were originally published at Neufchâtel in 1783. This useful series of reprints also contains two other volumes of distinctly meteorological interest, viz., No. 57, 'Fahrenheit, Réaumur, Celsius, Abhandlungen über Thermometrie. 1724, 1730–1733, 1742,' and No. 58, 'Otto von Guericke's neue Magdeburgische Versuche über den leeren Raum., 1672.' The work of de Saussure in connection with hygrometry was of marked importance, and it is well to have interest in it revived by means of this attractive little volume, the price of which is but 2 m. 60 Pf. The book contains a brief biographical sketch of de Saussure, and also a number of notes on the text. The publisher is Engelmann, of Leipzig.

BRITISH RAINFALL FOR 1899.

THE fortieth volume of 'Symons's British Rainfall,' that for the year 1899, is the first one of the long series of these annual reports which has been compiled by anyone but Mr. Symons himself. Owing to the death of the founder of the British Rainfall service on March 10, 1900, the duty of compiling the annual report has devolved upon Mr. H. S. Wallis, who was associated with Mr. Symons for 30 years. 'British Rainfall' for 1899 appropriately contains an appreciative notice of Mr. Symons's life and work, together with an excellent portrait of that distinguished meteorologist. The number of observers from whom records are received is now about 3,500. Besides the usual full presentation of the results of the year's observations, the present volume contains a discussion of the average rainfall of the decade 1890–99, as determined by records at a hundred stations well distributed over England, Scotland and Ireland.

SCIENTIFIC BALLOON VOYAGES.

NOTICE has been received of a new work on balloon meteorology, issued by Friedr. Vieweg und Sohn, Braunschweig. The title of the work is 'Wissenschaftliche Luftfahrten, ausgeführt vom Deutschen Verein zur Förderung der Luftschiffahrt in Berlin.' The authors are Drs. Assmann and Berson, and associated with them are the following well-known meteorologists or aëronauts: Baschin, von Bezold, Börnstein, Gross, Kremser, Stade and Süring. There are three volumes. The first deals with the history of balloon ascents and with the instruments and their use; the second contains accounts of individual ascents, and the meteorological results obtained on them, and the third volume summarizes the whole subject, giving the most important results. The price of the work is 100 Marks.

R. DEC. WARD.

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*YELLOW FEVER AND MOSQUITOES.*

MEDICAL authorities are by no means agreed as to the value of the experiments on the relations between yellow fever and mosquitoes carried out at Havana by Drs. Reed, Carroll, Agramonte and Lazear. The *British Medical Journal* remarks editorially: "At first glance these experiments appear to show almost conclusively that the germ of yellow fever is conveyed by a special species of mosquito — *Culex fasciatus*, presumably—and that the insect becomes infective only after from ten to thirteen days from the time of ingestion of the germ. Unfortunately the mode in which the experiments were conducted detracts much from their value. They are really by no means conclusive. The experimenters themselves are of this opinion. At most they are suggestive. It is to be regretted that, considering the great danger to which the subjects of these experiments were exposed, greater care was not exercised that the conditions of the experiments were absolutely free from objection. If life was to be risked, it was surely imperative that this risk should not be incurred in vain; that it should be unnecessary to go over the ground afresh, and thereby entail further risk.

Manifest objections to the conclusion that the mosquito did convey the disease in the three cases which yielded a positive result are, first, that nine out of the twelve individuals subjected to mosquito bite did not contract yellow fever; secondly, that those individuals who did contract the disease had entered the local endemic yellow fever area about the time they were bitten; they might have contracted the disease in the ordinary way, therefore, and not from the experimental mosquitoes; thirdly, that the germ of yellow fever has been recognized neither in the mosquito nor in human blood.

Dr. Lazear's life has not been altogether thrown away if these experiments lead, as they must, to their repetition under more rigid conditions, and if it be found that yellow fever is conveyed by the mosquito, the important sanitary measures which will result from the discovery will atone, in a measure, for the regrettable sacrifice. Meanwhile the bacillus icteroides of Sanarelli is being discredited, and, like so many of its predecessors, may have to give place to some other microorganism, in this case, possibly, of a protozoal nature.

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*UNINSULATED CONDUCTORS AND SCIENTIFIC INSTRUMENTS.*

In his inaugural address as president of the British Institution of Electrical Engineers delivered on November 8th, and published in *Nature*, Professor John Perry urged the importance of scientific and mathematical training for electrical engineers. He said: "In this address I mean to put before you this simple question: Is electrical engineering to remain a profession or is it to become a trade? Is this Institution to continue to be a society for the advancement of knowledge in the applications of scientific principles to electrical industries, or is it to become a mere trades union?"

Professor Perry, in the course of his address referred to the use of insulated return conductors in connection with electrical transportation, where uninsulated conductors may disturb scientific instruments, saying:

"At Potsdam this sacrilege has been forbidden. At Washington, Toronto, Capetown and most other important places, the magnetic records have already been rendered useless. Professor Rücker and I were asked by the other members of the Committee of the Royal Society which was in charge of the Kew Observatory to defend Kew, and with the help of her Majesty's Treasury we thought we were able to insist upon the use of insulated returns in all undertakings authorized by Parliament where harm was likely to be inflicted on Government observatories. * * * We were, however, mistaken, for the only clause which we have been able to get inserted in all Parliamentary authorizations of undertakings leaves it to the Board of Trade to substitute other methods of protection than the insulation of the return conductors in cases where these other methods seem to be sufficiently good for the protection of laboratories and observatories, and this is why the Board of Trade appointed the committee which met on October 31st, probably for the last time. * * * I beg to assure you that I have been acting in your best interests. As an electrical engineer I ought surely to regret the use of uninsulated returns, even if we leave Kew Observatory out of account. Suppose we do not now insulate our returns. Electricity will certainly return by gas and water pipes and the amount of harm done to those pipes is merely a question of time. Because of the ignorance of legislators and gas and water companies, nothing is said just now; but will nothing be said at the end of ten or twenty years, when pipes are found to be eaten away everywhere? And if by a slight increase of expense, or rather, as I think, actually no increase of expense, but merely a little increase in inventiveness and common sense on the part of electrical engineers, this evil may be entirely prevented, surely it is in the interests of all of us that insulated returns should be insisted upon. But even if we do not insist on insulating the returns in all systems, surely something may be said for the giving of this protection on lines near such a magnetic observatory as Kew. Even the magnetograph records now being made have been continuous for forty five years, and if Kew is interfered with no sum of money can compensate for the interference; for if the observatory were removed the future observations would have no link with the past."

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*SCIENTIFIC NOTES AND NEWS.*

The programs of the scientific societies in session during Christmas week at Baltimore, Chicago, New York and Albany show that an interesting series of meeting will be held. We hope to publish in early issues the official addresses and discussions, together with accounts of the meetings.

Dr. G. A. Miller, of the mathematical department of Cornell University, has just been awarded the prize of $260 offered by the Royal Academy of Sciences of Cracow, for researches in the theory of groups.