A Period Rope Bed

Some time ago, several of our Mirkfaelin friends told us about a period picture one of them had found, a 13th c. Byzantine ivory showing a rope bed (Figure 1). I have now made several versions of that bed. Figure 2 shows the second, built for my 68 lb son. It turned out to be ridiculously easy to make–about half an hour for me to build the bed, plus another hour or so for me and my lady wife to lace it. It is also light and disassembles and assembles easily.

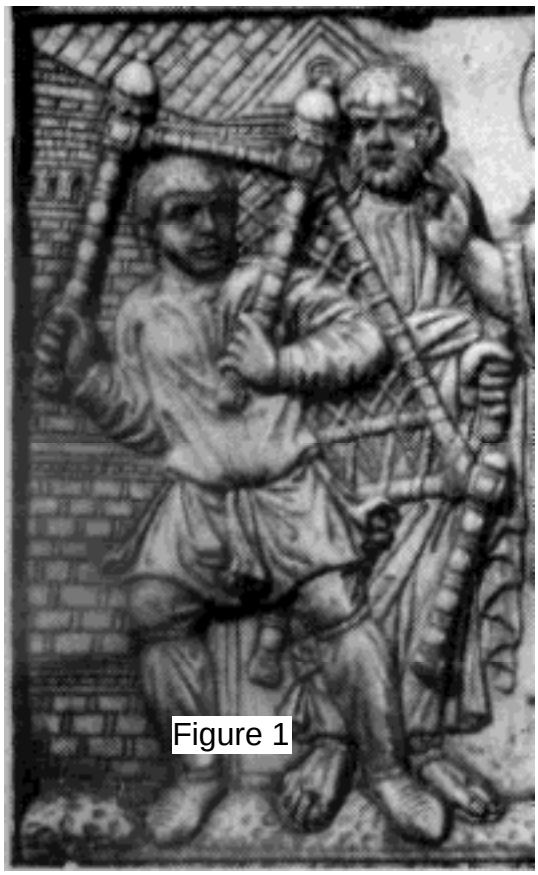


Figure 1

One problem with rope beds is that unless the rope is very taut, they sag. The solution in this design is to have the mesh of ropes fasten not to the food of the bed but to a horizontal dowel a little above the foot. You wrap a rope six times around the dowel and foot and pull. This pulls the dowel towards the foot with a mechanical advantage of twelve to one (minus considerable losses from friction), tightening the bed. The result is satisfactory for one person, although it still sags enough to provide a couple with more togetherness than they may want, especially in hot weather.

The basic construction is very simple. For the child's version, which was the first one I made, the legs are oak, 1 5/8" x 1 5/8". The sides are oak dowels, 1" in diameter. Each leg has two 1" diameter holes drilled into it at right angles to each other, one a little above the other. The ends of the dowels fit into the holes.

Materials for the bed (child's version)

2 legs, oak, 9"x1 5/8" x 1 5/8"
2 legs, oak, 18"x1 5/8" x 1 5/8"
1 end piece, 3/4" oak dowel, 26" long
2 sides, 1" oak dowels, 4' long
2 ends, 1" oak dowels, 2' long
1/4" manila rope, 50' (for the web)+ 7' long (to wrap around the end piece and the foot).

Total cost: approximately $60

That bed was not quite adequate for our 68 pound son; it will hold him, but the dowels at the sides bow in more than I like. Figures 2 and 3 show the bed I made for him. The end pieces are still 1" oak dowels, but the sides are 1 3/8". I made a slightly larger version for his older sister, who weighs about a hundred pounds; it would be adequate for a small adult. To make a bed for an ordinarily sized adult, I would use 1 3/8" hardwood dowels for the ends and 1 3/4" for the sides.

Larger dowels raise a problem, since the hole they fit into has to be significantly smaller than the width of the piece of wood it is drilled in. I solved this problem for the second bed by tapering down the ends of the 1 3/8" dowels to fit into 1" holes. The ideal tool is a spokeshave, but if you don't have one a knife should do.

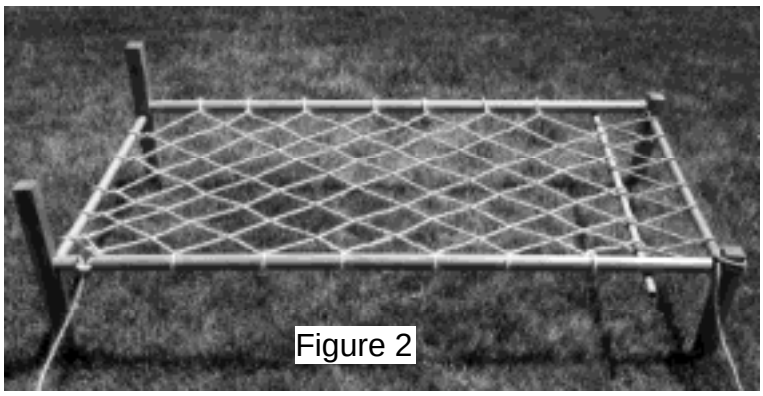


Figure 2

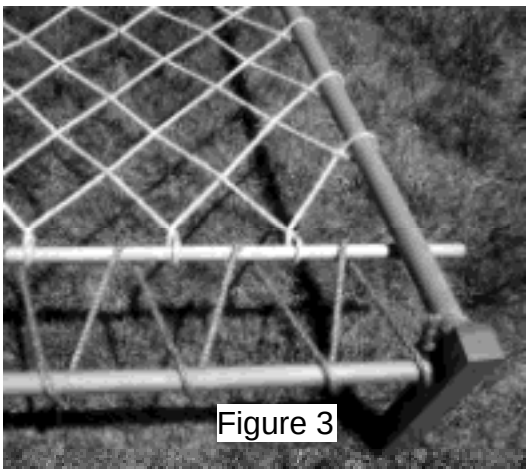


Figure 3

For the third bed, I got my lumberyard to cut the legs as 2" strips from a 1 5/8" plank, giving me pieces 2"x1 5/8". I drilled the 1 3/8” holes for the side dowels into the two inch sides of the legs and the 1” holes for the end dowels into the 1 5/8" sides. That way I could do the whole thing without having to taper any dowels.

If I were making the bed for an adult–which I have not yet done–I could solve the problem in either of two ways. The simplest would be to use 3x3 (actually about 2 1/2" x 2 1/2") hardwood for the legs. Not only would that give enough width for holes that fit the dowels, it might give enough depth to make it possible to put the end pieces and the side pieces at the same height, as they are in Figure 1, rather than offsetting them a little as I have been doing. On the other hand, it would also significantly increase the cost, weight, and bulk of the bed. The alternative would be to use 2" x 1 5/8" legs, as in my third bed, and taper the ends of both sets of dowels.

One solution to the cost problem which I have not yet tried would be to use softwood instead of hardwood. Softwood 3x3’s would probably be adequate for the legs–or 2x4’s, which are easily and inexpensively available. For the side pieces I would want to use softwood dowels a little bigger than the hardwood dowels I am now using, to compensate for the fact that softwoods such as pine are significantly weaker than oak.

In addition to being smaller, this bed differs from the one shown in Figure 1 in four ways.

1. The legs are plain instead of ornamental.
2. The legs are proportionally shorter than in the picture–because it is intended to fit inside a tent at Pennsic.
3. The legs at the head extend higher than at the foot. I did it this way with the idea of eventually adding some sort of headboard.
4. The holes the side dowels plug into are a little higher on the legs than the holes that the end dowels plug into. I did it that way because I couldn't get sufficiently deep holes at the same height without having the two holes run into each other. I don't know whether the fact that the original appears to have sides and ends at the same height reflects shallower holes, thicker legs, or artistic license.

Interlacing the Rope

Figure 1 is not detailed enough to show how the rope is interlaced. I succeeded however, in working out a pattern that looks right; it is consistent with the figure and ropes consistently alternate between going over one and under the next. Figure 3 shows the pattern.

Concerning Dimensions of Wood

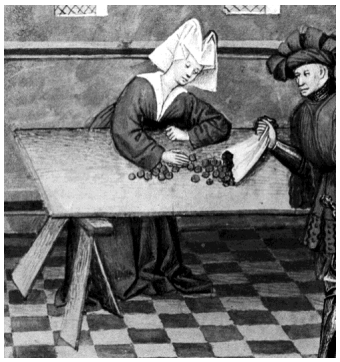
Readers who are not woodworkers may be confused by the distinction between the nominal dimensions of planks (2x2, 2x4, 3x3) and the actual dimensions. The nominal dimension measures the size of the plank as originally cut. The actual dimension is less because some of it is lost in the process of planing the wood smooth. So a 2x4, which is nominally 2" by 4", is actually about 1 1/2" by 3 1/2". Dowels, on the other hand, are usually labeled with their actual diameter.

To add additional confusion, hardwood is often labeled by its nominal thickness in quarter inches. Thus 4/4 is four quarter inches–a nominal thickness of an inch and an actual thickness of about 3/4". 8/4 is a nominal thickness of two inches, 12/4 of three inches.

When in doubt, measure.

References

Figure 1 is the Andrews diptych, a 13th c. Byzantine Ivory currently in the Victoria and Albert Museum. It is shown in Sill, Gertrude Grace, *A Handbook of Symbols in Christian Art*. New York. Collier/Macmillan, 1975, p. 106.



Building a Simple Period Table

A distinctive style of table appears in many period illuminations; each of the two trestles on which the tabletop rests has three legs made from planks, wider at the bottom than at the top. The table is easy and inexpensive to make and it comes apart, making it easy to transport.

To make one, you will need the following materials:

Two planks 1x8x29" (true dimensions 3/4"x7.5"x29") to cut the legs out of.

Two 22.5" long 2x4's (true dimensions 1.5"x3.5"x22.5") for the tops of the trestles.

Two 6' long 1x12's (true dimensions 3/4"x11.5"x6') for the table top.

Figure 1 shows how to cut three legs from each of the 1x8 planks, where to cut the sockets that the legs fit into in the top piece, and how the trestle goes together.

One tricky part is cutting the sockets for the legs, since they have to be angled into the 2x4's as shown in the end view of the assembled trestle. The way I did it was to draw the outline of the socket, drill two 3/4" diameter holes as shown in Figure 2 (which shows the center socket–the end sockets are a little shorter, so I use one 3/4" hole and one 1/2"), and chisel and file out the remaining wood until the narrow end of the leg fits tightly into the socket. Alternatively, you could do it with a drill and a saw. If you are using a drill press, you can angle the hole by putting a block under one edge of the 2x4 then drilling straight down, as shown in Figure 3.

The other tricky part is fitting the legs into the sockets. The basic idea is to make the socket a little too tight, so that the end of the leg doesn't go quite all the way in. Then you trim wood off the end of the leg or out of the socket until it goes far enough in to make it's end flush with the top of the top piece.

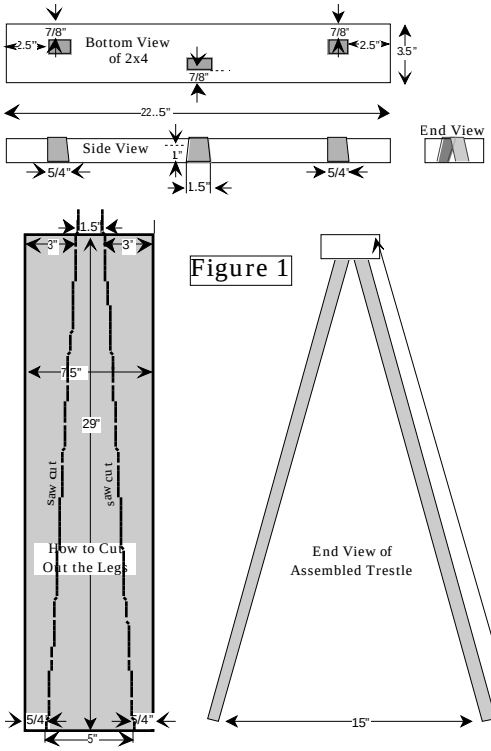


Figure 1

Once all the pieces are made, you assemble the two trestles and lay the two boards across them. A table cloth long enough and wide enough to hang over on all sides helps hold the planks together–but even without that, the table is reasonably stable.

When I made the table shown here I had access to inexpensive 3/4" oak planks, which I used for the legs; in the figures I have made the legs a little wider than in my table, on the assumption that you will probably be using a somewhat weaker wood.

The period pictures shown here are from a fifteenth century source; I do not know how much earlier and later the same design is in use.

Reference: *Illuminated Manuscripts: Boccaccio's Decameron 15th Century Manuscript,* texts by Edmond Pognon, J. Petter Tallon tr., Miller Graphics.

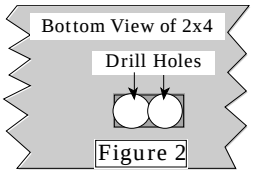


Figure 2

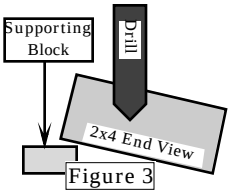


Figure 3

In the city of al-Basra there is a mosque of ʻAlī ibn Abī Ṭālib (May God be pleased with him), and it is a miracle of that mosque that if a man climbs into a certain minaret and calls out upon the name of ʻAlī, the minaret trembles. The traveler ibn Battuta came to that mosque and being informed of the miracle of the trembling minaret, desired to see it. A man of al-Basra accompanied him into the minaret, and there he saw a wooden handle, like the handle of a trowel, attached in one angle of the minaret's wall. The man seized the handle and cried out:

"By right of the head of the Commander of the Faithful ʻAlī (God be pleased with him), shake," and shook the handgrip and the whole minaret trembled.

And so Ibn Battuta placed his hand upon the grip, and he cried out:

"By right of the head of Abū Bakr, the successor of the Apostle of God (God give him blessing and peace), shake," and he shook the handle, and again the minaret trembled."

In his *Rehla*, where I found this tale, Ibn Battuta remarks that what he did was safe enough at Basra, where the people were Sunni, but that at Mashhad ʻAlī or Mashad al-Ḥusain it might have cost him his life.

Conjecturally Authentic Furniture

In the SCA, we often speak as if something either is authentic ("in period") or is not (“OOP”). But this is obviously wrong; authenticity is a matter both of dimensions–a poem may be written in modern English yet wholly authentic in its verse form–and degree.

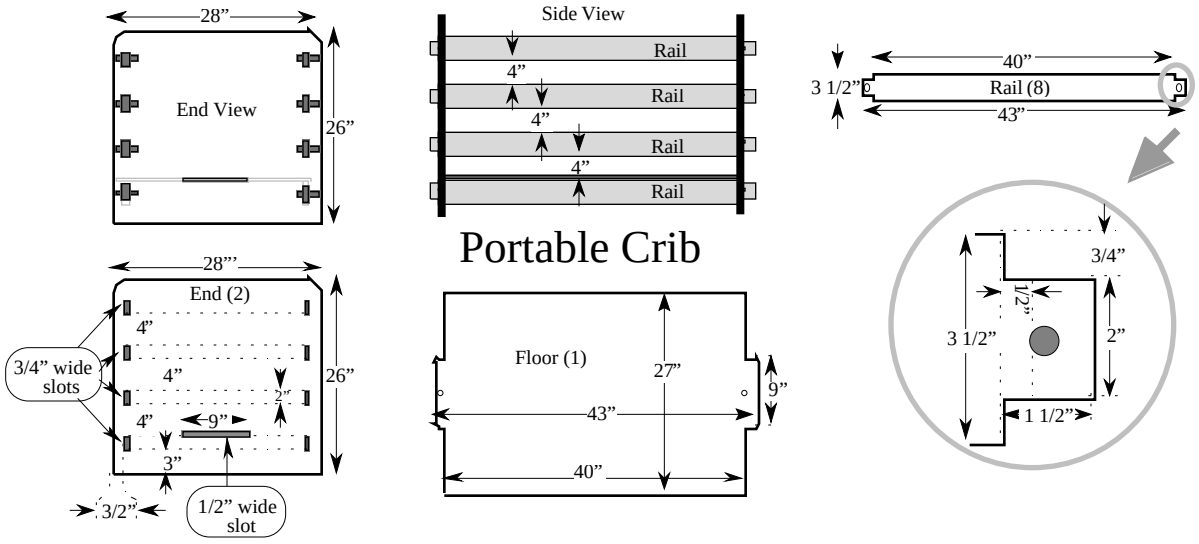
The idea is not merely false but destructive. It provides an argument against any attempt to do things in a period way–"we can't be authentic, since we don't have the exact plant varieties used for food in period, or the exact breeds of sheep they got their wool from, so why bother to try?" In a less extreme form, it provides an argument against any attempt to improve the existing level of authenticity: “what we are doing is already period–we wouldn’t be doing it if it weren’t–so why try to do any better?”

One interesting category intermediate between blatantly modern and clearly period is what I call “conjecturally authentic:” something that could have been done in period, might well have been done, but we have no good evidence was done. Bluejeans do not qualify, because I am fairly sure they were not made in period–although (without zippers) they could have been. The peg together furniture shown on the next two pages, which I made for my encampment at Pennsic, is conjecturally authentic–I use construction techniques that were used in period (the construction, although not the form, of the bed is loosely based on one from a viking ship grave) and materials likely to be used in period, but I am not working closely enough from a period model to claim that the furniture accurately represents furniture made in period.

One reason to do work that is only conjecturally authentic is that none of us has the time and energy to learn everything; I know people who have done extensive research in medieval furniture, but I am not one of them. A second reason is that not everything is knowable–for some of the medieval things we want to do, information on how they were done in period may not have survived. These reasons must be balanced against a strong argument on the other side: medieval people knew much more than we do about how to solve problems using their technology, so learning how they did things and imitating them may save us the cost of learning by our own mistakes.

One reason to be at least conjecturally authentic is that doing so provides an interesting window on medieval life–not what they did but the problems they faced. If you ask yourself how to build a bed in a world where metal is expensive, rubber unknown, wood, leather, rope and labor plentiful and cheap, you put yourself in a position to understand a little more about how the medieval world worked. The same is true of other attempts to use medieval technology to solve problems faced both in period and now–the discussions of hardened leather, pavilions, and Pennsic without coolers elsewhere in this book are examples. One conclusion I have reached is that, although medieval technology and economics may limit you, there is still a lot that can be, and was, done within those constraints. I find it hard to think of examples of things we have to do at events, including camping events, that could not be done in a satisfactory fashion using only period technology.

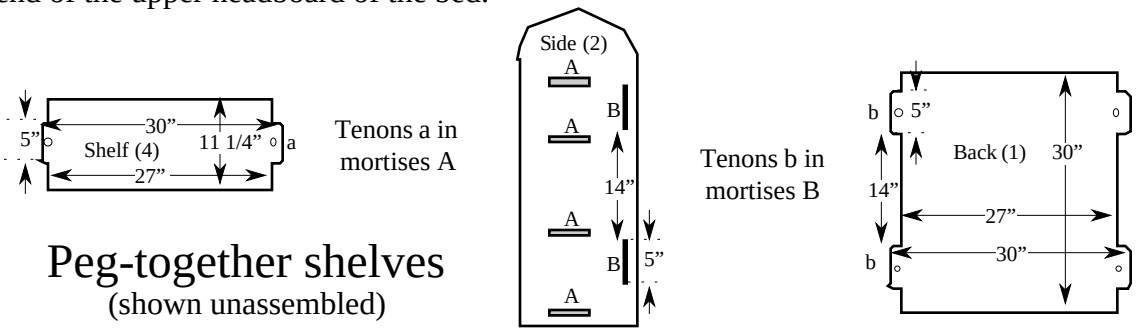
The objects shown on the next pages are solutions to a particular set of problems: How, consistent with medieval technology and economics, do you build a portable crib? A bed? A set of shelves? They are less authentic than the furniture produced by the handful of SCA carpenters who have made a serious study of medieval furniture. But they are more authentic than most of what is used in the SCA, fairly easy to build, and designing them was fun.



Construction Notes:

The pieces of furniture illustrated here are held together by mortise and tenon joints. The mortise is a slot cut in a plank, the tenon an extension of a second plank that goes through the mortise and is pegged on the far side. This should be clear from the figures, which show many such joints.

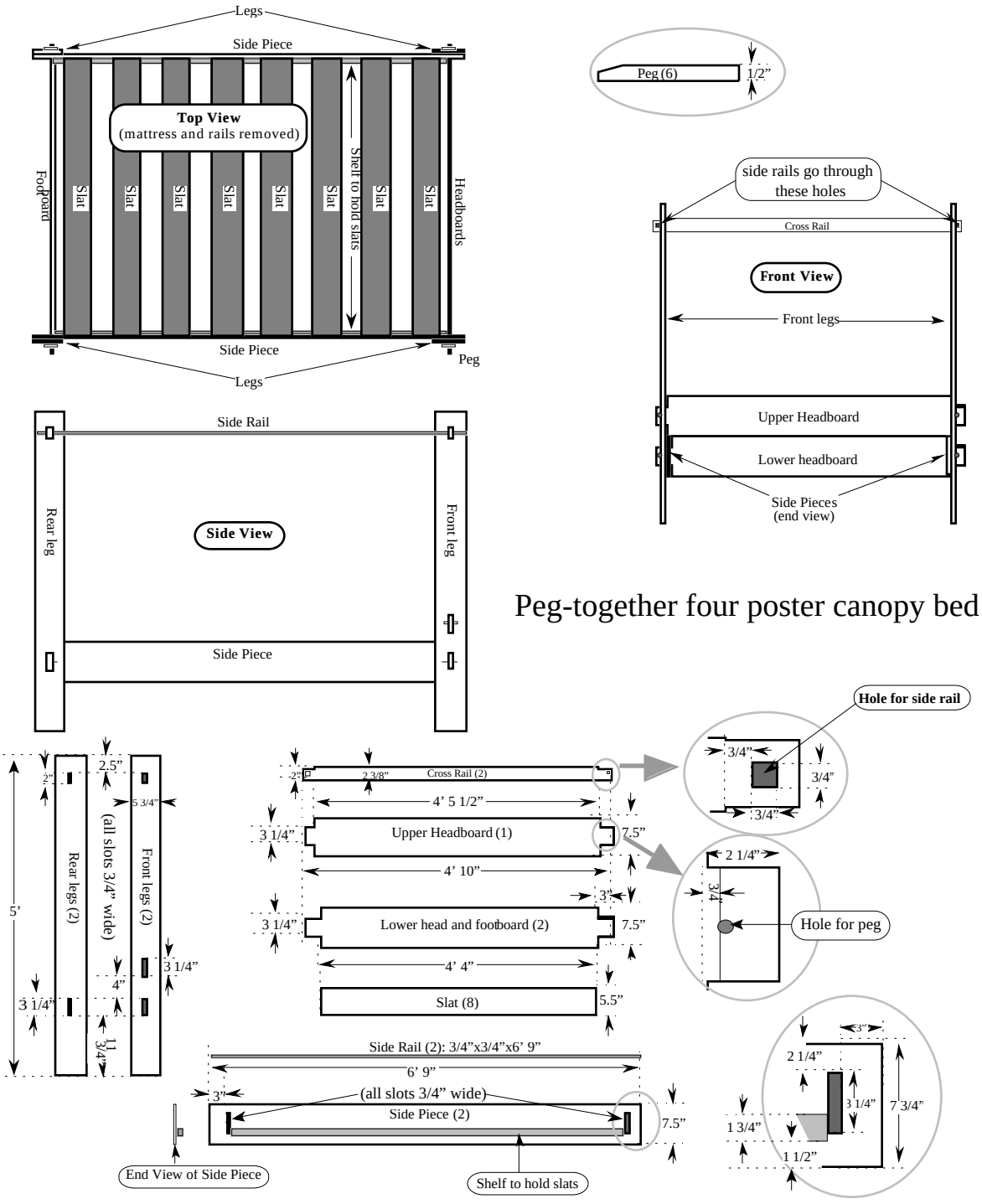
One detail that may not be sufficiently clear is the exact location of the hole in the tenon that the peg goes into. I like to make it slightly overlap the line showing where the edge of the plank containing the mortise is going to lie. That way when I assemble the pieces and force a tapered peg into the hole, I lock the joint tight. I have tried to illustrate the layout in the detail diagram of the end of the upper headboard of the bed.



Peg-together shelves
(shown unassembled)

All pegs are 1/2" hardwood dowels, tapered at one end. All pieces were at some point sanded, stained, and finished.

Except for the rails, the bed pieces have a nominal thickness of 1" (1x6, 1x8, ...), which implies an actual thickness of 3/4". The rails, the slats and the glued on shelf that holds the slats are pine; everything else is poplar. If you use a stronger or weaker wood, you may want to modify proportions accordingly; the same is true if you are taller or shorter than our 5’ 3/12", or intend the bed for more or fewer than two people. The wider the bed is, the greater the leverage your body weight can exert against the slats and thus the stronger they should be.



The rails were originally intended to support a canopy, as in many medieval beds, but have proven more useful as a place to hang damp garments when going to bed.

The back and sides of the shelves and the floor and ends of the crib are 1/2" plywood; the crib rails are pine 1x4’s, the shelves pine 1x12’s.

Instead of drawing the assembled shelves, I have shown how they go together by labeling tenons (a, b) and mortises (A, B), with a fitting in A and b in B.