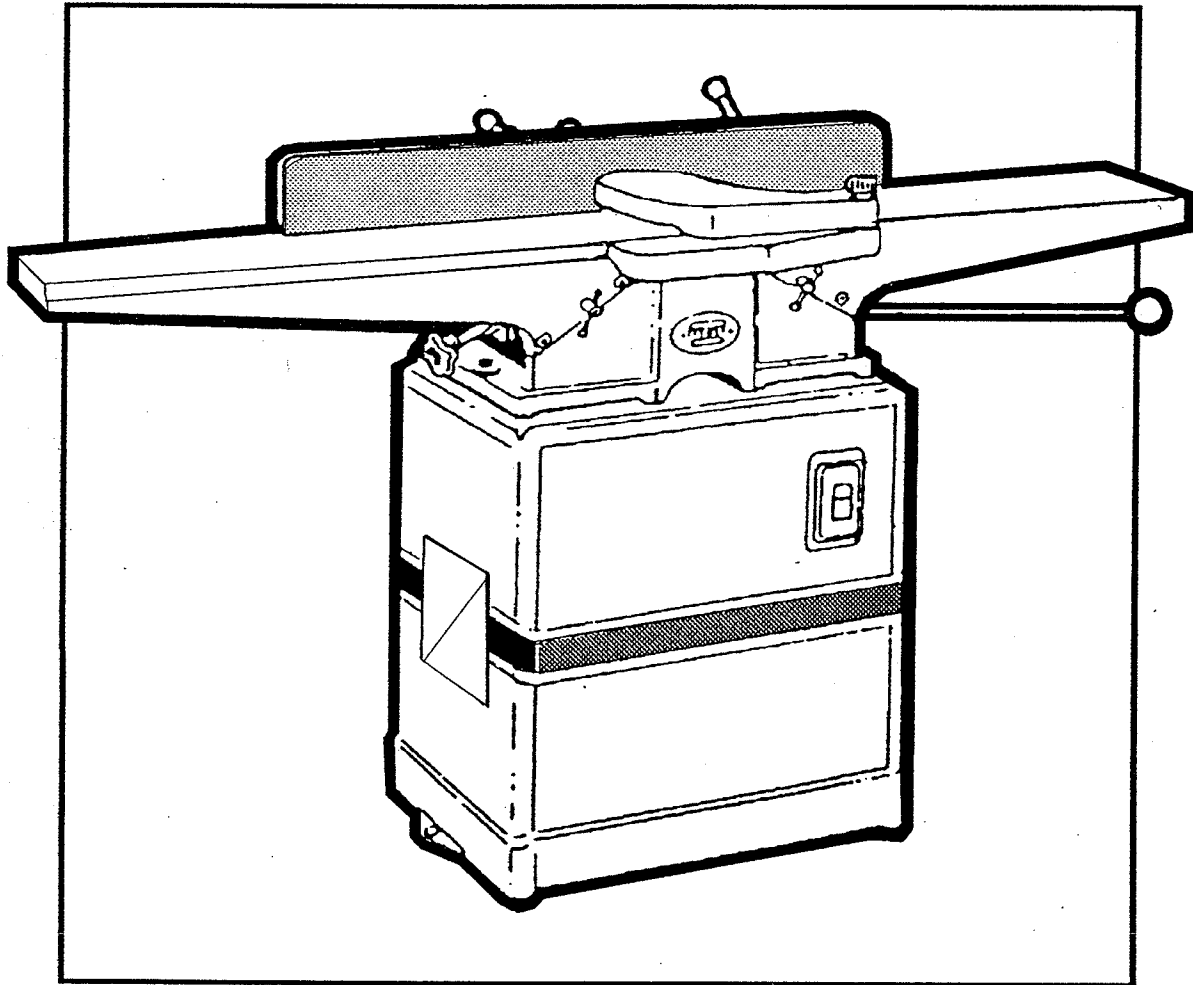


Models 50 and 60

# JOINTER

## OPERATING INSTRUCTIONS



Better By Design

**POWERMATIC**® **MTI**®

McMINNVILLE, TENNESSEE 37110 □ AC 615 / 473-5551

EDP# 0460198

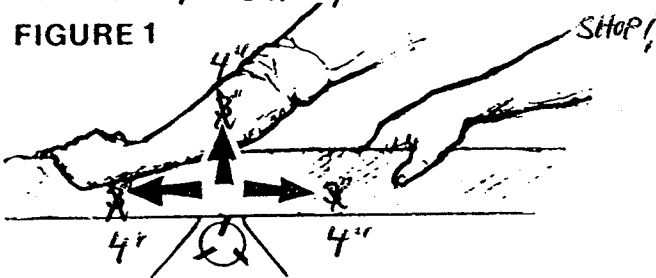
## SAFETY: Specific Rules

**READ THE MANUAL** Read, understand, and follow the safety instructions found in this manual. Know the limitations and hazards in using the jointer. One safety rule decal and two caution decals ( page 6 ) are placed on each machine as reminders of good safety practice.

**NEVER** surface stock less than 12 inches long, or 3 inches wide, or 3 inches thick without a hold down push block.

**3 INCH RULE** When working a piece of wood on the jointer, follow the 3 inch radius rule. The hands must never be closer than 3 inches to the cutter head (Fig. 1). *Mr. Barron requires this to be a 4" safety rule in our*

FIGURE 1



**KICKBACK** Use extra care in the location of the jointer in the shop. Position the jointer so that a kicked-back stock will strike a wall and not endanger other persons in the area.

**AVOID TIP-IN** Never apply pressure to stock directly over the cutter-head. This may result in the stock tipping into the cutterhead along with the operator's fingers. Follow the 3 inch rule. Position hands away from extreme ends of stock, and push through with a smooth, even motion.

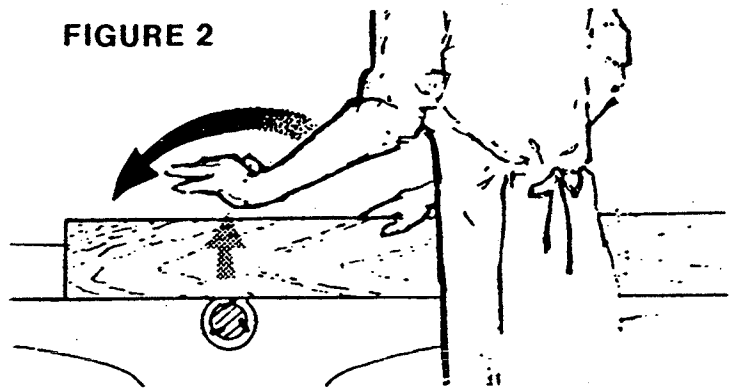
**AVOID KICKBACK** "Pull-out" and the danger of kicked-back stock can occur when the workpiece has knots, holes, or foreign material, such as nails. It can also occur when the stock is fed against the grain on the jointer. The grain must run in the same direction you are cutting. Before attempting to joint, or plane, each workpiece must be carefully examined for stock condition and grain orientation.

NOTE: At certain times it may be necessary to plane against the grain when working with a swirly grain wood or burls. With this type stock, the operator must use a lesser depth of cut and a slow rate of feed ( see **Skewing**, p.12 ).

**HAND SAFETY** It is good practice to move the hands in an alternate motion from back to front as the work continues through the cut. Never pass the hands directly over the cutter knife while holding on to the stock. As one hand approaches the knives, remove it from the stock in an arc motion and place it back on the stock in a position beyond the cutterknife ( Fig. 2 ).

NOTE: At all times hold the stock firmly.

FIGURE 2



\* Jointing End Grain → To avoid chip out, make sure you start the travel into the machine about 2 inches, Pull it out, turn it around 180° and finish cut from other end. In order to joint end grain, the width of the stock being jointed must be a minimum of 12" wide.

# CAUTION

SET THE KNIVES NO MORE THAN  
.015 ABOVE CUTTERHEAD TO  
MINIMIZE THE DANGER OF  
KICKBACK AND POTENTIAL INJURY.

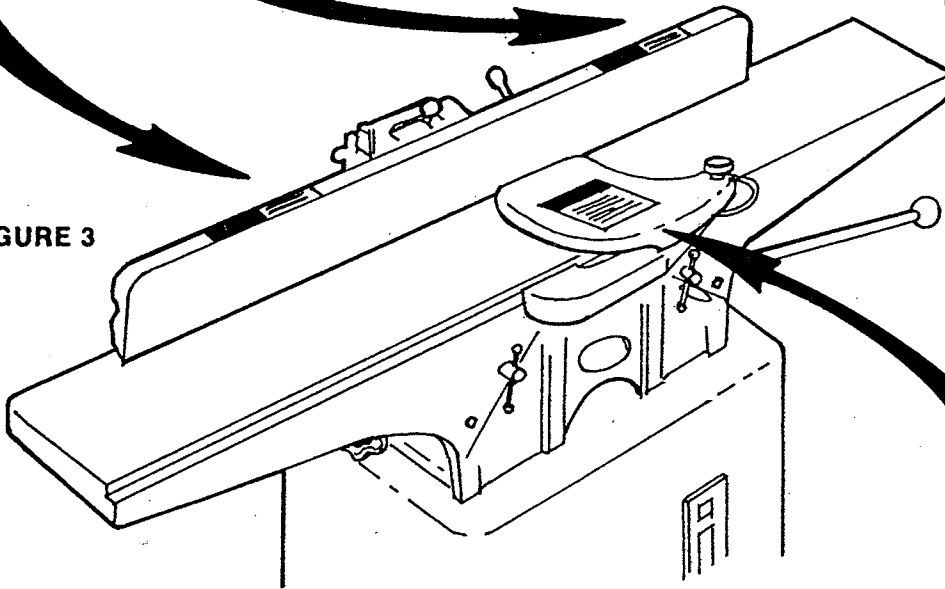
3330315

# CAUTION

KEEP HANDS CLEAR  
OF CUTTERHEAD

3330305

FIGURE 3



# SAFETY RULES

CAREFULLY READ INSTRUCTION MANUAL BEFORE OPERATING MACHINE.

DO NOT OPERATE WITHOUT ALL GUARDS AND COVERS IN POSITION.

BE SURE MACHINE IS ELECTRICALLY GROUNDED.

REMOVE OR FASTEN LOOSE ARTICLES OF CLOTHING SUCH AS NECKTIES, ETC. CONFINE HAIR.

REMOVE JEWELRY SUCH AS FINGER RINGS, WATCHES, BRACELETS, ETC.

USE SAFETY FACE SHIELD, GOGGLES, OR GLASSES TO PROTECT EYES AND OTHER PERSONAL SAFETY EQUIPMENT AS REQUIRED.

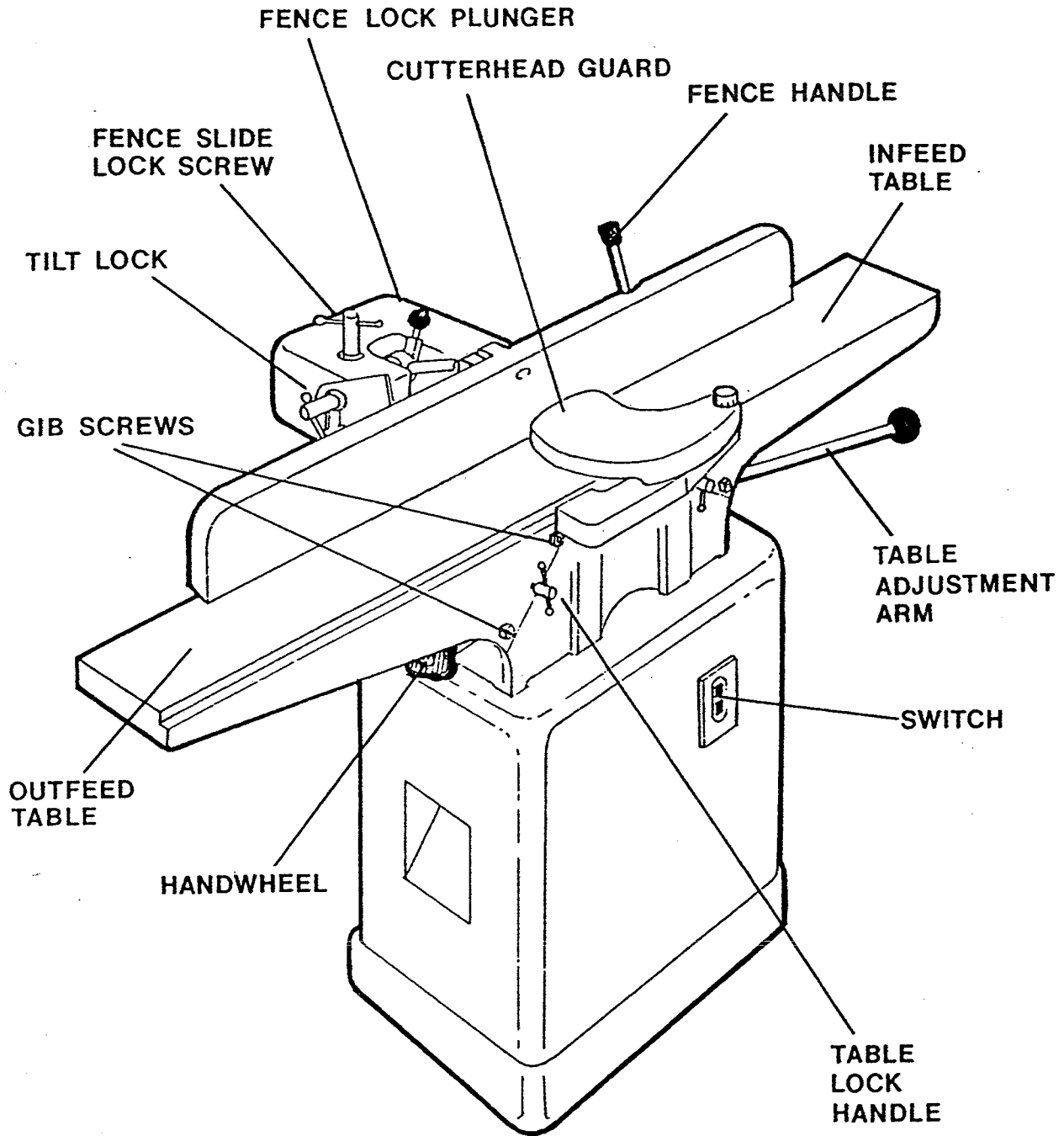
STOP MACHINE BEFORE MAKING ADJUSTMENTS OR CLEANING CHIPS FROM WORK AREA.

KEEP THE FLOOR AROUND THE MACHINE CLEAN AND FREE FROM SCRAPS, SAWDUST, OIL OR GREASE TO MINIMIZE THE DANGER OF SLIPPING.

3330283

# CONTROL LOCATIONS

FIGURE 4



## BASIC JOINTER OPERATIONS

Before making any cuts on the stock, make a few practice cuts by raising the infeed table to "O" and disconnect power source. In this manner you will acquaint yourself with the feel of jointer operations without the danger of serious injury.

### Surfacing (wide face)

Adjust depth of cut. It is better to make cuts of approximately 1/32 inch for hardwoods and 1/16 inch for softwood. This will enable you to have better control over the material being surfaced. Make several passes if necessary to obtain proper stock removal. Never surface pieces shorter than 12 inches or thinner than 3/8 inch without the use of a special work holding fixture. Never surface pieces thinner than 3 inches without the use of a push block. On stock shorter than 12 inches use a single two-hander push block (Fig. 5A). On stock longer than 12 inches use two push blocks as shown in Fig. 5B.

With narrow stock, use the type push block shown in Fig. 5C.

When surfacing short stock over 4 inches wide, use two (2) push blocks to guide material over cutterhead (Fig. 5D).

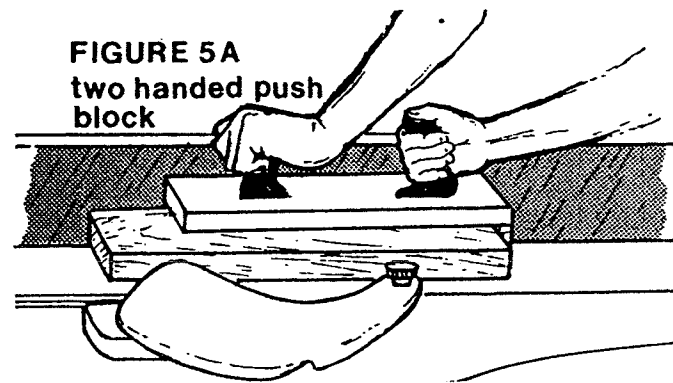


FIGURE 5A  
two handed push  
block

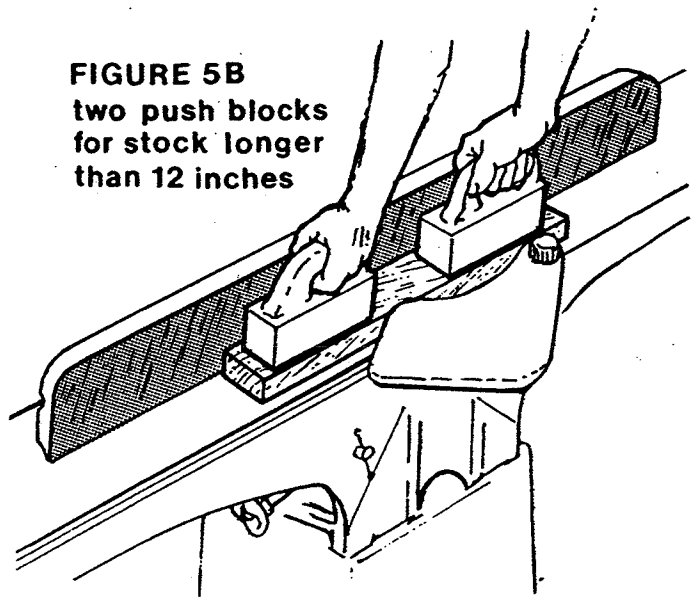


FIGURE 5B  
two push blocks  
for stock longer  
than 12 inches

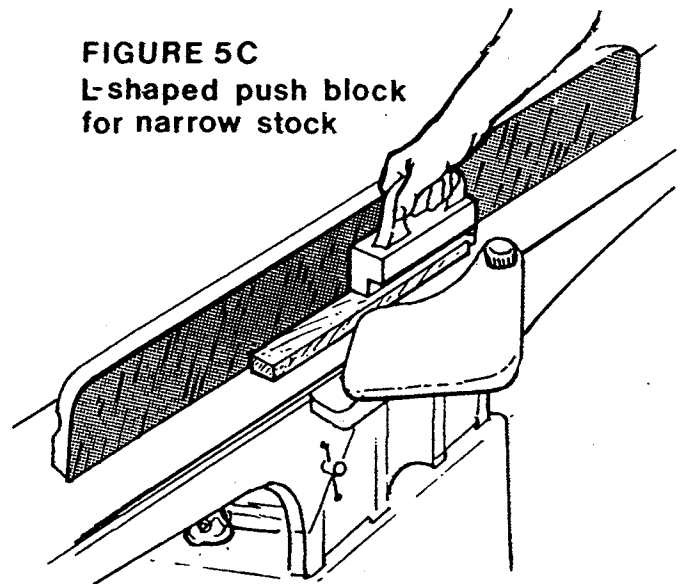


FIGURE 5C  
L-shaped push block  
for narrow stock

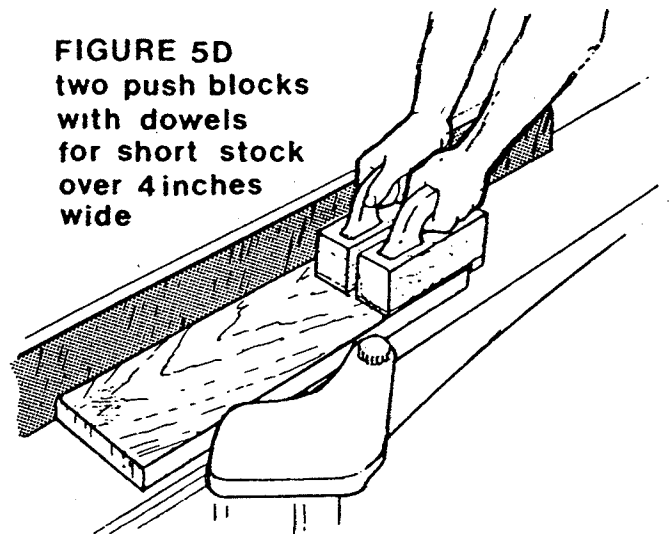


FIGURE 5D  
two push blocks  
with dowels  
for short stock  
over 4 inches  
wide

## Surfacing: long boards

The use of push blocks will help prevent hands from coming in contact with cutterhead in the event of a kickback and as trailing end of board passes over cutterhead.

When surfacing long stock, place push block near the front of piece and start feeding wood with the right hand until guard has opened and cut is started (Fig. 6A). Place second push block near the rear of the infeed table and continue feeding stock using the hand-over-hand method (Fig. 6B).

Before the left hand is in the 3 inch area of the cutterhead, move it over to the outfeed side as shown in Fig. 6C. As soon as possible follow with the right hand over to the outfeed side and continue through with cut (Fig. 6D).

When the stock is longer than twice the length of the infeed and outfeed tables, another helper or support table must be used to support the stock.

FIGURE 6A

left hand pushes down toward fence as right hand starts feed

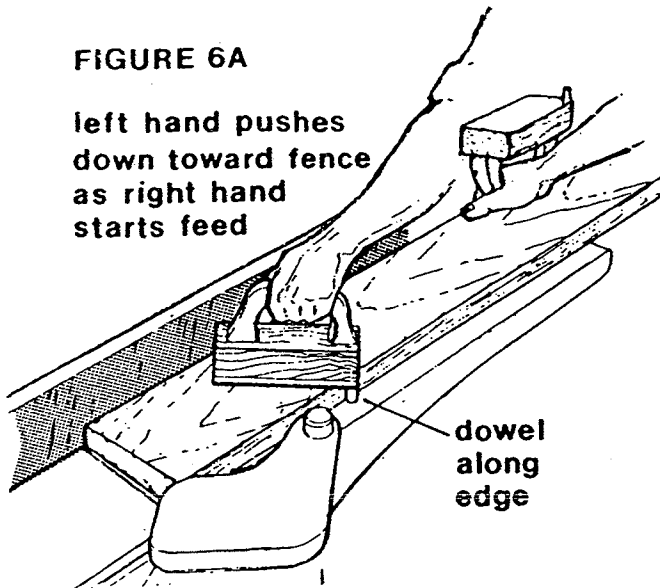


FIGURE 6B

near cutter, feed hand over hand

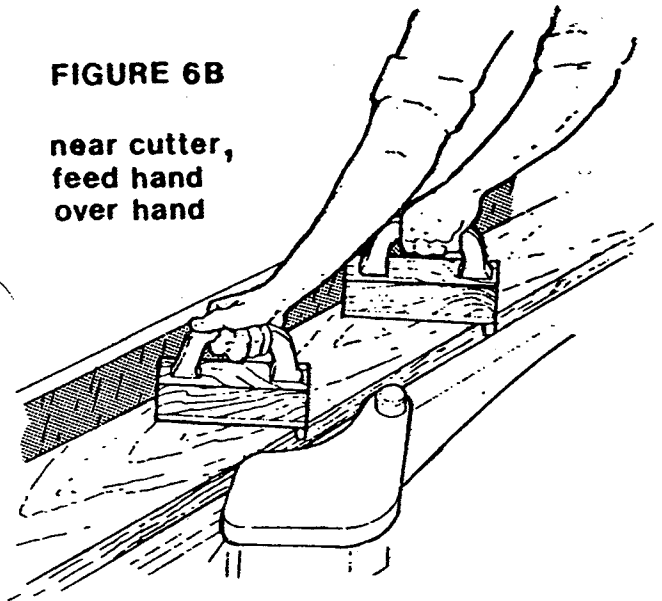


FIGURE 6C

left hand is moved to outfeed side

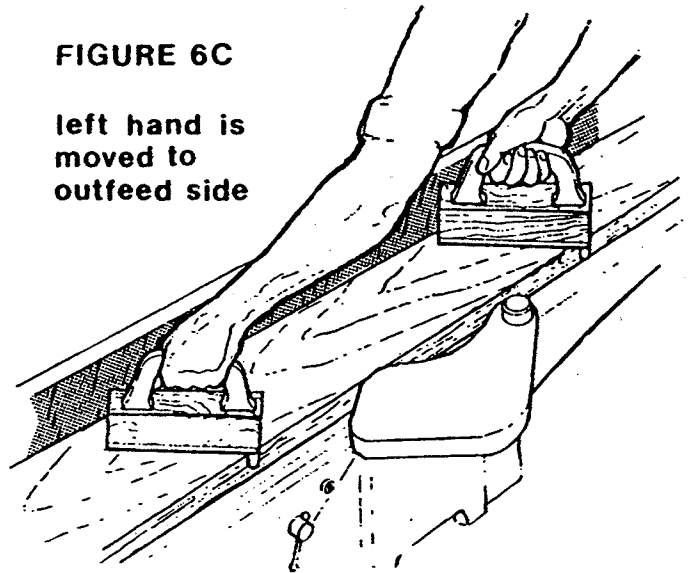
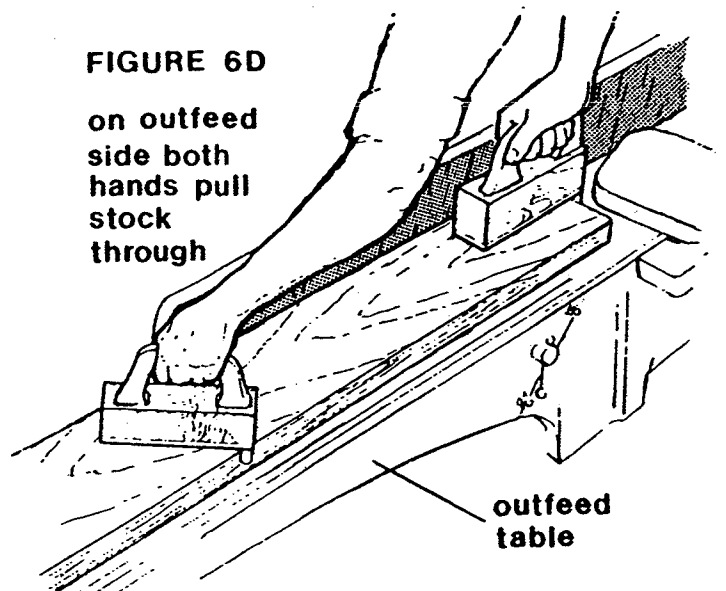


FIGURE 6D

on outfeed side both hands pull stock through



## Jointing (edging) narrow edge

Never edge a board that is less than 3 inches wide, less than 1/4 inch thick, or less than 12 inches long, **without using a push block!**

### Long Stock

When edging long pieces, the same procedures apply for surfacing long pieces. **CAUTION:** When workpiece is twice the length of the jointer infeed or outfeed table use an infeed or outfeed support.

### Depth of Cut

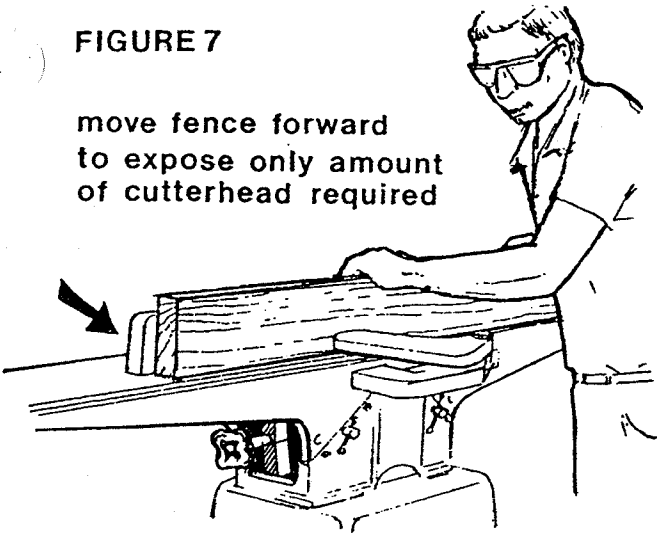
Begin by feeding stock with right hand and apply pressure to front of stock with push block. When edging, make cuts of approximately 1/16 inch for hardwood and 1/8 inch for softwood.

### Prevent Kickback

When edging wood wider than 3 inches, lap the fingers over top of the wood, extending them back over the fence such that they will act as a stop for the hands in the event of a kickback. Keep stock firmly against the fence (Fig. 7).

FIGURE 7

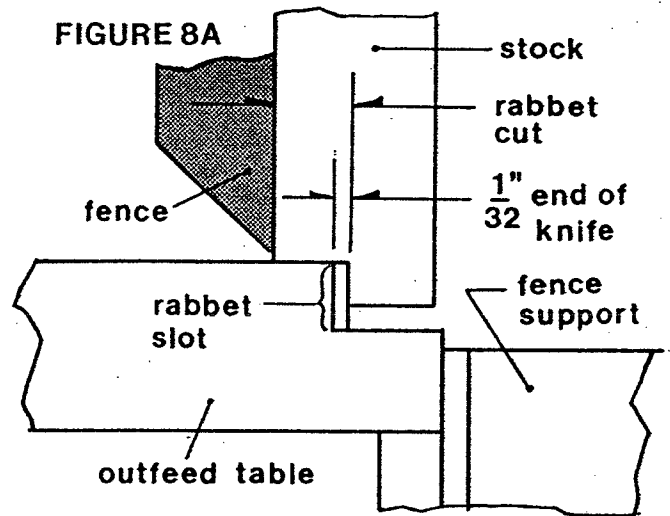
move fence forward to expose only amount of cutterhead required



**Rabbeting ( Danger: Rabbeting requires the removal of the cutterhead guard. Use extreme caution and keep hands clear of the cutterhead ). This will be not done on our jointer!**

### Width

Set fence for the desired width of the rabbet. Check the width of the rabbet by measuring the distance from the end of knife in the cutterhead to the fence (Fig. 8A). Make certain the machine is unplugged, or disconnected, before making this check.



Lower infeed table 1/32 inch at a time and make successive cuts until the desired depth of rabbet has been obtained. Note: It is easier and safer to take a series of **shallow** cuts.

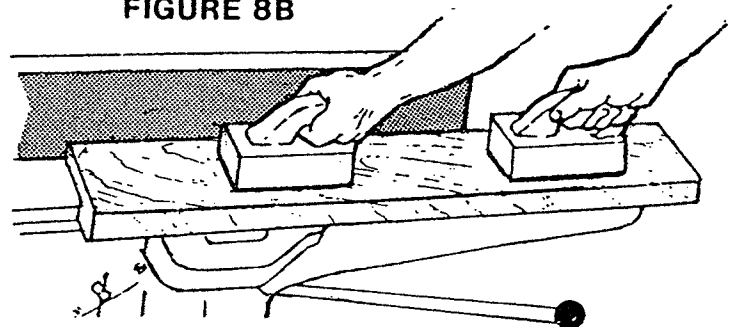
Make a trial cut using a piece of scrap material.

### Size

The width and thickness of the wood to be rabbeted depends on the width and length of the rabbet. **However, never rabbet a piece of wood less than 12 inches long.**

When rabbeting long pieces, follow the same procedure for surfacing long pieces (page 9). Whenever possible use push blocks to rabbet cut as shown in Fig. 8B. **Always replace the cutterhead guard immediately after rabbeting operation is completed.**

FIGURE 8B



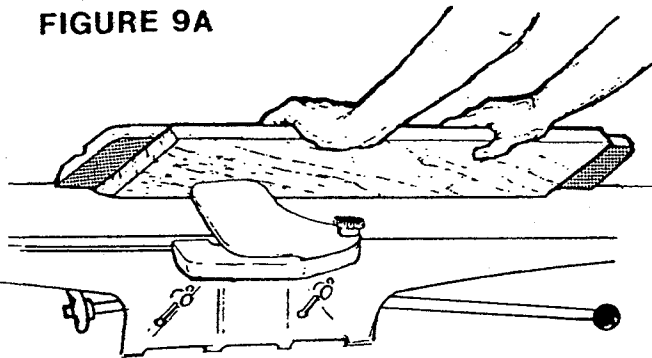
## Beveling

When beveling, never make cut deeper than 1/16 inch. Make certain material being beveled is over 12 inches long, more than 1/4 inch thick and 1 inch wide.

Set fence to desired angle.

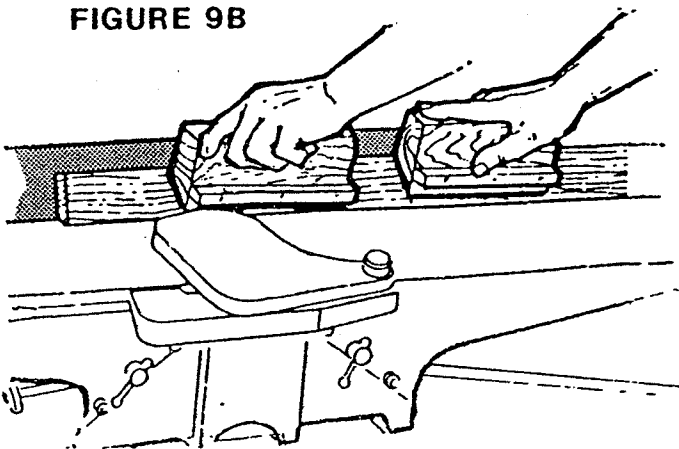
**CAUTION:** Although fence may be tilted in or out for a bevel cut, Powermatic recommends the fence be tilted in for safety reasons, making a cradled cut (Fig. 9A). For wood wider than 3 inches, hold with fingers close together near the top of the stock, lapping over the board and extending over the fence.

FIGURE 9A



**Safety:** When beveling material less than 3 inches wide use beveled push blocks and **apply pressure toward the fence.** Keep fingers **above** the ledge and near top of hold down block as shown in Fig. 9B.

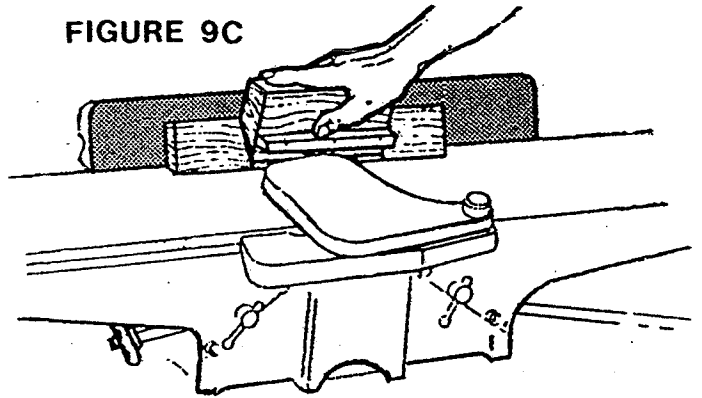
FIGURE 9B



## Short Stock

When beveling short material use one bevel hold down and apply pressure toward the fence. Keep thumb **above** the ledge on hold down block as shown in Fig. 9 C.

FIGURE 9C



## Cross Grain

**NOTE:** When beveling around four edges of a workpiece, make cross grain cuts **first.** This will help clean up any chipping or splintering when beveling the end grain.

For long boards, follow the same hand-over-hand procedure used for surfacing long boards, (p. 9).

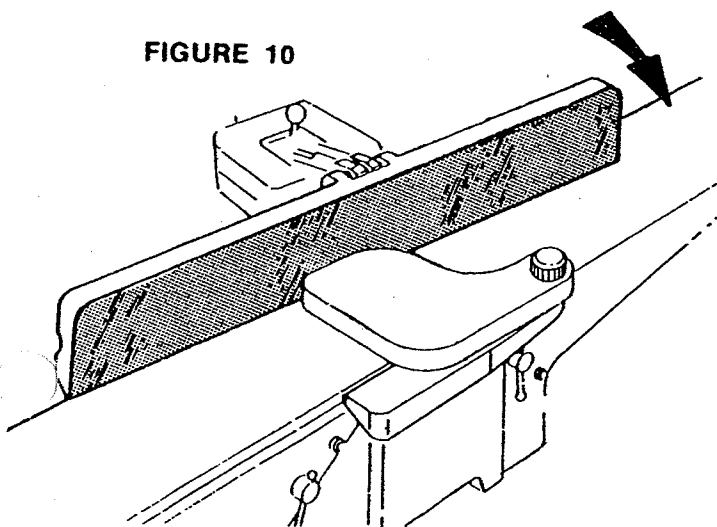


## Skewing (shear cutting)

When edging, or facing, burl or birds-eye maple, it is not unusual to deface or mar the surface being finished. This is caused by the cutterhead blades at times cutting against the grain. In order to prevent the defacing or marring of this type wood, it is necessary to skewer, or angle finish, the material being worked.

Release the fence locking screw and remove the fence assembly. Remove the key from the fence slide base. Replace the fence assembly at the desired angle across the cutterhead as shown in Fig.10 and tighten the fence locking screw.

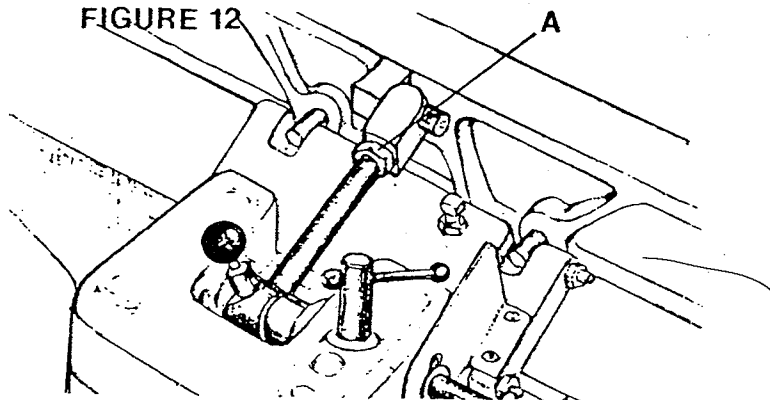
FIGURE 10



## Squaring the Fence

Before operating the jointer it is important to check that the fence is correctly aligned to the table. Loosen the lock nut A (Fig.12) and return the fence to the 90 degree position. There will be some play in the fence when it is unlocked. All play must be removed by tilting the fence toward or away from the table while locking the lock nut.

FIGURE 12



Always remove the backlash by tilting the fence in the same direction while tightening.

If the fence does not come to 90 degrees, do the following procedure.

1. Place a square on the outfeed table near cutterhead.
2. Loosen lock nut- A ( Fig. 11 ) and insert an adjusting tool in tilt rod- B.
3. Turn rod clockwise to move top of fence to the right and counterclockwise to move fence to the left.
4. When fence is square with outfeed table, reset lock nut- A.

## Spring Cutting

To spring cut, the outfeed table is lowered below the level of the cutterhead blade as shown in Fig 11. Loosen both gib screws-A on the outfeed table. Amount of end drop is controlled with the table lock handle-B. Tighten handle to reduce amount of drop. **A 1/32 inch drop usually creates the ideal concave for spring joints.** Return the outfeed table to be in line with the cutterhead knives on completion of the cut.

FIGURE 11

