

If only we could grow these trees in Canada!



Plate by courtesy 'American Lumberman.'

Picture shows an Athel windbreak, just eighteen months after the small cuttings were planted.

THE Athel tree is a remarkably quick grower, and was introduced into California and Arizona from Northern Africa. What such a tree could do for the Canadian prairie farm, if it could be persuaded to stand the climate, is indicated by its attainment of a height of six to ten feet one year after planting, while trees four to six years old reach 40 to 50 feet. It thrives in sandy and calcareous soils and in

those with considerable alkali and is very drought and heat resistant. In addition it is an exceedingly beautiful tree, forming thick branches close to the ground, just what the prairie farmer needs in a shelter belt.

The Forestry Magazine hopes to have for the next issue a report from United States sources as to the ability of the Athel tree to stand low temperatures.

How Wood is Distilled and what Results

IF hardwoods such as birch, beech or maple are heated in an iron vessel they are decomposed into gases, aqueous and oily vapours and charcoal. The uncondensable gases are inflammable and, in commercial distillation plants, are burned in the furnace used to heat the wood. The charcoal is cooled and sold for domestic fuel.

The vapours are passed through pipes surrounded by cold water and condense into a tarry acid liquid which, on standing, separates into layers of oil, watery liquor and tar.

The watery liquor is called Pyroligneous Acid and contains wood alcohol, acetic acid, acetone and other substances. The acid in this liquor is neutralized with lime thus forming

Grey Acetate of Lime from which acetic acid, cetone, ketone oils, acetate of soda and other chemicals are derived.

Wood alcohol is separated from the neutralized Pyroligneous Acid by redistillation. The oils and tar contain creosote oils and pitch.

Hardwood distillation is the principal source of acetic acid, acetone, sodium acetate, etc., and is the only commercial source of methyl alcohol which is the purified form of wood alcohol. Acetone is valuable as a solvent in the "Smokeless Powder" and Celluloid industries. Ketone oils may be used as varnish removers. Methyl alcohol is important as a solvent for shellac and other varnish gums and as a fuel. Methylated

Spirits is used for the same purposes and consists of grain alcohol which has been rendered unfit for drinking purposes by the addition of methyl alcohol. Formalin, which is so much used for cleansing wheat before sowing, is manufactured from methyl alcohol. Creosote oils yield a substance called Guaiacol which is a valuable medicinal drug.

HOW PINE TREES MAKE TURPENTINE.

THE operation of turpentineing pine trees does not lower the strength or resin content of the wood, according to information obtained by the Forest Products Laboratory at Madison, Wis. The crude turpentine, or oleoresin, is not drained from a store in the tree, but is manufactured under the stimulus of the wound by living cells in the sapwood immediately adjacent to the cut on the trunk. No turpentine is produced by the heartwood because all of its cells are dead. The heartwood may be saturated in places with pitch but this does not readily flow out as does the resin freshly formed in the sapwood.

The major part of the tree is not appreciably affected, and the loss due to death of trees or to a reduction or degrading of lumber is very small when the proper method of turpentineing is followed; this loss is more than offset by the additional revenue obtained through turpentineing. The greater part of the wood that is chipped away would not have become finished lumber, but would have gone into slabs and edgings at the sawmill. With proper treatment, the turpentineed faces remain healthy, and the wood underneath does not become saturated with resin.

PIERS MADE OF PAPER

Supporting piers are now being made of paper in California. These piles are not subject to attack by the teredo. They are 60 feet in length and from 18 to 30 inches in diameter. A square steel cap is fitted over the top to receive the shocks of the pile-driver.

PLASTIC WOOD

Plastic wood is a collodion preparation made with very fine wood meal and of the consistency of putty. It is claimed to be waterproof, will set hard and can be turned with a lathe. Nails can be driven into the dried material without cracking it.