

Machining Of Metals Defined

Machine tools are used to precisely cut and shape parts from metals and other materials to very close limits of accuracy.

- **To make new machines**
- **To make tools**
- **To make “stand alone” parts**

Traditional Machining

***Drill**

***Saw**

***Turn**

***Mill**

***Grind**

Non Traditional

***Chemical**

***Laser**

***EDM**

Fig. 1-1. A drilling machine or drill press.

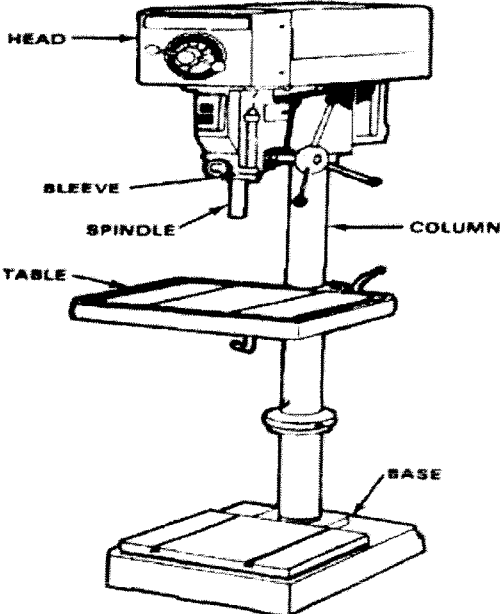
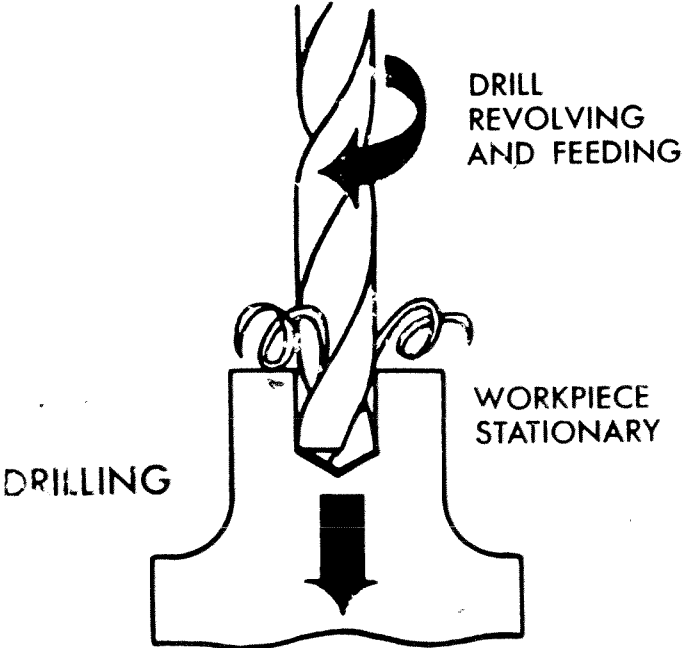
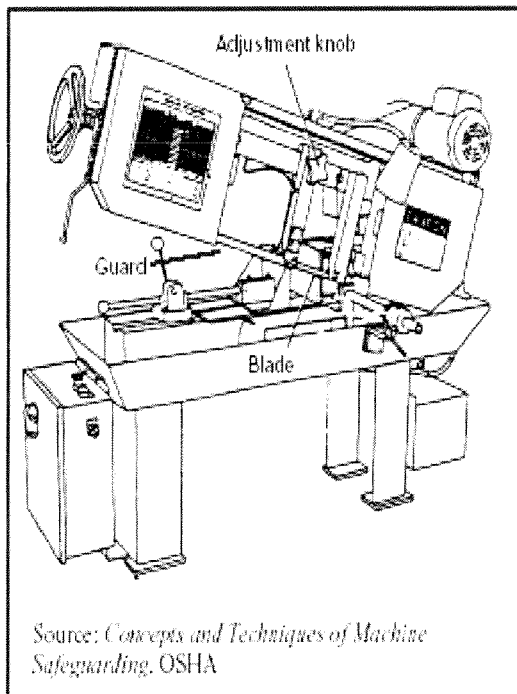
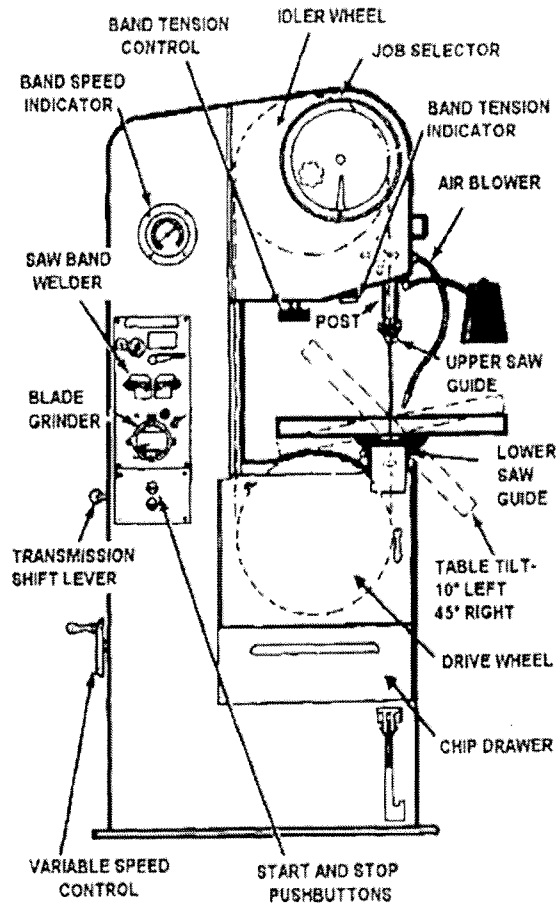


Figure 4-4. Construction of an upright drilling machine



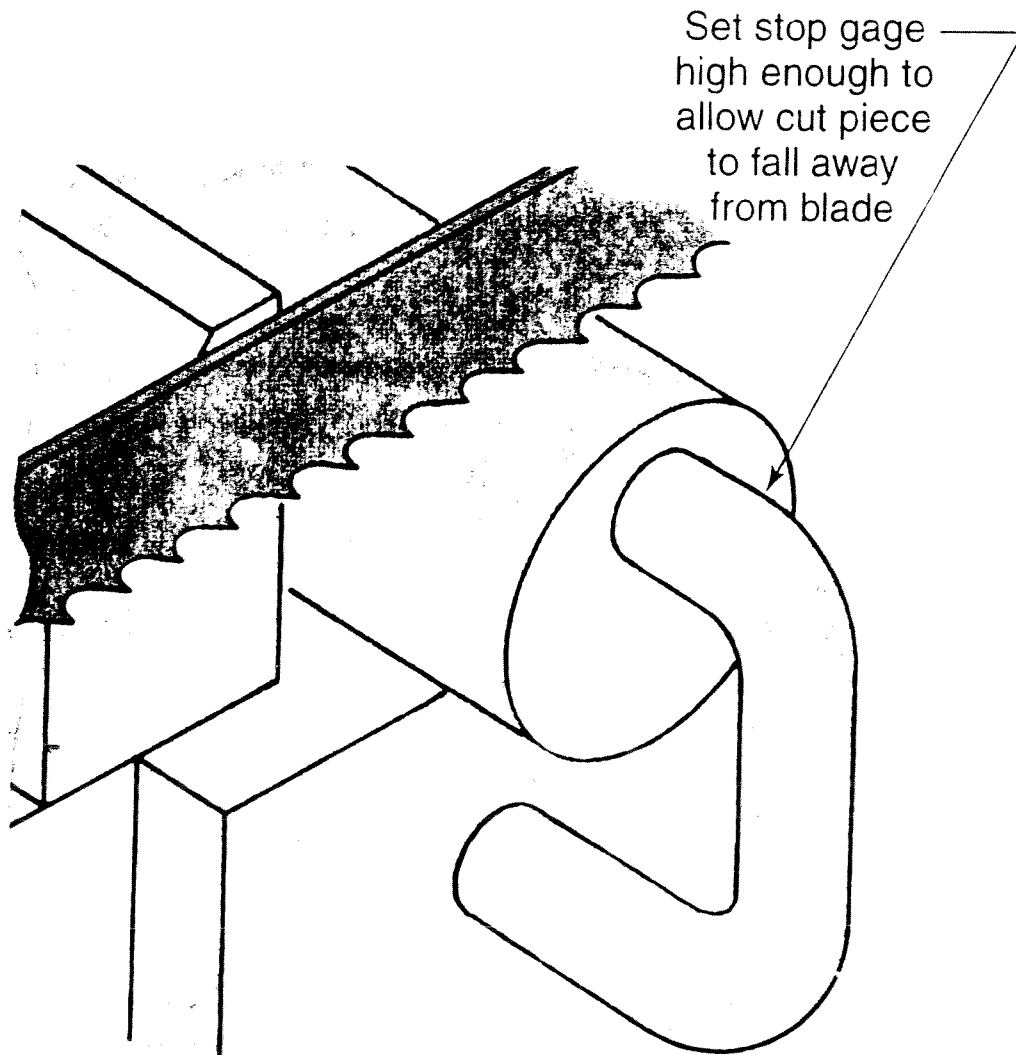


Figure 25-16.

A stop gage is used when several pieces of the same length must be cut. Set it high enough to permit the work to fall free when completely cut.

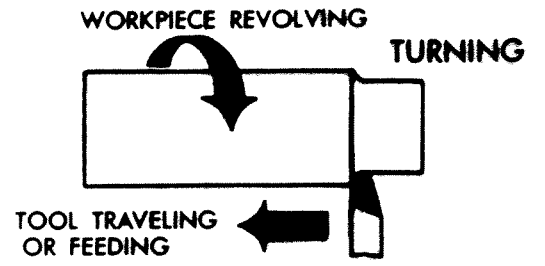
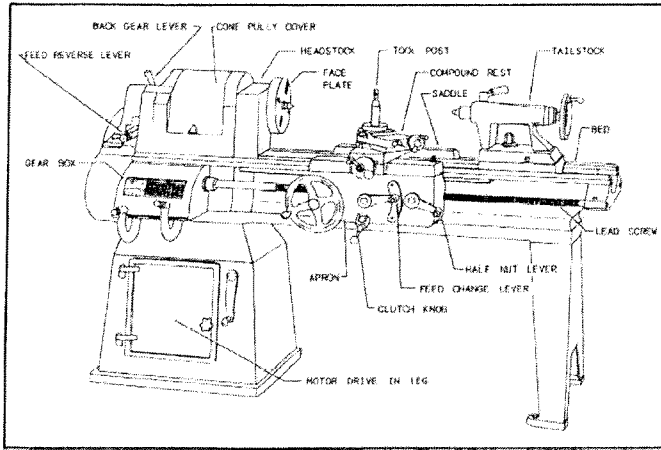


Fig. 1-2. An engine lathe.

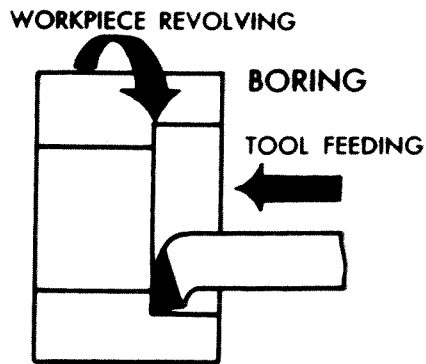


Fig. 1-3. Boring a hole on the lathe.

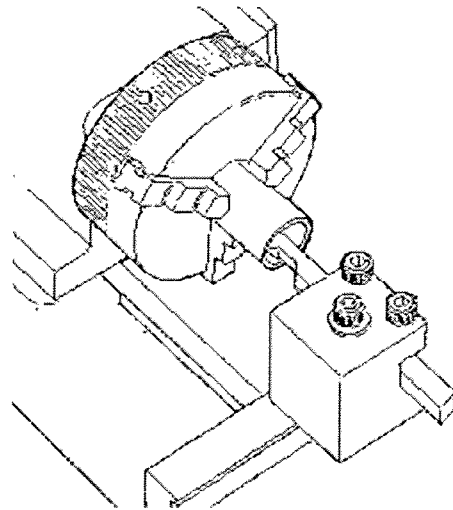
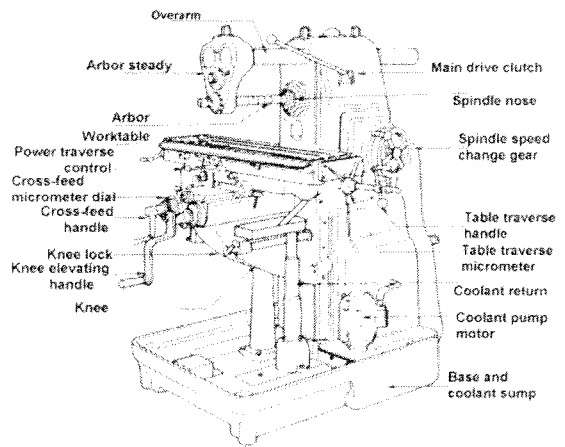
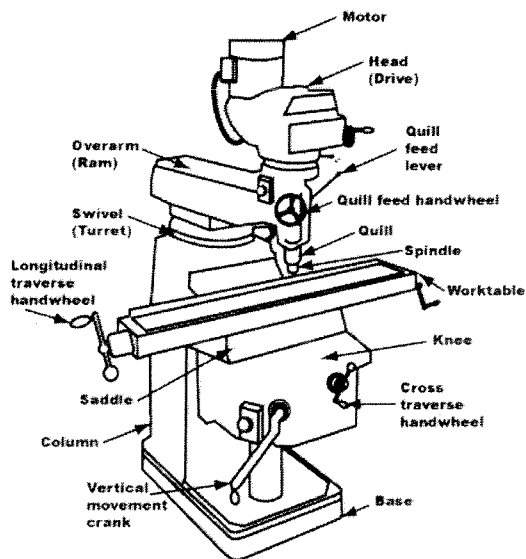
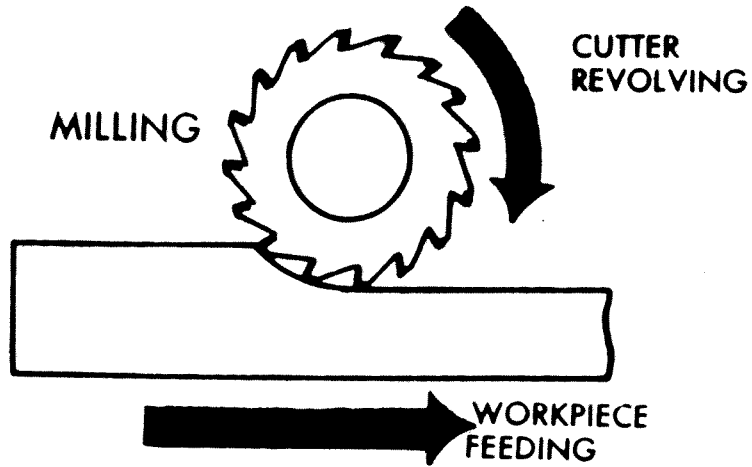


Fig. 1-4. A milling machine.



Horizontal milling machine

5. A surface grinder is one kind of grinding machine.

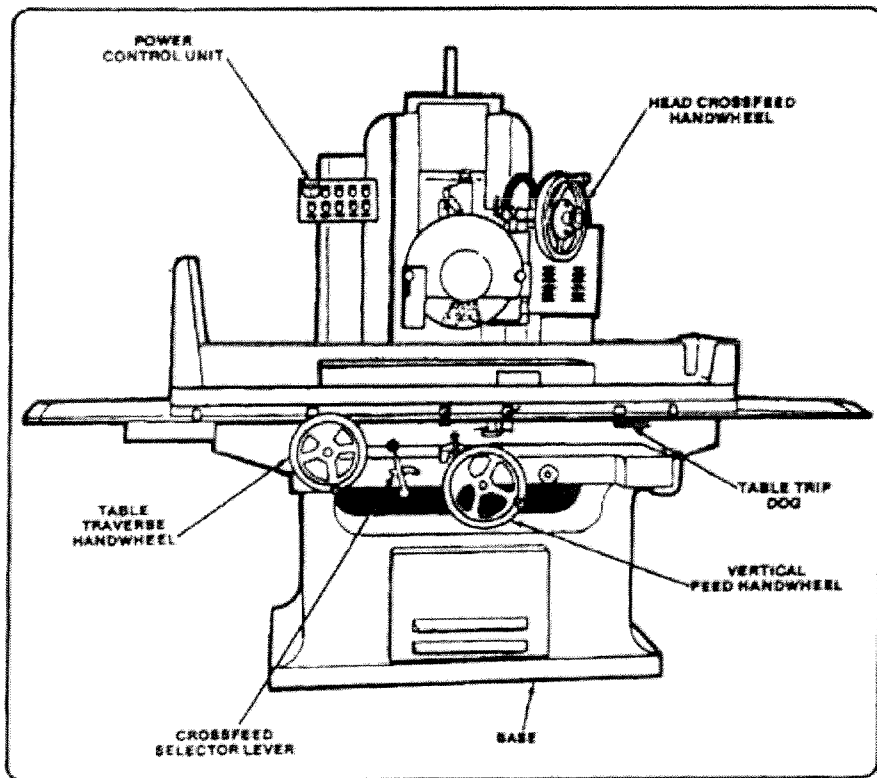
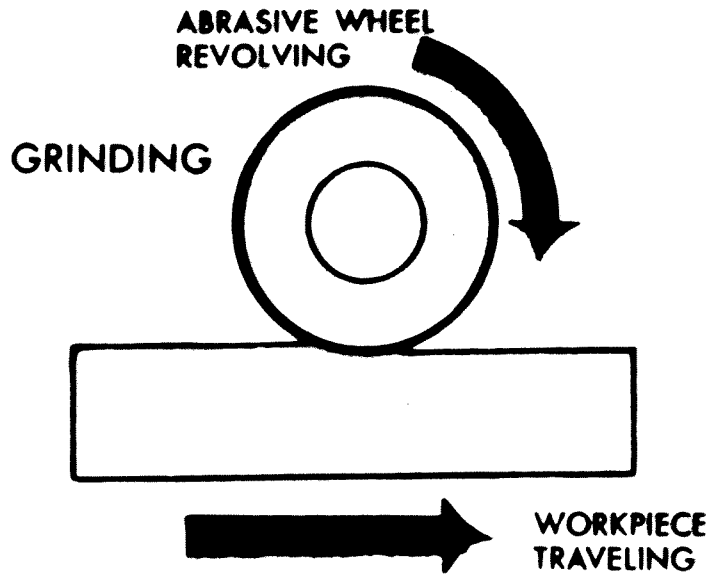


Figure 5-6 Reciprocating surface grinding machine