

Cuticle under which lies the Cortex or true Skin, which we call the Bark, the substance whereof is made up of small Bladders, interwoven with fine soft and flexible Fibres, which makes a kind of reticular texture, the longitudinal fibres of which grow hard by degrees, become woody, and leaving the nature of bark, join the lignous substance in form of ringlets, making the sappy part thereof. But others are of a different mind concerning the nature and use of the bark, the theory of which is not yet settled.

The leaves of a plant are the next part to be considered. They are properly the most extreme part of a branch, and the ornament of the twigs; they consist of various fibres minutely ramified, the interstices whereof are filled with a parenchymous substance. The fibres are analogous to arteries and veins, which bring and return the sap after it is subtilized and refined in passing the vesicular texture of the parenchyma; besides this, the business of transpiration is carried on in the leaves; for by their excretory vessels they exude or sweat forth what is superfluous in the circulation of the nutritious moisture. That leaves are the organ of vegetable respiration has been already observed; and that they not only expire, but also inspire or draw in the air through their numerous pores, is pretty reasonable to suppose; and that with the air, they imbibe a part of their nourishment likewise. Lastly, the leaves of trees serve for protection to the gems or buds, and the flowers and fruits, which are hereby screened in a good measure from the injuries of wind and weather. These are the principal of the many uses assigned to the leaves of plants. The size, form, color, and superficies of leaves are so various, that it were endless to recount them all. I shall only observe, that a leaf is said to be simple which is not divided to the middle, and compound when it is divided into several parts, each resembling a simple leaf. Thus when a leaf is divided into three simple ones, it is called trefoil, if into five, cinquefoil. &c., or they are said to be trifoliated, quinquefoliated, &c. Pennated leaves are such as are divided into several parts, like lobes, placed along the middle rib, either alternately or by pairs, as in Goat's Rue, Agrimony, &c. A ramose leaf is that which is divided into several minute branches, as in osmund royal, female fern, &c. An entire leaf is that which has no division on its edges, as in the apple tree, &c. A sinuated leaf is that which