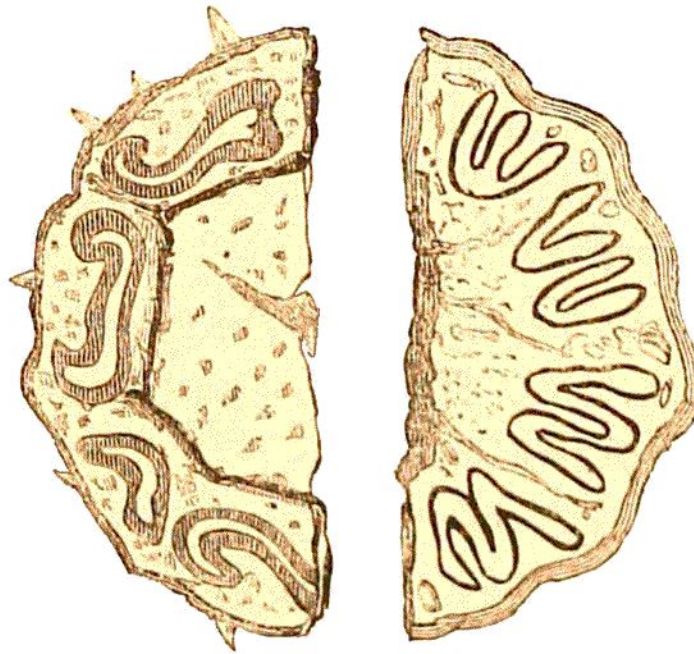


tissue, then it belonged to an arborescent fern; see the subjoined figures (*Lign. 2.*).

If the stem be in a state of preservation that will admit of the slicing, or chipping off a piece for microscopical investigation, the process described at the conclusion of this section should be employed.



LIGN. 2.                      SECTIONS OF FERN-STEMS.

Transverse sections (half the diameter) of two stems of recent arborescent ferns, to show the zone of woody fibre disposed in arcs. This structure is preserved in the silicified trunks from Chemnitz.

The following data may be thus obtained. If the structure be entirely cellular, and it can be satisfactorily ascertained that it never possessed vascular tissue, the original belonged to the cryptogamia, as fuci, mosses, and the like.

If it consist of parallel tubes, and has neither pith, nor rays passing from the centre to the circumference, the original was endogenous; as the