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Scratchbuilding a Small Wooden Freight Station and Platform

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SO, NOW THAT YOU HAVE A FEW old time wooden freight cars built, you need a place to stop and load and unload those items you've carefully crafted as flatcar loads or packaged goods from your gondolas.

There are countless examples in the model railroading literature that you can use for plans to create a small freight station or platform (try www.index.mrmag.com). With a few good pictures, an article or two, or just a photocopied page from a borrowed book, you can be on your way to the workbench! Or, more likely since you need to fit this into a specific location or limited space on your layout, you can just build to fit the space and location on your layout.

I continue to advocate for building in wood since wood really looks like...wood, cuts like...wood, stains like...wood, and paints like...(you guessed it)...wood. There are several suppliers of scale lumber and various types of specialty scribed sheet lumber: Northeastern, Kappler, Mt. Albert, and others. You're going to need the standard tools, e.g., a fine kerf razor saw, miter box, small square, sandpaper, and a few very sharp modeling knives. Invest in a good scale ruler and a fine marker; 0.5 mm mechanical pencils are nice and you can get colored leads for them. A pin vise and a set of drills, tweezers, files, and gluing weights are required as well.

Assembly requires glue, and since there are butt joints, my adhesive of choice remains Walther's Goo or some equivalent. A generic brand of medium viscosity CA adhesive works just fine for nearly every application.

So let's get building! We'll build the platform and station separately, and then combine the two to finish. One of the advantages of working this way is that while the glue is setting on the platform, you can work on the station.

THE PLATFORM

Just like a flatcar, construction begins with building a perimeter box frame. Working from Figure 1 (see page 4), assemble the framework as square as possible using a dab of Goo on the ends of each joist to tack them in place against the end sills. These are all made from 1/4" x 3/16" lumber. You'll need four 29'-9" long and two 20'-0" joists and three end boards measuring 14 ft, 9 ft, and 5 ft respectively. Of course, these dimensions are flexible; you can lengthen, shorten, or widen this platform to suit your needs in location and function. And, of course, since this is laid out in O-Scale, everything is easily translated to your favorite scale.



Let's get some deck boards down. Scribed sheeting makes this fast and easy, but I like individual boards. Odds are no one will look under your structure, but having some random widths and having an aged, worn surface adds character. I like to use those wooden coffee stirrers that you can buy by the case of 10,000 or you can buy the expensive commercial model-building version, Doctor Ben's Rustic Lumber. I also like to pre-stain these using a complex mixture of Minwax. The complexity is that I have no idea what's in the bottle; I just

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randomly top off a small bottle from whatever can is handy on the shelf and variably dilute to suit.

Cut enough boards (about 40) to cover the platform. Make them a bit longer than the width of the platform. You can set them flush on one side and prune off the excess overhang later.

are willing to match up complementary boards so things work out evenly. Trim the deck boards flush with the side sills. I use a band saw or a construction knife to trim off the overhand along with a belt sander, but a razor saw, albeit slower, also works fine.

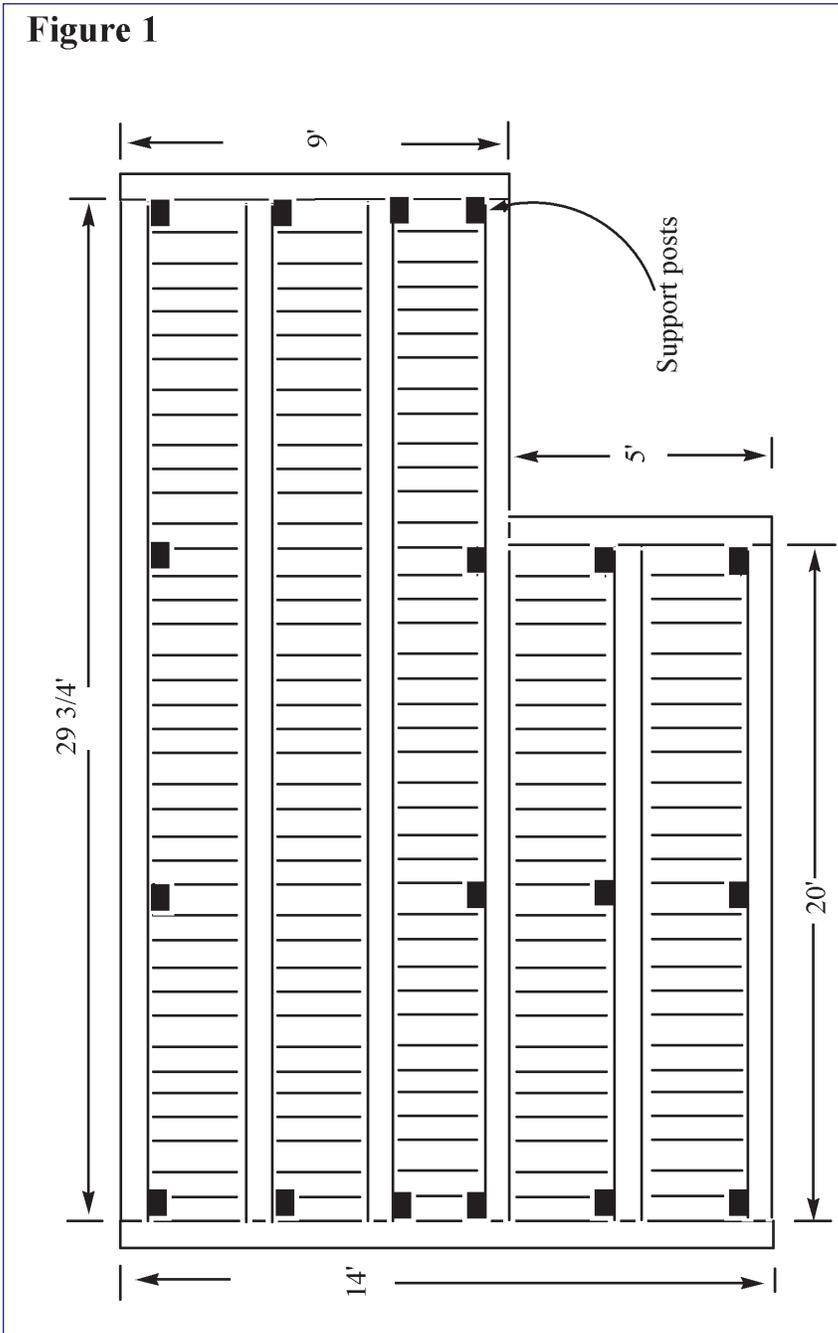
The platform needs some legs to stand on. I used HO-scale 8 by 12s (that I had on hand) cut 4'-6" (O-scale) long to bring the height of the platform up close to the opening on one of my boxcars. A square or other dimensional lumber leg would work just fine also. The locations for these are marked out in Figure 1. Just glue them straight into place against the joists and sills. After you get this done, add diagonal bracing (see Figure 4 on page 6). I used HO-scale 3 by 10s for this, but again, other dimension lumber that looks right will be fine.

Now let's add a ramp. Take two more pieces of that 1/4" x 3/16" lumber, cut them to the full length of the ramp, 16 scale feet in this case, and create the angles at each end by sanding and test fitting until satisfied. Glue a piece of scale 4x4 across the bottom of the platform end sill for the ramp joists to rest on. Notch the ends of the ramp beams to accept this 4x4, glue them in place, and cover them with short pieces of decking boards. This will be a little delicate to trim neatly later, so it's worth the time to cut these boards close to correct length now. I added nut-bolt-washer castings (Grandt Line #23) to dress up the assembly where the legs are bolted in to complete the platform assembly. You can use this platform as is or you can add the station.

THE STATION

Figure 2 (see page 5) shows the four walls of the station. The sides and ends are cut from Northeastern 3/32" clapboard siding. One side and end are taller than the others because they extend over the side of the platform. I have a window in one end with a door at the opposite end. These could be moved to suit and different or more windows could be used. It's up to you to take my plan and customize it to suit your needs. Before you cut out the holes for the door and window, cut four, 9-scale-foot lengths of O-scale 4x4 and glue one to each inside edge of each end measuring from the top down. These serve two purposes. First, they stabilize the clapboard siding from splitting when you make cut outs for the door and window. Secondly, they provide a surface for gluing the sides to the ends when you assemble the structure. See Figure 3 (see page 6). Run another length of O-scale 4x4 along the base of the shorter walls to provide an attachment site to the platform. Having done this step, decide on your window and door locations. Mark their openings using the Grandt Line castings themselves as guides. The openings in the figure were derived from a Grandt Line #3707 window and a modified Grandt Line #3612 door; the styles and locations could be easily changed to complement your personal tastes and functions. Using a very sharp knife, repeatedly scribe a line until you cut through the siding. Do not rush this! Even with the 4x4 reinforcing, the clapboard siding can crack or split. It's repairable with CA, but avoiding this situation is preferable. Test fit the castings in their

Figure 1



Pick out four to six nice straight deck boards and, after laying down a bead of CA on the top of the end sill and down the joists for a distance of about three deck boards, glue them down. This will "lock" your joists and frame squarely in place and let you finish installing the rest of the deck boards. Try to pick "interesting" boards; arrange for color patterns, grain, "knots", etc., to be visible. A little damage adds character, but also stay with straight boards. Avoid using seriously crooked or warped ones unless you

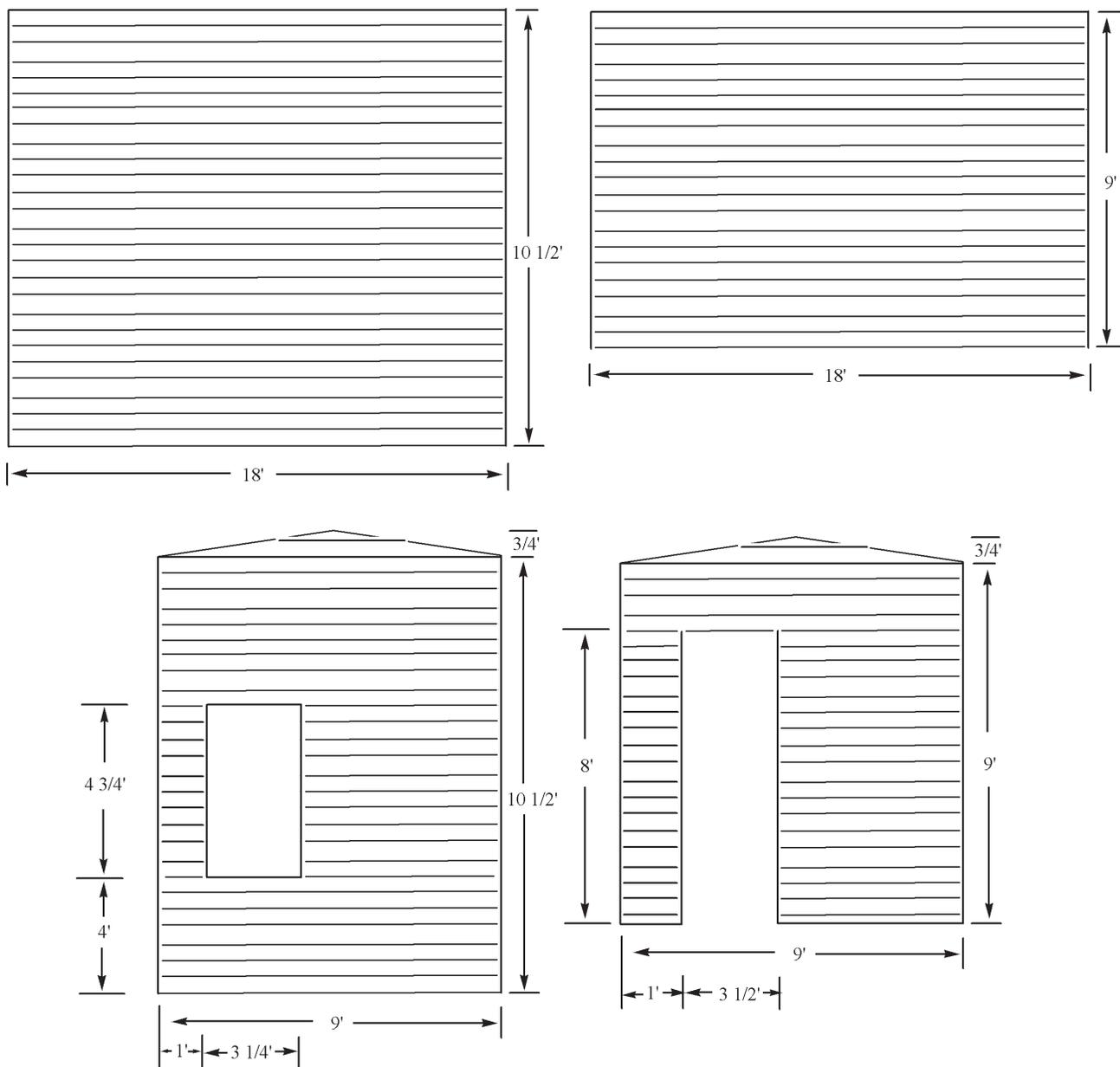
corresponding openings and make “adjustments” with your knife as needed so they fit snug but not tight. This gives you the opportunity to paint the door and window castings and glaze the openings with slip cover glass prior to installation.

Now, assemble the four walls. Carefully run a bead of glue on one of the O-scale 4x4 edges on the interior of the “door end” and glue this to the “short wall” making sure to align the tops of the two pieces. Repeat this step gluing the “window end” to the other end of the short wall. Try to get these joints as close as possible to 90 degrees. Now, glue the “tall wall” to the two ends. Start with one end; get it carefully aligned at the top, and square, and then

let the glue set up well. You can then carefully pry and glue the other end of this wall to the remaining end wall.

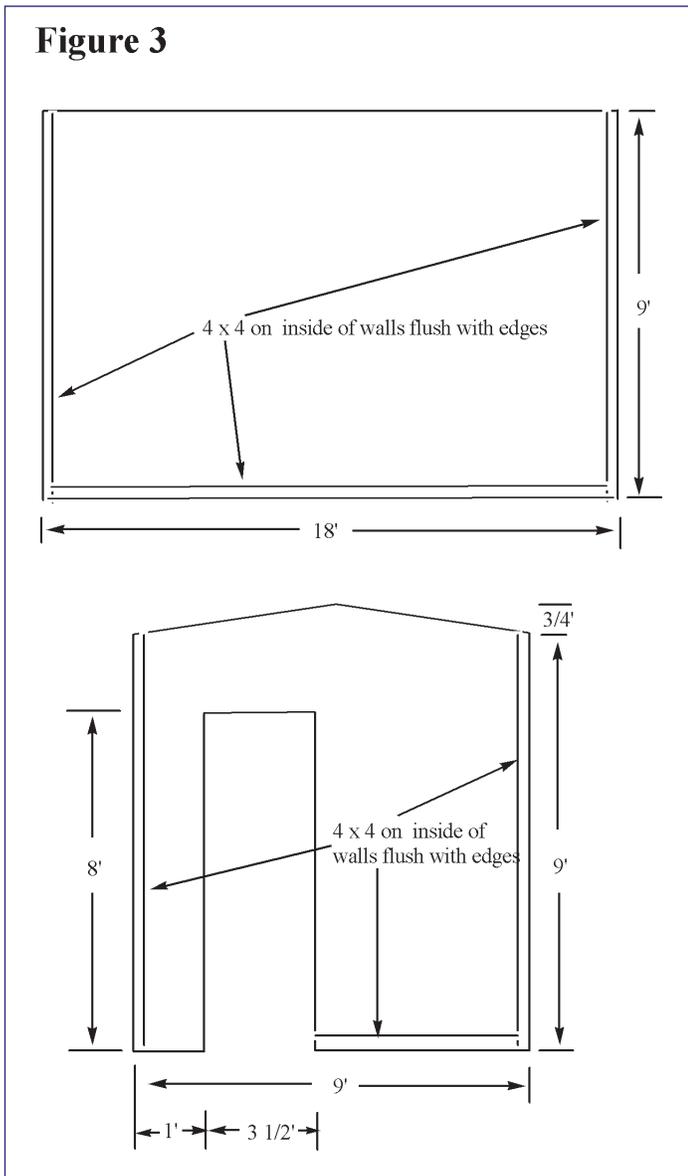
Now, let’s get a roof on this structure. You could do board over rafters and then put on shingles, a metal roof, or a quick simple tarpaper roof. We’ll do the latter, but with a simplified roof under it. Using two pieces of 1/32” thick sheet basswood sheet (7 by 20 scale feet), close up the roof leaving a one-scale-foot overhang on the sides and a six-inch-scale overhang on the ends. Flip the station over and glue in false rafters made of 1/16x5/32 strip wood sanded to the correct bevel to sit snugly against the top clapboard, meeting the roof overhang and extend-

Figure 2



continued on page 6

Figure 3



ing out to the near the edge of the roof. Start at each end and set these in evenly at about a scale two-foot centering. My model has nine rafters. Make sure your rafters line up on both sides! For tarpaper you can use sheets of tissue glued down, but I like to use 600 grit sandpaper cut into 4' x 8' sheets. Overlap these slightly,

starting from the lower edge corner and work your way across. Two more rows should do it; make sure to stagger the seams. Sheets folded in half cap the roof. These can be glued down with a minimal amount of thinned wood glue or CA. You can cut a hole in the roof or surface mount a smoke jack at this point. Grandt Line makes these although mine is an ancient Scale Craft casting that I drilled out and Goo'd in place. Two places that you need to do a little trim work are on the station corners and end fascia. Milled angle wood is a little too thick for this so I built the corner molding to cover the joints of the clapboard with HO 2x8s. This same scale lumber works well for the fascia boards, too.

Now it's time to paint the door and window castings, and glaze them with some glass slide slipcovers. I hand painted mine with two coats of Polly S. For those of you who like convenience, Stevens Creek (<http://www.hon3.com/glazing.htm>) sells glazing pre-cut for some of the Grandt Line window and door castings. I still like glass because plastic doesn't quite look right. This very thin glass can be accurately cut with a diamond tip scribe sold through scientific supply houses. Try Thomas Scientific or Fisher Scientific. Minimal pressure and patience are the key ingredients for success here. Secure the glass to the interior of the painted door and window with minimal ACC or Goo.

PUTTING IT ALL TOGETHER

Having completed these steps, it's a simple matter to mount the building on the platform. A bead of CA on the scale 4x4s you added at the base of the walls and to the part of the walls that overlap the platform sides secures the building to the platform.

FINISHING IT UP

I first stained the entire building with Minwax Pecan. Then I took some very old Floquil Dark Green, diluted it with mineral spirits and with the cheapest brush available spread it around until I got the coloration and depth that I wanted; darker under the eaves and protected spots and lighter away everywhere else. I followed this with some streaking of the window paint below the sill. The tarpaper roof and the platform lags and braces were painted Polly S Oily Black, and the smoke jack got a coat of Polly S Steam Black with a few touches of Roof Brown. Next I added some details – crates from Berkshire Valley, some leftover passenger car seats by Grandt Line, and a Berkshire Valley box with a hinged top that I liked. I also added a hanging sign made from scrap wood. I gave it the same treatment with the green paint and lettered it with Clover House dry transfers. To give the sign

Figure 4

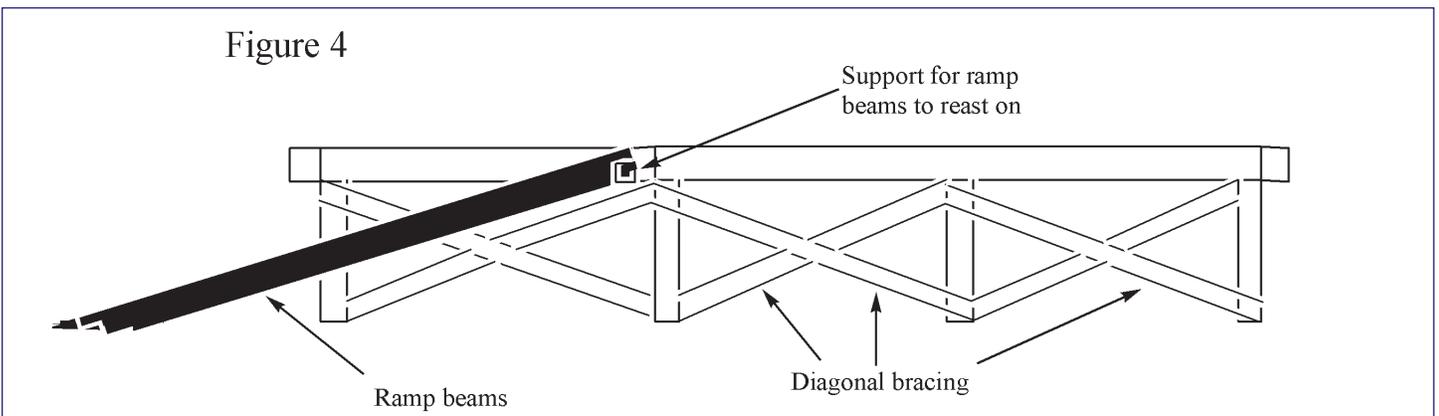
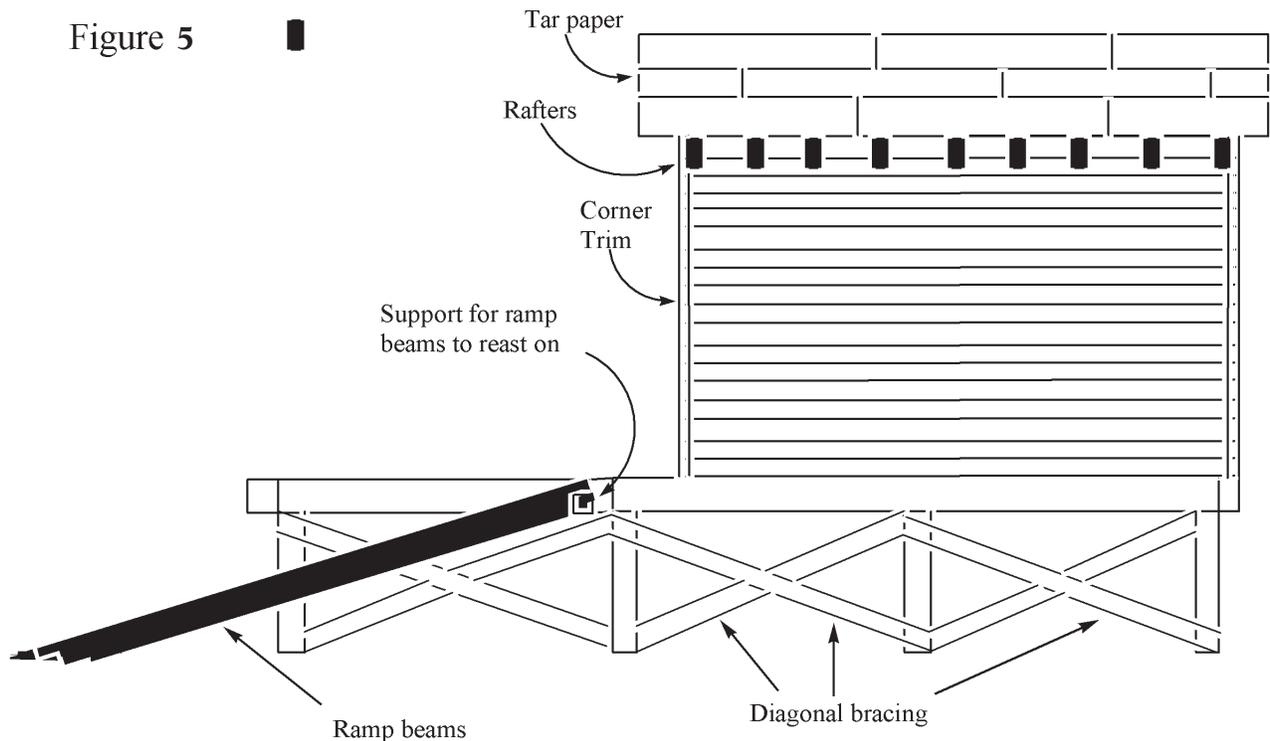


Figure 5



a weather-beaten look, I sanded off some of the lettering.

Finally, I wanted to add something to the blank wall. I had a jpeg file of an old tin sign advertising “Mavis” chocolate drink. I cropped the excess from the picture using MS Photo Editor, imported it into ChemDraw (non-chemists can use PowerPoint or a host of other software for manipulating jpegs), and sized it to fit. After printing it on an ink jet printer and cutting it out, I carefully sanded the paper very thin. Since the colors were far too bright and I also wanted the paper to be more pliable to fit the contours of the clapboard, I soaked it in water for about 30 minutes. This resulted in washing out much of the coloring and providing very fragile paper that I laid down over thinned carpenter’s glue on the wall. I used a block of scrap wood to work



the paper into the clapboards and let it dry. When the glue dried, I sprayed on some Testors Dullcote. To further tone down the colors, I gave the entire structure a light airbrushing with grimy black and roof brown.

You could, of course, add a complete interior with lighting and a removable roof, but the primary objective here is to build a simple, first structure that becomes the basis for future and more complex endeavors.

Keep on building! 🛠️

