The sarcocarp is very pleasant to the taste, and is to be compared very closely with the exterior of many species of the genus *Pyrus*—as far as I could judge from the single specimen brought home in the green state.

Abundant fresh seeds deprived of the sarcocarp were procured, and a dissection of these shows how accurate are the drawings of Cruiger, which were produced in Dr. Morris's article. We hope to secure full sets of herbarium specimens later.

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The Rotation-Period of Venus.

DURING the years 1876 and 1878 I paid some attention to Venus at the Kempshot Observatory, and although no distinct markings on the disc were seen in the very small equatorial, yet the following observation may prove valuable:—"1876 October 2, 6 a.m. The planet dichotomised, but the terminator is not straight; the S. horn projects, and the N. horn is rounded off."

By comparing the sketch then made with the drawing, Fig. 1, in the article in *NATURE* of February 20 (p. 367), there can be no doubt that the broader features in the curvature of the terminator are the same in both. Fig. 1 was taken from a drawing by Signor Mascari, October 12, 1892, or about sixteen years after mine.

Now every eight years the earth and Venus come to nearly their same position again in their respective orbits, for $365.24d. \times 8 = 2921.9d.$, and $224.7d. \times 13 = 2921.1d.$; and consequently if the rotation-period of Venus be $224.7d.$, any well-marked permanent feature will become visible every eight years.

The question is whether this curvature of the terminator will prove to be a permanent feature or not under the circumstances detailed above; and for the answer we shall have to wait until the western elongation of Venus in September or October 1900, when observations made at or a little after the time of dichotomisation will show whether the agreement of the drawings in October 1876 and 1892 was a mere coincidence or not.

Jamaica, March 14.

MAXWELL HALL.

A Remarkable Meteor.

MR. BACKHOUSE's observation of the beginning of flight of the slow-moving meteor of March 1 appears to have been from a point 2° south-east of α Canis Minoris instead of between α and β of that constellation, as I at first assumed from the description. This misunderstanding shows the extreme importance of noting meteor tracks according to the best method, viz. that of giving the R.A. and Decl. of the beginning and end points. This is at once simple and effective; it avoids the frequent errors which occur when projecting meteor tracks from descriptions (sometimes ambiguous) of their courses by the stars, and saves endless trouble.

A reinvestigation of the path of the meteor shows it to have commenced its visible career when nearly over York at a height of 55 miles, and it was last seen by the observer at Sunderland when 53 miles high. Mr. Clark at York, however, watched it much further, and after it had passed over Heligoland when its height had again increased to 55 miles. The radiant was nearly on the western horizon, and the meteor, which in the early part of its flight was descending towards the earth, showed a slight ascent towards the end. The average velocity from the two estimates of duration seems to have been about 20 miles per second.

An observation from Kiel or Hamburg would be very useful for comparison, as the meteor at its terminal stages was comparatively near those places, and must have been far more brilliant than it appeared from York and Sunderland.

Bristol, April 3.

W. F. DENNING.

Simple Huyghens' Apparatus for the Optical Lantern.

IN his excellent handbook on experimental optics, "Light," Mr. Lewis Wright describes and figures the well-known double-image phenomena to be observed when an ink-dot is viewed through two superposed rhombs of calc-spar. He does not suggest, and I have not seen elsewhere the suggestion, that the experiment is readily adapted to lantern projection. This, however, is the case, and when so projected this experiment is more useful to the demonstrator than that of the double-image prisms,

commonly known as Huyghens' experiment, since the apparatus is more simple. There is no colour correction to explain—nothing to occupy the mind of the student but the action of the spar.

My method is to take two small rhombs of a thickness of $1\frac{1}{2}$ inches or more, and mount them near together in such a way that one or both can be rotated. I use by preference a small parallel beam from the parallelising lens, and between this lens and the rhombs, close to the latter, is placed a thin metal plate having an aperture of a size depending on the thickness of the rhombs. The thicker the rhombs the larger, of course, can be the aperture. The rays, after passing through the pieces of spar, are focused by the ordinary objective so as to give sharp images of the aperture in the plate. Rhombs can often be found whose cleavage faces are quite perfect enough to allow sharp images.

It is evident that a single rhomb in the position here indicated may be made to serve nearly or quite all of the purposes of the double-image prism—may sometimes, indeed, to the advantage of the demonstration, replace the analysing Nicol. This fact has its obvious usefulness in the present scarcity of Iceland spar.

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THE MANAGEMENT AND PROTECTION OF FORESTS.¹

II.

THE working plan of coppice woods is a simple matter.

The area is divided into as many compartments as there are years in the rotation. If the coppice is cut, when it has attained the age of fifteen years, fifteen compartments are formed, and every year the old wood on one compartment is cut, after which the coppice shoots grow up to form the new crop. The rotation is determined by the species composing the coppice, and the class of material required, and the yield depends upon the areas cut over, which are equal, where the quality of the locality is uniform, unequal in inverse proportion to the quality, where the quality varies.

In the case of high forests, matters are more complicate, and a brief indication of the main subjects that must be attended to, may serve to explain what is done. A thorough examination of all portions of the forest, its previous treatment, soil, climate, and other conditions, which influence the growth of trees, an accurate and detailed survey of the growing stock, and, lastly, the market for timber and other produce, and the labour available for forest work, are the points which must be examined in the first instance. The next subject is the study of the lines of communication, roads, and water-courses to be used for the transport of timber; and, lastly, the subdivision of the forest into blocks and compartments. A forest to be manageable must consist of compartments of moderate and fairly uniform size. On level ground regular rectangular figures are most convenient; in a hilly country, compartment boundaries must follow the configuration of the ground. Obviously it is in every respect convenient that, wherever practicable, compartment boundaries should coincide with export roads; the sooner, therefore, a system of roads is projected and traced on the ground the better, the traces serving as compartment lines, though the roads need not be built until cuttings are made in the compartments adjoining them.

Simultaneously with the division of the forest into blocks and compartments, the method of treatment must be considered, the choice of species, and the silvicultural system, particularly with regard to the regeneration of the forest, and the arrangement of cuttings. Large forest areas will generally have to be divided into several working sections, each with its own system of treatment—say one working section for coppice woods,

¹ "A Manual of Forestry," by William Schlich, C.I.E., Ph.D. Vol. iii. (pp. xix + 397). "Forest Management," by William Schlich. Vol. iv. (pp. xix + 593). "Forest Protection," by W. R. Fisher, B.A. (London: Bradbury, Agnew, and Co., 1895.) (Continued from p. 515.)