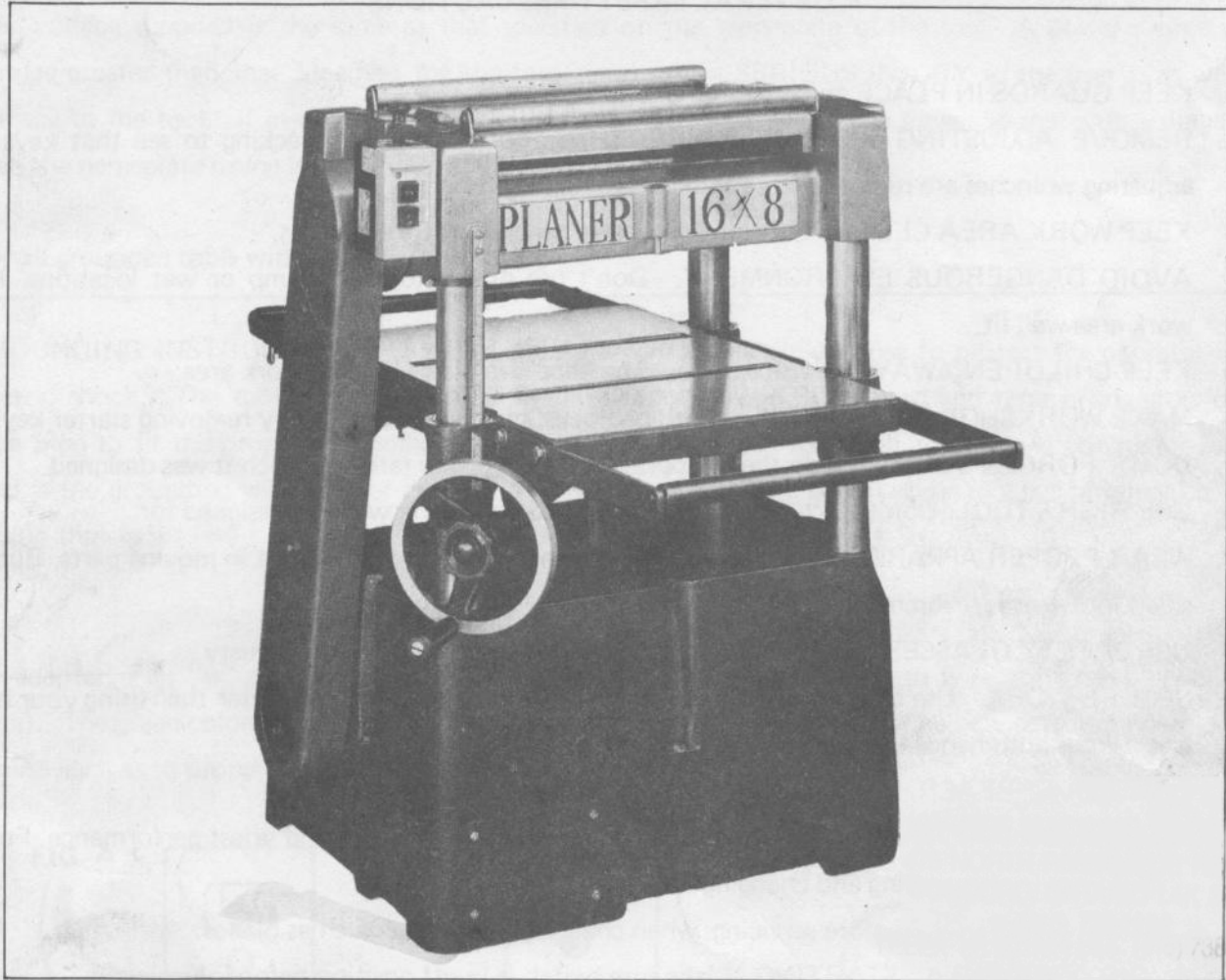


406mm(16") PLANER MODEL CBM-1

INSTRUCTION MANUAL



SPECIFICATIONS

Cutting width	Max. cutting depth	Feed rate	Table size (W x L)	No. of knives
406mm (16")	1.5mm (1/32") of stock width over 304 (11-3/4") 3.5mm (1/8") of stock width under 150mm (5-7/8")	5m/min (17.3 ft)	410mm x 605mm (16-1/4" x 23-7/8")	4
MAX. Thickness	No load Speed	overall dimensions (W x L x H)	Net weight	Power supply
1/8"-8"	5450 R/Min	736mmx711mmx895mm 29"x28"x35-1/4"	227 Kgs 499 lbs	Cord 3M (9.8ft)

* Manufacturer reserves the right to change specifications of parts and accessories without notice.

* Note: Specifications of parts and accessories may vary from country to country.

**BEFORE CONNECTING YOUR TOOL
TO A POWER SOURCE**
**Be sure you have read all
GENERAL POWER TOOL SAFETY RULES**

GENERAL SAFETY PRECAUTIONS

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. AVOID DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations. Keep work area well lit.
5. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
6. MAKE WORKSHOP CHILDPROOF — With padlocks, master switches, or by removing starter keys.
7. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
8. USE RIGHT TOOL. Don't force tool or attachment to do a job it was not designed for.
9. WEAR PROPER APPAREL. No loose clothing or other objects to get caught in moving parts. Rubber-soled footwear is recommended for best footing.
10. USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty.
11. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
12. DON'T OVERREACH. Keep proper footing and balance at all times.
13. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
14. DISCONNECT TOOLS before servicing; when changing accessories such as blades.
15. AVOID ACCIDENTAL STARTING. Make sure switch is in off position before plugging in.
16. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.
17. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
18. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part this is damaged should be carefully checked to ensure that it will operate properly and perform its intended function—check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
19. PROPER GROUNDING. This tool should be grounded while in use to protect the operator from electric shock.

PRELIMINARY INSTRUCTIONS

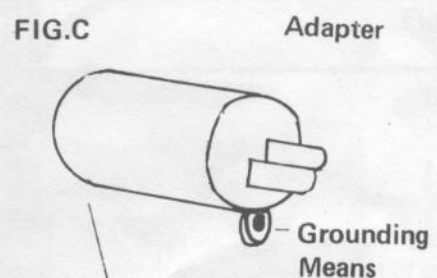
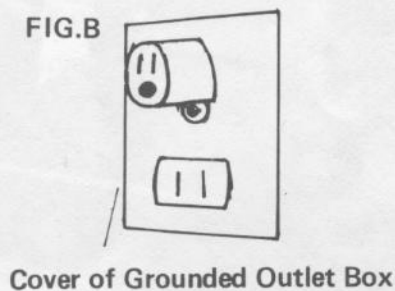
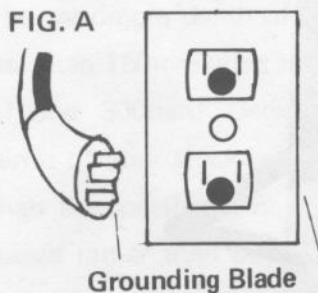
Your electric tool is precision built and manufactured to satisfy the highest standards. For maximum performance, long tool life, and your safety, follow these instructions carefully.

VOLTAGE WARNING: Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in **SERIOUS INJURY** to the user — as well as damage to the tool. If in doubt, **DO NOT PLUG IN THE TOOL**. Using a power source with voltage less than the nameplate rating is harmful to the motor.

For all grounded tools with American type plug

GROUNDING INSTRUCTIONS: This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with an approved three-conductor cord and three-prong grounding-type plug to fit the proper grounding-type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal. It has a plug that looks like Fig. "A". It is for use on 150-250 volts,

An adapter, Fig. "B" and "C" is available for connecting Fig. "A" plugs to two-prong receptacles, (see Note). The green-colored rigid ear, lug, etc., extending from the adapter must be connected to a permanent ground such as to properly grounded outlet box.

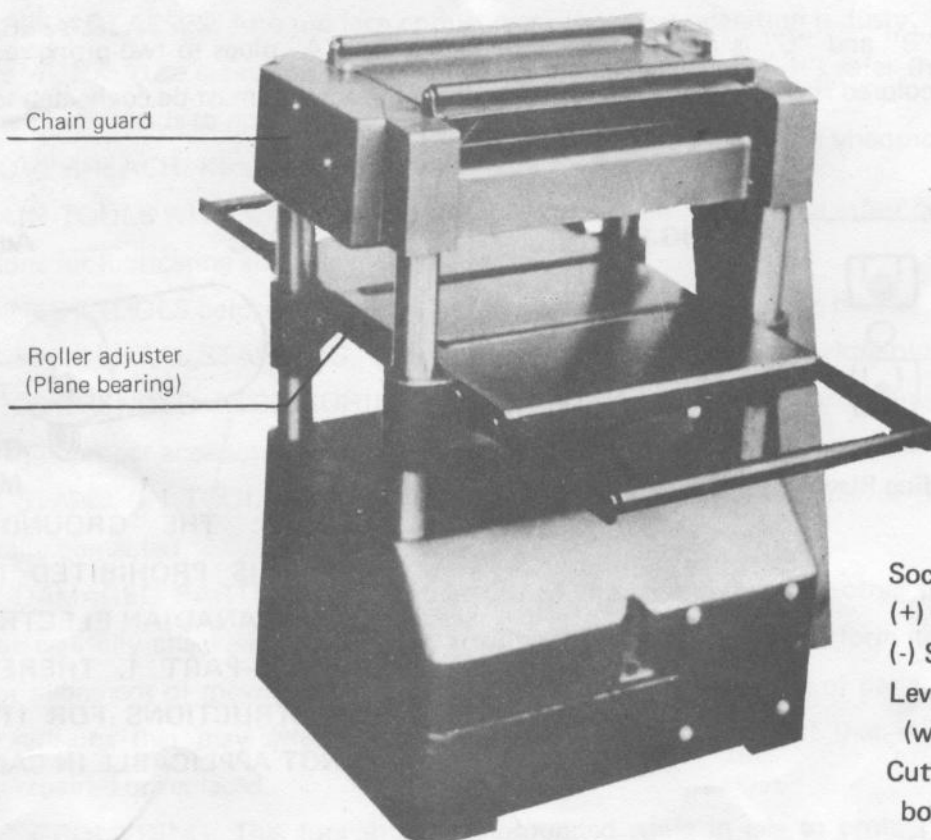
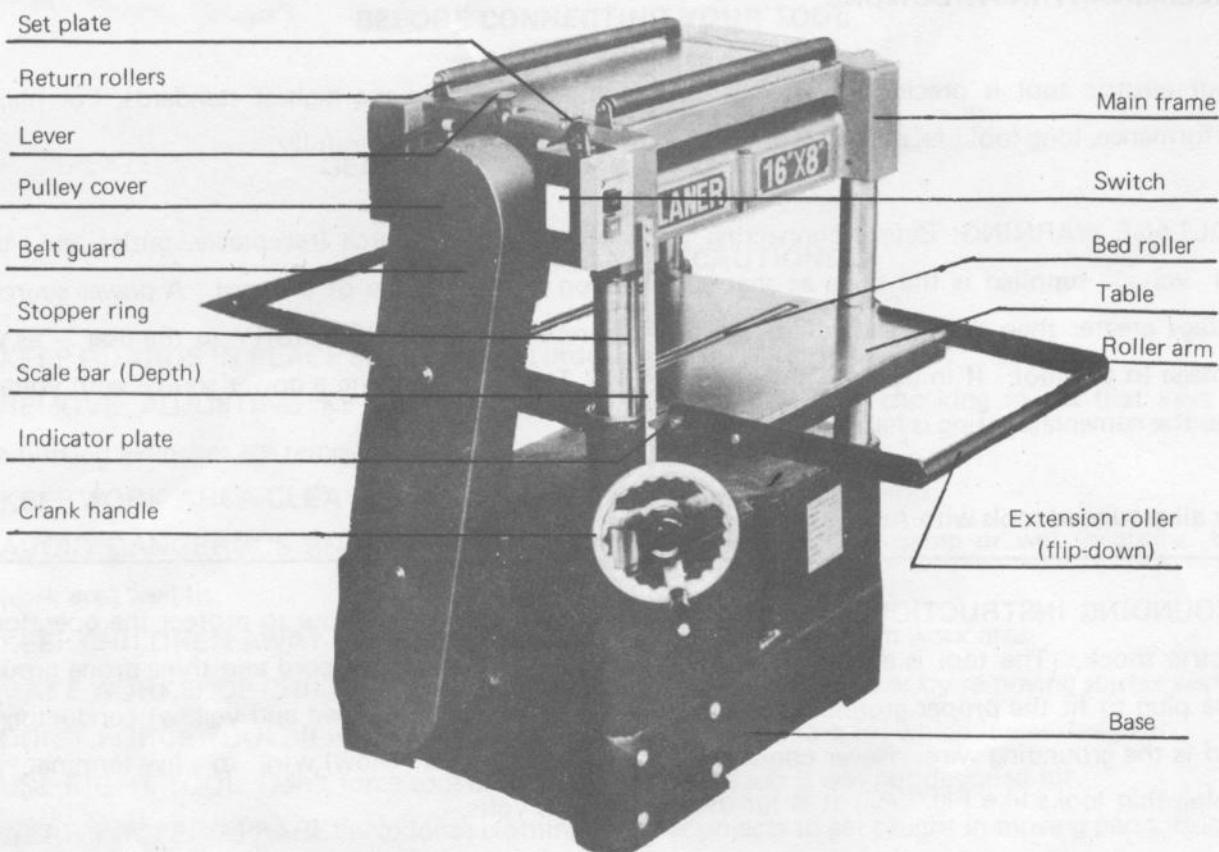


NOTE: THE GROUNDING ADAPTER IS PROHIBITED IN CANADA PER CANADIAN ELECTRICAL CODE—PART 1. THEREFORE, THE INSTRUCTIONS FOR ITS USE ARE NOT APPLICABLE IN CANADA.

Grounding Blade

EXTENSION CORDS: use only three-wire extension cords which have three-prong grounding-type plugs and three-pole receptacles which accept the tool's plug. Replace or repair damaged or worn cord immediately.

Planer & Standard Equipment



Socket wrench.	1
(+) Screwdriver.	1
(-) Screwdriver.	1
Leveller	
(wooden).	2
Cutter fastening	
bolt (spare)	2

CAUTION:

Please make sure rollers are adjusted before machine is started. Rollers are not preset. Put all screws on firmly. Be sure the hex bolts are put on firmly after replacing a blade.

Special Precautions with Planer

a. Planing Operation

Do not perform planing operations on material shorter than 16 inches (400mm), narrower than 3/4 inch (19mm), wider than 16 inches (400mm) or thinner than 1/2 inch (13mm).

b. Maintain the proper relationships of infeed and outfeed table surfaces and cutter head knife path.

c. Support the workpiece adequately at all times during operation; maintain control of the work at all times.

d. Do not back the work toward the infeed table.

e. Do not attempt to perform an abnormal or little-used operation without study and the use of adequate hold-down/push block, jigs, fixtures, stops, etc.

HOW TO USE

1. Dimensional Adjustment

Release the wing screw on the stopper ring and turn the crank handle to the clockwise, aligning the indicator plate until the scale bar graduation for the desired finished dimension is reached. Align your workpiece with the top of the table. (One handle revolution makes for 3 mm ascent or descent.)

2. Depth of Cut

The maximum depth of cut with a piece of wood less than 150mm wide is 3mm (1mm with a width of over 300mm). Determine the depth of cut in terms of your stock width. Do not try to cut more than the specified amount in one pass. Make two passes rather than put an overload on the planer that might cause trouble.

3. Stock Feed

Align the stock to be cut with the top of the table. If the stock is too thick to be cut, immediately lower the table by means of the crank handle so as to reduce the size of the cut.

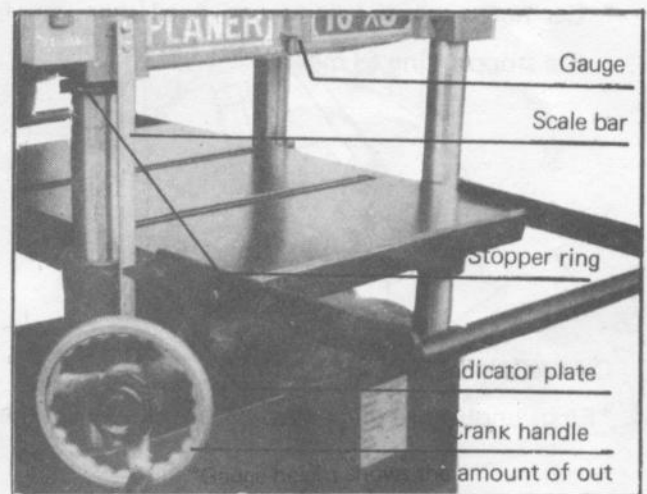


Fig. 1

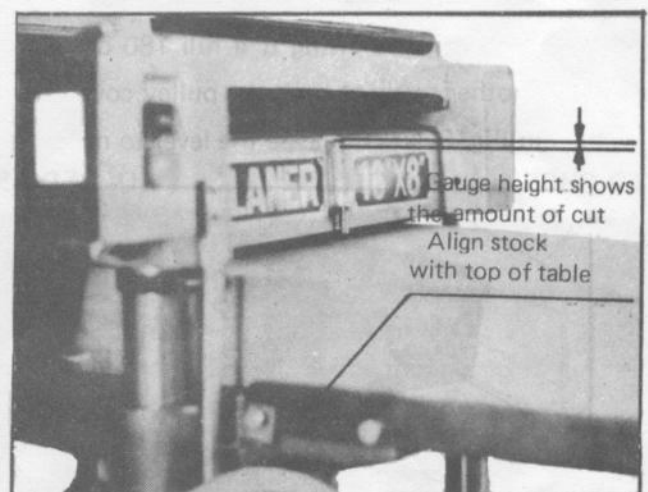


Fig. 2

Precautions When Feeding

- Attempting to feed oversized stock will cause abnormal wear on the rubber rollers.
- Keep on the level so that cutter action and roller wear will be even.

4. Return

Returning cut stock back to the front side is very easy if you use the convenient return rollers on top.

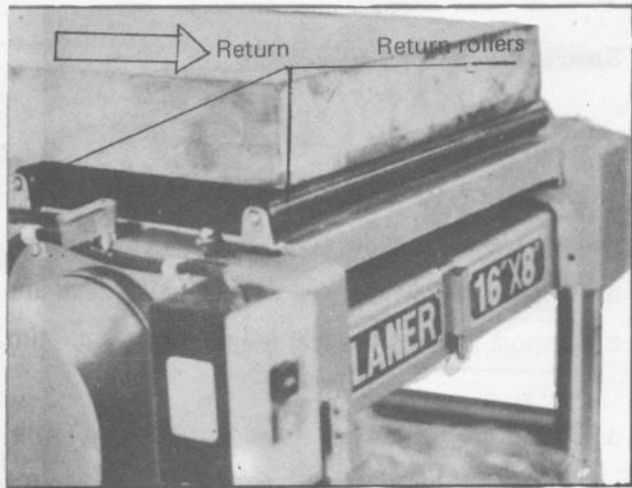


Fig. 3

5. Stopper Regulating Depth

Numerous workpieces can be planed to the same thickness very simply just by setting the stopper ring to the desired dimension.

- * Do not crank the handle so hard that you force the stopper ring to move.

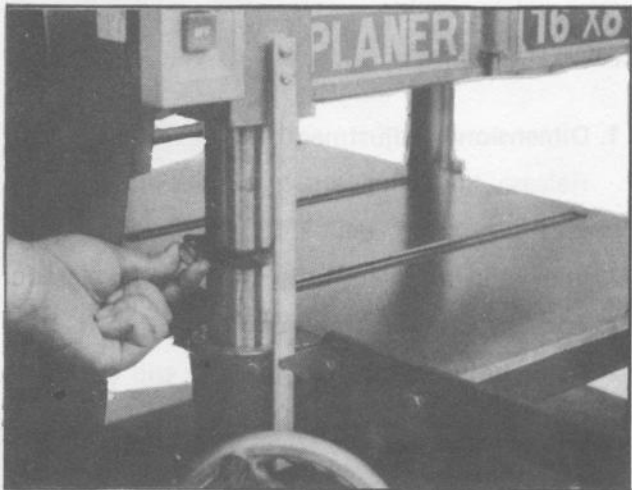


Fig. 4

CHANGING CUTTER KNIVES

- *First, unplug the planer from your power source so as to prevent any mishap.

TO CHECK AND ADJUST KNIVES, PROCEED AS FOLLOWS:

A. To CHECK AND ADJUST KNIVES use knife gage (A) Fig. 6 and 5 and check all four knives for proper setting as shown. When the gage (A) is placed properly on the cutterhead as shown, the knife should just contact the bottom of the center protrusion (B) Fig. 5 and 6 of the gage.

B. If an adjustment to one or more of the knives is necessary, slightly loosen the knife locking bars (C) Fig. 5 of all four knives by turning the twenty knife locking screws (D) into the knife locking bars just enough to relieve stress in the cutterhead and not disturb the setting of the knives.

C. Then, using the knife gage, adjust the knife that must be reset by loosening all five locking screws (D) Fig. 5 by turning them into the knife locking bar. As the knife locking bar becomes loose, lifter springs (E) located under the knife will raise the knife until it comes into contact with the center portion (B) of the gage (A) Fig. 5. Then snug up the knife locking bar by lightly backing out the five screws (D) against the slot. **IMPORTANT: AT THIS TIME, ONLY TIGHTEN THE KNIFE INTO THE SLOT JUST ENOUGH TO HOLD KNIFE INTO POSITION.**

D. If additional knives must be reset, repeat STEP C.

E. After all four knives are set with screws just snug, back out and tighten the five screws (D) Fig. 5 and 6, against the slot starting with the end screws first then the center screws until the knife is securely held in the cutterhead. Tighten remaining three knives in the same manner.

5. If the knives are removed for sharpening, care must be exercised in replacing and resetting them, as follows:

A. To remove knives, loosen the knife locking bar (C) Fig. 5 by turning the five knife locking screws (D) into the knife locking bar (C) and remove the knife locking bar (C), knife (F) and springs (E) located under the knives.

B. Remove the remaining three knives in the same manner.

C. Thoroughly clean the knife slots, knife bars, springs and screws. Check the screws. If the threads appear worn or stripped or if the heads are becoming rounded replace them.

D. Inspect the cutting edge of the knives for nicks or wire edge. Hone the knives slightly using a stone or if the knives are to be sharpened, maintain a cutting angle of 20 degrees as shown in Fig. 5.

E. Insert springs (E), knives (F) and knife locking bars (C), into all four slots in the cutterhead, as shown in Fig. 5. Back out locking screws (D) just enough to hold all four knives in the cutterhead.

F. Place the knife gage (A) over one of the knives, as shown in Fig. 5.

G. While holding down on the knife gage (A) Fig. 5 loosen all five locking screws (D) by turning them into bar (C) until cutting edge of knife (F) comes into contact with the protrusion (B) of gage (A). Then snug up the knife locking

bar (C) by slightly backing out the five screws (D) against the slot. **IMPORTANT: AT THIS TIME, ONLY TIGHTEN THE KNIFE INTO THE SLOT JUST ENOUGH TO HOLD THE KNIFE IN POSITION.**

H. Replace and reset the other three knives in the same manner.

J. After all four knives are set with the screws just snug, back out and tighten the five screws (D) Fig. 5, against the slot starting with the end screws first and then the center screws until the knife is securely held in the cutterhead. Tighten the remaining three knives in the same manner.

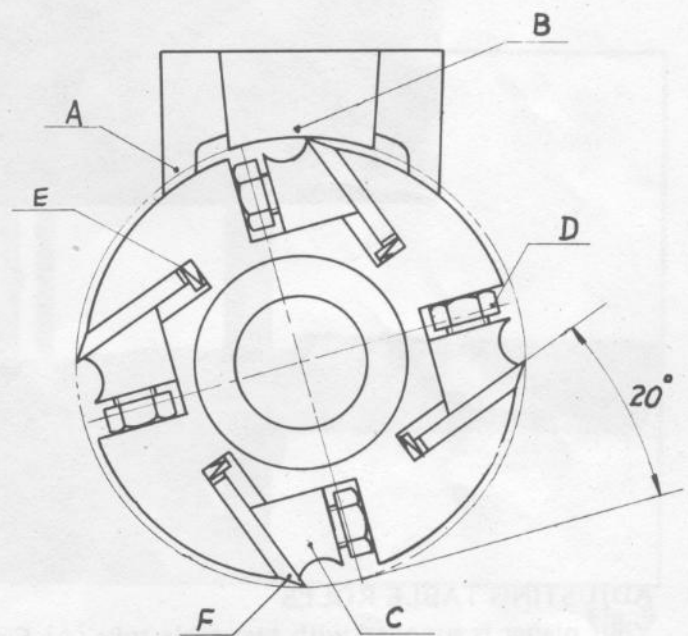


Fig. 5

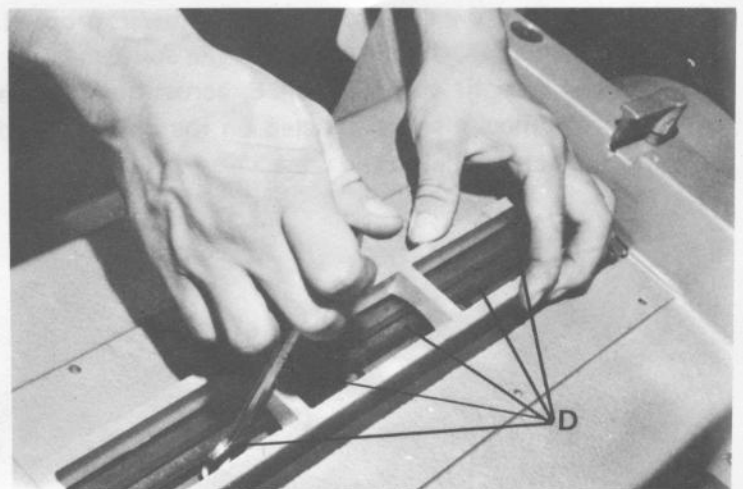


Fig. 6

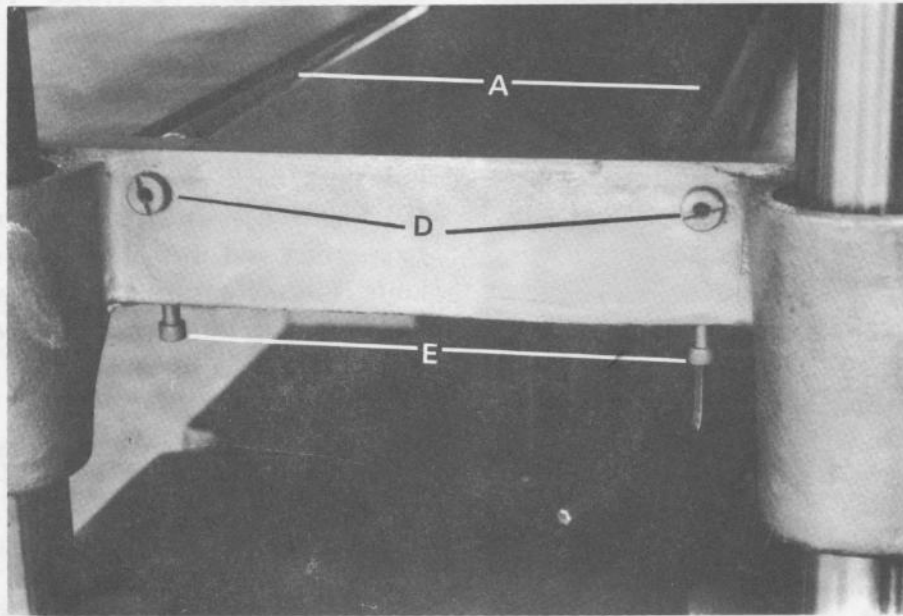


Fig. 7

ADJUSTING TABLE ROLLS

Your planer is supplied with two table rolls (A) Fig. 7 which aid in feeding the stock by reducing friction and turn as the stock is fed through the planer. It is not possible to give exact dimensions on the proper height setting of the table rolls because each type of wood behaves differently. As a general rule, however, when planing rough stock the table rolls should be set HIGH and when planing smooth stock the table rolls should be set LOW.

The table rolls on your planer are set for average planing and are parallel to the table surface. If you desire to adjust the table rolls higher or lower, proceed as follows:

1. Disconnect machine from the power source.
2. Lay a straight edge (B) Fig. 8, across both rolls and turn screws (E) to raise or lower table rolls (A). Table rolls must also be adjusted on the opposite end of table in the same manner. The table rolls must always be set parallel to the table.

Gauge Range	Cutting Depth
0.15	0.5 mm
0.3	1.0 mm
0.45	1.5 mm
0.6	2 mm
0.75	2.5 mm
0.9	3 mm

2. Extension Roller Adjustment

Gently loosen the hex bolt, set a rule or yardstick on the table surface and adjust so that roller arm is slightly higher than the table. Tighten the hex bolts securely so that the roller arm surface is at the 90° to the column.

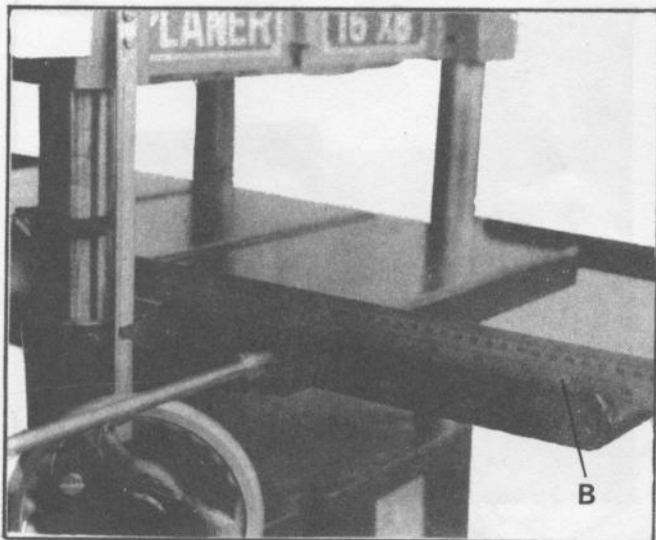


Fig. 8

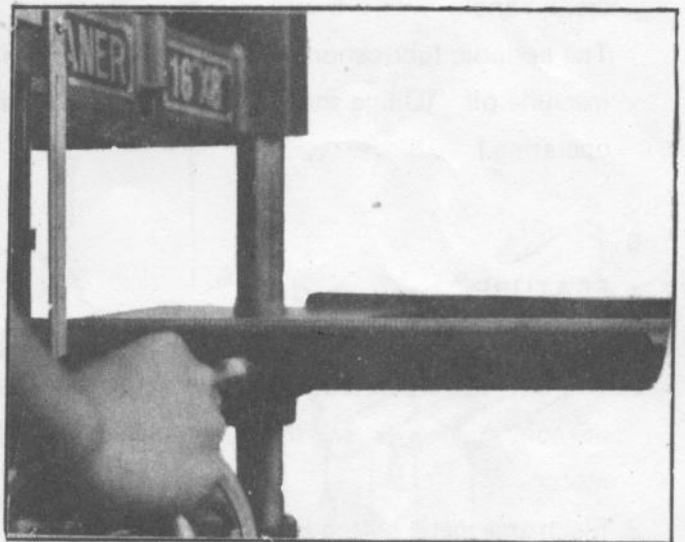


Fig. 9

MAINTENANCE

- Cleaning

- 6 Always brush off dirt, chips and foreign matter adhering to roller surfaces. See that water or oil does not enter the motor.

- Lubrication (Periodic)

Oil the chain (after removing the chain cover), the column moving parts (contact areas) and the crank handle.

The periodic lubrication should be performed with machine oil. (Oiling should be done with tool not operating.)

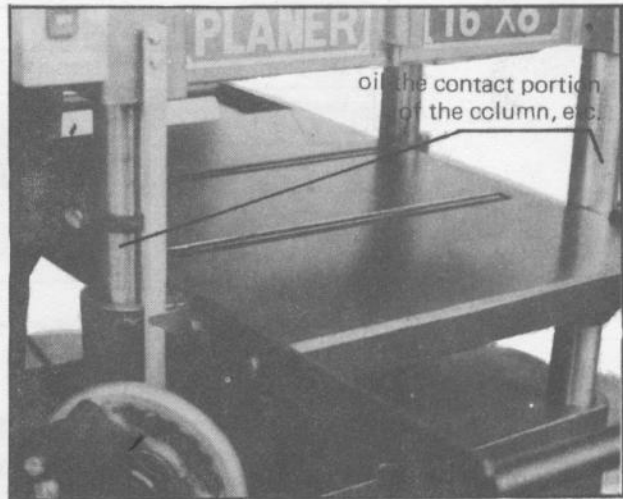


Fig 10

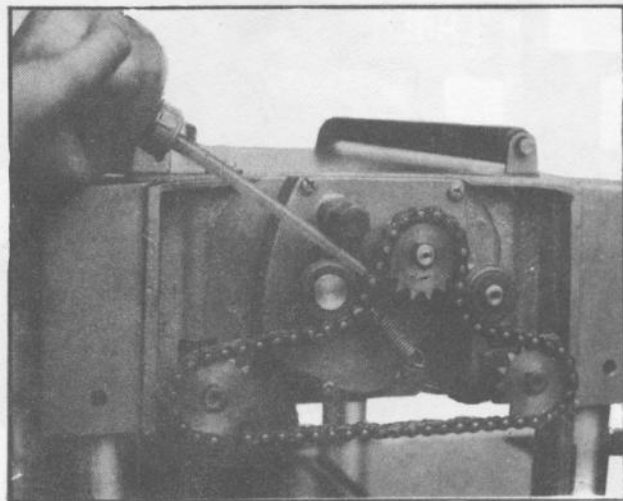


Fig. 11

6

- FEATURE:

1. 2HP, single phase, 230V motor included.
2. The bottom separated with 2-layers, for the sake of convenience & swiftness while assemble the motor.
3. Electromagnetic switch is safe for over-loaded.

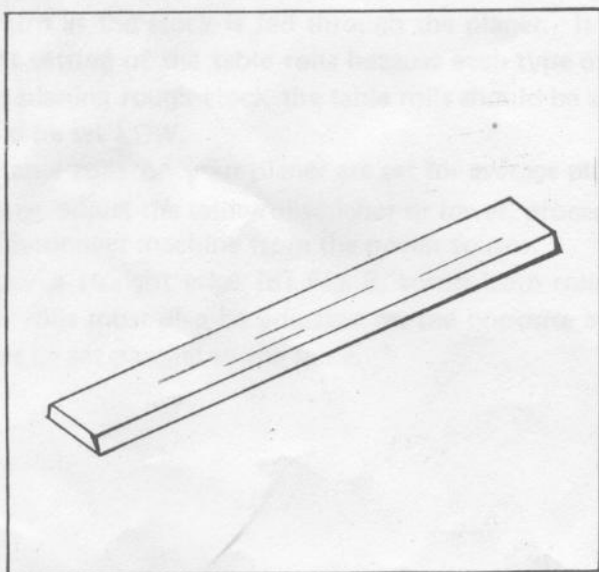


Fig. 12

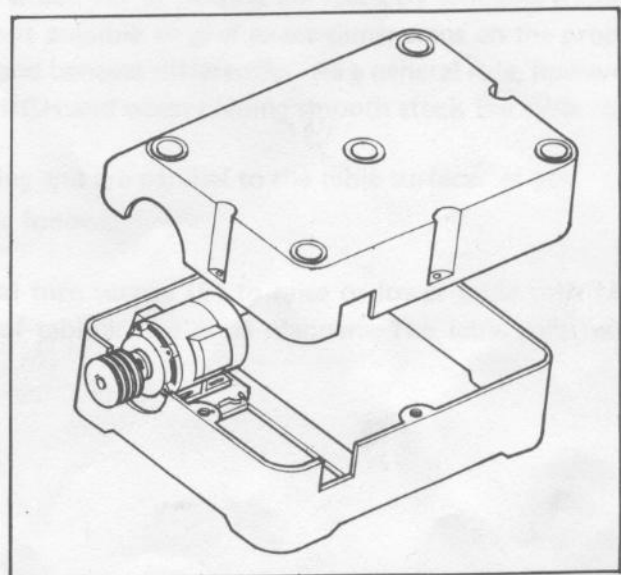


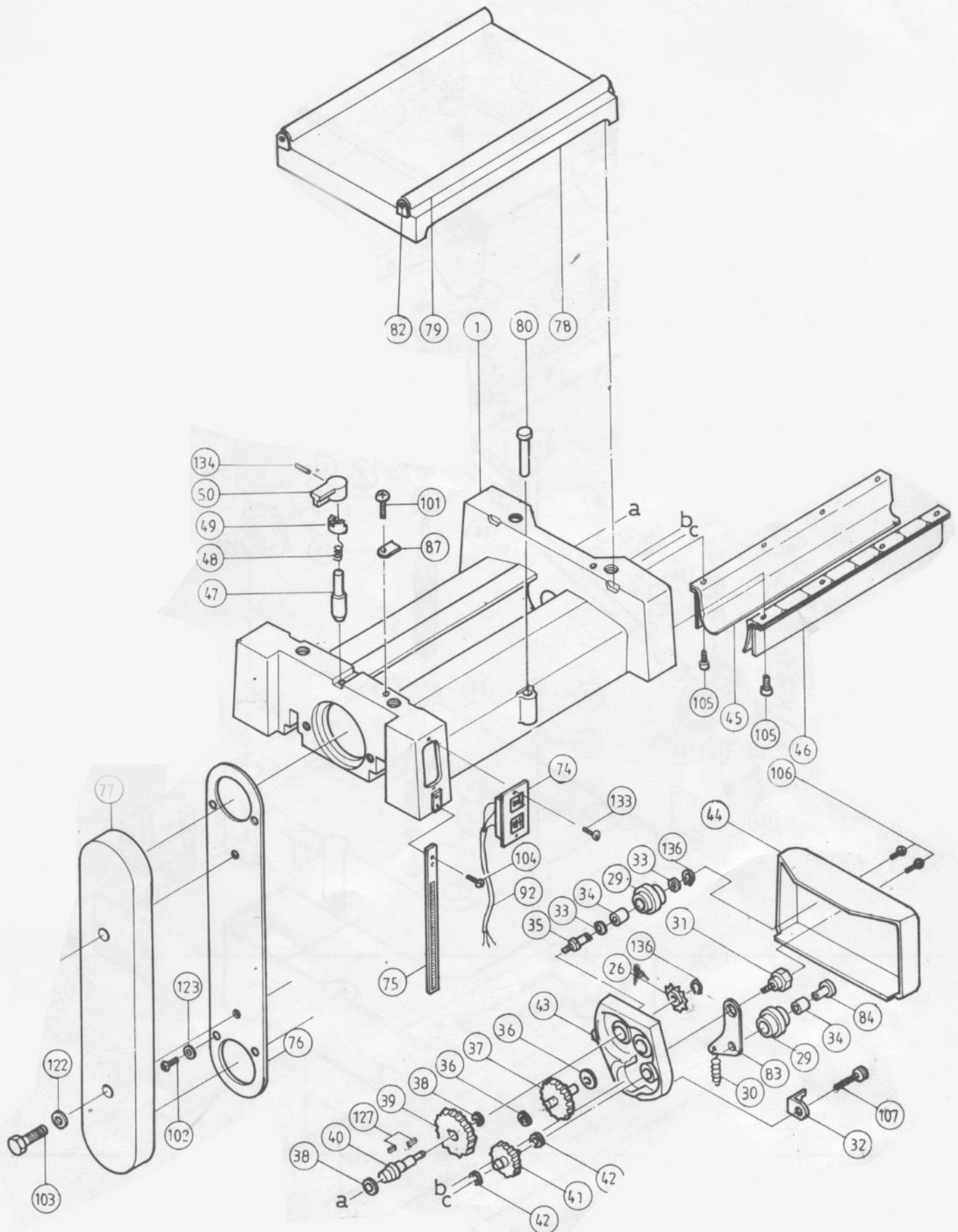
Fig. 13

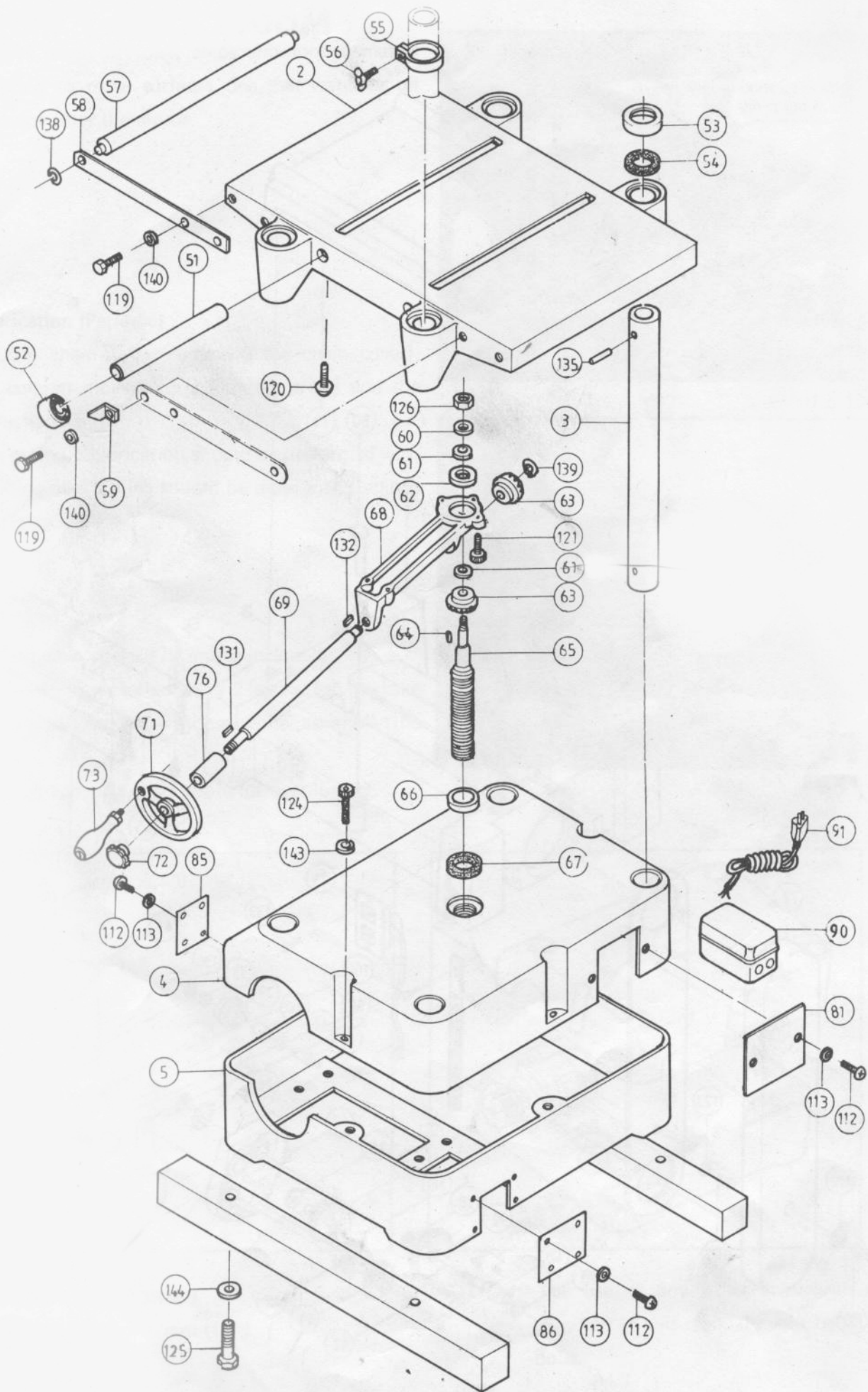
OPTIONAL ACCESSORIES

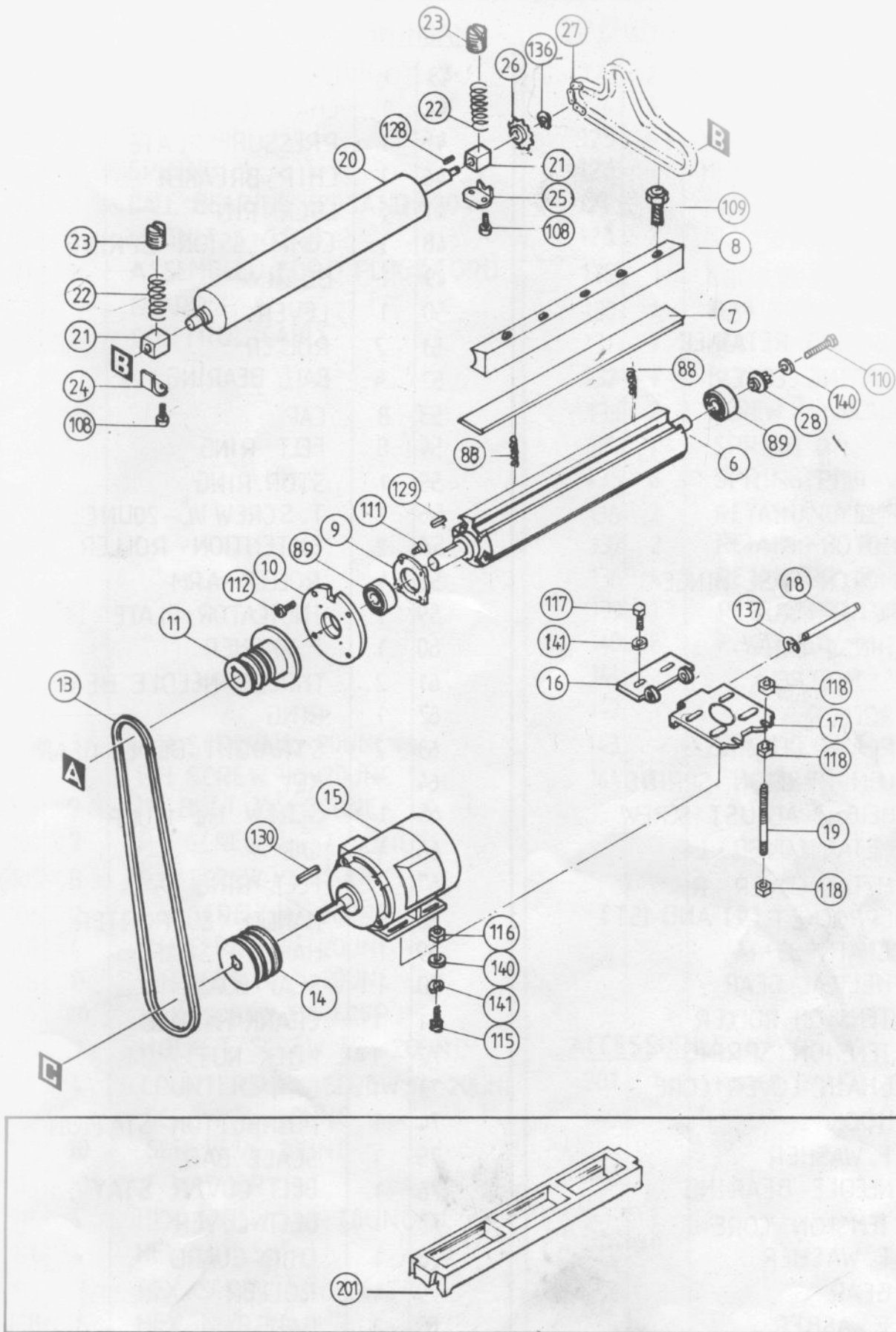
Replacement Blades 409mm (16")

CAUTION: The use of any other accessories not specified in this manual might be hazardous.

406mm (16") PLANER Model CBM-1







ITEM NO:
NO. USED

DESCRIPTION

ITEM NO:
NO. USED

DESCRIPTION

MACHINE

1	1	MAIN FRAME
2	1	TABLE
3	4	COLUMN
4	1	BASE - 1
5	2	BASE - 2
6	1	DRUM
7	4	PLANER BLADE
8	4	KNIFE LOCK BAR
9	1	BEARING RETAINER
10	1	BEARING COVER
11	1	PULLEY
12		
13	3	V-BELT
14	1	PULLY
15	1	MOTOR
16	1	MOTOR BASE HINGE
17	1	MOTOR BASE
18	1	HINGE PIN
19	2	SET SCREW
20	2	ROLLER
21	4	PLANE BEARING
22	4	COMPRESSION SPRING
23	4	HEIGHT ADJUST SCREW
24	2	METAL COVER L
25	2	METAL COVER R
26	3	SPROCKET (9T AND 15T)
27	1	CHAIN 35-64
28	1	HELICAL GEAR
29	2	TENSION ROLLER
30	1	TENSION SPRING
31	1	CHAIN COVER CORE
32	1	HOOK
33	2	F. WASHER
34	1	NEEDLE BEARING
35	1	TENSION CORE
36	2	F. WASHER
37	1	GEAR
38	2	F. WASHER
39	1	HELICAL GEAR
40	1	DRIVING SHAFT
41	1	GEAR
42	2	F. WASHER

MACHINE

43	1	GEAR HOUSING
44	1	CHAIN COVER
45	1	PRESSURE PLATE
46	1	CHIP BREAKER
47	1	LOCK PIN
48	1	COMPRESSION SPRING
49	1	BUSH
50	1	LEVER
51	2	ROLLER
52	4	BALL BEARING
53	8	CAP
54	8	FELT RING
55	1	STOP RING
56	1	T. SCREW 1/4" - 20UNC
57	2	EXTENTION ROLLER
58	4	ROLLER ARM
59	1	INDICATOR PLATE
60	1	F. WASHER
61	2	THRUST NEEDLE BEARING
62	1	RING
63	2	STRAIGHT BEVEL GEAR
64	1	KEY
65	1	SCREW 1 1/4" - 12UNF
66	1	CAP
67	1	FELT RING
68	1	HANDLE SUPPORTER
69	1	HANDLE SHAFT
70	1	SEAT BUASH
71	1	CRANK HANDLE
72	1	LOCK NUT
73	1	GRIP
74	1	PUSHBUTTON STATION
75	1	SCALE BAR
76	1	BELT COVER STAY
77	1	BELT COVER
78	1	CHIP GUARD
79	1	ROLLER
80	1	GAUGE
81	1	MAGNIT SWITCH PLATE
82	4	PIN
83	1	TENSIONER HINGE
84	1	TENSIONER PIN

ITEM NO. NO USED DESCRIPTION			ITEM NO NO USED DESCRIPTION		
MACHINE			MACHINE		
85	1	LORD GUARD COVER	123	2	F. WASHER
86	1	MOTOR SEAT PLATE	124	4	HOCKET SCREW $5/16$ "-18UNC
87	2	SET PLAT	125	4	HEX. BOLT $3/8$ "-16UNC
88	8	SPRING	126	1	HEX. NUT $1/2$ "-12UNC
89	2	BALL BEARING. 6205AND 6204	127	2	KEY
90	1	MAGNIT SWITCH	128	2	KEY
91	1	ASSEMBLED CORD PLUG& CORD	129	1	KEY
		GUARD.	130	1	KEY
92	1	CONTROL CABLE	131	1	KEY
			132	1	KEY
			133	2	SCREW $3/16$ "-24UNC
			134	1	SPRING PIN
			135	8	SPRING PIN
			136	2	RETAINING RING
			137	2	RETAINING RING
			138	4	RETAINING RING
			139	1	RETAINING RING
			140	8	F.WASHER
			141		
			142		
101	2	P.H SCREW $1/4$ "-20UNC	143		SPRING WASHER
102	4	P.H SCREW $1/4$ "-20UNC	144	4	F.WASHER
103	2	H. BOLT $1/4$ "-20UNC			
104	2	P.H SCREW $3/16$ "-24UNC			
105	8	P.H SCREW $1/4$ "-20UNC			
106	2	P.H SCREW $1/4$ "-20UNC			
107	4	P.H SCREW $1/4$ "-20UNC			
108	8	P.H SCREW $1/4$ "-20UNC			
109	20	HEX. SCREW M8x1.25P			
110	1	HOCKET SCREW $1/4$ "-20UNC	ACCESSORIES		
111	4	COUNTERSUNK SCREW $1/4$ "-20UNC	201	1	KNIFE GAUGE
112	4	SCREW $1/4$ "-20UNC			
113	10	SCREW $1/4$ "-20UNC			
114	10	F. WASHER			
115	4	HEX. SCREW $5/16$ "-18UNC			
116	4	HEX. NUT $5/16$ "			
117	2	HEX. SCREW $5/16$ "-18UNC			
118	6	HEX. NUT $3/8$ "			
119	8	HEX. SCREW $5/16$ "-18UNC			
120	4	SCREW $1/4$ "-20UNC			
121	5	HOCKET SCREW $5/16$ "-18UNC			
122	2	F. WASHER			