



## Child's Bed

Designed and constructed by Craig Tilley

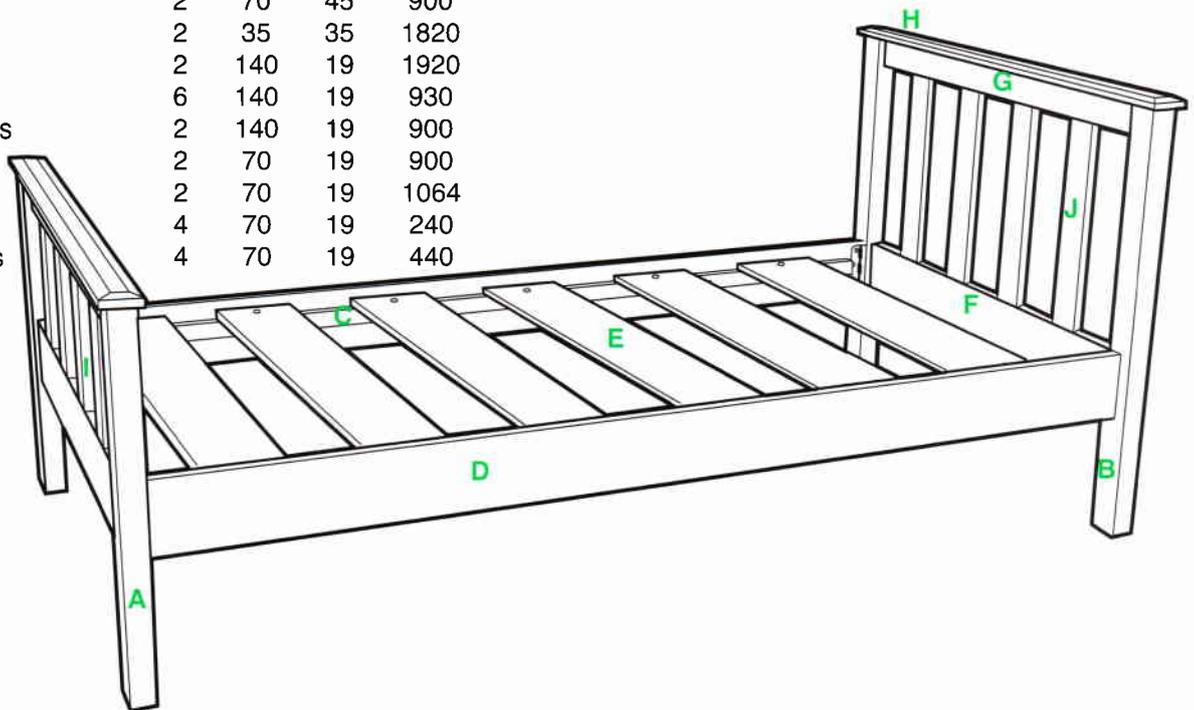
This classic design single bed could be built as a first bed for your child when they've outgrown the cot. Alternatively, it's a great bed for an older child or a bed for the spare room. Either way it is attractive and easy to build. For an inexpensive yet durable bed, use radiata pine for all timbers. Alternatively, a suitable hardwood like meranti or Tasmanian oak may provide a better base if you intend on adding a clear timber finish. For strong, snug-fitting joints the Triton Biscuit Joiner has been used throughout the construction. The side rails attach firmly to the ends with purpose designed bed fittings. These allow easy dismantling of the bed for relocation. Likewise the slats simply unscrew from the rails.

These plans cater for a single bed mattress of 1900 x 900 x 150mm. If your mattress does not match these dimensions, alter the measurements given in the components list below to suit. Finish the bed in a suitable stain or paint to match the existing bedroom furniture.

### Component Specifications

All dimensions are in mm.

Part	Description	Quantity	Width	Thickness	Length
A	End legs	2	70	45	700
B	Head legs	2	70	45	900
C	Slat rails	2	35	35	1820
D	Side rails	2	140	19	1920
E	Slats	6	140	19	930
F	Bottom rails	2	140	19	900
G	Top rails	2	70	19	900
H	Caps	2	70	19	1064
I	End stiles	4	70	19	240
J	Head stiles	4	70	19	440



### Tool Requirements

**1. ESSENTIAL** Triton Workcentre with power saw, Triton Router & Jigsaw Table, Triton Biscuit Joiner, router, bar or pipe clamps, electric drill and drill bits, tape measure, try square, screwdriver, glue brush, steel ruler, chisel, rubber mallet, sanding block & sandpaper sheets, dust mask, eye goggles, ear muffs, pencil.

**2. USEFUL** Triton Sliding Extension Table, Triton Bevel Ripping Guide, Triton Precision Power Saw, Triton Multi-stand(s), Triton Dust Bag, Triton Random Orbital Sander & sanding discs, drill press.

# Construction details

## Material Shopping List

### 1. WOOD

Radiata Pine  
70 x 45 - 2 @ 1.8m for legs  
70 x 35 - 1 @ 2.1m ripped in half for slat rails  
140 x 19 - 6 @ 2.1m for slats, side & bottom rails  
70 x 19 - 3 @ 2.4m for top rails, caps & stiles

### 2. FASTENING

Good quality PVA glue  
(eg. Triton Premium Woodworking Adhesive)  
Triton biscuits (28),  
10G x 50mm wood screws (30).

### 3. OTHER

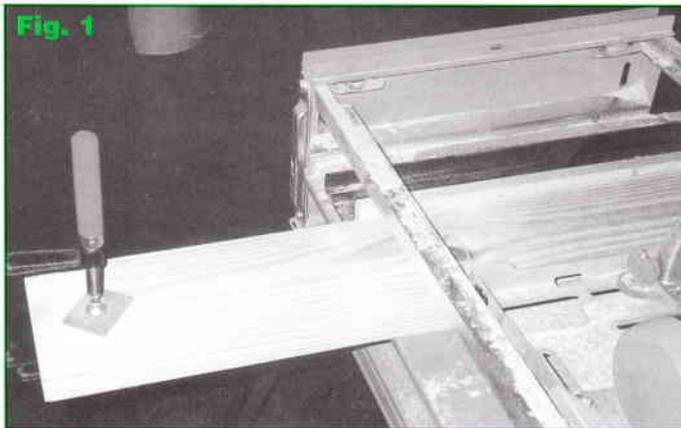
1 set bed fittings (Howard Silvers Serial Number 0912665, or similar) with screws.

### 4. FINISHING

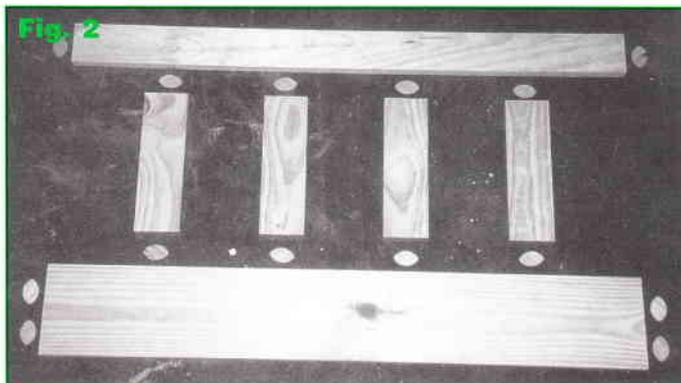
Wood stain and estapol or undercoat and paint of your choice.

Begin construction by cutting the bottom & top rails (**F** and **G**) and end & head stiles (**I** and **J**) to length. Cut these parts to length using the Workcentre set up in the crosscut mode.

Clamp parts together that are the same length and cut them with one pass of the saw to ensure identical size (**Fig. 1**). The two bottom rails, and the two top rails, should be identical in length. Likewise the four end stiles should be identical, and the four head stiles should also be identical.



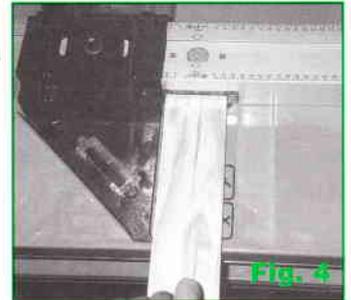
Lay out the parts for the bed end using one bottom rail (**F**), one top rail (**G**), and the four end stiles (**I**). (**Fig. 2**). Note the biscuit locations.



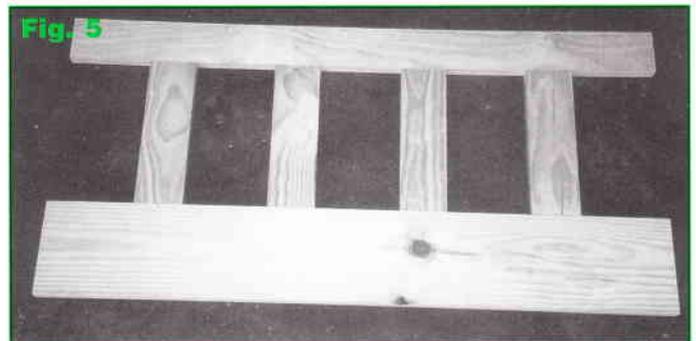
The stiles should be spaced equally, approximately 124mm apart. Mark a straight line at the centre of each joint to mark the biscuits. Also mark the ends of the bottom and top rails.



A single biscuit joint will join the top rail to the legs and a double biscuit joint will join the bottom rail to the legs. Using the Biscuit Joiner, adjust the cutter height to around 8mm and cut the biscuit slots in the rails and stiles (**Figs. 3 & 4**).

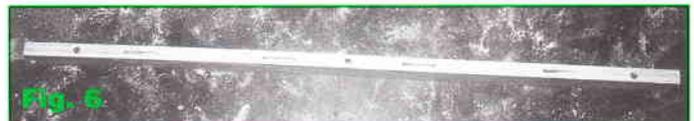


When all slots are complete do a dry run of assembly, i.e. without glue, and check the alignment of the joints (**Fig. 5**). Repeat this procedure for the bed head framework. **DO NOT YET GLUE UP.**

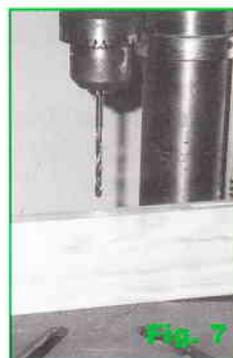


**Hint:** A test assembly of the biscuit joints, prior to gluing, ensures accuracy in alignment and fit. The beauty of the Triton Biscuit Joiner is that the biscuits can move lengthways in their slots slightly so you can true up joints easily.

Before gluing up, drill three counterbored holes in each top rail between the end stiles and the legs and between the middle stiles (**Fig. 6**).

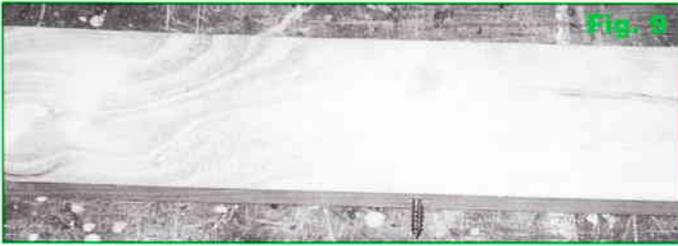


These holes are for the 10G x 50 mm screws that will attach to the capping pieces later. These holes are best drilled on a drill press (**Fig. 7**).



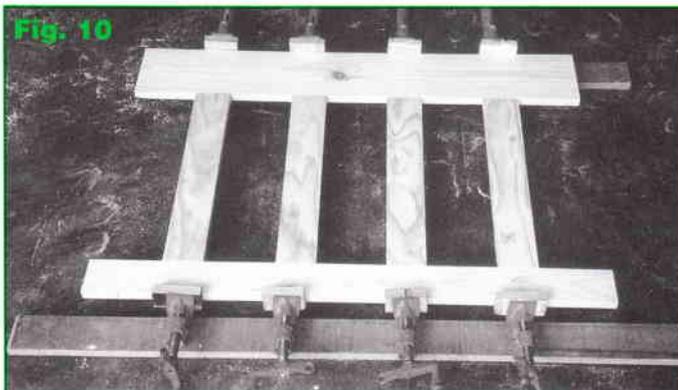
Whatever method is used, ensure to clamp the work to the bench and drill perfectly square and straight (**Fig. 8**).

Drill the clearance holes first, then the wider counterbores. When inserted, the 50 mm long screws should protrude about 15 mm (**Fig. 9**).



**4** When you are happy with the dry run of the bed head and bed end frameworks, sand all the parts smooth and ensure the biscuit slots are free of sawdust or shavings and prepare for gluing up.

Apply glue sparingly to the biscuit slots using a small glue brush to spread the glue inside the slot. Coat each biscuit fully with glue and clamp the assembly together with bar or pipe clamps (**Fig. 10**). Use a good quality PVA such as Triton Premium Woodworking Adhesive for all gluing.



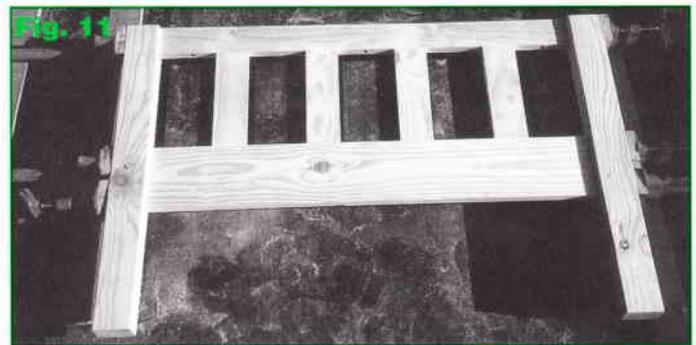
Allow about a half an hour for the glue to partially cure, then scrape off any excess with a sharp chisel. Repeat this procedure for the bed head.

**5** When both assemblies are dry, sand the joints smooth with an electric sander. The Triton Random Orbital Sander is perfect for this job, working with medium then fine sanding discs to produce a smooth surface.

**6** Next, cut the bed legs (**A** and **B**) to length. Again use the Workcentre set up in the crosscut mode to accurately cut each pair of legs to length. Sand the legs smooth all around.

Bevelling the bottom edges of the legs slightly with sandpaper will prevent the wood from splitting if it is ever dragged across a hard floor.

Align each post with the top edge of each top rail and mark them for the three biscuit slots. Adjust the biscuit cutter height to about 21 mm and cut the slots in each post. Test the assembly of the legs with dry biscuits and if the alignment is okay, glue the legs to the rails and clamp them in place (**Fig. 11**).



**7** The capping (**H**) is cut and attached next. Ensure both capping pieces are cut to the same length. Use the Triton Bevel Ripping Guide to cut chamfers all around the capping.

Set the bevel angle to 70° and lock the scale at 10mm. Cut the chamfers on the end of the capping first, using the protractor in the guide slot on the Bevel Ripping Guide (**Fig. 12**). Then cut the long chamfers (**Fig. 13**).

Be careful at the end of each cut. Hit the stop plate as the saw approaches the end of the cut and let the blade coast to a stop as the cut is completed.



Alternatively, use a chamfer bit in a router and cut the chamfers on the router table.

Sand the capping pieces smooth.

Align each capping piece with the centre of the top rails and mark with a long nail through the screw holes in the top rails drilled earlier.

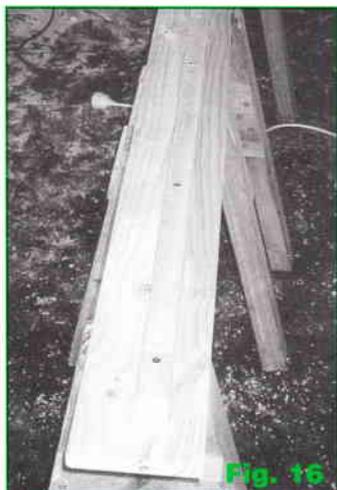
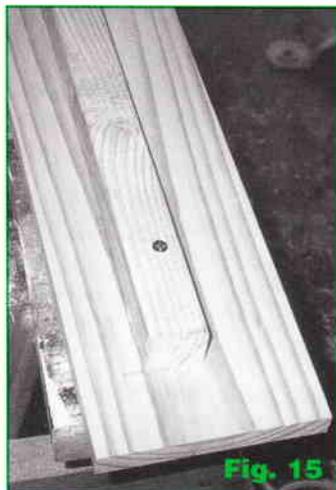


Do a dry run for each capping piece and then glue and screw them in place (**Fig. 14**).

**8** The bed sides are assembled next. Cut the slat rails (C) by ripping the 70 x 35 piece down the centre, then cut the slat rails (C) and side rails (D) to length and sand the cut ends.

The slat rails are positioned 40mm down from the top edge of the side rails and 50 mm in from each end (Fig. 15).

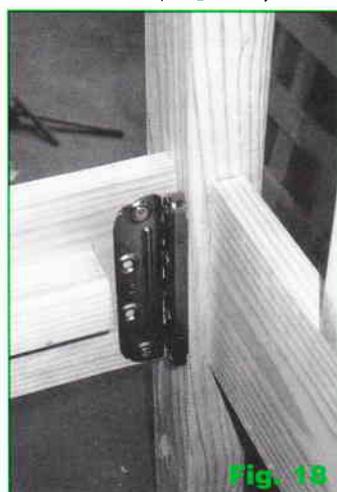
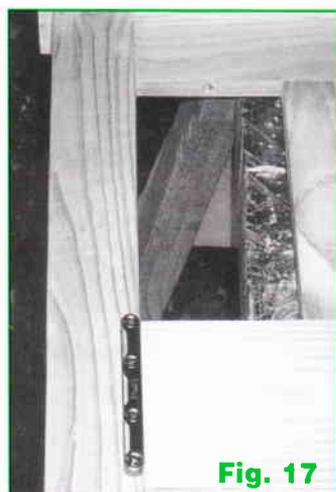
Drill and countersink six evenly spaced screw holes in each slat rail for the 10G x 50 mm screws. Glue and screw the slat rails to the side rails (Fig. 16).



**9** The bed is assembled using bed fittings. These are metal fittings consisting of a male piece and a female piece. Installed correctly they provide a tight corner joint that allow the bed to be easily dismantled. The ones used in this project are made by Howard Silvers (serial no 0912665) but any similar style bed fittings will do the job.

Fit the male pieces to the inside ends of each side rail. The hooks should be flush with the ends and should point downwards. The female pieces are attached level with the inside edge of each post, as shown (Fig. 17).

Position the bed fittings so the side rails will be level with the bottom rails on the bed head and end (Fig. 18).



When the bed fittings are attached to all four corners, assemble the bed. Use a rubber mallet to firmly connect the bed fittings so as not to damage the wood (Fig. 19).



**10** Check that the bed is square and measure the distance between the side rails. It should be about 930 mm. Cut the six slats (E) using the Workcentre in the crosscut mode (Fig. 20).



Place the slats in position so they are equally spaced. Mark the slats for a screw hole at each end. Remove the slats and drill and countersink the holes for the 8G x 50 mm screws. Replace the slats in position and drill pilot holes into the slat rails. Screw the slats in place. Check the fit of your single mattress on the bed.

Dismantle the bed and sand all the parts smooth. Dust it off using a vacuum cleaner and a cloth to remove all traces of sanding dust. This is essential to produce a smooth finish when applying stain and estapol. Put the slats to one side as they do not need finishing. Apply the same stain and estapol as your other bedroom furniture or undercoat and paint the bed if appropriate.