Following on legislation extending annual holidays in the timber industry, wholesale timber and box prices were advanced slightly to cover the extra costs involved, representing the first increase in timber prices since 1942. Pending the supply of financial accounts from timber-merchants to determine whether they could absorb these increased costs, the Price Tribunal did not approve of a revision in retail prices, which therefore remained unchanged throughout the year.

75. *Timber Imports.*—As disclosed by Appendix IV, imports for the calendar year 1944 amounted to 15,178,000 board feet, consisting almost entirely of Australian hardwoods and North American softwoods in virtually the same quantities as for the previous year. Pre-war timber imports averaged 40,000,000 board feet annually, and, as most were considered essential, the decrease in supply has been felt keenly, and wood-users have suffered considerable hardship.

The supply of Australian hardwoods, particularly for railway-track sleepers, fell to such a low level during the year that officers of both the New Zealand Railways and the State Forest Service were despatched to Australia for the purpose of surveying the forward position and negotiating improved arrangements with the Commonwealth Timber Controller. Their investigations showed that a very critical position existed in the Commonwealth, and that shortages of man-power, as in New Zealand, were limiting production. Assurances were received that all assistance possible would be forthcoming, and while improvement in supply did follow, local stocks of Australian hardwood sleepers fell to such low levels that it was found necessary to resort to the use of totara for tangent work in order to conserve hardwoods for curve and other critical uses. As the demand for totara has exceeded production for many years, its use for railway sleepers is a serious blow to the building industry, particularly for joinery, and it is to be hoped that during the current year it will be possible to secure such an improvement in the supply of hardwood sleepers as will permit the use of totara to be discontinued.

76. *Timber Exports.*—From the beginning of the century until 1925 exports of timber exceeded imports, but ever since, with the exception of a brief period during the depression, imports have consistently exceeded exports. For the calendar year 1944 exports totalled only 4,243,000 board feet—the lowest figure recorded since 1880—but this figure would have been substantially greater had shipping been available, as 12,000,000 board feet of rimu and 1,000,000 board feet of beech had been allocated to the Commonwealth Timber Controller in exchange for essential supplies of Australian hardwoods, for sleepers, poles, piles, and other purposes (see Appendix V).

CHAPTER X.—UTILIZATION TECHNOLOGY

77. *General.*—It has been necessary during the past year to subordinate long-term objectives to a considerable extent, to the immediate problems relating to wartime timber usage. Such problems have ranged from container design to the employment of special plywood for an active role in warfare; routine inspectional work continues to be a necessary corollary.

78. *Grading of Timber.*—In connection with the major housing-construction programme for the post-war period it has become more apparent during the year that timber requirements should be met as far as practicable by the use of insignis pine for structural purposes as well as for sarking and flooring. Substantial progress in the development of grading rules to cover framing timbers has been made; trial cuttings of sample areas of young exotic forest of *P. radiata* have yielded invaluable information on sawing and drying problems, in addition to providing material upon which to formulate practicable grading rules. As a basis for these rules it has been necessary to introduce the conception of "cuttings"—*i.e.*, the standard length building members obtainable from random length timber, which is thus graded according to its ability to produce such cuttings. For "cuttings" to be used as studs in non-bearing walls or for members not subjected directly to either bending or compressive stresses, 50 per cent. of any cross-section free from defects—*i.e.*, knots principally—has been regarded as the acceptable minimum. For those to be used for rafters, ceiling-joists, and studs for exterior or load-bearing walls all of which are subjected primarily to bending and tension stresses, at least two-thirds of any cross-section must be free from defects. Sufficient data have now been assembled to specify grades for kiln-dried framing timber for the prefabrication of wall panels.

A survey made in Auckland during the current year of the seasoning, storage, and utilization of tawa has provided additional data prerequisite to the finalizing of grading rules for hardwoods.

79. *Specifications for Finished Products.*—Following several years' investigations, recommendations made by the Forest Service for standardizing sizes and profiles of dressed building lines were considered by a Standards Institute Committee which agreed to the more important provisions affecting types and size of weatherboarding in 6 in. nominal width, and the profile and finished dimensions for nominal $\frac{1}{2}$ in. matchlining. Although the provisions for flooring in 4 in. and 6 in. nominal width were approved as regards width and profile, the required finished thickness was raised to $\frac{13}{16}$ in., with the proviso that dressing on the back is not essential, but the proposal is so impracticable and so opposed to all technical considerations that it is unlikely to be proceeded with. Weatherboarding from nominal widths above 6 in., matchlining in nominal $\frac{5}{8}$ in. and $\frac{3}{8}$ in. thickness, and secret-nailed flooring have meanwhile been excluded from the proposals.

Schedules of permissible blemishes and defects for furniture parts and general clauses affecting timber sizes, seasoning, and species were prepared by the Forest Service for embodying in a household furniture specification, and at subsequent meetings of the Standards Institute Furniture Committee most of these clauses were adopted. Those sections of the specification dealing with finished timber sizes, finished moisture contents, and treatment of timbers such as tawa for dowels and finished work to ensure freedom from attack by insect borers require fuller consideration by the Timber Sectional Committee. In the draft standard for commercial plywood the clauses governing grade names, grain direction, face checks, core gaps, finished moisture content, and adhesive strength are considered most unsatisfactory, and their revision is considered essential in the interest of consumers.

Other current Standards Institute Committee work covered timbers for tool-handles and ladders. During the year the regulations covering wooden casing and capping for electrical installations have been reconsidered, and clauses covering grade, moisture content, and other details amended.