

# Woodwork (MTW)

Mr. Murphy

# What you will need

- A4 Hardback Copy
  - Notes and Homework
- Text Book (To Be Decided)
- Folder (40 - 60 pages)
  - Practical Folder
- €2 or Buy your own steel ruler
- Pencils (HB and 2H)
- Colouring Pencils

# Health and Safety in the Woodwork Room

# Woodwork room rules

- Always follow the teachers instructions.
- Do not move around the room without good reason and **never run** in the room.
- Safety equipment should be worn appropriately but particularly when using machines or as instructed by your teacher.
- Always read and follow the manufacturers instructions and warnings carefully.
- Never interfere with others when they are working.
- Report all damaged equipment immediately.
- Always turn power tools off and disconnect them from the mains when they are not in use.
- Report all accidents, no matter how small to your teacher.
- All work benches should be swept down, Stools up and floor swept.
- All tools should be back in there right place
- Work pieces should be placed in your press for safe keeping

**This list of rules is to be read, understood and signed by the student**

Signed Student \_\_\_\_\_

# Tidiness

- Keeping your work area tidy at all times
- When tools are not being used they should be put away
- Keep the floor free from waste material
- Hands should be clean to avoid getting your work pieces dirty



# Safety Guidelines

- Always follow the instructions given to you
- Wear the correct safety gear for the job
- Tie up long hair and secure loose clothing
- Report all damage
- Report all accidents

# Jointing methods

# A brief history

- ❖ Evolved significantly between the 12th and 15th Centuries.
- ❖ In response to
  - technical problem of making strong joints
  - the demands of the customers.
- ❖ Evolution from the relatively crude and utilitarian objects of the early Middle Ages to the highly decorated furniture created during the renaissance period





# A brief history

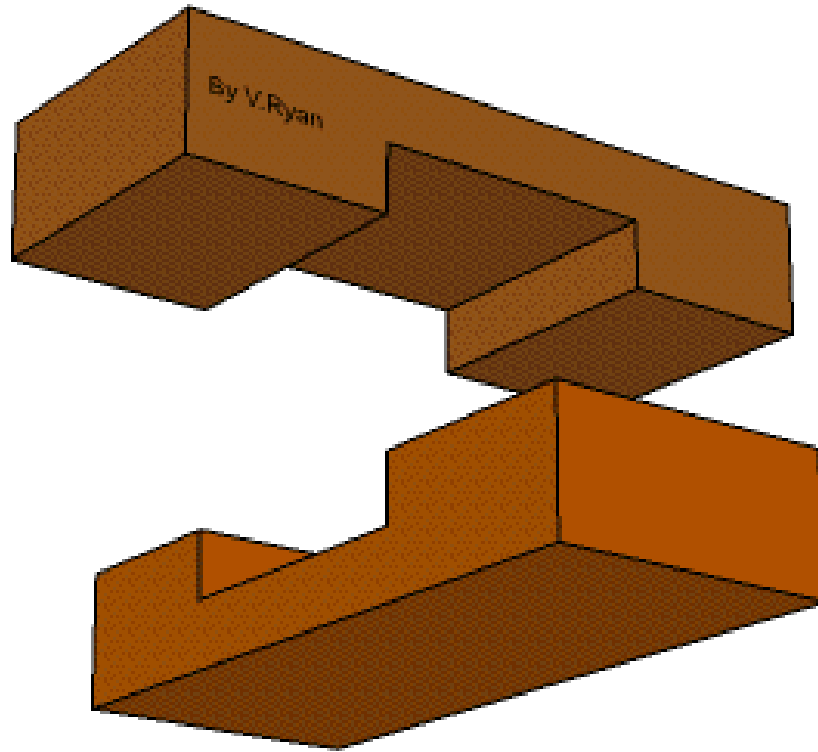
- Designed to overcome problems of movement and distortion
- There was a need to make a mechanically strong joint without the use of external fasteners.
- Medieval hide and casein glues were not especially strong
- Metal fasteners, such as nails, were expensive
- Nails do not hold well in end grain



# The purpose of joints

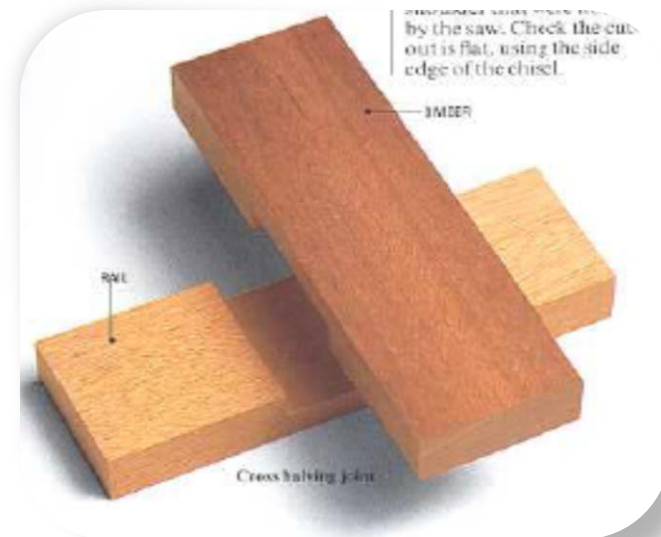
- Jointing techniques are used to
  - Lock two pieces together
  - Give strength to the union of both pieces
  - Resist forces applied to a structure
    - Stresses
    - Thrusts
    - Sudden impact
    - Wear and tear

# 1<sup>st</sup> Project



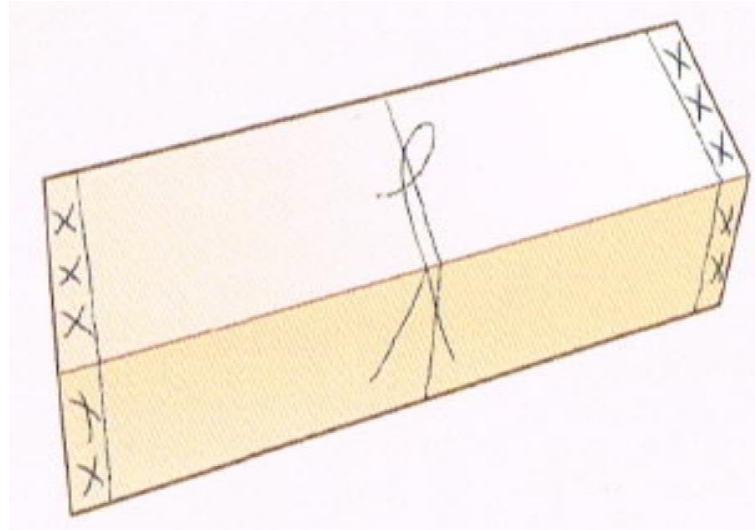
# Cross Halving Joint / Lapped joint

- Cut in components of equal thickness
- Half the thickness is cut from each piece
- Used in frame construction where one member must cross the other in the same plane

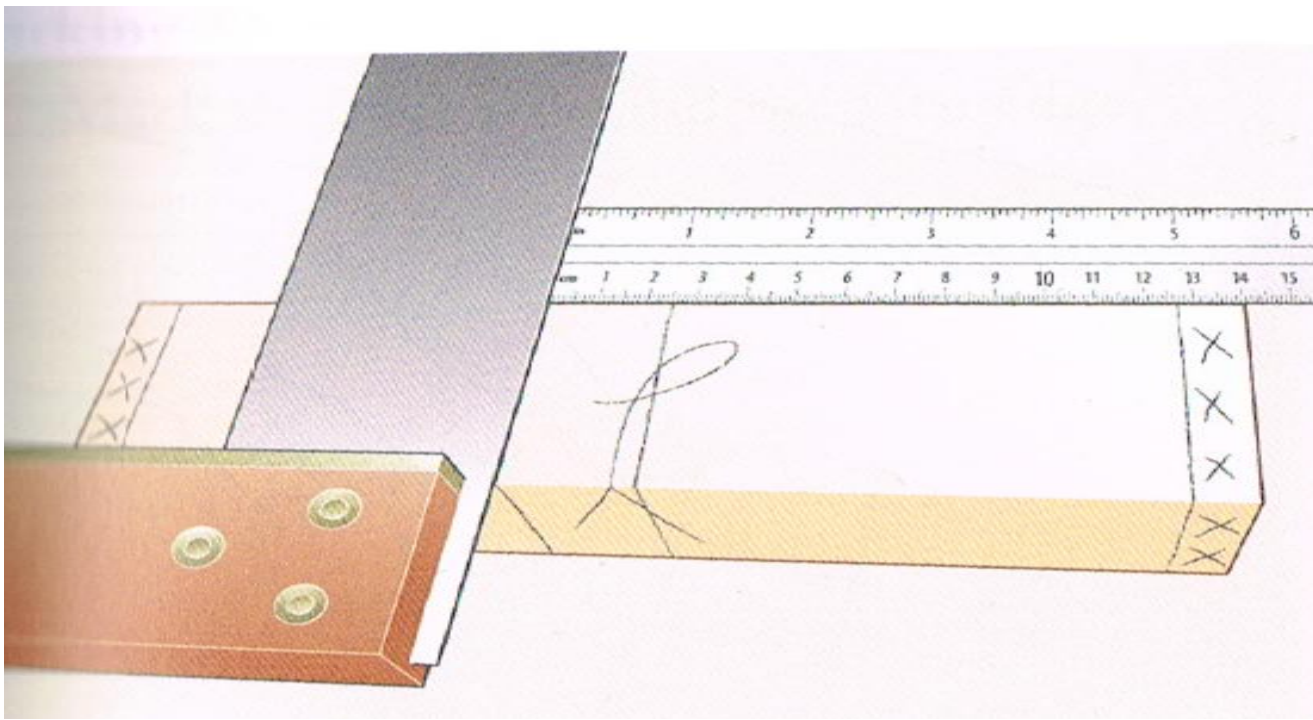


# How to make a Cross Halving Joint

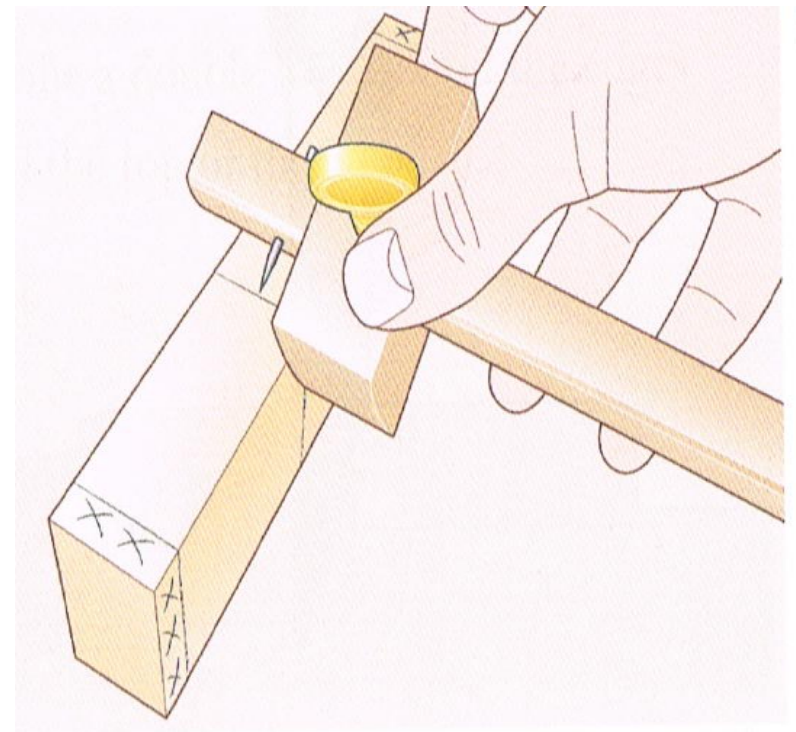
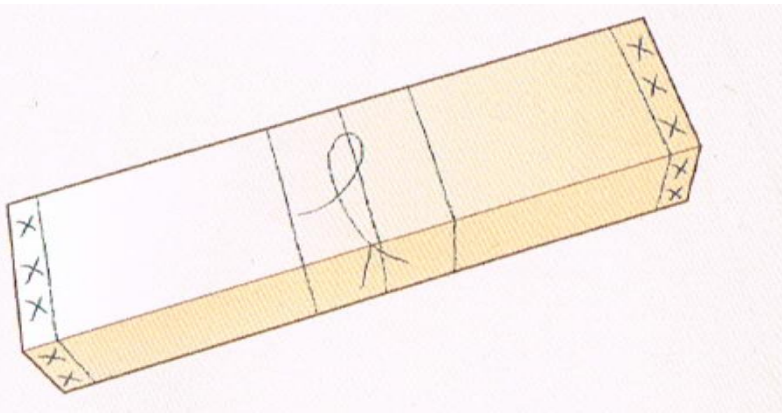
## Marking-Out Step by Step



1. Mark Face side and Face Edge.
2. Mark 5- 10mm waste at both ends marked with an "X".
3. Mark the centre of the piece of wood.



4. Measure the width of the joining piece of wood and divided by two.
5. Measure from the centre line half the width of the joining piece. Mark all around using your try square. Remembering to use only the face side and edge to rest the try square on.

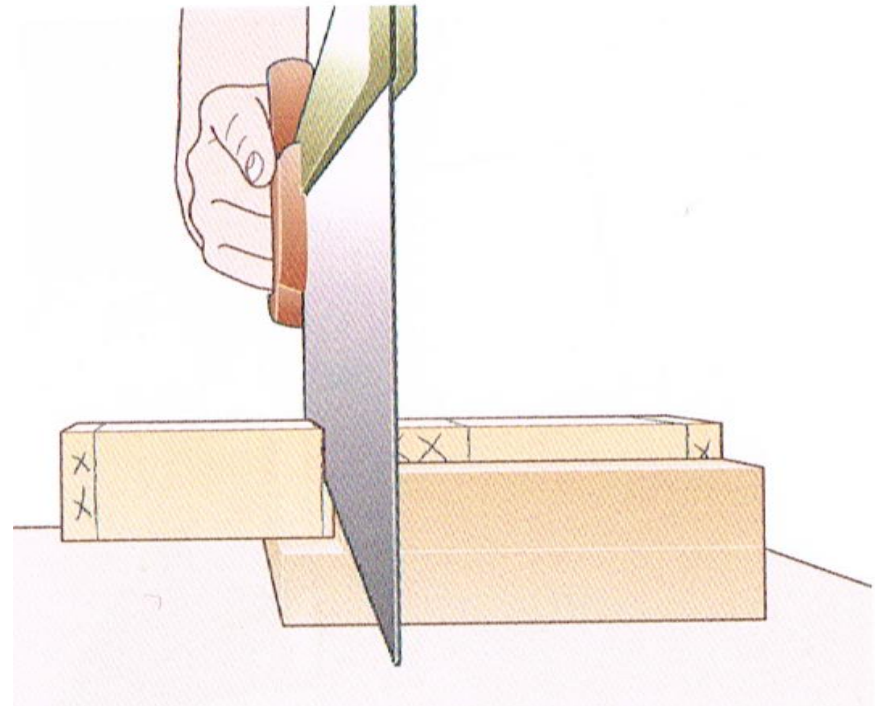


6. Set the Marking Gauge to half the depth of the wood and scribe lines between the maximum widths.
7. Mark the waste on the wood and highlight scribe line using your pencil

# How to make a Cross Halving Joint

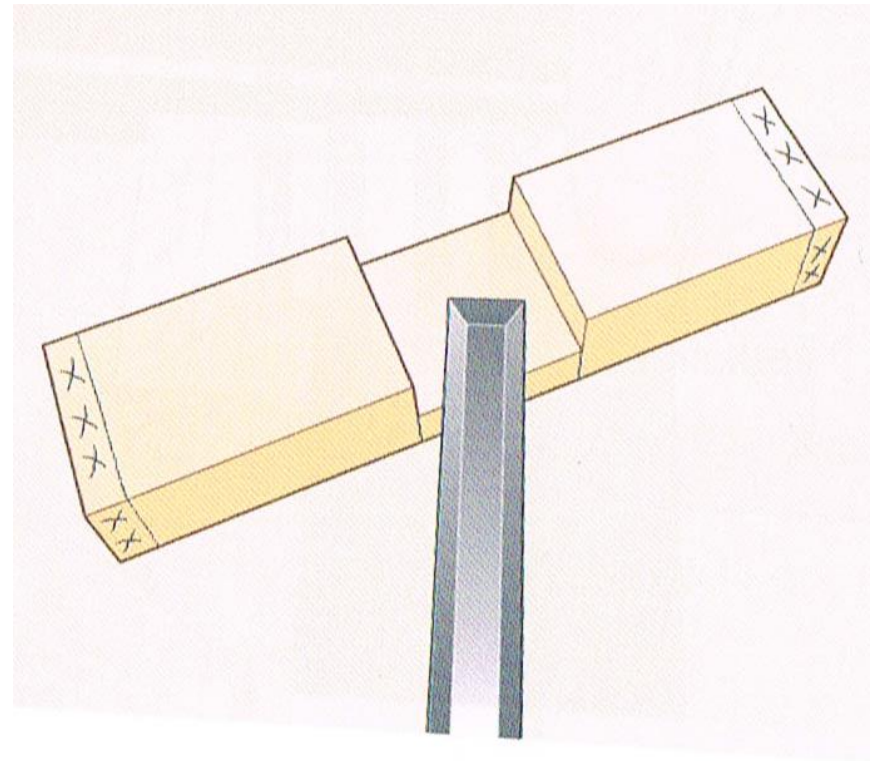
## Processing Step by Step

8. Cut the edges of the trench with a Tenon Saw, Staying Inside the waste lines. With the aid of a Bench Hook or Bench Vice
9. Add a third or fourth cut to ease the chiselling process. (Relief Cut)





10. Chisel out the waste, working from both sides. Ensuring our chisel does not go more than half way across the piece. In order to prevent breakout. Level the base of the joint. Hands are **ALWAYS** behind the cutting blade at all times!!



11. Repeat the process for the other piece of wood and fit together.

