

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

READ AND FOLLOW ALL INSTRUCTIONS.

There are certain applications for which this tool was designed. Porter-Cable strongly recommends that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the tool until you have written Porter-Cable and we have advised you.

Technical Service Manager
Porter-Cable Corporation
4825 Highway 45 North
P. O. Box 2468
Jackson, TN 38302-2468

POLARIZED PLUGS: To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

- 1. KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
- 2. AVOID DANGEROUS ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep area well lit. Avoid chemical or corrosive environment. Do not use tool in presence of flammable liquids or gases.
- 3. GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
- 4. KEEP CHILDREN AWAY.** Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
- 5. STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place - out of reach of children.
- 6. DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
- 7. USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended - for example - do not use a circular saw for cutting tree limbs or logs.
- 8. DRESS PROPERLY.** Do not wear loose clothing or jewelry. Loose clothing, draw strings and jewelry can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
- 9. USE SAFETY GLASSES.** Wear safety glasses or goggles while operating power tools. Also face or dust mask if operation creates dust. All persons in the area where power tools are being operated should also wear safety glasses and face or dust mask.
- 10. DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges. Have damaged or worn power cord and strain reliever replaced immediately. DO NOT ATTEMPT TO REPAIR POWER CORD.

11. SECURE WORK. Use clamps or a vise to hold work. 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 better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Have all worn, broken or lost parts replaced immediately. Keep handles dry, clean and free from oil and grease.

14. DISCONNECT TOOLS when not in use, before servicing, and when changing accessories such as blades, bits, cutters, etc.

15. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

16. AVOID UNINTENTIONAL STARTING. Do not carry a plugged-in tool with finger on switch. Be sure switch is off when plugging in. Keep hands, body and clothing clear of blades, bits, cutters, etc. when plugging in the tool.

17. OUTDOOR USE EXTENSION CORDS. When tool is used outdoors, use only extension cords marked "Suitable for use with outdoor appliances - store indoors when not in use."

18. STAY ALERT. Watch what you are doing. Use common sense. Do not operate tool when you are tired or while under the influence of medication, alcohol or drugs.

19. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine 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 by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.

20. WEAR EAR PROTECTION to safeguard against possible hearing loss.

SAVE THESE INSTRUCTIONS

ADDITIONAL SAFETY RULES FOR PLATE JOINER

- 1. KEEP GUARD (BASE) IN WORKING ORDER.** Check operation before each use. Do not use if guard does not close briskly over blade. CAUTION: if machine is dropped, guard may distort restricting operation. Keep slide mechanism free of wood chips. Occasionally lubricate ways with light machine oil. DO NOT OVERLUBRICATE as this creates excessive sawdust buildup.
- 2. KEEP BLADES CLEAN AND SHARP.** Sharp blades minimize stalling and kickback.
- 3. DANGER: KEEP HANDS AWAY FROM CUTTING AREA.** Keep hands away from blade. Do not reach underneath work while blade is rotating. CAUTION: Blades coast after being turned off.
- 4. GUARD AGAINST KICKBACK.** Release switch immediately if blade binds or motor stalls. Keep blade sharp. Do not force tool. Stay alert and exercise control.

- 5. USE ONLY CORRECT BLADES IN MOUNTING.** Do not use blades with incorrect size holes. Never use defective or incorrect blades, washers or bolts.
- 6. AVOID CUTTING NAILS AND KNOTS.** Inspect for and remove all nails from lumber before cutting. Try to layout cuts between knots.
- 7. SOME WOOD CONTAINS PRESERVATIVES WHICH CAN BE TOXIC.** Take extra care to prevent inhalation and skin contact when working with these materials. Request, and follow, any safety information available from your material supplier.
- 8. WARNING: BLADE MAY PROTRUDE THROUGH WORKPIECE.** Keep hands and all body parts away from blade area during operation.

REPLACEMENT PARTS

When servicing use only identical replacement parts.

MOTOR

Many Porter-Cable tools will operate on either D.C., or single phase 25 to 60 cycle A.C. current and voltage within plus or minus 5 percent of that shown on the specification plate on the tool. Several models, however, are designed for A.C. current only. Refer to the specification plate on your tool for proper voltage and current rating.

CAUTION: Do not operate your tool on a current on which the voltage is not within correct limits. Do not operate tools rated A.C. only on D.C. current. To do so may seriously damage the tool.

EXTENSION CORD SELECTION

If an extension cord is used, make sure the conductor size is large enough to prevent excessive voltage drop which will cause loss of power and possible motor damage. A table of recommended extension cord sizes is found below. This table is based on limiting line voltage drop to 5 volts (10 volts for 230 volts) at 150% of rated amperes.

If an extension cord is to be used outdoors it must be marked with the suffix W-A following the cord type designation. For example - SJTW-A to indicate it is acceptable for outdoor use.

RECOMMENDED EXTENSION CORD SIZES FOR USE WITH PORTABLE ELECTRIC TOOLS

	Length of Cord in Feet											
	25 Ft.	50 Ft.	100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	400 Ft.	500 Ft.	600 Ft.	800 Ft.	1000 Ft.
115V	18	18	18	16	14	12	10	8	6	4	2	2
230V	18	18	16	14	12	10	8	6	4	2	2	2
0-2	18	18	16	14	12	10	8	6	4	2	2	2
2-3	18	18	16	14	12	10	8	6	4	2	2	2
3-4	18	18	16	14	12	10	8	6	4	2	2	2
4-5	18	18	16	14	12	10	8	6	4	2	2	2
5-6	18	18	16	14	12	10	8	6	4	2	2	2
6-8	18	16	12	10	8	6	4	2	2	2	2	2
8-10	18	14	12	10	8	6	4	2	2	2	2	2
10-12	16	14	10	8	6	4	2	2	2	2	2	2
12-14	16	12	10	8	6	4	2	2	2	2	2	2
14-16	16	12	10	8	6	4	2	2	2	2	2	2
16-18	14	12	8	6	4	2	2	2	2	2	2	2
18-20	14	12	8	6	4	2	2	2	2	2	2	2

OPERATING INSTRUCTIONS

FOREWORD

Your Porter-Cable Plate Joiner is designed for making grooves for Porter-Cable #0, 10, or 20 biscuits used in making various types of wood glue joints.

SELECTING THE BISCUIT

Biscuits are $\frac{5}{32}$ " thick and available in three sizes as shown below. Five of each size are furnished with your Plate Joiner.

Choose the largest biscuit that will accommodate the type of joint being made.

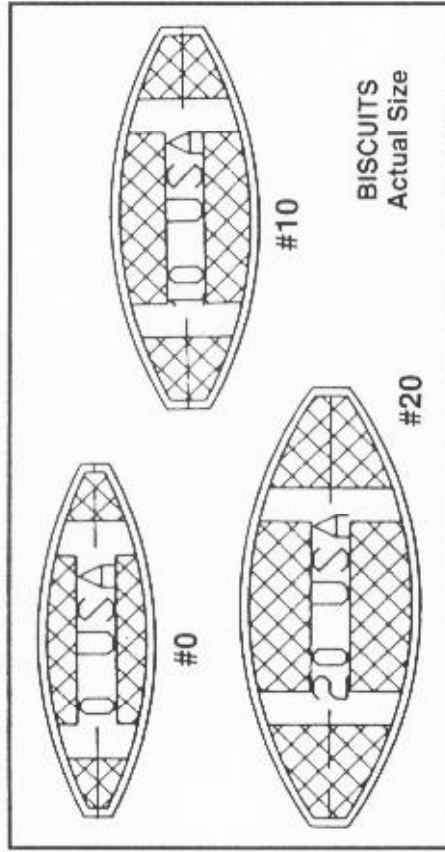


Fig. 1

ADJUSTING DEPTH OF GROOVE

A "quick set" adjusting knob (A) Fig. 2, is provided for changing depth of groove required for the three biscuit sizes. The biscuit sizes 0, 10, and 20 are stamped on the flats at the end of this knob. Adjust depth of groove as follows:

- CAUTION: DISCONNECT JOINER FROM POWER SOURCE.**
- Pull adjusting knob forward and rotate until desired biscuit size is in line with indicating mark (B) Fig. 2.
- Release knob making sure knob engages with index grooves.

FINE ADJUSTMENT (Depth of Groove)

The "quick set" depth adjustment is adjusted at the factory to produce joints with nominal clearance (biscuit to groove). A fine adjustment is provided allowing the operator to reduce or increase the clearance as desired.

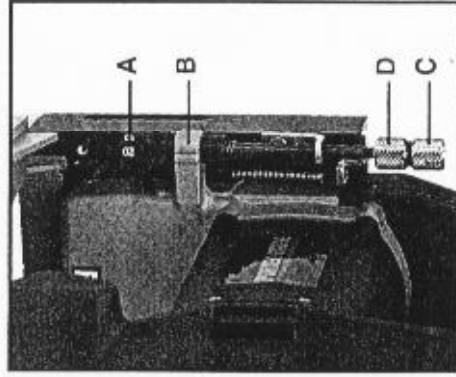


Fig. 2

TO REDUCE CLEARANCE:

1. Hold knob (D) Fig. 2, and turn knob (C) Fig. 2, counterclockwise to unlock.
2. Turn knob (D) Fig. 2, clockwise.
3. Hold knob (D) Fig. 2, at desired position and turn knob (C) Fig. 2, clockwise to lock.

TO INCREASE CLEARANCE:

1. Hold knob (D) Fig. 2, and turn knob (C) Fig. 2, counterclockwise to unlock.
2. Turn knob (D) Fig. 2, counterclockwise.
3. Hold knob (D) Fig. 2, at desired position and turn knob (C) Fig. 2, clockwise to lock.

POSITIONING GROOVES

The number of grooves (biscuits) used in a joint may be varied to provide the strength required for the particular application. Typically, the center of the first groove is positioned approximately two inches from the edge of the work with additional grooves spaced at three to six inches on centers.

Position the two workpieces (to be joined) in the relationship desired after joining. Mark the centerline of each groove required as shown in Fig. 3. Use a square to assure accuracy.

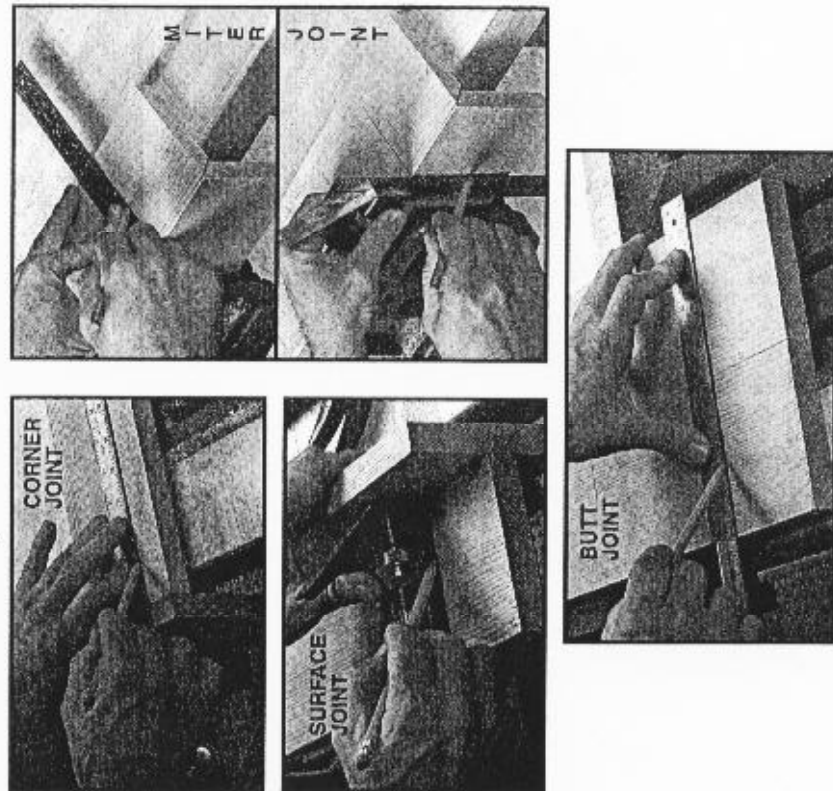


Fig. 3

AUXILIARY FENCES

Model 556 is supplied with two Auxiliary Fences: (1) A "Tilt" Fence (which is assembled to the machine at the factory), and (2) A "45°/90°" Fence.

The "Tilt" Fence (A) Fig. 4, can be adjusted to any angle between 0° and 90°. This enables you to cut grooves into surfaces that are at an angle to the "face" of the workpiece. When this fence is used to make corner joints at **other than 90°**: the "inside" surfaces of the joint will be aligned. When making 90° joints: either the "inside" or the "outside" surfaces can be aligned.

The "45°/90°" Fence (B) Fig. 4, has two "fixed angle" guide surfaces: one at 45°, and one at 90°. This provides "fixed" guide surfaces for the most popular Plate Joiner applications: 90° corner joints, 45° miter joints, and butt joints. The Fence can be quickly changed from 90° to 45° operation. When this fence is used to make 45° joints: the outside surfaces of the joint will be aligned. When making 90° joints: either the "inside" or the "outside" surfaces can be aligned.

The Plate Joiner is used without an Auxiliary Fence for some applications.

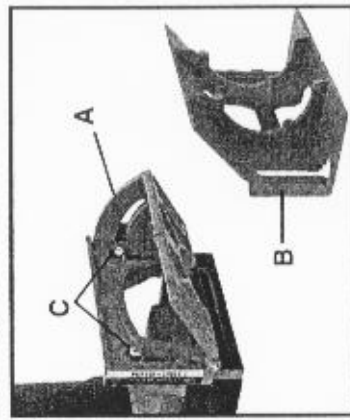


Fig. 4

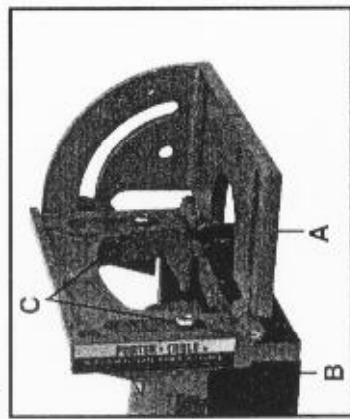


Fig. 4A

TO ADJUST TILT FENCE

Fence height is adjusted by loosening the two fence mounting screws (C) Fig. 4A, and sliding the fence up or down as required. Tighten the two fence mounting screws to secure the fence in the desired position.

Fence angle is adjusted by loosening the knob (A) Fig. 4B, and moving the fence until the desired angle on scale (B) Fig. 4, is aligned with the index point (C) Fig. 4B. Tighten the knob to secure the fence at the desired angle.

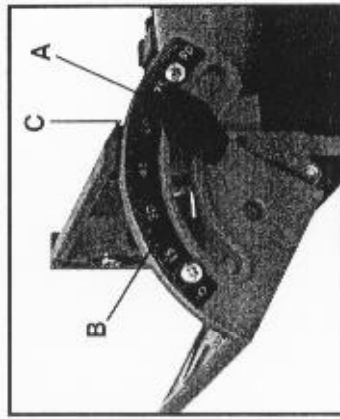


Fig. 4B

TO REMOVE TILT FENCE

CAUTION: DISCONNECT PLATE JOINER FROM POWER SOURCE.

1. Use hex wrench (furnished with the Plate Joiner), to remove the two fence mounting screws (C) Fig. 4, from the Plate Joiner blade guard.
2. Slide the tilt fence upward, off of the Plate Joiner.
3. Store tilt fence and mounting screws for future use.

TO INSTALL 45°/90° FENCE

CAUTION: DISCONNECT PLATE JOINER FROM POWER SOURCE.

1. Thread each of the two auxiliary fence mounting screws into the Plate Joiner blade guard approximately three turns.

NOTE: Two sets of fence mounting holes are provided in the blade guard. The upper set of holes is primarily used with the tilt fence. The lower set of holes is primarily used with the 45°/90° fence. Either fence may be mounted in either set of holes, to provide additional fence adjustment for material of unusual thickness.

2. Orient the 45°/90° fence for 90° operation (see Fig. 5A), or for 45° operation (see Fig. 5B), as required for the operation that is to be performed, and position the fence to the plate joiner blade guard.

NOTE:

- When assembling the fence in the 90° position, start the fence onto the top of the blade guard and slide downward.
 - When assembling the fence in the 45° position, start the fence onto the bottom of the blade guard and slide upward.
3. Adjust the fence to the desired position (as described later in this manual), and tighten the two mounting screws firmly.

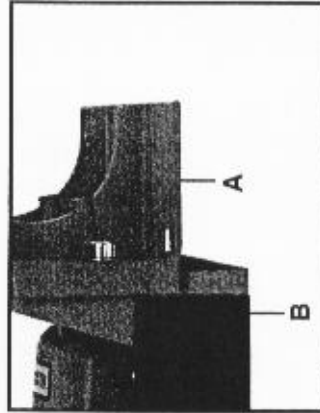


Fig. 5A

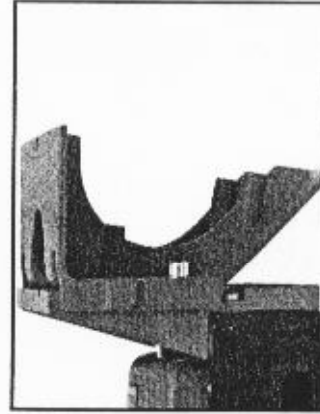


Fig. 5B

PRACTICE CUTS

Make several joints in scrap material as described in the following sections of this manual.

CORNER JOINTS

1. Layout groove positions as described in POSITIONING GROOVES.
2. Use hex wrench (provided) to loosen the two fence retaining screws (C) Fig. 4, just enough to allow up and down movement of fence.
3. Position fence so that bottom surface (A) Fig. 4A (or Fig. 5A), is at a distance of $\frac{3}{8}$ " + ($\frac{1}{2}$ the material thickness) above the bottom of the machine base (B) Fig. 4A (or Fig. 5A). Tighten the two retaining screws.
4. Clamp the workpieces securely.
5. Position machine to workpiece with bottom of auxiliary fence resting on workpiece and guide notch (A) or (B) Fig. 6 aligned with a groove centerline. Apply light forward pressure to bring front of machine in contact with workpiece.

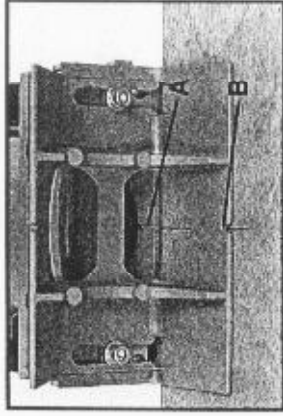


Fig. 6



Fig. 7

CAUTION: Do not apply enough pressure to move motor unit forward in machine base.

6. Hold machine firmly as shown in Fig. 7, and squeeze trigger switch to start machine.
7. At a slow, steady pace, push machine forward in base as far as depth stop allows.
8. Release trigger switch to stop machine and remove machine from work.
9. Repeat steps 5 through 8 until all the grooves for this joint are completed, see Fig. 8.

NOTE: Assemble all joints and verify alignments **before** applying glue.

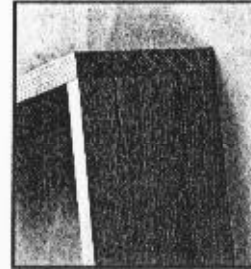
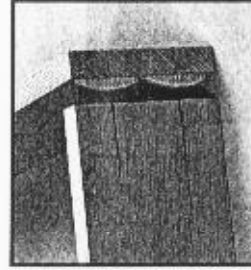
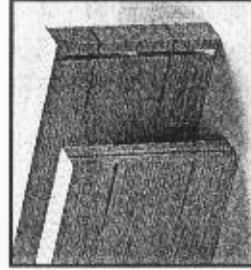


Fig. 8

SURFACE JOINTS

1. Layout groove positions as described in POSITIONING GROOVES.
2. Mark centerline of joint on workpiece (A) Fig. 9.
3. Clamp a straight edge to workpiece (A) Fig. 9, $\frac{3}{8}$ " back from the joint centerline (as marked in Step 2). Clamp workpiece securely.

NOTE: The auxiliary fence is **NOT** used in this operation. Remove two retaining screws (C) Fig. 4, and the fence.

4. Position machine to workpiece with bottom of base against straight edge and guide notch (C) Fig. 9, aligned with a groove centerline. Apply light forward pressure to bring front of machine in contact with workpiece.

CAUTION: Do not apply enough pressure to move motor unit forward in machine base.

5. Hold machine firmly as shown in Fig. 10, and squeeze trigger switch to start machine.

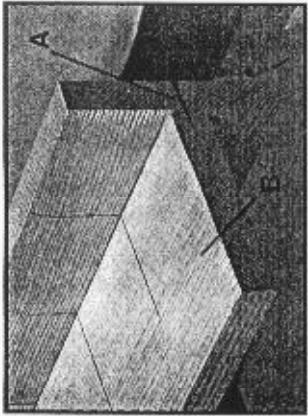


Fig. 9

6. At a slow, steady pace, push machine forward in base as far as depth stop allows.
7. Release trigger switch to stop machine and remove machine from work.
8. Repeat steps 4 through 7 until all the grooves for workpiece (A) Fig. 9 are completed, see Fig. 10.
9. Follow steps 2 through 7 of CORNER JOINTS for each groove required in workpiece (B) Fig. 9.

NOTE: Assemble all joints and verify alignments **before** applying glue.

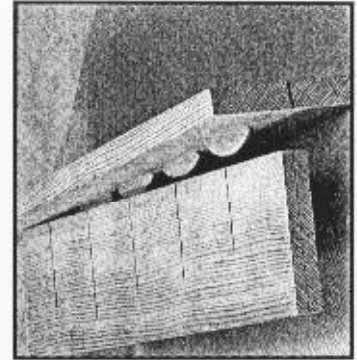
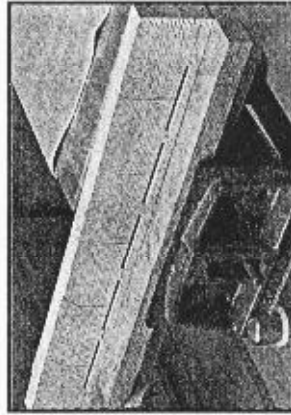


Fig. 10

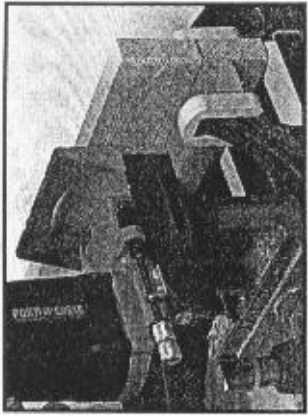


Fig. 11

BUTT JOINTS

Machine adjustment and operation for producing butt joints is the same as for CORNER JOINTS, see Fig. 11.

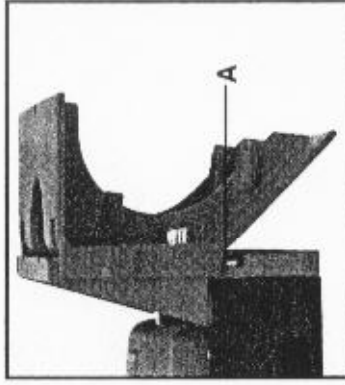


Fig. 12

MITER JOINTS (45°)

1. Layout groove positions as described in POSITIONING GROOVES.
2. Assemble the 45°/90° Fence in the 45° position as shown in Fig. 12 (see TO INSTALL 45°/90° FENCE section of this manual).
3. Position fence so that point (A) Fig. 12 (tangent point where 45° fence surface meets front of machine base), is a distance above the bottom surface of base equal to the material thickness plus $\frac{3}{16}$ ".

4. Clamp workpiece securely.

5. Position machine to workpiece utilizing either guide notch (A) or (B) Fig. 13, to align machine with a groove centerline. Seat machine firmly onto workpiece.

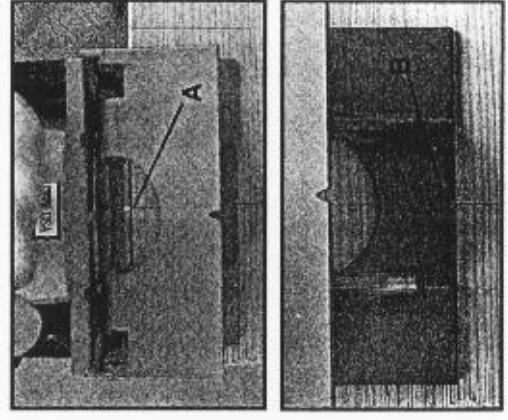


Fig. 13

6. Hold machine firmly as shown in Fig. 14, and squeeze trigger switch to start machine.
7. At a slow, steady pace, push machine forward in base as far as depth stop allows.
8. Release trigger switch to stop machine and remove machine from work.
9. Repeat Steps 4 through 8 until all the grooves for this joint are completed, see Fig. 14.

NOTE: Assemble all joints and verify alignments **before** applying glue.

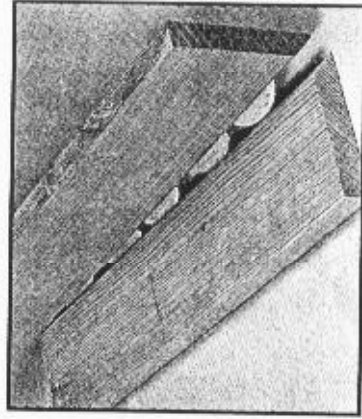


Fig. 14

CHANGING BLADE

1. **CAUTION: DISCONNECT MACHINE FROM POWER SOURCE.**
2. Use a Phillips screwdriver to remove two screws (A) Fig. 15, from the blade guard (B) Fig. 15.

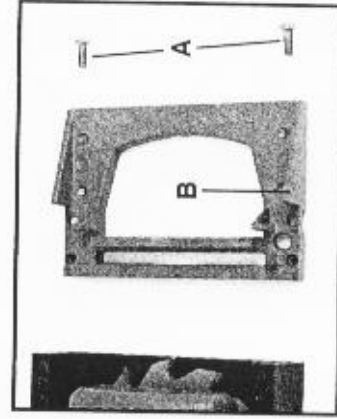
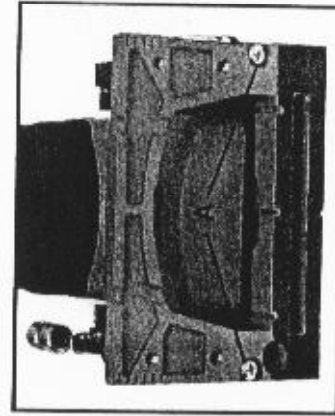


Fig. 15

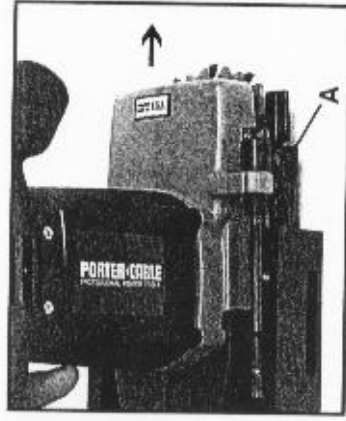
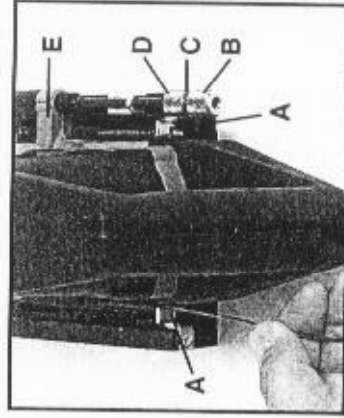


Fig. 16

3. Use the spring removal tool furnished with machine to unhook the rear ends of the two return springs (A) Fig. 16.
4. Note distance of knob (D) Fig. 16, to surface (E) Fig. 16. (Reset to this dimension when reassembling). Remove knob (B) Fig. 16, washer (C) Fig. 16, and knob (D) Fig. 16.
5. Slide motor unit forward out of base (see Fig. 16).

NOTE: A felt oiler (see Fig. 16) is located in each side of the gear housing cover. Brush clean and apply a few drops of light oil to each oiler before reassembly.

6. Place screwdriver through a blade gullet and into corner of tool housing (see Fig. 17) and hold while turning blade retainer counterclockwise with spanner wrench (furnished with machine) and remove.
7. Lift blade from mounting flange.
8. Clean bottom of motor unit and parts which were removed.
9. Coat blade flange and blade retainer lightly with grease. Install new blade with teeth pointing to the left as shown in Fig. 17, and reassemble machine by reversing above procedure.

NOTE: After reassembly, make a practice cut in scrap material. It may be necessary to fine adjust the depth of cut as described in FINE ADJUSTMENT (depth of groove).

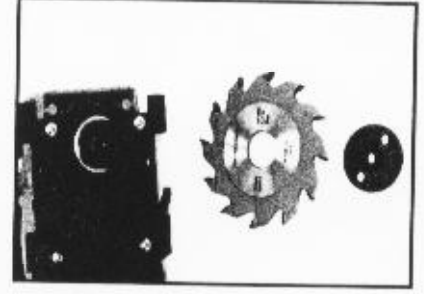
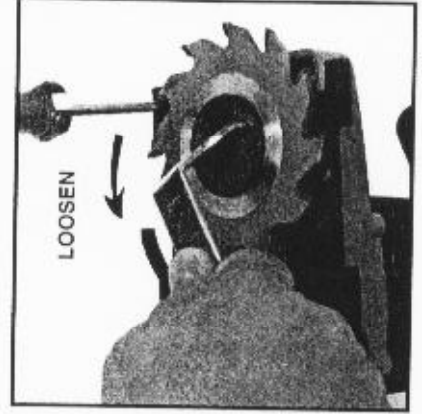


Fig. 17

MAINTENANCE

KEEP TOOL CLEAN

Periodically blow out all air passages with dry compressed air. Remove buildup of grime resulting from working with green or sappy wood. All plastic parts should be cleaned with soft cloths. NEVER use solvents when cleaning plastic parts.

CAUTION: Wear safety glasses while using compressed air.

FAILURE TO START

Should your tool fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

LUBRICATION

Occasionally lubricate ways with light machine oil. DO NOT OVERLUBRICATE as this creates excessive sawdust buildup.

The motor unit has been lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions. No further lubrication is necessary.

BRUSH INSPECTION

At approximately 100 hours of use, take or send your tool to your nearest Authorized Porter-Cable Service Station to be thoroughly cleaned and inspected; worn parts replaced, when necessary; relubricated with fresh lubricant, if required; reassembled with new brushes; and performance tested.

Any loss of power before the above maintenance check may indicate the need for immediate servicing of your tool. DO NOT CONTINUE TO OPERATE TOOL UNDER THIS CONDITION. If proper operating voltage is present, return your tool to the Service Station for immediate service.

SERVICE AND REPAIRS

All quality tools will eventually require servicing or replacement of parts due to wear from normal use. These operations, including brush inspection and replacement, should ONLY be performed by either an AUTHORIZED PORTER-CABLE SERVICE STATION or a PORTER-CABLE SERVICE CENTER. All repairs made by these agencies are fully guaranteed against defective material and workmanship. We cannot guarantee repairs made or attempted by anyone other than these agencies.

Should you have any questions about your tool, feel free to write us at any time. In any communications, please give all information shown on the nameplate of your tool (model number, type, serial number, etc.).

ACCESSORIES

The testing of this tool has been accomplished with the following accessories. For safest operation, it is recommended that only these accessories be used with this product.

WARNING: Since accessories other than those listed have not been tested with this product, use of such accessories could be hazardous.

48233 SPANNER WRENCH

5557 BLADE

PLATE JOINING BISCUITS

Come in three convenient sizes for any woodworking project.

- No. 5551 (Box of 1,000) "0" (16 mm x 47 mm)
- No. 5560 (Box of 150) "0" (16 mm x 47 mm)
- No. 5552 (Box of 1,000) "10" (20 mm x 52 mm)
- No. 5561 (Box of 125) "10" (20 mm x 52 mm)
- No. 5553 (Box of 1,000) "20" (24 mm x 58 mm)
- No. 5562 (Box of 100) "20" (24 mm x 58 mm)
- No. 5554 (Assortment pack) Contains 500 of Size "20",
250 of Size "10" and 250 of Size "0" biscuits.

PORTER-CABLE LIMITED ONE YEAR WARRANTY

Porter-Cable warrants its Professional Power Tools for a period of one year from the date of original purchase. We will repair or replace, at our option, any part or parts of the product and accessories covered under this warranty which, after examination, proves to be defective in workmanship or material during the warranty period. For repair or replacement, return the complete tool or accessory, transportation prepaid, to your nearest Porter-Cable Service Center or Authorized Service Station. Proof of purchase may be required. This warranty does not apply to repair or replacement required due to misuse, abuse, normal wear and tear or repairs attempted or made by other than our Service Centers or Authorized Service Stations.

ANY IMPLIED WARRANTY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL LAST ONLY FOR ONE (1) YEAR FROM THE DATE OF PURCHASE.

To obtain information on warranty performance please write to: PORTER-CABLE CORPORATION, 4825 Highway 45 North, P.O. Box 2468, Jackson, Tennessee 38302-2468; Attention: Product Service. THE FOREGOING OBLIGATION IS PORTER-CABLE'S SOLE LIABILITY UNDER THIS OR ANY IMPLIED WARRANTY AND UNDER NO CIRCUMSTANCES SHALL PORTER-CABLE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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