

INSTRUCTIONS
for
FOLEY
Saw Filers

FOLEY MANUFACTURING CO., INC.
MINNEAPOLIS, MINNESOTA

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FOLEY AUTOMATIC SAW FILER

General View of Foley Filer with Letters Showing Points of Adjustment

A. Double Hand Wheel consists of an Inside Wheel and an Outside Wheel. Inside Wheel adjusts vise to necessary tension to hold saw rigidly under file, at the same time permitting proper feeding through Filer. Outside Wheel is used to tighten cone arbor in center of saw when filing circular saws.

B. Screw locks adjustment to maintain proper hook of file.

C. Reversible File Socket has one end for small files, and the other end for large files.

D. Adjustment for Depth of File Cut is regulated by knurled nuts at each end of filing arm which raise or lower file socket bracket.

E. Screws lock file in position after adjusting for depth.

I. Saw Carrier for Straight Saws is adjustable to hold all sizes of hand, back, and mitre-box saws without removing handles. One carrier for crowned saws (not shown) is also standard equipment.

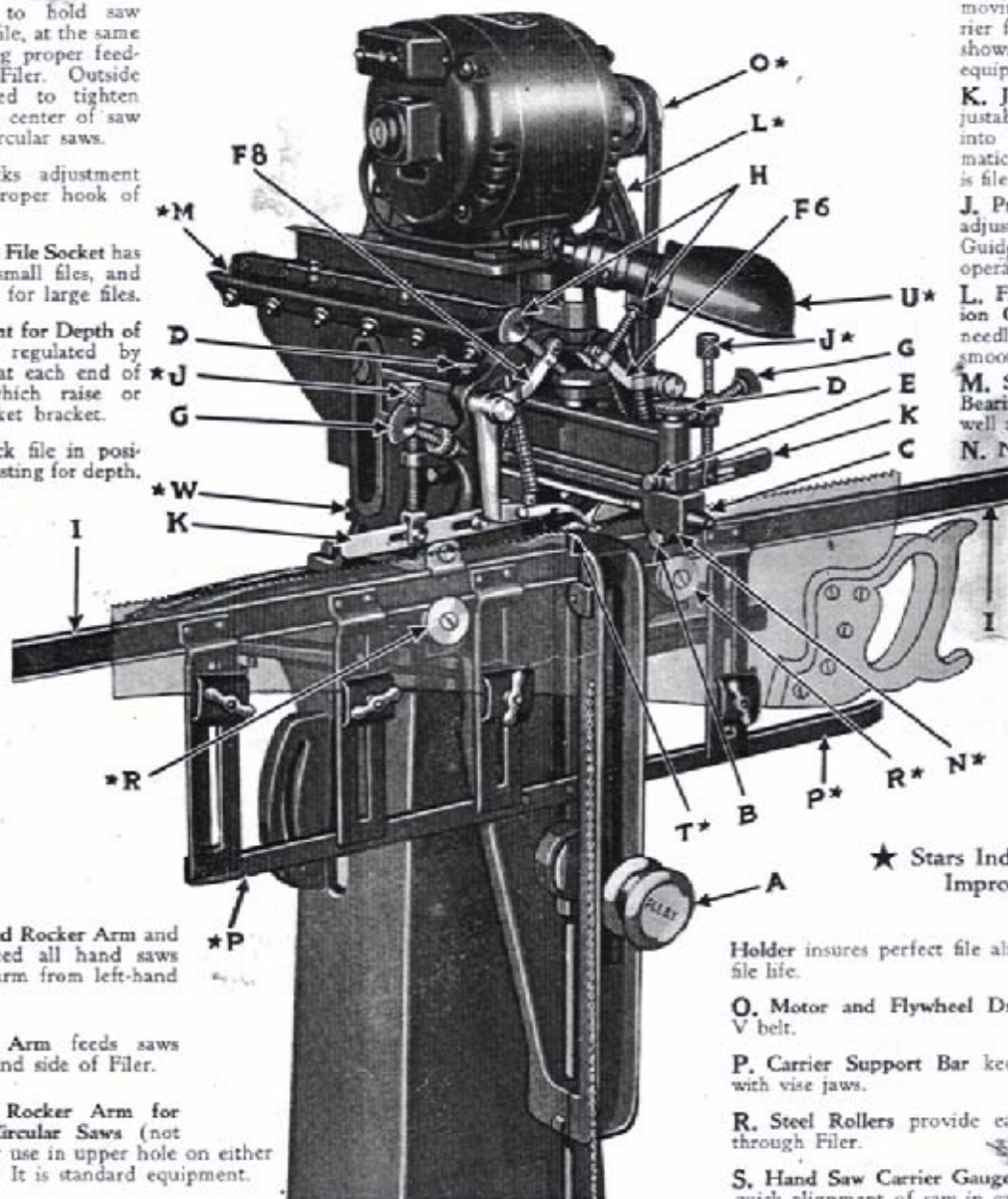
K. Jointing Guide is adjustable to guide feed pawl into V already filed, automatically jointing saw as it is filed.

J. Precision Screw permits adjustment of Jointing Guide K while Filer is in operation.

L. Filer Flywheel and Pinion Gear are mounted on needle bearings, assuring smooth quiet operation.

M. Single Triangular Slide Bearing supports file arm well above level of file.

N. New Type Socket



F8. Left-hand Rocker Arm and feed pawl feed all hand saws up to filing arm from left-hand side of Filer.

F6. Rocker Arm feeds saws from right-hand side of Filer.

F9. Special Rocker Arm for Band and Circular Saws (not shown) is for use in upper hole on either side of Filer. It is standard equipment.

G. Lower Adjustment Rocker Arm Screw limits backward travel of rocker arm to move two teeth at a time for feeding coarse saws up to the file in bevel filing.

H. Upper Adjustment Rocker Arm Screw controls forward or backward travel of feed pawl to bring any size of saw tooth in position under file.

★ Stars Indicate Latest Improvements.

Holder insures perfect file alignment and increased file life.

O. Motor and Flywheel Drive is equipped with V belt.

P. Carrier Support Bar keeps hand saw in line with vise jaws.

R. Steel Rollers provide easy movement of saw through Filer.

S. Hand Saw Carrier Gauges (not shown) permit quick alignment of saw in carrier.

T. Steel Vise Lip assures permanent accuracy. It is replaceable.

U. Adjustable Light Attachment assures perfect lighting.

W. Vertical Slide Rods.

Illustration No. 1

IMPORTANT! It is very simple to operate the Foley Filer. All you need do is learn the adjustments before trying to file a saw. This will save you time and trouble. Read the general instructions on pages 3 to 10 and then refer to section covering the particular type of saw you wish to file. Have the filer in front of you as you read, if possible.

GENERAL INSTRUCTIONS

For Use and Operation of FOLEY AUTOMATIC SAW FILER

The Foley Automatic Saw Filer will not only file saws more accurately than can be done by hand but will add a mechanical precision not obtainable otherwise. Since the Foley Filer is designed to do perfect work, it must be used accurately and the greatest care taken with all adjustments. The operation of Filer is simple and easy once adjustments of moving parts are understood thoroughly.

The Foley Filer is designed to file and joint any type of saw that can be filed with a standard three-cornered or cant saw file, having teeth ranging from 3 to 16 points to the inch. The Filer will also retooth practically any type of hand saw, although retoothing can be done much cheaper and faster with the Foley Retooler, illustrated on page 30.

A careful study of this instruction book will enable you to obtain perfect results with very little effort.

Good light is essential to operate the Filer, and that is why we furnish as standard equipment the electric light attachment. It assures you of perfect light and enables you to file saws even at night without eye strain.

Before starting to operate Filer, study large cut on page 2, with Foley Filer before you. Identify each part as indicated by an arrow and note its purpose and use.

Models F-16, F-24, and F-3 have identical types of rocker arms, beveling quadrant bases, socket holders, and saw carriers for guiding hand saws through Filer.

Setting Up Filer

The Foley Filer is tested thoroughly at the factory and packed carefully for shipment. When it reaches you, unpack it at once and examine it carefully for breakage. If you find it damaged, report it immediately to the agent who delivered it to you, secure agent's notation of damage on freight bill, and then notify us of the broken parts.

Motor and flywheel are removed from Models F-16 and F-24 before shipping. Flywheel is removed from F-3.

To set up, first attach Filer to pedestal or work bench. If you are using bench, a height of about 42" will give you best results. Fasten Filer securely with bolts or screws supplied for that purpose.

In assembling Models F-16 and F-24, when Filer is placed, remove collar and washer from drive shaft and slide flywheel in position so that teeth of small pinion gear attached to flywheel engage teeth of large cam gear on Filer.

Then replace washer and collar on drive shaft. Remove bolts and place motor on motor plate with pulley to right. Then pass four motor bolts from below through holes in motor base, putting nuts on from top. Tighten nuts just enough to allow motor to be

moved into position. Put belt in position and pull motor forward until belt is tight. Turn flywheel by hand and swing motor until belt leads evenly on both pulleys. Then tighten motor in position.

With Model F-3, it is only necessary to attach flywheel by taking off collar and slipping wheel on shaft, matching jaws of clutch so that counter weight on flywheel is just past top center (turning clockwise) when file arm carriage is at bottom of stroke.

Correct Filing Speed

The correct filing speed of Models F-16 and F-24 is 55 to 60 strokes of file arm per minute. If you have standard 60 cycle, 110 volt, alternating current, speed of file arm will always be uniform, but if you are using direct current or a special cycle motor such as (25, 40, or 50 cycle), there is possibility of speed of file arm varying. After you have set up Filer, turn on motor and check speed of file arm. If it is from 55 to 60 strokes per minute, it is correct filing speed, but if speed is lesser or greater, write us at once giving speed of file arm. We will be very glad to furnish you with a special motor pulley, without extra charge, so that Filer will operate at correct speed on current that you are using.

Oiling

The Filer was oiled thoroughly before it left our factory, but since it has collected dust in transit, it is necessary to oil thoroughly again before starting to operate it. Use a good grade of light machine oil that will not gum. We recommend No. 20 S.A.E. Engine Oil. Particular attention should be given cam, cam roller, vertical slide rods, oil cups in the gib slide (above file arm). Oil cup leading to main bearing should be kept filled. With ordinary usage, oil motor bearings once a month.

While Filer is in operation, be careful not to allow filings to accumulate on any part of Filer. Use a small brush to clean them off, taking care to brush away from moving parts of Filer. Do not blow filings toward Filer. Keep all parts well oiled.

There is an oil hole in each rocker arm so that you can oil rocker arm bolt to keep it working freely.

USE AND REPLACEMENT OF FILES

The Foley Filer is equipped with two 7" extra slim taper files for filing saws with 8 or 9 points to the inch. For saws with larger or smaller teeth use the following files:

For fine tooth saws with 10 or more points per inch, use 7" double extra slim taper file.

For saws 8 or 9 points to the inch, use 7" extra slim taper file.

For saws 5, 6 and 7 points to the inch, use 7" slim taper file.

For saws 5 points or less to inch, use 7" taper file or one of our special Diamond Point files with $\frac{5}{8}$ " or $\frac{3}{4}$ " face.

We suggest that you purchase Foley Files, especially manufactured and adapted for use on Foley Filer. They are selected and tested carefully for straightness and hardness on all three faces and edges. It is economical to use Foley Files, for each file will sharpen more saws than ordinary standard files.

We carry a complete assortment of files in stock at all times, as shown in the file price list enclosed.

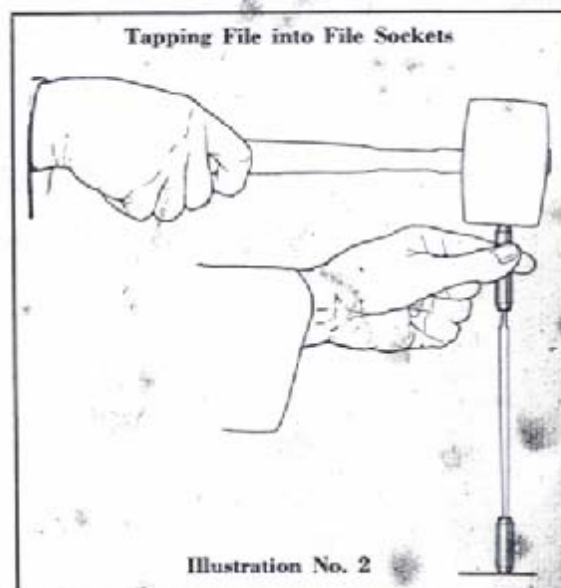
To Change Files

Be sure to check files for straightness before using in Filer. It is necessary that files be absolutely straight, otherwise you will not be able to do perfect work. All files furnished by us are guaranteed as to straightness.

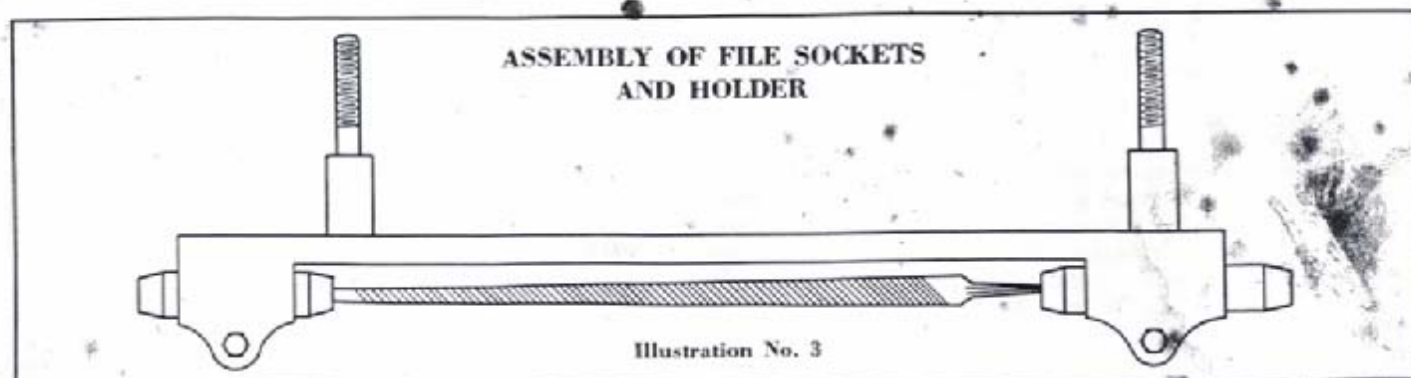
A file is held in position in Filer by two sockets which fit into socket holder. Both front and rear file sockets are reversible, either end can be used. Large files fit in one end of socket and small files fit in other end. Some brands of 7" double extra slim taper files are too thin a tang to be held firmly in small hole in front socket. A special file socket with a smaller hole in one end is provided for files with a small tang. The other end of special file socket is extra large to fit tang on Diamond Point Files.

The front and rear file sockets are locked in place by Cap Screws B. In removing file, loosen Cap Screws B. Draw file assembly forward through socket holder. Remove sockets from old file and place them on new file to be used. Take care that tang or handle end of file is placed in longer socket (using hole at either end of socket in accordance with size of file being used). Taper end or point of file fits in shorter socket. Either hole of this socket can be used, depending upon size of file.

Turn assembly on end and tap (See Illustration No. 2) hard enough to give each socket a firm grip on file. If you do not tap sockets to file, there is tendency for rear socket to work loose and file will get out of line, making it impossible to do perfect work.



Replace assembly in socket holder, making sure that taper end or point of file in short socket is toward back of Filer. Push file assembly into socket holder until file centers. Lock Cap Screws B (with wrench attached to machine) before filing to hold sockets in place securely. Sockets are intended to fit snugly into socket holder. When sockets are too tight, rub them down with emery cloth.



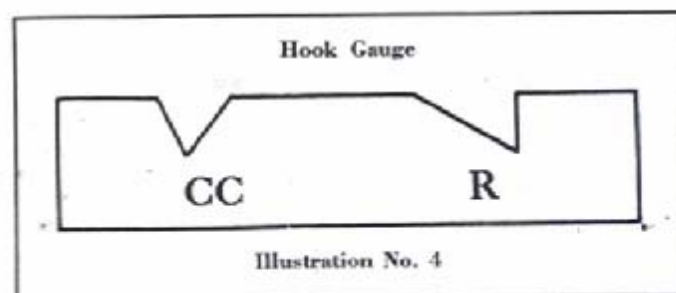
USE AND REPLACEMENT OF FILES (Continued)

Adjusting File for Hook †

The angle at which file is held will govern hook given to teeth of saws to be filed. In all filing, therefore, file must be adjusted to give hook desired before starting to file saw. This may be done either by adjusting file to hook already on teeth or by using hook gauge furnished with Filer, which gives standard hook used by saw manufacturers.

A hook gauge (See Illustration No. 4) is furnished with Foley Filer and is used to gauge proper hook for either cross-cut or rip saws. It is marked by letters CC for cross-cut and R for rip saws. Place gauge on top of vise with marking for type of saw you wish to file facing toward you. Drop file into notch of hook gauge by turning flywheel by hand and loosening Cap Screws B. Turn File Socket C until file fits gauge. Then tighten Cap Screws B so that file will retain hook during filing.

Some carpenters prefer a little more than standard hook on saws. If hook on saw is to be retained, use saw teeth as a gauge. File can be set at any angle to give hook desired.



Setting File for Depth

For hand saws, place saw in carrier (See Page 6) and move in under file until first V next to handle is under file.

If you are filing a band or circular saw (See Pages 19-25) indicate starting point with chalk, blue pencil, or string. Loosen Cap Screws E at front and rear of file on side of file arm. Turn Knurled Nuts D until file is lowered into gullet of tooth. Keep rear of

socket holder (which holds taper or pointed end of file) about $\frac{1}{8}$ " higher than front of socket holder (which holds tang end of file), enabling you to take a gradual cut. Watch this point and files will last twice as long. After proper depth of file is set, tighten Cap Screws E to hold file in place. Take light cuts at all times, as heavy pressure does no more cutting and only wears out file.

How to Insert Diamond Point File

Very coarse saws such as 3 and 4 point require special Diamond Point Files which we can supply. Special socket F134* must be used to hold point of file; furnished extra. Combination holder (Illustration No. 3) will not accommodate this wide file so separate front and rear socket holders, parts F222* and F225*, will be sent on request.

1. Remove combination front and rear holder (Illustration No. 3) from file arm. Replace with individual F222 front and F225 rear holders. Long end of rear holder should face front of machine.

2. Insert tang of Diamond Point File through the back of front holder. Place F134 socket in rear holder and slip file back into this socket.

3. Special front file socket with large hole, furnished with machine, is used to hold tang end of file. Place this special socket over tang end of file, inserting through front of file holder.

4. Tap front file socket lightly so tang end of file is held firmly in front socket.

5. Adjust file for desired hook and tighten Cap Screw B to hold the adjustment securely.

*See Illustrated Parts Price List, Pages 33-34.

†Hook: Is the pitch or angle with which teeth are filed, pointing forward away from the handle.

INSTRUCTIONS APPLYING TO ALL HAND SAWS

Hand Saw Carriers

All hand saws are guided through Filer by a hand saw carrier. (See Illustration No. 5.) Two carriers are furnished. One has a straight edge, the other is crowned $\frac{3}{16}$ " to length of saw. All straight hand saws must be filed in straight carrier. Saws with crown must be filed in crowned carrier, if crown in saw is to be retained. Special carriers with more or less crown can be furnished extra.

Carrier rollers and guides are bolted on front of Filer on each side of vise to hold carrier in position. Carrier rides freely without binding. Saw guides are adjustable to compensate for wear.

A bar is provided for bolting to inside vise to support hand saw carrier through Filer. This support bar eliminates possibility of hangers catching, if bent slightly out of line. This bar should be parallel with bottom edges of hangers on hand saw carrier. It is equipped with two set screws, one on each side of center bolt, providing for adjustment of bar either in or out, to hold hand saw straight in vise. **Support bar is used only when filing hand saws.**

Adjusting Hand Saw Carriers

Place carrier in rollers and guide without a saw. See that carrier moves freely without binding. If any

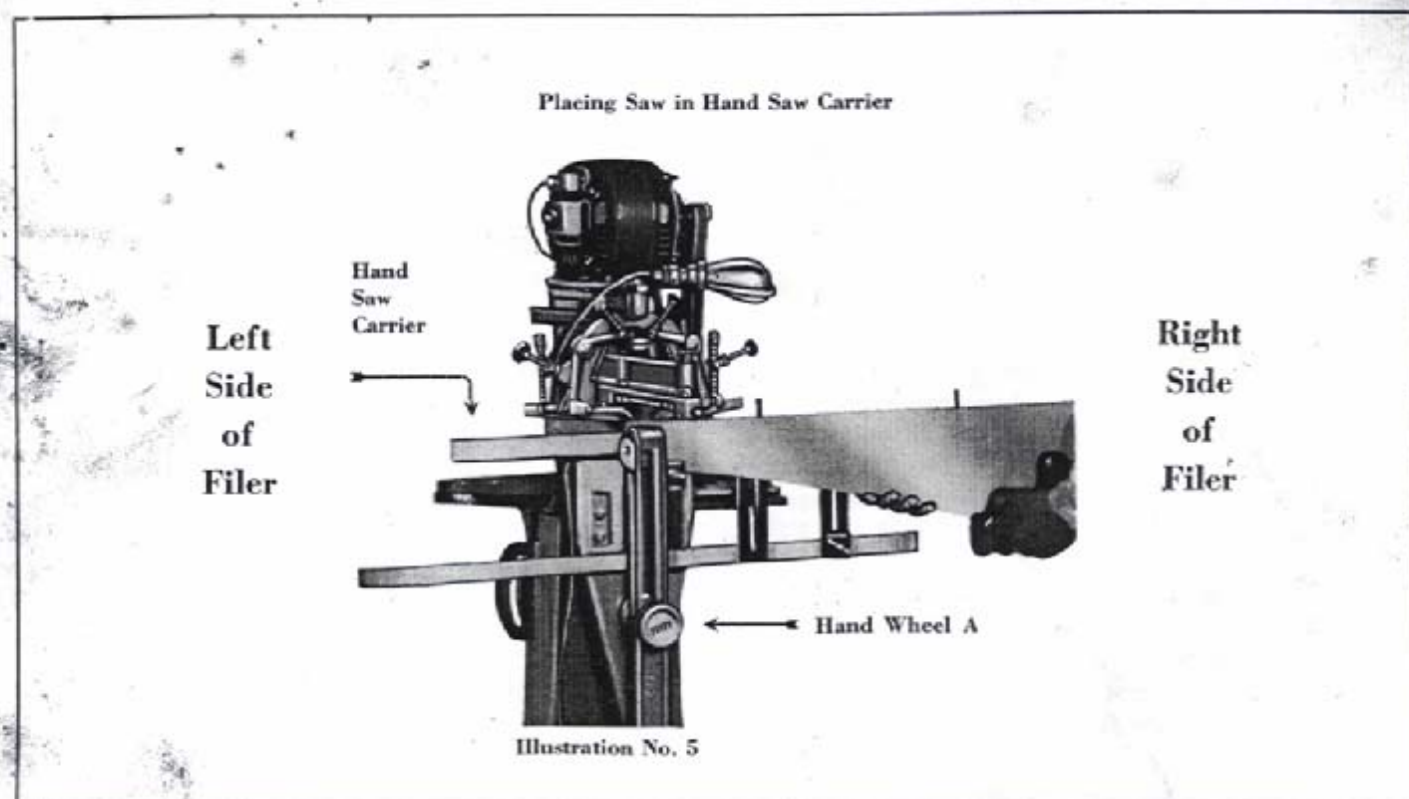
of the four hangers are out of line, straighten so that they will not touch when going through vise.

Both straight and crowned saw carriers have four hangers to hold saws in place. The straight saw carrier has hangers with small offset near top to allow for back on back saws.

When filing a back or mitre-box saw using a straight-edged carrier, remove outer clamp and use inner clamp with curved side down. This holds saw in vertical position while passing through Filer. When filing standard hand saws, both clamps are used, the inner one being turned so that curved edge laps over side of hanger (acting as washer) and saw is gripped between inner and outer clamps.

Carrier Gauges Adjust Saw in Carrier

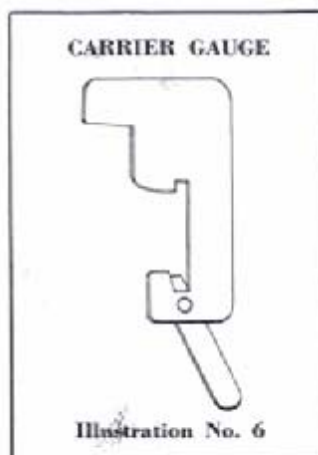
Two hand saw carrier gauges are furnished for placing saws at correct height in carrier. (See Illustration Nos. 5, 6 and 7.) These gauges are clamped, one at each end, on back of carrier bar so that bottom of V or gullet of saw tooth touches beveled edge of gauges. Tighten clamps. Saw is then in proper position for filing.



INSTRUCTIONS APPLYING TO ALL HAND SAWS (Continued)

Mounting Hand Saw in Hand Saw Carrier

1. Slide carrier to right as far as it will go without coming out of carrier roller.
2. Loosen clamps on hangers so that they will move freely up and down in slots.
3. Place gauges on carrier bar, one on each end of saw, and clamp in position.



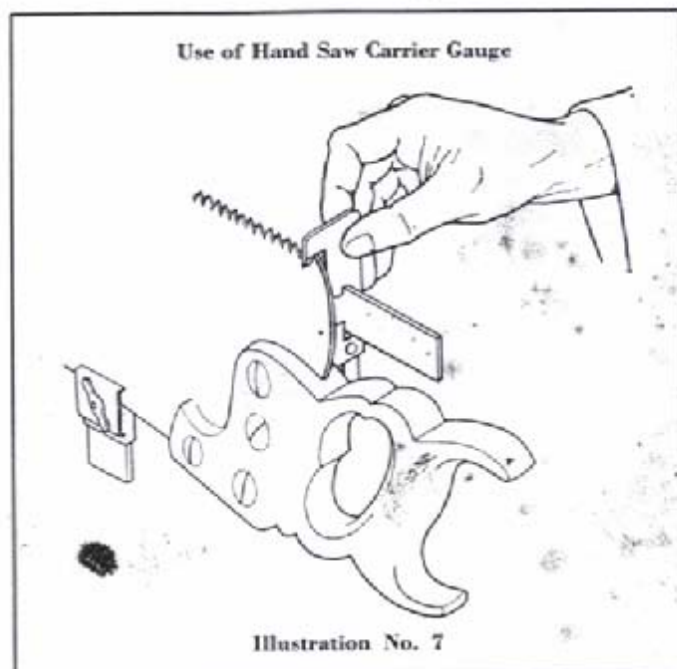
4. Place saw against carrier with handle to right and touching first hanger. Then bring saw up against both gauges, adjusting one of gauges so that beveled edges of both gauges fit into V of saw teeth. Hold saw in this position until you have tightened saw clamps. Then remove gauges from carrier bar. This leaves saw at correct height for filing.

5. Be sure that hand wheel A is low enough to permit hangers to pass through vise without striking cone arbor cup. *

6. When saw is placed properly in hand saw carrier, bottom of V of teeth should be about $\frac{3}{8}$ " above top of vise.

7. When filing an irregular saw, a little judgment must be used as to where gauges are to be applied, since in such cases an average height is preferable.

8. Occasionally saw will be worn down at point or toe, so that it is impossible to hold point of saw in regular manner just described. To tighten such saw in hand saw carrier, remove outer clamp from hanger at point of saw and turn inner clamp around with curved edge down, same as you would to hold a back or mitre-box saw. Be sure that top end of clamp rests against offset at top of hanger. This holds point of saw perfectly in carrier. This turning of clamp applies only to one clamp holding point of saw and does not apply to clamps holding center and handle end of saw.



* will BREAK f-8 if Too Hi

FILING HAND SAWS

Adjustments for Straight Across Filing

Straight-across filing on Filer is the only way to joint* any saw. This applies both to hand cross-cut saws and hand rip saws.

Once you have become acquainted with adjustment of Filer, you will have no difficulty in filing. First practice with a cross-cut hand saw approximately 8 points to the inch, because adjustments for such a saw are easy to make.

Filing of saw having a high heel† is done quickly by lining up saw in carrier, then taking two or three cuts across high heel for a distance of 6" to 8", and afterward resetting saw according to gauges. Continue this method until heel has been cut down to compare with rest of saw.

Determine left- and right-hand side of Filer by facing Filer. As you stand before Filer, right-hand side of Filer is your right-hand side, and left-hand side of Filer is your left-hand side. (See Illustration No. 5.)

Rocker arm on right-hand side of Filer is known as F-6 and rocker arm on left-hand side is known as F-8. (See Illustration No. 1.)

Setting Filer on Quadrant

1. Set Filer at Zero, reading from left-hand edge of upright casting, and tighten both hexagon nuts (See Illustration No. 9). Do not use center of upright casting as a setting point. Left-hand edge of casting is machined in line with file and must be used as setting point.

2. Mount saw in hand saw carrier so teeth point toward left, using Rocker Arm F-8. Handle of saw will then be on right-hand side.

3. Close vise and turn hand wheels A until saw is held firmly between lips of vise. When adjusting vise, have it just loose enough so that saw can be moved back and forth without binding, but tight enough to prevent chattering and to keep saw from moving to right or left away from file. If saw is rusted, put a few drops of oil on side of saw so that it will not bind in vise.

Adjusting File

4. Adjust file for hook as described under "Use and Replacement of Files." (Pages 4 and 5.)

5. Move saw until first V next to handle is under file. Turn flywheel until file is at its lowest point. Loosen Cap Screws E at front and rear of file on side of file arm. Turn Knurled Nuts D until file is lowered into V of tooth, keeping rear or point of file about $\frac{1}{16}$ " higher than tang end of file. This permits file entering V of tooth gradually without damage to saw or file. Watch this point and files will last longer. After file is set to proper depth, tighten Cap Screws E to hold file in place.

Take light cuts at all times, as heavy pressure does no more cutting and only wears out files.

Adjusting Feed Pawls

6. You are now ready to adjust feed pawl which pushes saw through Filer so that V of tooth to be filed always comes directly under file. Use Jointing Guide K and feed pawl attached to Rocker Arm F-8. (See Illustration No. 8.)

7. File first tooth by turning flywheel slowly by hand. Continue stroke until file is raised above teeth.

*Joint: Is to file straight across saw until teeth are of an equal spacing and height.

†Heel: Handle end of saw higher than rest of blade because sometimes not cut down in hand filing.

Straight Across Filing on a Hand Saw

Correct Position of All Adjustments

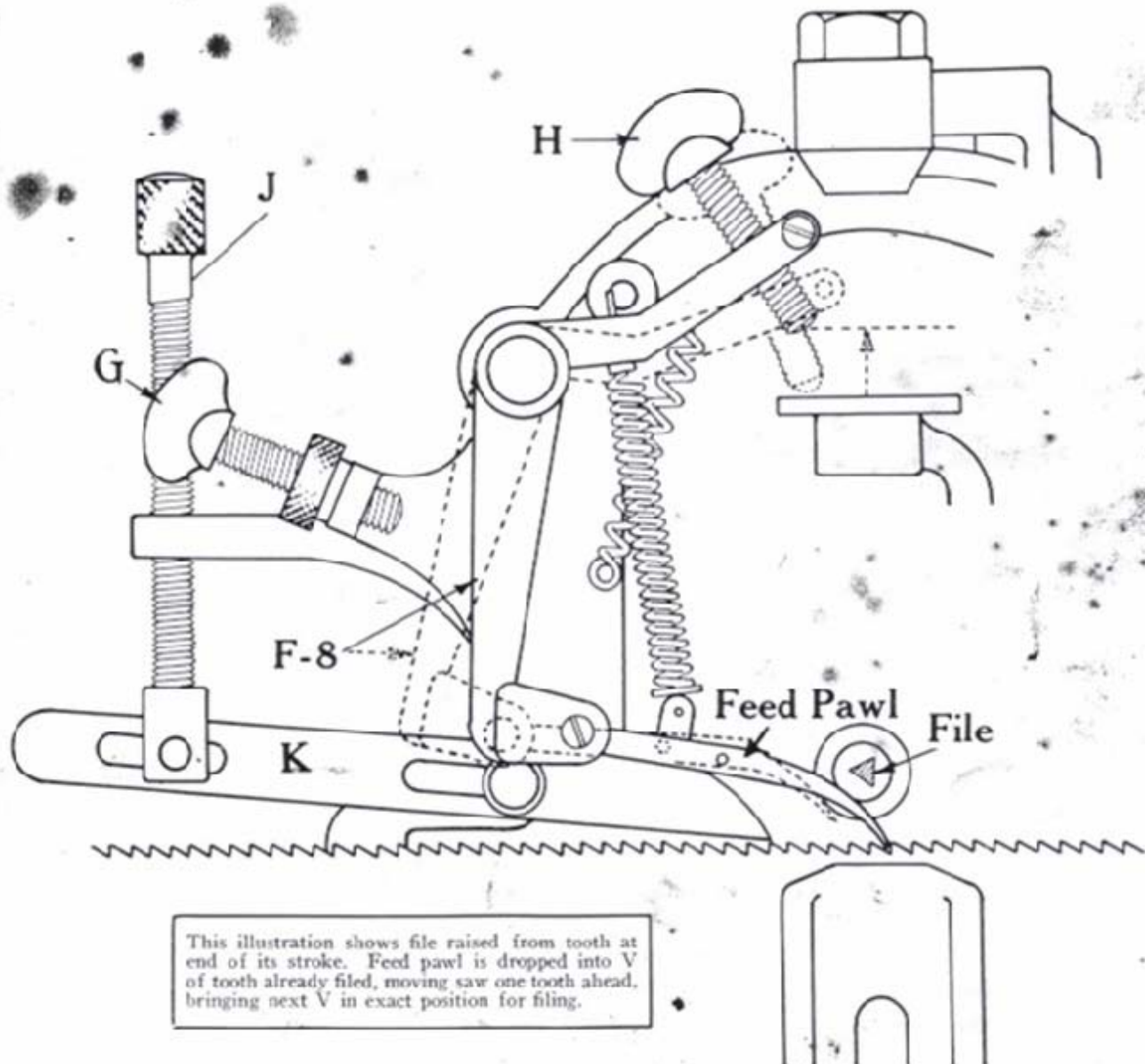


Illustration No. 8

FILING HAND SAWS (Continued)

Adjusting Jointing Guide K

8. Adjust Jointing Guide K by turning Jointing Guide Screw J so that jointing guide will lead tip of feed pawl into **V already filed, which means the V that was filed on last stroke of file.** Always adjust Jointing Guide K so that it leads tip of feed pawl to strike front of **V* already filed**, midway between bottom of V and tip of tooth. If you have feed pawl feed on bottom of V, you cannot joint a saw, because bottom of V changes slowly but front changes rapidly. You must feed on front of **V already filed**, midway between bottom of V and tip of tooth.

You can joint any saw in good condition by filing straight across twice. A saw in poor condition may require filing straight across several times.

9. Jointing Guide K is **slotted** so that it can be moved back and forth to any point desired. Be sure that pin in feed pawl rides on **curved part** of jointing guide. If saw has large and small teeth, feed pawl might be engaging wrong tooth unless jointing guide is adjusted so that point of feed pawl drops into **V already filed**, midway between bottom and tip of tooth.

Adjusting Thumb Screw H

10. Turn flywheel by hand until feed pawl reaches end of stroke. If next V does not come directly under file, turn Thumb Screw H **down** to move it ahead, or **up** and move saw back by hand as needed. **Remember that Thumb Screw H is the most important adjustment on Filer.** Always be sure that adjustment on Thumb Screw H is correct, so file drops into V of tooth. Lock screw in top of rocker arm should be just tight enough to hold adjustment of Thumb Screw H securely. Do not tighten lock screw too much or rocker arm may crack. **Once you have secured proper tension of lock screw, it is seldom necessary to change its adjustment.**

*Front of Tooth—Means hook or cutting side of tooth; is always the short side.

11. Switch on motor or turn flywheel by hand to operate Filer.

12. Check adjustments on Thumb Screw H every time you file across saw in straight-across filing and jointing, because depth of V of tooth changes as filing and jointing progress. This adjustment is taken care of by turning Thumb Screw H **down** to move saw ahead.

13. It is most important that you feed in **V already filed**, which means the V that was filed on last stroke of file. This is the only way that you can joint teeth of saw with Filer.

14. The only exception to this method of feeding on **tooth already filed** is when you are jointing Docking or Plasterers'† saws. Such coarse saws must be jointed by feeding two teeth back from filed tooth, advancing saw one tooth at a time. Rocker Arm F-9 with special feed pawl must be used.

Causes of Feed Pawl Jumping

If feed pawl jumps and skips teeth, it is due to one of following reasons:

1. Feed pawl screw is too tight in rocker arm: Loosen feed pawl screw.

2. Teeth of saw may not be hooked properly. Correct hook by filing straight across with jointing stroke.

3. Jointing guide may be adjusted too high.

4. Feed pawl pin may not be riding on curved end of jointing guide as it should, to make feed pawl drop into correct tooth.

5. Some teeth of saw may be too high. Any saw that has never been filed on Filer, should first have teeth run over with flat file, removing all high teeth, making it easier to adjust Jointing Guide K.

†Plasterers' Saws—These are coarse tooth hand saws.

We suggest that after careful study of the preceding pages and instructions applying to hand saws, you then refer to that part of the instructions covering the particular saw you wish to file.

DO NOT READ INSTRUCTION BOOK ALL THE WAY THRU AT ONCE. FOLLOW STEP BY STEP, MAKING THE ADJUSTMENTS ON YOUR FOLEY FILER AS YOU GO ALONG, UNTIL YOU HAVE COVERED THE ENTIRE OPERATION.

FILING CROSS-CUT HAND SAWS

Beveling Cross-Cut Hand Saws 8 to 16 Points to the Inch

1. Remember that the first step in sharpening a cross-cut hand saw is to joint or even up the teeth. Follow directions given on pages 8-10. **After teeth have been evened up**, you are ready to cut in the bevel. To adjust Filer to bevel desired, loosen hexagon nuts on quadrant base and swing Filer to angle desired. Read points marked on quadrant base, using **left-hand edge of upright casting** as setting point (See Illustration No. 9). You can adjust bevel to any angle desired between zero and 30 points. We recommend a 20-point bevel for carpenters' cross-cut hand saws, this producing an actual bevel of about 27° on saw teeth. For back and mitre-box saws, set file arm at No. 15 mark on quadrant.

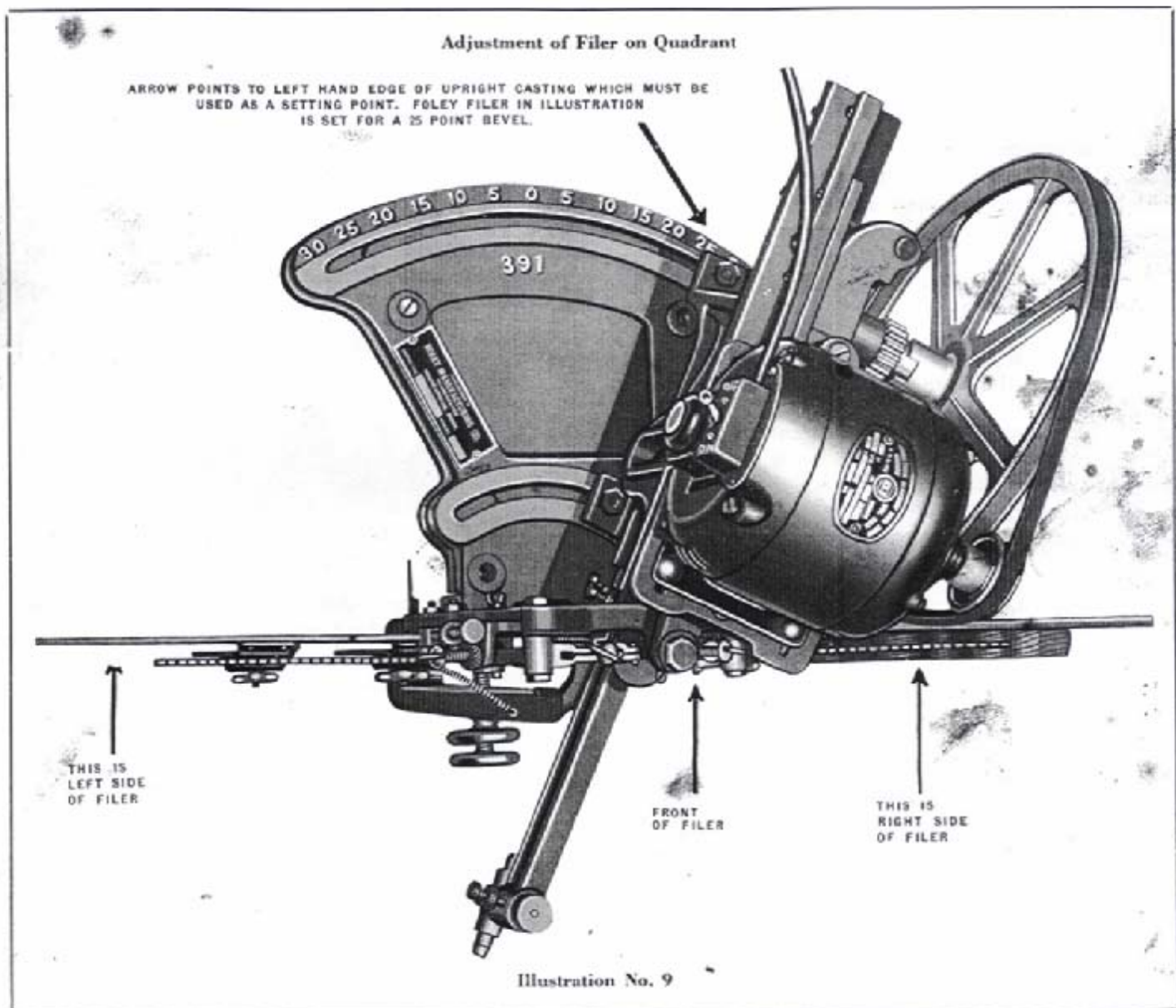
2. File is adjusted for hook and contact, as de-

scribed under "Use and Replacement of Files." (Pages 4 and 5.) Make hook correspond either with hook of teeth on saw to be filed or with hook gauge.

3. Take light cuts at all times, as heavy pressure does no more cutting and only wears out files.

4. Move saw until first V of bevel to be filed is centered under file.

5. Turn flywheel by hand and take first cut. Continue turning, directing feed pawl with Jointing Guide K to drop into V **already filed**. This is exactly the same as when filing straight across to joint teeth. In beveling, feed two teeth at a time instead of one, as every other tooth on a cross-cut saw is beveled in the opposite direction. (See Illustration No. 10.)



FILING HAND SAWS (Continued)

Adjusting Thumb Screw H

Most Important Adjustment on Filer

6. Turn Thumb Screw H down until feed pawl advances saw ahead two teeth, thereby bringing next V to be filed directly under file.

7. Turn flywheel by hand for a few teeth to test accuracy of adjustments. Then switch on motor or turn flywheel by hand to operate Filer.

8. After first bevel is cut, swing Filer on quadrant base until it registers same degree on opposite side. When using an angle that is 20 points on one side, be sure to use 20 points on the other. Always read points from left-hand edge on upright casting.

9. When beveling saw, never lower file in changing from one bevel to the other. Twice across each bevel brings most saws up to proper points and knife-edges.

10. Examine teeth to see that there is no straight-across filing left on either front or back of teeth. Teeth must be beveled clear across to obtain knife-edges and points of each tooth must be needle-sharp. This is necessary to make a clean, fast-cutting saw. If teeth do not have needle points, take another cut on each bevel.

To Avoid Large and Small Teeth

11. In beveling saw, file takes less cut on one bevel than it does on the other. The reason is that you are filing against the grain of steel on one tooth and with the grain of steel on the other.

12. Note cross-cut saw teeth in Illustration No. 9-A. This shows side view of cross-cut saw beveled perfectly. Teeth No. 1 and No. 3 have bevel toward you, while Teeth No. 2 and No. 4 have bevel away from you.

13. In bevel filing, the tendency is for teeth Nos. 1 and 3 to become smaller, because they present a better filing surface than do teeth Nos. 2 and 4. To avoid these large and small teeth, crowd file harder against front and back of teeth Nos. 2 and 4. In case of a hard saw, this will keep the teeth uniform.

14. Refer again to Illustration No. 9-A. Note that file travels at this angle "V" when filing V between teeth Nos. 1 and 2. Crowd file harder against tooth No. 2 than against tooth No. 1. Do this by turning Thumb Screw H up slightly.

15. Similarly, when filing V between teeth No. 2 and No. 3 (when file is traveling at this angle "V") turn Thumb Screw H down. This causes file to bear harder against tooth No. 2 than against tooth No. 3.

16. By crowding the file as explained above, you get a saw sharpened perfectly with all teeth exactly the same size and shape.

17. In crowding bevel to right and left, you must be governed by whether saw is soft or hard metal. A soft saw needs very little crowding.

18. After jointing teeth and taking one cut on each bevel, set saw. Model 281 Foley Setter for Hand Saws (See Illustration Page 32) is designed for setting hand saws without removing from hand saw carrier, saving time in setting and filing operations. After setting, take a finishing cut on each bevel to obtain a perfect cutting saw.

19. When filing a cross-cut saw on Filer, it is not necessary to turn saw as in hand filing. The Foley Filer files a saw perfectly from one side. If you prefer to file saw from both sides, this can be done by reversing saw end for end. Filer is equipped with rocker arms on each side for feeding hand saws through Filer in either direction.

Cross-Cut Saw Teeth

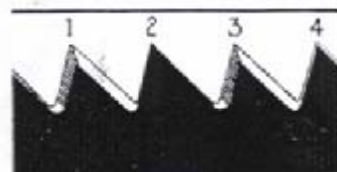


Illustration No. 9-A

20. Do not try to file a crowned* or curved-edge saw with straight-edged carrier. To file crowned saws on Foley Filer, use a crowned carrier. Both carriers operate in same roller and no adjustment is necessary when changing from one carrier to the other.

21. Be sure to check saw to determine if it is crowned or straight before placing in carrier. This will avoid placing a crowned saw in a straight carrier or a straight saw in a crowned carrier.

Causes of Feed Pawl Jumping

Refer to page 10.

*A crowned saw is approximately $\frac{1}{16}$ " higher in middle of blade than at the ends.

Filing Hand Cross-Cut Saw 8 to 16 Points on Bevel

Correct Position of All Adjustments

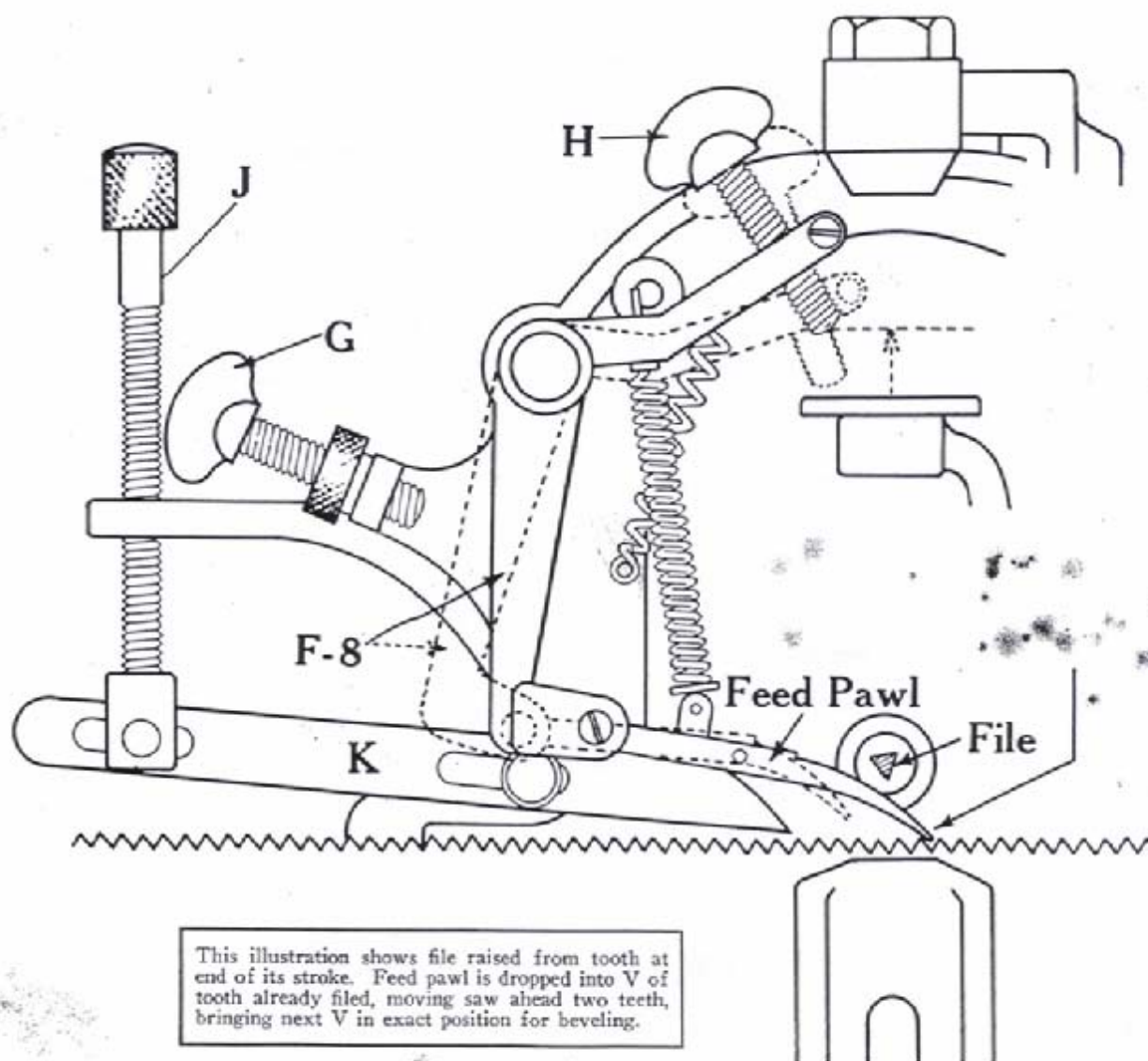


Illustration No. 10

FILING HAND SAWS (Continued)

Beveling Hand Cross-Cut Saws 3 to 7 Points to the Inch

1. Coarse tooth hand saws 3 to 7 points to the inch are adjusted in hand saw carrier, exactly as described under "Instructions Applying to All Hand Saws" (Pages 6 and 7). If teeth are uneven in size, file them straight across with quadrant set at zero. Use jointing stroke, as described under "Adjustments for Straight-Across Filing" (Pages 8, 9, 10).

2. After saw has been jointed and is ready for bevel filing, swing Filer to angle desired on quadrant base, such as 20 degrees, and lock Filer in position with hexagon nuts on quadrant base.

3. Filer is adjusted for hook and contact, as described under "Use and Replacement of Files." Make hook correspond either with hook of teeth on saw to be filed or with hook gauge.

4. Move saw until first V of bevel to be filed is centered under file.

5. Turn flywheel by hand and take first cut. Continue turning, directing feed pawl with Jointing Guide K to drop into **second V back of one just filed**. This provides for feeding two teeth at a time, which is necessary in all bevel filing.

Adjusting Thumb Screws H and G

6. Turn flywheel until feed pawl is moved to end of stroke. If next V to be filed does not come into exact position under file, turn Thumb Screw H down to move saw ahead, or up and move saw back by hand as needed. Remember that Thumb Screw H is the

most important adjustment on Filer. Always be sure that adjustment on Thumb Screw H is correct, so that file drops into next V.

7. Thumb Screw G is used to limit backward travel of feed pawl. Adjust Thumb Screw G so that feed pawl comes to rest on back of next tooth to be filed. This avoids possibility of feed pawl feeding on wrong tooth on next stroke.

8. Adjust Jointing Guide K so that feed pawl pin rides on **curved end** of jointing guide, as described under "Adjustments for Straight-Across Filing."

9. When adjustments are accurate, switch on motor or turn flywheel by hand to operate Filer.

10. In beveling saw, never lower file when changing from one bevel to the other. Twice across each bevel brings most saws up to proper points and knife-edges. On extra hard saws, go over bevel three or more times. **Take equal number of cuts on each bevel before lowering file.**

11. After first bevel is cut, swing Filer on quadrant base until it registers same angle on opposite side. Be sure to read points from **left-hand edge** of upright casting.

12. Push saw back through vise and drop point of feed pawl into first V of new bevel to be filed. Turn flywheel slowly until file is entering V. Check adjustment of Thumb Screw H. There will always be a slight change in adjustment, according to amount of hook on saw teeth.

FILING HAND RIP SAWS

A hand rip saw is always filed straight across. Follow directions, as described under "Adjustments for Straight-Across Filing" (Pages 8, 9 and 10). Operation of Filer is exactly the same, except that file is set for proper hook for rip saws.

Most all hand rip saws have one more point to the inch at toe or point of saw for distance of about 6". Allow for it by turning Thumb Screw H up about

a half to a full turn when you come to that part of saw, and continue to file.

If rip saw has uneven teeth, first file straight across two or three times to joint teeth, then set saw, and after setting, take light cuts. If saw has even teeth and is in good condition, but requires setting, set saw before placing in Filer, then file straight across once or twice to obtain a perfect cutting saw. Model 281 Foley Setter for Hand Saws sets any type of hand saw without removing saw from hand saw carrier.

Beveling Hand Cross-Cut Saws 3 to 7 Points to the Inch

Correct Position of All Adjustments

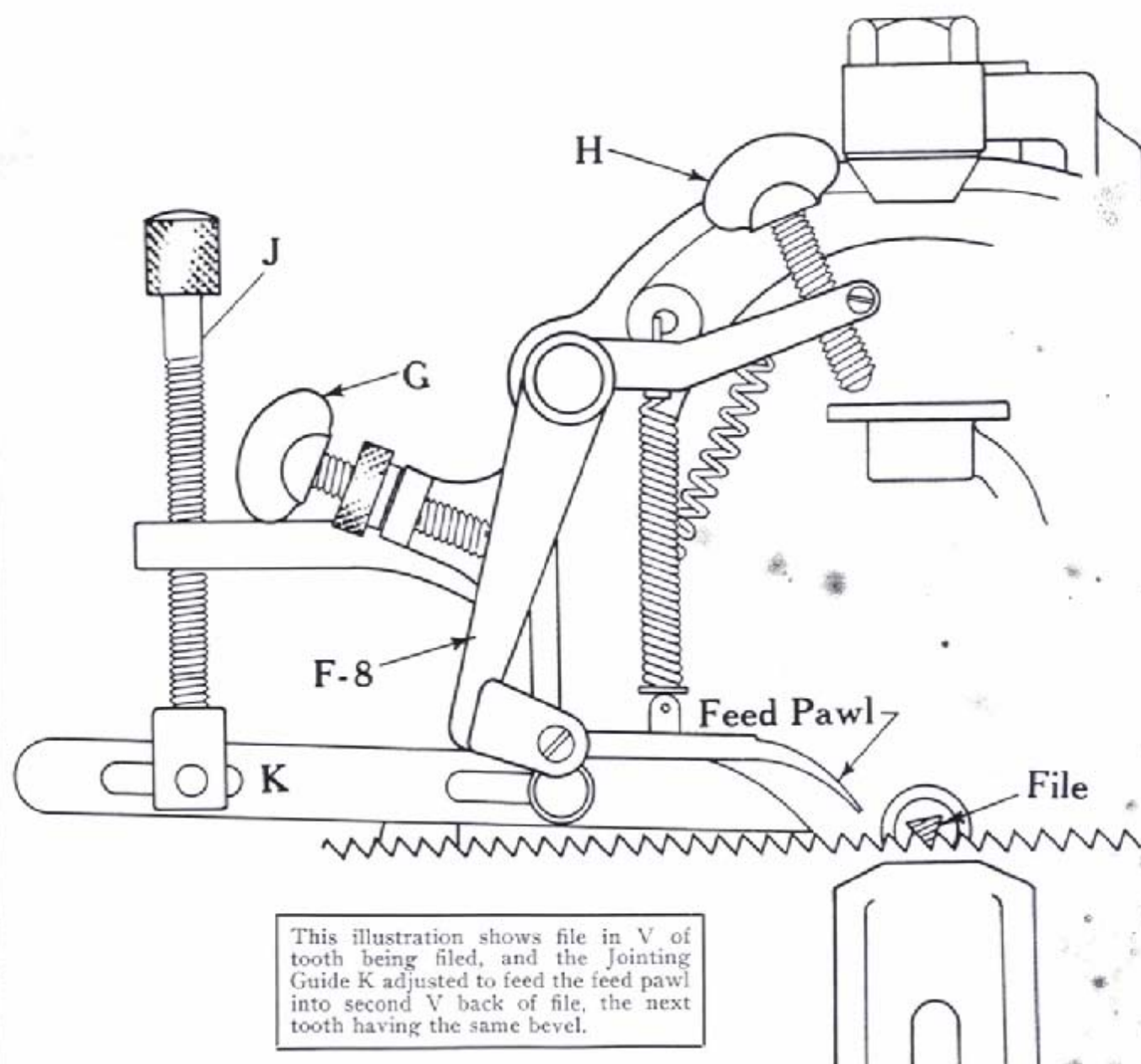


Illustration No. 11

SUMMARY

The first step in sharpening any saw is to file straight across until teeth are uniform, the file arm being set at the zero mark on the quadrant. All teeth must be made the same shape, width and height.

To restore perfect spacing of teeth you must feed on the tooth that has just been filed or corrected. If pawl is allowed to feed on tooth to be filed, rather than on tooth that has been corrected, the teeth will remain uneven regardless of how many times you file across the blade. By remembering to feed on the corrected tooth, you can turn a hopeless looking saw into a perfect one.

Let's assume that the first tooth you want to file on a saw is a trifle too large. The file drops into the V and makes one cut, filing the large tooth down slightly. Pawl then feeds on front of this tooth that has just been filed and corrected, moving saw ahead. (See note below regarding Thumb Screw H which regulates length of pawl stroke.)

Saw is automatically moved into position so file drops into next V. If it happens that this second tooth is small, file will not work against it but will pass through the V without touching the small tooth. Of course this is the result desired since this particular tooth is already too small.

Again the pawl moves saw ahead, just the right amount so file drops into third V. If this third tooth

is large, it too will be filed down while if it happens to be small, the file will make little or no cut on small tooth. There may be cases on irregular saws where on some strokes the file will not touch at all.

As a rule, high teeth are too wide. Therefore, the file does not always drop exactly in center of V. It will strike part way up on side of wide teeth, evening the spacing as it goes along.

Thumb Screw H regulates length of pawl stroke. By turning Thumb Screw H up or down, you can cause your machine to feed anywhere from 3 to 16 points to the inch, whatever number that may be desired.

In adjusting Thumb Screw H for proper feed, turn flywheel by hand so machine operates slowly. Turn Thumb Screw H either up or down until file drops into each V. As explained above, on saws with wide and narrow teeth, file will not always drop exactly in center of V but will cut on wide teeth only.

By studying this summary and the preceding pages you will be able to recondition the majority of hand saws, even those that are in bad condition. Only occasionally will you encounter a saw where the tooth spacing has been completely disarranged by hand filing so there are, say, 9 points to one inch and 8 points to another. Here it is necessary to retooth before filing. See retooling instructions, pages 16-18.

LET OUR SERVICE DEPARTMENT HELP YOU

Remember that we have a Service Department for your convenience. Please feel free to write us if there should be any point in these instructions that is not clear or if you would like to have any additional information pertaining to the filing of saws. Our engineers will give your letters immediate attention.

You can secure replacement parts for all Foley Machines, as well as Foley Files, from us at any time.

Replacement parts for the Foley Filer are all numbered and illustrated in the back of this instruction book. In an emergency, you can wire us number of part that you might require, and it will be mailed immediately, special delivery, if you wish.

We can also furnish at our actual cost a complete advertising service consisting of newspaper ads, electrotypes, signs, repair tickets, in fact, anything you require in a custom saw filing business.

RETOOTHING HAND SAWS

Hand saws are retouched on the Foley Filer by being fed through Filer by action of Rocker Arm F-6 and retouching feed pawl. (See Illustration No. 12.) It is necessary to use a graduated bar especially notched for number of points to the inch desired. The various sizes of graduated bars that we can furnish are:

No. F-261 for retouching hand saws 8-4½ points to the inch on one side and 9-5 points on other side.

No. F-262 for retouching hand saws 10-5½ points to the inch on one side and 11-6 points on other side.

No. F-263 for retouching hand saws 7-4 points to the inch on one side and 12-6½ points on other side.

No. F-264 for retouching hand saws 13-7 points to the inch on one side and 15-8 points on other side.

No. F-265 for retouching hand saws 14-7½ points

to the inch on one side and 16-8½ points on other side.

Before a saw can be retouched on Filer, old teeth must be removed. If they are ground off with an emery wheel, be careful not to burn edge of saw. Grinding has a tendency to caseharden edge of saw. Take a flat file and run lengthwise of edge to remove this casehardening. Then file in machine will take hold faster and save considerable time in retouching.

Retouching on Filer is recommended only where volume of this type of work is light. Where there are a number of saws to be retouched, the Foley Retoucher is essential and proves a worth-while investment because of savings in time and files. Illustration and complete details on Foley Retoucher are given on page 30.

Method of Retouching with Filer

1. Mount saw in hand saw carrier the same as for ordinary filing. Occasionally, handle must be removed where saw has been worn close to handle. Place handle end on right-hand side of Filer. Attach carrier support bar to inside vise of Filer.

2. Select graduated bar stamped with number of points to the inch that you wish to cut.

3. Place graduated bar on outside of saw between saw and vise, with hook of notches on graduated bar facing right. (See Illustration No. 13.)

4. Clamp graduated bar to saw with two short bars furnished, inserting bolts into holes provided in graduated bar nearest end of saw.

5. Small bracket is furnished with graduated bar. Place on left-hand side of front vise. (See Illustration No. 13.) When retouching saws, swing bracket in position to act as shelf for graduated bar to ride on. Bracket eliminates springing of graduated bar. Always keep bracket out of way when filing saws.

6. Push saw through vise until bracket support is close to end of saw. Let clamp of graduated bar rest on bracket support and clamp graduated bar to end of saw by means of short clamping bar. Then push saw to opposite end, having bracket support come close to other end of saw, and let graduated bar rest on bracket support. Clamp graduated bar over that end of saw by means of other short clamping bar.

7. When graduated bar is clamped correct height on saw, bar will ride on bracket support on front vise. This will prevent bar from springing away from feed pawl on left-hand side.

8. Push saw through vise until toe of saw comes under file. Remember when cutting new teeth, always start at toe of saw and work toward heel or handle end.

9. Adjust hook of file, using hook gauge (See Illustration No. 4, Page 5), bringing file to correct hook for either rip or cross-cut, depending on type of saw.

10. Adjust height of file to take extra light cut on edge of saw.

11. To retouch either rip or cross-cut saw, always file straight across, feeding on teeth of graduated bar.

12. You are now ready to adjust

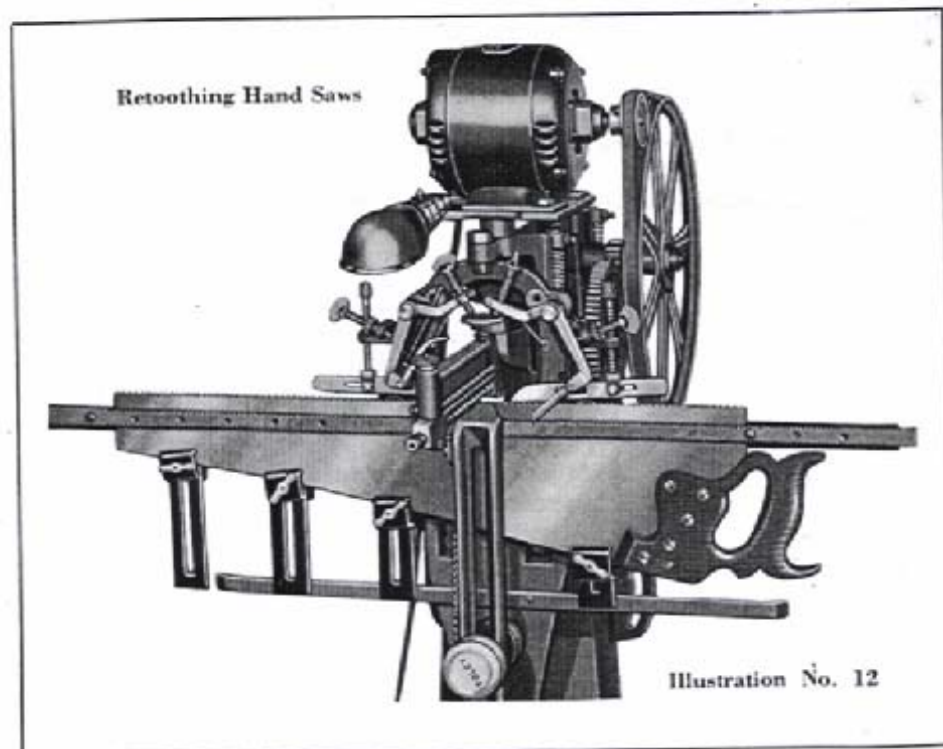


Illustration No. 12

Adjustment for Retooling Hand Saws

Correct Adjustment for Using Graduated Bar

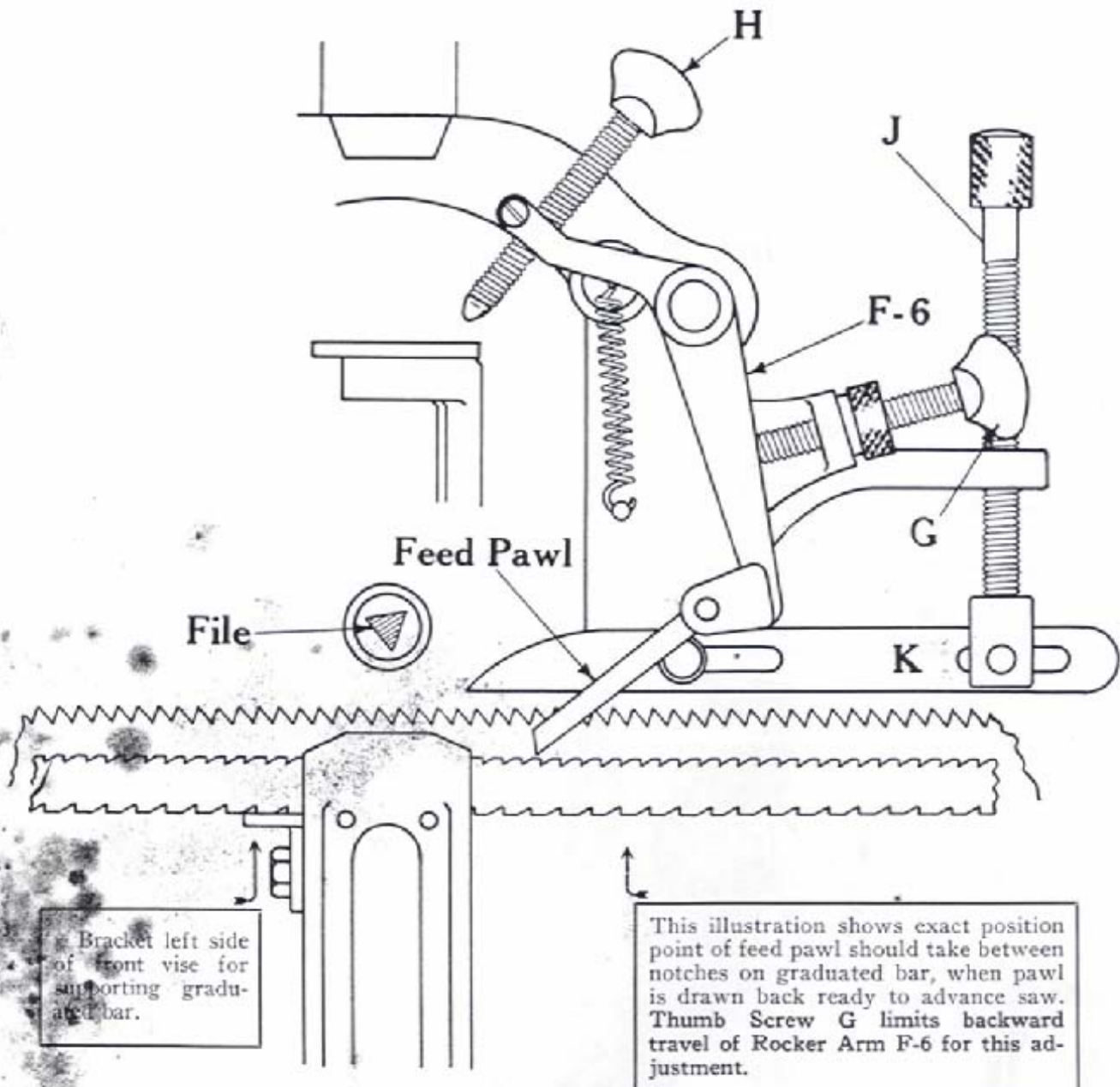


Illustration No. 13

RETOOTHING HAND SAWS (Continued)

feeding of saw through Filer. Remove regular feed pawl from Rocker Arm F-6 and replace with retoothing feed pawl. This pawl feeds on graduated bar and not on saw as in regular filing.

13. Drop feed pawl into first notch of graduated bar. Turn flywheel by hand, adjusting Thumb Screw G to retard backward travel of rocker arm so that it will feed one or two notches at a time as required.

14. It is important to adjust Thumb Screw G so that retoothing feed pawl rests on back of next notch of graduated bar, to be advanced by retoothing feed pawl. Otherwise, retoothing feed pawl may engage in wrong notch on next stroke. Be sure to tighten lock nut on Thumb Screw G to retain proper adjustment.

15. File straight across as many times as necessary to form teeth. Each time saw goes through Filer, lower file by turning Knurled Nuts D and lock file in position by means of Cap Screws E. The average carpenter's hand saw requires filing from six to eight times across saw to form teeth, but on fine tooth back saws and mitre-box saws, teeth can be formed perfectly by filing two or three times across saw.

16. For example, to retooth an 8 point cross-cut saw, select bar marked 8-4½ and feed into every notch of bar while filing straight across and forming teeth. If next saw you retooth is a 4½ point saw, use same edge of bar and feed into every second notch. When feeding into every second notch, it is important that Thumb Screw G is adjusted so that retoothing feed pawl rests on back of every second notch.

Beveling a Cross-Cut Saw After Retoothing

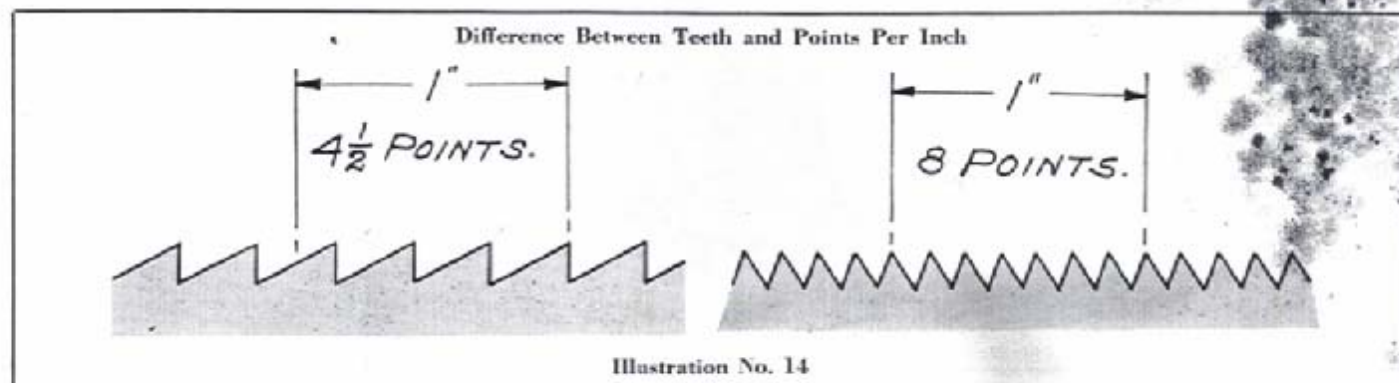
After teeth have been formed and brought to points, remove graduated bar and retoothing feed pawl, leaving saw in carrier. Set saw and then take light cut to straighten tooth angle, using regular feed pawl and

Rocker Arm F-8. Rip saw is now finished. Should saw be a cross-cut, it still requires beveling. Follow instructions on pages 11-14.

Difference Between Teeth and Points Per Inch

The standard measurement of saw teeth is points to the inch. There is one less tooth to the inch than there are points to the inch. For example, take an ordinary 8 point hand cross-cut saw and lay a ruler along teeth. Have the inch start on point of any tooth in saw. The inch will end on the eighth point. Count

the teeth. While you have 8 points, you have actually only 7 full teeth, there being 6 full teeth and a half tooth on each end, which makes 7 full teeth in an 8 point saw. Illustration No. 14 shows clearly the difference between points and teeth to the inch.



FILING BAND SAWS

Models F-16, F-24, and F-1 file all band saws not coarser than two teeth, which is three points to the inch or $\frac{1}{2}$ " spacing, that can be sharpened by a standard three-cornered file. Band saw attachment and feed pawl for filing band saws on Model F-3 can be furnished extra.

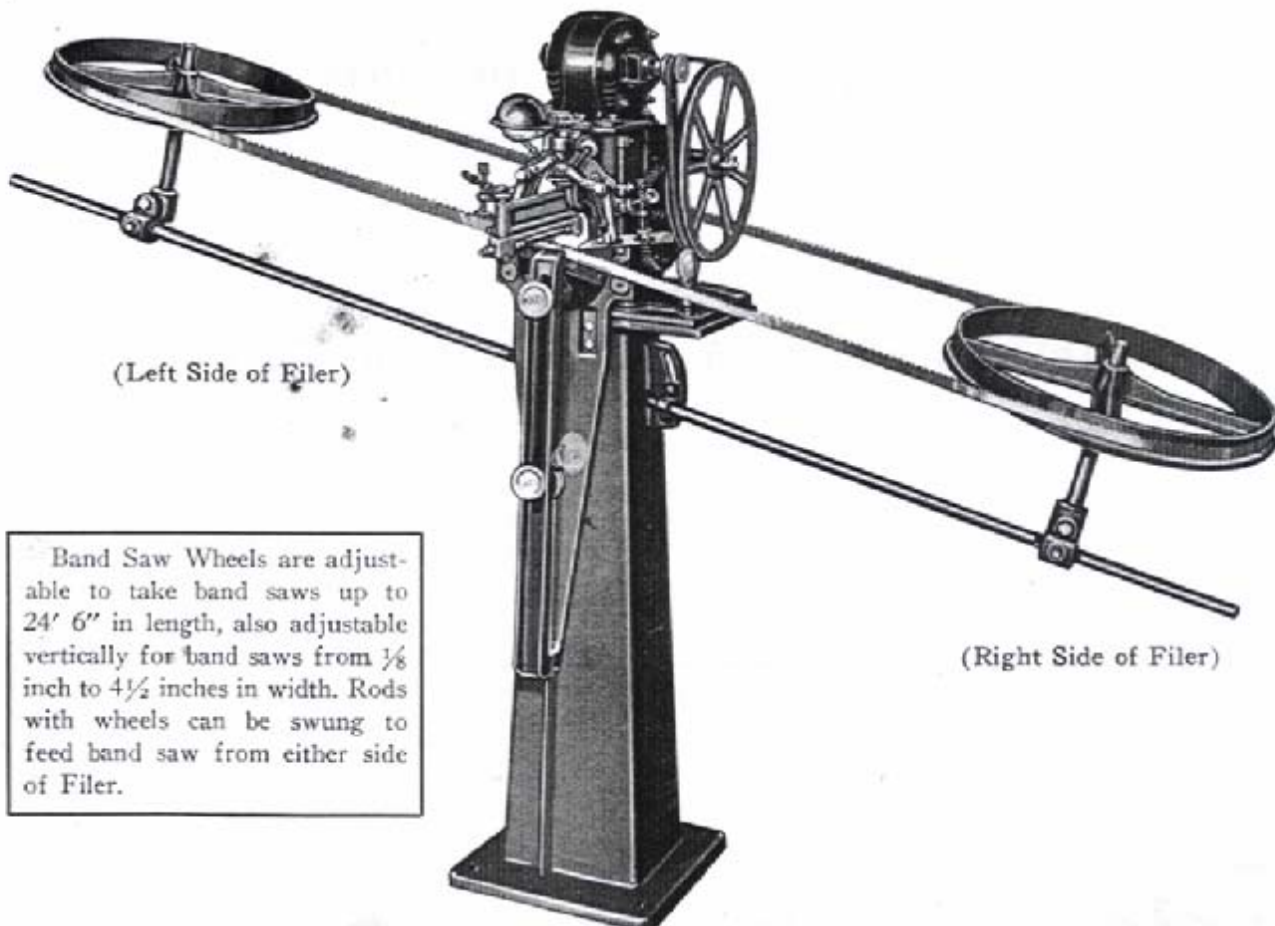
Band saws are always filed straight across with Filer swung to zero on quadrant.

Band saw attachment provides support for saw as it passes through Filer, keeping saw at uniform height as it moves through jaws of vise. A small quadrant on band saw attachment can be adjusted to give teeth any hook desired. Band saws can be fed through Filer in either direction, thus providing for both right- and left-hand band saws.

Production attachment (No. F-404), for band saws $\frac{1}{4}$ " and less in width, can be furnished extra.

Left and Right of Foley Filer

Filing Band Saw Using Pedestal and Band Saw Wheels



Band Saw Wheels are adjustable to take band saws up to 24' 6" in length, also adjustable vertically for band saws from $\frac{1}{8}$ inch to $4\frac{1}{2}$ inches in width. Rods with wheels can be swung to feed band saw from either side of Filer.

Illustration No. 15

FILING BAND SAWS (Continued)

Mounting Band Saws for Filing

1. Unscrew vise wheel A and open jaws of vise. Remove bolt and hand wheel from band saw attachment. Push bolt through long vertical slot in back of vise. Place band saw attachment so that lug on back of attachment fits into vertical slot of vise and bolt passes through its proper hole. (See Illustration No. 16.) Hold attachment and bolt in this position while closing vise. Insert hand wheel of attachment through front of vise so that it catches thread of bolt on band saw attachment.

2. Place band saw in slot provided in band saw attachment, and adjust height of attachment so that vise has firm hold on saw under tooth being filed, giving clearance for file. Then tighten hand wheel to hold attachment in place.

3. Loosen Cap Screws B and adjust file to hook, to conform with hook marked R on hook gauge (See Illustration No. 4).

Adjusting Band Saw Attachment

4. Loosen hexagon nut on band saw attachment and swing attachment on its quadrant to hook desired on band saw.

5. Adjust tension of vise so that saw passes through vise smoothly, yet is held firmly. Make sure that hexagon nut and hand wheel on band saw attachment are tight. This holds saw in proper position for filing and prevents attachment from slipping away from hook position at which it has been set.

Rocker Arms

6. For filing band saws, use Rocker Arm F-9 and feed pawl in upper hole on Filer, on either left- or right-hand side. Band saws may be filed from either right- or left-hand side of machine, so burr may be kept on waste side of saw. Be sure that Jointing Guide K is moved to upper hole provided when using Rocker Arm F-9.

7. Adjust depth of file cut, as described under "Use and Replacement of Files." (Pages 4 and 5.)

8. Indicate starting point with chalk, blue pencil, or string.

9. Band saw is filed by jointing, as described under "Adjustments for Straight-Across Filing" (Pages 8-10). Jointing Guide K leads tip of feed pawl to strike front of V already filed (which means V filed on last stroke of file), midway between bot-

tom of V and tip of tooth. Feed pawl advances saw, bringing next V directly under file. By filing straight across, teeth of band saws are jointed perfectly.*

10. Take light cuts at all times, as heavy pressure does no more cutting and is apt to leave burr.

11. Point of file in rear of socket holder must be approximately $\frac{1}{8}$ " higher than tang or handle end of file. This makes files last longer.

12. If you are using Filer without pedestal and band saw wheels, provide support on bench so that band saw maintains same angle as band saw attachment.

13. Where band saws have been hand filed so teeth are uneven, it may be necessary to file around several times to joint the blade perfectly. Then, in resharp-ening these blades after they have become dull in use, one filing cut† around the blade and one finishing cut‡ should suffice. Last filing and finishing cuts are made after teeth have been set.

14. Finishing cut is made by adjusting Thumb Screw H so file does not touch front of tooth. In jointing saw, file has tendency to throw burr up on point of tooth. Burr should be removed by taking this‡ finishing cut, to produce a truly sharp blade.

15. It is impossible to feed on tooth already filed on band saws having three points to the inch. Special short feed pawl, furnished on request, is used in Rocker Arm F-9. Such coarse saws must be jointed by feeding two teeth back from filed tooth, moving saw forward one tooth at each stroke of file.

16. For filing band saws, always use Band Saw Files or Diamond Point Files, depending upon size of teeth. These files have rounded edges, which eliminate cracking of saw at bottom of V of tooth. They are not stocked regularly by hardware stores, but you can secure them from us here at Minneapolis at any time. Refer to "Use and Replacement of Files" (Pages 4 and 5) and to file price list.

17. Model 282 Foley Setter for Band Saws (See Illustration Page 32) is adjustable for setting all band and meat saw blades. This setter sets both sides of saw in one operation at speed of 200 teeth per minute.

*Refer to first eight paragraphs on Page 15-A.

†Filing Cut—Cut taken on both front and back of tooth to straighten tooth angle.

‡Finishing Cut—Means light cut—filing only on back of tooth to remove burr.

Filing a Band Saw

Correct Position of All Adjustments

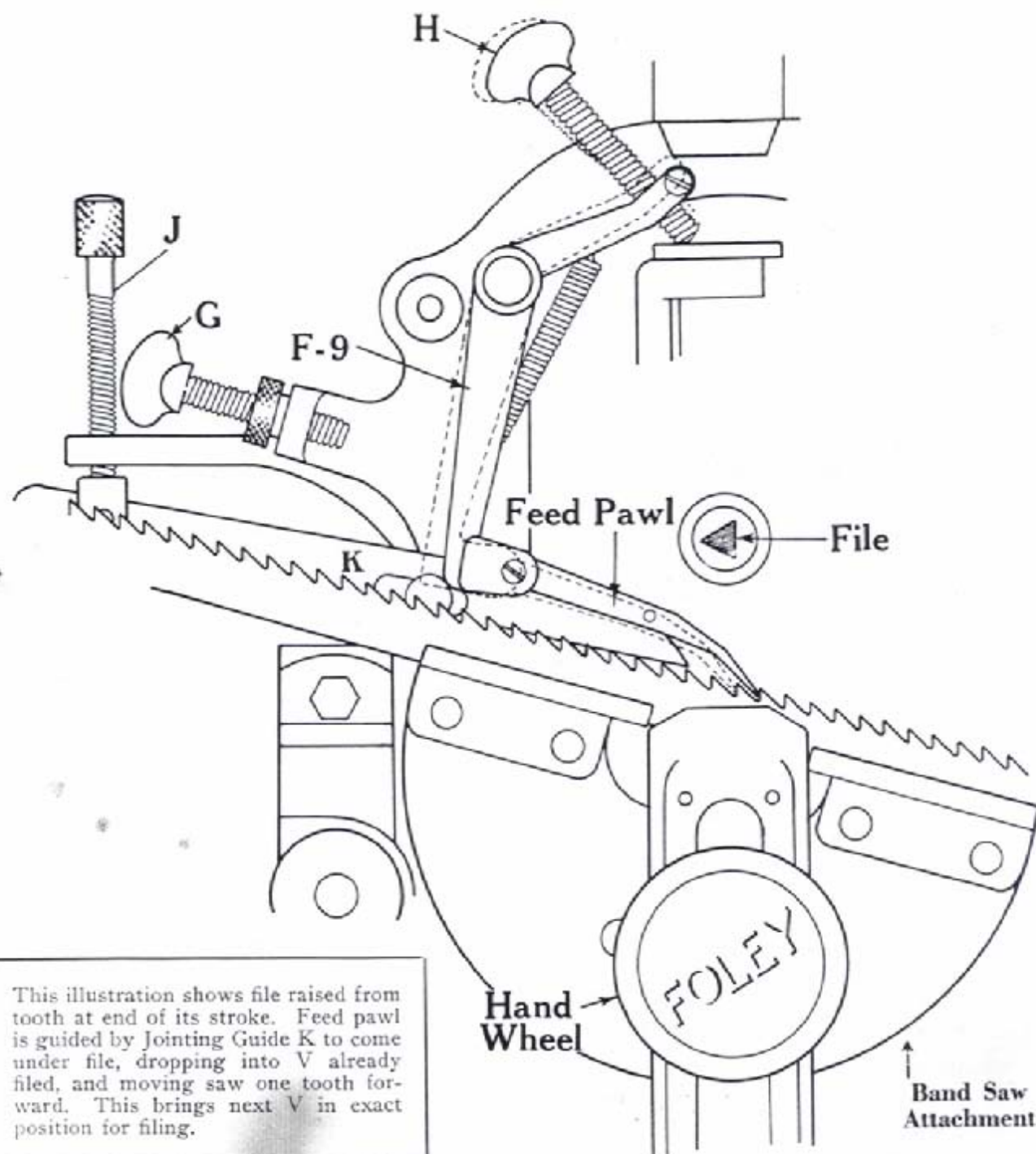


Illustration No. 16

FILING CIRCULAR SAWS

Models F-16 and F-24 are equipped with conical saw arbors for filing circular saws having arbor holes from $\frac{1}{2}$ " to $1\frac{7}{8}$ " in diameter. Arbors for larger holes can be furnished extra.

Model F-16 will file circular saws up to 16" in diameter and Model F-24 circular saws up to 24" in diameter, provided that teeth are **not coarser than three points to the inch**. Saw must be of type that can be sharpened with standard three-cornered or cant saw file. Circular saws that must be filed off center, using cant saw file, can be sharpened on Filer with special attachment, furnished extra. Operating instructions for this special type of circular saw are

described under "Circular Saw Offset Attachment" (Page 24).

Both circular cross-cut and rip saws can be filed on Filer. Circular rip saws, mentioned in these directions, are those that can be filed with standard three-cornered file. Circular rip saws with large hook or curved teeth must be sharpened on an emery wheel. (See Illustration Model HG-12 Grinder, Page 31.)

When circular cross-cut or rip saws are filed for first time on Filer, they must be jointed* first by filing straight across. It is only necessary to joint saw the first time it is filed on Filer. In resharpening, take one or two cuts around saw.

Mounting Circular Saw for Filing

1. Unscrew hand wheels A and open vise. Remove cone arbor.

2. Place circular saw on bolt and replace cone arbor on bolt on outside of saw. (See Illustration No. 17.) Then close vise and catch bolt thread with stem of outer hand wheel A. Take up slack and center saw on cone by tightening outer hand wheel A.

3. Adjust height of saw by moving arbor and arbor holder up or down until bottom of V of tooth to be filed is about $\frac{1}{8}$ " above top of vise. Arbor holder may be raised or lowered by rod extending through bottom of vise. Lock rod in position by thumb screw at bottom and back of vise after adjustment has been made.

4. Tighten inner hand wheel A to close vise lips against saw. Vise must be just loose enough so saw may be moved back and forth without binding, tight enough to prevent chattering and to keep saw from moving to right or left away from file.

Rocker Arms

5. When filing circular saws 7 points to the inch or finer, use Rocker Arm F-8 or F-6. Place Jointing Guide K in lower hole provided on same side as rocker arm. Circular metal-cutting saws and most types of circular lead-cutting saws† used by newspapers and printers are classed as fine tooth circular saws.

6. When filing coarse tooth circular saws, use Rocker Arm F-9 and feed pawl in upper hole on either right- or left-hand side of Filer. When using Rocker Arm F-9, use Jointing Guide K in upper hole provided.

7. Lower file by turning flywheel by hand until

Circular Saw Being Placed on Cone Arbor

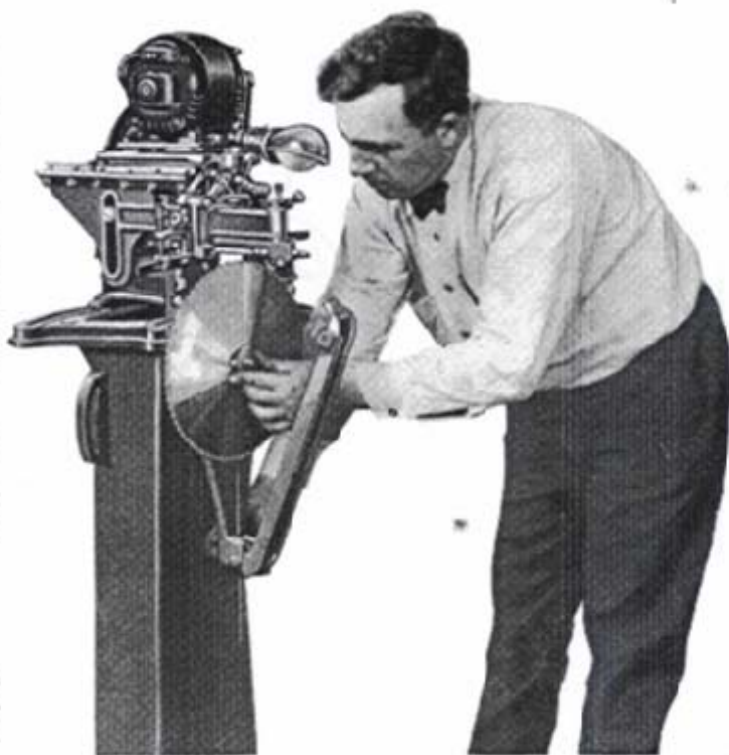


Illustration No. 17

file drops into V of saw tooth and adjust for hook and depth, as described under "Use and Replacement of Files" (Pages 4 and 5).

*Refer to Pages 5-10, also 15-A.

†Refer to Page 27.

Straight Across Filing to Joint a Circular Saw

Correct Position of All Adjustments

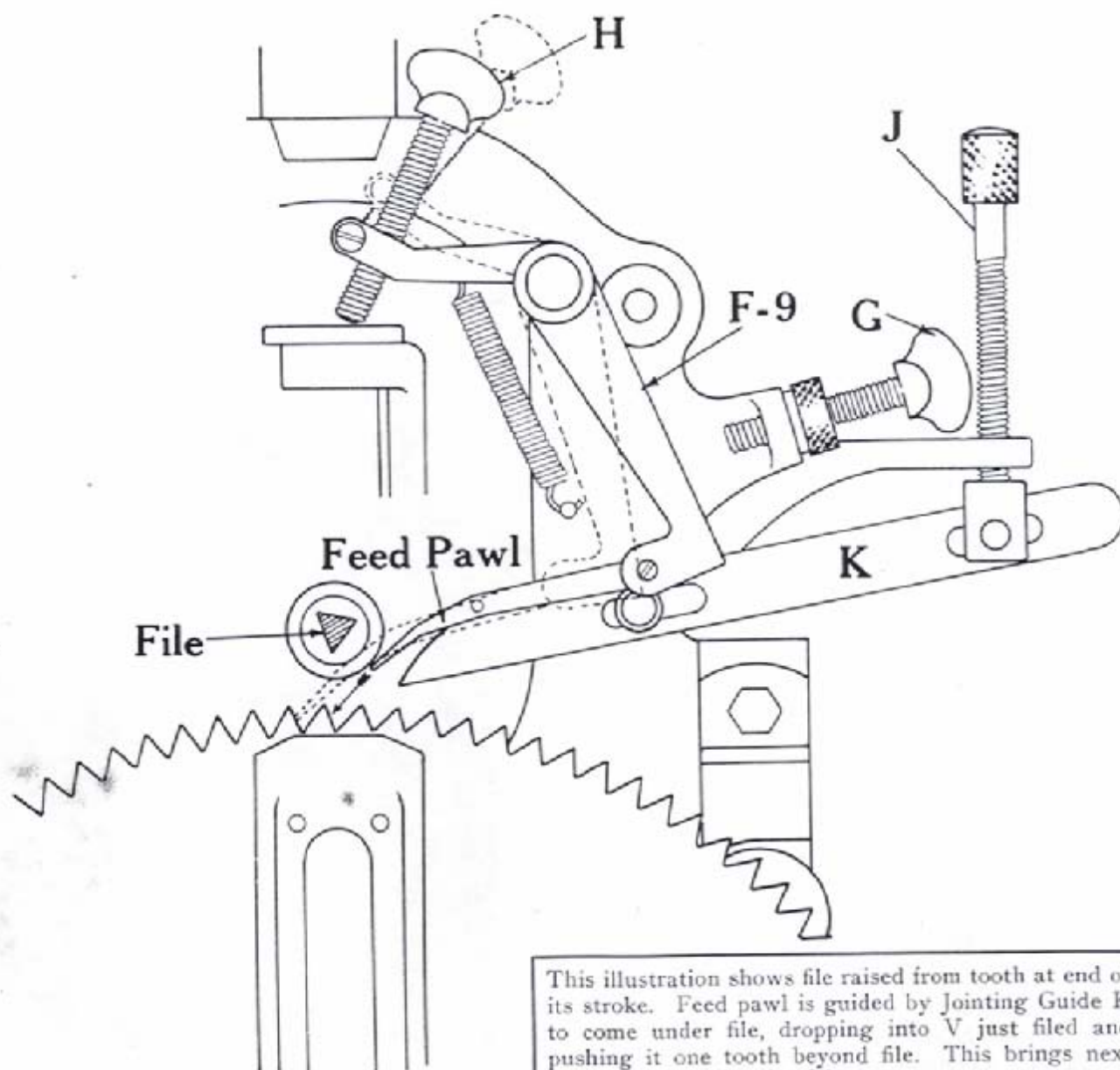


Illustration No. 18

FILING CIRCULAR SAWS (Continued)

Filing Circular Rip Saws

1. Make adjustments on all straight-across filing of circular saws the same as in jointing hand saws. Perfect jointing of all circular saws is obtained by using Jointing Guide K, filing straight across, feeding on front of **V already filed**. This is the V that has been filed on last stroke of file. File straight across until teeth are uniform and saw is jointed perfectly. In this manner, a circular rip saw is filed completely or a circular cross-cut saw is jointed perfectly.

2. Indicate starting point of filing with chalk or blue pencil.

3. The adjustments for filing of circular saws are identical to "Adjustments for Straight-Across Filing" (Pages 4 and 5), with the exception of adjusting saw in Filer. Check adjustment on Thumb Screw H carefully. Be sure to have proper tension on lock screw. It is seldom necessary to change this adjustment. Lock screw should be just tight enough to allow Thumb Screw H to be turned back and forth, holding screw adjustment on Thumb Screw H so it does not change when Filer is in motion. **Thumb Screw G is turned back out of way during jointing operation.**

4. If teeth of circular rip saw are not uniform, first joint teeth by filing straight across until teeth are uniform, then set saw, if necessary, and after setting take light finishing out. **If teeth are uniform, it is not necessary to joint saw but if saw requires setting, set saw before putting in Filer.** Then take one or two cuts straight across to obtain a perfect cutting circular rip or metal-cutting saw.

Filing Circular Cross-Cut Saws

1. To bevel a circular cross-cut saw, follow directions, as described under "Bevel Filing Cross-Cut Hand Saws 3 to 7 Points Per Inch" (Page 14). **Customary bevel for circular saws is approximately 15 points.** Take very light cuts with file. Do not stop

filing until round of saw has been completed. **Feed pawl must feed in V to be filed, which means in V that will be filed on next stroke of file.**

2. It is easier to file first bevel with Filer swung on quadrant base to same side as rocker arm being used.

3. When first bevel is finished, swing Filer to same number of points on opposite bevel. However, when filing very thick saws, it is easier to maintain uniform teeth by turning saw around between bevels, removing Rocker Arm and replacing on opposite side of Filer to file second bevel.

4. Change hook of file to correspond with hook used on first bevel. Readjust Thumb Screw H carefully (this is very important adjustment) and feed on front of **V to be filed on next stroke of file**, as when filing first bevel.

5. It is not advisable to try to cut whole depth of V first time around. Let file have what it can handle and lower gradually to bottom of V as filing continues.

6. After circular cross-cut saws have been jointed and bevel nearly completed, set saw, and then replace in Filer. **Take light cuts on each bevel to obtain perfect cutting circular cross-cut saw.**

7. In filing 3 point saws, special short feed pawl, furnished on request, is used in Rocker Arm F-9. A saw this coarse must be fed two teeth back from filed teeth, in jointing moving it one space and in bevel filing moving it two.

8. For filing circular saws with 3 to $4\frac{1}{2}$ points to the inch, always use band saw files or Diamond Point Files. These files have rounded edges, which eliminate cracking of saw at bottom of V of tooth. Such files are not stocked regularly by hardware stores, but you can secure them from us here at Minneapolis at any time. Refer to "Use and Replacement of Files" (Pages 4 and 5) and to file price list.

Circular Saw Offset Attachment

Circular offset attachment with special cant saw file socket can be furnished extra. Attachment is used to file small circular rip and cross-cut saws of type that require cant saw file. Circular blades for portable electric hand saws are sharpened by this type of file.

Offset attachment bolts in slot on rear vise. It is adjustable up and down, as well as sidewise, for more or less hook of tooth and is provided with cup and

cone arbor for holding saws. Special arbors can be furnished extra. Offset attachment provides for filing small circular saws having teeth hooked past center of saw.

After saw is adjusted in arbor of offset attachment, such circular saws are filed exactly the same as circular cross-cut saws.

When circular saw is tightened in offset attachment, hook and tooth must center with jaws of vise.

Bevel Filing a Circular Saw

Correct Position of All Adjustments

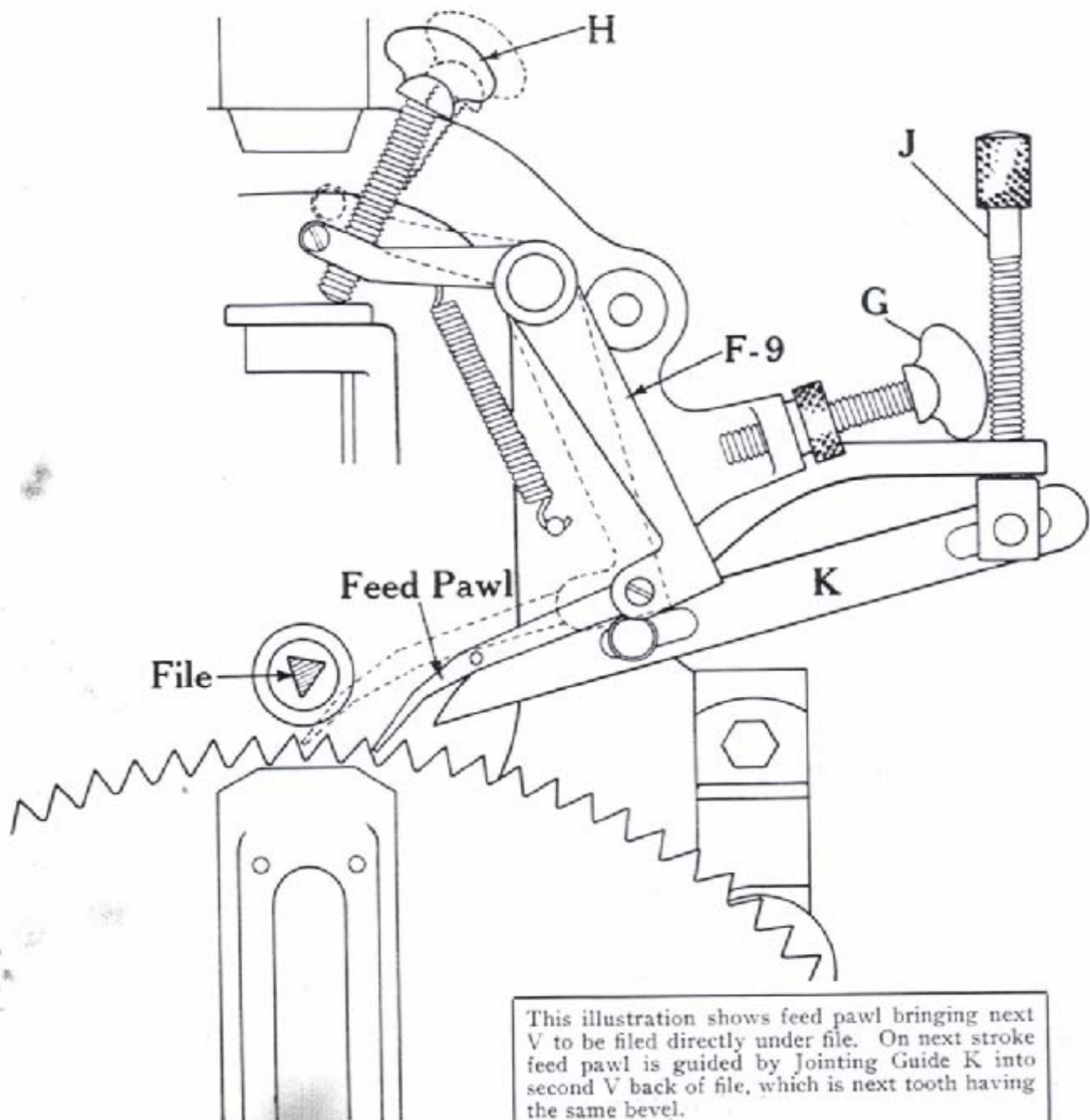


Illustration No. 19

FILING MISCELLANEOUS SAWS

Mitre-Box and Back Saws

Mitre-box and back saws* are filed in the same manner as 8 to 16 point cross-cut saws. (See Pages 6-11-13). We recommend a 15 point bevel on these saws.

Use caution in making adjustments on such fine teeth. They are of thin gauge steel and joint easily.

If back or mitre-box saw has teeth that are very uneven, it is quicker to retoothe saw with graduated bar, as two or three times filing straight across will form new teeth, or retoothe on Foley Retooler. (See Illustration Page 30.)

Keyhole and Compass Saws

Keyhole or compass saws† require special carrier furnished extra. Carrier is made of sheet steel with adjustable narrow shelf running at an angle that furnishes support for saw and is held high enough to hold teeth for filing above vise. Clamps hold blade firmly in carrier. This special carrier is mounted in

Filer, same as regular hand saw carrier. Upper edge of support blade should pass through vise jaws of Filer. Saw is mounted same height above carrier bar as hand saw. Some keyhole saws are filed straight across, others are beveled about 10 points, using same hook as for hand cross-cut saws.

Band Meat Saws

Band meat saws‡ are filed exactly the same as any other band saw—filed straight across, using regular band saw attachment and Rocker Arm F-8 or F-6, except that band saw attachment is adjusted by hand wheel, so that saw rest carries saw perfectly straight through vise of Filer.

A band meat saw is always filed straight across with file set at same hook as for rip saws. If teeth of band meat saw are uneven, first joint saw, then set it, and after setting take light finishing cut. This assures you of perfect cutting meat saw blade.

A double feed pawl can be furnished extra, if you have to file band meat saws with broken teeth.

Skip Tooth Meat and Band Saw Blades

Recently a new band saw was placed on the market for sawing meat and ice known as the skip tooth saw.** The majority of these saws are 6 points to the inch. Due to the wide flat section between points, a special skip tooth file is required for filing such saws in Filer. They are handled the same as band saws.

We stock skip tooth files for skip tooth saws of 6 points per inch. They are six-sided files, providing faces for 3 turnings.

Removed from Frame

Band saw attachment can be used on all Foley Filers. It is furnished as standard equipment on Models F-16, F-24, and standard F-1. Model F-1, when purchased for meat saws only, has specially built-in attachment, which acts as under support for saw.

To file meat saw blades with band saw attachment, blades must be removed from frames. If blades do not contain pins, they can be filed full length straight across on jointing stroke, as described under "Adjustments for Straight-Across Filing" (Pages 8-10). If meat saw blades contain pins, they can only be filed within inch of either end because pins will not go through vise. Filing of extreme ends of blades is not necessary, as ends are not used for cutting purposes.

*Mitre-box and Back Saws—These are fine tooth, straight blade saws with stiff back.

†Keyhole or Compass Saws—These are small pointed blades used for starting cut in small places. Used by plumbers, steamfitters, and carpenters.

To Adjust Attachment

1. Open vise and bolt band saw attachment in rear slot, as described under "Mounting Band Saws for Filing" (Paragraph 1, Page 20).

2. Place meat saw in slot provided in band saw attachment. Adjust height of meat saw in band saw attachment, so that bottom of V is about $\frac{1}{8}$ " above top of vise.

Loosen Cap Screws B and adjust file to conform with hook marked CC. in hook gauge (See Illustration No. 4), as described under "Use and Replacement of Files" (Pages 4-5).

4. Close vise and file straight across with jointing stroke, as described under "Adjustments for Straight-Across Filing" (Pages 8-10).

5. Meat saw blades are always filed straight across with file set at same hook as for cross-cut saws. If teeth of meat saw blade are uneven, first joint blade, then set it, and after setting take a light finishing cut. If teeth of meat saw blade are even and do not require jointing but need setting, set blade before putting it in Filer, and then take one filing cut and one finishing cut on each tooth.

6. After saw has been filed straight across, filing on every tooth, adjust Thumb Screw H to file every third tooth. Turn Thumb Screw H down until it brings every third tooth under file, which produces a raker tooth, resulting in a faster cutting saw.

‡Band Meat Saws—Band saws with fine teeth used on power machine for cutting meat.

**Skip Tooth Meat Saws—Band saws with every other tooth taken out.

FILING MISCELLANEOUS SAWS (Continued)

Without Removing from Frames

To file meat saw blade without removing from frame requires special meat saw carrier and special under vise support which can be furnished extra for Model F-24 Foley Filer only; cannot be used on Model F-16. Meat saw carrier is identical to standard hand saw carrier with exception that hangers are longer to accommodate larger type of meat saw frames.

1. Open vise and pass meat saw frame through jaws of vise.

2. Clamp frame of meat saw into carrier, adjusting it for height with hand saw carrier gauges, exactly as you would a mitre-box or back saw.

3. Adjust special meat saw support in slot of front vise to act as shelf or rest on which blade will ride

to prevent center from springing when filing.

4. Close vise and tighten hand wheels A. Then file straight across with jointing stroke, as described under "Adjustments for Straight-Across Filing."

5. Meat saw blades are always filed straight across with file set at same hook as for cross-cut saws.

6. It is not possible to file meat saw blade in frame the last inch at each end of blade, as meat saw frame interferes with vise. Filing of extreme ends of blades is not necessary, as ends are not used for cutting purposes.

7. After saw has been filed straight across, filing on every tooth, turn Thumb Screw H down until it brings every third tooth under file. This produces a raker tooth, resulting in faster cutting saw.

Buck Saws

Buck saws,* having teeth parallel to back of blade and which have V teeth that can be filed with standard three-cornered file, may be filed by using band saw attachment. Adjust height so that bottom of V of

tooth is $\frac{1}{8}$ " above top of vise. Then file, using same method as described under "Bevel Filing Hand Cross-Cut Saws 3 to 7 Points to Inch" (Page 14).

Docking Saws

Docking saws† require a special long carrier furnished extra, crowned to conform with crown of saw. File docking saws, using same method as described under

"Bevel Filing Cross-Cut Hand Saw 3 to 7 Points to Inch" (Page 14).

Printers' Circular Saws

To file a printer's circular saw‡ in Filer, set file with hook gauge same as for rip saw. We advise using round-cornered files, such as Band Saw Files or Diamond Point Files, as other files produce too sharp a gullet causing lead to clog in teeth. Adjust file in Filer, filing straight across on every tooth, using jointing stroke until teeth are jointed perfectly.

Printers' saws are swaged** instead of set. A swage is a small piece of steel with notch in one end which fits over teeth. To swage circular saws, remove saw from Filer and place in a circular saw vise (leather face jaws of vise to avoid injuring teeth of saws).

Place swage on tooth holding it at same angle at which tooth is hooked. Tap swage lightly several times with hammer to spread teeth approximately $\frac{1}{16}$ " on each side of saw. Swage every tooth.

It is advisable to side dress*** swage of teeth so that they will be same width. This gives a smoother cutting saw. After side dressing teeth, place saw in Filer again and file once or twice around until teeth are brought up to sharp cutting edge. Last time around use finishing cut; see Paragraphs 13-14, Page 20. Saw swage can be furnished extra. (Item No. F-127 on Parts Price List.)

Adjustment of File Arm Gib

Adjustable gib on Filer insures permanent accuracy in filing. Adjusting screws and lock nuts on file arm gib take up slack in file arm (See "M," Illustration No. 1). Tighten gib screws when there is play in file arm, keeping equal tension on gib screws.

1. Place screw driver in slot of gib screw, holding it in the same position. Do not turn screw, but use screw driver to keep screw from turning. Be sure point of screw driver fits slot in set screw. If point of screw driver is too large, it will crack set screw.

2. Use wrench and loosen slightly hexagon lock nuts on each of gib screws.

3. Turn Filer by hand so that file arm moves back and forth. Tighten each screw slowly, starting from back of Filer until there is no play. Lock with hexagon nut. If a pounding noise is detected after adjusting file arm gib, some screws are too tight. Readjust these screws until file arm runs smoothly.

Pounding or thumping noise in new machine is usually caused by foreign substance collecting on upright slide rods. Clean and oil these rods carefully.

‡Circular Lead Cutting Saws or Printers' Circular Saws—Small diameter circular saws used by printers and engravers for lead cutting.

**SWAGE SET: The spreading of the points or top of teeth $\frac{1}{16}$ " wide on each side of blade.

***SIDE DRESS: Lay saw blade flat on bench; use oil stone or flat file to remove points that project out from the blade further than $\frac{1}{16}$ ".

*Buck Saws—These are narrow coarse tooth blades used in hand frame for rough cutting.

†Docking Saws—Docking saws are large type hand saws with coarse teeth used mostly in mines.

ASSEMBLY AND OPERATION INSTRUCTIONS FOR MODEL 281 FOLEY SETTER

ASSEMBLY

Place Setter on work bench about 26" in height. This will enable you to operate Setter while seated. Place Setter where there is good light. Front of Setter should be even with edge of bench. Drill hole in bench for trip rod to extend through bench. Fasten Setter in place using holes in base. Attach foot pedal to floor directly below Setter. Then connect foot pedal to Setter with adjustable rod furnished. See that rod is long enough to allow foot pedal to just clear floor when you trip Setter.

OPERATION

Setter is designed so that both sides of saw can be set while in hand saw carrier of Foley Filer. Place saw on rest in front of Setter, press down on foot pedal and raise hammer. Then place tooth of saw to be set under hammer. Loosen thumb screw on back of set and adjust indicator so that point fits into V of fourth tooth. Then tighten thumb screw to hold indicator in position.

Start at one end of saw, and set first tooth. Move saw up two teeth by hand, using indicator to give proper spacing of teeth, and proceed in this way across saw. Then turn saw over and set opposite teeth of saw in same manner.

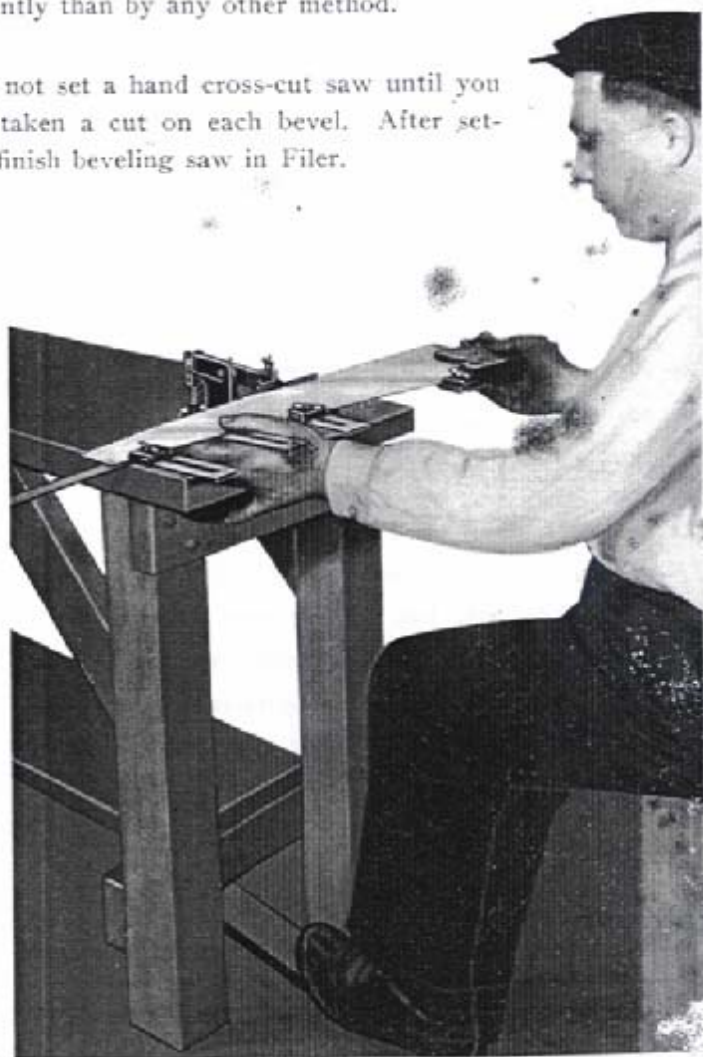
Blow of hammer is taken care of by adjustment of wing screw on top of hammer. Setting of heavier gauge saws is taken care of by turning wing screw down. For lighter gauge saws turn wing screw up.

To set more of tooth, move saw rest in. To set less, move it out by loosening thumb screws at each end of saw rest. Set or bend to side top portion of tooth only. This is very important. Set should never go deeper than half length of tooth, even on fine toothed saws. If set goes deeper than half length of tooth, it is likely to crack blade or break teeth.

This setter enables you to obtain a positive set, insuring a smooth cutting saw, one on

which cutting edge of teeth will stay sharp longer. Always use indicator, which is necessary to obtain speed and accuracy. As soon as you have become familiar with this machine you will be able to set saws more quickly and efficiently than by any other method.

Do not set a hand cross-cut saw until you have taken a cut on each bevel. After setting, finish beveling saw in Filer.



Adjustments to Watch on Foley Automatic Saw Filer

Be sure to read directions thoroughly before trying to file a saw.

Be sure file is tight in sockets. Tap it in.

Be sure to keep point of file about $\frac{1}{8}$ " higher than front or tang end of file.

Be sure to line up file sockets and socket holder so that file is kept perfectly straight.

Be sure Cap Screws E are tight so that file cannot get out of line.

Be sure to keep play out of file arm with adjustment screws.

Be sure adjustments on Thumb Screws G and H are correct.

Be sure lock nut on Thumb Screw G is tight, so that adjustment will not change while Filer is in motion.

Be sure lock screw on Thumb Screw H is just tight enough to allow Thumb Screw H to be turned back and forth, but making sure adjustment of Thumb Screw H is held securely so that it does not change while Filer is operating. Once you have secured this adjustment, it seldom has to be changed.

Be sure to check adjustments on Thumb Screw H when swinging from one bevel to the other.

Be sure carrier support bar is adjusted with set screws provided to keep carrier hangers in line, so that when saw passes through vise it will always be in line with vise jaws.

Be sure to keep vise tight enough so that saw is held firmly under file.

Be sure point of screw driver fits slot in set screw. If point of screw driver is too large, it will crack set screw.

Be sure to keep machine clean. Sweep filings away from vise and all wearing parts with small brush.

Be sure to oil sides of a rusty saw to keep it from binding in vise.

Do not try to file saw with dull or crooked file.

Do not try to run Filer without plenty of oil.

Do not try to force work by taking heavy cuts.

Do not have vise lips too tight.

Do not lower file when changing from one bevel to the other.

Do not try to bevel saw with uneven teeth and expect it to come out perfect. Straighten it up first by filing straight across.

Do not start motor before you are sure adjustments are correct.

Do not blame Filer if first saw you file is not perfect. Try again, as it will take a little practice to do perfect work.

Be sure to keep slide rods clean and oiled. Any thumping or pounding noise detected in new machine is usually caused by presence of foreign matter or lack of oil on slide rods.

FOLEY RETOOTH

FOR HAND SAWS

New Teeth in 3 Minutes

Every Saw Shop Needs a Foley Retooter

The Foley Retooter, in combination with the Foley Filer, is essential equipment in any saw filing shop, plant, factory, mill, or school having many hand saws to keep in condition.

This machine provides a new, fast, accurate method of retooling cross-cut, rip, back, mitre-box, panel, and all kinds of hand saws at low cost. It is a marvel for reconditioning saws with broken or uneven teeth or hollowed due to poor filing. The Foley Retooter does the finest, quickest job of retooling at a fraction of the cost of filing new teeth. It is far easier and quicker to cut new teeth. Filing in new teeth is a long tedious job.



EASY TO OPERATE — No Experience Necessary

The simple construction and positive action of the Foley Retooter make it easy for anyone to operate. There are no complicated adjustments. The feed pawl that moves the saw works on the graduated carrier, insuring uniform teeth and accurate number of points per inch. Any number of points from 4 to 16 per inch can be cut in any hand saw without removing handle, unless blade is worn down into handle. Adjustments for any hook or size of teeth can be made quickly and easily.

Saves You $\frac{3}{4}$ Time and $\frac{2}{3}$ File Costs

New teeth are punched right over the old teeth. It is not necessary to grind or shear off the old teeth. It takes only 3 minutes to retool a 26" hand saw or 2 minutes to retool a back saw. This means a saving of three-fourths of your time as compared with jointing and filing, and in addition saves two-thirds of your actual file costs.

After new teeth are cut with the Foley Retooter, it takes just a few minutes to put a perfect cutting edge on either a cross-cut or rip saw with the Foley Filer.

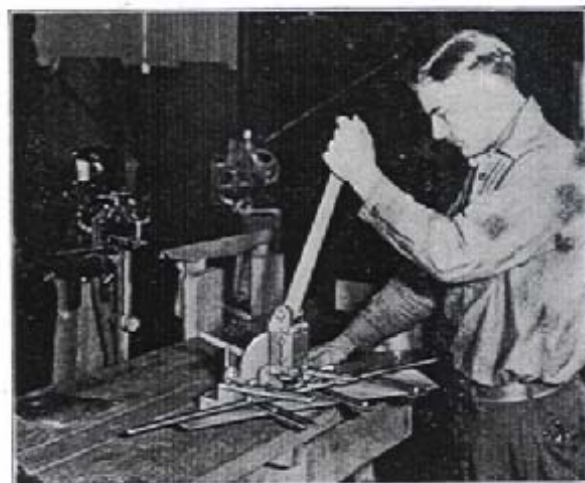
Cuts 20 Sizes of Teeth

From 4 to 16 Points Per Inch

Standard equipment includes five graduated saw carriers for cutting ten sizes of teeth, from 4 to 11 points to the inch. Special carriers for fine-toothed saws can be furnished extra. Each carrier provides for punching two different number of points per inch, as follows:

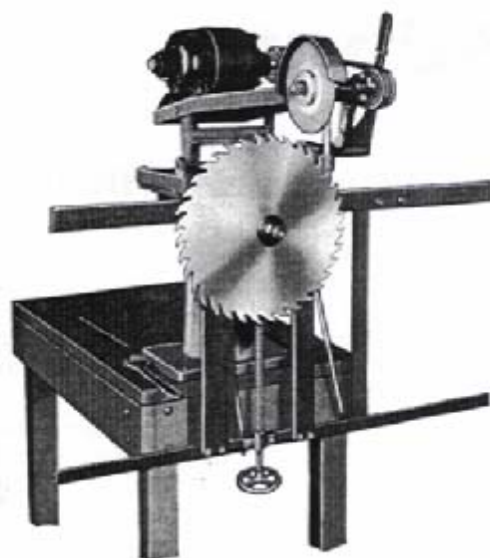
Standard Carriers		Extra Carriers	
7 and 4	10 and $5\frac{1}{2}$	12 and $6\frac{1}{2}$	15 and 8
8 and $4\frac{1}{2}$	11 and 6	13 and 7	16 and $8\frac{1}{2}$
9 and 5		14 and $7\frac{1}{2}$	

Write for literature and prices on this file- and time-saver.



Foley Saw Sharpener and Gummer

Model HG-12



This is the only machine manufactured for gumming* and sharpening both one- and two-man cross-cut saws and circular, rip, and cross-cut saws from 4" to 44" in diameter.

Adjustable depth screw insures all teeth being same height and depth. Sliding table permits any amount of hook on circular saws. Quadrant on saw carrier allows for grinding any bevel up to 45 degrees. Self-centering device for emery wheel insures automatic centering with saw at all times regardless of wear on wheel, and prevents one side of saw from becoming higher than the other. Model HG-12 meets a real need among industrial plants, lumber camps, and saw filing shops for a moderately priced grinder that will handle these two types of saws. Illustrated circular will be sent you on request.

Foley Electrakeen Lawn Mower Sharpener

Featured by perfect sharpening and the ease with which simple adjustments are made, the Foley Electrakeen System is used by the largest manufacturers of lawn mowers in the country, as well as by leading repair shops.

The Foley Lawn Mower Sharpener sharpens automatically reel blades and cutter bar together in one operation. This means a perfect contact of blades and cutter bar. That is why Foley-sharpened lawn mowers cut so smoothly and easily. This method is faster than any other method. With the Foley you can sharpen 3 to 4 mowers an hour.

It is furnished in two sizes. Model M-1 will accommodate hand mowers up to 22" in width. Model M-2 will take care of both hand and power mowers up to 42" in width. Write for information about this money-making Sharpener.



*GUMMING: Cutting down in gullet with an emery wheel, to lengthen and shape teeth.

FOLEY SAW SETTERS

It is not practical to file and set a saw in the one operation. For this reason we manufacture separate machines for filing saws and separate machines for setting saws.

Model 280

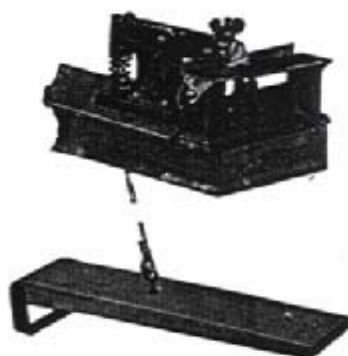
Foley Circular Saw Setter

BENCH TYPE

Takes circular rip or cross-cut saws from 6" to 24" in diameter. Cone is adjustable in long slot to provide for different diameters of saws. Hammer is adjustable in quadrant slot to secure any set desired to point up teeth for rip or cross-cut saws. Saw is set by hand, one side at a time, by striking hammer attached to Setter.



Shipping Weight, 15 Lbs.
Price \$15.00



Model 281

Foley Hand Saw Setter

BENCH TYPE

Shipping Weight, 10 Lbs. — Price \$15.00

This is a hand-feed, hammer setter, operated by foot pedal with a positive hammer action on anvil, producing uniform set. Force of hammer blow is adjustable quickly for any amount of set or size of teeth. It is equipped with indicator, enabling operator to feed the saw by hand, one side at a time. It is not so apt to break teeth of saws as the ordinary push type setter. Teeth can be set while saw is in hand saw carrier used on Foley Filer, thus saving time for both operations.

Model 282

Foley Band Saw Setter

BENCH TYPE

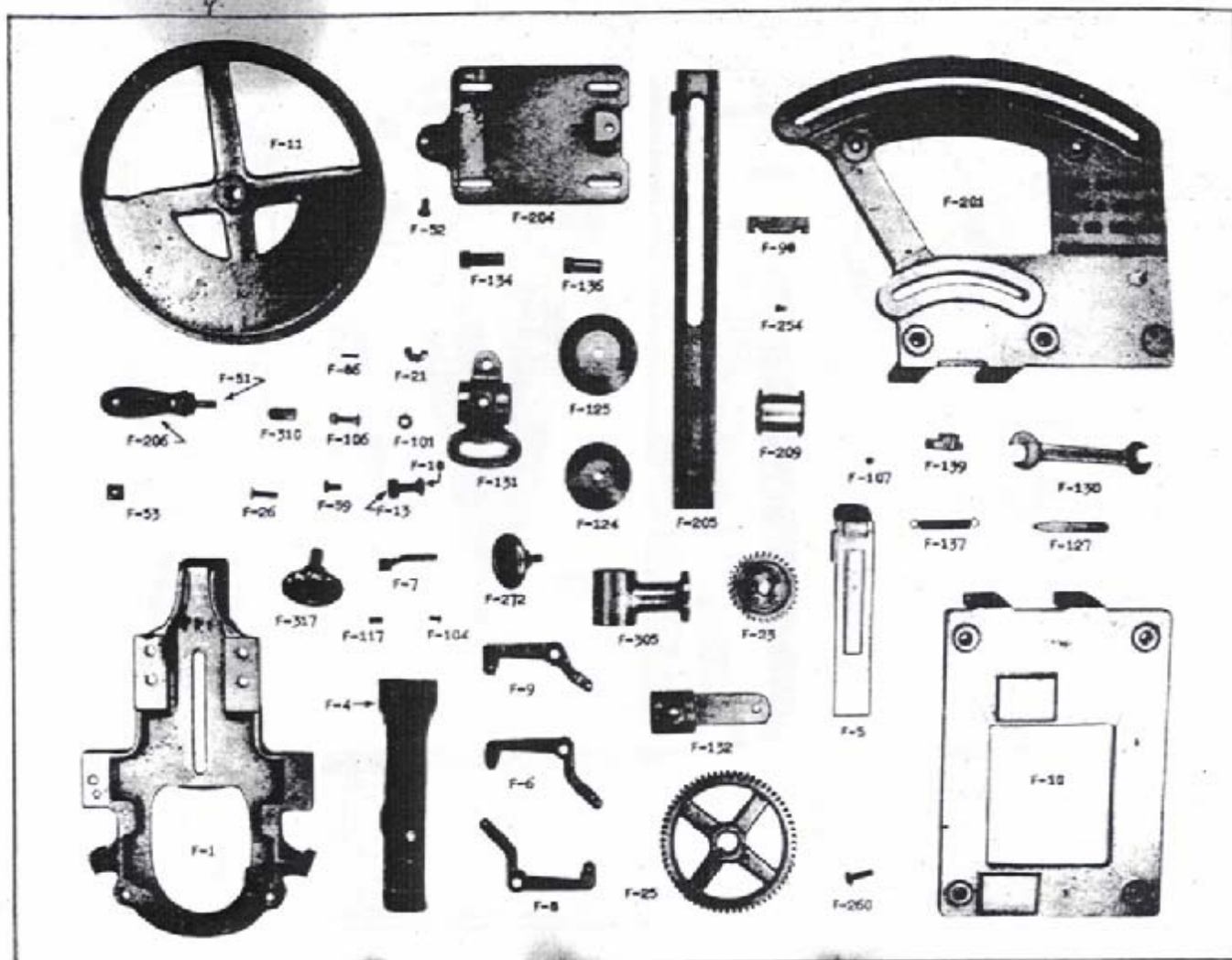
Shipping Weight, 25 Lbs. — Price \$25.00

This is an automatic push type setter for all band saws from $\frac{1}{8}$ " to $1\frac{1}{2}$ " wide. It feeds saw automatically, setting both sides of saw in one operation. Setting speed is 200 teeth per minute. It is ideal for band and meat saw blades and all types of small wood band saws. It can be furnished for either hand or power drive.



FOLEY MANUFACTURING CO.

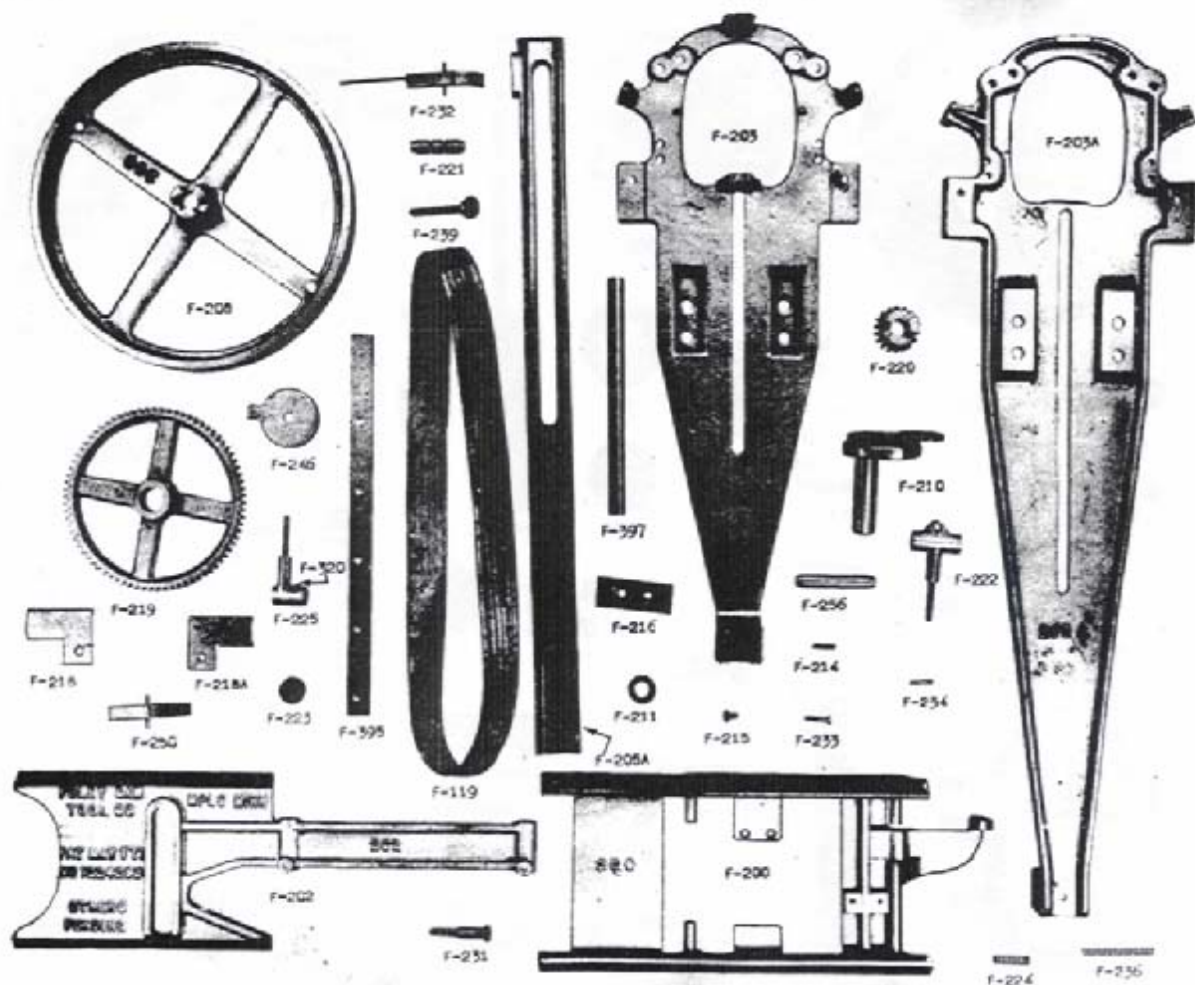
30 SECOND ST. N. E.
MINNEAPOLIS 13, MINN.



PART #	DESCRIPTION	PRICE	PART #	DESCRIPTION	PRICE
F-1	Front Casting for F-1 and F-3.....	\$ 9.00	F-106	Motor to Bracket Nut and Bolt.....	\$.10
F-4	Front Vise for F-1.....	2.00	F-107	Motor Pulley Set Screw.....	.05
F-5	Front Vise for F-3.....	1.75	F-117	Slide Rod Set Screw.....	.05
F-6	Rocker Arm Right.....	2.00	F-124	Special Saw Cone, 1 3/8" to 2 3/4"...	1.00
F-7	Feed Pawl for Graduated Bars.....	1.00	F-125	Special Saw Cone, 1 3/4" to 3 1/4"...	1.25
F-8	Rocker Arm Left.....	2.00	F-127	Swage for Printers' Saws.....	1.50
F-9	Rocker Arm.....	2.00	F-130	Filer Wrench.....	.75
F-10	Base Casting for F-1.....	6.75	F-131	Band Saw Rod Knuckle.....	1.50
F-11	Hand Fly Wheel for F-3.....	7.50	F-132	Band Saw Rod Knuckle.....	1.20
F-13	Quadrant Lock Nut.....	.10	F-134	Diamond Point File Socket (rear)....	1.50
F-18	Quadrant Bolt.....	.10	F-136	6° Cant File Socket.(rear).....	1.50
F-21	Steel Wing Nut.....	.10	F-137	Carriage or Sash Spring for F-5only..	.25
F-23	Clutch Gear for F-3.....	3.00	F-139	Fly Wheel Shaft Oil Cup.....	.25
F-25	Cam Shaft Gear for F-3.....	5.25	F-201	Base Casting.....	12.00
F-26	Jointing Guide Bolt.....	.10	F-204	Motor Bracket.....	1.50
F-51	Fly Wheel Handle Bolt.....	.10	F-205	Front Vise Casting for F-16.....	3.75
F-52	Cap Screw for E or B.....	.05	F-206	Fly Wheel Wood Handle.....	.40
F-53	Fly Wheel Handle Bolt Nut.....	.05	F-209	Motor Pulley Flat.....	.75
F-59	File Holder Lock Bolt.....	.05	F-254	Carrier Hanger Rivet, 3/16" X 3/8"...	.05
F-86	Black Iron Rivet.....	.05	F-260	Carrier Bolt, 1/4" X 3/4".....	.10
F-92	Gib Support Screw (not shown)....	.10	F-272	Vise Hand Wheel for F-3.....	1.15
F-98	File Hook Gauge.....	.25	F-305	Pedestal Bearing for Band Saw Rod...	1.50
F-101	Hexagon Nut, 1/4".....	.05	F-310	Set Screw, 1/2" X 3/4".....	.10
F-104	File Arm Guard Screw.....	.05	F-317	Band Saw Rod Hand Wheel.....	.50

All Prices F. O. B. Factory

POLEY MANUFACTURING COMPANY
Minneapolis, Minnesota

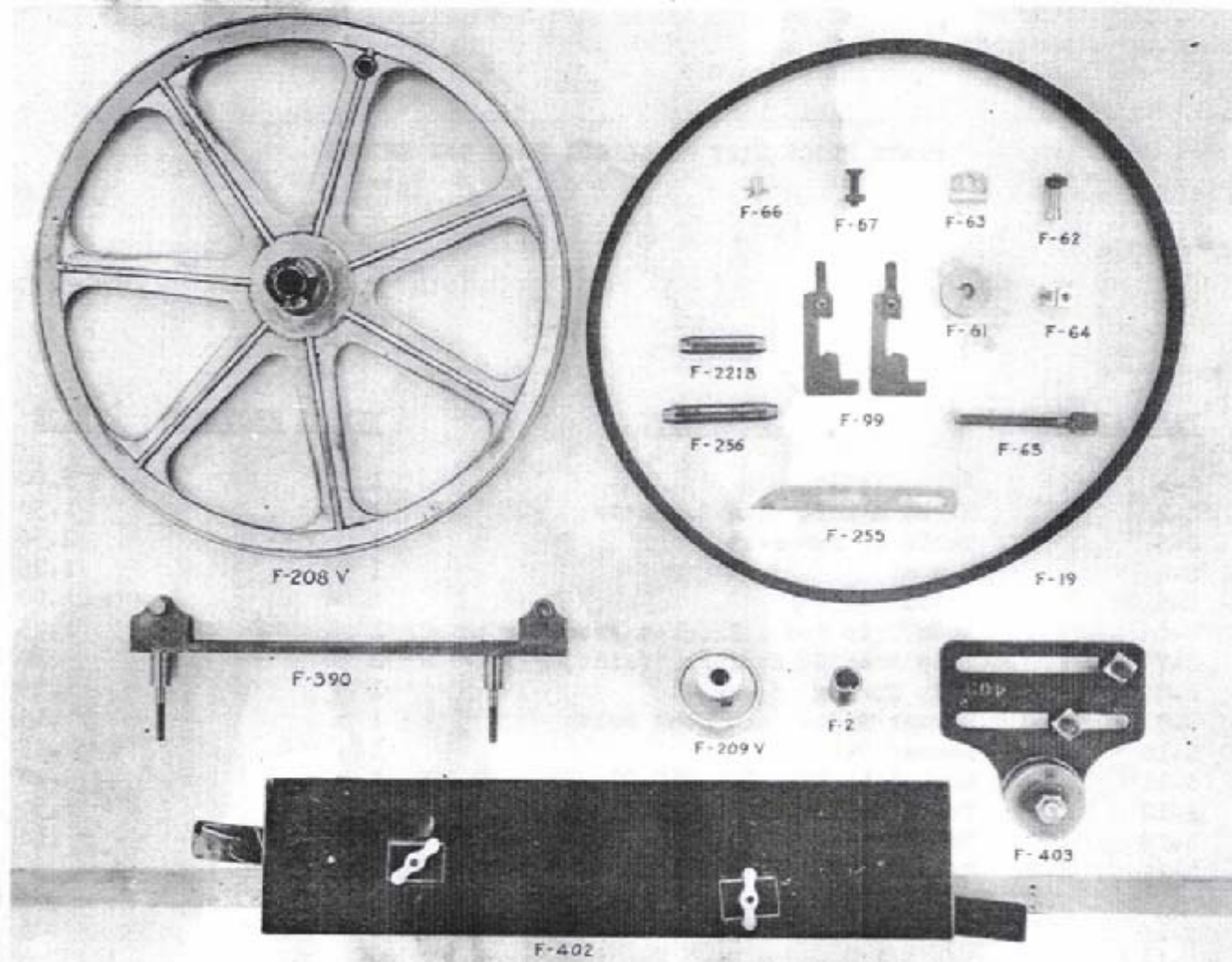


PART #	DESCRIPTION	PRICE	PART #	DESCRIPTION	PRICE
F-119	Motor Belt (flat).....	\$ 2.25	F-221	Rear File Socket (Old style).....	\$.50
F-200	File Arm Carriage for F-5.....	Obsolete	F-222	Front File Holder.....	1.00
F-202	File Arm for F-5.....	Obsolete	F-223	File Holder Adjusting Nut.....	.25
F-203	Front Casting for F-5 and F-16...	12.00	F-224	File Holder Spring.....	.10
F-203A	Front Casting for F-24.....	19.20	F-225	Rear File Holder.....	1.00
F-203A	Front Vise Casting for F-24.....	5.25	F-231	Rocker Arm Pivot Bolt.....	.15
F-208	Fly Wheel for F-16 and F-24 (flat)	7.00	F-232	Feed Pawl for F-6 and F-8 Arms.....	1.00
F-210	Cam.....	3.75	F-233	Feed Pawl Pivot Screw - F-6 and F-8..	.10
F-211	Fly Wheel Collar.....	.40	F-234	Feed Pawl Pin for F-9 Arm.....	.10
F-214	Cam Shaft Key.....	.05	F-236	Feed Pawl Spring.....	.10
F-215	Lift Plate Screw.....	.05	F-239	H & G Adjusting Screw.....	.25
F-216	Lift Plate.....	.50	F-246	Circular Saw Cup.....	1.15
F-218	Hand Saw Carrier Slide Left.....	.10	F-250	Feed Pawl for F-9 Arm.....	1.00
F-218A	Hand Saw Carrier Slide Right.....	.10	F-304	Pedestal (not shown)	25.00
F-219	Cam Shaft Gear for F-16 and F-24..	5.00	F-320	Rear File Holder Clip.....	.10
F-220	Clutch Gear with Needle Bearing for F-16 and F-24.....	3.40	F-395	Gib for F-16 and F-24.....	.75
			F-397	Vertical Slide Rod for F-16 and F-24	.75

All Prices F. O. B. Factory

POLEY MANUFACTURING COMPANY

Minneapolis, Minnesota



PART #	DESCRIPTION	PRICE	PART#	DESCRIPTION	PRICE
F-2	Needle Bearing.....	.80	F-209V2S	Vee-type Motor Pulley, 2* (Not Shown).....	.50
F-19	Vee Belt.....	1.70	F-221B	New Rear File Socket.....	.50
F-61	Carrier Rollers25	F-255	Jointing Guide.....	.50
F-62	Carrier Roller Screws.....	.10	F-256	Standard Front File Socket (for all medium-sized files).....	.50
F-63	Adj. Upper Carrier Slide.....	.20	F-378	Special Front File Socket (not Shown) for extremely small and extremely large files.....	.75
F-64	Jointing Guide Adj. Screw Clip.....	.15	F-390	New Style File Socket Bracket.....	3.25
F-65	Jointing Guide Adj. Screw.....	.30	*F-391 N	New Type File Arm for F-16 & F-24 (Not Shown).....	12.00
F-66	Jointing Guide Adj. Screw Clip Pin.....	.10	F-402	Compass & Keyhole Saw Carrier.....	3.00
F-67	Adj. Upper Carrier Slide Screw.....	.10	F-403	Offset Attachment with Cant Saw File Socket.....	3.75
F-99	Carrier Gauges (Pair).....	.60			
F-208 V	Vee Flywheel with needle bearing.....	7.00			
F-209 V	Vee-type Motor Pulley, 2-1/4", Standard.....	.55			
F-209 VS	Vee-type Motor Pulley, 2-1/2" (Not Shown).....	.60			

* (For machines using F-391 NS Bracket)

All Prices F. O. B. Factory

FOLEY MANUFACTURING COMPANY
Minneapolis, Minnesota

PARTS PRICE LIST MODEL 281 HAND SAW SETTER

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>NUMBER REQUIRED</u>	<u>PRICE</u>
S-1	Base Casting	1	\$ 5.00
S-2	Right & Left Side Brackets	1 Each	1.50 Ea.
S-3	Table or Saw Rest	1	2.50
S-4	Hammer	1	1.25
S-5	Anvil	1	1.00
S-6	Rear Trip Rod & Bracket Assembly	1	1.75
S-7	Trip Bracket Springs (side)	2	.10 Ea.
S-8	Trip Spring (rear)	1	.25
S-9	Hammer Adjustment Hook Bolt	1	.15
S-10	Hammer Pin	1	.15
S-11	Hook Bolt Wing Nut #10-32	1	.10
S-12	Tooth Indicator or Pawl	1	.50
S-13	Hammer Tension Spring	1	.10
S-14	Economy Wing Nuts 1/4 X 1/2 USS (2 for Table - 1 for Pawl)	3	.10 Ea.
S-15	Square Nut 1/4 USS (for Pawl Wing Nut)	1	.05
S-16	1/4 X 1/2 Round Head Machine Screw USS (for Side Brackets to Base)	4	.05 Ea.
S-17	1/4 X 1/2 Headless Set Screw USS (to Lock Anvil to Base Casting)	1	.10
SS-17	Foot Pedal Trip Rods (Bottom & Top Rod & Clip with Pin)	1	.40
SS-18	Foot Pedal Board	1	.60
SS-19	Trip Rod Clip (Including Set Screw)	1	.40
SS-26	Pedal Bracket (Including Screws)	1	.60

All Prices F. O. B. Factory

FOLEY MANUFACTURING COMPANY
Minneapolis, Minnesota

Metal Working and Mining Companies

Acme Steel Co.
Albro Metal Products Co.
Aluminum Company of America
Aluminum Ore Co.
American Brass Co. (all plants)
American Smelting & Refining
American Steel Wire
American Type Founders
Anaconda Copper Mining Co.
Bethlehem Steel Co.
Bohn Aluminum & Brass Co.
Braden Copper
Bremer Aluminum Co.
Cananea Cons. Copper Co.
Carnegie-Illinois Steel Co.
Chase Brass Co.
Chicago Extruded Metals Co.
Colorado Fuel & Iron Corp.
Cons. Mining & Smelting of Canada
Deshler Foundry & Machine Works
Gisholt Machine Co.
Holleran Brass Foundry
Illinois Steel Co.
Jones & Laughlin Steel
Metal Forming Corp.
Nevada Cons. Copper Co.
New Jersey Zinc Co.
Ohio Steel Foundry Co.
Phelps-Dodge Copper
Reynolds Metals Co.
Sandvik Steel Co.
Tennessee Coal & Iron Co.
Wilmington Malleable Iron Works

Ship and Boat Yards

Annapolis Yacht Yard
Richard Arnson Boat Works
Bethlehem Shipbuilding Co.
Federal Shipbuilding & Drydock
Los Angeles Shipbuilding & Dry
Dock Co.
Manitowoc Shipbuilding Co.
Maryland Drydock Corporation
Muth's Yacht Co., Camden, N. J.
Napson Navigation
Newport News Shipbuilding & Drydock
New York Shipbuilding Corporation
Norfolk Shipbuilding Co.
North Carolina Shipbuilding Co.
Oregon Shipbuilding Corp.
Pleth Yan Boat Co.
Port Arthur Shipbuilding Corporation
Robinson-Marine Construction Co.
Seabrook Yacht Corp.
Seattle-Tacoma Shipbuilding

Electric Companies

Brooklyn Edison Co., Inc.
Cleveland Electric Illuminating Co.
Cons. Gas, Electric Light & Power
(Baltimore, Md.)
Dallas Power & Light Co.
Detroit Edison Co.
Duquesne Power & Light Co.
General Electric Co.
Hydro Electric Power Com. of Canada
Indiana & Michigan Electric
Kansas City Power & Light Co.
Northern States Power Co.
Western Electric Co.
Westinghouse Elec. & Mfg. Co.

Paper and Bag Companies

American Tissue Mills
Brown Co.
Champion Paper Corp.
Champion Paper & Fibre Co.
Dexter Sulphate & Paper Co.
Fallulah Paper Company
International Paper Co.
Kalamazoo Vegetable Parchment Co.
Minnesota & Ontario Paper Co.
Morgan Paper Co.
Moss Paper Mills
Neenah-Edwards Paper Co.
Oxford Paper Co.
Pittsford Pulp & Paper Co.
Scott Paper Co.
Southern Kraft Corp.
Union Bag & Paper Corp.

Construction Companies, Lumber Yards and Contractors

Alta Lumber Co. (Iowa)
W. C. & E. G. Armstrong Co.
B-W Construction Co.
Chicago Mill & Lumber Co.
Commonwealth Engineering Co.
H. M. Daniels Lbr. Co.
Davy Tree Experts
W. D. Denham Construction Co.
Dixie Construction Co. (Georgia)
Henry Ericson Co.
Fraser Brace Engineering Co.
G. E. Friend Lbr. Yards (Kansas)
Froeh Conolon Construction Co.
G. A. Fuller Co. & Merritt Chapman
Scott Corp.
Greebmar Cons. Corp. (Panama)
Greelander Lumber Co.
Greenport Basin and Construction
John H. Griffiths & Son
Gulf Lumber Co.
Mason-Walsh-Atkinson-Kier
Morrison-Knudson Co.
Nevada-Massachusetts Co.
Ogle Construction Co.
Page Building Co.
Pike & Co.
Shevin-Hixon Co.
Seems-Spokane Co.-Johnson-Drake
Piper, Inc.
Starrett Bros. Construction Co.
Sundt Construction Co.
Triad Construction Co.
United Lumber Yards, Inc. (Calif.)
U. S. Gypsum Co. (all plants)

Publishers

Boston American
Boston Herald
Chicago Daily News
Christian Science Pub. Co.
Curtis Publishing Co.
Detroit Times
Herald Papers
Philadelphia Public Ledger
Portland Oregonian
Providence Journal
St. Louis Star
Spokesman Review of Spokane
Tampa Morning Tribune
Washington (D. C.) Star
Western Png. and Lithographing Co.

United States Government

Air Corps, Moffett Field, Calif.
Air Corps, Wright Field, Dayton, Ohio
Air Depot, Plattsburgh, Calif.
Air Depot, Middletown, Pa.
Bolling Field
Borinquen Field
Federal Reformatory, Chillicothe, Ohio
Fort Bragg
Fort Leavenworth
Frankford Arsenal
Hickam Field
Jefferson Proving Ground
Pearl Harbor, Hawaii
Wheeler Field
Marine Corps
Medical Section, Army Sup., Be'lyn
U. S. Army Base Flying School
(Montgomery, Alabama)
Naval Powder Factory
Naval Proving Ground
(Dahlgren, Va.)
Navy Yard, Washington, D. C.
Navy Yard, Mare Island, Calif.
Navy Yard, Charleston, S. C.
Norfolk Navy Yard, Portsmouth, Va.
Navy Supply Depot, Norfolk, Va.
New London Submarine Base
Panama Canal
Pacatiny Arsenal
Portsmouth Navy Yard
Pugot Sound Navy Yard
Quartermaster, Camp Hulen, Texas
Quartermaster, Camp Wallace, Texas
Submarine Base, Canal Zone
U. S. Army Base Flying School
(Montgomery, Alabama)
U. S. Army Base, British Guiana
U. S. Army Engineers
U. S. Battleships and Tenders
U. S. Construction Quartermaster,
Milan, Tenn.
U. S. Constructing Quartermaster,
Piquette Brook Ordnance, Wis.
U. S. Cavalry School
U. S. Government, Hattiesburg, Miss.
U. S. Government, Warrensburg, Mo.
U. S. Naval Air Station, Pensacola, Fla.
U. S. Naval Academy
U. S. Naval Ammunition Depot
U. S. Penitentiary, Terra Haute, Ind.
U. S. Navy Base, Bermuda
U. S. Quartermaster, Brimhurst, La.
U. S. Shell-loading, Burlington, Iowa
U. S. Signal Corps, Honolulu, Hawaii
U. S. Treasury, Madison, Wis.
U. S. Treasury, Verona, N. J.
U. S. Treasury Dept., Chelsea, Mich.
U. S. Veterans Hospitals
War Department, Fort Clark, Texas
War Department, Fort Peck, Mont.
War Department, Washington, D. C.
War Dept., West Point, N. Y.

United States Government Cont'd

U. S. National Youth Administration
NYA Russellville, Arkansas
NYA San Francisco, California
NYA Norwich, Connecticut
NYA Belleville, Illinois
NYA Chicago, Illinois
NYA Chicago Heights, Illinois
NYA Harrisburg, Illinois
NYA Des Moines, Iowa
NYA Ashland, Kentucky
NYA New Bedford, Massachusetts
NYA Detroit, Michigan
NYA Marquette, Michigan
NYA Duluth, Minnesota
NYA St. Paul, Minnesota
NYA Shakopee, Minnesota
NYA Winona, Minnesota
NYA Greenwood, Mississippi
NYA Tupelo, Mississippi
NYA Kearney, Nebraska
NYA Lincoln, Nebraska
NYA Newark, New Jersey
NYA Astoria, Queens, New York
NYA West Brighton, Staten Island,
New York
NYA Carrollton, Ohio
NYA Chickasha, Oklahoma
NYA Guthrie, Oklahoma
NYA Muskogee, Oklahoma
NYA Philadelphia, Pennsylvania
NYA Barnard, South Dakota
NYA Amarillo, Texas
NYA Bonham, Texas
NYA Burnet, Texas
NYA Haskell, Texas
NYA Pearsall, Texas
NYA San Antonio, Texas
NYA South Houston, Texas
NYA Webster Springs, West Va.
NYA Wheeling, West Virginia

Railroads

Atchafalaya, Topeka & Santa Fe R. R.
Baltimore & Ohio R. R.
Belt Railroad of Chicago
Boston Elevated Ry.
Boston & Maine R. R.
Canadian National Ry.
Central of Georgia Ry.
Central R. R. of New Jersey
Chesapeake & Ohio R. R.
Chi., Milw., St. Paul & Pacific R. R.
Chi., St. Paul, Mpls. & Omaha R. R.
Cinn., N. O. & Texas Pacific Ry.
Delaware & Hudson R. R.
Denver Tramway Corp.
International Ry., Buffalo, N. Y.
Louisville & Nashville R. R.
National Ry. of New Zealand
New York Central Lines
N. Y., New Haven & Hartford R. R.
Northern Pacific R. R.
Pacific Electric Ry. Co.
Panama R. R.
Philadelphia Rapid Transit
Rock Island Lines
St. Louis and San Francisco R. R.
Seaboard Airline R. R. Co.
Soc. Line R. R.
Southern Ry.
Southern Pacific R. R.
Union Pacific R. R.

FOLEY MANUFACTURING COMPANY

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