

third year and between these and the civil engineers somewhat earlier. Mathematics and pure science and the modern languages will be given in the University proper. A good general education is expected to be secured in advance of entrance into the technical courses, which are made entirely professional, as is usual in law and medicine.

R. H. THURSTON.

#### THE PREVENTION OF HAIL STORMS.

MR. JOHN C. COVERT, U. S. Consul at Lyons, writes to the Department of State: An effort is being made in this section of France to dissipate hail storms by firing cannon at the clouds. Fifty-two cannon, manned by 104 cannoneers and their chiefs, have been distributed over an area of 2500 acres of rich vine land. For the expense of the experiment, the Government appropriated 2000 francs (\$386), the departmental council 1500 francs (\$289), the National French Agricultural Society and a number of wealthy wine growers added 12,000 francs (\$2316) and furnished fourteen more cannon. The Minister of War supplied powder for 2½ cents per pound.

A high point in the vine land to be covered by the experiments was selected as the central post of observation and a signal code adopted. When a shot is heard from the central post all the cannon are fired, at first twice per minute; more slowly after the first ten shots. I translate the report of the first firing at the storm clouds this season:

The farmers of Denicé were aroused at 1.30 o'clock on the night of June 5th-6th. The storm was very severe. The artillerists, from 40 to 50 strong, fired their guns and stopped the thunder and lightning. In the neighboring communes, the people saw columns of flames rise 300 feet above the cannon when the shots were fired. At several places, women recharged the cartridges.

The wine growers are organizing to attack the hail storms in many of the great wine-growing regions of France. The two experiments thus far reported are pronounced successful. A writer in one of the wine-grower's organs says:

The results obtained from these experiments

are such that organizations will be established at once in all the places that have heretofore been ravaged by hail.

I am told that the practice of shooting at the clouds was known in France over a hundred years ago, and that it originated in Italy. It is to be more extensively carried on this year than ever before.

#### BRITISH CONGRESS ON TUBERCULOSIS.\*

It has already been announced in the *British Medical Journal* that a Congress on Tuberculosis is to be held in London next year. The date of meeting has been fixed for the last week of April. H. R. H. The Prince of Wales, is the President of the Congress, and among the Vice-Presidents are the Duke of Fife, the Marquis of Dufferin, K.P., Earl Spencer, K.G., Lord James of Hereford, Lord George Hamilton, P.C., Lord Reay, G.C.S.I., Lord Lister, P.R.S., Sir John Burdon Sanderson, Sir Hermann Weber, the Presidents of the Royal Colleges of Physicians and Surgeons, the President of the Royal College of Veterinary Surgeons, the Director-General of the Medical Department of the Navy and the Chairman of the London County Council. The President of the Organizing Committee is the Earl of Derby; the Chairman, Sir William Broadbent; the Honorary Treasurers, Lord Avebury and Sir James Blyth; the Chairman of the General Purposes Committee, Professor Clifford Allbutt, and the Honorary Secretary-General, Mr. Malcolm Morris. The Prince of Wales has consented to open the Congress in person. In order to make the Congress as comprehensive as possible every colony and dependency in the Empire will be asked to send representatives, and distinguished guests will be invited from Europe, Asia and America. Authorities in these and other countries will be invited to take an active part in the work of the Congress.

It is hoped that the Congress will be able to adopt practical resolutions which will serve to indicate the measures best adapted for the suppression of tuberculosis. The work of the Congress will be divided into Sections, as follows: Section 1 (State and Municipal). Presi-

\* From the *British Medical Journal*.

dent—Right Hon. Sir Herbert Maxwell, Bart, M.P. Secretaries—Dr. Bulstrode, Dr. Arthur Newsholme, Dr. James Niven. Section 2 (Pathological, including Bacteriology). President—Professor Sims Woodhead, M.D. Secretaries—Dr. Wethered, Professor Rubert Boyce, Dr. E. J. McWeeney. Section 3 (Tuberculosis in Animals). President—Sir George Brown, C.B. Secretaries—Professor Hobday, Royal Veterinary College; Messrs. Harold Sessions, F.R.C.S., Stuart Stockman (Glasgow), Frank Leigh (Bristol). Section 4 (Clinical and Therapeutical, including Climatology and Sanatoria). President—Sir R. Douglass Powell, Bart, M.D. Secretaries—Sir Hugh Beevor, Bart, M.D., Dr. Hector Mackenzie, Dr. R. W. Philip, Dr. William Calwell (Belfast). The subscription for ordinary members will be £1. As the expense of the Congress will be very considerable, donations to the Reception Fund are invited. Donations of more than one guinea will be considered as including members subscription, and will entitle the donor, whether an individual or a corporation, to all the privileges of membership.

#### SCIENTIFIC NOTES AND NEWS.

PROFESSOR JAMES EDWARD KEELER, the eminent astronomer, director of the Lick Observatory, died at San Francisco on August 12th, from the effects of heart disease. He was born in La Salle, Ill., on September 8, 1857.

PROFESSOR RUDOLPH VIRCHOW has been elected an honorary member of the Vienna Academy of Sciences, and Dr. Ernst Abbe, professor of meteorology and astronomy at Jena, Dr. Karl v. Zittel, professor of paleontology and geology at Munich, and Dr. Felix Klein, professor of mathematics at Göttingen, have been elected corresponding members of the same Academy.

MR. OVERTON W. PRICE, of the Division of Forestry of the U. S. Department of Agriculture, has been promoted to the position of superintendent of working-plans and assistant chief, vacant by the appointment of Mr. Henry S. Graves to the professorship of forestry in Yale University.

IN response to a recent requisition from the Bureau of American Ethnology for an assistant

ethnologist especially competent to deal with the Siouan languages, the Civil Service Commission held, on July 24th, a competitive examination for the position. Only a single candidate entered the competition—Mr. John R. Swanton, of Massachusetts, a recent student in Columbia University, where he took a special course in American linguistics under Dr. Boas; he passed the examination most satisfactorily. His immediate field of work will include reservations of the Dakota and other Siouan Indians.

THE Rolleston Prize, Oxford University, has been awarded to Gustav Mann, B.Sc., New College, for his published 'Research on the Histology of Vaccinia' and for his unpublished 'Atlas of the Anatomy of the Brain of the Frog.'

PROFESSOR WILLIAM C. STUBBS, director of the Audubon experiment station in Louisiana, has gone to Hawaii as a representative of the Agricultural Department to make a study of the sugar industry on the islands and to establish a Government experiment station there.

DR. HIDEZO IKEDA of Tokio has been sent to America by the Japanese Government to study the agriculture of this country, with special reference to tobacco and cotton.

WE noted recently a movement for a memorial to the late Sir William Flower. We now learn from *Nature* that it is proposed that the memorial shall consist of a bust and a commemorative brass tablet to be placed in the Whale Room of the Natural History Museum—one of the departments in which he was most interested, and to which he devoted special care and attention. Subscriptions (which must not exceed two guineas) should be paid to Dr. P. L. Slater, treasurer of the Flower Memorial Fund, 3 Hanover Square, W.

DR. RUDOLPH HESSEL, who had charge of the propagating ponds of the U. S. Fish Commission, died at Washington on August 16th from the effects of sunstroke. He was born in Baden 75 years ago, and became connected with the U. S. Fish Commission in 1877.

PROFESSOR CHARLES SCOTT VENABLE, professor emeritus of mathematics at the University of Virginia, died at his home in Charlottesville, Va., on Aug. 11th. He was born in Prince