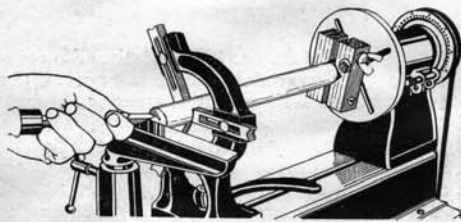
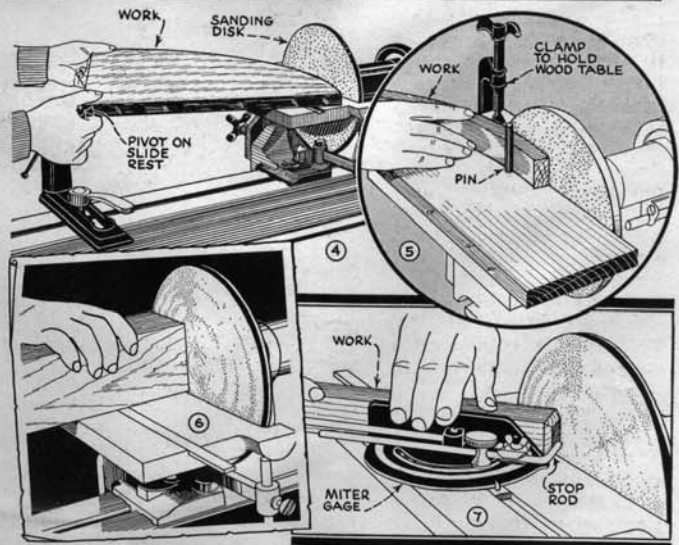
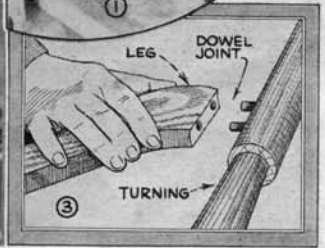
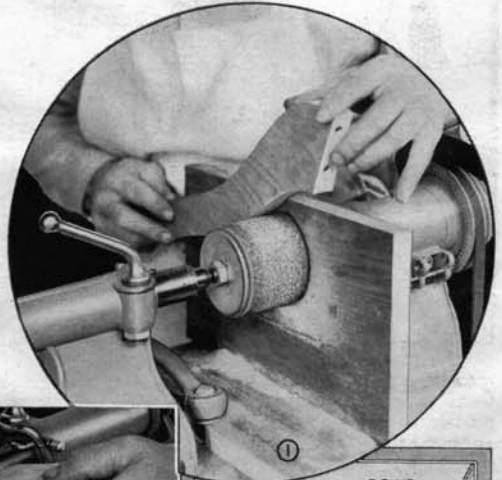


USING LATHE ATTACHMENTS



Sanding Drums.—The use of the sanding drum on the lathe should be obvious to every worker. One point to be borne in mind is that, if the shank of the drum is a Morse taper to fit the lathe spindle, the free end of the drum should be supported whenever possible by bringing up the tailstock with a plain center inserted, as shown in the photo, Fig. 1. This picture also shows how a vertical support can be used to good advantage in maintaining a true edge when sanding curved work. Sanding drums are, or can be made up to, different diameters, and the diameter itself can often be used as a surfacing gage for curved surfaces, a typical example being the fitting of legs to a round turning, as shown in Figs. 2 and 3. Almost any radius can be made in this manner by slightly rocking the work.

The Sanding Table.—The sanding table or the sanding disk alone is an indispensable part of the lathe. Its many uses in finishing work of all kinds should be evident. A few special operations with the sanding table are shown in Figs. 4 to 7, inclusive. Fig. 4 shows how circular curves can be sanded to a uniform radius by pivoting the work against the tool rest. The use of a pivot pin, as in band sawing circles, can also be used to advantage. Curved surfaces can be sanded to uniform width by first band sawing and smoothing one side, and then using the spacer pin, as shown in Fig. 5, to set the finish cut on the opposite side. Fig. 7 shows one of the many uses of the miter gage—beveling the edges of a piece of square stock. The gage sets the right angle, while the stop rod controls the depth of cut. In general use, the table should be within $\frac{1}{8}$ -in. of the sanding disk and slightly above the center of the disk. The table can be lowered, however, to accommodate large work, as shown in Fig. 6. Sanding, in all operations, should be



The Photographs Above Show a Few of the Many Uses of Sanding Drums on the Lathe. The Drawings Picture Typical Operations Using the Adjustable Sanding Table in Connection with the Sanding Disk.



ing end boring or similar operations. In the first of these operations, the work is turned down to a cylinder somewhere near the center of the stock. The lathe is then stopped, and the steady rest is moved over this section. The three supporting arms are adjusted to hold the turning firmly, but the pressure should not be so great as to cause excessive heating. All three arms are reversible. That is, the curve at the end of each arm is greater at one end than at the other, and the end to use will be determined by the size of the turning.

In operation, that portion of the turning between the steady rest and the dead center is usually turned first; then the live center end is turned and the steady rest is removed. Finishing cuts at or near the point occupied by the steady rest can be run in by making light cuts, supporting the back of the turning with the left hand while using the chisel with the right. In most cases the rest can

Above, Using the Steady Rest. The Center Photos Show Other Applications.

be shifted a little to permit access to all parts of the turning. You will find that the supporting arms burn the work to some slight extent. Friction can be avoided by wrapping the contact point with adhesive tape.

Fig. 2 shows the steady rest being used to support the free end of the turning for end boring. The same general procedure applies, the rest being properly adjusted before the tailstock is set free from the turning. If possible, the steady rest should contact a shoulder or similar cut so that it will not only center the work, but also keep it pressed against the live center. This is not strictly essential for end boring since the drill itself will exert enough end pressure, but it is a necessity when doing end turning. Fig. 3 shows one method of holding the work to the live center when there is no shoulder on the turning against which the steady rest can press. The jig is shown in detail in Fig. 4. As can be easily seen, it consists of two vee-blocks which bolt around the work, the blocks, in turn, being bolted through the slots in the 6-in. faceplate. Fig. 5 shows a simple back rest. This is simply a variation of the steady rest, and is most useful as a support for long turnings.

done on the front half of the disk. If the work extends past the center, firm pressure should be applied to prevent it from being kicked upwards. The tilting table is a useful asset in beveling work to any required angle.

Other Accessories.—Other accessories which are frequently used on the lathe include the grinding wheel, the wire brush, and the cloth buffing wheel. The use of the grinding wheel should be familiar with the reader; the wire brush is handy for removing rust and burrs from metal work and for applying a scratch brush finish; the cloth buffing wheel has a wide range of uses in buffing and polishing metal work. All of these wheels are interchangeable on one arbor. The two halves of the wire brush are reversible so that frayed edges can be turned to the inside.

