

WEEK: 9.

SUBJECT: BASIC TECHNOLOGY.

CLASS: JSS3.

TOPIC: WOODWORK MACHINE.

WOODWORK MACHINE.

Portable power tools are small handheld tools that are electrically operated used in woodworks. Woodwork machines are those immobile big equipment that are also electrically operated used in wood working activities.

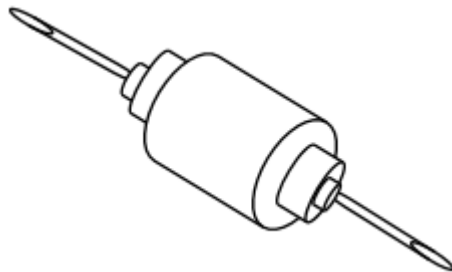
Portable power tools

Some portable power tools include;

- 1) Belt sander
- 2) Hand drill
- 3) Fret saw

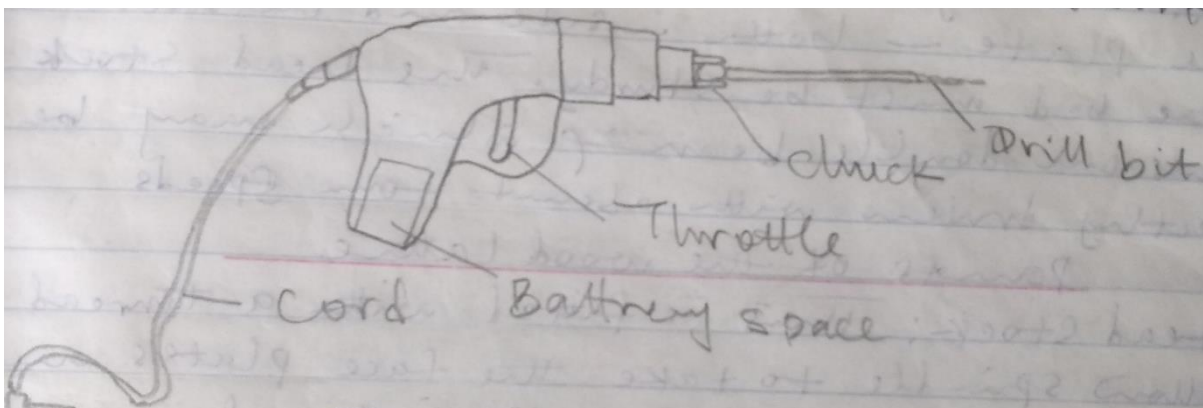
Belt sander

This is a motor driven abrasive that is used in smoothening rough edges or surface of woodwork pieces as it revolves.



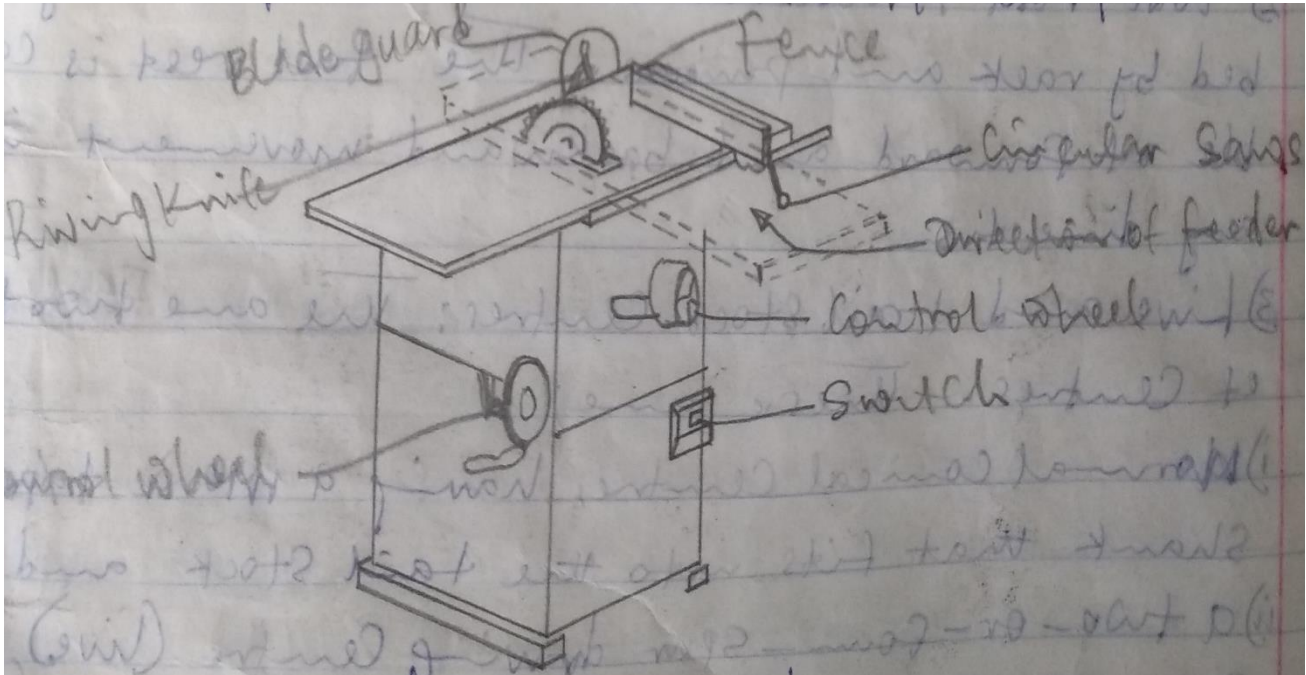
Hand drill

The hand drill is a motor fitted drill bit used to bore hole on woodwork pieces.



Fret saw

A fret saw is a motor driven toothed wheel that is used to cut wood into smaller pieces in the wood workshop.



Woodwork machines

Some woodwork machines include: circular saw, hand saw, wood lathe, surface planner, thicknesser, sanders and drills

The word lathe

The lathe the lathe is regarded as the most versatile machine of the workshop because of its ability to do a lot of jobs, such as; cutting, drilling , planing, sawing, knolling etc.

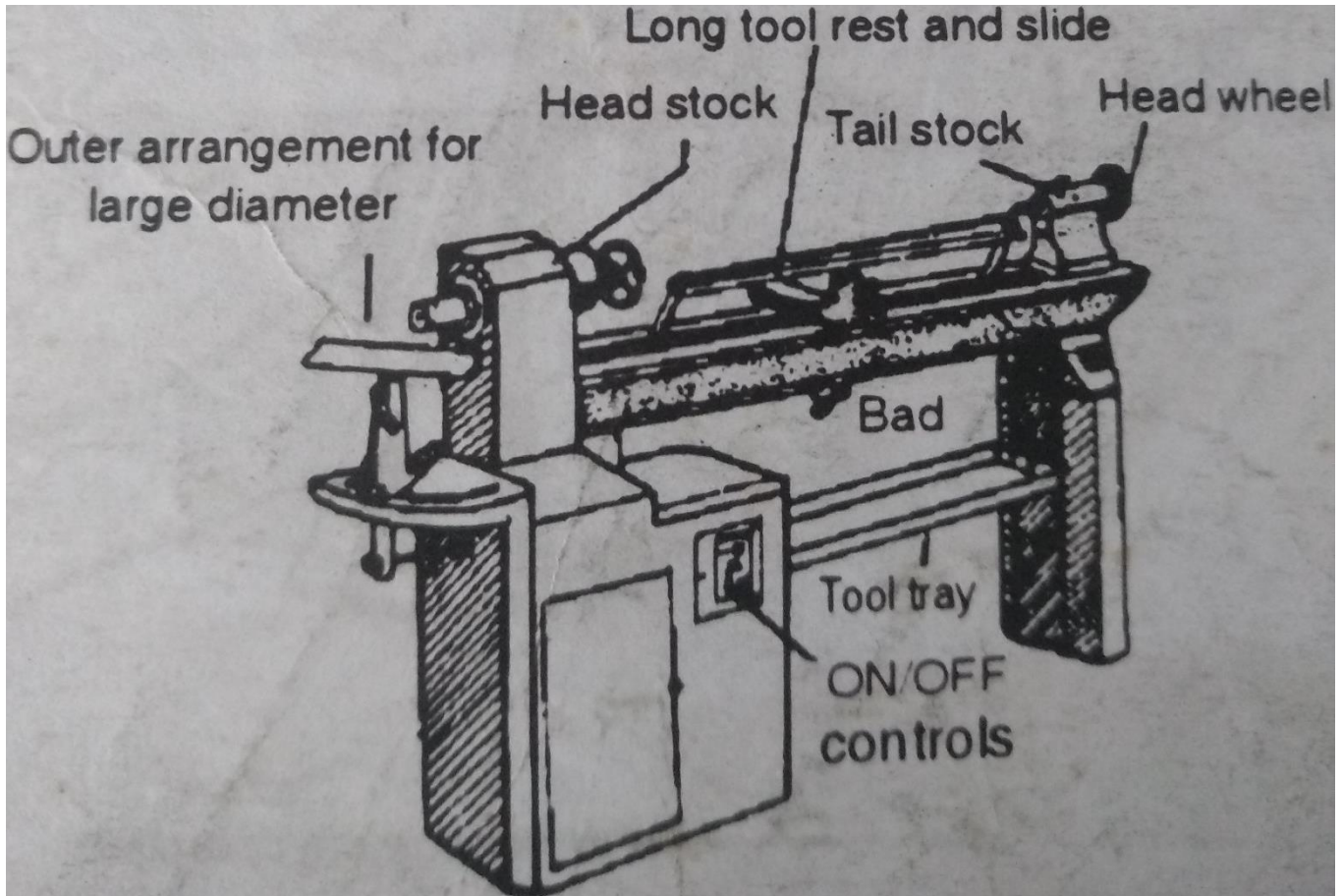
The wood lathe is employed where there is an amounting of turning to be done.

Generally, turning can be made on the lathe in two ways; between centres, and on the face plate - both inside and outside. The lathe bed must be sturdy. The head stock runs on double bearing which may be directly driven with about form speeds.

Parts of the woodwork lathe

- 1) **Head stock:** This is fitted with a thread hollow spindle to take the face plate and various chucks. The spindle is bored at the end to a morse taper to hold the turning centres by friction grip.
- 2) **Tool rest:** This is usually moveable along the bed by rack and pinion. The tool rest is capable of forward and backward movement in any direction.
- 3) **Live and tail stock centres:** There are two types of centre, these are;

- I) **Normal conical centre**, having a morse tapered shank that fits into the tail stock and
- II) **A two – or- four spur driving centres (live)** which fits into the head stock. The work piece is gripped between the centre for turning the stem of table lamps, table leg, lamp stand etc.



- 4) **Face plate**: These vary in sizes. Each is screwed into the head stocks main spindle for inside and outside turning.
- 5) **Steady rest**: This is used where long lengths are turned between centres. It reduce vibration of the material being turned.
- 6) **Turning tools**: There are great number of these; some include i) skew chisel ii) round nose scraper chisel iii) gouge iv) Parting tool v) hook chisel vi) diamond point chisel vii) calipers (inside and outside) viii) side chisel.

SAFETY IN THE USE OF PORTABLE POWER TOOLS AND MACHINES

- 1) Ensure they are handle by the experienced technicians.
- 2) Ensure they are put off immediately after use.
- 3) Do not use them without proper PPE.
- 4) Make sure their guards are in place.

- 5) Ensure that their power cords are not exposed and are firmly connected to the power source.
- 6) Ensure they are always in good working condition before use.
- 7) Ensure they are properly stored, cleaned and covered before or after use.