

weighing without its Armour just an Ounce, and with the Armour, Cramps, and Rings, 1 Ounce 17 Pennyweights, lifted, before the President of the *Society*, on *Friday* the 27th of *July* 1745, 6 Pounds and 10 Ounces *Troy* Weight.

This Magnet consisted of 3 Plates of Steel, each 2 Inches long, 7 Tenths of an Inch in Breadth, and not above 6 Hundreths of an Inch in Thickness: They were laid flat upon each other, and screwed together by 2 small Brass Screws going through the 3 Plates. After which, the little Parallelopiped Block so made up, was armed with Iron at the 2 Ends, cramped together with Silver, and fitted with a double Ring of the same Metal, for the convenient holding of it.

IX. *Abstract of what is contained in a Book concerning Electricity, just published at Leipzig, 1744. by John Henry Wintler, Greek and Latin Professor there; from Article 75 to Article 79.*

Read Nov. 22. 1744. **T**HE electrical Sparks from Metals, such as Iron and Silver, are capable of kindling all such Fluids as may be otherwise kindled by actual Flame. And this Experiment succeeds best, when the *quinta Essentia vegetabilis* is held in a Spoon under the Cross of a Sword, whose Point is turned towards the electrifying Glass (TAB. II. Fig. 4.). In like manner, the same Spirits may easily be set on Fire,

Fire, by the Sparks proceeding from an electrified Tube of Tin.

This Experiment with the Sparks coming from Metals when made electric, was first made by Dr. *Ludolph*, of *Berlin*; who, toward the Beginning of the present Year 1744, kindled, with the Sparks excited by the Friction of a Glass Tube, the *ethereal Spirits* of Frobenius. This was done at the Opening of the *Royal Academy*, and in the Presence of some Hundreds of Persons. This Account was not only related in the *Berlin Gazette*, of the 30th of *May* last; but has been since confirmed by several Letters, sent from *Berlin* to *Leipsic*, to Count *Manteufet*, immediately after the Experiment.

Mr. *Marscall*, who now studies here, also communicated to me a Letter he had received from *Berlin* concerning the same; and I have since been also certified of it, by the Account of several Men of Learning, that had seen the Experiment at *Berlin*, and that have since visited me at this Place. Lastly, Mr. *Reinhart*, who came hither about last *Easter*, with Count *Zaluski*, Great Chancellor of *Poland*, told me, that the Experiment was not difficult to be made; and that the Liquor, called *Quinta Essentia* * *vegetabilis*, might very readily be kindled by the electrical Sparks. I immediately sent for some of that Essence, and found the Experiment succeed to my Wish.

Red-hot Iron sets no Spirits on Fire, tho' held very near to those Spirits; but if that Iron is made electric, its electric Sparks very readily kindle all well-rectified Spirits. The

* *i. e.* Spirit of Wine so highly rectified, as, being pour'd upon Gunpowder, and then being set on fire, will at last flash the Gunpowder.

The Sparks that proceed from the Body of a Man, made electrical, kindle Spirits as quick as those from electrified Metal, whether the Body of the Man is rendered electric immediately by the Glass Tube, or by the intermediate Tube of Tin.

I made this Experiment with Success upon myself, before his Excellency Count *Manteufet*, at his House, about the middle of last *May*, in the Presence of Professor *Christian Wolf*, of *Hall*, and many others. Neither myself, nor any of the Company, knew, at that time, that the electric Sparks, from the Body of a Man, were capable of kindling Spirits; but, upon seeing the *Quinta Essentia vegetabilis* kindled with extraordinary Quickness, by the Sparks proceeding from an Iron Tube that was rusty, one of the Company started the Question, Whether the Sparks, from the Body of a Man, might not possibly do the same? Upon which I immediately stept on to a Frame, over which blue silken Lines were extended: I took hold with one Hand of the rusty Iron Tube, and held the Fingers of the other over some of the *Quinta Essentia*; and the Sparks from my Fingers immediately struck with such Violence into the silver Spoon that held it, that the Essence was in a Moment set all in a Flame.

This Experiment, so unexpected, gave the greatest Satisfaction to all the Company; and an Account of it was published in the *Leipsic Gazette* of the 21st of *May*; where it was also mention'd, that divers other Experiments, with the Sparks of electrified Metal, had already been made both at *Dantzic*, and at *Berlin*.

Dead Fowls, Pork, and Veal, both raw and drest, may be made electric by a Tin Tube, or by the
Hand

Hand of a Man ; infomuch that the Sparks, proceeding from those several Bodies, will also kindle the same Effence.

If such fluid Bodies, as are usually kindled by Flame, are not fine enough, they need only be warm'd a little in the Spoon : Or the Spirits may be lighted a little before, and blown out again, before they are brought to the electrical Body.

In this manner I have kindled, with the electrical Sparks, camphorated Spirits of Wine, coloured with Saffron, the common *Essentia vegetabilis* ; and even *French Brandy*, and *Corn-Spirits*, only taking the Precaution of warming these Liquors a little before.

Even Oil, Pitch, and Sealing-wax, may be lighted by the electric Sparks, provided they are before heated to a Degree that is next to kindling.

X. *Translation of a Letter from Mr. Abraham Trembley, F. R. S. to the Præsident, with Observations upon several newly discover'd Species of Fresh-water Polypi.*

S I R,

So'g'v'iet, 6. Nov. 1744. N. S.

Read Nov. 22.
1744.

I HAVE herewith the Honour of transmitting to you the Particulars of several Observations I have made, during the Course of the last Summer, upon some Species of very minute Water-Animals ; and which are the same I have already made some Mention of, in the third Paragraph of the 297th Page of the *Memoires pour servir à l'Histoire des Polypes à Bras en forme*