

Retention of Nails by Various Woods. Object: To ascertain the relative ability of various woods to retain nails.

Several widely used commercial woods were employed in the investigation and some six hundred tests were made with the specially designed equipment installed last year. Nails were of various types such as cement coated, barbed, etc.

Results are of value in connection with many uses of woods such as crates and containers for shipping manufactured articles. The work will be continued until all Canadian commercial woods have been covered.

Comparative Strength Values of Canadian Woods for Tie Purposes. Object: To establish "composite" figures for woods at present used, or of possible use, for railway ties.

The composite figure is arrived at by combining the figures for the several strength functions with the spike-retaining value, taking into consideration the physical properties of the wood under test. Spike-retaining tests were made on cedar, spruce and jack pine ties. The effect upon retention of driving into bored holes as compared with solid wood was carefully investigated, special attention being given to the effect of varying the diameter of the bored holes. The work will be continued until figures have been established for the several species to be covered.