The young man's book of amusement

Halifax, 1848

On Sounds excited in Hydrogen Gas

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along his side; then the part below the elbow was kept in a horizontal position, with the hand turned downwards, which was done by the operator himself. After taking these preparatory steps, the man bent his body forwards in a situation which presented the profile of his face nearly to the front of his hearers, whilst his mouth pointed to the cup; in which posture he copied the voice of a confined child so completely, that three positions of the glass were easily distinguished by as many different tones, viz. when he pressed the mouth of the cup close against the palm, when one edge of it was elevated, and when the vessel was held near the hand, but did not touch it. The second and third instances of ventriloquism afford strong proofs, that this delusive talent is nothing more than the art of substituting an echo for the primary sound; for, besides the change perceivable in the direction of the voice, it was found to be blended with a variety of secondary sounds; such as we know by experience are produced, as often as a noise of any kind issues from a cavity. The responses of many of the ancient oracles were delivered by persons possessing this quality, so very capable of being applied to the purpose of priestcraft and delusion.

On Sounds excited in Hydrogen Gas.

As the intensity of sound is diminished by the rarefaction of the medium in which it is produced, it

might have been expected that the sound in hydrogen gas would be feebler than when produced in atmospheric air in similar circumstances. Mr. Leslie, however, has found the difference to be actually much greater. Having placed within a receiver of an air-pump, a small piece of clock-work, by which a bell was struck every half minute, the air was rarefied, and after the re-action had been carried the length of one hundred times, hydrogen gas was introduced. The sound, however, so far from being augmented, was, at least, as feeble as in atmospheric air of that extreme rarity, and decidedly much feebler than when formed in air of its own density, or rarefied ten times. Mr. Leslie likewise observed the very curious fact, that the mixture of hydrogen gas with atmospheric air, has a predominant influence in blunting or stifling sound. When one half of the volume of atmospheric air is extracted, and hydrogen gas admitted to fill up the vacant space, the sound will now become scarcely audible: an effect which he ascribes to a want of intimate combination between the gases, which causes the pulsatory impressions to be dissipated before the sound is originally formed.

Sonorous Properties of different Gases.

By causing a small tin pipe, brought into contact with a cock in the neck of a bell glass, to be blown by gas contained in a bladder applied to the external aperture of the cock, it will be observed, that the