

## 7. Doll Bed/Cradle

The doll bed is shown in Figure 7-1. The pillow and blanket add a nice touch to this toy but are not a part of the instructions that follow. The bottom (base) of the bed slides on the three spacers (dowels) between each pair of side rails. When the bed is turned over, the bottom slides to convert the bed into a cradle as shown in Figure 7-2.



Figure 7-1. Doll Bed



Figure 7-2. Doll Cradle

## Materials and Tools

### Wood Cut List

Part	Material	Size (thickness, width, length)	Qty
Headboard	Baltic birch or hardwood	3/8" to 1/2" x 6 1/2" x 9 1/4"	1
Footboard	Baltic birch or hardwood	3/8" to 1/2" x 6 1/2" x 9 1/4"	1
Rails	Any hardwood	5/8" x 3/4" x 14"	4
Base	Plywood	1/8" to 1/4" x 7 3/4" x 13"	1
Rail spacers	Dowel	1/4" x 3"	6

### Other Parts

Part	Material	Size	Qty
Screws	Steel Phillips head	#6 x 1 5/8"	8

### Tools Required

- Woodworking tools and supplies (see Chapter 2, pp. 14-15)
- Special tools for this toy:
  - Twist drill bits: 11/64", 9/32", and 1/8"
  - Forstner or brad point bit (preferred): 1/2"
  - Countersink drill bit

## Plans and Steps

The drawings for building and assembling various parts of the bed are shown in Figures 7-3, 7-4 and 7-5. These drawings are not actual size. At the end of this chapter (Figure 7-6) is an actual size pattern for making the headboard and footboard.

## Headboard and Footboard

**1 – Shape.** Use the template (Figure 7-6) as a pattern to draw these parts on the rectangular blanks. Mark the locations of the four holes. Since the headboard and footboard are identical, the same template is used for both.

The preferred material for making these parts is Baltic birch plywood, but any hardwood will do. The thickness is not critical. Material from  $\frac{3}{8}$ " to  $\frac{9}{16}$ " thick can be used. A band saw is ideal for obtaining a rough cutout of these parts. Otherwise use a jig saw or coping saw.

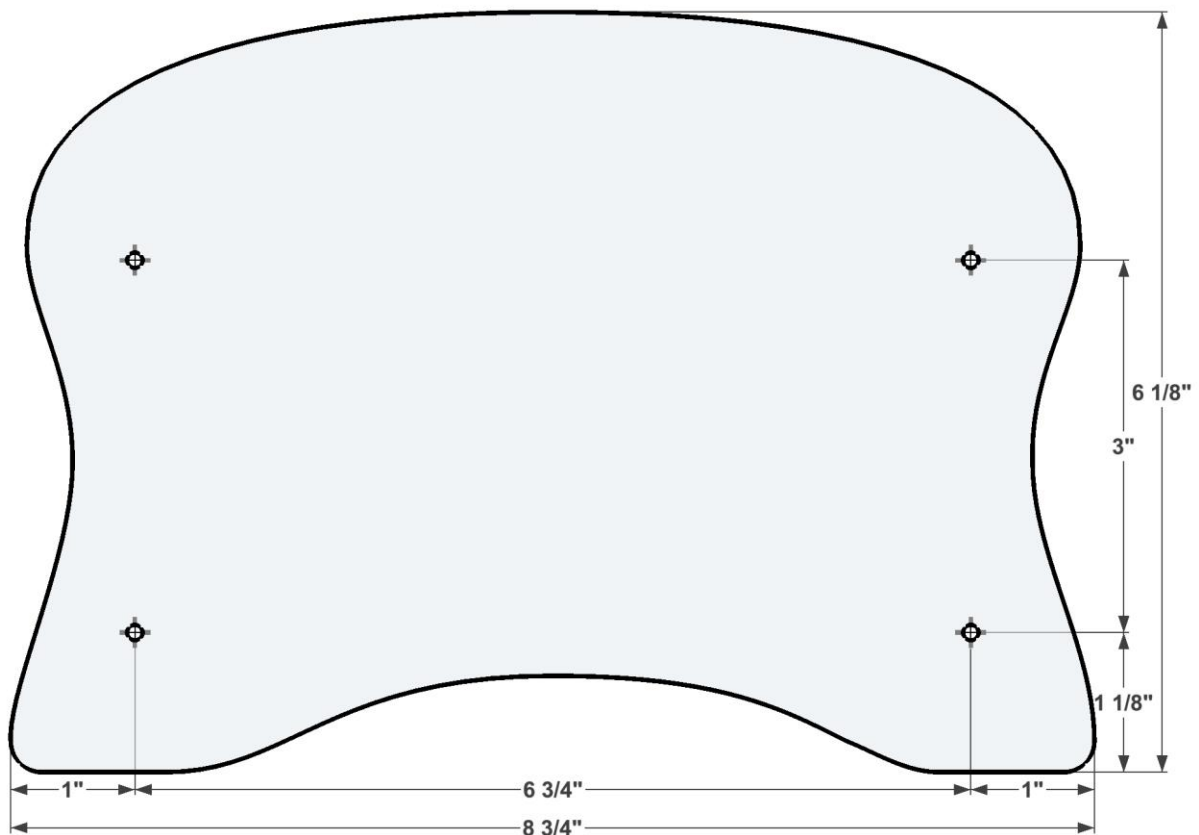
**2 – Sand and Round Over.** Next sand the edges to obtain the shape show in Figure 7-3, then round over the edges either by hand or

using a  $\frac{1}{8}$ " roundover router bit. Sand the rounded over edges of the headboard and footboard to 150 grit sandpaper.

### *Router Safety*

**DO NOT USE** a router to round over edges of toy parts **UNLESS** the router is stationary, that is, attached to a router table. See Ch. 18, p 158.

**3 – Drill.** The final step in preparing the headboard and footboard is to drill  $\frac{1}{64}$ " clearance holes (four holes each) for screws to attach the rails (see Figure 7-3 or 7-5). Then countersink these holes.



**Figure 7-3.** Headboard (Footboard) – *not actual size*

### Tip for Making Multiple Doll Beds

The doll bed/cradle is a very popular toy. Once you make one you could be inundated with requests for more. A jig that makes it easy to accurately drill the holes in the rails and base is described in Chapter 19, pp. 173-6.

The method of template routing, shown in Chapter 20 (pp. 162-3), can be used to make identical headboards and footboards, and helps to avoid a lot of sanding after these parts are cut out on a band saw or jig saw.

### Rails and Base

**1 – Prepare the rails.** The rails should be cut from a piece of  $\frac{3}{4}$ " hardwood, 14" long. The plans given here call for  $\frac{5}{8}$ " thick rails, however,  $\frac{3}{4}$ " x  $\frac{3}{4}$ " stock will also work. A table saw is ideal for this cut, but if one is not available a handsaw can be used.

**2 – Prepare the base.** Cut the base from a piece of  $\frac{1}{8}$ " to  $\frac{1}{4}$ " plywood. Sand all edges and round the corners to a  $\frac{1}{2}$ " radius.

**3 – Drill holes in rails and base.** Drill three  $\frac{9}{32}$ " diameter holes  $\frac{1}{2}$ " deep in one  $\frac{5}{8}$ " wide side of each rail, at the locations shown in Figure 7-4.

Drill  $\frac{1}{2}$ " diameter holes through the plywood base centered at the locations shown in Figure 7-4. If available, a  $\frac{1}{2}$ " diameter Forstner bit or brad point bit should be used for these holes. Use a backup board to minimize tear-out.

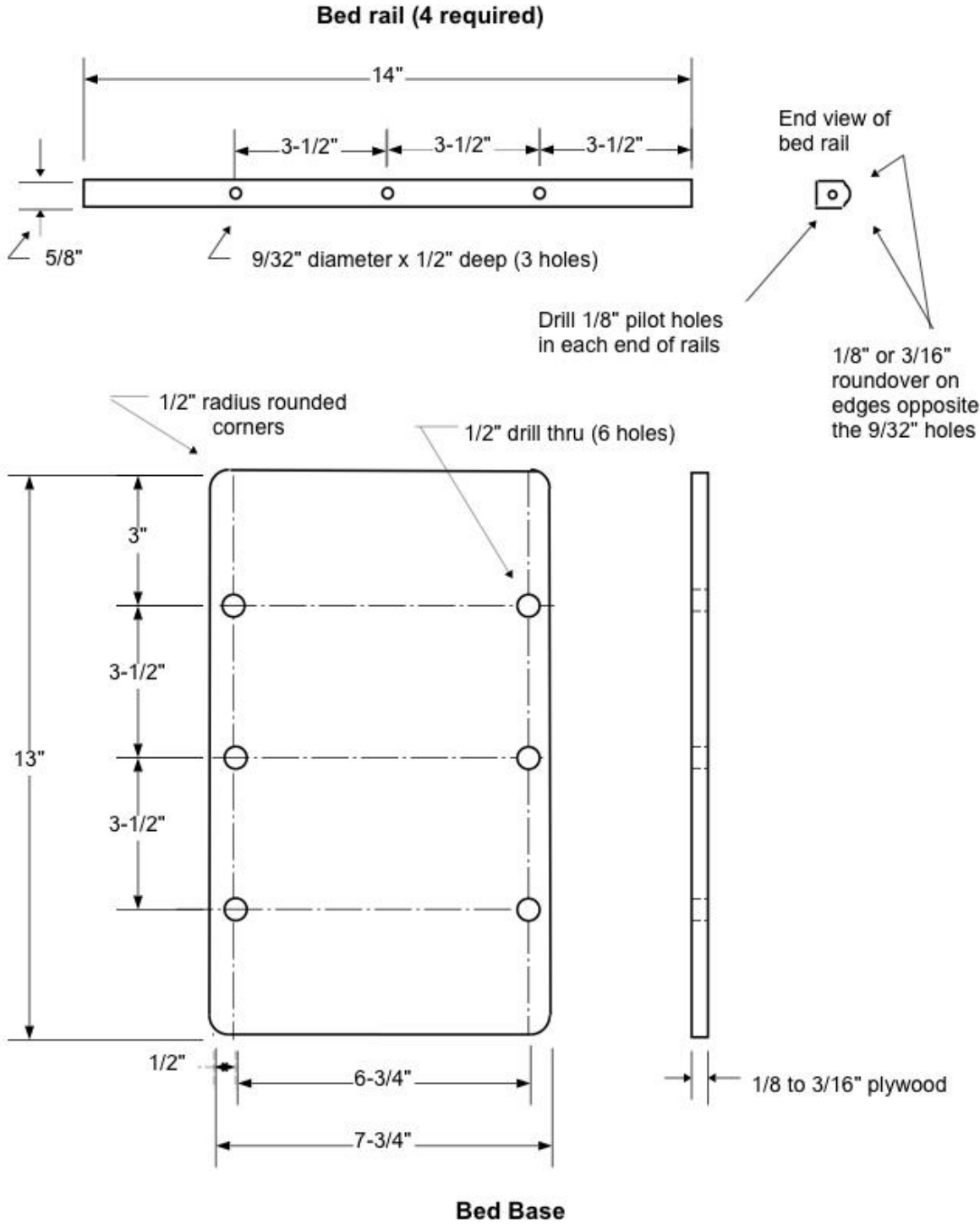
### Types of Drill Bits

See Chapter 19, pp. 166-7.

**4 – Round over and sand rails.** Next round over the edges of the  $\frac{5}{8}$ " wide side opposite the side in which the rail spacer holes were drilled (see Figure 7-4.)

The round overs can be done with a  $\frac{1}{8}$ " or  $\frac{3}{16}$ " round-over bit in a stationary router. If this is not available, a rasp, hand plane, or 80 grit sandpaper can be used. Finally, sand by hand all surfaces of the rails to remove any rough or sharp edges. Use 120 – 150 grit sandpaper.

**5 – Cut rail spacers.** Sand the  $\frac{1}{4}$ " dowel rod purchased for this toy, then cut six 3" lengths from it. Sand the ends of the dowels to break the edges.



**Figure 7-4.** Bed Rails and Bed Base  
*(These drawings are to scale but not actual size)*

## Finish and Assemble

**1 – Seal, stain or paint (optional), and clear finish.** Seal all parts except the dowels with de-waxed shellac, then apply a child safe clear finish such as water-based polyurethane to all the sealed parts.

Before applying the polyurethane finish, the faces of the headboard and footboard can be decorated (see for example, Figure 7-1). Because the bed is designed to be turned upside down, depending on whether it is being used as a bed or cradle, when decorating the headboard or footboard try to use a design that looks good in both directions.

To personalize the bed, paint the child's name on the headboard or footboard or both.

### Decorating the Bed

See Chapter 21, p. 185.

**2 – Assemble.** See Figure 7-5 for top and side views of assembled doll bed. Begin to assemble the bed by drilling  $\frac{1}{8}$ " pilot holes centered in the ends of each of the four rails (see Figure 7-4).

The bed/cradle should be assembled as if it were to be used as a bed (not a cradle) in order to have a flat surface on which to rest the headboard and footboard. Next, attach the bottom rails using  $1\frac{5}{8}$ " screws from the outside of the headboard and footboard. These screws should be countersunk.

Now place the bed on a flat surface and insert the six rail spacer dowels (three on each side) into the holes in the bottom rails. Next place the base on the bottom rails having passed the rail spacers through the holes in the base. Do not glue the spacers into the rails.

With the spacers in the bottom rails and the base installed on the spacers and resting on the bottom rails, attach the top rails by inserting the spacers into the holes of the top rails. Finally, attach the headboard and footboard to the top rails by using  $1\frac{5}{8}$ " screws. Countersink the screws.

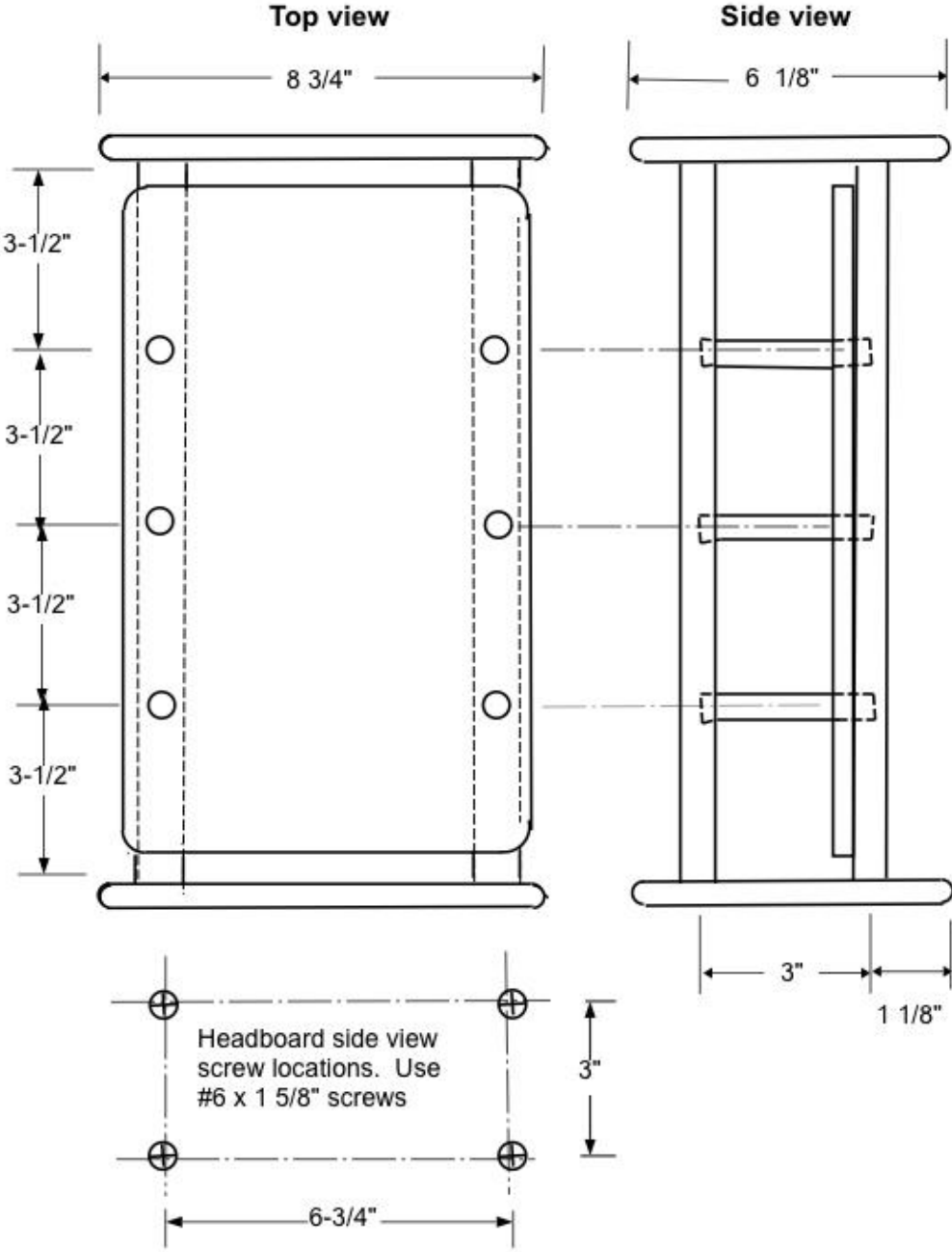
**3 – Check that the base slides.** Turn the bed over (as a cradle) to be certain that the base slides freely on the rail spacers. If there is a problem, determine what is preventing the base from sliding. It might be necessary to re-drill the holes in the base, if they were not located correctly.

**4 – Test for wobble.** Rest the completed doll bed on a flat surface (as a bed, not a cradle). If the bed wobbles, that is, it does not rest flat on the surface, have someone hold the footboard end while you hold and slightly twist the headboard end to achieve a flat resting bed. This process might need to be repeated by trial and error to correct the wobble.

### Addition to Bed

The finished doll bed shown in Figure 7-1 includes a blanket and pillow. These items make the bed more realistic and can be created from scraps of fabric. Including a small doll with the bed makes this a complete toy.





**Figure 7-5.** Assembling the Bed  
*(These drawings are to scale but are not actual size)*

**Figure 7-6.** Headboard/Footboard Template (next page)

7. Doll Bed/Cradle

