

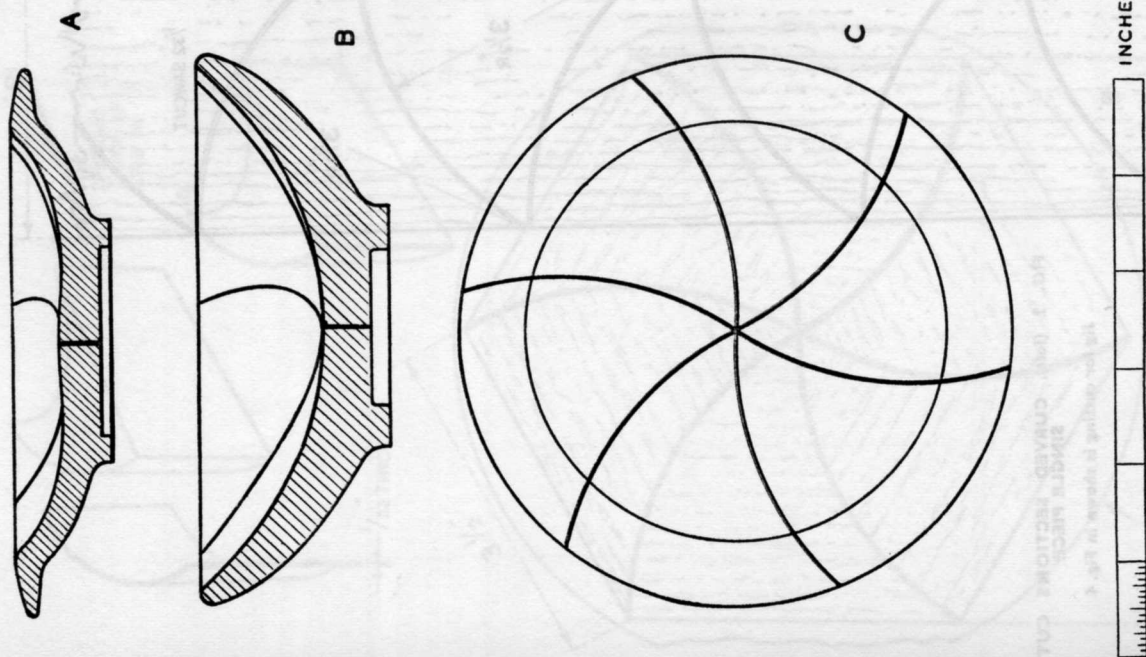


FIG. 1. BUILT-UP BOWLS MADE WITH CURVED SECTIONS

6. BUILT-UP BOWLS

FIG. 1 SHOWS TWO DESIGNS (A AND B) FOR A SMALL BOWL MADE UP OF SIX curved sections cut from a light-coloured hardwood. Between the sections is a thin strip of dark wood veneer which produces the pattern shown in the centre plan view (C). The method of assembly is similar to that used for the built-up clock cases, Fig. 3, page 49; but the cutting of the curved sections so that they fit accurately together presents a peculiar problem.

Curved sections. As it would be difficult to make these by hand a suitable wooden jig for use with a small band saw will be described later. The sections are cut from a 3 in. wide block which has been carefully planed to size. The depth of the block should be not less than $1\frac{3}{8}$ in. for the upper bowl (A) and $2\frac{3}{8}$ in. for the lower one (B), Fig. 1. The length required is about 15 in. which includes the waste piece left when the last section is cut off. In Fig. 2 the block is shown divided into sections by a series of saw-cuts on a $3\frac{1}{2}$ in. radius. There is, however, no need to mark these out if the jig is used, as this is designed to locate the work as each cut is made.

Jig. The construction of the jig is shown in Figs. 4 and 5. It will be seen that it consists of a flat base board provided with a vertical pivot on which the work carrier can rotate. The dimensions of the base must be made to suit the band saw table, and it should extend far enough to enable the jig to be firmly clamped in position. A $\frac{1}{4}$ in. wide slot is cut to clear the saw blade.

The work carrier has a vertical stop carefully positioned at one end and a curved slot through which the saw passes. The slot has a short length of straight to form a lead for the saw blade and facilitate lining up. The straight part of the slot should be carefully marked off and cut by hand with a relief on the inside edge to clear the saw blade when the work carrier swings outwards. The remaining curved portion is cut on the band saw after the jig is assembled and clamped in the correct position.

How jig works. The operation of the jig is shown in Fig. 6. The upper view shows the workpiece in position for the first cut, with the jig clamped to the band saw table so that the saw is just clear of the bottom of the slot in the base board, while at the same time locating centrally in the parallel portion of the slot in the work carrier. The band saw is then started and the carrier with its

BUILT-UP BOWLS

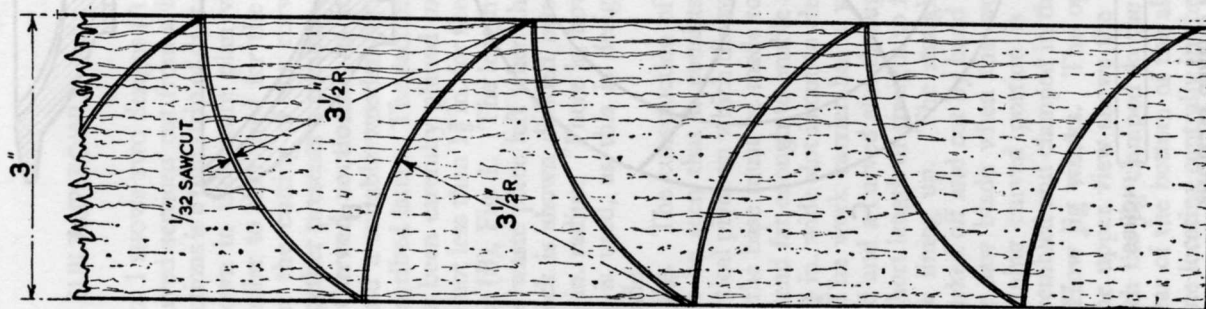


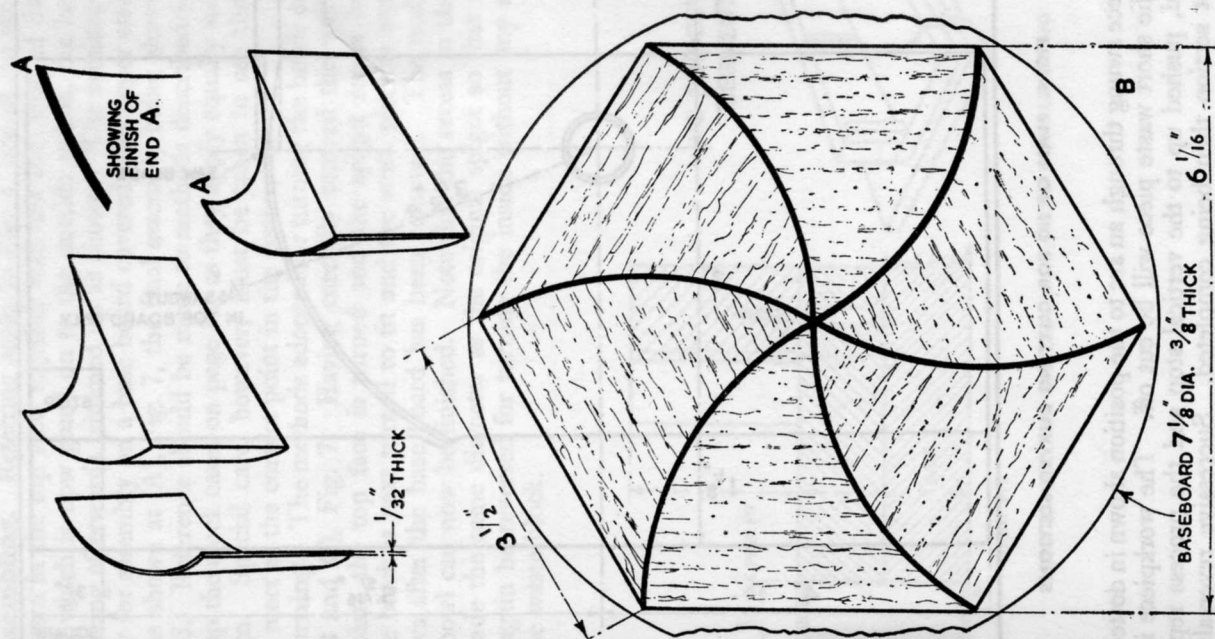
FIG. 2 (left). CURVED SECTIONS CUT FROM SINGLE PIECE

Jig for cutting is shown in Fig. 4

FIG. 3 (right). DETAIL OF CURVED SECTIONS SHOWING INLAY (A)

(B) shows the parts assembled ready for turning

SHAPE OF SECTIONS



Assembling. Referring again to Fig. 3, one of the six sections is shown in the top view together with the thin strip of dark hardwood which is now glued on to the outside radius, the inner edge (A) being afterwards trimmed up as shown. The sections are now ready for assembly on a base board covered with paper and marked out as shown at (A), Fig. 7, the final assembly being shown at (B), Fig. 3. Reference should be made to methods described for building up the clock cases on page 52, as they apply equally well to this design. Special care, however, must be taken to see that all the lines meet at the correct point in the centre.

Turning. The methods adopted for turning the bowls are shown at (B and C), Fig. 7. Having carefully centred the work on the faceplate the top face is turned and the spigot recess bored. A waste block is next turned to fit and the work piece is attached by screws after the base board has been removed. The underside of the bowl can now be finished. Note that the recess in the bottom is made the same diameter as the original spigot so that the work can again be reversed for turning the inside without any alteration to the waste block.

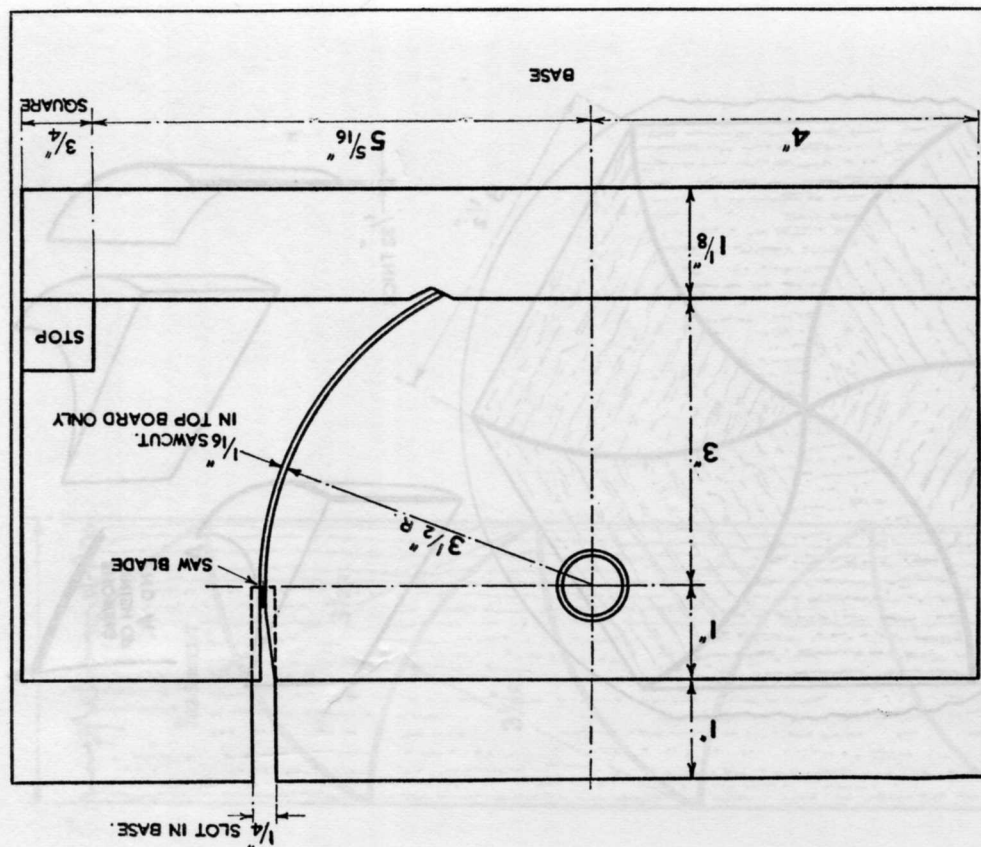


FIG. 4. PLAN OF JIG FOR CUTTING CURVED SECTIONS

workpiece swung through an arc to the position shown in dotted lines when the short waste piece will be cut off. The workpiece is next reversed, pushed up to the vertical stop and the process repeated, the first section then being completed. Successive reversals produce the remainder of the sections.

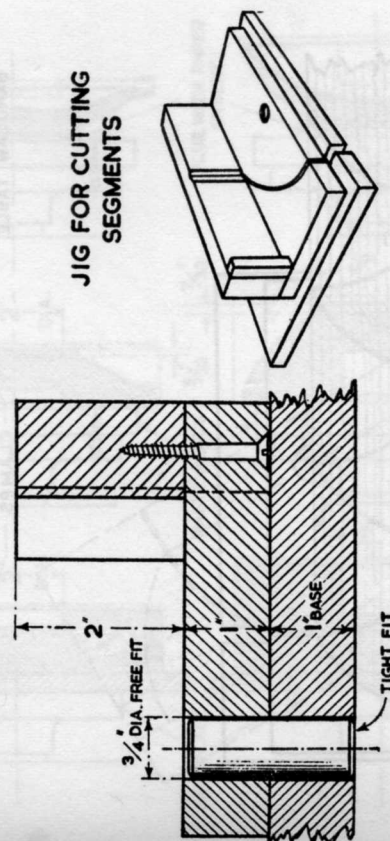


FIG. 5. SECTION THROUGH JIG; ALSO COMPLETED JIG

BUILT-UP BOWLS

FIG. 6 (below). JIG IN USE, SHOWING TWO STAGES

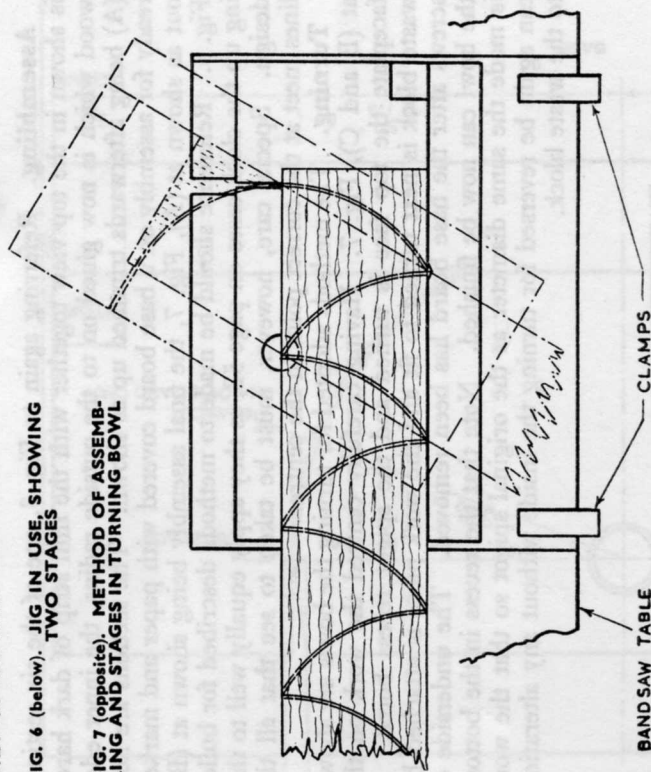
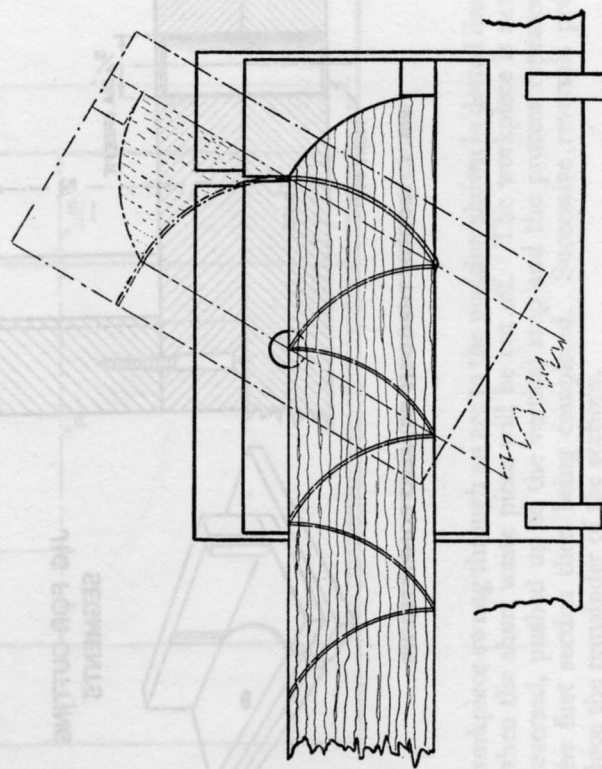


FIG. 7 (opposite). METHOD OF ASSEMBLING AND STAGES IN TURNING BOWL



ASSEMBLING AND CHUCKING

A

