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OPERATING INSTRUCTIONS
AND PARTS LIST FOR
CRAFTSMAN
THICKNESS PLANER

6 INCH

Model Number 103.23700

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.

HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through Sears, Roebuck and Co. or Simpsons-Sears Limited. When ordering parts by mail from the mail order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER.
2. The PART NAME.
3. The MODEL NUMBER.
4. The NAME of item.

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.—U.S.A.
SIMPSONS-SEARS LIMITED—CANADA

LITHOGRAPHED IN U. S. A.

OPERATING INSTRUCTIONS FOR 6 INCH THICKNESS PLANER MODEL 103.23700

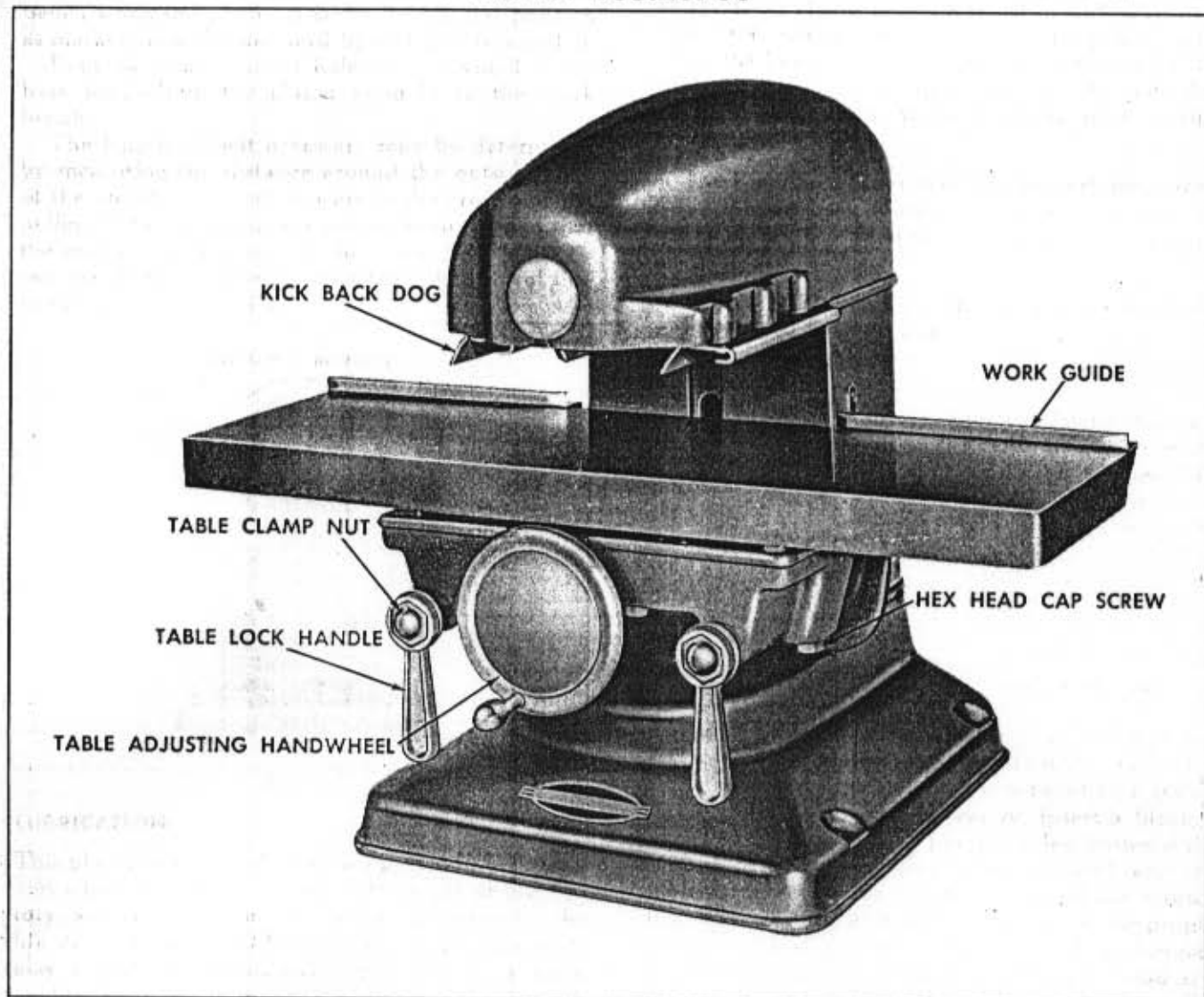


FIG. 1

Through the combined efforts of highly skilled machinists and rigid inspection, this tool will provide the utmost in satisfaction.

The advantages of heavy cast iron construction and "lubricated for life" ball bearings, should enable you to enjoy many years of trouble free service.

MOTOR

For best results, a 1/2 horsepower, 3450 R.P.M. motor is recommended.

If the machine is to be used almost exclusively for light finishing cuts, a 1/3 horsepower motor will provide sufficient power.

INSTALLATION

When installing this Thickness Planer, mount the motor directly below the tool on a bench shelf. When the desired position of the planer has been estab-

lished, draw a line on the bench around the rear half of the base as indicated in Fig. 2. Cut a rectangular hole 1 1/2 x 4 inches the ends of which should be equi-

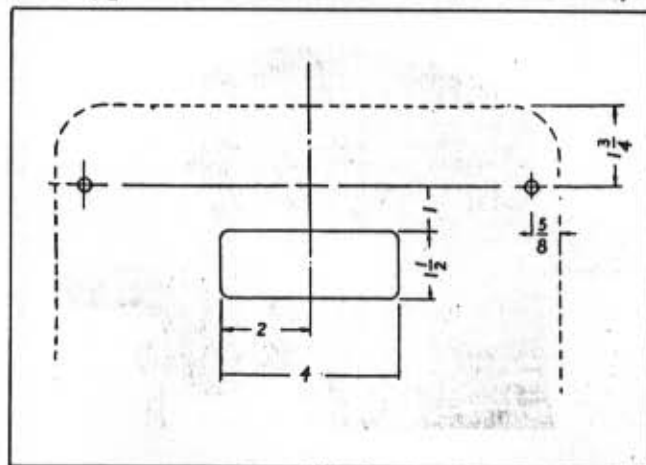


FIG. 2

distant from the sides of the base, and the nearest edge of which should be $2\frac{3}{4}$ inches from the rear edge of the base. This hole, when properly located as described will provide belt clearance through the bench when the planer is set in its original position as marked, and the standard $\frac{1}{2}$ -inch belt is installed.

Four $\frac{3}{8}$ inch diameter holes are provided in the base for bolting the planer securely to the work bench.

The length of belt necessary may be determined by measuring the distance around the outside edge of the pulleys. Do not measure in the groove of the pulley. When installing the motor, keep in mind that the direction of rotation of the cutter head must be counter clockwise when viewed from the control side of the machine. See Fig. 3.

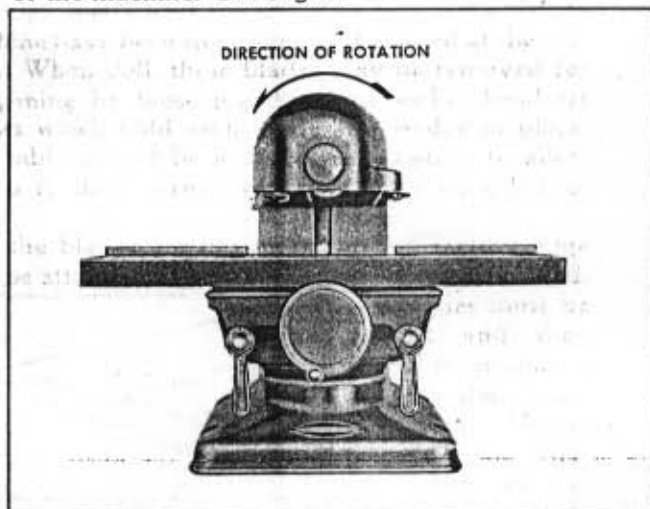


FIG. 3

LUBRICATION

This planer is equipped with two precision ball bearings which have been packed with grease at the factory, and should require no further attention for the life of the bearing. Other moving and sliding parts may require an occasional application of a good quality light machine oil to preserve the smooth operation of the control units of the planer.

SPEED

A $2\frac{1}{2}$ inch diameter pulley, installed on a 3450 R.P.M. motor, will drive the cutter head at the recommended speed—4200 R.P.M.

If a 1750 R.P.M. motor with the same horsepower is used, a 5 inch diameter motor pulley should be used.

Be sure to specify the shaft diameter of your motor when ordering your motor pulley.

CONTROLS

The Table Adjusting Handwheel when turned will raise or lower the table $\frac{1}{16}$ inch per revolution through a range of approximately $2\frac{1}{4}$ inches as indicated on the calibrated scale located on the right side of the planer column behind the table.

The two Table Clamp Nuts when tight, clamp the table firmly in place. These nuts should be loose when the table setting is being changed, and tight-

ened securely when the desired position has been attained.

A Table Lock Handle has been provided on each of the table clamp nuts, designed in such a manner that after setting is made and the clamp nuts tightened, the hexagon recess of the wrench may be disengaged from the hexagon head of the nut, thus allowing the handle to hang freely in a vertical position.

The Kick Back Dogs prevent the work piece from being thrown back toward the operator in case the cutter blades should strike a hard spot in the work piece.

The Work Guides keep the work piece inside the cutting range of the blades.

ADJUSTMENTS

If the thickness of the piece after planing does not agree with the reading on the calibrated scale on the right hand side of the column, the pointer, No.

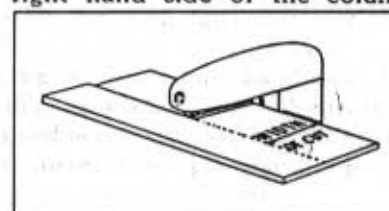


FIG. 4

42, may be reset. Loosen the screw, No. 43, which holds the pointer to the casting and rotate the pointer to the desired position on the scale and re-

tighten screw.

The table surface has been set parallel with the cutter head and blades, and should require no further adjustment unless misaligned as a result of a severe shock. If adjustment is necessary, insert a block 6 inches long, with straight parallel sides, between the surface of the cutter head (not a blade) and the table surface. Loosen the two hex head cap screws, Fig. 1, which will allow the table to shift to the proper position. Raise the table until the block is clamped firmly between the full length of the cutter head and the table surface. With the table thus held parallel with the cutter head, tighten the two cap screws securely.

An adjustment is provided for the tension of the sub-table, No. 30, against the column No. 13. Two hex nuts, No. 20, accessible through the rear of the

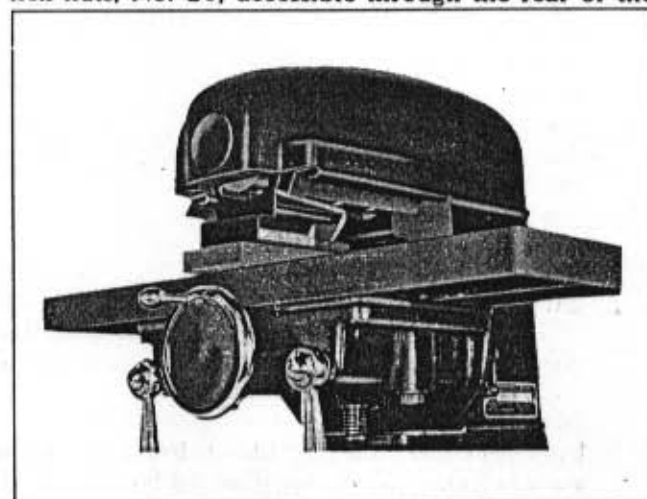


FIG. 5

When tightened will further compress the tensioner rubber, thus increasing the pressure the sub-table against the column.

The work guides may be adjusted by loosening the attaching screws along the rear edge of the table. Should such an adjustment become necessary, the guides should always be aligned with a straightedge to assure free passage of the work piece across the full length of the table without interference from a projecting end of a guide. A line across the face of both guides should cross the cutter head within the cutting limits of the blades.

Retighten pulley set screws after a few hours operation.

SHARPENING BLADES

The high speed steel cutter blades supplied with this machine have been sharpened and aligned at the factory. When dull, these blades may be removed for sharpening by loosening the three socket head set screws which hold each blade and wedge in place. The table should be in its lowest position to allow access to these screws with the Allen wrench provided.

If the blades are not nicked, a satisfactory edge may be attained by honing only. However, if nicked,

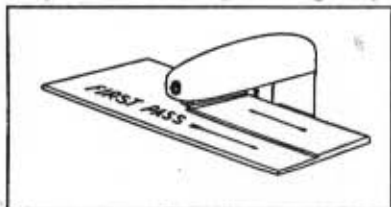


FIG. 6

the blades must be ground and then honed to produce a straight sharp cutting edge. Always maintain the original angle of the bevel at the cutting

edge, and keep the blade width uniform from end to end. To insure safe operation of the machine, blades should not be reinstalled whose width has been reduced below 9/16 inch. Below this dimension, insufficient grip is provided to guarantee holding the blade in the cutter head at high speeds.

To reinstall and properly align the blades:

1. Set the table at its lowest position.
2. Place the blades and wedges in the cutter head so that the set screws will tighten against the crown in the wedge (see Fig. 7) which in turn clamps the blade in place. The bevel on the blade should be on the side away from the set screws and wedge. Tighten the set screws only enough to grip the blades lightly, yet allow moving of the blades for proper setting.
3. Place a piece of wood 1/2 inch thick 3 inches wide and 6 inches long on the table under the blade setting gage as shown in Fig. 5 to provide clearance for the Allen wrench when tightening the set screws.
4. Raise the table until the gage touches the cutter head front and rear at the bearing points indicated in Fig. 5.
5. Adjust the blade position so that it touches the gage lightly at each end and tighten the blade clamp set screws securely.
6. Lower the table, remove the gage to allow rotation of the cutter head, and repeat the

above operations on each of the remaining blades.

During the blade setting operation do not force the gage against the blades in such a manner as to nick the blade or cut the gage. Be certain that the blade is held loosely in the cutter head so that it may be shifted in any direction without application of excessive force when applying the gage.

OPERATING INSTRUCTIONS

The work piece must be fed from right to left as one faces the control side of the machine. Set the table for the desired thickness as shown on the scale. At this point, the work piece should slide freely under the kick back dog support, No. 63, to insure a cut of moderate depth.

If the piece is forced tightly against the support, the resulting cut will be heavier than is recommended for efficient operation. For best results, the cut should not exceed 1/16 inch. If more material is to be removed, the work piece should be fed through the machine several times, raising the table and taking a moderate cut each time until the desired thickness has been attained. When a finish is desired on both sides, be sure each side has been planed before the final thickness is attained. The work piece should be advanced across the table under the cutter head with a slow steady feed, pressing the piece firmly against the table surface at all times.

CAUTION

Do not at any time place the hands under the head casting of the planer while the machine is in operation.

When completing a cut, either pull the piece through from the opposite side of the machine or use a pusher of scrap wood.

When turning the handwheel to change the table position, extreme care should be exercised so that projecting fingers and thumbs do not pass between the cutter head and table.

The quality of finish varies with the feed and depth of cut. A slow feed and a light cut will produce a high quality finish, while a fast feed and heavy cut will tend to produce a rough finish.

When planing pieces wider than the capacity of the cutter blades it is best to minimize the overlap

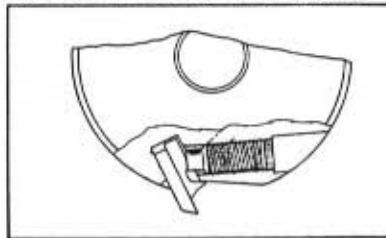


FIG. 7

of the cut. For instance, if the piece to be planed is 10 inches wide, a spacer strip approximately 1 inch wide and thinner than the intended finished work piece should be secured next to the guides so that only a 5 inch cut is taken as each half of the piece is fed through the planer. See Figs. 4 and 6.

For safety purposes, the table cannot be set closer than 1/8 inch from the cutter blades. For this reason, when a piece 1/8 inch or less in thickness is to be planed, a sub-board should be used. This sub-board should be planed on each side before use to insure parallel sides on the finished thin piece.

PARTS LIST

Illus. No.	Order Part No.	Part Name
1	10903	Base
2	10637	Lift Screw Stop Washer
3	*X-1100	Lift Screw Cotter Pin $\frac{1}{8}$ -5/32x1
4	*X-420	Column Screw Nut $\frac{1}{4}$ -20 Hex.
5	*X-605	Base and Column Screw Lock Washer 9/32
6	10927	Table Lift Screw
7	X-622	Lift Screw Thrust Washer 17/32
8	10930	Lift Screw Gear Spacer
9	18814	Bevel Gear
10	*X-210	Hex. Head Column Screw $\frac{1}{4}$ -20x1
11	*X-605	Base and Column Screw Lock Washer 9/32
12	X-117	Bevel Gear Set Screw 5/16-24x $\frac{3}{8}$
13	10941	Column and Depth of Cut Scale Assembly
14	10911	Depth of Cut Scale
15	X-1326	Drive Screw #4x3/16
16	10929	Table Tension Plate
17	10534	Table Tensioner Retainer
18	10535	Table Tensioner Rubber
19	X-623	Tensioner Stud Washer
20	X-417	Crank Shaft Screw Lock Nut, Table Tensioner Stud Nut 5/16-18
21	*X-202	Hex. Head Column Screw $\frac{1}{4}$ -20x1 $\frac{3}{8}$
22	10928	Table Guide
23	10918	Table Tensioner Stud
24	10901	Table
25	*X-1403	Allen Wrench
26	X-3500	Back Guide Hold Down Screw $\frac{1}{4}$ -20x $\frac{3}{4}$
27	10915	Work Guide
28	X-607	Back Guide Screw Washer 17/64
29	*X-421	Back Guide Screw Nut $\frac{1}{4}$ -20 Sq.
30	10902	Sub-Table
31	X-117	Bevel Gear Set Screw 5/16-24x $\frac{3}{8}$
32	18814	Bevel Gear
33	10951	Hand Crank Assembly
34	12321	Table Clamp Nut
35	10511	Table Lock Handle
36	X-611	Crank Shaft Lock Washer 5/16
37	18513	Crank Shaft Screw
38	X-606	Table Screw Washer $\frac{3}{8}$
39	X-204	Hex. Head Table Screw $\frac{3}{8}$ -16x3 $\frac{1}{4}$

Illus. No.	Order Part No.	Part Name
40	10908	Table Clamp
41	*X-321	Table Clamp Bolt $\frac{3}{8}$ -24x8
42	10912	Depth of Cut Pointer
43	*X-511	Pointer Screw 10-24x $\frac{3}{8}$
44	10905	Head Casting
45	10913	Cutter Head Shaft
46	X-172	Inner Brg. Ret. Set Screw $\frac{1}{4}$ -20x $\frac{3}{8}$
47	10931	Cutter Head Spacer Washer
48	18211	Spindle Bearing
49	10917	Inner Bearing Retainer
50	18035-B	Pulley with Set Screws — 2 inch Single Groove V-Pulley $\frac{3}{8}$ Bore Purchase from your nearest Sears Retail Store or Mail Order House Ask for Catalog No. 9-2801 — $\frac{3}{8}$ inch Bore.
51	X-179	Pulley Set Screw 5/16-18x5/16
52	18101	Cutter Head with Set Screws
53	18113	Cutter Blade Wedge
54	18112	Cutter Blades—Purchase from your nearest Sears Retail Store or Mail Order House. Ask for Catalog No. 9-2293.
55	10925	Kick Back Hinge Rod
56	10923	Kick Back Spring
57	X-615	Kick Gage Spacer 17/64
58	*X-513	Kick Back Screw 10-24x $\frac{3}{8}$
59	*X-608	Kick Back Screw Lock Washer .200
60	10909	Kick Back Dog
61	X-532	Kick Back Screw 10-24x7/16
62	*X-608	Kick Back Screw Lock Washer .200
63	10926	Kick Back Dog Support
64	18211	Spindle Bearing
65	10931	Cutter Head Spacer Washer
66	X-121	Cutter Head Blade Set Screw 5/16-24x $\frac{3}{4}$
67	X-125	Cutter Head Set Screw 5/16-24x $\frac{3}{4}$
68	X-171	Outer Brg. Ret. Set Screw $\frac{1}{4}$ -20x $\frac{3}{8}$
69	10914	Outer Bearing Retainer
70	10920	Bearing Retainer Cap
71	18100	Cutter Head Assembly — Includes Illustration Nos. 52, 53, 54, 66, 67
	10934	Blade Setting Gage (Not Illus.)

*Standard hardware items—may be purchased locally.

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.

