will hear two sounds after each blow, the first descending through the wall, and the second through the air.

As sounds are weakened by diffusion over a larger sphere of particles, so they are capable of having their intensity increased by concentration into a smaller space; an effect which may be produced by their being reflected from the solid walls of cavities, shaped so as to bring the undulations to unite into a focus; it is on this principle that the ear-trumpet, for assisting persons dull of hearing, is constructed; and the same effect sometimes takes place in echoes, which occasionally reflect a sound of greater loudness than the original sound which was directed towards them.

If the impulses given to the nerves of the ear be repeated at equal intervals of time, provided these intervals be very small, the impressions become so blended together as not to be distinguishable from one another, and the sensation of a uniform continued sound, or *musical note*, is excited in the mind. If the intervals between the vibrations be long, the note is *grave;* if short, that is, if the number of vibrations in a given time be great, the note is, in the same proportion, *acute*. The former is called a *low*, the latter a *high note;* designations which were, perhaps, originally derived from the visible motions of the throat of a person who is singing these different notes; for, independently of this circumstance, the terms of high and low are quite arbitrary; and it is well known that they were applied by the ancients in a sense exactly the reverse of that in which we now use them.

The different degrees of tension given to the cord or wire of a stringed musical instrument, as well as its different lengths, determine the frequency of its vibrations; a greater tension, or a shorter length, rendering them more frequent, and consequently producing a higher note; and on the contrary, the note is rendered more grave by either lessening the tension, or lengthening the cord or wire. In a wind instrument, the tone depends chiefly upon the length of the tube producing the sound.