OPERATING INSTRUCTIONS AND PARTS LIST FOR

THICKNESS PLANER

6 INCH

MODEL NUMBER 103.1801

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

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

SEARS, ROEBUCK and CO.

OPERATING INSTRUCTIONS FOR 6 INCH THICKNESS PLANER MODEL 103.1801

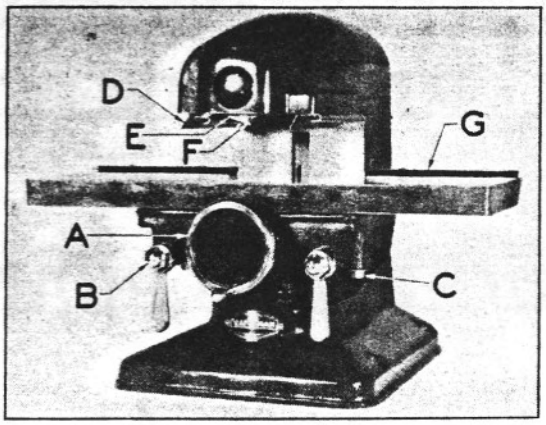

Fig. 3

INSTALLING THE THICKNESS PLANER

This planer was designed to be driven from directly beneath the tool. The best installation therefore requires a shelf—to which the motor is secured—below the surface on which the planer rests. After the planer has been placed in position mark around the rear of the base casting. Measure in and mark area as shown in Figure 1. Cut this piece out of the table top to allow the belts to pass through to the motor pulleys. The minimum belt length which may be used with this machine is 40 inches. Bolt the planer securely to the table. This is important for the production of accurate, smooth work.

Fasten the motor to the shelf so that it will give the cutter head the proper direction of rotation. See suggested mounting in Figure 2. The bench illustrated is made from Sears No. 2735 Lathe Stand.

CAUTION

Be sure to check the direction of rotation of the cutter head before attempting to plane a piece of wood. The blades must rotate counter clockwise when viewed from the control side of the machine.

CONTROLS

The hand wheel (A) in Figure 3 operates the lift screw which raises or lowers the table of the thickness planer to any position desired by the operator. One revolution of the wheel raises or lowers the table $\frac{1}{16}$ inches.

The two clamp nuts (B) are fitted with wrenches to

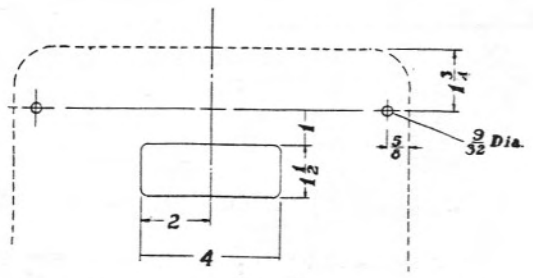

Fig. 1

clamp the table at any desired height. This is particularly useful when making duplicate cuts.

The table alignment screws (C) hold the table in line with the cutter head.

The kick back dogs (D) prevent the work from being thrown back toward the operator.

The cutter head (E) is made of one solid piece of cold rolled steel of 2⅝" in diameter and 6" long. It is grooved for 3 blades and wedges with four holes drilled and tapped for the locking screws to hold each blade and wedge into place.

The cutter head blades (F) are of high speed steel. The blades were aligned with the table at the factory and will not need attention until they become dull.

The planer guides (G) keep the board feeding straight to the cutter blades. These guides are also used for the planing of boards over 6" in width.

SPEED

The cutter head should travel 4200 R.P.M. to obtain the best results. At this rate the cutter head makes over 12,000 cuts per minute.

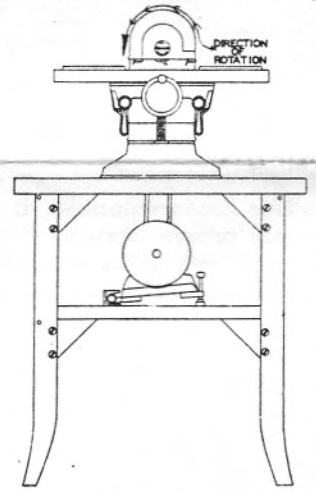

Fig. 2

To acquire the recommended speed, use either a 1/3 or ½ H.P. motor which turns 3450 R.P.M. The size of the motor depends upon the use to be made of the planer. If the planer is used intermittently with light cuts, a 1/3 H.P. motor is large enough. If it is used for heavy duty the ½ H.P. motor is recommended.

As the dual pulley supplied on the planer is 2" in diameter, the motor pulley should be 2½". This is based on the motor running 3450 R.P.M.

If a motor with a different speed is used, the pulley ratio must be changed to obtain the recommended speed of 4200 R.P.M.

OPERATING INSTRUCTIONS (CON'T.)

ADJUSTMENT

The table is raised by means of the handwheel to bring the work into the blades. The exact height at which the table is set is shown by the depth of cut scale to the right of the table.

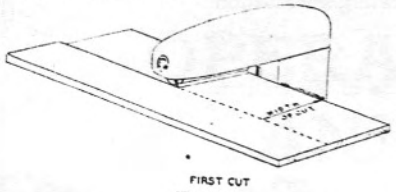

Fig. 5

DEPTHS OF CUT

The pointer on this scale can be reset to adjust for minor inaccuracies by loosening the screw holding it to the casting.

TABLE

The table on this planer may be tilted to align it parallel to the cutter head. To make this adjustment loosen the bolts (C in Fig. 3) which lock the table to the sub table. Lower the table. Using a block having parallel sides slide this piece as a gage between the table and the cutter head (not a blade). With the cutter head resting full length on the gage retighten the bolts.

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While the relation of cutter head and table should be checked occasionally, the above adjustment should only be necessary in case of a severe shock on the table.

GUIDES

The guides on the right hand side of the table can be adjusted for boards of different widths. To reset loosen the screws in both guides and with a board in place move the guides in or out as desired. Make sure that the front of the guide behind the cutter head is reset with enough clearance to allow the free passage of the planed stock. When retightening the guide screws use a wrench on the nuts to avoid shifting of the guides in actual operation.

TABLE HEIGHT

The clamp screws which are tightened with the floating wrenches are to be used for duplicate cuts after the proper cut has been determined. Slip the wrenches off the nuts after tightening to avoid accidental loosening of the screws.

TENSION

To adjust the tension of the sub table against the column loosen or tighten the hexagon head nuts bearing on the table tensioner rubbers in the column behind the table. This adjustment must be made through the opening in the rear of the column after the belts have been removed.

REMOVING AND SHARPENING BLADES

When the cutter blades become dull they can be removed for sharpening by lowering the table to its lowest point and, with the Allen wrench which is supplied, loosening the four screws which hold each blade and wedge in place.

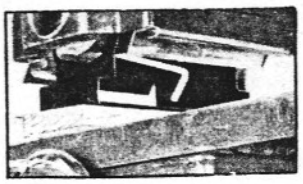


Fig. 4

After the blades have been removed inspect them to see if they are nicked. If they are not nicked, all the blade will need is honing. If the blades are nicked they must be ground and then honed to produce a smooth cutting edge. To check the blade after it has been sharpened use a try square with one leg extending down the end of the blade and the other leg along the sharpened edge. Always maintain the cutting edge angle.

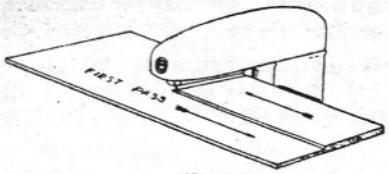


Fig. 6

TO RESET BLADES AFTER SHARPENING

1. Procure a piece of wood about ½" thick, 3" wide and at least 6" long.
2. Lower table to maximum depth.
3. Place blades and blade locks in slots and tighten screws slightly—just enough to hold blades in place.
4. Slide blade setting gage under cutter head with one of the blades between the projections and press gage against the head.
5. Slip the block of wood between the gage and the table. (See Figure 4).
6. Raise table until blade just touches curved sections on front and rear of gage.
7. Tighten set screws securely with wrench provided.
8. Note position of pointer on depth of cut gage.
9. Lower table, remove gage, and rotate head to bring one after the other of the remaining blades over the gage.
10. Raise table to setting previously noted and repeat operations outlined above.

Care must be exercised so as not to nick the curved edges of the gage by raising the table too high and forcing the gage into the blades.

LUBRICATION

This tool is equipped with two precision type ball bearings which are fully enclosed in dust-proof housings. These bearings have been packed at the factory with sufficient grease to insure proper lubrication for an extended period.

OPERATING INSTRUCTIONS

The table on this planer is designed to raise the work into the cutter head. To start a board lower the table enough to allow the board to be inserted beneath the kick back dog support. Raise the table either to a predetermined depth of cut as shown in the scale or to the amount of cut desired for the first pass. The speed at which the work is fed through the machine will determine the finish obtained. For a smooth finish use a slow feed and a light cut.

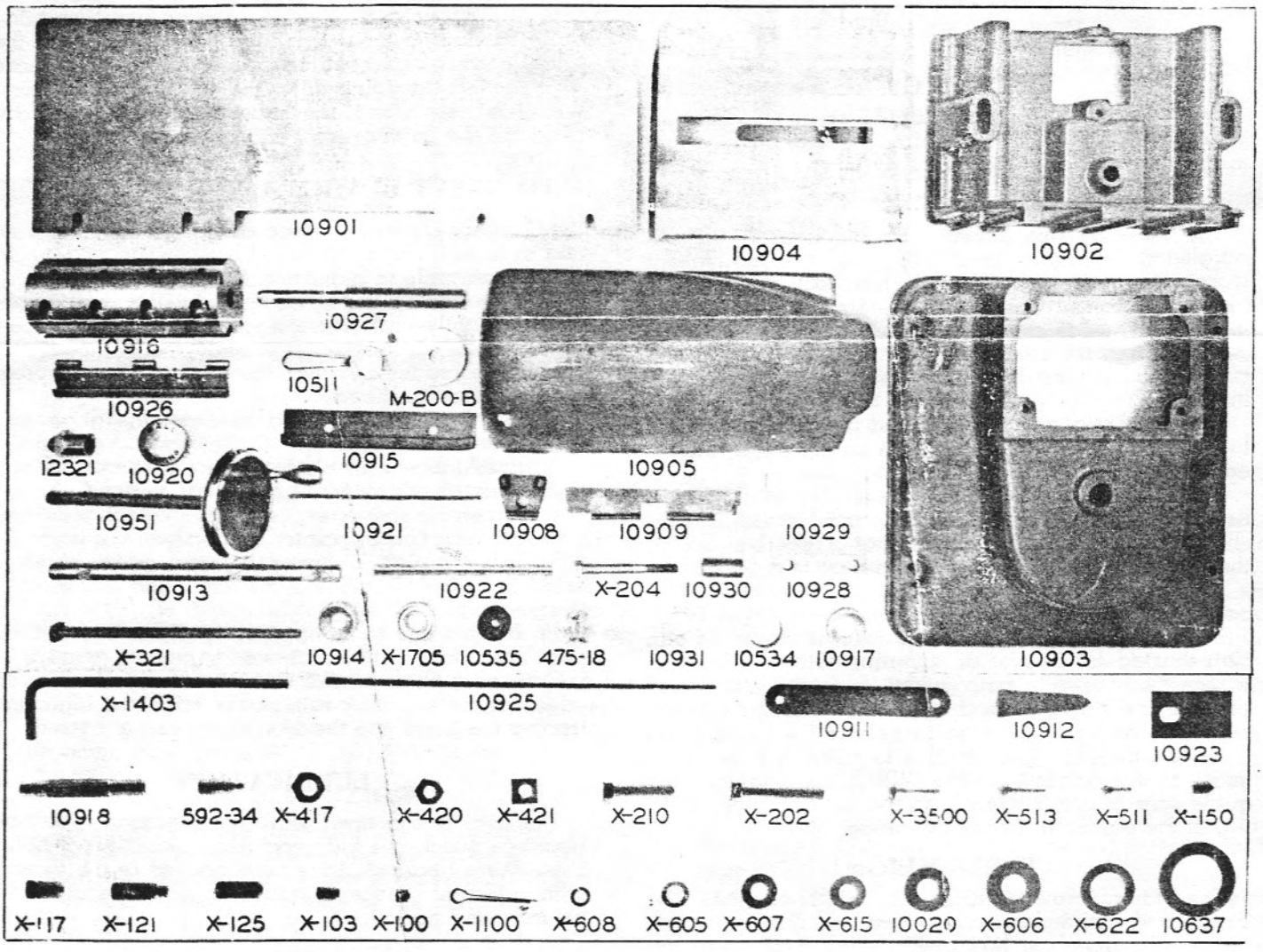
In planing 12 inch lumber set the guides to produce a cut of slightly more than one half the width of the board. In this way the second pass will produce a minimum of overlap. Note the method illustrated in Figures 5 and 6.

To reduce a board below ⅛" in thickness it is necessary to place it on a piece approximately 1½" in thickness before feeding it into the machine. The supporting piece should be given one pass on each side before the small boad is placed upon it.

HOW TO ORDER PARTS FOR MODEL NUMBER 103.1801 THICKNESS PLANER

All parts listed here may be ordered through any 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 103.1801 and will be found on the right side of the column.



Part No.	Part Name	Price
475-18	Bevel Gear	.25
592-34	Crank Shaft Screw	.15
10020	Tensioner Stud Washer	.25
10511	Table Lock Handle	.45
10534	Table Tensioner Retainer	.15
10535	Table Tensioner Rubber	.15
10617	Lift Screw Stop Washer	.15
12321	Table Clamp Nut	.25
10901	Table	4.20
10902	Sub-Table	4.00
10903	Base	3.50
10904	Column	3.95
10905	Head Castings	4.60
10908	Table Clamp	.30
10909	Kick Back Dog	.25
10911	Depth of Cut Scale	.15
10912	Depth of Cut Pointer	.15
10913	Cutter Head Shaft	.60
10914	Outer Bearing Retainer	.25
10915	Back Guide	.30
10916	Cutter Head	5.00
10917	Inner Bearing Retainer	.25
10918	Table Tensioner Stud	.15
10920	Bearing Retainer Cap	.20
10921	Cutter Blade	1.20
10922	Cutter Blade Wedge	.35
10923	Kick Back Spring	.15
10925	Kick Back Hinge Rod	.15
10926	Kick Back Dog Support	.25
10927	Table Lift Screw	.50

Part No.	Part Name	Price
10928	Table Guide	.35
10929	Table Tension Plate	.15
10930	Lift Screw Gear Spacer	.15
10931	Cutter Head Spacer Washer	.15
10934	Blade Setting Gage (Not Illus.)	.40
10950	Cutter Head Assembly (Not Illus.) (10916-1) (X-121-12) (10921-3) (X-125-2) (10922-3)	9.00
10951	Hand Crank Assembly	1.35
M-200-B	Hubless V-Pulley, Single Groove, 2" Dia. 5/8" Bore (Purchase in Division 9 of nearest retail store)	
X-321	Table Clamp Bolt 3/8-24x8	.10
X-1403	Allen Wrench	.15
X-1705	Spindle Bearing	1.00

THE FOLLOWING PARTS ARE STANDARD AND CAN BE PURCHASED LOCALLY

X-100	Pulley Set Screw 1/4-20x1/4	.10
X-103	Outer Brg. Ret. Set Screw 1/4-20x3/8	.10
X-117	Bevel Gear Set Screw 5/16-24x3/8	.10
X-121	Cutter Head Blade Set Screw 5/16-24x3/4	.10
X-125	Cutter Head Set Screw 5/16-24x3/4	.10
X-150	Inner Brg. Ret. Set Screw 1/4-20x3/8	.10
X-202	Hex Head Column Screw 1/4-20x1-3/8	.10
X-204	Hex Head Table Screw 3/8-16x3 1/4	.10
X-210	Hex Head Column Screw 1/4-20x1	.10
X-417	Crank Shaft Screw Lock Nut, Table Tensioner Stud Nut 5/16"-18	.10

Part No.	Part Name	Price
X-420	Column Screw Nut 1/4-20 Hex	.10
X-421	Back Guide Screw Nut 1/4-20 Sq.	.10
X-511	Pointer Screw 10-24x3/8	.10
X-513	Kick Back Screw 10-24x5/8	.10
X-605	Base and Col. Screw Lock Washer 9/32	.10
X-606	Table Screw Washer 3/8	.10
X-607	Back Guide Screw Washer 17/64	.10
X-608	Kick Back Screw Lock Washer .200 I. K.	.10
X-615	Kick Gage Spacer 17/64	.10
X-622	Lift Screw Thrust Washer 17/32	.10
X-1100	Lift Screw Cotter Pin 1/8-5/32x1	.10
X-3500	Back Guide Hold Down Screw 1/4-20x3/4	.10

We suggest you write your orders for repair parts like this sample.

Sears, Roebuck & Co.

Enclosed find my check for $4.40 for which please send me by Parcel Post the following parts for my Thickness Planer, model 103.1801

1 each No. 10904 Column $3.95
1 each No. 10511 Table Lock Handle .45

$4.40

Yours truly, John Martin, Box 128, Richmond, Indiana

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 Prices are Subject to Change without Notice. All Parts are Shipped Prepaid.

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