had previously been nearly calm, freshened into a strong breeze, which blew from the south-west down the valley, but died down after the illumination faded away. The cloud above the mountain began to assume irregular dark cumulus shapes, and the sky became generally overcast. Early this morning rain was falling heavily. The mountains have been all day shrouded in dripping cloud, and the deluge still continues.

ARCH. GEIKIE.

Mürren, August 15.

A Mirage at Putney.

PERHAPS the phenomenon of mirage is not sufficiently rare in England to make its occurrence noteworthy, but I should like to mention a singularly beautiful example that I noticed on Sunday last (August 16). I was riding on my bicycle along the Upper Richmond Road towards the west, and against a fairly steady breeze, and had arrived at that part of the road lying between the railway bridge and the Putney High Street—about opposite house No. 110—when I noticed that the road beyond, some fifty yards in front of me, was apparently flooded ankle deep in water. I was somewhat disconcerted at the prospect of riding through such a quantity of water, but I found to my astonishment that when I arrived at the supposed lake the road was perfectly dry. I thereupon turned and rode back to my previous station, and, dismounting, watched the phenomenon for some while. To assure myself that it was no personal illusion upon my part, I directed the attention of a passing stranger to the scene, and he was impressed as I had been. I should mention that the road sloped slightly downhill from me, and the sun was high (12.50 p.m.) above on my left. The line of sight must therefore have met the dividing surface between the layers of hot and cold air lying above the wooden paving almost at grazing incidence. The surface of the "water" was still, and the reflection of the gay dresses and sunshades of the ladies just from church was remarkably and beautifully clear.

H. E. WIMPERIS.

London, S.W., August 17.

THE SOUTHPORT MEETING OF THE BRITISH ASSOCIATION. SECTIONAL ARRANGEMENTS.

THE arrangements of the various sections of the British Association for the forthcoming meeting at Southport have now been practically completed. The following summary shows the chief points of the programmes, so far as they are at present known:—

Mathematical and Physical Sciences.—The physical portion of Section A will be mainly occupied in discussing three questions of considerable interest to physicists at the present time. The nature of the emanations from radio-active substances will be introduced as one of the subjects for discussion by Prof. Rutherford, of Montreal, and it is expected that several visitors from the Continent will take part. Mr. Swinburne will introduce a discussion of the method of treatment of non-reversible processes in thermodynamics, in which Prof. Perry and others will have something to say, and Prof. Henrici will direct attention to the desirability of introducing vectorial methods into physics to a much larger extent than has been done hitherto. The fact that the International Meteorological Congress meets at Southport under the presidency of Prof. Mascart, of Paris, at the same time as the Association, will make the work in the department of Section A devoted to meteorology and astronomy of special importance this year. Contributions to the proceedings of the department have been promised by several of the members of the congress, including Hildebrandsson, Paulsen, and Pernter, and Sir Norman Lockyer will discuss the agreement in time between certain solar and terrestrial phenomena. Papers have been promised by Prof. Turner, Dr. W. J. S. Lockyer, the Rev. A. L. Cortie and Mr. Hinks, and there will be an exhibition of photographs from the Yerkes Observatory.

NO. 1764, VOL. 68]

Chemistry.—In his opening address to the section, the president, Prof. W. N. Hartley, F.R.S., proposes to give a brief account of twenty-five years' work in spectroscopy applied to the investigation of the composition and constitution of terrestrial substances, both organic and inorganic, and to review the present position of spectroscopy chiefly in relation to chemical theories, indicating where it may be usefully and profitably extended. The following papers will be read:—"Dynamic Isomerism," by Dr. T. M. Lowry; "Hydroaromatic Compounds," by Dr. A. W. Crossley; "The Cause of the Lustre produced during the Mercerising of Cotton," by Mr. J. Hübner and Prof. W. J. Pope, F.R.S.; "Mutirotaion, and the Glucoside Formula of Glucose," by Dr. E. F. Armstrong; "A Contribution to the Constitution of the Disaccharides," by Mr. T. Purdie, F.R.S., and Dr. J. C. Irvine; "Some Derivatives of Fluorine," by Miss Ida Smedley; "Fluorescence as Related to the Constitution of Organic Substances," by Dr. J. T. Hewitt; "The Cholesterol Group," by Dr. R. H. Pickard; "On Essential Oils," by Dr. O. Silberrad; "Freezing Point Curves of Binary Compounds," by Dr. J. C. Philip; "Action of Diastase on the Starch Granules of Raw and Malted Barley," by Mr. A. R. Ling; "Action of Malt Diastase on Potato Starch Paste," part i., by Mr. B. F. Davis and Mr. A. R. Ling; "Action of Malt Diastase on Potato Starch Paste," part ii., by Mr. A. R. Ling; "Some Properties of Sodium Hydride," by Mr. A. Holt; "On a Method of Separating Cobalt and Nickel and the Volumetric Determination of Cobalt," by Mr. R. L. Taylor; "The Influence of Small Quantities of Water in bringing about Chemical Reaction between Salts," by Dr. E. P. Perman; "Sur le Spectre du Silicium" and "Sur les Procédés de Photographie Spectrales applicables à la Pratique des Laboratoires de Chimie," by M. le Comte Arnaud de Gramont. Dr. W. A. Bone will open a discussion on the general subject of combustion by a paper on the combustion of methane and ethane.

Geology.—The following papers have been promised in this section:—"On the Disturbance of Junction-beds from Differential Shrinkage during Consolidation," by Mr. G. W. Lamplugh; "On the Igneous Rocks of Weston-super-Mare," by Mr. William Boulton; "On the Igneous Rocks of the Berwyn Mountain," by Mr. T. H. Cope and Mr. J. Lomas; "On the Recent Work of the Geological Survey," by Dr. J. J. H. Teall, F.R.S.; "Lower Ordovician Rocks in the Neighbourhood of Snowdon and Llanberis," by Mr. W. G. Fernsides; (1) "On the Origin of Certain Quartz Dykes at Foxdale, Isle of Man," (2) "On some Glacial Lakes in Switzerland," (3) "On the Geology of the Country Around Southport," by Mr. J. Lomas; "On the Porosity of Rocks," by Mr. C. C. Moore; "Notes on Sarsen Stones, with Special Reference to the Stones at Stonehenge," by Mr. H. W. Monckton; "On the Geology of Martin Mere," by Mr. H. Brodrick; (1) "On the Origin of Eruptive Rocks," (2) Observations on the Metalliferous Deposits of the South of Scotland," by Mr. J. G. Goodchild; (1) "On the Origin of the Drift Deposits of Lancashire and Cheshire," (2) "On the Striation of Boulders on Modern Beaches," (3) "Observations upon the Evidences for the Former Existence of Glacier-Lakes in N. England and S. Scotland," by Mr. P. F. Kendall. Dr. A. Smith Woodward, F.R.S., has promised a paper, but the title is not yet known. There will also be the first report of the committee appointed at Belfast to report upon the fauna and flora of the Trias of the British Isles. The greater part of this first report is furnished by Mr. Beasley, and deals with footprints.