

Society. It contains a statement of the work done in the two departments of magnetism and meteorology, and a notice of certain of the instruments. It appears that 196 barometers and 4,828 thermometers have been verified during the year. Besides these last, 53 deep sea thermometers have been tested, the great number of which were subjected, in the hydraulic press, without injury, to strains exceeding three and a half tons on the square inch." These figures may be taken as an average of the work done here annually.

The following is an extract from a paper by Mr. C. Murray, in the "Companion to the British Almanack" for 1884:—"The so-called Kew Observatory was built for George III. by Sir William Chambers, for the purpose of studying astronomical science, with special reference to the Transit of Venus in 1769. The situation is low, but otherwise well situated both for its original and its present work. It stands in the old Deer Park, Richmond, some little distance above Kew Gardens, near that part of the bend of the Thames which faces Isleworth, a little more than 900 feet from the water-side. . . . To show how characteristically isolated this building is from the ways of the world, the only open entrance to it is through a farmyard, and along an ankle-spraining 'prairie path' of cinder-slag, little more than a foot in breadth. The park is the property of the Crown, and the stewards of the Crown have well doubled the saying of 'no royal road to learning' by maintaining there shall be no 'royal road' to Kew and its science. . . . For many years Kew may be said to have quietly glided into a long winter of hibernation, being under the careful guardianship of a curator and reader. However, in 1841, Sir Robert Peel 'disestablished' it, and bestowed such instruments as it had among several learned bodies. The Royal Society, as a body, refused the building, from lack of funds in its corporate capacity; but several private members of that society and of the British Association, headed by Lord Northampton and Lord Francis Egerton, under sanction of the Government, raised subscriptions among scientific persons to establish a physical observatory, where it was decided that meteorology, electricity, and magnetism, were to form the subjects of observation. Much opposition was raised, and at one time it was proposed that the observatory should be closed and discontinued; but a committee of the leaders of the world of science—Herschel, Sabine, Wheatstone, and others—reported in favour of its maintenance, and accordingly it pursued for several years 'the even tenor of its way.' In 1855

the Board of Trade accepted its assistance with respect to meteorological work, and when, on the death of Admiral Fitzroy, the meteorological department of the Board of Trade was transferred to a committee nominated by the Royal Society, Kew was made a central station, from which outlying observatories at Aberdeen, Armagh, Falmouth, Glasgow, Stonyhurst, and Valentia, were controlled, its superintendent being their examiner and reporter. A grant placed at the disposal of the committee—now called the Meteorological Council—is the only sum of public money given for its support. In 1871 the annual grant of the British Association was withdrawn, and a sum of £10,000 being placed in trust in the hands of the Royal Society by Mr. Gassiot for the maintenance of its magnetic observations, it passed into the hands of a committee selected by that body." It would be impossible here to describe in minute detail the marine barometer—which serves also as a barometer on land—the thermometer, the hypsometer, the barograph, the thermograph, the anemometer, and the other instruments used here to work out the several branches of meteoric science practically. Enough to say that barometers, thermometers, sextants, &c., are tested here; that all instruments so verified leave the Kew Observatory with the letters "K. O." stamped upon them, and with a registered number. To our list of these instruments may be added the "Sunshine Recorder," which marks the number of hours and minutes during which the sun is visible. Mr. Murray thus describes it:—"It is a sphere of glass mounted on a polar axis, which rests in a suitable framework and stand. This axis can be set to coincide with the polar one at the place of inclination, whilst a graduated circle will adjust it to its working latitude. The supporting frame has movable card-holders, adapted to receive straight cut strips of card all to fit, so that when one is done with another can be instantly put in its place. These cards are cut from Bristol board, tinted with Prussian blue, and divided into slips thirteen inches long by three-quarters of an inch wide. The large-sized card-holder is used in the instrument during the months of May, June, July, and August, and the smaller-sized during the rest of the year. Each ray of sunshine passing through the glass globe leaves its path along the card, and the hours are marked by a pencil from hour to hour." In fact, so perfect is the command of man over Nature, that it is a matter of common boast that almost without exaggeration the sun is now made to photograph his own face as he rises every morning!