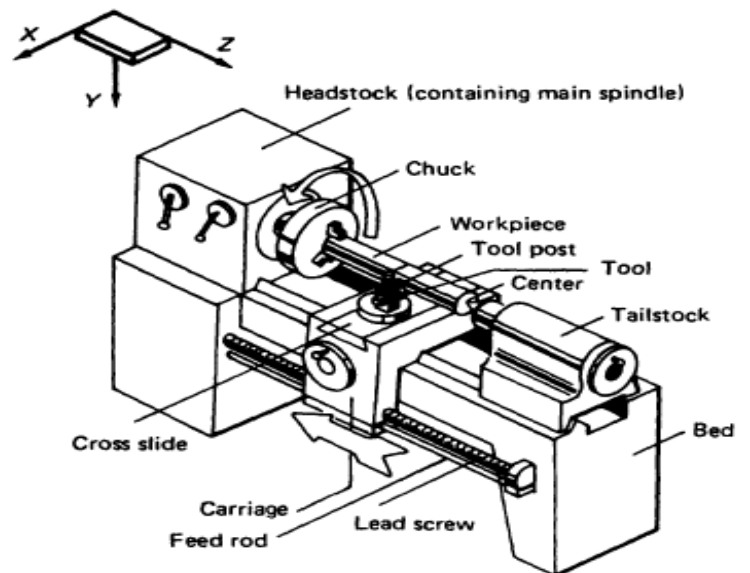


MACHINE TOOLS AND THEIR OPERATING PRINCIPLE

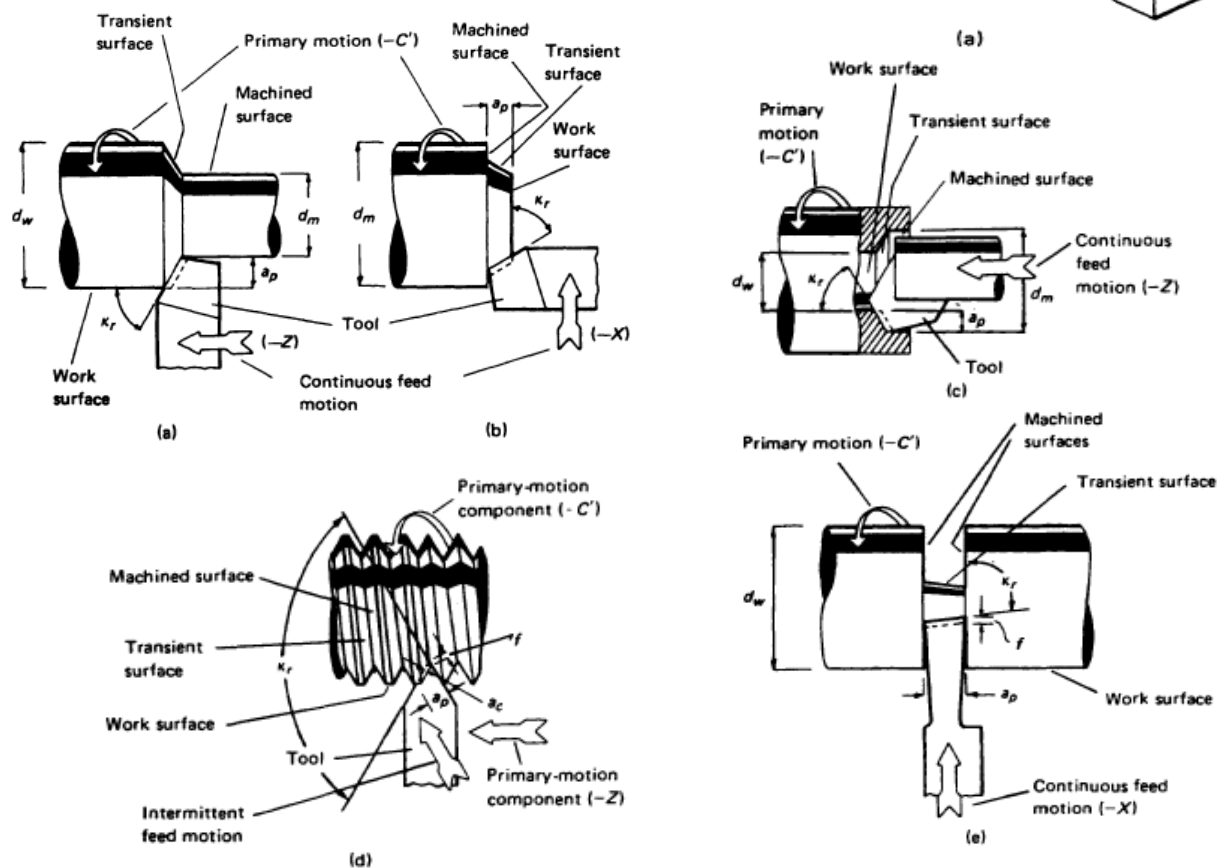
machines using single-edged tools

Turning:

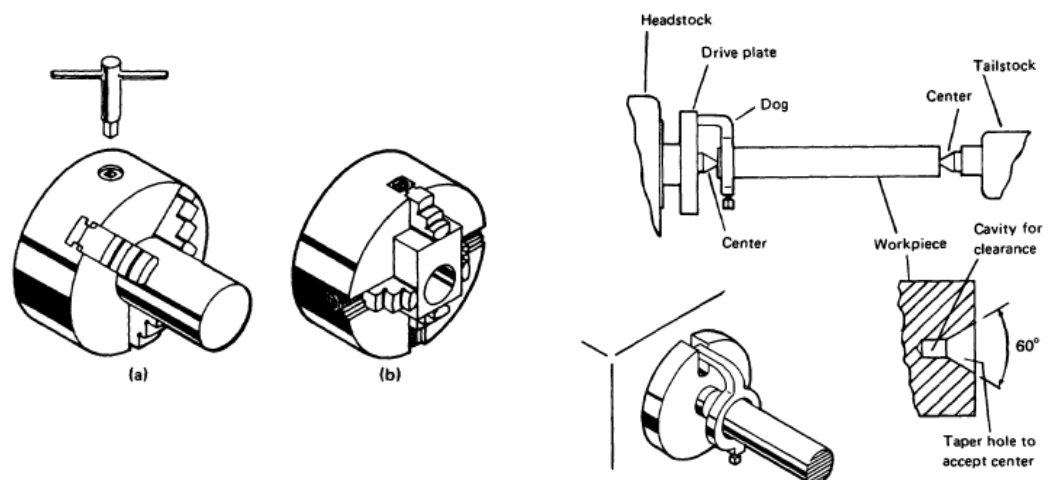
Parallel lathe :



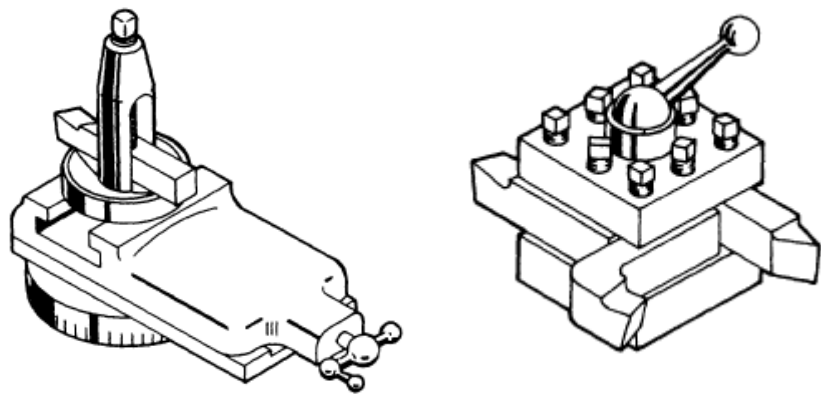
Typical Operations :



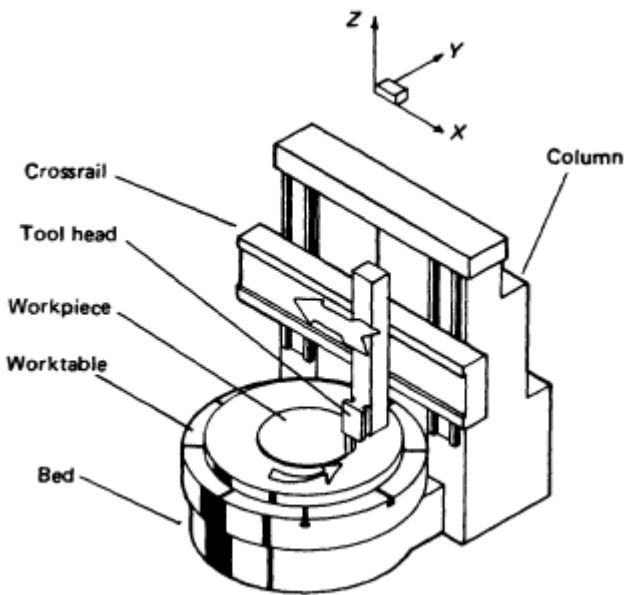
Fastening parts:



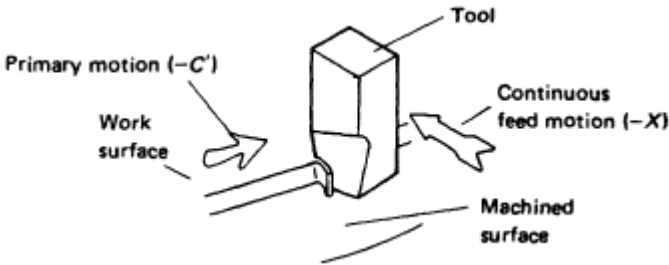
Fixing tools:



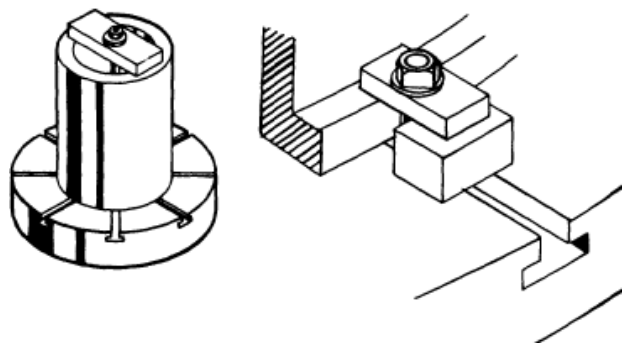
vertical Lathe:



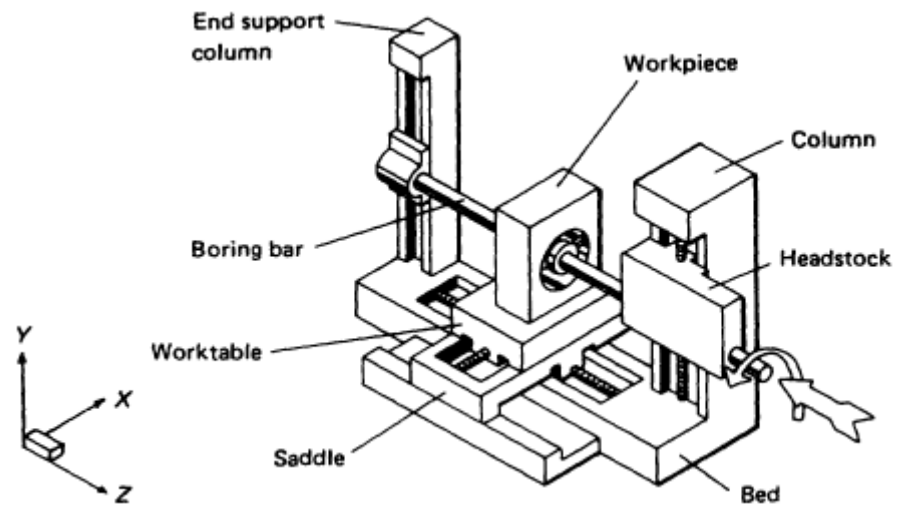
principle of operation :



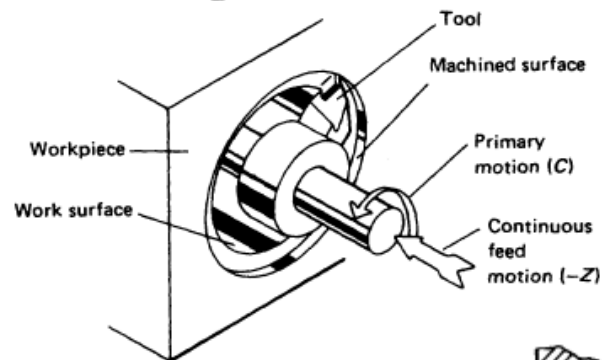
Fixation pièces :



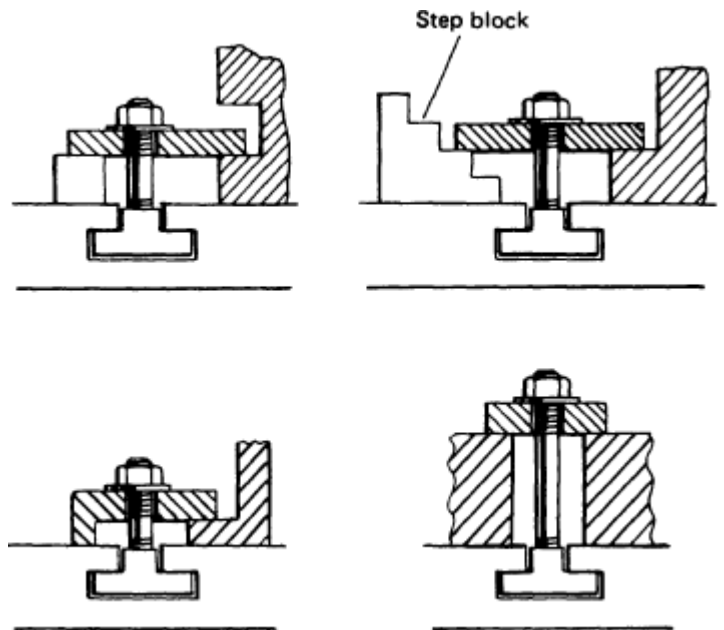
boring machine :



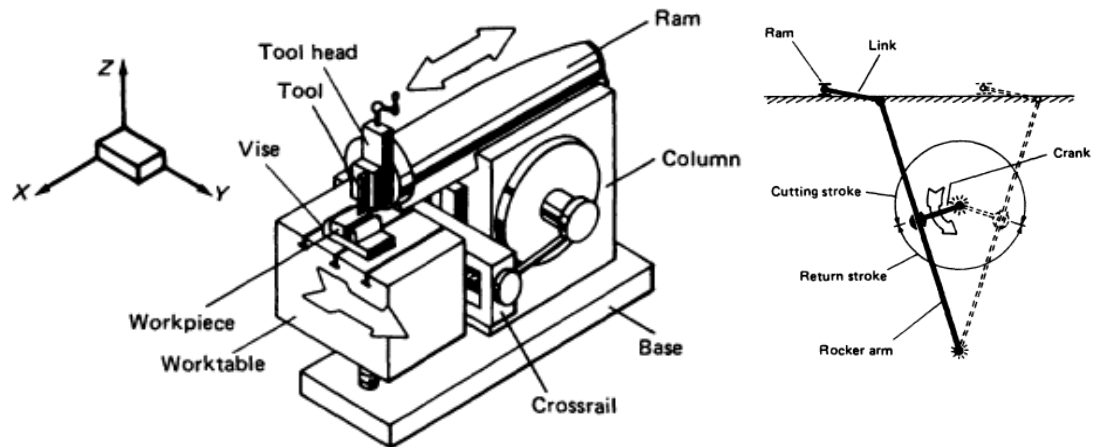
Principe de l'opération :



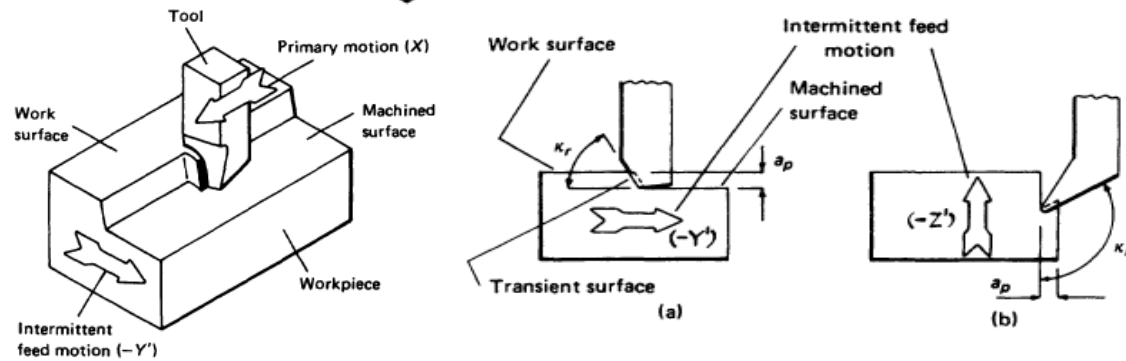
Fixation pièces :



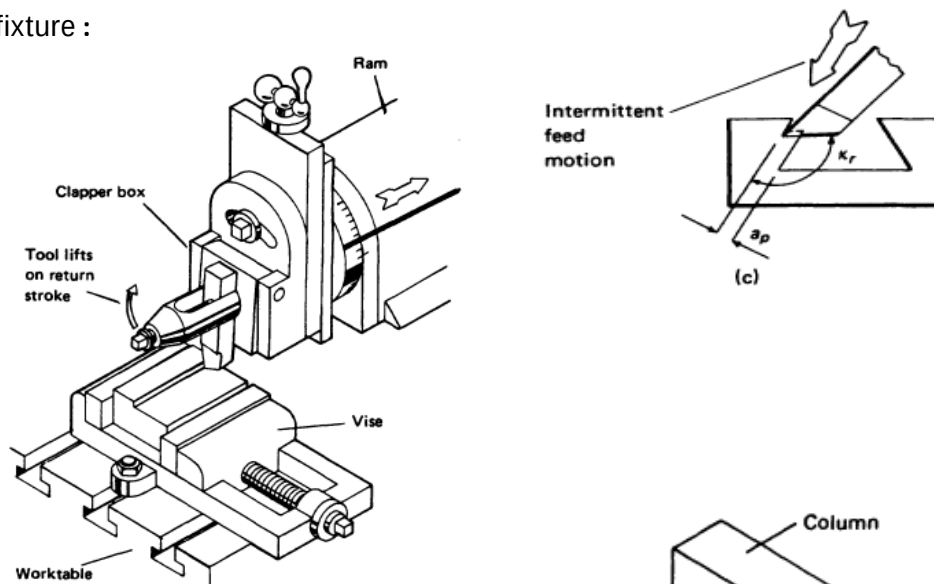
Shaper



Working Principle:

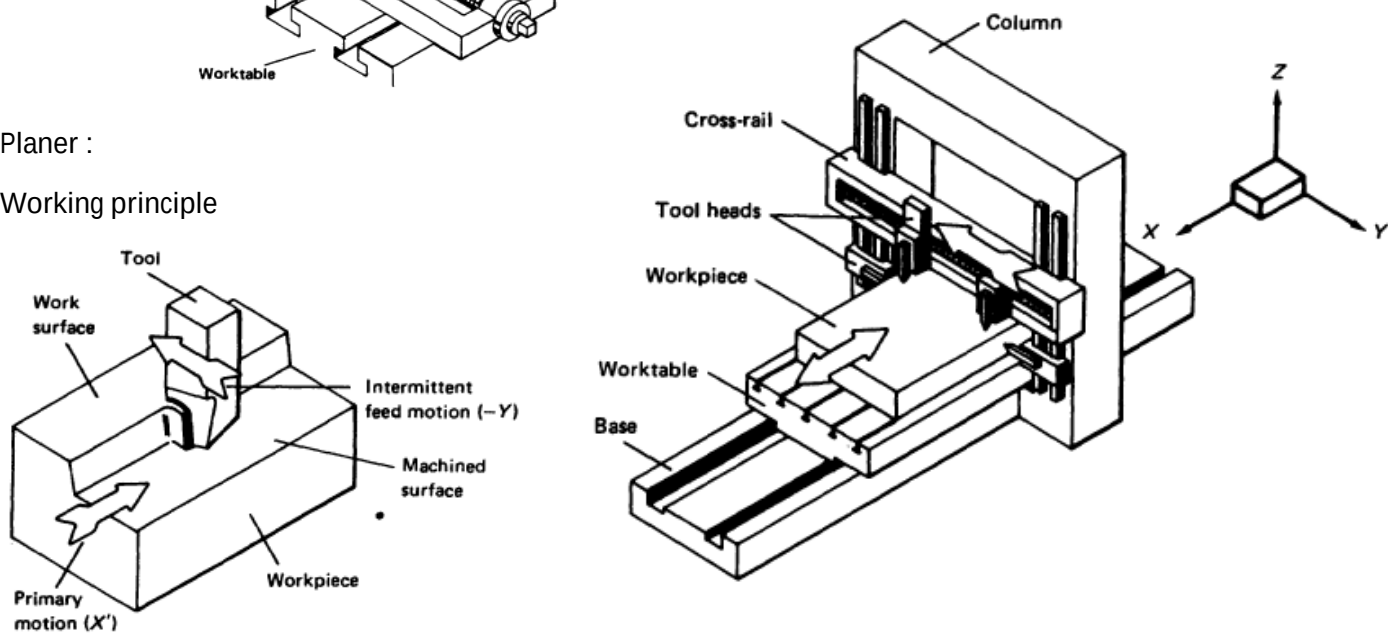


Tool and part fixture :



Planer :

Working principle

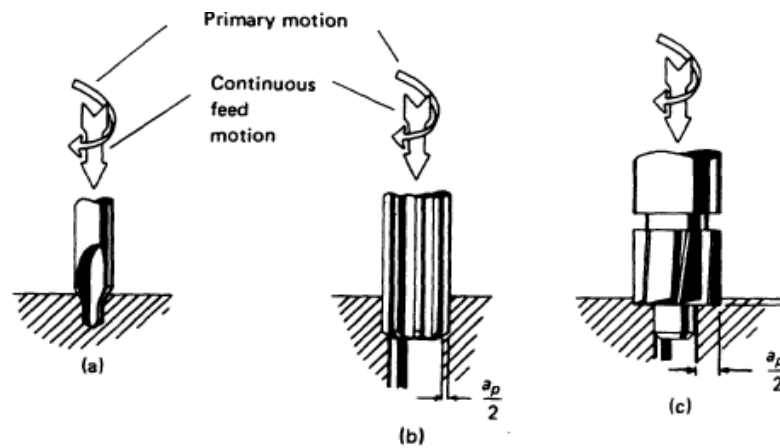
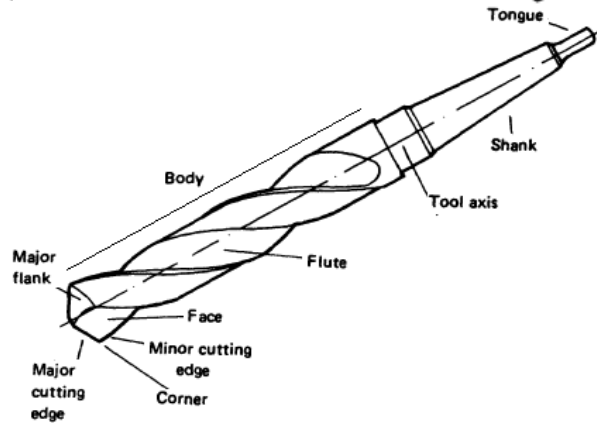
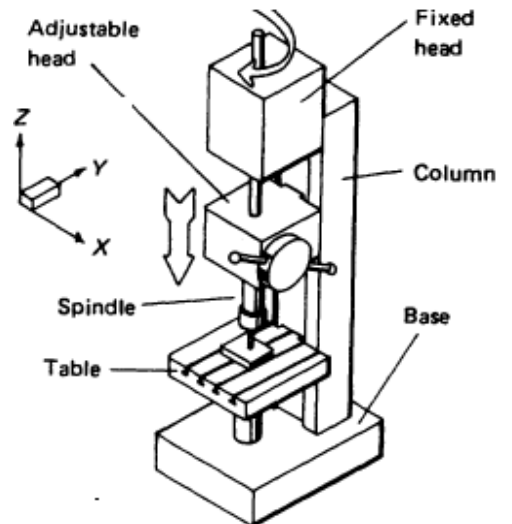
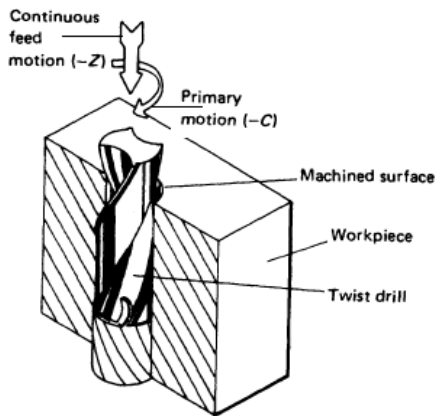
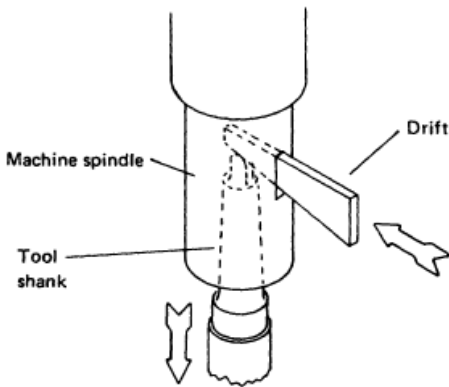


Machines using multi cutting tools: Drill:

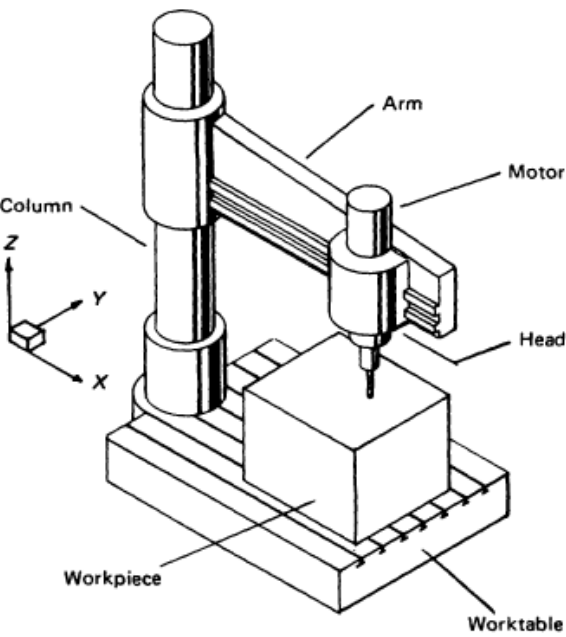
Drill:

working principle:

Fixing tool:



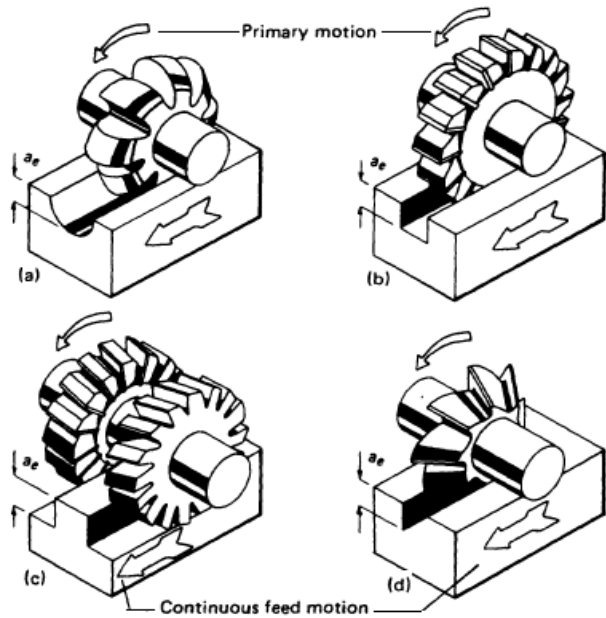
Radial drill



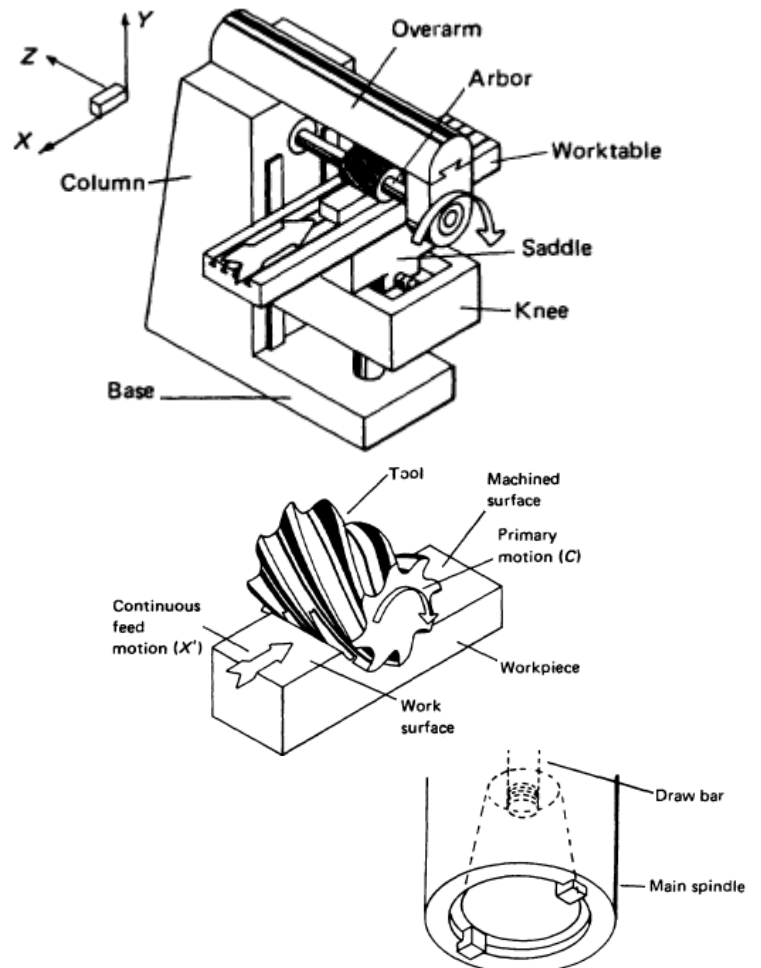
Milling machines:

Horizontal milling machine:

working Principle :

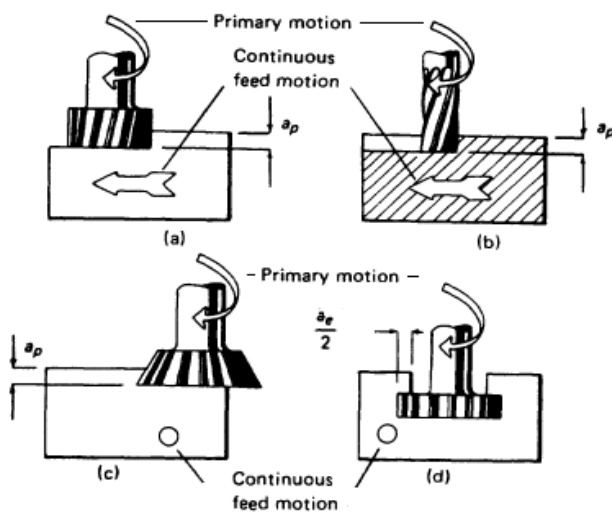


Tools fixture :

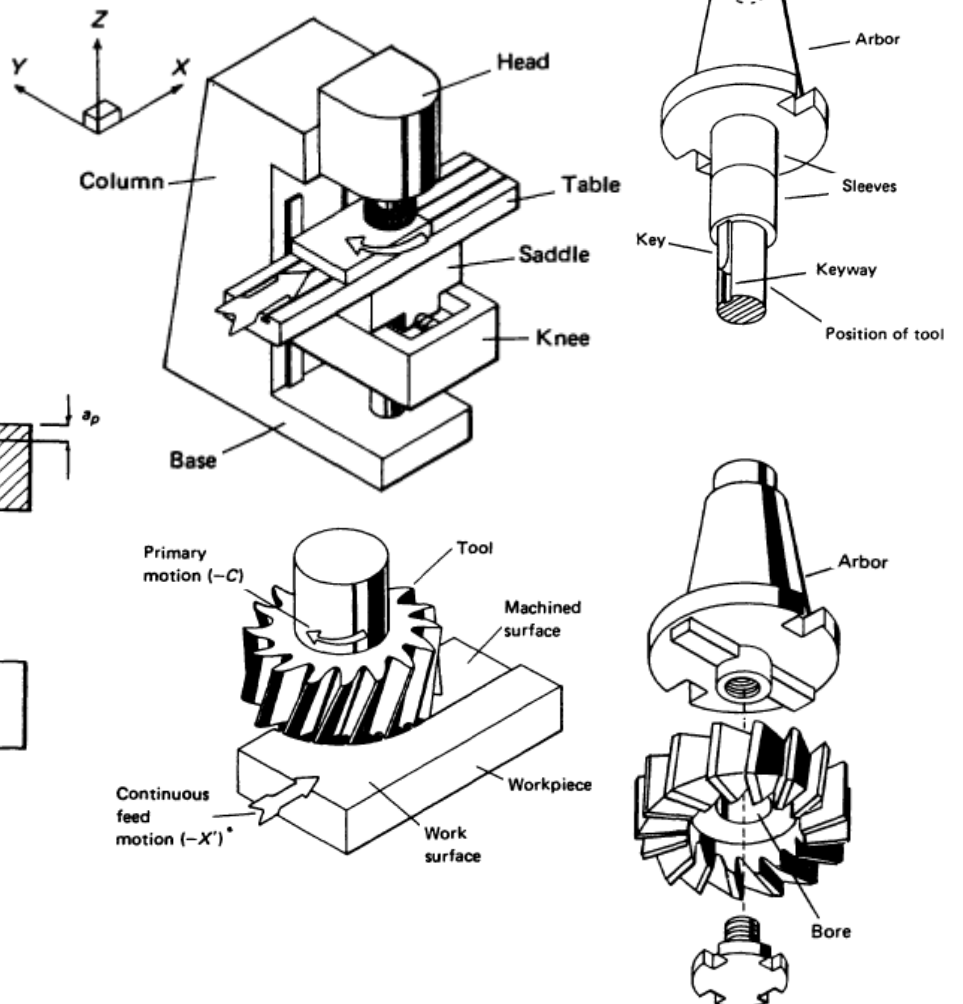


Vertical milling machine :

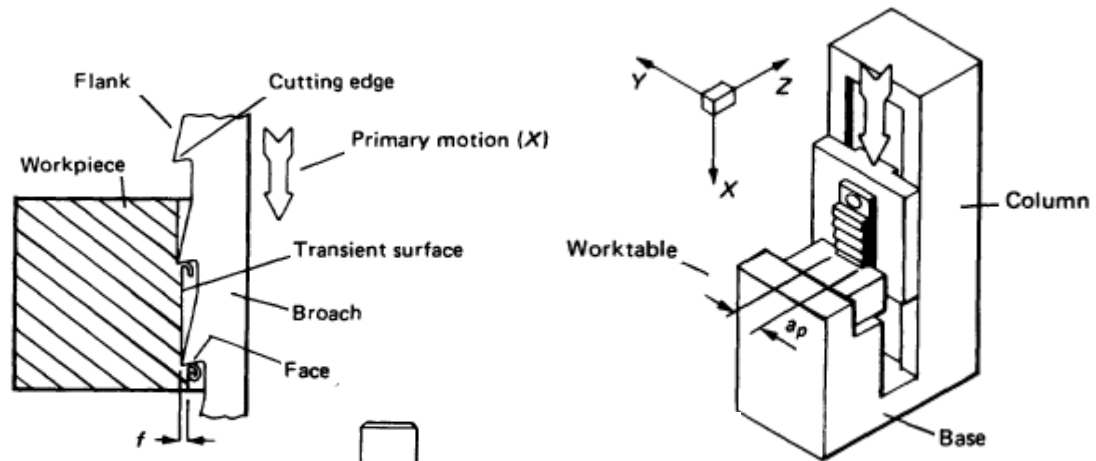
working Principle :



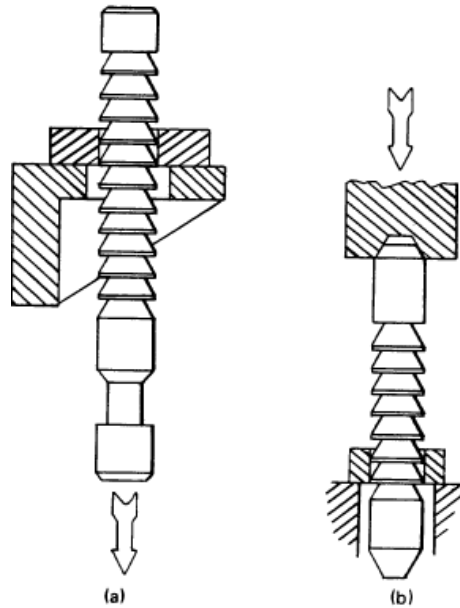
tool fixture:



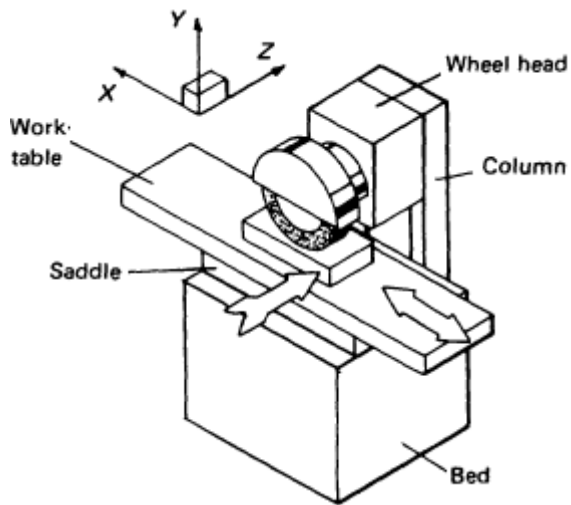
broaching machines :



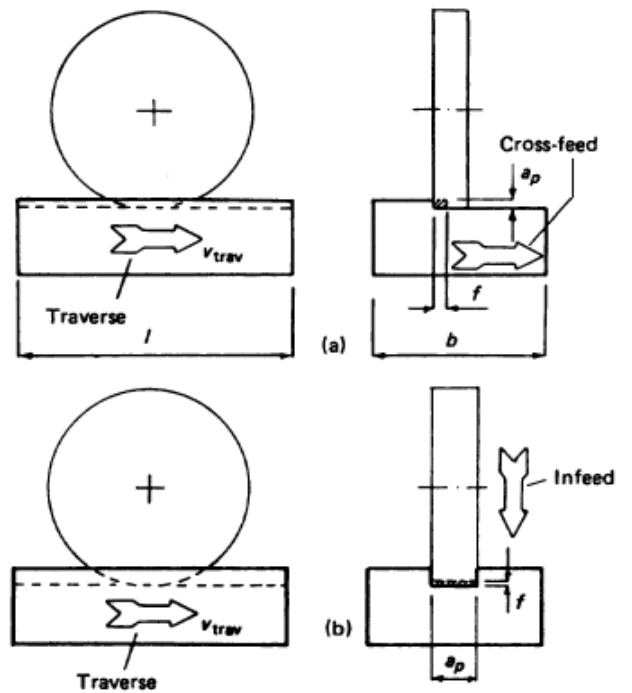
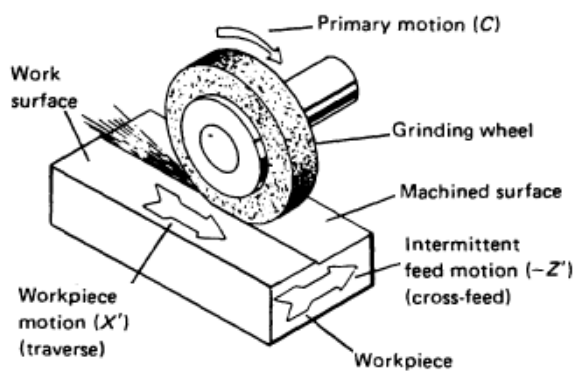
working Principle :



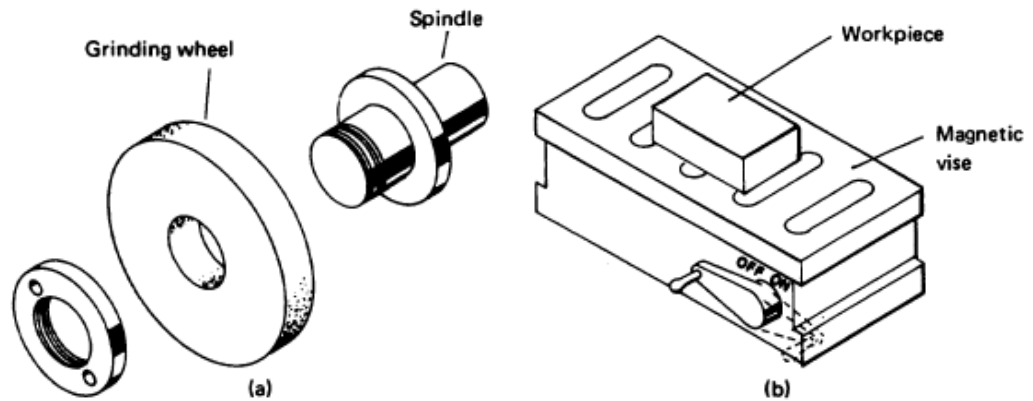
Horizontal flat grinding machine:



Working principle

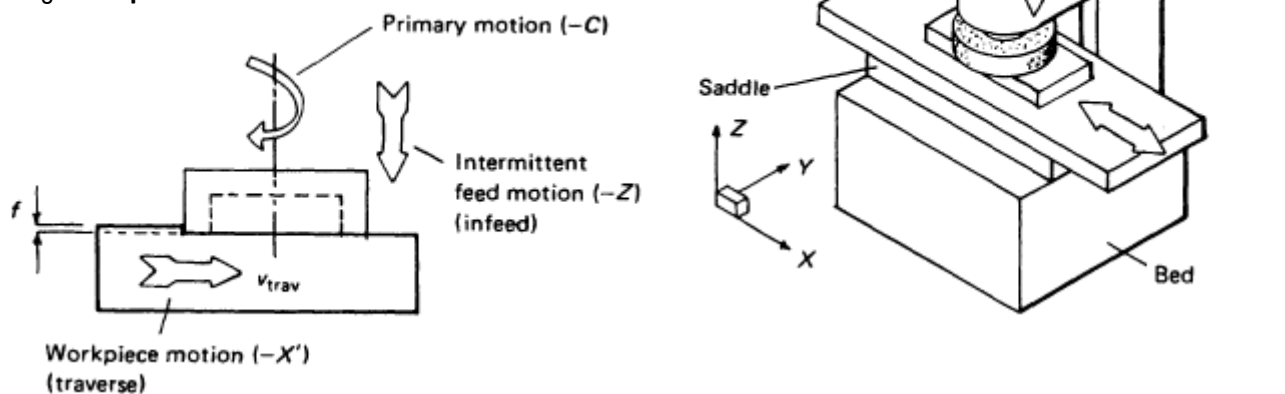


tool and workpiece fixture :



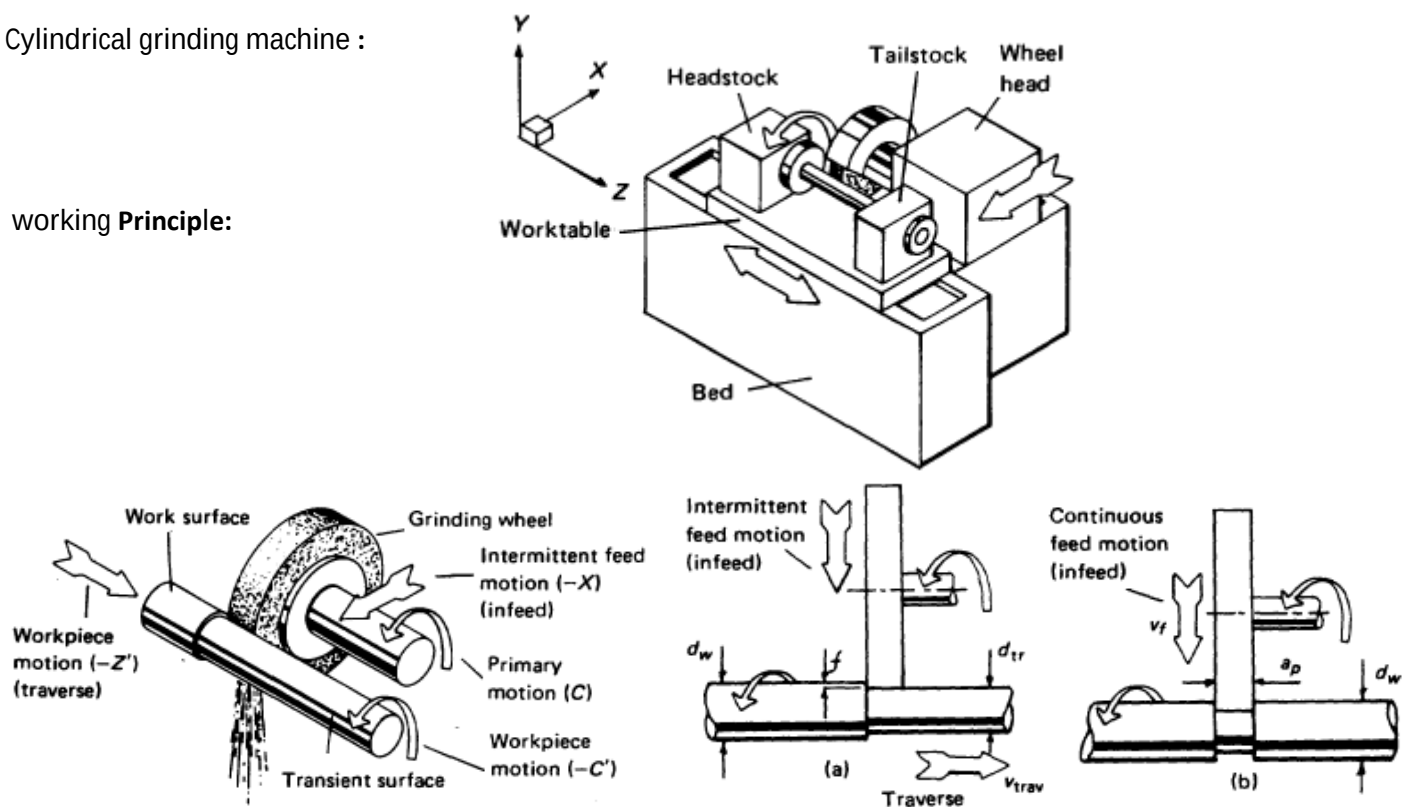
Vertical flat grinding machine :

working Principle :



Cylindrical grinding machine :

working Principle:



indoor grinder:

working Principle :

