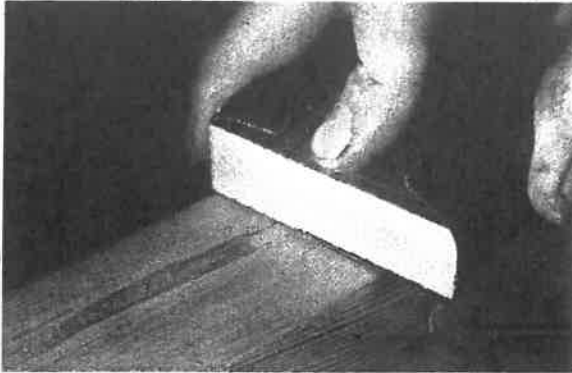# Sanding Stock

*Sanding* is a way of smoothing the surface of stock with an *abrasive* (a hard, sharp material that wears away a softer surface). Fig. 36-1. Abrasive grains are found on sandpaper and in grinding wheels and are used also as a powder.

Sanding is done (1) on each part after it is cut to final shape and (2) on the whole project after it is put together. Sanding should never be done in place of cutting. Only a poor or careless worker would try to make abrasive paper (sandpaper) do what a plane or chisel should do.

*Never use sharp tools on a surface after it has been sanded.* The fine abrasive grains left by the sandpaper would dull the tools.

**36-1.** *Sanding with a handmade sandpaper block.*

## GRIT SIZES

| | Grit. No. | O Grade | Uses |
|---|---|---|---|
| VERY FINE | 400<br>360<br>320<br>280<br>240<br>220 | 10/0<br>—<br>9/0<br>8/0<br>7/0<br>6/0 | For polishing and finishing after stain, varnish, etc., has been applied. |
| FINE | 180<br>150<br>120 | 5/0<br>4/0<br>3/0 | For finish sanding just before staining or sealing. |
| MEDIUM | 100<br>80<br>60 | 2/0<br>1/0<br>½ | For sanding to remove final rough texture. |
| COARSE | 50<br>40<br>36 | 1<br>1½<br>2 | For sanding after very rough texture is removed. |
| VERY COARSE | 30<br>24<br>20<br>16 | 2½<br>3<br>3½<br>4 | For very rough, unfinished wood surfaces. |

**36-2.** *Grades and uses of abrasive paper.*

## TOOLS AND MATERIALS

*Sandpaper* is a strong paper with abrasive grains glued on it. The abrasives used most often in the wood shop are:

• *Flint.* This is made of quartz. The paper looks light tan on the abrasive side. It is used for hand sanding. It is cheap but does not last long.

• *Garnet* is a reddish brown, hard mineral that is excellent for hand sanding. It is also used on power sanders. It will last much longer than flint but costs more.

• *Aluminum oxide* is a synthetic abrasive with a brown color. It is used for both hand and power sanding on hardwoods.

Abrasive coarseness is shown in one of two ways. A mesh number, such as 100, shows the size of screen through which the abrasive particles can pass. The larger the mesh number, the finer the abrasive. The older method uses a numbering system; for example, 2/0 is the same as 100. Fig. 36-2.
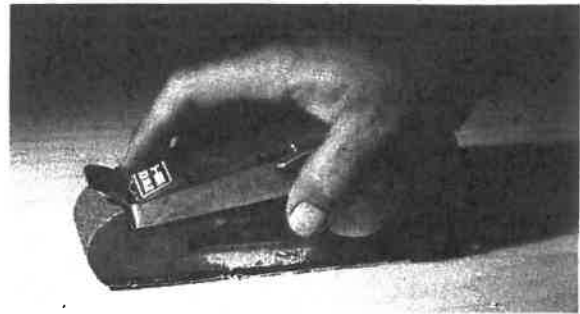
The following common sizes of garnet paper are used: 1 or 1½ (40 to 50) for sanding parts with deep tool marks; ½ (60) for all general sanding; 1/0 (80) for sanding after the project is assembled; 2/0 or 3/0 (100 to 120) for sanding before applying a finish; 4/0 to 6/0 (150 to 220) for sanding finishes.

A *sandpaper block* is very helpful. A rectangular block like the one in Fig. 36-1 is a good one. A



**36-3.** *Using a commercial sandpaper holder.*

piece of leather or heavy felt glued to the base makes a good backing. Putting the sandpaper right over the block is not good. If a sliver of wood gets between the paper and the block, the hard spot can tear the paper or make the sanding uneven. A commercial sandpaper holder is shown in Fig. 36-3.

**199**
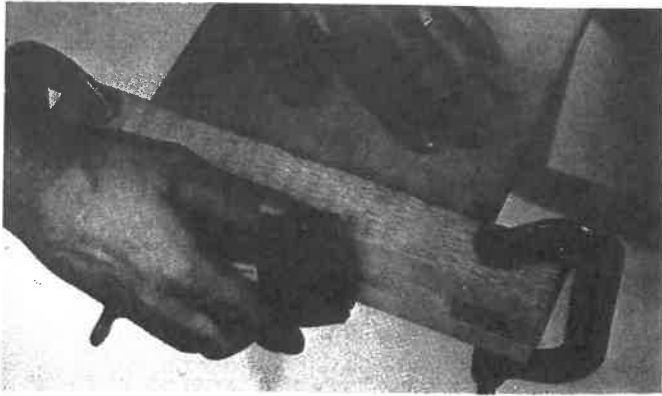
**36-4.** *Sand end grain in one direction. Notice the guide boards clamped over the end to keep the sanding square with the face surface.*
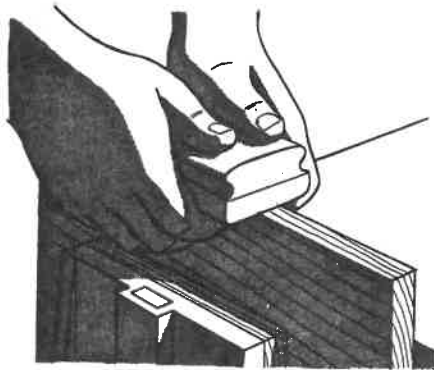


**36-5.** *Sanding an edge. Notice how the sandpaper block is held.*

## CUTTING OR TEARING SANDPAPER

Sandpaper can be bought in sizes to fit sandpaper holders and power sanders. You can also get larger sheets and cut or tear them to the size you need. To cut or tear the paper:

1. Grasp the opposite corners of the paper with the paper side down. Soften the paper by drawing it across the edge of the bench.

2. Fold the paper, abrasive side in. Then hold the folded edge over the corner of a bench and tear with a quick jerk.

3. To cut sandpaper, place the paper with the abrasive side down on a bench. Place the cutting edge of a saw on the paper and tear.

4. Always use a piece of sandpaper as small as possible to do the job.

200

## GENERAL SUGGESTIONS

● Make sure that all cutting is finished before you start sanding. Sanding is done to finish the surface, not to shape it.

● Always sand *with the grain*—never across it.

● When sanding end grain, always sand in one direction. Fig. 36-4.

● Apply just enough pressure to make the sandpaper cut. Don't press so hard that it makes scratches.

● Clean off the sandpaper and the surface often with a brush.

● Don't sand surfaces that are to be glued.

● Don't try to sand off pencil or knife marks. Remove them with a plane or scraper.

● Always brush off the surface after sanding.

● When you are finished sanding, use a tack cloth (a rag lightly moistened with varnish and turpentine) to remove dust before going on to the next step.
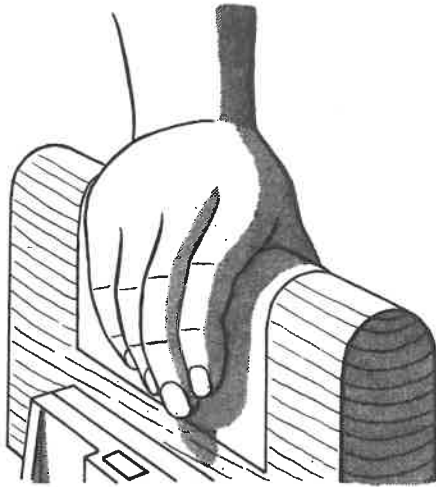
## SANDING A SURFACE

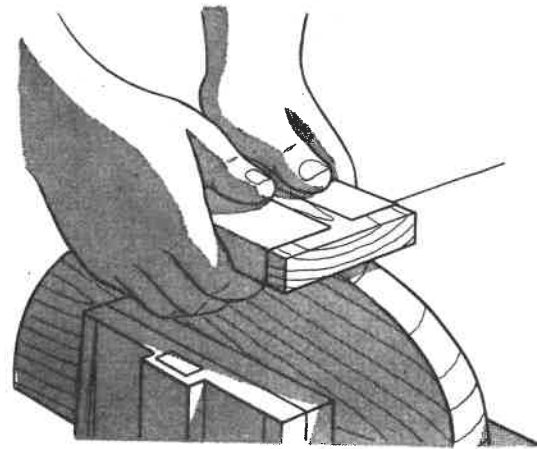1. Clamp the stock to the bench or hold it firmly with one hand.
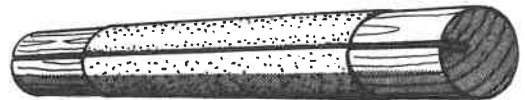


**36-6.** *A dowel rod with sandpaper attached.*
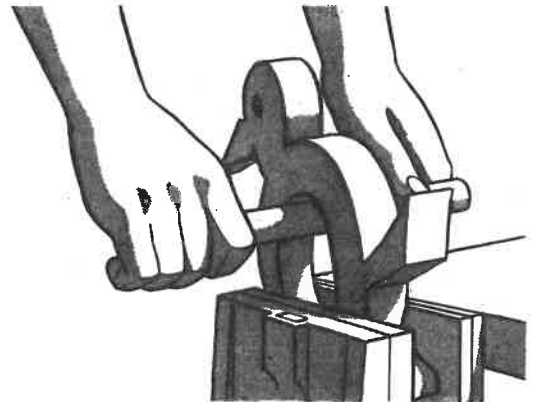


**36-7.** *Sanding an inside edge.*

**36-8.** *Sanding a convex surface.*



**36-9.** *Sanding an outside curve with a sanding block.*

2. Place the sandpaper on a block.

3. Take long strokes, sanding with the grain. Sand evenly from one side to the other. Always hold the block flat on the surface, especially as you near the end.

## SANDING AN EDGE

1. Clamp the stock in a vise.

2. Hold the block as shown in Fig. 36-5. Your fingers guide the block and keep it from rocking. Remember that you must sand surfaces square. Unless you are careful you will tend to round all edges.

3. "Break" all edges slightly to prevent splintering. This is done by holding a piece of fine sandpaper in your hand and going over all the sharp edges lightly.

## SANDING CURVED SURFACES

1. To sand a concave (inside) curve, wrap a piece of sandpaper around a piece of large dowel rod or a round file. Fig. 36-6. Twist the tool a little as you sand the surface. Fig. 36-7.

2. For convex (outside) curves, hold a piece of sandpaper in the palm of your hand. Fig. 36-8. Another method is shown in Fig. 36-9.

---

## QUESTIONS

1. Can sanding be done in place of cutting?
2. Should you use a chisel on a piece of wood after it has been sanded? Explain.
3. Name three kinds of sandpaper or abrasives.
4. What grade of sandpaper would you use for general sanding?
5. How do you cut a piece of sandpaper into equal parts?
6. Describe the way to make a good sanding block.
7. Should you sand across grain? Why or why not?
8. What must you watch for when sanding an edge?
9. How do you sand an inside curve?