

construction of new buildings, for repairs to old buildings, and for the installing of scientific equipment. The minister of public instruction also requests 900,000 francs to complete the construction work at the Institute of Applied Chemistry; 5,243,000 francs for the extension of the work of the departments of chemistry; 800,000 francs for the enlargement of the Radium Institute, and 1,500,000 francs for the construction of a laboratory of physical chemistry.

THE organization of the new department of hygiene and preventive medicine at Cornell University has been completed, the following appointments to the staff having been made: Dr. Haven Emerson, professor of hygiene and preventive medicine, and director of the department; Dr. James Stevenson Allen, assistant professor of hygiene and preventive medicine, and assistant director of the department; Dr. Frank C. Balderry, medical adviser; Drs. J. Ralph Harris, Lawrence B. Chenowith, Richard Kimpton, Claude E. Case and John A. Herring, assistant medical advisers for men and Drs. Margaret D. Baker and Katherine Porter, assistant medical advisers for women.

DR. ELI KENNERLY MARSHALL, JR., Washington, D. C., formerly associate professor of pharmacology in Johns Hopkins University, has been appointed head of the department of pharmacology at Washington University Medical School. Other appointments are A. W. L. Bray, associate in anatomy; Alfred C. Kolls, associate in pharmacology; Edgar Allen, instructor in anatomy and Edward A. Doisy, instructor in biological chemistry.

DR. EMIL GOETSCH, formerly resident surgeon of the Peter Bent Brigham Hospital, Roxbury, Massachusetts, has been appointed head of the surgical department of Long Island College, New York.

PROFESSOR HOWARD E. SIMPSON, associate professor of geology and physiography at the University of North Dakota, has been promoted to a professorship of geographic geology.

MR. B. MOUAT JONES, assistant professor of chemistry in the Imperial College of Science and Technology, London, has been elected to the chair of chemistry in the University College of Wales, Aberystwyth, in succession to Professor Alex. Findlay.

DISCUSSION AND CORRESPONDENCE A HELIUM SERIES IN THE EXTREME ULTRA-VIOLET

It has been shown that the helium series first discovered in a terrestrial source by Fowler can be represented by the formula

$$\nu = 109750 \left(\frac{1}{\left(\frac{n_1}{2}\right)^2} - \frac{1}{\left(\frac{n_2}{2}\right)^2} \right);$$

where n_1 has the value of 3 or 4¹

If n_1 be given the value 2, and n_2 the successive value 3, 4 and 5, lines result at wave-length 1640.1, 1214.9 and 1084.7. My previous investigations of the helium spectrum did not afford much evidence as to the existence of these lines;² a recent search, however, has been more successful. With a powerful disruptive discharge in helium, a sharp, fairly strong line appears at 1640.2; no trace of it is found in hydrogen under the same electrical condition and it does not occur in helium when the discharge circuit is free from capacity. Under the same violently disruptive condition the line at 1216, always present in helium and hydrogen, develops a satellite on its more refrangible side, this satellite is not well resolved, but its wave-length appears to be about 1215.1. The region that should be occupied by 1084.7 is obscured by a strong pair at 1085, probably due to an impurity.

Owing to the difficulties of vacuum spectroscopy it is perhaps unwise to claim that the evidence in this case is conclusive. I regard it as very probable, however, that two members of this series in helium have been found in the extreme ultra-violet.

THEODORE LYMAN

HARVARD UNIVERSITY,
October 25, 1919

¹ Evans, *Phil. Mag.*, 29, p. 284, 1915.

² *Astrophys. Jour.*, 43, p. 92, 1916.