

The Mail Car

Issue no. 27 - January 2004

St. Lawrence Division web site: www.cyberus.ca/~g_knowles/sld/sld_main.htm

From the Superintendent's Desk

By Stanley Conley

November 30, 2004 started out ominously with several inches of heavy wet snow and slush covering the roads, more snow coming down, a real warning of the winter to come. Our intrepid band of SLD participants was not perturbed however as about 25 joined us for the second meet of the year.

Our meeting hall for this occasion provided lots of space to spread out, socialize, set up several tables for the models presented and still left room for lots of chairs for the presentations. The church hall has proved comfortable and the next two meetings will be held in the same location, a bit of welcome consistency perhaps. After a few technical difficulties, a forgotten VCR and then a missing cable we were finally able to begin the formal part of the meet, after dragging participants away from the model display!

The jewel of the day was an outstanding presentation by Normand Levert on Heavy Duty Flat Cars. Normand managed to balance excellent technical content, appropriate and interesting graphics and images with a humorous delivery that kept all participants alert in their chairs. Normand was able to pass on his engineering understanding of flat car construction as he worked his way from 'simple' eight wheel flats to the gigantic 30 wheeled, multi span-bolstered monsters.

The second presentation was an NMRA tape presentation on weathering with chalks. The presenter Robert W. Bailly Jr. was taped during the NMRA national in Valley Forge several years ago. The material presented was certainly good although the poor camera man had difficulty following the hand held examples during bursts of exuberant arm movement.

It was particularly gratifying to see the display tables covered in models, prototype reference material and other related items. Since one of the primary goals of the organisation is to provide a forum to share knowledge and experience, a full display table is a welcome sight.

Our meeting was graced with several special guests. Gord MacBride, current president of the Niagara Frontier Division was able to attend our meet. Robert Douglas, the new

superintendent of the Central Ontario Division was also able to come from Belleville to meet with us, and hopefully we were able to provide him with some hints to help him resurrect the recently revived division.

The afternoon was spent touring two excellent layouts in Orleans, Jack Scott's wonderful western Canadian Pacific, with rugged mountain scenery providing the backdrop to his highly detailed trains, and Paul Therien's Orleans and Northfield, a rendition of eastern Ontario railroading that supports several operators during regular sessions.

Our current Paymaster, Doug Cushman has accepted a contract position in the Cayman Islands for at least the next 6 months, and so we decided that the SLD would need to find a replacement to help the exec shoulder the load, and in the fine tradition of a railroad, the first volunteer to surface was accepted with enthusiasm. Gary Baillargeon will be no stranger to many regular meet attendees and will no doubt be an asset to the SLD exec.

Looking forward, there are a number of upcoming events to consider. First up will be the Meet on January 31, to be held at the same location, St. Emanuel Church (address and map on back page). There will be two clinics and layout tours are in the planning stage for the afternoon.

March will see the SLD participate in the Kingston *Rail O Rama* Show, March 20 and 21. This will be the third year we have appeared at the show to promote model railroading, promote the NMRA/NFR/SLD and to enjoy a day of hands on modeling. As always we will call for volunteers to attend and man the tables. Duties at the show are exceptionally tough, participants are expected to spend a significant part of the day seated behind a table building a model while carrying on conversations with the public, mostly fellow modelers and an enthusiastic younger generation.

March 27 will bring us to another SLD meet, and in late April the NFR regional convention will be held in London Ontario. Many things to look forward to.

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November Issue - October 15
January Issue - December 15
March Issue - February 15
May Issue - April 15
September Issue - August 15

Special thanks to Diane Dodds for proof-reading and general nit-picking

November Meet Shows Off Modelling Talents

Compiled by Alex Binkley

The display at the November SLD meet was a showcase for some of the modelling talent in our organization. It included several well-built examples of trestles that were constructed in the workshop organised by Grant Knowles as well as other superb models.

Doug Cushman, who is going to represent the SLD in the Caribbean for the next six months, brought out what he called the 'trestle project that got out of control'. It featured his models of a trestle, signs and trees a la Mike Hamer. He had an RS10 and a CNR van on display on the trestle. A great little scene. As well Grant Knowles, Gary Baillargeon, Greg Gee and Bob Hobbs displayed the trestles they had built in the workshop. Bob noted that his structure required about 500 nuts, bolts and washers.

In addition to trestles, bridges were a popular item in the display. Grant had two versions of a 47-foot Howe truss bridge built in 1881 by the Denver & Rio Grande. The HOn3 was for his basement layout and was constructed from a Trout Creek kit. He built a copy of it for his outdoor pike using cedar strips he cut himself. It has survived several years in his garden.

Mike Hamer displayed his scratchbuilt Salmon River Bridge. The curved stone arch bridge was quite a challenge, Mike reports, and he credited Stan Conley's engineering assistance in the project. Mike also showed off some bridge piers and abutments that he has made for Jacques Huppe's layout.

Dave Steer showed a Howe truss bridge that he built in HO 3-foot gauge from a Juneco kit.

Normand Levert, who gave a detailed presentation on bridges and flatcars to the meeting, brought out several flat cars, which he has kitbashed, to make his point that flatcars are bridges on wheels. He had a 40-foot flat car that is an upgraded Athearn project and a 60-foot flat that gave up its bulkheads to a gondola project. He displayed a depressed centre flat car that was part Lima, part Normand. As well there was a 12-axle heavy duty flat on Athearn Buckeye trucks. Quite a collection. The Nord Railway must have some heavy-duty customers.

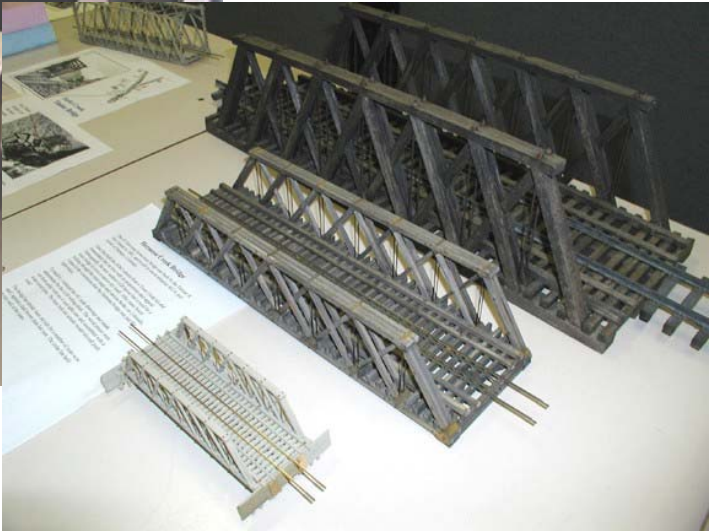
Still on bridges, Bill Meredith showed some samples of bridge hardware that he is developing for a DSP&P bridge in both Sn3 and ON3. The kit from Cimarron Works will include resin, wood, brass parts, styrene shapes and Grandt Line castings. More details at "<http://www.cimarronworks.com>" Bill also displayed some of the pattern work for a RGS caboose kit that is scheduled for production in the near future.

Chris Butler displayed an On3 2-6-0 Baldwin Mogul that he kitbashed from an On30 Bachmann loco. He has already made extensive changes to the engine and plans to add a styrene "wood" cab later. Perhaps when Chris is done with his articles on the 22 foot flat car he also brought to the meeting, he could do a narrative for the **Mail Car** on his modifications to this loco.

Stanley Conley showed off his rendition of the Barry's Bay station kit produced by Alder Models. It is a resin kit that is basically finished and some preliminary weathering had been done. Stanley reports that more details are to be added.

Bob Hobbs also displayed a collection of silk screen prints of GTW, CnoR and CNR locomotive prints.

November Display Table



Grant Knowles ↑
Grant Knowles (upper right)



Stanley Conley ↑
Chris Butler →



Photos By Doug Cushman

NMRA Achievement Program – The Cars Certificate

Grant Knowles
SLD AP Chairman



Over the following months, I will be reviewing the AP Criteria for each of the AP Certificates and presenting some helpful tips on how to approach these certificates. Additional information can be found on the NMRA Achievement Program web page - www.nmra.org/achievement/

As a quick review, remember that the purpose of the AP is to recognise and reward good model building. It is not a competition and is directed to working with the modeller to advance their skills and interest in a positive environment.

The key questions the judges will be looking for answers to are:

1. What did the modeller try to do?
2. How well did the modeller do it?

The AP program is divided into 4 main categories each of which have a number of sub categories. Today we will look at the sub category “cars” which appears under the Model Railroad Equipment category.

To qualify for the Master Builder - Cars certificate:

1. You must build eight operable scale models of railroad cars:

Operable means they must be able to roll down the track and negotiate model railroad trackage. You may gain additional points by providing “functional” features on your model, e.g. opening doors.

A. There must be at least four different types of cars represented in the total of eight. One of these must be a passenger car.

The intent of this requirement is to demonstrate that you can model a variety of types of cars, not just several variations of the same type. Ideally you should select models that are distinctly different as a box car vs. flat car vs. passenger car. That being said, a wood deck flat car and a depressed centre flat car are considered different as they are substantially different types of car to build.

A "Passenger cars" is defined as anything that would normally be found in a regular scheduled passenger train including baggage cars, express reefers, business cars, or other passenger carrying cars like drover's cabooses. Remember, it is only four different types that are required: you could build a set of five identical passenger coaches, a box car, a tank car, and a gondola, and satisfy the requirement.

B. Each of the eight models must be super detailed with either commercial parts or scratch built parts (for extra points).

Super detailing relates to adding details to the model that are not normally provided in a kit or like. For example, replace the “molded on” grab irons with formed wire ones. Don't forget the undercarriage details like brake rigging, battery boxes, etc.

C. In addition to being super detailed, at least four of the eight models must be scratch built. The term "scratch built" implies that the modeller has done all of the necessary layout and fabrication that produce the final dimensions, appearance, and operating qualities of the model.

Scratch building is not as daunting as it may appear. For example, to scratch building a wood flat car would involve building the basic frame, adding the deck and under frame brake rigging. Add a couple of trucks and couplers, a little paint and letting and you are done! Note that you can use commercial parts (NBW, brake cylinders, etc) though you will score more points with any items you scratch build. In order to qualify for the “scratch built” category, you must score at least 14 points in the Scratch Built field.

Note the following parts are specifically excluded from the scratch built requirement:

- Wheels
- Couplers
- Light bulbs & electronics
- Trucks
- Brake fittings. Marker lights & drumheads
- Paint, decals, etc.
- Basic shapes of wood, plastic, metal, etc.

Something that you should remember if the idea of 'scratch building' intimidates you: there is very little difference between scratch building and building most craftsman kits. The big difference is that in a kit, the manufacturer has assembled the materials that you will need for you. Only the construction needs to be done from scratch. If you take someone else's plans and instructions (even those from a kit) and go to the hobby shop and buy the materials yourself and assemble them, that qualifies as scratch building. On the other hand, if you do develop your own plans, make sure that you tell the judges that, as it will earn you extra points.

2. You must earn a score of at least 87.5 points on four of the eight models.

Note, only four of the models have to be judged, the remaining four don't have to be if you don't want to!

Remember that your eight cars do not have to be from the same era, or prototype. They don't even have to be the same scale. You also don't have to earn your four Merit Award certificates at the same time - you can earn one this year, another two years from now, and another the year after that. So far I have models built in Gn3, On3 and plan to do some in HOn3 to complete this certificate.

The AP Judging

As noted, 4 of the models will be evaluated against the NMRA AP Program guidelines that will cover the following 5 fields. The Merit Award is presented when a score of 87.5 (out of a possible 125) or greater is earned. Models submitted under the Motive Power and Structure categories will also be subject to these guidelines.

It is important to remember the model is NOT being judged against the other entries, but against a well defined set of standards. If this can be viewed as a competition, it is only with the modeller against himself, not in reference to the other entries.

1. Construction (0 - 40 Points)

This category has two dimensions:

- The difficulty or complexity of what the modeller has attempted
- How well was the model constructed

Points the judges will consider:

- The judges will focus on quality, skill, workmanship & complexity.
- Quality of assembly, fit of parts, cleanliness of glue application
- Alignment of parts, tool marks, fuzzy wood
- Symmetry of repeated details
- Difficulty in construction techniques
- Complexity of the model
- Effort required to fit multiple parts

2. Detail (0 - 20 points)

This category has two dimensions:

- How much detail has the modeller added or incorporated?
- How complex was the detailing job?

Points the judges will consider:

- The amount and complexity of the details
- The refinement of the model

- They will be evaluating the quality, not quantity of the details
- Underbody detail on rolling stock
- Board by board construction vs. scribed siding
- Nuts, bolts, door knobs, etc.
- Working details such as doors
- Use of masters / patterns to cast parts

3. Conformity (0 - 25 points)

This category has two dimensions:

- How well has the modeller reproduced the prototype?
- How complex was the detailing job?

Points the judges will consider:

- Is the model logically built?
- Does the model follow prototypical construction practices?
- Does it achieve prototypical appearance?
- If selected compression has been used, how well was it done?
- Is there reference material? Prototype support for freelancing
- Max of 6 points if no documentation is provided

4. Finish & Lettering (0 - 25 points)

This category has two dimensions:

- The difficulty or complexity of what the modeller has attempted
- How well was the model constructed

Points the judges will consider:

- The number of colours and difficulty of separation lines between the colours
- Application of paint, brush marks, unevenness, etc,
- Quality and quantity of fine stripping and lettering
- Does the surface look like the medium it is representing?
- Are the letters on straight?
- Note: There is no requirement for weathering though when added, must be done correctly

5. Scratchbuilding (0 - 15 points)

This category has two dimensions:

- How much did the modeller build from scratch?
- And how difficult was the scratchbuilding?

Points the judges will consider:

- The quantity of scratchbuilt parts, quality is measured under Construction
- How much of the model is scratchbuilt?
- How complex is the scratchbuilding?
- Drawing your own plans is considered part of scratchbuilding
- Casting & photoetching is considered scratchbuilding
- Some parts due to their nature are excluded from the list of "judged parts". E.g. electric motors, light bulbs, gears, couplers, trucks, figures, etc.

If you have any further questions, please feel free to contact me directly.

Modelling Tips

from the machine shops of the

Bonnechere & Braeside Railway Company

Departing from the track theme, this issue's column is about lighting especially with DCC. One can use a 14 or 16 volt bulb of the appropriate amperage and that's the end of it. However, sometimes we need something smaller, a 1.5 volt bulb for example, or an LED that generates less heat.

When using either of the latter two solutions, a resistor is needed to drop the voltage or control the current to the bulb or LED. Assuming you're not up to determining all the relevant values and then going through the math then you're likely following the "word of mouth" or "trial and error" method. While there's really nothing wrong with this approach, it can be expensive in terms of bulbs or LEDs in a new situation.

At the NMRA National convention this past summer I came across a better way. Get a potentiometer and a pair of wires with alligator clips at one end. A 2 to 3k pot should be adequate. Before installing the bulb or LED, put the pot in series and after making sure that the pot is turned to the high resistance level turn the lighting function on. Gradually turn the pot, reducing the resistance until the bulb or LED looks right. Turn the lighting function off, remove the pot and with your ohmmeter read the resistance value of the pot. Use a resistor close in value to the reading off the pot and complete the installation.

If you want to get a little fancier, install the pot in a case or the equivalent. Then using your meter, determine the points where the resistance value equals standard values. Mark these on the face of the box. Then when you test a particular bulb or LED, you can read the needed resistor value right off the face of the box.

If you don't want to make up your own, they are commercially available.

Peter Nesbitt
General Manager

NMRA Dates

SLD Meetings

January 31, 2004	Emmanuel United Church 691 Smyth Road, Ottawa
March 27, 2004	Emmanuel United Church 691 Smyth Road, Ottawa
May 29, 2004	TBA

NFR Spring Convention

Traxx to London

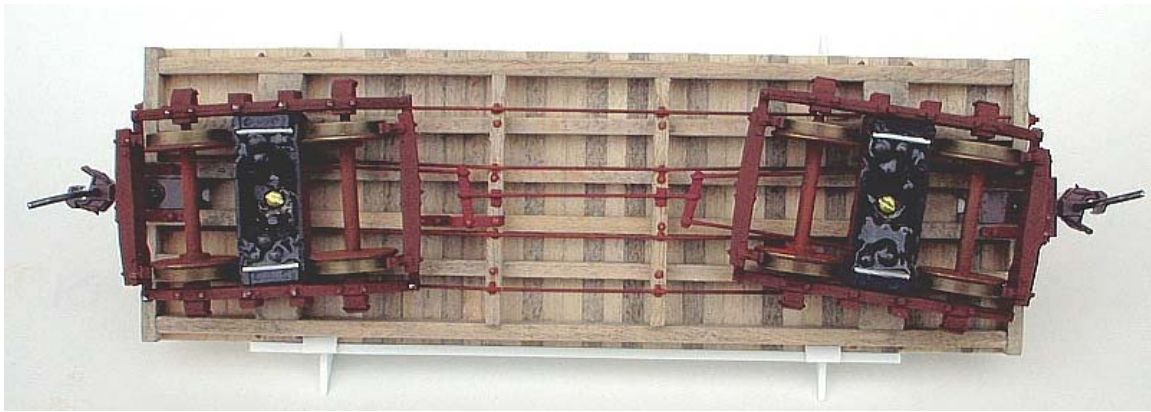
April 23-25 2004, London Ontario

Rusty Metal and Weathered Wood; Scratch-building a Carson and Colorado Flat Car in On3

By Chris Butler

Photographs and Illustrations by the Author

Part 3 – Finishing



Underside view of the author's completed flat car.

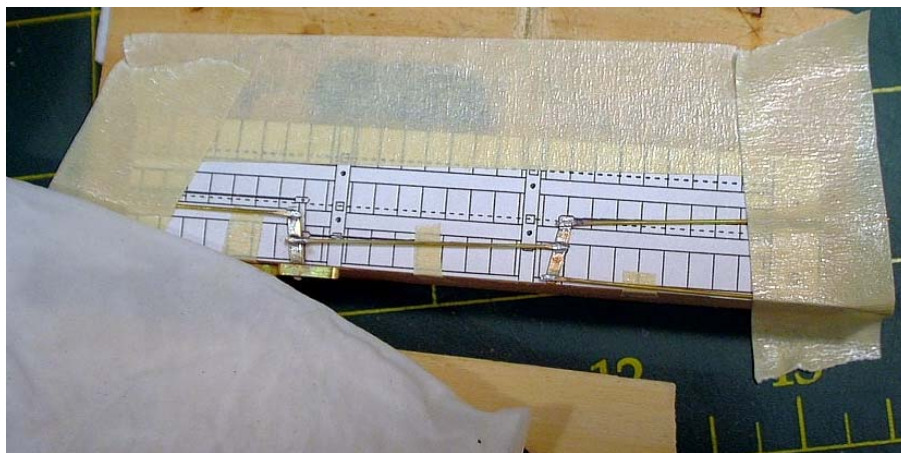
In the previous edition of the **Mail Car**, we made a start on the construction of a 22' C&C 3' narrow gauge flat car. Now we've started, let's complete the model.

Brake Rigging

I made the parts from 0.022" brass rod and 1/64th (~0.016") x 1/16th K&S brass strip – available from most local hobby stores. The coupling rods were shaped at their linkage ends by simply hammering the end flat on a smooth concrete floor. OK, on to the soldering (remember guys, there's an 'L' in soldering...). Anyway, since my soldering iron is extremely unsophisticated – 18 Watts and not temperature controlled, I soldered some of the joints and used ACC on the others so the thing wouldn't fall apart while I was building it. It was then I discovered that ACC isn't all that strong (especially if you bake it at 200°F!) and consequently devised plan "B".

Plan "B" entailed soldering all the parts. Since I was soldering parts that were often only a couple of millimetres from another solder joint, the problem was to prevent the initial joints from becoming unsoldered as I added another part. A few years back, I remembered reading about using wet tissue paper as a heat shield. I used this approach and found it worked very effectively.

Once I finished beating, bending and filing the rigging parts, I laid them out on top of the plans which were attached to a scrap piece of wood with masking tape. Now I could see where all the bits were located. One by one, I carefully fluxed the joints and sparingly applied solder. When I had two adjacent joints, I simply used the wet tissue paper to prevent the joint from coming undone. Who needs a high-tech resistance soldering setup anyway? Well, one would be nice! Man, this project is growing.

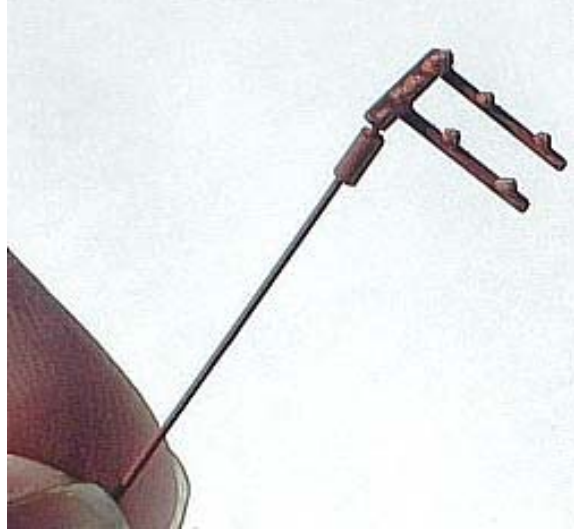


Assembling the brake rigging parts – note the wet tissue paper and masking tape

Prior to installation on the car, I carefully washed the entire assembly in dish washing detergent and airbrushed it with my old rust formula.

Once dry, I super-glued a few pre-airbrushed Grandt Line #99 1 $\frac{5}{8}$ " NBW (NBW - Nut, Bolt, Washer) castings to the rigging. The final result was well worth the extra effort and this time it didn't fall apart. Triangles and soldering (with an "L" rule!

Once the main rigging was completed; I turned my attention to the small sub-frame located at the "B" end of the car on top of the draft timbers. This supports the brake wheel shaft and roller bar for the flexible chain linkage. For the brake shaft and support frame, I made the parts from 0.022" brass rod and 1/64th (~0.016") x 1/16th" K&S brass strip which I soldered together.



Brake shaft and Roller bar "sub-frame".

I used a Grandt Line #94 15" Lovested brake wheel, ratchet and pawl set. I made the roller bar from some 0.025" internal diameter brass tube cut to roughly 6" scale inches in length. This was ACC'd to the brake shaft. Next, I added some NBW castings and the entire sub-assembly was then washed, dried and airbrushed with my old rust mix.

Trucks

I used the MacLeod Western T-3 Carter Bros. 4' trucks. These are simple styrene kits and went together easily. The brake beams however were another matter. I used Foothill Model Works FMW-4000 wooden brake beams which are designed to be used with the MacLeod Western trucks. These beams are a work of art but extremely fragile and so I spent quite a bit of time repairing them! Be sure to take extreme care in removing them from the sprue as this was where I encountered most of my problems. The prototype used body hung brake shoes however, this is close to impossible to replicate in O-Scale and so mine are truck-mounted as per the FMW instructions.

I cleaned up the castings and the NWSL 24" wheels and airbrushed them with my "old rust" mix – a blend of Floquil Rust and Floquil Zinc Chromate Primer. For the wheel sets, I cut up some masking tape and masked the treads prior to airbrushing them. Once they were dry I brushed the wheel sets and trucks with weathering chalks and dry brushed the details with Polly S Reefer white.

The final step was to increase the truck's weight with lead shot and some 2-part epoxy. The last step really makes a difference in how the trucks roll. This is important because on a flat car, there are not too many places we can hide weights!

Decking

The decking was HO Scale Northeastern 3" x 10" basswood. This works out to be almost a 2" x 6" (finished dimensions) in O-scale (1 $\frac{7}{8}$ " x 5 $\frac{7}{8}$ " – close enough. The Northeastern basswood was scribed (with an old Atlas Snap saw) to represent a grain and stained with a very light wash of black shoe dye and Isopropyl alcohol mix in order to make it look like weathered wood. In order to add some interest, the basswood strips were stained with various shades of the shoe dye / Isopropyl mix. Once dry, these were cut into scale 7' 4" lengths and carefully glued to the flat car frame. I used a small square to ensure correct alignment. The finished pieces were butted up close together to represent the "Z" ship-lap decking because I didn't want any daylight showing through the gaps.

Paint and finishing details

I pre-airbrushed some Grandt Line #99 1 5/8" NBW castings with my old rust mix for the Needle beams where they connect to the sills. I did the same thing with the 8 NBW castings for the buffer blocks. These were then glued onto the under frame with ACC.

Finally, I installed the completed MacLeod Western T-3 Carter Bros. trucks described earlier to the bolsters with two 1/4 inch long x 1/72 brass pan head screws.

As I wanted a car that had been used a lot and was well weathered, I used a dry brushing technique with a small Nylon brush that I had "modified" (ruined) so as to make its individual hairs 'splay out'. The Floquil paint (Boxcar red) was applied to the previously stained outer sills to simulate peeling paint.

Conclusion

I really enjoyed building this simple flat car and I'm really keen to build a Caboose using the same construction techniques and jig.

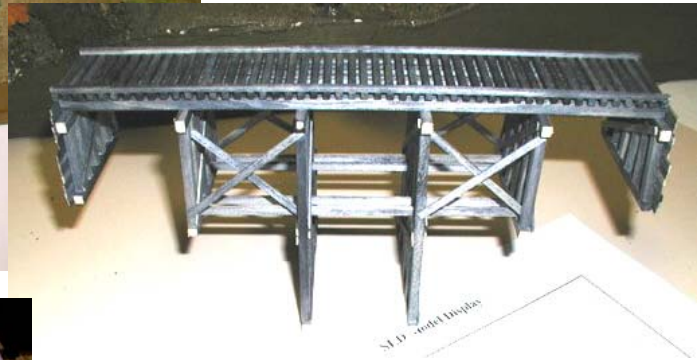
If you'd like to construct this flat car (or something similar), please send me an email at cjbutler@igs.net and I'll respond with scale drawings in CorelDraw 9 format, DXF format and un-scaled drawings in hi-resolution JPEG formats. Just let me know.

This is the final part in the series and I hope you enjoyed reading it. Until next time...

Trestle Workshop Results



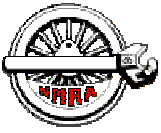
↑ Bob Hobbs
← Doug Cushman



↑ Greg Gee
← Gary Baillargeon



All Photos by Doug Cushman



Next Division Meet

St Lawrence Division – NMRA

When:

Saturday, January 31st, 2004

Where:

Emmanuel United Church

691 Smyth Road,

Ottawa

East of CHEO at Dauphin Road

Doors open at 9:00am -- Admission \$5.00

What's on:

Morning:

Division Business

- Kingston Rail-o-Rama

Clinics

- Modeling Roads
- TBA

Display

- Bridge and Building Equipment

Door Prizes

- You never know what to expect!

Afternoon:

Tour

- Layout tours

