

ence, and eighty or ninety feet of height. 2 *Mich. Am. Sylva*. 225. In France, at Sancerre, in the department of the Cher, one hundred and twenty miles from Paris, there was, in 1819, in existence a chestnut tree (*castanea vesca*,) which, at six feet from the ground, was thirty feet in circumference. Six * hundred years ago **75** it was called the great chestnut; and though it is supposed to be more than a thousand years old, its trunk was still perfectly sound, and its branches were annually laden with fruit. 2 *Mich. Am. Sylva*. 142.

All forest trees have a range of climate within which they flourish best, and far beyond which they will not grow, or cannot be propagated; and even within the range of their appropriate climate, they are all more or less affected by the soil and situation in which they happen to be rooted. As the great parent, nature, rolls round the seasons of the changeful year, all of them assume different external appearances in succession. That they do not put forth their foliage or bloom in winter is obvious; but how they are, in other respects and internally, affected by the revolutions of the seasons, seems to be a mystery. Yet an opinion has become very prevalent, that the structure of their wood, visible on dissection, affords evidence of the periodical progress of nature in effecting their enlargement.

“Wood in vegetable anatomy, is that more or less hard and compact substance which makes up the bulk of the trunk and branches of a tree or shrub, and is concealed from view by the bark. When cut transversely, the wood is found to consist of numerous concentric layers, very distinct in the fir, and in trees of cold or temperate countries in general; less so in those appropriated to a tropical climate. The external part of each circular layer being much the most hard and compact, often with somewhat of a horny appearance, distinguishes the limits of each. Scarcely any two layers of the same tree are precisely alike, in the proportion which this compact part bears to the rest; nor does any one layer exhibit a precise uniformity of diameter in its whole circle.” *Rees' Cyclo. v. Wood in Vegetable Anatomy*. And it is also said, that “the bark of trees annually changes into lifeless wood; whence the concentric rings, which are seen in the trunk of trees, when they are felled, are annually produced; and are said generally to be thicker on that side of the trunk, which grows towards the south, than on the northern side; and thicker in the summers most favorable to vegetation than the contrary. These rings, as they lose their vegetable life, and at the same time a part of their moisture by evaporation or absorption, gradually become harder and of a darker color; insomuch, that by counting their number, it is said **76** that not only the age of the tree, but that the mildness or moisture * of each summer during the time of its growth, may