Hospital; $185,000 to the Evanston Hospital, and $92,000 each to the County Home for Convalescent Children and the Home for Destitute Crippled Children.

THE Thelon Game Sanctuary, east of Great Slave Lake in the Northwest Territories, which contains the last known herd of musk-ox on the Canadian mainland, has been closed. No person, either Indian or white man, will be permitted to enter this 15,000-mile preserve unless by special arrangement. The musk-ox is rare, and action has been taken by order-in-council to conserve the herd of approximately 250 known to have their habitat in this area.

Industrial and Engineering Chemistry writes, the *Journal of Physical Chemistry* has become the leading publication in its field and has grown in importance since the formation of an editorial board jointly by the American Chemical Society, the Chemical Society of London and the Faraday Society. Professor Wilder D. Bancroft, who carried the full responsibility in earlier days, has continued as editor and the societies mentioned discharge their responsibilities through representatives elected to the editorial board. For some time the Chemical Foundation, Inc., has met the deficit, but now the foundation has decided to assume the entire business management, thereby relieving the editor and his board of all duties incident to financial management. The Chemical Foundation has announced its desire to furnish the scientific world with all available authentic material in this field, and plans to increase the number of pages carried by the journal, so that articles accepted on their merit may be published more promptly. Deficits incurred will, as before, be met by the Chemical Foundation.

A CLASSIFIED bibliography of two hundred and fifty citations on "The Effect of Environmental Factors upon the Production of Pigment by Bacteria" has been compiled by Dr. Laetitia M. Snow, of Wellesley College. In order to make this work available to students, copies have been placed in the Library of Congress, in the Library of Wellesley College and in the department of agricultural bacteriology of the University of Wisconsin. Data from these articles have been classified under the various factors, and a copy of this second part has been deposited at the University of Wisconsin.

THE Rockefeller Foundation has appropriated $10,000 for establishment of an observatory for the study of the aurora at the Alaska College of Agriculture and School of Mines, Fairbanks. This is said to be the most northern college in the world. It will receive $2,500 in 1930 as the first payment. Two special cameras and other photographic supplies to be used in the scientific observations were ordered on November 16 from Dr. Stormer, of Oslo, Norway. Reports from the study, which is to start immediately upon arrival of the photographic supplies, will be available to investigators who are to make a Polar flight next April on the dirigible, *Graf Zeppelin*, from Fairbanks, the Alaskan base of the flight. The International Geodetic and Geophysical Union and the National Research Council, Washington, D. C., have indorsed the plan of establishing the observatory.

UNIVERSITY AND EDUCATIONAL NOTES

THE University of Chicago has received a conditional gift of $1,500,000 from the General Education Board for the further development of the department of education. It is provided that the university shall obtain from other sources an increase in the annual budget of $75,000 a year within five years.

THE new engineering building known as Patton Engineering Hall at the Virginia Polytechnic Institute was occupied in September. This building is named in honor of Colonel William McFarland Patton, former dean of the school of engineering. The building contains quarters especially designed for the departments of electrical engineering, civil engineering, industrial engineering, architectural engineering and applied mechanics, as well as the offices of the dean.

THE Board of Regents of the University of Michigan, in accordance with the wishes of President Alexander G. Ruthven, have voted to dispense with formal inaugural ceremonies. It accepted, however, an invitation by the Ann Arbor Chamber of Commerce to attend a banquet in honor of President Ruthven on November 18, at which Regent Junius E. Beal officiated as toastmaster.

DR. SIDNEY WILLIAM BLISS has been appointed to the position in the department of medicine of Tulane University of professor of biochemistry and head of the department, succeeding the late Professor Willey Denis. Dr. Robert Alexander Strong, after several years' absence from Tulane, has accepted the position of professor of pediatrics and head of the department, succeeding Professor L. R. DeBuys, who resigned at the close of the past session.

DR. WILLIAM SADDLER, of the University, St. Andrews, has been appointed professor of mathematics at Canterbury College, Christchurch, New Zealand.

E. G. WILLIAMS, of Trinity College, has been

elected to an Isaac Newton Studentship at the University of Cambridge, and F. L. Arnott, research student of Trinity College, has been elected to an additional Isaac Newton Studentship.

IN Poland Mme. Cezaria Ehrenkreutz has been appointed professor of ethnography and ethnology at the University of Vilno, and Mme. Helen Wilman professor of Sanskrit at the University of Cracow.

DISCUSSION

A GEOLOGICAL SURVEY OF CALIFORNIA

FOR fifty-five years California was without a state geological survey, but now under the State Division of Mines a new survey known as the Geologic Branch has been established by the legislature and given a modest appropriation to maintain its activities. Though the appropriation is small to begin with ($20,000 for the biennium), there is every reason to believe that this amount will be materially increased in the future and that California will go to the front as one of the states which recognize the importance of this fundamental science.

The chief function of the Geologic Branch of the State Division of Mines is to be the coordination of the geologic work of various institutions and concerns that have done or are doing geology in California. It is to encourage and promote further scientific work and to act as a clearing-house for unpublished geological data of the state. Furthermore, so far as finances will permit, the Division of Mines will publish detailed reports on the geology of California.

It is encouraging to find that geologists and institutions interested in the geology of California are giving full support and offering much assistance and cooperation to the new undertaking. It is only with this cooperative assistance that the geologic work may be a success.

At present several interesting projects are under way. With small payment for field expenses only, it is found that excellent young men may be encouraged to continue to completion important problems upon which they are at work in connection with the winning of advanced degrees from recognized universities. The work, since it is done under the direction of the university departments, is thus controlled through geologists of highest standing and the younger research workers are thus permitted the opportunity of satisfactorily completing their chosen work and guaranteed a medium for publication.

An extensive bibliography of the geology of California, to contain also a practical working index, will be one of the first publications of this new state survey. This fundamental guide to research is now being prepared by Dr. Solon Shedd, custodian of the Branner Memorial Library at Stanford University.

A geological map of California, on a scale of 1:500,000 (about eight miles to the inch) is another goal to be reached by the new survey. A tremendous amount of unpublished detail in geology is already available for this map. It comes from many sources—scientific departments of commercial concerns as well as institutions of learning. Here again, coordination is the object, but cooperation is necessary to complete the work.

The great size of California can be appreciated only by persons traveling and working in this state. The complexity of the geology of California can never be adequately visualized by outsiders. This great size, together with the complexity of the stratigraphic and structural problems, makes the work, however, so much the more interesting, and it is little wonder that so many discussions arise regarding the intricate problems in this area.

In order to advance the knowledge of the geology of California, it will be necessary to organize our efforts, to bring to a head problems already commenced but temporarily laid aside and to avoid as much as possible the duplication of work. Thus the Geologic Branch, working under the well-established Division of Mines (formerly known as the California State Mining Bureau) with the state mineralogist, Mr. Walter W. Bradley, as executive head, will serve as a clearing-house for information regarding *work in progress*.

It would thus be advantageous for this new geological survey to know what work is being done now and by whom. Furthermore, if persons desiring to take up new problems in the state would first consult this scientific organization before attempting to spend much time and money in any particular way, it is quite possible that the information available would be of assistance in judging to what extent the area under consideration might already have been studied by others. This state division, therefore, requests further and continuous cooperation in the endeavor to keep informed concerning the geologic activities in California.

OLAF P. JENKINS
CALIFORNIA STATE DIVISION OF MINES

NOTE ON THE HIGHER ALCOHOLS OF FERMENTATION

IN the industrial fermentation of molasses for the production of alcohol there is always found a certain quantity of high boiling material which is known as fusel oil and which forms one of the chief by-products of the industry. The commercial product is obtained