolyticus*, which he subdivided, morphologically into Types 1, 2 and 3, which were described as follows:

*Type 1.* Straight rod, varying in size from 2.2 to 3.2 micra by 0.8 micra (average length 2.5 micra), non-motile and gram positive. Cultures over 24 hours old may stain irregularly and show pleomorphism, occurs singly, in pairs, in chains or in clumps in which the units may be arranged in parallel order. When arranged end to end it seems to assume a slight coccal form. At times the short chains may appear to be pleomorphic elongations of cell units. It has a granular internal structure, both metachromatic granules and polar bodies being very beautifully brought out by staining with Gram's

stain decolorizing, however, with alcohol to which has been added 33 per cent acetone. When so stained, it resembles the *B. diphtheriae* markedly. With the usual Gram's procedure it stains uniformly. It is a non-spore former.

*Type 2.* Curved bacillus, measuring 1.2 x 0.4 micra. The arrangement of the organism is peculiar in that it is frequently seen in pairs with the concavities of the bacilli facing each other. It is non-motile, non-sporogenic and Gram-positive. In old cultures it stains irregularly. It usually occurs singly, in pairs or in clumps when concave sides approximate. Chain formation is not seen. Slightly curved or straight forms occur. It stains uniformly with Gram's. It has a similar internal structure as the previous type.

*Type 3.* Straight, delicate rod, measuring 1.01 to 1.5 micra by 0.4 micra. It is non-motile, non-sporogenic and Gram-positive. Old cultures stain irregularly. Pleomorphic in old cultures. It is very slender, about half the size of No. 1 type. It always occurs in clumps with almost constant parallelism of units. Palisade formation is more manifested in this type than in the other straight form. It is very characteristic. It has an internal granular structure as mentioned for the preceding types.

This group, illustrated in Fig. 1, he demonstrated to be the pri-

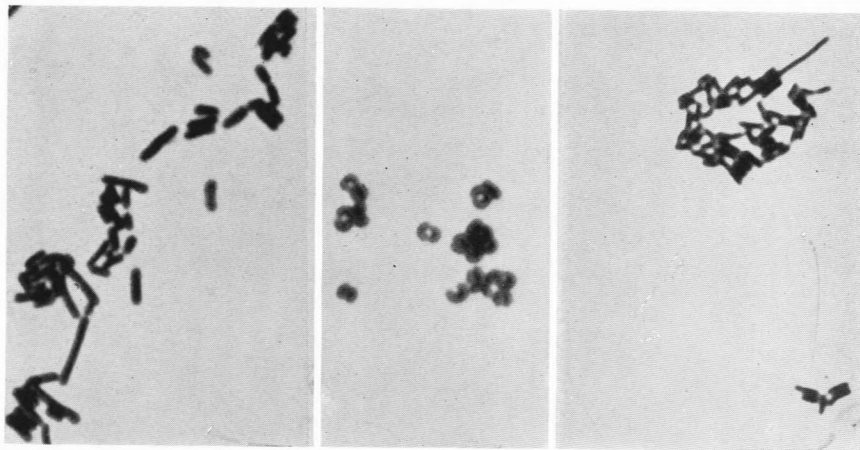


FIG. 1. *LACTOBACILLUS ODONTOLYTICUS*, TYPES 1, 2 AND 3 (RODRIGUEZ) A.M.M.  
NEG. 36706-36702-36703.

mary etiologic agent in enamel decay, identifiable with organisms consistently found along the dentinal tubules in caries. In 1922 he

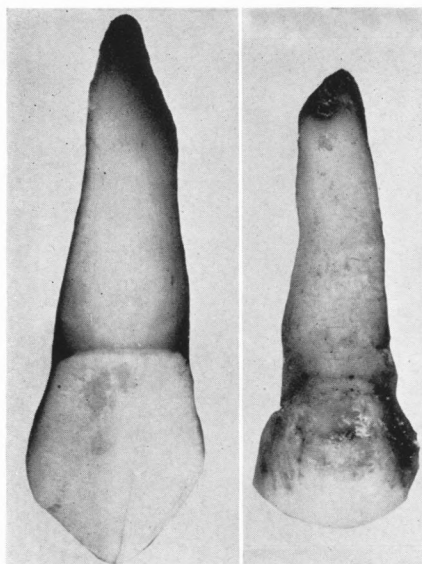


FIG. 2. TYPICAL SURFACE DECAY PRODUCED IN THE INTACT ENAMEL OF NORMAL TEETH, IN VITRO, AFTER IMMERSION IN CULTURES OF TYPES 1, 2 AND 3 *LACTOBACILLUS ODONTOLYTICUS* (RODRIGUEZ). A.M.M. NEG. 36481-36483.

writes for the *Military Dental Journal*:<sup>4</sup> "We bring forward the view that there exists a definite species of bacterium where metabolic processes are in such harmony with certain favorable conditions which it may find upon the teeth that its growth and activity there amounts practically to a selective localization." This view, concurrently arrived at by English investigators<sup>5</sup> whose work was unknown to Rodriguez at the time, is almost universally accepted. These organisms produced pathological changes in previously sterilized normal teeth, suspended in the cultures, similar to the lesions found in the mouth. This result he attributed, not entirely to an acid environment, but to the biological activ-

ity of the bacteria themselves which confine their secretion to unprotected tooth areas. The photographs, Fig. 2, show the teeth in which he was one of the first researchers to produce carious lesions, in vitro, by specific organisms.

Histological sections, Fig. 3, of the teeth shown in Fig. 2 show large numbers of organisms in the main lesion and also their presence in the tubules far in advance of the gross lesion.

<sup>4</sup>..... Studies in the Specific Bacteriology of Dental Caries. *Military Dental Journal*, 5, 199-214; 1922, Dec.

<sup>5</sup>McIntosh, J., James, W. W., and Lazarus-Barlow, P.: An Investigation Into the Etiology of Dental Caries. 1. The Nature of the Destructive Agent and the Production of Artificial Caries; *British Dental Journal*, 43, 728; 1922. Idem, *British Journal Exp. Path.*, 5, 175; 1924.

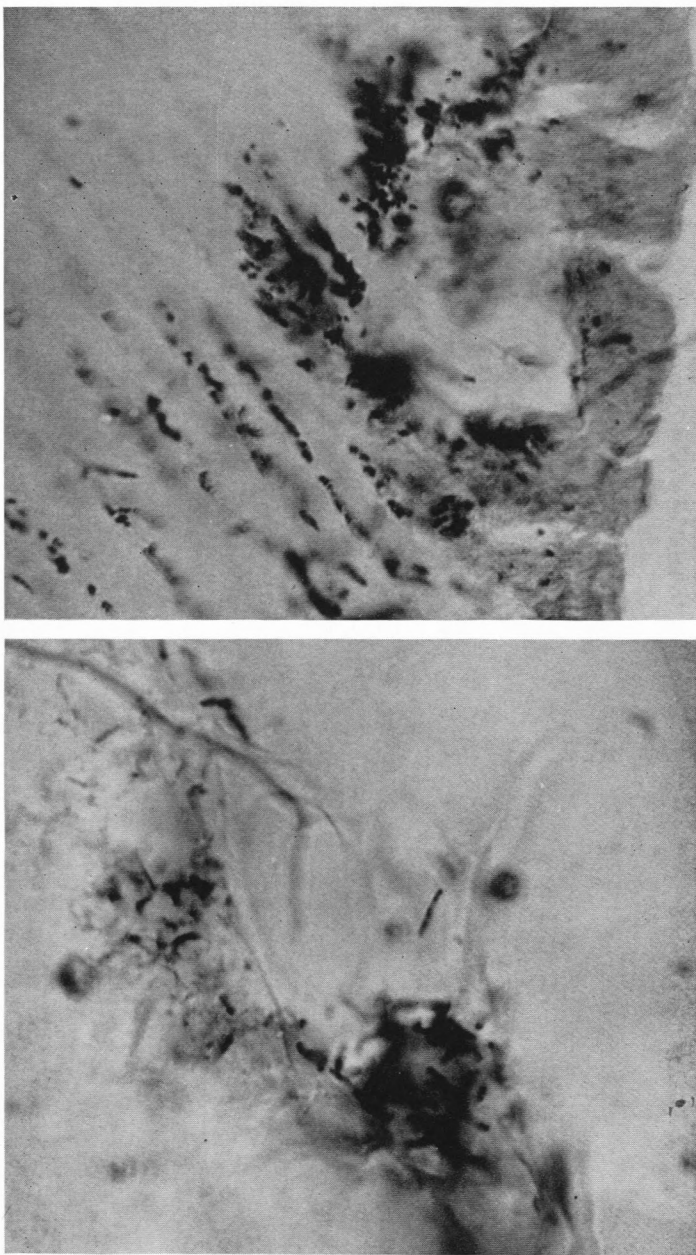


FIG. 3. PHOTOMICROGRAPHS OF HISTOLOGIC SECTIONS MADE FROM TEETH SHOWN IN FIG. 2. IN THE LOW POWER COLONIES MAY BE SEEN EXTENDING ALONG THE TUBULES OF THE DENTINE AND "LIQUEFACTION FOCI" HAVE BEEN FORMED BY COALESCENCE OF COLONIES. IN THE HIGHER POWER THE INDIVIDUAL ORGANISMS MAY BE SEEN. (RODRIGUEZ) A.M.M. NEG. 36728-36732.



To quote from Major Rodriguez's description of his microscopic examinations (after staining in situ by Gram's method) he states "when examined microscopically with the varying focal planes in direct control, the morphological characteristics of the invading micro-organisms are brought into full view. The reproduction allows only one plane of photography, but the rod-like appearance of the bacterium is fully visible especially when seen in a favorable position parallel with the optical plane. Great importance is attached to this aspect of our investigation, for in the past doubt has been expressed as to the nature of the bodies claimed to be bacteria."

Other workers investigating the field of the Bacteriology of Dental Caries had reported that they were able to produce lesions of dental caries similar to those in the mouth by suspending teeth in carbohydrate fermenting mixtures inoculated with saliva from individuals with carious teeth but they had not determined what specific organism was the cause; what inhibitions or preponderances which may have occurred in the cultures. In fact, the only conclusions which had apparently been reached were that caries was caused by various organisms capable of forming acid by carbohydrate fermentation.

His conclusions in regard to this particular investigation are:

1. A distinctly high-acid-producing group of bacteria, morphologically distinguishable into three types, is constantly found in the deep layers of dental decay.
2. This group may be differentiated, bio-chemically, from the other acid producers of the mouth by a constant optimum H-ion Concentration varying from pH 3.9 to pH 2.9.
3. These organisms, in pure culture, survive and are active in degrees of alkalinity equivalent to normal reactions of the saliva.
4. When normal, previously sterilized teeth are subjected to the direct action of these bacteria, caries-like lesions are produced.
5. Histological sections of the artificial lesion present the gross clinical characteristics of the natural process and the localization of the experimental organism in the deep tooth areas.
6. The group has been tentatively placed under Tribe V, Lacto-

bacillae, official Classification S.A.B., and will accordingly be designated with the group name *Lactobacillus odontolyticus*, Types 1, 2 and 3, respectively.

Characteristic of his extreme caution and modesty as to claims he writes in the same article referred to above, "all that can be said with any certainty, pending extended studies of the question, is that we seem to be reaching a turning point in our knowledge of the bacteriology of dental caries that is pregnant with future possibilities."

Results of further studies, published in the *Journal of the American Dental Association*<sup>6</sup> in 1930, present a method for determining quantitatively the incidence of *Lactobacillus acidophilus odontolyticus* in the oral cavity.

In this work he used a special agar-serum media which was inoculated with definitely measured amounts of contaminated saliva and then incubated immediately in an anaerobic jar containing 10 per cent carbon dioxide as the only gaseous environmental element during the whole period of growth. By this technique he was able to produce luxuriant colonies of *acidophilus odontolyticus* which were different from other mouth bacteria. The chief gross characteristic of these colonies was the formation of an area of opacity in the media surrounding them. This opacity was due to the acid precipitation of the serum in the special media. From the number of these colonies the quantity of organisms could be estimated. In Fig. 4 a typical colony of the *lactobacillus acidophilus-odontolyticus* is shown.

By further experimentation he demonstrated that this opacity was only present where the hydrogen-ion concentration ranged from pH 3.8 to pH 4.2 which emphasized his previous claims, as well as those of other workers, that a localized acidity of pH 4 was essential for the inauguration of the carious process.

Evidence that he never lost sight of practical application as the object of his investigations is shown in the following conclusions arrived at on this problem;

<sup>6</sup> . . . . . Method of Determining Quantitatively, Incidence of *Lactobacillus acidophilus-odontolyticus* in the Oral Cavity. *Journal of the American Dental Association*, 17, 1711-1719; 1930, Sept.

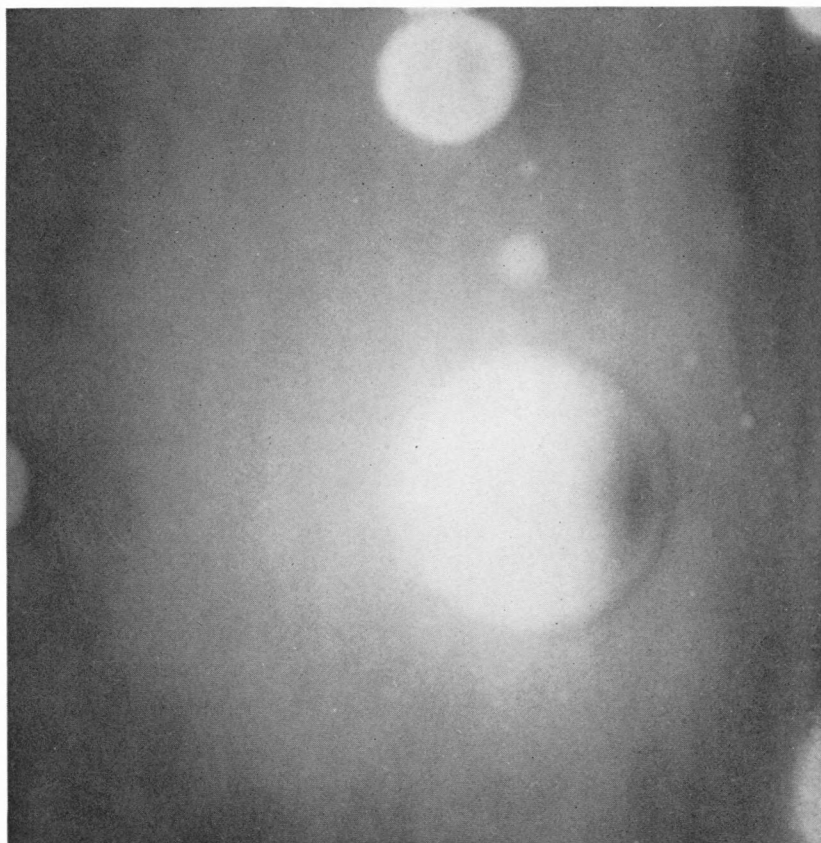


FIG. 4. COLONY OF *L. ACIDOPHILUS-ODONTOLYTICUS* GROWN ANAEROBICALLY AND UNDER THE INFLUENCE OF CARBON DIOXIDE. THE DIFFERENCE IN DEVELOPMENT OF THE SURROUNDING COLONIES CAN BE NOTED. (RODRIGUEZ) A.M.M. NEG. 47791.

1. This report represents a new technic of determining, quantitatively, the incidence of *L. acidophilus-odontolyticus* in the oral cavity by the employment of a plate colony count method.
2. The serum-agar medium here reported, under the influence of anaerobiosis and a carbon dioxide environment, stimulates the growth and development of this organism and differentiates its colonies from those of the other mouth bacteria by a specific reaction on the serum content of the agar.
3. The employment of this technique of cultivation makes pos-

sible the determination of the effects of dental caries control methods by providing the means of checking the actual reduction or disappearance of the bacterial factor involved as a part of the process.

In the *Journal of the American Dental Association*,<sup>7</sup> November, 1931, he reported the results of extensive work which demonstrated that there were periodic fluctuations of *L. acidophilus* in the mouths of individuals within the age groups of high susceptibility to dental caries, also that the incidence of these micro-organisms varied under various influences of mouth hygiene, operative and dietary procedures.

He stated in this article that "Irrespective of whether *L. acidophilus* is the specific bacterial factor of tooth decay, a proposition which I willingly admit remains within the confines of debatable grounds, there are certain unassailable facts relating to its presence in or absence from the mouth, its bio-chemistry and its consistent demonstration in the carious tissues, both bacteriologically and histologically examined, that warrant the most serious consideration in any well-correlated preventive dentistry investigation."

In the carious mouth he demonstrated that the *Lactobacillus* was present in large numbers both in the salivary fluid and deep in the active lesions. At the same time it was shown that in mouths which were clinically non-carious there was a marked decrease in the incidence of the organisms and that there were fluctuations in count, within narrow limits from zero, in this latter type case.

The mutation of *L. acidophilus* (oral type) from the normal with loss of acidogenic power probably from a change of environment had been observed by Rodriguez throughout his work and his views were in accordance with other investigators in this field. He regarded this phenomenon as a further argument for the need of newer concepts of interpretation in dental bacteriology.

In Fig. 5 photographs of the variation in colony structure and in Fig. 6 photomicrographs of some of the variations from type form noted by him are shown.

<sup>7</sup>..... Quantitative Incidence of *Lactobacillus-odontolyticus* in the Oral Cavity as a Presumptive Index of Susceptibility to Dental Caries. *Journal of the American Dental Association*, 18, 2118-2135, 1931, Nov.



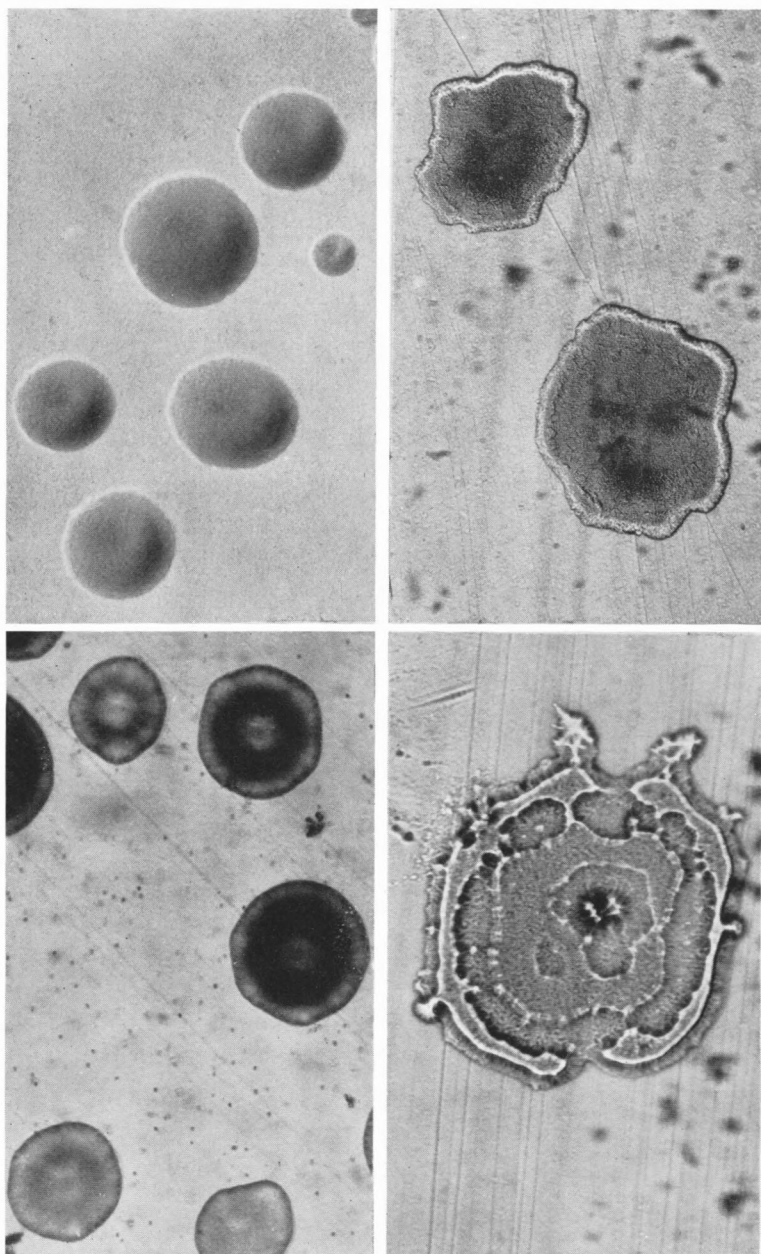


FIG. 5. VARIATIONS IN COLONY STRUCTURE OF *L. ACIDOPHILUS* FROM ORAL SOURCES. THE TYPE COLONY AT ABOVE LEFT IS HIGHLY ACIDOGENIC AND REPRESENTS THE ORGANISM IN ITS MOST AGGRESSIVE FORM. (RODRIGUEZ) A.M.M. NEG. 47797-47808-47799-47811.

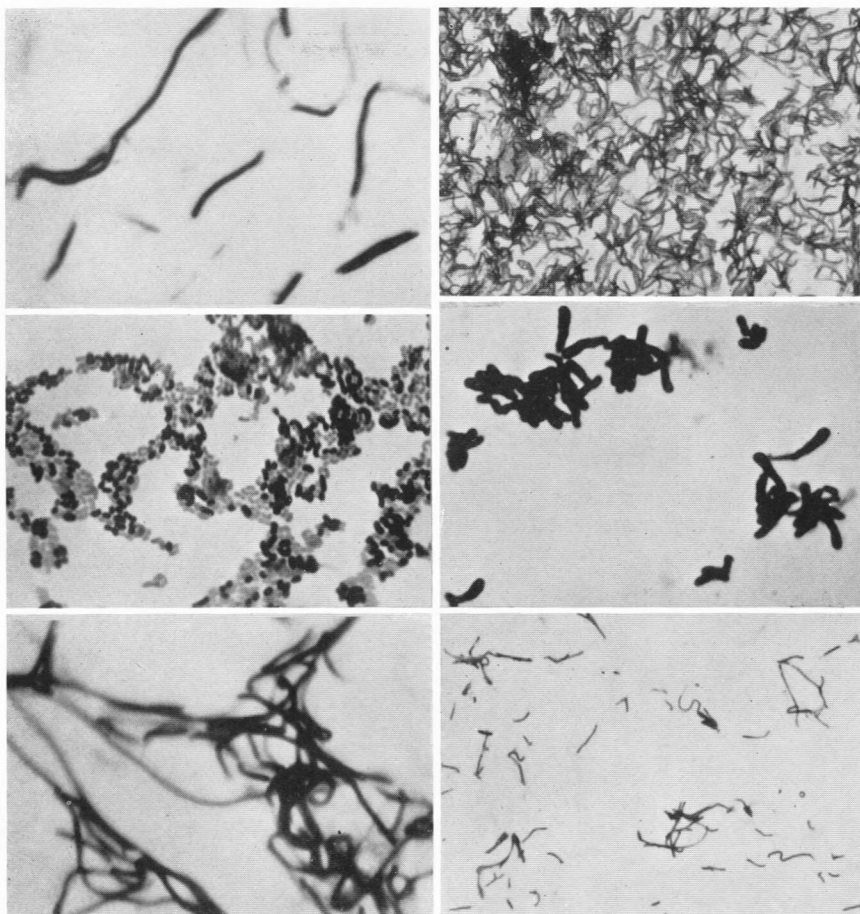


FIG. 6. VARIATIONS IN CELL STRUCTURE OF *L. ACIDOPHILUS* FROM ORAL SOURCES WHICH PRODUCE ATYPICAL COLONIES. LOSS OF TYPE FORM IS ACCOMPANIED BY LOSS OF ACID-PRODUCING POWER. (RODRIGUEZ) A.M.M. NEG. 47810-47806, 47800-47804-47809-47807.

His conclusions arrived at from this work are:

1. The incidence of *L. acidophilus* in the salivary fluid of persons susceptible to dental caries can be influenced by various hygienic measures.

2. By a combination of various simple clinical, hygienic and dietary measures, it has been found possible to reduce counts of over 80,000,000 colonies per cubic centimeter of saliva to figures fluctuat-

ing between zero and only a few thousand colonies of this micro-organism.

3. The bacterial incidence has been determined by a quantitative colony count method.

4. The results obtained suggest the possibility that, by the employment of this or a similar procedure, the effectiveness or non-effectiveness of dental caries control methods may be determined.

He also performed exhaustive and informative tests on the relative merits of mercurochrome and iodine in various media and concentrations, as oral disinfectants. The results were published in the *Journal of the American Medical Association*,<sup>8</sup> 1928, and reprinted in *The International Journal of Orthodontia and Oral Surgery*,<sup>9</sup> March, 1929, his conclusions being:

1. Mercurochrome 220 soluble (2 per cent aqueous solution) is too feeble an antiseptic to be used safely as a surface disinfectant of the oral mucous membranes.

2. The 5 per cent mercurochrome solution in alcohol and the mercurochrome-alcohol acetone preparations possess decided advantages over the aqueous solution, but fail in too large a proportion of cases to be considered effective in surface disinfection of the oral mucous membrane.

3. Iodine in dilutions of 3.5 per cent, and even in 1.75 per cent strength, preferably in glycerin, is an effective germicide from the standpoint of surface disinfection of the oral mucous membranes.

While no reference can be found to any published report, the writer had the privilege of observing some of Major Rodriguez's findings in the teeth of white rats raised under rachitic conditions. This work was done in connection with investigations by Lt. Col. Wm. D. Fleming,<sup>10</sup> Medical Corps, U. S. Army.

<sup>8</sup> . . . . . Mercurochrome and Iodine as disinfectants of the Mucous Membrane of the Mouth. *Journal of the American Medical Association*, 91, 708-712, 1928, Sept.

<sup>9</sup> . . . . . Mercurochrome and Iodine as disinfectants of the Mucous Membrane of the Mouth. *International Journal, Orthodontia and Oral Surgery*, 15, 267-276, 1929, Mar.

<sup>10</sup> Fleming, Wm. D., Anti-rachitic Efficiency of Winter Sunlight of Washington, D. C. *Military Surgeon*, 62, 592-609; 1928, May.

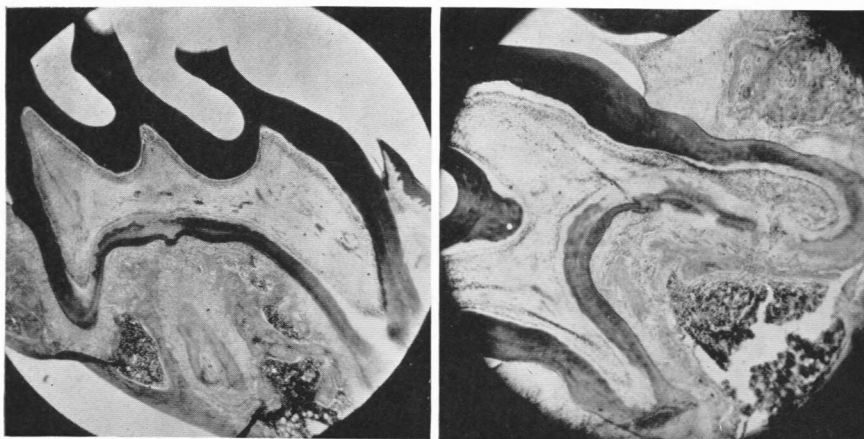


FIG. 7. PHOTOMICROGRAPHS OF DECALCIFIED SECTIONS OF MOLARS OF WHITE RATS IN WHICH RICKETS HAD BEEN PRODUCED EXPERIMENTALLY. NOTE DEFECTIVE DENTINE FORMATION. (RODRIGUEZ) A.M.M. NEG. 47787-47788.

Two photomicrographs showing defects of dentine formation in these animals are shown in Fig. 7. This illustration and all others in this article have been made from films on file in the Army Medical Museum where they were made by this scientific investigator in the course of his work.

In recognition of his splendid work in the investigation of the specific bacteriology of dental caries the Executive Board of the National Research Council<sup>11</sup> on May 10, 1923, voted Major Rodriguez a member of its Dental Investigation Committee. He was also a member of the International Society for Dental Research and a Fellow of the American College of Dentists. His death has been a severe loss, both to the Army Dental Corps and to the dental profession.

He is survived by his widow, Marianita P. Rodriguez, and one son, Robert.

<sup>11</sup>Editorial Section. Capt. F. E. Rodriguez Honored. *Military Dental Journal*, 6, 96; 1923, June.



AMERICAN COLLEGE OF DENTISTS  
PROCEEDINGS OF THE MILWAUKEE CONVOCATION, July 16, 1939<sup>1</sup>

REPORTS OF COMMITTEES TO THE BOARD OF REGENTS

(Continued from the December Issue, pp. 350-66)

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VII. ENDOWMENTS

Emory W. Morris, D.D.S., *Chairman*<sup>2</sup>  
*Battle Creek, Mich.*

The work of the Committee on Endowments this year has consisted primarily of an effort on the part of the Chairman to familiarize himself with the activities of the College, its aims and interests in the field of dental research, and consideration as to the various methods that might be used in submitting requests to the various organizations that might be interested in making grants in the dental field.

During the past few years dentistry has rightfully gained a more important position in the field of health service, as evidenced by the expansion of dental public health activities by both the federal and state governments. It would be my suggestion that at as early a date as possible the various committees of the College having projects requiring endowments hold a joint meeting so this committee may have specific projects to present to the various sources of funds for their consideration.

The Committee on Dental Research has suggested in one of its reports that an effort be made to develop a committee to correlate the activities of the various research projects in the field of dentistry. One of the private foundations of this country recently

<sup>1</sup>For reports of other Committees, see *J. Am. Col. Den.*, 6, 350, 1939 (Dec.). See, also, Footnotes, *Ibid.*, 1 and 2.

<sup>2</sup>The other members of this Committee (1938-9): Dan U. Cameron, Oscar J. Chase, Abram Hoffman and Arthur H. Merritt.

made a grant of a similar nature to correlate the various research projects in communicable disease throughout the country, and it is not beyond the realm of reality to believe that such a project might receive favorable consideration by one of the private organizations in this country. At least an effort should be made if this is considered to be of first importance in the field of dental research.

#### VIII. HOSPITAL DENTAL SERVICE

Howard C. Miller, D.D.S., *Chairman*<sup>3</sup>  
*Chicago, Ill.*

This report constitutes a progress report of the Committee, and is made for the purpose of informing the College of the present activity in the development and standardizing of Hospital Dental Service.

Your Committee desires to call attention to the change made in the rules governing the medical staff, in the report of the Council on Medical Education and Hospitals of the American Medical Association.<sup>4</sup>

"III. *Medical Staff*—Since the medical staff is the most important factor in the delivery of medical service to the patients, too great care cannot be exercised in the selection of staff members. The staff should be limited to physicians holding the degree of doctor of medicine from medical colleges acceptable to the Council on Medical Education and Hospitals, having satisfactory qualifications as to training, licensure and ethical standing, and to dentists who are graduates of recognized dental colleges and whose professional ability and standing are known to the medical staff."

A recommendation contained in the 1938 report of this Committee was to the effect that effort should be made to amend the rules governing qualifications for staff memberships in Class A hospitals, to include members of the dental profession. To what extent the work of this Committee affected the new regulation is not known, but at least the change has been made, and a dentist who is a graduate of an accredited dental college may now be recognized as a member of the medical staff of a registered hospital.

<sup>3</sup>The other members of this Committee (1938-9): R. W. Bunting, E. A. Charbonnel, Leo Stern and C. W. Stuart.

<sup>4</sup>*J. A. M. A.*, May 15, 1939, page 2167.

Another important recommendation of the Committee in 1938 was that the Committee prepare a plan for minimum standards of hospital dental service, during 1939. The Committee on Community Dental Service of the New York Tuberculosis and Health Association, under the chairmanship of Dr. John Oppie McCall, through a subcommittee on Dental Standards and Services in Hospitals and Institutions, with Dr. Malcolm W. Carr as chairman, completed such a report, which was published in the *Journal of the American Dental Association*.<sup>5</sup> Their recommendations have been brought to the attention of the American Hospital Association, who will consider the matter at their annual meeting in September. Effort is also being made to present the plan to the American Medical Association through the proper committee.

The Chairman of your Committee on Hospital Dental Service has had considerable correspondence with the New York Committee, and has attempted to co-operate to the fullest extent. Copies of the report of the New York Committee, entitled "Basic Standards of Hospital Dental Service as a Fundamental Requirement of Approved Class A Hospitals" have been submitted to all members of the Committee, who will study the plan and present a report thereon after their opinions have been recorded and tabulated.

In addition to this activity, the American Hospital Association, through the Committee on Dental Care and Internships in Hospitals, recently made the following announcement:

"Recognizing the need for a greater extension and uniformity in the dental services in hospitals in America, and of the desirability of better facilities for dental internships, the Council on Professional Practice of the American Hospital Association has appointed a committee for the purpose of studying this relationship and of compiling a manual on Dental Services in Hospitals. As the President of the American Hospital Association is resident in Toronto, Canada, and is deeply interested in clinical services and internships in general, the Council on Professional Practice agreed that the nucleus of the committee might readily be zoned in the Toronto, Canada, area with corresponding members located elsewhere on the con-

<sup>5</sup>*J. A. D. A.*, 26, 1016; 1939, June.

tinent and that the American and Canadian Dental Associations be asked to participate in this study. It is then proposed to submit the draft to leading dental educators and directors of hospital dental services for their criticisms and suggestions.

"This is an excellent opportunity for the dental profession to outline the ideal hospital dental service, to suggest the relationship of the dental to other clinical services and to set forth the educational possibilities of the hospital in the training of the dental surgeon. When accepted for publication this will become one of the official bulletins of the American Hospital Association.

"The Committee on Dental Services in Hospitals is an organizing, coordinating and editing body, formed at the request of the Council on Professional Practice, acting under the authority of the American Hospital Association and entrusted with the task of directing the preparation of a manual on 'Dental Care and Internships in Hospitals.'

"The manual after approval by the Council on Professional Practice will be adopted by the American Hospital Association as the official standard for the formation, equipping, administration and direction of Dental Services in the member hospitals of the Association in the United States and Canada. The Committee is composed of a general chairman, appointed by the Council on Professional Practice of the American Hospital Association, a general secretary and two assisting local members, one of whom is an oral surgeon with hospital training and one general practitioner with wide experience in Public Dental Health. The above, together with a local medical representative of the Council on Professional Practice (the present President of the American Hospital Association) constitute the nucleus committee.

"In addition there are two representatives of the American Dental Association, appointed by the American Dental Association, and similarly appointed two representatives of the Canadian Dental Association.

"At the discretion of the nucleus committee and with the approval of the Council on Professional Practice, additional representatives of the interested bodies may be appointed to the committee if such appointments appear advisable to facilitate the completion of the study.

"The American Hospital Association desires to afford every opportunity to the dental profession to participate and co-operate in the formulating of standards which will determine the future status of the dental service and its personnel in the member hospitals in Canada and the United States. The Committee will be very appreciative of any suggestions or assistance which can be obtained from other organizations or committees, and will be happy to give due credit to work already done by other bodies.



"The members of the committee will be considered to be acting in a consulting, co-operating and advisory capacity to the nucleus committee, who in conjunction with the representative of the Council on Professional Practice of the A. H. A. for their decisions and actions."

The appointment of this committee by the American Hospital Association indicates that this organization recognizes the importance of adequate dental care for the hospitalized patient, and gives promise of a uniform plan for dental service in hospitals being adopted by hospital and medical authorities. You may be sure that your Committee will co-operate and assist all organizations conducting similar studies, and will continue its own efforts in forwarding the elevation and standardization of Hospital Dental Service, and will also continue to carry out the recommendations contained in previous reports.

A copy of the report compiled by the Committee on Community Dental Service of the New York Tuberculosis and Health Association is herewith submitted.

## APPENDIX

### PROPOSED BASIC STANDARDS OF HOSPITAL DENTAL SERVICE AS A FUNDAMENTAL REQUIREMENT OF APPROVED CLASS "A" HOSPITALS

*Submitted by*

*The Committee on Community Dental Service of the New York  
Tuberculosis and Health Association*

*The Sub-Committee on Dental Standards and Services in Hospitals  
and Institutions*

Malcolm W. Carr, D.D.S., *Chairman*<sup>o</sup>  
New York

#### I. GENERAL CONSIDERATIONS

Dentistry is recognized as an important division of health service and consequently adequate dental care of the hospitalized patient becomes a necessary factor in the treatment of many medical and surgical conditions. This interdependence between medicine and dentistry is accepted in hospital

<sup>o</sup>The other members of this Committee are: Waldo H. Mork, Henry C. Slatoff, C. Raymond Wells.

organization and thus the dental service has become a recognized unit of the modern hospital. Since this development is comparatively recent it is natural that there has been experimentation with several plans of procedure with varying success and satisfaction. Thus, standardization is much needed.

Consideration should be given first to the minimum standard for the hospital dental service and secondly to acceptance and maintenance of a systematic plan of management of the dental service as an integral part of hospital standardization. Two decades of progress toward hospital standardization have been completed and remarkable improvement is recorded through a succession of surveys but there has been no official recognition given to the minimum standards for the dental service. Therefore, in addition to the need for standardization there exists also the desideratum of including minimum standards and an accepted plan of management of the dental service in the requirements of approved Class "A" Hospitals.

## II. MINIMUM STANDARDS FOR THE HOSPITAL DENTAL SERVICE<sup>7</sup>

In order to receive a Class "A" rating it should be required:

1. That approved hospitals have a Department of Dentistry and that the inclusion of a Department of Dentistry should be recognized as an official requirement in accordance with the generally accepted plan of hospital standardization.

2. That the Department of Dentistry should be separately organized and should function in an autonomous manner as the service equivalent of any specialty of medicine, and that the By-laws of the Hospital should be amended where appropriate to include the words "Dentists (licensed to practice in the state)" and any other revisions necessary to provide for department status of the dental service. Corresponding revisions in the Rules of the Medical Board should also be made to clarify interdepartmental procedure.

3. That dentists privileged to practice in the hospital should be organized as a definite group or staff.

4. That membership upon the staff be restricted to dentists who are (a) full graduates in dentistry of acceptable dental schools, in good standing, and legally licensed to practice in their respective states; (b) if special work in oral surgery is undertaken the dentist should be competent in this field and qualified in accordance with minimum standards; (c) that the dentist be worthy in character and in matters of professional ethics and that the practice of division of fees, under any guise whatsoever, be prohibited.

<sup>7</sup>Based upon "Minimum Standards for Hospitals," Report of the American College of Surgeons, 1938, page 57.

5. That the Director of the Department of Dentistry be a member of the Medical Board of the Hospital.

6. That the Department of Dentistry function in accordance with a systematic plan of management based upon standards of organization and services. (See Section III of this report.)

7. That the equipment and instrumentarium of the Department of Dentistry be adequate for the practice of Dentistry or such branches of Dentistry as may be included in the dental service, in accordance with generally accepted standards of practice and with the systematic plan of management set up hereinafter. Dental X-ray apparatus and pulp testing apparatus is considered a basic requirement of equipment for the study, diagnosis and treatment of dental disease.

### III. PLAN OF MANAGEMENT

#### *General Consideration*

The plan of management of the Department of Dentistry will vary in accordance with (a) the size of the hospital (b) the type of the hospital, i.e., the type of medical service rendered by the hospital and, (c) whether or not it is feasible for the hospital to attempt, through its out-patient department, to give general dental care, particularly to patients who apply for such care without recognized systemic disease. Whereas, it is desirable that patients be afforded the opportunity of complete dental care, it does not seem possible for the average general *hospital* to assume the responsibility for the complete dental care of the community.

The hospital should evolve as rapidly as feasible a Department of Dentistry with adequate facilities to assume the responsibilities for complete dental care of certain types of in-patients and out-patients, and at the present time should extend dental care in that direction as rapidly as economic resources will permit. However, in health service, as in many other considerations, ideals must be tempered with practical realities; and careful study of fundamental problems forces the conclusion that in order to set up minimum standards of a plan of management that would be practical during the present transitional period, dental care under hospital auspices should be upon a selective basis and rendered in accordance with the following policy of oral-health service:

#### *Classification of Dental Services for Hospital Patients*

1. Care of the hospital patient in whom oral infection may be either an etiological or an aggravating factor in systemic disease. Special consideration should be given to oral hygiene service before operation to all surgical patients except in emergency operations: oral hygiene service should also be given, on

agreement with the directors of the medical services to other patients whose condition will permit.

2. Care of the ambulatory patient referred to the Department of Dentistry from other out-patient departments for consultation with regard to possible oral sepsis that may be related to systemic disease.

3. Emergency dental or surgical treatment of out-patients applying for relief of pain, acute infection, traumatic injury, or diagnosis. The most important services for patients classified in the above categories are oral diagnosis, surgical treatment (eradication) of acute or chronic periodontal and periapical disease, and treatment of traumatic injury.

4. Additional supplemental dental care may be instituted for the hospital patient, consistent with facilities and again upon a selective basis; (a) operative (reparative) dentistry should be made available for pre-natal patients and hospitalized children and for tuberculous and chronic patients, and (b) prosthetic (reconstructive) dentistry should be made available for edentulous tuberculous patients, or other chronic patients for whose care it may be considered necessary.

5. General dental care beyond the range indicated in #4 should be offered by certain types of hospitals and by general hospitals wherever feasible.

Where it is possible only to provide services of Classes 1, 2, and 3, and pending a time when Classes 4 and 5 may be added, the department may be known as the Department of Oral Surgery. A change of title (and of scope) to the Department of Dentistry is urged on all hospitals.

The material contained in this report, particularly the systematic plan of management, is based upon experience and observation in several municipal and voluntary hospitals in New York City. Most of this material has been drawn from a basic monograph on the oral surgical service as an integral part of modern hospital organization<sup>8</sup> which should be consulted for details, and a full explanation of the various phases of the subject covered in this report.

The preceding paragraphs and the following outline are based upon the selective plan alluded to in previous paragraphs. An attempt has been made throughout to present a plan based upon minimum standards that are practical in every detail, and although special emphasis is placed on dental and oral surgery, because of present day conditions, the plan includes provision for such other dental care as may be considered adequate during this transitional period and until hospitals may be able to render complete dental care inclusive of all the branches of dentistry.

<sup>8</sup>Carr, Malcolm W. "Oral Surgical Service as an Integral Part of Modern Hospital Organization." *J. Am. Col. Den.*, 2, 203; 1935.



This plan of management is applicable to large general hospitals, hospitals for the tuberculous and hospitals for chronic diseases. By modification the plan of management may be adapted to smaller hospitals.

## THE PLAN

### *Title of the Hospital Dental Service*

The broad term of Department of Dentistry should be used if the service renders dental care in the *various* branches of dentistry including oral surgery. In large hospitals where large departmental staffs are required the Department of Dentistry may be subdivided into Sections of Operative Dentistry, Prosthetic Dentistry, Periodontia and Oral Surgery. However, when the service is confined only to oral surgery or when the work is essentially oral surgery with minimum provisions for supplemental dental care, and until additional dental services are added, the term Department of Oral Surgery may be used.

### *Staff Organization: The Attending Staff*

The Department of Dentistry or the Department of Oral Surgery should (depending upon the plan of organization) be under the direction of a Director of Dentistry or Director of Oral Surgery, as the case may be. The Director should also hold the appointment of Visiting Dentist or Visiting Oral Surgeon<sup>9</sup> and be a fully qualified member of the Medical Board of the Hospital.

*Qualifications for appointment to the Visiting Staff*—The Director of Dentistry should be required to have had adequate hospital or institutional experience and the Director of Oral Surgery, in addition to experience in hospital organization, should be qualified as a competent oral surgeon.

As far as possible the same qualifications should be required of the Associate and Assistant Dentist or Oral Surgeon. Qualifications should be made uniform and minimum standards should be those specified under Division II, paragraph 4; preliminary training, previous hospital experience, technical ability and aptitude to be given special consideration. Applicants with only one year's practice to their credit may be assigned to the out-patient dispensary and be required to serve provisionally for one year under supervision. Unless the candidate has special and unusual qualifications he should be recommended at the outset for Clinical Assistant Visiting Dentist or Oral Surgeon, with the above assignment.

Promotion in rank should be made as rapidly as may be consistent with ability and aptitude.

<sup>9</sup>In this report the term "visiting" is used as synonymous with "attending". Either term is acceptable.

*Size of staff required*—The number of appointments and grades in rank will depend upon the size and type of hospital.

*Classification of appointments according to rank*—The uniform use of standard nomenclature of staff appointment is recommended in accordance with the following classifications:

Director of Dentistry or Oral Surgery (who shall also hold the rank of Visiting Dentist or Oral Surgeon).

Visiting Dentist or Oral Surgeon.

Associate Visiting Dentist or Oral Surgeon.

Assistant Visiting Dentist or Oral Surgeon.

Clinical Assistant Visiting Dentist or Oral Surgeon.

Resident Dentist or Oral Surgeon.

Dental or Oral Surgical Interne.

Dental Hygienist (where legalized).

Staff members with the rank of Associate Visiting Dentist or Oral Surgeon may be qualified as chiefs of the in-patient and out-patient clinics.

Clinical Assistant Visiting Dentists or Oral Surgeons should be assigned to the Out-patient Clinic. After gaining reasonable experience and at the discretion of the Director of the Service, they may be assigned to the In-patient Clinics and ward service.

The staff in a hospital with 150-200 beds, with an active out-patient dispensary should consist of a Director of Dentistry or Oral Surgery, three associates or assistants, one dental or oral surgical interne and one dental hygienist. In larger hospitals the staff should be proportionately larger.

#### *Resident and Interne Staff*

*General considerations*—Provision for dental or oral surgical internes should be one of the requirements of approved hospitals operating a Department of Dentistry or a Department of Oral Surgery.

Internes are eligible only if qualified by the statutory requirements of the State Law.

Appointment should be made according to the regulations of the hospital to which application is made.

Opportunity should be provided for specialized training and clinical research should be encouraged, under a systematized plan, in accordance with existing facilities.

Special effort should be directed toward adequate training of the interne in the administration of general anesthetics and in clinical experience of physical diagnosis related to dental problems.

An organization of ex-internes should be encouraged and developed, with alumni meetings held at least once a year.

*Length of Intern Service*—It is recommended that appointments be made for a one year period. If appointment is to be continued, it may carry advancement to grade of Resident Dentist or Oral Surgeon.

*Number of Internes*—The number of internes should be proportioned according to the Hospital Census and annual visits to out-patient department. A reasonable minimum standard requirement in a hospital census of 1,000 patients and for out-patient dispensary service with dental patients numbering 10,000 to 15,000 patient visits annually might be three internes and one resident. Attention is called to the fact that these figures are applicable where essentially an oral surgical service is maintained. As stated in Section III, Plan of Management, the goal of dentistry is that "the hospital should evolve as rapidly as feasible a Department of Dentistry with adequate facilities to assume the responsibilities for complete dental care for certain type of in-patients and out-patients." If and when such general dental care is provided for the hospital patient, it will be necessary to increase the proportion of dental internes and residents.

*Residents (second year internes)*—The staff should approve a resident when a service has three or more internes. A standard salary should be paid commensurate with the salary of residents on other major services.

#### *Dental Hygienists*

*Basis for appointment of Dental Hygienists*—In hospitals having 100 beds or more a dental hygienist or hygienists should be employed, if recognized by the State Law. Their function is to give routine oral prophylactic service as directed by the Head of the Dental Service in agreement with the directors of the various medical services.

*Scope of Oral Prophylactic Service*—This service should be given in both the In-patient and Out-patient Clinics with special emphasis on the following: Pre-operative surgical patients, particularly those to have general anæsthesia; pre-natal and medical cases should have oral prophylactic service with follow-up during convalescence according to the length of such convalescence.

#### *Equipment*

*Minimum requirements of equipment*—The volume of dental service required will vary with (a) the size of the hospital (the total number of beds, the number of beds devoted to ward or free service and the size of the Out-patient Dispensary), (b) the type of the hospital and (c) local conditions. The number of dental chairs with accompanying equipment will vary similarly. The minimum requirement of a 200 bed hospital with 25,000 annual out-patient visits, should be two dental chairs with adequate auxiliary equipment including dental x-ray apparatus and dark room facilities.

The physical equipment should be utilized full time daily, and the personnel of the staff should be adequate to maintain this standard.

### *Minimum Requirement of Management*

*General considerations*—All patients' teeth and mouths should be examined by a member of the dental staff as soon after admission as their condition permits. The mouth conditions should be recorded on a special form with appropriate recommendations, and this record should become a part of the official hospital record of the patient.

The dental or oral surgical service should function in both out-patient and in-patient ward service, in accordance with the minimum standards and selective plan alluded to in this report.

*Ward Rounds*—Departmental ward rounds are essential to a systematic plan of management and should be regularly scheduled.

*Management of the Oral Surgical Service*—The work of the Department of Oral Surgery in relation to the hospital out-patient and in-patient ward service may be designated as (a) diagnosis and (b) prophylactic and surgical treatment. "Diagnosis" includes clinical diagnosis of diseases of the mouth; also clinical and roentgenological diagnosis of oral focal infection, with special reference to the relation of oral sepsis to systemic disease. Treatment should consist of oral hygiene procedure, particularly routine oral prophylaxis for the pre-operative surgical patient, and surgical eradication of chronic oral infections suspected of being related to systemic disease. Experience in many hospitals has indicated that it is both feasible and desirable from the standpoint of the patient's interests that the oral surgical service should, in addition to the above, care for surgical diseases and injuries of the teeth and jaws such as acute infections of dental origin, cysts and inflammations of the jaws, osteomyelitis and necrosis of the jaws, traumatic injuries and complicating infections of the teeth and jaws, and certain benign neoplasms and malformations of the jaws. Transfer or assignment of such services to the oral surgical service will depend on the competence and availability of oral surgeons to care for those conditions and will, of course, be with the consent of the medical board.

Where competent oral surgical service is available the following systematic plan of management is recommended for standard procedure in relation to special oral surgical conditions:

(a) That tumors of the mandible and jaw should be admitted to the surgical ward and assigned to the Oral Surgical Service for treatment, or for consultation with the Tumor Service as conditions indicate.

(b) That fractures of the jaw, osteomyelitis of the jaw, etc., requiring operative treatment, whether by intra-oral or extra-oral approach, shall be



admitted to the surgical ward and assigned to the Oral Surgical Service for treatment.

(c) That patients suffering from surgical complications of dental origin, requiring extra-oral incision shall be admitted to the surgical ward and assigned to the Oral Surgical Service for treatment. At the discretion of the Oral Surgeon in charge, consultation shall be had with the surgical service to which the patient may, if acceptable, be referred for treatment and that such treatment be instituted by the co-operation of the two named services.

(d) That patients suffering from surgical complications of dental origin amenable to intra-oral treatment, operative or otherwise, shall be admitted to the surgical ward and assigned to the Oral Surgical Service.

(e) That whenever a patient is admitted to any service from the Oral Surgical out-patient dispensary, a request for consultation shall be simultaneously sent to the Visiting Oral Surgeon in order to facilitate prompt co-operation in the care of the patient.

In large hospitals sufficient and adequate bed service should be assigned specifically to the Department of Oral Surgery.

*Inter-departmental Relations*—Special effort should be directed toward close inter-departmental co-operation, particularly between the Department of Dentistry or the Department of Oral Surgery and the Departments of Surgery, Medicine, Obstetrics (pre-natal), Pediatrics and Otolaryngology.

*Relation to the Hospital School of Nursing*—Lectures on oral pathology and oral hygiene should be given to student nurses in hospitals having a training school for nursing. Five hours of teaching with thirty hours of clinical observation are suggested as minimum requirements. Instruction should include actual clinical experience in rendering adequate care of the patients' mouths.

*Staff Meetings and Clinical Conferences*—Staff meetings and in addition clinical conferences should be held each month.

*Research*—Clinical research should be encouraged and adequate facilities should be made available.

*Rules and Regulations*—Rules and regulations are essential to efficient management. There should be a standard set of departmental rules and regulations and also rules and regulations for the interne staff.

*Records*—A carefully planned system of adequate records is essential in the management of the oral surgical service, and a uniform method of recording data should be established for departmental use. The routine records, and the method of filing them, should be simple and practical for future reference. Special clinical records, carefully filed in accordance with an appropriate plan of classification and cross-indexing, are a valuable adjunct to clinical research.

*Formulary*—A standardized departmental formulary, based upon "Accepted Dental Remedies" of the Council on Dental Therapeutics of the American Dental Association should be adopted and should be included in the general formulary of the hospital.

*Books and Journals in the Hospital Library*—Hospital libraries should include books on dentistry, oral pathology and oral surgery and selected journals approved by the American College of Dentists, and the American Dental Association.

#### IX. PUBLIC RELATIONS

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Saginaw, Mich.

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#### I. OBJECTS AND PLANS FOR ACCOMPLISHMENT

Any group which deals with the public wishes to stand well in public esteem. The wish for recognition, an individual human urge, expands itself and becomes a group desire when those with common interests, such as dentists, associate themselves in thought and in organization. In other words, dentists, in addition to being desirous of extending the services which they render and in educating the public as to their need for adequate dental service, also wish to be recognized for what they are—an unselfish, scientific profession. So there are two problems in public relations, complementary to each other: (1) inviting attention of the people to the values of dental service for their own good and (2) improving the public view of dentistry to the end that the profession itself is shown in its best light.

Public relations require and merit studious application. Everything we, as individual practicing dentists or organizations do, in-

<sup>10</sup>The other members of this Committee (1938-9): O. W. Brandhorst, T. E. Purcell, Nathan Sinai, Wilmer Souder.

fluences the reactions of others toward our services or our profession. Therefore, each one of us is, in a very definite sense, a member of the committee on Public Relations.

In a highly organized society, such as we have at present, the competitions for public attention are exceptionally keen. Pressure groups influence our public impressions and make themselves felt in important places. The profession of dentistry has been so busy over the years in attempting to care for the public health and in improving its standards of service, that it has not taken time to organize in the field of public relations. The American College of Dentists, being the type of organization it is, may not be the proper agency for efficient performance in this field, but we should be rationalizing and even assuming such responsibilities as are not borne by others. Here, as in other enterprises indulged in by the College, we must ever be ready and willing to co-operate with those who are attempting to solve the problems of dentistry.

In recent years there has been a growing consciousness among dentists of the need for intelligent public relations. Many state societies co-operate with other agencies in the dissemination of dental information to the public. Some have press committees that aim to assist the publishers of newspapers in the selection of copy. The American Dental Association has employed public relations counsel to assist at the time of the national convention. These all are steps in the right direction, but it does seem that a well organized system of public relations is a crying need of the profession of dentistry. All of us may be doing the best we can, but spasmodic, unrelated efforts make for confusion and inefficiency. The work of a public relations committee should be so organized that it maintains contact with every conceivable individual, enterprise or organization which affects, in any way, the rendering of dental service to the people. This program may seem rather ambitious, but it can be done. Obviously, it is impossible, with our present facilities, but an individual who has had training in the newspaper or publicity field and is steeped in our problems, working full time, under the direction and with the assistance of a committee, could co-ordinate and direct our dental relationships, with dignity and efficiency. For the purpose of

illustration, let us set up a sample organization, in a rough way, and see how such a plan might work and what services it might perform.

A central office, under the direction of a trained secretary who is responsible to the committee would, of course, be the focal point of all activity. The manager or director must possess, in addition to many other attributes, knowledge of news and publicity values and familiarity with the public's ability to absorb information. Perhaps some dentist possesses these qualifications—but probably he does not. One of the chief advantages in having a director of the type mentioned would be that he, in turn, would have his own contacts with other agencies through which information is spread.

Under the committee and director would be carefully selected contacts who deliver informative material at regular intervals and stand ready to comply with any request. Information, once received, then may be correlated, evaluated and utilized in such ways as seem to be important.

An effectively organized department of public relations might consider the following:

1. There are many groups which have a definite relation to dentistry or with whom we might co-operate and serve. For example, someone would handle all problems of common interest between us and the American Association for the Advancement of Science. Another would do the same with the Boy Scouts, the Parent-Teachers Association, institutions engaged in dental research, the American Public Health Association or any other group. Some would receive special assignments.

2. Another contact, perhaps through a small sub-committee, might be responsible for radio. Studies could be made of national advertising and legitimate complaints brought to the attention of the Federal Trade Commission. This committee also would be in a position to take advantage of all opportunities for education through this important medium.

3. A third zone of activity might involve someone whose obligation lay in the development of education through lay magazines. Those of us who saw *Life's* pictorial review of dentistry and read the article accompanying it were impressed by the power of such



publicity. Among other things, Life emphasized the need of funds for dental research. Doesn't it seem possible that, if this were followed up, some value might be derived from the suggestion that we need financial assistance? If other magazines were induced to publish articles showing what dentistry is doing in spite of its economic handicaps doesn't it seem reasonable that funds might more easily be obtained? This type of activity is in the public interest. The foregoing is but one example of what *might* be done if programs were organized through these channels.

4. There are many standing and special committees continually serving dentistry. Many times these committees discover and develop material of interest to other committees, members and the public. If all committees, as parts of their jobs, were compelled to report to the director of public relations at regular intervals, giving digests of their activities, the results of their investigations could be made available to others. Material could be selected for press releases. Continual, efficient, co-operative effort would magnify and simplify the services of all.

5. One of the duties of the director, located at the central office who is thinking—full time—in terms of public relations would be the issuance of releases to the press. Another function would be the handling of publicity emanating from national and large district meetings. If this were well done some of the "trash" which appears might be eliminated without interfering with the news-value inherently necessary if the columns are to be read.

6. Probably the *most important* service to be rendered by a well organized public relations department would be the education of dentists so that they might appreciate the importance to the public health and to the profession of well planned, intelligent dissemination of dental information. In communication with the national director would be state committees of public relations and under the state would be local and district units. Each district meeting has something of value to be offered for public consumption. Usually, however, the local press merely mentions that the society met and somebody spoke. One who is trained could select something from the speech and give it to the press in simplified terms which the

public could understand. The proper training in technique could be obtained quite easily by learning a few fundamental principles sent out by the originating, focal, national center.

The ideal "top-to-bottom" organization with its ramifications could be utilized in many ways. The system would not be a one way affair. Periodic reports on many phases of dental activity could be sent forward to headquarters. The momentary status and trend in health insurance, public health dentistry, legislation, or anything else could be parts of the regular communications from all parts of the country. Many incidentals which have no meaning when viewed in the particular could be constructed into a panorama of sufficient breadth to allow perspective and understanding. Problems, once understood, are comparatively easy of solution. There is nothing so devastating as confusion.

The proper orientation and organization of our public relations resources in an efficient manner seems to be a worthy ambition and one which should receive deep consideration from dentists and their organizations.

## II. ACTIVITIES OF THE PUBLIC RELATIONS COMMITTEE

Your present Committee on Public Relations, the personnel of which is largely new this year, has spent most of its time in becoming acquainted with its responsibilities and in trying to maintain some of the contacts which were established by its predecessor.

Following is a brief description of activities during the past year:

## III. RELATIONS WITH OTHER ORGANIZATIONS

*American Association for the Advancement of Science*—The College and the dental profession have maintained their fine alliance with general science. The College has been prominent in the Subsection on Dentistry of the American Association for the Advancement of Science since its inception. A special committee is now looking after the relations between the College and the American Association for the Advancement of Science. On December 30, 1939, at Ohio State University, Columbus, Ohio, was held the last meeting of the American Association for the Advancement of

Science, and the Sub-section on Dentistry, at which time a part of the program was a symposium on definite oral manifestations of systemic disease. It is urged that members of the College attend these meetings and offer for consideration such contributions as they may.

*American Association of Dental Schools, International Association for Dental Research, Omicron Kappa Upsilon*—It is hoped that the American Association of Dental Schools, the International Association for Dental Research and Omicron Kappa Upsilon will join with the American College of Dentists in putting on a joint program at the Baltimore Centennial on March 17, 1940. Efforts are being made in that direction.

*American Public Health Association*—The Regents of the College have urged that the Fellows become members of the American Public Health Association. Dr. Frank C. Cady of the United States Public Health Service, Washington, D. C., is the new chairman of the Oral Health Group. The Executive Secretary of the American Public Health Association is Reginald M. Atwater, M. D., 50 W. 50th Street, New York, N. Y.

Your Public Relations Committee has communicated with the dental directors of health departments in 33 states during the past year. They were asked: (1) if dentistry is represented on the programs of their annual state association meetings; (2) if they receive desirable co-operation from the other health service professions; and, (3) if they encourage dentists in practice to become associate members in the American Public Health Association. They were also offered the co-operation of the committee if so desired. Almost without exception the replies were in the affirmative. Your committee urges the membership of the College to inquire of their own state dental health directors if they can be of any assistance to them. Those states, although few in number, which do not have adequate dental divisions in their health departments, are not organized to serve the best interests of the people. The College would do well to see that its members, residing in those states, act as moving forces behind the development of dental health divisions.

*American Association of Social Hygiene*—The co-operation of the Public Relations Committee of the College has been offered to the American Association of Social Hygiene.

*United States Public Health Service, Children's Bureau*—Members of the College through appointments in the American Dental Association are now maintaining contacts between dentistry and the United States Public Health Service and the Children's Bureau. For this reason and to prevent confusion your committee has made no effort to keep in touch with these agencies this year. Drs. Cady and Camalier, respectively, are in charge, and are handling this phase of the work very effectively.

*American Red Cross*—The American Dental Association, through Dr. C. W. Camalier, is working with the American Red Cross to establish methods whereby the dental profession can work harmoniously with the Red Cross in times of disaster. Dr. William DeKleine, Medical Adviser to the American Red Cross, has asked, through your Public Relations Committee, that the American College of Dentists indicate to the American Dental Association and the American Red Cross its willingness to render whatever assistance and co-operation it can.

*Parent-Teacher Association, Boy Scouts, Camp Fire Girls, Girl Scouts, and 4-H Clubs*—Your Public Relations Committee has communicated with the national headquarters of the Parent-Teacher Association, Boy Scouts, Camp Fire Girls, Girl Scouts and the 4-H Clubs, and offered them the co-operation of the College. They all have responded and desire our assistance in their programs. For example, the Boy Scouts are organizing Health and Safety Committees in all Councils with dentistry having a part in their educational program. The Camp Fire Girls desire pamphlets which girls might find interesting. The 4-H Clubs report that many county extension agents could use the advice and assistance of local dentists in their health clinics. Opportunities for service to these groups exist in various localities and the Fellows are urged by your committee to make the most of them.

*The American Association for Health, Physical Education and*



*Recreation*—Just recently, through the efforts of Dr. E. P. Brady of St. Louis, the activities of the American Association for Health, Physical Education and Recreation were brought to the attention of the Public Relations Committee of the College. It seems that this organization has established an agreement with the National Education Association and others, including the American Medical Association, whereby an intelligent planning and co-ordination of health education in the schools is intended to render such education more effective. Any program endorsed by the National Education Association will be readily accepted by school authorities. It appears that the executive committee of the new association has provision for five members, four of which are already selected from The American Medical Association, the National Education Association, the Department of Interior, and the American Public Health Association. The fifth is, or was, vacant. Inasmuch as dental health is so important to the general well-being of youth, it might be desirable to have the fifth place occupied by dentistry. At least, dentistry should be vitally interested in this plan for systematizing health education of school children. The Executive Secretary of the American Association for Health, Physical Education and Recreation is Dr. N. P. Nielson.

#### IV. MISCELLANEOUS ACTIVITIES

*Undergraduate Public Health Instruction and Student Social Responsibility*—Last year the Public Relations Committee of the College recommended that studies be made of the types of public health instruction available to undergraduate students in dentistry and that these same students be stimulated in their appreciation of social and community responsibility. The Regents referred these matters to the Committee on Education.

*Radio*—Also, last year, your Public Relations Committee recommended that a "radio committee be appointed to give attention to the matter of radio publicity and to develop ways of control of present objectionable methods by commercial interests." The Regents since then have expressed a desire that the details be developed for their further consideration.

At present the American Dental Association, through Dr. Hodgkin, is working on this problem.

The Federal Trade Commission has direct jurisdiction over matters involved by our complaints. The Commission is not interested in general, unspecific objections to radio advertising which we believe to be contrary to the public interest. It therefore would seem to be incumbent upon us to gather evidence in substantiation of our contentions, make an effort to prove our assertions and correct the evils which exist.

Another suggestion included in last year's report of this committee was that a special committee be appointed to follow through on the work of Dr. Arno Luckhardt, who consumed a great deal of time and effort in correspondence with the Columbia Broadcasting System. Professor Lyman Bryson of the Adult Education Board of that radio corporation very generously offered to cooperate with dentistry in working up a program. Your committee communicated with Dr. Bryson and a portion of a letter from him under the date of May 26, 1939, reads as follows: ". . . Very little has been done in this field (dental education programs on the air). If you have any ideas I suggest that you take them up with Mr. Sterling Fisher, who is Educational Director of the Columbia Broadcasting System. You will find him anxious to cooperate in any way possible." It seems that dentistry is missing an opportunity if this offer is allowed to slip by.

*Lay Dental Magazine*—It has been stated that, perhaps, a magazine of a popular nature, similar to *Hygeia*, might be desirable in dentistry. Upon inquiry it seems to be the opinion of some that, for the present, publication of such a magazine is not feasible, but a possible solution might be the establishment of a section on dentistry in *Hygeia* to fill this need. It seems that such a solution would be worthwhile if it could be accomplished.

#### V. RECOMMENDATIONS

Following are the recommendations of the Public Relations Committee of the American College of Dentists:

1. A Special Radio Committee should be appointed to consider:
  - a. The gathering of specific information on which complaints may be based for presentation to the Federal Trade Commission, in cooperation with those now working on this problem;
  - b. Cooperation with those who are engaged in promoting positive dental education via broadcasting;
  - c. Cooperation with others in realizing the fruits of the efforts of Dr. Luckhardt with respect to the offer of the Columbia Broadcasting System.
2. a. In the absence of an adequate public relations department in the service of dentistry, such as that outlined in the introduction to this report, the College should take over such functions and responsibilities as it is able to assume. (If possible an effort, for example, should be made to compile and correlate the trends and developments over the whole country in health-insurance, public health dentistry, etc., so that information may be made easily available to anyone who seeks it. Such services as described may require the employment of a librarian and such organization as is necessary. (This may not, properly, be the function of the College but occasionally a duty must be recognized and assumed, to prove values until others, realizing the need, assume the task and permit the originators to relinquish custody of the agency.)
- b. All committees of the College might be requested to send very brief reports or digests of their progress to the Public Relations Committee on January 1 of each year and again at least a month before the annual meeting of the College, so that this committee will understand what is being done and can serve all of the committees intelligently, if requested.
3. A special committee should be appointed to investigate the activities of the American Association for Health, Physical Education and Recreation and cooperate with them, the American Medical Association, the National Education Association, the American Dental Association, or those who are interested in improving health education through school channels so that dentistry may be satisfactorily represented.

4. The College should endorse by resolution the joint efforts of the American Dental Association and the American Red Cross to work out a plan of procedure in dentistry in times of disaster and that such resolutions be transmitted to the American Dental Association and the Red Cross.

5. The name of the Public Relations Committee might be changed to some other although the functions remain the same. The name, "Public Relations," infers a selfish interest which at times is embarrassing to the committee. Also, the term is more or less in disrepute in some quarters. Your committee believes that its approach might be more subtle, disarming and conducive to better feeling if it bore a different designation on its stationery. Some such identification as "Dental Relations Committee," "Orientation Committee," or other might be more satisfactory. We offer this suggestion for consideration by the College.

#### VI. CONCLUSION

The very nature of the work of a public relations committee necessitates inquiry into the functions and performances of others. The need for information demands that entrance be obtained in places where it may not, altogether, be welcome unless mutual understanding is complete. Sometimes a dilemma is created and a conflict appears between the desire to be politic and the wish to serve efficiently. Anything which this committee has said or suggests is not meant to be critical except in the kindest sense—just as we wish to be criticized, and expect to be, in the same spirit. It is hoped that all will realize that a desire to serve prompts the utterance of any thought which finds expression in this report.

#### VII. ADDENDUM

Since the foregoing report was completed your committee has learned from Dr. Lon W. Morrey that:

1. The Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, which includes no representatives of other health agencies, has been reorganized;



2. There is a new group entering the health education field in the National Education Association—that of Health, Physical Education and Recreation;

3. The American Dental Association is cooperating with those mentioned in (1) and (2), above.

Your Committee on Public Relations, however, feels that Recommendation No. 3 should continue to receive consideration from the College because of the importance of dental health to school children, and that we should cooperate at all times with those who are working in the school field.

## AMERICAN COLLEGE OF DENTISTS

### ABSTRACT OF MINUTES OF THE BOARD OF REGENTS,

CHICAGO, ILL., FEB. 11, 1940

O. W. BRANDHORST, D.D.S., *Secretary*  
*St. Louis, Mo.*

February 11 (9:30 a. m. to 12:45 p. m.), first session: Present nine. (1) Minutes of New York Regents meeting with ad-interim activities read and approved. Reports of officers: (2) Secretary, (3) Assistant Secretary, (4) Treasurer; all accepted. Reports of Committees: (5) Committee on Socio-Economics; report received.

February 11 (3:00 to 6:15 p. m.), second session: Present, nine. Reports of Committees: (6) Commission on Journalism; report received. (7) Committee on History; general plans approved and voted that names of Eleazar Parmly and Solyman Brown be inscribed on the Mace of the College. (8) Research Committee; recommendations approved. (9) Committee on Centennial Celebration; report approved. (5) Committee on Socio-Economics; supplementary report and plans approved. (10) Committee on Publication of Proceedings of Baltimore meeting; report approved and support voted.

February 11 (8:45 to 11:45 p. m.), third session: Present, nine. (11) Miscellaneous business; discussions. (12) Plans for dental internship in U. S. Army, approved. (13) Honorary Fellowships. (14) Membership in American Association for the Advancement of Science. (15) Plans for unveiling Rodriguez plaque.

The following Fellows have passed on since the Milwaukee Convocation: James Edward Chace, Ocala, Fla.; James Francis Clark, Pawtucket, R. I.; Oren Henry Gaver, Baltimore, Md.; T. L. Grisamore, Chicago, Ill.; Finis M. Hight, Houston, Tex.; Otto G. Krause, Milwaukee, Wis.; Alfred P. Lee, Philadelphia, Pa.; Charles Joseph McCarthy, San Francisco, Calif.; Wm. Hiram McCracken, Detroit, Mich.; Chas. J. Marcinkiewicz, Detroit, Mich.; William B. Power, Seattle, Wash.; Louis Rossman, Baltimore, Md.; Geo. B. Winter, St. Louis, Mo.; Craig M. Work, Ottumwa, Ia.

## EDITORIAL

Dentistry has come of age. It is now one hundred years since the first attempt was made looking toward the organization of a curriculum, the literature and of those who practiced the art. Compared with the technic of today, it may appear a little beside the point to speak of the technic of that day as art, yet to the extent that care, thought, knowledge, and a general plan of procedure had to be applied and followed, it was art.

It might be of interest, even of no small value, to repeat something of the history of dentistry, yet a better account, for many reasons, can be had by reference to any one of the several histories, or even to current literature of the past few months. Yet, it should be known that prior to the eighteenth century dental procedures were not organized nor was the art designated by a common name. Pain, as history records, has always been one of man's accompaniments, and always have there been men who devoted time and attention to its alleviation. During the first centuries there was no particular distinction between the head, with all of its parts, and the body as a whole. As time passed more attention was paid to the teeth, though not with any effort at organization into a systematic art. In the latter part of the eighteenth and the early part of the nineteenth centuries, this was done, and the practice of dentistry began to take on a definite form. Credit for this beginning is given to the French dentist, Pierre Fauchard, who is "to dentistry what Hippocrates is to medicine."<sup>1</sup> Fauchard "laid the foundation for anatomy, pathology, and therapy of the mouth and teeth."<sup>2</sup>

"The year 1839 is one of special import at this time. We are celebrating the 100th anniversary of the opening of the first dental

<sup>1</sup>Robinson, J. Ben, *J. Am. Col. Den.*, 6, 289; 1939 (Dec.).

<sup>2</sup>Wedl, Carl, M.D., Professor of Histology, University of Vienna. Translated by W. E. Boardman, M.D., with notes by T. B. Hitchcock, M.D., D.M.D., Professor of Dental Pathology and Therapeutics, Harvard University. Lindsay and Blakiston, Philadelphia, 1872. p. 2.

school in the world and which school was opened in the United States of America.

"The entire period prior to the present day may for convenience be roughly divided into periods as follows: prior to 1839; 1839 to 1900; 1900 to 1925; 1925 to 1940. Prior to 1839 any one who so desired might operate upon the teeth. The barber had an equipment which arranged the individual conveniently, so he merely added the function of a dentist to that of his original trade. The jeweler worked with fine metals, did that finer mechanical work, so why couldn't he manufacture jewelry for the mouth? He did. Then men began to limit their labors for livelihood to this work, and thus the dentist was born. Presently men came to realize that they had a greater responsibility than many, if not most vocations imposed, and as they became more intimately associated with the medical fraternity, they began to assume a professional air. The method of learning was through praeceptors and so, after a period of service to another, one more added himself to the growing number of dentists. Here and there was one with an inquisitive or investigative nature, but there was no organized study in any degree.

"The second period, 1839 to 1900, witnessed many changes and development. The number practicing dentistry had grown at a considerable pace and it is obvious that among them would be men of vision and of high purpose. Among them were two whose names go down in dental history, Hayden and Harris, through whose activities were organized those institutions which have made dentistry what it is today, the school, the society, and the journal. During these years, too, laws regulating the practice of dentistry were established, thus creating the profession. In this, the State conferred certain rights and privileges which constitute the final step in creating a profession.

"Through the passage of legislation, two things were accomplished: the power to do away with quackery and charlatanism, which had prior to that time ran rampant, and second, dentistry now had reason and opportunity to develop itself into a true profession. Quackery and charlatanism have not yet been wholly eliminated,



but that type of practice is greatly curtailed and is under fair control. Neither has dentistry risen to its full height as a profession, but to a degree it has met those requirements as laid down by Dorothy Fahs Beck, in her thesis for a Master's degree. In this she proposed<sup>3</sup>: 'The term profession may be regarded as an honorary title awarded informally by society to occupations conforming to certain standards. These standards may be roughly outlined as follows: (1) the occupation must require high skill and intellectual effort and an extended educational preparation, both intensive and comprehensive in nature; (2) the occupation must involve primarily the exchange of service or advice for a fee or salary, rather than the sale of material products for a profit; and (3) the occupation must have achieved in public opinion, tradition of group dignity, intellectual superiority, self-control, and resistance to unscrupulous commercialism.'"<sup>4</sup>

With the organization of the first school in the world, in Baltimore, in 1840, the establishment of the first journal in the fall of 1839 and of the first society in the spring of 1840, dentistry took its first great step ahead and the developments of these one hundred years have seen such a marked advance that we who today practice the art can well be proud that we are dentists. We now have one hundred years of "tradition," our curriculum is "intensive and comprehensive," nor are we as a group bound by the so-called "profit motive." It may yet require a little time for the full appreciation of all the principles of professionalism, nor will the time ever come when we may be perfect—man is an imperfect creature—but we have risen to the level of a health service profession and our opportunities for social equality are only waiting for each of us individually to meet his.

These were all amply demonstrated at the meeting in Baltimore. It was three days or four, full of activity. On Sunday, March 17, the American College of Dentists, acting as host, joined with the

<sup>3</sup>Personal communication.

<sup>4</sup>Gurley, John E., excerpt from an address, *Dentistry in a Scientific Era*, delivered before faculty and student body, Medical College of Virginia, College of Dentistry, March 8, 1940.

American Dental Association, the International Association for Dental Research, the Canadian Dental Association, the American Association of Dental Schools, the National Association of Dental Examiners, the American Association for the Advancement of Science (Dental Section), the American Association of Dental Editors, and Omicron Kappa Upsilon (Honor Society), in an all-day meeting of addresses and ceremonies, including the conferring of honorary degrees upon men who had made notable contributions to the good of the public and to the honor of dentistry.

Then followed three days of professional program contributed to by men carefully chosen from the standpoint of authority in a particular branch as well as geographical representation. The entire field of dentistry was divided into eighteen departments and three speakers were selected for each. In addition there were members of the medical profession and university presidents who came and spoke to us. These were men who know the health needs and who labor with us or with whom we labor in meeting those needs. They were men who know our educational needs and whose desire it is that dentistry and dentists shall come fully into their own.

The progress of dentistry through the centuries was dramatically told through the Cavalcade of Dentistry. This was a splendid portrayal and left in the mind of each of us a vivid picture of the road over which we have come.

Nearly seven thousand persons, including all who attend our meetings, took advantage of this opportunity and joined together in celebrating this one hundredth anniversary. It gave those of us who were there and others who were not there, but through us, a spirited incentive to push on into the second century of dentistry, of dental educational advance and of dental service. It was a splendid manifestation of the culmination of one hundred years of the life and beneficence of dentistry. The men in Baltimore have earned our thanks for the fulfillment of the mandate laid upon them one hundred years ago, for continuing now with one of the leading schools in the world, and for the splendid manner in which they developed and conducted this centenary celebration.

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

### PROCEEDINGS OF THE SUBSECTION ON DENTISTRY, FIFTH ANNUAL MEETING, COLUMBUS, OHIO, DEC. 30, 1939

*Compiled by* PAUL C. KITCHIN, D.D.S.<sup>2</sup>  
*Secretary of the Subsection, University of Ohio, Columbus, Ohio*

A series of papers dealing with the relation between fluorine, tooth decay and the acid producing bacteria inhabiting the mouth formed the major part of the Saturday morning program of the Dental Subsection.

Sidney B. Finn, School of Medicine and Dentistry of the University of Rochester, reported that experimental rats fed on a caries-producing diet showed a 70 per cent reduction of the usual amount of decay when 3 m.g. of fluorine daily was included in the drinking water. J. F. Volker, working in the same institution presented experimental data indicating that the reduction of tooth decay by fluorine is the result of a direct local action between the surface of the tooth and the fluorine. Studying the effect of fluorine on the formation of acid by mouth bacteria, B. B. Bibby, also of the University of Rochester, found that fluorine did not affect the growth rates of such bacteria but did reduce the amount of acid formed by them. Since tooth decay is initially acid action on the tooth surface, reduction in amount of acid formed by oral bacteria would be conducive to less decay. R. W. Harrison of the Zoller Memorial Dental Clinic, Chicago, reporting on the results of the inclusion of fluoride or iodoacetate in the diet of rats, found a sharp decrease in the numbers of lactobacilli cultured from the tooth surfaces. The effect of these compounds on other mouth bacteria was less apparent.

<sup>1</sup>A brief analysis of these proceedings appears in *Science*, Feb. 2, 1940, p. 121. See, also, Footnote No. 1, *J. Am. Col. Den.*, 5, 73; 1938 (March-June).

<sup>2</sup>The other members of this Committee are: J. L. T. Appleton, Chairman, and Lester R. Cahn.

Virgil D. Cheyne, working with the above mentioned University of Rochester investigators, removed the salivary glands of rats to eliminate a continued action of fluorine in the saliva on the tooth surface and then fed the fluorine as potassium fluoride in a drop of water to prevent the possibility of fluorine remaining in the mouth long enough, as it might if mixed with food, to have a prolonged effect. Fluorine thus administered reduced the incidence of dental decay and Cheyne concluded that "fluorine must have a direct and persistent action on the tooth, or in the region where food and bacteria come in contact with the tooth surface, and in this way retard the progress of experimental dental caries." Another paper dealing with the effect of the removal of the salivary glands of rats on the development of caries was presented by C. Truman Nelson of the Harvard Dental School. Working with David Weisberger and Paul E. Boyle, he found an increase in the total concentration of the oral flora and dental decay in the molar teeth of desalivated rats as early as twenty-two weeks of age. This experimental evidence of increased tooth decay in reduced saliva condition makes the results of Cheyne seem even more significant.

In the general discussion following the papers on fluorine emphasis was laid on the fact that it should be borne in mind in considering the experimental results of the apparent beneficial action of fluorine regarding tooth decay, that fluorine is a toxic substance. Previous workers have traced the disfiguring condition known as mottled tooth enamel to the presence of as little as two parts per million of fluorine in the drinking water used during the period of development of the teeth and incidentally also noted the lower incidence of tooth decay in regions where mottled enamel was prevalent. All this work with fluorine is in the experimental stage and much more needs to be known before any application to man can be considered a safe clinical procedure.

B. F. Miller of the Zoller Memorial Dental Clinic, in cooperation with John Muntz and Sigmund Brandel, reported on the use of alkyl dimethyl benzyl ammonium chloride as an inhibitor of acid formation by mouth bacteria. Their results indicated that this syn-



thetic wetting agent is quite effective for the purpose and they believe it to be much safer for use in the mouth than either iodoacetate or fluorides.

The afternoon session, devoted to a symposium on the subject of "Definite Oral Manifestations of Systemic Disease," was opened by a general discussion and review of the literature by E. H. Hatton of Northwestern University Dental School. Three motion pictures in color were presented, one showing mouth conditions in blood dyscrasias by T. J. Cook, School of Dentistry, University of Pennsylvania, and the other two by J. R. Blayney, Zoller Memorial Dental Clinic, Chicago, depicting mouth conditions in a number of systemic diseases including pemphigus, acromegalia, fat and skin tumors. The importance of these systemic conditions, from the dental standpoint, was stressed in that they may be recognized in a dental examination before the patient himself is aware of the condition and referred to the physician for proper treatment.

Dietary deficiencies, especially those involving the vitamins, are often the cause of mouth disorders. Papers on this subject were presented by B. K. Wiseman of the College of Medicine, Ohio State University, and Norman H. Topping and H. F. Frazer of the National Institute of Health. The latter two workers produced striking examples in monkeys of mouth inflammation and disease of the structure supporting the teeth by deficiencies in diet.

The aspects of syphilis in the mouth was given a very competent discussion by W. N. Taylor of the Medical College, Ohio State University.

David Weisberger of the Harvard Dental School presented evidence that disorders of the menstrual cycle may be accompanied by disturbances in the membrane lining the mouth and may be treated by the use of estrogenic hormones.

That giant cell tumors of the mouth were frequently first signs of excess parathyroid activity, evidenced as changes in the bone of the jaw, was pointed out by Lester R. Cahn of the School of Oral and Dental Surgery, Columbia University. The early removal of the parathyroid tumors in such cases prevents an irreparably crip-

pling disease and thus early recognition of such overgrowth of the parathyroids is very important.

George Stein of Boston gave the results of a study of the mouths of a group of diabetic children in Vienna, showing that pyorrhea may even occur in the first teeth and is very prevalent in the second dentition of young diabetic patients.

The subsection on Dentistry had a noon luncheon followed by the election of an executive committee for the coming year. Officers were chosen as follows:

J. L. T. Appleton, Philadelphia, Chairman.

Paul C. Kitchin, Columbus, Secretary.

Lester R. Cahn, New York.

#### MORNING SESSION

- I. REDUCTION OF EXPERIMENTAL RAT CARIES BY THE ADDITION OF FLUORINE TO THE DIET. *Sidney B. Finn, School of Medicine and Dentistry, University of Rochester, Rochester, New York.*

The incorporation of fluorine into a caries producing diet reduces the incidence of dental decay in experimental rats. Rats fed caries producing diets showed a 70 per cent reduction in dental decay when the diets were supplemented by the daily oral administration of an aqueous solution of potassium fluoride containing 3 mg. of fluorine. The reduction does not appear to be mainly in the size of the cavities, but rather in the number of lesions. The teeth most affected are in the following order: upper first molars, lower first molars, lower second molars, upper second molars, upper third molars, lower third molars. On the fluorine diet there was an 18 per cent reduction in the number of entire teeth destroyed. There were 13 caries free mouths as contrasted to none in the groups not receiving fluorine.

2. REDUCTION OF THE SOLUBILITY OF ENAMEL AND DENTIN BY FLUORINE. *J. F. Volker, School of Medicine and Dentistry, University of Rochester, Rochester, N. Y.*

Experiments have been carried out to test the possibility that the reduction of caries by addition of fluorine is the result of a direct

local action between the fully formed enamel and dentin and fluorine taken into the mouth in water or food. Pure samples of powdered enamel and dentin were treated for different periods of time with various concentration of solutions of fluorides. Reductions of solubilities in acid of as much as 50 per cent resulted in the enamel. The solubility of the dentin was reduced by about 30 per cent. Visual evidence of reduced solubility was found in whole teeth. The changed solubilities produced by the action of fluorine appear to be permanent, and are in keeping with reports of the action of fluorine on the solubilities of hydroxyl apatite and calcium phosphates. These findings may point to the use of controlled local application of fluorine as a means of preventing dental caries.

3. THE EFFECT OF FLUORINE ON THE FORMATION OF ACID BY MOUTH BACTERIA. *Basil G. Bibby and Mary VanKesteren, School of Medicine and Dentistry, University of Rochester, Rochester, N. Y.*

The effect of fluorine on the production of acid by several types of mouth bacteria was tested by culturing them in Douglas' broth containing 5 per cent of glucose and various concentrations of sodium fluoride. Measurements of pH, titratable acidity and bacterial population were made at different time intervals.

Thirty-five control tests with no fluorine made on 14 strains of oral streptococci produced an average of 3.18 cc. N/10 acid in 24 hours. With concentrations of 2, 10, 20, 50, and 100 parts per million of sodium fluoride 2.62, 2.34, 2.14, 1.73 and 1.48 cc. of N/10 acid, respectively, were produced. The terminal pH of the controls ranged from 4.0 to 4.5, whereas, those of the fluorine tests ranged from pH 4.5 to 6.0 with increasing concentrations. The growth curve and rate of acid production paralleled one another for the first 12 hours after which the bacterial counts fell in tubes with higher concentrations of acid, the organism remaining viable for the longest time in the highest concentration of fluorine. Using lactobacilli similar reductions in the amounts of acid were noted with increasing concentrations of fluorine. The rate of acid formation was slower, the average for the controls after 72 hours being

3.24 cc. (pH 4.2 to 4.5) diminishing to 2.32 cc. (pH 5.0 to 5.5) in the 100 p.p.m. sodium fluoride. The numbers of viable organisms did not diminish during these experiments. Tests with 4 strains of micrococci produced an average of 1.45 cc. N/10 acid in 24 hours and showed a reduction of acid in the presence of fluorine.

In the presence of fluorosed enamel and dentin, cultures of streptococci produced less acid than when fluorine-free dental tissues were added.

The failure of the concentrations of fluorine used to change the growth rates of the test organisms indicates that the fluorine influences acid production by means of its action on the bacterial enzymes concerned with fermentation.

4. INHIBITION OF EXPERIMENTAL DENTAL CARIES BY FLUORINE IN DESALIVATED RATS. *Virgil D. Cheyne, School of Medicine and Dentistry, University of Rochester, Rochester, N. Y.*

The inhibition of dental caries by fluorine has been demonstrated in three ways: (1) decrease in caries incidence in endemic areas; (2) higher fluorine content of sound enamel than in carious; (3) reduction of experimental dental caries in rats by feeding of fluorine after the teeth are fully formed.

It has been postulated that compounds act to inhibit caries either by contact (1) between the saliva and the tooth surfaces, (2) between the food and the flora of the tooth surface, or (3) by direct chemical combination with the tooth. Using desalivated rats, the first possibility can be eliminated. Administration of the fluorine as potassium fluoride in a drop of water, as in our experiments, eliminates the second possibility, i.e., that fluorine would remain in the mouth in the form administered for a sufficient period to have a prolonged effect. However, evidence is presented that fluorine administered under these precautions can still decrease the incidence of caries. The logical deduction, therefore, is that the fluorine must have a direct and persistent action in the region where food and bacteria come in contact with the tooth surface and in this way retard the progress of experimental dental caries.



5. A METHOD OF REPOSITIONING THE MANDIBLE IN THE TREATMENT OF TEMPORO-MANDIBULAR JOINT LESIONS. *B. H. Pippin and A. J. McCullough, School of Dentistry, Washington University, St. Louis.*<sup>3</sup>

A discussion of etiology, case history, symptomology, radiology, differential diagnosis, gnathostatic measurements and the prescribed therapeutics employed in this condition. Illustrated by lantern slides.

6. PHYSIOLOGY OF AN OVARIAN DERMOID CONTAINING TOOTH. *Rudolf Kronfeld,*<sup>4</sup> *Foundation for Dental Research of the Chicago College of Dental Surgery, Chicago, Illinois.*<sup>5</sup>

Microscopic examination of an ovarian teratoma revealed, in addition to skin, hair, glands, nervous and fat tissue, cysts and pigment and a portion of alveolar process with three erupted teeth and one unerupted tooth germ. The teeth were studied with regard to periodontal membrane, pulp changes, formation of enamel and dentin, incremental pattern, and other phases of dental physiology and pathology. The findings are correlated to similar problems in teeth within the oral cavity.

7. THE INHIBITORY ACTION OF A SYNTHETIC DETERGENT, ALKYL BENZYL AMMONIUM CHLORIDE, ON METABOLISM OF DENTAL PLAQUE MATERIAL. *Benjamin F. Miller, John Muntz and Sigmund Bradel from the Walter G. Zoller Memorial Dental Clinic and the Dept. of Medicine, University of Chicago, Chicago, Illinois.*

This work is based on the following considerations: (a) the *pathogenesis* of dental caries is explained most logically by the theory which postulates that localized accumulations of bacteria initiate the carious process by acid-production or some other metabolic process;

<sup>3</sup>This paper was not read, due to the illness of Dr. Pippin, but is included in this abstract. Analysis omitted from summary by Dr. Kitchin, account not related to the fluorine problem.

<sup>4</sup>Deceased, February, 1940.

<sup>5</sup>Omitted from the summary by Dr. Kitchin, account not related to the fluorine problem.

(b) it has been possible to decrease the incidence of experimental rat caries by adding fluoride or iodoacetate<sup>6</sup> to the diet and water, presumably inhibiting enzymatic processes involved in the growth or metabolism of the oral bacteria, and (c) pure cultures of the microorganisms which are constantly or frequently associated with the lesions of human dental caries are inactivated by very small quantities of a synthetic wetting agent and detergent, alkyl dimethyl benzyl ammonium chloride (Zephiran). As shown by Miller, Baker and Harrison<sup>7</sup>, 2 to 30 micrograms of this compound will completely stop the respiration and/or glycolysis of one billion of these bacteria in a few minutes.

Since it is believed that the metabolism of the mixed organisms in the dental plaque is directly or intimately associated with the formation of the initial carious lesions, and since iodoacetic acid and fluoride may be undesirable for continued application in human cases, we have concentrated our studies on the relatively non-toxic compound, alkyl dimethyl benzyl ammonium chloride. Experiments have been performed on dental plaques *in vitro* and *in vivo*. The "activity" of the plaque has been followed by determination of the total pH drop and the production of lactic acid during a 30 minute period of incubation in 0.5 per cent glucose solution at 37 degrees C.

Under these conditions, plaque material gathered from several areas on human teeth and incubated in 0.2 cc. of the glucose solution produced variable quantities of lactic acid, ordinarily from 5 to 50 micrograms, and sufficient total acid to lower the hydrogen ion concentration by 0.5 to 1.5 pH units. The addition of 70 micrograms of the alkyl ammonium chloride compound (approximately M/1000) reduced the lactic acid production and the pH drop almost to zero in almost every case.

The *in vivo* experiments were performed as follows: Control plaque material was removed from several areas on one side of the mouth and incubated in 0.5 per cent glucose solution. The lactic

<sup>6</sup>Miller, B. F., Proc. Soc. Exp. Biol. and Med., 39, 389; 1938.

<sup>7</sup>Miller, B. F., Baker and Harrison, Proc. Soc. Exp. Biol. and Med., 42, 705; 1939.

acid production and pH drop were determined as above. To corresponding areas on the other side of the subject's mouth a 1:500 aqueous solution of the Zephiran compound (approximately 0.006M) was applied gently with a wet cotton swab for two minutes. At the end of this time the subject was permitted to talk and salivate normally for about 8 to 10 minutes. The treated plaques were then removed and immediately placed in the glucose solution and incubated in same manner as the untreated controls. It was found that plaques subjected to this procedure produced little or no lactic acid or pH drop during the 30 minute period of incubation. Ninety to 100 per cent inhibitions were observed in most experiments.

8. BACTERIAL FLORA IN EXPERIMENTAL DENTAL CARIES OF THE RAT. EFFECT OF FLUORIDE AND IODOACETIC ACID INCORPORATED IN THE DIET. *R. W. Harrison, Zoller Memorial Dental Clinic and the Department of Bacteriology and Parasitology, University of Chicago, Chicago, Ill.*

Bacteriological studies on the oral flora of rats revealed that during the time of development of carious lesions, the numbers of acidogenic microorganisms on the molar teeth surfaces increased. The acidogenic forms commonly encountered were streptococci, staphylococci, micrococci, lactobacilli and monilia. Of these only staphylococci and lactobacilli were consistently found in larger numbers after lesions appeared than before.

Inclusion of fluoride or iodoacetate in the diet of rats, which was shown by Dr. B. F. Miller to decrease the incidence of experimental caries, resulted in a sharp decrease in the numbers of lactobacilli cultivable from the tooth surfaces. The effect of these compounds upon the other flora were less apparent.

The cultures obtained from suspensions of ground normal rat teeth corresponded with surface cultures in variety and proportions of microorganisms. The flora of teeth in which cavity development was inhibited by fluoride or iodoacetate approximated that of normal teeth. Although in the *surface flora* lactobacilli and perhaps staphylococci appeared to be associated with the development of caries,

streptococci predominated in cultures of ground tooth suspensions when gross carious cavities were present.

#### AFTERNOON SESSION

- I. THE DEVELOPMENT OF CARIES IN THE TEETH OF ALBINO RATS FOLLOWING THE EXTIRPATION OF THE SALIVARY GLANDS. *David Weisberger, C. Truman Nelson and Paul E. Boyle, Harvard Dental School, Boston. (Presented by C. Truman Nelson)*

Following extirpation of the major salivary glands of albino rats, a sequence of changes occurs in the oral cavity. The first change is xerostomia; this is followed by collection of food debris, gingivitis, increase in the total concentration of oral flora; and, as early as twenty-two weeks, caries is initiated in the molar teeth. The carious process is primary at the cemento-enamel junction and involves enamel, dentin and cementum.

2. A GENERAL CONSIDERATION OF DEFINITE ORAL MANIFESTATIONS OF SYSTEMIC DISEASE. *E. H. Hatton, Northwestern University Dental School, Chicago, Ill.*

There is no part of the body that is involved in systemic disease more universally than the mouth. This relationship, although recognized by some writers, has not had adequate consideration except in one instance. This is the extensive text in German of Julius Misch, originally published in 1914, entitled *Grenzgebiete der Medizin und Zahnheilkunde*. Recent and current investigations have intensified this relationship rather than diminishing its importance and frequency. For example the classical lesions of the oral mucosa in scurvy, known ever since the disease was first recognized, are no more characteristic and no more frequent than the pathological changes of the tooth pulp which were discovered recently and which even now are not generally known. An attempt was made to review briefly the literature on the general aspects of this subject.



3. ORAL MANIFESTATIONS OF BLOOD DYSCRASIAS. *T. J. Cook, School of Dentistry, University of Pennsylvania, Philadelphia, Pa.*

The establishing of the following facts, (a) that in many instances symptoms have appeared in the mouth as a first sign; (b) that the oral lesions have often been the patient's chief complaint; and (c) that during the progress of certain blood diseases the alveolar bone becomes affected, has made the study of the oral manifestations of blood dyscrasias a most interesting and important one.

The paper was illustrated by motion pictures in color.

4. THE ORAL MANIFESTATIONS OF SOME ENDOCRINE DISORDERS. *Lester R. Cahn, School of Dental and Oral Surgery, Columbia University, New York City.*

A large number of the glands of internal secretion have been suspected of causing changes within the oral cavity. Equivocal clinical proof of these incriminations is wanting in the majority of instances. In hyperparathyroidism, however, there is no doubt that the jaw changes are directly referable to the parathyroid dysfunction for upon the restoration of normal function in these glands the bone lesions heal. For this reason I dwell entirely with hyperparathyroidism.

Approximately 25 per cent of the cases reported in the literature showed giant cell tumors and those cases are briefly abstracted. Undoubtedly many cases have been wrongly reported as representing other bony dystrophies. A number of the oral giant cell tumors made their appearances before a systemic origin had been suspected and were treated as malignant growths for the cure of which the jaws had been amputated. Later the true nature of the trouble was disclosed. It is not necessary to interfere surgically with these tumors for in a number of reports these lesions healed after the parathyroid tumor had been removed.

Frequently the first flagrant sign of the disease was manifested by the jaw lesion. Therefore, in all cases of generalized alveolar resorption or giant cell tumor further investigation of the patient is imperative. Since hyperparathyroidism, if neglected, is a deform-

ing and irreparably crippling disease its early recognition is greatly to be desired.

5. ORAL MANIFESTATIONS OF SYSTEMIC DISEASE—A MOVING PICTURE IN COLOR. *J. R. Blayney, Walter G. Zoller Memorial Clinic, University of Chicago, Chicago, Ill.*

Not infrequently the dentist will see oral manifestations of systemic disease before the patient consults a physician or before the patient himself is aware of the presence of such changes. If for no other reason the dentist should be familiar with the conditions frequently visualized in the oral mucosa. During the past year we have attempted to record, by the use of the ciné color photography, some of the oral lesions observed in our patients.

The following is a partial list of lesions included in the film: Lupus Erythematoses; Lichen Planus of Oral Mucosa; Chronic Glossitis; Pemphigus; Fusion of Tongue to Mandible with Agensis, of Teeth in Region of Fusion; Facial Hemiatrophy with Arrest of Dental Development; Granuloma Pyogenicum; Acromegalia; Lipoma in Retromolar Fossa; Familial Hereditary Telangiectasia; Erythema Multiforme; Mucous Patch of Tonsil and Soft Palate; Bismuth Line from Anti-Leutic Treatment; Lucoplakia of Buccal Mucosa; Ulcerating Carcinoma of Tonsil.

6. ORAL LESIONS OF THE SOFT TISSUES IN NUTRITIONAL DEFICIENCY STATES. *Bruce K. Wiseman, College of Medicine, Ohio State University, Columbus, Ohio.*

Nutritional deficiencies involve the metabolism of oxygen, water, proteins, carbohydrates, fats, mineral elements and the vitamins. Deficiencies in these substances are, by custom, referred to dietary defects; however, nutrition depends not only upon the intake of essential substances but also upon such factors as digestion, absorption and utilization of the more than 30 substances required for health. From the standpoint of the production of oral lesions the utilization of certain vitamins is particularly important. Among these, nicotinic acid and riboflavin have recently been shown to pro-

duce lesions of the mucous membranes, and examples of these were shown. Newer facts that suggest the importance of vitamins C and K to the oral surgeon were amplified. The relationship of ulcerative and herpetic stomatitis to faulty nutrition was also discussed.

7. SYPHILIS OF THE MOUTH. *W. N. Taylor, College of Medicine, Ohio State University, Columbus, Ohio.*

A presentation dealing with hazards to the dentist in his professional contacts with early and late syphilis of the face, mouth, tongue and throat.

The paper is illustrated by lantern slides.

8. ORAL MANIFESTATIONS OF EXPERIMENTAL DIETARY DEFICIENCIES IN MONKEYS. *Norman H. Topping and H. F. Fraser, National Institute of Health, Washington, D. C.*

The effects upon the oral soft tissues in monkeys on selected dietary deficiencies was studied. Deficient animals showed varying manifestations of gingivitis, stomatitis, periodontal disease and noma. Comparable animals maintained on the diet of natural foods, and the artificial control diet, showed little or no evidence of such oral pathology. Ten additional monkeys on a stock diet were inoculated by swabbing, with and without trauma, the gums and mouth mucosa with material freshly transferred from the necrotic tissue of depleted animals. No evidence of gingivitis or stomatitis developed in any of these inoculated animals.

9. MUCOUS MEMBRANE DISTURBANCES OF THE ORAL CAVITY IN RELATION TO ENDOCRINE DISTURBANCES. *David Weisberger, Harvard Dental School, Boston, Mass.*

A group of patients in whom subjective symptoms of the oral cavity occur which are followed by lesions of the mucous membranes are found to have an associated disorder of the menstrual cycle. Replacement therapy with estrogenic hormone is followed by improvement and, in most cases, regression of the lesions.

10. DENTAL CONDITIONS IN DIABETIC CHILDREN. *George Stein, Boston, Mass.*

Dental conditions of a group of eighty-two patients who had

acquired diabetes during childhood were examined. In forty-one of these patients a survey could be carried on for more than two years up to a time of seven years. In accord with the findings of Boyd and Drain a low caries incidence could be observed.

1. If there was a marked caries susceptibility at the onset of the diabetes, the progress of caries and the acquisition of new caries was slowed. The average number of carious teeth of all patients in the age from four years to twenty-nine years was 6.4; the average increase in carious teeth reduced to one year is 0.72 per year.

2. Most of the caries is fissure caries.

3. The caries incidence of anterior teeth is very low. The difference in nutrition seems not to be the only reason for this low caries susceptibility, as these patients have a normal mixed diet. Other facts, as for instance changes in the composition of the salivas, seem to play a part, as will be discussed. The deposition of calculus is very marked, especially in the permanent dentition. An ochre yellow calculus is frequently found. There is a very marked tendency for periodontal disturbances in the permanent dentition, which is shown in the following table:

Age	Up to 10 Years	11-14 Years	15-18 Years	Over 18	Total
Number of cases.....	20	19	20	23	82
With Periodontal disturbances .....	1	7	10	15	33
Without Periodontal disturbances .....	19	12	10	8	49

Never have signs of pyorrhea been seen in the deciduous dentition. This table includes all cases of periodontal disturbances from a slight degree up to the severest forms, which in the groups over eighteen years show an incidence of 25 per cent and three of those patients have lost all their teeth by loosening. Only those cases have been included in the table which show a tendency for accelerated eruption, pocket formation, pathological drifting, and loosening of the teeth. Simple gingivitis was excluded.



AMERICAN COLLEGE OF DENTISTS  
 GENERAL STATEMENT, CONSTITUTION AND BY-LAWS, AND  
 REGISTER OF MEMBERSHIP AS OF APRIL 30, 1940  
 OTTO W. BRANDHORST, D.D.S., *Secretary*  
*St. Louis, Missouri*

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I. GENERAL STATEMENT

*1. Objectives*

The American College of Dentists was organized on August 20, 1920. Those who established it believed there was need for an organization that would be imbued with the highest ideals for the dental profession and would lend its influence to every move-

ment having for its purpose the advancement of professional objectives and the betterment of dental service to humanity.

The first Constitution contained the following statements as to the general purposes of the College:

- (a) To promote the ideals of the dental profession.
- (b) To advance the standards and efficiency of dentistry.
- (c) To stimulate graduate study and effort by dentists.
- (d) To confer Fellowship in recognition of meritorious achievement, especially in dental science, art, education and literature.
- (e) To improve public understanding and appreciation of oral health-service.

To these purposes and objectives the College has steadfastly devoted its efforts and by so doing has created greater opportunities in the profession itself and also elevated dentistry in the eyes of other professions and the public.

## *2. Membership*

Membership in the College consists of two classes: active and honorary.

### *1. Active*

Active members consist of dentists and others who have made notable contributions to dentistry, or who have done graduate, scientific, literary or educational work of merit.

### *2. Honorary*

Honorary members consist of those who "through eminent service have promoted the advancement of dentistry or furthered its public appreciation."

Today, the College has 918 active Fellows and 23 Honorary Fellows.

### *3. Eligibility*

Eligibility to membership is determined by a Board of Censors, after the individual has been nominated by two Fellows. Upon the recommendation of the Board of Censors, the Board of Regents may elect and extend the invitation to Fellowship.

The American College of Dentists will not, knowingly, accept into Fellowship persons holding membership in any similar honorary dental organization. Membership in the College is automatically forfeited by members who (a) give courses of instruction in dentistry, for remuneration, under any conditions other than those of an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital, or other accredited 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; or (d) are guilty of unethical or unprofessional conduct, or of moral turpitude; or (e) are in arrears for two fiscal years in the payment of annual dues, unless the reason therefor is presented to the Regents and the delay approved by them.

The Regents shall note and announce for the College the occurrence of automatic forfeiture of membership. But, to insure justice, before declaring a forfeiture of membership the Board of Regents shall privately inform the affected member of the Board's tentative judgment, and shall give him ample opportunity to present evidence showing that forfeiture did not in fact occur.

### *3. Government*

The Board of Regents, consisting of the officers and five (5) elective Regents, constitute the governing board of the College, except as otherwise provided.

The Regents hear the reports of all committees, consider all recommendations of committees before bringing them to the College for action; conduct all business matters not otherwise provided for; elect and invite persons to membership and, in general, look after the conduct of the organization.

The Board of Censors, known only to the Regents, considers the

qualifications of all persons nominated for active Fellowship and recommends for membership. No person can be invited to active membership unless he has received the approval of a four-fifths vote of the Board of Censors.

#### 4. *Committee Activities*

While the College usually holds one convocation each year, its activities continue from convocation to convocation. The following standing committees are active throughout the year, and make their annual reports at the convocations, and also present regular progress reports to the Board of Regents:

Centennial Celebration	Journalism
Certification of Specialists	Necrology
Dental Relations	Nominations
Education	Oral Surgery
Endowments	Prosthetic Service
History	Research
Hospital Dental Service	Socio-Economics

The field covered by these committees can be summarized as follows:

The *Centennial Committee* has been engaged in promoting the Centennial Celebration held in Baltimore last March. Their work is now completed and the committee will be disbanded at the next convocation.

The *Committee on Certification of Specialists* has been studying the best approaches to the enactment of laws for the certification of specialists.

The College has always stood for higher educational standards and its *Committee on Education* has sought to support these ideals through its studies in the educational field.

A *Committee on Endowments* is busily engaged in seeking funds for the endowment of research projects.

The *History Committee* is delving through the pages of history in order to bring to light any facts of interest to dentistry



thus far overlooked and to give credit to individuals for their contributions in the past.

The *Hospital Dental Service Committee* has made extensive surveys to ascertain the best means of improving dental service in hospitals and with the *Committee on Oral Surgery* has aided greatly in a better understanding of medico-dental problems.

The *Commission on Journalism* has sought to divest our literature of commercial control, believing that the profession should control its own literature, just as it now controls its organization and education.

The *Prosthetic Service Committee* has made exhaustive studies in this field and has given a great deal of attention to the dental laboratory and technician problem.

The *Committee on Research*, believing that through research a better dental health service would result and a closer medico-dental relationship would be established, has formulated plans for the granting of research fellowships and grants-in-aid to men in various fields of research.

The College is ever mindful of its duty to the public and, through its *Committees on Socio-Economics* and *Dental Relations*, it is attempting to meet its obligations by developing plans for a better and more extensive dental health service, and to acquaint the public and other professions with its findings and recommendations.

There are other committees, such as the Ceremonial, and special committees, which serve to round out the activities of the College in various directions.

Each of these committees is manned with persons especially interested in its work and the advancement of dentistry. They labor far into the night for the benefit of the public and the glory of the profession.

### 5. Sections

The membership of the College is representative of the dental profession in the United States, Canada and several foreign countries.

Wherever there are sufficient Fellows and it is their desire, sections may be formed with the approval of the Board of Regents. The object of these sections is to carry on the work of the College in their communities and to solve local problems as they relate to the College and the profession at large.

There are at present 18 such sections. They send delegates to the annual meetings of sectional representatives, where College problems are discussed.

#### 6. *Courses of Instruction*

The College takes the position that courses of instruction in dentistry should be under the auspices of the profession. To this end the Constitution provides for automatic forfeiture of membership when (a) "courses of instruction in dentistry are given for remuneration under any auspices other than those of a dental society, dental school, or other professional or educational agency"; or (b) "courses of instruction in dentistry are given in a privately owned undergraduate or postgraduate dental school, or in a school associated with an independent hospital or dispensary but not an organic part of it"; or, (c) "exorbitant fees for courses of instruction in dentistry are exacted, under any auspices."

The By-laws interpret this provision to mean "that in accord with the designated and implied obligations of membership in the College, each member will be fraternally ready at all times to give to dental colleagues, privately and publicly, the benefit of any knowledge of, or experience in, dental practice he may have that would be useful; but will give courses of instruction in dentistry, *for remuneration*, only as an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital or other accredited professional or educational agency."

The pledge, now exacted from every person as he accepts membership affirms his support of this principle.

#### 7. *The Pledge*

Every *active* Fellow takes the following pledge when Fellowship is conferred upon him:

"I have read a copy of the Constitution and By-Laws of the American College of Dentists.

"Recognizing that the American College of Dentists seeks to exemplify and develop the highest traditions and aspirations of our calling, I hereby accept, as a condition of Fellowship in the College, all its principles, declarations and regulations.

"I pledge myself, as a member of the American College of Dentists, to uphold to the best of my ability the honor and dignity of the dental profession, and to meet my ethical obligations to my patients, to my fellow practitioners, and to society at large.

"I also pledge myself to refrain from all practices that tend to discredit the profession, including employment, or holding a proprietary interest, in commercial corporations supplying dental products or services to either the profession or the public; giving testimonials for such products or services; participating in radio programs that advertise proprietary preparations sold to the public; bartering in fees; making excessive charges without rendering commensurate service; dividing fees with other health-service practitioners, or in any other manner taking advantage of the ignorance or confidence of the patient.

"I further pledge myself to devote my best endeavors to the advancement of the dental profession, and to perfect myself in every way possible in the science and art of dentistry. I shall be ready at all times to give freely to dental colleagues, privately or publicly, the benefit of any knowledge or experience I may have that would be useful to them; but will give courses of instruction in dentistry, for remuneration, only as an appointed teacher serving under the auspices of a dental school, dental society, hospital, or other accredited professional or educational agency."

## II. CONSTITUTION AND BY-LAWS

### CONSTITUTION

#### *Article I: Name and Objects*

This organization, named 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. Suitable means shall be used to attain these and related objectives.

## *Article II: Membership*

*Section 1: Classes of members.* There are two classes of members: active and honorary. Each member receives the title of Fellow.

*Section 2: Active members.* 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.

*Section 3: Honorary members.* Any person who, through eminent service, has promoted the advancement of dentistry, or furthered its public appreciation, may be elected to honorary membership.

*Section 4: Election to membership.* After a nominee for membership has received the approval of a four-fifths vote of the Board of Censors (Art. III, Sec. 3), he may be elected by a majority vote of the Board of Regents (Art. III, Sec. 2).

*Section 5: Forfeiture of membership.* Sub-section A. Membership in the College shall be automatically forfeited by members who

(a) give courses of instruction in dentistry, *for remuneration*, under any conditions other than those of an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital, or other accredited 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 it 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; or

(d) are guilty of unethical or unprofessional conduct, or of moral turpitude; or

(e) are in arrears for two fiscal years in the payment of annual



dues, unless the reason therefor is presented to the Regents and the delay approved by them.

Sub-section *B*. The Board of Regents shall note and announce, for the College, the occurrence of automatic forfeiture of membership. But, to insure justice before declaring a forfeiture of membership, the Board of Regents shall privately inform the affected member of the Board's tentative judgment, and shall give him ample opportunity to present evidence showing that forfeiture did not in fact occur.

### *Article III: Officers*

*Section 1: Officers.* The officers of the College are, President, President-elect, Vice-president, Secretary, and Treasurer.

*Section 2: Regents.* A Board of Regents, consisting of the President, the President-elect, the Vice-president, the Secretary, the Treasurer, the Editor (Art. IV) and five additional members, shall conduct the business of the College, excepting as otherwise provided.

*Section 3: Censors.* A Board of Censors, consisting of five members, shall receive all nominations for membership.

### *Article IV: Journal*

*Section 1: Title.* The *Journal of the American College of Dentists* is the official periodical publication.

*Section 2: Board of Editors.* The *Journal* shall be conducted by a Board of Editors, consisting of the Regents of the College and such additional members as the Regents may select.

### *Article V: Sections*

Sections of the College may be organized, in geographical centers, to support and promote locally the aims, purposes, functions and ideals of the College.

### *Article VI: Standing Committees*

Standing committees may be created by the Board of Regents. Their membership shall be appointed by the President.

*Article VII: Meetings*

*Section 1: Annual meetings.* The College shall hold a meeting at least once in each calendar year.

*Section 2: Special meetings.* The Board of Regents, by a majority vote, may call special meetings of the College or of the Regents. No other authority has power to call special meetings of either the College or the Regents.

*Article VIII: Financial*

*Section 1: Initiation fee.* The membership initiation fee shall be one hundred dollars (\$100.00), or more.

*Section 2: Annual dues.* The annual dues shall be ten dollars (\$10.00), or more.

*Section 3: Remission of fees.* (a) For special reasons in individual cases, the Board of Regents may remit initiation fees, annual dues and special fees.

(b) Honorary Fellows shall be exempt from the payment of initiation fees and annual dues.

*Article IX: Colors*

The colors of the College are lilac and American rose.

*Article X: Quorum*

Thirty-five members constitute a quorum.

*Article XI: Amendments*

Amendments of this Constitution may be made by affirmative vote of a majority of the total membership.

## BY-LAWS

*Section A: Members*

1. *Nomination and election.* Any member of the College may nominate candidates for membership. Nominations must be presented, on copies of the official nomination form, to the Secretary

at least 90 days before the date of the annual meeting at which action on the nominations may be desired, to enable the Secretary to forward them to the Board of Censors in accord with the rules of the Regents. Knowledge of nominations shall be kept inviolate by the nominators, and by the Secretary, Censors and Regents, until action is formally announced.

2. *Admission.* The procedures attending admission of members, and conferring of Fellowships, shall be determined by the Regents. The title of Fellow of the American College of Dentists (F.A.C.D.) may not be used by, and the certificate and academic apparel of the College shall not be presented to, a member before Fellowship has been conferred upon him.

3. *Recall of election.* The Regents may recall the announcement of election to membership for any person who fails to complete the requirements for Fellowship by the close of the first annual meeting after the original notification.

4. *Fellowships conferred in absentia.* In the unavoidable absence of a member-elect, or for any unusual reason, the College, on recommendation by the Regents, may confer Fellowship in absentia.

5. *Interpretation of a constitutional provision.* Art. II (membership) Section 5 (forfeiture of membership), Sub-section A, *Clause (a)*—which provides for automatic forfeiture of membership by any member who would give a “course of instruction in dentistry under any auspices other than” those there specified—is hereby interpreted to mean, that, in accord with the designated and implied obligations of membership in the College for the attainment of the stated objectives of the College, each member will be fraternally ready at all times to give to dental colleagues, privately or publicly, the benefit of any knowledge of, or experience in, dental practice he may have that would be useful to them; but will give “courses of instruction in dentistry”, *for remuneration*, only as an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital or other accredited professional or educational agency.

*Section B: Officers*

1. *Election of Officers.* The President, the President-elect, the Vice-president, the Secretary, and the Treasurer shall be elected by the College, at annual meetings, to serve for one year or until their successors are elected and installed.

2. *Election of Regents.* One member of the Board of Regents shall be elected annually by the College, from the general membership, to serve for five years. For at least one year after the completion of a five-year term, he shall be ineligible for re-election.

3. *Nomination of officials and creation of Nominating Committee.* The elective officials shall be selected from nominees presented, at the annual business meeting, (a) by the Nominating Committee and (b) by individual members who may make independent nominations from the floor. During the meeting at which this provision becomes effective, five Fellows shall be selected by the President to serve as the Nominating Committee, subject to confirmation by the Board of Regents. Their terms shall range successively, by designation of the President, from 1 to 5 years. Thereafter, one Fellow shall be appointed annually by the President, for a term of five years, subject to confirmation by the Board of Regents.

4. *Election of Censors.* The Board of Regents shall annually elect one member of the Board of Censors to serve for five years. He shall be ineligible for re-election. When vacancies occur in the Board of Censors, the Board of Regents shall present three names to the President, who shall select one therefrom to serve for the unexpired term.

5. *Duties.* (a) The *President* shall preside at all meetings of the College and of the Regents, and at all convocations where Fellowships are conferred.

(b) In the absence or disability of the President, the *Vice-president* shall perform the duties of the President.

(c) The *Secretary* shall attend, and keep records of, all meet-



ings of the College and the Board of Regents. All funds of the College received by him shall be promptly sent to the Treasurer. He shall issue orders on the Treasurer for the payment of all bills that are presented in accord with the rules of the Board of Regents, and perform such other duties as usually pertain to his office, or as the College or Regents may direct.

(d) The *Treasurer* shall disburse funds only on the order of the Secretary, and in accord with the rules of the Regents. At each annual meeting he shall make a detailed written report to the Board of Regents of the funds received and disbursed by him. At the expense of the College, he shall furnish a bond for the faithful performance of his trust. He shall be, ex-officio, a member of the Finance and Budget Committee.

(e) The *Board of Regents*, besides performing the duties specified in the Constitution and By-Laws, shall make detailed reports at the annual meetings of the College.

(f) The *Board of Censors* shall make careful investigations of the character and attainments of all nominees for membership, received from the Secretary on copies of the official nomination form, and shall recommend to the Regents only such persons as are deemed worthy of Fellowship.

#### *Section C: Board of Editors*

1. *Officers.* The *Board of Editors* of the *Journal* shall elect an Editor, an Associate Editor, and an Assistant Editor; and a maximum of ten Contributing Editors for terms not to exceed five years. No one shall be eligible to serve in the same position for a term or terms exceeding a total of five years.

2. *Duties.* The Board of Editors shall perform all duties pertaining to the *Journal* that may be properly assigned to a group of editors and managers of a periodical.

#### *Section D: Sections*

1. *Application.* Local organizations of members of the College may petition to the Regents to be accredited as sections of the College.

2. *By-Laws.* (a) To be accredited as a section, a local organization must adopt by-laws for its government in harmony with the principles of the Constitution and By-Laws of the College, as determined by the Regents; and, with the petition to be made an accredited section, shall file with the Secretary of the College a copy of the said by-laws.

(b) Amendments of a section's by-laws, to become operative, must be approved by the Regents.

3. *Action by the Regents.* The Secretary of the College shall forward copies of each sectional petition and by-laws to the Regents for their decision, before notifying the organizers of a section that their petition has been accepted.

4. *Charter.* Upon acceptance of a petition, the section shall be duly accredited as such and a copy of the sectional charter, as prescribed by the Regents, shall be forwarded to the section by the Secretary of the College.

5. *Jurisdiction.* On all questions affecting jurisdiction of the College over a section or its affairs, whether raised in behalf of the College or of a section, the Regents shall have authority to determine.

6. *Dissolution.* Any section may be dissolved, for cause, by the Regents; but dissolution of a section would not affect any individual rights and obligations of membership in the College.

#### *Section E: Standing Committees*

1. *Vacancies.* The President shall fill vacancies in the standing committees of the College.

2. *Duties.* Each standing committee shall perform such duties as may be assigned to it by the Regents, and before each annual meeting shall present to the Regents a full report of its activities.

#### *Section F: Financial*

1. *Initiation Fee.* The initiation fee shall be the minimum amount specified in the Constitution (\$100.00).

2. *Annual dues.* The annual dues shall be the minimum amount specified in the Constitution (\$10.00).

### *Section G: Amendments*

1. *Amendment of the Constitution.* Proposed amendments to the Constitution may be presented at any annual meeting and shall be voted upon at the succeeding annual meeting. Copies of all proposed amendments to the Constitution, with an accompanying ballot for a vote by mail, must be sent by the Secretary of the College to each Fellow at least three months before the date of the succeeding annual meeting.

2. *Amendment of the By-Laws.* Amendments to the By-Laws may be presented at any annual meeting and adopted by a majority of the members present and voting.

## III. REGISTER OF MEMBERSHIP

### I. DECEASED FELLOWS<sup>1</sup>

Charles L. Alexander, '28	Charlotte, N. C.	October 13, 1933
Charles C. Allen, '22	Kansas City, Mo.	July 16, 1930
Charles F. Ash, '22	New York, N. Y.	January 25, 1938
D. D. Atkinson, '22	Brunswick, Ga.	January 14, 1924
John H. Baldwin, '23	Louisville, Ky.	January 20, 1929
Lafayette L. Barber, '23	Toledo, Ohio	November 23, 1929
Albert M. Barker, '33	San Jose, Calif.	December 22, 1938
Thomas J. Barrett, '21	Worcester, Mass.	December 29, 1930
L. P. Bethel, '23	Columbus, Ohio	January 17, 1936
Theodore B. Beust, '28	Louisville, Ky.	November 24, 1937
*John F. Biddle, '21	Pittsburgh, Pa.	January 19, 1926
**Arthur D. Black, '21	Chicago, Ill.	December 7, 1937
George A. Bowers, '32	Nashua, N. H.	December 18, 1935
Charles A. Brackett, '22	Newport, R. I.	March 20, 1927
Frank T. Breene, '26	Iowa City, Iowa	October 15, 1931
Truman W. Brophy, '21	Chicago, Ill.	February 3, 1928
George K. Burgess, '30	Washington, D. C.	July 2, 1932
John H. Cadmus, '29	Chicago, Ill.	October 31, 1934

<sup>1</sup>Numerals following names indicate years of admission to membership.

\*A founder.

\*\*A founder and organizer.

H. Wood Campbell, '25	Suffolk, Va.	March 31, 1931
Calvin S. Case, '23	Chicago, Ill.	April 16, 1923
J. E. Chace, '34	Ocala, Fla.	April 30, 1940
David T. Chase, '37	Portland, Ore.	October 23, 1936
James Francis Clark, '34	Pawtucket, R. I.	March 7, 1940
W. R. Clark, '23	Clear Lake, Iowa	August 1, 1932
Albert W. Crosby, '36	New Haven, Conn.	November 11, 1938
Levitt E. Custer, '22	Dayton, Ohio	January 3, 1924
S. E. Davenport, Sr., '32	New York, N. Y.	June 7, 1934
W. S. Davenport, Sr., '26	Paris, France	February 26, 1938
Horace M. Davis, '24	Baltimore, Md.	February 8, 1935
Lyndall L. Davis, '27	Chicago, Ill.	February 25, 1937
Roscoe A. Day, '36	San Francisco, Calif.	June 28, 1939
Frank H. Dean, '24	Worcester, Mass.	September 10, 1934
W. H. DeFord, '32	Des Moines, Iowa	March 22, 1932
Frank A. Delabarre, '28	Boston, Mass.	April 15, 1938
Charles L. Drain, '34	Iowa City, Iowa	June 5, 1937
Forrest G. Eddy, '22	Buttonwoods, R. I.	May 17, 1939
S. Eschelman, '23	Buffalo, N. Y.	September 26, 1932
Luther A. Faught, '28	Philadelphia, Pa.	November 23, 1933
Oren Henry Gaver, '31	Baltimore, Md.	March 28, 1940
*William A. Giffin, '21	Detroit, Mich.	July 3, 1929
Steele F. Gilmore, '32	Princeton, Ind.	July 15, 1932
Hart J. Goslee, '23	Chicago, Ill.	May 31, 1930
Frank A. Gough, '26	Brooklyn, N. Y.	August 15, 1938
Horace P. Gould, '23	Brooklyn, N. Y.	April 4, 1928
Louis Graham, '22	San Francisco, Calif.	February 19, 1932
*Clarence J. Grieves, '21	Baltimore, Md.	November 4, 1927
T. L. Grisamore, '23	Chicago, Ill.	October 16, 1939
W. M. Griswold, '33	London, England	July 13, 1935
Charles W. Hall, '23	Milwaukee, Wis.	June 10, 1936
Frank A. Hamilton, '26	Indianapolis, Ind.	September 3, 1937
Charles A. Hawley, '27	Washington, D. C.	July 22, 1929
F. R. Henshaw, '22	Indianapolis, Ind.	May 27, 1938
Frank W. Hergert, '29	Seattle, Wash.	August 31, 1937
Frank O. Hetrick, '22	Ottumwa, Kansas	May 17, 1934
Finis Marlin Hight, '31	Houston, Tex.	August 6, 1939
DeLos L. Hill, '23	Atlanta, Ga.	May 7, 1931
*Thomas P. Hinman, '21	Atlanta, Ga.	March 19, 1931
A. Hugh Hipple, '21	Omaha, Neb.	July 29, 1933

\*A founder.



N. S. Hoff, '22	Ann Arbor, Mich.	December 1, 1926
Thomas A. Hogan, '30	Pittsburgh, Pa.	July 17, 1930
J. A. C. Hoggan, '23	Richmond, Va.	February 28, 1928
David A. House, '24	Indianapolis, Ind.	January 8, 1933
Edward J. Howard, '32	San Francisco, Calif.	November 16, 1931
Claude N. Hughes, '38	Atlanta, Ga.	March 8, 1938
Alfred O. Hunt, '27	Omaha, Neb.	January 12, 1934
*Victor H. Jackson, '21	New York, N. Y.	January 26, 1929
Albert Wade Jarman, '31	Philadelphia, Pa.	May 20, 1933
*C. N. Johnson, '21	Chicago, Ill.	July 17, 1938
H. Herbert Johnson, '23	Crescent, Ga.	May 23, 1937
H. Leonidas Keith, '37	Wilmington, N. C.	July 29, 1938
*C. Edmund Kells, '21	New Orleans, La.	May 7, 1928
Frederick C. Kemple, '38	New York, N. Y.	May 21, 1938
Albert H. Ketcham, '30	Denver, Colo.	December 6, 1935
Otto G. Krause, '27	Milwaukee, Wis.	January 31, 1940
Charles Lane, '26	Detroit, Mich.	April 28, 1938
A. C. LaTouche, '23	Los Angeles, Calif.	May 10, 1938
Alfred P. Lee, '23	Philadelphia, Pa.	April 8, 1940
Edward G. Link, '22	Rochester, N. Y.	July 12, 1933
Benjamin F. Luckey, '23	Paterson, N. J.	April 29, 1930
Chalmers J. Lyons, '22	Ann Arbor, Mich.	May 18, 1935
C. J. Marcinziewicz	Detroit, Mich.	April 23, 1940
Herman A. Maves, '28	Minneapolis, Minn.	March 19, 1932
Charles J. McCarthy, '36	San Francisco, Calif.	January 23, 1940
Harris W. McClain, '29	Chicago, Ill.	July 16, 1934
Wm. H. McCracken, '38	Detroit, Mich.	September 12, 1939
Arthur R. McDowell, '27	San Francisco, Calif.	May 14, 1938
Louis Meisburger, '22	Buffalo, N. Y.	August 10, 1927
George H. Mengel, '32	El Paso, Tex.	February 14, 1932
Clinton T. Messner, '29	Washington, D. C.	May 28, 1936
George E. Mitchell, '23	Haverhill, Mass.	August 23, 1934
J. N. C. Moffat, '31	Memphis, Tenn.	August 14, 1933
George S. Monson, '22	St. Paul, Minn.	May 27, 1933
W. D. M. Moore, '27	Chicago, Ill.	July 19, 1937
L. G. Noel, '23	Nashville, Tenn.	January 20, 1927
Edmund Noyes, '23	Chicago, Ill.	March 28, 1927
Robert Todd Oliver, '26	Washington, D. C.	July 11, 1937
Forrest H. Orton, '24	San Francisco, Calif.	March 1, 1933
John D. Paterson, '27	Kansas City, Mo.	January 12, 1930

\*A founder.

Frank L. Platte, '26	Berkeley, Calif.	June 27, 1927
William H. Potter, '26	Boston, Mass.	July 27, 1928
William B. Power, '29	Seattle, Wash.	March 29, 1940
Merle M. Printz, '25	Chicago, Ill.	February 10, 1934
James H. Prothero, '23	Chicago, Ill.	April 8, 1929
H. A. Pullen, '32	Buffalo, New York	February 17, 1935
G. A. Rawlings, '25	Bismarck, N. D.	April 16, 1933
Harry J. Ray, '34	Aiken, S. C.	June 27, 1936
Frank B. Rhobotham, '29	Chicago, Ill.	May 30, 1934
Charles E. Rice, '28	Los Angeles, Calif.	February 5, 1935
William Rice, '27	Boston, Mass.	November 23, 1932
U. G. Rickert, '23	Ann Arbor, Mich.	October 21, 1938
W. M. Robey, '38	Charlotte, N. C.	July 10, 1938
F. E. Rodriguez, '33	Washington, D. C.	October 21, 1932
Albert R. Ross, '23	Lafayette, Ind.	May 13, 1938
Louis Rossman, '38	Baltimore, Md.	April 2, 1940
Arthur T. Rowe, '34	New York, N. Y.	December 12, 1935
Joseph Samuels, '32	Providence, R. I.	February 12, 1939
John Scholten, '32	Cedar Rapids, Iowa	March 8, 1938
Wallace Seccombe, '21	Toronto, Canada	January 16, 1936
Samuel L. Silverman, '22	Atlanta, Ga.	October 7, 1934
Alfred R. Starr, '23	New York, N. Y.	October 27, 1924
Fred A. Stevenson, '27	Montreal, Canada	August 9, 1934
Edward F. Sullivan, '32	Boston, Mass.	March 26, 1938
Bert S. Sutherland, '28	Owosso, Mich.	October 23, 1931
Herbert S. Sutphen, '23	Sparta, N. J.	April 20, 1939
A. C. Thompson, '28	Detroit, Mich.	March 22, 1939
Walter G. Thompson, '30	Hamilton, Canada	January 9, 1939
George K. Thomson, '26	Halifax, N. S.	May 2, 1935
A. W. Thornton, '21	Montreal, Canada	February 11, 1931
William D. Tracy, '23	New York, N. Y.	February 11, 1937
Frank T. Van Woert, '23	New York, N. Y.	September 9, 1927
Wm. W. Walker, '23	New York, N. Y.	June 14, 1925
Eugene R. Warner, '22	Denver, Colo.	March 28, 1936
F. H. Waters, '30	Ames, Iowa	July 6, 1937
Harry L. Watson, '32	Manchester, N. H.	March 1, 1936
A. E. Webster, '22	Toronto, Canada	November 6, 1936
E. K. Wedelstaedt, '22	St. Paul, Minn.	June 1, 1931
W. H. Weston, '22	Sydney, Australia	February 26, 1933
Herbert L. Wheeler, '22	New York, N. Y.	March 23, 1929
J. Leon Williams, '24	New York, N. Y.	February 22, 1932

George H. Wilson, '21	Cleveland, Ohio	April 12, 1922
George B. Winter, '23	St. Louis, Mo.	March 28, 1940
Craig M. Work, '32	Ottumwa, Ia.	March 29, 1940
Albert M. Wright, '23	Troy, N. Y.	November 8, 1926
J. Lowe Young, '29	New York, N. Y.	May 3, 1931
R. C. Young, '38	Anniston, Ala.	March 12, 1938

*Total, 143*

## 2. HONORARY FELLOWS<sup>1</sup>

Blair, Vilray P., '38, Metropolitan Building, St. Louis, Mo.  
 Blauch, Lloyd E., '39, 7423-12th St., N. W. Washington, D. C.  
 Briggs, Lyman J., '40, National Bureau of Standards, Washington, D. C.  
 Carey, Eben James, '39, Marquette University, Milwaukee, Wis.  
 Cumming, Hugh S., '32, U. S. Public Health Service, Washington, D. C.  
 Cutter, William D., '37, 535 N. Dearborn St., Chicago, Ill.  
 Guild, Frederick T., '37, Brown University, Providence, R. I.  
 Hanzlik, Paul J., '33, Leland Stanford University, San Francisco, Calif.  
 Heatwole, Timothy Oliver, '40, Walbert Apartments, 1800 N. Charles St., Baltimore, Md.  
 Kraus, Edward H., '32, University of Michigan, Ann Arbor, Mich.  
 Leake, Chauncy D., '36, University of California, San Francisco, Calif.  
 Leary, Timothy, '31, 44 Burroughs St., Jamaica Plain, Mass.  
 Luckhardt, Arno B., '33, 5216 Greenwood Ave., Chicago, Ill.  
 McQuarrie, Irvine, '38, University of Minnesota, Minneapolis, Minn.  
 Miller, Sydney Robotham, '40, 1115 St. Paul St., Baltimore, Md.  
 Murphy, Francis Daniel, '39, Milwaukee County Hospital, Milwaukee, Wis.  
 Parran, Thomas, '40, U. S. Public Health Service, Washington, D. C.  
 Riggs, Charles E., '31, 3105-36th St., Washington, D. C.  
 Schwitalla, Fr. A. M., '38, St. Louis University, St. Louis, Mo.  
 Sinai, Nathan, '34, University of Michigan, Ann Arbor, Mich.  
 Souder, Wilmer, '30, National Bureau of Standards, Washington, D. C.  
 Thompson, Lewis R., '32, U. S. Public Health Service, Washington, D. C.  
 Waller, Clifford E., '33, 1103 W. Highland Drive, Woodside, Md.

*Total, 23*

## 3. ACTIVE FELLOWS<sup>1</sup>

Abbott, Rush P., '34, West Point, Miss.  
 Abbott, Thomas Richard, '38, 920 S. 37th St., Milwaukee, Wis.

<sup>1</sup>Numerals following names indicate years of admission to membership.

- Adams, Philip Edwin, '37, 106 Marlborough St., Boston, Mass.  
 Addie, Charles B., Sr., '37, 1812 Spring Garden Rd., Philadelphia, Pa.  
 Aiguier, James E., '37, 1116 Medical Arts Bldg., Philadelphia, Pa.  
 Aisenberg, Myron S., '33, Baltimore Coll. of Den. Surgery, Baltimore, Md.  
 Alden, Harold W., '35, 160 Main St., Northampton, Mass.  
 Alexander, Howard, '33, 1305 E. 63rd St., Chicago, Ill.  
 Alford, Frank O., '39, First Natl. Bank Bldg., Charlotte, N. C.  
 Altfillisch, Henry J., '29, 722 Roshek Bldg., Dubuque, Ia.  
 Amies, Arthur, '38, care Australian College of Dentistry, 193 Spring St., Melbourne, Australia  
 Anderson, George M., '31, 831 Park Ave., Baltimore, Md.  
 Applegate, Oliver C., '38, 2015 Woodside Rd., Ann Arbor, Mich.  
 Applegate, Stephen G., '39, 630 E. Jefferson Ave., Detroit, Mich.  
 Archer, Wm. Harry, Jr., '38, 804 Professional Bldg., Pittsburgh, Pa.  
 Armbrecht, Edward C., '38, 77-12th St., Wheeling, W. Va.  
 Arnold, Edmond B., '38, 3306 Fannin St., Houston, Tex.  
 Arnold, Joseph P., '37, 1021 Esperson Bldg., Houston, Tex.  
 Arnott, Alwyn J., '32, care Dental Hospital, Chalmers St., Sydney, Australia  
 Asch, Andrew J., '39, 8 West 40th St., New York, N. Y.  
 Ash, Percy A., '38, 137 Macquarie St., Sydney, Australia  
 Ashbrook, John Stewart, '28, 310 Medical Arts Bldg., Pittsburgh, Pa.  
 Ashton, John T., '38, 108 N. Washington St., Alexandria, Va.  
 Atkinson, Spencer Roane, '37, First Trust Bldg., Pasadena, Calif.  
 Austin, Louie T., '38, Mayo Clinic, Rochester, Minn.  
 Bach, Ernest N., '37, 1307 Second Nat'l Bank Bldg., Toledo, Ohio  
 Bailey, Adams, '39, 113 West 57th St., New York, N. Y.  
 Bailey, Elpha E., '36, 1124 Republic Bldg., Denver, Colo.  
 Baker, Charles R., '22, 308 Central Office Bldg., Davenport, Ia.  
 Baker, Charles Reeder, '28, 636 Church St., Evanston, Ill.  
 Baker, Chester A., '32, 1726 Eye St., N. W. Washington, D. C.  
 Baker, Frederick Cooper, '39, 5231 Hohman Ave., Hammond, Ind.  
 Ball, Edward L., '31, 814 Doctors Bldg., Cincinnati, Ohio  
 Ballou, N. Talley, '37, State Dept. of Health, Richmond, Va.  
 \*Banzhaf, Henry L., '21, 1217 W. Wisconsin Ave., Milwaukee, Wis.  
 Barber, Arthur D'Alanson, '33, 217 Eccles Bldg., Ogden, Utah  
 Bard, Alexander E., '32, Valley Bank Bldg., Tucson, Ariz.  
 Barnard, Frank P., '35, 507 Main St., Worcester, Mass.  
 Barnes, Forrest A., '39, Ames, Iowa

\*A founder.



- Barnwell, Charles M., '38, Medical Arts Bldg., Atlanta, Ga.  
Barrett, Leland, '29, 133 W. 72nd St., New York, N. Y.  
Barry, Aloysius L., '38, 144 Harrison St., E. Orange, N. J.  
Barry, Walter F., '35, 51 Central Ave., Newark, N. J.  
Bartlett, Avery Allen, '38, 525 David Whitney Bldg., Detroit, Mich.  
Bassett, Charles Turk, '38, 1726 Eye St. N. W., Washington, D. C.  
Baumann, Charles J., '36, 408 W. Greenfield Ave., Milwaukee, Wis.  
Baus, Erwin Peter, '38, 4419 W. North Ave., Milwaukee, Wis.  
Bear, Harry, '29, 410 Professional Bldg., Richmond, Va.  
Becks, Hermann, '35, 154 Yerba Buena Ave., San Francisco, Calif.  
Bell, Dickson G., '38, 450 Sutter St., San Francisco, Calif.  
Bell, Frank J., '39, Billings, Mont.  
Benbrook, Charles M., '27, 707 Theatre Auditorium Bldg., Los Angeles, Calif.  
Bennett, Paul Hamilton, '38, 907 Valley Bank Bldg., Tucson, Ariz.  
Benney, Lt. Col. Clarence R., '39, Post Dental Clinic, Fort Sam Houston, Tex.  
Benson, William J. H., '29, 530 Wisconsin Ave., Milwaukee, Wis.  
Berger, Adolph, '29, 10 E. 74th St., New York, N. Y.  
Bergstrom, Hyrum, '33, 229 Seventh Ave., Salt Lake City, Utah  
Berkey, Hugh Thomas, '38, 408 Wayne Pharmacal Bldg., Fort Wayne, Ind.  
Berthel, Russell W., '38, 903 Lowry Bldg., St. Paul, Minn.  
Bertram, Irvin Roy, '38, 966 Metropolitan Bldg., Denver, Colo.  
Best, J. V. Hall, '38, 135 Macquarie St., Sydney, Australia  
Bettman, M. M., '36, 528 Medical Arts Bldg., Portland, Ore.  
Black, J. Cannon, '29, 55 E. Washington St., Chicago, Ill.  
Black, Roy E., '32, 612 Washington St., Huntington, Pa.  
Blackwell, Robert E., '29, 180 N. Michigan Ave., Chicago, Ill.  
Blaisdell, Edwin C., '34, 5 Market St., Portsmouth, N. H.  
Blake, Reuben Lloyd, '36, Butler Bldg., San Francisco, Calif.  
Blakeman, Robert I., '27, 603 Hume Mansur Bldg., Indianapolis, Ind.  
Blanquie, Raoul Henry, '36, Flood Bldg., San Francisco, Calif.  
Blue, James A., '26, 1017 Comer Bldg., Birmingham, Ala.  
Blum, Theodor, '23, 101 E. 79th St., New York, N. Y.  
Bodecker, Charles Francis, '26, 630 W. 168th St., New York, N. Y.  
Bogle, R. Boyd, '23, Medical Arts Bldg., Nashville, Tenn.  
Booth, Cecil O., '29, 405 Flannery Bldg., Pittsburgh, Pa.  
Booth, John J., '33, Marion, Iowa  
Boots, John L., '28, Severance Medical Union, Seoul, Korea  
Bostwick, Frank Brown, '26, 94 Main St., Gibraltar, Spain  
Bowles, Shirley W., '28, 3875 Wilshire Blvd., Los Angeles, Calif.

- Box, Harold Keith, '38, 86 Bloor St. West, Toronto, Canada  
Boyd, Bert, '30, 610 S. Broadway, Los Angeles, Calif.  
Boydston, Walter J., '37, 204 Masonic Temple, Fairmont, W. Va.  
Brach, Louis, '34, 112 Monticello Ave., Jersey City, N. J.  
Bradford, Harry, '37, Medical Arts Bldg., Birmingham, Ala.  
Brady, Ewing P., '33, 7239 Northmoor Drive, St. Louis, Mo.  
Branch, Ernest A., '38, State Board of Health, Raleigh, N. C.  
Brand, Thurlow Weed, '29, 131 Robinson St., Pittsburgh, Pa.  
Brandhorst, Otto W., '34, 4952 Maryland Ave., St. Louis, Mo.  
Brandon, Gerald Ivanhoe, '38, 3203 Garrison Blvd., Baltimore, Md.  
Brauer, John C., '38, University of Iowa, Iowa City, Ia.  
Brekhus, Peter J., '34, 1967 E. River Road, Minneapolis, Minn.  
Bremner, M. D. K., '33, 55 E. Washington St., Chicago, Ill.  
Brevig, Harold R. H., '33, 27 E. Monroe St., Chicago, Ill.  
Bricker, Frederick A., '33, 3780 Wilshire Blvd., Los Angeles, Calif.  
Briggs, E. Fred, '39, 116 Hammond Ave., Bangor, Maine  
Broadbent, B. Holly, '33, 1400 Keith Bldg., Cleveland, Ohio  
Broadhurst, Geo. B., '38, 401 University Club Bldg., St. Louis, Mo.  
Brock, David W., '38, 4903 Delmar Blvd., St. Louis, Mo.  
Brock, Sam H., '38, 1318 Medical Arts Bldg., Dallas, Tex.  
Brockington, Marion L., '33, Cherokee Road, Florence, S. C.  
Bronner, Finn J., '37, 209 East 23rd St., New York, N. Y.  
Brooks, Clarence G., '39, 302 State St., New London, Conn.  
Broomell, I. Norman, '34, Medical Arts Bldg., Philadelphia, Pa.  
Broussard, A. Claude, '38, 1116 Maison Blanche, New Orleans, La.  
Brown, Chas. Frederick, '38, 432 Mack Bldg., Denver, Colo.  
Brown, George Cowles, '35, 332 Main St., Worcester, Mass.  
Brown, Homer C., '23, 1816 Franklin Ave., Columbus, Ohio  
Brown, James A., '38, Lister Bldg., St. Louis, Mo.  
Brown, J. Draper, Jr., '39, Madison at 10th St., Wilmington, Del.  
Brown, J. H., '38, P. O. Box 104, Newton, Miss.  
Brown, Little Berry, '38, Atlanta-Southern Dental College,  
Atlanta, Ga.  
Brown, Robert Kennard, '32, Campus Bldg., Ann Arbor, Mich.  
Brown, Wm. Wiley, '38, 508 Frisco Bldg., Joplin, Mo.  
Brownlie, Ira C., '30, 536 Metropolitan Bldg., Denver, Colo.  
Bruening, Edward H., '22, 620 City Nat'l Bank Bldg., Omaha, Nebr.  
Brun, B. Lucian, '29, 827 Park Ave., Baltimore, Md.  
Bryan, Alvin Wesley, '28, Box 727, Iowa City, Ia.  
Bryans, Walter J., '38, 76 Park St., Lee, Mass.  
Bryant, Elwyn R., '37, 215 Whitney Ave., New Haven, Conn.

- \*Buckley, John P., '21, 10117 Riverside Drive, North Hollywood, Calif.  
Budge, David Clare, '29, Logan, Utah.  
Bull, Harry L., '37, 921 Bergen Ave., Jersey City, N. J.  
Bunting, Russell W., '22, University of Michigan, Ann Arbor, Mich.  
Burket, George E., '30, Kingman, Kansas  
\*Burkhart, Harvey J., '21, Rochester Dental Dispensary, Rochester, N. Y.  
Burmeister, C. H., '33, 2711 Union Central Bldg., Cincinnati, Ohio  
Bush, Alden J., '31, 150 E. Broad St., Columbus, Ohio  
Byrnes, R. R., '22, 106 Forrest Ave. N. E., Atlanta, Ga.  
Cadarette, Leo Anthony, '38, 14296 Terry Ave., Detroit, Mich.  
Callaway, George S., '38, 654 Madison Ave., New York, N. Y.  
Camalier, C. Willard, '29, 1726 Eye St. N. W., Washington, D. C.  
Cameron, Dan U., '26, 1210 Astor St., Chicago, Ill.  
Cameron, James R., '35, 19th and Spruce St., Philadelphia, Pa.  
Canavan, William H., '38, 47 Bay State Road, Boston, Mass.  
Caraballo, Christobal, '31, 713 Stovall Bldg., Tampa, Fla.  
Carlson, LeRoy, '39, 801 Donaldson Bldg., Minneapolis, Minn.  
Carmody, Thomas Edward, '30, 806 Metropolitan Bldg., Denver, Colo.  
Carr, James B., '31, 706 Hume Mansur Bldg., Indianapolis, Ind.  
Carr, Malcolm W., '34, 667 Madison Ave., New York, N. Y.  
Carson, K. Paul, '38, 1531 Medical Arts Bldg., Minneapolis, Minn.  
Cart, Jacob F., '39, 509 Jefferson Bldg., Peoria, Ill.  
Cartee, Horace L., '37, 810 Huntingdon Bldg., Miami, Fla.  
Casto, Theodore D., '33, 1833 Chestnut St., Philadelphia, Pa.  
Chambers, W. T., '22, 121 Lafayette St., Denver, Colo.  
Chandler, Alfred White, '38, U. S. Naval Academy, Annapolis, Md.  
Chandler, Chas. F., '23, 704 First Nat'l Bank Bldg., Montgomery, Ala.  
Chapin, Walter Coolidge, '38, 2 East 54th St., New York, N. Y.  
Charbonnel, Ernest A., '27, 334 Westminster St., Providence, R. I.  
Charlton, Percie C., '28, "Rushall" Almy St., Pymble, Australia  
Chase, Charles E. B., '34, 29 Commonwealth Ave., Boston, Mass.  
Chase, Oscar Jerome, Jr., '38, 140 E. 54th St., New York, N. Y.  
Chevalier, Paul L., '39, Professional Bldg., Richmond, Va.  
Childs, Wyatt Bentley, '39, Georgia Casualty Bldg., Macon, Ga.  
Chipp, Henry Duley, '35, Corinth, Miss.  
Christensen, Martin L., '33, 99 W. New York Ave., Oshkosh, Wis.  
Christiansen, John F., '33, 727 West 7th St., Los Angeles, Calif.  
Clark, Henry B., '38, 1132 Lowry Medical Arts Bldg., St. Paul, Minn.  
Clark, Stanley W., '33, 180 N. Michigan Blvd., Chicago, Ill.  
Clarke, John J., '35, Artesia, New Mexico  
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- Van Horn, Chris S., '32, 424 Iron St., Bloomsburg, Pa.
- Van Kirk, Lawrence Edw., '29, 6049 Jenkins Arcade, Pittsburgh, Pa.
- Vann, Geo. S., '26, Gadsden Nat'l Bank Bldg., Gadsden, Ala.
- Van Valey, Edwin G., '39, 38 East 61st St., New York, N. Y.
- Vaughan, Clarence B., '37, 363 Marlboro St., Boston, Mass.
- Vaughn, James J., '34, 1001 Medical Arts Bldg., Nashville, Tenn.
- Vedder, Francis B., '33, 711 N. University Ave., Ann Arbor, Mich.
- Vignes, C. Victor, '23, 922 Canal Bank Bldg., New Orleans, La.
- Viner, Frank J., '38, Creighton University, Omaha, Nebr.
- Vinsant, Robert Sherman, '31, 1728 Madison Ave., Memphis, Tenn.
- \*Volland, Roscoe H., '21, First National Bank Bldg., Iowa City, Ia.
- Waddell, J. Clark, '34, 413 Murphy Bldg., E. St. Louis, Ill.
- Wagner, Ralph O., '39, 408 Hawthorne Ave., Oakland, Calif.
- Wahl, Leonard P., '38, 309 Jackson St., Wausau, Wis.
- Wald, S. S., '38, 57 West 57th St., New York, N. Y.
- Waldron, Carl William, '28, 730 LaSalle Bldg., Minneapolis, Minn.
- Waldron, Ralph, '23, 549 High St., Newark, N. J.
- Walker, Alfred, '23, 501 Madison Ave., New York, N. Y.
- Wallace, J. Sim, '29, Park Bourne, Hampton Wick, London, England
- Walls, James Milton, '34, 828 Lowry Medical Arts Bldg., St. Paul, Minn.
- Walls, Milton G., '39, 828 Lowry Medical Arts Bldg., St. Paul, Minn.
- Walsh, Arthur L., '38, McGill University, Montreal, Canada
- Walsh, Joseph Richard, '38, 67 S. Clinton St., E. Orange, N. J.
- Walsh, Leonard Theodore, '39, 442 Thatcher Bldg., Pueblo, Colo.
- Walz, William F., '23, 1114 First Nat'l Bank Bldg., Lexington, Ky.
- Ward, Marcus L., '23, 1308 Cambridge Road, Ann Arbor, Mich.
- Wash, Atwood M., '38, Medical Arts Bldg., Richmond, Va.
- Watkins, Joseph Conrad, '25, 503 Wachovia Bank Bldg., Winston-Salem, N. C.
- Watson, Alfred P., '34, 1306 S. E. Salmon St., Portland, Ore.

\*A founder.

- Watts, Clarence V., '27, 315 K. of P. Block, Des Moines, Ia.  
Waugh, Leuman M., '23, 576 Fifth Ave., New York, N. Y.  
Way, T. Irving, '32, Vernon Manor, Cincinnati, Ohio  
Weaver, Samuel Marshall, '38, 1632 Keith Bldg., Cleveland, Ohio  
Webster, Frederick W., '38, 1016 Stuart Ave., Lincoln, Nebr.  
Weeks, Arthur F., '34, 1015 Selling Bldg., Portland, Ore.  
Welker, John J., '38, 1144 Edison Bldg., Toledo, Ohio  
Weller, Roland Edward, '39, 29 Commonwealth Ave., Boston, Mass.  
Wells, Amos S., '37, 700 Physicians & Surgeons Bldg., Minneapolis,  
Minn.  
Wennerberg, Gunnar N., '39, Naval Hospital, Philadelphia, Pa.  
Werner, Jack, '35, 344 Fourteenth St., San Francisco, Calif.  
West, Frederick T., '29, 135 Stockton St., San Francisco, Calif.  
West, John Bernard, '38, 306 W. Church St., Elmira, N. Y.  
West, Sylvan Edmond, '37, 450 Sutter St., San Francisco, Calif.  
Wheeler, Russell C., '38, Missouri Theatre Bldg., St. Louis, Mo.  
Wherry, Arthur C., '31, 910 Deseret Bank Bldg., Salt Lake City, Utah.  
Wherry, Styles W., '33, First National Bank Bldg., Ogden, Utah  
White, F. Denton, '30, 512 Physicians & Surgeons Bldg., Minneapolis,  
Minn.  
White, J. D., '23, 805 University Club Bldg., St. Louis, Mo.  
White, Oliver Wilson, '35, 213 David Whitney Bldg., Detroit, Mich.  
White, Paul Gardiner, '30, Naval Medical Supply Depot, Brooklyn,  
N. Y.  
White, Wm. Wayne, '38, 722 Argyle Bldg., Kansas City, Mo.  
Whiteman, Joseph D., '32, Mercer, Pa.  
Whiteman, Wilbert J., '38, 1529 David Whitney Bldg., Detroit, Mich.  
Whittaker, H. F., '28, 406 Tegler Bldg., Edmonton, Canada  
Wiethoff, Charles Albert, '37, 909 Medical Arts Bldg., Minneapolis,  
Minn.  
Willett, Raymond C., '36, 535 Jefferson Bldg., Peoria, Ill.  
William, Maurice, '34, 200 West 57th St., New York, N. Y.  
Williams, Albert P., '36, Starks Bldg., Louisville, Ky.  
Williams, Edward L., '29, 1316 Medical Arts Bldg., Houston, Tex.  
Williams, John Bell, '29, St. Luke's Hospital, Richmond, Va.  
Williams, Joseph H., '37, Beaumont Medical Bldg., St. Louis, Mo.  
Wilson, George William, '29, 604 N. Sixteenth St., Milwaukee, Wis.  
Wilson, Harris Reid Cooley, '38, 1380 East 6th St., Cleveland, Ohio  
Wilson, John Lacy, '35, 940 N. Campbell Ave., Indianapolis, Ind.  
Wilson, Walter A., '39, 28 Duncan Ave., Jersey City, N. J.  
Wintrup, John Paul, '38, 607 Medical Arts Bldg., Wilmington, Del.  
Wise, Albert Irwin, '32, 339 Fifth Ave., Pittsburgh, Pa.

Wolfe, Allen Scott, '29, 1710 Rhode Island Ave. N. W., Washington, D. C.

Wood, Harry T., '38, 1261 David Whitney Bldg., Detroit, Mich.

Wood, W. A., '38, 1004 Merchants Nat'l Bank Bldg., Mobile, Ala.

\*Woodbury, Charles E., '21, 604 Bennett Bldg., Council Bluffs, Ia.

Woods, Fred Sumner, '38, 704 Congress St., Portland, Me.

Woodworth, J. Galvin, '33, 40 North St., Buffalo, N. Y.

Wright, Clarence John, '38, 701 American State Savings Bank Bldg., Lansing, Mich.

Wright, Walter H., '27, 1306 Penn Ave., Wilkesburg, Pa.

Wright, W. R., '23, Jackson, Miss.

Wyman, Eugene Barry, '39, 51 Brattle St., Cambridge, Mass.

Yost, Howard, '39, 402 First Nat'l Bank Bldg., Grand Island, Neb.

Young, Alfred Clyde, '29, 121 University Place, Pittsburgh, Pa.

Young, William Andrew, '37, 40 N. Main St., Concord, N. H.

Zeisz, Robert C., '36, 490 Post St., San Francisco, Calif.

Zemsky, James L., '38, 147 Fourth Ave., New York, N. Y.

Ziegler, Samuel, '38, 405 Lowry Medical Arts Bldg., St. Paul, Minn.

Zimmerman, Neal L., '36, 620 Medical Dental Bldg., Portland, Ore.

Zugsmith, Robert, '23, 3401 Fifth Ave., Pittsburgh, Pa.

Total, 918

#### 4. GEOGRAPHIC DISTRIBUTION OF ACTIVE FELLOWS

##### 1. United States

*Alabama:* Blue, Bradford, Chandler (C.), Hassell, Hopping, Patton, Sapienza, Vann, Wood (W.)—9.

*Arizona:* Bard, Bennett, Tweed—3.

*Arkansas:* Deaton, Fountain, Gibbs, Gray, Hutchinson (W.), Johnson (E. H.), Jordan (J.), Koch, Rushing—9.

*California:* Atkinson, Becks, Bell (D.), Benbrook, Blanquie, Blake, Bowles, Boyd, Bricker, Buckley, Christiansen, Coleman (B.), Cook (J.), Davis (A.), Darnall, Delaney, Dillon (C.), Durst, Endelman, Engstrom, Fladeland, Fleming (W.), Fontaine, Ford (L.), Frisbie, Giffen, Gill, Goodman, Graham (J.), Green (R. A.), Grover, Gurley, Hambly, Harrison (W.), Hartley, Hasbrouck, Hayes (G.), Hogeboom, Hollenbeck, House, Hughes (G.), Humphreys, Hunt (V.), Inskipp, Johnson (C.), Kibler, Kingsbury, Kirtland, Leggett (J.), Leggett (R.), Leslie, Locke, Lucas, Marshall (J.), Marshall (L.), Mauer, McCoy, Merriman, Milliken, Moose, Nesbitt, Packwood, Petray, Robinson (W.), Scott (S.), Selberg, Selleck, Sheffer, Sloman, Smith (T.), Sorensen, Sweet, Terrell,

\*A founder.

Thompson (W.), True, Wagner, Werner, West (F.), West (S.), Zeisz—80.

*Colorado:* Bailey (E.), Bertram, Brown (C.), Brownlie, Carmody, Chambers, Cogswell, Downs, Giesecke, Hoffman (H.), Kramer, Monroe, Smedley, Walsh (L.)—14.

*Connecticut:* Brooks, Bryant, Cory, Hyatt, Jones (R.), McLaughlin, Murlless—7.

*Delaware:* Brown (J. D.), Combs, Jefferis, Price (R.), Traynor, Wintrup—6.

*District of Columbia:* Baker (C. A.), Bassett, Camalier, Cogan, Cole, Dean (H.), Erikson, Jordan (L.), Kaplan, Krogh, Leigh, Lynch (D.), McCole, McGehee, Paffenbarger, Swanson (H.), Wolfe—17.

*Florida:* Caraballo, Cartee, Johnson (E. A.), Pankey, Simkins, Smith (A. M.), Stillman, Taylor (R.), Thompson (E.), Tison—10.

*Georgia:* Barnwell, Brown (L.), Byrnes, Childs, Coleman (W.), Enloe, Foster (S.), Garrett, Harpole, Huff, Hunter, Johnston (H.), Mason (R.), Mitchell (G), Mitchell (J.), Murphy (R.), Scruggs, Slaughter, Sullivan (R.)—19.

*Idaho:* Colver—1.

*Illinois:* Alexander, Baker (C. R.), Black (J.), Blackwell, Bremner, Brevig, Cameron (D.), Cart, Clark (S.), Clendenen, Conklin, Dittmar, Edlund, Fisher (H. G.), Ford (J.), Freeman, Gallie, Haberle, Hayes (H.), Hewett, Hoeffel, Hoffman (A.), Jelinek, Johnson (L.), Knapp, Kremer, Kurth, Lee (H.), Logan, Lundquist, MacBoyle, Miller (Howard), Molt, Morrey, Mueller, Noyes (F.), Noyes (H.), Olafsson, Partridge, Pinney, Sauer, Sayre, Schaefer, Schlosser, Smith (C. C.), Smith (C. M.), Smith (E.), Smith (H.), Stuart, Thomas (E. H.), Timmons, Tylman, Waddell, Willett—54.

*Indiana:* Baker (F.), Berkey, Blakeman, Carr (J.), Crawford (W.), Fonner, Gillis, Hale (J.), Haynes (E.), Hilgemann, Hughes (F.), Jackson (C.), Johnston (J.), Kennedy (W.), LaRue, Mitchell (E.), Pell, Shurr, Wilson (J.)—19.

*Iowa:* Altfillisch, Baker (Chas. R.), Barnes, Booth (J.), Brauer, Bryan, Conzett, Fenton (R.), Fitz-Gerald (L.), Ford (E.), Foster (C.), Hemingway, Hemsworth, Higley, Hildebrand, Kennedy (C.), Klaffenbach, Lehman, Ostrem, Rogers (E.), Smith (E. S.), Smith (R.), Sommers (R.), Thoen, Volland, Watts, Woodbury—27.

*Kansas:* Burket, Parkinson, Richmond—3.

*Kentucky:* Fullenwider, Goepper, Hower, Hubbuch, Hume, Johnson (J. E.), Juett, Kellogg, McElrath, Means, Myers (R.), O'Rourke,



Owen (J.), Randall, Selden, Sprau, Springsted, Thomas (R.), Walz, Williams (A.)—20.

*Louisiana:* Broussard, Gamard, Genre, Jarrell, Leabo, Psayla, Smith (P.), Vignes—8.

*Maine:* Briggs, Fitzgerald (E.), Grant (G.), Haskell, Kelley, MacKay, Maxfield (C.), Maxfield (F.), Small (D.), Woods—10.

*Maryland:* Aisenberg, Anderson, Brandon, Brun, Chandler (A.), Coriell, Dixon, Eader, Ferguson, Gaver, Golton, Heintz, Hopkins, Ide, Inman, Jersin, Kelsey, Latcham, Leonard, Lovett, McCarthy, Parsons, Paterson, Robinson (J.), Smith (F.), Streett, Swinehart—27.

*Massachusetts:* Adams, Alden, Barnard, Brown (G.), Bryans, Canavan, Chase (C.), Cleaveland, Cushman, Daley, Daniels, Desmond, Dort, Elliott (M.), Farrington, FitzGibbon, Grant (F.), Grant (W.), Griffin, Hadley, Hinds (M.), Howe, Kazanjian, Keltie, Mallett, Marvel, Maycock, McKenna, Miner (L.), Muzzey, Perkins, Peters (M.), Piper, Richardson, Rogers (F.), Rollins, Sager, Shuman, Spinney, Tannebring, Thatcher, Tishler, Tyler, Vaughan, Weller, Wyman—46.

*Michigan:* Applegate (O.), Applegate (S.), Bartlett, Brown (R.), Bunting, Cadarette, Cook (W.), Davis (W.), Easlick, Elliott (W.), Gibson, Girardot, Goodsell, Hall (C.), Harris (S.), Honey, Jay, Jeserich, Kemper, Kingery, LeGro, Lewis (S.), Lowery, McBride (W.), Moore (G.), Morris, Pilkington, Prince, Shackelford, Spalding, Travis, Vedder, Ward, White (O.), Whiteman (W.), Wood (H.), Wright (C.)—37.

*Minnesota:* Austin, Berthel, Brekhus, Carlson, Carson, Clark (H.), Cobb, Conley, Coulter, Damon, DeVries, Dickson, Epstein, Ernst (H.), Ernst (M.), Fenton (H.), Flagstad, Green (R. O.), Griffith, Grove, Hall (A.), Harker, Harris (H.), Hartzell, Henry, Hodgson, Hyde, Johnson (R.), Larson, Lasby, Lawton, Mentzer, Miner (C.), Nelson (Charles), Nelson (H.), Pattison, Pattridge, Rudolph, Schmid, Shellman, Stafne, Stickney, Sundby, Thom, Thomas (T.), Thornton, Waldron (C.), Walls (J.), Walls (M.), Wells, White (F.), Wiethoff, Ziegler—53.

*Mississippi:* Abbott (R.), Brown (H. H.), Chipps, Haynes (G.), Henderson, Leggett (T.), Moore (C.), Wright (W. R.)—8.

*Missouri:* Brady, Brandhorst, Broadhurst, Brock (D.), Brown (J. A.), Brown (W.), Coleman (C.), Coston, Davidson, Davis (T.), Dillon (E.), Edwards, Engel, Fisher (H. M.), Foerster, Frederich, Hagemann, Haverstick, Hillias, Kelly, Keys, Kornfeld, Lischer, Main, Mayer, McFarland, Miller (J.), Moore (N.), Northcutt, O'Brien, O'Hare, Owen (E.), Poe, Porter (C.), Purcell, Rinehart, Robb, Rodgers, Scott

(J.), Seibert, Spotts, Templeton, Wheeler, White (J.), White (W.), Williams (J. H.)—46.

*Montana*: Bell (F.), Rider—2.

*Nebraska*: Bruening, Colgan, Drake, Hunt (L.), Ludwick, Merchant, Myers (L.), Pierson, Prime (J.), Shearer, Spencer, Thomas (E. A.), Viner, Webster, Yost—15.

*Nevada*: None.

*New Hampshire*: Blaisdell, Copeland, Staples, Young (W.)—4.

*New Jersey*: Barry (A.), Barry (W.), Brach, Bull, Faupel, Harper, Harrington, Hutchinson (R.), Lum, Pruden, Reock, Schwartz, Smith (E. A.), Stillwell, Waldron (R.), Walsh (J.), Wilson (W.)—17.

*New Mexico*: Clarke, Lord, Moran—3.

*New York*: Asch, Bailey (A.), Barrett, Berger, Blum, Bodecker, Bronner, Burkhart, Callaway, Carr (M.), Chapin, Chase (O.), Collins, Cooke, Davenport, Douglass (G.), Dunning, Evans, Fancher, GaNun, Gies, Granger, Hayes (L.), Hellman, Hillyer (E.), Hillyer (N.), Holliday, Hughes (D.), Irving, Keller, Kennedy (E.), Kohn, Lewis (F.), McBeath, McCall (J.), Merritt, Miller (S.), Mork, Nestler, Palmer, Peters (J.), Phillips (P.), Porter (L.), Rault, Riesner, Schelpert, Schneer, Schuyler, Shapiro (B.), Shapiro (J.), Shapiro (S.), Sniffen, Squires (F.), Squires (W.), Stern, Swift, Taylor (W.), Thompson (E.), Trier, Van Valey, Wald, Walker, Waugh, West (J.), White (P.), William, Woodworth, Zemsky—68.

*North Carolina*: Alford, Branch, Fleming (J.), Hale (G.), Howle, Jackson (W.), Johnson (J. N.), Jones (P.), Lineberger, McClung, Olive, Pridgen, Smith (A. G.), Spurgeon, Watkins—15.

*North Dakota*: Gilbert, Hallenberg, Hocking, Shaw—4.

*Ohio*: Bach, Ball, Broadbent, Brown (H.), Burmeister, Bush, Cottrell (H.), Davis (D.), Dressel, Graham (W.), Harkrader, Hebble, Hill, Jarvis, Kitchin, Loughry, MacMillan, Meisser, Mills (C.), Mills (E.), Price (W.), Pryor, Schott, Semans, Sherwood, Snyder, Stephan, Stillson, Stricker, Strosnider, Sullivan (J.), Way, Weaver, Welker, Wilson (H.)—35.

*Oklahoma*: Flesher, Lawrence, Reichmann—3.

*Oregon*: Bettmann, Cooper (H. C.), Fixott, Gulick, Harris (M.), Hurd, Miller (Herbert), Prime (F.), Titus, Watson, Weeks, Zimmerman—12.

*Pennsylvania*: Addie, Aiguier, Archer, Ashbrook, Black (R.), Booth (C.), Brand, Broomell, Cameron (J.), Casto, Cooper (H. K.), Essig,

Everhard, Fickes, FitzHugh, Friesell (F.), Friesell (H.), Haas, Hagan, Harkins, Irish, Lotz, Luckie, McBride (T.), McCready, McParland, Meisel, Metz, Oartel, Rial, Rusca, Sausser, Swanson (W.), Van Horn, Van Kirk, Wennerberg, Whiteman (J.), Wise, Wright (W. H.), Young (A.), Zugsmith—41.

*Rhode Island*: Charbonnel, Davis (R.), Lynch (A.), Massicotte, Midgley, Mullaney, Spicer—7.

*South Carolina*: Brockington, Dick, Hair, Higgins—4.

*South Dakota*: Eggers—1.

*Tennessee*: Bogle, Cottrell (A.), Hoffer, Lundy, Meacham, Ogden, Oliver, Parks (A.), Phillips (J.), Powers, Slater, Taylor (E.), Vaughn, Vinsant—14.

*Texas*: Arnold (E.), Arnold (J.), Benney, Brock (S.), Duckworth, Fife, Foster (W.), Frew, Hall (J.), Hays, Hinds (F.), Jones (B.), Knutzen, Lacey, Lux, McCall (W.), McCarty, McRimmon, Murphy (J.), Newton, Nygard, Ogle, Parks (S.), Ridley, Rogers (R.), Scherer, Talbot, Thielen, Turner, Williams (E.)—30.

*Utah*: Barber, Bergstrom, Budge, Wherry (A.), Wherry (S.)—5.

*Vermont*: Johnson (E. E.), Pond, Small (H.), Taggart—4.

*Virginia*: Ashton, Ballou, Bear, Chevalier, Harrison (G.), Hodgkin, John, Little, Lyons, Mack, Muir, Pilcher, Simmons, Simpson, Smith (H. L.), Sprinkel, Wash, Williams (J. B.)—18.

*Washington*: Dean (O.), Ellsperman, Ferrier, Martin, Randolph—5.

*West Virginia*: Armbrecht, Boydston, Douglass (E.), Poindexter, Sturm, Summers—6.

*Wisconsin*: Abbott (T.), Banzhaf, Baumann, Baus, Benson, Christensen, Crawford (J.), Dippel, Donovan, Dresen, Droegkamp, Ender, Fee (A.), Fee (G.), Flancher, Hahn, Hardgrove, Hausmann, Hopkinson (R.), Hopkinson (W.), Huegel, Johnson (M.), Justin, Kolter, Kraus, Macfarlane, McFarlane, Milliette, Morgan, Morton, Mortonson (J.), Mortonson (M.), Nelson (C. A.), Noetzel, Rohde, Stratton, Tolan, Uebele, Wahl, Wilson (G.)—40.

*Wyoming*: None.

*Territories: Hawaii*: Conner, Fraser, Pritchard—3.

## 2. Countries other than the United States

*Australia*: Amies, Arnott, Ash, Best, Charlton, Moxham, Tuckfield—7.

*Canada:* Box, Dohan, Faulkner, French, Gilchrist, Mason (A.), McLean, Moore (F.), Pallen, Thomson, Walsh (A.), Whittaker—12.

*China:* Lindsay, Mullett, Sommers (H.)—3.

*England:* Roberts, Wallace—2.

*India:* Khambatta—1.

*Korea:* Boots—1.

*Spain:* Bostwick—1.

5. CLASSIFICATION OF ACTIVE FELLOWS AS TO YEARS OF ADMISSION

1921: Banzhaf, Buckley, Burkhart, Conzett, Endelman, Foster (S.), Friesell (H.), Hartzell, House, Howe, Johnson (E. A.), Logan, Midgley, Noyes (F.), Volland, Woodbury—16.

1922: Baker (Chas. R.), Bruening, Bunting, Byrnes, Chambers, Coriell, Coston, Dittmar, Ford (L.), Gillis, Gurley, Kelsey, Marshall (J.), McCoy, Milliken, Price (W.), Prime (J.), Semans—18.

1923: Blum, Bogle, Brown (H.), Chandler (C.), Cooke, Fickes, Friesell (F.), Gies, Hassell, Hillyer (E.), Hocking, Kennedy (E.), Lucas, Merritt, Miller (Herbert), Peters (J.), Richardson, Robinson (J.), Stillman, Vignes, Waldron (R.), Walker, Walz, Ward, Waugh, White (J.), Wright (W. R.), Zugsmith—28.

1924: Gallie, Hale (J.), Hardgrove, Hasbrouck, Hoffman (A.), Hopkinson (W.), Hume, Hutchinson (R.), Hyatt, Morton, Phillips (J.), Smith (H. S.), Tuckfield—13.

1925: Goepper, Huff, Jackson (C.), Lischer, Massicotte, Means, Paterson, Powers, Rinehart, Stephan, Watkins—11.

1926: Blue, Bodecker, Bostwick, Cameron (D.), DeVries, Fee (A.), Hoffer, Khambatta, LeGro, Mork, Mullaney, McCall (J.), Rohde, Smith (A.), Spalding, Vann—16.

1927: Benbrook, Blakeman, Charbonnel, Crawford (J.), Dick, Elliott (W.), Evans, Fixott, Giffen, Hayes (G.), Hubbuch, Kennedy (W.), MacBoyle, MacMillan, Mortonson (J.), Mortonson (M.), Oliver, Shearer, Sprau, Stratton, Thomas (R.), Watts, Wright (W. H.)—23.

1928: Ashbrook, Baker (C. R.), Boots, Bowles, Bryan, Charlton, Cogan, Cooper (H. C.), Dunning, Fisher (H. G.), FitzGibbon, Frew, Graham (J.), Hildebrand, Hillias, Hopkinson (R.), Kibler, Lasby, Lindsay, Lowery, Mitchell (J.), O'Rourke, Palmer, Partridge, Simkins, Swinehart, Talbot, Thomas (E. H.), Waldron (C.), Whittaker—30.

1929: Altfillisch, Barrett, Bear, Benson, Berger, Black (J.), Black-



well, Booth (C.), Brand, Brun, Budge, Camalier, Conklin, Cook (J.), Farrington, Fenton (R.), Fleming (J.), Freeman, Fullenwider, Hellman, Hopkins, Hower, Hurd, Ide, Jelinek, Kazanjian, Kelley, Kellogg, Knapp, Lee (H.), Lundquist, Martin (A.), Marvel, Maxfield (F.), McParland, Meisel, Metz, Miller (Howard), Miner (L.), Mueller, Nelson (H.), Nestler, Olafsson, Randall, Scott (S.), Selden, Simpson, Smith (E. H.), Thoen, Tylman, Van Kirk, Wallace, West (F.), Williams (E. L.), Williams (J. B.), Wilson (G. W.), Wolfe, Young (A.)—58.

1930: Boyd, Brownlie, Burket, Carmody, Clendenen, Cogswell, Combs, Davis (A.), Engstrom, Giesecke, Graham (W.), Gulick, Hollenbeck, Howle, Johnson (J. N.), Kramer, Locke, Noetzel, Roberts, Robinson (W.), Smith (E. S.), Smith (T. S.), True, White (F.), White (P.)—25.

1931: Anderson, Ball, Bush, Caraballo, Carr (J.), Davis (W.), Faulkner, Goodman, Hadley, Hodgkin, Johnson (J. E.), Keltie, LaRue, Lineberger, Mason (A.), Mason (R.), McCready, McElrath, McLean, Mills (C.), Mills (E.), Pell, Richmond, Rudolph, Schott, Sherwood, Slaughter, Vinsant, Wherry (A.)—29.

1932: Arnott, Baker (C. A.), Bard, Black (R.), Brown (R.), Cottrell (H.), Cushman, Edlund, Ernst (M.), FitzHugh, Flagstad, French, Grant (W.), Harper, Hausmann, Hinds (F.), Keys, Kohn, Lotz, Lynch (A.), McClung, McCole, Molt, Moore (F.), Murphy (J.), Ogden, Piper, Pond, Rial, Rollins, Schlosser, Schuyler, Spurgeon, Stern, Streett, Swanson (W.), Sweet, Thomas (E. A.), Van Horn, Way, Whiteman (J.), Wise—42.

1933: Aisenberg, Alexander, Barber, Bergstrom, Booth (J.), Brady, Bremner, Brevig, Bricker, Broadbent, Brockington, Burmeister, Casto, Christensen, Christiansen, Clark (S.), Copeland, Cottrell (A.), Darnall, Davenport, Ferguson, Ferrier, Fife, Fitzgerald (L.), Gill, Hall (J.), Harrison (G.), Hewett, Hill, Hoeffel, Huegel, Jones (B.), Latcham, Lawrence, Macfarlane, McBride (W.), McGehee, Meacham, Morgan, Morrey, Pinney, Prince, Purcell, Schaefer, Smith (H. L.), Staples, Stuart, Vedder, Wherry (S.), Woodworth—50.

1934: Abbott (R.), Blaisdell, Brach, Brandhorst, Brekhus, Broomell, Carr (M.), Chase (C.), Damon, Dresen, Edwards, Fraser, Grove, Hallenberg, Hoffman (H.), Hunt (V.), Kirtland, Leigh, Luckie, Lyons, Mack, Moran, Nelson (C. A.), Owen (E.), Patton, Pruden, Rault, Rogers (E.), Rusca, Sayre, Scherer, Thatcher, Titus, Uebele, Vaughn, Waddell, Walls (J.), Watson, Weeks, William—40.

1935: Alden, Barnard, Barry (W.), Becks, Brown (G.), Cameron (J.), Chippis, Clarke, Cole, Desmond, Dohan, Ender, Faupel, Goodsell, Harkins, Harkrader, Irish, Irving, John, Maxfield (C.), Merriman, Moose, Nygard, Oartel, Owen (J.), Paffenbarger, Scruggs, Selberg, Sell-eck, Sniffen, Spicer, Stillson, Summers, Swanson (H.), Werner, White (O.), Wilson (J.)—37.

1936: Bailey (E.), Baumann, Bettmann, Blake, Blanquie, Coleman (B.), Dean (O.), Fleming (W.), Fontaine, Frisbie, Green (R. A.), Haas, Harris (M.), Hogeboom, Johnson (L.), Johnson (R.), Kings-bury, Klaffenbach, Koch, Leggett (J.), Lum, Mauer, Moxham, Mullett, Murlless, Nesbitt, Pankey, Parkinson, Sheffer, Smith (P.), Sorensen, Thompson (W.), Timmons, Willett, Williams (A.), Zeisz, Zimmer-man—37.

1937: Adams, Addie, Aiguier, Arnold (J.), Atkinson, Bach, Ballou, Boydston, Bradford, Bronner, Bryant, Bull, Cartee, Conley, Cooper (H. K.), Dillon (C.), Dort, Engel, Erikson, Everhard, Frederich, Gar-rett, Girardot, Grant (G.), Griffin, Hagemann, Hale (G.), Harrington, Harris (H.), Hughes (F.), Hyde, Jeserich, Juett, Kelly, Kitchin, Lewis (S.), Loughry, Lynch (D.), Main, Maycock, Mentzer, Mitchell (E.), Nelson (Charles), O'Hare, Peters (M.), Porter (C.), Porter (L.), Psayla, Rushing, Sapienza, Sausser, Simmons, Small (D.), Smith (A. M.), Stickney, Strosnider, Taylor (R.), Tison, Travis, Vaughan, Wells, West (S.), Wiethoff, Williams (J. H.), Young (W.)—65.

1938: Abbott (T.), Amies, Applegate (O.), Archer, Armbrecht, Arnold (E.), Ash, Ashton, Austin, Barnwell, Barry (A.), Bartlett, Bassett, Baus, Bell (D.), Bennett, Berkey, Berthel, Bertram, Best, Box, Branch, Brandon, Brauer, Broadhurst, Brock (D.), Brock (S.), Brou-sard, Brown (C.), Brown (J. A.), Brown (J. H.), Brown (L.), Brown (W.), Bryans, Cadarette, Callaway, Canavan, Carson, Chandler (A.), Chapin, Chase (O.), Clark (H.), Cobb, Coleman (C.), Colgan, Col-lins, Colver, Cook (W.), Cory, Coulter, Crawford (W.), Daly, Daniels, Davis (R.), Davis (T.), Deaton, Dickson, Dillon (E.), Dixon, Don-ovan, Downs, Dressell, Duckworth, Eader, Elliott (M.), Enloe, Epstein, Ernst (H.), Essig, Fenton (H.), Fisher (H. M.), Fitzgerald (E.), Fladeland, Flesher, Foerster, Fonner, Ford (E.), Ford (J.), Foster (C.), Foster (W.), Fountain, Gamard, GaNun, Gaver, Genre, Gibbs, Gibson, Gilchrist, Golton, Grant (F.), Gray, Green (R. O.), Griffith, Grover, Haberle, Hagan, Hahn, Hall (A.), Hall (C.), Harpole, Harris (S.), Harrison (W.), Haverstick, Hayes (H.), Hayes (L.), Hays, Hebble, Heintz, Hemsworth, Henderson, Henry, Higgins, Higley, Hilgemann, Holliday, Honey, Hopping, Hughes (D.), Hughes (G.), Humphreys,

Hunt (L.), Hutchinson (W.), Inskipp, Jackson (W.), Jarvis, Jay, Jersin, Johnson (E. E.), Johnson (E. H.), Johnson (M.), Johnston (H.), Johnston (J.), Jones (P.), Jones (R.), Jordan (J.), Jordan (L.), Justin, Kaplan, Keller, Kingery, Kornfeld, Kraus, Kremer, Krogh, Kurth, Lacey, Lawton, Leabo, Leggett (R.), Leonard, Lewis (F.), Lord, Lovett, Lundy, Lux, MacKay, Marshall (L.), Mayer, McBride (T.), McCall (W.), McCarthy, McCarty, McFarland, McKenna, McLaughlin, McRimmon, Meisser, Merchant, Miller (Jesse), Miller (S.), Milliette, Miner (C.), Mitchell (G.), Monroe, Moore (C.), Moore (N.), Morris, Muir, Murphy (R.), Muzzey, Myers (L.), Myers (R.), Newton, Northcutt, Noyes (H.), O'Brien, Ogle, Olive, Ostrem, Packwood, Pallen, Parks (A.), Parsons, Pattridge, Petray, Pierson, Pilcher, Poe, Poindexter, Pridgen, Pryor, Reichmann, Rider, Ridley, Robb, Rodgers, Rogers (F.), Rogers (R.), Sauer, Schmid, Scott (J.), Seibert, Shapiro (S.), Shellman, Slater, Sloman, Small (H.), Smedley, Smith (C. C.), Smith (E. A.), Smith (F.), Smith (R.), Snyder, Sommers (H.), Sommers (R.), Spencer, Spinney, Spotts, Springsted, Squires (F.), Squires (W.), Stafne, Stillwell, Stricker, Sturm, Sullivan (J.), Sundby, Taggart, Tannebring, Taylor (E.), Templeton, Terrell, Thielen, Thom, Thompson (E. L.), Thompson (E. C.), Traynor, Trier, Turner, Tweed, Tyler, Viner, Wahl, Wald, Walsh (A.), Walsh (J.), Wash, Weaver, Webster, Welkner, West (J.), Wheeler, White (W.), Whiteman (W.), Wilson (H.), Wintrup, Wood (H.), Wood (W.), Woods, Wright (C.), Zemsky, Ziegler—272.

1939: Alford, Applegate (S.), Asch, Bailey (A.), Baker (F.), Barnes, Bell (F.), Benney, Briggs (E.), Brooks, Brown (J. D.), Carlson, Cart, Chevalier, Childs, Cleaveland, Coleman (W.), Conner, Davidson, Davis (D.), Dean (H.), Delaney, Dippel, Douglass (E.), Douglass (G.), Drake, Droegkamp, Durst, Easlick, Eggers, Ellsperman, Fancher, Fee (G.), Flancher, Gilbert, Granger, Hair, Hambly, Harker, Hartley, Haskell, Haynes (E.), Haynes (G.), Hemingway, Hillyer (N.), Hinds (M.), Hodgson, Hunter, Inman, Jarrell, Jefferis, Johnson (C.), Kemper, Kennedy (C.), Knutzen, Kolter, Larson, Leggett (T.), Lehman, Leslie, Little, Ludwick, Mallett, McBeath, McFarlane, Moore (G.), Parks (S.), Pattison, Perkins, Phillips (P.), Pilkington, Price (R.), Prime (F.), Pritchard, Randolph, Reock, Riesner, Sager, Schelpert, Schneer, Schwartz, Shackelford, Shapiro (B.), Shapiro (J.), Shaw, Shuman, Shurr, Smith (C. M.), Sprinkel, Sullivan (R.), Swift, Taylor (W.), Thomas (T.), Thomson, Thornton, Tishler, Tolan, Van Valey, Wagner, Walls (M.), Walsh (L.), Weller, Wennerberg, Wilson (W.), Wyman, Yost—106.

6. MEMBERS-ELECT WHO HAVE NOT YET ATTENDED A CONVOCATION TO  
COMPLETE REQUIREMENTS FOR ADMISSION

Alvin B. Anderson, Hamilton Bank Bldg., Knoxville, Tenn.  
J. J. Berry, Deadwood, S. Dakota  
Paul J. Boyens, 450 Sutter St., San Francisco, Calif.  
Wilbur F. Browne, Brunswick, Me.  
Francis Marion Calmes, University of Southern California, Los Angeles,  
Calif., c/o Graduate School  
Leonard Erwin Carr, 1218 Professional Bldg., Kansas City, Mo.  
Frederick Joseph Conboy, 1043 Bloor St. West, Toronto, Ont.  
William John Cosgray, 1211 Edison Bldg., Toledo, Ohio  
Louis M. Cruttenden, 1353 Lowry Medical Arts Bldg., St. Paul, Minn.  
Albin P. Dansereau, 1235 Maison Blanche, New Orleans, La.  
Geo. Downes Estes, 1546 Medical Arts Bldg., Minneapolis, Minn.  
Travis Allen Ganung, 1115 Main St., Bridgeport, Conn.  
Clarence G. Gillam, Austin Clinic Bldg., Austin, Minn.  
J. Walter Hartshorn, 748 Nicholas Bldg., Toledo, Ohio  
Edwin Almus Holbrook, 80 Hanson Place, Brooklyn, N. Y.  
William Roy Humphrey, 1232 Republic Bldg., Denver, Colo.  
Frederick Lorenzo Hunt, 609 Public Service Bldg., Asheville, N. C.  
Ernest L. Johnson, 450 Sutter Street, San Francisco, Calif.  
Alfred William Kany, 745 Fifth Ave., New York, N. Y.  
Albert Knox, Bureau of Medicine and Surgery, Washington, D. C.  
Sterling U. Loveland, 198 Marlboro Street, Boston, Mass.  
Howard M. Marjerison, 29 Commonwealth Ave., Boston, Mass.  
Philip Edwin Mellen, Middlebury, Vermont  
John Valentine Mershon, 1520 Spruce St., Philadelphia, Pa.  
Clifford D. Mitchell, Crookston, Minn.  
James Nuckolls, 450 Sutter St., San Francisco, Calif.  
William M. Parks, Davis Square, West Somerville, Mass.  
Robert Lindsay Robinson, U. S. Marine Hospital, Baltimore, Md.  
Alfred P. Rogers, 60 Charlesgate West, Boston, Mass.  
L. T. Smith, American Trust Bldg., San Jose, Calif.  
Ralph B. Snapp, 201 Fairmont Ave., Winchester, Va.  
Earl Whitaker Spencer, 620 Thatcher Bldg., Pueblo, Colo.  
Leo Winter, 140 W. 58th St., New York, N. Y.  
Chas. W. Wekenman, Marine Hospital, Kirkwood, Mo.  
Frank B. Whinery, 411 Johnson County Bank Bldg., Iowa City, Ia.

*Total, 35*



## IV. REGISTER OF SECTIONS, AND CHIEF OFFICERS

## ARRANGED IN SEQUENCE OF ORGANIZATION

	<i>Chairman</i>	<i>Secretary</i>
(1) Kentucky	E. H. Hubbuch, 830 Starks Bldg., Louis- ville, Ky.	Raymond E. Myers, 129 E. Broadway, Louis- ville, Ky.
(2) Northern California	W. C. Fleming, Medi- cal Bldg., Oakland, Calif.	Alver Selberg, 344 Four- teenth St., San Fran- cisco, Calif.
(3) Maryland	Alexander H. Patterson, 909 Medical Arts Bldg., Baltimore, Md.	Harry E. Latcham, Baltimore College of Dental Surgery, Bal- timore, Md.
(4) New York	Wm. J. Gies, 632 West 168th St., New York	Jerome H. Trier, 993 Park Ave., New York, N. Y.
(5) Minnesota	Geo. M. Damon, 730 LaSalle Bldg., Min- neapolis, Minn.	Harry C. Lawton, 704 Lowry Bldg., St. Paul, Minn.
(6) New England	W. Henry Grant, 107 Massachusetts Ave., Boston, Mass.	James Keltie, 419 Boyl- ston St., Boston, Mass.
(7) Wisconsin	W. J. H. Benson, 536 W. Wisconsin Ave., Milwaukee, Wis.	Thos. R. Abbott, 920 S. 37th St., Milwaukee, Wis.
(8) Colorado	Ira C. Brownlie, 536 Metropolitan Bldg., Denver, Colo.	Max Giesecke, 1206 Republic Bldg., Den- ver, Colo.
(9) Pittsburgh	H. E. Friesell, Dental School, University of Pittsburgh, Pitts- burgh, Pa.	E. G. Meisel, 121 Uni- versity Place, Pitts- burgh, Pa.
(10) Iowa	John V. Conzett, 116 West 13th St., Du- buque, Iowa	Leslie M. Fitzgerald, 718 Roshek Bldg., Dubuque, Ia.
(11) Illinois	Lon W. Morrey, 5611 Kenmore Ave., Chi- cago, Ill.	H. R. H. Brevig, 27 E. Monroe St., Chicago, Ill.

	<i>Chairman</i>	<i>Secretary</i>
(12) St. Louis	H. F. Hagemann, Missouri Theatre Bldg., St. Louis, Mo.	Ewing P. Brady, 7239 Northmoor Drive, Clayton, Mo.
(13) Oregon	H. C. Fixott, 729 Medical Dental Bldg., Portland, Ore.	H. W. Titus, 214 E. 13th St., Eugene, Ore.
(14) Texas	F. W. Hinds, 820 Medical Arts Bldg., Dallas, Texas	Walter H. Scherer, 1620 Medical Arts Bldg., Houston, Tex.
(15) Florida	James Edw. Chace, Professional Bldg., Ocala, Fla.	Edward L. Thompson, 326½ S. Beach St., Daytona Beach, Fla.
(16) Indiana	Glenn J. Pell, 505 Hume Mansur Bldg., Indianapolis, Ind.	Robert R. Gillis, 134 Rimbach St., Hammond, Ind.
(17) Washington, D. C.	C. Willard Camalier, 1726 Eye St. N. W., Washington, D. C.	Geo. C. Paffenbarger, National Bureau of Standards, Washington, D. C.
(18) Southwestern	M. M. House, 1001 Floral Ave., Whittier, Calif.	F. E. Hogeboom, 3780 Wilshire Blvd., Los Angeles, Calif.

## V. REGISTER OF PAST-PRESIDENTS

1921, 1922	J. V. Konzett	1933	J. E. Gurley
1923, 1924, 1925	H. E. Friesell	1934	B. B. Palmer
1926, 1927	C. N. Johnson	1935	J. B. Robinson
1928, 1929	H. L. Banzhaf	1936	W. R. Davis
1930	R. H. Volland	1937	A. L. Midgley
1931	F. T. Breene	1938	C. E. Rudolph
1932	U. G. Rickert	1939	A. H. Merritt

VI. BOARD OF REGENTS: 1939-1940<sup>1</sup>

## I. OFFICERS

*President*, Alvin W. Bryan. *President-elect*, George W. Wilson.  
*Vice-president*, Henry C. Fixott. *Treasurer*, Harold S. Smith. *Secretary*,

<sup>1</sup>The Board of Regents consists of the officers and the elective Regents.

Otto W. Brandhorst. *Editor*, John E. Gurley. *Assistant Secretary*, William J. Gies.<sup>2</sup>

2. ELECTIVE REGENTS

Wm. F. Lasby (44), E. G. Meisel (43), Albert L. Midgley (42), J. Cannon Black (41), E. W. Swinehart (40).

<sup>2</sup>Dr. Gies serves in the appointive office of Assistant Secretary.

## NOTES AND COMMENTS

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

The results are showing up very well in the campaign for this endowment fund, but much yet remains to be done. The following is the report of the Treasurer up to May 1, which includes the total income over the two-year period. Read it through, then if you have not made your contribution, may we have it by return, and further, may we not ask you to solicit your neighbor? This is a project in which every member of organized dentistry should be interested.

Amount solicited .....	\$50,000.00
Paid in to May 1, 1940.....	21,322.33
Unpaid balance .....	\$28,677.67
Pledges not yet due.....	4,850.00
Balance yet to be raised.....	\$23,827.67

\* \* \*

### THE DENTAL CENTENNIAL

The Centennial celebration held in Baltimore, March 18-20, surely marked a milestone in the history of dentistry. When we stop to check up the development that has been made, we really have much of which to be proud. The entire program was very well arranged and emphasized very clearly in the minds of those in attendance the facts of the past, the present, and the future. The speakers outside the actual field of dentistry possessed great knowledge of our educational advancement, and by their statements gave recognition to dentistry in its place in society. The proceedings are now being published in book form, which book will possess valuable information for every dentist, for every dental educator and for everyone interested in the finer accomplishments of this profession. This book may be purchased by addressing Dr. Harry B. McCarthy,



Medical Arts Bldg., Baltimore, Md., at a cost of \$5.00. The attendance figures, as given out by the committee, are as follows:

Dentists .....	3,178
Dental Students .....	775
Guests .....	1,757
Commercial Exhibitors .....	945
	<hr/>
	6,655

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### NEW BOOKS

TEETH, HEALTH AND APPEARANCE, compiled and published under the direction of the Bureau of Public Relations, American Dental Association, Lon W. Morrey, D.D.S., Director. 1940. Pp. 48—10½ x 14 in.; cloth, \$1.50 postpaid.

\* \* \*

CLINICAL DENTAL ROENTGENOLOGY—Technic and Interpretation: By John Oppie McCall, D.D.S., F.A.C.D., Director, The Murry & Leonie Guggenheim Dental Clinic; former Professor of Periodontia, New York University College of Dentistry; Visiting Lecturer in Periodontia, New York University College of Dentistry; Consultant to the Dental Service, New York Hospital; and Samuel Stanley Wald, D.D.S., F.A.C.D., Head of the Department of Diagnosis and Roentgenology, The Murry & Leonie Guggenheim Dental Clinic and School for Dental Hygienists; Assistant Professor of Roentgenology, New York University College of Dentistry; Lecturer in Dental Radiology, New York University College of Medicine; Visiting Dental Surgeon, Nazareth Trade School. 319 pages with 1046 illustrations on 355 figures. Philadelphia and London: W. B. Saunders Company, 1940. Cloth, \$5.50.

\* \* \*

RADIO MANUAL, published by the Oral Hygiene Committee of Greater New York; cloth; pp. 200; 1940. Price \$1.50.

## 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

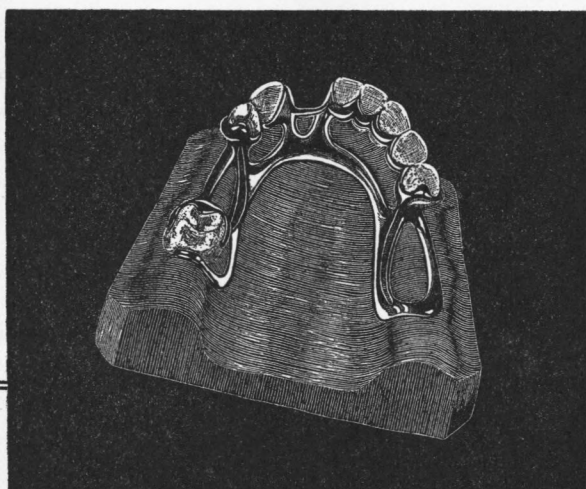
*welfare of the consumer is our paramount consideration.* In accordance with the recommendation of the American Association of Dental Editors, the placement of advertisements will be restricted to the advertising section.

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.

# WHAT PRICE *Superiority?*



Each pennyweight of Williams XXX (with Indium) Partial Denture Casting Gold represents more than just a carefully alloyed combination of dentistry's finest metals. It represents years of patient metallurgical research, years of careful study into the rigid requirements which dentistry has a right to place upon a prosthetic metal...Throughout these years Williams XXX (with Indium) has been progressively improved to its present high standard of quality, workability, durability...The Williams Gold Refining Co., Inc., Buffalo, N. Y.

*Williams* **XXX** *Indium* WITH

PARTIAL DENTURE CASTING GOLD



## AMERICAN COLLEGE OF DENTISTS

### STANDING COMMITTEES (1939-1940)

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

*Certification of Specialists*—H. C. Fixott (44), *chairman*; Max Ernst (42), C. O. Flagstad (41), J. O. McCall (43), E. W. Swinehart (40).

*Dental Relations*—J. O. Goodsell (43), *chairman*; L. E. Kurth (41), T. E. Purcell (44), Nathan Sinai (40), Wilmer Souder (42).

*Education*—F. W. Hinds (42), *chairman*; A. W. Bryan (43), W. C. Fleming (44), Harry Lyons (40), J. T. O'Rourke (43), R. S. Vinsant (41), L. M. Waugh (42).

*Endowments*—Emory W. Morris (43), *chairman*; Dan U. Cameron (41), Oscar J. Chase (44), Abram Hoffman (40), A. H. Merritt (42).

*History*—W. N. Hodgkin (44), *chairman*; E. E. Haverstick (42), J. B. Robinson (43), Henry L. Banzhaf (41), Robert P. Thomas (40).

*Hospital Dental Service*—Howard C. Miller (43), *chairman*; R. W. Bunting (44), E. A. Charbonnel (40), Leo Stern (42), C. W. Stuart (41).

*Journalism*—J. Cannon Black (40), *chairman*; G. M. Anderson (40), W. B. Dunning (41), Walter Hyde (44), T. F. McBride (41), E. G. Meisel (42), H. J. Noyes (43), E. B. Spalding (44), R. C. Willett (42).

*Necrology*—J. V. Conzett (41), *chairman*; R. R. Byrnes (40), F. H. Cushman (42), B. E. Lischer (43), W. L. Shearer (44).

*Nominations*—P. V. McParland (40), *chairman*; E. N. Bach (41), G. M. Damon (44), H. O. Lineberger (43), H. W. Titus (42).

*Oral Surgery*—M. W. Carr (41), *chairman*; E. R. Bryant (42), J. R. Cameron (40), C. W. Freeman (44), W. I. Macfarlane (43).

*Prosthetic Service*—W. H. Wright (43), *chairman*; W. H. Grant (41), Clarence A. Nelson (40), A. P. O'Hare (42), A. H. Paterson (44).

*Research*—A. L. Midgley (42), *chairman*; L. E. Blauch (44), W. D. Cutter (43), J. E. Gurley (42), P. J. Hanzlik (40), P. C. Kitchin (43), A. B. Luckhardt (41), L. R. Main (44), L. M. S. Miner (41), Irvine McQuarrie (40), A. M. Schwitalla, S. J. (44).

*Socio-economics*—C. E. Rudolph (43), *chairman*; E. H. Bruening (44), Wm. R. Davis (41), B. B. Palmer (40), M. W. Prince (40), Maurice William (44), Geo. W. Wilson (42).

### Announcements

*Next Annual Convocation*: Cleveland, Ohio, Sunday, September 8, 1940.

*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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