

VI. *Observations on the Figures of Snow.* By the Reverend Benj. Langwith, D. D. Rector of Petworth in Suffex. In a Letter to Dr. Jurin, R. S. Secr.

ON the 30th of *January* last, something past Nine in the Morning, Weather cold, Wind South-westerly, but not very high, Barometer above thirty Inches, I saw that pretty Phenomenon of the Star-like Snow, and tho', upon comparing my Observations afterwards with those of *Descartes*, *Dr. Grew*, and *Mr. Morton*, I find I have but little to add upon the Subject; yet, as I observ'd the Progress of Nature in this sort of Crytallization, with a great deal of Pleasure, I hope it will not be disagreeable to you to receive an Account of it.

I shall begin with the most simple Figures A and B, (*Pl. I. Fig. 3.*) of which the former is a roundish Pellet of Ice; the second, a small oblong Body, with parallel Sides, which is often as fine as a Hair. Of this latter kind the Flakes of Snow chiefly consist; and tho' they look white to the Eye, yet when view'd with a small Magnifier or a Microscope, they appear like so many transparent Needles of Ice thrown together, without any Manner of Order.

The next Figure is C, in which the Pellet has shot out six of those small Bodies of equal Length, and set at equal Angles: Of this kind I saw a considerable Number.

The

The next Step in the Crystallization is D, in which those Bodies are lengthen'd, and have shot out a great many more from their Sides, at equal Angles, but unequal Lengths, as growing continually shorter and shorter, till they terminate in a Point: I measur'd some of these, and found them to be about one quarter of an Inch in Breadth. I saw but very few of them in Perfection, for the collateral Shoots were so exquisitely fine, as to be liable to be broken in their Fall, or confounded together by the least Degree of Heat.

Of the next kind, E, I saw a very great number, which being examin'd by the Microscope, plainly appear'd to be nothing but the former in Disorder. The Edges of these were in general very irregular, but some of them happened to be so indented, as to look like the jagged Leaves of Plants.

The next Kind, F, had twelve points regularly disposed, and probably might consist of two of the former so join'd together, as to cut their Angles equally.

Perhaps also those Mr. *Morton* describes, as consisting of *Radii*, which, instead of terminating in a Point, grow bigger, as they advance from the Centre, might be formed from two of the Kind, C, so join'd at the Centre, as to cut each other's Angles unequally; for in the Progress of the Crystallization, these *Radii* would quickly unite.

Lastly, that Sort, which *Descartes* compares to Roses, and of which he has given a Figure in his Treatise of Meteors, may be nothing but the Kind E, when the Points are rounded off, by being gently thaw'd.

I propose these things only by way of Conjecture; because, as the small Drops of Water may be impregnated with very different Particles in the Air, it is not easy to determine, whether these Figures may not be the

Result

Result of a Crystallization quite different from the former.

I had almost forgot to tell you, that I saw but very few Figures of twelve Points, and those mostly imperfect in one respect or other.

Petworth, Feb. 13.

1727.

VII. *Observationes Auroræ Borealis per quadriennium factæ, Lennæ Regis in Norfolciâ. Ex epistolâ doctissimi Observatoris ad Martinum Folkes, Arm. Reg. Soc. Vice-Pres.*

NON ingratum fore arbitror, Vir Doctissime, observationes quasdam de Aurorâ Boreali, apud Lennam Regis in Norfolciâ, quatuor superioribus annis a me habitas tibi impertire. Mirum illud Phænomenon sexto Martii 1718. non licuit mihi inscienti videre, quod infortunium haud exiguum in me peperit studium subsequenter Phænomenis invigilandi. Priorem observationem, quam hic subjeci, summâ curâ delineavi, statim atque vidi, ideoque, ni fallor, a vero parum discrepat. Reliquas etiam descriptiones pro certo habeas accuratas esse. Quænam sit causa harum coruscationum, nondum, ut opinor, satis exploratum est.

Die Veneris Sept. 5. 1718. circa hor. x. Phænomenon hoc, delineatum *Pl. I. Fig. 4.* observatum fuit Lennæ Regis, in puncto boreali.

Fig. 2.

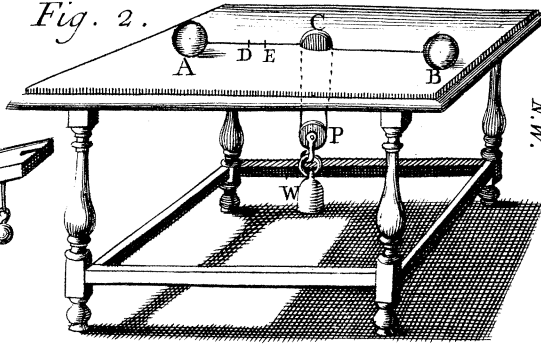


Fig. 1.

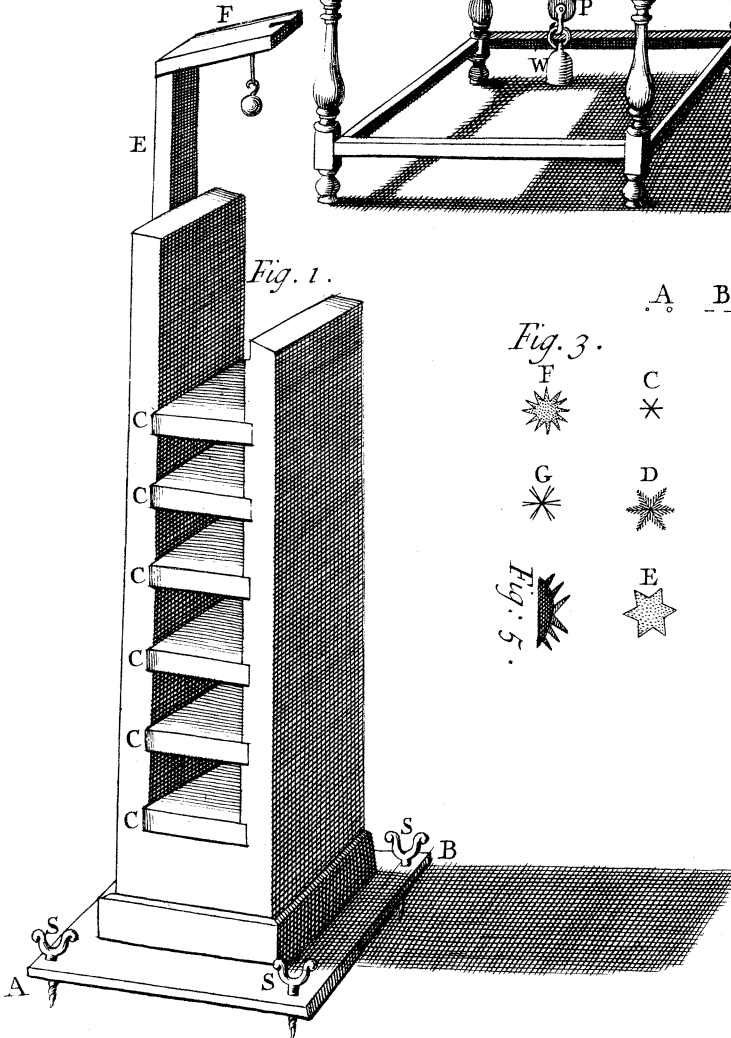


Fig. 3.



A B



Fig. 5.

Fig. 4.

