exercised any authority over it, the island was not included in the revolution of 1776. Has the jurisdiction of Great Britain lapsed in course of years? and if it has not, what are the dozen acres of rock worth? At present it is occupied by a few fishermen, and also contains the summer residence of a Boston attorney, who evidently knows the value of peace and quietness as well as that of nine points of the law.

## *LONDON LETTER.*

THE health of the president of the Royal society, Professor Huxley, is a matter of grave anxiety to his numerous personal and scientific friends. The prolonged absence from work in the winter and early spring of this year failed to restore him to anything like his usual vigor, and last summer he judged it prudent to resign altogether most of his public appointments, especially those in connection with the teaching at the science schools, South Kensington. Whether he will retain the presidency of the Royal society is as yet undecided. As the official representative of the society, and indeed of science generally on all public occasions, the social claims upon him at these public appearances are very considerable. The amount of personal attention that has to be given by the president to work which makes no show is also very large, and more than one past president has had to resign the office on this account. At this crisis, therefore, a grave responsibility is cast upon the council and officers. It has been suggested that Professor Huxley should return with Professor Marsh, of New Haven (who is now on his way to Berlin, having attended the British association meeting), and should remain with him for a year, quietly working through his wonderful collection of dinosaurians. The interest of this to Professor Huxley could not fail to be great, as his forecast about twenty years ago of the probable course of geological discovery with regard to this great group has always been regarded as one of the most sagacious divinations of modern times.

Next to the president of the Royal society, the president of the British association for the advancement of science occupies the representative position above referred to. In this case, however, the *personnel* is changed every year. The appointment of Sir William Dawson, principal of McGill college, Montreal, to this distinguished position for the year 1886–87 (September to September) is a graceful recognition of the part which he took in promoting the most successful visit of the association to that city last year. He will succeed Sir Lyon Playfair, whose life-long labors on behalf of the higher scientific education found a natural expression in his recent presidential address at the Aberdeen meeting. One of the most remarkable features of this was the evidence it gave of the extent and variety of its author's reading, no less than sixty references being made in it to various books. Advocating as he did a greatly-increased expenditure on education in pure science, his address has been sharply criticised by those organs of the so-called 'practical men,' to whom everything that savors of the 'endowment of research' is as a red rag to a bull.

Next month will be a time of great political excitement in the United Kingdom, in consequence of the first elections of members of parliament by the new constituencies, created by the recent Reform act, the total number of votes having been increased by two millions. Signs are not wanting that science will be much more largely represented in the new parliament than it ever has been before. Sir J. Lubbock and Sir Lyon Playfair have hitherto been the two chief men to whom the house has looked for counsel and advice in scientific matters. It is expected that the distinguished chemist, Sir Henry Roscoe, will be returned for one division of Manchester, and that Professor A. W. Rucker, late professor of physics in the Yorkshire college, will be returned for one division of Leeds. Several other men of more or less scientific reputation are mentioned as possible candidates in connection with various constituencies.

The condition in which the river Lea has been during the last few months is one which illustrates the need of more scientific knowledge on the part of the legislature. This is a comparatively small river in the north-east of London, from the upper part of which one of the eight water companies which supply the metropolis with water is permitted by acts of parliament to pump daily large volumes of water. By other acts of parliament the suburbs of London (Tottenham, etc.), which in course of time grew up upon its banks, were permitted to pour their sewage into it at a point considerably below the intake of the water company. Of late years the enormous growth of London has practically rendered these suburbs a part of the metropolis itself. The neighborhood is a comparatively poor one, and the river and its banks used to be one of the most important recreation grounds in that district, boating, angling, etc., being freely indulged in. In consequence, however, of the diminution of the flow of water below the company's intake and the increase in the sewage, both of which are authorized by act of parliament, the condition of this part of the river during the past summer can only be likened, with justice,

to that of an open sewer. Several large indignation meetings have been held, as well as demonstrations of unemployed boatmen, etc.; and deputations have waited upon the Home secretary, but all to no purpose; this high official practically declared himself powerless to act, in consequence of the sanction of the law having been extended to both proceedings. On one Sunday during the warm weather, when the condition of the river became practically unbearable, the water company, yielding to strong representations made to them by medical men and others, raised its sluices and allowed the whole volume of the river to flow along its natural course. This produced a partial and temporary mitigation of the evils complained of at a considerable loss to the shareholders. Fortunately the summer heat has passed without serious outbreaks of illness in the neighborhood, but meantime the deadlock continues, and apparently will continue, until the new parliament reverses one or other of the decisions of its predecessors.

The condition of the Thames itself is an illustration on a large scale of the results of the same legislative action, and has been the subject of investigation recently by a royal commission. The Metropolitan board of works is the body charged with dealing with the sewage of London as a whole. At present the sewage of London is discharged into the Thames mainly at two points some miles below London bridge, one on the north and one on the south bank of the river. The latter station, called Crossness, which receives all the sewage from the Surrey side of London, was visited by the present writer, in company with several other members of the Society of chemical industry, last July; the object of the visit was to see the measures which had been taken by the board for the purpose of diminishing the nuisance caused by the sewage discharge at this point. For a considerable period on either side of low-water the sewage can be pumped direct into the river, but at other times it has to be pumped into huge covered reservoirs, which are allowed to empty themselves at low tide. The ameliorating measures consisted in running into the sewage during its discharge a solution of sodium manganate, mixed with a quantity of sulphuric acid supposed to be sufficient to decompose the sodium salt, liberating a solution of manganic acid. The sodium manganate was manufactured on the premises by fusing caustic soda (of which there was a large stock on the ground) with black oxide of manganese. The inefficiency of the process adopted, to do any real good, as well as its great cost, was somewhat freely commented on by the visitors, as well as the crude manner in which all operations were carried out. Several schemes are before the public for dealing with the sewage of the north bank of the river, some of which involve the use of Canvey Island, a large low-lying tract of land in the estuary of the Thames, where probably sewage irrigation could be carried out on a very large scale. We may perhaps recur to these in future letters.

The Society of chemical industry, before referred to, has just sustained a severe loss in the sudden death of one of its most active founders and past presidents, Mr. Walter Weldon, F.R.S. Wherever the manufacture of soda from common salt is known, Mr. Weldon's name was a household word. Not himself a manufacturer, his prolific brain devised a large number of most valuable improvements in various details of almost every branch of the alkali manufacture, including bleaching-powder, etc. He knew almost every alkali works in Europe, and his labors abroad received the recognition of the grand cross of the Legion of honor. His addresses to the society were most valuable *résumés* of the position and prospects of the alkali trade at the time at which they were delivered, and such as probably no other man could have written.

## *LETTERS TO THE EDITOR.*

**** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

### Flood Rock explosion observed at Princeton, N. J.

WE had arranged to observe the arrival and character of the wave by reflection of images in mercury, and precaution was taken to stop all movement of pedestrians and vehicles within 500 or 600 feet of the observatory. At eleven o'clock (standard time), Professors Rockwood, McNeill and myself, were at our posts. Between 11.05.25 and 11.07.40 we, all three, observed, accordantly, a series of four slight tremors which blurred the reflected images in a pronounced manner. We now suppose they were due to trains on the railroad three miles away, or to carriages on the main street, distant more than 1,000 feet; but at the time we had no doubt that they were due to the explosion; and so, at 11.10, I stopped the chronograph, and took off the sheets.

Having a spare half hour in the morning, I had rigged up a very rude, but fairly delicate, vertical seismoscope, which was connected with a cylinder of the chronograph so as to make an automatic record of anything vigorous enough to affect it; but it was not sensitive enough to feel the tremors above mentioned. While I stood at the table reading off my sheet, suddenly, without any apparent cause, the seismoscope magnet began to rattle. I immediately took the time from the clock, and, all corrections applied, it gives $11^h\ 14^m\ 41^s \pm 1^s$, eastern standard time, as the beginning of the signal. Mr. McNeill instantly went to his instrument, and found the mercury strongly disturbed: the reflected image was invisible at first, but the disturbance ceased in about