walker-turner®

Power Tools

PM-1925

37-B: Jointer Instruction Manual

Date: 2-20-58

U. S Patent 2,085,131—Other U. S. Patents Pending

WALKER-TURNER 6" JOINTER MAINTENANCE AND INSTRUCTION SHEET

Jointers are carefully tested and inspected before shipment, and if properly used will give perfect results. However, certain adjustments are necessary in service, and if you are to receive the utmost from your machine, it is imperative that you read the following instructions carefully.

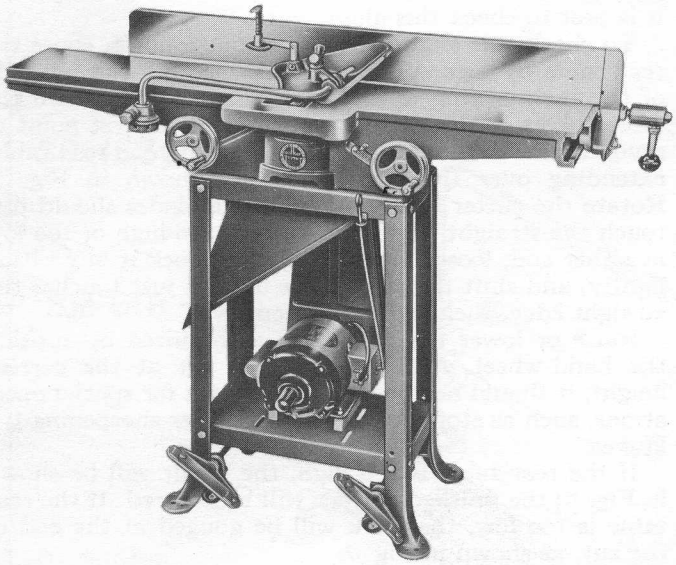


Fig. 1. Jointer With Cast Iron Stand.

MACHINE UNITS

The basic unit No. 6610 consists of the following standard parts: three high speed steel knives, two way tilting fence, 2¾" O.D. arbor pulley and dual purpose cutter head guard.

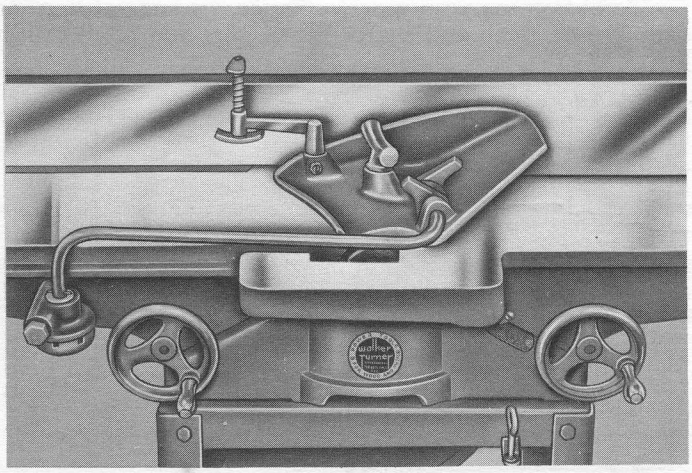


Fig. 2 Safety Knife Blade Guard.

ASSEMBLY

Remove the protective coating from the tables and cutter-head, using Naphtha or some other similar solvent.

Place jointer in a selected place in your shop or workroom and allow enough clearance for jointing long pieces.

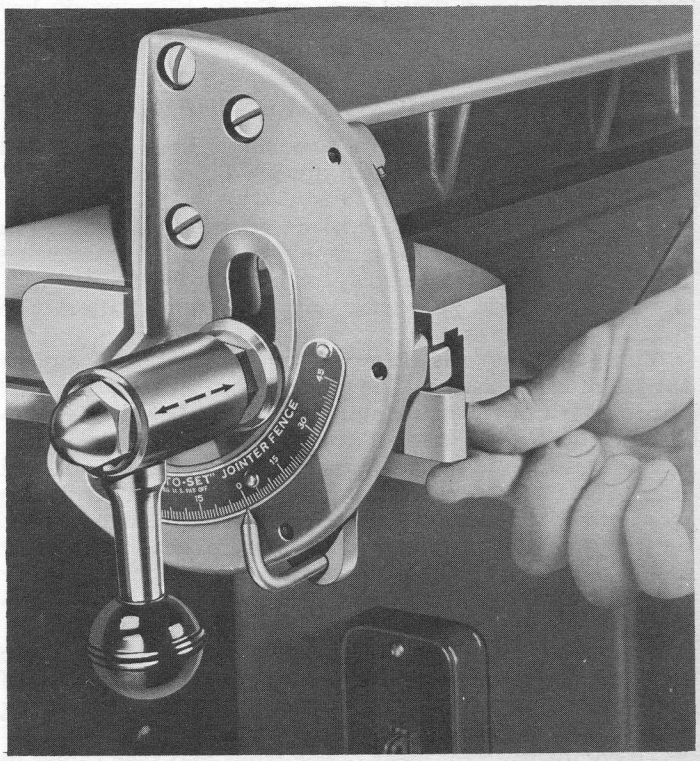


Fig. 3. Showing Angle Scale.

MOTORS, PULLEYS AND V-BELT

For light duty work a ⅓ H.P. motor will furnish ample power. For heavier duty work a ½ H.P. motor will be more effective. Use a constant speed motor. Use 3 phase power whenever it is available.

A 60 cycle, 1725 RPM motor will run the cutting head at 4500 RPM. This speed is obtained with a 2¾" cutterhead pulley No. 5275 and 7" motor pulley No. 5700. Please specify bore when ordering the motor pulley.

Use V-belt No. 560 in conjunction with the above motor and cutter-head pulleys when motor is mounted on our steel stand. Consult your dealer if you need a belt of any other length to fit special conditions.

POWER CONNECTIONS

Before connecting the motor to the power line, be sure the electric current is of the same characteristics as stamped on the motor name plate.

Do not connect the motor to a circuit which will be overloaded. If an extension cord is used, be sure that the

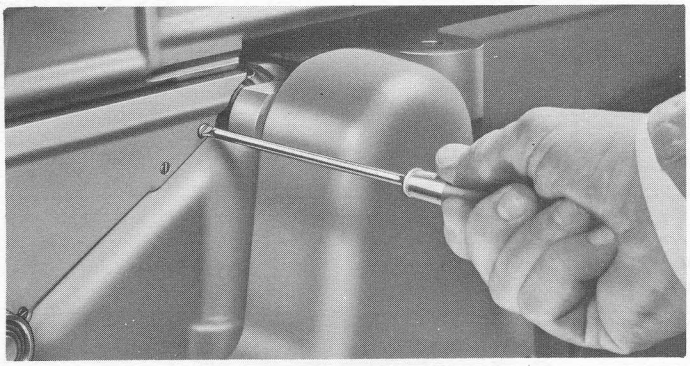


Fig. 4. Adjusting Gibs.

proper size of wire is used when connecting the machine to the power line to obtain proper voltage. Using too small a wire will cause an excessive loss of power. All line connections should make good contact. Running on low voltage will injure the motor.

CONSTRUCTION FEATURES

The cutter-head runs in two single row sealed and shielded ball bearings, which are pre-lubricated for their entire life.

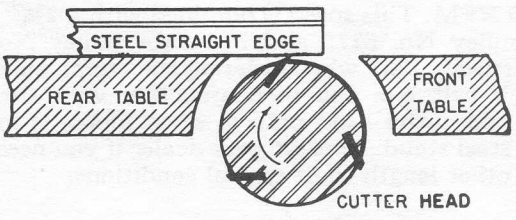
The Dual Purpose Knife blade guard gives maximum protection to the operator at all times. The tensioning mechanism enables the operator to give the correct tension to the blade guard for any desired operation. See Fig. 15.

The guide fence is clamped to the machined way of the front table casting. The guide fence can be moved the entire width of the table and clamped in position. It can also be tilted 45 degrees to the right or left.

The raising and lowering mechanisms of the front and rear tables are operated by hand wheels located in the front of the machine. The rear table can be locked at the desired height by means of a square head set screw DJ-20, see Fig. 12. The front table can be locked at any desired height by means of a lock stud with hand knob DJ-21-S, see Fig. 12.

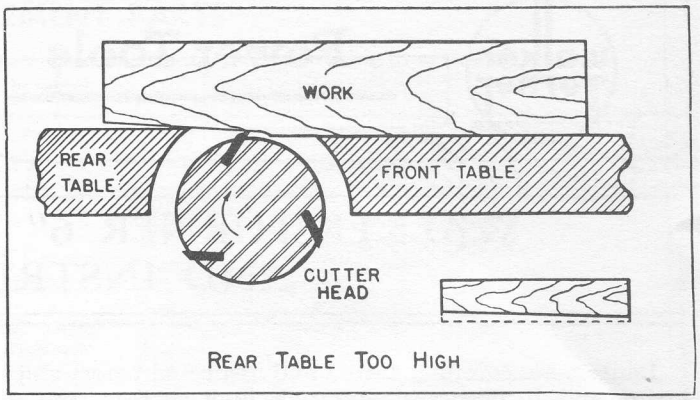
The depth scale located on the base casting on the front of the machine and the tilting angle scale located on the fence segment are accurately graduated for making any setting required.

To compensate for wear of the front and rear tables in relation to the base casting, we have incorporated into this machine gibs to maintain its original tight sliding fit at all times. These gibs can be drawn up by means of headless set screws on the rear side of each table casting, see Fig. 4.



METHOD FOR CHECKING REAR TABLE ELEVATION AND KNIFE ALIGNMENT

Fig. 5.



REAR TABLE TOO HIGH

Fig. 6.

REAR TABLE AND KNIFE ADJUSTMENT

Accurate cuts are possible only when the knives of the cutter-head are parallel to the work tables and project equally from the cutter-head. Upon receiving this jointer it is best to check this alignment.

To check this alignment proceed as follows: Raise the rear table by means of the hand-wheel on the left side of the base casting until table is exactly level with the steel knives of the cutter-head at their highest point of revolution. Place a steel straight edge on the rear table, extending over the cutter head as shown in Fig. 5. Rotate the cutter head by hand. The blades should just touch the straight edge. If a knife is too high or too low at either end, loosen the screws which lock it in position lightly, and shift the steel blade until it just touches the straight edge, then tighten it securely.

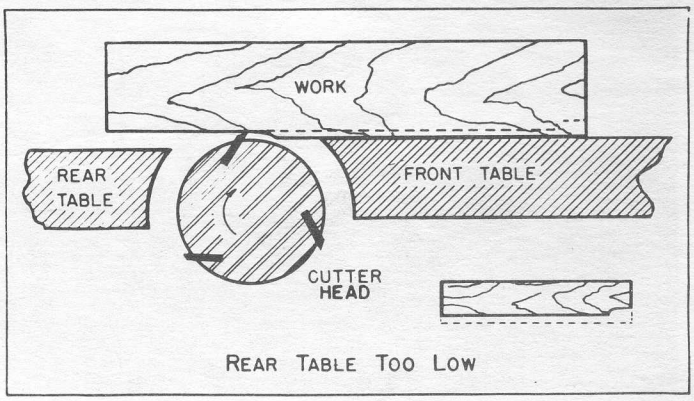
Raise or lower the rear table as required by turning the hand-wheel. After it has been set at the correct height, it should not be changed, except for special operations, such as stop chamfering and after sharpening the knives.

If the rear table is too high, the result will be shown in Fig. 6; the finished surface will be tapered. If the rear table is too low, the work will be gouged at the end of the cut, as shown in Fig. 7.

As a final check of the rear table adjustment, run a piece of wood approximately 12 inches long slowly past the cutter head knives; it should rest firmly on both machined surfaces of the work tables and the machined surface of the guide fence as shown in Fig. 8, with no open space under the finished cut.

CARE AND SHARPENING OF CUTTER HEAD KNIVES

To obtain maximum performance, we suggest keeping the knives clean and sharp. When gum and pitch collect



REAR TABLE TOO LOW

Fig. 7.

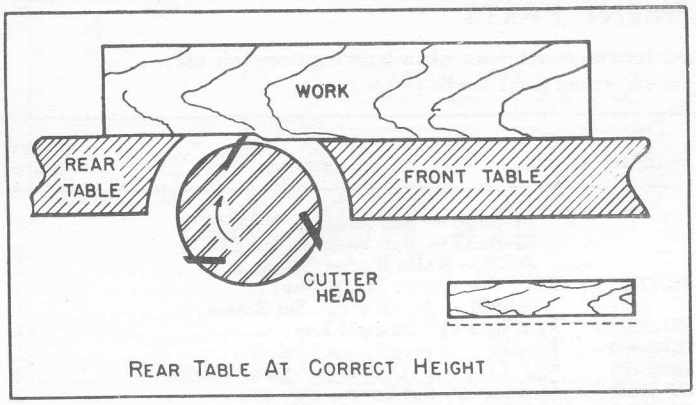


Fig. 8.

on the knives, we suggest removing it by using our gum and pitch remover. Never scrape off the gum and pitch with a sharp tool.

If the knives are left to become too dull, more material must be removed to bring them back into service, thus reducing blade life more than if they were sharpened more frequently.

WHETTING KNIVES

Use a fine carborundum stone; cover it partly with paper as shown in Fig. 13, to avoid marring or marking the ground table surface. Lay the stone on the front work table, lower the table and turn the cutter head forward until the stone lies flat on the bevel of the knife as shown. Hold the cutter head from turning and whet the beveled edge of the knife, stroking lengthwise by sliding the stone back and forth across the work table until a fine wire edge is produced. This fine wire edge can be easily removed by honing. Be sure to whet each knife blade of the cutter head the same amount by taking the same number of strokes during each whetting operation.

JOINTING KNIVES

Use a fine carborundum stone; cover it partly with paper, as shown in Fig. 14, to avoid marring or marking the ground table surface. Lay the stone on the rear table after adjusting rear table to the highest point of cutting circle. Start the machine and slowly move the stone forward until it projects over the revolving knives. Then

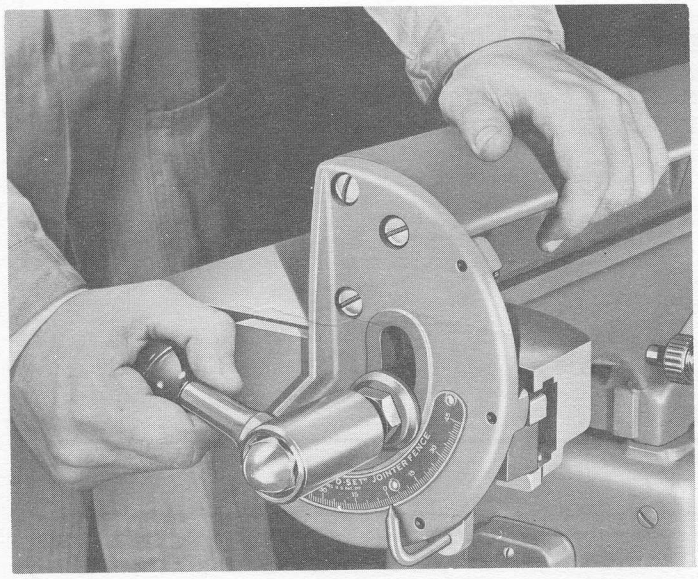


Fig. 9. Sliding the Fence.

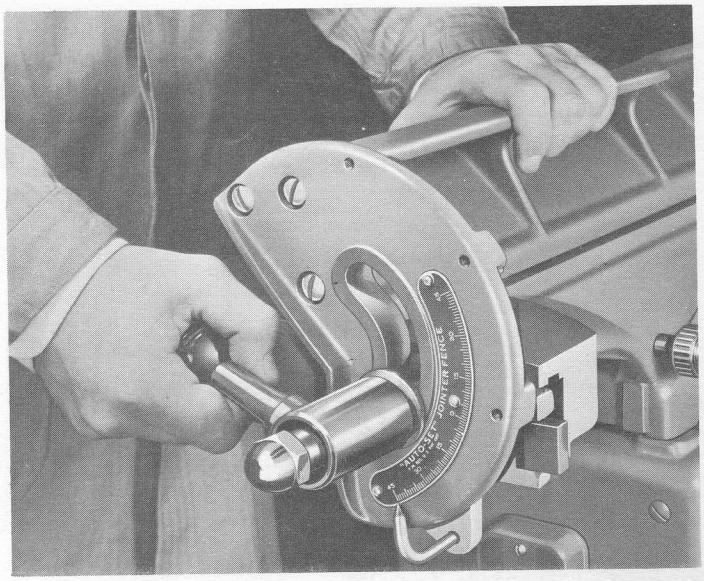


Fig. 10. Tilting the Fence.

move it across the work table lengthwise of the knives so they are sharpened their length. Keep the stone flat on the table. If the knives do not touch the stone at all points across their entire length, lower the rear work table one or two thousandths of an inch by turning the proper hand wheel and repeat the operation if necessary. If a fine wire edge appears on the knives of the cutter head, this wire edge can be removed by honing. When the knives have been jointed properly and carefully, each knife of the cutter head will take a nice smooth clean cut.

SETTING KNIVES

If the knives are removed from the head for any reason, care must be used in resetting them. Place a knife in its

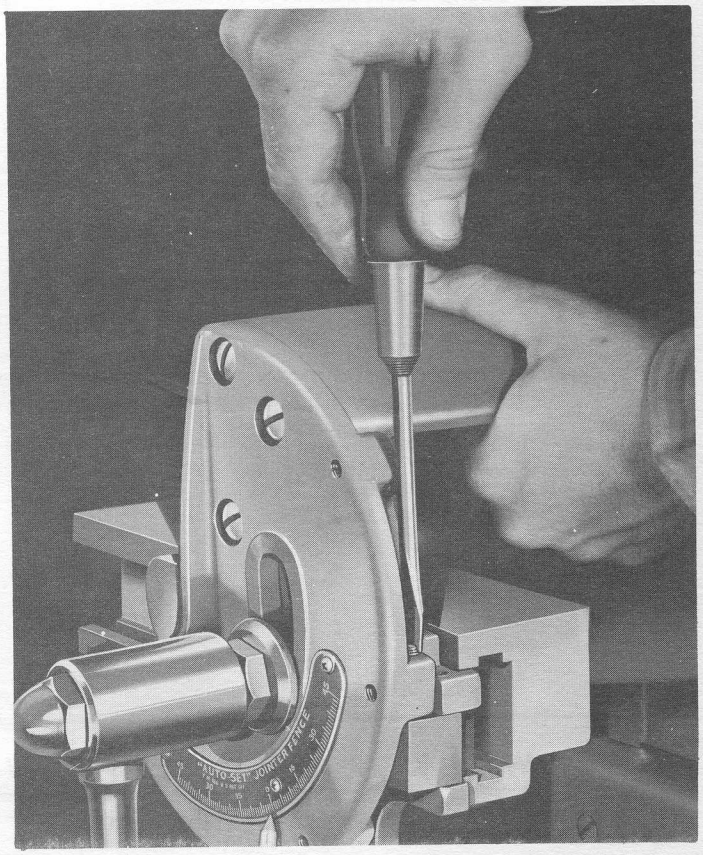


Fig. 11. Adjusting Segment Stop.

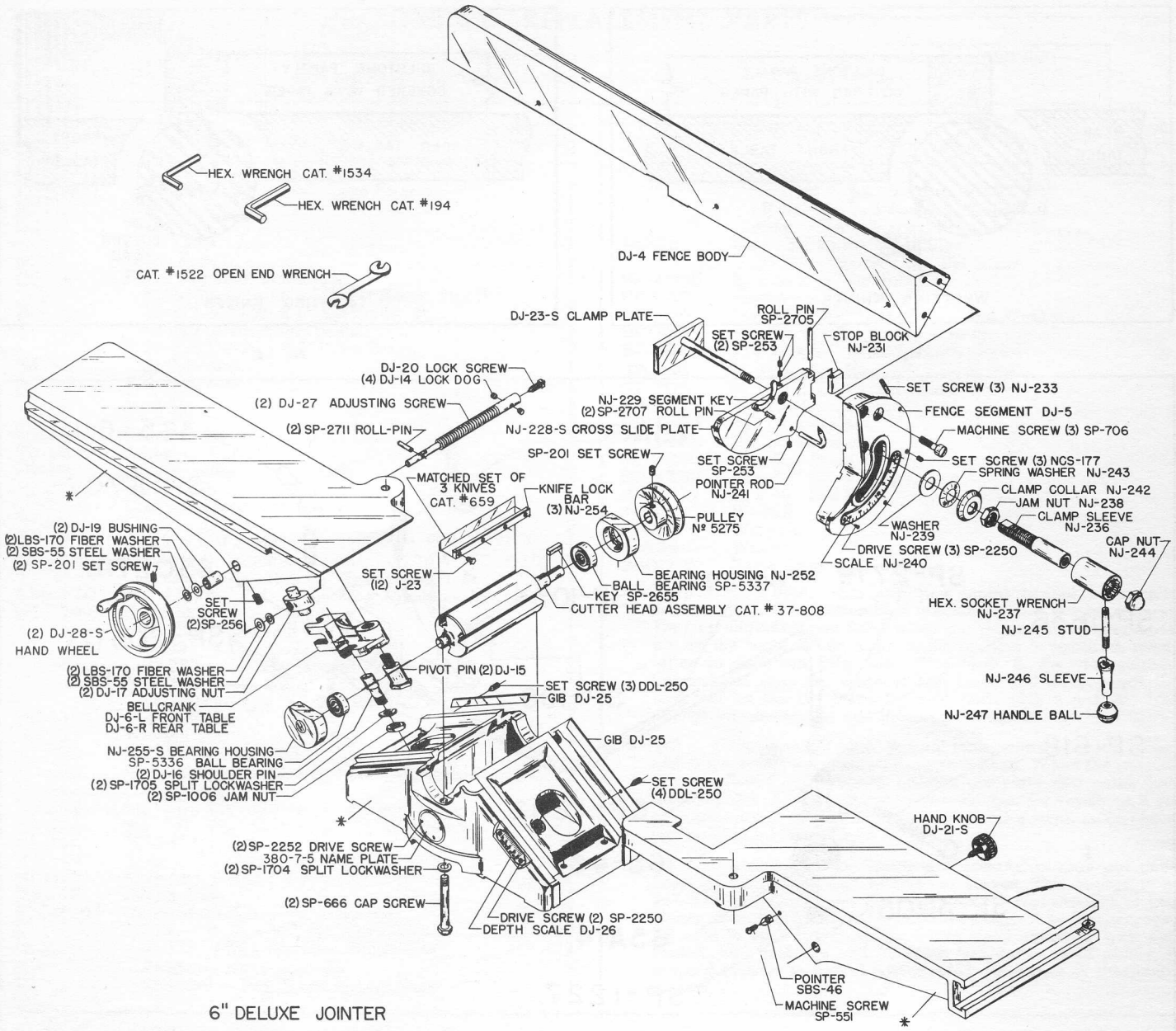


Fig. 12.

groove so that the rear edge of the bevel on the knife projects $\frac{3}{32}$" beyond the surface of the cutter-head. Slip the knife lock bar into place and tighten screws lightly. Place a knife setting bar, made from a piece of hardwood jointed perfectly straight on one edge, on the rear table. The knife is then set so that when the head is revolved carefully backward, it will just touch the bar without moving it. This should be checked at each end of the knife. Tighten the screws, then set the other knives in turn. Go over the lock screws again to make sure they are tight; then joint the knives lightly. Do not hurry these operations, for upon their accuracy, depends the quality of the work the machine will do.

The depth of cut pointer, if out of adjustment, should be set by making a cut of exactly $\frac{1}{8}$" and then set the pointer to this mark on the scale.

LUBRICATION

The cutter head runs in grease-sealed ball bearings which are lubricated for the life of the bearings. Occasionally a drop of oil should be placed on ways of base and on raising screws, assuring easy movement.

SAFETY RULES

1. Always keep your hands on top of the work.
2. Always hold the work firmly on the table or against the fence.
3. Always turn the concave side of stock toward the table and cut with the grain, not against it.
4. Never run a piece of stock shorter than 12 inches across the jointer.
5. Do not operate the jointer unless the guard is in place and working.
6. Do not use the jointer when the knives are dull.
7. Never attempt to run a piece of wood across the jointer until the machine is running at full speed.
8. Set the fence at right angles to the table. Test with a square.
9. If the stock is not held down on the rear table after passing over the cutter head, the machine will not produce a true surface.

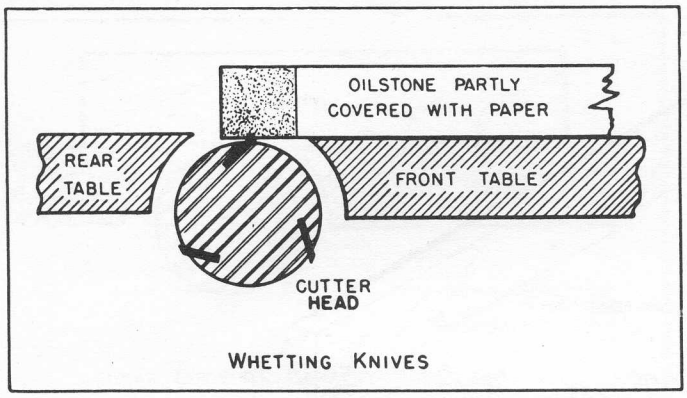


Fig. 13.

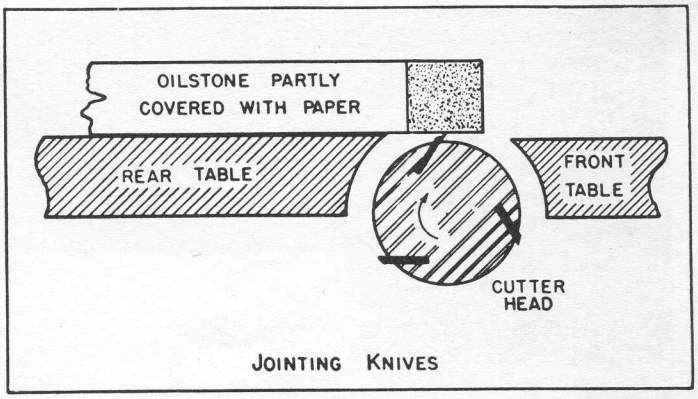
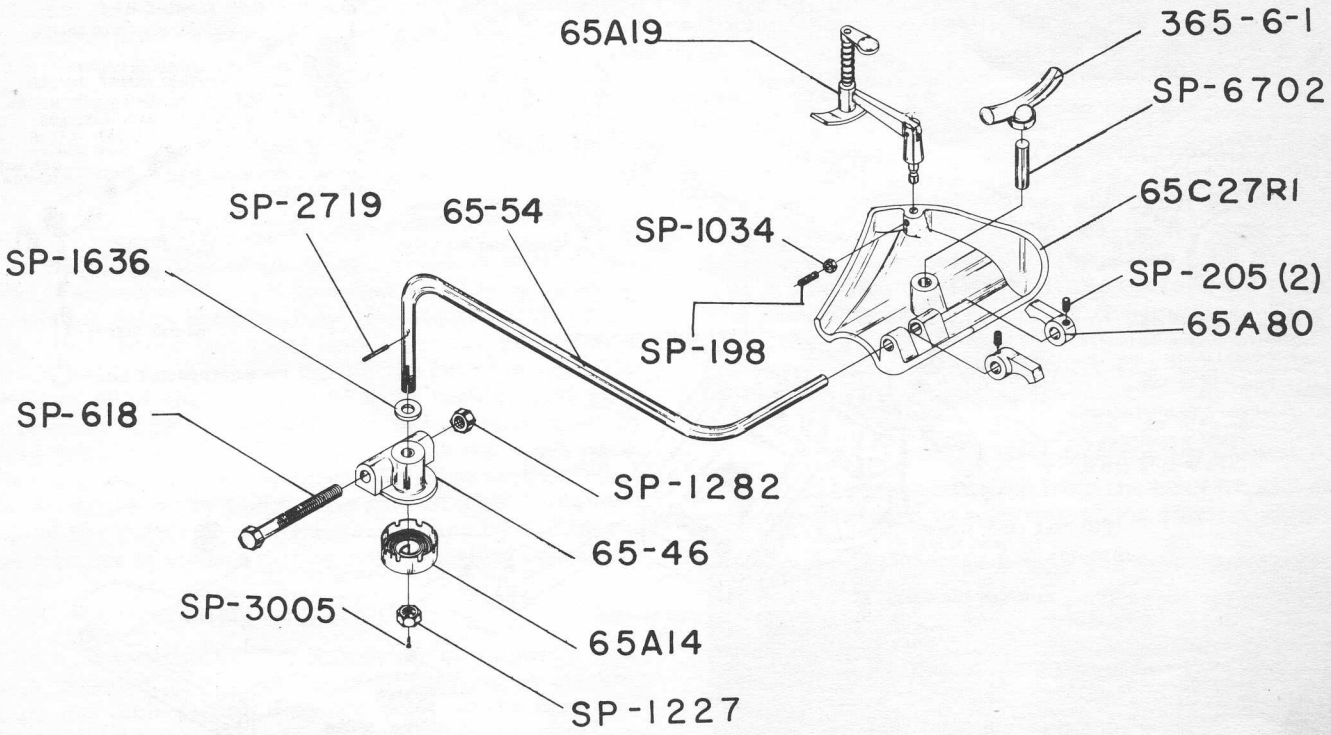


Fig. 14.



CAT. NO. 65A47 DUAL PURPOSE GUARD

65A14	Spring Housing and Spring	1
65A19	Hold Down Plate, Brkt. and Spring	1
65C27R1	Guard Assembly, Including:	1
	365-6-1 — Handle	1
	SP-198 — 1/4-28 x 5/8" Set Screw	1
	SP-1034 — 1/4"-28 Hex. Jam Nut	1
	SP-6702 — 1/2 x 1 1/2" Roll Pin	1
65-46	Spring Bracket	1
65-54	Arm	1
65A80	Safety Stop Collar, Including:	2
	SP-205 — 5/16 x 1/4" Set Screw	2
SP-618	1/2-13 x 3 1/2" Hex. Hd. Cap Screw	1
SP-1227	1/2"-20 Hex. Jam Nut	1
SP-1282	1/2"-13 Hex. Jam Nut	1
SP-1636	1/2" Steel Washer	1
SP-2719	1/8 x 1" Roll Pin	1
SP-3005	#2 x 1/4" Self Tapping Screw	1

Fig. 15.

Table 1. REPLACEMENT PARTS

IMPORTANT: Give both the Part Number and the Description of each item when ordering from this list: also the Serial Number of the machine on which the parts are to be used.

Part No.	Description	Number Required
DDL-250	1/4-28 x 29/32" Set Screw, Cone Point	7
*	Base	1
*	Rear Table	1
*	Front Table	1
DJ-4	Fence Body	1
DJ-5-S	Fence Segment, Including:	1
	NCS-177 — 1/4-28 x 1/4" Set Screw, Flat Pt	3
	NJ-233 — 1/4-28 x 1" Set Screw, Flat Pt	3
	NJ-240 — Tilt Angle Scale	1
	SP-2250 — #4 x 3/16" Drive Screw	3
DJ-6-L	L.H. Bellcrank	1
DJ-6-R	R.H. Bellcrank	1
DJ-14	Lock Pin	4
DJ-15	Pivot Pin	2
DJ-16	Shoulder Pin	2
DJ-17	Adjusting Nut	2
DJ-19	Steel Bushing	2
DJ-21-S	Hand Knob	2
DJ-23-S	Clamp Plate with Stud	1
DJ-25	Gib	2
DJ-26	Depth of Cut Scale	1
DJ-28-S	Handwheel, Including:	2
	SP-201 — 5/16"-18 x 5/16" Set Screw, Fl. Pt	2
LBS-170	25/64" I.D., 3/4" O.D. x 1/32" Fiber Washer	4
NJ-228-S	Cross Slide Plate, Including:	1
	NJ-229 — Segment Key	1
	NJ-231 — Top Block	1
	SP-253 — 1/4-28 x 1/4" Set Screw Flat Pt	3
	SP-2705 — 7/32 x 1 7/8" Roll Pin	1
	SP-2707 — 5/32 x 1/2" Roll Pin	2
NJ-236	Clamp Sleeve	1
NJ-237	Wrench	1
NJ-238	11/16"-16 Hex. Jam Nut	1
NJ-239	45/64" I.D., 1 7/16" O.D. x 1/8" Steel Washer	1
NJ-241	Pointer Rod	1
NJ-242	11/16" I.D., 1 5/8" O.D. x 1/4" Clamp Collar	1
NJ-243	45/64" I.D., 1 7/16" O.D. x 1/64" Spring Washer	1
NJ-244	7/16"-14 Hex. Nut	1
NJ-245	3/8-24 x 2 7/16" Stud, Both Ends Threaded	1
NJ-246	Sleeve for Wrench Handle	1
NJ-247	Handle Ball	1
#37-808**	Cutter Head Assembly, Including:	1
	J-23 — 1/4-28 x 1/4" Set Screw, Flat Pt	12
	NJ-252 — Brg. Housing, Pulley Side	1
	NJ-254 — Knife Lock Bar	3
	NJ-255-S — Brg. Housing, Left Side	1
	SP-5336 — Ball Bearing, ND-87502	1
	SP-5337 — Ball Bearing, ND-87503	1
	#659 — Knife Blades, Set of 3	1
#5275	2 3/4" Dia. Cutter Hd. Pulley	1
	SP-201 — 5/16-18 x 5/16" Set Screw	1
SP-2655	3/16 x 3/16 x 7/8" Straight Key	1
SBS-46	Pointer	1
SBS-55	25/64" I.D., 11/16" O.D. x 1/16" Steel Washer	4
SP-256	1/4-28 x 5/8" Set Screw, Cup Pt.	2
SP-551	#10-32 x 1/4" Rd. Hd. Mach. Screw	1
SP-666	3/8-24 x 3 1/4" Hex. Hd. Cap Screw	2
SP-706	3/8-16 x 1 1/4" Fil. Hd. Mach. Screw	3
SP-1006	1/2"-13 Hex. Jam Nut	2
SP-1704	3/8" Lockwasher	2
SP-1705	1/2" Lockwasher	2
SP-2250	#4 x 3/16" Drive Screw	3
SP-2252	#2 x 3/16" Drive Screw	2
SP-2711	1/8 x 5/8" Roll Pin	2
#194	Wrench	1
#1522	Wrench	1
#1534	Wrench	1
380-7-5	Name Plate	1

*IMPORTANT — Base, front and rear tables cannot be supplied separately, as the reassembled machine would not be accurate. For true alignment, we finish grind our jointer tables after assembly on the base. When a new table or base is required, send a letter to Rockwell Mfg. Co., Pittsburgh 8, Pa., for shipping instructions. Ship the machine less fence and knife guard. The cost will be the list price for new parts plus a nominal fixed charge for assembling and grinding the tables.

**NOTE — Cutter head repairs: Special tools are required to remove and replace ball bearings on the cutter head. When the bearings or cutter need replacement, order a complete new cutter head assembly No. 37-808, or return the old one for repair at a cost of present list prices for the new parts plus a small labor charge per bearing for installing.

Knife Sharpening Service: There is a nominal charge per cutter head for regrinding and setting the knives. This charge is net and F.O.B. Factory, and does not include replacement of knife blades damaged to the extent that they cannot be re-sharpened. Be sure to send the complete cutter head assembly with knife blades, ball bearings and housing, less cutter head pulley, by prepaid express or parcel post insured, for repair or sharpening service.

TO FACILITATE HANDLING WE SUGGEST ORDERING ALL PARTS THROUGH YOUR W-T DEALER. CONSULT YOUR W-T DEALER FOR PRICES OF REPLACEMENT PARTS, ACCESSORIES AND TOOLS.

WALKER-TURNER DIVISION
Rockwell MANUFACTURING COMPANY
PITTSBURGH 8, PA.

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