

VIII. *An Experiment made at Gresham-College, shewing that the seemingly Spontaneous Ascention of Water in Small Tubes open at both ends is the same in Vacuo as in the open Air. By Mr Fr. Hauksbee, F. R. S.*

I Took three pieces of small Tubes of Different bores, and fixt them in a piece of Cork directly Perpendicular, with their Lower Orifices as nicely even as I could. The same Cork I likewise fasten'd to a Wire, which pass'd through some Collars of Leather, included in a Box on the Upper Plate of the Receiver; by which means, I could at pleasure elevate or depreſs the Tubes without any danger of the Air's Insinuation. (See *Fig. 4.*) Thus prepar'd, and ting'd Water set on the Plate, the small Tubes (which never had been wetted) were drawn to the upper part of the Receiver by the premention'd Moveable Wire. When the Air being withdrawn, the Tubes were caus'd to descend (by the same Wire as drew them up) till their lower ends were plung'd juſt under the ſurface of the ting'd Liquid; where they no ſooner were, but the Water roſe in each of them a conſiderable height above its ſurface in the Glaſs, and higher in the ſmaller Tubes than the larger; and would retain ſuch a quantity as voluntarily aroſe in them, (if I may call it ſo,) notwithstanding their lower Orifices were drawn out of the Water. Upon letting in the Air again they continu'd juſt the ſame as *in Vacuo*. I found by plunging Tubes of ſeveral ſizes in the ting'd  
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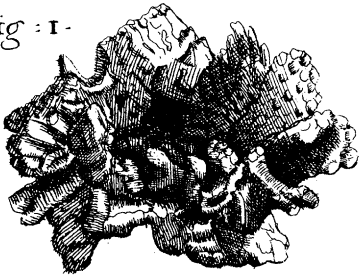
Liquid, that so much of the Liquid would remain suspended in them, when taken out of it, as it would in such Tubes when plung'd be Elevated above the surface of the Stagnant fluid: I have likewise since observ'd, upon bending some small Tubes by the flame of a Candle, in manner of Syphons, that it would require the Orifice of the longer Leg to be at least so far below the surface of the Stagnant Water, as that Water in the same Tube would spontaneously ascend in it, before it would run.

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Fig: 1-

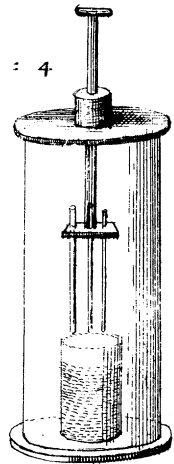


f = 3.



Aldebaran

f = 4.



f = 2.

