

In many cases the disks may be located conveniently without the aid of the outer rim formed on the jig in Fig. 15. If we have given the center distances for three holes to be bored as in Fig. 19, we can make three disks of the proper size, place their edges in contact, secure them to the jig with wax or shellac and indicate and bore one hole after another. In the case shown in Fig. 19, where the distance from center to center is equal, the disks are of course all made to one diameter, equal exactly to the center distance between the holes, as shown in Fig. 20.

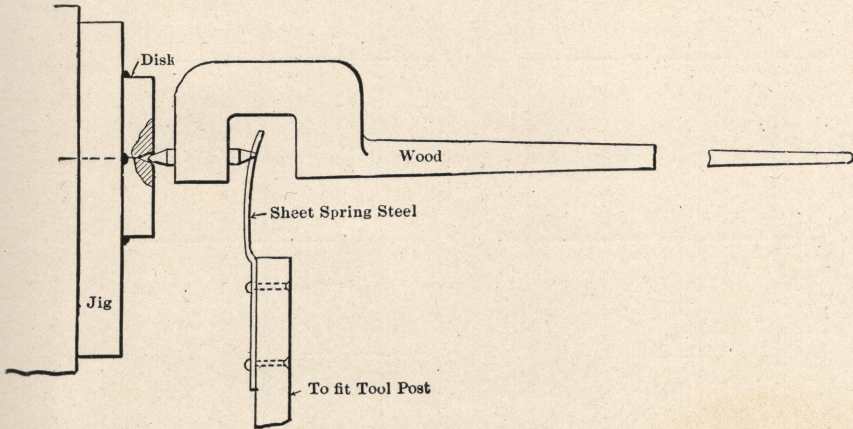


FIG. 18. — INDICATOR USED WITH THE DISKS

Where the center distances desired are all different, as in Fig. 21, the diameters of the disks may be easily found, as suggested by the diagram in Fig. 22.

Let  $x$  = half diameter of disk A  
 $y$  = half diameter of disk B  
 $z$  = half diameter of disk C

According to the dimensions in Figs. 21 and 22,

$$x + y = 0.765$$

$$x + z = 0.710$$

$$y + z = 0.850$$

$$\text{If } x + y = 0.765$$

$$\text{and } x + z = 0.710$$

Subtracting, we have  $y - z = 0.055$

$$\text{Now } y + z = 0.850$$

$$\text{and } y - z = 0.055$$

Adding, we have  $2 y = 0.905$ , diameter of disk B.