



Sun Lounge

Written and constructed by Craig Tilley

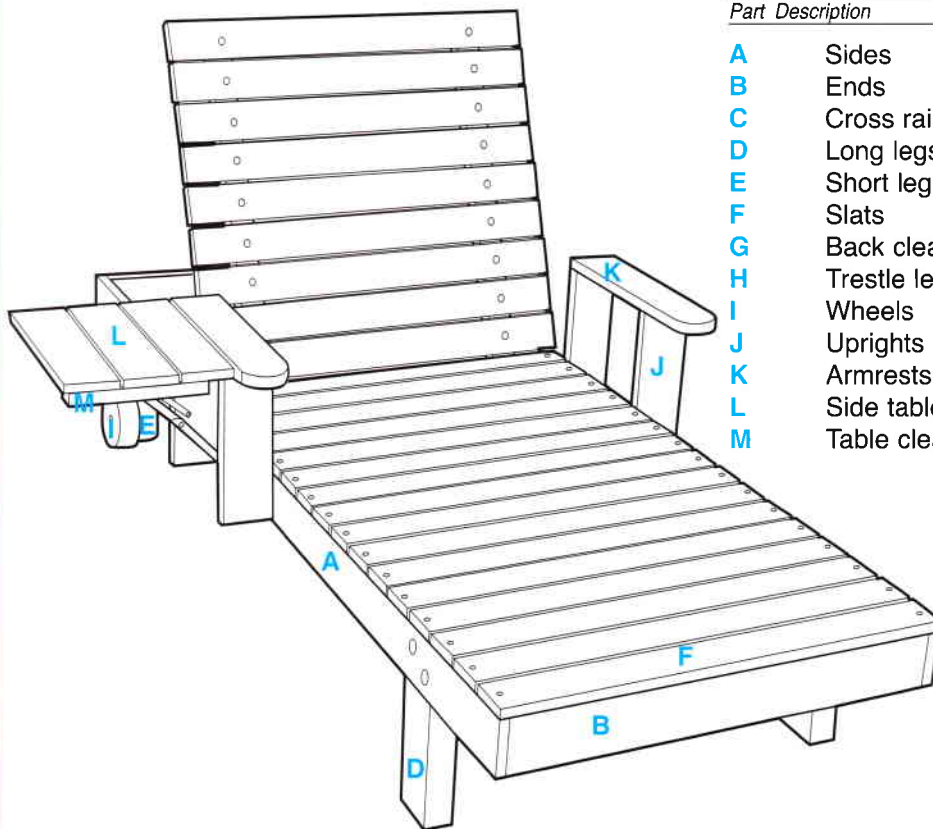
This outdoor Sun Lounge is the ideal piece of furniture for relaxing and basking in the sun. The design incorporates two shaped armrests and a fold-down side table that can be attached to either arm. Integral wheels and an adjustable back-rest make it very easy to take full advantage of the sun, or shade.

There is nothing complex about the design and should be within the capabilities of a novice woodworker, with most joints glued and screwed butt joints.

The best timbers to consider for this project are western red cedar or jarrah. They are both very long lasting and ideal for outdoor use. Finish the lounge in a clear outdoor finish to protect the timber from the elements.

Component Specifications

All dimensions are in mm.



Part	Description	Quantity	Width	Thickness	Length
A	Sides	2	85	20	1900
B	Ends	2	85	20	660
C	Cross rail	1	85	20	660
D	Long legs	2	85	42	290
E	Short legs	2	85	42	260
F	Slats	26	65	20	700
G	Back cleats	2	41	42	667
H	Trestle legs	2	41	42	410
I	Wheels	2	135	42	135
J	Uprights	4	85	20	280
K	Armrests	2	85	20	390
L	Side table slats	3	85	20	340
M	Table cleats	2	42	20	240

Tool Requirements

1. ESSENTIAL: Triton Workcentre with power saw, jigsaw, electric drill and drill bits, hammer, tape measure, try square, hand saw, screwdriver, steel rule, sanding block & sandpaper sheets, dust mask, eye goggles, ear muffs, pencil, spanner, F or C clamps, file.

2. USEFUL: 1/2" plug cutter, Triton Multi-Stand, drill press, Triton Jigsaw Kit, Height Winder Kit, Sliding Extension Table.

Construction details

Material Shopping List

1. WOOD:

100 x 25 (85 x 20 dressed) Jarrah
4 @ 2400mm for sides, ends, cross rail, uprights,
armrests & table slats.

100 x 50 (85 x 42 dressed) Jarrah
1 @ 2400mm for legs, back cleats, trestle legs &
table cleats.

75 x 25 (65 x 20 dressed) Jarrah
9 @ 2400mm for slats.

150 x 50 (135 x 42 dressed) Jarrah
1 @ 600mm for wheels.

2. FASTENING:

Waterproof wood glue such as liquid nails,
Galvanised woodscrews:

- 30 mm x 8G (6),
- 40 mm x 8G (72),
- 50 mm x 8G (8).

Galvanised cuphead bolts:

- M8 x 70 mm, nuts & flat washers (8).
- M8 x 100 mm (4), nuts & flat washers (8).

3. OTHER:

Galvanised hinges

- 38 x 38 mm back flap (2), e.g. Zenith WBS0038
- 50 x 16 mm butt (2), e.g. Zenith WSS1050

Desk stays (2), e.g. Zenith WEG0810

Cut the sides (A), ends (B) and cross rail (C) to length on the Workcentre in the cross cut mode.

Cut the sides together supporting them with a Multi-Stand (Fig. 1). Alternatively, cut them in the table saw mode with the Triton Sliding Extension Table.



Cut the ends and cross rail together with one pass of the saw to ensure they are identical in length.

2 Join the sides to the ends and cross rail with glue and two 40 mm x 8G woodscrews at each joint.

The cross rail is positioned 740mm from the head end of the lounge (Fig. 2).

Counterbore the screw heads below the surface with a 1/2" drill bit to allow them to be covered with 1/2" wood plugs later (Fig. 3).

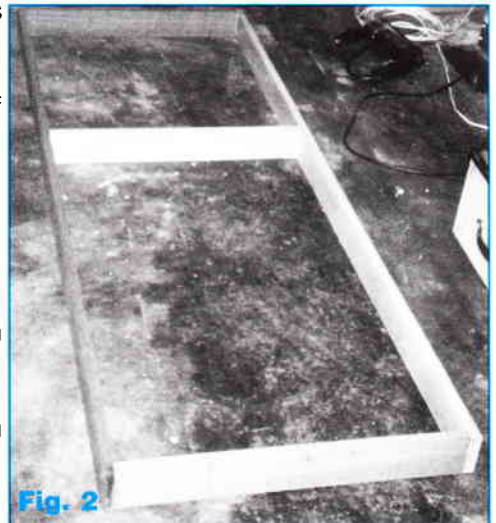
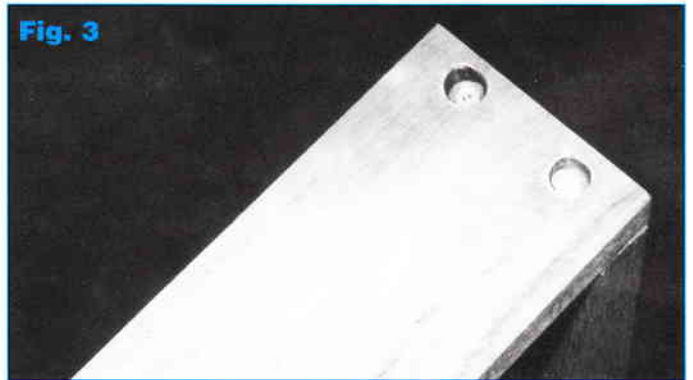


Fig. 3



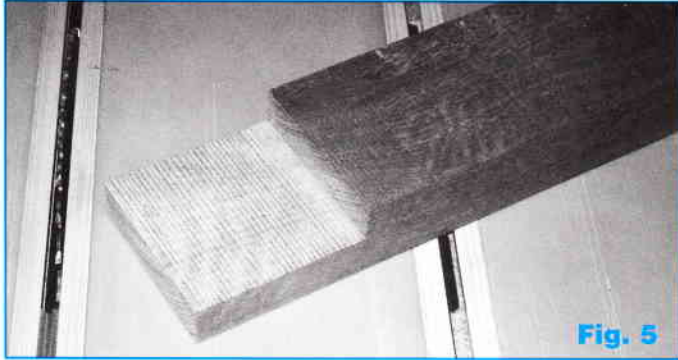
3 Cut the long (D) and short (E) legs to length on the Workcentre in the cross cut mode in pairs as before (Fig. 4).



Alternatively, cut them in the table saw mode with the Triton Sliding Extension Table.

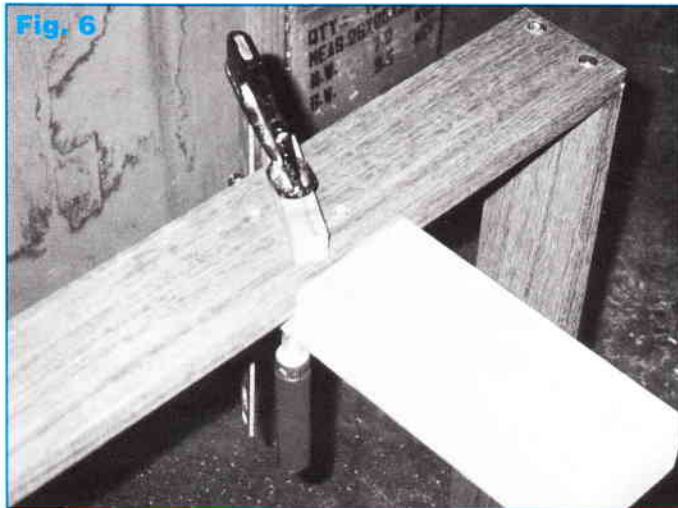
The short legs are for the head end of the lounge where the wheels will be. The legs have 85mm wide x 18mm deep rebates cut in their top ends for fitting around the lounge sides. These parts are then glued and bolted together to produce a tight and strong joint.

Cut the rebates on the Workcentre in table saw mode by lowering the saw blade to a height of 18mm. Using the Triton Height Winder Kit, makes this job very simple to set up. Make repeated cuts supporting the wood with the protractor until the desired waste is removed (**Fig. 5**).

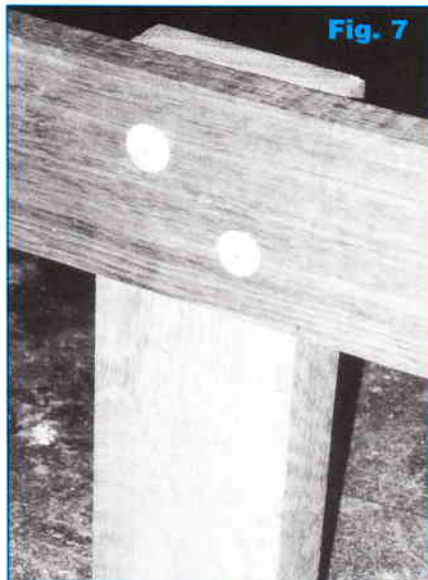


Check that the rebates fit around the sides.

4 Clamp the legs in place 200 mm from the ends of the sides (**Fig. 6**). Drill clearance holes through them for the two M8, 70 mm long coach bolts.



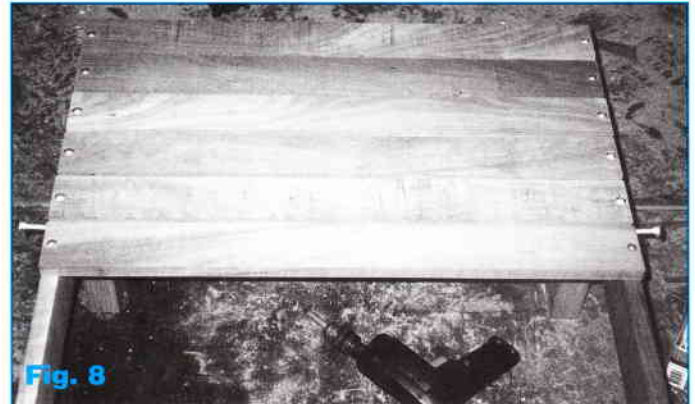
Off-set the bolts to give a staggered appearance (**Fig. 7**).



Remove the clamps and glue the joints together. Install the bolts, nuts and washers and tighten the nuts with a spanner.

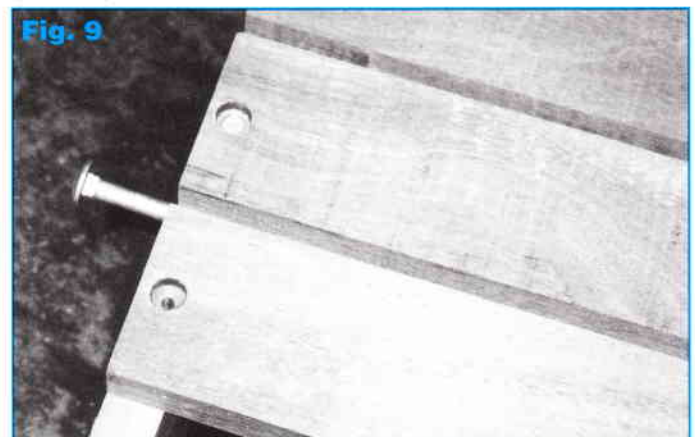
5 Cut 16 slats (**F**) to length on the Workcentre in the cross-cut mode. Alternatively, cut them in the table saw mode with the Triton Sliding Extension Table.

These slats will attach to the bottom part of the lounge. They are fixed in position with glue and one 40 mm x 8G galvanised woodscrew at the end of each slat, screwed into the lounge sides (**Fig. 8**).

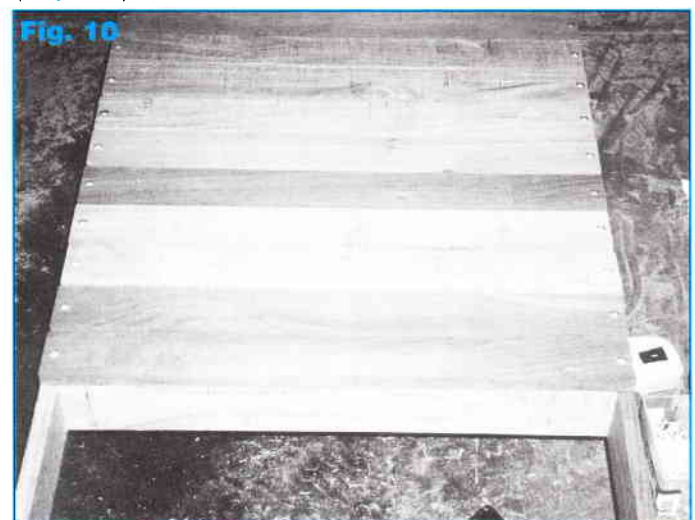


Counterbore the heads so they can be covered with wood plugs later.

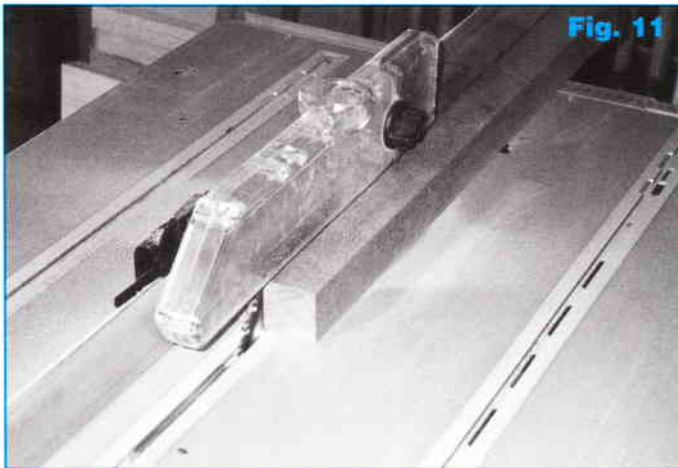
Position the first slat flush with the end of the lounge and space the others 8mm apart. Use the 8mm thick M8 bolts as spacers to ensure the spacing is kept constant (**Fig. 9**).



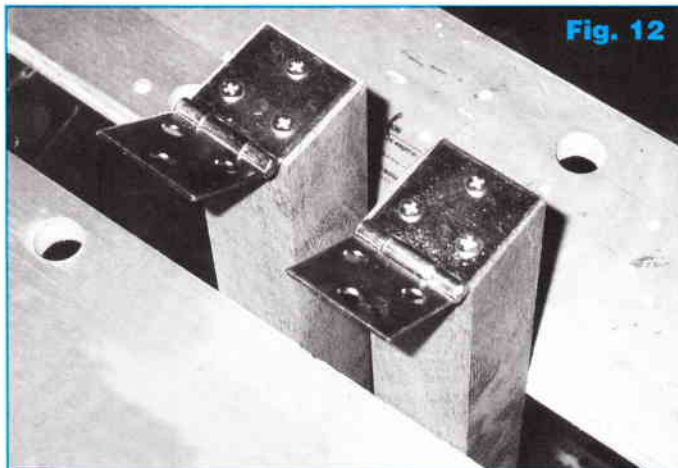
Continue until all 16 slats are in place. The last slat should finish flush with the outside face of the cross rail (**Fig. 10**).



6 Cut the back cleats (**G**) to size from the 85 x 42 timber. Cross cut one piece to length first, then rip this piece in half to create the 41 x 42 mm dimensions required (**Fig. 11**).

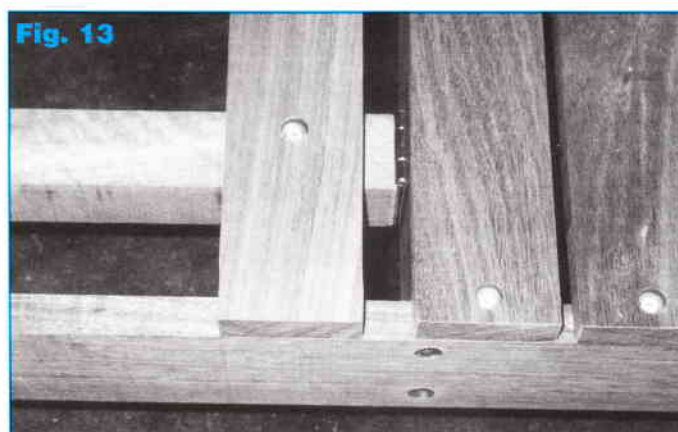


Attach the back flap hinges to the ends of the back cleats with the screws supplied with the hinges (**Fig. 12**).

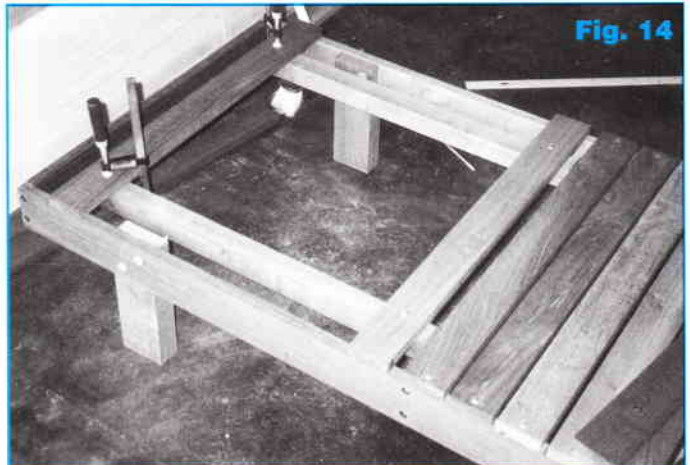


Cut ten more slats (**F**) to length and glue and screw nine of them to the back cleats using 40 mm x 8G counterbored woodscrews. Do this by holding the back cleats with their hinges in place against the cross rail and position the first slat 25mm from the last slat on the bottom part of the lounge.

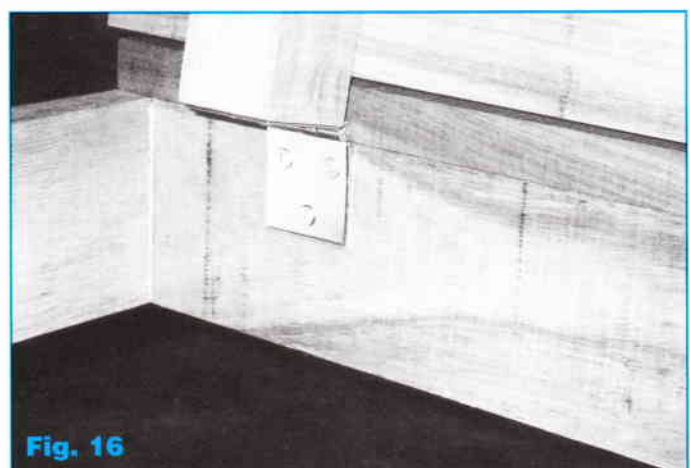
Screw it to the back cleats without glue at this stage (**Fig. 13**). The cleats should be 80mm from the ends of the slat so they will clear the lounge sides, legs and bolts.



7 Support the other end of the back cleats by clamping them to the ninth slat (**Fig. 14**).



Mark the cross rail around the hinges then raise the back cleats and slats (**Fig. 15**) and attach the hinges to the cross rail with the screws supplied (**Fig. 16**).



Lower this reclining section and check that the first slat doesn't bind at all and that it sits flat on the lounge sides. Lay the tenth slat in place flush with the top end of the lounge frame.

This slat and the trestle legs will form the support frame for the reclining section of the lounge. Glue and screw the ninth slat in place so it is spaced about 8mm from the tenth slat (**Fig. 17**).

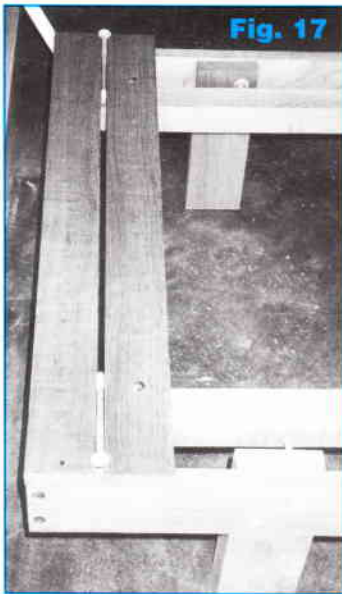


Fig. 17

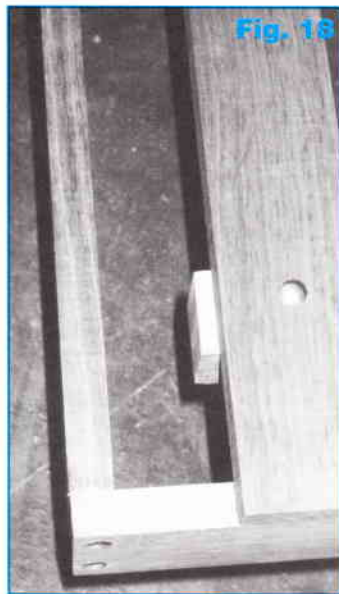


Fig. 18

Lay the intervening slats in place and adjust their positions to create equal gap widths. If the back cleats are longer than necessary, trim them to length (Fig. 18).



Fig. 19

Glue and screw the nine slats in place with 40 mm x 8G counterbored woodscrews (Fig. 19).

8 Cut the trestle legs (H) to length, width and thickness as for the back cleats. Round over the bottom end of each trestle leg where it will pivot when attached to the back cleats.

Do this by marking the radius required with a plastic lid or some similar shape (Fig. 20) and cutting it out with a jigsaw or by sanding using the Triton sanding disc mounted in the saw on the Workcentre.

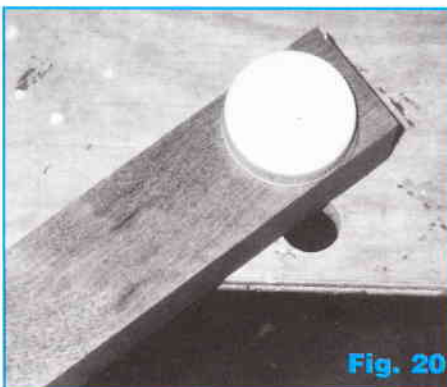


Fig. 20

Drill a clearance hole in the centre of the curved part of each trestle leg for the 100 mm long M8 bolts that will enable them to pivot with the back cleats (Fig. 21).

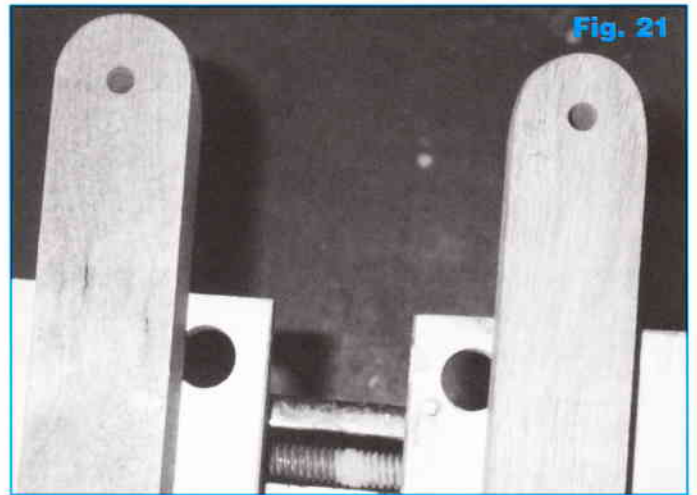


Fig. 21

9 Raise the reclining section upright and measure and mark 340mm down from the top end of the back cleats on each side. Drill clearance holes at these marks for the 100mm long M8 pivot bolts (Fig. 22).

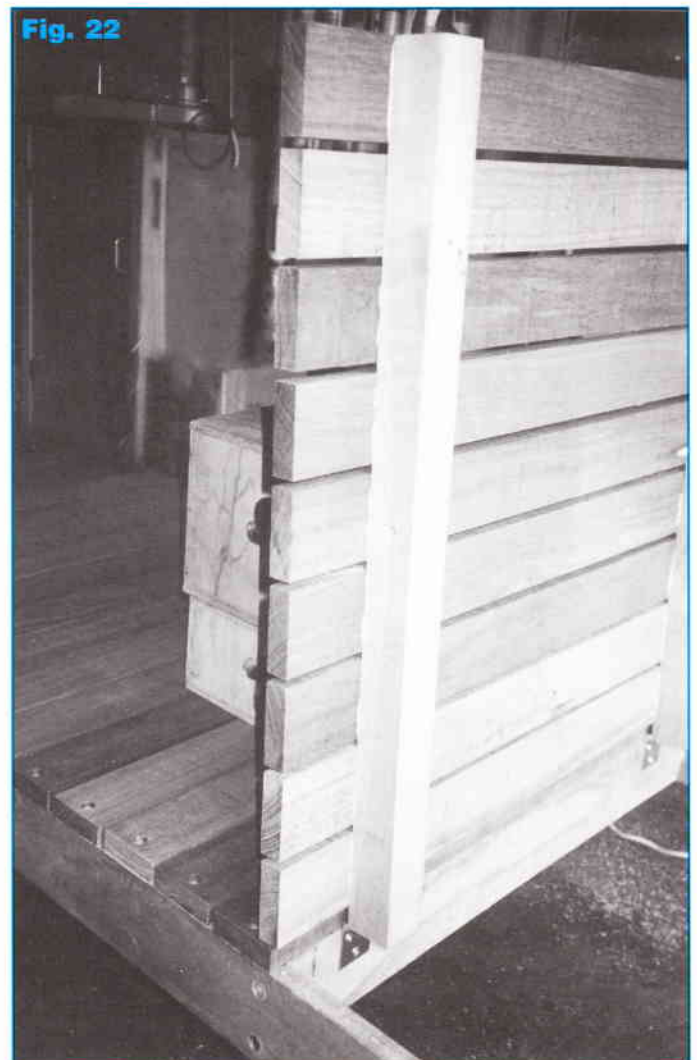


Fig. 22

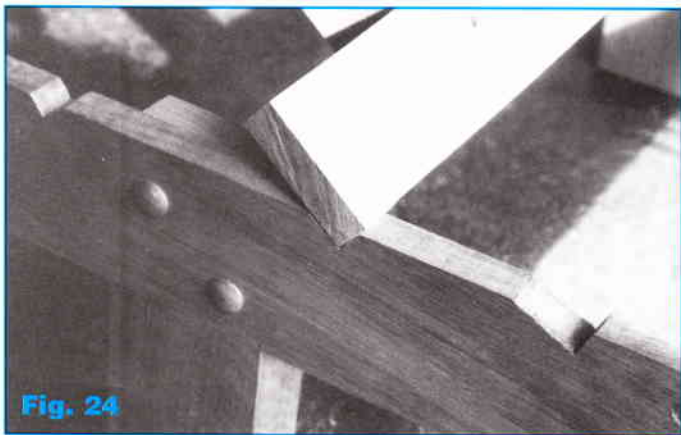
File off the square part under the head of the bolts so they will pivot correctly when inserted into the holes. Put a bolt through each hole and add the trestle legs. Swing them upright and check that they are no more than 46mm longer than the ninth slat.

Remove the trestle legs if necessary and trim them to length. Reinstall them with a washer between them and the back cleats, then attach a flat washer and two nuts. Tighten the nuts against each other with a spanner. This will lock them in place so the trestle leg can pivot freely.



Lay the reclining section flat and attach the tenth and last slat to the trestle legs with one 40 mm x 8G counterbored woodscrew at each end (Fig. 23).

10 Check that the reclining section will work correctly. Raise it by lifting the ninth slat and pivoting the trestle legs and tenth slat downwards. The tenth slat should swing down easily to rest on the lounge sides thus providing different reclining positions.

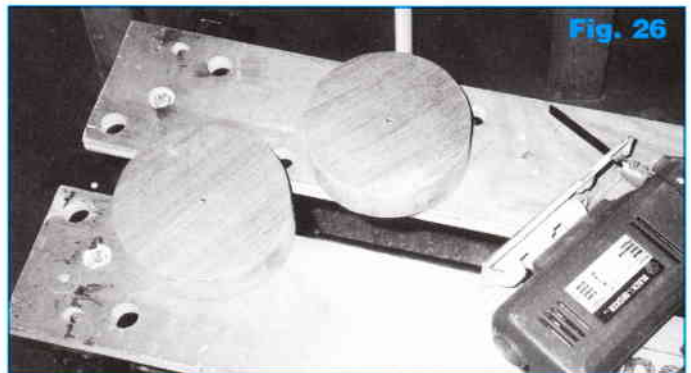


Raise the reclining section to three different reclining angles. At each of these points, mark and cut out an angled V slot from the sides to provide support for the slat (Fig. 24).

Cut out these shapes with a handsaw and check that the reclining section sits snugly in the slots on both sides when raised to the three positions (Fig. 25).



Cut the wheels (I) from the 135 x 42 timber. Mark out two 135mm diameter circles and cut them out with a jigsaw (Fig. 26).

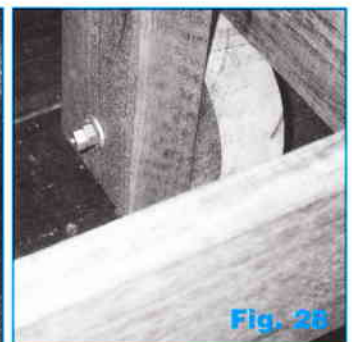


Smooth the edges of the wheels with sandpaper.

Drill a central axle clearance hole in each wheel for the two M8 x 100 mm coach bolts that will form the axles.

File off the square corners under the heads of the bolts.

Prop up the short legs so the lounge is level and clamp the wheels in place against the legs (Fig. 27).



Drill through the axle holes to make matching holes in the legs. Insert a bolt through the wheels, through a flat washer, then through the legs and secure them with another flat washer and two nuts. Lock the nuts by tightening them against each other (Fig. 28).

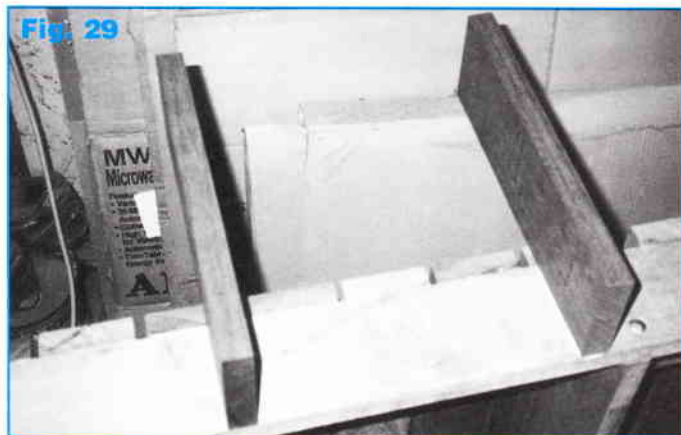
12 The uprights (J) are cut to length and attached to the sides of the lounge with glue and two 50mm x 8G galvanised woodscrews at each joint, screwed through the rear face of the sides and into the uprights.

There is no need to counterbore the heads of these screws as they are not visible from the outside.

The uprights are positioned 850 and 1110mm from the foot end of the lounge sides. Their bottom edges are flush with the bottom edges of the sides. Clamp them in place first to check their position and appearance. Mark the locations and remove the clamps.

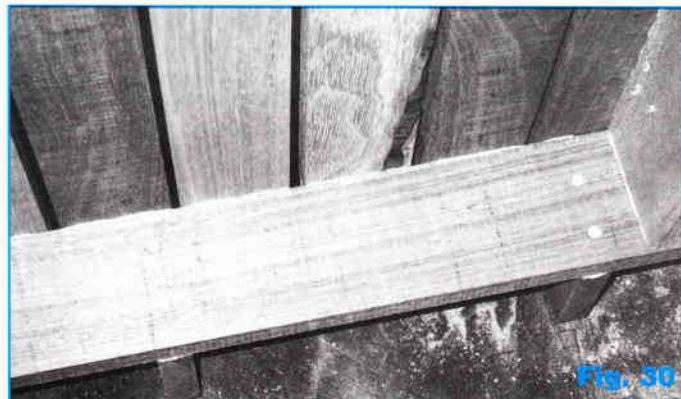
Drill clearance holes, then tip the lounge over on one side and drill pilot holes into two of the uprights from underneath the upper side.

Apply glue and screw the two uprights in place (Fig. 29).



Prop up the lounge on its side and slide the other two uprights into place under the bottom side.

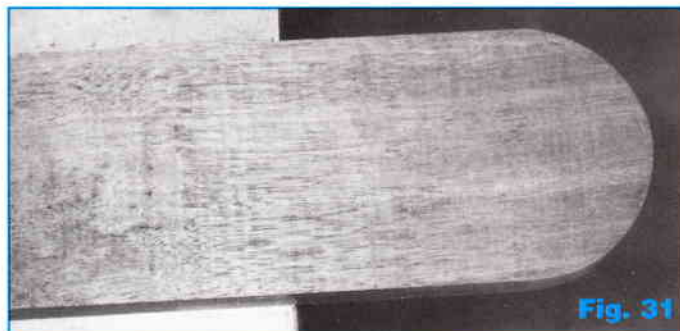
Drill their pilot holes then glue and screw them to the side (Fig. 30).



Stand the lounge back on its legs and check all four uprights are straight and square to the sides.

13 Cut the armrests (K) to length on the Workcentre in cross-cut mode as before.

Mark the armrests for a 42mm radius on their ends. Cut out these curves with a jigsaw and sand the curves smooth with sandpaper (Fig. 31).

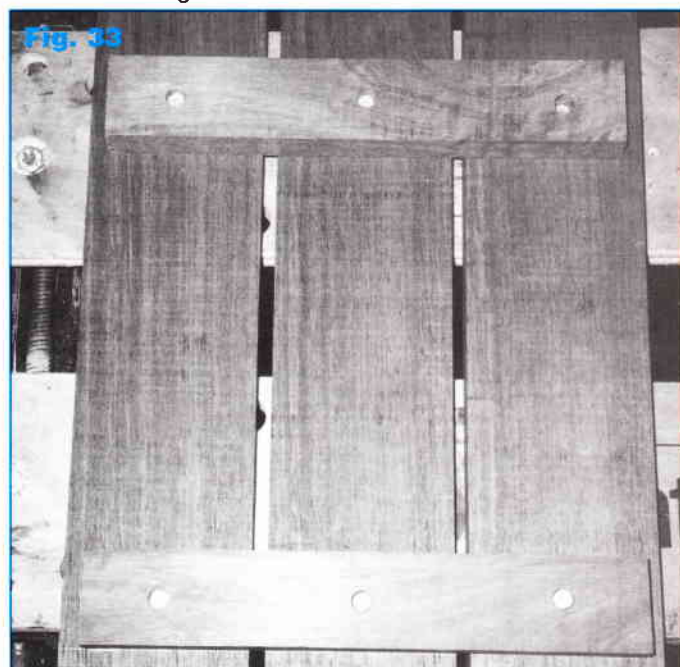


Attach the armrests to the uprights with two 40 mm x 8G counterbored woodscrews at each joint (Fig. 32).



14 The side table is made from three table slats (L) made from 85 x 20 timber, glued and screwed to two table cleats (M) made from 42 x 20 timber.

Cut these pieces to size on the Workcentre in crosscut mode and join them with glue and six 30mm x 8G counterbored galvanised woodscrews.



Position the cleats under the slats so they will miss the uprights when the table is lowered. This means the two cleats are positioned 50mm from one end and 20mm from the other end of the table slats (Fig. 33).

15 Attach the table to the right or left armrest with two 50 x 20mm galvanised hinges.

Install two desk stays under the table and to the uprights (**Fig. 34**).



Fig. 34

These lock the table in position when it is raised. Test the table to see that it folds up and down easily without binding and that it locks in place when raised.

16 Cut 72 wood plugs from scrap timber by using a 1/2" plug cutter in a drill press (**Fig. 35**). Alternatively, use a length of dowel cut into short lengths to create the plugs required.

Glue the plugs in position over the counterbored screw heads (**Fig. 36**).

When the glue is dry, sand the plugs flush with the timber surface.

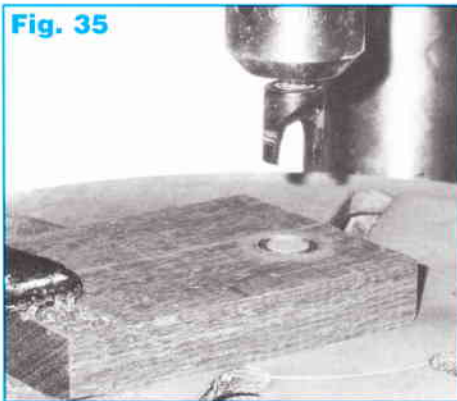


Fig. 35



Fig. 36

17 Finish the lounge by sanding or chamfering (using a router with bearing cutter) all edges smooth.



Fig. 37



Fig. 38

Apply a protective coating using an outdoor finish if your choice.