

Cutting Tools

There are various types of chisel and saw used in woodwork. They are the most widely used of all woodworking tools and each type has a different use for different tasks.

Firmer Chisel

This has a rectangular blade and is used for general workshop purposes. The purpose of the metal ferule is to stop the wood handle splitting when struck by a mallet.

Bevel Edged Chisel

This chisel has tapered edges to allow it to cut angles less than a right angle for dovetails. It is not as strong as a firmer chisel so is more suitable for use with light work.

Mortise Chisel

This has a square blade to provide extra strength to cope with the leverage needed when cutting a mortise. It should only be used when cutting mortises.

Carpenters Mallet

Not a cutting tool but used for driving wood chisels and for assembling or dismantling joints - because it is made from Beech it won't damage work as a hammer would.

Tenon Saw (back saw)

This is used for accurate, straight cuts in small pieces of wood e.g., When cutting joints. It has a brass back which keeps the blade straight and adds weight to the saw making accurate cutting easier. The back limits the depth of the cut. A tenon saw is an example of a cross-cut saw - it has lots of small alternating teeth, a wide kerf, and is designed to cut across the grain of the wood.

Coping Saw (frame saw)

This is used to cut curved shapes in thin timber. The blade usually has the teeth pointing back towards the handle. This type of saw cuts when it is pulled back because the frame is put into tension. The blade can be turned to aid the cutting of irregular shapes. A coping saw can be used to cut out shapes from the middle of a piece of material by inserting the blade through a pre drilled hole before attaching to the frame.

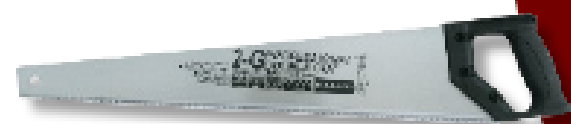
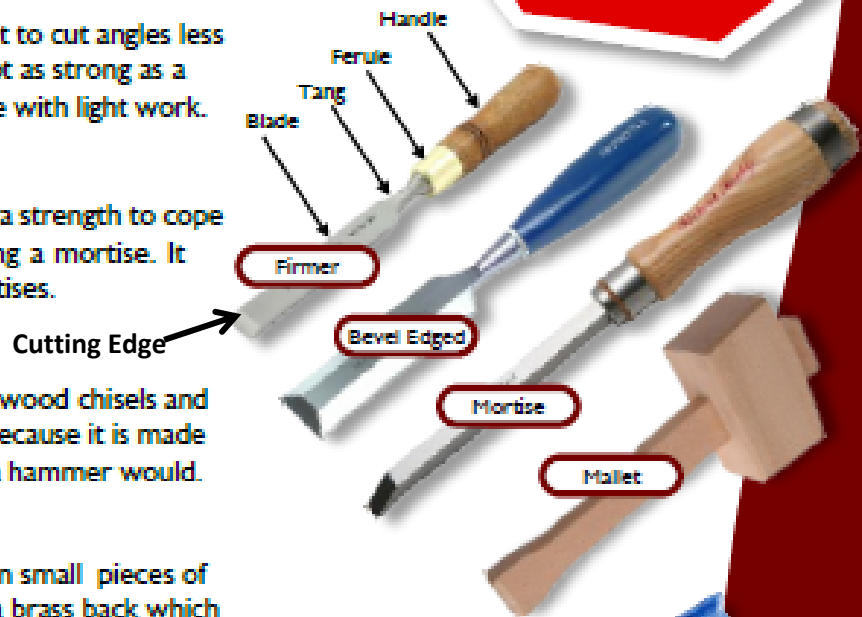
Rip Saw

These saws are designed to cut along the length of the wood, parallel to the grain. The cutting edge of each tooth has a flat front edge and it is not angled forward or backward. This design allows each tooth to act like a chisel (rather than being knife-like, as with a crosscut saw), preventing the saw from following grain lines, which could curve the path of the saw and prevent a straight cut from being achieved.

Safety...

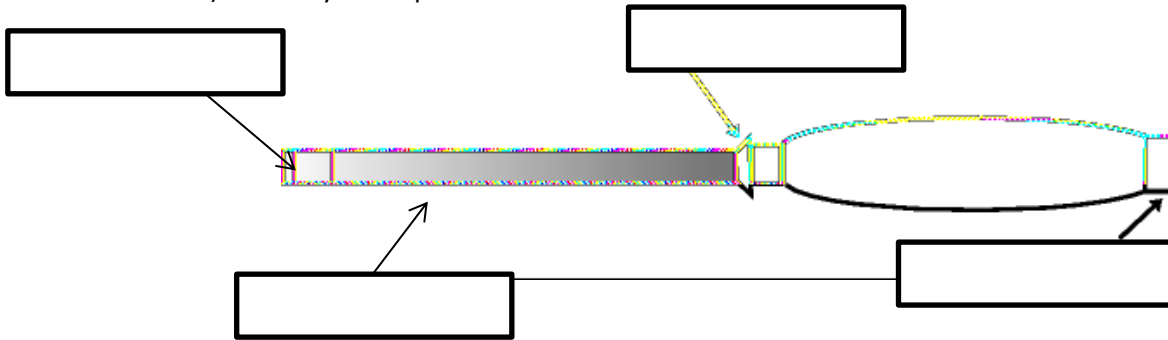
Chisel blades are extremely sharp so great care should be taken when using them:

- Any work should be secured in the vice or cramped to the bench.
- Both hands should be behind the blade at all times to ensure the users safety.



Name:

1) Identify these parts of a mortise chisel:



2) State two reasons why a tenon saw has a brass back:

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3) Describe what a cross-cut saw is used for?

4) Describe what a Rip-saw is used for?

5) Explain what is different about the teeth of a Rip Saw?

6) Describe two examples of when a coping-saw would be an appropriate saw to use:

- a)
- b)

7) State which particular joint bevel-edged chisels better at cutting?