

TECHNICAL NOTE NUMBER 139

FOREST PRODUCTS LABORATORY - U. S. FOREST SERVICE - MADISON, WISCONSIN

SUNKEN JOINTS IN FURNITURE PANELS

A defect in manufacture known as a sunken joint is sometimes noticeable in thick panels, especially the tops of tables, desks, and other pieces of furniture. This defect appears as a long, shallow depression in the surface and may be very conspicuous when viewed at certain angles.

In modern practice furniture tops are generally built up of five plies of wood, consisting of a thick core, cross banding, and faces. The core is usually made of a number of pieces of lumber glued together. Investigation shows that the defect in question occurs over joints in the core stock.

The Forest Products Laboratory finds that too rapid progress in the preparation of the core is the basic cause of sunken joints. The wood next the joint absorbs moisture from the glue and swells. If insufficient time is allowed between the gluing of the joints and surfacing of the core, which is the next step in manufacture, more wood will be removed at the joints, because of the greater swelling there than at intermediate points. During subsequent drying and seasoning, greater shrinkage takes place at the joints, causing permanent depressions.

The remedy for sunken joints is an extension of the seasoning period between gluing and planing. The proper length of this period will vary with the thickness and species of wood, and atmospheric conditions, but it should be long enough to allow the moisture added by the glue to evaporate or to distribute itself through the wood.