



MACHINE AND DUTCH-HOEING LINED-OUT TREES.

straight in the grain, with moderately interlocking fibres, and shows very little sapwood, generally under 1 inch.

Karri weight about 63lbs. per cubic foot when fairly seasoned.

Jarrah is most generally employed for railway construction, sleepers, marine and

engineering works, and building construction and is specially suitable for underground use, and where in contact with wind and water. Piles in river bridges erected 54 years have been withdrawn and found perfect in every respect. It cannot, however, be said that it would with-

stand the attack of the *teredo navalis*.

Karri is largely used for car and waggon frames, bridge timbers, flooring, planking, telegraph pole arms, fruit cases, and street paving blocks, being considered by many equal to jarrah in this respect.

Tuart is used in the framework of railway waggons, buffers, ship's beams, bridge supports, deck planks, etc., and especially in wheelwright's work.

Wandoo is deemed equal to jarrah for railway sleepers, also used for short piles, bridge and wharf planking, etc.

Full information regarding Australian timbers suitable for commercial requirements may be obtained from Messrs R. Dalrymple Hay, Director of Forests, Sydney; H. McKay, Conservator of Forests, Melbourne; W. Gill, Cons. of Forests,

Adelaide; and N. W. Jolly, Director of Forests, Adelaide.

Heartwood and Sapwood.

Contrary to general practice in the case of other chief timbers of the world, the heartwood core of the eucalypti is to be avoided. Specifications for cut timber should, therefore, require freedom from heartwood, except in the case of piles, which are better round than squared. Sapwood, on the other hand, rarely measures above an inch in thickness and being often as hard as the inner wood, hardly needs to be particularly excluded except in cases of special importance. It is preferable to season all eucalyptus timber for at least twelve months prior to using.

Other Australian Timbers.

The following information has been obtained from the Forest Department, Sydney. Samples of the undermentioned woods are available for inspection at the Public Works Office in Wellington.

Apple-tree (*Angophora intermedia*).—Timber strong, tough, heavy and durable; subject to gum veins; used for naves of wheels, etc. Plentiful supply.

Blackbutt (*Eucalyptus pilularis*).—Timber strong, sound, hard, heavy and highly esteemed for house-carpentry, ship-building, bridge planking, street-paving blocks, etc., and is about equal in strength to rough ironbark. Suitable for export for railway sleepers. Plentiful.

Brush Box (*Tristania conferta*).—Timber strong, hard, close-grained and durable; a much valued timber, and not likely to be attacked by white ants etc. Ribs of vessels constructed of this wood have kept perfectly sound for upwards of 30 years. Paving blocks. Extensively planted as ornamental shade tree. Plentiful.

Gum, grey (*E. propinqua*).—Timber resembles grey ironbark, hard, heavy, tough, strong, inlocked and durable; used for poles and shafts of carriages, spokes of wheels, railway sleepers, posts, felloes, shingles, etc. Plentiful.

Gum spotted (*E. maculata*).—Timber strong, elastic, and durable (free from sapwood); used for ship-building, naves of wheels, cart and buggy shafts, street paving blocks, etc. Timber splits well and the bark is beautifully spotted. Plentiful.

Ironbark (*E. paniculata*).—Timber much valued; hard, tough, strong, interlocked and durable; used for bridges, sleepers, railway carriages, beams, poles, building girders, etc. Fairly plentiful.

Ironbark, red (*E. siderophloia*).—Timber highly esteemed for strength and durability; much used for large beams, girders, sleepers, dray poles and other purposes for which timber of great strength and durability is required. Plentiful.

Mahogany, red (*E. rosiniifera*).—Timber tough, durable; used for staves of casks, shingles, palings, rough buildings and paving blocks. Fairly plentiful.

Mahogany, white (*E. acmenoides*).—Timber pale, hard, heavy, close-grained and durable; used for posts and rails of fences, house and ship-building, plough beams,

KOWHAI (*Sophora tetraptera*).