



## How To Use A Hand Drill

The hand drill is used for the rapid drilling of small holes in wood and metal. Holes in wood should be started with an awl, to center the hole. Holes in metal should be started with a center punch. Note: When drilling through metal, be sure to relieve pressure just before breaking through to avoid breaking the bit. Bits for wood and metal come in a variety of sizes.

### Utensils

Hand drill  
Assortment of wood and metal bits  
Small table vise with protector block  
Awl  
Center punch for metal drills  
Hammer

### Ingredients

Several pieces of wood of varying thickness

1. Open chuck (Fig. 5A) slightly larger than diameter of bit.
2. Insert bit and tighten chuck by pushing clockwise on the crank with one hand while holding chuck tight with thumb and forefinger of the other hand (Fig. 5B).
3. To remove bit, hold the chuck with thumb and forefinger of one hand and turn crank counterclockwise with the other hand (Fig. 5E).
4. With a hammer and awl, punch small hole in wood (Fig. 5C). Use center punch for metal (Fig. 5D).
5. Clamp wood or metal into the table vise so that hole punched with awl or center punch is visible.
6. To prepare for horizontal drilling, grasp drill handle in one hand and crank handle in the other hand.
7. Place bit against hole firmly and turn crank steadily in a clockwise direction. Do not wobble the drill, as this will create an oversized hole and could possibly break the bit.
8. It is sometimes desirable to hold the drill by the side handle and press your body against the frame handle (Fig. 5F).
9. Repeat this process several times until you can drill steadily.

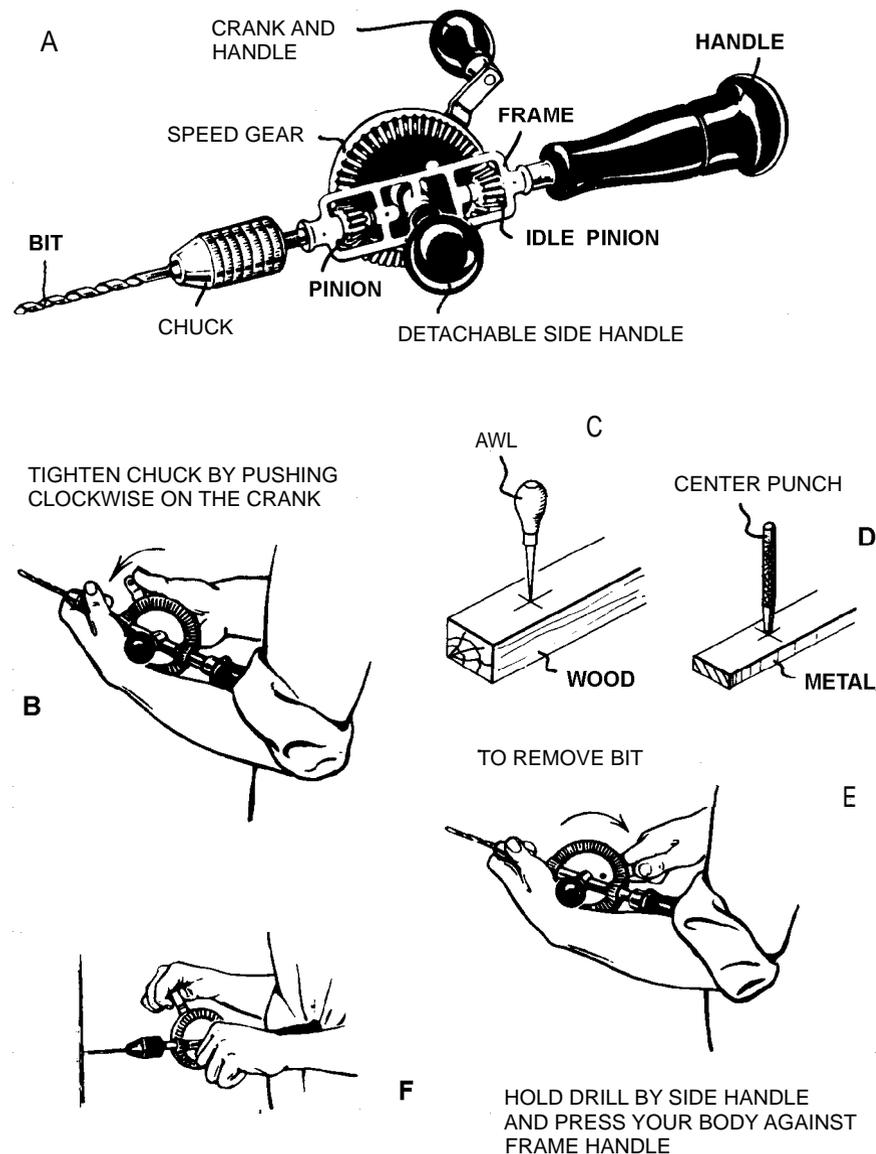


Figure 5.  
Hand Drill and its Use