

funds have been provided by the Rockefeller Foundation, will be opened at Munich next May.

Nature states that it has been decided to found an institute at Prague for the scientific investigation of coal. It will have the support of the state and of the various coal undertakings in Czechoslovakia.

AN anonymous donor has presented to Cornell University five hundred acres of abandoned farm land in Newfield, which will be used for experiments and instruction in forestry and as an observation ground for botanists.

AN archeological expedition sponsored by Captain Marshall Field has gone to British Honduras to seek new facts concerning the ancient culture of the Mayas and to collect material illustrating their civilization for exhibition in the Field Museum of Natural History. The expedition has for its leader J. Eric Thompson, assistant curator of Mexican and South American archeology at the museum. Its center of operations will be Belize.

WITH all construction details completed and with a large stock of rabbits on hand, the rabbit experiment station maintained by the division of fur resources of the U. S. Bureau of Biological Survey in cooperation with the National Rabbit Federation and local rabbit breeders at Fontana, California, was formally opened on March 3. The chief of the biological survey, Paul G. Redington, represented the U. S. Department of Agriculture. The station will be under the directorship of D. Monroe Green, formerly of the Washington office of the U. S. Biological Survey, who went to Fontana several months ago to take charge of the erection of the station. Assisting Mr. Green will be John W. Meyer, formerly of the office of exhibits of the Department of Agriculture.

UNIVERSITY AND EDUCATIONAL NOTES

DR. HARVEY NATHANIEL DAVIS, professor of mechanical engineering at Harvard University, has been chosen president of the Stevens Institute of Technology at Hoboken, N. J. Dr. Davis takes office on September 1, succeeding the late Dr. Alexander C. Humphrey.

DR. EDWARD HICKS HUME, formerly president of the Colleges of Yale-in-China, has been appointed director of the New York Post-Graduate Medical School and Hospital, and not of the Yale Graduate School as was erroneously reported in the last issue of *SCIENCE*.

DR. HARRY CLARK, of the biophysics division of the Rockefeller Institute for Medical Research, has been appointed acting professor of physics for the summer session at Leland Stanford University.

DR. JOSEPH T. WEARN has been promoted to be associate professor of medicine at Harvard University.

DR. CHARLES HUNTER has been appointed professor of medicine at the University of Manitoba, to succeed Dr. Edward W. Montgomery, now minister of public welfare of Manitoba.

PROFESSOR J. H. DIBLE, professor of pathology in the University of London and honorary pathologist to the Royal Free Hospital, has been appointed to the chair of pathology in the Welsh National School of Medicine in succession to Professor E. H. Kettle.

THE first professorship of the geology of fuel (petroleum and coal) at a German technical school has been created at Freiberg in Saxony. The occupant is to be Dr. Otto Stutzer, who has also been elected director of the new fuel institute at the School of Mines.

PROFESSOR ROBERT KÖNIG, of the University of Münster, has been appointed professor of mathematics at the University of Jena.

DISCUSSION AND CORRESPONDENCE THE FUNCTIONAL NATURE OF THE CONSTANT OF MASS ACTION

THE thermodynamical proof given by van't Hoff that the constant of mass action is a constant at constant temperature depends on the tacit assumption that molecules while getting transferred from one chamber to another in a certain isothermal process do not decompose. This is a difficulty in the process which has been recognized, but is usually ignored. Attempts have been made to overcome it by supposing that either, (a) the molecules are so rapidly transferred that they have not time to decompose, or (b) decomposition is prevented by a catalytic agent. But (a) does not give an isothermal process, and (b) would radically change the nature of the molecules. The writer has shown in a paper that will appear shortly in the *Philosophical Magazine*, that if all the thermodynamical conditions of equilibrium are satisfied, the constant of mass action can be shown to be a function of the volume of the interacting gas, the masses of the constituents, as well as of the temperature. It may of course be in most cases *approximately* independent of all variables except the temperature.

If this result is true, we should expect that thermodynamical differential equations exist which determine the functional nature of the constant of mass action. These the writer has obtained and will be given in a subsequent paper. They are evidence of the truth of the result obtained; additional evidence presents itself from many directions which can not be dealt with here.

From kinetic considerations we would also expect this result to hold. The number of molecules as that