

large experimental x-ray plant in the hands of Dr. Müller and Mr. R. S. Clay. The capacity of the apparatus is calculated to be about 50 kw.; as yet it has worked well up to 10 kw. The treasurer's report and accounts showed a very satisfactory position, in spite of the heavy demand on the financial resources of the institution caused by the recent reconstruction. After a total expenditure in connection with the rebuilding of more than £100,000, a diminution in the invested funds of the Royal Institution of about £2,000 is shown. This gratifying result is a consequence of many generous donations to the Building and Research Endowment Fund raised by the institution in the past three years. The donations and other receipts to this fund have been sufficient to defray almost the entire cost of the rebuilding, and to go a considerable way towards completion of the program of permanent endowment of research which the managers of the institution have as one of their principal objects. The following officers for 1933-34 were elected: *President*, the Right Hon. Lord Eustace Percy; *Treasurer*, Sir Robert Robertson; *Secretary*, Major Charles E. S. Phillips.

#### NATIONAL RESEARCH FELLOWSHIPS IN THE BIOLOGICAL SCIENCES

THE annual meeting of the Board of National Research Fellowships in the Biological Sciences, for the award of 1933-34 appointments, was held in Washington on April 28 and 29, 1933. The board made twenty-six reappointments and forty-one new appointments, as follows:

##### REAPPOINTMENTS

###### *For Domestic Study*

Bond, R. M.—Zoology  
Boughton, D. C.—Agriculture  
Burkholder, P. R.—Botany  
Casida, L. E.—Agriculture  
Fry, Glenn A.—Psychology  
Glass, H. B.—Zoology  
Hopkins, E. W.—Agriculture  
Jackson, T. A.—Psychology  
Kelly, Isabel T.—Anthropology  
Kerr, Thomas—Botany  
Miller, E. S.—Botany  
Morsh, J. E.—Psychology  
Mowrer, O. H.—Psychology  
Phelps, Austin—Zoology  
Riley, H. P.—Botany  
Shaw, Luther—Agriculture  
Smelser, G. K.—Zoology  
Smith, Wm. K.—Agriculture  
Taylor, G. W.—Zoology  
Tharp, Wm. H.—Botany  
Wald, George—Zoology  
Walls, Gordon L.—Zoology  
Wolfe, J. B.—Psychology  
Zirkle, R. E.—Botany

###### *For Study Abroad*

Hill, R. T.—Zoology  
Sparrow, F. K.—Botany

##### NEW APPOINTMENTS

###### *For Domestic Study*

Abbe, Ernst C.—Botany  
Barker, Horace A.—Zoology  
Clark, Harold E.—Agriculture  
Day, Harry G.—Zoology  
Dyk, Walter—Anthropology  
Edelman, Edward E.—Psychology  
Gardner, Wm. U.—Agriculture  
Goddard, David R.—Botany  
Hamlett, Geo. W. D.—Zoology  
Harrison, Carter M.—Agriculture  
Hooker, Charles W.—Zoology  
Hulse, Frederick S.—Anthropology  
Hunt, Joseph McV.—Psychology  
Jeffers, Katharine R.—Zoology  
Krechevsky, Isadore—Psychology  
Leeper, Robert W.—Psychology  
Livingston, Luzern G.—Botany  
Mackinney, Gordon—Botany  
Misbach, L. E.—Psychology  
Moyer, Laurence S.—Botany  
Needham, J. G.—Psychology  
Pady, Stuart M.—Botany  
Park, Thomas—Zoology  
Peckham, Robert H.—Psychology  
Rosenfels, Richard S.—Botany  
Rudnick, Dorothea—Zoology  
Seltzer, Carl C.—Anthropology  
Spence, Kenneth W.—Psychology  
Steinbach, H. Burr—Zoology  
Sumwalt, Margaret—Zoology  
Williams, H. H.—Agriculture

###### *For Study Abroad*

Barron, Donald H.—Zoology  
Baxter, Dow V.—Forestry  
Birkeland, J. M.—Botany  
Ehrlich, John—Forestry  
Graham, Roy—Botany  
Lindsley, D. B.—Psychology  
Neatby, Kenneth W.—Agriculture  
Snyder, Wm. C.—Agriculture  
Wells, John W.—Zoology  
Wilcox, A. N.—Agriculture

#### SUMMER CONFERENCE IN SPECTROSCOPY

ONE of the features of the summer research gathering of spectroscopists to be held at the Massachusetts Institute of Technology this year is to be a Spectroscopic Conference scheduled for the week of July 17-22. Each of the five days of the conference will be devoted to some particular branch of spectroscopy, the mornings being devoted to the presentation of papers and the holding of discussion groups, while the afternoons are to be left free

for informal discussions, laboratory inspections, and sight-seeing and recreation.

While the program is not yet complete, the following papers have already been scheduled:

Monday, July 17: *Quantitative Spectroscopic Analysis of Materials*

C. C. Nitchie, Bausch and Lomb Optical Company, "Some Practical Applications of the Spectrograph."

W. F. Meggers, Bureau of Standards, "The Physical Basis for Quantitative Spectrochemical Analysis."

F. Twyman, Adam Hilger, Ltd., "The Rôle of the Instrument Maker in Spectrum Analysis."

C. E. K. Mees, Eastman Kodak Company, "Photographic Plates for Spectroscopy."

Keivin Burns, Allegheny Observatory, leader of Discussion on Spectrochemical Analysis.

Tuesday, July 18: *Biological and Photochemical Applications of Spectroscopy*

W. A. Noyes, Jr., Brown University, "The Correlation of Research in Spectroscopy with that of Photochemistry."

P. A. Leighton, Stanford University, "Photochemistry and the Schumann Region."

F. Twyman, Adam Hilger, Ltd., "Basic Principles in the Design of Spectrophotometers."

G. B. Kistiakowsky, Harvard University, "Molecular Dissociation Energies from Spectroscopic Data."

Wednesday, July 19: *Physical and Astrophysical Aspects of Spectroscopy*

D. H. Menzel, Harvard University, "The Spectroscopy in Astrophysics."

G. H. Dieke, The Johns Hopkins University, "Astigmatism of the Concave Grating."

F. H. Crawford, Harvard University, "The Present Status of Research on the Zeeman Effect in Molecular Spectra."

Thursday, July 20: *Analysis of Complex Spectra*

A. G. Shenstone, Princeton University, "Incompletely Analyzed Spectra."

W. F. Meggers, Bureau of Standards, "The Structure of Rare Earth Spectra."

G. H. Dieke, The Johns Hopkins University, "The Present Status of Wave-length Standards."

Keivin Burns, Allegheny Observatory, "Wave-length Standards."

Friday, July 21: *Spectroscopy and Atomic Structure*

(To be arranged), "Status of Theoretical Calculations of Atomic Energy States."

G. R. Harrison, Massachusetts Institute of Technology, "Status of Calculations of Spectral Line Intensities."

D. R. Hartree, University of Manchester, "Numerical Calculation of Atomic Properties."

J. C. Slater, Massachusetts Institute of Technology, "Analytical Calculations of Atomic Properties."

A number of other papers which have been tentatively scheduled are not listed because of uncertainties

which had not been cleared up at the time of going to press. It is planned to follow each set of papers by extended discussion of the present status and future possibilities of each branch of spectroscopy considered.

## PSYCHOLOGY AT CHICAGO

MEMBERS of Section I of the American Association for the Advancement of Science will meet in Chicago from June 20 to 23, in connection with the Century of Progress. Four psychologists from abroad will be present. Each of these will lead a symposium and in addition special lectures are scheduled. American psychologists will also participate in the symposia, the topics and leaders of which are as follows:

June 20, "Gestalt": Wolfgang Köhler, Berlin.

June 21, "Intelligence": Charles E. Spearman, London.

June 22, "Sensory Psychology": Henri Piéron, Paris.

June 23, "Character and Personality": Emilio Mira, Barcelona.

In addition to regular sessions the special symposia and lectures given in other sections of the association are of interest to psychologists. For example, the following may be mentioned:

June 20, forenoon, Dr. A. V. Hill, London, Symposium on Nerve Activity.

June 21, afternoon, Dr. R. Goldschmidt, Institute of Experimental Biology, Berlin, Symposium.

June 23, evening, Dr. C. U. A. Kappers, Brain Institute, Amsterdam, General Address.

The preliminary program follows:

Tuesday, June 20, 2:00 P. M. Symposium on Gestalt Psychology: Wolfgang Köhler, Berlin; R. H. Wheeler, University of Kansas; Heinrich Klüver, Institute for Juvenile Research.

Wednesday, June 21, 9:30 A. M. Symposium on Intelligence: Charles E. Spearman, University of London; Florence L. Goodenough, University of Minnesota. 11:30 A. M. Address: Henri Piéron, Paris.

Thursday, June 22, 9:30 A. M. Symposium on Sensory Psychology: Henri Piéron, Paris; Walter R. Miles, Yale University; Alvhh R. Lauer, Iowa State College. 11:30 A. M. Address: Emilio Mira, Barcelona.

Friday, June 23, 9:30 A. M. Symposium on Character and Personality: Emilio Mira, Barcelona; Mandel Sherman, University of Chicago; John E. Anderson, University of Minnesota.

Saturday, June 24, 8:00 P. M. General Address before the Association: Charles E. Spearman, University of London.

Dr. Walter R. Miles, of Yale University, is chairman of the section and Dr. John E. Anderson, of the University of Minnesota, is secretary. The meetings will be held in Thorne Hall and Lincoln Hall, McKinlock Campus, Northwestern University.