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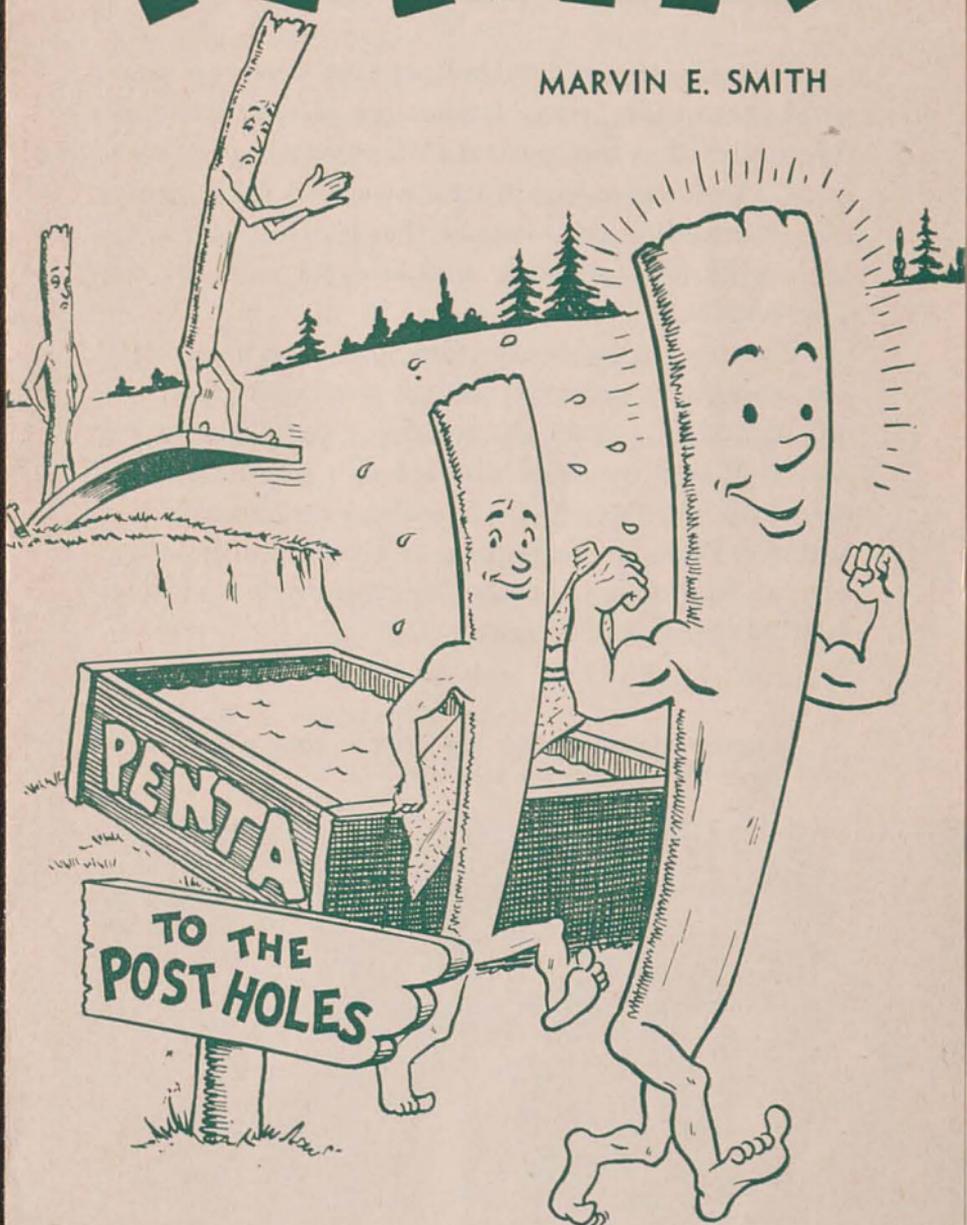


LONGER-LASTING FENCE POSTS

with

RENITA

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U. S. DEPARTMENT OF AGRICULTURE

WHY USE PENTA?

PENTACHLOROPHENOL (commonly nicknamed "penta") is an oil-soluble wood preservative. With this chemical the life of many fast-decaying woods can be extended to three and four times that of untreated wood.

You Can Grow Your Posts

Even though our durable fence post woods are scarce or of poor quality, many farmers can meet annual needs by growing their own posts if their woodland is managed wisely. Most tree species in farm woodlands are at present not serviceable as posts because they rot too fast. Treated with penta, they are good substitutes for naturally durable woods.

Plan now to handle the farm timber as a crop. Cut out trees that are crowded and not growing thriftily. This will hasten growth on the remaining trees. Taking out poorly formed trees and diseased or otherwise crippled trees will also benefit the woodland and furnish post material. Posts for treatment may be salvaged from tops of trees cut for sawlogs. One important point: cut only **ROUND** posts for treatment.

In making thinnings you can reserve good crop trees for later harvests. Cut just the poor trees.



What Are Sapwood and Heartwood?

Sapwood

Light-colored, porous, young wood just beneath the bark. Conducts food and minerals between leaves and roots. Decays quickly. Soaks up penta readily.

Heartwood

Dark, old, dead wood in center of tree, forming its support. More durable than sapwood; often very decay-resistant; difficult to treat.



Good Posts for Treating—

- have a minimum of heartwood.
- have at least one inch of sapwood surrounding the heartwood.

What To Treat

Here are points to remember when choosing posts:

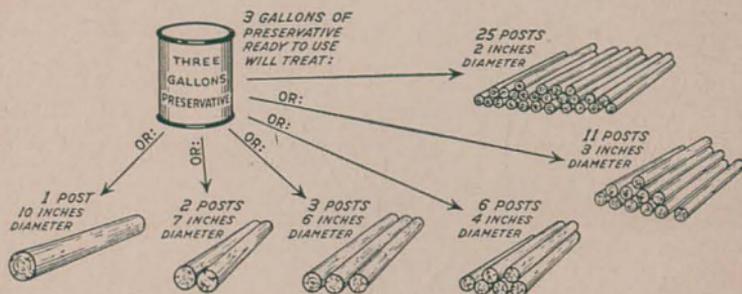
1. Some woods naturally last a long time. They owe all their lasting qualities to the amount of heartwood. For naturally durable posts, select white oak, bur oak, or northern white cedar with large amount of heartwood.
 2. Sapwood is more easily treated than heartwood.
 3. Wood from some kinds of trees is easier to treat.
- These facts will help you choose woods:

Pine, spruce, balsam fir, and red oak take penta treatment well. Next best are tamarack, black oak, elm, black ash, hackberry, and hickory.

Basswood, maple, green ash, and willow take up the penta solution poorly. Use these only when better woods are not available. Because of extremely poor penetration, aspen, cottonwood, and birch should not be treated.

Heartwood, and not sapwood, accounts for the durability of white oak, bur oak, and northern white cedar. When large bolts from these trees are split into posts, nondurable sapwood usually makes up only a small proportion of the whole post. Penta treatment is then hardly necessary. But small, round posts and split posts with large amounts of sapwood need treatment.

FOR ECONOMICAL USE OF PRESERVATIVE AND TIMBER —
CHOOSE THE SMALLEST POSTS
THAT WILL MEET YOUR FENCING REQUIREMENTS



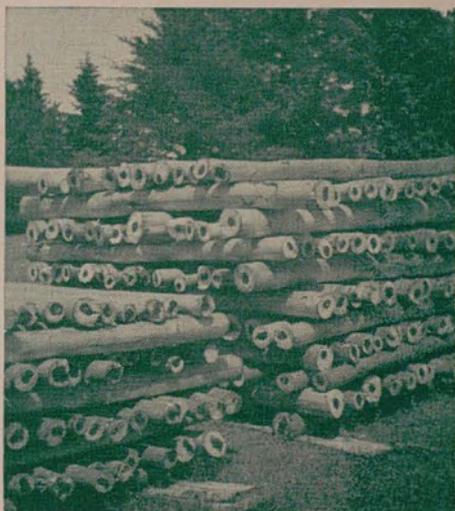
STEPS IN TREATING

1 Prepare Posts Properly

Penta is best used on ROUND posts that have been peeled of both outer and inner bark. If bark is not entirely removed, drying takes longer and the penta solution is kept from penetrating the wood. If you want construction plans for a motor-driven mechanical peeler, write to Extension Forester, University of Minnesota, Institute of Agriculture, St. Paul 1, Minnesota.

Posts cut in late spring or early summer will strip easily and cleanly if peeled immediately. For posts cut in the winter peeling can be made easier by bulk piling the posts. Likewise, do any pointing, boring, or notching peeled in spring and openly piled will be ready for treatment in late summer or early fall.

Trim knots and branch stubs smooth before treating the posts. Likewise, do any pointing, boring, or notching before treatment. Otherwise, untreated wood is exposed and will decay.



Preparations for treatment—Peel off both outer and inner bark of posts to get good penetration of penta. Stack posts crib-fashion for proper air drying before treatment.

2 Get Posts Air-Dry

After peeling, the posts should be stacked for seasoning. Green wood cannot be treated effectively.

Pile posts loosely (crib-fashion) at least one foot above the ground in a well-ventilated location. Seasoning can be expected to take 60 to 90 days in summer and 120 to 180 days in winter.

Checking and splitting of the posts—caused by drying too rapidly—can be minimized by roofing the stack with boards the first month or two.

3 Soak Posts in a Cold Solution

Submerging the posts in a cold solution of penta is a method of treatment that gives good results. Advantages of the method are these:

- (1) equipment is usually available on the farm;
- (2) hazards of heating solutions are eliminated.

Ready-to-use solutions can be obtained, but for farm use it is more practical to buy the penta liquid concentrate and mix it with the recommended amount of kerosene or light fuel oil (No. 1, 2, or 3). Manufacturers' directions for mixing will be found on container labels. If you want to paint posts after treating, get the special paintable concentrate. For a list of suppliers of penta, write to Extension Forester, University of Minnesota, Institute of Agriculture, St. Paul 1, Minnesota.

A stock tank or three oil drum halves welded together make satisfactory horizontal treating tanks. Single oil drums are sometimes used vertically when only butt-treatment is wanted. For full-length treatment, however, they are unsatisfactory because posts must be turned end-over-end. Moreover, a single drum is too shallow to treat one-half of a seven- or eight-foot post. Full-length treatment is preferable to butt-treatment.

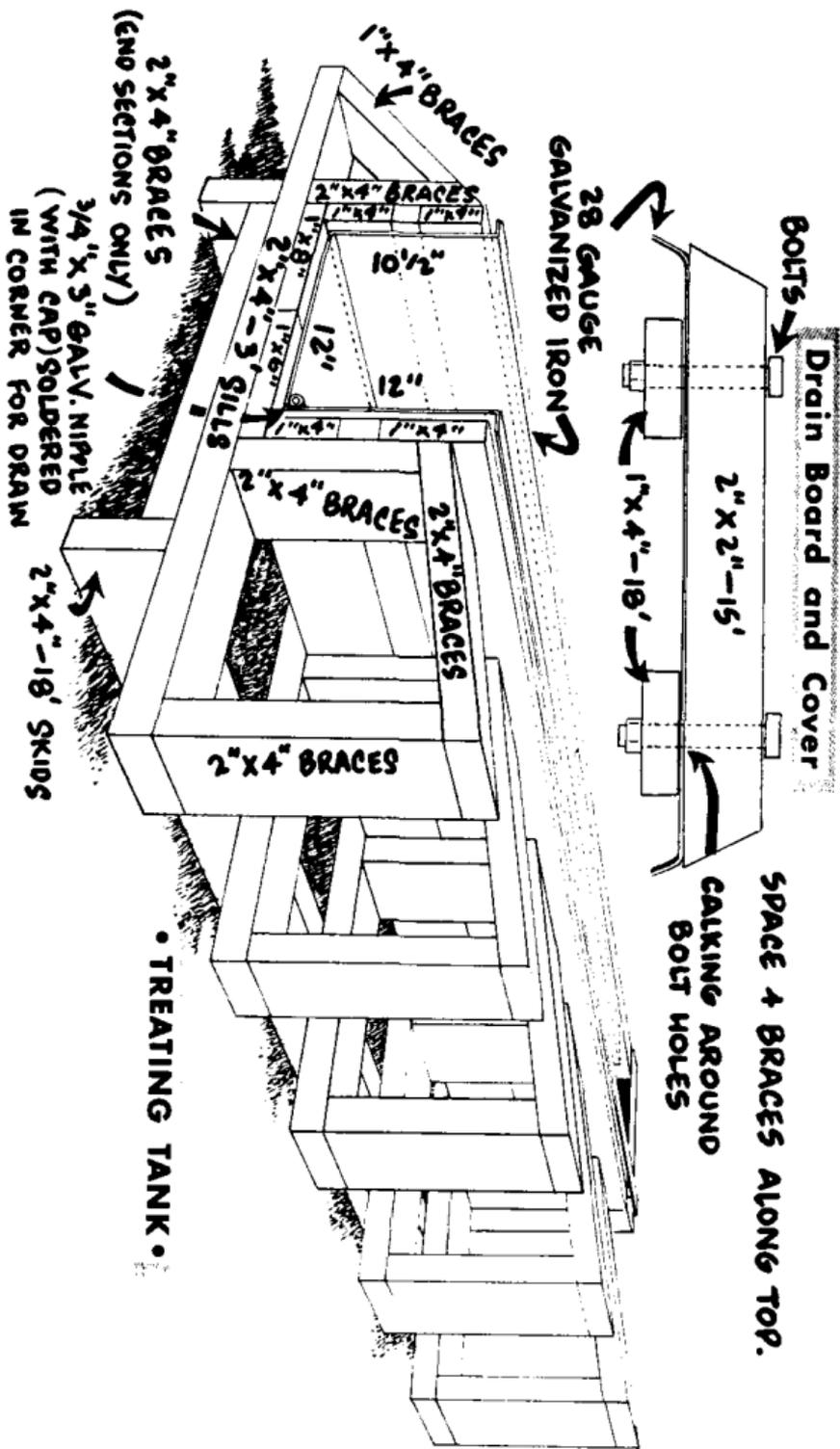
Important construction details for an improved portable horizontal tank for treating posts, small poles, and lumber are given on the opposite page.

After placing posts in the tank and before adding the liquid, secure the posts to keep them from floating. Then add liquid until the posts are completely covered. As a general rule, most woods should be submerged for 48 hours. Add more solution from time to time to replace what is taken up by the wood.

After soaking, allow the posts to drain. Finally, dry them out-of-doors and out of direct sunlight. When dry enough to handle, they are ready for service.

PRECAUTIONS

- Penta can be irritating to the skin, so it is good practice to use synthetic rubber gloves to protect hands.
- Washing at once with soap and water will remove the solution if it gets on hands or face.
- Follow the same fire precautions you would around any fuel oil.



Perspective drawing of a dual-purpose treating tank for cold-soak treatment of posts, small poles, and lumber up to 16 feet long. Approximate cost of materials—\$30-35.

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