production of the frequency ν. This is true, and therein lies its strength, just as the strength of the first and second laws of thermodynamics lies in the fact that they are true irrespective of a mechanism. The Bohr theory is a theory of atomic structure; it is not a theory of radiation, for it merely states what energy relations must exist when radiation, whatever its mechanism, takes place. As a theory of atomic structure, however, it is thus far a tremendous success. The radiation problem is still the most illusive and the most fascinating problem of modern physics. I hope to discuss it at a later time.

R. A. Millikan

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GEORGE CHRISTIAN HOFFMANN

George Christian Hoffmann, formerly assistant director, chemist, and mineralogist of the Geological Survey of Canada, died in Ottawa, March 8, 1917. He was born June 7, 1837, in London, England, and studied at the Royal School of Mines under Sir Henry de la Bèche, under Hoffman, Percy, Smyth, Stokes, Ramsay, Huxley and Willis. He spent several years as chemist in research laboratories of England, and later 1861, wrought in Natal, South Africa, in the Mauritius, later again in Australia. In 1872 he joined the technical staff of the Geological Survey of Canada, Montreal, under Dr. Alfred R. C. Selwyn. Dr. Hoffmann was a fellow of the Institute of Chemistry of Great Britain, a fellow of the Royal Society of Canada and of many other distinguished bodies. He is the author of many numerous reports published by the Geological Survey of Canada and the Department of Mines. While in Australia he devoted considerable time in the phyto-chemical laboratory attached to the Melbourne Botanic Garden in Victoria; inquiries into the tanning properties of the barks of native trees; investigation into the amount of potash in various indigenous trees, besides experiments in reference to various acids, tar and other products. Besides the above enquiry into the suitability for paper-making of various fibrous substances were carried on by Dr. Hoffmann. The essential oils of certain trees, dyeing properties and coloring matter of others and researches on tea, opium and various economic products were carried out in conjunction with Baron Ferdinand Mueller, the distinguished Australian botanist. His bibliography contains valuable reports and papers of analyses and determinations of Canadian ores, minerals and economic products characterizing the rock formations of Canada and elsewhere, including rare and new species.

H. M. Ami

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SCIENTIFIC EVENTS

LECTURES ON SANITARY SCIENCE AT RUTGERS COLLEGE

In connection with the recently established course in sanitary science, Rutgers College has inaugurated a series of public lectures. The list follows:

November 27. Professor Jacques Loeb, of the department of experimental biology of the Rockefeller Institute, New York City, "Regeneration."

February 5. Dr. J. G. Needham, professor of entomology, Cornell University, "Action."

February 28. Dr. G. M. Potter, of the Bureau of Animal Industry, Washington, D. C., "Abortion Diseases of Cattle."

March 7. Professor A. E. Taylor, Ph.D., University of Pennsylvania, "Agricultural Production in Germany under Blockade."

March 8. Mr. Allen Hazen, C.E., New York City, "Purification of Water Supplies."

March 14. Dr. K. F. Kellerman, associate chief of the Bureau of Plant Industry, Washington, D. C., "Relation of Algæ to Public Water Supplies."

March 19. Dr. J. F. Anderson, director of Squibb's Laboratory, New Brunswick, N. J., "Anaphylaxis."

March 21. Dr. Theobald Smith, director of the department of animal pathology of the Rockefeller Institute, Princeton, N. J., "Research in Animal Diseases with Reference to Agriculture and the Industries."

March 22. Dr. Theobald Smith, director of the department of animal pathology of the Rockefeller