

order that it may erect a horticultural hall in London.

ACCORDING to the London *Times* Sir Claude Macdonald has published, in China, a report from Mr. Bourne, of the British Consular Service there, on an extraordinary landslip on the banks of the upper Yang-tsze, which has created a new and dangerous cataract in that river. Mr. Bourne describes the cataract as being situated in latitude  $30^{\circ} 54' 30''$ , and in estimated longitude  $109^{\circ} 16'$ , and about half a mile above a small rapid called Tachang. It is now much the worst rapid in the Yang-tsze, over which junks can only go empty and even so with the greatest danger. The rapid was formed at 10 p. m. on the 30th of September last by a landslip that occurred after 40 days of rain. While the water was high the extent of the obstruction was not apparent; as the river sank the rapid became impassable to upward-bound junks, and remained so for about a month. On the 4th of December the first upward-bound junk was hauled over, and there seems a great probability that as the river drops further the rapid will become again impracticable to the upward traffic. A block of ground, measuring 700 yards north and south by 400 yards east and west, has fallen down from the slope of the mountain on the north bank, a distance of 150 yards, reducing the breadth of the river from 250 to 80 yards.

IN France the manufacture of matches is a state monopoly and under state control, and in view of the numerous cases of illness among the workers and the many complaints which have been made in the press the Minister in charge has asked the Academy of Medicine to draw up rules for the regulation of the government factories. According to the *Lancet*, the Academy has agreed to the following answer being sent to the Minister: 1. It is necessary to put a stop to the unhealthy conditions which exist in many of the match factories in France. 2. The suppression of the use of white phosphorus is the only certain way of insuring health to the workers in this manufacture. 3. The employment of perfected automatic machinery is a costly matter and carries with it the condition that all dangerous operations

should be done under glass. 4. Until these recommendations can be carried out as a whole the present unhealthiness can be diminished by thorough ventilation, short shifts for those men working in the dangerous shops, careful selection of healthy hands, and periodical medical inspection, with power to prohibit the labor, either for a time or altogether, of anyone with lesions of the mouth or whose general health is impaired.

#### UNIVERSITY AND EDUCATIONAL NEWS.

THE Medical College of the New York University and the Bellevue Hospital Medical College have been consolidated under the control of the New York University. The enrollment of students last year in the two schools was 1,057.

THE Sheffield Scientific School of Yale University receives \$25,000 by the will of Mrs. Sarah Van Nostrand.

THE department of natural history of Vassar College will receive about \$25,000 through the settlement of the will of the late Jacob P. Giraud.

A BILL before the Texas Senate appropriates for the State University \$35,000 for 1897 and \$85,000 for 1898, and in addition \$42,000 annually for the medical department.

THE trustees of the Teachers' College have appointed Mr. George P. Krapp associate professor of the biological sciences, in conjunction with Professor F. E. Lloyd.

DR. BECKENKAMP, teacher in the Chemical School at Mühlhausen, has been called to the chair of mineralogy at Würzburg; Professor L. Claisen, of Aix, to the chair of chemistry at Kiel. Dr. Gaupp has been promoted to an assistant professorship of anatomy at the University of Freiburg. Dr. Boldinger has qualified as docent in analytical chemistry in the University of Amsterdam, and Dr. v. Buchka as docent in chemistry in the Polytechnic Institute at Charlottenburg.

PROF. v. KRIES, of Freiburg, has declined a call to the chair at Berlin vacant through the death of Du Bois-Reymond.

It is proposed to take powers to transfer the

patronage of Edinburgh Royal Botanical Gardens to the Crown, and to unite the Regius professorship and the University professorship of botany.

#### DISCUSSION AND CORRESPONDENCE.

##### THE BRUCE ASTRONOMICAL MEDAL.

TO THE EDITOR OF SCIENCE: Miss Catherine Wolfe Bruce, of New York city, to whom astronomy all over the world is indebted for liberal and intelligent benefactions, proposes to found a gold medal to be awarded not oftener than annually by the Astronomical Society of the Pacific for distinguished services to astronomy. The medal is to be international in character and may be given to citizens of any country and to persons of either sex. The design for the obverse of the medal is the seal of the Astronomical Society of the Pacific. The medal is to be 60 mm. in diameter. The reverse is to bear this inscription: "This medal founded A. D. MDCCCXCVII. by Catherine Wolfe Bruce is presented to—(name)—for distinguished services to Astronomy—(date)."

The Astronomical Society regularly awards also a bronze medal founded in 1890, by the late Joseph A. Donohoe, for the discovery of each unexpected comet.

EDWARD S. HOLDEN.

LICK OBSERVATORY.

##### PROFESSOR SCOTT'S BIRD PICTURES.

IN *Scribner's*, for April, Professor W. E. D. Scott 'scores the conventional method of bird-stuffing, and furnishes eight pictures of birds which are stuffed according to his own ideas.' Now, Professor Scott speaks from long experience, and what he says is largely, but by no means wholly, to the point, for much of our museum work is undoubtedly bad. Whether or not the pictures which illustrate the article and are held up as examples for us to follow are any great improvement over our more recent bird work is very questionable. It might seem ungracious to criticise these pictures of stuffed birds, but when our attention is called to them by aggressive italics and special postal cards criticism would seem to be invited. It therefore becomes a painful duty to say that the Clapper Rail and Robin are certainly not in conven-

tional attitudes and that aside from these at least three of the birds are decidedly faulty, these, moreover, being birds with which Professor Scott should be most familiar. The Bittern, p. 503, is so poised that he seems about to topple over backward, while his neck and free foot are both wrong. Ward's Heron, p. 501, and the Little Blue Heron, p. 502, both have curves in their necks which, from the structure of their backbones are *physically impossible*. The shape and articulation of the neck vertebrae of herons is such that they *always* have more or less of an angular bend in their necks, whether these be extended vertically or doubled upon themselves, and failure to reproduce this very characteristic feature means failure to convey a correct idea of a heron. We may accept Professor Scott's strictures, but we decline to follow his models.

F. A. LUCAS.

##### NOTE ON A SIMPLE METHOD FOR NEWTON'S TOTAL REFLECTION EXPERIMENT.

DEMONSTRATORS who have written for their fellows seem to have overlooked the fact that Newton's beautiful experiment, showing that for any pair of media each color having its own index of refraction has, therefore, its own critical angle, may be exhibited by much more simple and inexpensive means than the four prisms usually required for that purpose.

All that is really necessary beside the lantern or other means for getting a strong sharp parallel beam is a refraction tank, such as Wright's, having glass ends. If this tank is set up in the path of the beam in such a manner that the light may be made to pass obliquely upward into the water as for total reflection it will be found that, by adjusting the depth of the water in the tank and the angle of incidence of the beam, the apparatus can be so arranged that only red rays will emerge, all others being totally reflected. Now, by diminishing the angle of incidence of the pencil on the air surface, tilting the mirror if one is used, the remainder of the spectrum may be brought in order out of the water, and, by reversing the operation, sent back again totally reflected. Just as in the demonstration in which the right-angled prisms are employed, the image of the