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The young man's book of amusement

Halifax, 1848

Musical Figures resulting from Sounds

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sound is a semitone lower with azotic and oxygen gas than with atmospheric air, a third lower with carbonic acid gas, and nearly the same with nitrous gas ; but with oxygen gas, from nine to eleven tones higher than the air that surrounds us. A mixture of azote and oxygen, in the same proportion as in the atmospheric air, will give the same tone as the latter ; but when the mixture of these gases is not uniform, the sounds are totally discordant.

When a plate of glass is agitated by means of a bow, if some dust is strewed over the glass, the former will appear to have arranged itself symmetrically, after the plate ceases to emit sound. Under the like circumstances, the figures are always the same, their changes depending only upon the gravity or acuteness of the tone.

Musical Figures resulting from Sounds.

Cover the mouth of a wide glass, having a foot-stalk with a thin sheet of membrane, or vegetable paper, over which scatter a layer of fine sand. The vibrations excited in the air by the sound of a musical instrument, held within a few inches of the membrane, will cause the sand on its surface to form regular lines and figures with astonishing celerity, which vary with the sound produced, affecting a particular mode of division, according to the number of vibrations.