

night and day, when it froze so hard, that the Sap congealed as fast as it issued out. The Cold remitting, the *Birches* bled afresh, the *Sycamores* abated very much, and the Walnut-trees quite ceased.

12. We pierced two *Sycamores* on the *North* and *Southsides*, and both of them from equall incisions bled a greast deale faster from the *North-sides*, than the *South*, which is consonant to the preceding Experiment.

13. We set several *Willows* with the wrong ends downward, and cut off several *Bryars*, that had taken root at the small ends. This 29th of *May* the *Willows* have shot out Branches neare two foot long; and from the top of the Sets, which were a yard high, the *Bryars* have also grown backwards from that part, which we left remaining to the roots at the lesser ends; they have great leaves and are ready to flower.

An Extract of a Letter

Lately Written by Dr Edward Browne to the Publisher, concerning Damps in the Mines of Hungary and their Effects.

Sir, having been lately in the Copper, Silver, and Gold-mines in *Hungary*, I hope ere long to give you a particular account thereof; presenting this in the mean time concerning *Damps* in these Mines; whereof I understand, that they happen in most of them, that are deep; and that they happen not only in the *Cuniculi* or direct passages, where they walk on Horizontally (by these Mine-men call'd *Stollen*) but also in the *Putei* or Perpendicular Cutts or Descents (term'd *Schachts* by the same.) They are met with not only in places, where the Earth is full of Clay or the like substances, but also where it is Rocky: and one place they shew'd me in the Copper-mine at *Hern-groundt*, where there had been a very pernicious damp, and yet the Rock so hard, that it could not be broken by their Instruments; but the descent was all made by the means of Gun-powder, ram'd into long round holes in the Rock, and so blowne up. Another place they show'd me, where there is sometimes a damp, and sometimes clear weather. When there is much water in the

the Mine, so as to stop up the lower part of this passage, then the damp becomes discoverable, and commonly strong. I procured one to enter it, till his Lamp went out 4. or 5. times, in the same manner as at *Grotto del Cane* in Italy.

Damps are not all of the same force, but some weaker, some stronger; some suffocate in a small space of time, others only render the Workemen faint, with no further hurt, except they continue long in the place. The Miners (who think themselves no Workmen, if they be not able to cure a Damp, or to cure the bad Weather, or make the Weather, as they term it) performe it by persfation, by letting the Aire in and out, and causing, as 'twere, a Circulation of it. In the Mine at *Herrn-groundt* they did cure a bad Damp by a great paire of Bellows, which were blown continually for many days. The ordinary remedy is by long Tubes, through which the Air continually passing, they are able to digg streight on for a long way without impediment in breathing. For some *Cuniculi* are 500. fathoms long; which will not seeme strange to any one that shall see the Mapp of the Copper-mine at *Herrn-groundt* or the Gold-mine at *Chremnitz*. And in the Silver-Trinity-mine by *Schemnitz*, I pass'd quite under a great Hill, and came out on the other side. At *Windschach*-mine by *Schemnitz* they show'd me the place, where 5. men and a Gentleman of quality were lost; for which reason they have now plac'd a Tube there. The like they place over all doores, and over all ways, where they digg right on for a great space, and have no passage through. At *Chremnitz* they told me, that 28. men had been killed at one time in 4. *Cuniculi*, 7. in each; and in the sinking of *Leopold's-pitt*, which is 150. fathoms deep, they were much troubled with damps, which they remedied in this manner.

They fixed a Tube to the side of the *Schacht* or *Pitt*, from the top to the bottom; and that not proving sufficient, they forc'd down a broad flat board, which cover'd or stopp'd the *Pitt*, or couched very near the sides of it, on all sides but where the Tube was; and so forc'd out all the Air in the *pitt* through the Tube: which work they were forc'd often to repeat. And now they having divers other passages into it, the Air is good and sufficient; and I was drawn up through it without the least trouble in breathing.

But

But besides this mischief from poisonous Exhalations, Stagnation of the Air, or Water impregnated with minerall spirits, they sometimes perish by other ways. For there being in these Mines an incredible mass of wood to support the Pitts and the Horizontal passages, (the *Putei* and *Cuniculi*) in all places but where 'tis Rocky, men are sometimes destroy'd by the wood set on fire. And in the Gold-mine at *Chrennitz* the wood was once set on fire by the carelesness of a boy, and 50 Miners smothered thereby; who were all taken out but one, that was afterwards found to be dissolv'd by the Vitrioll water, nothing escaping either of flesh or bones but only some of his cloaths. I am &c.

Vienna April. 20 1669.

*A Chronological Accompt
Of the severall Incendium's or Fires of Mount Aetna.*

THe present Fire of *Aetna*, (whereof there was lately a Relation printed here in the *Savoy*) will make it appear not unseasonable to reflect back upon former Ages, and to collect from History the severall Eruptions hapned there, together with the times of them, and some observations recorded by Authors concerning the same.

To pass by what is related by *Berosus*, *Orpheus* and other less credible Authors, about the Eruptions of this Mountain, both at the time of the ingress of the *Ionian* Colonies into *Sicily*, and that of the *Argonautes* (which latter was in the 12th Age before the Christian account,) we shall first take notice of that, which happen'd at the time of the Expedition of *Aeneas*, who being terrified by the fire of this then burning Mountain, left that Island; whereof *Virgil* l. 3. *Aeneid.* gives this notable description;

*Ignarique via, Cyclosum allabimur oris,
Portus ab accessu ventorum immotus et ingens,
Ipse sed horrificis juxta tonat Aetna ruinis,
Interdumque etiam prorumpit ad aethera nubem,
Turbine fumantem piceo et candente favilla.
Attoilitque globos flammarum, et sidera lambit.*

Interdum