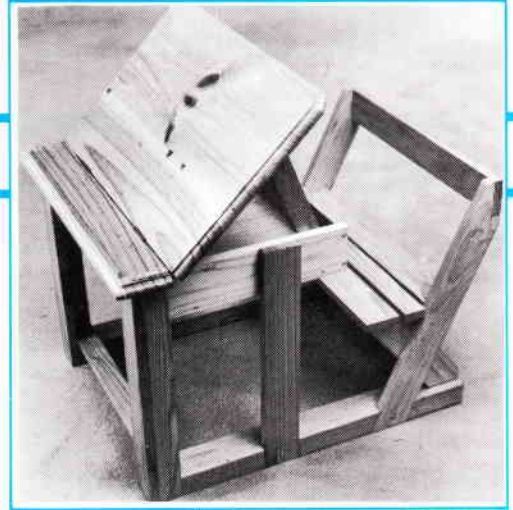


Child's Desk

Designed and Constructed
 by Dick Holden

This desk is designed for pre-school children between the ages of two and five, and can serve to introduce the concept of a "school-desk" to them - prior to their starting at primary school. The desk also provides a useful storage area for items such as paper, pencils, crayons, etc.

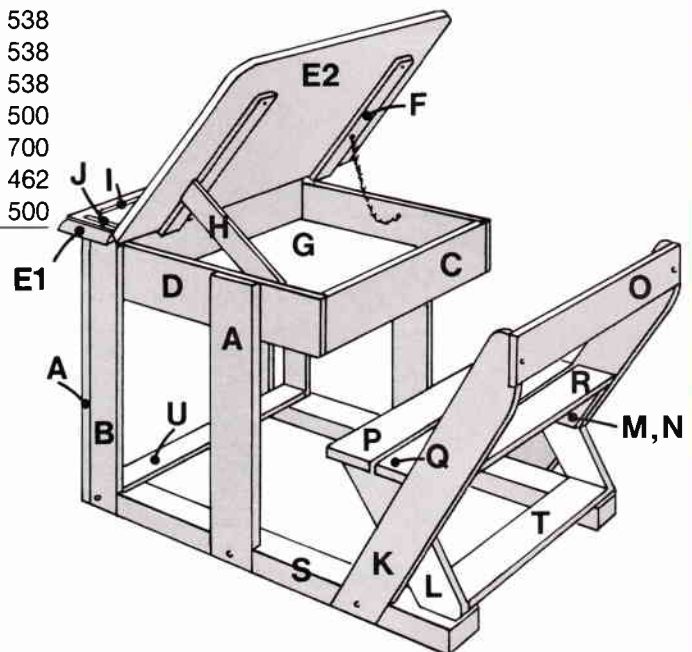
The cutting of the components is relatively simple, and the assembly straightforward. The only complication that arises is cutting the angled components for the seat supports; follow our instructions and you should not have any difficulty.



Component Specifications *All dimensions are in mm*

Part No.	Description	Quantity	Width	Thickness	Length
A	Legs	4	70 x	19	x 460
B	Legs	2	42 x	19	x 460
C	Frame	2	90 x	19	x 462
D	Frame	2	90 x	19	x 385
E	Desk Top	1	475 x	19	x 600
F	Bracing Strips	2	42 x	12	x 300
G	Desk Bottom	1	347 x	19	x 462
H	Support Prop	1	42 x	12	x 270
I	Edging	1	6 x	6	x 550
J	Edging	1	6 x	6	x 70
K	Side (seat)	2	70 x	19	x 535
L	Side (seat)	2	70 x	19	x 240
M	Seat Supports	2	70 x	19	x 190
N	Seat Supports	2	70 x	19	x 100
O	Seat Back	1	70 x	19	x 538
P	Seat Slat	1	70 x	19	x 538
Q	Seat Slat	1	42 x	19	x 538
R	Seat Slat	1	70 x	19	x 500
S	Base Strips	2	70 x	45	x 700
T	Cross Strut (rear)	1	70 x	19	x 462
U	Cross Strut (front)	1	42 x	19	x 500

Note: Do not pre-cut components.
 Exact cutting to length is done
 during construction.



Tool Requirements

- 1. ESSENTIAL** Triton Workcentre and your power saw. Small handsaw, measuring tape, square, hammer, nail punch, screwdriver, drill and drill bits, medium and fine sandpaper, sliding bevel.
- 2. USEFUL** Length gauge fitted to your workstops (as per Jig Guide), orbital sander, router mounted in Triton Router and Jigsaw table.

Construction Details

Material Shopping List

1. WOOD Radiata Pine is a good choice for this project, being economical, light and easy to work. However, any close-grained furniture timber will be suitable.

Shop for:

90 x 19mm - 1 @ 1.2m, 1 @ 0.9m

70 x 19mm - 1 @ 2.1m, 4 @ 1.2m

42 x 19mm - 1 @ 2.1m

70 x 45mm - 1 @ 1.5m

42 x 12mm - 1 @ 0.9m

This material is for the frames, seat, etc.

240 x 19mm - 1 @ 1.2m

6mm quad - 1 @ 0.9m for the desk top.

18/19mm chipboard offcut - 1 @ 500 x 400 for the desk bottom.

2. FASTENING

* PVA or equivalent wood glue.

* Bullet head nails: 30 x 2.00mm, 40 x 2.0mm, 50 x 2.8mm, 75 x 3.75mm.

If using a softwood like Radiata Pine in your construction you may wish to use processed nails for their increased holding power.

* Self-tapping screws - 1" x 8g

* Countersunk screws - 1" x 6g

3. OTHER Light chain or similar, one pair butt hinges - 50mm with screws. Optional: "Furniture glides" for bottom of base strips, Satin Polyurethane for finishing.

General Points

1. A study of **Figure 1** shows that the desk is made up of two separate items - the table and the seat - joined together by the base strips **S** to form one unit. The table is made first, then the seat, and the two are then combined.

2. The desk top is obtained by edge joining two planks of 240mm material. This can be done by tongue-and-grooving (as per beginners project "Bread Board"), splining or dowelling (Intermediate project - "Workbench").

Begin by cutting to length the following:

- The four leg components **A** - 70 x 19 x 460mm
 - The two leg components **B** - 42 x 19 x 460mm
 - Two frame components **C** - 90 x 19 x 462mm
 - Two frame components **D** - 90 x 19 x 385mm.
- This is best done in the crosscut mode, using a length gauge fitted to the workstops.

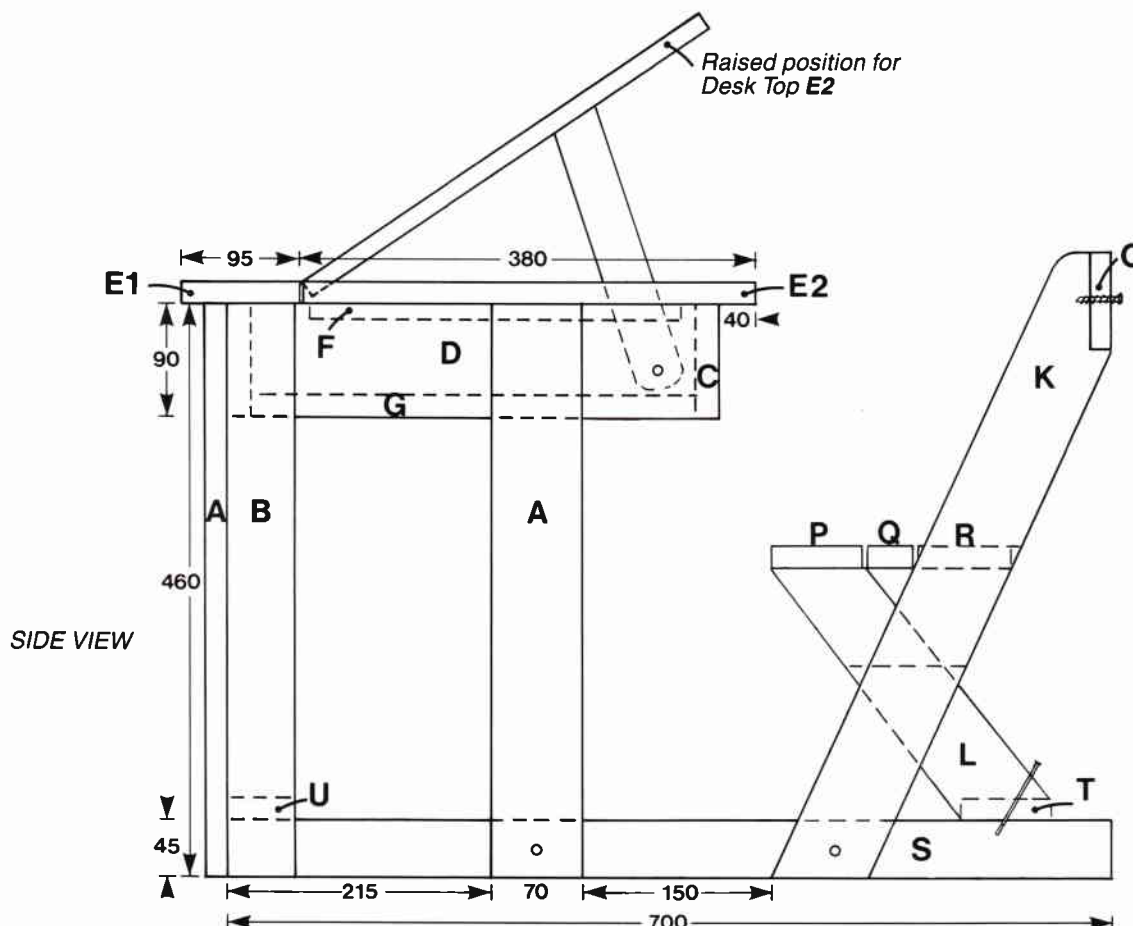


FIGURE 1

2 Assemble the two front legs which consist of **A** and **B** joined by gluing and nailing. (**Figure 1 & Figure 2** show how the edge of **B** butts up to **A**).

Make sure the ends of **A** are flush with the ends of **B**.

3 Take the frame components **C** and **D** and lay them out on edge to form a box with the end section of **C** butting up to the end of **D** as shown in **Figure 2**. Add glue to the ends of **C** and nail through **D** at each corner into the respective ends of **C**, using two 40 x 2.0mm nails (pre-drilling is advisable). Check for square on all four corners as you fasten.

4 Attach the front legs, gluing and using 30 x 2.0mm nails to nail from inside through **C** and **D** into **A** and **B** respectively.

Add the side legs – the remaining two **A** components – by gluing and nailing from inside, using four 30 x 2.0mm nails for each leg.

5 Check the inside measurement of the box frame, and cut the desk bottom **G** to suit. Attach to the frame by gluing and nailing and/or screwing through components **C** and **D**. (You may need to convert to the table saw mode, and use the wide-rip position, to cut your bottom to size, depending on the size of your saw and your chipboard offcut). **Figure 3** shows the assembly at this stage.

6 The desk top is made next. Edge join your 240 x 19mm material to make a 480 x 600mm top (**exact** size is not critical here – slight variation from our dimensions will only vary the overhang of the top).

If you wish to use your router to add a decorative feature to the desk lid do this now. Use your router in the shaper table mode; a cutter with a pilot bearing is best.

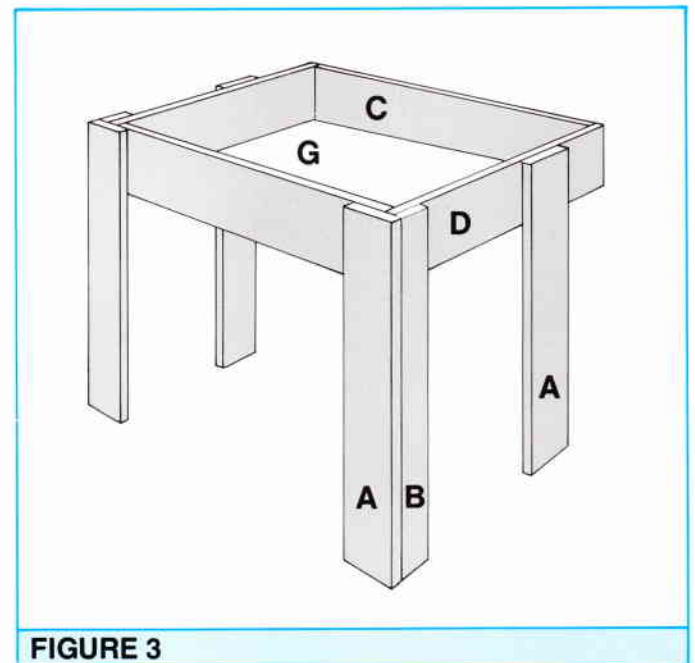


FIGURE 3

Set the rip fence to 95mm and rip the desk top – along the grain – into two pieces which become **E1** and **E2** as per **Figure 1**.

7 For safety, round the corners of the desk top (don't round the corners or edges of the **E1/E2** hinge line).

Attach **E1** to the frame components **C** and **D** by gluing and nailing, leaving about 30mm overhang on all sides. Make sure **E1** is both square and overhangs evenly both sides before securing.

8 In the table saw mode, using your protractor to crosscut, cut the two bracing strips **F** to length – 42 x 12 x 300mm. It is advisable to slot-screw the braces to the lid – drilling slightly oversize holes in the braces, and/or elongating the holes in the direction of the length dimension of the brace. Use round-headed screws (such as self-tapping screws), which will enable the top to shrink and swell while the braces prevent it from warping. (Don't glue!). Make sure you locate the braces so they fit inside the frame when the top is down in position.

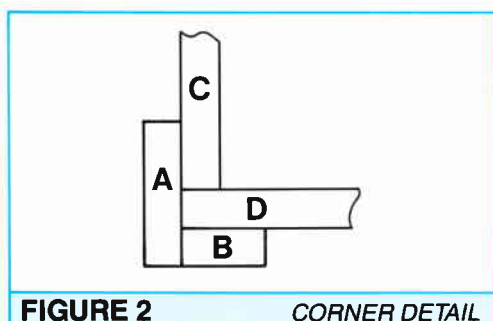


FIGURE 2 CORNER DETAIL

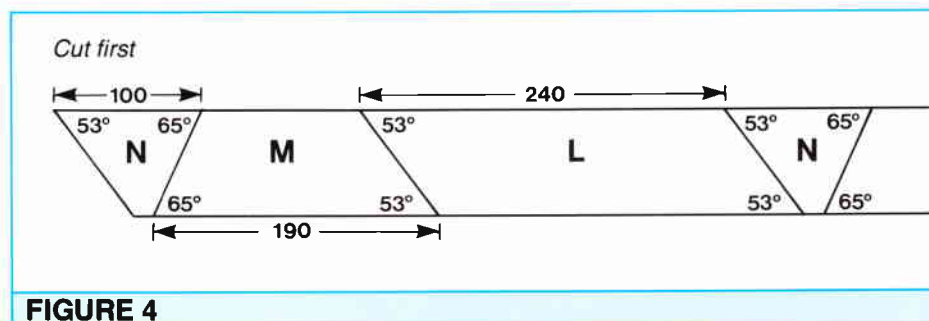


FIGURE 4

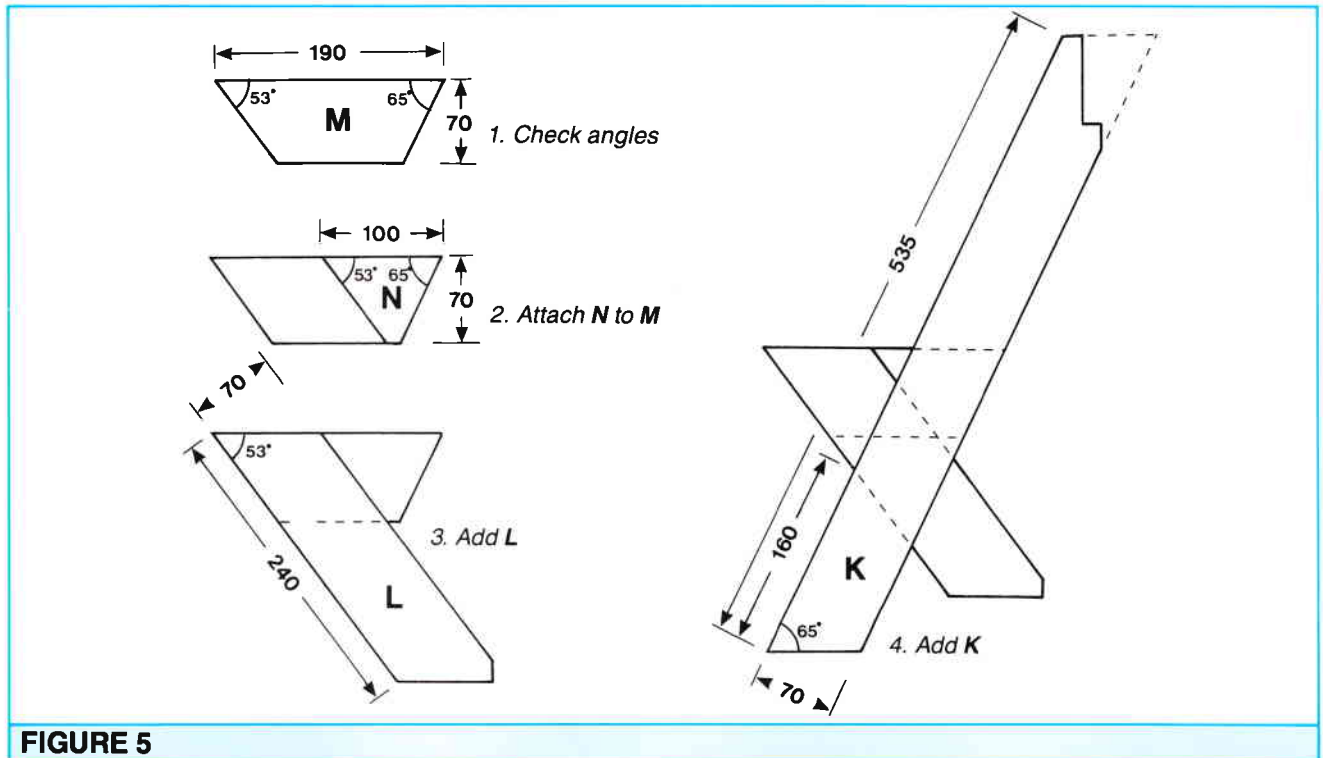


FIGURE 5

9 Hinge **E2** to **E1** using the two 50mm butt hinges. Add a piece of light chain or similar to prevent the top **E2** from falling back and tearing out the hinges. Screw one end to the side of the bracing strip **F** and the other end to the inside of the side frame **D**.

Take the remaining piece of 42 x 12mm, round one end, and drill an oversize hole centrally in that end (larger than the diameter of a 1"/6G wood screw). Measure the length of the support prop **H** required to support the raised top, establish the angle required to match up with the underside of **E2** when raised and cut to suit. The support prop **H** is attached by a wood screw (with a washer either side of the strip) to the inside of side frame **D** - on the opposite side from the chain.

10 A small wooden block glued to the underside of **E2** in the appropriate place can serve as a stop for the support prop when the lid is up.

The "table" unit is completed with the attachment of the quad pieces **I** and **J** on the front area of the desk. (Refer to the title page illustration).

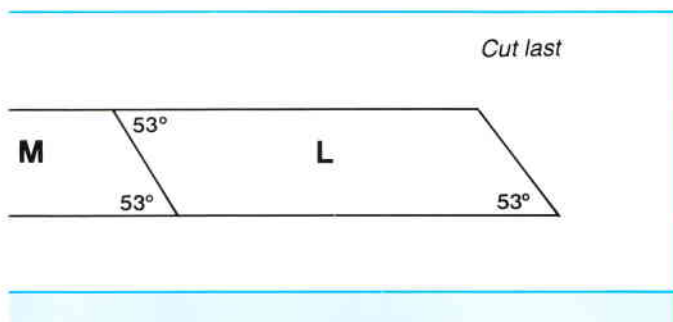
11 Now for the seat. Components **K**, **L**, **M** and **N** are best cut in the crosscut mode.

Mark out the two side pieces **K** on one of the 1.2m lengths of 70 x 19mm material. Using your protractor to hold your material at the correct angle (don't add your workstops as they are not needed in this operation), cut **K** at the angles and lengths shown in **Figure 5**. To notch the top cut for **O** use your protractor in the tablesaw mode and a handsaw to finish the cut.

12 Because of the difficulty in holding small components when cutting, the following procedure should be followed to cut seat components **L**, **M** and **N**.

Using **Figure 4** as a guide, take the 1.2m length of 70 x 19mm and with your protractor set on 53 degrees, cut one end to this angle. Reset your protractor to 65 degrees, mark out and cut component **N**.

Revert back to 53 degrees, mark out and cut component **M**. Still on 53 degrees, mark out and cut component **L**. Repeat the procedure for your second set of **L**, **M**, **N**, but be sure to cut **N** first, then **M**, and **L** - the longest - last.



Construction Details

13 Referring to **Figure 5**, for sequence and locations, attach **N** to **M**, then attach **L** and finally **K**. Glue and nail with 30 x 2.0mm nails. Note that the bottom of **L** sits on the top of **S**, while **K** is rebated into the side of **S** and therefore is flush with the ground. Ensure the height difference between the two from the ground is 45mm.

Figure 1. Hold the assembly against the 70 x 45mm material to check fit before gluing and nailing **K**.

You need to make a right hand and a left hand assembly ("mirror imaged"). **Figure 6.**

14 Re-attach your workstops with length-gauge, and cut the following:

- The seat back **O** - 70 x 19 x 538mm
- The seat slat **P** - 70 x 19 x 538mm
- The seat slat **Q** - 42 x 19 x 538mm
- The remaining seat slat **R** - 70 x 19 x 500mm
- The front cross strut **U** - 42 x 19 x 500mm
- The rear cross strut **T** - 70 x 19 x 462mm.

15 The base components **S** are made next. Cut the components to length (700mm) and mark out the required check-outs or rebates on the edge of the material, as per **Figure 7**. Use a sliding bevel to mark out the angled rebates. Note that they are mirror-imaged, and therefore one angled rebate cannot be cut in the crosscut mode. Two completely separate operations are required.

While in the crosscut mode cut the 90 degree rebates, by holding your workpieces against the workstops, and then the 65 degree rebate with your workpiece against the protractor set at 65 degrees. These rebates are all 19mm deep; determine your saw blade height on scrap before proceeding to cut your workpieces.

16 Convert to the table saw mode to cut the second 65 degree rebate. Set the saw blade height at 19mm. Square your marked out lines onto the face of the material to reference your cuts. Back up your workpiece with a piece of scrap between it and the protractor, set at 65 degrees, to prevent break-out as you cut.

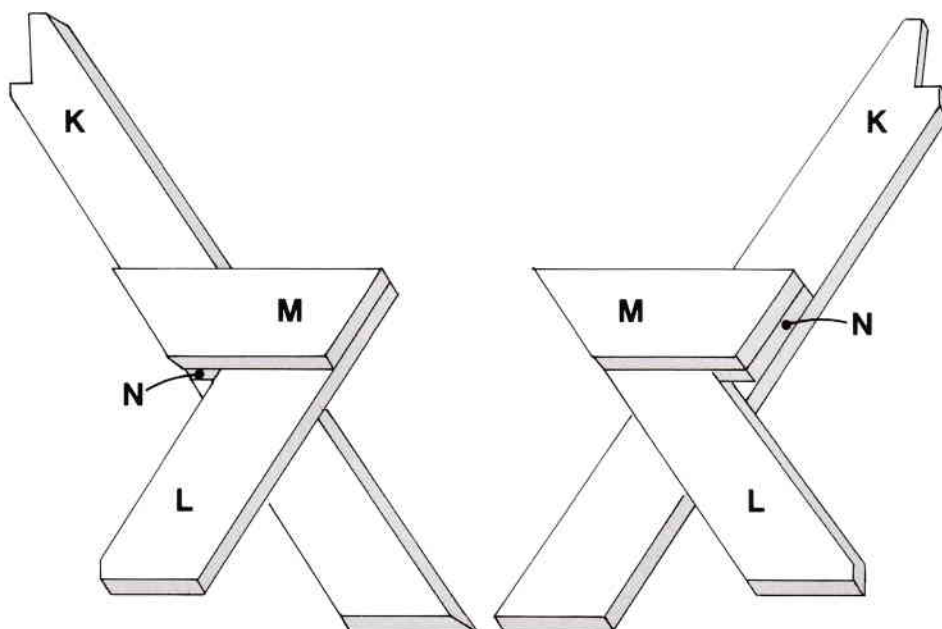


FIGURE 6

Construction Details

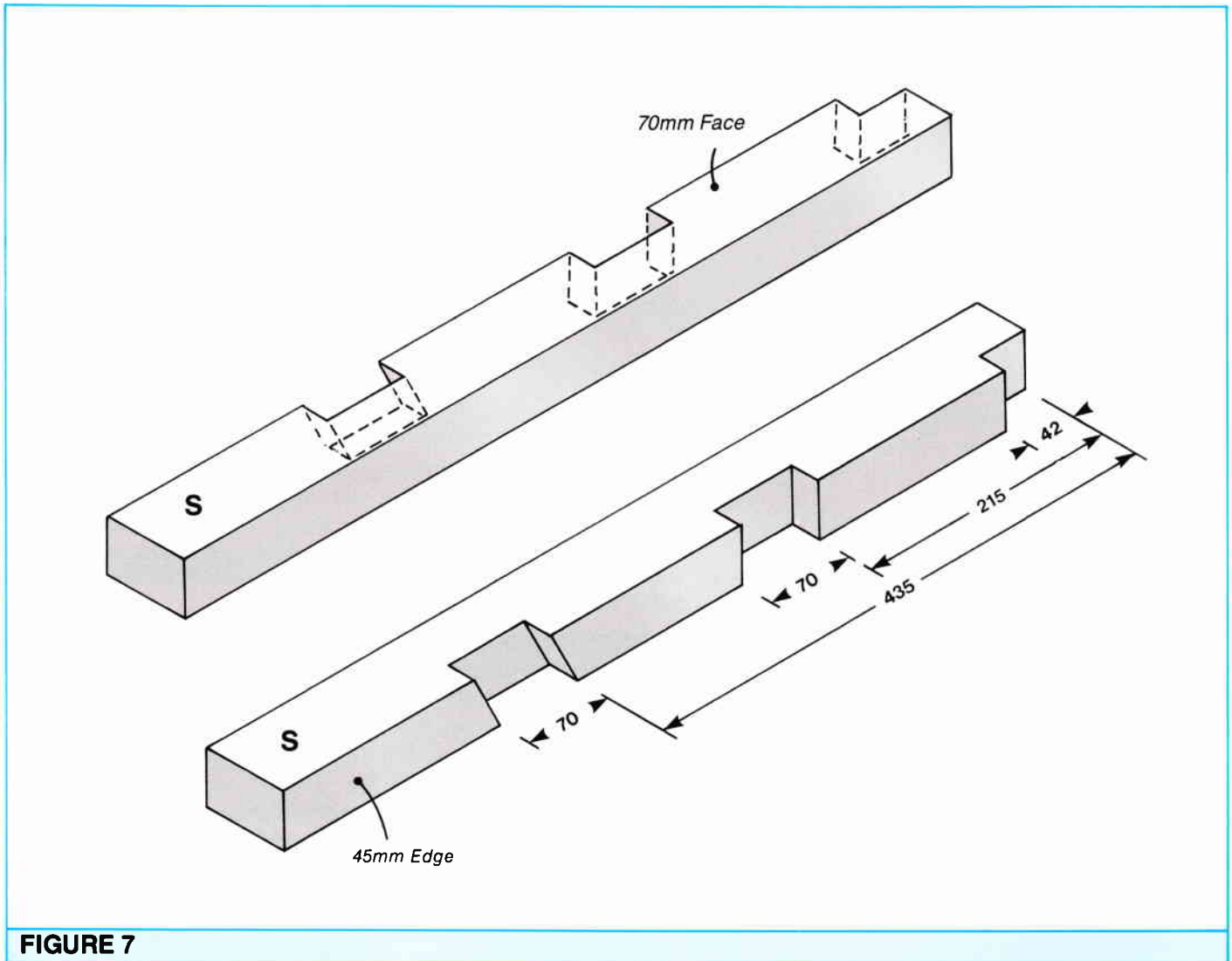


FIGURE 7

17 Assemble the seat sides onto your **S** components. Then attach seat slats **P,Q,R**, followed by seat back **O**. Screw and glue through **O** into **K** to ensure strength, using two countersunk wood screws each side (pre-drill).

18 Final assembly can now be done. Attach the completed table unit to the base components **S**. Add front cross strut **U** and add rear cross strut **T**. For extra strength, drill through the lower end of the side pieces **L** and nail through into base components **S**, using the 75 x 3.75mm (3") nails.

19 Punch all visible nails, fill the holes with wood putty, sand all over, and finish appropriately. We used Cabot's "Cabothane Satin", a clear polyurethane finish to achieve a satisfactory result.