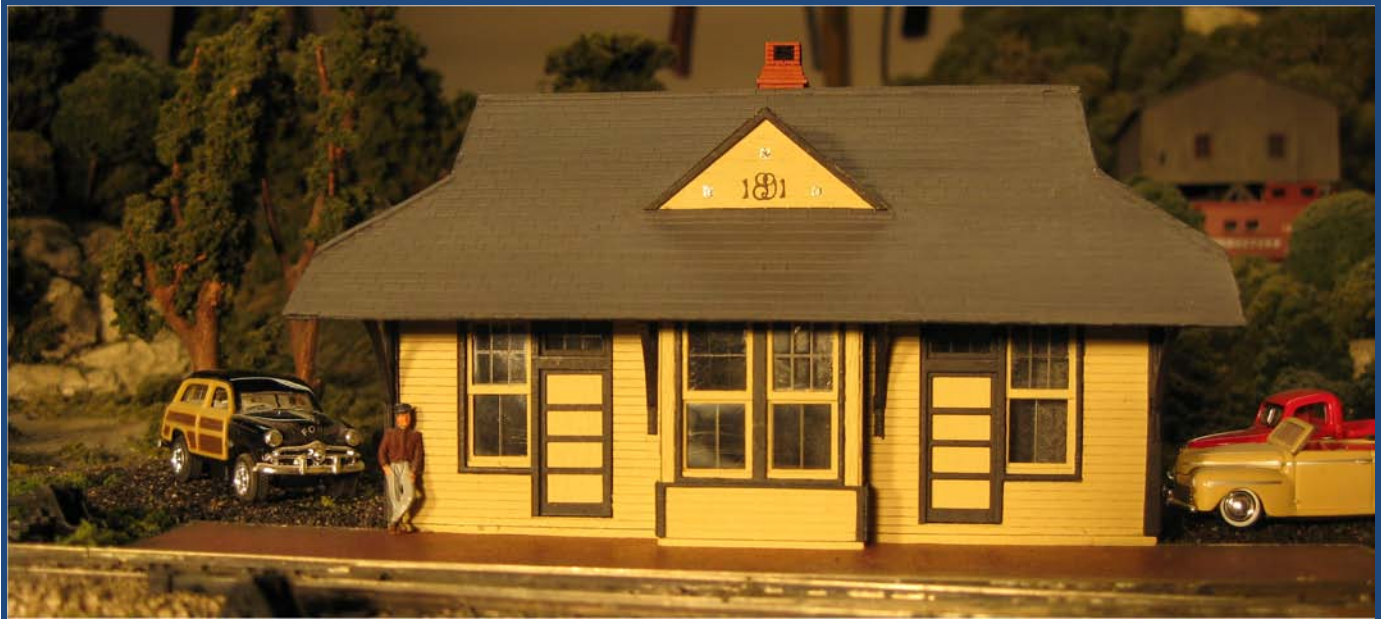




THE B&O MODELER

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BUILDING MJB MODELS GERMANTOWN STATION KIT HO SCALE B&O WOODEN HULL CARFLOAT

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Cover Photos – Top, Germantown Station – Duane Carrell photo. Bottom, Carfloat #56, Tom Griffiths photo.

AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY

The Baltimore and Ohio Railroad Historical Society is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the B&O. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the B&O's history. Currently the Society has over 1600 registered members.

Members regularly receive a variety of publications offering news, comments, technical information, and in-depth coverage of the B&O and its related companies. Since 1979, the Society has published a quarterly magazine, *The Sentinel*, dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original B&O source material. Their

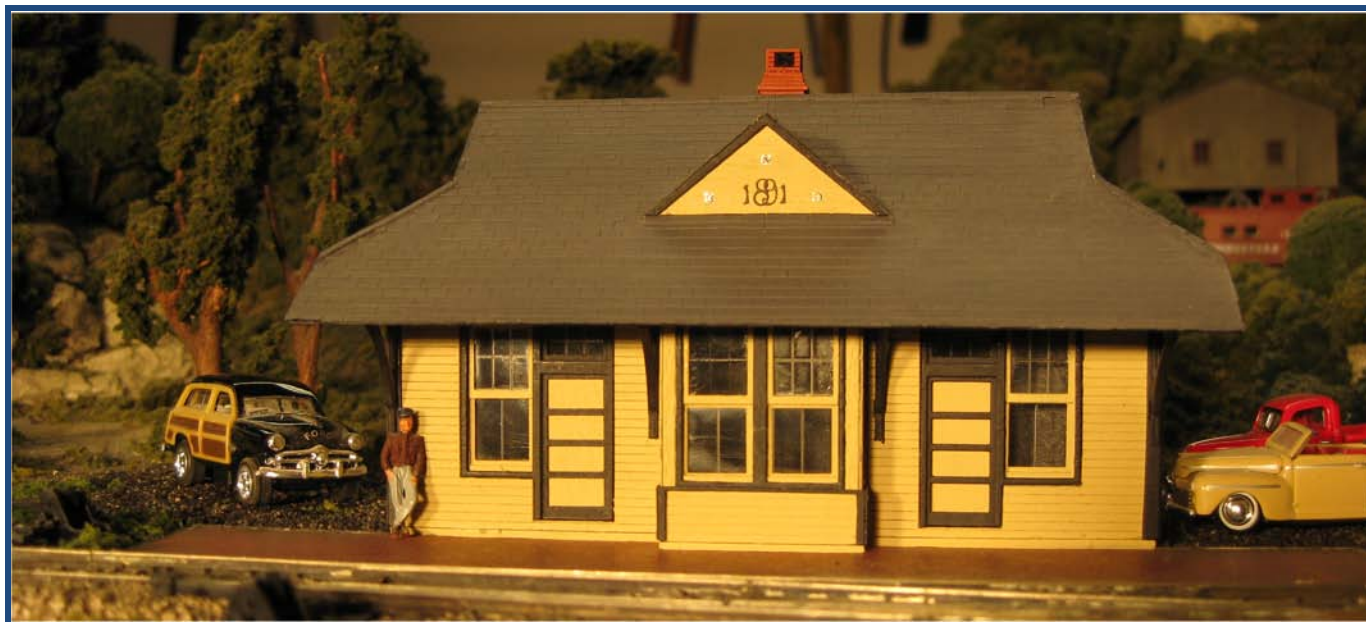
purpose is to make otherwise unobtainable data available to the membership at reasonable cost. Membership in the Society is a vote of support and makes all of the Society's work possible. It provides those interested in the B&O with a legitimate, respected voice in the railroad and historical communities. By working together, B&O fans are able to accomplish much more than by individual efforts. No matter how diverse your interests or how arcane your specialty, others share your fascination with America's most historic railroad. We invite your participation. Several classes of annual memberships are available, Regular memberships are only \$35.00. If you would like to join, visit the website, <http://borhs.org/Membership/membership.html> to fill out a membership application, print a copy and mail it to:

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ATTN: Membership
P.O. Box 24068
Baltimore, MD 21227-0568

BUILDING MJB MODELS GERMANTOWN STATION KIT

BY: DUANE CARRELL

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Introduction

Having grown up in Washington, D.C., I was familiar with the E. Francis Baldwin wooden stations at Germantown and Dickerson. I felt they had an odd look with the large front roof overhang and short overhang on the sides and rear, but they were as distinctively B&O as wagontop boxcars, covered hoppers, and cabooses. Ever since getting back into model railroading 30 years ago I had wanted one of these stations but had to settle for the Alexander station kit, a PRR prototype, which had some roof similarities to the B&O's Kensington Station. The old station kit has been a stand-in for these many years, through four moves.

When John Teichmoeller announced about two years ago that Mark Bandy and his MJB models company had interest in producing these stations, as well as St. Denis, I immediately responded that I wanted one or two when available. While Mark's only product at the time was the N-scale Ellicott City Station, I figured that whatever he would come up with had to beat scratchbuilding. When John announced that the kits were ready, I ordered one each of Germantown-Lansdowne and St. Denis. My layout is entirely freelanced, set in West Virginia, so this type of station would not be seen there, but these buildings say "B&O" like few other wooden depots. Actually,

the Cumberland & Pennsylvania had a very similar Baldwin station at Lonaconing, MD, southwest of Cumberland, so I am not stretching things too far in regards to locale.

I will admit that I was a bit apprehensive about the kits since MJB was not an established name like American Model Builders. I have built several laser kits but I wondered about things like the packaging, directions, and how the kit would go together. When the kits arrived I was pleasantly surprised by the sturdy boxes and the sealed plastic bags within. I can say that they were equal to or better than any other manufacturer's packaging.

It took a few months to start work on the first kit and I chose to begin with Germantown. I ordered the St. Denis station without the basement as I was not going to place it on an embankment and inclusion of the basement causes St. Denis to cost \$30 more. Since Mark indicated that the base would be different without the basement I thought it would be wise to get my feet wet with Germantown-Lansdowne kit.

The kit is not hard to assemble but it is helpful if you have built laser kits prior to this one as there are no written instructions provided. Four pages of



Germantown, MD Station, May 1968. John King Photograph.



Germantown, MD Station, Circa 1910. B&ORRHS Archives Collection.



Germantown, MD Station, 1972. John King Photograph.



Setting the scene, Germantown, MD Station and Liberty Milling Company in May 1968. John King Photograph.



GACX 42894 assigned to and lettered for Liberty Milling Company in Germantown in May 1968. John King Photograph.



GACX 42892 assigned to and lettered for Liberty Milling Company. John King Photograph.



Germantown, MD Station, circa 1969. John Gascoyne Photograph, John King Collection.



Germantown, MD Station, circa 1969. John Gascoyne Photograph, John King Collection.



Germantown, MD Station, circa 1969. John Gascoyne Photograph, John King Collection.



Germantown, MD Station, circa 1969. John Gascoyne Photograph, John King Collection.



Germantown, MD Station and Liberty Milling Company in the background, circa 1969. John Gascoyne Photograph, John King Collection.



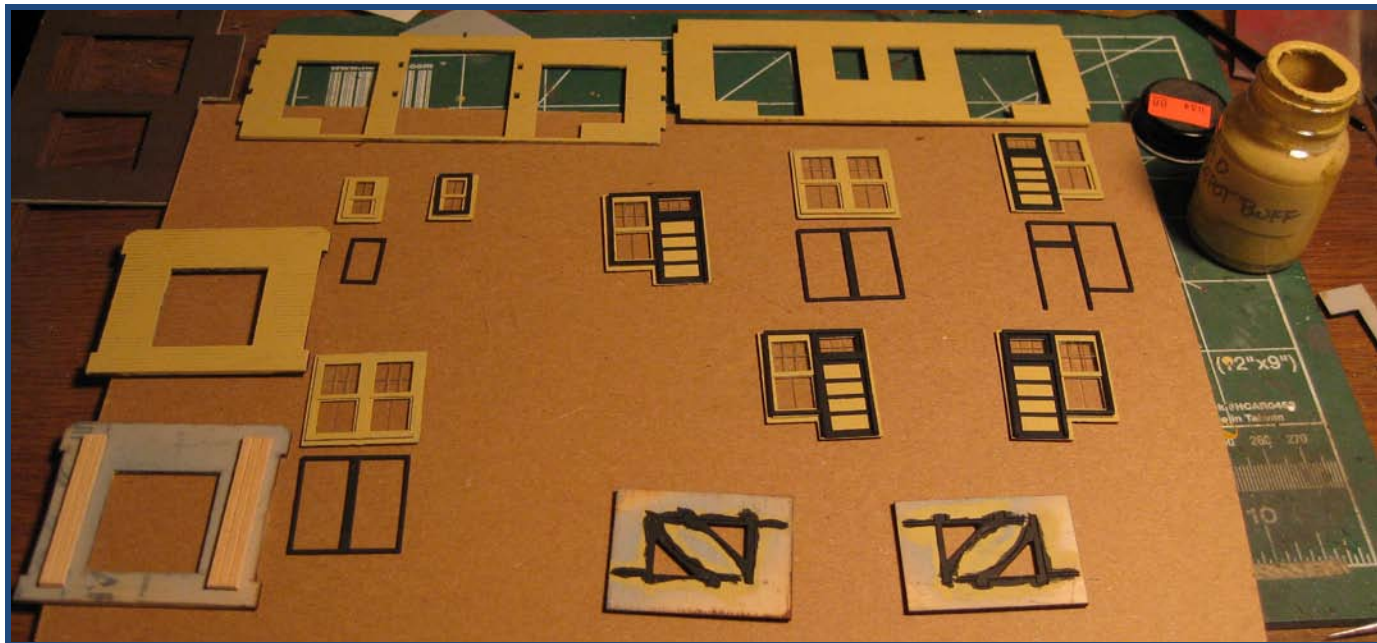
Germantown, MD Station, circa 1969. John Gascoyne Photograph, John King Collection.

drawings are provided and they are the best I have seen with any kit. They are, by and large, self-explanatory. But since there are no written steps to follow it helps to have some experience.

Page one of the instructions is the parts list. All of the pieces are shown very clearly with their numbers and this is probably the clearest I have seen. There were only two parts mislabeled, which was not a

problem since they were identified by elimination – the back window assemblies are identified as W6 and W7 in the instructions while on the parts sheet they are W9 and W10.

I began by spray painting all the wall and roof sections on both sides with Krylon gray primer paint purchased at Wal-Mart, and then brush painting all the trim and wall pieces.



Since my layout is set in 1957, the color scheme is buff with black trim. There has been a good bit of discussion about the proper colors to use for each. Several years ago John King passed along a formula given to him by Henry Freeman: equal parts Depot Buff, White, and Flesh. While Henry probably was using Floquil oil-based paint, I use Polly Scale and found the color very satisfactory. The trim color I have used previously was 2/3 Roof Brown and 1/3 Black but this time I mixed two parts Roof Brown to 10 parts Black and was pleased with the result. Mark's directions say to paint the walls after they are

assembled and he told me afterward that he thinks the walls look more continuous if painted after assembly. I would counter that trying to paint the walls without getting paint on the trim is difficult unless you have a steadier hand than I do. In fact, one thing I would do differently is to remove the trim from the front of the agent's bay, which is held by two or three tabs, before painting as I could not get the black paint on the far edges of the trim without getting it on the wall, and vice versa.



Another issue was what color to paint under the eaves, not that it would be too visible. The best photo I could find was of Kensington on the Fallen Flags website and it appeared the rafters were black. I conferred with John King since he had done some research on depot paint and while he did not have positive evidence he felt the underside was painted all black, so I went with that.

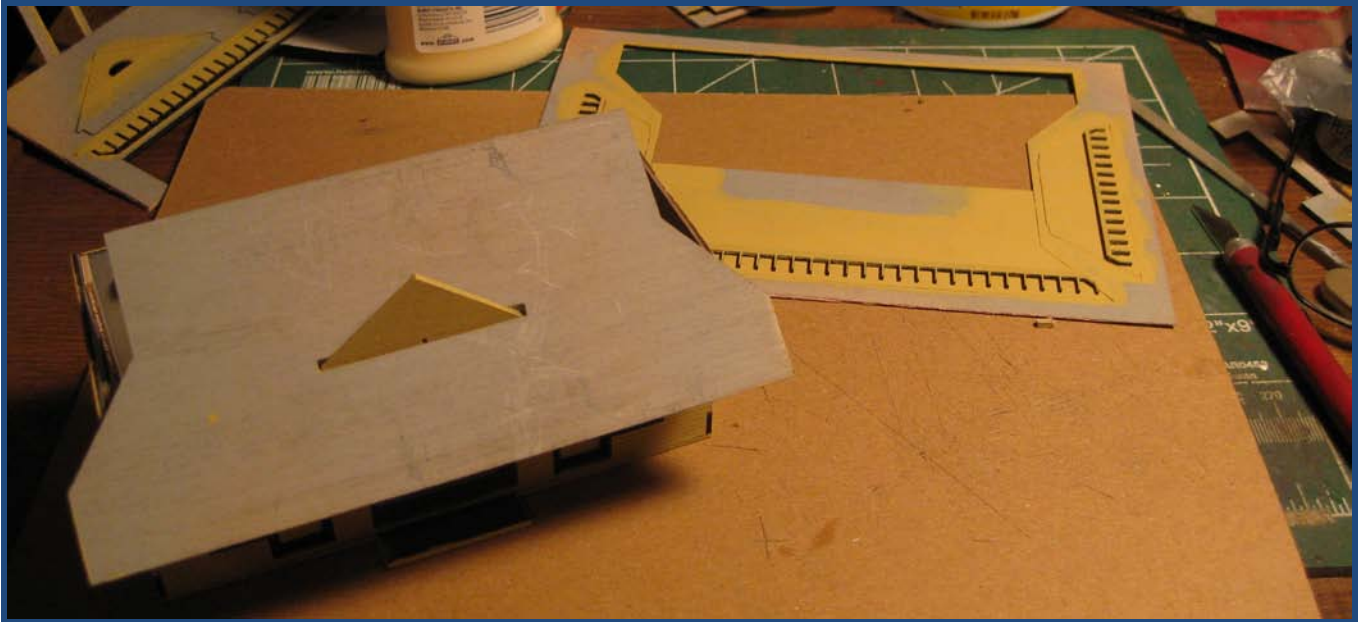
The windows have an interesting assembly which works pretty well. Two full-sized pieces glue together. The front piece has a smaller upper sash and the inner piece has a smaller sash on the bottom. When glued and placed in the wall opening they look like a double-hung window. A sheet of clear plastic

window panes is provided. These are clearly labeled so there is no problem knowing where they should go. In this kit is that there are no wooden mullions – the panes are scored and I do not have a steady enough hand to paint along the scores but felt that was a minor detail. The upper panes fit inside the larger upper sash of the rear window assembly and against the front assembly. I used cyanoacrylate glue to adhere them but there is not much room to do so, in fact none at the bottom of the sash. When completed the window assemblies fit into the walls snugly from the rear and the trim fits in from the front. For all other gluing I used Elmer's Carpenters Wood Glue.



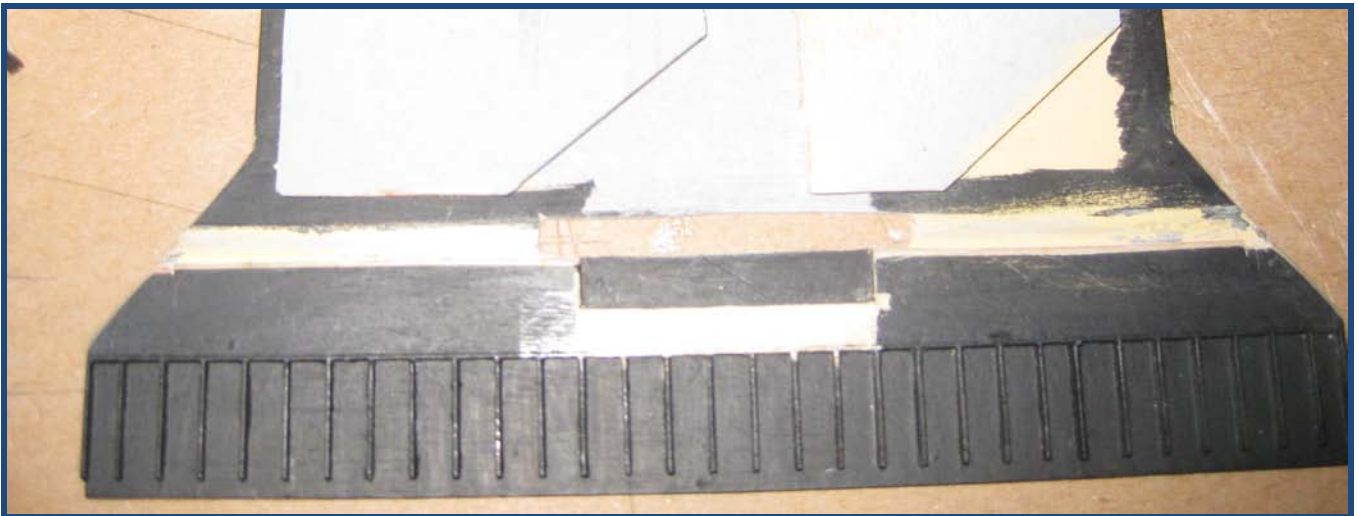
Nothing was mentioned in the directions about reinforcing the walls and roof but I used scraps from the kit to do that. Once the walls were assembled and glued to the base I cut a piece of cardboard so that it

would fit diagonally inside the building and painted it black on both sides. By doing this the wall reinforcement is not visible by looking through the windows – all you see is black.



The rafters and roof assembly gave me the biggest problem, as I have found is true on any laser kit I have assembled. The rafters come as part of an assembly – one for each section of roof, so they are not handled and glued individually as on the

American Model Builders kits. Extreme care must be used in cutting these out and I had three rafters break off before I got the hang of it. Gluing the assemblies to the roof panels is where I made my only real mistake in assembly.



The upper outside edges of each assembly are trimmed at a 45 degree angle, which I interpreted to be glued flush with the angled portion of each roof panel. This leaves the ends of the rafters a bit short of being flush with the outer edges of the panels, but I did not worry much about it as the rafter ends are not as prominent in photos of these stations as they

are in many others. It was not until I was trying to glue the panels to the building that I saw my error and had to do a bit of trimming and sanding to get them to fit.

The front roof panel has a slot that fits over the front gable and I had to sand the opening a bit so the panel

would lie down properly. The side panels go on after the front and rear and these had to be trimmed and sanded some to give the proper fit.

The shingles provided are the real challenge. They are pressure-sensitive and there is one piece for each panel – a flat sheet with no overlap and scores to give the layered shingle appearance. I started with the front panel and immediately had a problem. The adhesive is very tacky and allows no room for adjustment, so the edges have to be aligned perfectly at the beginning. However, they stuck so tightly to my fingers that when I tried to move them the sheet tore at the scores. I scrapped those shingles and bought two sets of Master Creations Three-Tab Shingles which are pressure sensitive and go on one row at a time so there is overlap, as on the prototype. I did use the supplied shingles for the roof caps and also over the front gable. Here the pieces were small enough that they could be maneuvered more easily. When finished I painted the roof with Polly-Scale Tarnished Black, but I may use Grimy Black when I build St. Denis for some variety.

When I contacted Mark Bandy about the shingles and how he recommended using them, he replied:

I tried to give the modelers one-step coverage in applying the shingles. The sticky tape has a learning curve. I have applied the roof a couple of different ways.

1) Is [to] take roughly 1/4" x 1/2" size Xerox paper and place them on the edge where your fingers stuck to the sticky tape (paper tabs). Use the paper area to place your fingers: this should help in placement of the roof. I start

by placing the shingle ridge edge to the ridge of the model.

You will have to cut that paper portion off after the shingles are down. I had no problem with the paper showing up. Then I used a burnisher to finish.

2) This was my first way, I found when the roof was sprayed with primer there is residue from the paint which gave the roof surface a sandy feel. I placed the roof shingles starting from the ridge and rolled down the model roof. Yes, the finger problem accrued, where I used two fingers from each hand and switched the fingers[,] eventually the tacky tape wears a little. The shingle sheet has some play when applied to the primed roof. Within a 1/2" or a 1" I make sure the sheet edges still overlap the model roof and kept straight.

Lastly, you could glue the white backing of the shingles right on the model roof.

When I build the St. Denis station kit I will probably just glue the backing to the roof.

The entwined numbers for the date of construction on the gable are provided both on the shingle sheet of the shingle material and also on the same thin wood as the wall trim. I was going to use the wood numbers, figuring that it would be easier to work with than the sticky shingle material, but while cutting out the entwined "89" part of the number broke. I found the adhesive shingle material went on fairly easily, to my relief.



The gable has scores, in a Gothic font, for the B&O that sit at the corners. Not willing to try to paint a fine line in the scores I used decals from the Microscale covered hopper sheet and placed them over the scored letters. They do not cover perfectly, but it is close enough to be unnoticeable. While the B&O font in the Microscale set is not the same as what was on the stations, it is as close as I could come and actually closer than the scores themselves.

The chimney is a piece of scored wood which needs to be cut at an angle to glue on top of the roof. The corbels are provided as square pieces of the same thin wood as the building trim, and they do need to be

sanded to fit over the chimney. You can add however many you want to achieve the proper look.

Last to go on are the roof brackets, which have tabs that fit into holes in the trim on the front of the depot, along with the support beam.

I was pleased with the kit, and although there were problems encountered, I do not feel that they were any more difficult than on other laser kits. I now have a station that I have wanted for years and hope that I have helped any of you who have the kit or anticipate buying one.

Bill of Materials

Manufacturer	Part Number	Description
MJB Models http://www.mjbmodels.com		Germantown Station
Floquil Polly S Color Corp. http://www.testors.com	270- 414275 270-414290	Polly Scale Roof Brown Polly Scale Engine Black
Krylon		Gray Primer
Master Creations http://www.btsrr.com/	464-21010	Three-Tab Shingles
Other		Cardboard

A B&O WOOD CARFLOAT

BY TOM GRIFFITHS

PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



Introduction

At the 2009 NMRA National Convention in Hartford, Connecticut I entered several rail-marine related models. One, a kitbashed railroad owned tugboat, won Second Place - Structures - Kit. Another was based on the B&O float bridge at St. George, Staten Island, New York. This model was awarded First Place - Structures - Scratch Built. And the third which did not place, was, however, awarded a Merit Award, being awarded a total of 97 out of 125 possible points. This was a model of a B&O wood carfloat. That model is the subject of this article.

Some time ago, I purchased a resin kit for a B&O steel carfloat, manufactured by Frenchman River. This kit has been reviewed in these pages, by John Teichmoeller. It is an excellent kit, and assembles quite easily. However, upon opening the box, I discovered that the track spacing did not quite match the spacing on my almost completed float bridge. As the rails are cast integral with the hull, it would have required a great deal of work to correct.

I then remembered some photos I had received from John, of B&O operations in Baltimore Harbor. When I looked at them again, I realized that I had the answer, in the form of the B&O's wood carfloats.

The B&O had several wood platform floats in Baltimore that were the basis of my model. These floats would, it turned out, be easy to duplicate. Unlike most marine craft of the time, these barges had neither sheer, the graceful concave curve of the main deck that runs in a fore and aft direction, nor camber the convex curve that runs across the main deck, from left to right. This design results in an easy to model, wood box, with no complex curves, and a nice flat deck, which is prototypically correct. The B&O's floats also came in two versions, one with a roof over the platform, and one with a platform but no roof. I did not want to have a roof in the way of my switching crews when the models are eventually installed on my layout, so I built my model without the roof.

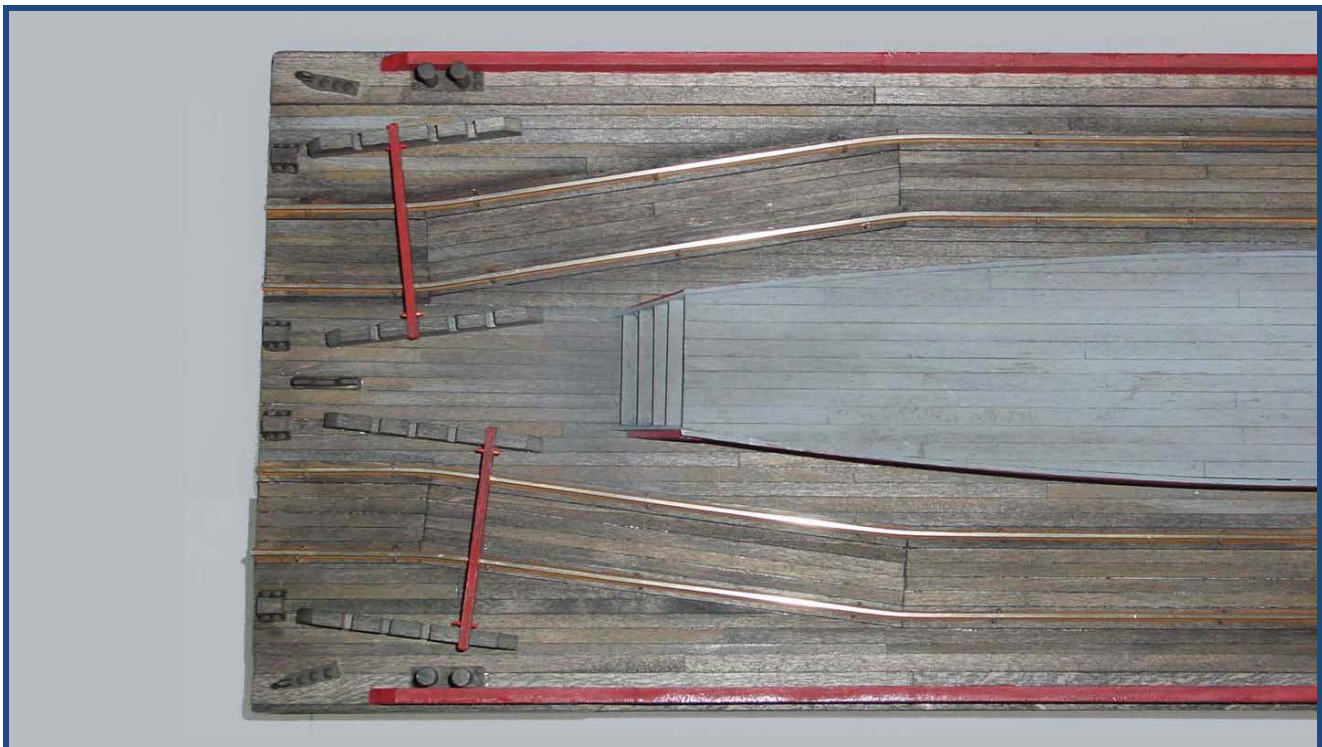


Photographs this page, John Teichmoeller Collection

I did make two major modifications to my models, however. The biggest change I made was to the length of the float. The B&O had (circa 1950 or so) five wood carfloats of twelve car capacity in Baltimore Harbor. These were numbered in the range from 166 to 176. These were about 285 feet long, and had a center platform. Widths varied from about 37 feet to 40 feet. I also have a photo, from just before this period showing a similar capacity float, number 165, which had a center platform with roof. Photos of numbers 166 and 176 also show a roof. I have no information on the others in this group, as to whether or not they had roofs as well as platforms. Due to space limitations on my layout, I modeled my float at 160 feet, for a 6 car capacity, and without a roof over the platform. The other compromise was in the freeboard dimension. I made the deck of my float 8 ft. 6 in., which is really too high, even for an empty float. This was done to keep the deck of the float even with the level of my yard tracks, to ease switching the float. Aside from these two departures from the prototype, I tried to keep my models as close as possible to the details shown in the photos in my possession. According to an equipment diagram [T-89212 dated 1956, with corrections to 1961] most 12 car capacity floats, which were steel, were either 9 feet to 10 feet overall height. I am not sure what the

freeboard would have been, but I am sure it was less than the 8 ft. 6in. depicted in my model, especially when fully loaded. My guess is that to be more accurate, the freeboard should be at least twelve to eighteen inches less than I modeled it. If you have the space, you can increase the capacity of your model carfloat as follows; 160 feet - 6 cars (my model length), 200 feet - 8 cars, 240 feet - 10 cars, and 280 feet -12 cars (the prototype length).

I have not included any general plans for the float. The 'core' for modeling the hull is simplicity itself to make, and the size and placement of the details can be gotten by referring the photos and sketches. They will depend largely on the exact materials that you use, and the design of your float bridge, and the exact placement of approach tracks. I began construction of my model by ripping a four foot long piece of ½ inch birch plywood to a scale width of 40 ft. 0 in.. After adding planks to the model, the finished width was a hair over scale 42 feet. From this plywood, I cut two pieces a scale 158 ft. 0 in. long. I then spread a thin layer of yellow carpenters glue on the top surface of one piece, then placed the second piece on top, and after insuring that they lined up all around, nailed them together. This 'core' was set aside for a few days to dry good and hard.



While the glue was drying, I then turned to the stripwood. I estimated what I would need, and proceeded to pre-stain all of it. I used Campbell's tie

stain, possibly the last can in existence in the western world! I bought this several years ago, after Campbell announced that due to changes in

California law, they were discontinuing it, as it had a solvent base. If you like the effect that I achieved on my model, you could try 'MINWAX - Ebony', as a starting point, I think this may even be the stain that Campbell used. Using a rag dipped into the stain, I wiped several strips at a time, making sure that I hit all four sides, but not being particularly careful to get an even coverage. Variation is what I was looking for. After twenty-four hours or so, I scooped it all up, but being sure not to mix different sizes, and headed down into 'The Pit' to finish the job. I placed

large blobs of Polly-Scale 'Rust', 'Railroad Tie Brown', and 'New Gravel Gray' paint near the front edge of my workbench. (I never claimed that this would be a neat project! Just easy!) Then using a ¼ inch flat brush, I picked lengths of stripwood at random, out of each pile, and proceeded to dry brush very small amounts of paint down the length of each piece. You only need to do this dry brushing on one wide side of each length of stripwood. When they were all treated, I went back upstairs and treated myself to a vodka and tonic!



The next day I took the 'core', and measured down 3 ft. 6 in. from the deck, at each end, and drew a pencil line across the end of the float. I then set my table saw at a 45 degree angle, and cut the angle across the end of the float, on the lower part of the ends. The basic shape of the float was now completed, and sheathing of the hull could begin. To save some time, I used 1/16 inch thick, 1/8 inch scribed sheathing for the first layer, as most of it would later be covered with stripwood. The scribing ran

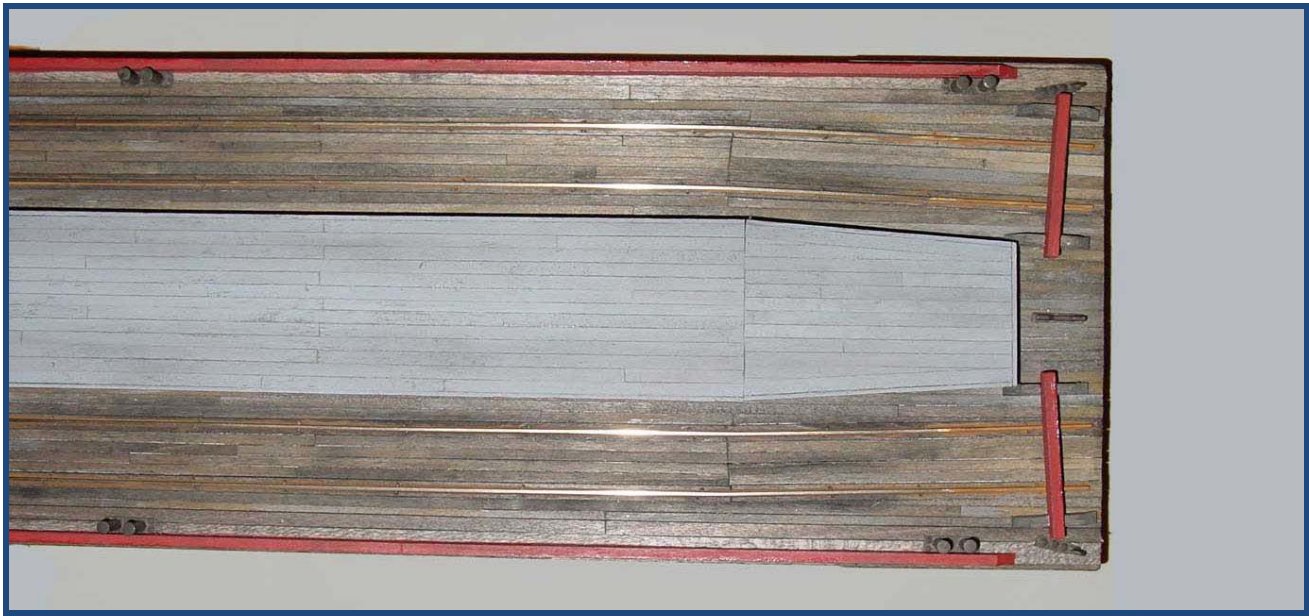
horizontally on the sides and sloping portion of the ends. On the upright portion of the ends, the planking runs vertically. Let the lower edge of this vertical planking extend about 1/16 inch below the top edge of the horizontal planking on the sloping face of the ends. All of this sheathing was also stained with the Campbell tie stain before cutting out the sections. I did not use the scribed sheet for the deck, as I wanted the more realistic look that you get with individual boards.



I now started to attack the piles of pre-stained stripwood that lay on the bench. A few notes here, I used Loctite's 'Stik'n Seal adhesive almost exclusively in the construction of the model. It is water soluble, so is easy to clean off your fingers and tools. It dries clear, and is readily available at Lowe's and Home Depot. It is also thick and tacky from the tube and can glue almost anything. When working with the pre-stained wood, I try to cut a large number of pieces, of whatever size I was working with, to a common length. I used 35 feet, which on reflection is probably too long, but hindsight is wonderful! After cutting the pieces I needed, I just dumped them in a pile on the bench, and used them at random, which resulted in a nice

variation in tone between the separate pieces, and really brings out the fact that you used stripwood and not scribed sheet. Do not forget when using this method to vary the lengths of the first piece in each row. Then use the full length pieces until you reach the other end, and when the glue dries, trim the ends even.

The results are no end joints being next to each other. Look at a wood floor sometime to see what I mean. In all but the most poorly done jobs, all the end joints will be offset from their neighbors. If you look at the photos of the float deck, you will also see what I mean.



The first step in covering the float with stripwood was to add the strakes, or rub rails, that extend the length of the sides of the float. I used 1/16 in. x 5/16 in. strip for these, laid flat against the side of the hull. There is a stretch of about 20 scale feet at both bow and stern, where this material completely covers the hull planking. Note that there is a piece that follows

the slope of the lower part of the end. For the rest of the length of the sides, the strips are spaced on 2 ft. 6 in. centers, leaving the hull planking visible between them. Note that both ends of the float are the same, below deck level. Now turn the float over on your bench.



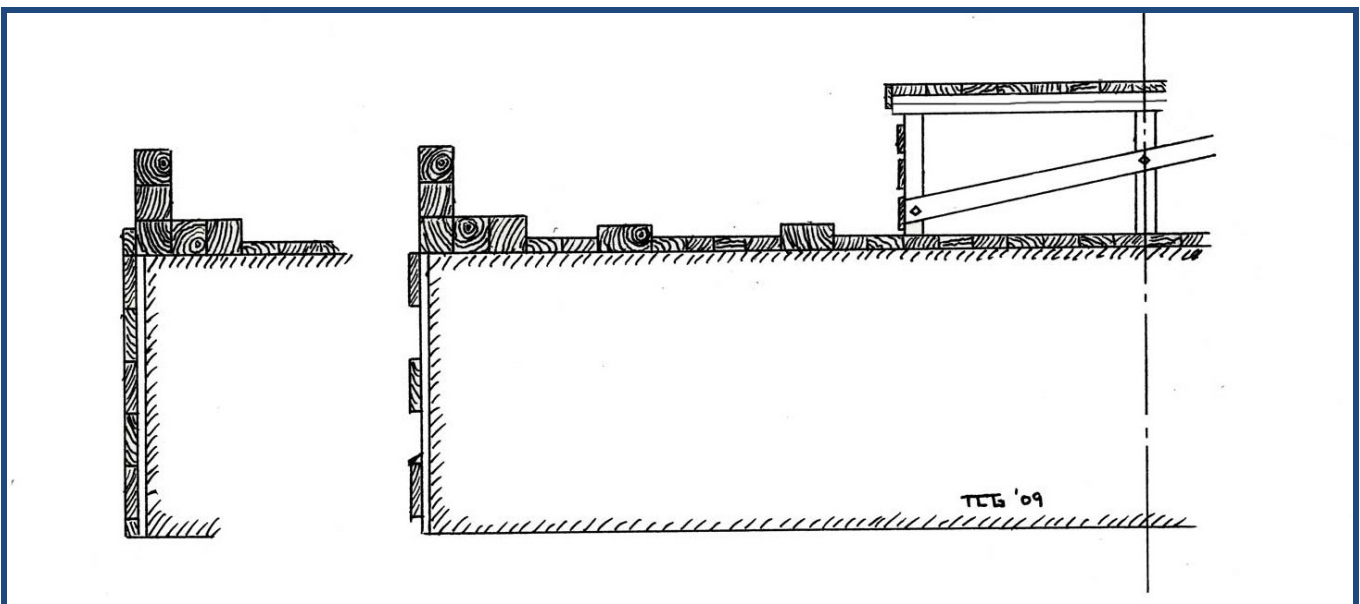
I used some stained scraps left over from planking the hull for the next bit. I cut four pieces, three planks wide, and slightly longer than the height of the sloped part of the ends. Glue these, flush with the outside of the strakes, on each side of the sloped end. Keep them tight against the lower edge of the planks

on the vertical part of the ends. When these are done and the glue is dry, carefully sand a radius on the vertical corners of the float. This includes the slanted portion of the ends. **Do *not*** sand a radius on the edge across the ends, between the vertical and sloping faces. See photo below for details.



I then glued 1/16 in. x 1/16 in. strips vertically on the sloping section of the ends, spaced on 3 ft. 0 in. centers. These helped protect the hull sheathing from debris floating in the water. When the glue is dry on all of these bits, take a small brush, and carefully stain the cut ends of all the stripwood, and the newly sanded corners. Do not forget to check where two cut ends abut each other. If you look carefully, on a lot of them you will see a tiny bit of unstained wood. It takes just a tiny dab with a wet brush, and these disappear. If you leave them undone, they will stand out like a sore thumb later!

Next on the agenda, is to build up the wood sections along each side of the deck. For this I used some 1/8 in. x 1/4 in. material, as well as some 1/8 in. square material. See drawings for details, especially the cross section drawing below, to see how these parts relate to each other. I use the square stock to build up the bulwarks, or rail, so as to highlight the fact that it was, in reality, a built-up structure. It is a subtle effect, but a noticeable one, especially if you paint the bulwarks as I did.



Cross Section

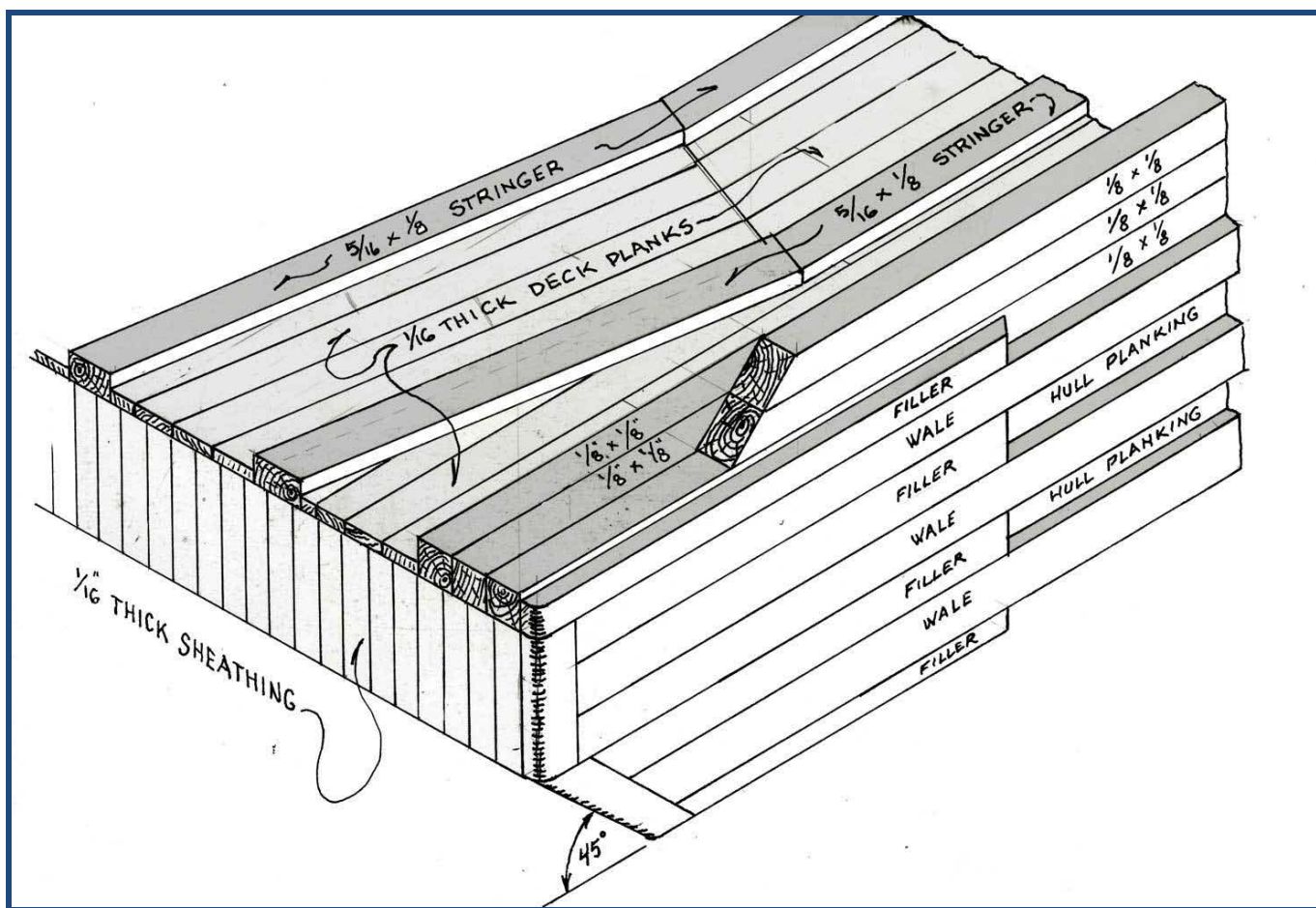
I cut the 1/8 in. x 1/4 in. stock to 40 foot lengths, and then started to glue them, flat, to the deck. I placed the first right to the edge of the hull planking, but

NOT overlapping the highest strake, creating a ledge the length of the float. Immediately inside this strip, I glued lengths of 1/8 in. x 1/8 in. material, but cut

the first piece so that the joints did not line up with the first strip. When done, trim carefully to length, even with the outer face of the vertical sheathing on the ends. Repeat the process on the other side of the deck. Now, along both edges of the float's deck, measure in from each end seven feet, and make a mark. Now cut some 1/8 in. square stock to 40 foot lengths. Make a 40 degree cut at the end of one piece, and glue along-five the outer edge of the float, starting at the seven foot mark made previously. Place the angled cut facing up [like a ramp] sloping towards the middle of the float. Continue gluing pieces of 1/8 in. square stock till you reach the seven foot mark at the other end of the float. Mark the last piece, and make a 45 degree cut to finish the strip.

Again, this cut should face up, and slope back towards the middle of the float. Now take a 40 foot length of 1/8 in. square stock, and cut it approximately in half, at a 45 degree angle. Glue one of these pieces in place on top of the previously glued 1/8 in. square strips, making sure that the cut faces up, and continues the 'ramp' started with the first strips.

Continue with full length strips until you get to the last section. Here you should take the other half of the piece you cut in half at 45 degrees, and carefully trim it to length, so that you wind up with a smooth 'ramp' at each end of the bulwark. Please study the isometric detail drawings and photos.



Corner Isometric

An important thing to consider before starting the planking on the float deck is to determine the track centers at the bow of the float. [Floats were **not** double ended! There were no provisions made for cars to be run through onto another float, all floats were loaded, one at a time, from the bow. The stern can be determined by looking for the bumpers at the end of the tracks.] I strongly recommend,

particularly if you are scratch building your float bridge, as I did, to acquire or build the bridge first, and build your float with the tracks laid to match the bridge. Real railroads had the luxury of being able to adjust the ends of the rails on the bridges several inches in either direction, to make up for variations in carfloats from one owner to another. Unless you are **extremely** talented, we, as modelers, do not have that

option! Whether you build the bridge or the float first, when building the other take great care that the rail ends line up exactly. Also, before starting work on the deck, read the entire article and study the photos of the deck, then do it again! It isn't hard, but will take a little time to get the best results.

Now you can start the planking of the deck itself. I used 1/32 in. thick strip for the deck planking on the float. I mostly used 1/8 in. wide, but also had some 5/32 in. wide strips to get the correct width in some places. As before, I precut all the wood for the deck to length before starting, and made sure to mix the pieces well, so when it was laid, the stain pattern varied in a random manner. I laid the planking from the side of the deck, towards the centerline of the float. I figured that since there would be a platform in the center, running almost the full length of the float that any 'fudging' needed at the center of the float would be mostly hidden.

The first thing I did was to lay two strips of planking the entire length of the float, on each side of the deck. I then used 5/16 in. x 1/8 in. stock, laid flat, to represent the stringers upon which the rail was laid. I did not use any tieplates under the rail; I just spiked it directly to the stringers. Most likely the railroads would have used tieplates, but at 61 years of age, I decided not to bother, I have other projects I would like to get on with! Mark the position of each of the four rails at the bow of the float. Take a length of rail, about two or three inches longer than your float [I used a continuous length, for electrical continuity reasons.] and form it to sit on top of the stringers. The only advice I can offer here is, Take your time, and check frequently! I drew the plan of the deck out full size, and used it to form the rail into the proper shape. You should wind up with two rails, mirror images of each other please! Do not forget, we are working from the outside in! You will find it best if you can keep a short length at the bow straight, before you start the 'ess' curve. You want the 'ess' curve to fall within the first 40 scale feet or so of the length of the float. If you are building a longer float than I did, you could stretch this distance out some more. When you are happy with the 'ess' curve, place the rail in position on the deck and at a point about 30 feet from the stern, make a slight bend in the rail so that it turns back towards the centerline of the float. When the bends look right, trim the rail to length. It should be flush at the bow of the float, and can end about a foot short of the stern.

When you are at a point where you are as happy as you are going to get with your rail bending, place it on the deck, and pencil in the approximate centerline of the rail. Starting at the bow, use pieces of the 5/16 in x 1/8 in. start cutting and fitting the stringer under the rail. There should be a short length under the straight portion at the bow, and then a piece angled towards the side of the float, and then a length that is tight up against the two planks already laid. Towards the stern a last length angles in slightly towards the centerline of the float. What you want is to be able to lay the rail in place on the deck, and have it continuously supported by the stringer.

The rail will come close to the edge of the stringer on the inside of the bends, but that is okay, it was that way on the prototype. The important thing to remember is that it should not drift *off* the stringer at any point.

As a break from rail bending, if you like, you can finish planking the triangular areas between the outboard side of the stringers, and the two planks already on the deck. Trim the ends of the planks at a shallow angle so that they 'die' gradually into the sides of the rail stringer. Trim the planks at the ends of the float even with the outside of the vertical hull sheathing. If any of the preceding is not clear, I hope reference to the photos of the deck will help. Next, carefully spike the rails into place on the stringers. I spiked the rail about every two inches or so, the railroads did not use a whole lot of spikes either! This was not mainline trackage!

This part is a little tricky, but not difficult. First, carefully bend another rail to follow the shape of the one that has been spiked down, do not forget, mirror images!! Using a scrap of stringer material, and a few scraps of your planking, determine how many, and what widths, of planking you will need to space the second stringer centered under the other rail. In my case, it worked out to teehr pieces of 1/8 in. plus one of the 5/32 in. It might be different for your model, depending on where [and when!] you bought your stripwood. Bisect the angles of the stringer already laid on the deck, lightly penciling in the angle on the deck. {See sketch} This will give you the correct location to change the direction of the stringer sections. You can do this by eye; we are not building a watch here! Now lay scraps of planking, to the proper width, on the deck, and CAREFULLY glue the sections of stringer into place. I advise against gluing this center planking in place yet, until after the second rail is laid, in case you need to move the

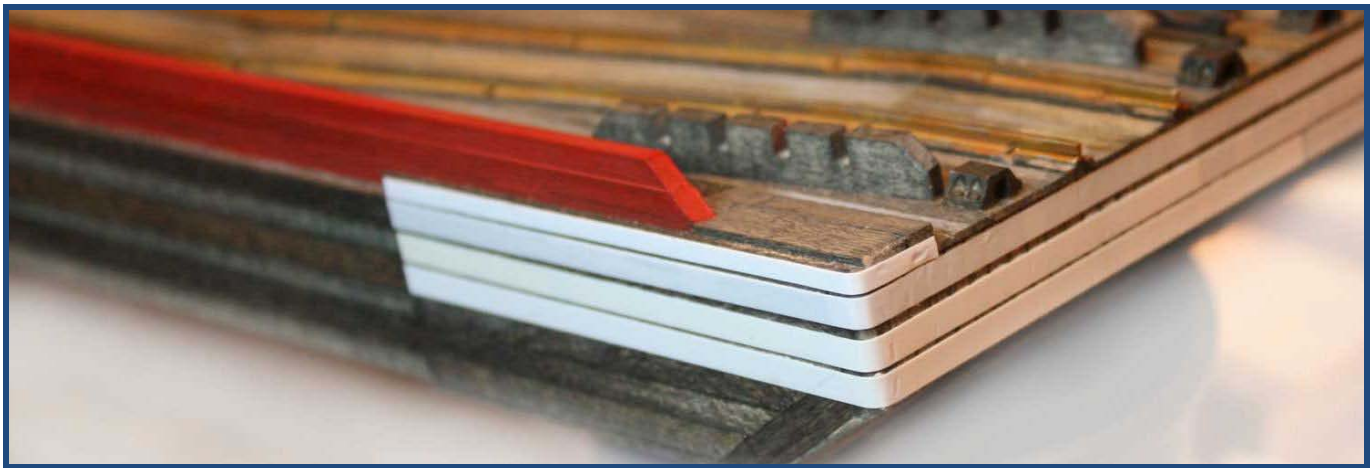
stringer. With the glue dry hard, spike the second rail in place, leaving the gauge a little wide on the bends of the 'ess' curve. Trim the ends of the rail flush with the end of the float sheathing. The stringers should also end even with the outside face of the vertical hull sheathing. Now connect a length of flex track to the rails on the float, and thoroughly track test the float, using a mix of car lengths, and locomotives. Make sure you use the longest wheelbase loco you will be likely to use in operations. When you are satisfied that everything will run on and off the float without any problems, you can glue the planking between the stringers. I also trimmed the top of the stringer, under the rail ends at the bow to clear rail joiners.

You can now finish the deck planking, working from both sides towards the center. Check the distance between the edges of the planks every few rows, so that you can 'adjust' the spacing as need, if you find the edges closer to each other at one end than the other. In my rush to finish, I forgot to check the last few rows, and I wound up OK at the bow [all full planks] but had to insert a 'half width' plank at the stern. But I am sure the float builders had the same problems.

A LAST REMINDER: Do not forget to stagger the lengths of adjacent rows of planking, so that you will

not wind up with end joints next to each other. This is something that people will notice, as well as being something that you will never see on the prototype. Again, please reference the photos.

Take a piece of paper, or better a piece of light card, and cut it to fit flat on the center of the deck, between the sides of the two innermost rail stringers. This should be the length of the float, and cover the whole area between the stringers. Pin it in place on the deck, so it will not move. Next reconnect your length of flex track to one track on the float, and reach for your longest car. In my case, I used a 50 footer, as I model the early fifties. Also, try to find the widest, 50 foot car that you own, this is important. Place a sharp, soft pencil vertically at the leading [when running onto the float] inboard corner of the car, so that it is resting lightly on the paper. Slowly, and hopefully smoothly, run the car onto the float, and all the way to the stern, tracing a line on the paper for the whole distance. Now move the pencil to the center of the car, still holding it vertically, and repeat the operation, which will leave a second line, at a different location for the most part, on the paper. Move the flex track to the other float track, and repeat the procedure. You might want to think as to whether or not you have that one 'rogue' 40 footer [or it might even be shorter] that seems to be just a bit wider than everything else on your layout.

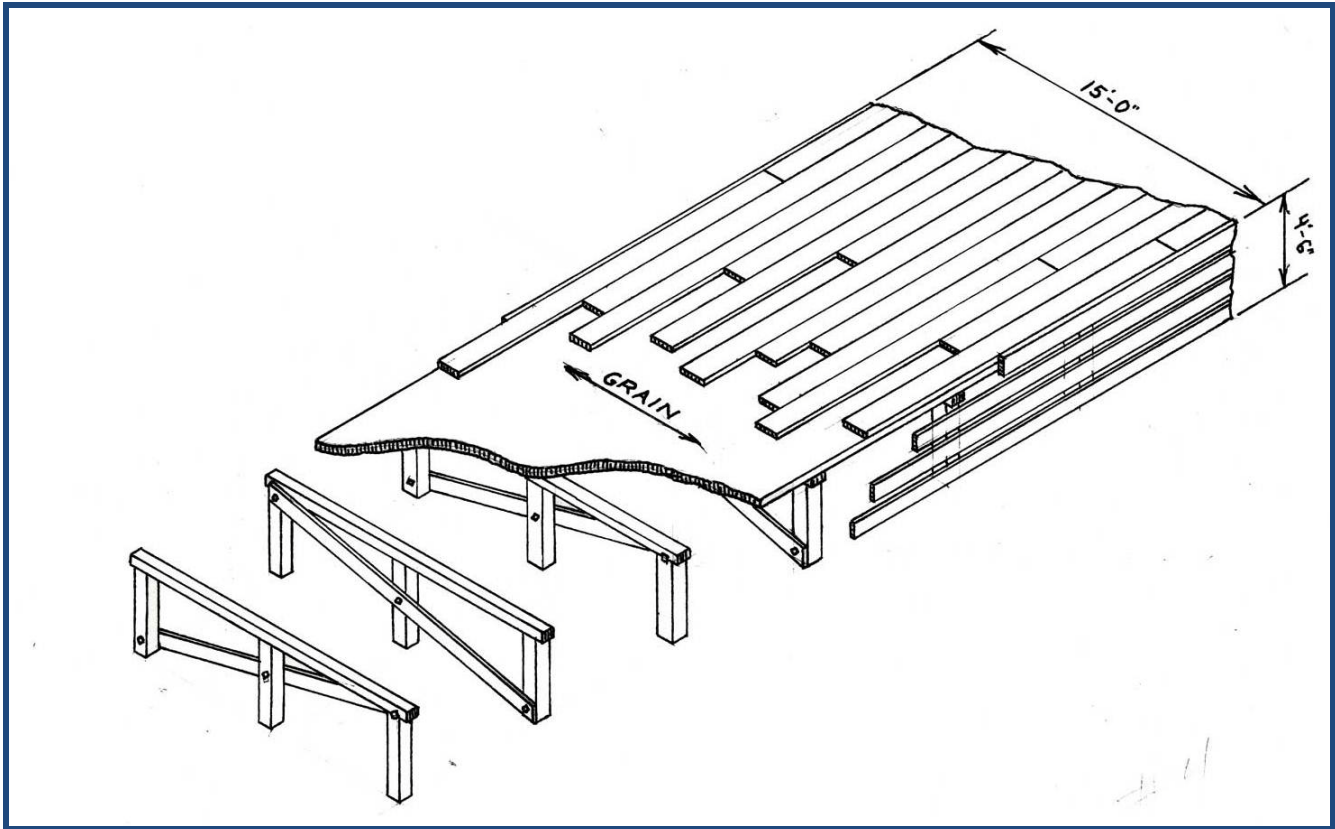


You know the car I am talking about, it is the one car that ALWAYS hangs up on the freight house loading dock. If you have a car like that, and it might be run onto the float, get it out, and redo the test with the pencil at the center of the car only. This procedure will give you the clearance you will need to leave when you build the platform. Use a French curve to draw a line for the edge of the platform. This line should be just inside the lines drawn using the cars.

Once you have your clearance diagram, and have determined how long the platform will be, use the pattern to cut a 'sub deck' for the platform. The platform on my float is 125 feet long x 15 feet wide. The deck starts 27 feet from the bow, and ends 8 feet from the stern, the last 20 feet slopes downward, dropping one foot. I used some 1/16 in. thick sheet wood, and since the top planks were to run

lengthwise on the float, I cut the 'sub deck' with the grain running across the width of the float. This

makes for a nice strong platform deck, which will also tend to stay flat.



You will notice that the last few feet [20 in this case] of the platform slope downwards. There were times when a float would be moored end on to a pier, and the cars on the float would be manually unloaded, or loaded by workers using hand trucks or dollies. The freight would be wheeled out of the car, along the platform, down the ramp and across a temporarily placed bridge plate and onto the pier. The slight ramp at the end of the platform made this manual transfer of freight easier on the crews. Freight would also be

manually handled alongside a freighter moored out in the middle of the harbor. If the float had a covered platform as many did, there would be an empty flat car positioned somewhere on the float, and freight would be moved from the boxcars to the flat, to be loaded into the ship's cargo nets. If the float did not have a roof on the platform, the freight would be transferred into the nets right on the platform, next to the freight car.



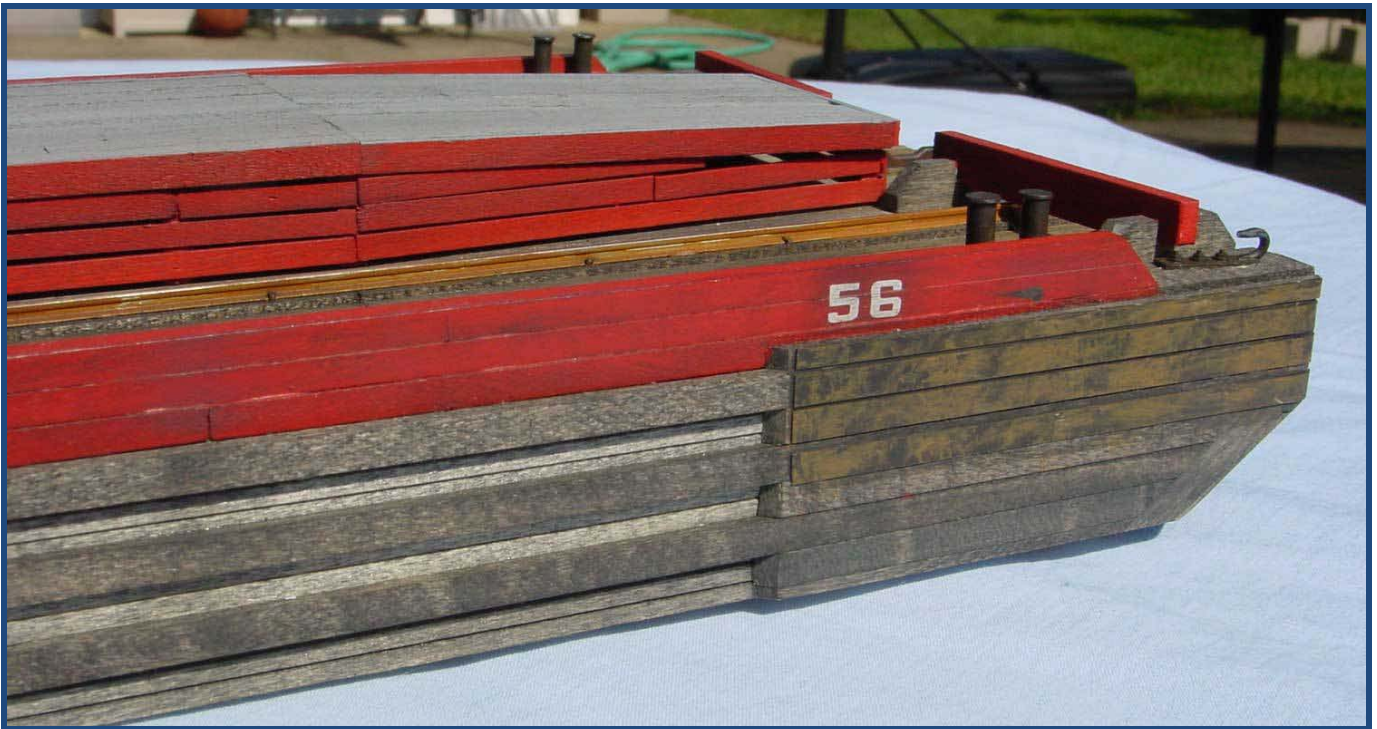
While you have half dozen cars scattered around the workbench, place them on the track again, and determine the best height for your platform deck. In my case I determined that a height of 4' 3" was a good average. It might be different for you, depending on the thickness of the stringer, and whether or not you used tie plates under the rail. Now I took a length of ½ in. foam core board, and, using long straight pins, pinned the platform deck in place, sitting on the foam core strip. Now run your

selected 'clearance' cars back and forth, on both tracks, to ensure that they do not hit the edge of the platform. This is an important step if you will be using the float in operation sessions, as you do not want to have cars derailing all the time because of hitting the platform edge! I found that the thickness of the pencil left me with enough clearance to allow a trim board to be added around the edge of the deck when done, which hid the 'sub deck' from view.



I used 3/32nd square stock for the legs and cross beams of the platform, and 1/32nd x 1/8th stock for the diagonal bracing. I know, it can't be seen, but when I started, I wasn't sure if I was going to add the horizontal boards down each side of the platform. I placed bents every six feet, the length of the platform, and glued pieces of the 3/32nd square stock at each location, as the cap on the legs. I cut enough pieces of the same stock to a length of 3'0", which with the cap, the sub deck, and the final deck planking, brought the finished height of the platform to 4'3". Or pretty close! I glued three legs to each cap, and used two pieces of the 1/32nd x 1/8th stock as diagonal braces. [See the cross section drawing of the platform.](#)

When the legs were on, I flipped the platform right-side-up, and piled on lots of weights, and left it to dry for twenty four hours. After the glue was dry, and after checking that most of the legs reached the deck, [They did!] I started planking the platform. I used the same sizes of material as on the float deck, and staggered the joints in the same manner. With the planking done, and dry, I trimmed the deck planks flush and added a piece of 1/8th wide material all around the edge of the platform, which hid the fact that there was a sub floor. I carefully fit the platform into place on the deck, DRY at this point, do not glue it yet! When you think it is right, get those cars out again, and make sure that they will roll past all parts of the platform without hitting it.



If nothing hits, carefully mark the position of the end legs, on both sides, and remove the platform, and lay it upside-down on the bench. By now I had decided to add the side planking to the platform legs, so I proceeded as follows; I placed a small blob of glue on the bottom of every other leg down each side of the platform, and a larger blob on every leg down the

center. Then I flipped it over, and placed it on the marks I made on the float deck earlier. I placed weights all down the length of the platform, and left it for another twenty four hours, till it was dry hard. If you do not elect to install the side planking, remember you will have to be much neater applying the glue to the ends of the platform legs!

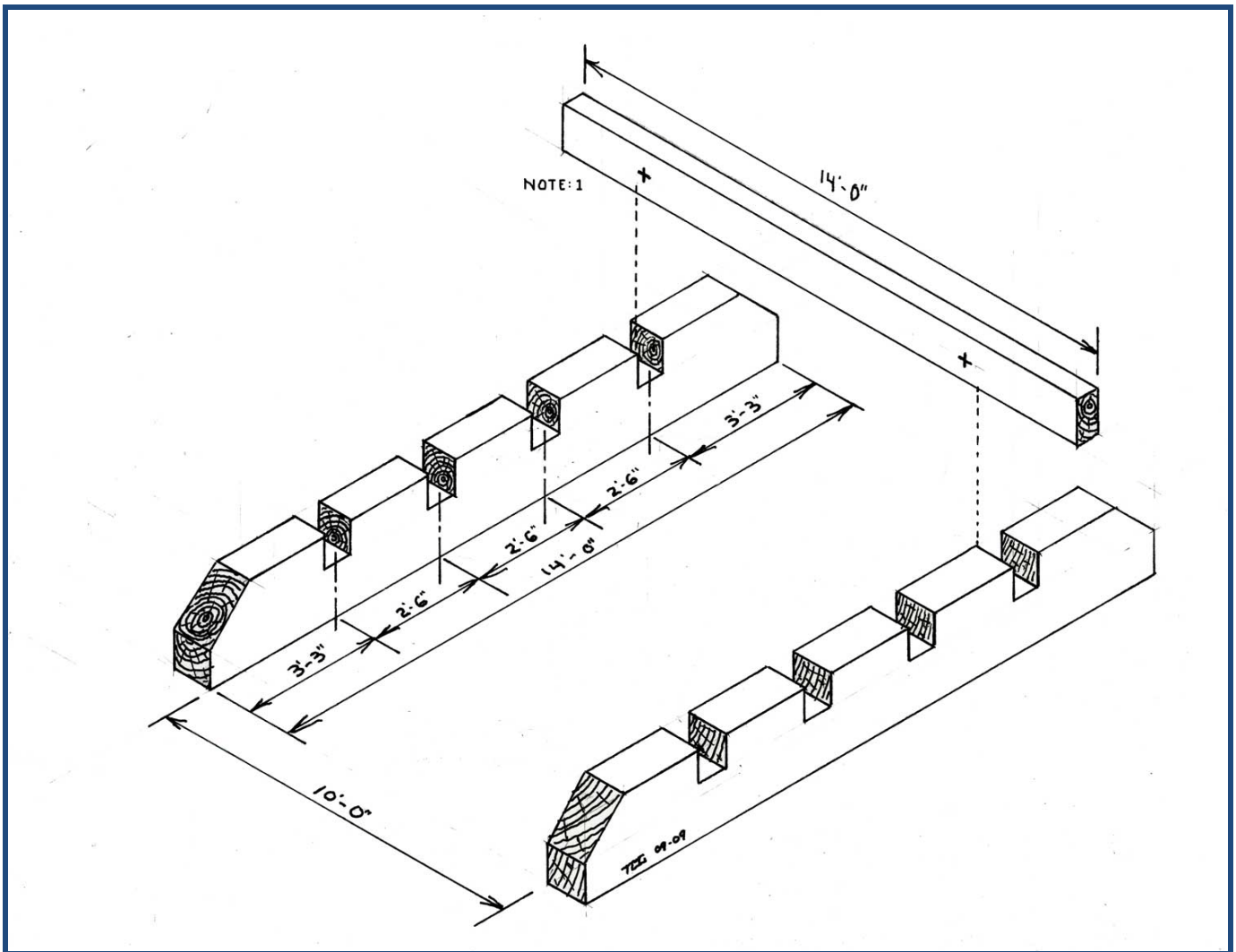


Once the platform was firmly attached to the deck of the float, I started adding the planks to the sides of the legs. I added three to each side, which allowed a slight gap between each row, just as on the prototype. When I reached the bow end, I let them run long, past the end of the platform deck, and built the steps, so that they fit snugly between the tapering widths, and

so maintained the clearance distance. Sorry, no details or drawings for this. If you have come this far with me, you should be able to fabricate the steps, just as I did. The most important thing is to maintain the equal height on each of the steps. It looks like hell from the back, but then, you cannot see the back can you?



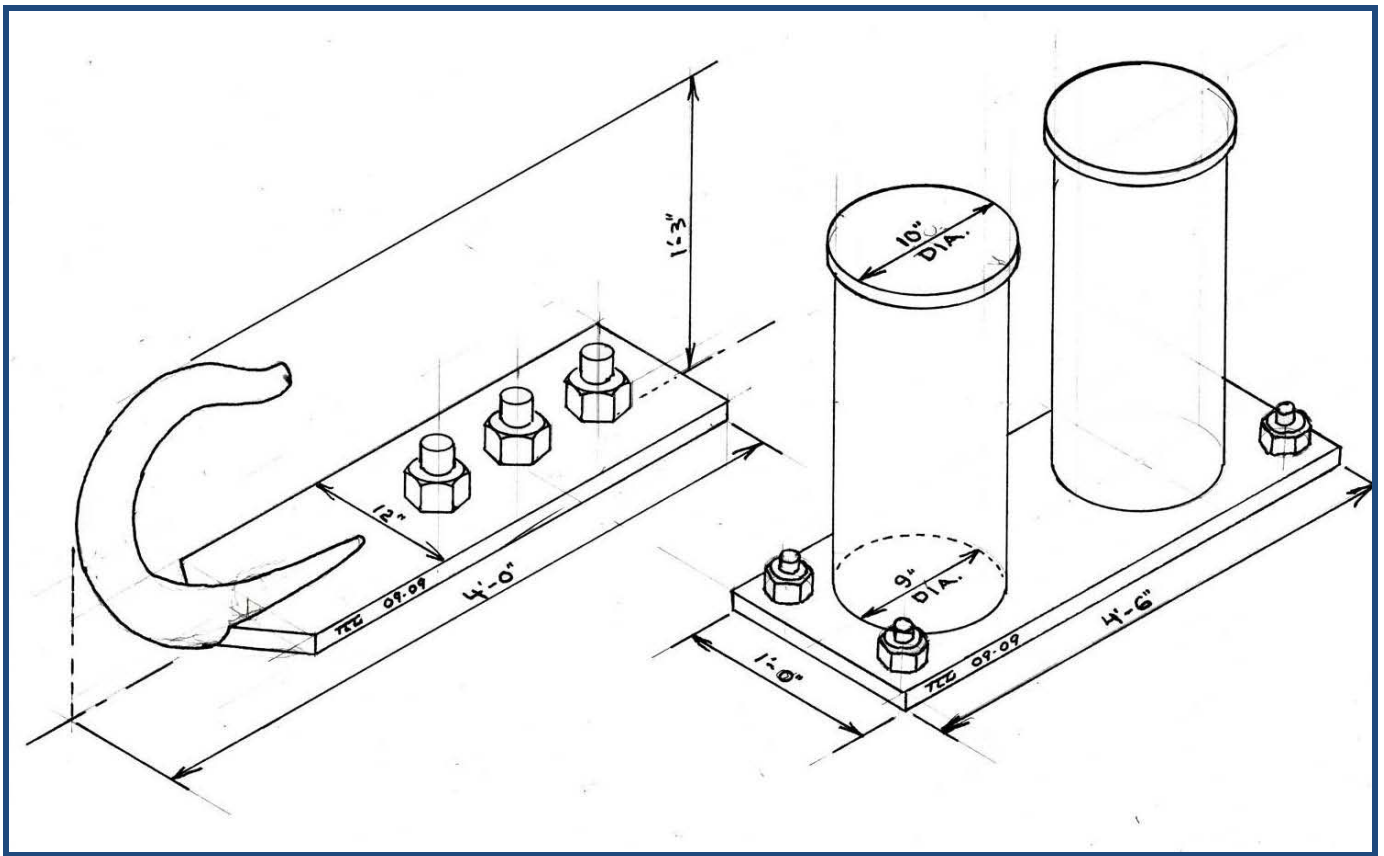
ANOTHER REMINDER! If you have *not* been touching up all the raw wood ends during construction, with a bit of stain, **DO IT NOW!** It is noticeable, and you want to do it *before* you do the finish weathering with chalks.



Well, we are almost done. Now there are just the details to finish.

Bumpers: I used stringer material for the bumpers. (5/16 in. x 1/8 in.) The feet are 7 ft. 0 in. long, with the corners chopped off at 45 degrees. The cross pieces are 14 ft. 0 in. long, and sit in notches cut into the feet.

Car retainers at the bow: I do not think this is the right name for these, but as that is what they were designed to do. Again, I used stringer material for the 'rails' on the deck and chopped the corners again. These are 14 ft. 0 in. long, with four notches, spaced 2 ft. 6 in. on center, to accept the cross pieces. [Cut from 3/32 in. x 1/8 in. material, 16 feet long.] The pins kept them in place.



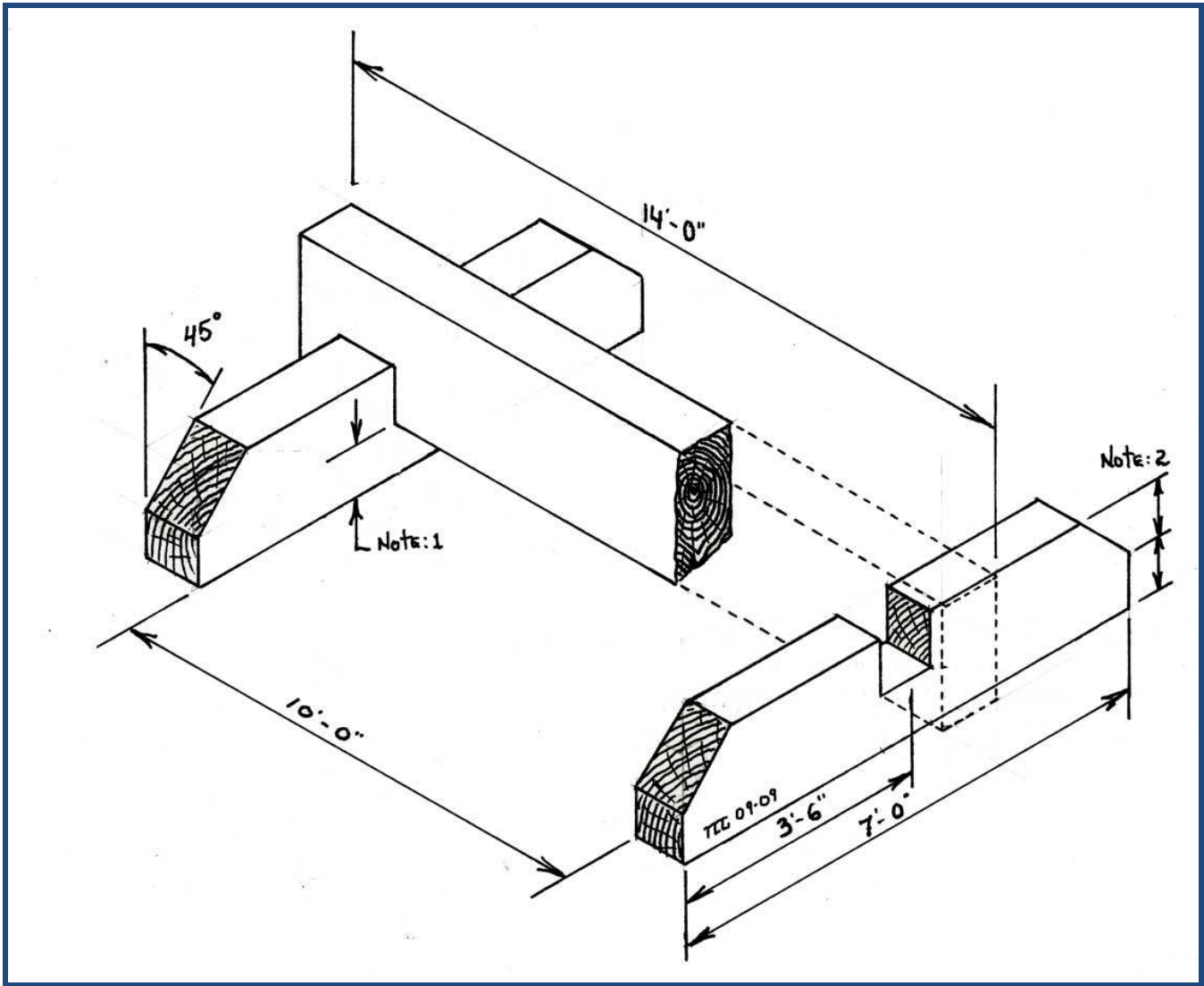
Towing Bitts: I cut a base from thin styrene, 12" in. x 4 ft. 6 ft., the round parts are 9 in. diameter, and 2 ft. 9 in. high, capped with a small disc punched from a thin sheet of styrene. I added 4 N/B/W's, one to each corner of the base.

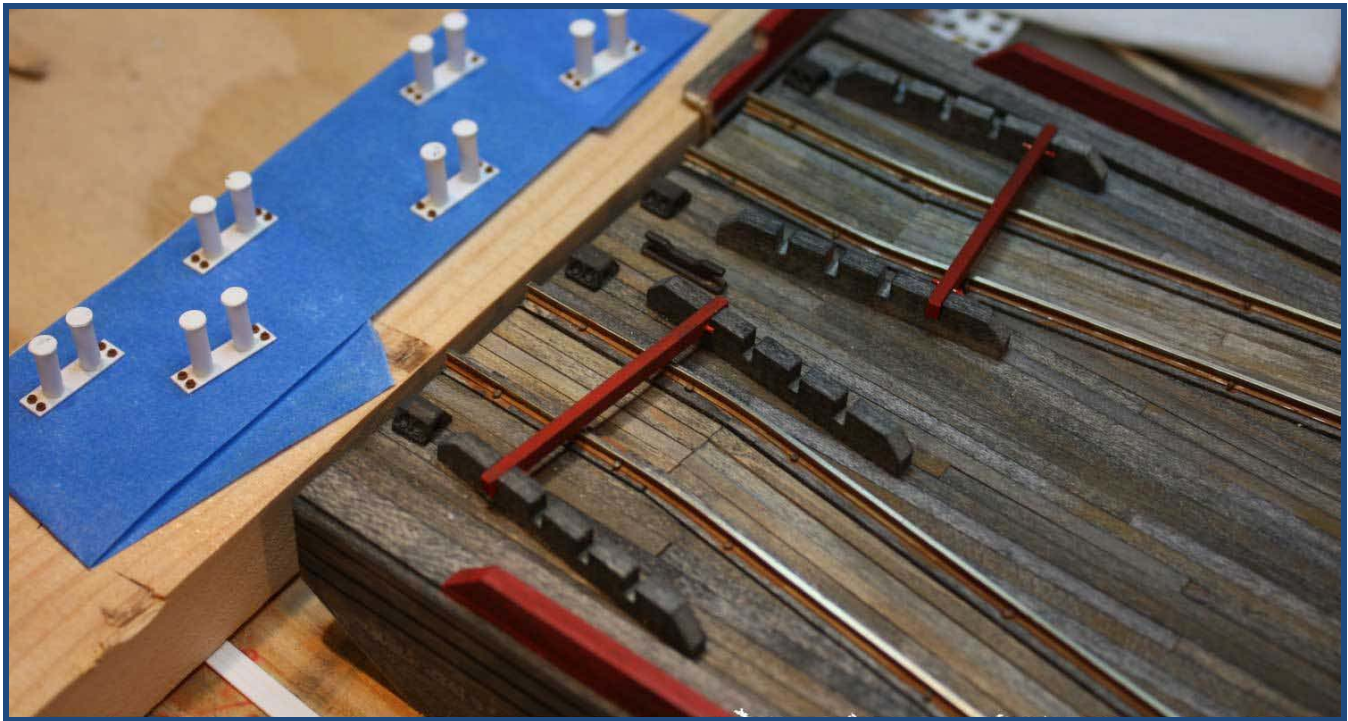
Bridge Hooks: Four of these, one at each corner of the float. The hook part came from the scrap box and glued to a sheet styrene base with N/B/W's added. Hooks could be made up from wire, super glued to the styrene base.

Cleats: Just two, from Walther's car float. One each at the bow and stern, centered on the deck.

Castings for the alignment pins: There are four, spaced across the bow. These castings are from Crow River.

Steel reinforcing/wear strips: There are four at each end of the float. They are made from .015 in. strip styrene, 1/8 in. wide. They wrap around from the front to each side of the float, and extend down each side for about 20 feet. The topmost one is only about 1/16 in. wide.





The only thing left now is painting and final weathering. I hope that you painted the made-up details as you finished them, and before adding them to the model! If not, I apologize for not mentioning it before now!

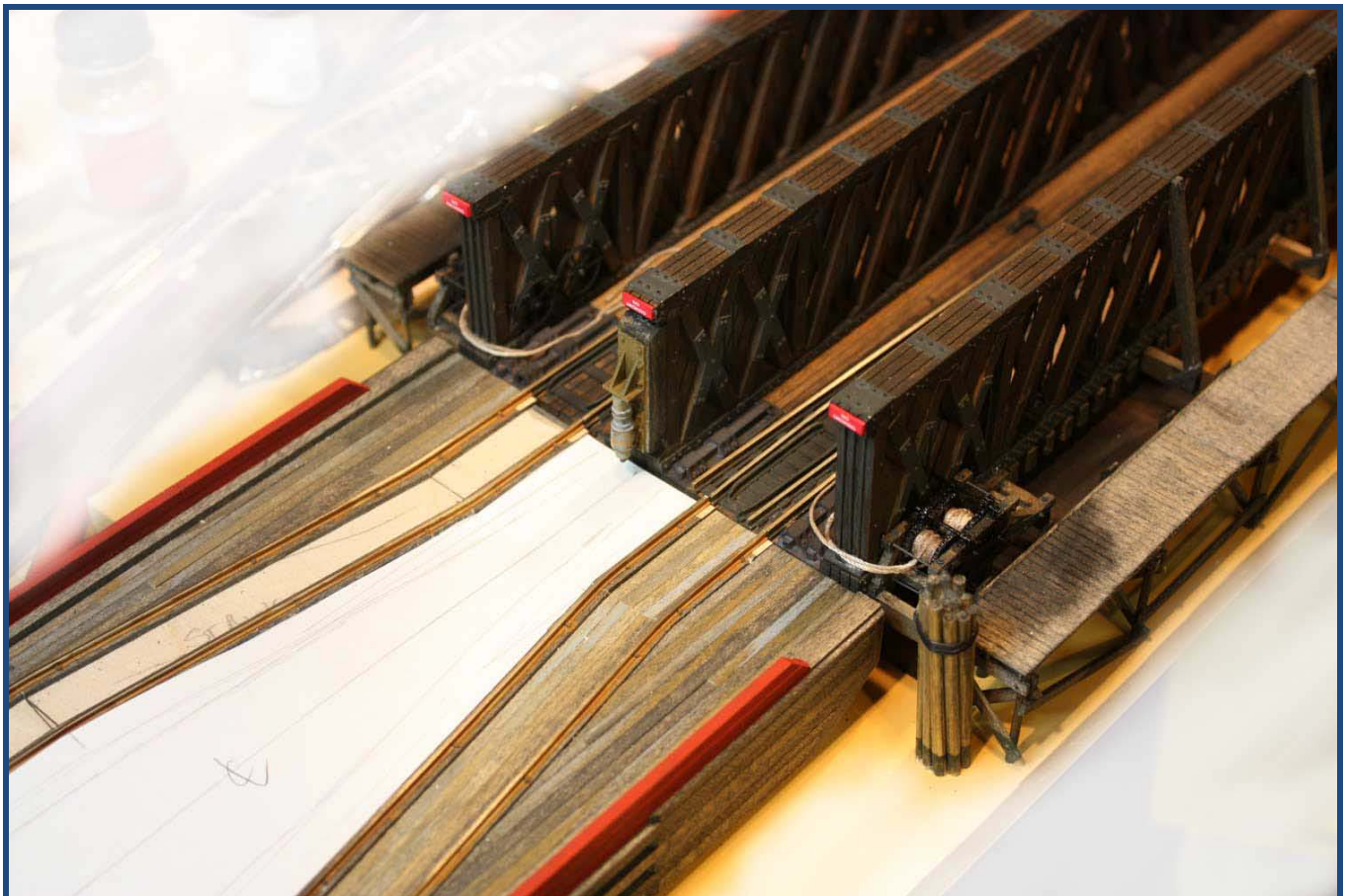
The painting is easy and quick. [The best kind!] I have not seen a color photograph of these wood floats, and do not know anyone who has! I have only seen one color photo of a wood covered barge in the pre - blue and grey scheme, so that is what I used for a rough guide. I used Caboose Red for the bulwarks, and the sides of the platform. I also used it on the

cross pieces of the bumpers, and car retainers. I used New Gravel Grey for the deck of the platform, and the steps. I did not try to get a beautiful, even, opaque coating! I also used stained wood to build everything, so that the colors, especially the grey, look a little mottled in places. Remember, these floats took a beating in service, and were a long time between paint jobs! The lettering comes from a set of decals that I had custom printed. Upon reflection, thinking of the evidence I had in the photos, I should have cut the lettering apart, to spread the road name to stretch more nearly the length of the float. But, as I said earlier, hindsight is wonderful!

Bill of Materials

Manufacturer	Part Number	Description
Crow River Products http://www.crowriverproducts.com/		Alignment Pin Castings
Evergreen Scale Models http://www.evergreenscalemodels.com	269-116 269-213 269-8212 269-9020	Styrene Strip - .015" x .125" Styrene Rod - .100" Styrene Strip - 2 x 12 Styrene Sheet - .020"
Floquil Polly S Color Corp. http://www.testors.com	270-414128 270-414323 270-414329 270-414332	Polly Scale Caboose Red Polly Scale Rust Polly Scale Railroad Tie Brown Polly Scale New Gravel Gray
Grandt Line http://grandtline.com	300-5135	Nut-Bolt-Washer (Plastic) -- 2-1/2" Hex Nut & Bolt, No Washer
Minwax		Ebony Stain

Walthers http://www.walthers.com		Cleats (from Walthers Carfloat Kit)
Other		½" Birch Plywood 1/16" x 1/8" Scribed Wood Sheathing 1/16" Sheet Wood 1/16" x 1/16" Stripwood 1/16" x 5/16" Stripwood 3/32" x 3/32" Stripwood 1/8" x 1/32" Stripwood 1/8" x 1/8" Stripwood 1/8" x 5/32" Stripwood 1/8" x 1/4" Stripwood 1/8" x 5/16" Stripwood Code 83 Rail and Spikes



The absolute last thing, except for placing it into service on the layout, was to use several shades of grey, plus black, powdered chalks to weather the float, and tone everything down, and blend it all

together. And don't forget to clean the rails, but the last few feet or so can stay weathered, as the bumper prevented the cars from polishing the railhead.

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