

has continued well ever since, leaving the Hospital yesterday, and professing himself cured. The *Apoplectical* hath not had one Paroxysme since: And the several Sores, which the *Plica Polonica* had occasioned, are healed; and both these Persons have been able to work any time these three Weekes. Dated August 18. 1668.

*Additional Answers*

*To the Queries of Mines.*

What the Worthy and Learned Mr. Joseph Glanvil intimated in his *Answers to the Queries concerning Mines*, publisht Numb. 28. p. 525. viz. That he did not think himself by the return, then made, absolv'd of his Taske, but intended to pursue that matter further, He now proveth to have been his real purpose, by the following Additions, very obligingly imparted by him; concerning the same Mendip-Mines; To which he premiseth this short instructive Letter;

Sir, I now send you a more perfect account of the Mendip-Mines, which by the help of an Ingenious friend I procured from some very experienc'd Mine-men. I have since communicated these Informations to the Gentleman, who gave me the former, which I also sent you; and he assures me, that they are exact. Only in some little things they differ from some circumstances of his; as the *Virgula* he never knew practis'd; whereas these say, it hath, but is not much valued. For which, allowance must be made to the difference of 30 yeares; it being so long agoe, that my first Informant had to do in those matters. He also saith, that the Trees are sooner wither'd in their leaves upon this Hill; whereas they observe, that when a Mineral-vein runs up into the Roots of Trees, yet they have not noted any difference at Top; which must be understood with respect to other Trees there, into whose roots no such veins ran. I can perceive no difference in the account else, that is any wayes material. What defects you find in it, if you intimate them to me, I shall inquire again for further satisfaction, &c.

To the 10—16 *Qu.* (Viz. Numb. 19. p. 333.) the Grass is rank and good. There are few Trees on this part of the Hill, but the Workmen have known the Vein to run up into the roots of Trees, when they have observ'd no difference at the Top. They esteem the water healthy to drink, and to dress Meat with it.



The *Snow* and *Frost* near the *Grooves* melt quickly, but continue long at further distance.

To the 18, 19. Sometimes, when a Mine hath been very near the surface, the Grass hath been yellow and discolour'd. Some have made use of the *Virgula divinatoria*; but the Experienced Work-men have no value for it; yet they say, when the Mine is open, they may guess by it, how farr the *Vein* leads.

To the 20, 21, 22, 23, 24, 25, 26. Qu. White, Yellow and mixt Earth are leaders to the Country (as they call it;) Changeable colours alwayes encourage their hopes. For Stones, they are sometimes 12 fathom deep, before they meet any: Otherwhile, when a tony *Reak* at top, they meet Ore just under the sword (superficies) of the Grass, which Ore hath gone down above 40 fathom. A black Stone is of bad signification, and leads to a *Fam* (a black thick Stone, that hinders their work.) A grey cleer dry one they account best. They seldome encounter *Damps*. If in sinking they come to wet moorish Earth, they expect a *Fam*, and to be closed up with Rocks. The nearness they guess by short brittle Clay; for the *tough* is not leading. As to the rest of the *Queries*, belonging to this *Title*, the Mine-men can give no satisfaction to them.

To the 31, 32. The Ore sometimes is Shole, and again, it is 14 or 20 fathom more or less, before they hit it. They follow a *Veine* inclining to some depth, when it runs away in flat *Binns* (their terme.) When the Stones part it, then they find a *Veine* again. Their *Draughts* are 14 or 16 Fathom, till they come to a Stone, where they cast aside a Draught call'd a *Cutt*. Then they sink plum again 4 or 5 *Cutts* one under another. They find Ore at 50 Fathom. Their best *Reaks* are North and South; East and West are good, though not so deep. But 6 and 12 are proper Reakes, the rest not so.

To the 33 and 34. The *Groove* is 4 foot long, 2 $\frac{1}{2}$  foot broad, till they meet a stone, when they carry it as they can. The *Groove* is supported by Timber of a Divers bigness, as the place gives leave. A piece of an *Armes* bigness will support 10 tun of Earth. It lasts long: that which was put in beyond the memory of man (nay, which by the difference in the manner of working their mines, they know to have layn above 200. years) will



will serve in new VVorks. It is tough and black, and being expos'd to the Sun and Wind for 2 or 3 dayes, will scarce yield to an Axe. That which hath layn 40 yeares to their own knowledge, they have taken up, and set again.

To the 35. VVhen they have sunk a *Groove*, they will not be at the charge of an *Air-shaft*, till they come at Ore; and for the supply of Air have boxes of *Elme*, exactly closed, of about 6 inches in the cleer, by which they carry it down above 20 Fathom. They cut a Trench, at a little distance from the top of the *Groove*, covering it with Turf and Rodds disposed to receive into the pipe, which they contrive to come in, sideways, to their *Groove*, 4 foot from the top; which carries down the Air to a great depth. When they come at Ore, and need an *Air-shaft*, they sink it 4 or 5 fathom distant, according to the convenience of the breadth, and of the same fashion with the *Groove*, to draw as well Ore as Air.

To the 36, 37, 38. The waters are more plentiful in Winter, according to the downfalls of Rain. They make use of Leathern-baggs, 8 or 9 Gallons a piece, drawn up by Roapes, to free the water.

To the 39, 40. If they find a *Swallet*, they drive an *Adit* upon Levell, till 'tis dry. Seldome *Damps*.

To the 41, 42. I refer to a *Melius inquirendum*: Only they find no prejudice from any Iron-ore.

To the 43, 44. If they cannot cut the Rock, they use Fire to aneale it, laying on Wood and Coale, and the Fire so contriv'd, that they leave the Mine before the Operation begins; and find it dangerous to enter again, before it be quite clear'd of the Smoak; which hath killed some.

To the 45, 46, 47, 48. Beetles, Axe, Wedge, unless so hardned as to make a deep Impression upon the head of an Anvill, are not fit for their use; and yet they sometimes break them in an hour; others last 3 or 4 dayes, as it happens. They work cloath'd in Frocks and Wast-coats, by Candle-light of Tallow, 14 or 15 to the pound, each whereof lasts 3 houres, if they have Air enough: which if they want to keep in the Candle, the Work-men cannot stay there. A Vein being lost, they drive 2 or 3 fathom in the breast, as the nature of the Earth directs them,



them. They convey out their Materials in *Elme-Buckets* drawn by Ropes. The Buckets hold about a Gallon. Their Ladders are of Ropes.

To the 49, 50, 51. The Ore runs sometimes in a Vein, sometimes dispers'd in Banks. It lies many times between Rocks: some of it is hard, some milder. They never find any *perfect*, but it must be refined. Many times they have branched Ore in the *Sparr*.

To the 53--till 60. There is *Sparr* and *Caulk* about the Ore; and another substance, which they call the *Crootes*, which is a mealy white stone, matted with Ore, and soft. The *Sparr* is white, transparent, and brittle like Glass. The *Caulk*, white and heavy, heavier than any stone. The *Vein* lies between the Coats, and is of different breadths. It breakes off sometimes abruptly in an Earth, they call a *Deading Bed*, and after a fathom or two may come again, keeping the same point. It terminates sometimes in a dead Earth Clayie, without *Croot* or *Sparr*; sometimes in a Rock called a *Fere-stone*.

To the 62 till 65. There is much difference in the goodness of the Ore. The cleereft and heaviest, best. 36 hundred of Ore may yield a Tun of Lead. Some small eyes of other mixtures, Brass, &c.

To the 66. They beat the Ore with an Iron flat piece; cleanse it in Water from the dirt; sift it through a Wire-sive. The Ore tends to the bottom, and the Refuse lies at top. And these are the Preparations, they make use of, before 'tis fit for fusion. Then they have a Hearth about 5 foot high, set upon Timber, to be turn'd as a Wind-mill, to avoid the inconvenience of smoak upon a shifting VVind. The Hearth contains half a bushel of Ore and Coal, with bellows on the top. The Charcoale is put upon the Hearth, where the Ore is; laying dry Gads upon the top, which they call their VVhite coales. There is a sink upon the side of the Hearth, into which the Lead runs, that holds about an hundred and an half. Then it is cast into Sand, and runs into those *Somes* (as they call them) which they sell. They have a barr, to stir the Fire; a shovel, to throw it up; and a Ladle heated red-hot, to cast out the Metal.

To



To the 82, &c. Once melting is enough. The good melts best, and the best, first. There is sometimes half odds in the goodness. The best is distinguished by its weight.

To the 88, 89. There is a *flight* in the smoak, which falling upon the Grass, poysons those Cattel that eat of it. They find the taste of it upon their lips to be sweet, when the smoak chances to fly in their Faces. Brought home, and laid in their houses, it kills Rats and Mice. If this flight mix with the Water, in which the Oar is wash't, and be carried away into a streame, it hath poisoned such Cattel, as have drunk of it after a current of 3 Miles. What of this *flight* falls upon the sand, they gather up to melt in a Flagg-hearth, and make Shot and Sheet-lead of it.

To the 90. They sometimes find *Slaggs*, 3, 4, or 5 foot under ground, but such as they judge cast aside heretofore.

The *Promiscuous* Inquiries, annexed in the *Numb. 19*, are most of them satisfied in the former Answers.

But as to the Mineral *Laves* of *Mendip*, I am promised an Account of them, which I shall transmit to you, as soon as I have received it.

Concerning subterraneous *Demons*, they have never seen any, but sometimes have heard knockings beyond their own Works, which, when follow'd by them, have afforded plenty of Ore.

About 2 years since, one *King of Wells* in his *Groove* found a piece of Ore, in which they fancied the shape of a Man, Eyes, Armes, Leggs, full Breast: The whole was about 4 inches in length; the Mine proved rich.

#### *An Extract of a Letter.*

Written from Franckfurt in the Oder, by the learned Professor Johannes Christophorus Beckman to the Publisher, concerning *Osteocolla*, and some other *Observables* in those parts; Englished out of the High-Dutch, as follows.

Sir, the Conversation with several worthy Members of the *R. Society*, I had the honor to be admitted to, when I was in *England*, as it then awakned me, and begot in me a resolution, better