

tunity of adding to their returns, and will not once more allow the foreigner to develop a system originally devised in this country.

In the discussion on the paper, several steel makers, who had seen Mr. Darby's plant in operation, spoke as to the excellent way in which the furnace worked when using gas which had been treated for the extraction of the ammonia.

Prof. Roberts-Austen next gave a brief address on the diffusion of carbon in iron, he not having prepared a paper in the usual way. The subject has recently been described by the same author in the Bakerian Lecture of the Royal Society and will shortly be treated in these columns; it is therefore unnecessary for us to go into the matter on the present occasion.

The remainder of the sitting was almost wholly occupied by the reading and discussion of M. Osmond's and Mr. Howe's papers, the paper of M. de Benneville being taken as read. It would be impossible at the end of a report of this nature to deal with the highly controversial matters which form the subject of these two papers; and indeed, without the introduction of the micro-sections supplied by Mr. Howe, the matter would not be intelligible. The allotropic theory of the hardening of steel, which has already caused so much discussion, did not appear to be carried very much further on Thursday last, or, at any rate, the majority of those present at the meeting did not seem to see their way much further towards the end of the problem. M. Osmond welcomes Mr. Howe as a friend and ally. He looks on the latter's carbo-allotropic theory as not antagonistic to his own. The discussion was confined principally to Prof. Arnold and Mr. Hadfield, who are the chief opponents of the school represented principally by M. Osmond and Prof. Roberts-Austen, now, we suppose, with Mr. Howe as an ally.

The summer meeting of the Institute is this year of an unusually ambitious nature, and will be held in September in Bilbao, a steamer having been chartered for the conveyance of members to that port. The vessel is the Orient liner *Ormus*, which will also serve as a floating hotel for members during the meeting.

#### A REMARKABLE DUST-STORM.

THE American journal *Electricity* for February 19 contains an account of an unusual kind of storm which occurred in January of this year. The details were communicated by L. H. Korty, telegraph superintendent of the Union Pacific System, of Omaha, Neb. It was on the telegraph lines of this system between Weber and Peterson, Utah, that considerable difficulty was experienced in working, owing, as it is stated, to the peculiar character of the storm in question. The description is as follows:—

"On the afternoon of January 16, a very peculiar rain-storm occurred in Eastern Utah and Western Wyoming, along the Union Pacific Railway, extending from Ogden, Utah, to Evanston, Wyoming, a distance of 75 miles. The rain consisted of salt water or brine. The clothing of persons exposed to the shower had, when dry, the appearance of having been sprinkled with whitewash. The windows in the stores and residences at Evanston were so encrusted with salt deposit as to make it impossible to look out. Dr. C. T. Gamble, of Almy, Wyo., a gentleman of undoubted trustworthiness, states that the storm deposited in Almy alone 27 tons of salt. 'This assertion may appear fabulous,' says the doctor, 'but nevertheless is true, as it has been proved by carefully estimating the quantity on a given surface in different parts of the camp. The area of Almy is something over nine miles, and three tons to the mile would make 27 tons of the sodium deposited. The salt if collected and sacked would make ten ordinary wagon-loads. Those who doubt the above statements, go to figuring.'

"The salt-storm lasted about two hours. After it had ceased raining, the sun came out, and as fast as things dried they turned a whitish colour, and it was found that everything was covered with a thick coating of salt. Cars, buildings, trees, telegraph poles, insulators and wires all looked ghastly in their white coats. Through Weber Cañon the salt storm turned into snow later. A peculiar effect of the salt deposit on the telegraph poles, arms and insulators through Weber Cañon was noticed in operating the wires. During the day, when the sun came out, the wires worked clear and without interruption, while at night, when it turned cold, the wires were rendered unserviceable, which was attributed to the fact that the snow, having melted,

some during the daytime and again freezing at night, created a moisture in conjunction with the salt deposit underneath, so as to entirely destroy the insulation of the wires. After several unsuccessful attempts to remove the cause of the trouble, an engine with a pump and long hose was sent over the line, and the deposit thoroughly washed off the poles and fixtures for a distance of 40 miles. The wires of the Rio Grande Western Railroad between Ogden and Salt Lake City were slightly affected in the same way, as were also those of the Southern Pacific for a short distance west of Ogden."

It has been suggested, as an explanation of the facts, that the salt was raised in vapour over Great Salt Lake, and was carried by the wind and deposited over the country for many miles to the eastward. This, of course, could not have happened, as salt could not be raised in vapour. It seems likely, however, that the white residue may have had the appearance of salt, but was not actually salt. Would not a more reasonable explanation be that fine white dust in the region about the lake may have been carried into the upper regions by the wind, and after traversing some miles brought to earth again owing to the condensation of the vapour surrounding them?

#### SCIENCE IN THE MAGAZINES.

THIS month's magazines contain numerous articles on scientific topics or with scientific bearings. Röntgen photography naturally forms the theme of several contributions. The *Quarterly Review* contains a short descriptive account of methods employed, results obtained, and theories propounded, and even blossoms into illustrations reproduced from radiographs taken by Mr. A. A. C. Swinton. The *Century Magazine* has "a Symposium on the Röntgen Rays," the writers being T. C. Martin, R. W. Wood, Elihu Thomson, Sylvanus P. Thompson, J. C. McLennan, W. J. Morton, and Thomas A. Edison. The result of this composite article is vain repetition of experimental conditions, and a confusion of tongues; Prof. Thompson referring to pictures obtained by Röntgen rays as "sciographs," while other writers describe them as "shadowgraphs," and all the illustrations are designated "cathodographs."

Dr. St. George Mivart writes on "Life from the Lost Atlantis" in the *Fortnightly*, his paper being concerned chiefly in pointing out the significance of the discovery of *Cynolestes obscurus*, a still-existing survivor of Ameghino's Epanorthidæ, and the representative of a new family of recent marsupials, described by Mr. Oldfield Thomas before the Zoological Society on December 17, 1895.

"This little, apparently insignificant, mouse-like creature," to quote the author, "turns out to be an animal of extreme interest, for it affords strong evidence that what we now know as South America and Australia must have been connected, and the Atlantic at least bridged by dry land, if even an Antarctic continent may not have existed, of which South America and Australia are divergent and diverse outgrowths."

Mr. G. E. Boxall puts forward, in the *Contemporary*, the view that the vast sedimentary plains of Australia, which thirty years ago were so "rotten" that no stock could be kept upon them, have been trampled into compactness by large herds of cattle and sheep. He gives reasons for believing the dry plains of Western Australia to be similar to those described by Oxley and others as once existing in the delta of the Murray, where about one hundred millions of sheep are now pastured, besides large herds of cattle and horses; and therefore he thinks that the present sandy plains will sooner or later be consolidated and rendered secure for stock. He concludes:

"The plains of Australia are, from the accounts given of them by explorers in all parts of the continent, singularly alike, and if the plains of Northern and Western Australia can be consolidated by the trampling of stock, as I believe those of the eastern districts have been, the time is not far distant when the word 'desert' may be wiped off the map of Australia, and the true character of its vast plains become more generally understood and appreciated."

Psychologists will be interested in a paper by Mr. Havelock Ellis, in the same review, on "The Colour-Sense in Literature." Mr. Ellis has examined the works of a series of imaginative writers, usually poets, dating from the dawn of literature to the present time, and has noted the main colour-words that occur, and has also noted how these words are used. His paper