

In the *perennial herb* the aerial shoot dies down each year, and the growth is carried on by a lateral bud from the base, which either expands directly to the surface, or (as in fig. 9), first extends horizontally for a variable distance and then bends

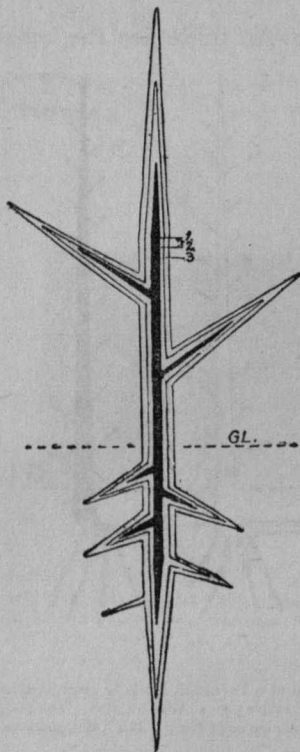


Fig. 10.—Diagrammatic Longitudinal Section of Tree or Shrub, to show relation of the increment of successive years. The black core is the wood of the first year; 2 and 3, of the two subsequent years. G.L., Ground level. The appendages above the line are branches; below, roots.

up to the light. The new shaft thus formed roots freely at the base. Though there is vegetative continuity between the successive annual segments, the body segment of the preceding year is normally abandoned and dies away. The actual plant of any year is thus a rooted branch of last year's plant. To this type belong plants with budding rootstocks, runners, rhizomes, tubers, corms, and bulbs. These are mere variants in detail, depending on food storage and the distance at which the new plant appears above the soil. Most seaside plants are referable to this type.

In the *shrub or tree* the new growth is not carried to a distance, but is added to the original plant in the manner roughly indicated in fig. 10. The growth made each year serves to thicken the original plant and to provide new branches and extensions of the existing ones. Thus from year to year the original plant is elaborated, growing in stature and thickness, till a tree results.

The tree remains in one place with annual increase, whilst the perennial herb tends to migrate slowly from its original location, never producing shoots of more than one season's duration.

The above types are characteristic of ordinary fixed or dormant soils, but by the shore soils exhibit mobility, and, as