

# TECHNICAL NOTE NUMBER 197

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## VENEERED AND SOLID FURNITURE

A large proportion of all the furniture manufactured has more or less veneered construction in it. The high-grade finish woods are used almost entirely as veneers. More table tops, drawer fronts, doors, and side and end panels of all kinds of furniture are built up of three or five layers of wood than are made of single solid pieces.

Veneered construction has several advantages over solid wood, besides permitting the use of cheaper material in the core or on hidden surfaces. These advantages should be borne in mind by the purchaser who thinks that veneering cheapens the product.

Adjacent plies in practically all plywood and veneered panels are laid with their grain directions at right angles to each other; that is, in a three-ply panel the face veneers are glued with their grain at a right angle to that of the core, and in a five-ply panel the grain of the face veneers is parallel to that of the core and at right angles to that of the intervening layers or crossbands. A panel of this construction has the advantages that it is more nearly of the same strength in all directions, and that as it absorbs or gives up moisture it shrinks and swells in width much less than solid wood. Splitting along the grain in one set of plies is made impossible by the cross grain of the adjacent plies, and rapid shrinking across the grain in the face veneers is offset by slow shrinkage along the grain in the core.

The change in dimension with change in moisture content of veneered panels is almost equal with and across the grain of the face, but is much less than that of solid wood across the grain.

More care can be taken in the selection of surface wood in veneered furniture than can be taken in solid furniture. The manufacturer can dry veneer stock very quickly and cheaply, and he can utilize all of his wood to the best advantage.

Veneered furniture, if properly cared for, will last as long as solid furniture. The glued joints when correctly made are as strong as the wood under ordinary service conditions. Long exposure to very damp air or direct contact with water, of course, will decrease the joint strength of interior-type glues commonly used for furniture. Such service conditions would also be detrimental to solid furniture, because even in solid furniture the members are joined together with glue.