

hitherto connected, and be taught as a separate science on its own merits and usefulness, and extent of practical application. It is therefore proposed that meteorology might constitute a separate course of lectures, theoretical and practical, at our colleges, where might be expounded its bearings on navigation, agriculture, human health, and engineering. To it might also be attached the sciences of ventilation of buildings, as barracks, factories, and mines, and hydrology, or a knowledge of ocean and sea currents, and ice drifts.

The foundations for such a professorship in scientific materials have, it is suggested, now reached a sufficient weight and bulk as to furnish ample occupation, and to be of universal interest and general application.

Weather observatories, now numerous established, will require superintendents and assistants, captains of ships would be benefited by some scientific knowledge of the winds and waves, and farmers would find meteorology useful for the successful tillage of the soil.

Again, overseers of mines would derive some good from a knowledge of the mechanism of the currents of the air they have to regulate in ventilation, and engineers of waterworks would require to know the variability and extent of rainfall for the sites and construction of their reservoirs.

Finally, the science of the weather is of most importance of all to those who have to fulfil the duties of health officers in our great towns, and climatology is more than ever studied by the physician having to give advice to the numerous invalids who now travel abroad for the sake of restoration of health by change of air and scene.

In order to facilitate the accomplishment of this object, it is suggested that some means should be taken to originate a fund to defray the expenses of such a course of lectures, either in London or Edinburgh, both of which cities have meteorological societies which might lend their influence to promote such schemes of scientific development.

The class of men to whom resort might be suggested for patronage of this proposition would most likely be shipowners, landowners, and boards of health, either for the study of their self-interest or for the benefit of the public.

SPES  
Edinburgh, June

#### THE BRITISH ASSOCIATION—GLASGOW MEETING

THE arrangements for the reception of the British Association are fast progressing towards completion. The Executive Committee met on Tuesday, and the following is a brief sketch of the work which has been done:—

*Finance Committee.*—The total sum subscribed to the Guarantee Fund amounts to £6,559 10s.

*Museum Committee.*—This Committee has arranged as follows:—The Geological Exhibition will be accommodated in the Corporation Galleries, Zoology and Botany in the lower Queen's Rooms, and Archæology, &c., at the University. These exhibitions will be large and complete, and arrangements have been made for keeping them open, if desired, for some time after the meeting of the Association.

*Local Industries Committee.*—This Committee has three sub-committees—one for Machinery, one for Chemicals, and one for Textile Fabrics—and the materials for a highly instructive exhibition are being collected, which will be held in Kelvingrove Museum, where there is already a general museum of considerable size and variety.

*Reception Committee.*—Already a number of distinguished persons have been invited and have accepted invitations. Among these are the President-designate, Prof. Andrews, of Belfast, who will be the guest of Sir William Thomson, the present President, Sir John Hawkshaw, who, with Lieut. Cameron, the African explorer, will be the guest of the Lord Provost. The Duke of Argyll, one of the Vice-Presidents, will be the guest of Prof. Blackburn.

Arrangements have been made with all the leading railway companies in England and Scotland to facilitate the visits of strangers and their stay in Glasgow. A

guide and handbook for Glasgow and the West of Scotland is being prepared under the general editorship of Dr. Blackie.

The following places have been secured for the use of the Association:—The University, where, as at present arranged, all the Sections except the Geographical and Ethnological Section (Section E) will meet, Section E meeting in the large upper hall of the Queen's Rooms. At the University, also will be the Reception and Refreshment Rooms. Kelvingrove Museum.—This will be the receptacle for the exhibitions of machinery, of chemicals, and textile fabrics. Queen's Rooms.—Here will be held an exhibition of the zoological and botanical collections of the district, and here also the meetings of Section E will take place. The upper Corporation Galleries will be filled with a geological exhibition, there being no room at the museum at the University to accommodate more than the Archæological Section, in addition to the permanent and temporary exhibits already arranged there. The City Hall and the Botanic Garden Palace have also been secured for the use of the Association. The Chambers of the Association, where all inquiries may be made, will be found at 135, Buchanan Street.

A great many of the citizens have indicated their wish to receive guests, and a list is being drawn up of expected visitors, from which guests may be selected. Notice of its completion will be given by advertisement in the newspapers.

*Excursion Committee.*—It has been arranged that excursions will take place on Saturday, the 9th, and Thursday, the 14th of September, to the following among other places:—Arran, Lochlomond, Loch Fyne, and the Holy Loch, Coatbridge, and Paisley. Mr. A. B. Stewart has placed his yacht at the disposal of the Association, as has also Mr. Duncan of Benmore, for dredging expeditions. It is intended that there will be at least one dredging excursion to the Firth of Clyde, or other suitable place. Mr. Duncan will also receive at Benmore a party of 100, who go the round by Loch Fyne, for whom he has arranged a delightful excursion. Mr. Martin of Auchendennan will receive a party at dinner there, and Mr. Campbell of Tulliechewan and Mr. Matheson of Cordale have also intimated their desire to show hospitality to members of the Association visiting Dumbartonshire. Mr. Ellis will entertain a party at luncheon at Coatbridge after inspection of the North British Wireworks, and Sir Peter and Mr. Thomas Coates are expected to do the same at Paisley.

#### ABSTRACT REPORT TO "NATURE" ON EXPERIMENTATION ON ANIMALS FOR THE ADVANCE OF PRACTICAL MEDICINE<sup>1</sup>

##### II.

*Experimentation with the forms of *Lycoperdon giganteum*, or common Puff-Ball.*

IN 1853, while the study of the art of producing safe anæsthesia was fresh upon me, my attention was directed by my friend, Mr. H. Hudson, to the fact that in the country the owners of bees rob the bee-hive of its contents of honey and wax after they have stupefied the bees by driving into the hive the smoke of the common puff-ball—*lycoperdon giganteum*. It struck me at once that I ought to ascertain whether the stupefying agent which is given off in the smoke would act as an anæsthetic on the higher animals and on man, and whether a new and safer anæsthetic than chloroform was contained in it. The results of this research, some of which I published in the *Association Medical Journal* in 1853, showed that the narcotic agent present is indeed a true anæsthetic, and that all animals may be narcotised by it, but that owing to the mode in which it has to be administered, it cannot conveniently be applied to man. All the lower animals about to be subjected to operations of any kind, surgical

<sup>1</sup> Continued from p. 152.