

16. CONIFEROUS TREES.—In some groups of dicotyledonous trees the elongated cells, or tubes, are studded with spots or glands (Tab. 122, fig. 6), and this is particularly the case in the woody fibres of the *coniferæ*; the name (*cone-bearing*) is derived from the fruit of these plants being in the form of a cone, as in the fir, larch, &c.; transverse sections of the stems show the concentric layers and radiated structure peculiar to the dicotyledonous class. In this magnified view of a slice of the common fir (Tab. 122, fig. 2), the spots or glands are seen to be arranged in double parallel lines. In a remarkable family of pines, the *auracaria*, the spots are placed alternately, and sometimes in triple rows. All the trees of this order secrete resin, have branched trunks, and linear, rigid, entire leaves: species are found in the coldest as well as in the hottest regions. The *auracaria* (or, *altingia excelsa*,) is a native of Norfolk Island, a small spot in the South Pacific, about fifteen miles in circumference. This island presents a scene of the most luxuriant vegetation, and abounds in this particular species of pine, which attains a height of two hundred feet, and a circumference of thirty: it will not thrive in the open air in this country.

The limits assigned to these lectures will not allow me to dwell at length on any other of the numerous co-relations of structure presented in vegetable organization. I may, however, observe, that even in the foliage of the different orders, there are such