

binations of the nature above mentioned, in which several different notes shall be transmitted, while the intermediate one, finding no unisons, or near approaches to unison in the systems established, shall be extinguished; so by analogy we may perceive how any number of bright and dark lines may be produced in a spectrum unequally absorbed.

(14.) The case last put is entirely analogous in its principle to that of a phænomenon which is described in my Treatise on Sound, and of which, at the time of the publication of that Treatise, I believed myself to have been the first and only observer, though I have recently learned to rectify that impression, and have great pleasure in referring the experiment, which is a remarkably easy and striking one, to Mr Wheatstone, the author of so many other ingenious and instructive experiments in this department of physics. If a tuning fork be held over the open end of a pipe pitched in unison with it, the pipe will *speak* by resonance. (If the fork be disked, and the aperture of the pipe be nearly covered by the disk, the tone brought out is one of a clearness and purity quite remarkable.) Now both Mr Wheatstone and myself have observed that if *two forks*, purposely pitched out of unison with each other, so as to yield the beats of imperfect concords, be *at once* held over the orifice, the pipe will, at one and the same moment, yield both the notes, and will utter loud beats, being actually out of unison with itself. In proportion, however, as the pitch of one or other fork deviates from that to which the length of the pipe corresponds, and which the pipe