

congruous that it should be in the hands of army officers.

WE NOTICE WITH MUCH PLEASURE the election of Prof. E. S. Holden to be president of the university of California, and director of the Lick observatory. Professor Holden's resignation as director of the Washburn observatory at Madison, Wis., takes effect on the 1st of January next. His appointment as director of the Lick observatory will hardly be a matter of surprise to those who are aware that, as consulting astronomer, he has virtually had the direction of the work as it has progressed, visiting the site on Mount Hamilton in 1881, and again in 1883 and 1884. Very happily the choice both of the Lick trustees and of the regents of the university has fallen upon Professor Holden. It is understood that in his letter of resignation to the regents of the university of Wisconsin, he strongly urges the name of Prof. W. A. Rogers, of Harvard college observatory, as his successor.

THE CREATION OF A NEW CHAIR of psychology at the Sorbonne, and the instalment therein of M. Th. Ribot, editor of the *Revue philosophique*, as professor, marks a new epoch in the relation of the university to philosophy in France, and is a most gratifying proof of the way in which the world moves. Safe opinions and literary smoothness have, for almost as long as any one now can remember, been stronger passports to French philosophic professorships than either learning or originality. But the renewal of the science of human nature by the physiologists, pathologists, and evolutionary anthropologists of this day and generation, has brought too great a mass of new facts with it, and of new conjectures, for any barriers to stand. They must be let in somehow, and officially taught and discussed, if the official teaching is not to appear ignorant and antiquated. The Ministry of public instruction has wisely seen this, and has had the sagacity to choose for the new professor the man who has done most to introduce the new ideas to his countrymen. M. Ribot's place at the head of the *Revue philosophique* is, to be sure, more important than any professorship; and a professorship would be but a faint reward for the service he has done to French philosophy by his admirable management of that periodical. But the two functions do not exclude each other, and we wish M. Ribot health and strength for a long career in both.

THERE IS NO GEOGRAPHER, biologist, or ethnologist, probably no statesman, on the other side of the Atlantic, to whom the name of Justus Perthes is not full of meaning. It is not merely that the house has helped, by its publications, each in his profession. It is not only because, of all geographical chart-work, theirs is pre-eminently the most delicate, the most reliable, the most artistic in the taste with which colors are used. It is rather because to the operations of a firm of means, business ability, and pride in furthering geographical science, have been added the efforts of a succession of geographers who stood second to none in their specialties, and whose ambition was not merely pecuniary or personal. The founder of this house, Johann Georg Justus Perthes, was the son of the physician to the Prince of Rudolstadt, and was born September 11, 1749. He engaged in a commercial enterprise, out of which, in September, 1785, the establishment at Gotha originated. Since then, after the death of the founder, the business has been carried on by Wilhelm (1816-1853), Bernhardt (1853-1857), and by Adolf Muller and Rudolf Besser, on behalf of a posthumous son of Bernhardt Perthes and others interested, nearly to the present time. In September last the centenary of the establishment was celebrated, and a jubilee-volume, elegantly printed, and illustrated with portraits of the firm and its chief collaborators, has been distributed to its associates and friends. This volume contains a brief history of the firm, of its connection with geographical literature, with geographers, and with explorers. The part it has played in these matters redounds to the honor of all concerned. A table showing the present organization is appended. It is unnecessary to go into details with which most of our readers are more or less familiar already. It is sufficient to say that a house to which we owe the works of Berghaus, Stieler, Petermann, Spruner, Behm, and their associates, must be counted among the ornaments of the German fatherland and the efficient forces of civilization.

PASTEUR AND HYDROPHOBIA.

THE recent communication of M. Pasteur to the Academy of sciences, upon the prevention of hydrophobia by inoculation, has naturally aroused great interest among the general public as well as in the scientific world. The methods and results of his experiments upon this subject have not yet been published with sufficient detail to justify any

positive judgment or intelligent criticism concerning them. If correctly reported, Pasteur is convinced that he has discovered means by which the virus of hydrophobia can be attenuated, and that, by the inoculation of the attenuated virus, individuals may be rendered, for the time being, insusceptible to the disease. The attenuation is said to be effected by preserving for a variable length of time pieces of the spinal cord of rabbits which have been inoculated with the hydrophobic virus. The longer the pieces of spinal cord are preserved, the weaker becomes the virus contained in them. It is evident that the spinal cord must be preserved in a manner not to decompose, and at the same time not to destroy at once, the hydrophobic virus. We are not informed how these ends are accomplished, but in accordance with Pasteur's doctrine of attenuation of virus, they must be reached without any obstacle to the free access of oxygen to the specimen. Of especial interest is the statement that inoculation with attenuated virus will prevent the outbreak of the disease, even when this inoculation is performed after the reception into the body of the strong virus by the bite of a rabid animal. There is no information as to whether this inoculation is effectual after the development of the symptoms of hydrophobia or not.

The conclusions of Pasteur, coming from so great an authority, will receive, as they deserve, respectful and serious consideration. It is understood that for no less than five years Pasteur has given the greater share of his time and labor to the study of hydrophobia. It is probable that his conclusions are based upon a large number of careful experiments upon animals. The two or three reported instances of preventive inoculation of human beings, which have excited such popular interest, and which have been reported with so much dramatic detail in the newspapers, can hardly lay claim to much scientific value in proof of Pasteur's views. Even if the number of reported cases were much larger, it would be necessary to use great caution in drawing from them positive conclusions, in view of the facts that the period of incubation of hydrophobia is very variable, and sometimes of many months' duration; that a considerable number of those bitten by rabid dogs never contract hydrophobia, even when no especial treatment has been adopted; and that there is great popular ignorance as to the symptoms and means of recognition of hydrophobia in dogs.

There is no evidence that the real nature of the hydrophobic virus has been discovered; indeed, we have, in June of the present year, the positive statement of Bouley, who is believed to be familiar with Pasteur's work, that no organism has been isolated or cultivated which can be considered to be the virus of hydrophobia, and that Pasteur's researches have been conducted without a knowledge of the biological properties of the suspected organism. The whole subject of immunity from disease by preventive inoculation is in a very unsettled state. We possess a mass of superficial observations and undigested conclusions on the subject, but we have very few positive and well-established facts. It is to be hoped that Pasteur's researches upon the inoculation and cure of hydrophobia will be found, when they are fully published, to add greatly to our knowledge of this subject, and that the blessings which are anticipated from his discovery may be realized.

THE BURMAN DISPUTE.

THE Bombay-Burma company, a British corporation having very important interests in Independent Burma, was ordered by the Burman government to pay twenty lacs of rupees (about \$1,000,000) in respect of their forest leases. The company replied that it was unable to pay such an enormous sum, and, furthermore, that no such payment was required under any reasonable construction of the grants from the Burman king. Judgment was accordingly entered against it. The company appealed to the British government, and on the twenty-eighth of last August 'the officiating secretary to the chief commissioner of British Burma' wrote to the Burman minister for foreign affairs, reciting the facts as they are here given. He then proceeded to inform the Burman minister that the British government—not the chief commissioner, not the Indian Viceroy, but the British government—'cannot acquiesce' in any such proceedings. He asked that all further actions against the company should be suspended, and proposed that the whole dispute should be referred to a person skilled in judicial matters, to be appointed by the Viceroy of India. He closed by requesting the Burman government to 'make a very early reply' to these three questions: (1) whether the decree would be suspended; (2) whether the matter would be submitted to arbitration; and (3) whether the Burman government would agree to abide by the arbitrator's decision.

To an unbiassed observer this proposition that the government of one of the parties to a dispute