

Plans for a Portable Cottage

By Matthew Power

Please feel free to modify this design. At best, it was a crude prototype. I would expect every house to be different in size, ornament and purpose, contingent on the geography and time period of your persona. With this in mind, I intend to focus more on how things go together than on how wide to make the door, and how high the roof should be.

I want to thank Hon. Lord Sean de Carrigfergus for sending me a great article about Henry the VIII's portable house. If you're having trouble rationalizing a mobile home for Pennsic, listen to this description of Henry's port-a-hovel:

"It had two rooms, one 27 ft. by 14, with walls 8 ft. high to the eaves, and the other smaller, with 7-ft. walls; a pitched roof about 14 ft. from floor to apex, and windows of 'lantern horn' which admitted some light. . . . The component parts were standardized to facilitate assembly and dismantling. The thirty roof panels were all 8 ft. by 3. . . . Other parts included joists, rafters, beams, posts, and made-up sections of flooring. To enhance the appearance of the house, and make it look more solid, the outside was painted 'in the manner of brickwork' (1)

Now, as someone famous once said,
ENOUGH TALK.

Build the posts and beams

For our building we chose a simple "half-lap" post and beam construction, with tied rafters. Be sure to choose a construction method suitable to your period. This is a simple, rustic technique used throughout the middle ages in rural areas of Britain and France (2).

The key to making this thing impressive lies in making it look impossible to move. Obviously, this illusion creates enormous weight problems for your trailer. We solved the problem by creating false beams, using the cheapest grade of yellow pine 1" X 6" boards we could scrounge. Try to find dry lumber. Wet lumber warps, weighs too much, and won't glue properly.

Glue the boards edge to edge using yellow carpenters glue. Drive in some 1-1/2 inch finish nails every foot or so. You will set them later with a nail set. After all of the joints have dried, cut the required notches in the side posts, corners and topper beams. You can use either a circular saw or hand saw for the big cuts, and finish off the notches with a jigsaw. Pay special attention to the angled notches on the ends of the end beams (see detail). Once you have all the notches cut, drill 1-1/4" center holes for the pegs as shown.

Your next task, cutting grooves in the posts and corners (for the walls, requires a router. A router table helps a lot. You can buy a cheap plastic router table for about \$20 at many large home builder suppliers. Use a straight 3/8" router bit set to a depth of 1/2." Just slide the beam



Baron Kane strikes an action pose

along the table, and end the groove an inch or so before you reach the notched portion of the post.

Hinge the side top plates (side beams)

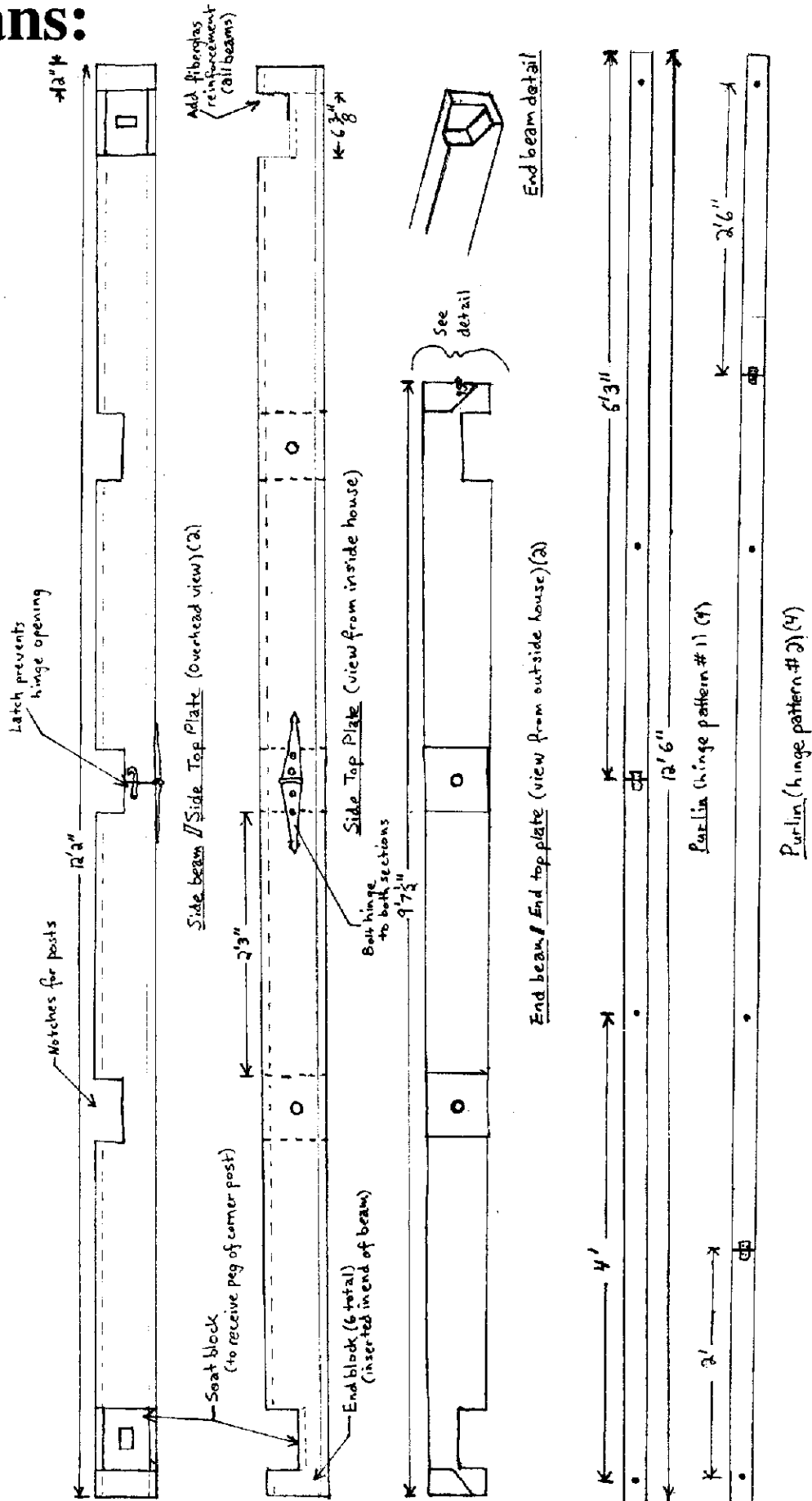
The side top plates must be cut into two sections to fit in the trailer. You will need a heavy duty hinge to keep the pieces together, along with a latch on the top of the beam to keep the beam from unfolding as you erect the frame (see detail). You can either construct your own hinge, or get a storebought version and alter it. If you choose the latter method, bang the edges of the hinge against an anvil to leave hammer scars, and use a jigsaw or grinder to alter the shape as your research dictates. Then paint it with a flat black epoxy or rustoleum enamel.

Add end plugs and seat blocks to beams

Find a scrap piece of an old beam that is at least 5"x5" and cut 4-2" thick slices to serve as

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Plans:



Portable house (cont.)

end plugs for the false beams. If you cut the beam with a circular saw, you will need to make several passes. Fit a plug into the end of each beam, clamp and glue. If you want to hold it in place with finish nails, dull the end of the nails first to avoid splitting the outer boards.

Now insert a 3/4" thick seat block inside the outer notch of each of the side topping beams. This block, set flush with the notch, will help stabilize the corner posts. Glue and fasten with finish nails.

The outer notches on all of the beams need reinforcing. I found that applying a layer of fiberglass matting and resin to the inside of each notch makes the 2" end pieces much stronger. Just soak the cloth in resin, and press it into the 90 degree bend between the seat block and the end plug.

Finish the posts and beams

Once you have all of the heavy construction done, use a nail set to bury all of the finish nails, then take a hatchet and hack away the edges of all the posts and beams, to make them more rounded. Don't get jittery. You can cut pretty deeply and still

get the right effect.

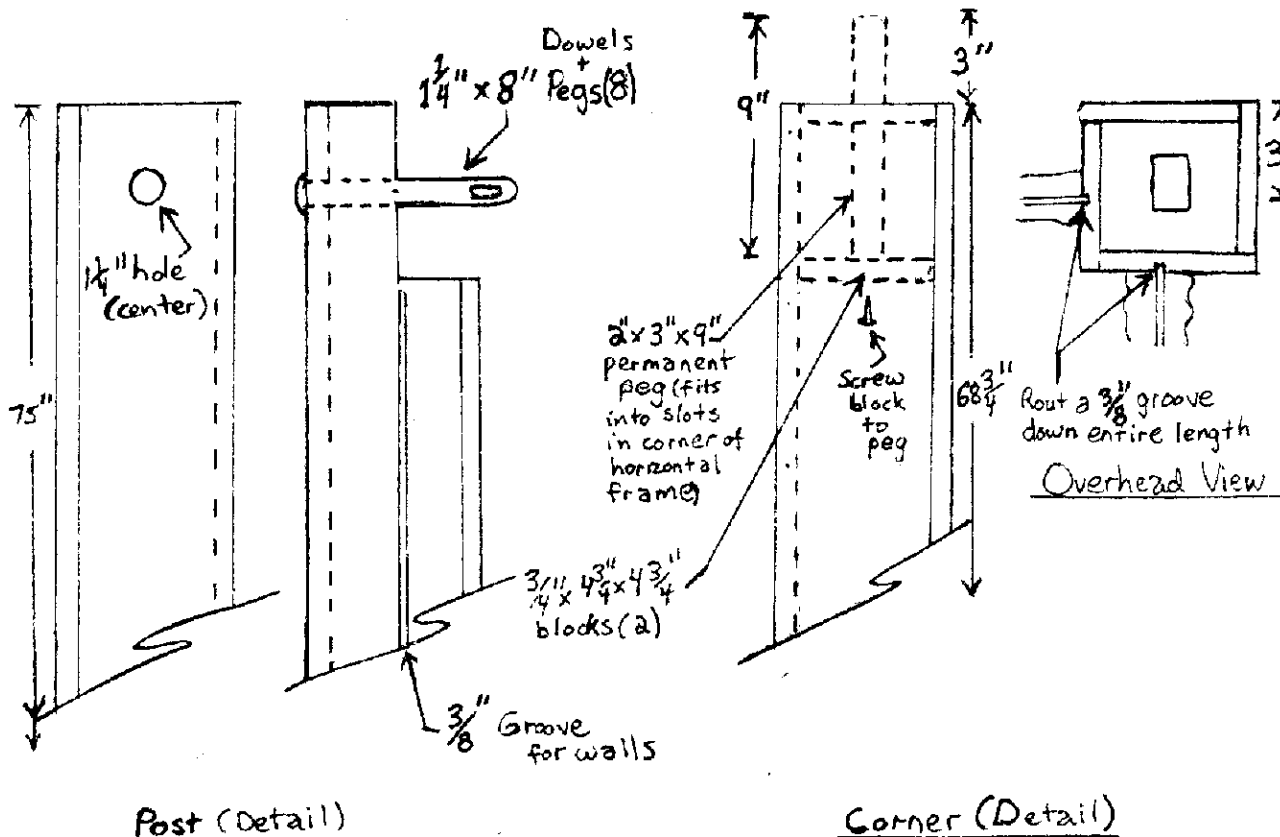
When you have done this, apply wood putty--make sure it's stainable--to the nail holes and along the joints between the boards. Allow the putty to dry.

Now take a wood rasp and smooth the edges of each post. Follow up by belt sanding all of the corners until they are smooth. This gives your posts a "weather smoothed" look. You can rent an industrial belt sander at most tool rental companies. If you have to rent, wait until you have finished the roof, so you sand everything at once.

When you're happy with how the posts and beams look, apply a dark stain to all exposed wood. If you find that some seams refuse to disappear, try spraying them lightly with a dark brown spray paint, then adding stain over the top.

If you want to get your frame standing before you finish the roof, cut 8 pieces of 1-1/4" round stock into 8" segments. Cut a slot in the end for the locking peg. Make the pegs as described for the tuam (see article in this issue). Use hardwood. You also will want to peen over the other end of each dowel. It helps to soak the end of the dowel overnight, then put the shaft in a vice, and pound on the wet end. In addition to these "real" dowels,

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Portable house (cont.)

you will need to make two "false" dowels, which will be glued permanently into whichever posts you designate to occupy the center notch along your side topping beam.

When you're ready to erect the frame, make certain the ground is level. Slot the topping beams together and close the center latch on each side topping beam. You will want at least three people to help with this next step. Lift one end of the frame, and insert two of the corner posts. While two people keep the posts steady, lift the opposite end of the frame and insert the other two corner posts. Now install the other posts and peg them together tightly.

Take a break. Gape at your creation.

Make the rafters and purlins

Like the frame, the roof structure must LOOK heavy to create the illusion of permanence. You will build the rafters, ties and collar supports out of pairs of economy 2"x4"s that have been glued together, doubling their width. It's easier to cut the pieces to length before you glue and clamp. This way, you can leave the necessary notches without a lot of chiseling and frustration. All of the pieces join with half-lap joints, which are then held fast with shorter versions of the dowels and pegs used to secure the lower frame.

You will need a total of (4) sets of rafters, which will be set at equal intervals atop the frame. Unless you expect to encounter heavy winds, you won't need fasteners to hold the roof to the beams. The weight should be enough.

The end rafter sets have some special requirements. First, they need a central collar support to make the walls look right. They also need to be prepared to hold the wall sections. Lay in a groove on the inward face of each section of the rafter frame, as shown. When you're ready for final assembly, you will insert the wall pieces into these grooves as you put the end rafters together. The stone walls on these upper gable ends of the house should align with those of the walls below.

The roof has no center beam, so each rafter set joins at the peak with a half-lap joint. The rafters are held in position by strips called "purlins" made from 1"X2" strapping (true size may vary). Cut notches on the top of each rafter to receive the purlins. In the center of each notch, drill a hole for a 3/8" dowel. Glue the dowel into the hole, making it flush with the outer edge of the rafter. Now cut the purlins, and hinge them together as shown. The hinges will face the interior of the house. Drill 3/8" holes in each purlin where it falls on the rafters.



Erecting the posts and beams



Shaping the stone panels

In addition, cut a notch called a "birdsmouth half-lap" near the base of each rafter. This is where the rafter will sit on the side topping beam.

When you finish the carpentry, distress and finish the rafter sets the same way you did the lower frame. If you're feeling brave, get a stepladder and erect the rafters. Start at one end of the house, and work your way toward the other end. Use a wooden mallet to bang the purlins onto the dowels.

The walls

Before you rush out and buy a pile of styrofoam to make the walls, let me make a few disclaimers about the "foam stone" method.

In hindsight, I discourage the use of styrofoam. It's expensive, fragile, and an environmental nightmare. Burning in the stones (as we did) releases deadly gases. Just breaking the stuff releases ozone-destroying CFCs into the air (or so I've been told).

Ideally, this cottage should have walls of wattle and daub, by far the most common batting among rustic and early period structures. We rationalized the use of "stone" for our cottage because the walls

Continued on page 19