

A lady who had lived in India mentioned, in this connection, that she had often noticed natives, after taking up a photograph to look at it, replace it upside down. One of those two boys, looking at pictures, preferred to hold them upside down.

A. B. M.

**Lecture Experiment on the Nodes of a Bell.**

REFERRING to Mr. Taylor's letter on the above subject (January 23), the method he describes requires, in the first place, a bell-jar of very wide edge—at least half an inch—and the result, when obtained, would only be visible to one or two persons at a time. May I suggest the following method, although, very probably, by no means new.

An ordinary bell-jar with a plain edge (not welted) is fixed firmly in an inverted position; from a metal ring, arranged above it, are suspended eight small beads by fine threads, in such a manner that they rest lightly against the outside of the edge of the jar. It is convenient (though not necessary) to so arrange the beads that they touch the circle of the jar at equidistant points. On then bowing, the beads are all jerked out from their positions, and can be heard rattling against the glass as they fall back; and it is easy to note that at the nodes the disturbance is comparatively slight, while it is more violent in the ventral segments.

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*THE PLANET VENUS.*

THE planet Venus, as every observer knows, is a difficult and, at the same time, a tantalising object for observation, for when she is in that part of her orbit nearer to us, and therefore greatest in size, she presents us with only a small illuminated crescent, from which it is impossible to gather much from her surface markings as a whole. Although at her greatest distance from us she presents her whole disc, yet the latter appears so small that even in this case satisfactory observation is not obtainable. We have to content ourselves, therefore, with observations made between these two stages, and when her apparent disc is thus semi-illuminated.

That such an important question as the time of rotation of the planet about her axis is not yet definitely settled, is quite sufficient to indicate that the observer has not everything his own way.

In a former number of NATURE (vol. xlvi. p. 469), a summary was given of the valuable observations made by the late M. Trouvelot at Cambridge, United States, and Meudon, extending over the years 1877-1891. The chief points to which reference there was made were the two kinds of spots, white and grey, one specially prominent in size having appeared on September 3, 1876; the snow caps at the poles, and the bright specks which appeared at their southern extremities; the varying shape of the terminator, which occurred sometimes in the space of a few hours; and, finally, the period of rotation. Trouvelot found that the whitish and greyish spots were very difficult to observe, even under favourable conditions. The former were situated near the terminator, and produced on it slight deformations, which seemed so to alter it as to suggest that these spots are at a higher level than the other parts. The greyish spots, on the other hand, when situated in about the same positions, also deformed the terminator to a small extent, but in an opposite way to those just mentioned, suggesting that these spots lie at a lower level than the parts near them. Another peculiarity of these two kinds of spots which he remarked was their size. The white ones seemed to assume a round or slightly oval form, and were nearly always small, while the grey spots were generally of an elongated shape and of large dimensions, forming sometimes straight bands. That the spots were not necessarily of long duration was also remarked, and they were analogous in their formation to "taches des couches nuages continues de notre atmosphère précédant les pluies, et qu'un simple jeu de lumière fait naître ou disparaître." Their

contours were described as very vague, those of the white spots being less brilliant, and those of the grey spots less dark.

In the observations that were made at the Catania Observatory and at Mount Etna (*Astr. Nach.*, Bd. 139, No. 3329), and to which a brief reference is here made, the observer, Sig. A. Mascari, describes in detail the appearances of the spots during the years 1892-1895. He also differentiates between the two kinds of spots. "Le macchie oscure si presentano ordinariamente sotto forma di leggiere velature grigie a contorni mai netti, molto deboli, senza alcun limite deciso, ed è assai raro e fortunato quel momento in cui si può arrivare a distinguere con precisione qualche contorno netto." The second type, "Le macchie chiare si rilevano per un maggiore splendore rispetto a quello del resto del pianeta.



FIG. 1.—October 12, 1892.

From the series of twenty drawings which accompany the observations in the communication referred to above, the surface markings can be clearly followed.

Fig. 1, which is one of a series of four drawings made in the months of October and November 1892, gives the general appearance of the surface as it was then observed. The three dark patches, A, B, and C, were nearly always visible; a was not always so prominent as is shown in the drawing. The terminator was also at times irregular in shape, being specially so on November 14. The edge of the south polar cap, near the terminator on October 13, assumed a somewhat similar appearance to that which Trouvelot recorded on September 27, 1876. The observations of the latter indicated that the most striking

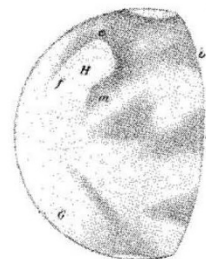


FIG. 2.—September 25, 1893.

ities of the terminator close to the edge of the pole-caps, where deep notches were often recorded. They were of different sizes and shapes, and underwent rapid changes in periods of sometimes a few hours. These facts led Trouvelot to believe in a short period for the rotation of the planet. In the observations for 1893, the terminator was directed towards the east.

Fig. 2 shows the planet for September 25, 1893, from 13h. 50m. to 14h. 52m. The bright spot, H, is bounded on the east and west sides by dark, well-defined contours, e, f, and m. The region about G was somewhat obscure; the area enclosed by i, m, n was bright and sometimes circular, being bounded, for the most part, by dark indistinct contour lines.