given his department much anxiety. The matter was of such far-reaching importance that the treasury had granted a sum of money for one, two, or three years to institute a scientific inquiry, and he hoped to obtain the services of Professor Laurie, of the Heriot-Watt College, Edinburgh, to that end. The Foreign Office had also consented to inquire of the governments of France, Germany, Italy, Greece and America whether any treatment had been evolved in these countries to combat this evil.

AN efficiency limitation of quite a different type from that imposed by the inadequate and dangerous quarters occupied by the United States Geological Survey is presented, according to the annual report of the director, recently made to Secretary Lane, in the restrictions placed in one way or another upon the selection of personnel. Under "lump-sum" appropriations there is a fair opportunity to obtain high-grade service in the scientific and technical positions, yet even here the restraining influence of precedent prevents attaching to the higher positions salaries that are more than a fraction of those which the well-trained specialists best fitted for those positions can obtain for similar work in the service of corporations. This condition has resulted in many of the members of the Geological Survey leaving government service at the time when they have become most valuable as public servants. Thus in the four and one half years ending January, 1913, the number of geologists who left the government service for the primary purpose of bettering their financial condition was 41, and these men are known to have received salaries outside of the public service amounting to an average immediate advance of 149 per cent., or practically two and one half times the salaries paid them by the Geological Survey.

THE Euphrates barrage from Hindich north to Bagdad was opened on December 12. It is the portion of the great irrigation works designed by Sir William Willcocks, the designer of the Assouan dam. The system, according to a dispatch from London to the Boston *Transcript,* will cost, when completed, no less than $115,000,000, of which $25,000,000 has already been expended on the present section of the work, known as the Feluja project. Three million acres of what were in early history the finest agricultural lands are to be eventually reclaimed. When the system is completed the Tigris, the Euphrates and the Akkar Kuf Lake will form part of a controlled system of canals, weirs and barrages, whereby the pernicious silt is to be separated, floods are to be prevented, and wheat-bearing land is to be nourished with water. It is estimated that the cultivated area will be doubled, and that the crop of wheat along the Euphrates will be trebled. The scheme would also result in a vast increase in the yield of cotton. It consists of providing a means of escape for the flood waters of the Euphrates along the depressions of the Pison, but it also entails the construction of a great central canal, regulators to control the supply from the Euphrates at the head of the Sakhnlawia, a weir on the Tigris, a canal for irrigation to the north of Bagdad, another canal along the right bank of the Tigris, and the building of a railway along the left bank of this canal for the transport of the harvests. Moreover, the construction work would include a railway to connect Bagdad with the Mediterranean by a short and cheap route. The project was submitted by Sir William to the Turkish government in 1909, after a year's study of the situation, a study which he continued through the two years subsequently up to the time of his resignation in July, 1911, as adviser to the Turkish Ministry of Public Works.

UNIVERSITY AND EDUCATIONAL NEWS

WESTERN RESERVE UNIVERSITY will receive from the McBride family of Cleveland a lecture foundation with an endowment of $50,000.

THE following changes concerning the admission of students to the Johns Hopkins Medical School have been announced. In 1913 the number of students in each class was limited to ninety. In order to receive consideration applications of incoming students must

this year be made by July 1. After that date the various applications will be sifted and an attempt made to choose the most likely ninety applicants. It has also been decided to increase the requirements for admission in chemistry and, in addition to the 150 hours of laboratory work in inorganic chemistry now required, an additional 90 to 100 hours of laboratory work in organic chemistry will be required of all students desiring to enter the school after October, 1914.

Beginning next year the two-year courses in the college of agriculture at the Ohio State University will be lengthened to three years. The Tuesday before October 15 is the date set for opening and the Friday before March 15, that for closing. Farmers' sons may, with this change made, come to school after harvest and complete the year's work before the spring work begins on the farm. No attempt to extend the subject matter is intended, and the length of the course is practically the same, but boys from the country may engage in practical farming while taking the agricultural course under the new system.

Plans are being perfected for the centennial of the first conferring of degrees by the Yale medical school. Special exercises will be held in Woolsey Hall on Monday afternoon of commencement week from 4 to 6, and historical addresses, the conferring of honorary degrees, exhibits and other features will be arranged.

Mr. A. W. McCoy (A.B., A.M., Missouri) instructor in geology at the University of Missouri, has been elected instructor in geology at the University of Oklahoma.

The General Board of Studies of Cambridge University have appointed Dr. Assheton to be university lecturer in Animal Embryology.

DISCUSSION AND CORRESPONDENCE

REPLY TO A RECENT CRITIQUE OF AN OLD REVIEW IN SCIENCE

In the current number of the *Bulletin of the American Mathematical Society,* December, 1913, pages 147–151, Professor E. B. Skinner makes erroneous statements regarding my review in Science[1] of Professor L. W. Reid's "The Elements of the Theory of Algebraic Numbers," and also regarding the history of the subject.

1. In my review I had said:

> After stating formally theorem *A* and devoting fifteen lines to its proof, the author informs us that the "theorem therefore fails." Similarly, on pages 250–251, theorems are formally stated and later shown not to hold in general. This peculiar style of pedagogy is decidedly a novelty to the reviewer.

Quoting only the first sentence and that incorrectly, Professor Skinner insists that the quotation puts the author in a wholly erroneous light. But the entire passage certainly makes clear that I was merely questioning the wisdom of this peculiar style of pedagogy. There was no need whatsoever for any comment in Science on the bare fact that the author stated a formal theorem in italics, devoted a half page to a "proof," and then indicated that the proof failed and that the "theorem" itself was false, repeating the same process on pages 250–251. I think I was justified in presupposing upon the part of a reader of my review that small degree of acumen which would enable him to conclude unguided that if an author devoted considerable space to a false theorem, the failure of the theorem was regarded by him as of sufficient interest to warrant attention. It is unfortunate that the author and Professor Skinner speak also of general theorems which they nowhere state explicitly and which if stated would be false, except in the very simplest cases, as they well knew.

2. In my list of important topics omitted from the book, I included erroneously that of class number. It occurs first on page 434, just seventeen pages before the end of the book. One may be pardoned for not looking at the end of a long book for a topic which should play a fundamental rôle in the whole theory.

3. The last paragraph of my review has gone through a remarkable metamorphosis in the hands of Professor Skinner. What I actually said was:

[1] Science, N. S., Vol. XXXIII., pp. 188–89, February 3, 1911.