

## TREATMENT OF SECOND-GROWTH WHITE PINE.\*

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(Continued from February issue.)

To be ranked as first class timber a tree must be tall, straight, free from branches, and tapering as little as possible. If heavy thinning is done during the early years of the growth straight, clean poles are not as a rule produced—that is, not in the same degree as when the woods are kept dense and the lower branches die off gradually from lack of light. Nor can we make up for this by pruning, though it may be beneficial to some degree. Heavy thinning gives an increase of light and consequently produces a more rapid diameter growth and coarse-grained timber.

In the case of the white pine thinning should be carried on lightly until the end of the principal height growth, which occurs when the trees are about forty years old. Then the thinning should gradually become heavier, in

What hardwood species are allowed to remain depends largely upon the commercial value of the different kinds of wood. Perhaps the trees to be favored next to the White Pine, in a mixed forest, are the White Oak and Chestnut, both of which are healthy and vigorous trees of high commercial value.

In a woodlot of considerable size the whole area need not be thinned in one winter, as this would cause the owner needless expense. Let him cut out gradually the timber he may need for firewood and fence posts, and within a few years his whole stand will be cleared. In some cases it may be necessary to lay out a small sum per acre for this work, but the added rapidity of growth and the consequent increased value of the trees will in the end more than compensate for the money expended. Extreme care should be taken that the remaining trees and undergrowth are not injured by the removal of the timber and brushwood.

Thinning, if carefully carried on, is of great



YOUNG WHITE PINE GROWING UNDER WHITE OAK AND PITCH PINE.

order to assist the selected trees by the removal of all inferior and diseased ones. The thinning should be done more among the dominating and dominated trees than among those which have fallen far behind in the race, although the latter may be allowed to remain to assist in the protection of the soil or as wind-break.

If the woodlot in question does not consist of a pure stand of white pine, but is intermixed with hardwoods, the plan of thinning must be slightly changed.

The most important tree, which in this case is the white pine, must be favored in every way possible. Inferior hardwoods may be allowed to remain for a certain length of time to act as nurses for the young pines, but after their periods of usefulness for this purpose is past they should be removed. This removal should not be done too rapidly, as in many cases shade is beneficial and the pines will not stand a too rapid opening of the forest cover. After the inferior trees have been removed and the pines have firmly established themselves thinning may be commenced.

value in the production of high-grade timber. It affords a means of directing the growth of the wood, either towards the production of the greatest quantity or the best possible quality. Further, it preserves a suitable proportion of species in dealing with mixed woods. The danger from insects and fire is lessened by the prompt removal of dead and diseased trees, and thinning strengthens the selected trees against the injurious effects of wind and snow.

When it is the farmer's object to produce the best quality of timber—that is, long, clear boles—it is necessary that the trees should lose their side branches to a certain height from the ground. The lower branches of trees growing in crowded woods die naturally owing to the lack of light. This is a very marked characteristic of the white pine, as its branches often die to the height of 30 feet, which is also true of all light-demanding species of conifers. Sometimes the dead limbs drop quickly to the ground; in others they remain for years, eventually producing knots. If the lower branches do not drop off naturally, they are

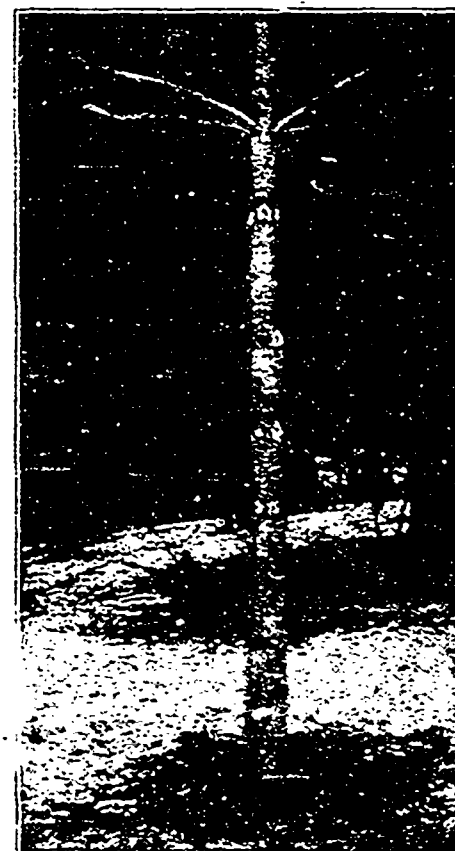


EXAMPLE OF BAD PRUNING; STUMPS OF BRANCHES LEFT.

usually removed by artificial means, and to this process is applied the term pruning.

The pruning of live branches is done to increase the value of the timber, stimulate the expansion of the crown of the tree, and also to free the young growth from the too dense shade of the overhanging trees.

Pruning to free the undergrowth from a too dense cover is usually done in woods consisting of timber of different ages. In many cases



GOOD PRUNING; BRANCHES CUT OFF EVEN WITH THE POLE.