

moisture is fatal to the process. Two coats are usually applied, the first being allowed to dry before the application of the second.

ABSORPTION AND PENETRATION.

The amount of preservative absorbed by the sap-wood varies with the timber, the pines absorbing as much as 30 lb. per cubic foot of wood, and the eucalypts only 15 lb. per cubic foot. A minimum absorption of 20 lb. per cubic foot for pines and of 10 lb. per cubic foot for eucalypts is recommended for the butt treatment of posts. For the upper portion of the posts the minimum absorption should be at least half that recommended for the butt treatment.

For posts and other timbers in contact with the ground it is preferable that the whole of the sap-wood and as much of the heart-wood as possible be impregnated, but this is sometimes difficult to accomplish, and impossible on the score of economy. The minimum penetration recommended by the Forest Service is 1 in.

HOW TO PRESERVE FENCING-POSTS AND OTHER FARM TIMBERS.

Only sound wood free from decay is suitable for treatment. Once started, decay is not necessarily stopped by the preservative, but may continue to destroy the interior of the wood beneath the treated portion. It is necessary to bark or peel all round forms of timber immediately after felling, preferably in the winter, otherwise fungi and wood-boring insects quickly commence their destructive activities beneath the loose pieces of bark, where the moisture tends to collect, and where conditions are favourable for rapid decay. The removal of the thin inner bark of the wood is important, as comparatively small particles prevent penetration of the preservative, and their removal after treatment exposes a surface of untreated wood through which decay enters.

Fence-posts are best seasoned by open piling, as shown in Fig. 1, in a shady yet exposed locality where there is ample circulation of air both beneath and through the whole pile. Damp ground and both living and rotting vegetation are to be avoided. Too rapid seasoning damages timber by excessive splitting, &c. This applies particularly to locally grown Australian hardwoods.

Poles and large structural timbers which show a tendency to split are best protected by the use of S-shaped irons, which are driven into the wood across the incipient splits to hold the timber in place. They are to be purchased for a few pence each. End coatings, such as coal-tar, pitch, and petroleum residue, effectively prevent end-checking.

Under favourable conditions posts season sufficiently for treatment in from 60 to 180 days, according to the species and to the period of the year. Only the sap-wood or that portion to be treated requires to be thoroughly seasoned. By weighing a few specimen posts at regular intervals the state of seasoning is obtainable with fair accuracy. When the weights remain fairly constant during two weeks of good seasoning-weather the posts are dry enough to treat. A glazed appearance on the surface of the posts is a sign of case-hardening, which seriously retards penetration. It is remedied by shaving off the hardened surface for a distance of 6 in. above and below the ground-line.