



This cut illustrates the effect a limb has on timber. Up to *a, b* the limb was alive. Then the limb died, and for the last three years the annual layers of wood have been formed about the dead wood. So long as the limb remains the new growth will continue to cover it, and this produces the dead, loose knot common to timber.

yet small and while the diameter of the tree is very small. This produced in time a tree with a long, clean stem. The "second growth" of white pine in many cases is composed of trees growing in the open and producing large, lower limbs, will not drop off for years to come. This produces very knotty timber.

Nature will, in time and on most situations, give us a second crop of trees but she is not particular as to kind, quality or quantity. On the other hand the forester endeavors to reproduce the most useful kinds and of a sup-

erior quality. The forester follows two methods in producing wood crops. Natural regeneration, when the crop is established by the action of nature, that is, the trees are produced by seed falling from the mother trees or the shoots coming from the stump left after cutting, artificial regeneration, where the crop is established by man either sowing the seed or planting the young tree. For our needs in Ontario both methods will necessarily be followed owing to natural and economic conditions.

Successful natural regeneration of the conifers such



Plantation of Larch, showing the effect of close planting. The lower limbs died from shading while yet very small, and were easily cleaned off, thus giving a tree with a long, clean stem.