

Mines. Its ore concentration method seems to have also been highly successful. After mining its quota of ore from the Crucible Steel Mining & Milling Co.'s property, the institute came into the market as a purchaser of ore. In the later half of the year Dr. W. A. Schlesinger and associates established a radium reduction plant in Denver. They acquired an interest in the Copper Prince claims, from which ore was mined, and bought a further quantity. Ore carrying about 5,000 pounds of uranium oxide, containing about 640 milligrams of radium, was treated during the year. The Carnotite Reduction Co., made up of Dr. H. N. McCoy of the University of Chicago and associates, purchased from Galloway and Belisle a quantity of ore which had been stored in Placerville, Colo., and the radium will be extracted in Chicago. The company will mine ore from claims it has bought. The Standard Chemical Co. did no work on its claims except that required by law, but in this work produced and shipped a quantity of ore from its properties in Colorado and Utah, and purchased, it is stated, a considerable number of claims. It was reported in December that the company had produced a total of 14 grams of radium (elemental) and that its ore had averaged 1.7 per cent. uranium oxide. Probably between 4 and 5 grams of this quantity were produced during 1915. The production of radium salts in this country during the year was probably nearly 11 grams.

MR. BARNUM BROWN returned to the American Museum of Natural History in January, bringing a carload of fossil dinosaur bones, chiefly from the Belly River Cretaceous formation of Alberta. The collection comprises two complete skeletons; one of the horned dinosaur *Ceratops*, of which the museum previously possessed only skulls; the other of the helmeted dinosaur *Stephanosaurus*, not before represented in the museum's collection. Other notable specimens are a complete skull and jaws of the horned dinosaur *Monoclonius*; a skull and part of the skeleton of an armored dinosaur; and the largest skull yet discovered (five feet in length) of the duck-billed dinosaur, *Trachodon*. Another very rare specimen

is a complete lower jaw of a cretaceous marsupial mammal. In addition to the vertebrate remains, two large silicified tree trunks were secured, over forty feet in length. When these are sectioned it will be possible to determine the genus to which they belong. They are of especial interest because the center of the tree is silicified, while surrounding it the outer portion had carbonized, forming lignite. Several large slabs were also obtained on which impressions of many species of leaves are beautifully preserved. This material will be displayed to show the type of foliage contemporaneous with the dinosaur life of Alberta. After bringing to completion the museum's work on the Red Deer River, which has extended over a period of six years and been productive of four and a half carloads of valuable fossils, Mr. Brown went to Northern Montana. Here he secured a large collection from the Upper Cretaceous beds on Milk River. Work was continued in this field until zero weather compelled cessation of operations.

THE Philadelphia Academy of Surgery announces that essays for the Samuel D. Gross prize of fifteen hundred dollars will be received until January 1, 1920. The conditions are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practise, founded upon original investigations, the candidates for the prize to be American citizens."

UNIVERSITY AND EDUCATIONAL NEWS

DR. JOHN C. DUNCAN has been appointed professor of astronomy and director of Whitin Observatory of Wellesley College. Professor Sarah F. Whiting retires at the close of the present academic year as does also Professor Ellen Hayes. Professor Whiting, a pupil of Professor E. C. Pickering at the Massachusetts Institute of Technology before he became director of Harvard Observatory, gave the first lectures in astronomy at Wellesley College in

1879, as a course in applied physics. A portable four and a half inch telescope was the only available instrument until 1900, when the beautiful Whitin Observatory equipped with twelve-inch telescope, three-inch transit, all necessary apparatus, and an adequate library in astronomy was opened, through the generosity of Mrs. John C. Whitin, a trustee of the college. In 1906 the observatory was doubled to make room for the teaching of astronomy as other sciences are taught by the laboratory method, and a residence for the astronomers was added. Professor Hayes, head of the department of applied mathematics, a pupil of Ormund Stone, meantime conducted work in mathematical astronomy. In 1901 the department of astronomy was created, including both the astrophysical and the mathematical sides of the subject. Dr. Duncan has worked at Lick, Lowell and Yerkes observatories, and has taught at Harvard and Radcliffe Colleges.

FRANK H. PROBERT, a graduate of the Royal School of Mines in London, and for the past twenty years engaged in consulting mining engineering practise, has been appointed professor of mining in the University of California, as successor to the late Professor Samuel Benedict Christy.

DR. JESSE F. WILLIAMS, assistant professor of hygiene and physical education at Columbia University, has been appointed professor of hygiene and physical education in the University of Cincinnati.

DR. HENRY W. WANDLESS has been appointed clinical professor of ophthalmology at New York University and Bellevue Hospital Medical College.

DR. EDWARD H. HORTON, director of the bacteriologic department of the Tri-Cities Hygienic Institute, LaSalle, has resigned to become bacteriologist in the Northwestern University Dental College, Chicago.

DR. STERLING TEMPLE, instructor in chemistry in the University of Minnesota, has accepted a position as professor of chemistry at Hamline University, and will take up his work there in the autumn.

AT Ohio Northern University, Joseph Hamilton Hill has become professor of mathematics.

SIR R. HAVELOCK CHARLES, president of the medical board of the India Office, has been appointed dean of the London School of Tropical Medicine in succession to the late Sir Francis Lovell.

DISCUSSION AND CORRESPONDENCE

A NEW FORM OF PLANT DRIER

A NUMBER of notices have been published¹ regarding the use of single or double-faced corrugated straw board as a means of rapid drying of plants for herbaria. Some have omitted the use of the customary driers with the corrugated boards, a procedure which has a tendency to cause the plants to be somewhat wrinkled. It has also been recommended that the boards be cut so that the corrugations run crosswise of the board. The pressure of the straps around the press, however, has a greater tendency to close up the ends of the corrugations when they run crosswise than when they run lengthwise. To avoid handling two driers and a corrugated board for every plant placed in press the writer adopted the plan several years ago of fastening at the corners with a wire stapling machine two driers with a corrugated board between. This procedure saves two thirds of one's time in handling the corrugated boards and two driers in the old way. While this form of drier worked very satisfactorily when hot sunshine or artificial heat was available for drying it made the drying material much thicker than necessary. An order was consequently given to a local firm for a special drier consisting of two pieces of ordinary felt drying paper with a corrugated filler such as is used in the single and double-faced corrugated straw board. This material has given entire satisfaction and can be obtained in large quantities at a cost of about \$16.56 per 1,000 as compared with

¹ Kellerman, W. A., *SCIENCE*, N. S., 27: 67-70, 1908; Collins, J. F., *Rhodora*, 12: 221-224, 1910; Conrad, H. S., *Plant World*, 15: 135-139, 1912; Ricker, P. L., *Bureau of Plant Industry Circ.*, 126: 27-35, 1913.