

and turned into another ; but an Overman, some Days after this Change, and upon some Notion of his own, being induced, as is supposed, by a fresh, cool, frosty Breeze of Wind, which blew that unlucky Morning, and which always clears the Works of all Sulphur, had gone too near this Pit, and had met the Sulphur just as it was purging and dispersing it self ; upon which the Sulphur immediately took Fire by his Candle, and so he proved the occasion of the Loss of himself and so many Men, and of the greatest Fire that ever was known in these Parts.

III. *An Account of the Success of an Attempt to continue several Atmospheres of Air condensed in the space of one, for a considerable time. By Mr. Fr. Hauksbee, F. R. S.*

March 30, 1708.

Injected with my Siringe into a very thick Flint-Glass Bottle, (which I had procur'd to be made on purpose for the Experiment) between four and five Atmospheres of Air, as the included Gage demonstrated, which continu'd in that State till about the 7th of *August* following ; when looking on't, (as usually once in four or five Days) I found that the Air Injected at the prementioned time, had made its Escape, the Weather for a Week before (or thereabouts) having been very hot ; especially one Day I observ'd the Spirit in the Thermometer had ascended one hundred and twenty Degrees above the Freezing Point. And notwithstanding the Bottle was continually kept under Water, yet the Cement

ment, that was made use of to fasten the Brass Cap to it, suffer'd such a Softness, as render'd it incapable to resist the Spring of the Injected Air. I observ'd, that altho' all the Air as was capable of spring was fled, yet the Mercury in the Gage remain'd about three quarters of an Inch in height, above the Surface of that in which its open end was immers'd; which was about a 6th part less space, than what the same Air possess'd before the Injection, and still remains so, notwithstanding it is constantly expos'd to the open Air. Which manifestly shews, that the Springs, or constituent Parts of the Air, do not in time totally restore themselves after standing so long bent. And had not the Accident of Heat happen'd, but it had continu'd in that State, as at first Injected, for a Year or two, (as I hop'd for) I doubt not, but the Springs of it would have been render'd much more incapable of their Restoration. From hence it is easie to conclude, that if nine or ten Atmospheres of Air were condens'd in the space of one, and to remain in that State for a Year or two; that when the Vessel, that contains them, shall become expos'd open to the Air, that then Bodies, such as very thin Glass Bubbles, (supposing them not to be above five or six times specifically heavier than their like Bulk of common Air) would float on such a Medium, which would be very surprizing, to see a Body supported by an Invisible Agent. But I am not sure of this, for I cannot tell but it may be a means to render Air visible; From whence some Discoveries may be made, which otherwise it may be impossible to know. But let it happen how it will (for Nature will have her own ways) I doubt not but several useful Inferences may be made from such an Experiment.