of the Date, I muſt beg Leave to refer to N°. 439 of the *Tranſactions* mentioned above. But as this Manner of writing the Four appears as antient as the Time of *Johannes de Sacro Boſco*, who died in the Year 1256, the Age of this *Iriſh* Date cannot ſo well be determined by that Figure, as by the Form of the Five, which follows it, and ſo exactly agrees with the modern Shape, that it cannot, I think, from any Inſtance I have yet met with, be juſtly deemed much older than the ſixteenth Century.

Upon the beſt Judgment therefore, which I can form of theſe two Dates, from ſuch Arguments as the Nature of the Subject admits of, it appears to me highly probable, that neither of them can be more antient, than the Times I have here aſſigned them.

Greſham College,
Feb. 21.
1744-5.

J. Ward.

XIV. *A Letter from the Reverend* Henry Miles, *D. D. F. R. S. to Mr.* Henry Baker, *F. R. S. of firing* Phoſphorus *by* Electricity.

Dear Sir,

Read March 7. 1744-5. IT came into my Head laſt Night, to try whether the *Effluvia* of an excited glaſs Tube would not kindle *Phoſphorus*; and, having been uſing my Tube for the ſake of a little Exerciſe, I took a ſmall Bit of about a Quarter of an Inch

Inch long, which has lain by me theſe ten Years; and having nothing at hand convenient for holding it, I roll'd it up in a ſmall Piece of white Paper; and applying it to the excited Tube, it immediately took Fire, emitting a conſiderable Quantity of Flame and Smoke: After ſome time I quench'd it, by dipping it into Water, which was ready for that Purpoſe; and taking it out again without ſtaying any longer than to be ſatisfied it was not on Fire, I applied it as before, when it ſuddenly took Fire, as at firſt: This I repeated in the ſame manner for ſix or ſeven times with the like Effect; tho' the *Phoſphorus* could not be drained of the Water, eſpecially as the Paper about it was wet.

The Room in which I made the Trial was not abſolutely dark, having a dull Fire (tho' without any Candle): The Tube I uſe is about two Feet and a half long, the Diameter of the Bore nearly one Inch, the Thickneſs about one Eighth of an Inch, hermetically ſealed at one End (which Sort are, by the way, moſt convenient for rubbing): The *Phoſphorus* was held generally about five Inches from the Tube; but once or twice bringing it nearer, I could perceive a continued Ray of Light from the Tube to the *Phoſphorus*. Some Occaſions calling me away in the midſt, I could not be more accurate; but I would not omit to tell you one Obſervation I made, upon pretty ſmartly exciting the Tube, that the Corruſcations of Light were larger, more ſubſtantial, and of a more regular Form than I had ever obſerved them before, This happen'd, not when the *Phoſphorus* was applied, but in the Intervals. Whether any of the Fumes of the *Phoſphorus*, which remained in the

the Room, might contribute hereto, I cannot tell, tho' it is not very likely. I ſhall attempt below to give you, as well as I can, the Form and Size of the Rays of Light, as they appeared immediately after my withdrawing my Hand, without applying my Finger, as is uſually done to produce the Snapping of the *Effluvia*. Tho' I never made many Trials with *Phoſphorus*, yet as I am not inſenſible, that ſome ſolid Kinds of it will be inflamed by the mere Action of the Air upon it, when it is taken out of the Water in which it is uſually kept; I was therefore minded to try whether the Air would have that Effect upon mine, and accordingly took it out of the Water, with a *Forceps*, and laid it down on a Shelf, ſo as nothing touch'd it but the Inſtrument which held it, but I could not perceive the leaſt Glimmering of Light, tho' the Place was ſufficiently dark, after it had lain there for the Space of half an Hour, which I thought long enough to ſatisfy me, that it was not kindled by the Action of the Air upon it in the above-mentioned Experiment.

If you have known this Trial to have been made by any one before, you will caſt this into the Fire; and however believe, that I am, with very great Sincerity,

Dear Sir,

Your moſt affectionate,

and obliged humble Servant,

H. Miles.

See

See TAB. I. *Fig.* 5.

A. Repreſents the Tube which I held in my Right-hand, and excited with my Left, having on a Glove, which I find more convenient for me in rubbing it. I ſhould obſerve, that my Method then was to rub it ſmartly for about half a ſcore times up and down; and then giving it one briſk Stroke, beginning at the End from me, upon diſcharging my Hand quick from the Tube, the Corruſcations of Light appear'd as mark'd α and β, both in Size and Form: Some Allowance may be thought reaſonable to be made for one's Judgment in ſuch a Caſe, the Motion being ſo very ſudden, and the *Phænomenon* ſo ſoon diſappearing. But I intend to repeat the Experiment whenever the Temperature of the Air ſhall be favourable, which I don't find it to be this Morning. I forgot to mention, that, during this Trial, I found the *Effluvia* troubleſome to my Eyes to a great Degree, occaſioning a very ſenſible ſmarting Pain, which did not go off for ſome time; tho' I never deſignedly brought the Tube near my Face. This was the firſt time of uſing this Tube.

XV. *An Obſervation of a Fracture of the* Os Humeri *by the Power of the Muſcles only; by the late* Claudius Amyand, *Eſq; Serjeant Surgeon to His Majeſty.*

Read March 7. 1744 5.

THE outward Cauſes of Fractures not being ſufficient to break or tear aſunder the broken Pieces of a fractur'd Knee-pan, in

Philos. Trans. N° 475. TAB. I.

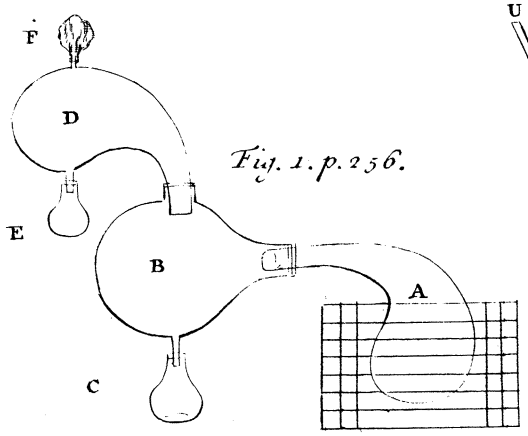


Fig. 1. p. 256.

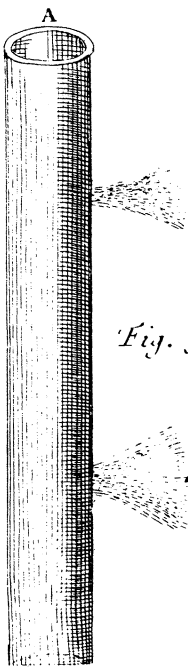


Fig. 5. p. 293.

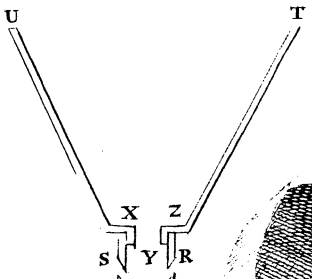


Fig. 6. p. 315.

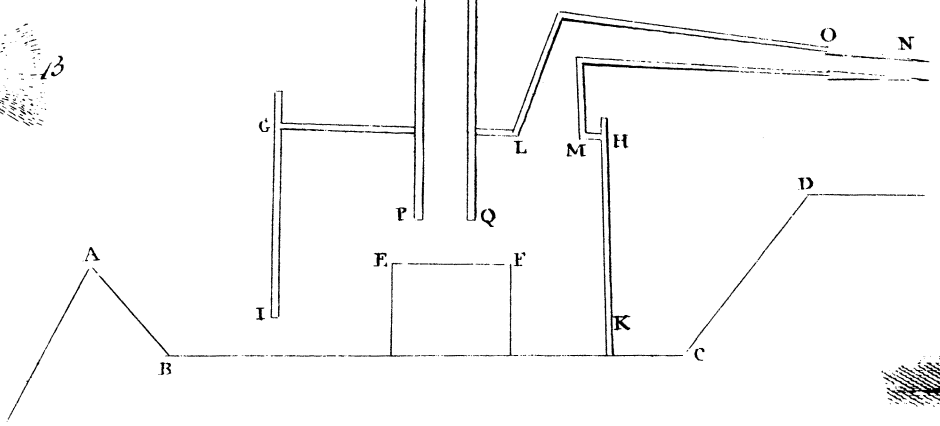


Fig. 8. p. 340.

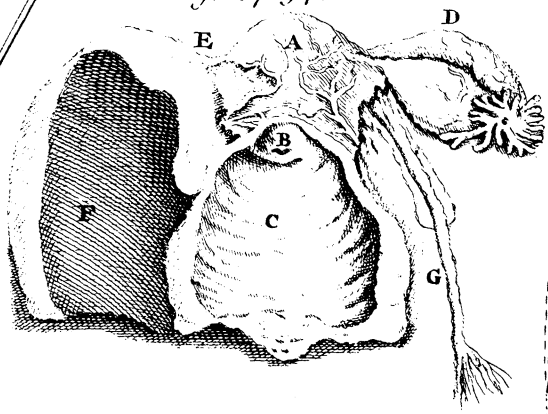


Fig. 3. p

Fig. 2. p. 2

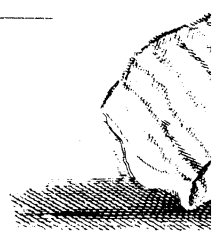
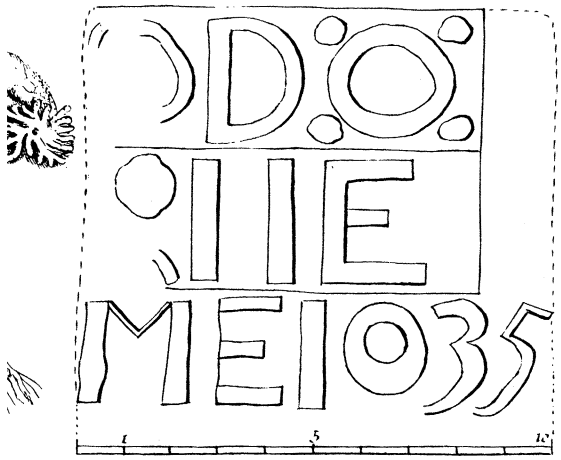


Fig. 3. p. 280.

Fig. 4. p. 288.



A Scale of Inches.

ig. 2. p. 284.

A Scale of Feet.

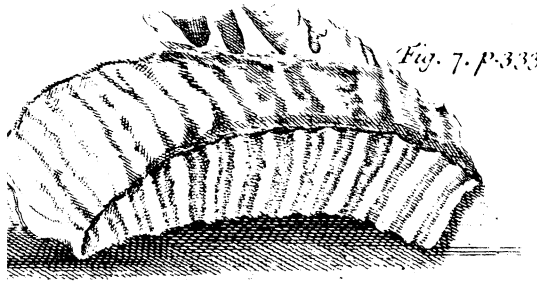


Fig. 7. p. 333.