

INTERNATIONAL ASSOCIATION FOR DENTAL RESEARCH

PROCEEDINGS OF THE TWENTY-NINTH ANNUAL MEETING

FRENCH LICK HOTEL, FRENCH LICK SPRINGS, IND.

MARCH 17, 18, AND 19, 1951

Compiled by HAMILTON B. G. ROBINSON, Editor, *College of Dentistry, The Ohio State University, Columbus, Ohio*

I. Presidential Address, <i>B. G. Bibby, (Eastman Dental Dispensary)</i> - - - - -	455
II. Index of participants and sequence numerals for corresponding abstracts - - - - -	458
III. First Session: Morning, March 17; Abstracts 1-11 - - - - -	459
IV. Second Session: Afternoon, March 17; Abstracts 12-24 - - - - -	463
V. Third Session: Section A, Evening, March 17; Abstracts 25-36 - - - - -	468
VI. Third Session: Section B, Evening, March 17; Abstracts 37-48 - - - - -	472
VII. Fourth Session: Morning, March 18; Abstracts 49-59 - - - - -	477
VIII. Fifth Session: Section A, Afternoon, March 18; Abstracts 60-73 - - - - -	481
IX. Fifth Session: Section B, Afternoon, March 18; Abstracts 74-87 - - - - -	486
X. Sixth Session: Morning, March 19; Abstracts 88-99 - - - - -	492
XI. Dental Materials Group: Abstracts 100-113 - - - - -	496
XII. Papers read by title: Abstracts 114-169 - - - - -	501
XIII. Executive proceedings and register of newly elected officers and members - - - - -	524

I. PRESIDENTIAL ADDRESS: REMARKS OF RETIRING PRESIDENT

B. G. BIBBY,

Eastman Dental Dispensary, Rochester, N. Y.

Until recently, it seems to have been customary for the retiring president, as his last official duty, to make some comments on the affairs of the Association. In attempting to reestablish that usage, it is my hope that, as a result, throughout the years the members of the Association will be provided with a varied commentary on the progress, objectives, and needs of the Association.

In undertaking this self-imposed assignment, I can do no better than read a letter which I recently received from Dr. W. J. Gies, the founder and long-time secretary of our Association. In addition to providing us with happy news about his return to health following a major abdominal operation, Dr. Gies' letter not only records progress of the Association over a longer period of years than I can review, but it also restates some of the objectives which were in our founder's mind when the Association was formed. It states:

"Since the establishment of the I. A. D. R., 30 years ago, the Association's proceedings have recurrently promoted inquiries into the validity of many aspects of conventional dental opinions. The proceedings also have encouraged the endeavors and have supported the matured judgments of the steadily growing number of ardent workers in dental research. Consequently, the Association has been a cumulatively constructive factor in the evolution of the sciences and arts of oral health service, and in the increase of the dental profession's proficiency in giving the public the most effectual dental health care.

"The constructive influences of the I. A. D. R. have been strengthened by the Association's organization—from the beginning—as a federation of active geographical sections, and by the ensuing transmission of the scientific import of the general transactions to the local

The meetings of the International Association for Dental Research were coordinated with the meetings of the American Association of Dental Schools and Omicron Kappa Upsilon.

The Editor wishes to express his appreciation to Dr. Edward H. Hatton, General Secretary, for cooperation in preparation of these Proceedings and to Dr. H. Sicher for translating the abstracts of the contributions of the Vienna Section.

groups of members, and vice versa. The influence of this intimate coordination within the Association has been extended by close correlations of the annual meetings of the I. A. D. R. with the American Association of Dental Schools, which present specially favorable yearly opportunities for both teachers and investigators to compare their understandings, responsibilities, and mutual suggestions, for the advancement of dental research, and also for the improvement of teaching in the dental schools.

“My long-standing appreciation of the accomplishments of the I. A. D. R., and my anticipations of its potential achievements, account for my enthusiastic interest in the Association’s growth in size, strength, initiative, and influence. . .”

The foregoing letter indicates that the growth of the Association has been healthy and that most of its original objectives are being fulfilled in a satisfactory manner; however, growth in size gives rise to increased responsibilities and it complicates administration. In the past our secretary-treasurer has managed the affairs of the Association without assistance, but if we envision much further growth, arrangements should be devised which will take some of the responsibility from his shoulders. As a beginning step in that direction it would be useful to have officers of the Association who are better informed as to the management of the Association than I was when I took office; thereby, they might be in a position to help the secretary when they took office rather than to harass him by making mistakes or promoting policies which may only recently have been discarded. As a means of saving the secretary from having to educate the incoming generation of officers during the next year on the matters which mystified me, I initiated the practice of sending copies of all business correspondence to the president-elect and the vice president. This simple arrangement is probably only one of several devices which could be used to increase administrative efficiency.

Another method for laying a foundation for an expanded and efficient Association is to develop committees which function in a really effective way. The Association has two permanent or standing committees, the Publication Committee and the Program Committee both of which are established by the Constitution and By-laws. It also has a group of continuing or, more accurately, “repeat” committees such as those on Membership, Dental Research, and Dental Science and Art. The duties of these committees, the conditions of membership, the methods of reporting, or the reason for existence of some of them are not too certain. After taking office last year I appointed new members to all of these committees, but so that the incoming officers would come to know more about their organization, I appointed them to as many committees as possible. Out of respect for the past, and because it must be assumed that at some time all of these committees had a significant purpose, it is probable that your new president will make new appointments again this year. There is yet another group of what may be termed “moribund” committees which have been set up by action of the council in recent years. These include what was designed to be a continuing Committee on Business and Finance, the membership of which would hold office for 5 year periods. Other committees were appointed for the organization of symposia, the providing of better programs, and such purposes. The forgotten existence of these committees gives point to the statement that committees resemble illegitimate children; too often they are conceived in moments of excitement to be forgotten as soon as they are born.

It would seem that a contribution could be made to the efficiency of the Association if the activities of our committees were critically examined with the

idea of redefining their functions and procedures. Some committees, such as the Membership Committee, which have continuing responsibility might, by amendment of the By-laws, be given the dignity of becoming standing committees of the Association; the others might be given an informal burial.

The Program Committee assumed added responsibility this year in arranging the program of the annual meeting. Such responsibilities could be expanded. For instance, now that it has become the responsibility of the I. A. D. R. to select, on alternate years, a location both for its own meeting and that of the American Association of Dental Schools, that duty might be assigned to the Program Committee, thus removing a recurring item from the crowded agenda of the council.

The Publication Committee was set up for the purpose of publishing the *Journal of Dental Research* for the Association. It has functioned very satisfactorily and were it not for the hard work and devotion of the editor and his Publication Committee, the Association would not now have the excellent journal that it has. However, times have changed since the Publication Committee was created. The problems of publication, business management, advertising, and circulation are no longer in the hands of a geographically united group of Dental Fellows at the University of Rochester; instead, most of these matters are handled by the Mosby Company with whom the Association has signed a publication contract. This reduction of the Publication Committee's responsibilities in business management and circulation has not been accompanied by a reduction of their financial responsibility to the Association. Over the years the Publication Committee has become the disbursing agent for progressively greater percentages of the Association's funds. At the time the Publication Committee was formed, none of the membership dues of the Association were designated for its use. Later, in response to a request from the Publication Committee, the dues of the Association were increased to include a compulsory subscription to the *Journal of Dental Research*. Thus, the larger portion of the funds collected by the Association became assigned to the Publication Committee. This year we have had a further increase in the Association dues and the larger portion of that increase will be expended by the Publication Committee. Although there are no doubts that the expenditure will be careful and wise, it is important to note that over the years an anomalous situation has grown up under which a committee of the Association is responsible for the major financial obligations of the Association. This is not a businesslike arrangement, and it is one for which the trustees and other officers can well be criticized on the basis of administrative principle.

It is my feeling that one or two of the General Officers of the Association in addition to the Editor should automatically be members of the Publication Committee. Such a change would overcome an organizational anachronism without interfering with the authority of the editor in the running of the *Journal*. The by-products of such a reorganization would be to add greater dignity to the Publication Committee, to give more direct representation of the Association in its major financial commitment, and, in line with the need for better informed officers, it would help to educate a rotation of officers in the major business commitment of the Association. An important benefit to the *Journal* would be the existence of a larger group of officers and members in the Association who understood its publication problems, and who would be in a better position to help if the future should bring difficulties, or special opportunity.

These considerations suggest that changes in our Constitution and By-laws might be necessary. Apart from anything which has been suggested here, it seems to be time that our Constitution and By-laws were reexamined.

It has now been ten years since they were last reviewed. During that time, conditions such as those touching on the financial commitments to the Journal have changed, and, over the years, the officers and others have noted a number of ambiguities and incongruities in the By-laws. Some of these are being taken care of by amendments, but it does not seem too soon to reexamine the whole constitutional structure of the Association, to see if it cannot be made more appropriate to the conditions of today.

It is obvious that in examining the needs of the Association I have also made recommendations, however, to give these ideas a little more point, it might be worth restating them in a different form. To my successors in office I would suggest that a study be made of duties of our officers and committees for the purpose of making recommendations which would help them to work more efficiently. Such a study should include an examination of the organization and responsibilities of the Committees established by the Constitution and By-laws, and should recommend any changes in the Constitution and By-laws as should seem to be necessary to bring the desired ends.

Now that my last official statement to the Association is about to be concluded, I would like to thank the membership for the honor they have bestowed upon me by allowing me to serve as president, and to thank everyone for the support that has been given me during my tenure of office. Finally, may I convey to my successor, Dr. Fosdick, my congratulations and good wishes as he takes office. I am sure that he will find as I have, that it is a privilege to serve this very worthy organization.

II. INDEX OF PARTICIPANTS, AND SEQUENCE NUMERALS FOR CORRESPONDING ABSTRACTS

Addelston, H. K., 47, 52; Afonsky, D. A., 12; Alderman, N. E., 146; Armstrong, W. D., 24, 40; Avery, J. K., 83, 132; Barber, T. K., 143; Barich, F. T., 122; Bartelstone, H. J., 59; Baume, L. J., 114, 115, 116; Belgorod, H. H., 58; Besic, F. C., 66; Bibby, B. G., 28, 71, 96, 117; Blayney, J. R., 18; Blechman, H., 118; Boman, V. R., 126; Boyd, J. D., 16; Brauer, G. M., 103; Bright, P. J., 119; Bruckner, R. J., 13; Brudevold, F., 51, 95, 166; Brumfield, R. C., 109; Burnett, G. W., 50; Bush, S. H., 110; Canfield, R. C., 49; Cantril, S. T., 49; Cattoni, M., 75; Castaldi, C. R., 1; Chawla, T. N., 6; Chen, E., 71; Chernausek, D. S., 73, 148; Christian, K., 60; Clubb, R. W., 132; Cohen, M., 46, 118; Coolidge, T., 56; Cooper, E. N., 100; Costich, E. R., 7; Cowie, D. B., 22; Crowell, W. S., 108; Curby, W. A., 38, 140; Dam, H., 128; Detwiler, S., 82; Dobbs, E. C., 11; Domm, L. V., 78, 79; Donnelly, D. F., 164; Downs, W. L., 21; Driak, F., 120; Edwards, R. W., 121; Elliott, H. W., 81; Engel, M. B., 88, 90, 158; English, J. A., 167; Ennever, J. J., 63; Epstein, S., 9; Fankuchen, I., 47, 52; Fischer, C. J., 77, 129; Fischer, T. E., 113; Fisher, B. J., 32; Fleet, I. J., 122; Forbes, J. C., 94; Fosdick, L. S., 30, 57; Freeman, R. S., 123; Fridley, H. H., 45; Frisbie, H. E., 65; Gaard, R., 27; Gans, B. J., 124; Gardner, D. E., 20, 21; Gerber, W. E., 125; Gibilisco, J. A., 98; Gillis, R. E., 33; Glass, R. L., 25; Glickman, I., 4, 6; Glowacz, C. R., 126; Goldberg, H. J. V., 71, 96; Graber, T. M., 85, 123, 127; Granados, H., 128; Greep, R. O., 77, 129; Grohs, R., 130; Grossman, L. I., 60; Gurney, B. F., 93; Hadjimarkos, D. M., 131; Hamilton, T. R., 61; Harris, R. S., 70; Hawes, R. R., 99; Haydon, G. B., 20; Hein, J. W., 7, 20, 21, 132, 133; Henry, E. E., 102; Hill, I. N., 18; Hill, T. J., 13, 31; Hodge, H. C., 21, 23; Hoffman, H., 34; Hoffmeistr, F. S., 42; Holland, M. R., 134; Howard, T. J., 15; Hurst, V., 27, 65, 80; Hutton, W. E., 55, 80; Jarabak, J. R., 85, 86, 87, 135, 136, 137; Jensen, J., 61; Jones, E., 76; Kaplan, H., 54; Karshan, M., 3; Kauffman, S., 32; Kennedy, D. R., 61; Klapper, C. E., 72; Klein, E., 47, 52; Knighton, H. T., 62;