

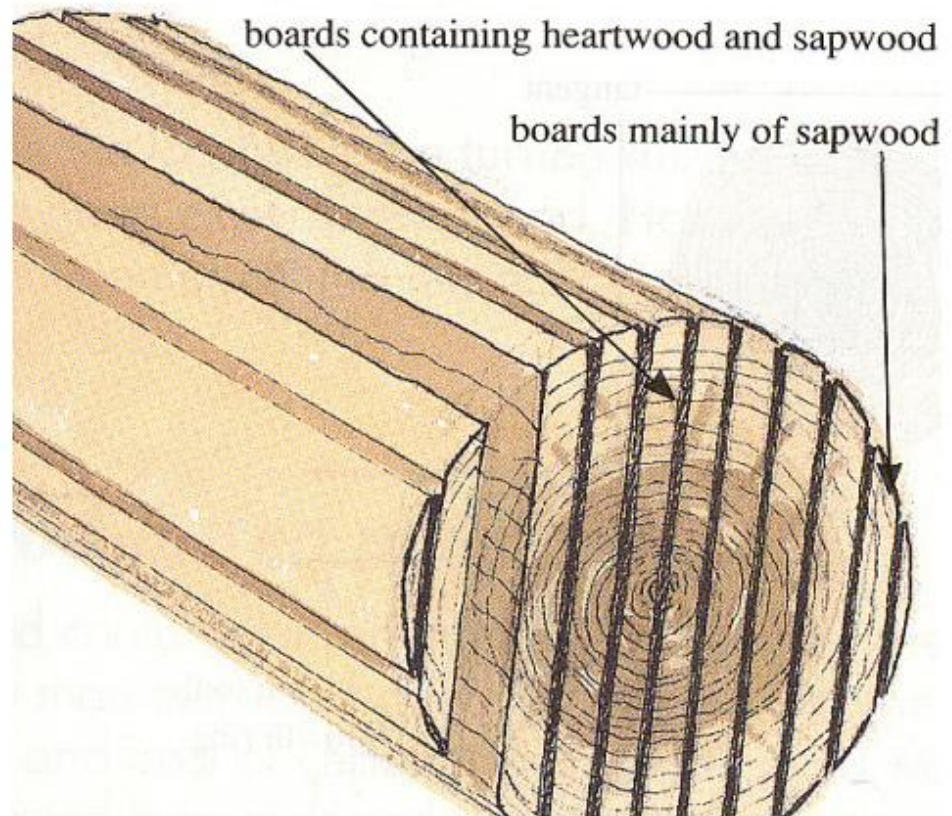
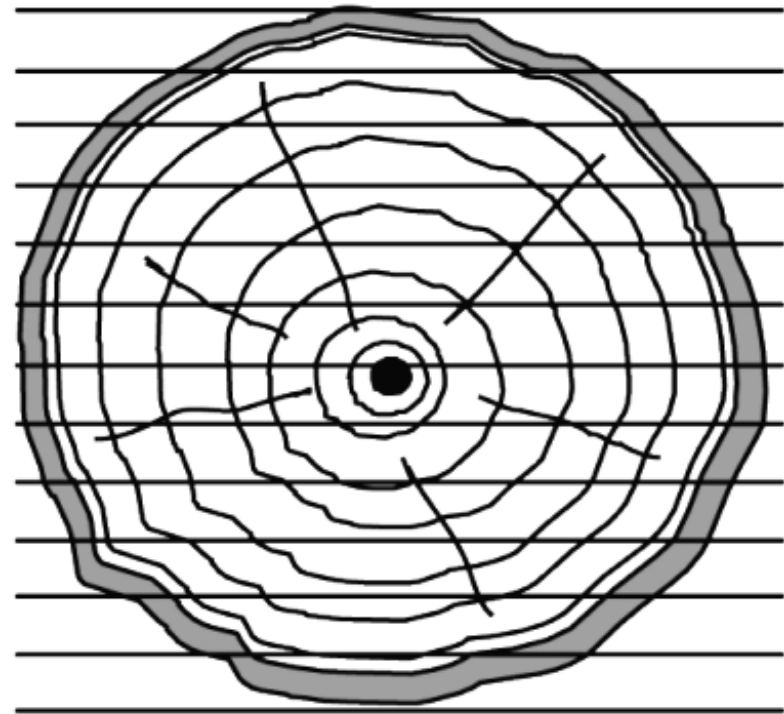
Tree Conversion

Tree Conversion

- Trees are cut down during winter as there is less growth, therefore less sap
- After felling trees are transported to sawmills to be cut into boards
- This process of converting logs to boards is known as **conversion**
- There are 3 methods of conversion
 - Through and through sawing
 - Tangential sawing
 - Quarter sawing

Through and Through Sawing

- This is one of the most popular methods of sawing. The log is cut in parallel cuts in the direction of the grain.

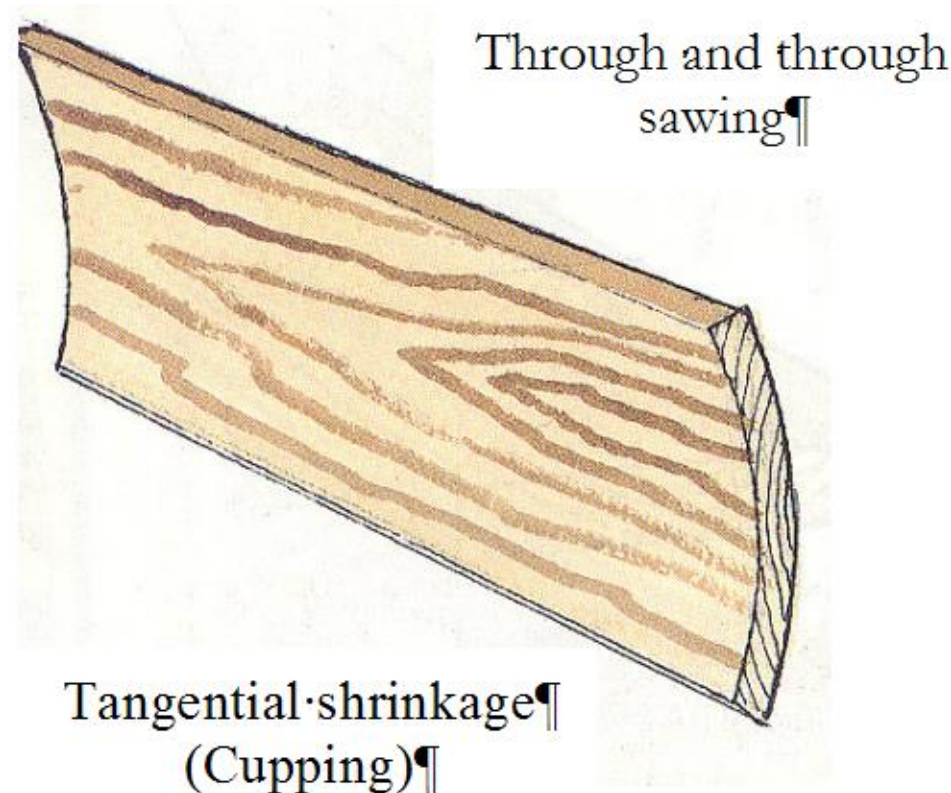


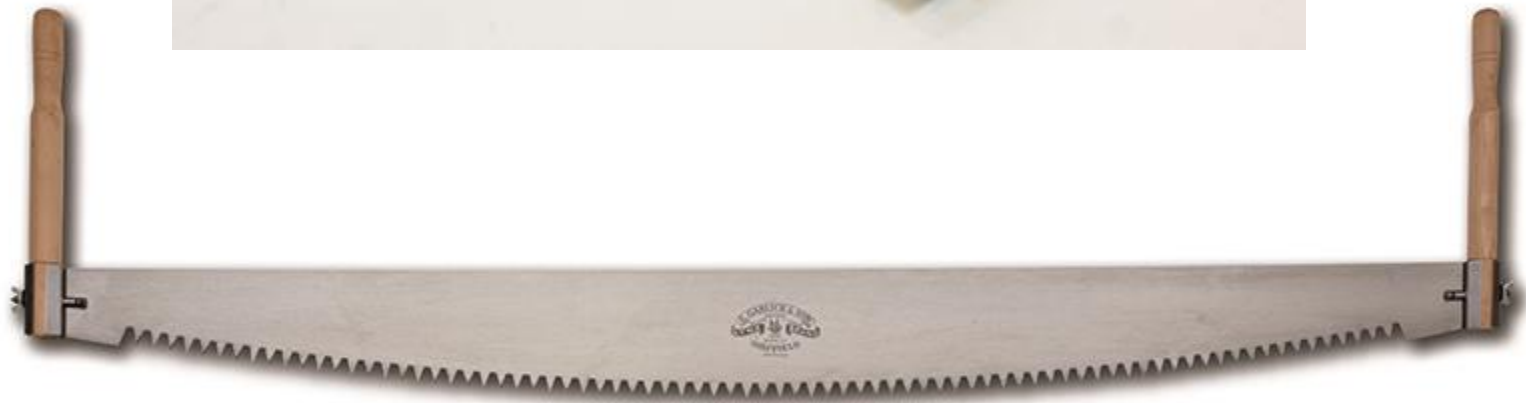
- **Advantages**

- Low cost and fast
- Maximum width of planks obtained from log.
- Little wastage.
- Reveals attractive grain pattern, especially in softwoods.

- **Disadvantages**

- Not suitable for structural timber
- With this method *cupping* caused by tangential shrinkage is a problem (cupping is the warping of the plank away from the heart of the tree)



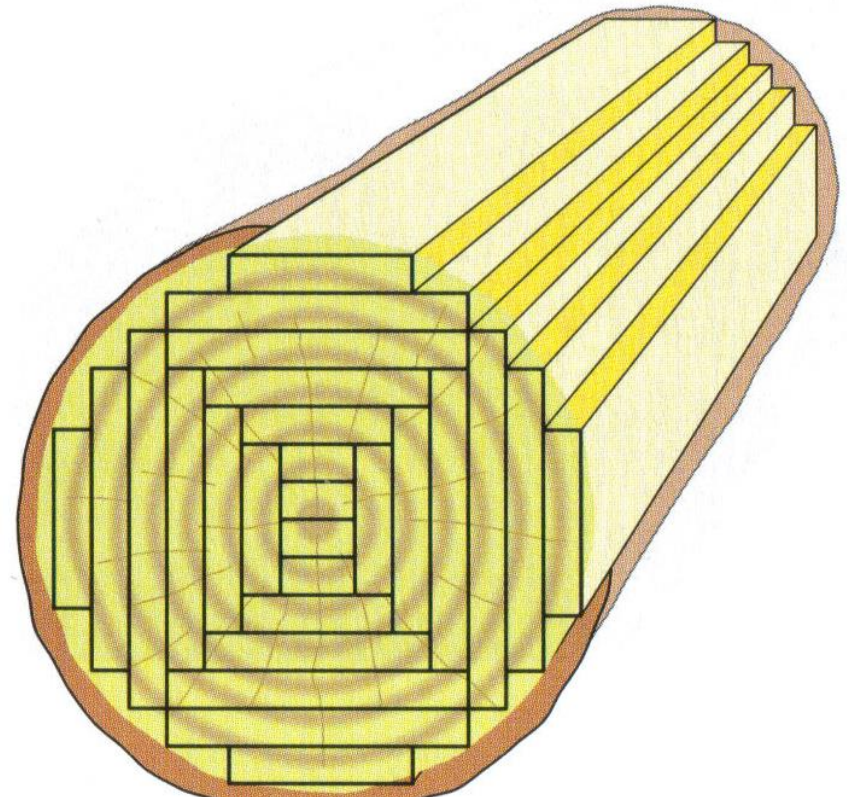
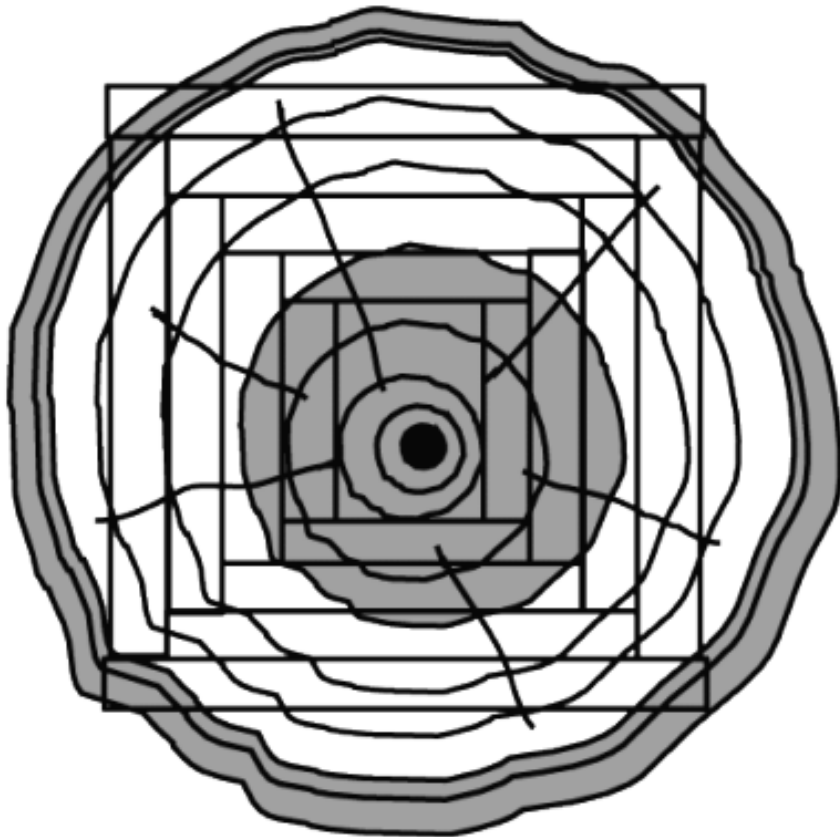






Tangential Sawing

- The cut is made at a tangent to the annual rings of the log.
- Log must be turned 90° after each cut.

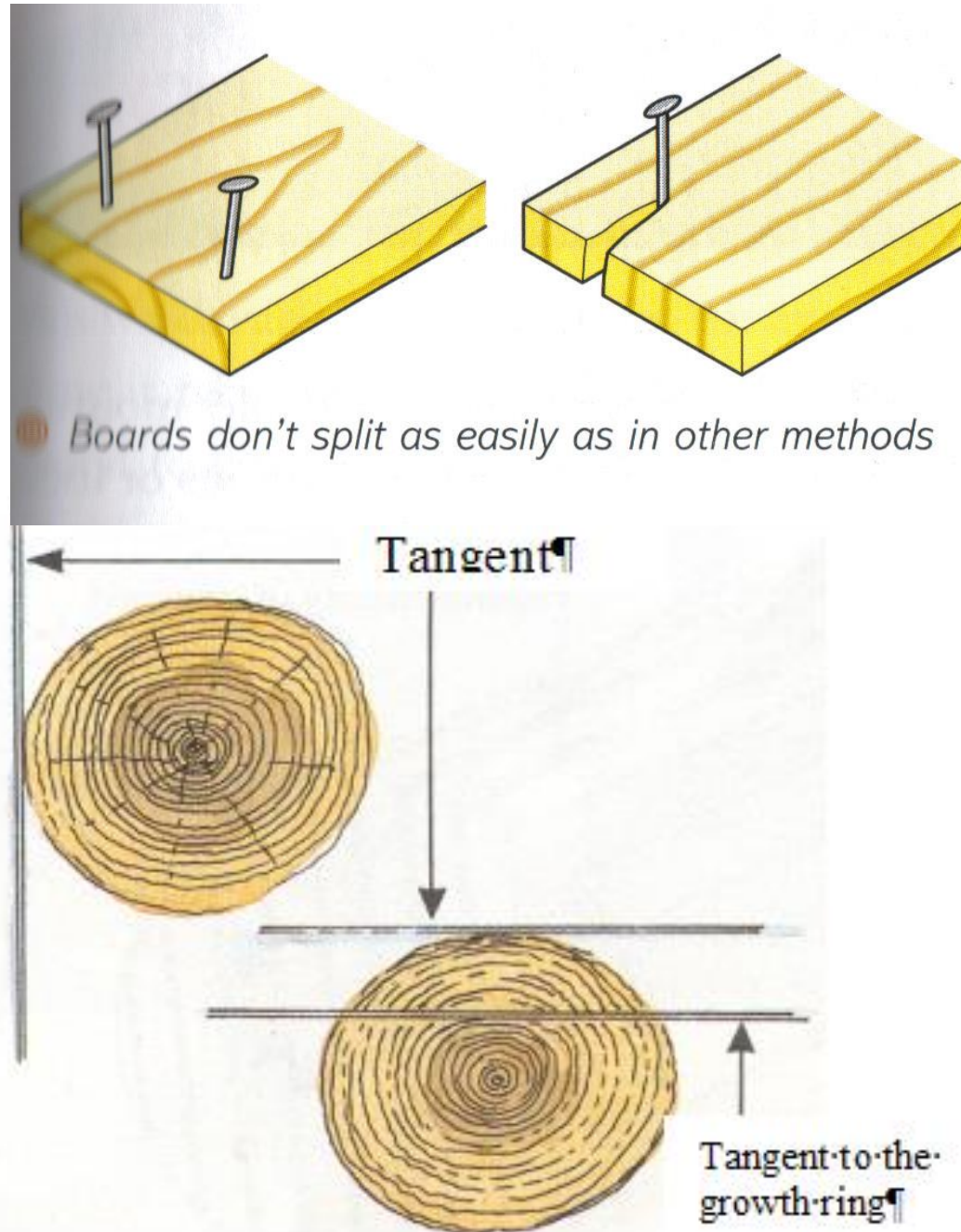


- **Advantages**

- Produce board with flame figure
- Tangential boards are strong boards, used for beams and joists
- Heartwood and sapwood are easily separated
- These boards can take a nail without splitting because of the position of their annual rings

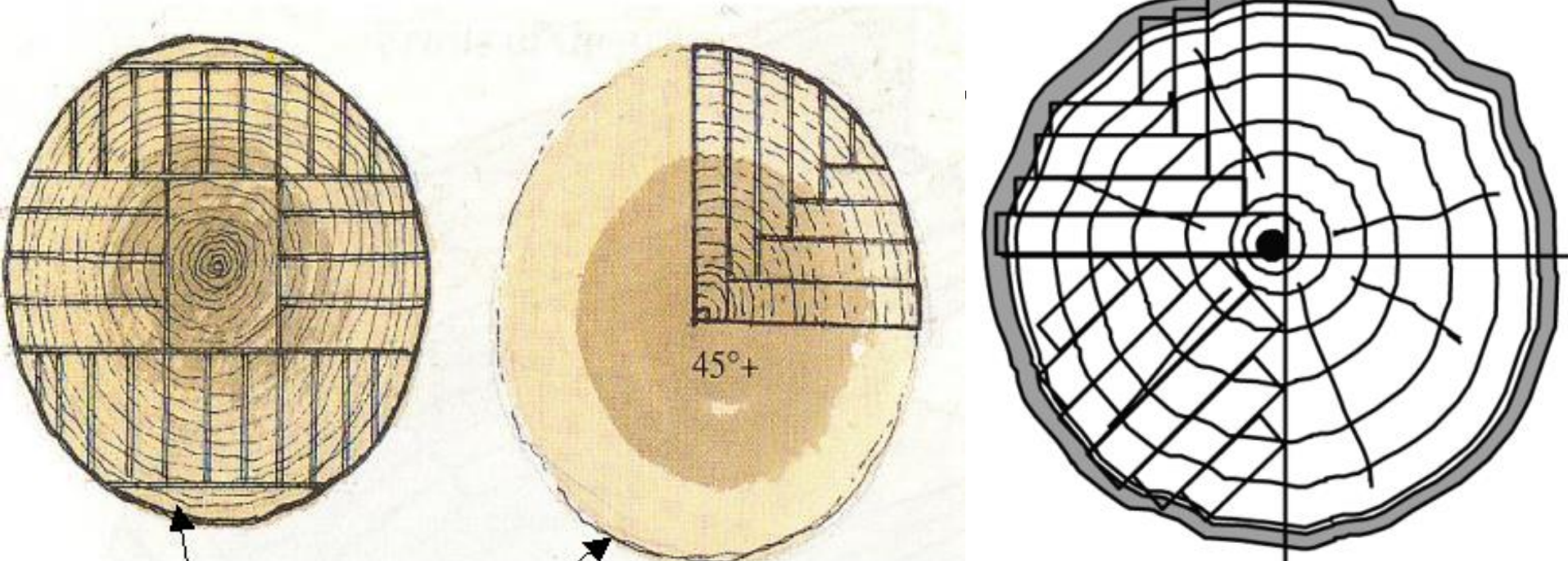
- **Disadvantages**

- Prone to shrinkage (Cupping)
- It is expensive as the log is turned 90° for each cut



Quarter Sawing

- This method leaves the annual rings of the converted timber meeting the face of the board at 45° or more.
- It is important to note that the log must be rotated each time a cut is taken.

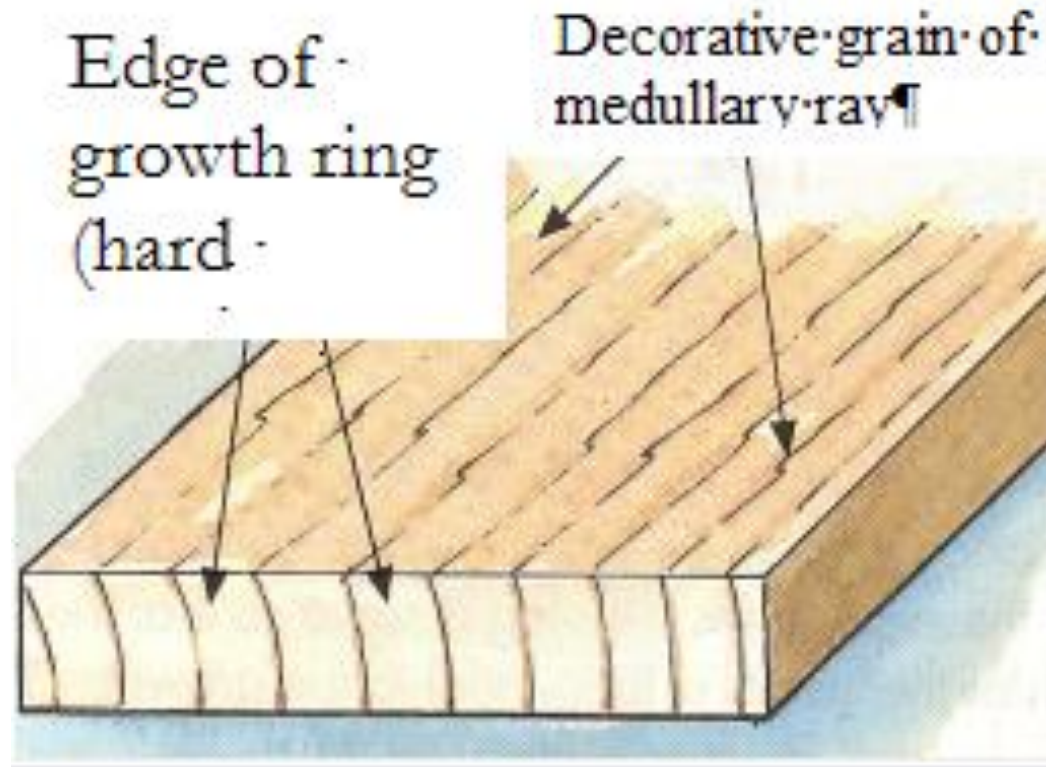


- **Advantages**

- An attractive grain pattern is produced
- Boards are more stable and shrink less
- Boards wear more evenly, important for flooring

- **Disadvantage**

- Expensive, as the log has to be first quartered then turned for every cut.
- Because the log is quartered then cut again narrower boards are produced



Old methods Of Conversion





