

volcanic showers of mud at times took very eccentric courses, overleaping one section of land and then striking another further on, in the same line. Dr. Hector, who is making a scientific examination of the volcanic districts, said he expected that the volcanic cone which was thrown up in Lake Rotomahana during the disturbances had already on July 1 attained a height of six hundred feet, and was daily adding to its stature. He has named it Mount Hazard, after the gentleman of that name who lost his life on the first night of the great eruption. A chemical examination of the volcanic ashes shows that they are mostly composed of fine basaltic soil. Every human being has abandoned the entire portion of country situated within the limits of the volcanic system. Photographers were busily engaged taking views of the region."

#### GAS SUPPLY.

NUMBERS two and three of the publications of the American economic association are covered by a monograph, entitled "The relation of the modern municipality to the gas supply," prepared by Edmund J. James, Ph.D. The pamphlet contains a thoroughgoing investigation of the various systems of gas supply, and for that reason should commend itself to all interested in municipal administration and economic phenomena. The author, as is well known to readers of *Science*, is disposed to widen the sphere of state activity, basing his reasoning on philosophic conceptions. The present discussion, however, is not limited to a scholastic treatment, but assumes an intensely practical form. It is viewed from two standpoints: that of the individual, who is interested in obtaining a good quality of gas at a low price; and that of the municipality, which is interested in acquiring a revenue by legitimate economic methods. On both these points, Dr. James supplies abundant data. He shows how many European, and especially English, cities have been able to save large sums for the taxpayers by managing gas trusts on a business basis; while on the other hand, "the general opinion in England seems to be that the gas furnished by the public companies is better than that made by private companies." The experience of city upon city is adduced to support the belief that a transfer of ownership from private parties to municipal authorities would be of immense benefit. In the United States, there are at least three city corporations, Philadelphia, Richmond, and Wheeling, which undertake the manufacture and sale of gas. In each of these the results, upon the whole, have been favorable. The monograph is enriched by statistical information which makes it exceedingly

serviceable; and the thoroughness of the work augurs well for the series of publications which the Economic association has undertaken.

#### LONDON LETTER.

SEVERAL weeks ago, attention was drawn in this correspondence to a remarkable outbreak of scarlatina in a London district, in which the hypothesis that the disease had spread from the milk drawn from one particular farm, seemed to be suggested and supported by the facts of the case. The proof, then wanting, that the disease of the animals could really produce scarlatina in man, has now been supplied by the investigations of Dr. Klein (conducted mainly at the 'Brown institution'), whose report has just been issued by the local government board. Four calves were inoculated with the matter from sores on the udders of the diseased cows, and similar sores were produced in them. Dr. Klein states that this disease, thus artificially produced in the calf, 'bears a close resemblance to human scarlatina,' and he specially quotes the appearances found in the kidney of the animal as indicative of the scarlatina attack. It is remarkable, however, that the milk of the affected cows is harmless, and does not contain, *per se*, the germs of the disease, but that it is contaminated after it has passed from the udder of the cow. Dr. Klein says that the fingers of the milker must of necessity bring down into the milk diseased particles from the ulcerations on the teats of the animal, and he points out that in the milk 'the disease germs find a good medium in which to multiply.'

As the last important act of his present official existence, Mr. Mundella, the president of the board of trade, has just announced that a 'Fishery department' is to be forthwith created, with an assistant secretary of state at its head. Mr. Berrington, who is to be the chief inspector, will be recognized as the right man in the right place, since he has already won his spurs as the successor in that post of Professor Huxley. The new department promises to be strong in practical knowledge.

The latest large engineering scheme which has been broached is that for a tunnel between Scotland and Ireland, at two points (Port Patrick and Donaghadee) where the distance from land to land does not exceed twenty miles. A shaft is to be sunk at once to test the strata. The cost of the tunnel has been estimated by competent authorities at \$25,000,000, and that of the land approaches on either side, \$5,000,000 more. The distance from Moville, in Lough Foyle (where the Allan line steamers now call), to London will be