

How to Protect Pruned Trees from Infection

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This tree is being pruned properly—clean cuts close to the trunk to facilitate healing. Waterproof coating is being applied to the wounds.



tree troubles can be traced directly to improper pruning at some time in the past.

Poor Pruning May Kill

The greatest danger to which a tree is subjected by improper pruning undoubtedly is infection. Whenever a limb is cut, this danger is imminent, exactly the same as there is danger of infection when a person cuts himself or is operated on, and the wound is not properly treated. In the case of a person, blood poisoning is apt to occur; in the case of a tree, the almost inevitable aftermath of carelessness is decay.

Decay is caused by rot fungi, a low form of vegetable life which live by tearing down and consuming other forms of vegetable life. At a certain time of the year these rot fungi throw off what are called

OF all things that tend to give a golf course a down-at-the-heels appearance, probably none is quite so obvious as deadwood in the golf course trees. The dead limbs and branches, jutting skeleton-like into the sky, make the entire course look neglected and unkempt and seem to advertise the fact that the club officials care little about its appearance.

Greenkeepers who endeavor in every possible way to keep the appearance of their courses above reproach make provision for having their trees pruned at regular intervals. In this article I shall discuss the need for pruning and also why unusual care should be taken to make sure that the deadwood is removed in a scientific manner.

Pruning is the oldest form of tree care and perhaps for that reason there is a common belief that "anyone can cut a dead limb off a tree." Nothing could be farther from the truth. Investigations have proved that fully half of the major



The operator is showing the wrong way (left) and correct way to prune a branch from a tree.

fruiting bodies. They resemble toad-stools; in fact, many of them are toad-stools. These fruiting bodies give off a myriad of tiny microscopic seeds called spores which float through the air. Whenever these spores land upon the heartwood of a tree, they are likely to do serious damage.

The heartwood is always exposed when a limb or branch is cut off and unless the wound is properly treated the spores are bound to lodge upon it sooner or later. Once established in a tree, the fungous growth works relentlessly, spreading in all directions, destroying the cell walls and absorbing their contents. It eats its way insidiously into the limbs and trunks, leaving behind nothing but a porous, rotten mass which can be crumpled in the hand and powdered into dust.

Eventually the tree becomes nothing but a hollow shell doomed to collapse under the first heavy wind. It seems incredible that a splendid, healthy tree should perish because it has been improperly pruned, and yet this is exactly what has happened countless times in the past and will continue to happen as long as trees are pruned by unscientific methods.

Prune Limbs Flush with Trunk

One of the most common indications of improper pruning is the unsightly stub left when a branch or limb is removed. Not only does a stub detract from the appearance of the tree, but it also provides an ideal spot for rot fungi to get in and start their deadly work. Nature provides

no way for the end of the stub to heal over; it always remains open and exposed to infection, and after the wood dries it splits, making openings through which the rot fungi spores penetrate deep into the tree.

The tree expert never leaves stubs when removing limbs or branches. He makes the cut in such a way that the flow of sap can be carried constantly to the edges of the wound, permitting rapid healing. To do this, he cuts the branch off flush with the limb or the limb flush with the trunk. The sap, flowing downward through the inner bark, begins forming a new growth called callus which gradually grows over the wound and eventually covers it entirely, making further infection impossible.

The tree expert not only makes the cut in such a way as to facilitate callus growth, but he also takes precautions to treat the wound at once to prevent infection. He does this by covering the wound with a waterproof coating which sterilizes it and is an indispensable aid in protecting it until nature covers it with callus.

A waterproof coating must have special properties to be satisfactory. It must adhere firmly to the surface of the wound in all kinds of weather—it must not run in summer or crack in winter; it must be plastic enough to bridge over cracks and keep the wound sealed even when the wound begins to check. Years of experimentation were necessary to perfect a coating which was satisfactory in every respect.

When a large limb is removed improperly, the bark and wood are often badly ripped. This is the common result of removing the limb with only one cut. After the saw sinks deeper and deeper into the wood, the limb begins to sag. Finally, before the cut is completed, the limb crashes. Rarely does it break off clean. Usually, it rips the bark and wood on the lower side of the limb. The jagged wound which results is particularly susceptible to infection. Sometimes many feet of bark are torn away and the appearance of the tree is marred.

How to Saw Off Branches

To prevent such injuries, the tree expert makes three cuts with his saw. The first is made on the under side of the limb, a foot or two from the trunk. The second is made on the top side a little farther out. The result is that when the limb falls the break is clean—the ripping of wood and bark is stopped at the point where the first cut was made. After the heavy part of the limb is removed, the tree expert proceeds to remove the stub flush with the trunk.

Needless to say, spurs should never be used in climbing the trees in order to prune it. Each hole made in the trunk by the sharp points leaves an opening through which the tree can become infected. The results of such wounds are often far worse than the benefits gained by pruning out the deadwood. Tree experts get to all parts of a tree by the use of ropes which they have been trained to use with amazing dexterity.

Incidentally the ax is a tool which always should be left in the tool kit unless there are trees to be cut down. When a tree is pruned with an ax, the wounds are almost invariably jagged, and consequently will not heal rapidly. The tree expert always uses saws for pruning work, and the wounds are so cleanly made that the healing process is hastened.

Pruning is a very important and necessary phase of tree surgery. Dead branches in a tree are a serious menace—they often crash to the ground when least expected, destroying property and endangering human life. Moreover, the deadwood menaces the tree's health inasmuch as it is a favored camping ground for all kinds of bacteria, fungous spores and insects. There might well be a slogan: Remove the deadwood and save the tree.

It must be remembered, however, that pruning the deadwood out of a tree does

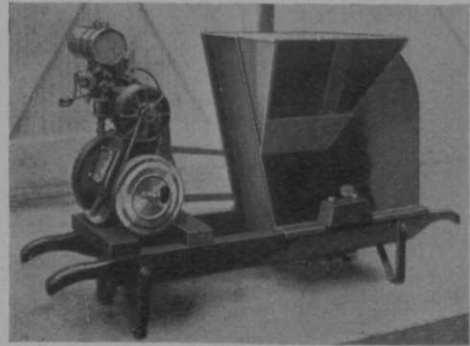
not remove the cause of that deadwood. When branches and limbs die back, there is something wrong with the tree. It may be diseased; it may be starving to death; it may have been repeatedly defoliated by insects and its vitality so lowered that it is slowly dying; it may have girdling roots which are strangling it. Any one of a great many things may be wrong.

By making a thorough diagnosis of the tree's condition, the tree expert is enabled to determine the cause of the deadwood and treat the tree accordingly. Obviously this should always be done if the tree has any particular value to the golf course.

(This is the fourth of a series of articles regarding tree care written for GOLF-DOM, by Martin L. Davey, president of the Davey Tree Expert Co.)

ANNOUNCE NEW COMPOST MIXER AND SPREADER

BEARDSLEY & PIPER COMPANY, 2543 North Keeler Ave., Chicago, have recently placed on the market a new compost mixing machine and a topsoil dresser. The manufacturer's announcement reads: "This new *Soilslinger* (illustrated here)



Soilslinger, new composter.

thoroughly cuts, breaks, mixes and aerates compost, completely pulverizes and prepares soil, sand and manure, and delivers a perfectly blended material into a fluffy pile or windrow. The unit is simply constructed, possessing a specially designed cutting cylinder to insure proper mixing and aeration of materials. It is made with pulley for tractor drive or with gasoline engine or electric motor. While the *Soilslinger* will meet every capacity requirement, it is particularly applicable, because of extremely low cost, for the smaller golf courses and the needs of estates, etc., where only one or two men are employed for turf maintenance."