not only so, but in order to produce the effect stated, the expansive energy must increase, neither more nor less, but exactly, as the number diminishes—a law which when applied to extreme cases, becomes obviously absurd. Further it may be observed, in corroboration of the hypothesis advanced, that in the gaseous state, the molecules of bodies may be considered as having undergone the utmost effects, that any increase of heat can produce upon them. All their interstitial vacuities may be supposed to be already saturated with it; while an atmosphere may be supposed to surround each molecule, keeping them individually at a considerable distance from each other: their polarities also may be supposed to have undergone their ultimate change; so that no more heat can be rendered latent by inducing further changes, except in degree; which degree may be supposed to be common to all gases. Hence every molecule of matter, in the gaseous state, when subjected to similar pressure and temperature, may, without reference to its other properties, be supposed to be in circumstances exactly similar; and consequently liable to be affected in an exactly similar manner, by all further increments of heat.

Of the inverse Relation of the Volume to the Compressive Force.—Nearly the same remarks apply to this law as to the preceding; for were