In connection with Coulomb's law, the statement that $F = Q/r^2$ (Art. 581) is "strictly true only when the two bodies are in a vacuum," requires a little more elucidation than the author gives. Similarly the explanation of polarisation, the definition of specific resistance (in terms of the metre and square millimetre), the statement of Ohm's law, and the laws of thermo-electric phenomena require more detailed and accurate treatment.

The paragraphs on recent work, such as Hertz's experiments, theories of magnetism and electrolysis, and modern theories of the ether, are far too meagre to be of any service; they give no information even to the student who is able to read between the lines.

Apart from these points, the book appears to present a fairly reliable exposition of the elements of the subject, which may justify its issue as a separate volume.

Meteorology. By H. N. Dickson, F.R.S.E. (London: Methuen and Co., 1893.)

IN this little book the author has attempted to lay down "a certain amount of 'permanent way' specially adapted to practical purposes, but at the same time leading to the more theoretical grounds of modern research." The fundamental facts and principles stated in the earlier chapters furnish the inquirer with much of the necessary stock-in-trade of information culled from other branches of science; as, for example, the behaviour of gases under varying conditions of temperature and pressure. Cyclones and anticyclones receive somewhat detailed consideration, but the account is very intelligible, and the mathematical expressions are of the simplest character. The present position of meteorology in regard to weather-forecasting is very clearly and impartially stated. In the chapter on instruments the author leaves a little to be desired in the shape of illustrations and descriptions, especially as he aims at producing a practical treatise. An excellent account of cloud classification is given. The relation of meteorology to agriculture is a subject of great practical importance, and this is carefully discussed in the final chapter.

The author has availed himself of all the most recent sources of information, both British and foreign, and the references to original papers form a valuable feature of the book. To all who desire to carry their meteorological observations beyond the mere hobby stage, we heartily commend this little book.

LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

Great Auk's Egg.

IMAGINATION has long had a large share in the accounts given of the Gare-fowl or Great Auk, notwithstanding the efforts of those who have tried to set forth nothing but the truth on the subject, yet I do not call to mind meeting with so "many inventions" regarding it as have appeared in the newspapers within the last week, on the occasion of the recent sale of a specimen of the egg of that bird. I should occupy too much space were I to dwell upon them; but I would ask for the admission of a few lines in which to state what is known exactly of the origin of that specimen, which I well remember in the collection of the late Mr. Yarrell. He told me, as he told others of his friends, that he bought it in Paris; and, to the best of my belief, not many years after the peace of 1815. In a little curiosity-shop of mean appearance, he saw a number of eggs hanging on a string; he recognised one of them as an egg of *Alca impennis*, and asking their price was told that they were one franc apiece, except the large one, which from its size was worth two francs. He paid the money and walked away with the egg in his hat. That is the whole story on which so im-

posing an edifice has been built, and the only "variant" of it deserving of consideration is to the effect that the price of the big egg was five instead of two francs. I may add that this simple story was published by the late owner of the egg, the Baron Louis d'Hamonville, in the *Bulletin* of the French Zoological Society for 1891 (tome xvi. p. 34).

ALFRED NEWTON.

Magdalene College, Cambridge, February 24.

Frost-Cracks and "Fossils."

SEVERAL letters appeared in NATURE last winter describing some of the more interesting plant-like forms due to frost acting on various surfaces, and both Prof. Meldola and myself drew attention to the possible deceptions which might arise from a preservation of such patterns as fossils. I yesterday met with a striking case illustrating this. It was at Cullercoats, on the Northumberland coast. There had been a slight frost the night before, and the surface of a talus of semi-liquid mud at the foot of a low cliff of boulder clay (actually on the line of the great Fault known as the "Ninety-Fathom Dyke") was found to be indented with cracks about $\frac{1}{4}$ to $\frac{1}{2}$ an inch deep and $\frac{1}{4}$ of an inch in breadth. These cracks were disposed in beautifully branched patterns bearing a surprising resemblance, in outline, to some of the more subdivided sea-weed fronds. A sandy beach lay close by, and a high wind was blowing the sand on to the mud. It was obvious that the sand would soon fill in the frost-cracks under these conditions. The cracks would thus be preserved, and if at any future time the mud surface be again exposed it will be found covered with sand (or, after induration of the mud and pressure of overlying material, sandstone) casts of what it would be very difficult to believe were not vegetable organisms in an unusually perfect state of preservation.

Newcastle-on-Tyne, February 25.

G. A. LEBOUR.

The Origin of Lake Basins.

I WISH to draw the attention of your correspondents, Messrs. Aitken and Tarr, to p. 94 of the *Geological Magazine*, vol. iv. 1876, in regard to the manner in which, in all probability, the greater number of the lakes in British North America were formed. There are, however, doubtless many other causes by which lake basins have been formed. The object of my notice was simply to point out that the ice need not be supposed to have exerted any extraordinary or abnormal influence in scooping out rock basins which have subsequently become lakes.

Ottawa, February 16.

ALFRED R. C. SELWYN.

Note on the Habits of a Jamaican Spider.

OBSERVING in your issue of January 11, p. 253, an interesting note on the *Nephila madagascariensis*, I am prompted to send you some unpublished observations on the Jamaican species, *N. clavipes*. They are from the MSS. of the late Mr. William Jones (concerning whom see *Journ. Inst. Jamaica*, 1893, p. 301), and date from over fifty years ago. The record begins: "*Aranea clavipes*, or the great yellowish wood-spider. I fancy Sir Hans Sloane must have been misinformed when he states that this spider's web will not only stop small birds but even pigeons. I will venture to assert that its strength would not even endure the struggling of the smallest humming-bird." But below is another entry: "Dec. 25, 1839. I wronged the accuracy of Sir H. Sloane's statement; a little boy returning from an errand brought me a little black and yellow bird that he found entangled in a web of *A. clavipes*." After this he adds a more general statement concerning the spider: "St. Thos. ye East, on bushes and outhouses,—I found in the old cooper's shop at Slamans Valley Est. in Portland, many hundreds of these, some of a monstrous size. These spiders weave an almost large (*sic*) spiral web, yellow and strong, like silk, glutinous or viscid, and well adapted for arresting the flight of large insects. I have frequently seen some of their lines two or three yards long. Butterflies appear their favourite food. They form an oblong oval cocoon of a white substance like soft chamois leather, outside composed of little round-shaped compartments; the cocoon is covered over with a mesh of strong yellow thread or silk." Finally he gives a technical description of the spider, which need not be quoted. The spider's size is said to be 1 to 1½ inches in length, with the fore-legs 2½ inches long, the second pair 2 inches, the third pair 1 inch, and the fourth pair 2 inches.

Thus it appears that *N. clavipes* is not altogether unworthy of comparison with the great Madagascar species in regard to its web. It is one of the very commonest spiders of Jamaica, as I have myself observed, and has a wide distribution in the neotropical region.

T. D. A. COCKERELL.

Las Cruces, New Mexico, U.S.A., February 8.

The Cloudy Condensation of Steam.

WITH reference to Prof. Barus's letter (p. 363), I have never suggested that condensation nuclei in smoke, &c. would "remain distinct indefinitely," but that, if there were no chemical action, they would hardly disappear in the course of a few seconds.

There is no mention in my lecture of "dissociated particles," or of the dissociation of platinum at red heat. What I said was that electrical discharges and incandescent substances probably caused dissociation of oxygen and nitrogen in the surrounding air (*ante*, p. 214).

SHELFORD BIDWELL.

February 22.

Astronomy in Poetry.

WITH reference to the note in the Astronomical Column of *NATURE*, No. 1226 (p. 372), it is worth remark that the nebular theory of the universe is briefly and accurately set forth by Tennyson thus—

"This world was once a fluid haze of light,
Till toward the centre set the starry tides
And eddied into suns, that whirling cast
The Planets."

[*The Princess.*]

A little knowledge of astronomy would have led Coleridge's Ancient Mariner to know that he could never have seen

"The horned moon, with one bright star within the nether tip."

Tennyson is always accurate in his descriptions of natural phenomena.

EDWARD GEOGHEGAN.

Bardsea, February 19.

A Plausible Paradox in Chances.

WITH reference to the paradox in chances mentioned by Mr. Francis Galton in *NATURE* of February 15 last, I think the following remarks will show very simply where the fallacy lies.

If I assert that at least two out of three coins must turn up alike, I am saying what is evidently true; but if I go on to say that it is an even chance whether a third coin is head or tail, I am assuming that only two coins have been tossed, and that the fate of the third is still uncertain; but this is directly counter to my first assertion, which requires the tossing of three coins.

If this method of reasoning is to be used at all, I must say first that the chance of two coins turning up alike on being tossed is $\frac{3}{4}$, and then that the chance of a third coin being the same as the other two is also $\frac{1}{2}$, and that therefore the required chance of all three being alike is $\frac{3}{4} \times \frac{1}{2}$ or $\frac{3}{8}$.

LEWIS R. SHORTER.

THE PLANET VENUS.

FROM time immemorial the planet Venus has attracted the attention of mankind. Before the days when the "optic tube" began to be turned towards her disc, Venus, we might say, was still in myth, and she was hailed as Hesperus and Phosphorus, according as she was an evening or a morning star, the fact that the same object was in question being then unknown.

Shining as she does at times with a brilliancy surpassing any other body except the moon, it is only natural that she should have been so often sung about by poets in all lands, liking her unto

"the fair star

That gems the glittering coronet of morn."

And she is highly honoured by Homer, in that she is the only planet to which he refers:

"Ἑσπερος δὲ κάλλιστος ἐν οὐρανῷ ἵσταται ἀστὴρ."

Hesperus quæ pulcherrima in cœlo posita est stella.

NO. 1270, VOL. 49]

To Galileo belongs the honour of first having viewed the planet through a telescope, but it is curious to remark the lapse of time that he allowed to pass before he made his first observation. The discovery that Venus exhibited phases did not take place until the end of September 1610, though Galileo first observed the satellites of Jupiter on January 7 of that year.

That Galileo should veil this important discovery of the phases of Venus under a Latin anagram,¹ does seem at first rather strange, but when one considers the vast importance of the discovery in that it supplied a simple proof of the planet's revolution round the sun, one can understand that he would first desire to be quite certain of his facts before giving the key to the anagram.

An historical fact of interest with reference to Father Castelli may be mentioned here. In Venturi's collection there is a letter from Father Castelli to the celebrated Florentine astronomer, dated November 5, 1610, in which he asks Galileo whether Venus and Mars show phases. Galileo evidently did not wish to give a direct answer, so evaded the question by saying that, although he was engaged in various investigations, he was better in bed than out in the open air in consequence of great infirmity. It was not until December 30, 1610, that he informed Castelli of his recognition of the cusps.

FIG. 1.—February 26, 1878 (Trouvelot).

With an ever-increasing number of telescopes at the disposal of astronomers, it is not astonishing that facts concerning surface markings, form, period of rotation, &c. should be rapidly forthcoming, and the sum total of what we now know about the planet has been gained at the expense of much labour and patience at the eye-piece end of the telescope.

During the past three months Venus has been a striking object in the south-western and western region of the sky, being in a position more than usually favourable for observation. Towards the end of November last her great southern declination began to decrease, while the planet became brighter and brighter, passing her greatest elongation east on December 6. On January 11 she attained her maximum brilliancy, the crescent form gradually increasing until on February 15, that is, at inferior conjunction, it was totally invisible. Gradually the crescent will become visible again, but in the inverse order, and we shall have another maximum on March 22, superior conjunction occurring on November 30. Thus we know that Venus is now lost in the sun's rays, and is, in consequence, invisible to us as an evening star for some time to come. The accompanying illustration (Fig. 1) gives a drawing of the planet as recorded by

¹ "Hæc immatura a me jam frustra leguntur," or with the letters properly arranged—"Cynthiæ figuræ æmulatu Mater Amorum."