



A Description, and Explanation of the WEATHER-GLASS.

IT is a Glass-Cane, about forty Inch long, of a small wideness, hollow within, close at the top, and open at the lower end. It is filled compleatly with Quicksilver. The mouth of it is stopped, with the pulp of the Finger, and the Cane being thus inverted, and the Finger removed, the Metal falls down from the top, and halts about thirty Inches from the lower end, where it is received in a small Vessel with Quicksilver in it.

There are two difficulties which occur in mounting of it. First, At what distance from the lower end, must the Degrees of fair and foul Weather be affixed? The other difficulty is, How to thrust out the small Particles of Air that lurk among the Quicksilver, when the Cane is full? The first cannot be known but by long observation, which I have done these many Years bygone. The second cannot be done without skill and experience. Either of the two, but especially the first, renders the Weather-Glass deceitful.

The Paper, or Brass-plate, is divided into half Inches, and each Part into five Parts, called Degrees. In the first place, is written, *Most pleasant Weather*, and opposite to it, the Letter A. I may call this station, the highest Tropick, because the Mercury goes not higher ordinarily. Here is excellent, fair, dry, and calm Weather. The Air is pleasant, wholesome and sweet, whether it be Summer, or Winter. In Winter, hard dry Frost, and the Heavens clear. Rather in Winter than in Summer, I find it at this height. Its long fair, so that a Man may have confidence to ride a long Journey, without one drop of Rain. When Wind or Rain is a brewing, the Metal falls down by degrees slowly towards B, which station I call *Dry and fair Weather*, but it does not continue so long ordinarily as at A. The Heavens may be black and cloudy, and some Dew falling, but no Rain. The third station is C, which I call *Uncertain Weather*; because, if the Metal halt here, the Air is demuring, whether to be fair or foul. If the Quicksilver hath ascended from D, to C, fair Weather is more likely to be than foul; but if it hath descended from B to C, foul Weather is more likely to be. In Summer you will find good and tolerable Weather at C: dry high Winds will bring it to C. It halts about C in dry Frost and Snow. In Easterly and Northeast Winds, even with Rain, the Metal keeps about this station; because (which is strange) such Winds raises the Mercury, whereas other Winds make it subside and fall down. I call the fourth station D, *Wet Weather*, that is, shows now and then; sometimes fair, and sometimes foul. In Winter, I have seen Sleet and raw Frost. No settled Weather can be expected here; a day, or a part of it, may be fair, but not long. I call the fifth station E, *Stormy Weather*; namely, frequent Rains, with Winds, and some days may seem to be fair, yet if it continue here, you may expect more foul Weather than before. No Frost, or Snow here. If the Winds be from the West, Southwest, or South, and begin to increase, with much Rain, the

Mercury falls down towards F, which is the last station, and lowest Tropick. Here are *extraordinary high Winds*, with much Rain, tempestuous Weather as can be. Here it was upon Saturday afternoon, *March 6, 1680*. You may expect long foul Weather at F, as there is long fair Weather at A.

The first general Rule is, the further up the Mercury goes, the Weather inclines to be the fairer; and the further down it comes, the Weather inclines to be the fouler. *Secondly*, When ever you observe the Metal to fall down two or three Degrees, from the place where it halted, be sure of some change of Weather. Sometimes (as in Summer) I have found this, and yet no Rain followed, at least here, but in some place not far off, there hath been Rain. *Thirdly*, The Metal being at A, or B, fair Weather is universal. It being at F, foul Weather is universal. *Fourthly*, (which must be seriously observed) It is not so much foul or fair Weather actually that influences and acteth the Quicksilver, as it is the disposition and inclination of the Weather; therefore you will sometimes see the Weather-Glass affirm foul or rainy Weather, when the day or the most part of it will be fair; yet the Weather is under a strong inclination to be foul. Herein consists the excellency of this Weather-Glass, that it shews us evidently the nature and disposition of the Weather, which we cannot well know, but as we guess.

It is useful to all Persons. To Men that travel by Sea, or Land. To the Husband-man in Seed-time, and Harvest; for winning of Corn and Hay. After long drought in Summer, it lets him know that Rain is a coming. To Physicians and Patients. To Ladies and Gentlewomen, and others, when they incline to walk. It lets the Good-wife of the House know, whether she may send out her Servants to the Water with Linnings, or not.

It may be taken down, and carried many Miles. It is not subject to corruption. It is a most pleasant and beautiful Ornament to a Gentlemans Closet, or Chamber. It is very delightful to see the Mercury ebb and flow, following the Weather, as the Sea follows the motion of the Moon.

To discourse fully upon this noble Invention, in discovering the reasons and causes of the various effects that are seen, would take a very long time. As, what sustains the Mercury? Why it halts at 30 Inches high? Why dry Weather should raise it? Why in foul Weather it should fall down? Why it goes no lower then F? Why it goes no higher than A? Why easterly Winds do raise it? Why westerly Winds make it fall down? Why in high and loud Winds, the Mercury ebbs and flows very sensibly? Why in the Reclining-Glass, the Tropicks are at a greater distance, than in the Perpendicular-Glass? But leaving all these things, I conclude with *Virgil* in his fourth Book of the *Georgicks*,

Intus se vasti Proteus tegit obice saxi.

By G. S.

