

In this case the block here produced, has been cut out so deep from the trunk of this black oak, as to include, with the bark and all the newly formed layers of wood, eighteen others which had been formed when the chop mark was made. Judging from the appearance of the block, and the segment of the circle formed by its outside, I should suppose that the tree was about one foot in diameter, and was at present in a youthful and vigorous state of vegetation. The block distinctly exhibits the new wood as being in every way perfectly united over the whole of the chop mark. Immediately over the chop mark there is much horny wood in which no concentric layers are visible; but on one side of the chop mark, and where the concentric layers appear to be a perfectly natural continuation of those into which the chop mark had been made, there can be counted no more than *twelve* additional concentric layers. These new layers differ very much in thickness one from another, and altogether measure as much in diameter as the eighteen which had been previously formed. The whole or a part of the epidermis, or outside bark through which the chop mark was made, apparently still remains, with a perfectly formed new bark so closed over it as to leave nothing more than a scar or cicatrice where the chop mark had been made.

The witnesses testify, that this chop mark was shewn as having been made in the year 1791, now thirty-nine years ago, in accordance with which, if the hypothesis that each concentric layer denotes the lapse of a year, be correct, there should have been found that number of concentric layers; but there are no more than *twelve*; and, consequently, the testimony of the witnesses, or the evidence derived from this hypothesis must be rejected. There is nothing whatever, in addition to this hypothesis, to impeach the credibility of the witnesses.

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which is not performed, as it were, behind a screen; the parts which are the prime movers in every operation, are so minute as to escape our view until they have been killed for microscopic examination—fixed to the soil, destitute of passions and sensations, the visible expressions of which might lead us to the discovery of their visible causes—having the whole of its organic mechanism concealed beneath a skin inert and opaque—we are compelled to trust for all our notions of the manner in which a plant performs its vital functions, to inductions from data about which, in many cases, there must always, from the nature of things, be some kind of uncertainty. In such circumstances, can we wonder that great diversity of opinion has existed among physiologists, respecting many of the phenomena of vegetable life; or that multitudes of erroneous theories have obtained belief almost without question.—*Essay on Vegetable Physiology, by Armstrong, Prof., &c., Washington College, Virginia, chap. 15; The Farmers' Register, by Ruffin, vol. 7, No. 7.*