

SEVENTY YEARS AGO

NATURE, vol. 1, January 13, 1870

Government Aid to Science

ALFRED RUSSEL WALLACE, in a letter to the Editor, writes: "The public mind seems now to be going mad on the subject of education; the Government is obliged to give way to the clamour, and men of science seem inclined to seize the opportunity to get, if possible, some share of the public money. . . .

"Now, sir, I protest most earnestly against the application of public money to any of the above specified purposes, as radically vicious in principle, and as being in the present state of society a positive wrong. . . . I uphold national education, but I object absolutely to all sectional or class education; . . . The broad principle I go upon is this,—that the State has no moral right to apply funds raised by the taxation of all its members to any purpose which is not directly available for the benefit of all. . . . If we follow this principle, national education is not forbidden, whether given in schools supported by the State, or in museums, or galleries, or gardens, fairly distributed over the whole kingdom, and so regulated as to be equally available for the instruction and amusement of all classes of the community. But here a line must be drawn. The schools, the museums, the galleries, the gardens, must all alike be *popular* (that is, adapted for and capable of being fully used and enjoyed by the people at large), and must be developed by means of public money to such an extent only as is needful for the highest attainable *popular* instruction and benefit. All beyond this should be left to private munificence, to societies, or to the classes benefited, to supply."

A New Thames Subway

THE importance of geological data on the extent of the London Clay was emphasized in an article by J. Prestwich, F.R.S., on the second Thames subway. "The first to apply this knowledge was Mr. P. H. Barlow, C.E., F.R.S., who fixed upon a spot intermediate between London Bridge and Limehouse (where the thickness of London Clay must be about 80 ft.), and at a sufficient distance below London Bridge to render an underground passage of the Thames a work of great public utility. . . . The tunnel is 7 feet in diameter, and is formed by cast-iron tubing in lengths of $1\frac{1}{2}$ feet each, each ring being composed of thin segments with a key piece. An iron shield, devised by Mr. Barlow, was pushed on in advance of the work. . . . The passage under the river will be made in an omnibus, by means, probably, of a stationary engine; and lifts on either side will take the passengers up and down [the shafts]." The tunnel, 1320 feet long, was begun on April 26, and finished on October 8, 1869, without a single fatal or even serious accident to any of the men employed. It is no longer in use.

On the Periodicities of the Solar Spots

"Messrs. De la Rue, Stewart, and Loewy have for some time past been engaged in investigations [at Kew Observatory], which . . . go to show that there is an intimate and, as yet, unexplained connection between the configuration of the planets and the position and number of the spots on the sun. This result, which at once seems to land us in a sort of modern astrology . . . is . . . questioned

by many European astronomers". Accordingly, a digest is given of independent investigations carried out by Dr. Kirkwood and published in the *Proceedings of the American Philosophical Society*. Among his conclusions were that the theory "has been placed beyond reasonable doubt", and the "11-year cycle of spot variation is mainly dependent on the influence of Mercury".

THE oxy-hydrogen light is now largely used in Paris for illuminated advertisements and theatrical purposes. Carts with metal reservoirs containing the compressed oxygen for the supply of customers may be seen in the streets. At the Gaieté Theatre, which is one of the largest consumers, cylinders of magnesia or zirconia take the place of the lime cylinders ordinarily used for this light.

PROF. HELMHOLTZ, of Heidelberg, has been elected a corresponding member of the Physical Section of the Paris Academy of Sciences.

APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

UNIVERSITY ASSISTANT IN BOTANY—The Secretary, The University, Aberdeen (January 20).

UNIVERSITY GRADUATE AS TEACHER OF ENGLISH for British-Peruvian Cultural Association, Lima—The British Council, 3 Hanover Street, W.1 (quoting 'Lima') (January 24).

LECTURER IN GEOGRAPHY in the University of Cape Town—The Secretary, Office of the High Commissioner for the Union of South Africa, South Africa House, Trafalgar Square, W.C.2 (February 5).

LECTURER IN MECHANICAL ENGINEERING in the Witwatersrand Technical College, Johannesburg—Frank Ross and Co., 9 Fenchurch Avenue, E.C.3.

REPORTS AND OTHER PUBLICATIONS

(not included in the monthly Books Supplement)

Great Britain and Ireland

Scientific Proceedings of the Royal Dublin Society. Vol. 22 (N.S.), No. 13: On a Recent Bog-Flow in Powerscourt Mountain Townland, Co. Wicklow. By A. D. Delap and G. F. Mitchell. Pp. 195-198. (Dublin: Hodges, Figgis and Co., Ltd.; London: Williams and Norgate, Ltd.) 6d. [2712]

Board of Trade. Statistical Abstract for the British Empire for each of the Ten Years 1929 to 1938 (Trade and Commerce Section). Sixty-eighth Number. (Cmd. 6140.) Pp. xv+234. (London: H.M. Stationery Office.) 3s. 6d. net. [2712]

Royal Meteorological Society. Bibliography of Meteorological Literature. Prepared by the Royal Meteorological Society with the collaboration of the Meteorological Office. Vol. 4, No. 7 (January-June 1939). Pp. 351-414. (London: Royal Meteorological Society.) 2s. 6d. [2712]

Other Countries

Ministry of Agriculture, Egypt: Technical and Scientific Service. Bulletin No. 231: The Incidence of Contagious Abortion in Domestic Animals in Egypt. By Dr. Mohamed Ragheb Ahmed. Pp. 29. P.T. 4. Bulletin No. 236: Further Studies on the Control of Bean Rust, with some Reference to the Prevention of Chocolate Spot of Beans. By A. F. El-Helaly. Pp. 24. P.T. 4. (Cairo: Government Press.) [2712]

Meddelanden från Oceanografiska Institutet i Göteborg. 2 The Radioactivity of Seawater. By Ernst Föyn, Berta Karlik, Hans Pettersson and Elisabeth Rona. Pp. 44. 3: Large-scale Plankton Cultures. By Hans Pettersson, Fabius Gross and Friedrich Kocz. Pp. 25. (Göteborg: Elanders Boktryckeri A.-B.) [2712]

Carnegie Corporation of New York. Report of the President and of the Treasurer for the Year ended September 30, 1939. Pp. 168. (New York: Carnegie Corporation of New York.) [2812]

Catalogues, etc.

Pocket Diary for 1940. (Bonnybridge: John G. Stein and Co., Ltd.)

Desk Engagement Pad for 1940. (London: W. Edwards and Co.)