



## INSTRUCTIONS AND PARTS LIST FOR

# No. 7122 12-inch WOODTURNING LATHE

### INSTALLATION AND CARE

#### MOUNTING LATHE —

1. Place the lathe on a sturdy level bench, with front edge of lathe legs about  $\frac{3}{4}$ " from front of bench. Bench should be high enough to bring lathe spindle about 1" above elbow level.
2. Mark and drill three holes for machine bolts or lag screws under corresponding holes in lathe legs. Fasten lathe to bench, but do not tighten bolts.
3. Level the lathe using a machinist's spirit level. To do this, check with level in two different positions: crosswise of the lathe, at both headstock and tailstock ends, with level across bedways. By placing thin metal shims or washers around the mounting bolts beneath lathe legs, adjust until both readings show that lathe bed is level. Slight variations may be corrected when tightening mounting bolts.
4. Bolt lathe securely in position by tightening each bolt a little at a time, rechecking level readings every few turns.

#### MOUNTING MOTOR —

The wood lathe requires a  $\frac{1}{3}$  or  $\frac{1}{2}$  HP, 1725 RPM motor, preferably a capacitor or repulsion-induction type. (Dealer can supply bushing for  $\frac{1}{2}$ " dia. motor shaft.)

Mount motor either below or behind headstock—whichever is most convenient. Position motor so pulley end is on left side. Motor must rotate clockwise when viewed from pulley end—wire according to instructions shown on motor.

Slide pulley on motor shaft so that small step is next to motor; tighten pulley set-screw.

**CAUTION:** Keep set-screws in motor and spindle pulleys tight to prevent scoring of motor shaft and spindle.

Place the belt around large step of spindle pulley and small step of motor pulley. Pull motor back and shift sideways until belt is tight and at right angles to the spindle. Bolt motor in this position.

**CAUTION:** Maintain proper belt tension at all times—belt should be just tight enough to prevent its slipping.

#### STATIC ELECTRICITY —

Sometimes a slight shock is experienced when touching the lathe. This may be caused by a static electrical charge set up by friction of the moving parts and is not necessarily an indication of faulty motor windings or grounds. To correct, ground lathe to a water or heater pipe.

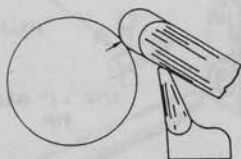


Fig. 2A



Fig. 2B

#### CLEANING AND LUBRICATION —

Keep all finished surfaces clean and covered with a thin film of oil when lathe is not in use.

Always clean centers, as well as spindle and tailstock taper bores, before centers are inserted. Keep threads on spindle and inside of faceplate free of chips and dirt.

Lubricate with S.A.E. No. 20 machine oil:

1. Headstock Spindle Bearings—Oil once a week when in constant use; raise guard and place oil in oiler above each bearing.
2. Tailstock Bearing—Oil once a week when in constant use; place oil between handwheel and tailstock.
3. Tailstock Ram—Oil once a week.
4. Lathe Bed-Ways—Oil once a week.

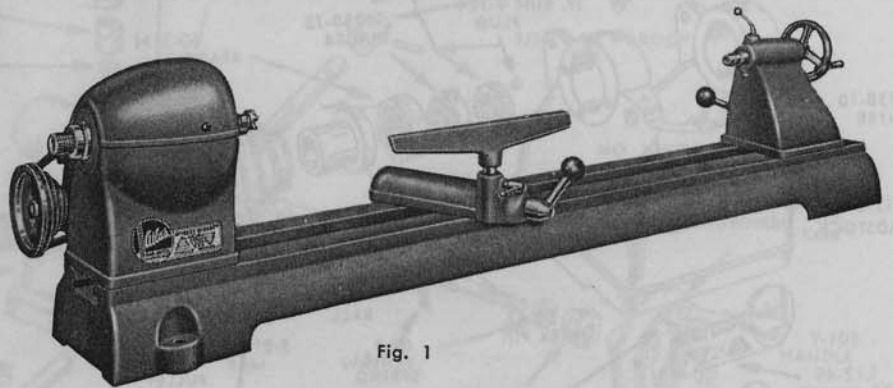


Fig. 1

#### SPINDLE ADJUSTMENT

After long and continued hard use, end-play may develop in lathe spindle. To correct:

- (a) loosen the four screws in front bearing collar and remove collar;
- (b) place shims around spindle against ball-bearing. The four shims available are L3-81 (.002"); L3-81A (.008"); L3-81B (.015"); L3-81C (.030");
- (c) replace collar—holding it tightly against shims, check clearance between collar and headstock with feeler gauge. Approximately .004" to .006" clearance is required to obtain proper bearing preload. Add or remove shims until correct clearance is obtained;
- (d) screw collar to headstock.

### OPERATION

#### SPEEDS —

There are four spindle speeds. Using a 1725 RPM motor these are: 635 RPM, 1230 RPM, 2430 RPM, and 4680 RPM. Belt positions for these are shown on speed chart on front of lathe headstock.

Speeds for various woodturning operations and sizes of stock are given below.

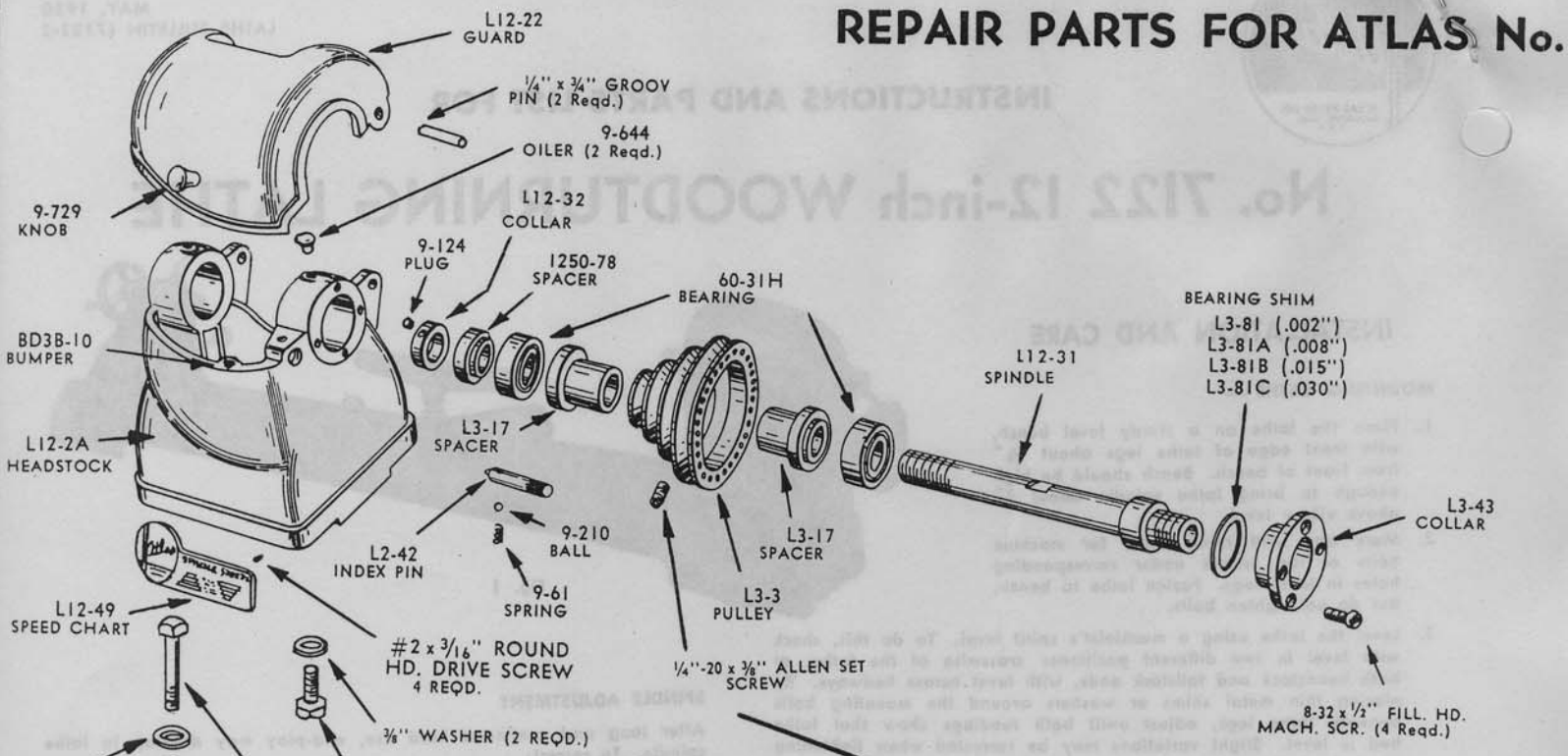
STOCK DIAMETER	ROUGHING CUT	GENERAL FINISH CUT	FINE FINISH CUT—SANDING
Up to 2"	2430 RPM	2430 RPM	4680 RPM
2" to 3"	1230	1230	2430
3" to 4"	635	1230	2430
4" to 5"	635	1230	1230
5" to 6"	635	635	1230
6" to 7"	635	635	1230
7" to 8"	635	635	635
8" to 9"	635	635	635
9" to 10"	635	635	635

#### WOODTURNING CHISELS —

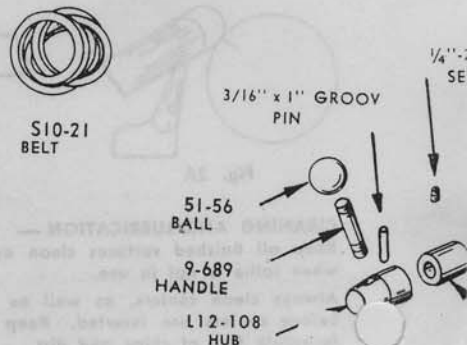
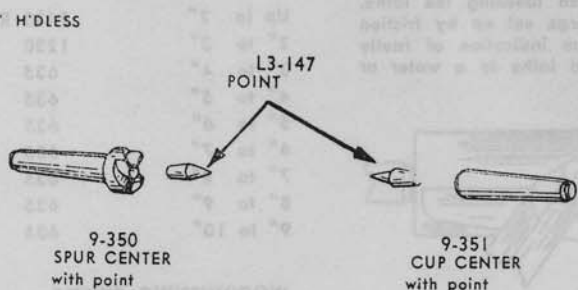
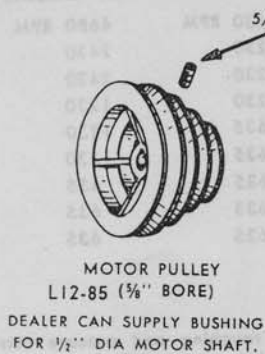
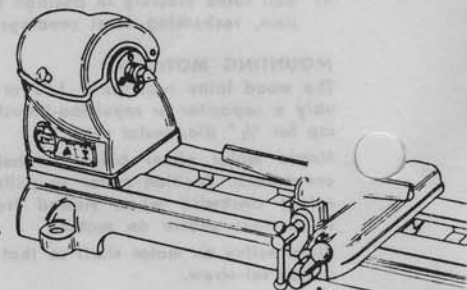
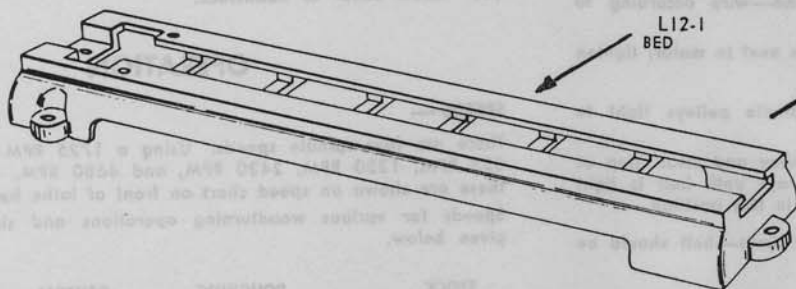
1. **GOUGE**—Fig. 3-A. Used mostly for roughing and concave cuts. Chisel should be held on its side, rolled over a little in direction of cut to produce shearing action. Handle is held a few inches below tool rest, slightly behind cutting edge. (See figures 2A and 2B). Never force gouge directly into work as it may catch and split the wood or fly out of your hands.
2. **PARTING TOOL**—Fig. 3-B. Used for cutting-off, sizing, squaring shoulders, cutting recesses, etc. Edge of parting tool is placed on tool rest, perpendicular to stock, with point above centerline of work. Cut should be started with handle sloping downward, and chisel pushed directly into work. As cut progresses, handle must be gradually raised to keep cutting edge engaged. Never force the tool in so fast that it tears rather than cuts the wood.

(Continued on Page 4)

# REPAIR PARTS FOR ATLAS No.



**L12-2AX**  
HEADSTOCK ASSEMBLY  
INCLUDING BELT



## ORDERING INFORMATION

IMPORTANT—The following information must be furnished on all repair part orders—  
 1—Quantity Required  
 2—PART NUMBER and NAME of Part  
 3—Model and Serial Number of Lathe

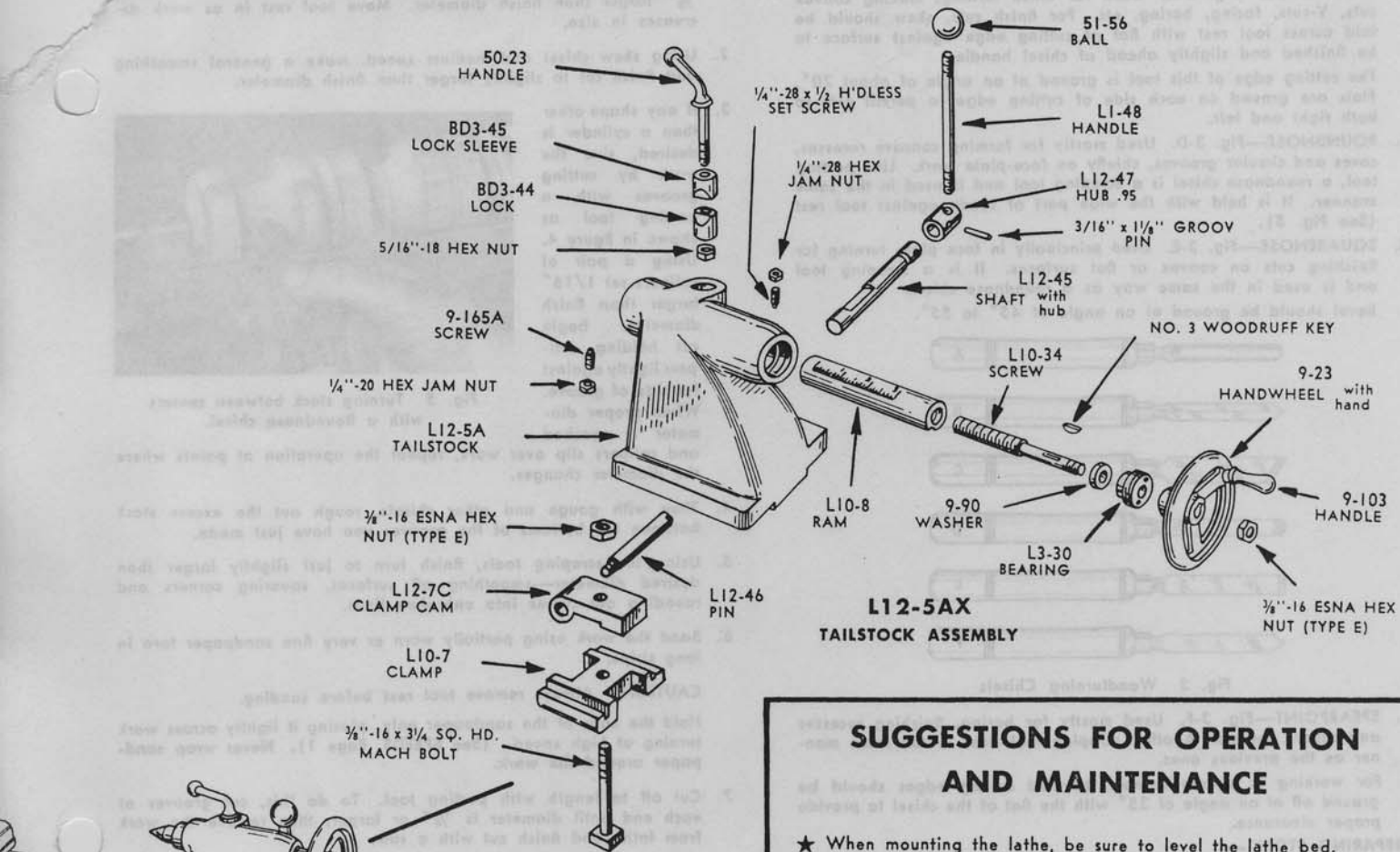
Parts shown without part numbers are standard parts and should be purchased locally.

MODEL NUMBER	7122	SERIAL NUMBER	000755
Atlas Press Company		Kalamazoo, Mich.	
MADE IN U.S.A.			

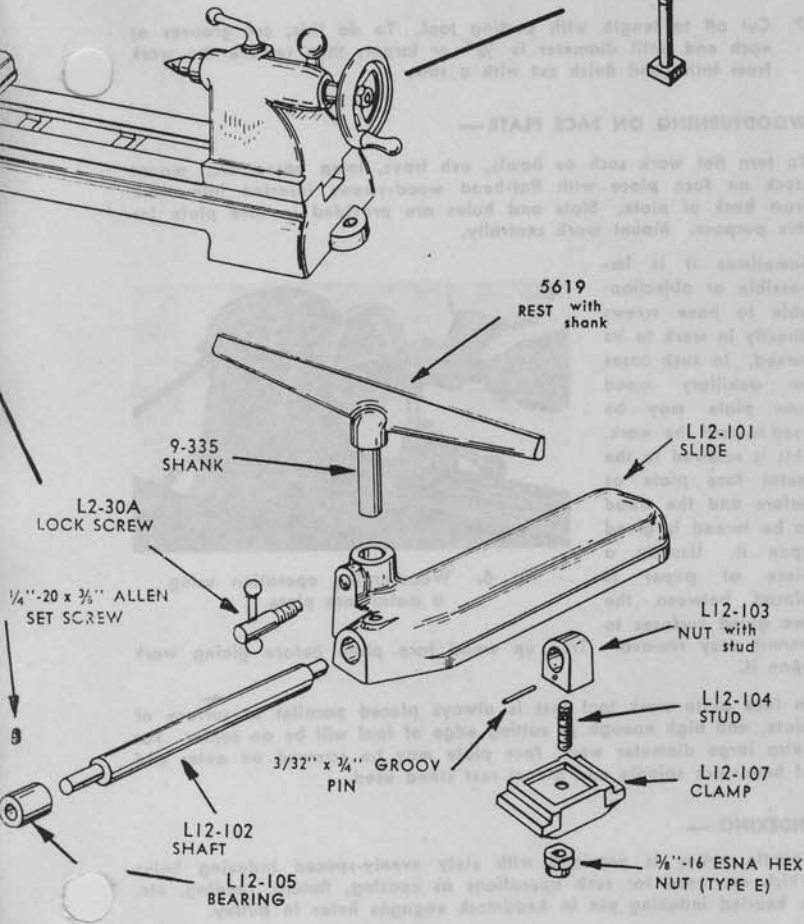
Be sure to give Model and Serial Number on this plate. Plate located on lathe bed.

ATLAS PRESS CO. KALAMAZOO 13D, MICH., U. S. A.

# 2 WOODTURNING LATHE



**L12-5AX  
TAILSTOCK ASSEMBLY**



**L12-101X  
TOOL REST ASSEMBLY**

## SUGGESTIONS FOR OPERATION AND MAINTENANCE

- ★ When mounting the lathe, be sure to level the lathe bed.
- ★ Keep set screws in motor and spindle pulleys tight to prevent scoring of motor shaft and spindle.
- ★ Maintain proper belt tension — keep the belt just tight enough to prevent its slipping.
- ★ Keep the spindle and tailstock centers and tapers clean.
- ★ Always examine stock before turning to make sure it's not split and that it's free of nails.
- ★ Apply beeswax to the tailstock centerpoint when turning stock between centers — it will prevent burning the wood.
- ★ When stock is mounted between centers be sure tailstock and tailstock ram are locked securely.
- ★ When using the face plate for turning be sure the work is solidly mounted.
- ★ Use a wood wedge between the spindle pulley and headstock to remove the face plate — NEVER use the pulley index pin to lock the pulley.
- ★ To remove live center, slide a rod through rear of spindle and tap it gently against the center. Catch center as it is loosened.
- ★ Keep tool slide and rest locked securely.
- ★ Never adjust the tool rest while the lathe is running.
- ★ Hold woodturning chisels firmly to prevent their hogging into the wood or flying out of your hand.
- ★ Remove the tool rest before sanding or polishing operations.
- ★ Keep the bed ways covered with oil when lathe is not in use — it will keep ways from rusting.

## OPERATING INSTRUCTIONS

- 3. SKEW CHISEL**—Fig. 3-C. Used for finish turning, making convex cuts, V-cuts, facing, boring, etc. For finish cuts, skew should be laid across tool rest with flat of cutting edge against surface to be finished and slightly ahead of chisel handle.  
The cutting edge of this tool is ground at an angle of about 70°. Flats are ground on each side of cutting edge to permit cuts to both right and left.
- 4. ROUNDNOSE**—Fig. 3-D. Used mostly for forming concave recesses, coves and circular grooves, chiefly on face-plate work. Like parting tool, a roundnose chisel is a scraping tool and is used in the same manner. It is held with the wide part of blade against tool rest (See Fig. 5).
- 5. SQUARENOSE**—Fig. 3-E. Used principally in face plate turning for finishing cuts on convex or flat surfaces. It is a scraping tool and is used in the same way as a roundnose chisel. Bevel should be ground at an angle of 45° to 55°.

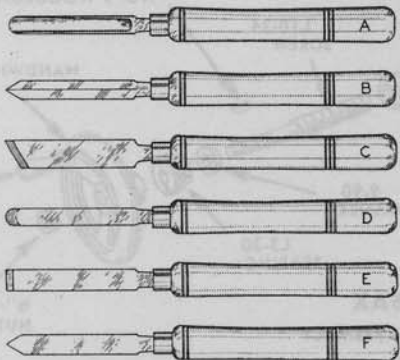


Fig. 3 Woodturning Chisels

- 6. SPEARPOINT**—Fig. 3-F. Used mostly for boring, finishing recesses and square corners. Another scraping tool—use in the same manner as the previous ones.  
For working in square corners, beveled cutting edges should be ground off at an angle of 35° with the flat of the chisel to provide proper clearance.

### PREPARING STOCK —

1. Locate centers on wood to be turned. If stock is square or rectangular, centers may be found by drawing diagonals on ends.
2. Make 1/8" deep saw cuts on headstock end of work—these should be through the center point and at right angles to each other. If wood is hard, drill 3/32" diameter hole in each center point to a depth of about 1/8".
3. Stand the stock on end on a solid surface and drive spur center into center of stock, with prongs of spur center entering saw cuts. Always use a rubber or wood mallet—never a hammer.  
**CAUTION:** Do not drive work against live center when it is in the lathe.

4. Place live center in lathe, holding work against it. Clamp tailstock securely in position about 1/4" from end of stock. Turn handwheel until dead center is firmly in the work. Revolve work by hand to make sure it turns freely, and lock tailstock ram in place.

Place beeswax or other heavy lubricant on centerpoint to prevent burning of wood by friction.

5. Set tool rest to within 1/8" of work and parallel with it. Clamp securely in place.

**CAUTION:** Always revolve work by hand to make sure it clears the tool rest.

Position tool rest so that cutting edge of tool will be above centerline of work.

**CAUTION:** Make sure tool rest is clamped securely. Never adjust the rest while lathe is running.

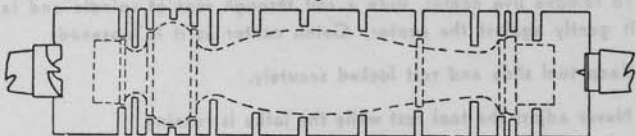


Fig. 4

### WOODTURNING BETWEEN CENTERS —

1. Run lathe at low speed, and, using a gouge in the manner described above, round off corners. Rough turn to cylinder about

1/8" larger than finish diameter. Move tool rest in as work decreases in size.

2. Using skew chisel and medium speed, make a general smoothing and finish cut to slightly larger than finish diameter.

3. If any shape other than a cylinder is desired, size the work by cutting grooves with a parting tool as shown in figure 4. Using a pair of calipers set 1/16" larger than finish diameter, begin cut holding calipers lightly against far side of groove. When proper diameter is reached and calipers slip over work, repeat the operation at points where the diameter changes.

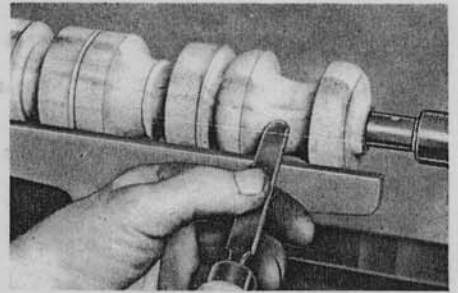


Fig. 5 Turning stock between centers with a Roundnose chisel.

4. Then with gouge and other chisels, rough out the excess stock between the bottoms of the grooves you have just made.
5. Using the scraping tools, finish turn to just slightly larger than desired diameter—smoothing off surfaces, squaring corners and rounding out curves into unbroken lines.
6. Sand the work using partially worn or very fine sandpaper torn in long strips.

**CAUTION:** Always remove tool rest before sanding.

Hold the ends of the sandpaper only, placing it lightly across work turning at high speed. (See SPEEDS, Page 1). Never wrap sandpaper around the work.

7. Cut off to length with parting tool. To do this, cut grooves at each end until diameter is 1/4" or larger, then remove the work from lathe and finish cut with a saw.

### WOODTURNING ON FACE PLATE —

To turn flat work such as bowls, ash trays, lamp bases, etc., mount stock on face plate with flat-head wood-screws inserted into work from back of plate. Slots and holes are provided in face plate for this purpose. Mount work centrally.

Sometimes it is impossible or objectionable to have screws directly in work to be turned. In such cases an auxiliary wood face plate may be used to hold the work. This is screwed to the metal face plate as before and the wood to be turned is glued upon it. Usually a piece of paper is placed between the two glued surfaces to permit easy removal.

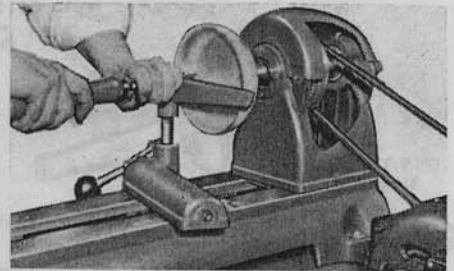


Fig. 6. Woodturning operation using a metal face plate.

True up wood face plate before gluing work upon it.

In face plate work tool rest is always placed parallel to surface of plate, and high enough so cutting edge of tool will be on center. For extra large diameter work, face plate may be screwed on outer end of headstock spindle and a tool rest stand used.

### INDEXING —

Spindle pulley is provided with sixty evenly-spaced indexing holes which are used for such operations as spacing, fluting, reeding, etc. A knurled indexing pin in headstock engages holes in pulley.

**CAUTION:** Never use index pin to lock spindle when removing face plate.