turers, and a conference was held on July 29 of representatives of the associations already formed for the purpose of discussing some of the many problems which have presented themselves in connection with their work.

In the absence of Mr. H. A. L. Fisher, president of the Board of Education, the chair was taken by Sir William McCormick, chairman of the Advisory Council. Sir Frank Heath, secretary of the Department of Scientific and Industrial Research, was also present, besides some sixty to seventy representatives. A great diversity of subjects was thus represented, though some, especially the great chemical industries, were conspicuously unrepresented.

The meeting was informed that nine research associations were in operation, eight more have been approved and are only waiting the license of the board of trade, while twelve others are under discussion. So much having been accomplished in the three years which have elapsed since the idea originated, it may be assumed that a general approval has been given to the scheme by the industrial world, but the initial difficulties are far from being overcome as yet.

Among the subjects discussed at the conference the first was the formation of a records bureau, and the second the difficult and important one of the conditions of employment of research workers engaged by the associations. Other questions related to cooperation among the associations, and the amount and method of assessment of the subscriptions to be paid by the associated firms in addition to the subsidy from departmental funds.

The formation of a bureau of information and for the recording of results secured by research is a matter of the utmost importance. In the first place it is proposed that its task should consist in storing up the results of work done by the associations, but even this will be found very expensive and not free from difficulties, owing to the views prevalent in some quarters as to secrecy. The associations require access to information of every kind, and apparently the representatives assembled have something to learn with regard to the existing sources of much of the information they require, for throughout the discussion no reference was made to the magnificent journals, containing both original papers and abstracts, issued by some of the British and American engineering and chemical societies. It seems to be recognized that a large number of reference libraries will have to be established, especially in the neighborhood of great centers of industry; but it ought also to be understood that every association will require a library stored with works of reference, and especially journals cognisant of the subjects it represents; indeed, every works which has a laboratory for research must be similarly provided. All this represents a large outlay of money, the amount of which can scarcely be calculated as yet.

THE AMERICAN CERAMIC SOCIETY

The program for "Ceramic Day" at the Fifth National Exposition of Chemical Industries, Chicago, September 24, was as follows:

Morning Session

Professor Charles F. Binns: "The American Ceramic Society, past, present and future."

Dr. Alexander Silverman: "Buy on analysis."

Dr. E. W. Washburn: "Some aspects of scientific research in relation to the glass industry."

Mr. Ross C. Purdy: "Superior refractories."

Mr. Frederick H. Rhead: "The making of pottery."

Afternoon Session

Mr. Robert J. Montgomery: "General types of optical glass."

Mr. Douglas F. Stevens: "Brick and tile."

Mr. A. V. Bleininger: "The application of scientific methods to ceramic research."

Dr. J. C. Hostetter: "The manufacture of optical glass."

Mr. R. R. Danielson: "Enameling technology."

Mr. A. Malinovszky: "Fused silimanite products."

Evening Session

A full evening's program of motion pictures, including:

"Making of cut glass."

"Glass bulb and tubing manufacture for Mazda lamps."

"Manufacture of architectural terra cotta."

According to information supplied by Mr. Chas. F. Binns, the American Ceramic Society was founded in 1899, at Columbus, Ohio, when a small group of scientific men, interested in the problems of the silicate industries, gathered together and formed a permanent organization. Beginning with the report of that meeting a volume of *Transactions* has been published each year for nineteen years. In addition to the annual volume, a Manual of Ceramic Calculations, as an appendix to Volume 11, and the works of Hermann A. Seger, translated from the German, were published.

Clays and glazes were the earliest interests of the society but were soon followed by all branches of the silicate industries.

The growth in membership was steady but not large until 1917, when conservatism yielded before a vigorous campaign under the Membership Committee, resulting in an increase of over 200, a movement which has continued up to the present when there are 1,156 members.

In 1918 the annual volume of *Transactions* was superseded by the *Journal of the American Ceramic Society,* with G. H. Brown as editor. There has been a gratifying improvement in this *Journal* during the year and three quarters of its existence, and it now ranks with the scientific journals of much larger societies.

Local sections have been organized in places where there are many ceramists, who meet frequently for the discussion of papers and for good-fellowship. More recently Industrial Divisions have been formed for the better grouping of interests at the annual meetings. It is probable that hereafter there will be one or two general meetings and the rest of the time will be given over to divisional meetings.

SCIENTIFIC NOTES AND NEWS

DR. HENRY A. CHRISTIAN, Hersey professor of the theory and practise of physics in the Harvard Medical School and physician-in-chief to the Peter Bent Brigham Hospital, has been granted a leave of absence from his Boston work to serve for a year in Washington as chairman of the Division of Medical Science of the National Research Council and will begin that work on October 1.

DR. AUGUSTUS TROWBRIDGE, professor of physics at Princeton University, has received for his work in organizing and directing the sound-ranging and the flash-ranging in the American Expeditionary Forces the distinguished service medal. He has also been decorated with the British D.S.O., and has been made Chevalier of the French Legion d'honneur.

PROFESSOR GILBERT N. LEWIS, dean of the college of chemistry, University of California, formerly lieutenant colonel in the Gas Service, A. E. F., has been decorated as Chevalier of the French Legion d'honneur.

DR. MORTON PRINCE, of Boston, has been decorated with the Cross of the French Legion of Honor for his services in promoting Franco-American cooperation during the war.

LIEUTENANT COLONEL ELMER K. HILES, formerly of the Engineers, American Expeditionary Forces, has joined the Pittsburgh Testing Laboratory as manager of laboratories.

JACK J. HINMAN, JR., formerly captain in the Sanitary Corps of the American Expeditionary Forces, where he was engaged in water supply work, has returned to his pre-war duties as water bacteriologist and chemist to the Iowa State Board of Health and assistant professor of epidemiology in the State University of Iowa.

NORMAN A. SHEPARD, assistant professor in chemistry at Yale University, has resigned to enter the employ of the Firestone Tire & Rubber Company.

JULIUS B. KOHN, formerly employed by the U. S. Public Health Service as organic chemist doing research work under the direction of Dr. Julius Stieglitz on arsphenamine and neoarsphenamine at Kent Chemical Laboratory of the University of Chicago, is now connected with the Mallinckrodt Chemical Works as research chemist in their organic department, at St. Louis, Mo.

THE Massachusetts Department of Health celebrated the fiftieth anniversary of its estab-