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Distributors of Saws, Tools, Files for Great Britain and Ireland

How to Set and File Your Saw

FOLLOW THESE DIRECTIONS. Before starting work, read ALL the directions. Then, as you work, read them step by step.

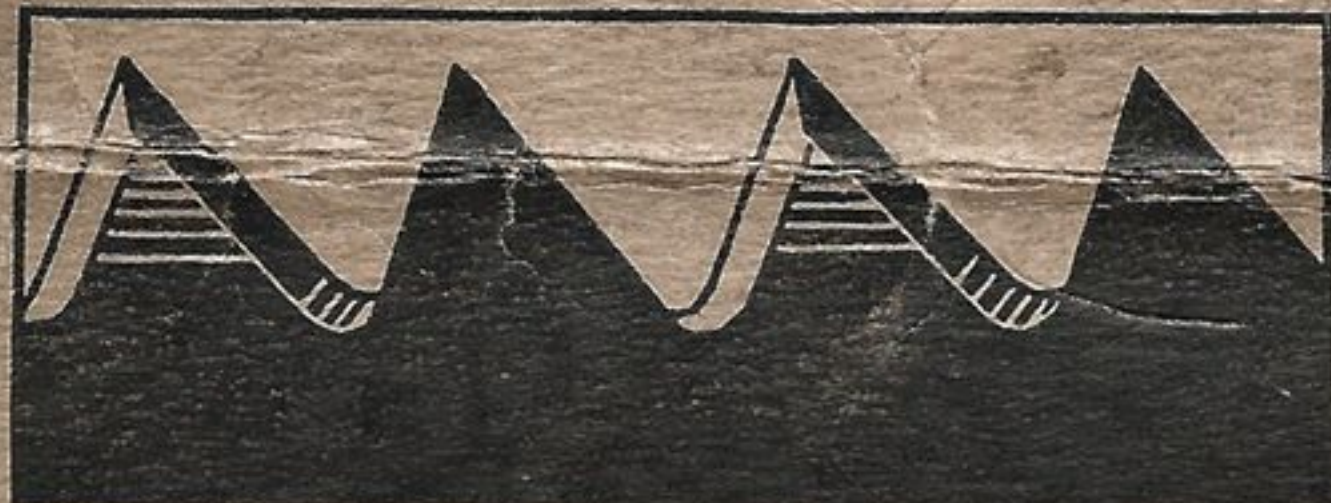


FIG. 1
Teeth of Cross-cut Saw (Magnified)
Showing correct shape.



FIG. 2
Teeth of Rip Saw (Magnified)
Showing correct shape.

Examine the tooth-edge of your saw carefully to see if the teeth are uniform in size and shape. If the teeth are uneven, it is necessary to "joint the saw" and "shape the teeth" in accordance with the instructions below.

However, if the teeth are of uniform size and correct shape, as shown in Figs. 1 and 2, "Jointing" and "Shaping the Teeth" are not necessary and you should start with the chapter on "Setting" below.

JOINTING

To be done only when the teeth are uneven or incorrectly shaped, as explained above.



FIG. 3
If the teeth of your saw are so uneven as this, it probably needs to go back to the maker to be put into good condition.



FIG. 4
This saw needs jointing. Read directions below.



FIG. 5
The saw in Fig. 4 after jointing. "Shape the Teeth" next. Read directions below.

Place the saw in a clamp, handle to the right. Lay a mill file lengthwise on the teeth. Pass it lightly back and forth the length of the blade, on the tops of the teeth, until the file touches the top of every tooth. If the teeth of your saw are very uneven, it is best not to make all the teeth the same height the first time they are "Jointed." In this case "Joint" only the highest teeth first, then "Shape" (see "Shap-

ing the Teeth" below) the teeth that have been "Jointed," then "Joint" the teeth a second time, passing the file along the tops of all the teeth until it touches every tooth. The teeth then will be of equal height. Do not allow the file to tip to one side or the other.

The Disston Hand Saw Jointer holds the file correctly and does this work quickly.

SHAPING THE TEETH

To be done only when the saw has been "Jointed." After jointing, all teeth must be filed to the correct shape. The gullets must be of equal depth. The fronts and backs of the teeth must have the proper shape. (See Figs. 1 and 2 for shape. Disregard bevel.) To do this, place the file well down in the gullet and file straight across the saw, at right angles to the blade (under no conditions hold the file at any other

angle). If the teeth you are filing are of unequal size, press the file against the teeth having the largest tops, until you reach the center of the flat top made by "jointing."

Then move the file to the next gullet, and file until the rest of the top disappears and the tooth has been brought up to a point. Make no effort to bevel the teeth at this time.

SETTING

You need not reset the teeth of a well-tempered hand saw every time the teeth need a light sharpening. If it was not necessary to "Joint" and "Shape the Teeth," examine the saw to see if the teeth have the proper amount of set indicated in Figs. 6 and 7. If they do, the saw is ready for filing.

If they do not, set them in accordance with the following instructions.

Note—It always is necessary to set the teeth when you have "Jointed" and "Shaped the Teeth" of your saw.

(Continued on other side)



FIG. 6
Looking down on the tooth-edge (magnified) of a cross-cut saw properly set.

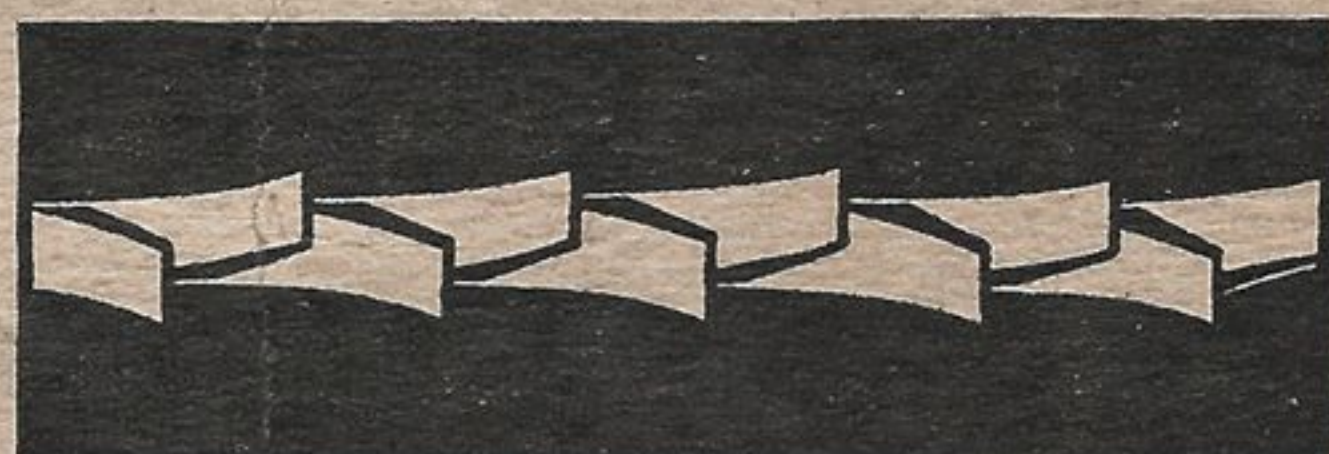


FIG. 7
Looking down on the tooth-edge (magnified) of a rip saw properly set.

(Read other side first)

"Setting" is springing over the upper part of each tooth, one to the right, the next to the left, to make it cut a kerf slightly wider than the thickness of the blade, to give clearance. (Figs. 6 and 7.) The same method is used for both cross-cut and rip saws.

The main thing is to avoid springing the teeth more than is necessary (just enough to cut a kerf slightly wider than the thickness of the blade) and to spring no more of the tooth than the half nearest the point.

A well-made saw needs very little additional clearance. If more than the upper half of the tooth is

set, it may crimp the blade, even if the tooth itself does not break.

Setting with Hammer and Anvil. This method requires a great deal of skill and practice. It is not recommended to the amateur.

Setting with Saw-set. The best method for all but experts is to use what is known as a "Saw-set." This is a special tool which sets the teeth by pressure.

Disston makes a saw-set which does this work properly. It is called the Disston Triumph Saw-set. Complete instructions come with it.

FILING

A Disston Taper File (three-cornered) should be used, its size varying with the fineness of the teeth. The table opposite indicates the particular style of file to be used on the different point rip and cross-cut teeth.

5	and 5 1/2 pt.	Cross-cut	6"	reg. taper file
6, 7, 8	" 9	"	" 4 1/2"	" "
10	" 11	"	" 5 1/2"	slim "
4 1/2, 5, 5 1/2	" 6	Rip	4 1/2"	reg. "
4 pt. rip and coarser, 6" regular taper file.				

[To determine the "point" of a saw, count the number of tooth points to the inch, measuring one inch from the point of any tooth. Note that there is always one more point to the inch than there are complete teeth to the inch.]



FIG. 8

First Position for Filing Cross-cut Saws (Fig. 8)

Place the saw in filing clamp with handle at right. The bottom of the gullets should be 1/8" above the jaws of the clamp. If more of the blade projects the file will "chatter" or "screech." This dulls the file quickly.

It will assist you to file a saw properly if, at the start, you pass a file lightly down the tops of the teeth (just as instructed under "Jointing" above) to form a very small flat top on each tooth. The purpose of this is to provide a guide for filing. It does, however, again even up the teeth—which was the main purpose of "Jointing" explained above. Now, file the teeth as instructed in the following paragraphs.

Cross-cut Saws. Stand at First Position, Fig. 8. Start at the point. Pick out the first tooth that is set toward you. Place file in the gullet to the left of this tooth. Hold file directly across the blade. Then swing the file handle toward the left for about 45 degrees (half of a right angle). Correct angle is shown in Fig. 8.

Hold the file level and at angle shown in Fig. 8. Do not allow it to tip upward or downward. Be sure the file sets down well into the gullet. Let it find its own bearing against the teeth it touches.

The file should cut on the push stroke. It files the tooth to the left and the tooth to the right at the same time. File the teeth until you cut away one-half of the flat tops you made on the teeth as a guide, then lift the file from the gullet. Skip the next gullet to the right, and place the file in the second gullet toward the handle. Repeat the filing operation on the two teeth the file now touches, being careful to file at the same angle as before. Continue this way, placing the file in every second gullet, till you reach the handle-end of the saw.



FIG. 9

Second Position for Filing Cross-cut Saws (Fig. 9)

Study Fig. 9 before you go further. Turn the saw around in the clamp, handle to the left. Take Second Position, Fig. 9. Place the file in the gullet to the right of the first tooth set toward you. (This is the first of the gullets you skipped when filing the other side of the saw.) Turn file handle 45 degrees toward right, this time. Now file until you cut away the other half of the flat top made on the teeth as a guide, and the teeth are sharpened to a point. Continue this, placing file in every second gullet, till you reach the handle of the saw.

Filing Rip Saws. With one exception, the method is exactly the same as that given above for Cross-cut Saws.

This exception is that rip saws are filed with the file held straight across the saw, at a right angle to the blade. Some mechanics, however, prefer to file a slight bevel in rip saws.

Place saw in clamp with handle toward the right. Start at the point. Place the file in the gullet to the left of the first tooth set toward you.

Continue placing file in every second gullet and filing straight across. When handle of saw is reached in this way, turn saw around in the clamp. Start at point again, placing file in first gullet skipped when filing from other side. Continue again in every second gullet till handle-end of saw is reached.

Files. You can get Disston Saw Files from your dealer. These are the same grade that Disston uses in filing Disston Saws. They cut faster and last longer.

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