

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.

Barbsea, 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.

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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,<sup>1</sup> 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.

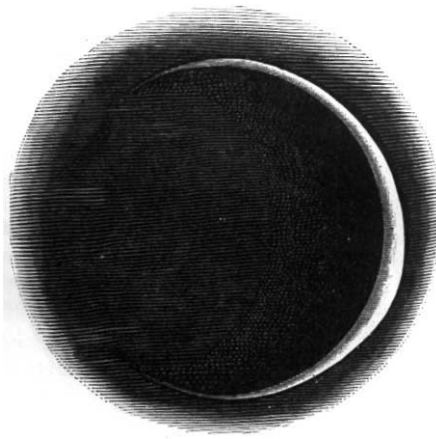


FIG. 1.—February 26, 1878 (Trouvelot).

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

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