

their subdivision according to the condition above explained ; and suppose, further, that the other ends (E) of all the reunited pipes opened out, in like manner, into another chamber, at some considerable distance from the first, and separated from it by masonry or some material, filling in all the intervals between the pipes, so as to be completely impervious to sound. Things being so disposed, let the whole scale be sounded, or a concert of music performed in the first chamber, then will every note, except that one to which the pipes are thus rendered impervious, be transmitted. The scale, therefore, so transmitted, will be deficient by that note, which has been, to use the language of photologists, *absorbed* in its passage. If several such chambers were disposed in succession, communicating by compound pipes, rendered impervious (or *untuned*, as we may term it) to so many different notes, all these would be wanting in the scale on its arrival in the last chamber ; thus imitating a spectrum in which several rays have been absorbed in their passage through a coloured medium.

(11.) In my Article on Light, above referred to, Art. 505, I have suggested, as a possible origin of the fixed lines in the solar spectrum, and (*pari ratione*) of the deficient or less bright spaces in the spectra of various flames, that the same indisposition in the molecules of an absorbent body to permit the passage of a particular coloured ray *through* them, may constitute an obstacle, *in limine*, to the production of that ray *from* them. The following easy experiment will explain my meaning. Take two tuning forks of the same pitch, and heating the ends of them,