

does it include the manufacture of glass and porcelain were made expressly for electrical purposes, that of bare iron and copper wire, or any of the group of electrochemical and electrometallurgical products. The total number of establishments in the United States in 1909 engaged in the manufacture of electrical machinery, apparatus and supplies, was 1,009. The total number of persons engaged in the industry was 105,600, of whom 102,950 were wage earners. The total capital employed was \$267,844,432, and the total value of products was \$221,308,563. The industry in 1909 was largely centralized in the six states of New York, Pennsylvania, New Jersey, Massachusetts, Illinois and Ohio. These states together reported 83.9 per cent. of the total average number of wage earners, 82.6 per cent. of the total value of products and 83.1 per cent. of the total value added by manufacture.

UNIVERSITY AND EDUCATIONAL NEWS

THE Graduate College of Princeton University was formally dedicated on October 22. Professor Andrew F. West, dean of the graduate school, made the principal address, his subject being "The Household of Knowledge." Addresses of congratulation were made by Dr. Alois Riehl, professor and former rector in the University of Berlin; Dr. Arthur Shipley, master of Christ's College, Cambridge; Dr. Arthur Denis Godley, fellow of Magdalen College and public orator in the University of Oxford; M. Emile Boutroux, honorary professor in the University of Paris and president of the Foundation Thiers, and by President Nicholas Murray Butler, of Columbia University. The Cleveland Memorial Tower was then presented by Mr. Richard V. Lindabury, president of the Cleveland Monument Association, and accepted on behalf of the university by President John Grier Hibben. A memorial address on "Grover Cleveland" was then made by ex-President William Howard Taft. Earlier in the week the foreign guests gave public lectures, the subject of Dr. Shipley's address being "The Origin of Life."

DR. CHRISTIAN B. HOLMES has been appointed dean of the medical department of the

University of Cincinnati, succeeding Dr. Paul G. Woolley.

At the University of California, Frank LeRoy Peterson has been appointed assistant professor of farm mechanics, and Dr. Max Morse, instructor in physiology.

CHARLES T. KIRK, Ph.D. (Wisconsin, '11), has been appointed professor of geology in the University of New Mexico.

MISS FANNY C. GATES, formerly head of the department of physics at Goucher College, has been appointed dean of women and professor of mental and physical hygiene in Grinnell College.

MR. GEORGE R. JOHNSTONE, A.B. (Illinois, '13), has been appointed instructor in botany at the Michigan Agricultural College, making four instructors in addition to professor and assistant professor, who give the full time to instruction in botany, with two research assistants giving a quarter of their time respectively to plant pathology and plant physiology. Five hundred and twenty-one students have registered for work in the botanical department, being an increase of twenty-five per cent. over last year.

MR. WILLIAM C. WILLARD, C.E., M.Sc., Lehigh University, has been appointed assistant professor of railway engineering at McGill University, Montreal.

At Birmingham University Dr. F. C. Lee has been nominated to the chair of civil engineering vacated by Professor S. M. Dixon. Professor P. F. Frankland, F.R.S., has been elected dean of the faculty of science in succession to Professor Dixon.

DISCUSSION AND CORRESPONDENCE

COMMENTS ON PROFESSOR BOLLEY'S ARTICLE ON CEREAL CROPPING

It is now rather late to refer to Professor Bolley's article on "Cereal Cropping," published in *SCIENCE* on August 22, but I can not refrain from calling in question his statements in regard to the deterioration in the quality of wheat grown on soils which are "exhausted"