

to furnish an instructive exposition of a phase of educational and scientific effort which is rapidly extending and is already exerting a potential influence in developing the industries and resources of the country. It is safe to say that in no special field of education and research has there been greater progress during the past decade than along the agricultural, industrial and technological lines represented by the land-grant colleges and experiment stations. The exhibit is under the control of the Government Board, and has been prepared under the general management of a committee of the Association of American Agricultural Colleges and Experiment Stations, of which Dr. W. H. Jordan, director of the New York Experiment Station, is chairman. Mr. James L. Farmer, special agent of the Government Board, is in immediate charge. The exhibit occupies about 16,000 square feet of space very favorably located in the Palace of Education. In addition to the displays of the U. S. Bureau of Education and of the Office of Experiment Stations of the U. S. Department of Agriculture, which represent the national government in its relations with these colleges and stations, the space devoted to agricultural exhibits is divided into fifteen sections, that occupied by the mechanic arts exhibits into nine sections. The displays in these sections have been prepared with the collaboration of experts selected from the faculties of the land-grant institutions, agricultural experiment stations and the U. S. Department of Agriculture, and cover all of the principal subdivisions of agriculture and mechanic arts.

The agricultural exhibits include soils, fertilizers, plant laboratory, field crops, horticulture and forestry, plant pathology, economic entomology, classed under the general head of agronomy or plant production; animal husbandry (investigation), animal husbandry (instruction), and veterinary medicine, classed under the head of zootechny or animal industry; dairy laboratory and sugar laboratory, classed under the head of agrotechny or agricultural technology; rural engineering, or farm mechanics; rural economics or farm management; and inspection. The mechanic

arts exhibits include civil engineering, mechanical engineering, electrical engineering, mining engineering, technical chemistry, architecture, drawing and shop practise (including textiles and trades), domestic science and ceramics.

#### HONORARY DEGREES CONFERRED BY THE UNIVERSITY OF WISCONSIN.

ON the occasion of the recent jubilee celebration of the University of Wisconsin, the doctorate of laws was conferred on some forty delegates. The words addressed by President Van Hise to several of the candidates were as follows:

HENRY PRENTICE ARMSBY—Formerly professor at this university, with the aid of ingeniously devised apparatus you have for years been successfully working upon the very important problems of metabolism of food nutrients. Upon you, for these valuable researches on the nourishment of the body, and for vigorous administration of the Pennsylvania state agricultural experiment station, we confer the degree of doctor of laws.

THOMAS CHROWDER CHAMBERLIN—It is with the greatest pleasure that I confer upon you the degree of doctor of laws. The University of Wisconsin owes you much. As her president for five years, you contributed to her development and upbuilding more than can be estimated. She honors you to-day for this, and also for your contributions to the science of geology. In your work in connection with the state and federal surveys, and in your comprehensive scientific investigations regarding the principles of ore deposition, the Pleistocene formations and the evolution of the solar system, you have combined in a rare manner patient collections of facts, discriminating reasoning power and constructive scientific imagination. You have richly deserved the highest academic honor in the gift of this university.

JOHN DEWEY—Profound philosopher and psychologist, you have successfully applied your learning to the study of childhood and youth. You have been an inspiration and a guide to students of education in every progressive country. For distinguished service

in the development of educational theory and practise this university confers upon you its degree of doctor of laws.

WILLIAM GILSON FARLOW—For your fundamental contributions to the morphology and classification of cryptogamic plants, in which you have advanced our knowledge of the evolution of plant life; for your valuable studies in applied botany, and because of your distinction as a representative of all botanical enterprises of international scope, the University of Wisconsin confers on you the degree of doctor of laws.

GROVE KARL GILBERT—Deep interpreter of nature, scientist of balanced judgment, geologist of the first rank, preeminent in the development of physiography; upon you, especially for the masterly formulation of the principles of erosion, by the authority of the regents I confer the degree of doctor of laws.

FRANKLIN PAINE MALL—Foremost investigator in anatomy in America, leader in recent advance in medical education, you have established productive departments of anatomy in three universities. Your teaching has inspired a strong group of disciples doing important work at this and other universities. You are well worthy the honor of all, for your aim is to decrease human suffering. This university, therefore, confers upon you the degree of doctor of laws.

EDWARD LAURENS MARK—This university confers upon you the degree of doctor of laws in recognition of your profound researches upon embryology and the animal cell, and of your services, for more than a quarter of a century, as the head of a great laboratory in which many of the zoologists of this country have been trained in the methods of fruitful research and inspired with the highest ideals of their science.

ELIAKIM HASTINGS MOORE—Teacher stimulating the study of the higher mathematics in America; leader accomplishing much for the betterment of mathematical instruction in schools of all grades; mathematician, whose erudite labors and fruitful research in an ancient science have made the world your debtor, upon you, for mathematical investiga-

tions, by authority of the regents, I confer the degree of doctor of laws.

ALFRED NOBLE—I confer upon you the degree of doctor of laws on account of your eminence as an engineer, a scientist and a man of affairs. Your skill in large construction, your broad views and sound judgment, and your knowledge of applied science, have made you an eminent expert and enabled you to make important contributions to the solution of the great problems of transportation.

SAMUEL LEWIS PENFIELD—Your determination of the molecular structure of complex minerals and researches upon the relation of crystal forms to chemical composition have advanced the knowledge of the constitution of matter. For determinative mineralogy you have written the authoritative text. Worthy successor of your illustrious predecessors Silliman and Dana, you have won fresh laurels in science for Yale University. In recognition of this work we confer upon you the degree of doctor of laws.

AUGUSTE RATEAU—In recognition of your achievements as a mechanical engineer, as a contributor to the science of the flow of fluids; as a distinguished inventor of steam turbine engines and as an author of standard books in engineering, upon the recommendation of the faculty, by the authority of the regents, I confer on you the degree of doctor of laws of the University of Wisconsin.

EDGAR FAHS SMITH—For pioneer work in the electrolytic separation of metals; for valuable researches upon the compounds of tungsten, molybdenum and uranium; for the training of a large number of scholars devoted to the advancement of the science of chemistry, this university confers upon you the degree of doctor of laws.

EDWARD BRADFORD TITCHENER—Through your skill in experimentation and your independence and sanity of judgment, you have become a leader in modern psychology. In many ways, and especially by your laboratory manual of experimental psychology, you have contributed to the creation of a new department of university study. For this work, the university confers upon you the degree of doctor of laws.

JAMES WILSON—From the presidency of Iowa Agricultural College you were called to the cabinet by William McKinley. By President Roosevelt you were retained as the head of the United States Department of Agriculture. Under your solicitous care scientific work has risen to first place in the greatest bureau of agricultural research in the world. Upon you, for the encouragement and fostering of agricultural education and research, and thus helping to dignify the great fundamental vocation of agriculture, this university confers the degree of doctor of laws.

ROBERT SIMPSON WOODWARD—As a mathematician you have departed from the beaten paths and have applied your art with unusual power to new fields in the border-land between astronomy, geodesy and geology. In recognition of your important contributions to knowledge in this department of learning, the university confers upon you its honorary degree of doctor of laws and welcomes you to its fellowship.

#### SCIENTIFIC NOTES AND NEWS.

DR. W. H. MAXWELL, superintendent of schools in New York City, has been elected president of the National Educational Association.

THE honor of knighthood has been conferred on Professor James Dewar by King Edward.

PROFESSOR ROBERT KOCH has been elected a member of the Berlin Academy of Sciences, filling the vacancy caused by the death of Professor Virchow.

OXFORD UNIVERSITY proposes to confer the degree of D.Sc., *honoris causa*, upon the following persons, on the occasion of the visit of the British Medical Association: Thomas Clifford Allbutt, M.D., F.R.S., regius professor of physics at Cambridge; Andrew Clark, F.R.C.S., vice-president and chairman of the council of the British Medical Association; Thomas Dryslwyn Griffiths, M.D., president of the British Medical Association; Jonathan Hutchinson, F.R.S., late president of the Royal College of Surgeons; Sir William Macewen, M.D., F.R.S., regius professor

of surgery in the University of Glasgow; Sir Patrick Manson, K.C.M.G., M.D., F.R.S.; Sir John William Moore, M.D., late president of the Royal College of Physicians of Ireland; William Osler, M.D., F.R.S., professor of medicine at Johns Hopkins University, Baltimore; Thomas George Roddick, M.D., M.P. (Canada), late president of the British Medical Association.

DUBLIN UNIVERSITY has conferred its honorary doctorate of science on Mr. Philip Watts, Sir James Dewar, Mr. Jethro J. Harris Teall and Dr. William Henry Thompson.

MR. WILLIAM H. NICHOLS, president of the General Chemical Company and of the Nichols Chemical Company, has received the doctorate of laws from Lafayette College. Dr. Nichols has also been nominated by the council of the Society of Chemical Industry, to succeed Professor Ramsay as president.

SIR WILLIAM RAMSAY, Sir Henry Roscoe and Professor Landolt have been elected honorary members of the German Bunsen Society.

SIR FRANCIS SHARP POWELL has been elected president of the Royal Statistical Society.

THE General Assembly of the State of Maryland voted, at its recent session, a gold medal to Colonel Charles Chaillé-Long, in recognition of his contribution to the solution of the Nile problem by the discovery of Lake Ibrahim in 1874 and his services to humanity rendered at the time of the bombardment of Alexandria in 1882.

THE Franklin Institute, Philadelphia, will confer the Elliott-Cresson medal on Dr. Hans Goldschmidt in Essen-Ruhr, Germany, in recognition of his distinguished work in aluminothermics.

WE learn from *Nature* that the French Society of Civil Engineers has this year awarded its prizes as follows: the annual prize to M. J. Bernard for his work on the installation in the Red Sea of three lighthouses in circumstances of especial difficulty. The Michel Alcan prize was awarded to M. L. Guillet for his researches on the composition of steel, and the F. Coignet prize went to M. V. Picou for his work on the regulation of dynamos. A prize was awarded to Professor