THE *British Medical Journal* states that a national fund is being created in Sweden for presentation to King Gustaf V as a gift on his seventieth birthday in June this year. The King intends to expend the fund in promoting cancer research. A special institute may be established in Stockholm.

THE original thesis presented by David Starr Jordan for his master's degree at Cornell University has been given by Dr. Jordan to the university library. Dr. Jordan, a graduate of the class of 1872, prepared for his master's degree a manuscript on "The Wild Flora of Wyoming County, New York."

AN advisory commission of engineers has been organized to make a survey in Vermont with a view to preventing floods. J. W. Votey, dean of the University of Vermont College of Engineering, was named chairman of the commission and Professor H. K. Barrows, of Boston, consulting engineer. The commission plans to establish a number of stations along various streams to determine the flow of water at various times and under different conditions. From the data thus obtained, the locations of reservoirs to control the water flow will be determined.

CONTINUING its program of scientific research in cooperation with the United States Bureau of Mines and two advisory boards representing the mining and metallurgical industries, the Carnegie Institute of Technology in Pittsburgh will award ten fellowships in mining and metallurgical research during the coming year. Subjects to be studied by the fellows appointed for 1928–29 will be selected in the fields of origin and constitution of coal, coal mining, utilization of coal, mine safety and the physical chemistry of steel making.

ACCORDING to *Industrial and Engineering Chemistry* the Imperial Chemical Industries, Ltd., the British trust of which Sir Alfred Mond is chairman, has launched a move in England to promote chemical industrial research and stimulate interest in the chemical industry in general. To this end a research council composed of leading scientific men has been established. It is pointed out that coordinated industrial research in Great Britain has suffered in the past through lack of sufficient close associations with the academic and scientific world. The main functions of the council will be advisory, and it will act as a clearing house for ideas. The council will also provide close liaison between the industry and the universities, and will promote research along both industrial and purely academic lines. Sir Alfred Mond is chairman of the council. In further extension of this move the British chemical trust has also inaugurated a scheme to absorb research chemists and chemical engineer graduates from British educational institutions. The plan provides for selecting boys who indicate an aptitude along chemical lines and insuring them positions with initial salaries of $2,000 per year upon successful completion of their educational training in universities.

UNIVERSITY AND EDUCATIONAL NOTES

THE will of the late Chauncey M. Depew, of New York, includes an unrestricted bequest of $1,000,000 to Yale University.

ST. STEPHEN'S COLLEGE at Annandale-on-Hudson has been absorbed by Columbia University, according to an announcement by the officials of both institutions. Under the consolidation St. Stephen's becomes a unit of Columbia University on a parity with Columbia and Barnard Colleges.

THE *Journal* of the American Medical Association states that at a luncheon given by the University of Southern California in honor of Dr. Ray Lyman Wilbur, of Stanford University, and a group of sixty Los Angeles physicians on March 26, it was announced that the University of Southern California College of Medicine is to be reopened and that the trustees have agreed to set aside $500,000 as an endowment.

GROUND was broken with formal ceremonies at Lafayette College on April 26 for the John Markle mining building.

DR. CHARLES P. OLIVIER, of the University of Virginia, has been appointed professor of astronomy at the University of Pennsylvania and director of the Flower Observatory at Highland Park.

DR. RAOUL BLANCHARD, professor of geography at the University of Grenoble, has been appointed professor of geography at Harvard University.

DR. S. TIMOSHENKO, of the research department of the Westinghouse Company, has been appointed professor of applied mathematics at the University of Michigan. He is succeeded at the Westinghouse Company by Dr. A. Nádai, of Göttingen.

PROFESSOR F. C. KOCH has been made chairman of the department of physiological chemistry and pharmacology at the University of Chicago. Professor A. Baird Hastings has been transferred from the department of physical chemistry to be professor of biochemistry in the department of medicine.

AT Clark University, the following promotions from associate professorships have been made: Dr. W. Elmer Ekblaw, professor of agricultural geography; Dr. Clarence F. Jones, professor of economic geog-

raphy; Dr. John P. Nafe, professor of experimental psychology. Oscar W. Richards has been appointed assistant professor of biology.

AT Rutgers University, Dr. Albert O. Hayes has been appointed full professor of geology and head of that department. He has served during the past two years as visiting professor of geology.

DR. CARL STEVENSON, of the University of Chicago, has been appointed acting professor of medical history at Cornell University, Ithaca, for the second term of the coming year, during the absence on leave of Professor Preserved Smith.

THE following promotions have been made in the department of chemistry at Princeton University: Assistant Professor Gregg Dougherty, to the rank of associate professor; instructors William T. Richards, Francis B. Stewart and Thomas J. Webb, to the rank of assistant professor.

DR. A. E. CAMERON, professor of zoology and entomology in the University of Saskatchewan, has been appointed lecturer in medical entomology in the department of zoology of the University of Edinburgh.

DR. JOHANNES WEIGELT, professor of geology in the University of Halle, has been appointed to the chair of geology in the University of Greifswald.

DR. HERMANN STEUDEL, of the department of physiology in the University of Berlin, has been made a full professor.

DISCUSSION AND CORRESPONDENCE

A NOTE ON THE FLUORESCENCE OF TEETH IN ULTRA-VIOLET RAYS

THAT teeth fluoresce under the excitation of ultra-violet rays has been known for some time. Hans Stubel[1] states that rabbit teeth fluoresce with a somewhat bluish intense white light. In human beings he finds the lens of the eye to be the strongest fluorescing organ, although the teeth are almost equally brilliant.

The following observations were made with a cored carbon arc and a Kromayer lamp, using as filters: (1) Corning purple-violet Ultra, (2) Corex G 986A, (3) Uviol cell with paranitrosodimethylaniline and a quartz cell of copper sulphate.

(1) The dentine fluoresces much more brilliantly than the enamel and seemingly with a bluer light.

(2) The white spot indicative of beginning dental caries does not fluroesce even though unpigmented. A similar effect is obtained by scratching through a paraffin coated tooth and placing in dilute acetic acid over night.

[1] *Arch. Ges. Physiol.*, 142, 1–14, 1911.

(3) Ashed enamel does not fluoresce, nor does dentine which has been boiled in 50 per cent. sodium hydroxide. On decalcifying dentine in dilute nitric acid the organic matrix retains its fluorescent power to an appreciable extent.

(4) Whereas serumal calculus fluoresces little if at all, salivary calculus fluoresces quite markedly with a reddish orange color (some old museum specimens emitted a white light).

These observations are significant in an investigation of the teeth as they may give a clue to the steps in the decalcification of enamel. From No. 3 the conclusion might be drawn that it was the organic matter which fluoresces. We have a means of determining on macroscopic pieces that we have enamel free from dentine. Further work is in progress.

H. C. BENEDICT

CHEMISTRY DEPARTMENT,
NORTHWESTERN UNIVERSITY DENTAL SCHOOL,
CHICAGO, ILL.

ON THE ANTIQUITY OF RELICS OF MAN AT FREDERICK, OKLAHOMA

IN the issue of SCIENCE for February 10, on pages 161 and 162, is an interesting contribution from Dr. Leslie Spier, of the University of Oklahoma, on the artifacts found recently at Frederick, Oklahoma. The present writer wishes to make some comments on this paper.

The most important statement made by Dr. Spier is that, according to the representations of Mr. Holloman, the owner of the pit, he picked up one arrow head from loose materials at the bottom of the front of the pit as it was being torn down by workmen. On the other hand, Mr. Holloman repeatedly told Director Figgins that he took it out of the hard conglomerate on the floor of the pit. Also the writer has Mr. Holloman's statement to the same effect in two or three letters. In one of these he informs me that he could not free the arrow-head himself, but had to call a workman to bring a tool. A pack knife was brought and with this the utensil was secured. Mr. Holloman further says that Dr. Spier misquotes him in saying that he picked the object from the loose materials. The writer can not for a moment doubt the veracity of either of these gentlemen. There must have been a misunderstanding of some remark made by Mr. Holloman.

In regard to the other flint object, probably a drill, Dr. Spier says that Mr. Holloman scratched it out of the face of the pit with his fingers. Now, if that object had fallen from the surface it would probably have become involved in the red clay which forms the uppermost stratum. In case it had fallen into the sand, this must have been sand which had been