

was a promenade at the school-rooms—very fully attended. On Monday, there was business in all the Sections,—and the General Committee again met. Lieut. Carte exhibited his rockets at the pier. He demonstrated their usefulness by firing over a vessel moored at some distance,—when two men, attaching themselves, were drawn ashore. In the evening, Dr. Carpenter lectured on microscopic structures to a large audience.—On Tuesday all the Sections again met: and the Mayor gave a dinner to the principal strangers. In the evening there was a promenade; at which were displayed such objects as had proved of interest in the various Sections.—On Wednesday some of the Sections met: and the General Committee assembled to sanction the grants which had passed the Recommendation Committee. In the afternoon of the same day, the concluding General Meeting of the Association was held for the customary ceremonial proceedings."

We proceed to give a brief account of the proceedings of the sections.

*Mathematical and Physical Science.*—

President, Lord Wrottesley. Professor Powell presented a "Catalogue of Observations of Luminous Meteors, from September 1833, to July, 1848, with an Appendix, containing much curious and valuable information."—The same gentleman also furnished "An Account of the Annular Eclipse of October 9, 1847, comprising observations made at Orleans, at Cilly, in Styria, at Bombay, at Hinjolee, and at Bruges."—Mr. Harrison gave an account of a self-registering Thermometer, with twelve months' tracings of its work.—Mr. Birt's "Report of Atmospheric Waves" was, no doubt, interesting to those who understood it, but the very free use of technical terms made it almost unintelligible to general hearers.—Several papers on optical phenomena were read, chiefly referring to abstract inquiries and minute details.—Sir David Brewster read a paper intitled, "An Examination of Berkeley's Theory of Vision," in which he argued that Bishop Berkeley's views were unsound, and that the power of judging of the distances of objects is not gained by experience, as the bishop maintained, but is a natural gift. Professor Whewell combated Sir David's statements, as did also Mr. Estlin, surgeon and oculist, of Bristol, who mentioned several instances of persons whom he had restored to sight from total blindness, who, previous to experience, could form no idea whatever of the distances, or directions, or shapes of bodies.—A communication from Col. Sykes, "on Atmospheric Disturbances throughout the world," characterised those disturbances, and the anomalies which pre-

sented themselves in various places in Europe, Asia, Africa, and even America, for some months past, as not less remarkable than the political agitations and storms which have swept over Europe.

*Chemical Science, including its application to Agriculture and the Arts.*—President, R. Phillips.—The papers presented to this section were very numerous. We can only mention the most important. "On the Motion of the Electric Fluid along Conductors," by the Rev. T. Exley. The object of this communication was to propound a theory by which it was thought all the phenomena of electrical action were explained on the notion of one fluid. Dr. Faraday drew attention to the fact that the mathematical examination of the subject had led to an equal balance in favour of the hypothesis of both one and two fluids—and that another view, equally plausible, denied the existence of either one. It was, therefore, of the utmost importance that we should move carefully in the inquiry, and endeavour to disentangle truth without entertaining any view more favourable to one than to the other of these theories. The whole subject was involved in perplexing mysteries.—"On a Peculiar Property of Coke," by Mr. J. Nasmyth. The following interesting fact was discovered some years ago, and it appears to furnish additional evidence as to the identity of the diamond with carbon, namely, that *coke* is possessed of one of the most remarkable properties of the diamond, in so far as it has the property of *cutting glass*. I use the term "*cutting*" with all due consideration—in contradistinction to the property of scratching, which is possessed by all bodies that are harder than glass. The *cut* produced by coke is a perfect, clear diamond-like cut, so clean and perfect as to exhibit the most beautiful prismatic colours, owing to the perfection of the incision. Coke hitherto has been considered as a soft substance, doubtless from the ease with which a mass of it can be crushed and pulverized; but it will be found that the minute plate-formed crystals of which a mass of coke is composed, are *intensely hard*, and as before said are possessed of the remarkable property of *cutting glass*. This discovery of the extreme "diamond-like" hardness of the particles of coke will, no doubt, prove of value in many processes in the arts, as well as interesting in a purely scientific sense.—A paper on "Common Salt as a Poison to Plants," by W. B. Randall, furnished some singular facts. It appears that if water is impregnated with salt, in the proportion of seven grains to a pint, the plants that are watered with it will be gradually poisoned, and will die.—Dr. Smith presented a report "On the Air and Water of Towns," pointing