OPERATING INSTRUCTIONS AND PARTS LIST FOR

CRAFTSMAN JOINTER

6 INCH

Model Number 103.23320

This is the model number of your jointer. It will be found on a plate located on the right side of the front table. Always mention this model number when communicating with us regarding your jointer or when ordering parts.

How to Order

Parts for Model Number 103.23320

All parts must be ordered through a Sears' retail or mail order store. Parts are shipped prepaid. When ordering repair parts, always give the following information:

1. The Part Number in this list.
2. The Part Name and Price in this list.
3. The Model Number which is 103.23320 and will be found on a plate on the front table.

This list is valuable. It will assure your being able to obtain proper parts service We suggest you keep it with other valuable papers.

SEARS, ROEBUCK and CO.

April, 1946

SOURCE FORM 21919

ASSEMBLING and OPERATING INSTRUCTIONS
FOR CRAFTSMAN 6 INCH JOINTER

MODEL NUMBER 103.23320

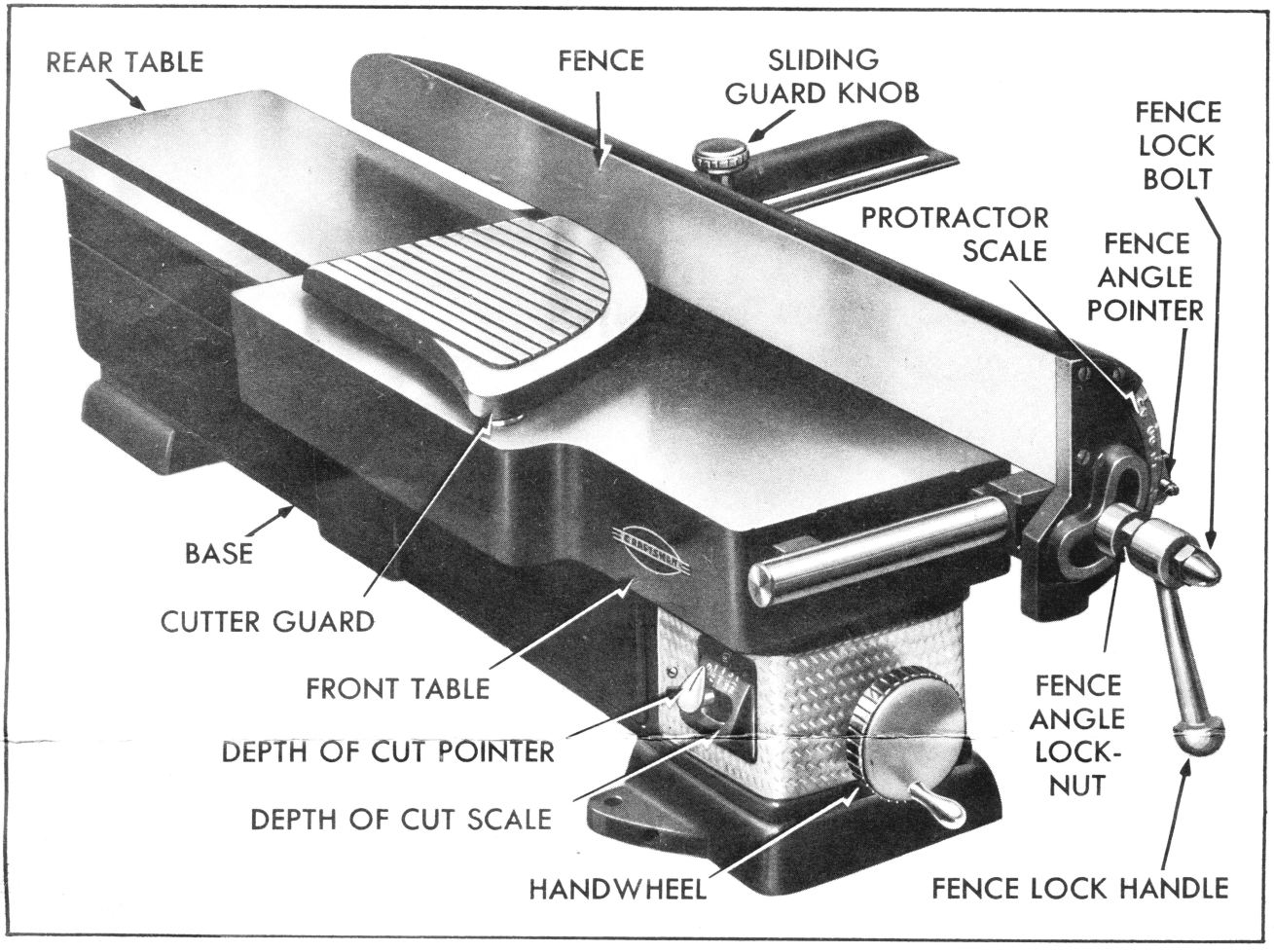


FIGURE 1

REASSEMBLING:

Your jointer has been completely assembled, inspected and tested at the factory. To prevent damage and misalignment of parts during shipping, the cutter guard (see Figure 1) was removed and packed separately. When installing this guard, engage the hexagon stud in the swinging guard insert #21412 in operating position and drop the guard in place.

LUBRICATION:

This tool is equipped with two precision type ball bearings which are fully enclosed in dust proof housings. These bearings were packed with grease at the factory and require no additional lubrication for the life of the bearing. Other moving parts such as the elevation screw #21614 and the upper and lower dovetails #21218 and #21219 may need an occasional application of a light grade oil to insure smooth operation.

INSTALLATION:

The jointer should be mounted securely on a bench or stand so that the surface of the table is approximately 35″ from the floor. The motor should be installed below on a wooden shelf. The jointer pulley is designed to use a ½″ Vee type belt. **Cutter head rotation must be counter clockwise as viewed from the pulley side of the jointer.** Pulley alignment, and belt tension adjustment, as well as direction of rotation should be considered when installing the jointer and its power unit.

SPEED:

For best results the jointer should be operated at approximately 4400 R.P.M. Satisfactory operating power and speed may be attained by using a ½ horsepower 3450 R.P.M. motor equipped with a 2½ inch diameter pulley.

CONTROLS:—Figure 1

The position of the fence is maintained by the clamping action of the fence angle lock nut and the fence lock bolt. The fence lock handle is a wrench designed so that it may be used interchangeably and

independently on either of the above units. The fence may be positioned at any point across the table by loosening the fence lock bolt and the sliding guard knob and moving the entire fence assembly along the fence slide bar #21616. The angle between the fence and the table may be changed for beveling operations by loosening the fence angle lock nut and the sliding guard knob. The angle selected for the bevel cut is indicated on the protractor scale. After changing the fence position as described above, check carefully that the fence angle lock nut, fence lock bolt, and the sliding guard knob are all secure before proceeding with a cutting operation.

The sliding guard knob functions as a lock to secure the sliding guard which supports the fence after it has been positioned.

The hand-wheel is used to raise and lower the front table, thus regulating the depth of cut as indicated by the depth of cut pointer and scale.

ADJUSTMENTS:

If at any time the cut obtained should vary from that indicated on the depth of cut scale, the following adjustment may be made. Align the front and rear tables with a straight edge as indicated in Figure 2. Loosen the screws in the depth of cut scale #21711 and set the scale so the 0 mark lines up with the pointer. Do not forget to tighten the screws in the scale after the above adjustment is made.

If a 90° setting on the fence angle protractor does not produce square cuts, the fence may be reset square with the table by using an accurate tri-square. After the 90° relation between the fence and table has been established, the screw holding the fence angle pointer may be loosened and the pointer reset at 0.

If a gouge or step is produced at the end of a cut, it is an indication that the rear table is too low. Likewise, the cut may diminish or taper as the work is pushed through, as a result of a high rear table. Either of these conditions may be rectified by aligning the table surfaces in the following manner. (See Figure 2.) Set the front table on the 0 mark on the depth of cut scale. Back the lock screws out several turns. The rear table surface may then be raised or lowered by turning any or all of the three leveling jacks #21611. When the rear table has been adjusted so that the straight edge shows perfect alignment between the two table surfaces across their full width, the lock screws may be tightened. The leveling jacks must be held secure while turning the lock screws.

After correct table alignment has been established, if the depth of cut varies between two sides of a piece it is an indication that the cutter head is not properly aligned with the front table surface. If the work piece hits the edge of the rear table instead of passing smoothly over its surface, the cutter head is too low. Adjustments may be made to correct either or both of these difficulties. Remove the two covers #21717 and #21718 and loosen the four arbor mounting bracket screws #X205. A screw #X217 in the bottom of each bracket #21214 and #21215 when turned will raise and lower the cutter head the small amount necessary to align it properly or to level it with the table surfaces. The leveling adjustment of both the cutter head and the rear table is always made in relation to the front table.

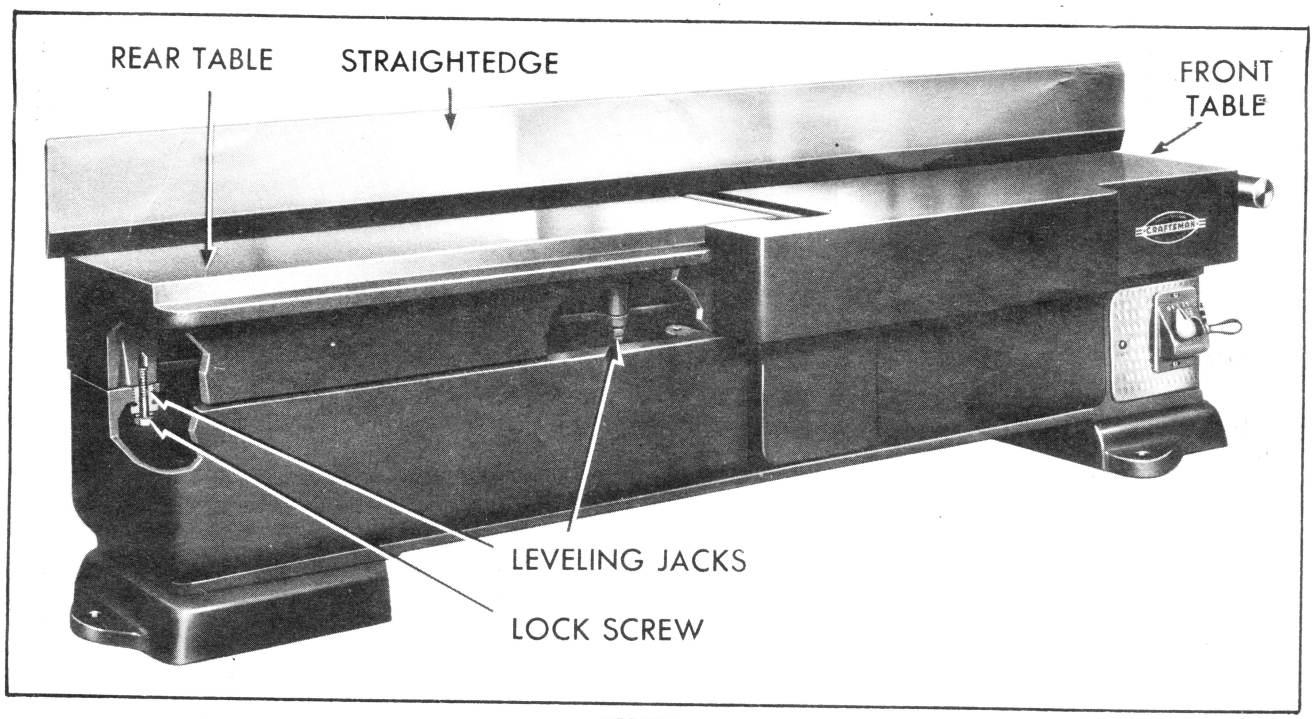


FIGURE 2

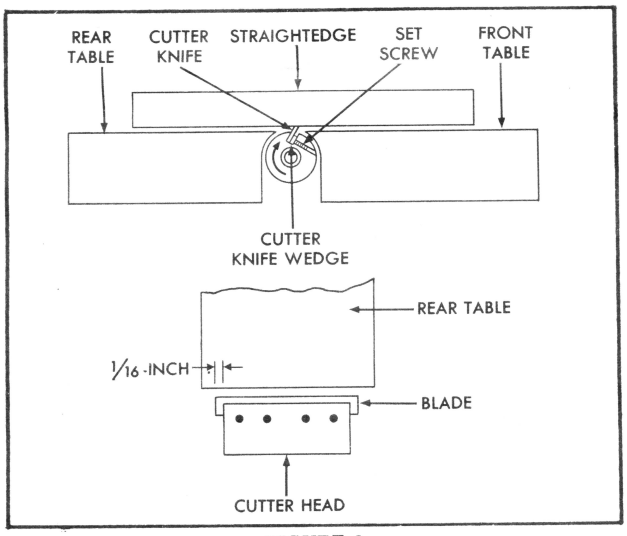


FIGURE 3

SHARPENING THE BLADES:

The three 6⅛ inch high speed steel cutter knives will give satisfactory cutting service for many hours of operation without regrinding, if they are honed occasionally with a fine abrasive stone to retouch the edge. This operation can be performed as shown in Figure 4. It is not necessary to remove the cutter blades from the head. Before honing, cover part of the stone with paper as shown, so the table surface will not be injured. For satisfactory results, the original bevel angle must be maintained on the knives. Adjust the front table so that the stone presses lightly against the full width of the knife bevel. Secure the cutter-head in the desired position by inserting a wooden wedge between the cutter head and table, as shown. Place the paper covered portion of the stone on the front table, and by moving the stone back and forth, hone the *full length* of each knife in turn. The small burr on the flat side of the blades may be removed by a few light strokes with a fine abrasive stick or a piece of emery cloth.

RESETTING BLADES:

If the blades are removed for grinding or replacement, care must be exercised at the time of reinstallation. Both tables should be level. All three blades should project 1/16 inch at each end of the cutter head (See Figure 3). With their edges projecting slightly above the surface of the tables, the blades may be clamped lightly in position with the four set screws #X121 and the wedge #18113 provided for each blade. With the straight-edge

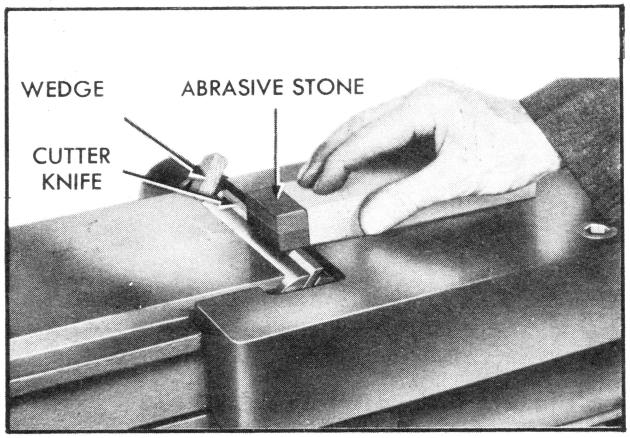


FIGURE 4

placed as shown, the blades may be properly positioned by tapping with a piece of hardwood until each knife will touch the straight-edge lightly at either end of the cutter head. When all three knives have been aligned in the above manner, tighten the twelve set screws securely.

Trial cuts should be made after any adjustment or repositioning to insure that no other control unit has been disturbed and that all controls are functioning in proper relation to each other.

OPERATION:

The cutter guard shown in Figure 1 should be in operating position at all times except during rabbeting at which time the sliding guard covers the unused portion of the cutter head. For the rabbeting operation, the fence is shifted from its normal position at the right hand edge of the table to the desired position on the left hand side. The width of cut is determined by the distance from the end of the cutter knives to the fence. Depth of cut is determined by the position of the front table as previously described.

Face planing or surfacing is the most common function of the jointer, yet extreme care must be exercised during this operation. The depth of cut is determined by the width of the material; the wider the material, the less the cut. In most cases a 1/32 cut will produce the best surface. Deeper cuts should be made in successive stages until the full depth has been attained. The work should be advanced through the guard to the cutter head with a smooth slow feed. Both hands should be placed on top of the work piece, the left hand pressing the piece firmly against the rear table surface, the right hand exerting the feed pressure over the front table.

When cutting pieces over four feet in length, the most uniform cut will be maintained by supporting the piece at table height after it leaves the rear table surface. Warped stock should be cut on the concave side for best results. To avoid pitting or torn grain it is advisable, where ever possible, to determine which way the grain emerges on a piece of wood. The direction of feed should be governed accordingly; the grain should emerge on the lower surface of the wood and should point toward the front of the jointer.

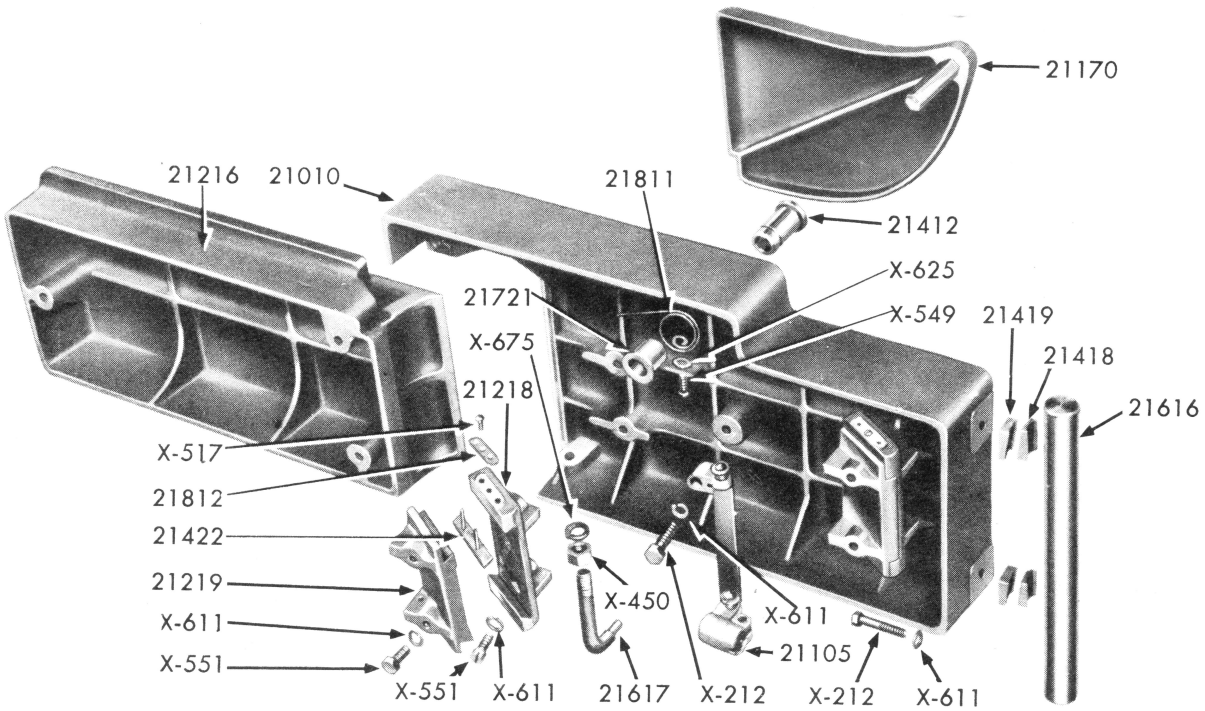
When surfacing thin stock (½ inch or less) a push block should always be used.

Because of the cut-out in the lower edge of the fence, designed for clearance at maximum depth of cut setting, a guide surface is not available beyond the cutter head when surfacing stock less than 9/16 inch thick. It is sometimes necessary to clamp an auxiliary face to the fence. This face should be attached after the front table position has been established, and should rest on the rear table surface.

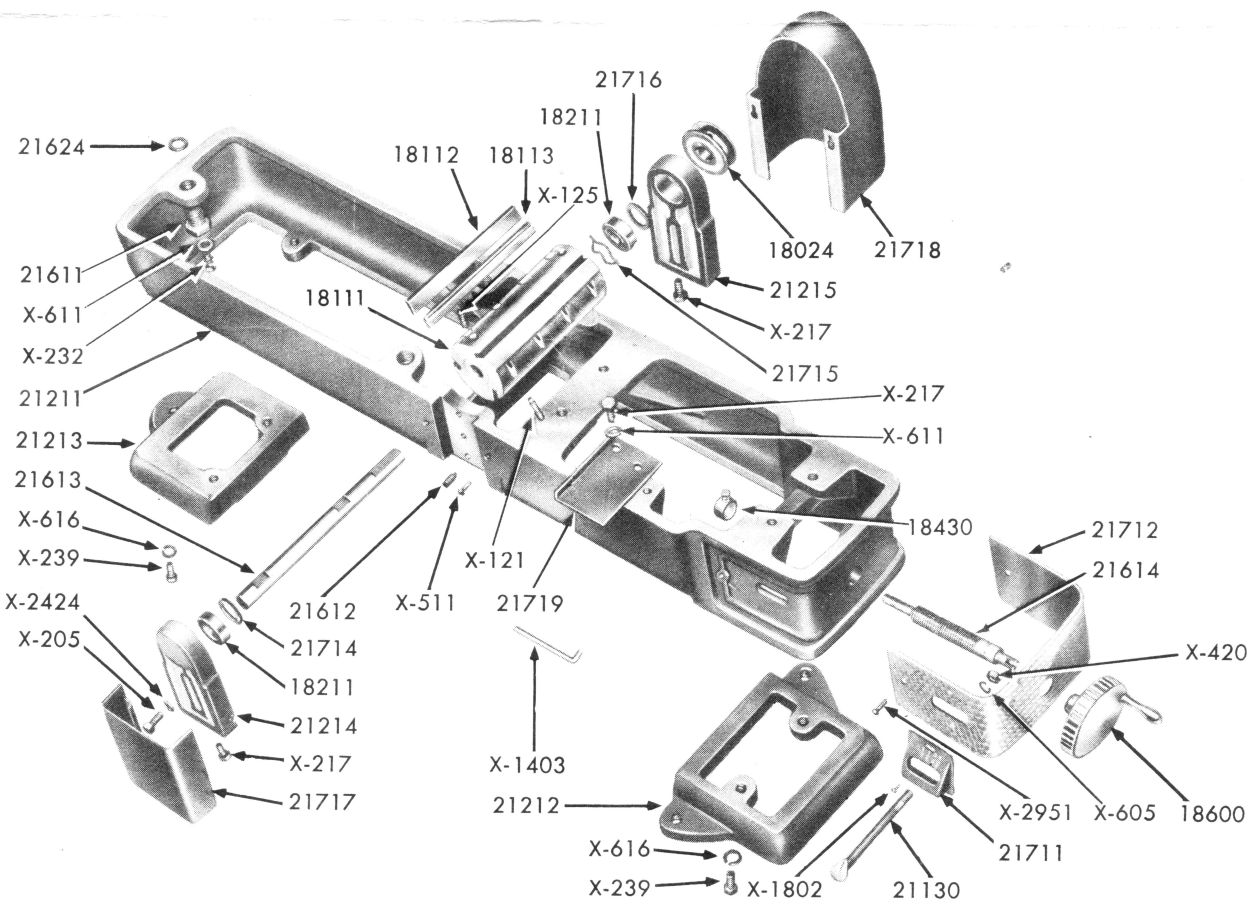
The function of the fence in the beveling operation has been described in the paragraph on controls.

Guards and covers have been provided at all necessary points. For your safety we recommend that these be kept in place at all times during the operation of the jointer.

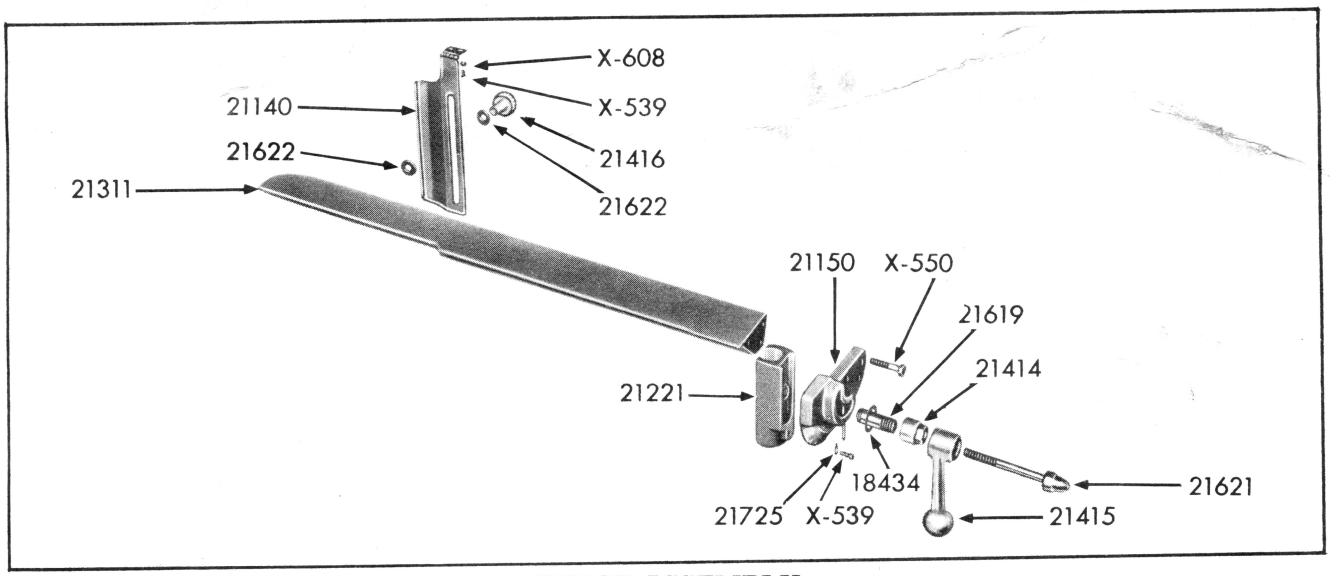
An interesting booklet covering special operations which may be performed on your jointer is available through your Sear's retail or mail order store.



TABLES AND ASSOCIATED PARTS



BASE AND ASSOCIATED PARTS



FENCE ASSEMBLY

Parts List

Part Number	NAME	Prepaid Selling Price Each
	FENCE AND ASSOCIATED PARTS	
18434	Fence Angle Washer	$ 0.15
21140	Sliding Guard and Hinge Assy.	1.25
21150	Protractor & Scale Assy.	2.15
21221	Fence Slide	3.50
21311	Fence	10.00
21414	Fence Angle Lock Nut	.50
21415	Fence Adjusting Wrench	1.75
21416	Sliding Guard Knob	.65
21619	Fence Angle Lock Stud	.50
21621	Fence Slide Lock Bolt	.70
21622	Sliding Guard Washer	.15
21725	Fence Angle Pointer	.15
	TABLES AND ASSOCIATED PARTS	
21010	Front Table Assembly	$21.50
21105	Linkage Assembly	2.00
21170	Swinging Guard Assembly	3.50
21216	Rear Table	18.00
21218	Upper Dovetail	3.25
21219	Lower Dovetail	3.00
21412	Swinging Guard Insert	.75
21418	Fence Guide Bar Spacer (Front)	.25
21419	Fence Guide Bar Spacer (Back)	.25
21422	Dovetail Spacer	.30
21616	Fence Guide Bar	2.00
21617	Sliding Guard Rod	.55
21721	Swinging Guard Spring Bushing	.15
21811	Swinging Guard Spring	.15
21812	Dovetail Tension Plate	.25

Part Number	NAME	Prepaid Selling Price Each
	BASE AND ASSOCIATED PARTS	
21130	Depth of cut pointer assembly	$ 0.60
21211	Base	35.00
21212	Front Foot	3.50
21213	Rear Foot	3.50
21214	Arbor Mounting Bracket L.H.	3.75
21215	Arbor Mounting Bracket R.H.	3.75
21611	Leveling Stud	.35
21612	Cutter Head Leveling Stud	.25
21613	Arbor	1.50
21614	Table Elevating Screw	.75
21624	Washer	.15
21711	Depth of cut gage	.75
21712	Front Cover	2.50
21714	Arbor Spacer	.15
21715	Bearing Pre loading Spring	.15
21716	Felt Washer	.15
21717	Bearing Cover	.50
21718	Belt Cover	1.20
21719	Swinging Guard Pin Support	.15
18024	Hubless V Pulley 2" Dia., 5/8" Bore	.60
18111	Cutter Head	12.50
18112	Cutter Blade	1.75
18113	Cutter Blade Wedge	.50
18211	Bearing	1.80
18430	Collar Assembly	.35
18600	Handwheel Assy.	3.00
	THE FOLLOWING PARTS ARE STANDARD AND CAN BE PURCHASED LOCALLY	
X-121	5/16—24 x ¾ Soc. Hd. Set Screw Full Dog Point	$0.10

Part Number	NAME	Prepaid Selling Price Each
X-125	5/16—24 x ¾ Soc. Hd. Set Screw. Cup Point	$0.10
X-205	5/16—18 x ¾ Hex. Head Screw.	0.10
X-212	5/16—18 x 1¼ Hex. Head Screw.	.10
X-217	5/16—18 x ½ Hex. Head Screw.	.10
X-232	5/16—18 x 1¾ Hex. Head Screw.	.10
X-239	⅜—16 x 1¼ Hex. Head Screw.	.10
X-420	¼—20 Hex. Nut	.10
X-450	½—13 Hex. Jam Nut	.10
X-511	No. 10—24 x ⅜ Round Head Screw	.10
X-517	¼—20 x ⅜ Round Head Screw	.10
X-539	No. 10—24 x ¼ Rd. Head Screw.	.10
X-549	No. 12—24 x 5/16 Round Head Screw	.10
X-550	¼—20 x 1¼ Fil. Head Screw.	.10
X-551	5/16—18 x 1 Fil. Hd. Machine Screw	.10
X-605	9/32 I.D. Lock Washer	.10
X-608	13/64 I.D. Lock Washer	.10
X-611	11/32 I.D. Lock Washer	.10
X-616	25/64 I.D. Lock Washer	.10
X-625	17/64 I.D. Flat Washer	.10
X-675	33/64 I.D. Lock Washer	.10
X-1403	5/32 Allen Wrench	.15
X-1802	No. 4 x ¼ Sheet Metal Screw	.10
X-2424	5/16 I.D. x ⅞ O.D. Ext. Int. Lock Washer	.10
X-2951	No. 6—32 x ¼ Self Tapping Screw	.10

This sheet is intended for instruction and repair parts only and is not a packing slip. The parts shown and listed may include accessories not necessarily part of this tool. All parts are shipped prepaid. All prices are subject to change without notice.