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The Engineering Foundation has the cordial cooperation of the American Institute of Mining and Metallurgical Engineers and other societies of engineers; the American Iron and Steel Institute, American Foundrymen's Association, Battelle Memorial Institute, Columbus, Ohio; Carnegie Institute of Technology, Pittsburgh; Lehigh University and other universities, iron and steel companies and other industries, the National Bureau of Standards, United States Bureau of Mines, technical journals and numerous individuals. Informal assurances of foreign cooperation also have been received.

Such laboratory research as the committee undertakes will have for its aim the production of basic data which may be freely disseminated. Utilization of the data for commercial processes will be open to the industries.

DEDICATION OF THE JAMES WARD PACKARD LABORATORY AT LEHIGH UNIVERSITY

THE James Ward Packard Laboratory for Electrical and Mechanical Engineering was dedicated at Lehigh University on October 15. Mr. Charles M. Schwab, chairman of the board of trustees of the Bethlehem Steel Corporation and a trustee of the university, who made the dedicatory address, paid high tribute to the late Mr. Packard, donor of the building. Dr. Charles Russ Richards, president of the university, was chairman. The architects, Messrs. T. C. Visscher and J. L. Burley, of New York City, were introduced and the former presented the keys of the building to Mr. Eugene G. Grace, president of Lehigh's board of trustees. The keys were then presented in turn to Dr. Richards, Professor F. V. Larkin, head of the department of mechanical engineering, and Professor S. S. Seyfert, acting head of the department of electrical engineering.

A two-day conference on the relations of technical schools to industry followed the dedication, at which the subjects and speakers were as follows: "What Industry Expects of the Technical Schools": F. A. Merrick, president Westinghouse Electric and Manufacturing Company; L. W. Baldwin, president Missouri

Pacific Railway; A. R. Glancy, president Oakland Motor Car Company; M. S. Sloan, president Brooklyn Edison Company; Baneroff Gherardi, vice-president and chief engineer American Telephone and Telegraph Company.

"What the Technical Schools Expect of Industry": Dr. Arthur Maurice Greene, Jr., dean of the School of Engineering, Princeton; Professor Dugald Caleb Jackson, head of the department of electrical engineering at Massachusetts Institute of Technology; David Ross, president of the Ross Gear Company and president of the board of Purdue University, and Dr. William E. Wickenden, president of the Case School of Applied Science.

"The Future of Industry, its Problems and Needs": Magnus W. Alexander, president National Industrial Conference Board, New York City; "Distribution and Its Effect on Industry," Edward A. Filene, president and chairman of the board of William Filene's Sons' Company, Boston; "The Effects of Research on the Future of Industry," Dr. John Johnston, director of research, United States Steel Corporation, Kearny, New Jersey, and "The Methods of Industrial and Business Forecasting," S. L. Andrew, chief statistician, American Telephone and Telegraph Company, New York.

THE FRANKLIN INSTITUTE

DR. HOWARD McCLENAHAN, secretary of the Franklin Institute and director of the Benjamin Franklin Memorial and Franklin Institute Museum, announces that three heads of departments of the museum have been appointed. Dr. James Barnes, present professor of physics in Bryn Mawr College, has been appointed head physicist and will assume the duties of his office at the completion of his present year in Bryn Mawr. Mr. Charles E. Bonine, of the firm of consulting engineers Bonine and Costa, will serve as head of the engineering section of the scientific staff. Mr. Bonine has already taken up active work in connection with the development of engineering in the new museum. Mr. James Stokley, of Washington, D. C., a member of the staff of Science Service, will be the head of the astronomical section of the new institution. Mr. Stokley will be responsible for the operations of the planetarium section and of the astronomical observatory, as well as the outdoor observatory of the museum. These three men, together with Dr. McClenahan who is himself an electrical engineer by training and has been for some twenty-eight years a professor of physics in Princeton University, form the nucleus for the staff of the new institute. A director of the chemical section will

soon be added. Other members of the staff will be appointed as the development of the exhibits proceeds and the need for other services becomes evident.

Lectures before the Franklin Institute are announced as follows:

October 15—Dr. and Mrs. Paul H. Dike, Philadelphia, Pa. "Theremin: Theory and Practice." Dr. Dike will develop the theory of this instrument and Mrs. Dike, who is a licensed performer, will demonstrate the use of it and will give a recital upon it.

October 23—Clifford B. White, M.E., American-LaFrance and Foamite Industries, Inc., Elmira, N. Y. "Modern Fire Extinguishing Methods."

October 30—Douglas Stanley, M.S., New York City. "The Science of Voice." W. M. Jennings, Esq., Philadelphia, Pa. Display of "A New Photography."

November 6—H. H. Lester, Ph.D., research physicist, Watertown Arsenal. "The Use of X-rays in Industry."

November 13—Arthur E. Morgan, D.Sc., president of Antioch College. "The Nation's Water."

November 19—R. T. Haslam, B.S. in Eng., Standard Oil Development Company, New York City. "The Hydrogenation Process in Petroleum Refining."

December 4—J. B. Johnson, Ph.D., research physicist, Bell Telephone Laboratories, Inc., New York City. "The Cathode Ray Oscillograph."

December 10—Sir Henry W. Thornton, K.B.E., chairman of the boards of directors and president, Canadian National Railways. "Men and Industry."

December 17—Saul Dushman, Ph.D., assistant director, Research Laboratory, General Electric Company, Schenectady, New York. "Methods for the Production of High Vacua."

SCIENTIFIC NOTES AND NEWS

THE Capper Medal of the National Country Life Association of \$5,000 was presented to Dr. Stephen Moulton Babcock on the evening of October 10. The money and a plaque were given to him by the donor, Senator Arthur Capper, Kansas publisher, and the story of his work was recounted by Mr. Frank O. Lowden, former governor of Illinois and president of the association. Dr. Babcock, who celebrated his eighty-seventh birthday on October 22, became professor of agricultural chemistry at the University of Wisconsin in 1888 and retired as professor emeritus in 1913.

THE honorary doctorate of laws was conferred at the opening session of the annual convocation of the University of the State of New York on Dr. William H. Welch, of the Johns Hopkins University. In conferring the degree Dr. Frank Pierrepont Graves, president of the university, recalled that Dr. Welch is a graduate of the medical school of Columbia University and carried on his first activities as instructor at Bellevue College of New York University. Continuing he said: "The years that bridge the interval between that first professorship and your present world-wide eminence as teacher, investigator, administrator and leader among scientists are filled with accomplishments and crowded with well-earned honors. No man has done more to make available to America the blessings of modern scientific medicine and public health work."

THE degree of doctor of laws was conferred on Dr. William J. Mayo, of Rochester, Minnesota, at the recent dedication of the medical school building of Temple University.

DR. E. P. FELT, for thirty years state entomologist

at the New York State Museum at Albany previous to his retirement from the state service, has been made collaborator of the museum, in recognition of his scientific work and his cooperation with the museum. The two others previously so honored are Dr. A. P. Brigham, of Colgate University, and Professor George H. Hudson, formerly of the State Normal School, Plattsburgh, N. Y.

DR. ERNEST S. LEWIS, emeritus professor of obstetrics and gynecology at the College of Medicine of Tulane University, was on September 24 the guest of honor at a luncheon given by medical colleagues celebrating his ninetieth birthday. Dr. Lewis has been connected with Tulane University for sixty years. The speaker was Dr. Rudolph Matas.

FOUR foreign surgeons were awarded honorary fellowships in the American College of Surgeons at the convocation on October 17, which concluded the twentieth clinical congress of the college. These were Professor Henry Wade, of Edinburgh, surgeon and urologist; Professor Otfried Foerster, Breslau, neurologist; William Ernest Miles, London, and Professor Dr. Emil von Grósz, Budapest, ophthalmologist.

DR. ALLEN B. KANAVAL, professor of surgery at Northwestern University, was elected president of the American College of Surgeons at the twentieth annual meeting held in Philadelphia. Dr. Rose Millar, Ottawa, and Dr. Eldridge J. Eliason, Philadelphia, were elected vice-presidents.

PROFESSOR WILLIAM R. RANSOM, of Tufts College, was elected president of the Bond Astronomical Club at the first meeting of the season at the Harvard Observatory.

PROFESSOR EGAS MONIZ on October 15 was elected