



*Above: A meeting room in a company headquarters rendered in marble and wrought iron exude an air of elegance and confidence.  
The Amtico Company Ltd.*

mind should both be expanding constantly with thoughts and uses for both old and new materials of all types.

While building principles remain fairly constant, practices have radically altered through the centuries. Increasingly, cost is a major factor: speed and ease of working naturally play their part to the point whereby, in some cases, pre-formed interiors are delivered on site that slot into a structural framework and plug into service ducts. This may seem a very limited system, but with a choice of components there is interesting potential offering further scope and challenge to the interior designer.

On the other side of this coin, we are seeing more and more residential customers wanting to participate in the work of designing their own environments, creating interiors that are a part of themselves and of their families. The designer can be the professional who helps them realize their dreams.

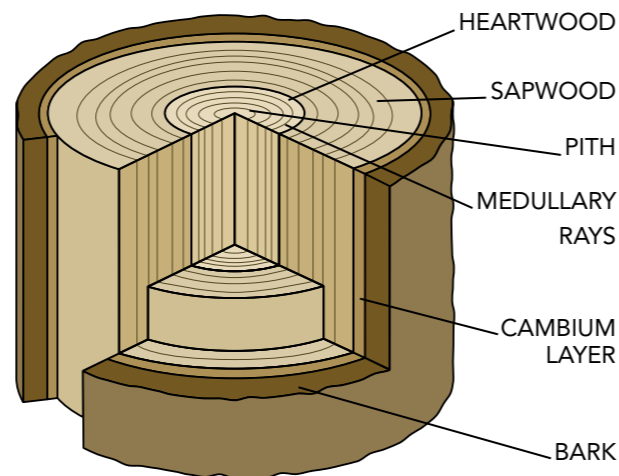
**The Tree** From the time a tree is little more than a few centimetres or inches high, it increases in girth and height each year by the growth of new cells at the cambium layer, a slimy film protected from damage by the bark. On the inside of this growth point there is a flow of water from the roots on its way to the leaves and, on the outside of the cambium layer, a return flow of starches and glucose created by photosynthesis in the leaves.

The combination of starch, glucose and water is consumed in the new growth of timber, apparent each year in the form of annual rings grown during the spring and summer seasons. After some years' growth (often decades or even hundreds of years in some cases) the centre of the trunk ceases to carry sap to the leaves and dies off. Then the heart-wood (the central part of the tree, hardened and matured by age) actually serves little function other than providing structural support to the mature tree; but its toughness is an essential feature for the manufacture of furniture. All other parts of the tree should be discarded because they are prone to infection by woodworm and decay.

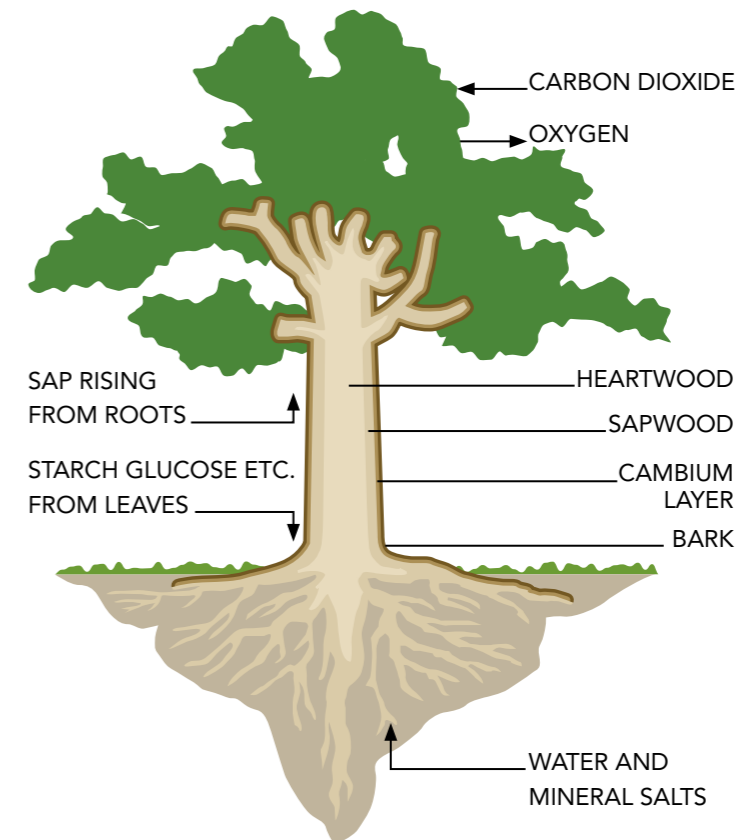
At the time of felling, half the weight of a tree might consist of water. Before it can be used for interior purposes the timber must be seasoned so that its moisture content is reduced to balance with the surrounding atmosphere. In losing this amount of water, timber shrinks substantially. Seasoning consists of speeding up the drying process while controlling it, to minimize deterioration of the timber

caused by uneven drying, which can result in excessive cracking, twisting and warping.

Seasoning may be achieved by natural or artificial means, but certain practices are common to both methods. Clearly, the narrower the cross sections, the easier it will be to extract moisture from the centre. Timber is therefore cut as close as possible to the size required, allowing for shrinkage during drying, and for subsequent machining to finished dimensions. The timber is then stacked flat with slats between each board, to allow an even and free movement of air. In the case of natural seasoning, or air-drying, the stacks of timber will take from one to six years to dry, depending on the species and the thickness of the



boards. At the end of this time some additional drying, or 'second seasoning', may be necessary. This is done by storing the timber in a dry and heated space to bring the moisture content down to a level suitable for products that are to be used in a centrally heated building.





Left: A modular seating system in beautifully finished wood on a sprung metal frame provides both comfort and flexibility.

Below: Aluminium leg frames support finely crafted desk units, again in a flexible modular system, accompanied by wooden accessories of beautiful simplicity.

Ordo Ltd



is WBP (water- and boil-proof). 'Moisture resistant' and 'interior' grades are also available.

**Blockboard** and laminboard are frequently made in the same factories as plywood, using the same raw materials. The core is made from timber strips glued edge to edge

- broad ones for blockboard, and not more than 9mm ( $\frac{3}{8}$ " ) wide, narrower strips for laminboard, making it more stable. Large sheets of strips are levelled and cross-veneered on both faces, producing a three-ply board. For five-ply blockboard two more veneers are then added on the outside, the grain this time running parallel to that of

the core. This would be used as a ground for good quality veneered panels, where the major variations of shrinkage in the core are concealed by the additional layers of veneer. Where an additional decorative veneer of a special timber is applied on one face, there would be a balancing timber veneer on the opposite face.

**Chipboard** is made from layers of synthetic resin glue mixed with graded wood chips, with wood dust or wood flour on the outer surfaces to give a fine finish. Chipboards are not particularly strong or rigid but they are stable. Furniture manufacturers use them extensively as a core for veneering. The manufacture of chipboard can be highly automated, and low-grade timber can be utilized. These advantages are reflected in the price.

**Hardboard, or Fibreboard** had a bad name, largely because it had been marketed in unbalanced form, with one smooth face and the back textured. In changes of humidity it could wrinkle and look terrible. Nowadays a double-faced version is available in a variety of thicknesses. Pulped timber is steamed and heavily compressed in a process like felt-making. As a result it can break down in wet conditions, but indoors its smooth surface is ideal for painting and lacquering. The core is inclined to be soft and rather woolly, and so structurally it will require especially careful detailing.

**Medium Density Fibreboard (MDF)** is a valuable addition to the range of man-made timber panel products. It has many of the attributes of solid timber but with a strong,

The surface of foam-padded seating may be very soft to the touch, but it is inclined to look uninviting. Compared with the relaxed appearance of the sofa with down-filled cushions, foam tends to give the appearance of a soldier on duty. Foam cushions are comfortable provided that the seat platforms are properly sprung; but these fillings are too often of poor quality, with the result that the cushions go 'sad' rather quickly. New families of foam may warrant exploration for upholstered furniture applications.

When a first class down and curled feather combination is used, cushions will have good recovery, provided that the covers for the down and feathers are made of sympathetically lightweight material that are also feather-proof (do not allow the feathers to creep through the material).

A product known as 'Dacron Fibrefill' is made of crimped Terylene fibre. Used for cushions and fixed upholstery it is claimed, with some justification, to combine the softness of down with the recovery of latex. Rolls of puffy wadding, or batting, rather like cotton wool and about 50mm (2") thick, are applied either between layers of muslin or with the faces heat-sealed to prevent the material pulling out of shape during upholstery.

Fibrefill can be used for cushions in two ways. They can be totally filled with it, in which case it is folded around itself, sufficient material being used so that a 50mm (2") thickness is compressed to 12.5mm (1/2") in the cushion



Above and Left: *Intricate needlepoint cushions soften the appearance and increase the comfort of pieces of bamboo and cane furniture, which can appear (and feel!) rather harsh on their own.*  
Romo