Grab Irons, Straight Every Time

The part of craftsman model building that every modeler hates is drilling the holes for the grab irons. There are so many and then never are quite straight. Try this little gadget and never miss again. Build a small jig that has the holes preset and already aligned.

Start with a scrap of .020" sheet brass or steel. A tin can lid center can work. The object here is to scribe a layout and then drill the holes into the brass so that the jig only needs to be placed on the corner of you model boxcar or refer and the guess work is done.

The part that is important is that the holes be parallel to the corner of the jig. The jig is bent to a 90 degree angle so that it wraps around the corner of your model. Thus the holes must be both parallel and the correct distance from the corner.

Begin by Striking a line vertically at the location where a 90 degree bend will be made later. See fig. 1.

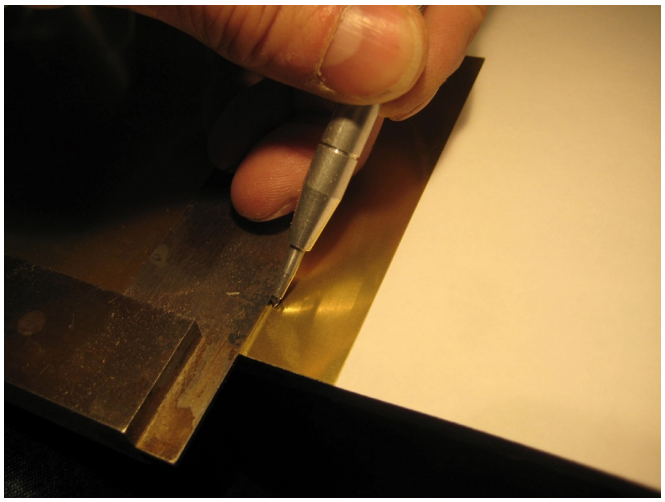

fig. 1

Then measure back from this line to the location of the first grab iron hole. Do this at the top and bottom of the jig. Plot a scribe line from top to bottom. A small machinist square makes this task quick and accurate. See fig. 2. With a machinist scribe or old hobby knife blade against a straight edge, scratch a line to represent the location of the holes closest to the corner. This will be the locations of the holes for the right side of the grab irons. Make a second measurement to the left that represents the spacing called for by the plan and scribe the next line. This is the line for the left side of the grab irons,

Determine the spacing of the holes from the drawings and plans provided by the manufacturer of your kit.

Then determine the vertical spaced between each rung. Record these numbers and then begin your layout on the brass sheet. See fig 3 & 4.

The part that is important is that the holes be parallel to the corner of the jig. The jig is bent to a 90-degree angle so that it wraps around the corner of your model. Thus the holes must be both parallel and the correct distance from the corner. You may choose to continue the lines around what will be the fold line so as to be able to locate the end grabs also.

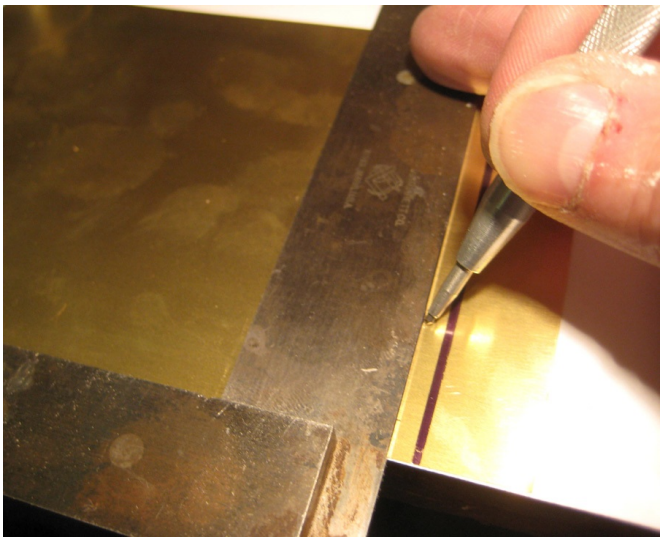

Fig. 2 Fold line highlighted in black felt pen

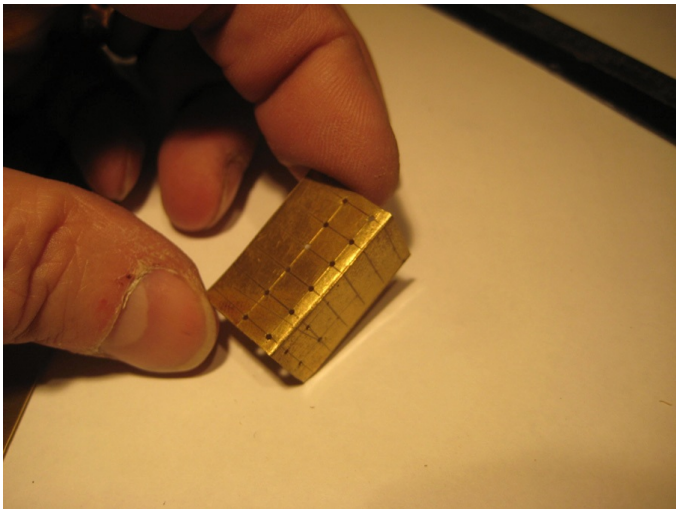

fig. 3

After all of this, if there are full elevation plans available you can make a full size photocopy and place it directly on the sheet brass and mark centers for the holes.

At 90 degrees to the vertical lines now the horizontal lines must be plotted. This will create the intersections where the holes will be drilled. Mark the remaining grab iron hole locations based on the value shown in the plans. Plot down as many grab locations as called for. Most are either five or six grabs to a car side.

Many manufacturers of older wood kits provided grab irons formed from .020" wire. Currently grabs are being supplied in HO at a more scale size of .012". Choose the appropriate drill size for the wires you will be using. That is for both the guide holes in the jig and the holes to be drilled in the car body.

Place the brass sheet with the grab irons in a vice with a very clean sharp edge. If the jaws are a bit raggedy pinch a thick steel straight edge in the vise with the brass with the straight edge exactly at the fold line the represents the corner of the model. Snug up in the vise and break over to 90 degrees. Use a small hammer and tap lightly on the vice to sharpen the corner. The brass will try and round a bit if given the choice.

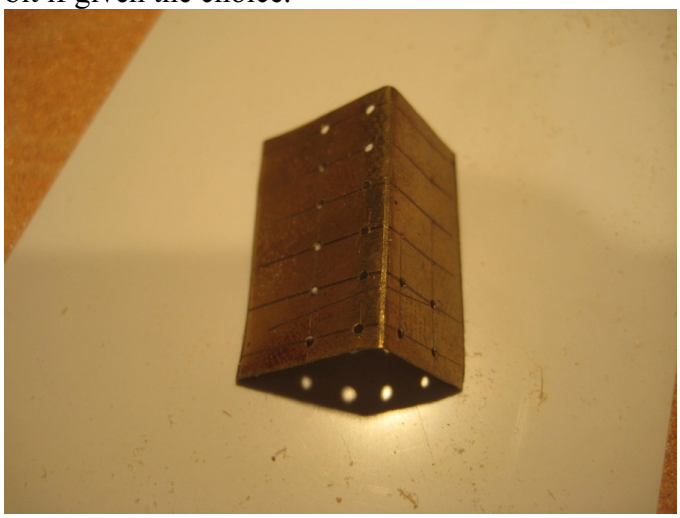

fig. 4

Where the jig is located on the side of the freight car is a function of where the top or bottom rung is intended in the plans. Once that location is found, hold the jig firmly and begin drilling holes in the side. See fig. 7. The jig may be rotated around for a full height ladder on the end of the car if the plan calls for it. If there are grabs on both the side and ends of a corner, drill the end iron holes on a slight angle so that the grab wires do not collide inside the end block of the car body. See fig. 8.

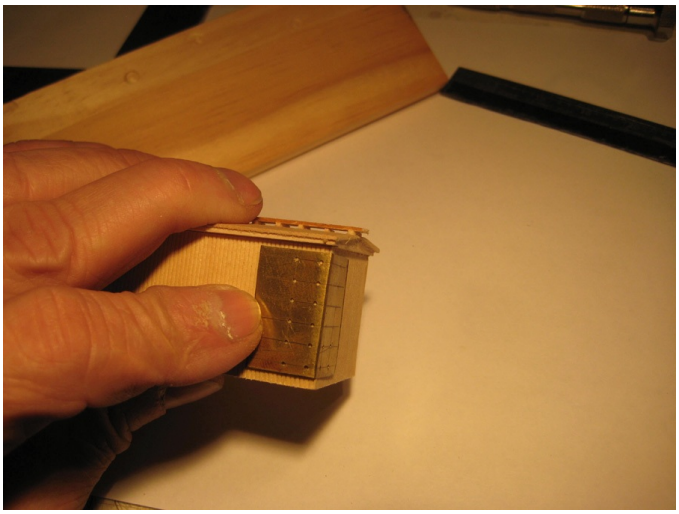

fig. 5

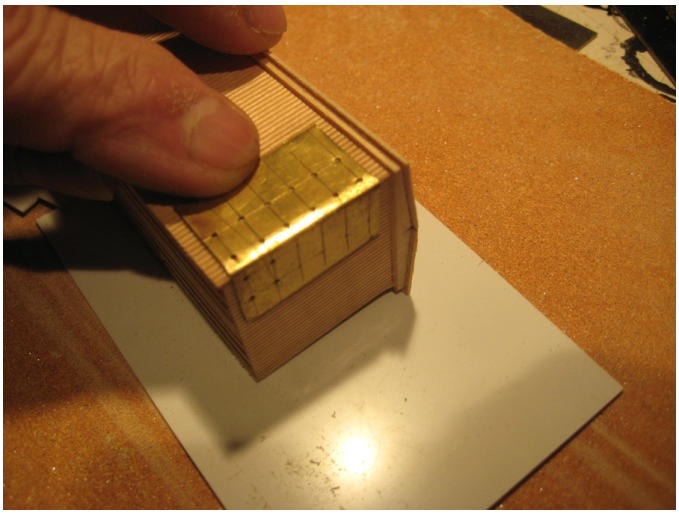

fig. 6

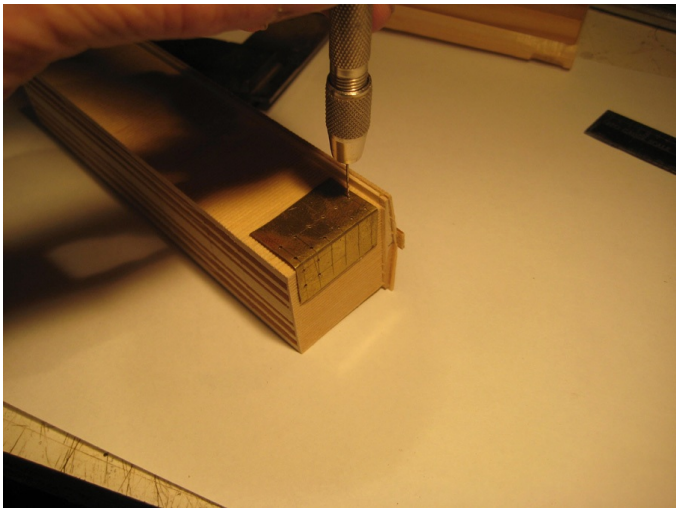

fig. 7

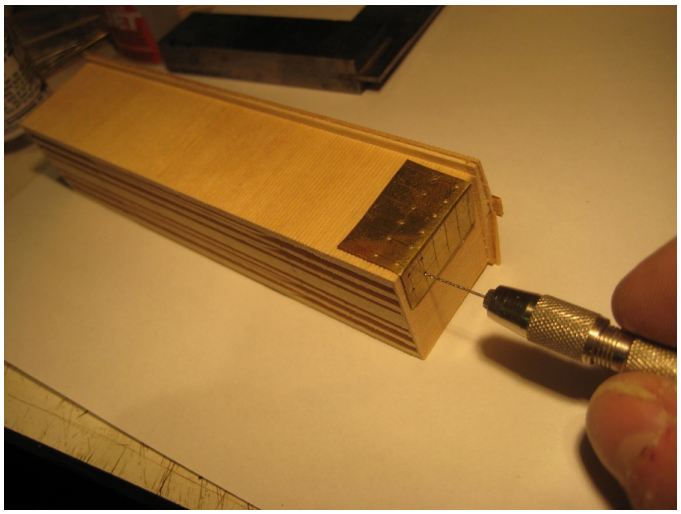

fig. 8

The jig shown in these photos is one that was made many years ago and has proven to be quite versatile over many different styles of rolling stock.

Once completed, the holes drilled in the car body will be the exact spacing from the roof, the corner and between each rung. Perfect.