

use for various economical purposes. But if we consider the properties of this valuable compound, with reference to the aid derived from it in the investigations of science, there are few substances of higher importance to the philosopher. Among the most useful of those properties are its impermeability to fluids, either in a liquid or aeriform state; its ready permeability to light, together with its power of modifying the qualities of that fluid; and its resistance to almost all those chemical agents, which are capable of destroying the texture of most other substances with which they remain long in contact.

In considering the extensive utility of the thermometer and barometer, in their common and most convenient forms, it is evident that their practical value almost entirely depends on the transparency of glass, and on its impermeability to air: for if the glass, of which they are made, were opaque, the variations in the level of the quicksilver contained within them would be imperceptible to the eye; and could not be indirectly ascertained, unless by very circuitous and difficult means: and, on the other hand, if the glass were permeable to air, the variation in the level of the quicksilver, in the case of the barometer at least, would necessarily be prevented. The same properties of transparency and impermeability to air very greatly enhance, if they do not solely constitute the value of glass,