U.S. Department of Agriculture Forest Products Laboratory
REPORT ON WOOD CHECKING

Not uncommon are so called 'complaints' by owners of new wood fences, such as "what is wrong with my posts – they are splitting and cracking?"

The U.S. Department of Agriculture Forest Products Laboratory at Madison, WI, has done considerable research on the subject of the cause of **WOOD CHECKING**. In their bulletin #1187, the U.S.D.A. states as follows:

Medium to large items are considerably more difficult to season than small items. The difficulty arises because the medium to large items contain the heartwood (or center) of the tree, frequently of large proportion to the whole and the outer sapwood layer. The enclosure of the heartwood within the piece prevents the satisfaction of the inherent differences between tangential and radial shrinkage by distortion of cross section. As a consequence, stresses set up in different directions during drying. Thus, medium to large items have a natural tendency to develop a 'v-shaped check' towards the center.

In simple terms, when a timber dries, the exterior surfaces, called sapwood, shrink faster than the inner wood, called heartwood. As a result of these drying differences, something has to give; the result being the familiar 'check', or as it is referred to erroneously by the layman, a 'SPLIT' or a 'CRACK'.

Checking is less evident visually, but still a distinct possibility in boards and planks (the form in which we see common lumber) because these timbers are normally cut from larger trees and having been sawn on four sides, exposure to the air and natural drying is even and uniform.

In final summary, fence posts, therefore, are neither cracked or split, but have undergone a process known as **'checking'**; the result of natural seasoning (drying out) of any piece of lumber. Both laboratory and field tests tend to prove that the natural checking of materials does not materially affect the strength of the timber.