

Tidal Phenomenon in Lake Constance

FOR the second time within 185 years the great sheet of water called the Lake of Constance, the Boden See, or the Suabian Sea, whose superficial area exceeds two hundred square miles, has been frozen over.

In connection with it a very interesting phenomenon has been noticed. At a time when the air was perfectly still and during intense frost the ice broke away in the middle of the lake and came crashing upon that nearer the shore, under which it forced itself or piled itself up in great heaps. An experienced skipper on the lake says there is no doubt that as nearly as possible every twelve hours the great fields of ice move backwards and forwards upon the lake. He adds that both in summer and winter he and his comrades have noticed during an absolute calm a powerful movement in the water, backwards and forwards, sometimes so strong as to require double force to propel the ship. Can any of your readers tell me if this is a true tidal movement?

Another fact which came under my notice to-day may interest your readers. In many places on the frozen surface of the lake and especially near the shore, there are great white spots varying from a foot to two or three yards in diameter. At these spots marsh gas has accumulated under the ice, and upon piercing them and applying a light, a flame will mount up I am told sometimes as high as six feet, though in those in which I experimented to-day it did not rise more than two feet.

SAMUEL JAMES CAPPER

Hotel Helvetia, Kreuzlingen, Switzerland, February 17

Meteors in New Caledonia

DURING the last few nights we have seen numerous flights of small meteors; indeed, so frequent have they been, that they have attracted the notice of the most casual observers. I first observed them on the night of the 9th inst. No fixed direction seems to be followed; in fact, I saw one display such as I have never seen before, which will illustrate my meaning. Two fair-sized meteors proceeded severally from the neighbourhood of Castor and Pollux, and crossed mid-way between those two stars. To me it was a very interesting sight.

A neighbour (a lady) informed me she saw a very fine meteor on the 10th, which left a long trail of light, and burst into shining fragments very like, as she expressed it, "the head of a rocket." The direction pointed out was rather low down in the north-north-west. We have had an unusually long, cool season, which has been quite delightful. Now, for some days past, the heat has set in; the air is charged with electricity; heavy thunder-clouds cling round the mountains in the interior, and frequent lightning-flashes are seen, but no thunder heard. On Saturday, the 13th, heavy rain came up against the wind and drowned out a pretty children's *fête*, the distribution of prizes at the Government Schools; serious colds are prevalent in consequence, your humble servant and his family being in the full tide of fashion, a distinction we could very happily have done without.

E. L. LAYARD

British Consulate, Noumea, December 13, 1879

Intellect in Brutes

MR. THOMSON'S communication in NATURE, vol. xxi. p. 324, has reminded me of an incident which may be of interest to your readers. I have a well-bred and gentle tortoiseshell cat, a feline lady. It is her habit not to steal food from dishes which the family is using; in cold weather, if a dish is placed in the fender to keep warm, its contents are safe from pussy. She has a kitten by no means so refined as herself, one, in fact, that takes after the other parent, a half-wild cat of the gardens. One morning recently the old cat was lying at our breakfast time upon the hearthrug; the kitten was playing about. It was a very cold morning, and a plate of herrings was put into the fender to be kept warm until they were to be eaten. The kitten smelling the fish, stepped gaily forward, with tail erecting itself, towards the fender. An angry growl from the old cat attracted the notice of all in the room, and to my intense amusement and surprise, I saw her strike the kitten a violent blow in the chest, strong enough to overturn the little creature, which retired humiliated to another part of the room.

ALEX. MACKENNAI

Bowden, February 14

A FRIEND in a village in the south of Scotland has a she cat, a great pet in the household. One night, when the lamp was being

trimmed, some paraffin was spilled on puss's back, and a short time after, going near the fire, a falling cinder set her in a blaze. In an instant she made for the door (which happened to be open) and sped up the street about 100 yards, and with a tremendous leap plunged headlong into the village watering trough, then stepped out, gave herself a shake, and trotted quietly home. The trough had eight or nine inches of water, and puss was in the habit of seeing the fire put out with water every night.

W. BROWN

Greenock

THE ARTISAN REPORTS ON THE PARIS EXHIBITION OF 1878¹

THE Society of Arts deserves the thanks of all who are interested in the progress and elevation of our national industries for the manner in which it has attempted to bring home to British manufacturers and artisans the lessons of the Paris Exhibition of 1878. As in 1867, so in 1878, it took a prominent part in the movement for sending over to Paris a number of selected artisans, whose reports on the exhibits of the various departments of industry they represented the Society has now published. Thanks to the interest shown in this step by H.R.H. the Prince of Wales, and by Sir Philip Owen, the artisans sent over by this agency, some two hundred in number, were enabled to visit also a number of the workshops and factories of the French capital, to judge for themselves of the conditions under which the various industries are carried on. The thirty-nine selected Reports printed in the volume before us, form therefore, an extremely interesting and valuable contribution to our knowledge of the relative conditions of the skilled industries in the two countries. The frequent comparisons drawn from the workman's point of view not only upon the quality of workmanship but also upon the conditions and price of labour, the machinery, the tools, and the character of the workmen, are striking and instructive in the extreme.

The Reports range over a wide area of subjects. Porcelain, Earthenware and Glass, head the list with seven separate Reports. Next come Ornamental Iron-work, Wood-carving and Stone-carving. After these are Reports on Machine-Tools, Mechanical Engineering, Agricultural and Horticultural Implements, Bricklaying, Stone-work, Plaster-work, Joinery, Cabinet Making, Clock and Watchmaking, and Jewellery. Optical Instruments have a Report to themselves, followed by others on Machinery for Printing, Spinning and Weaving, on Saddlery and Harness, Shoemaking, and Caoutchouc, whilst the volume closes with a Report on Mining Appliances, and one on Iron and Steel Manufacture.

The topics incidentally touched upon by the artisan reporters are not less wide in their range; they extend from an account of the style of dancing in vogue at the Sunday evening balls in the cafés of Belleville, to a description of a harmony in gold and yellow by Mr. Whistler, which we are told "looks as though the ground had been prepared with a sticky substance, and a shower of gold leaf had been thrown from above." It would be impossible in the space of any mere Review to comment upon all the points of scientific interest raised in these multifarious Reports. To obtain from a perusal of them anything like a connected or accurate view of the relation of science to skilled labour in the systems in vogue in French workshops is almost equally hopeless, since the very different styles of writing and modes of observation of the various writers preclude strict comparisons between one department of industry and another. Nevertheless there are a number of salient features which seem to call for notice.

The Report on Optical Instruments by Mr. M. Lambert,

¹ Published for the Society of Arts, by Sampson Low and Co., London 1879.