

ture in building walls that are exposed to water. In the manufacture of cheap wallpaper and artificial flowers it is used in the form of a fine dust. Other uses are for cementation in steel mills, for cleaning purposes in the production of gas, in the manufacture of calcium carbide and carborundum, and, in foundries, for pickling.

'Everybody knows of its application in the manufacture of powder and explosives. Further uses are for floors in gymnasiums and riding schools, for the manufacture of paper, for slippery streets in winter, and for bedding in stables. Sawdust improves soil mechanically, and, when saturated with stable manure, it also works

chemically on the soil and so improves it. Sawdust is also used in sawdust mortar (for moist places) and in horticulture to protect hotbeds, etc. With proper manipulation a good wood soil, so valuable in gardening, can be obtained. In the manufacture of soap for washing and cleaning purposes sawdust is also employed.

'Very promising is the manufacture of sugar and alcohol out of waste woods; but these processes are not yet far enough advanced to be of commercial value and to justify large expenditures at the same time. Finally, sawdust is the only material now used for a cheap production of oxalic acid.'

## Pennsylvania's Fine Fight

### Chestnut Tree Blight Commission Believe they can Exterminate the Evil

While the following, taken from the Philadelphia Post, is somewhat enthusiastic in its character, nevertheless the authorities of the Chestnut Tree Blight Commission of Pennsylvania state that it is substantially correct. It is gratifying to know that such success has attended the efforts of this commission. It is both an incentive and a warning to Canadians to be on the alert in fighting at the earliest possible stage the enemies which threaten our forests.

A current example of the effectiveness of common-sense, scientific methods is found in the work of the Pennsylvania commission now engaged in exterminating the chestnut-tree blight. This organization is barely eighteen months old; but in that short space of time it has quieted the fears of the almost panic-stricken landowners and has got the situation well in hand. The entire field has been thoroughly scouted, the centers of the disease located and a great quantity of infected trees treated, destroyed or rendered harmless.

Chestnut blight is caused by a fungus. There are two fungous growths that are very similar in appearance, but it has just been discovered that only one of them is harmful to the trees. Studies made by the commission indicate that the disease-creating fungus is spread in the form of spores, which

are shot out into the air in enormous numbers, particularly in wet weather. This new information is of importance in that it will modify the existing methods of preventing the spread of the blight.

Wherever the inspectors of the commission find blighted trees they cut out the diseased portions of trunks and branches. This method had formerly been tried without much success; but improved technique has made it thoroughly effective. The diseased wood, after its removal, is burned, and when the new sprouts come they are usually found to be healthy.

Just as boards of health quarantine individuals, modern foresters quarantine diseased trees. Three or four serious outbreaks of chestnut blight in the western part of Pennsylvania were traced to infected nursery stock. Since this time the inspectors have turned their attention to the nurseries and have examined every individual tree offered for sale. This is a costly and tedious process, but it appears to be justified by the results it produces.

Not the least important researches of the commission are being devoted to tree medication and the discovery of a liquid fungicide that can be safely and effectively injected into trunks and branches. In this field the investigators encounter one of the great obstacles of human medication — the difficulty of finding a substance that will kill the germs without injuring their host. In this interesting and important work the commission has the co-operation of the office of Forest Pathology at Washington.