Explanation of TABLE IV. *representing the* Cicuta aquatica *of* Wepfer.

a, A Branch of this Plant with its Umbels of Flowers in different States.
b, The Appearance of the Bottom of the Stem, growing from the Crown of the old Root.
c, An anterior View of the Flower of its natural Size.
d, An anterior View of the ſame magnified.
e, A poſterior View of the Flower magnified.
f, The *Vaſculum ſeminale*, and Seed.
g, The ſame magnified.

Explanation of TABLE V. *repreſenting the Root of the* Cicuta aquatica *in Winter.*

Fig. I.

a, The Rudiments of the Leaves.
b, The old rotten Root not yet ſeparated from the new one of the preceding Summer.

Fig. II.

A longitudinal Section of the Root exhibiting the Cells.

XIII. *A Letter to Mr.* Benj. Robins, *F. R. S. ſhewing that the* Electricity *of Glaſs diſturbs the* Mariners Compaſs, *and alſo nice* Balances.

Dear Sir, June 10. 1746.

Read June 12. 1746. WHILE ſo many Gentlemen are labouring to find out the Uſes of Electricity, it has been my Fortune to diſcover one, at leaſt, of the Inconveniencies attending that Property

perty in Glaſs. And as it is ſuch whereby vaſt Numbers, very likely, have been, and may hereafter be, greatly prejudiced, I deſire you will mention what follows to the *Royal Society*; to the end that it may be publiſhed, if they think proper, for the Benefit of others, and particularly of thoſe who uſe the Sea.

Having lately had Occaſion to compare together two Compaſſes of a different Make, the one having a bare Needle, as uſual, and the other a Chart, in the Manner that Mariners Compaſſes are commonly made, I happened to wipe off with my Finger ſome Duſt, which lay upon the Glaſs of the former; and thereby put the Needle, which was before at Reſt, into a violent diſorderly Motion, partly horizontal, and partly vertical or dipping. After ſeveral Repetitions of the ſame Thing, I found that the Glaſs, by ſo ſlight a Touch, was at that time excited to Electricity, ſo far as to diſturb the Needle extremely.

The ſame Glaſs being rubb'd a very little more with a Finger, a Bit of Muſlin, or of Paper, would attract either End of the Needle, ſo as to hold it to the Glaſs, for ſeveral Minutes, far out of the due Direction, according to what Part of the Glaſs was moſt excited.

And when the Needle has for ſome time adhered to the Glaſs, and afterwards dropt looſe, and made Vibrations, thoſe Vibrations would not be biſſected, as uſual, by that Point where the Needle ſhould reſt, but either be made all on one Side, or be very unequally divided, by means of ſome Remains of electrical Virtue in that Part of the Glaſs which had attracted the Needle; until at length, after fifteen Minutes or more, all the Electri-

city

city being evaporated, the magnetical Power took place.

The Cure for this Inconvenience, is to moiſten the Surface of the Glaſs: Even a wet Finger will do it immediately and effectually.

I need not ſuggeſt, that the ſame Quantity of Friction will not at all times have the ſame Effect upon theſe Glaſſes, any more than it will upon the electrical Tubes; but take the Liberty to hint, that I have Reaſon to believe that Glaſs does, at ſome times, become in ſome degree attractive without any Friction at all; and may poſſibly be excited by great Concuſſions in the Air, ſuch as Thunder, or the Diſcharge of great Ordnance, *&c.* and, if ſo, may thereby diſturb the Compaſs.

I muſt however obſerve, that the Mariners Compaſs is much leſs dangerouſly moved by wiping or exciting the Glaſs than the other; by reaſon that the excited Part of the Glaſs attracts that Part of the Chart which lies neareſt, juſt underneath, without giving it ſo much Verticity, as it does to the other Sort of Compaſs with a bare Needle. And farther, that the deeper, or the farther diſtant the Needle hangs below the Glaſs, the leſs Diſturbance it is likely to receive, by wiping, rubbing, or otherwiſe exciting the Cover.

I ſhall make no farther Reflections upon theſe Facts than to obſerve, firſt, That all the minute, irregular, reciprocating Variations which have been obſerved in the Directions of dipping and horizontal Needles, as mentioned in ſome of the *Tranſactions* *, may probably

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bably have been cauſed by the Glaſſes which covered the Inſtruments made uſe of: And, ſecondly, That the flat Pieces of Glaſs, often placed under the Scales of an Eſſay-Balance, are likewiſe very capable of attracting, and making even the lighter Scale preponderate, where the whole Matter weighed is ſo very ſmall. I have not tried this laſt, but do remember, that Mr. *Ellicot*, a Member of your *Society*, did ſome Years ago ſuſpect, if not find it certain, that ſuch Pieces of Glaſs did diſturb his Balance, and had given him a vaſt deal of Trouble, upon a Suppoſition, that the Beam itſelf was defective.

Your moſt humble Servant,

* * *

June 19. the SOCIETY adjourned to *Oct.* 23. 1746.

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