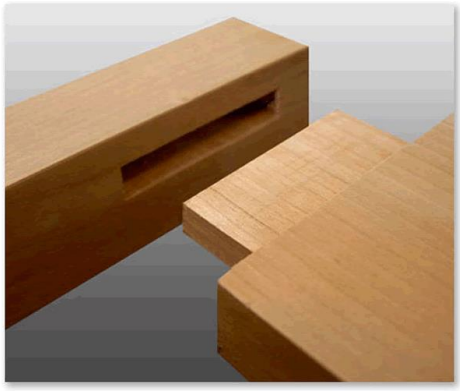
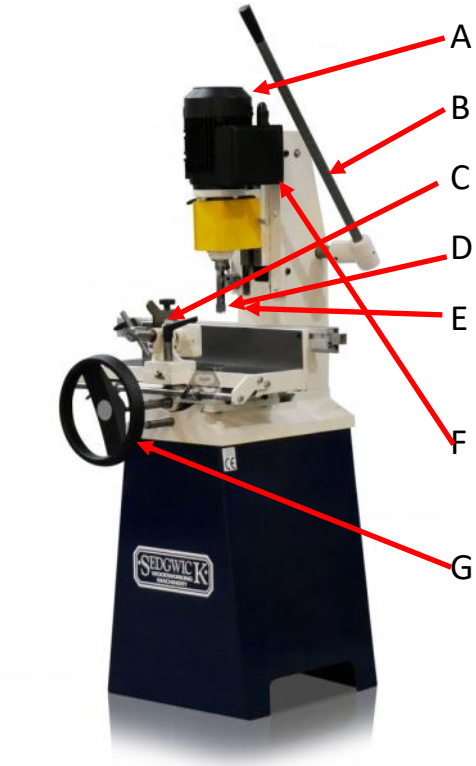
Mortise Machine



The Mortise and Tenon joint is often used when making tables and chairs. The **tenon** is cut into the rail, and this tenon is then inserted into a square hole named a **mortise**. Traditionally, mortises were cut out using a **mortise chisel**. These were made with heavy blades, so that they could be hit hard with a mallet. Cutting a mortise this way took a lot of effort and was difficult to do.
The mortise machine makes this process much simpler.



Parts of a Mortise Machine:

A. **Motor**—this makes the auger bit rotate
B. **Handle**—used to lower the mortise bit into the timber
C. **Clamp**—used to hold the timber onto the table
D. **Mortise Chisel**—A square hollow chisel which cuts the corners of the joint
E. **Auger Bit**—located inside the mortise chisel, to remove the excess wood.
F. **Depth Stop**—this prevents the mortise chisel from being cut through to the other side of the timber
G. **Wheel**—moved the table from side to side

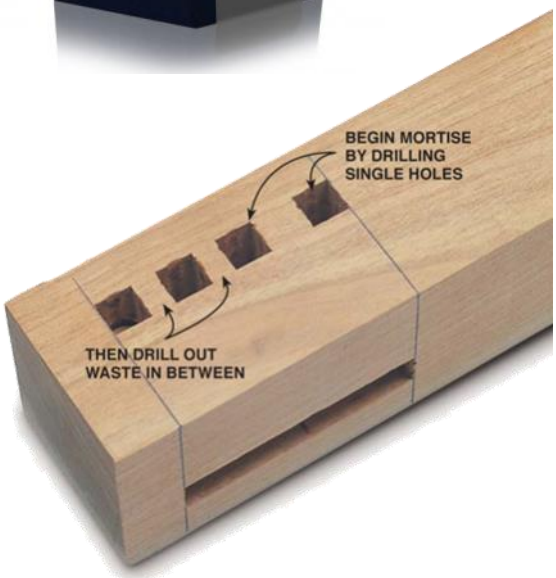
Operation of a Mortise Machine:

The timber needs to be marked out to show where the mortise is to be cut. It is then placed on the table and clamped in position.

The depth stop is set, so that the mortise will be cut to the correct depth.

The power is switched on and the handle is pulled to lower the chisel into the timber.

The handle is raised again, and the timber is moved side to side by the wheel to repeat the cut, creating a slot.



Mortise Machine Chisel

The Auguer Bit inside the chisel removes the wood. The outside chisel cuts the corners to create a square hole.