

the intensity of which is subject to rapid changes, sound may be produced in the phonoscope. Probably by making use of selenium, instead of the tube-transmitter with charcoal, &c., of Prof. Hughes, and by exposing it to light as above, the same result may be obtained.

I should be glad to know whether experiments have been made in this direction; for if the above should prove true, there is no doubt that many applications would be the result.

Kew, June 3

J. F. W.

### Meteor

HAVING just seen a magnificent meteor, I send you an account of it, as from its position it may have been seen at Gibraltar.

At 7.30 this evening a large meteor appeared as nearly as possible N.E. by E. of my position, at about 25 to 28° from the horizon, in a wide opening in the clouds, and proceeded with a moderately fast motion towards the north, slightly descending in a path slightly concave to the horizon. I did not see it disappear, as it went behind some bushes which hid the sky between N. by W. and N. by E.; if it disappeared due N. it would have been about 20° from the horizon as estimated by the altitude of the pole-star. The appearance was very remarkable, the head being of a brilliant green and the tail bright red. When I first saw it I took it for a first-class rocket passing at about 300 or 400 yards from me with a bright Bengal light of green colour at its head. The brightness was certainly from 10 to 15 times that of Venus at its brightest. It shone in the twilight more brilliantly than I ever saw Venus against a dark sky. The tail was not persistent as far as I could judge, against the light sky, and no report was heard, though I listened for several minutes. A bright star, which I believe was Vega, was just below it among the clouds, and afforded a fair standard of comparison; it was from thirty to forty times, at least, brighter than this star.

W. A. SANFORD

Funchal, May 27

P.S.—I find that I have forgotten to mention that my position is about two miles south-west of the cathedral of Funchal.

### Multiple Rainbow

ON Saturday evening I (and others) observed a rainbow which presented a very peculiar phenomenon. The primary bow, in the neighbourhood of its apex, was apparently composed of three distinct bows. Just below the violet of the principal bow the bright portion of a second bow was observed, and at about half the distance between the bright portions of these two bows was observed the bright portion of a third bow. The secondary bow looked much as usual, and the principal primary bow was very perfect, so far as I could see, on each side. The repetitions of the primary bow extended only through an angle of 35° or 40°, and did not apparently end at the same point.

Between the point of observation and the sun are some pieces of still water in Bushey Park. Overhead were some clouds upon which the sun was shining. I think the phenomenon was due to the reflection of the sun from the clouds.

R. S.

Hampton Wick, June 1

### Opening of Museums on Sundays

MANY of your readers will be glad to know that the very admirable and extensive museum at Maidstone was opened to the public on Sunday last, and will in future be open on Sunday afternoons from two to six o'clock.

The opening was a great success: the mayor and many of the influential inhabitants were present, and more than 1,000 people visited the museum on that afternoon, the average attendance on week-days being from 50 to 100. The most perfect order was preserved, and every part of the museum received its share of attention, even the library being more than full of readers.

I believe that this is the first and only scientific museum that has yet been opened on Sunday in the United Kingdom, the Art Gallery at Birmingham and Aston Hall being of a different character, and so I have thought it worth while to call your attention to it.

For the sake of those who have not yet visited Maidstone Museum I may say that it is one of the best local museums in the country, having remarkably fine palæontological, conchological, and other collections; that it will well repay a visit, or more than one; and that Mr. Bartlett, the courteous curator, is always ready to give visitors any assistance that he can.

Maidstone itself, and the country round, are well worth visiting. I must not forget to mention the cemetery, which is one of the most beautiful in the country.

10, Bolton Row, Mayfair, W.,  
June 10

W. H. CORFIELD,  
Chairman of the Committee  
of the Sunday Society

## THE FISHERIES OF BRITISH NORTH AMERICA

### I.

IT was provided by the Treaty of Washington, that, on payment by the United States of a compensatory sum (to be determined by a Commission) to the Dominion of Canada, the Fishing-grounds of British North America should be entirely thrown open to the fishermen of the Union; those of the United States coast, on the other hand, being opened to the fishermen of the Dominion only as far south as the 39th parallel of N. lat., which is almost exactly that of Washington. While the payment of the compensation since awarded by the Commission is being protested against by not a few influential politicians in the United States, the probable influence of the Fishery clauses on the future of the Dominion of Canada is being carefully considered in those parts of it which they especially affect; and we have before us a very able report on this subject by Mr. H. Y. Hind, M.A., a Member of the Legislature of Newfoundland, of which, as based on a careful scientific study of the physical and biological conditions involved in the questions at issue, we think that a summary will prove interesting to our readers.

It is somewhat startling to be told that "as a maritime power the Dominion of Canada stands *fifth* among the nations of the world." This expression, however, is obviously meant by Mr. Hind to refer, not to its *armed* but to its *commercial* marine, which is only surpassed by that of the Mother country, of the United States, of Norway, and of Italy. Its vessels number more than 7,000, and their registered tonnage amounts to above a million and a quarter tons, increasing at the rate of 60,000 tons per annum; its supply of trained seamen is drawn from a fishing population scattered over 3,000 miles of sea-board; and the annual value of their catch reaches at least 20 millions of dollars. The political importance of sea-fisheries as a nursery for seamen, irrespective of the pecuniary value of the catch, is admitted on all hands; and hence it is that a far-sighted policy looks to the value of the British American Coast fisheries as consisting not only in their present productiveness, but also in the security they afford for the maintenance and permanency of what has of late become one of the greatest industries of the Dominion—the work of ocean-carrying.

Now, while the length of the coast-line in British America not covered by previous treaty-arrangements, which is now opened to the United States fishermen, is about 3,700 miles, and the area of its coastal fishing grounds is about 11,900 miles, the length of the United States coast-line opened to British fishermen, is only 1,030 miles, and the area of its fishing-grounds about 3,500 miles. But the respective values of these grounds are not to be estimated by their relative extent alone; for while the United States fishing-grounds north of the 39th parallel were formerly extremely productive, they are now much less so, chiefly through the improvidence of their own people; the cod-fishery, in particular, having been ruined in a great measure beyond repair. On the other hand, the United States coastal waters south of the 39th parallel still maintain much of their original productiveness, supplying a very large quantity of fish to the markets of New York and the South. But to these prolific fishing-grounds access is forbidden to British-American fishermen, who are thus placed at a great disadvantage compared with those of the United States; the latter being