THE O SCALE RESOURCE

NEWS, REVIEWS, INFORMATION TO USE

We're putting the "modeling" back in Model Railroading! ®

Volume 9 No. 3

January/February 2022

Building a Pittsburgh Railways Co Brill 3700 Interurban

Building a Berkshire Valley Models 1934 Tank Truck

3D Printing - Not as Easy as You Think

Building Amtrak Superliners

Freelancing in O Scale

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THE O SCALE RESOURCE
NEWS, REVIEWS, INFORMATION TO USE

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January/February 2022
Volume 9 No. 3

Owner / Publisher
Amy Dawdy

Managing Editor
Daniel Dawdy

Advertising Manager
Jeb Kriigel

Welcome to the online O Scale Resource magazine. The magazine is presented in an easy to use format. The blue bar above the magazine has commands for previewing all the pages, advancing the pages forward or back, searching to go to a specific page, enlarging pages, printing pages, enlarging the view to full screen, and downloading a copy to your computer.

Front Cover Photo

George Paxon's model of a Pittsburgh Railways Co Brill 3700 Interurban at the corner of Main and Commerce Streets in Celestown on the Mountain Electric.

Rear Cover Photo

Beautiful view of Hendrik Kersten's Amtrak locomotives on outdoor trackage.

The Model Railroad Resource, LLC publishes *The O Scale Resource* and *The S Scale Resource*. Be sure to look at both of our magazines. There are many articles in our magazines that are not scale specific and will be of interest to you. Click the magazine title in this announcement to see the magazine.

From the Publisher's Desk

The year is just about over, and although better that last year, it's been far from from normal. Amy and I did get in a vacation by going to the Denver O Scale National which was a blast. There was so much to see and do.

Bad news on our Midwest O& S Scale Midwest Show – as many may know, we have decided to no longer sponsor/hold the show. While we hate to see this show end, we also cannot put on a show that is not profitable. Even though the 2021 show was the best ever for us, it was a direct result of concessions made by the hotel to our contract when we were asked to change dates. The end result of those negotiations was a win-win for both the hotel and us. We were able to reduce our expenses and, as such, pass the savings on to the attendees/vendors in the form of lower registration fees and sleeping room rates. Unfortunately, that is not the case for 2022. It comes down to the financial aspect of putting on a show of this caliber. The proposal from the hotel for 2022 has an increase in the the price of the meeting space by 150% and the sleeping room rate by over 30%.

Please do not ask us to see if we can find another place in which to hold the show. Been there, done that! Prior to booking the show in 2017, and again in 2018, we looked at numerous options and spent countless hours making phone calls and doing research. We looked at options not only in Indianapolis, but other venues in the Midwest as well. It's hard to find a place with the needed square footage of 16,000 to 18,000, in one or two adjoining rooms. A one day smaller show makes it hard to attract the larger dealers who normally have 10 to 20 tables. That's a lot of work for 5 or 6 hours.

There is talk of others reviving the show, and we'll do anything we can to support them.

This month we are back to building stuff. Building a Pittsburgh Railways Co Brill 3700 Interurban by George Paxon, Building Amtrak Superliners by Hendrik Kersten and my article on Building a Berkshire Valley Models 1934 Tank Truck to name a few.

Glenn Guerra has a great article on Drawing for 3D Models, and next time I'll follow up on the "frustrating fun" of printing resin models and share with you what I have learned thus far.

Let us know what you are up to. Email daniel@modelrailroadresource.com with any projects, large or small, and let's talk. Don't worry if you don't fancy yourself a great writer, we'll work with you and help get your thoughts down.

Thank you all for your support, and remember to tell our advertisers you saw them in *The O Scale Resource* Magazine!

Happy Reading & Happy Modeling,

Amy & Dan Dawdy




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NEWS YOU CAN USE

New from Stephen Milley and Rail-Scale-Models, the Overhead I-Beam Hoist detail kit. This kit comes into the Rail-Scale-Models product line-up as part of the acquisition of the Rusty Stumps Scale Models laser-cut craftsman kit business.

The Overhead I-Beam Hoist is a small detail scene that can be added to your model railroad in a variety of ways – on the front edge of a building's freight door or overhead loft opening, or on a scratchbuilt gantry frame located in a variety of different locations. The kit is assembled from 3D-printed detail components, a length of styrene I-beam, a length of scale chain, and a length of support wire.

The kit includes detailed assembly instructions and photos to assist the modeler with assembly. This small structure will add that special touch to your model railroad scene!

See this and all the O scale items on their Website.

Coming soon from WOODLAND®, Smith Brothers TV & Appliance.

Smith Brothers TV & Appliance carries the newest televisions, refrigerators and more. This 1950s era Built-&-Ready® structure features flickering TVs tuned into the latest programs and a brand, new colored TV on display. Illuminate the store and switch on the TVs with LEDs made for use with the Just Plug® Lighting System. An eye-catching printed interior creates the illusion of depth, from the shop at the front to a stockroom in the back. The building is hand-painted and weathered with loads of signage. Other exterior details like a loading dock with a dolly, exterior light, a dumpster and more add to the building's authenticity.

See their Website for more details.

San Juan Model Co. delivers narrow gauge CONOCO high dome tank car in two scales to their San Juan Car Co. Brand.

The latest release marks the first run of this model in both On3 (On30 with replacement wheels), and

HOn3. These highly detailed injected molded plastic cars are factory assembled with free-rolling durable metal wheel sets and prototypically accurate era specific paint schemes. Four distinct paint schemes available in this run are specific to 1926, 1930, 1935 and 1940 respectively.

Four era specific paint variations:
1. 1926 - Black car, white Sans-Serif, "Continental Oil Co." Lettering. Nine Numbers: 21, 22, 23, 26, 27, 30, 33, 35, 36

2. 1930 - Black car, white Roman, "Continental Oil Co." Lettering. Nine Numbers: 21, 22, 23, 26, 27, 30, 33, 35, 36

3. 1935 - Black frame and trucks, silver tank, large green Sans-Serif "CONOCO" Lettering. Nine Numbers: 21, 22, 23, 26, 27, 30, 33, 35, 36

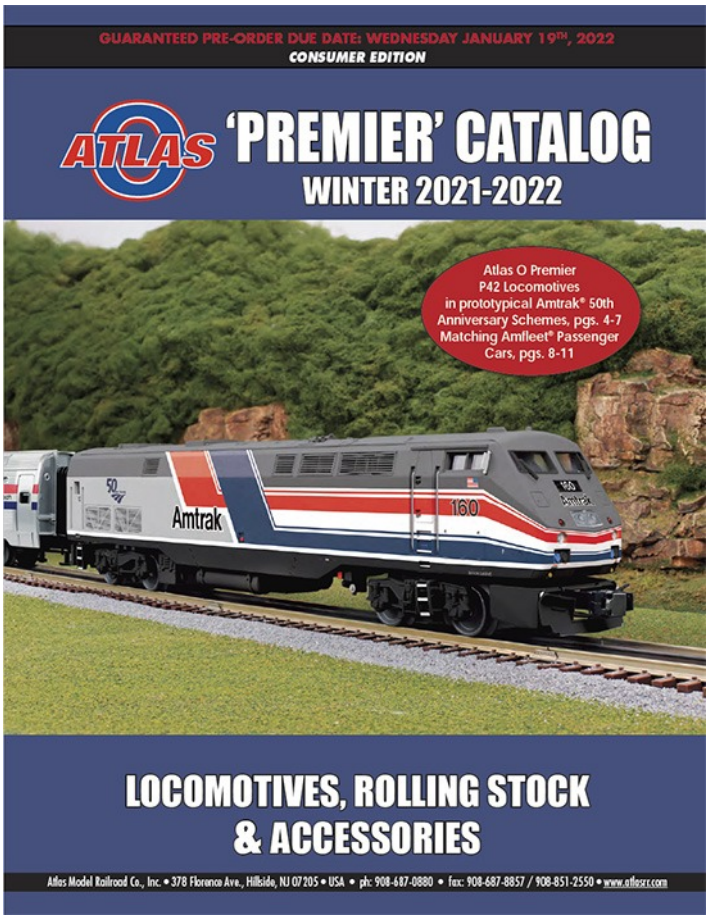
4. 1940 - Black car, large white Sans-Serif "CONOCO" Lettering. Nine Numbers: 21, 22, 23, 26, 27, 30, 33, 35, 36

These RTR models reflect the first time ever the 1926 & 1930 lettering styles have been produced in both O and HO scales and are available exclusively at sanjuancarco.com.

Atlas O has released their Winter 2021-2022 Premier Catalog. Here is the download link as of date of this publication.

The pre-order date for products listed below is January 19, 2022.

Atlas O Premier P-42 Genesis Locomotive
Atlas O Premier Amfleet Cars
Atlas O Premier F40PH Locomotive
Atlas O Master Horizon Comet Cars
Atlas O Master® F-7 A/B Locomotives
Atlas O Trainman® C & O Cupola Caboose
Atlas O Premier Russell Snow Plow
Atlas O Premier 3-Bay Centerflow Hopper
Atlas O Premier 55' All Door Box Car
Atlas O Premier Crane Car
Atlas O Premier Crane Tender
Atlas O Premier Scale Test Car
Atlas O Master Multi-Max Auto Rack Slide-In Interior Deck
Atlas O Layout Accessories
Atlas O Electronics



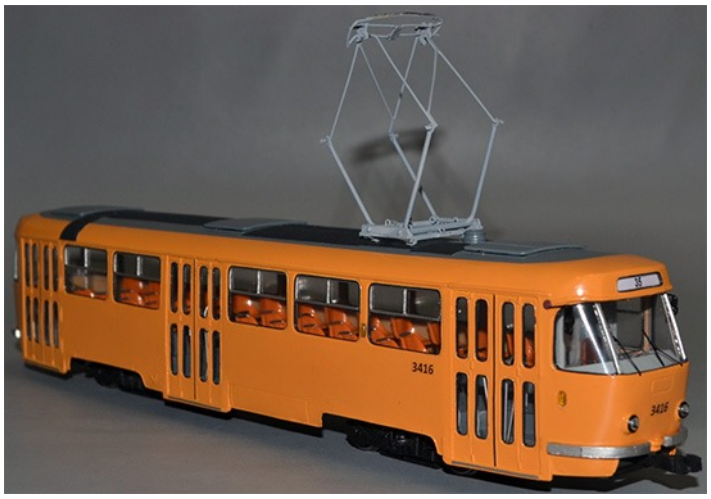
Two types of passenger cars are featured in this month's Catalog, including: the Atlas O Premier 50th Anniversary Amfleet® cars, decorated in cooperation with Amtrak, will match the Atlas O prototypically decorated 50th Anniversary Amtrak P-42 Genesis locomotives. In addition, the previously announced Atlas O Master Horizon Comet cars will match the Atlas O Premier F40PH offerings.

There are several rolling stock models being announced in the Master, Premier and Trainman lines including: Russell Snow Plows, Centerflow Hoppers, 55' All Door Box Cars and C&O Cabooses - with authentic prototypical paint schemes, including schemes to match the F7 Locomotives. Rounding out

the announcements are a full complement of structures, accessories and electronics to make your layout complete

See their Website for all the new O scale products!

Ed Skuchas from Berkshire Car Shop has been providing model trolley components for over 40 years. BCS has always provided the latest and best available model trolley products. A long time provider of St Petersburg Tram Collection PCC cars, we recognized that all of the Presidential Conference Committee developments were used in Europe when the US market subsided. More PCC cars were built in Europe by Tatra in Czechoslovakia. This huge fleet of cars were constantly redesigned and upgraded. Many are still in use and the number of cities using them has expanded due to the reselling of cars to other cities. Along with their use, expansion and years of service, the cars have many different paint schemes.



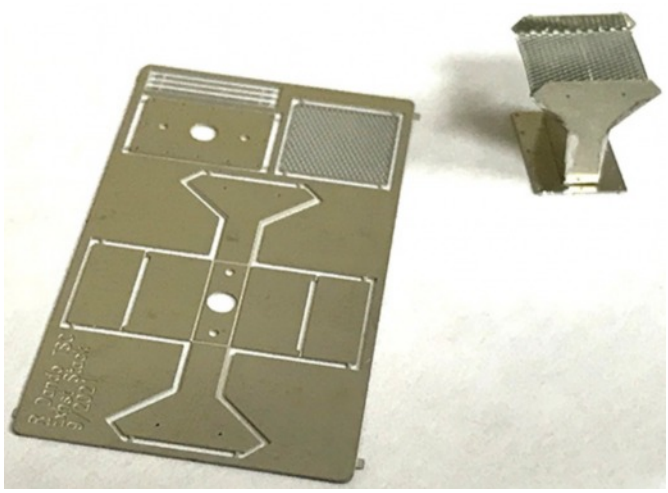
BCS works with car builders overseas who make models to our specifications. Since they are built to order, car type and paint scheme will be individually evaluated prior to production. Above are some of the car types and paint schemes that are available.

For more information please Email Ed here.

Ross Dando from Twin Star Cars has some new products coming your way as well as a new Website coming this January.

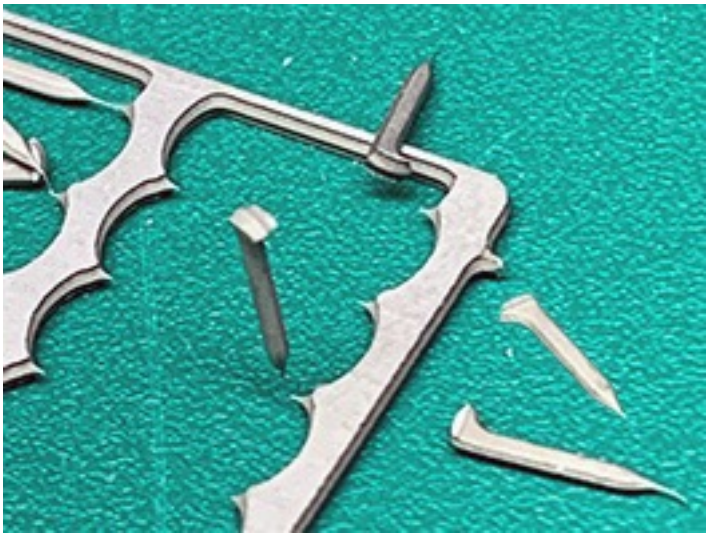
First up are their new Modern Era O Scale Etched running board for the Atlas PS 4427 Highside Covered Hopper. Assembly fixture and drill jig offered to enable a clean installation.

Next up is their spark arrestor. This spark arrestor represents the ones used on the Rock Island's GP and F units. Folds up easy and a little fix and solder makes a sturdy piece. A base plate with hole is provided if you want to add the base plate with separate bolt detail.



Rock Island herald. Correctly sized etched heralds to use on F Units.

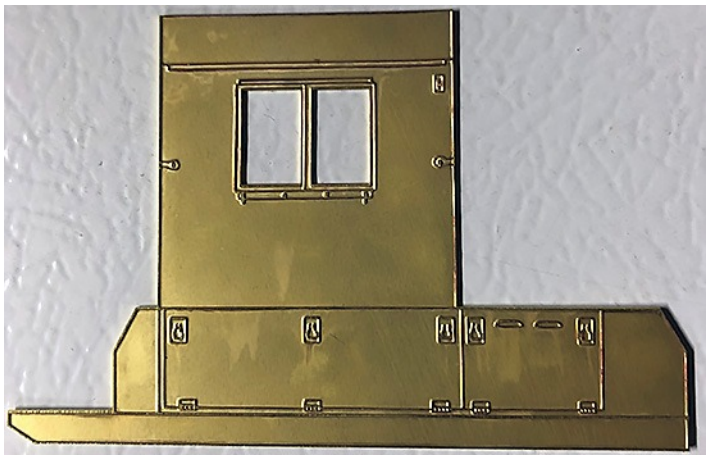
TSC has been working on this project for almost a year and we feel that it's time to share. These etched spikes are scaled as close as possible to the prototype shape using a double etch process. A fret will do 18" of standard tie spacing with four spikes per tie. They look great with the products offered by Right-O-Way.



Modern Era O Scale will see two kits being available after the first of the year. These will be the the Thrall RailGon and the FMC ABOX. Check out

the Backshop column in this issue for more details and pictures! Their New Website should be up and running for sales in January.

John Wubbel the new owner of All Nation Line has their new Website up and running. John says: "This is our Ivory Letter to announce our new All Nation Line Hobby Shop Web Store at https://AllNationLine.com The focal point from the Home page is to make navigation easy from the Activity Gallery to the Categories of products. Perhaps the most important page is the Contact Us form to let us know what is on your wish list, suggestions and just plain establishing a model builder to model builder relationship. The Activity Gallery will feature new product releases as we continue to add and support our legacy parts and kits, introducing them to the new generations of O Scale model builders.



Brass Engines Anyone! Our latest new product kit announcement. A long lost O Scale EMD GP-40 Engine Project that was partially completed within All Nation some years ago is now available for the well seasoned brass scratch builder. This kit is not for the inexperienced model builder because it does not come with instructions. This kit will challenge the model builder with a wonderful outcome at an affordable price point.

The primary body components are etched brass requiring metal work on the part of the modeler to cut up to the line work, do cut outs where appropriate and solder the main parts together. A subset set of 3D Printed PETG plastic parts ship with this model to add some of the hardware detail. The kit does not ship with trucks, couplers, motor or transmission drives, thus only the parts for the superstructure. This will be a fine addition to the O Scale 2 Rail Pike. No two modelers approach a scratch building project in the same manner or methods to solve the problems along the model building journey. Implicit in this is enjoying the means to innovate for customization that kits offer toward the railroad one is modeling. Please go to our Web Store for complete details."

More colors from our friends at Tru-Color Paint.
January, 2022

3D-Printed & Cast Resin
9289- CSX- Yn3 Scheme, Blue
9290- CSX- Yn3 Scheme, Yellow

Aerosols
4038- Matte Aged Brick Red
4039- Zinc Chromate

Railroad
396- Metallic Burnt Iron

February, 2022

3D-Printed & Cast Resin
9299- Kansas City Southern- Southern Belle; Red
9300- Kansas City Southern- Southern Belle; Yellow

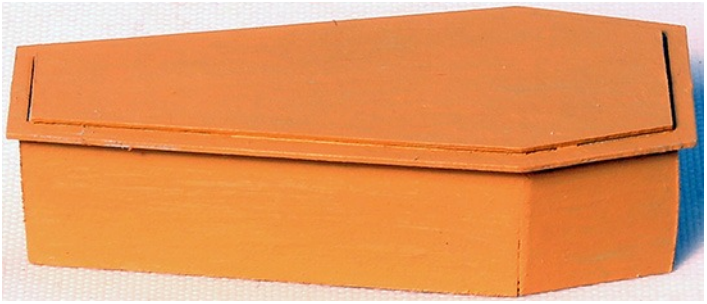
Aerosols
4041- Gloss Medium Green
4042- Gloss Dark Green

Flat/Brushable
888- Flat Rich Oxide Brown

As always Tru-Color Paint is always open to new ideas for paints. If there are colors that our readers need but aren't made, have them shoot them an email at tru.colorpaint1@yahoo.com. If they can find enough information on the color, they could put it in the next year's production schedule. See their full line up at their Website!

Richard Rands of Berkshire Valley Models has some new products available.

The new Hearse Wagon is a white metal and laser cut wood kit. Horses available separately.
Coffin included for your usage.



Also new are the #861 Coffins (2) $4.00 Laser cut 75" x 30"

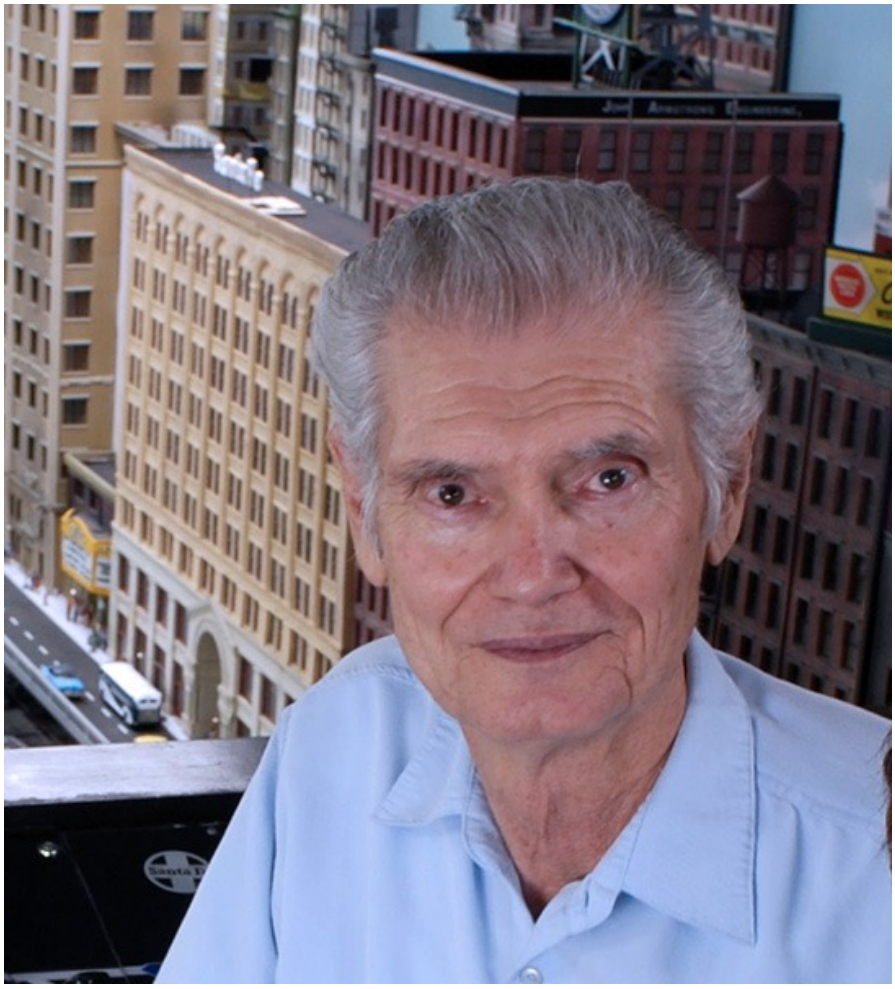
See their Website for all their great products.

Please checkout and like our Facebook page. We'll keep you up to date on O scale happenings!

Memories of my Dad, Bob Jakl

By Ed Jakl

My Dad, Robert Allan Jakl went to be with his Lord and Savior Jesus Christ on Monday, November 15th, 2021.



My dad was born to Frank and Frances Jakl in Oak Park, Illinois on July 9th, 1932. He was raised in Hinsdale, Illinois where he went to school and had remained friends with several classmates from Hinsdale High School. Following high school, he enlisted in the US Navy and was involved in Operation Wigwam, the first underwater nuclear explosion. He was also a veteran of the Korean War. Following his time in the service, he married the love of his life, Elizabeth Jane Tennent in October of 1957. They were married 64 years. They raised three fantastic sons and a wonderful daughter. He went to college in Chicago for Electrical Engineering. After spending five years at New Mexico State University at the White Sands Missile Range, he joined Sperry Flight Systems where he spent the majority of his career. His job at Sperry moved our family from Arizona to California to Oklahoma, back to Arizona, and then to Georgia. My dad and mom retired in Mariposa, California in 1989 where they have since been faithful members of the Mariposa Church of Christ. In addition to raising a family, my dad had a passion for O Scale model railroading. During retirement, he fulfilled a lifelong dream of building and completing a spectacular model railroad layout, helped by many friends and family and enjoyed by thousands of visitors.

Below: My dad on the ground. On the locomotive, left to right, Tom, Perry, and Ed.

My dad is survived by his wife (my mom) Elizabeth, sons Perry, Tom and myself, daughter Joyful Stoves, grandchildren Katie, Jennifer, Isaiah, and Willow, his brother Richard and sister Arlene Olszewski. He was preceded in death by his infant son, Jimmy.

A picture of my dad laying the foundation for his dream layout in Mariposa. This would have been in 1990.

My dad was introduced to trains by his grandfather, who would take him to a bridge over the rail yard in Cicero, Illinois. He enjoyed toy trains whenever he could get them and scratchbuilt his first boxcar using metal sides that he bought from the All Nation hobby shop in Chicago when he was 11 years old.

Dad was raised in Hinsdale, Illinois and mom in La Grange. Since they are from the Chicago area, they had particular interests in railroading there, specifically the Burlington and the Santa Fe. The Santa Fe was his favorite and he built many models of that railroad. While I was growing up, we built small layouts with the hope that someday we would have the land and ability to build the ultimate layout. Dad and mom retired to Mariposa with enough land to build a 34 x 80 foot building. We can happily say that he fulfilled a life-long dream that most modelers strive for, to complete a fully operational layout to operate his collection. The dream was further enhanced by having all of his sons involved in the hobby. It brought us all even closer together.

My dad fully enjoyed the fraternity of O Scale modelers. The hobby brings together those that are able to collect high-end models, those that can scratch-build freight cars, highly-talented machinists, artists in the hobby, as well as, highly technical people. He always enjoyed his conversations in-person, or on the phone with fellow modelers. He had so many friends in the hobby that I could not possibly list them all here.

He took great pleasure sharing the layout with fellow O Scalers during regional conventions, local model railroaders for operating sessions, and kids of all ages who would visit to enjoy the trains as well as the scenery and interactive accessories.

Left to right, Tom, Ed, Bob, Elizabeth, Perry. This was at O Scale West in 2019.

We were very blessed to have several of you O Scalers attend an outdoor BBQ and train operating session at the layout in October 2021, just one month prior to his passing. My dad had a wonderful time hosting the event and spending time with everyone. Also, early in October the layout was video recorded by TSG Multimedia. This professional video will be available on their You Tube channel in January, 2022.

Our entire family is saddened by the loss of a wonderful man, but thankful we were able to spend our life with him. He leaves a legacy of a comfortable homestead and a great model railroad that I and my brothers intend to operate and enjoy for generations to come.

For those interested in getting a small glimpse of our layout, you can see a few photos on the website: homestead.com/oscale

The Maumee Basin Lines Redux

Last issue we ran an article on Warner Clark's The Maumee Basin Lines. We screwed up here and left out some important items such as Rich Bougerie, who is responsible for all the scenic artistry and photography.

Rich is also responsible for well over half of all the structures. Without Rich's work, the MBL is just another 'Lionel train set' running in circles under a Christmas tree.

Warner commented, "I was responsible for the rail engineering (spiral curves, wide ballast lines, #10 frogs/switches, etc); Rich's skill's have been Centered on weathering, photo-shopping back-drop scenes (can't have 2000 era cars and mis-colored road lines or signs), and building structures, (18 plus). He has weathered all my rolling stock and several of my locomotives. Perhaps the greatest praise I can give him is the positive comments I get from visitors of Rich's ability to merge our modeling into the photographs pasted on the wall behind the shelf-layout. Rich retired from RCA as an industrial artist, designer. He was featured in *MR* 25 or 30 years ago on his John Allen style HO model RR."

Rich Bougerie working on the Maumee Basin Lines
Mona Clark photo

Building a Pittsburgh Railways Co Brill 3700 Interurban

By George Paxon

Some of you that have been following the perils of my Mountain Electric Ry know I grew up in southwestern Pennsylvania. Trolley transportation there was provided mostly by Pittsburgh Railways and West Penn Railways, both most interesting and large trolley systems. For the most part, the West Penn System was very rural in nature while Pittsburgh Railways (PRCo) was quite urban and centered on the city of Pittsburgh.

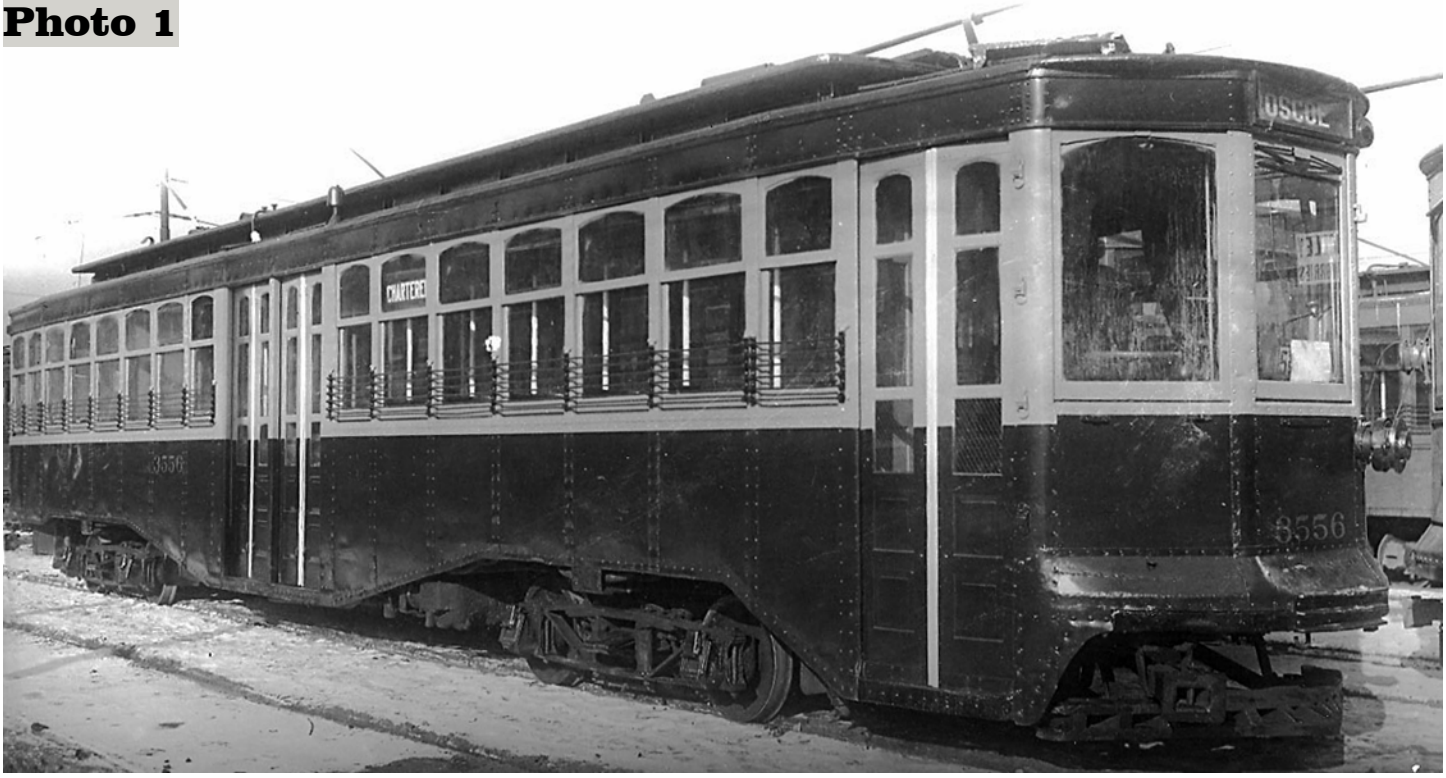
But the PRCo did have two substantial interurban operations, one particularly with a rural flavor. One line extended from downtown Pittsburgh to the small city of Washington about 30 miles southwest of Pittsburgh. The other operated due south from Pittsburgh, first cross country through the southern suburbs and rural areas, then along the Monongahela River through and many small towns and localities ending at Roscoe. This line, known as the Charleroi line, included a branch to Donora, and in all was some 45 miles long or so.

The PRCo interurban lines were initially equipped with typical all wood, clearstory roofed, or railroad roofed, high floor combines. These heavy cars, the 3600s, were very handsome and are on my “to-build” list as well.

The PRCo soon developed a unique style of low-floor, light-weight car with small wheels for its city operations. They were called Jones cars after the PRCo official that developed the design. Approximately a thousand were built for all Pittsburgh lines and were considered very successful.

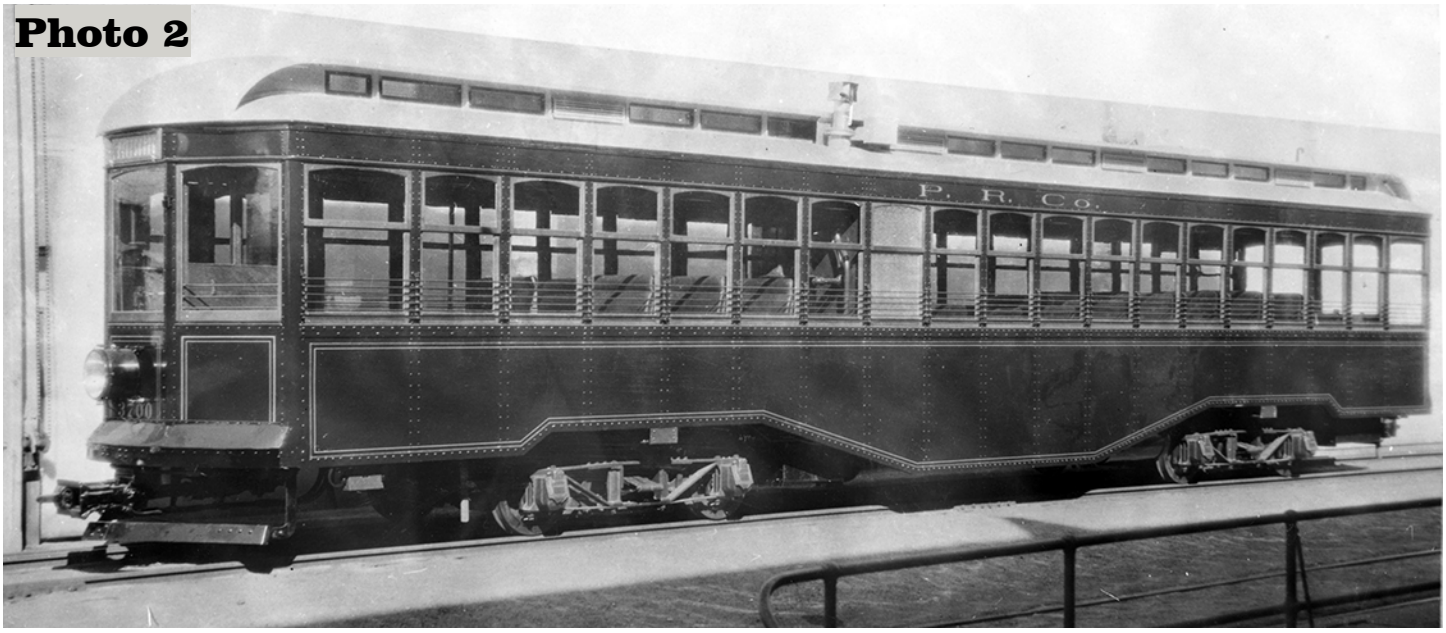
When new cars were needed for the interurban operations, the PRCo decided to develop a light weight interurban car based on the successful city car design. An experimental car was first built and tested. Photo 1 shows the experimental 3556 still in service in 1937. Brill was selected in 1917 to build a batch of 15 cars of an improved design, based on the city cars and the experimental car. The numerous city cars had a deck roof, but the new interurbans maintained a clearstory. The car ends and sides were very much like the city cars - the sides

Photo 1



just were longer and had more windows. The interurbans ran on similar small wheeled arch bar trucks to the city car. The seating was plush individual ones for more comfort. Many references say the cars had no toilet since the runs were not all that long. The original Brill drawing and photographs indicates a toilet compartment in the car center, so the jury is out on the issue of the toilet as far as I am concerned. See Photo 2 which shows the frosted glass window for the toilet compartment. This Brill builders photo is of car 3700, probably the first car built. It is possible that the toilet was deleted from the others before production and removed from 3700 by the PRCo.

Photo 2



A batch of basically city cars geared for higher speeds were ordered and used on the interurban lines for a while, but they were not popular as they had very rough riding qualities due to light weight, short length, and the rough track. To replace the unsuccessful city cars, the 3700 interurbans were supplemented by another order of cars somewhat similar to the 3700s built by Saint Louis Car Co. in 1928. This second batch, the 3800s, came with an arch roof however. And they were a bit more modern with rectangular windows. These two series of cars provided most services on the interurban lines until the PCCs were introduced to this service about 1952. The 37 and 3800 interurbans were assisted by the city car look-alikes during rush hour. I recall when very young riding from Monongahela to downtown Pittsburgh in one of the yellow-orange, deck roof cars with my great-grandmother.

These were days I wish we could revisit. One of my regrets is that I did not get to ride a 3700 nor 3800. And none of either series was saved.

And let me add that I have no idea who the photographer was for some of the prototype shots included with this article. I have had them in my collection for many years. Some have come to me from the very nice Pennsylvania Trolley Museum in Washington, Pennsylvania. Some were provided by another modeler and PRCo fan, Jim Holland. I wish I did know who took all these photos as they are nice and the unknown photographers have done us all a great service by documenting these cars. If anyone knows the sources, I would love to hear from them as the photographers may have more great photos, and it would be nice to give credit where credit is due.

One of my long-term goals is to build a model of select PRCo and West Penn cars. The wonderfully hand-built St Petersburg model series included a few PRCo and West Penn models. I have managed to obtain two and they include the low- floor PRCo city car and a big West Penn center entrance 700 car. These have helped to reduce my “to build” list. Others that I have so far built from scratch include a West Penn and a PRCo freight motor. With the PRCo 3700 now just about finished, I am making reasonable headway toward my goal.

Obtaining prototype information on PRCo cars and facilities has never generally been an easy task. Pittsburgh Railways was a very large traction system. But it has always been poorly documented. Some systems have shelves of books in print about them. This makes modelling such lines somewhat easier. Those of us interested in the PRCo have not been so lucky. Probably one reason the Pittsburgh trolleys were poorly documented can be seen in Photo 3. This is a daytime shot taken in downtown Pittsburgh from the University of Pittsburgh archives. The City was variously known as the "smokey city" and "hell with the lid off" for obvious reasons. The slow film of the day did not take good photos in such an environment.

But, there is a bit of information available on the PRCo Brill 3700s. Brief drawings were published back in 1917 by Brill Magazine when the cars were built and they are available. The precursor to the museum at Washington published a helpful drawing at one point and it can still be found. Good photos of the old cars are limited, but some can be had. And since the PRCo threw almost nothing away, the cars lasted well into the color film era, and I have managed to obtain a few good color photos to help with the build. One PRCo fan, Jim Holland, is most knowledgeable and helpful and shared some information he had accumulated, which was of great help as well. Being 10,000 miles away does not make it any easier for my research though.

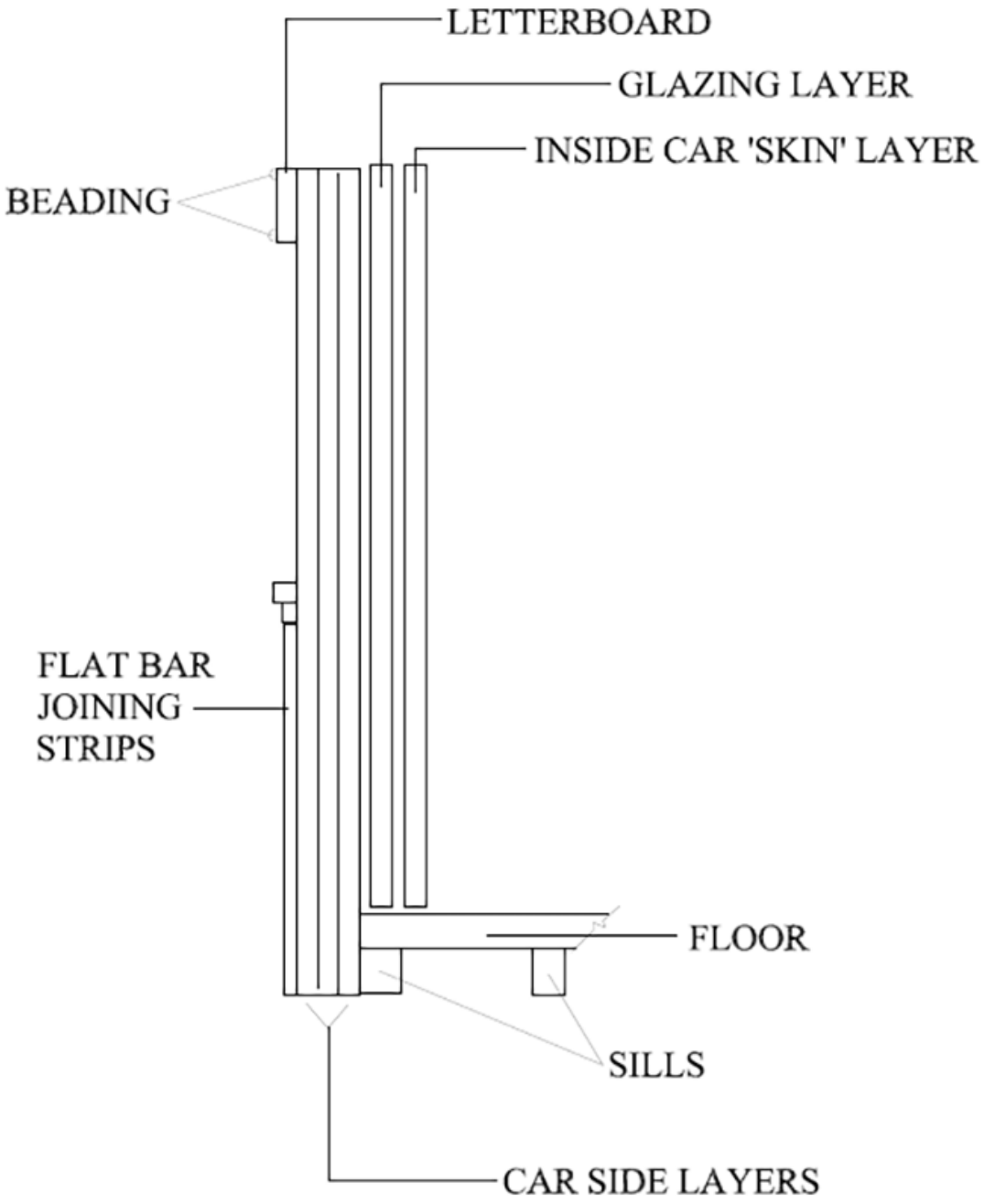
The drawing published by the Museum group has reasonable detail. I would recommend getting one if you can. I used my copy of that drawing and the 1917 Brill Magazine to build my car.

Building the Model

After a few years of collecting information, enough was on hand to begin the build project. All went well for quite a while into the project and the car body took shape. Some trial and error work was required along the way. I tried to use layers of 0.10 thick styrene for the side laminations to keep the model material to scale thickness. This was a worthy idea, but as it worked out, the material was just too thin for the practical handling required during assembly. Or maybe I am too ham fisted to model with it! A particular problem was the window mullions. I had to rework the design and use 0.020 inch thick laminations and remake the sides.

The floor I cut from 0.100 thick styrene. I am not aware of any source of information other than what is available in the original Brill drawing on the car underfloor. In a few available photos, the placement of resistors can be seen. The drawing from Brill does show some of the floor framing. I had to be satisfied with a typical set up under floor. I actually did not do much underfloor because thanks to the drop center of both the sides, not much underfloor is really visible anyhow. As you can see in one photo, I did include the step wells inside the doors. The car had a sloped floor to reduce the step-up when entering from the ground. I did not include this feature in my model though. I did add a center sill with weight between the channels to help lower the center of gravity of the car.

Figure 1



One prominent feature on the car are the boxy body bolsters above the trucks. These I modelled with some short blocks of ¼ x ¼ inch styrene strip that were notched to fit around the car sides. The blocks were glued to the bottom of the car floor and the inside edge of the car sides.

Prototype side construction, I assume, was steel vertical sections, typically “T” or top hat, supporting the roof and forming the window posts with steel sheet below the windows forming a load bearing side girder. This steel sheeting consisted of narrow pieces of sheet metal butted together with a joining strip of flat bar steel on the car outside. Rivets passed through the flat bar joining strips, through the side sheets, and then through the vertical side posts. The window frames would have been of wood. The belt rails and the window sills were probably steel as would have been the letterboard.

I find it always helps to try and work out how a prototype was put together before charging off and starting to build a model. Even if you are not perfectly correct, I think you will have a better chance of getting the model to look like its prototype by doing this first. The exact information on how a particular car was constructed may not available. But, by going through Car Builders Dictionaries and other similar references of the period, you can work out a probable construction approach. Again, it may not be perfectly correct, but will help make your model more plausible.

My construction approach was to make up the sides of several laminations of thin styrene sheet to model the above construction assumptions. See sketch at Figure 1 for my scheme for building up my sides

Open side windows are a nice feature to include on such cars that were in use before the advent of air conditioning. The Pittsburgh area was bloody cold in the winter, but it did get hot and muggy in the late summer. Open windows were essential. I made open windows and extended the window sills all the way through the open windows. See Figure 2.

Figure 2

WINDOW SILL DETAIL

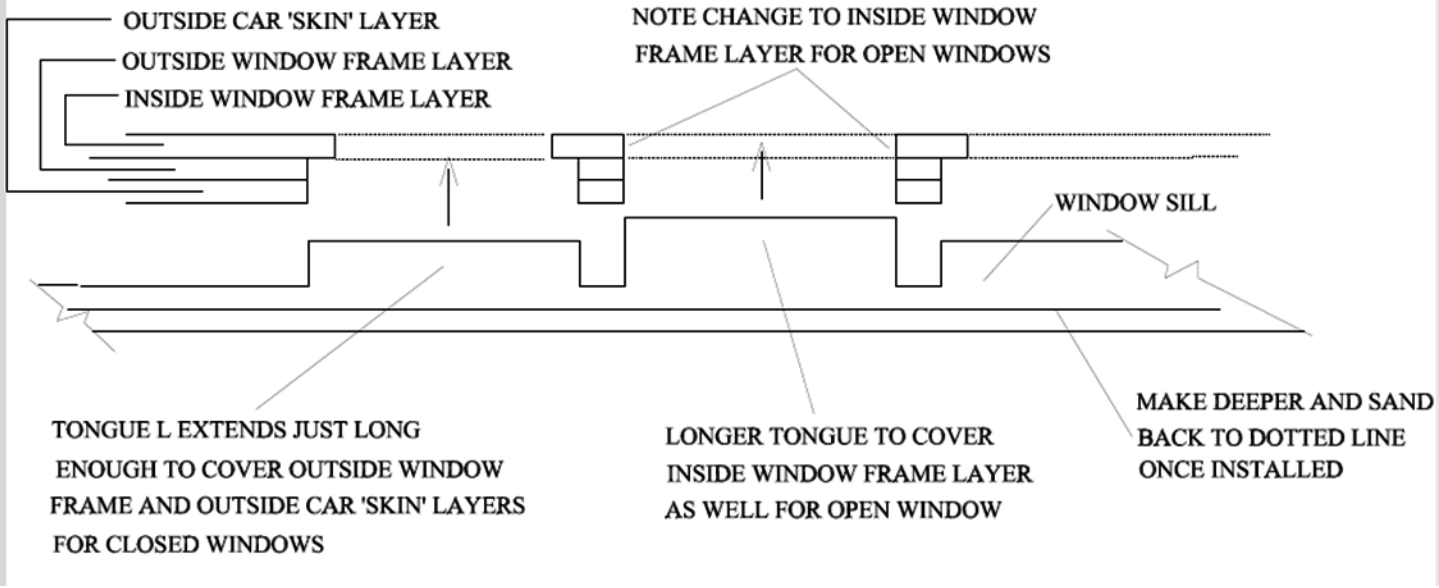
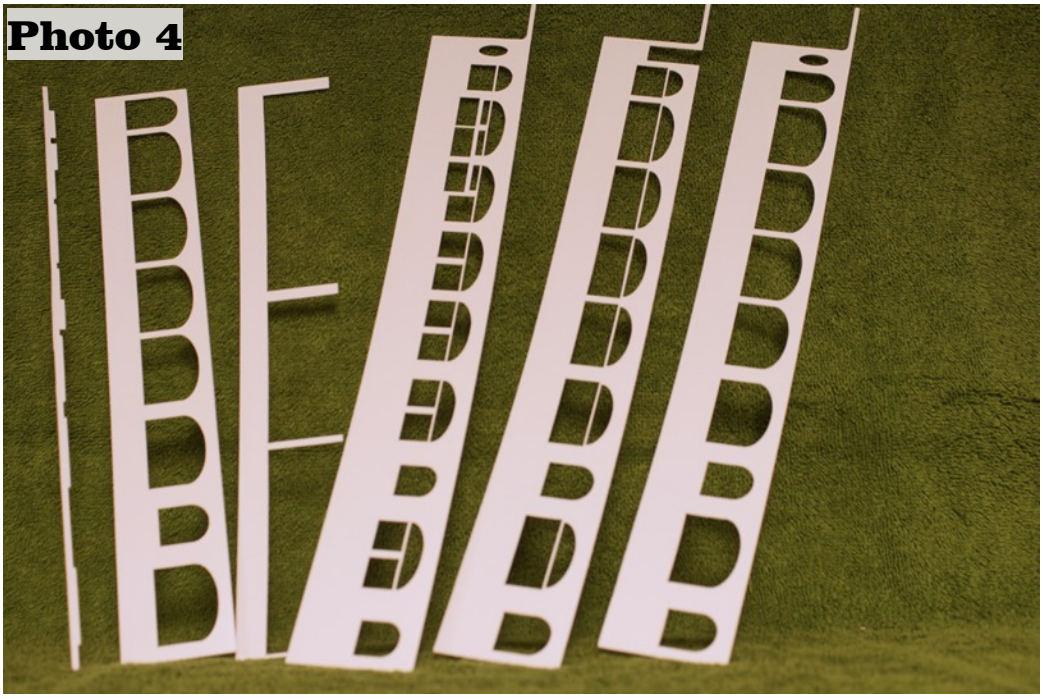


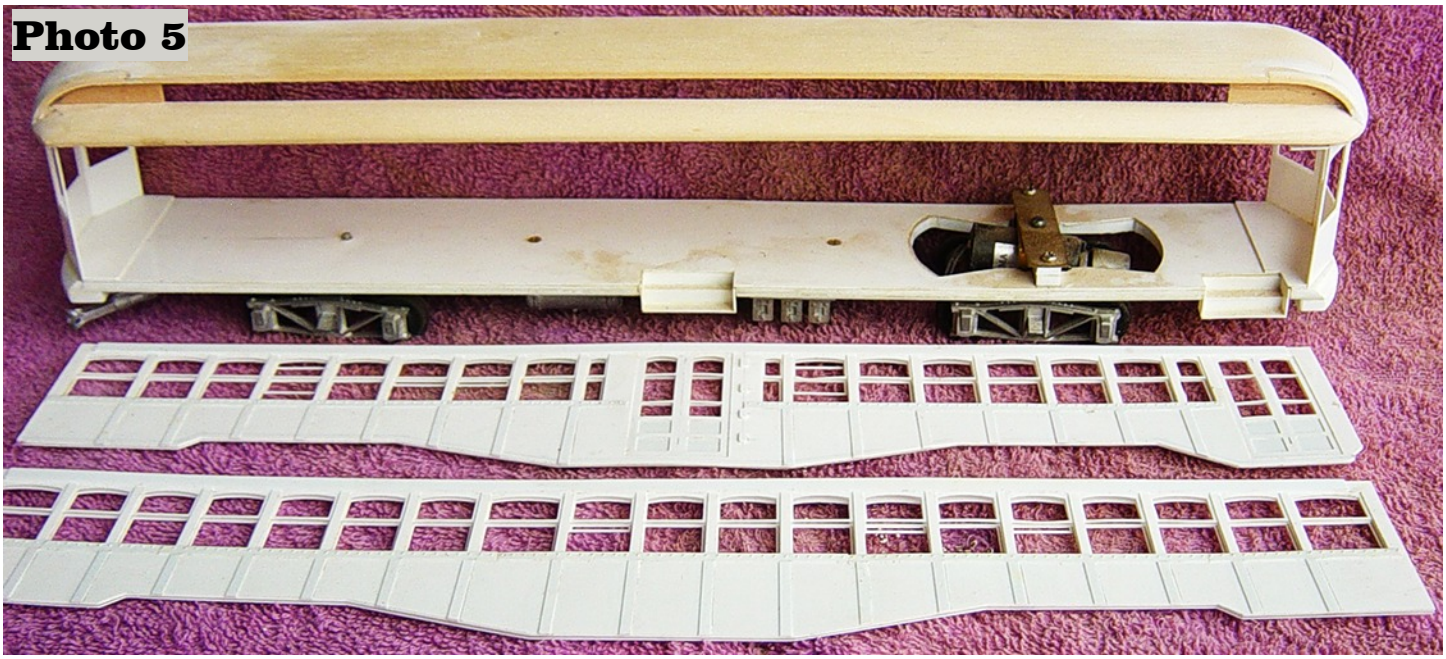
Photo 4 is of the layers of a different car, but provided so you can see how the window sill and car-side layer concept works. An article on building this arch window car was published in OSR a while back.

The letterboard was applied to the sides when the sides were built up flat on the workbench. But the letterboard were kept short of the car corners. After the ends and sides were assembled, the corners of the letterboard corners were completed. The prototype letterboard was of steel strip that had a beading rolled into the top and bottom to increase the stiffness I assume. I modeled this by adding a .020 X .020 strip of styrene to the top and bottom edge of a .020 X .188 styrene strip then rounding the edges of the .020 X .020 strips a little.



The ends are a bit more complicated only because they require quite a few individual pieces. The high piece count is caused by the three distinct flat panels on each end. But, this actually makes building the ends quite straight forward. Again, laminations were used to

build up the stepped details. The six panels were constructed individually and then fitted to a top and bottom former to maintain the required angles. You can see these formers on the car floor in Photo 5.



Each of the panel vertical edges was sanded to an angled, careful fit and glued to the formers and to the adjacent panel. Vertical strips of styrene were glued over the joints between the panels. Again, these model the flat bar used as rivet strips to join the car end sheeting to the internal end frame. The outside faces of the end panels were sanded a bit at the vertical joints to provide a flat surface to which the vertical cover strip could be glued. The ends can then be added to the car as complete units when appropriate during final car assembly. Then the vertical cover strips can be added between the ends and the car sides and this will close up any inadvertent gaps there.

At the bottom of each end is a compound shaped section with a slope that forms a transition from the flat end panels to the curve of the car end below. These transition pieces I made from some square styrene stock. The square styrene was first carved and sanded to a triangular shape, then cut at an angle to match the joints between the end panels. A bit of sanding was needed at the car sides to round and blend the shape to suit. Some Squadron Putty and a bit of sanding disguised the joints quite nicely.

On the prototype, these transitions were just bits of sheet metal. Below the transition was the bumper made usually of a heavy curved steel channel section extending from one car corner to the other across the car end. The bumper was actually the end sill of the car frame. The bumper worked just like the bumper on an automobile and absorbed the shock of a minor collision. A collision would wrinkle the sheet metal transition above, and it was easily changed when the car involved in the collision went to the shop. The sheet metal transitions were riveted to the end sheeting above and to the bumper below.

My headlight was an interurban one. Usually such a light was hung on a bracket over top the smaller city type light when the car was heading off the streets and into the boondocks. A city headlight was not bright enough for interurban running and an interurban headlight was too bright for city running I assume. I drilled and filed a 5 mm hole through the car front, reamed out a Q Car headlight casting to 5 mm, then passed a 5mm white LED through the car front and through the painted headlight casting. When all together, I gave the back of the LED inside the car a few good coats of black paint to keep the light from shining out the back of the LED. Some black paint on the side of the LED before you push it through the car end and the headlight casting will also help keep the light from shinning out through the crack between the car front and the headlight. One detail to add is a wire between the interurban headlight that loops under the front of the car to a plug there. See the drawing for details of this wire. The interurban headlight was often carried inside the car during city

operation and the motorman would hang the headlight over the city headlight and do up this plug when transitioning from city to interurban running.

The 3700 also had a red taillight mounted on the back letterboard. A 3mm LED was used here. The headlight and taillight were wired in series with a 510 ohm resistor and this circuit will connect to the headlight terminal of the decoder so they would both operate at the same time.

The roof of my model was made from LaBelle roof stock which I had to both narrow and shorten to get both dimensions reasonably correct. First, I sawed out the end blocks glued into each end of the LaBelle roof stock. This leaves the two basically quarter round roof sides, the top of the roof, and the two end blocks as five separate pieces. The end blocks were narrowed as needed by sawing and sanding to yield the correct finished roof width. The quarter round roof sides and the top were shortened as needed, and the pieces of the roof were glued back together, clamped and left to dry well. Then the ends of the re-assembled roof were shaped as is usually done with LaBelle roof stock.

Some modelers find finishing the ends of LaBelle roof stock a dreaded and difficult task. This is not good as the modelers pass up the LaBelle kits because of this roof task. LaBelle's traction and period steam passenger car kits, as well as their narrow gauge passenger cars, all build up into very nice models.

In the dark ages, the firm making these LaBelle kits used a die cutter to punch the windows out of sheet wood. Depending on how long it had been since the cutting die had been sharpened, sometimes the window holes were a bit ragged and need quite a bit of sanding to get them looking nice. The gentleman now producing the kits in the wilds of Wyoming uses laser cutting technology to produce the sides and they have sharp edges and are a dream to work with. If you are in need of a nice wood car, I certainly recommend these kits.

Finishing the roof ends is not difficult. It just takes a little time and care. Cut the templates from the instruction sheet that comes with LaBelle kits, glue them to some scrap sheet wood, and use them as you shape your roof ends, and your roof will turn out very nice. The big problem many encounter comes when they hurry and cut a big chunk of wood out of the roof stock….too big a chunk. Cut slowly with a sharp modelers knife checking often with the templates. Stop carving when you get close to the correct shape, then sand to the final shape. I have built many O scale LaBelle kits, narrow gauge, steam road and traction, and have found the roof forming task to be great therapy. This is a hobby: don't rush, take your time and enjoy. Not trying to hurry is the key to an excellent LaBelle roof. And the close to scale, see through, features of the LaBelle roof will impress you, believe me. Roof end carving is a good simple project to do while your Mrs is watching some junk on TV. Hopefully yours does not get as hostile about the wood shavings and sanding dust on the floor as does mine.

Brian Wiseman, Jason's Brass Poles, also sells little inexpensive kits for finishing these roof ends that would make the job a little simpler, too. I have never used one of his kits, but they sound like a good idea if you are worried about the task.

Photo 6 (previous page) shows good detail on the roof end. You can see the various pieces of wood as well as where filler has been used at the wood joints to make them smooth. When my roof wood-work was done, it was all painted with dilute shellac and sanded with fine steel wool several times to get a smooth finish before final painting. I used black with a dab of white added for the roof as per the prototype.

I made new clerestory window strips for the LaBelle roof stock as well. These were different on the two sides of this car as the clerestory windows are meant to align with the side windows. I did not do a great job of getting the clerestory windows lined up with the side windows on my car by the way. Not sure what happened there – might have been the red wine again.

A few roof details I added were the air whistle located at the front of the clerestory above the front door. Another was the muffler for the door air motors located above the center door, and the walk boards and grab irons near the muffler to help access the roof to service the pole. Rain diverters were provided above the door ways to help keep our passengers dry. The lateral boards at the rear of the roof helped to protect the roof canvas from a thrashing de-wired pole, too. And, a pole base and short platform appropriate for a single ended car were also included of course.

The PRCo style interurban pilot I needed for this car could not be bought from the normal trolley part sources. I made a pattern and had a few cast in brass as I needed the same pilot for both ends of my model of the PRCo freight motor, which was a double ended car, as well as for a future models of the 3600 and 3800 series cars.

Couplers I used were Q Car link and pin type. I usually cheat and put Kadee MCB-type couplers on my traction models so they will be compatible with all other models. But, this car will never pull a trailer or MU so I used the more prototypical ones here.

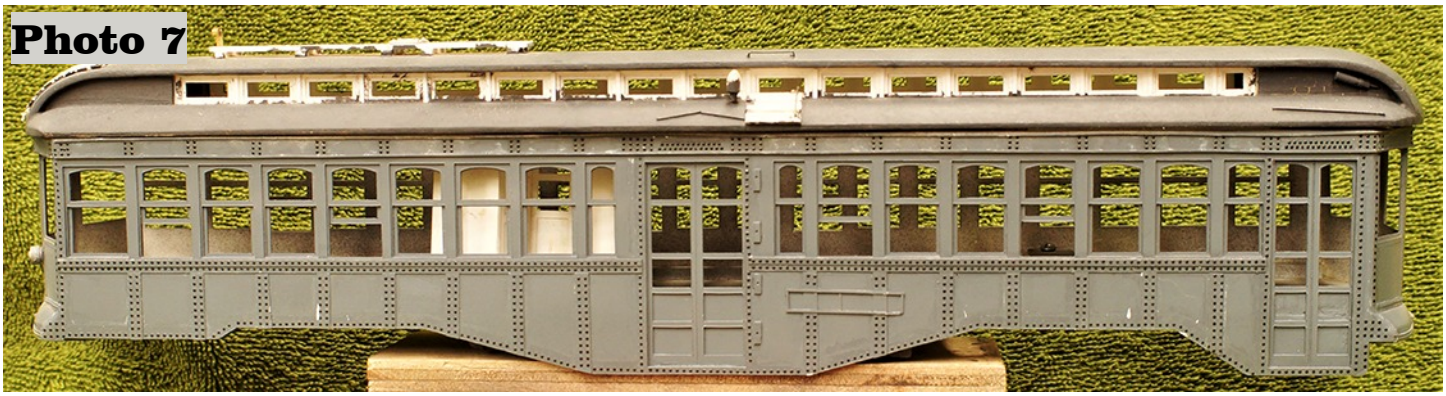
Trucks were Wagner arch bar that I had in my parts horde and had squirreled away for such a project. Only one truck is motorized on my model as the car will never pull a trailer.

The car was of riveted construction – about a zillion of them. As discussed in the earlier article on painting riveted cars, I have just about given up on pressing rivets into brass and styrene after the introduction of the handy decal rivets. A few straight strips of pressed rivets were used on the car ends, but almost all rivets on this model are decals by Micro Mark. Photo 5 shows the sides before priming and addition of the decal rivets. Some pressed rivet strips were used on this early iteration of the car sides. When I redid the sides of heavier styrene, I believe all the rivets were added as decals.

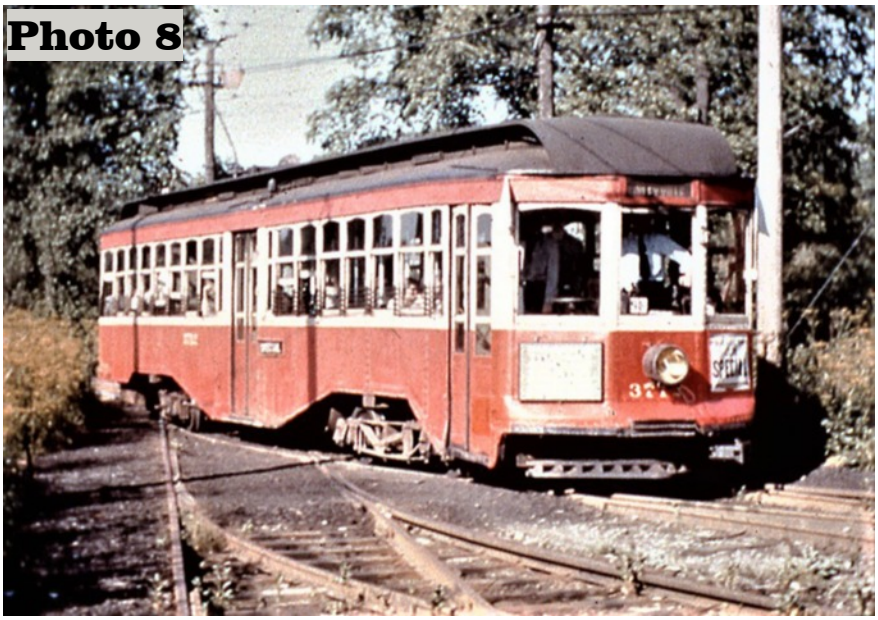
Photo 6 shows the assembly of the various car parts and before priming and rivets.

So after the model was primed and the decal rivets applied, the next major roadblock was masking for painting. A big concern was the tape used for masking pulling off the decal rivets. This resulted a few years of lull in the project while I pondered what to do next. Dealing with this was the subject of a recent OSR article titled " Living with Decal Rivets While Finishing a Pittsburgh Interurban Car", so I'll let you refer back to that to see how that problem was resolved.

One thing to note that I did not address in the earlier article was stray rivets. If you look closely at Photo 7 (next page) every here and there you will note a stray rivet – one that that seems to not belong where it is. I assume a few, certainly not many, of the resin decal rivets break loose from the backing and float out of place when applying them. This results in the strays. After the decal rivets are good and dry, you can use a hobby knife to carefully remove the strays. Photo 7 was taken before this was done. If you are a real rivet counter, you could then use single decal rivets to replace the few that are missing.



Painting was covered in the previous article so we won't be-labor that again here. Pittsburgh trolleys were famous for lack of money, lack of maintenance, and operating in long and hard winters. Pittsburgh and the adjacent towns served by the interurbans had very narrow crooked streets and minor "fender bender" type accidents with automobiles were common. PRCo cars were often very battered and almost always very dirty. I think it would be impossible to over-weather a PRCo car. Most PRCo equipment looked like it had just returned from the WWII front when I was growing up. I tried to get the weathered effect on my model. Sometimes I am guilty of over-weathering, but I don't think I am guilty of that on this car. Might take it back to the shop for some more…..



With the masking and painting problem solved, I continued on to completion. The only other major issue stumbled onto was making the window guards which is explained below.

As you can see in the prototype photos, Photo 8, 9 and 10, this car had nice window guards. The window guards turned out to be a project by themselves.

Photo 10

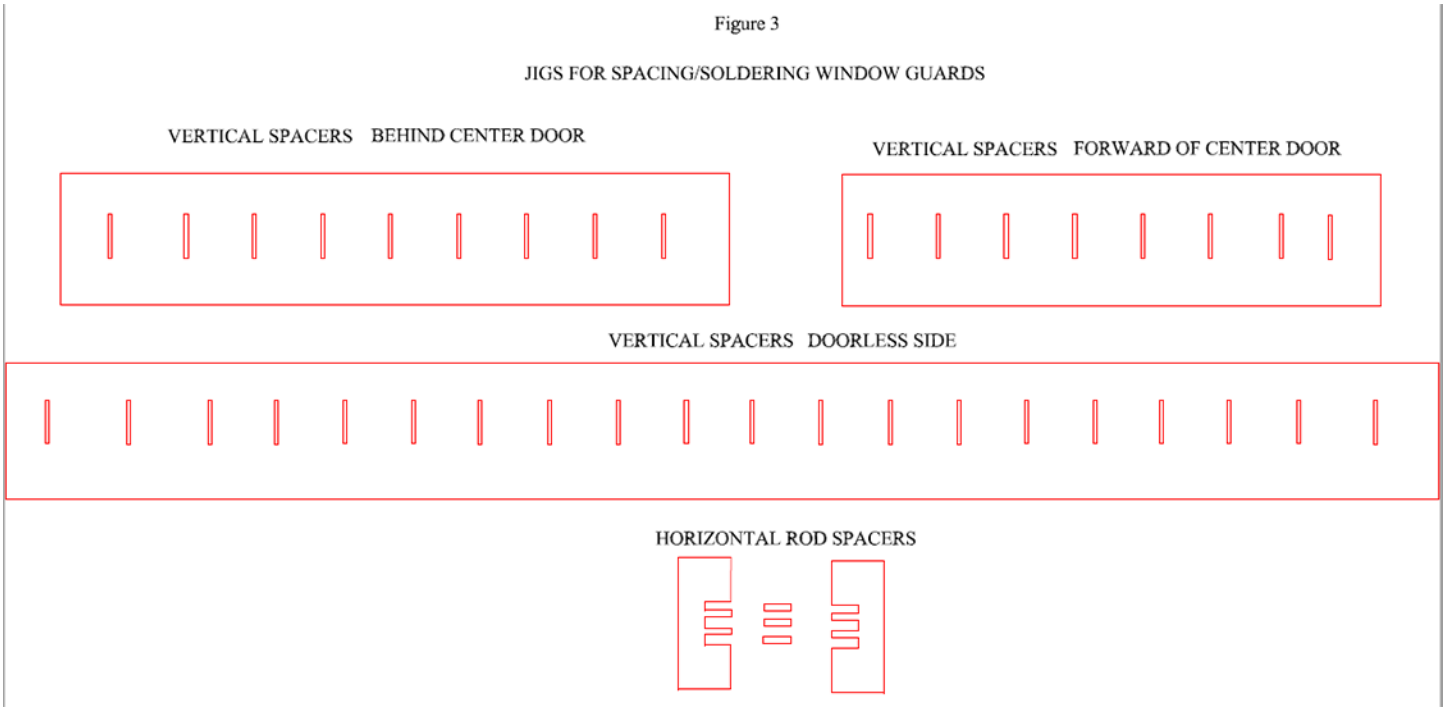
In the OSR article on painting riveted cars, I closed off with the pending problem of making the window guards to finish this car.

After some thought and another lull in construction, I decided to make the window guards of metal as they are very vulnerable to damage. It is difficult to not hit them when picking up the car. And as they consist of many parallel rods, they need to be placed accurately, and stay that way during soldering and use, or it would not be a good look. But, then after looking at some of the photos, like the rear shot in Photo 10, I began to wonder if I needed to worry about alignment at all!

I decided the first job would be to make a jig to hold the parts in place while soldering the guards together. As some of the windows are of different widths and there were three different window configurations, three jigs would be needed. I pondered making the jigs with small diameter nails in wood and gave that idea up. I finally settled on making them of thin card. I drew up the parts for the guards and gave them to one of my train mates to laser cut them as this would ensure the accuracy needed. A few trial and error attempts were required to get the three guard drawings correct. I would draw them, print them on bond paper, then check them on the car sides making note of changes. It seemed that when I fixed one slight mis-alignment, I would cause two others. But after a few such trials, we were good to go.

Figure 3

JIGS FOR SPACING/SOLDERING WINDOW GUARDS



The card I used was very thin and I made the jig as several laminations. The card was as thin as it was for a few reasons. One, that was what I had on hand and I could not readily find some just a little thicker. And, I wanted the vertical brackets to stand just a little above the top of the card jig to ensure the horizontal rods would submerse fully in the tin during soldering, and I needed a particular card thickness to achieve this. I got to the required thickness by using multiple layers of the thin card.

To space the rods, some particular care was taken in making the card ends of the jigs. With the thin card, I was concerned with the prospect of the laser setting fire to the card or burning off the thin bits of card between the rods if I tried to cut 0.020 slots for the rods. I made the slots much wider and made 0.060 wide spacers which I glued in place to narrow the retaining slots to the needed 0.020 inch width.

A drawing of the card parts for the jigs are shown in the sketch at Figure 3. The finished card jigs were glued to some scrap wood.

I made the vertical brackets that attach to the car window posts from 0.032 inch square brass and the horizontal rods from 0.020 diameter brass spaced 0.060 apart. The square brass was cleaned with fine sandpaper and one edge tinned with solder. The square brass was then cut into the 3/8 inch long pieces needed and filed carefully square at the ends. The pieces were dropped into the slots in the jigs tinned face up. The horizontal rods were cut over length so I could space them in the jigs at the overhanging ends.

The card at the two ends of the jigs were then used to maintain the rod spacing. After the rods were well cleaned, they were dropped into the jigs, too. White glue was used to hold the rods in place in the jigs ends during the soldering step by applying the glue to the overhanging ends. A paste flux was used to coat the joints. Paste flux is good here since when completed the guards can be scrubbed with an old toothbrush in paint thinner and then detergent and hot water to remove all traces of the flux for painting. A small soldering iron was then used to touch a bit of solder to each joint. Photo 11 shows the end of the doorless side guard in the jig just after soldering. This was the most difficult of the three to do as it was long and floppy, and keeping the horizontal rods in position was more of a challenge. After the soldering was completed, it was only necessary to cut the guards out of the jig, snip off the overhanging ends of the rods, touch the rod end cuts up a little with a file and the guard was together.

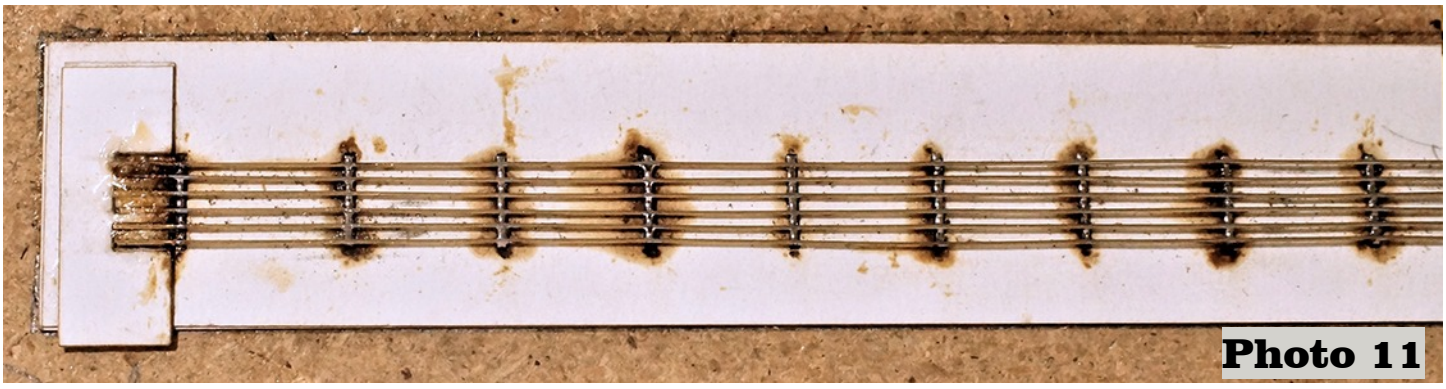


Photo 11

When all three window guards were assembled, they were carefully cleaned, sprayed an almost flat black, and cemented to the car sides with epoxy.

The window guards were fiddly and took a bit of thought and time. But, when finished I thought they looked the part. This is the first time I have made windows guards and I was quite happy with the way they turned out. And, they should do a good job of keeping our passengers from sticking their heads out the windows.

Many PRCo cars before the PCC era carried conservative advertising such as the classic Iron City Beer sign on the right front end panel on my model. Iron City was the major local brew when I was growing up and adverts for it was often seen on Pittsburgh trolleys. Other local beers, such as Duquesne Pilsner, were also advertised in the same way. Sometimes milk, sodas, and even candy were advertised there on some cars. When

the county fair was on every year, it could be seen advertised there, too. Some cars carried ad signs on the back as well. See Photo 10

And there are some photos showing advertising signs pasted across the tops of some side windows of 3700 cars. The PRCo would get some revenue from where ever they could!

Once the PCC era came along, whole cars were painted up as rolling billboards in some very colorful displays. It was a Pittsburgh innovation I think. Often when a later street car passed, it looked more like the circus was coming down the street!

On the left front end panel of the 3700s there was often a large destination sign. I have chosen the "Charleroi" destination sign for my model as my Mountain Electric Railway interchanges with the PRCo at this point for some runs. This PRCo car will obviously operate over the tracks of the ME Ry, so it would logically be signed to return tor the Charleroi interchange.

I made the Iron City ad and the destination sign as decals and put them onto thin styrene that has been painted white for the front of the car.

At the center of the front letterboard, you will find the front of the roller sign box. This was a rectangular box that passed through the letterboard and into the car. The motorman could roll the sign to the correct destination from inside the car. Again, our motorman has set the roller sign for "Charleroi". This sign was lighted on the prototype, but I could not see how to add the light so did not. Our roller sign was made by printing the destination on my computer, cutting it out, gluing it to the back of a piece of clear plastic, and framing it with some 0.02 X 0.04 styrene strip that had previously been painted red. When done, this was all glued to the letterboard.

The third bit of destination sign apparatus was on the side just to the right of the center door. This was only a metal frame into which a destination card could slide. Often there was no sign in this fixture, so we did not put one here on our model.

Roof access was provided just to the right on the center door. Small fold-down steps could be used to reach the roof for emergency pole service usually. These steps were modelled in the closed position. I had little information on these, so the modelling is a bit of a guess here.

The front center window had a wiper that operated in the vertical direction. I made this with two bits of styrene and a short length of .008 inch diameter wire. This makes a nice little extra bit of detail. The wiper was an add-on after car delivery and was mounted on a bracket that appears to be mounted over the curved top of the middle front window frame rail. Notice in photos that this window appears flat at the top rather than having the curve of all the others.

A trolley retriever was included on the back of the car and a pole hold down hook is attached to the roof platform. I did not include trolley ropes on my car, but the prototype had one running from the trolley pole to the retriever on the rear of the car.

Decals were made and added. In the very early days, PRCo had interesting and colorful small circular heralds as well as identifying their cars with the company name and/or initials. As seen in Photo 2, even much striping was originally on the cars. Later on, they had just the car number and caution signs as was modelled on the back of the car.

When first introduced, I believe the 3700 cars were painted tuscan red with gold leaf lettering and striping. In the middle 20s, the city car colors changed from the standard tuscan red to a dark yellow. The red and cream paint scheme for the interurbans, as seen on the prototype and model photos, came in quite early, but exactly when I am not sure. I would imagine the first low floor city style car built for interurban testing was Tuscan red. This car pre-dated the 3700 cars that were delivered in Tuscan red. The red and cream color scheme eventually came along as the experimental car appears two-tone in the early black and white photos I have. See Photo 1.

As seen in Photo 2 the cars had provision for a coal heater. This photo and the drawing are the only evidence I have seen of the heater, so I suspect the PRCo switched to electric heat quite early.

Photo 12 shows my model of the car at the corner of Main and Commerce Streets in Celestown on the Mountain Electric. I still need to install the decoder and a keep alive to complete the electronics. I will try and

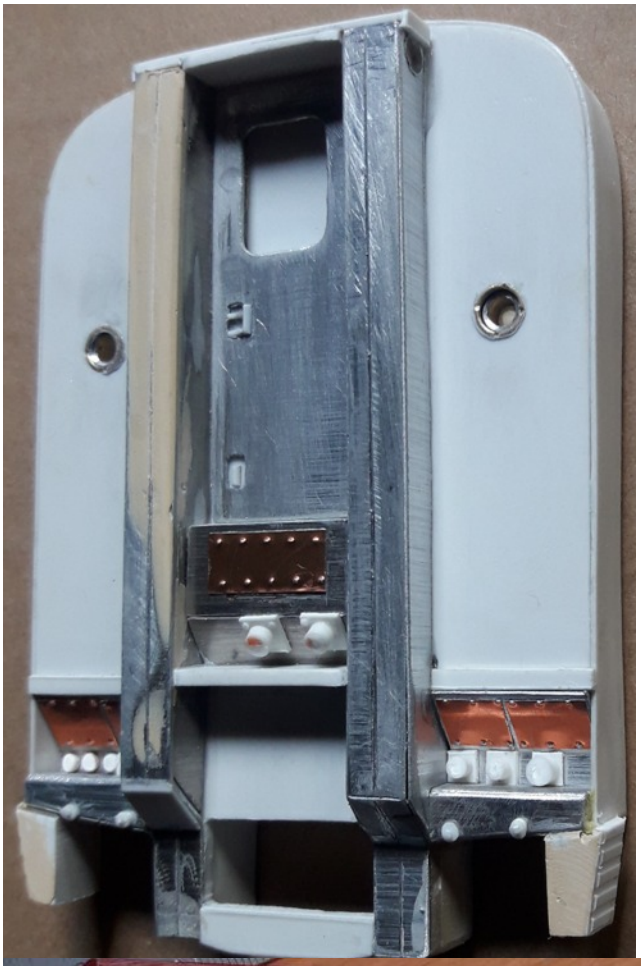
tame the mess of wires inside the car while doing this as well. Some seats, passengers and a motorman with his controller also need to be added. I am happy with this car, and look forward to building a model of a 3600 and a 3800 as well to add to my growing PRCo car fleet.

Building Amtrak Superliners

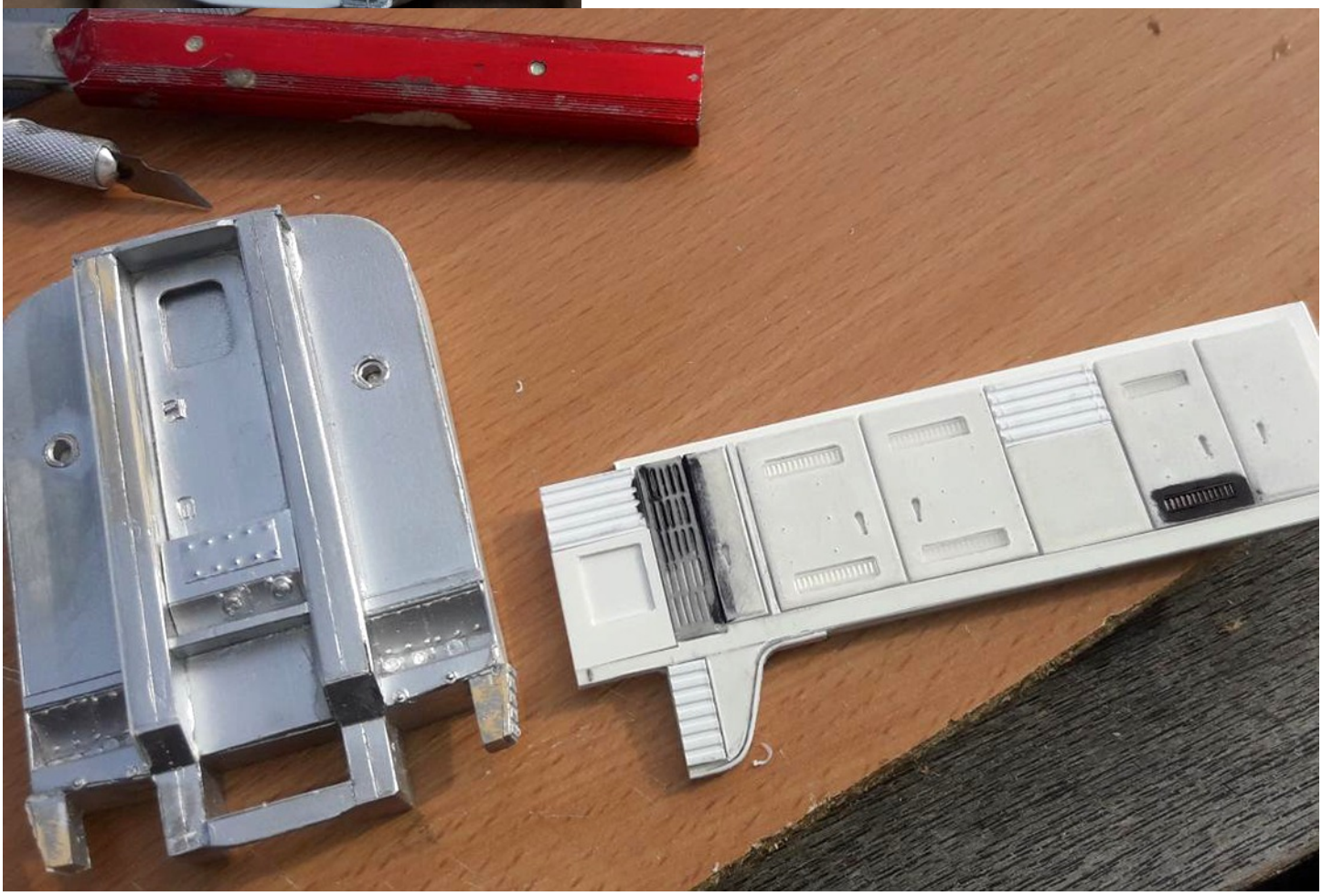
By Hendrik Kersten

The Amtrak "Superliners" are unique. Dating from the late 70s, they are nostalgic cruise ships on wheels. Especially seen from a European perspective, these 70-ton monsters are impressive. Of course, there are bi-level cars also available in Germany, but they have to adapt in size to the rigid profile restrictions. Genuine long-distance trains with multiple days of traveling are unknown, because of the relative short European distances. The double-decker concept is therefore limited to commuter trains. Perhaps the "modern" Amtrak Superliners, that trace back to Santa Fe Railroads´s "El Captain", are a bit of a stepchild in the USA, given the glittering history of the original California Zephyr's single level cars. No real surprise, "Atlas" has released these vehicles, their shimmering dome cars and luxury diners as excellent models. The mighty Superliners are to be obtained, if at all, only as a shortened version or as an exceptional expensive small series model. So it doesn't help anything, scratchbuilding is once again the order of the day. The construction of the P 42 (Genesis) locomotive for my California-Zephyr-project I had already imagined. Building a locomotive, however, is one thing, while a series of vehicles is quite another.

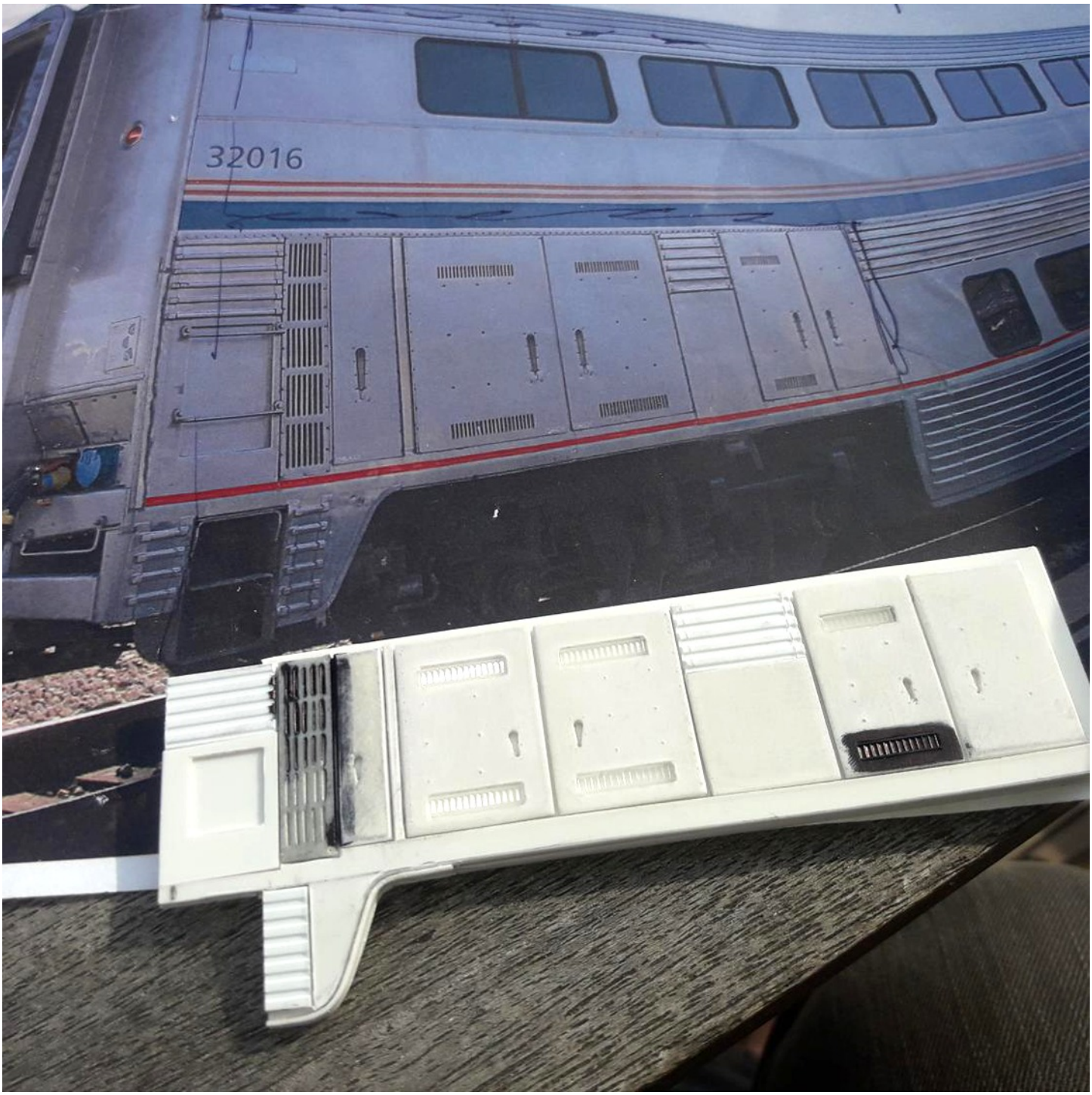
Series production with traditional means is of course practicable. CNC milled aluminum or soldered brass yield beautiful results. Unfortunately, this requires either a professional machine park or a lot, (really a lot) of patience. I don't have either. And honestly, I want to see my Superliners drive along the parallel arising garden track now, and not a decade later.

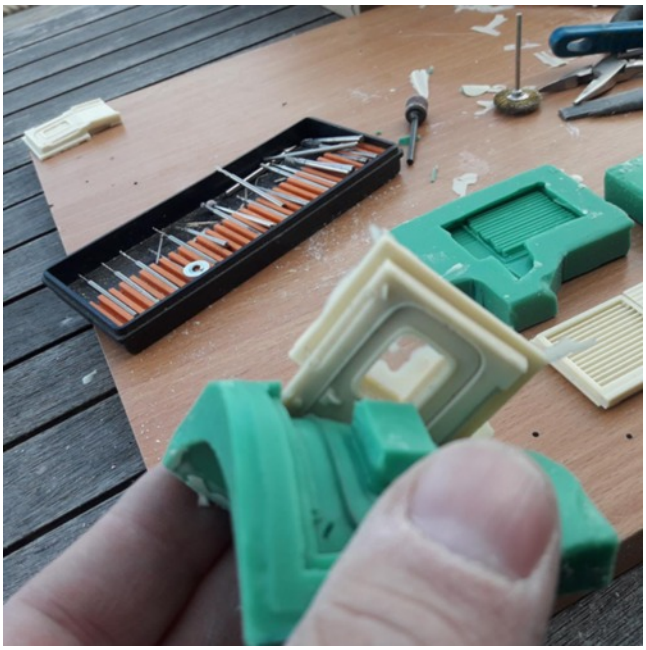


If you have a close look at the variants of the Superliner family, both, the original Pullman series and the later copy of Bombardier, share the essential components. The head ends of the cars, fan slots and flaps, are very similar. This appears to be the classical challenge for an original model in order to make casts. No, I do not come to the crazy idea to realize the complete hull in one piece, but prefer rather a more flexible system with side parts made of 3mm Plexiglas, fitted-in resin casts, glued-on window frames and corrugated sheets. These small, carefully built original models, consist of plastic plates, car putty from the DIY store and various accessories out off the spare parts box. It is recommended to set the models in such a way, that they are easy to cast. The level of detailing must not be too high either, because this ultimately minimizes the casting success.

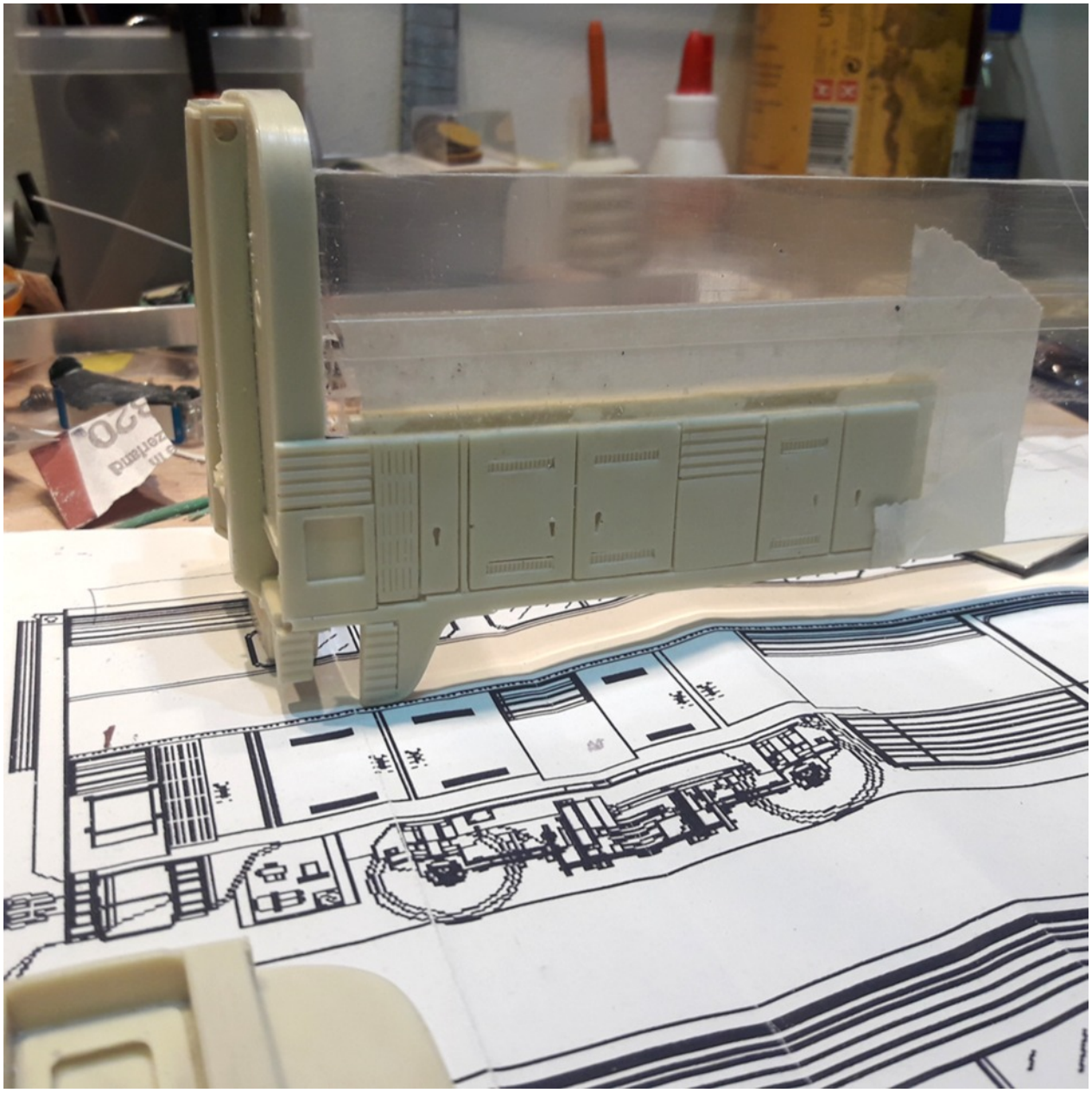


A comparison of reality and model naturally show where the compromise lines run. It is undoubtedly possible to do better in detail, but the component must be castable without difficulty, so simplifications are inevitable. Handle bars and the like, will be added afterwards. Sometimes chance helps with the details. The small ventilation slots are simply short cut sections of cable ties (tie down straps) that have been embedded in the plastic surface. The blackish discoloration is the residue of a waterproof marker pen, used to test the quality of a surface without having to airbrush the entire component.

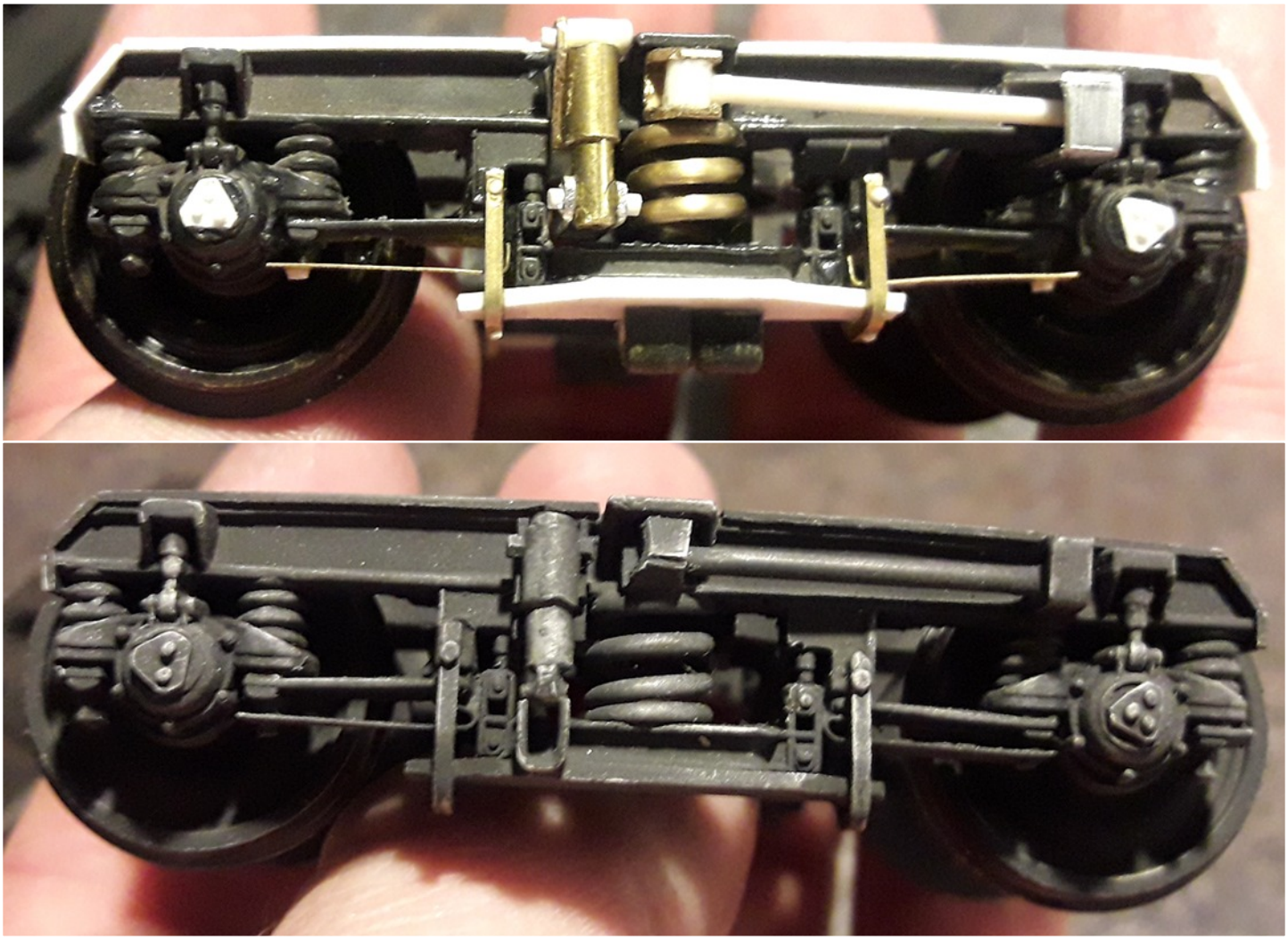




If it can be arranged, I avoid complicated, multi-part molds. The finished model is simply poured over with two-component silicone and removed. Resin casts have only one enemy - air bubbles! There are additives on the market for venting, some swear by ultrasound applied to the mold. In principle, however, a little experience and a toothpick are sufficient to remove persistent air pockets from corners and details. Here an entrance door is just emerging, the silicone mold is so flexible, that even sensitive components can be removed easily. Then it probably gets exciting. The finished casts should theoretically fit together exactly, after all, the master models did fit, didn't they? But you have to take into account a certain amount of shrinkage, it is tiny, 1-3%, but in case of doubt, that is enough to get you some additional gray hairs. The connection of the casts with each other and with the Plexiglas of the car sides is not a problem with modern two-component glue.



Eureka! The bogies are a critical detail in every railway project. In the case of the Superliners of the first series (Pullman), the bogies came from Germany (!). The legendary Minden-Deutz bogie was upgraded by the “Waggon Union” in Solingen, for American standards and exported. No wonder these things seemed familiar to me when I first traveled with them. Luckily the “Rivarossi” model railway manufacturer brought out a series of German 0-gauge passenger coaches, equipped with these bogies in the 1970s. So all I had to do, was Americanize these existing devices. This and that detail and a thick coil spring in the middle and the arbor is done. It`s a masking, not an exact replica, but it serves its purpose in style.

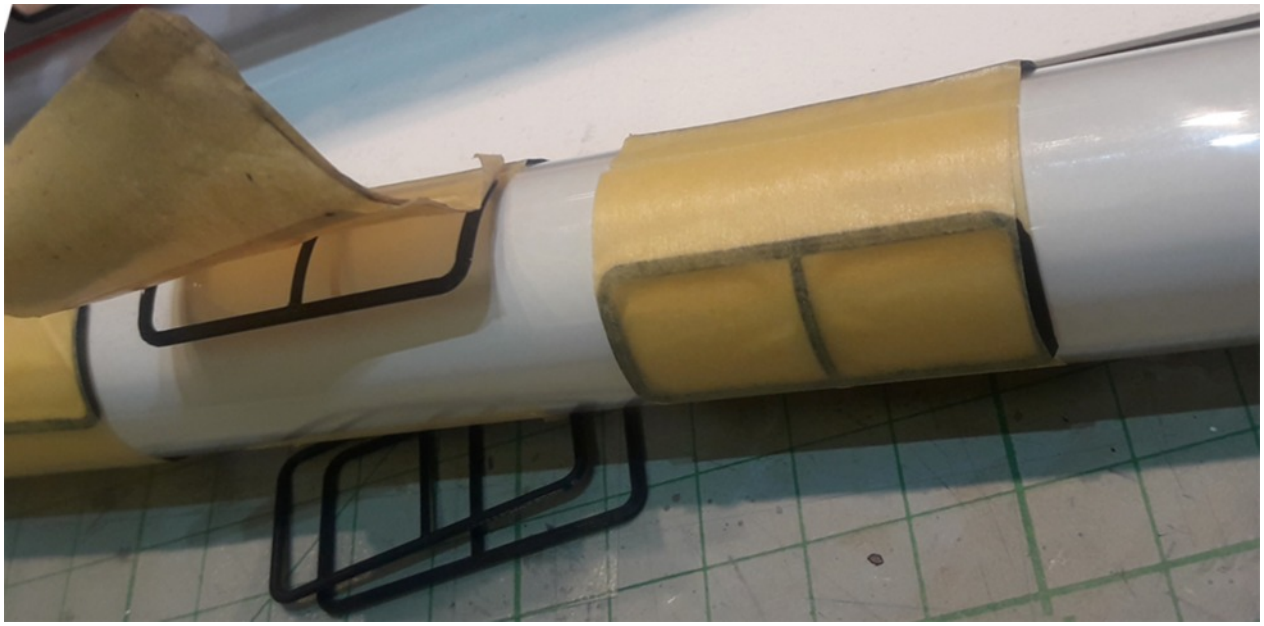


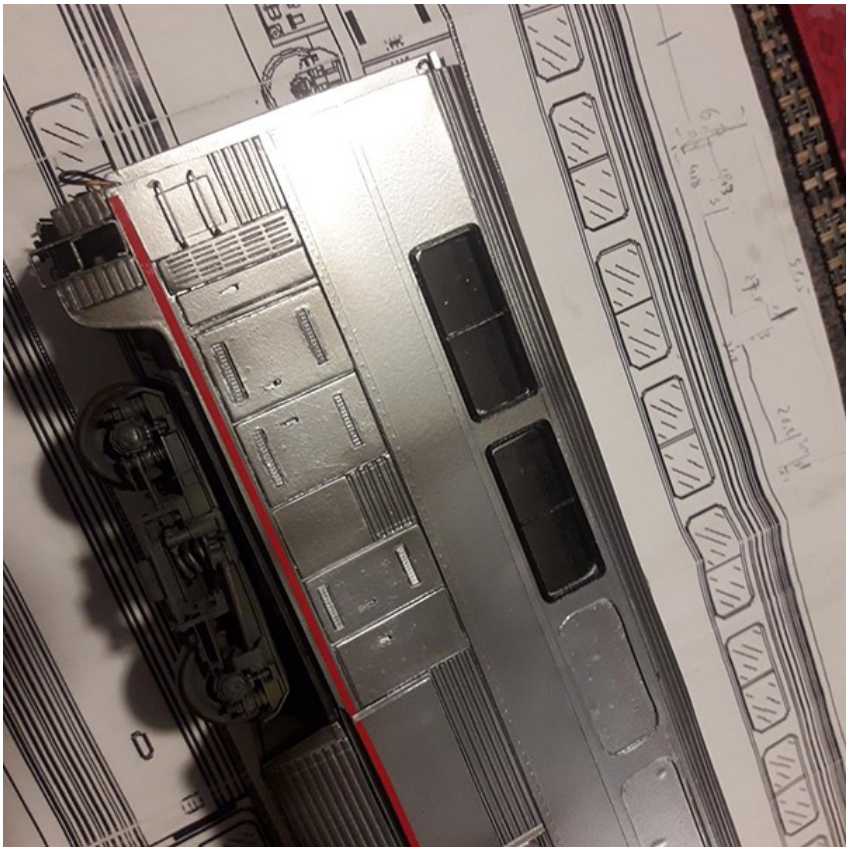
Next page: Here two Superliners in different stages of construction are shown coupled. When the car body is finally put together the challenge is, how to deal with the roof? Industrial models tend to have a parting line and an attached roof. With precise injection molding machines, that's an option. I tend to put the roof together from individual parts using roof harrows and then pour the inside with a thin layer of liquid resin. The result is a rather thin but extremely stable connection.

The advantage of this process becomes apparent, when one dares to use special designs. The observation car (sightseeing lounge) features curved windows in the roof area, a nightmare in terms of stability. On the horizontal side plates, the interplay of the 3D casts with the flat Plexiglas is easy to see. The sensitive surfaces must be masked to avoid scratches. Later, the window frames are simply glued on in the right place, covered again and sprayed with an airbush - Voila!

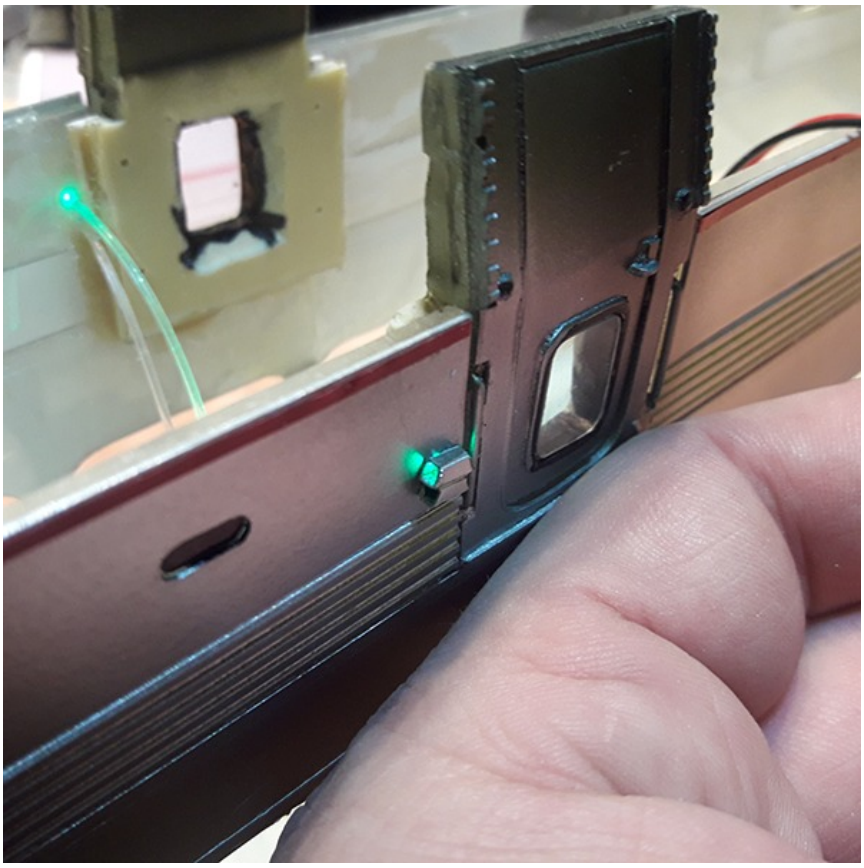
The windows. With just 8 Superliners on the production-line, you will still need round about 240 standard windows. This does not include special designs such as the large windows of the observation car, and certainly not the curved hatches in the roof approach. After half-hearted (and ultimately failed) attempts to realize the window frames with pewter castings, I made up my mind to have them printed three-dimensionally according to my measurements. American style railroad cars actually don't have metal frames at all, but a rubber seal. However, these "frames" simply have to come along exactly, in the end they compensate the viewer for small defects elsewhere. The plastic used for printing is quite heat-sensitive, which can be exploited unscrupulously if you need curved window frames, but definitely not the associated material tensions.

The raw frames are taped on a metal tube with a halfway suitable cross-section and baked in the oven on a mild heat. Gluing with superglue (cyanoacrylate) is easygoing if you degrease the surface with alcohol beforehand. Otherwise it can happen, that you unintentionally immortalize your fingerprints on the model window. The finished car body then justifies the effort. In addition to the color, phase 4 marking strips have already been applied here.





The color. The rendering of stainless steel is something like the holy grail of spray art. Until recently, it was almost impossible. The car bodies were sprayed plain silver and that's it. The aircraft model making sector in particular benefited from the new Alclad 2 colors. These highly specialized products are available in different nuances and when combined, result in a very convincing "metal surface". Assuming you are working on a shiny, smooth surface, success is not rocket science. The danger is exaggeration. In the end, the rather semi-gloss surfaces of the Superliners shouldn't come across as too dappled. Sockets, cables and compressed air hoses are colorful details that effectively spice up a model, all you need is a brush and a steady hand. The necessary strips can of course also be painted, but firstly the Alclad colors are allergic to masking strips and secondly, self-adhesive film is readily available in all colors. I had the multi-colored Phase 4 strips professionally printed on adhesive foil.



If you avoid the parting line at the roof extension, it will logically be necessary elsewhere, after all the interior of the car must be accessible. Due to its two-story design, the entrance area is unusually located deep below the level of the bogies. This results in the floor being a gooseneck shape that is anything but dimensionally stable. To avoid the problem, in my models a continuous (Alu-Dibond) plate runs from pivot to pivot, right across the vestibule. Bad luck for the model passengers! The partition-joint, mentioned above, runs therefore around the equally undivided access door. It is of course important to avoid the look inside the lower level. Mostly as a gimmick of distraction, I reproduced an interesting detail. Green and orange lights signal the braking status of the vehicles. An easy to notice help for the train attendants - and for me. The light from just two leds is directed to the outside simply using glass fiber light optics.

At present, only the observation car with its large window areas is entirely completed. Completed means, with interior decoration. While the "normal" window size of the passing train hardly allows indiscreet glimpses into the interior, the outwardly finished lounge looked sadly like a hollow barrel. Lounge seating and a reproduction of the somewhat sterile-looking diner equipment changed this substantially.

If you look closely, you'll notice something else, the bogies are those of the second series of Superliners (1991-1995) that Bombardier made for Amtrak. The model bogies are from "K-Line" which was merged into "Lionel" and in their production quality correspond to the antique "Rivarossi" Minden-Deutz. They have one thing in common anyway, they are unsprung, but this affects surprisingly little their good running characteristics. The close-ups show the somewhat cloudy mixture of the Alclad 2 color surfaces, the glued-on window frames and the self-adhesive foil printing of the colored stripes.

Next page top: Well, ex-President Donald Trump is not widely recognized as a dedicated fan of the Amtrak long-distance trains. On the other hand, there exist quite a few Trump bashing graffitis by the famous street artist "Banksy". But even if it may look alike, this is not the right place for political statements. I simply used a lot of Banksy cartoons to decorate the "Chicago" walls of my layout. The subtle wit is as good as their artistic execution. Donald T. gives in this case my crazy Superliner project a soft push - and I still have four cars to go!

Bottom: The author watching his Amtrak Superliners outside.


I'M GOING TO BUILD
YOU A BROTHER...

Building a Berkshire Valley Models 1934 Tank Truck

By Dan Dawdy

I had just finished cleaning up the layout getting ready for visitors last March and was looking for a bench project to do. Amy asked about a Christmas present she gave me this past year, the Berkshire Valley Models #210 1934 Tank Truck. Well, that was something I could do without messing up the rest of the basement. So I started the kit. This article was going to be just about that model; however, as I got to where I would need to stop and begin painting, I thought I had another one from the Christmas before last. Long story short, I had three more of these basic trucks each with different back ends. I had the #205 1934 Dump Truck, #209 1934 Tow Truck and the #207 1934 Service Truck. I thought I may as well build all of these together and get them on the layout. These are beautiful models and actually 1/48. Now I understand that they are all the same 1934 cab, but by spreading them around the layout, and in my case modeling 1947, you would see a few of these in use. Below are the four trucks I built. Photos courtesy of Berkshire Valley Models from their Website.

I'll concentrate on the tank truck here, but also add in tips I fould while building all of them. With any of these, the first thing is to go to Berkshire Valley Models and enter the store. Select the truck you have and download and print the picture or pictures. These are fantastic for reference.

As always, read through all of the instructions to get an idea of the process. In my younger days I did not do that sort of thing and it came back to bite me a few times. Even after reading a few times, I still missed some things which I'll cover here.

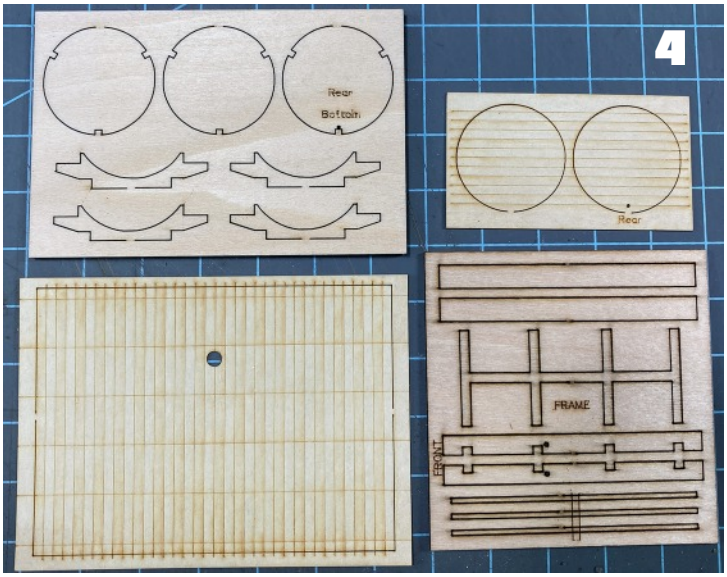
Out of the package. Nice castings and laser cut wood parts for the tank and supports. (Image 1)

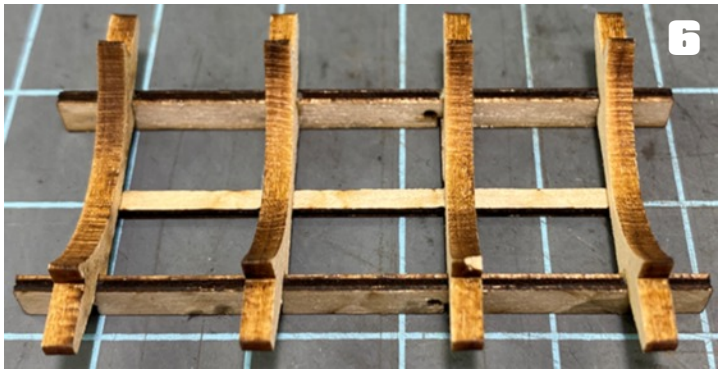
The flash on this model was minimal. While building the other three, there were small bits of flash on different parts where another part had none. I used a small file and a 3M sanding pad that I could rub the part back and forth on. (Image 2) This worked well as it does not take off much material. It came in very handy on the tires as some had a bump of flash and after using the X-Acto knife to remove it I could easily roll the tire on the pad to smooth it out without creating a flat spot.

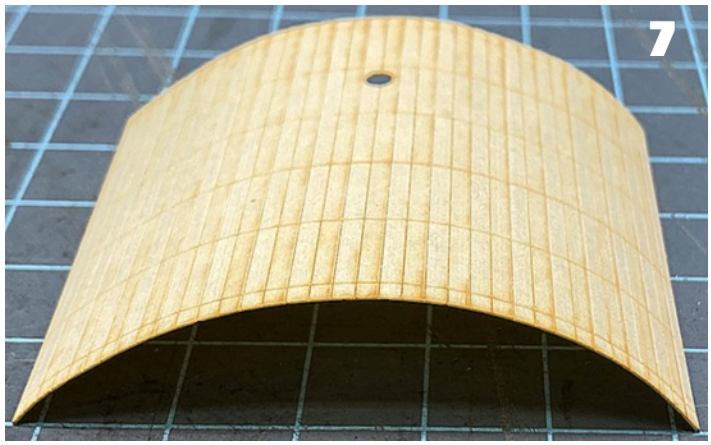
Another tool I used a lot was my Ultimation Sander. (Image 3) Yes, talk about overkill… but I found it a quick way of taking off end flash while keeping part square. It was also good for taking the cab back wall with the sides and marrying it to the firewall. I needed to take a bit off one side to even it up with the the other. Putting the whole assembly on the sander and slowly turning it took away the material need for a file and was more precise then my filing could do. Painting will be done as we get some of the subassemblies put together.

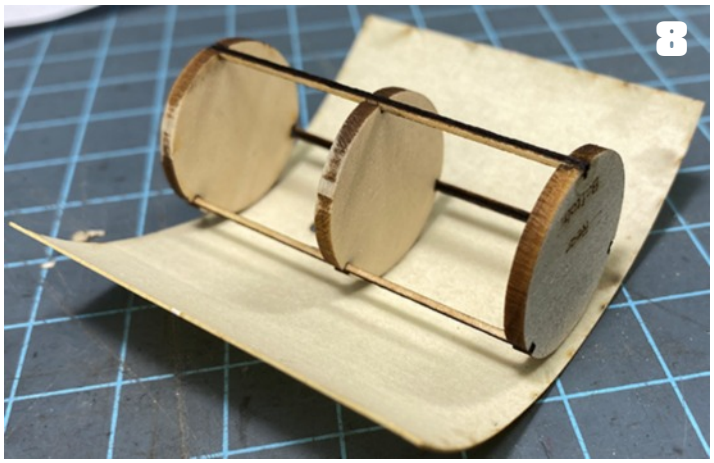
Now about flash… It appears that I got carried away. On two parts I went “flash happy”, one was the dashboard which has a small notch on the bottom left. That was for the steering column to fit and be glued to. The other was the mounting pin for the horn on the head light assembly. Oh well, I worked my way around those mistakes, but wanted to mention it so you would be careful.

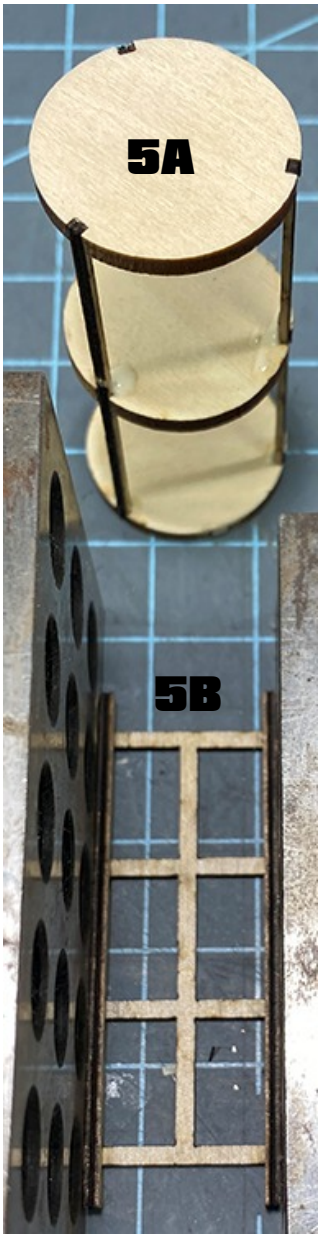
The water tank and its support are first up. Image 4 shows the parts. Gently remove the parts with a new X-ACTO blade. First glue the tank frame together. Image 5B shows the frame being held square and image 6 shows the



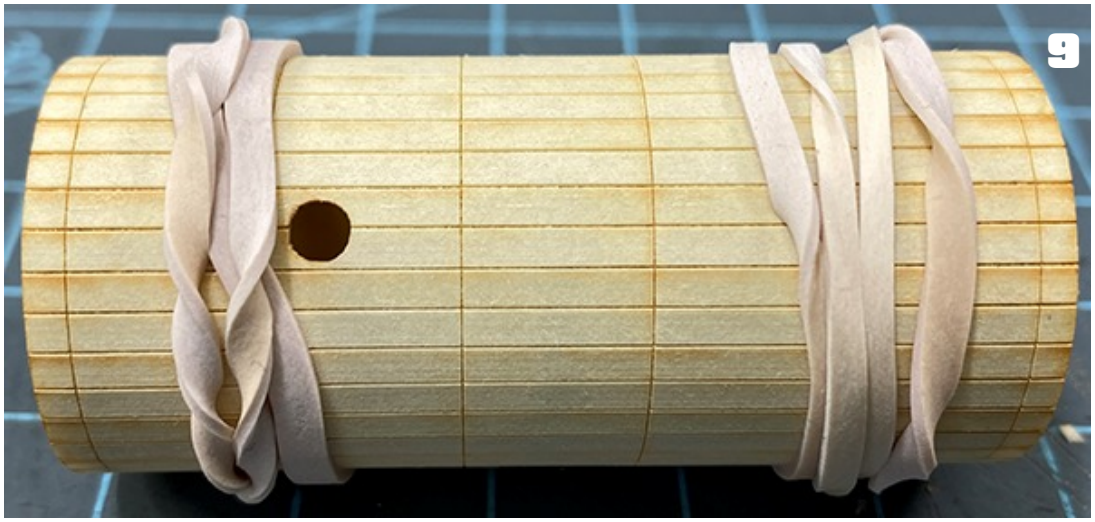


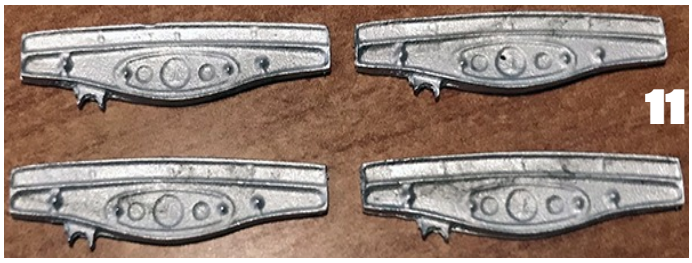






cross bracing. To make the tank frame, build up the three round disks which are slotted for you and add the three cross braces. Image 5A shows this completed. The tank wrapper needs a curve put to it by using a small pliers to lightly bend at each board as shown in image 7. Be very careful, just a very slight bend will be enough. To glue the wrapper to the frame I started the glue in the middle and let it set. Image 8. The middle is really the top where the filler hole is located. Once dry, it was easier to finish the wrap and rubber band it as seen in image 9. Add the tank ends. One is marked “Rear Bottom” and that goes on the end farthest from top fill hole. See image 10 on next page.





OK, back to the flash and my mistakes. The dashboard has a small notch on the bottom left as shown in image 11. It's for the steering column to get glued to. Well let's just say that's no longer an option for me. I'll let you know what I did to get around this later. Also again not fully reading, or should I say comprehending, I removed the small pin on the headlight assembly that the horn gets attached to. (Image 12) That was an easy fix as you will see.

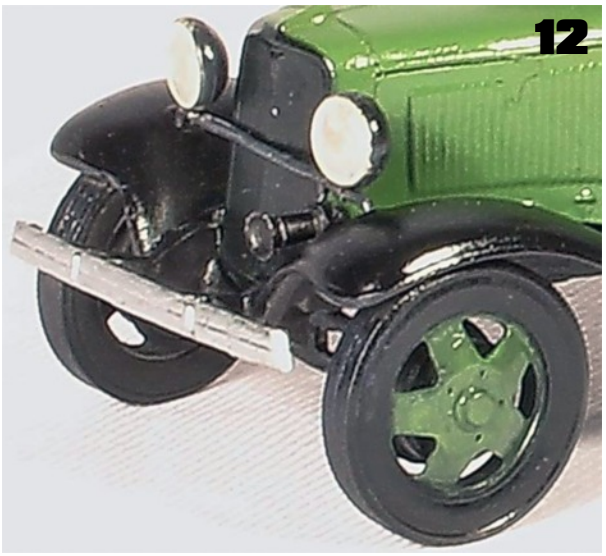
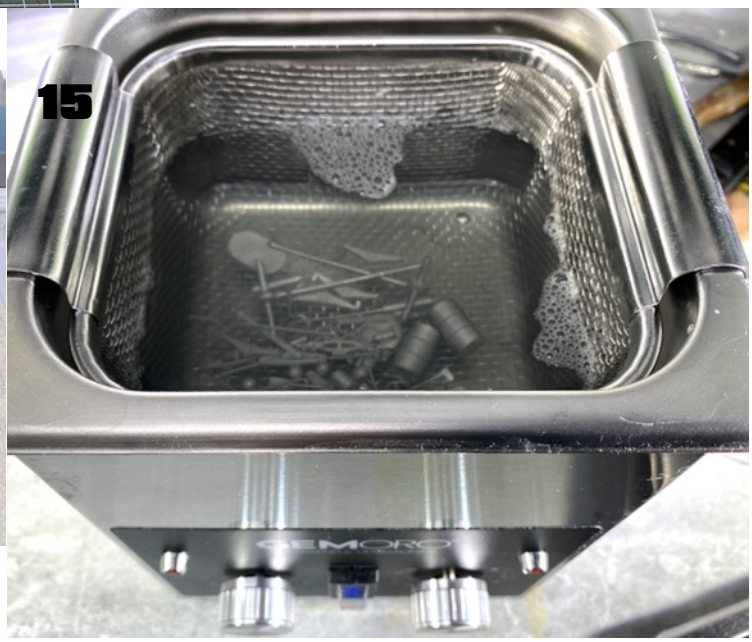
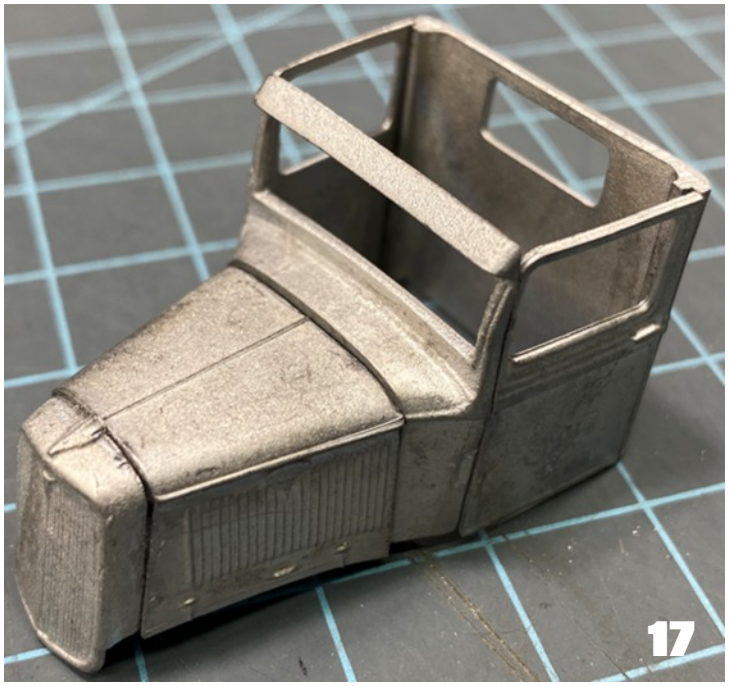


Image 13 shows all the castings. Originally, I hand washed these with warm water and Dawn Dish Soap to remove any mold release. (Image 14) Then I remembered I had a ultrasonic cleaner that Amy got me for Christmas two years ago… I am terrible at remembering this present stuff. Anyway, that was much better especially on the really small parts as you can see in image 15.





The cab is pretty straight forward. Dry fit the doors to the rear cab and the firewall. File to get a nice fit as seen in image 16.

Check the seat and make sure it fits in the cab. If it's tight, you can file a bit on the sides. You don't want this to me a tight fit at this point because after painting it will that much harder to get in in. Also test fit the roof, but don't glue it on yet.

Remember I cut off the horn mounting from the headlight assembly? I added the horn on the roof on two trucks and on the left front fender of the other two. I actually found pictures of horns placed on different place on trucks of this era.

Add the sides of the hood to the top and add the radiator as shown in image 17 and 18. At this point, the cab assembly is completed.

On to the frame assembly. The instructions call for a #58 hole to be drilled in the flat area of the fender body. See image 19. It's for the gearshift knob. My hole needed to be a little larger. To fix my steering column conundrum I added a hole at a slight angle to accept the steering column as shown in red. Now the column will have a snug fit for gluing since I removed the notch from the dashboard. Use care in drilling these holes. You will end up popping through the bottom of the engine. Not a big deal as no one will see it, but you have been warned.

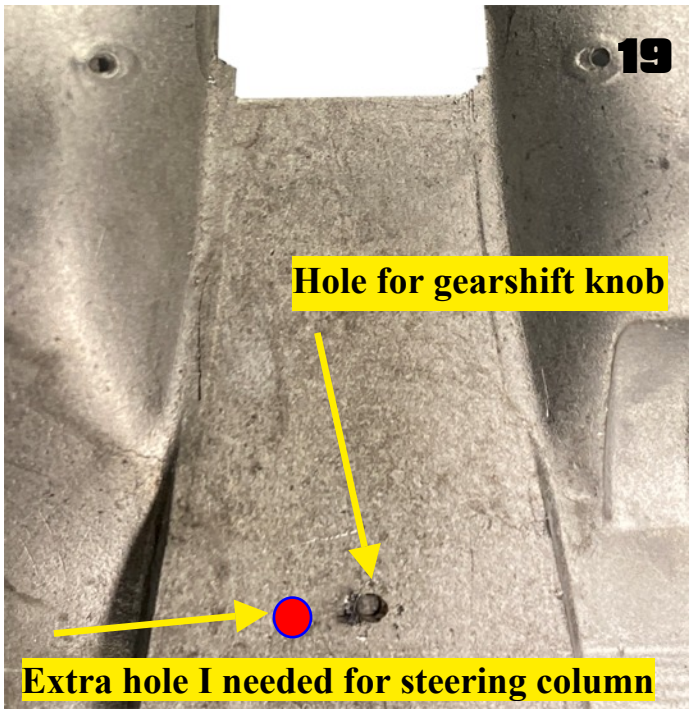
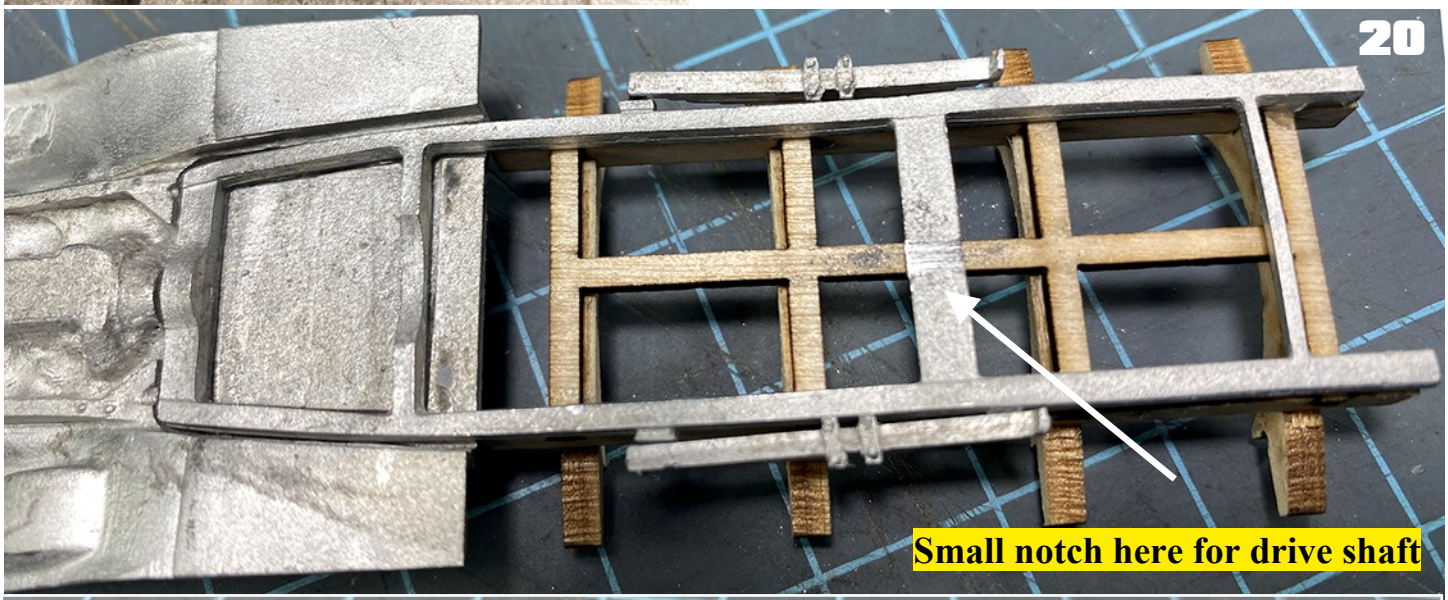


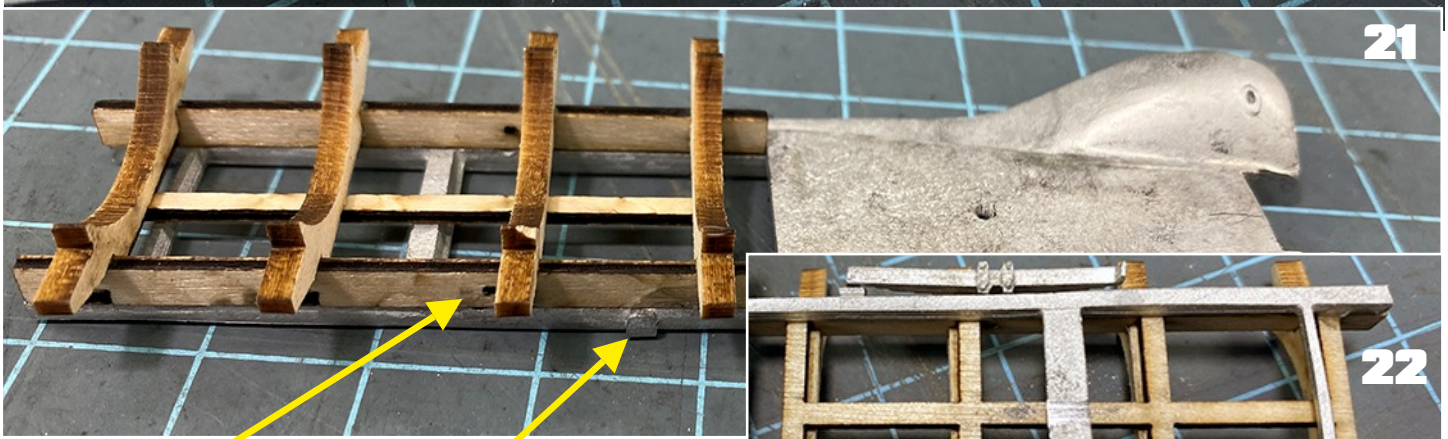
Image 20 shows the frame mounted to the bottom of the fender body. The wood frame and springs were added after this step. Before gluing, place the frame on a flat surface and make sure it's straight. Glue the two parts together, and once, dry file a small notch as shown.

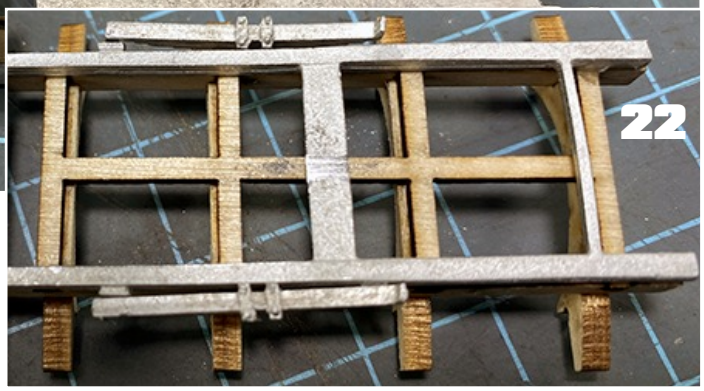
Now we can glue the wood tank frame to the truck frame as shown in image 21. Follow the instructions for alignment.

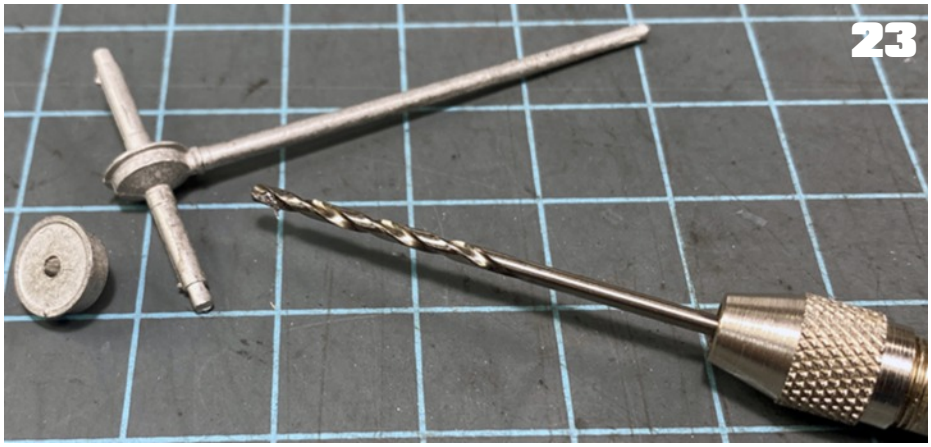
Add the rear springs into the hole in the tank frame as shown in images 21 and 22.

Next up is the drive train/rear axle piece.



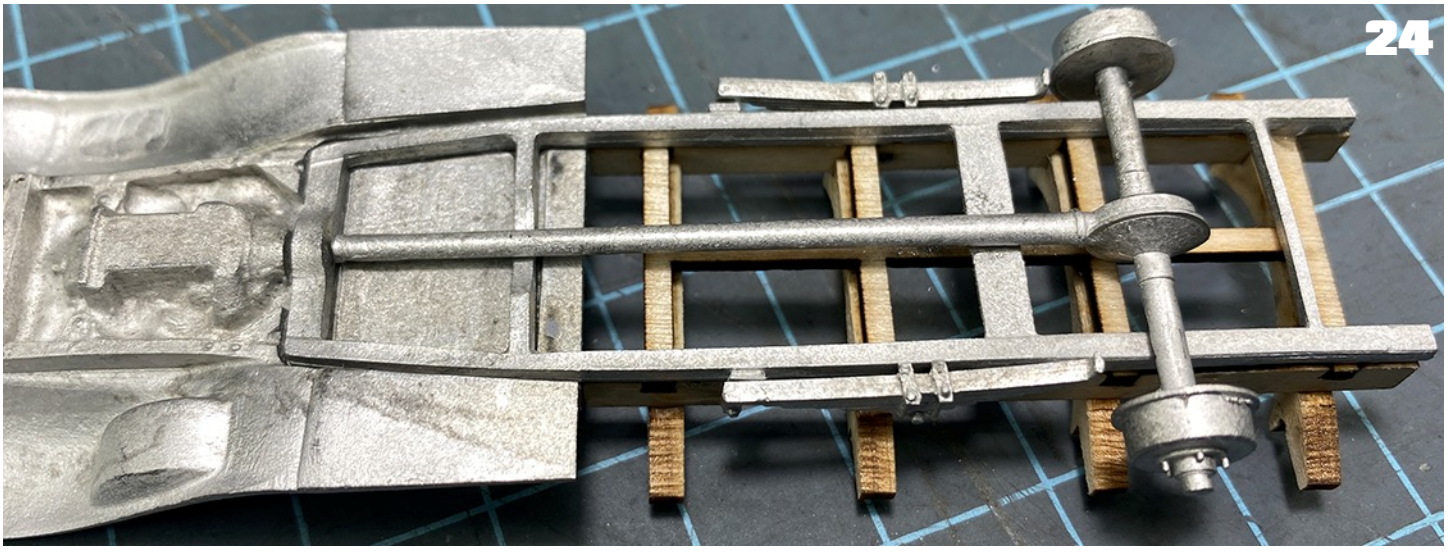


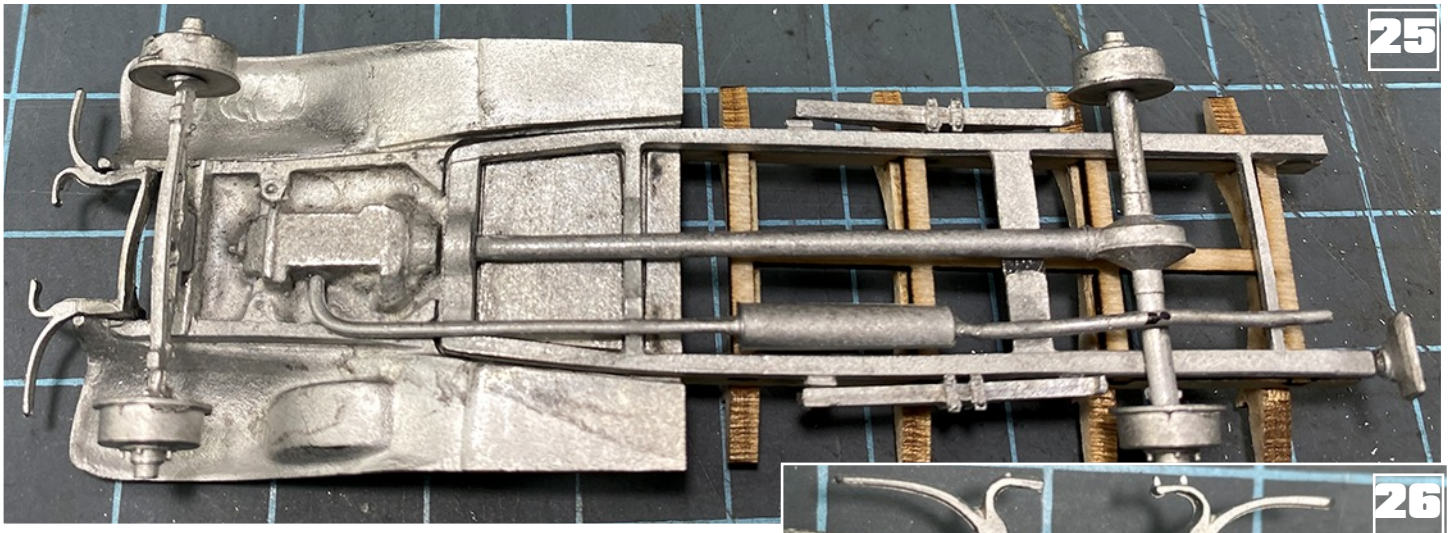


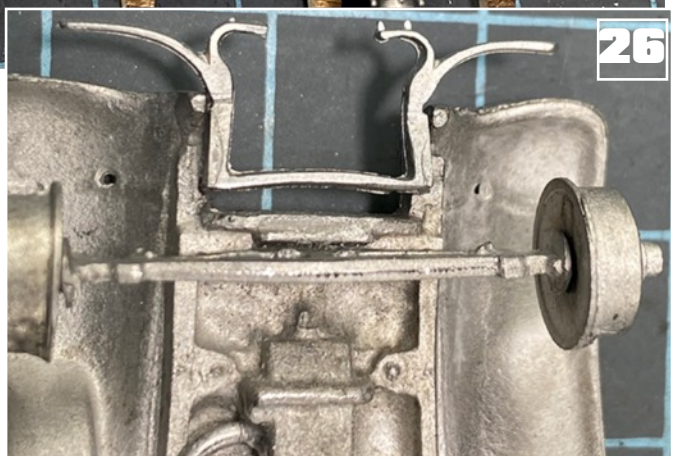


Glue the brake drums on the ends of the axle. I needed to enlarge the holes just a bit for a good fit without pushing too hard on the assembly. Image 23. Attach this to the bottom of the frame, Image 24, remembering you may need to notch the cross brace as mentioned earlier in Image 20.

Glue the brake drums to the front axle, image 25, and attach to the body.







At this point, I also added the front bumper holder to the frame, Image 26, but did not add the bumper till after painting. Note the small hole in the left fender is my new horn hole. The instructions called for a 3/64" hole to be drilled in the rear frame for the tail light/license plate. I thought that was rather large and the pin of the tail light/license plate casting was not that defined. I removed the pin and drilled a smaller hole in that assembly as well

as the truck end and used a brass wire as a pin. See Image 27. I did the same thing with the horn.

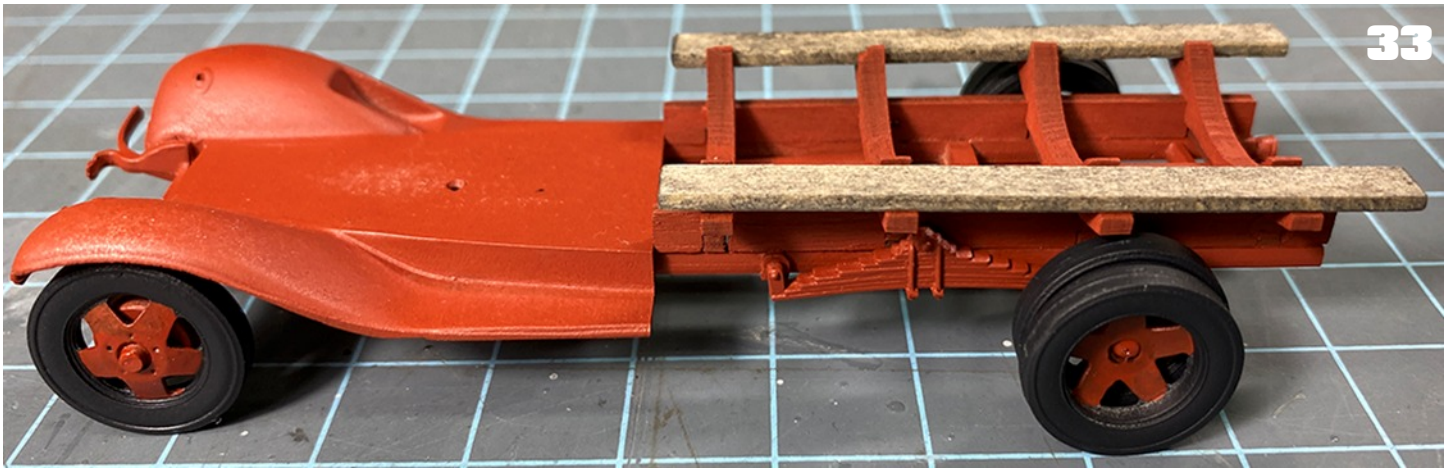
At this point, I had all four trucks up to the same point. Image 28 shows all the parts ready to go into paint. Now you can decide on colors. Note the tires have not been put on as it's easier to paint them and also the hubs before attaching them. The wood tank for this build can be painted, but I stained and weathered it as you will see later.

If you Google "1932 ford pickup" and look at images, you will see all shapes and colors. If you are modeling a period piece, then stick with the basics. No candy apple red for you.

The only thing I used a mask for were the headlights. You can cut a small circle out to mask them off but I am a klutz so I took out my trusty calipers and measured the diameter of the headlight. I then took the and transferred it to my Cricut software, stuck some green tape to the cutting matt and let the Cricut do the work. Image 29 shows the masks after removing them. If you don't know what a Cricut is, check out my article Daisy Cove Milk Station, Scratch Building with a Cricut Cutting Machine in the March/April issue of *The O Scale Resource* Magazine here.

I used three colors for the trucks. Black, brown and a rusty red. Remember, the frames with the wheels don't have to match the cab. Do whatever you want and have fun. If you use a wash for the tank, be careful you don't ever do it and cause the wood to warp. If it's glued well this won't be a big concern, but watch it. I shot the parts from the top, and after drying, again from the bottom. I used Scale Coat paint so I did not prime, but you may want to if using any other type of paint. If you are careful, you could use a rattle can for all this this painting.

There is a supplied string to make the tank bands from. I simply glued a piece of string on the bottom using ACC and accelerator or instantly attach it The wrapped around the tank and did the same thing with the other



end. See image 32. You won't see the bottom, but still keep it neat.

Image 33 shows the truck out of the paint shop, the tires have been attached. Note the hubs are painted on these. The two wood side frames were stained and attached.

Image 34 shows the seat installed and Image 35 shows the dashboard.

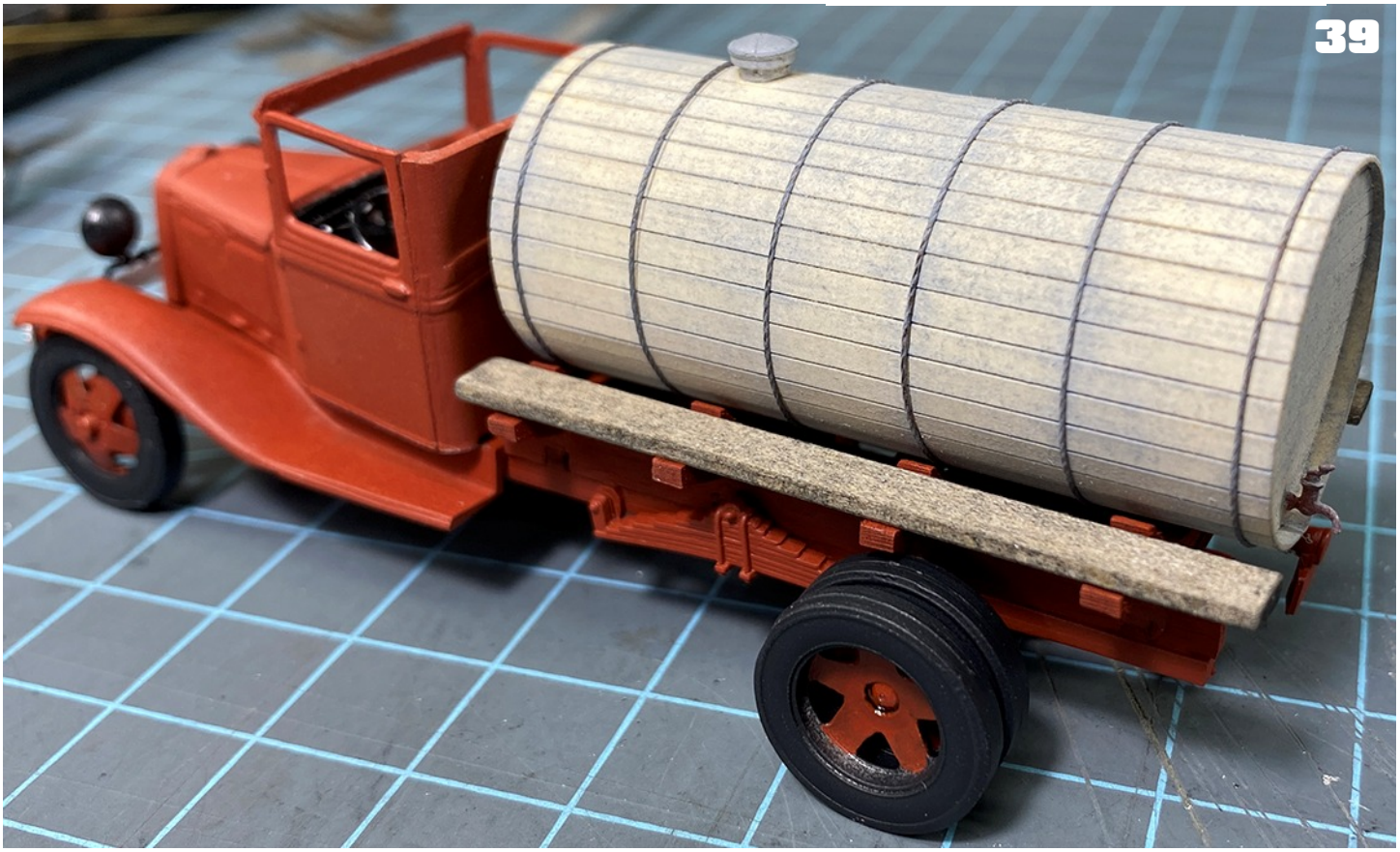
Headlights (which should have had the horn pin still attached before I got "flash happy") and front fender installed as seen in image 36.

Image 37 shows the extra hole I had to drill in the floor to accommodate the steering column since I also whacked off the notch in the dash.

Image 34 shows that once the cab was attached to the chassis we can place the shift knob and steering column in place. The column may need to be shortened.

The tank was weathered with a wash of dirty white paint and then PanPastels were used. I am going with the fact that this truck was hauling water. It could have hauled fuel or oil also. The weathering on the tank will ultimately decide what it carried. See image 39.

I found a Website for making Tennessee licence plates and used that background to make my own. I simply print on heaver paper and glue in place.



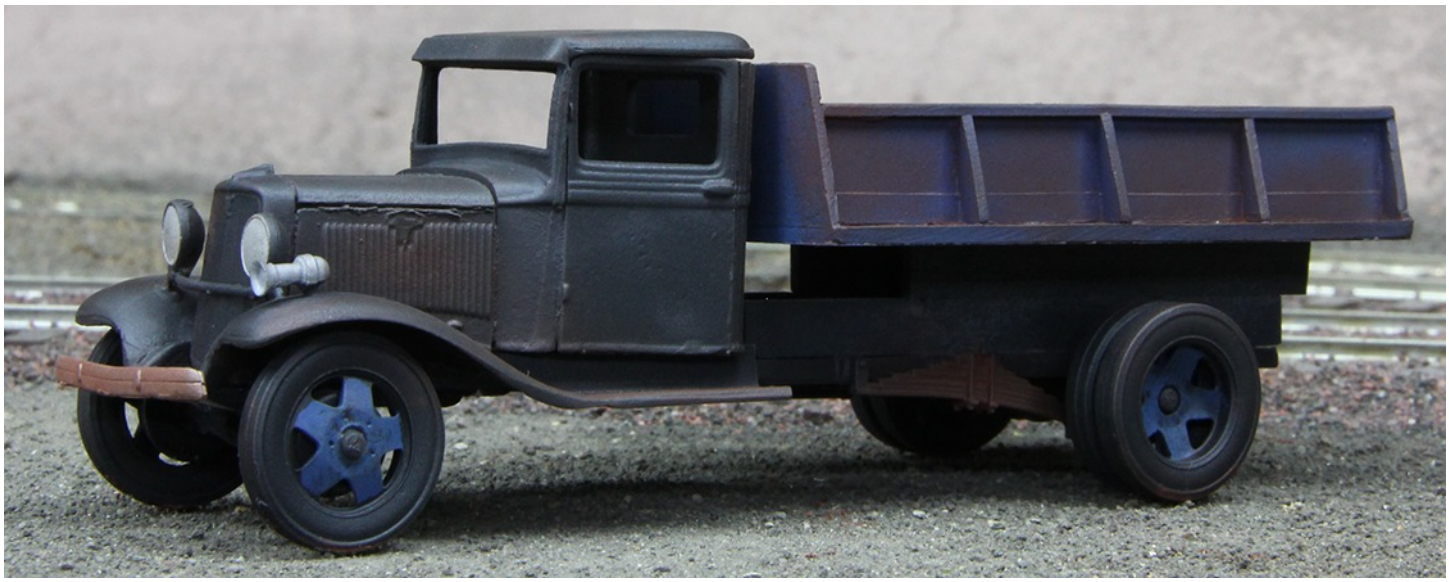
Since my layout is located in Tennessee, all my trucks and cars get this 1947 treatment. (Image 40)

I painted the horn on the roof with Floquil Old Silver, yes I have a stash of Floquil from back in the day, and placed the roof on but did not glue it. In this kit there, was a piece of clear styrene for the windshield, but I used .005 Clear Polycarbonate (LEXAN) from Clover House as it looks and reflects much more like real glass.

Above and to the right shows the beginning of the weathering process. I started by spraying Krylon Matte 1311 on the models and letting that dry. Next were some oil washes on parts and then PanPastels weathering powders. Again I sprayed Krylon Matte, which dulls down the weathering, so don't be afraid to put the powders on strong, and did more weathering. A bit more blending and that will finish them off. I did not want to make them rust buckets. I assume "my people in Tennessee" take pride in their work vehicles and after 13 years, they would not be in total disrepair. But that is entirely up to you.

The kits are great, and other than me being a bit "flash happy", which was easily fixed, I am more than pleased. Like I said earlier, although they are the same year of truck, by using the different bodies and spreading them about the layout they will blend in just fine.

I'll come back with decals I need to have made then gloss coat the doors and re-weather them. Yeah… I should have done that first, but I wanted to finish these and move on the another new project.



Freelancing in O Scale

By Norman Tyler

Figure 1: Situated in the upper Midwest in the 1920s, the local Ausemy and Eastern Railway (A&E RR) is based in the fictional town of Ausemy.

The Ausemy and Eastern Railway is a short line carrier based in the town of Ausemy, located somewhere in the upper Midwest. I created this fictional town to serve my goals of creating an O scale 2-rail layout that was large enough for interesting operations for one to four persons and small enough reach a stage of completion within a few years.

I have been a life-long model railroader, beginning as a youngster in the 1950s with a Lionel steam engine running through a series of basement rooms. In our next family house during my junior high years, the basement layout included a collection of trains – Lionel O gauge, American Flyer S gauge, and Tyco HO– all merged together on two 4' x 8' sheets of plywood. As an adult, I progressed through two HO layouts; twenty years ago I had completed a substantial HO layout that was a culmination of many winter evenings. With my approaching retirement, my wife and I moved to an older house with a warm basement large enough for me to finally begin again with a layout in a scale that was my true love – O scale 2-rail.

As I contemplated the design of a new layout, there were a number of challenging goals: 1) create a "floating" layout at eye level where the viewing would be most realistic; 2) the entire layout would be remotely controlled from one location without ever needing to get off the "engineer's stool" to walk around following trains, and 3) a point-to-point rail system large enough for interesting operations, but not so large that detailing

would never be completed. All model railroads are by nature rudimentary representations of reality, but no prototypes run in circles. After ten years of building and experimenting, these three goals essentially have been achieved. The layout is now fully operational, so each evening offers options–to run a session, focus on adding more scenery, or develop another accessory feature. Future goals include adding more 1920s-era components, such as operational crossing gates, a moving water tank spout, controlled signaling, and more night lighting.

Figure 2: The layout was designed to "float" off the basement's stone walls, supported by a 22-foot long steel channel. The entire Ausemy and Eastern Railway was built at standing eye level (59 Inches). A raised floor platform allows viewing for standing kids or seated adults. The control layout includes a diagram with mini-bulbs indicating turnout status.

The base for the layout was constructed on a platform supported on one side by the basement's stone wall and on the other by a 22-foot long steel channel spanning the length of the room. To respect the floating character of the layout, the stone wall was left exposed with no background scenery panels. Wood supports extend across the 42-inch width to hold a base platform of 1-1/2-inch-thick Styrofoam panels supported by the steel channel and 1x4 cross pieces. Styrofoam panels forming the base were covered with a mix of Plaster of Paris and ground paper mâché. Atlas Flextrack was used for trackwork and turnouts. The track was placed on flexible cork roadbed, except in the industrial yard where no cork roadbed was used.

The layout is powered by a Digitrax Command Control PS2012 unit coupled with an MTH Track Interface Unit (TIU) and two MTH Accessory Interface Units (AIUs). Because of the layout's free-floating design, the power supply and interface units are hidden by being mounted on a panel that can be lifted and attached to the underside of the layout. The result is that the only connection needed for the entire layout is one power cord to an electric outlet.

A sloped control panel, mounted unto the steel channel, efficiently allows operation from a single location. A button on the panel turns on power for all equipment and operations. The control panel includes a diagram of the layout with miniature lights indicating the position of each of twelve turnouts. All operations are controlled with MTH remote control units; each remote is able to control each of the three steam engines. Other remote commands include turnout commands, lighting and accessories, whistle, horn, bell, headlight, smoke, and PFA announcements.

Figure 3: A small light built into the scenery provides lighting for the control panel. The power supply and interface units are mounted on an under-panel (shown down) that can be raised up and out of sight under the layout.

During the 1920s, the Pere Marquette Railroad operated in the 1920s in the states of Michigan, Ohio, Indiana, and in Ontario, Canada. During this period, two financiers from Cleveland took control of the Pere Marquette, along with the Erie Railroad and the Chesapeake & Ohio Railway. My layout, set during this period, includes a hypothetical line of the PM that runs through the town of Ausemy and provides connections to distant distribution centers and factories. Equipment from the Erie and C&O systems regularly can be found in East Ausemy's rail yard. However, most of the town's freight traffic is local, running from the yard, where main line traffic is positioned as it arrives, to various points in the town. Awkward delays to main line traffic happen regularly because Ausemy's passenger station and a large warehouse building are located on the main line without a spur. The danger needs monitoring with a signaling system.

The 1920s period was selected because it arguably represents the steam era in its prime, as well as having a generally robust national economy. I created a fictional back story for the town of Ausemy and the A&E RR to bring a richer environment and rationale for operations. The scenario is as follows: The town was named after the Durant brothers, offspring of French fur traders who founded the settlement in the early 19th century. The Durant family established a successful carriage manufacturing business, Ausemy Manufacturing, which now (in the 1920s) makes parts for Detroit automakers. The Durants also own an adjacent dry goods store.

The layout's buildings are a blend of ready-built, kit-bashed, and scratch-built structures. When the layout was first being created, quickly made cardboard structures represented initial characteristics of the town as I envisioned it. Ready-built structures helped quickly establish the initial elements of the town's environment. These were soon coupled with kit-bashed buildings that provided more flexibility for additional structures. The Ausemy Manufacturing complex was modeled as a hybrid structure using sections of brick walls from various

Design Preservation Models kits coupled with handcrafted porches, foundations, and an elevated walkway. An overhead walkway provides a visual break to hide the top of a mirror strategically placed to create the illusion of extending the layout through a solid stone wall when viewed from the operator's stool. To further the effect, the back side of these structures were painted a different color to further the impression of being separate buildings, a device long-ago used effectively by visionary model railroader John Allen.

Figure 4: Scratch-built structures included the small post office, a freight loading platform, and a furniture manufacturing building.

Figure 5: The A&E RR relies largely on shipping from the Ausemy Manufacturing plant, which dominates the economy of this small town. This view is visually extended through use of a mirror placed on either side of the two buildings of Ausemy Manufacturing.

Gradually, other scratch-built structures were added to provide a unique set of buildings, including a workmen's rooming house, a two-story residence, a small cabin, a fisherman's tackle shop, a furniture repair building, a storage shed, and a freight platform.

Figure 6: Workers housing, Sweeney's Tavern, and the Sunset Casket building are three scratch-built structures contributing to the layout's variety.

Life in the community of Ausemy was simple during the 1920s. Residents like spending time fishing in Blue Lake, a central feature of the town. The north end of Blue Lake effectively divides the layout into two sections and creates a perception of greater distance from Ausemy to East Ausemy. On the east side of the lake's southern shoreline is Bud's Tackle Shop, a favorite spot for fishermen with its dock for fishing boats. On the town side of the lakeshore is a busy one-rail dock at the end of the downtown used by commercial fishing boats and for small freight handling. This water feature was created using a mix of paint colors – deeper blue in the center, with green tints on the edges – and coated with multiple layers of Woodland Scenics Realistic Water solution. The depth of the water is suggested by having painted it on the layout fascia.

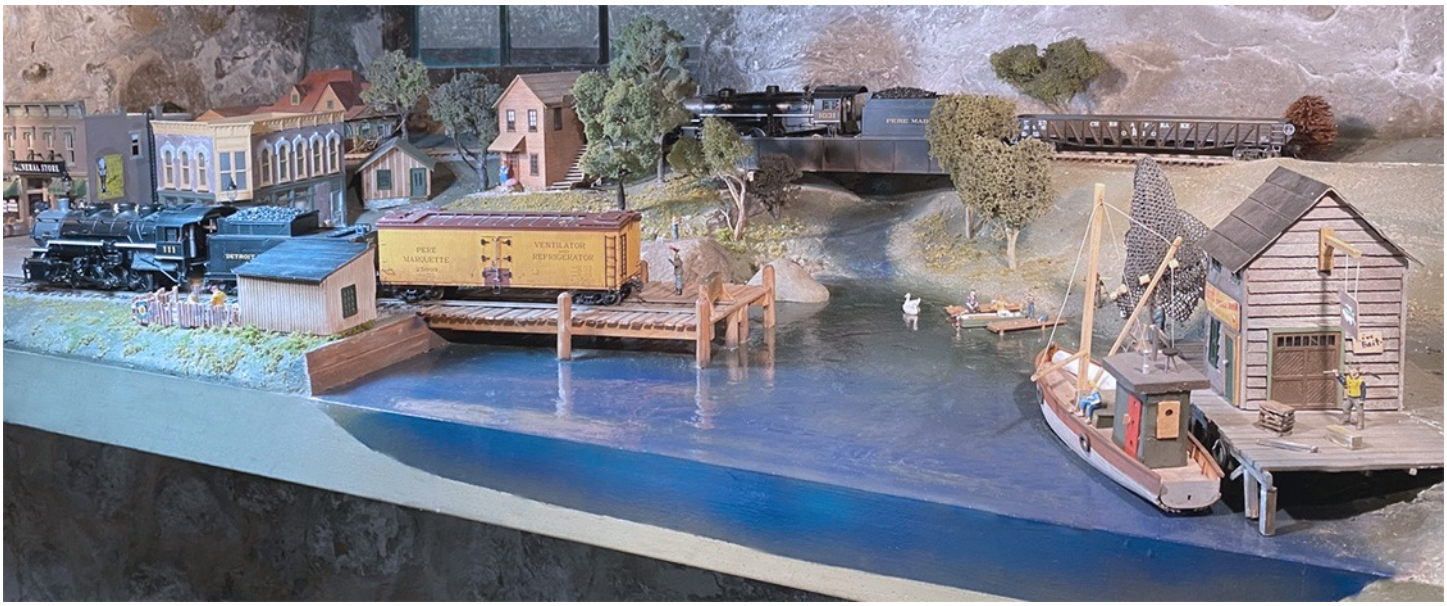


Figure 7: The north end of Blue Lake has a commercial dock at the end of the downtown spur and a dock on the east shore for sport fishing.

Figure 8: Both sport fishing and commerce are found in this portion of Blue Lake, suggesting it as part of a larger body of water.

Scenery is a collection of purchased and handmade elements. The layout does not include a forest of background trees, since the use of a background is not part of the basic scheme. Instead, individual trees are strategically placed for best effect. Trees, bushes and ground cover include purchased material as well as handcrafted elements. Handmade trees were fabricated using pieces of small branches glued together and covered with plasticine and painted. Woodland Scenics tree foliage was attached with sprayed white glue and then lightly spray painted with flat green and brown colors. Rail cars were weathered with a combination of marker pens and Doc O'Briens powders and TruBal paints from MicroMark.

The overall layout has ten ceiling-mounted track lighting fixtures that can be adjusted to subtly emphasize essential detail in key spots with a dimmer to represent various times of day. Selected buildings are individually lit to provide ambience for evening operations. All these lights are controlled by the accessories button on the remote.

When developing my O scale 2-rail railroad layout, I made the decision to base the system primarily on MTH Proto-Sound equipment. It provided a state-of-the-art Digital Control System (DCS) compatible with DCC and Lionel, but had unique features of its own. The system could to converted to DCC at some point if necessary.

Three MTH steam engines service the layout. Because there is no turnaround on the layout, a 2-8-2 Light Mikado Pere Marquette steam locomotive faces east and carries freight from west to east; a Detroit, Toledo and South Shore 0-8-0 faces west and moves traffic in the opposite direction; and an older New York Central 4-4-0 is largely designated for staging movements within the yard. All operations are conducted remotely with MTH remote control units, allowing for operations by three or four individuals. Uncoupling is based on strategically placed rail magnets with Kadee couplers.

Figure 9 above: Rail cars date from the 1920s and before, and have been weathered for a more realistic appearance. This scene includes background industrial facades to suggest the industrial character of the rail yard.

Figure 10 below: An evening scene brings character and life to Railroad Street in Ausemy's downtown.

One of the most difficult challenges was wiring the Tortoise-brand slow-switch motors for MTH remote units. I found no published data on such connections and queried others through online blogs, but to no avail. Eventually, I tried enough wiring variations to stumble across a method that worked. The wiring diagram is included here in case others have a similar situation. However, I found a Tortoise machine running through the MTH remotes did not complete the switching with one push; it took three pushes to fully switch. This was rationalized by reckoning it should take extra work to realistically switch a turnout.

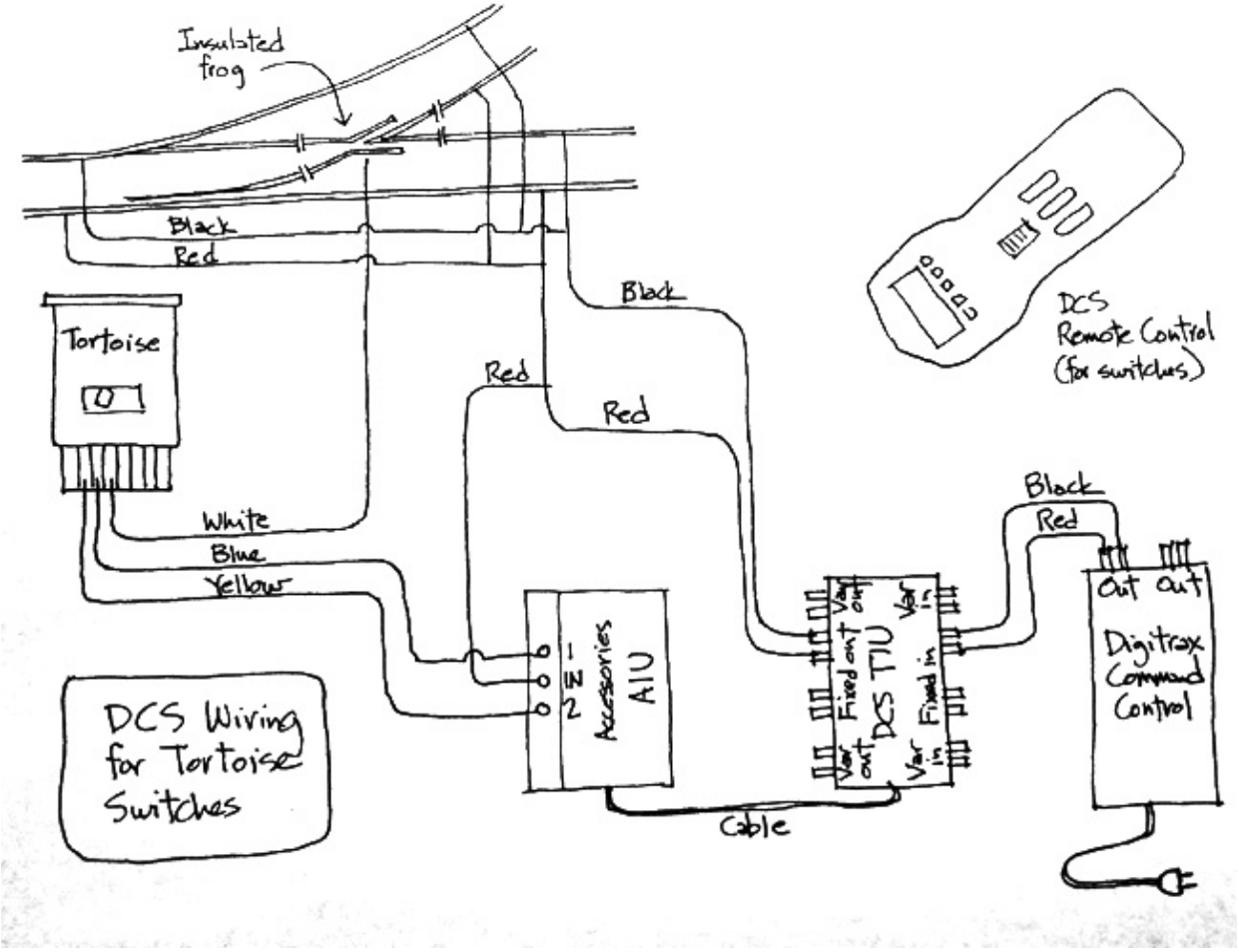


Figure 11: Experimenting with various wiring, this diagram drawn by Norm indicates how Tortoise switch motors can be wired for remote usage with an MTH DCS Digital Command System.

Operation of the A&E RR is based on a free-style card system. Each car on the railroad has its own card, and each possible destination is shown on a small envelope. When beginning a session, cards are randomly placed in randomly selected destination envelopes. This gives directions for an evening's activities. A session may be a single operation taking a short time or a series of operations taking up to an hour or more. Each engineer works with the dispatcher, who sets turnouts at the appropriate time. Together, the engineers and dispatcher, determine an optimum series of moves to most efficiently accomplish the tasks. For more interest, random "Situation" cards can add an unknown element to the operations. Situations include instructions such as, "The Mikado needs water the next time it is in Ausemy;" "Switch #7 is under repair; it can only be used in its current configuration;" or "Due to an emergency, establish a priority to bring the passenger combine to the hotel." Based on such untimed sessions, operations are more similar to a switching puzzle than a realistic prototype schedule. But each session becomes unique in its own way, thus creating the challenges and the fun of an optimized routing puzzle.

Over the years I have enjoyed developing the A&E Railway. It has been a creative challenge during which I relied on a trial-and-error approach as much as any other more researched methodology.

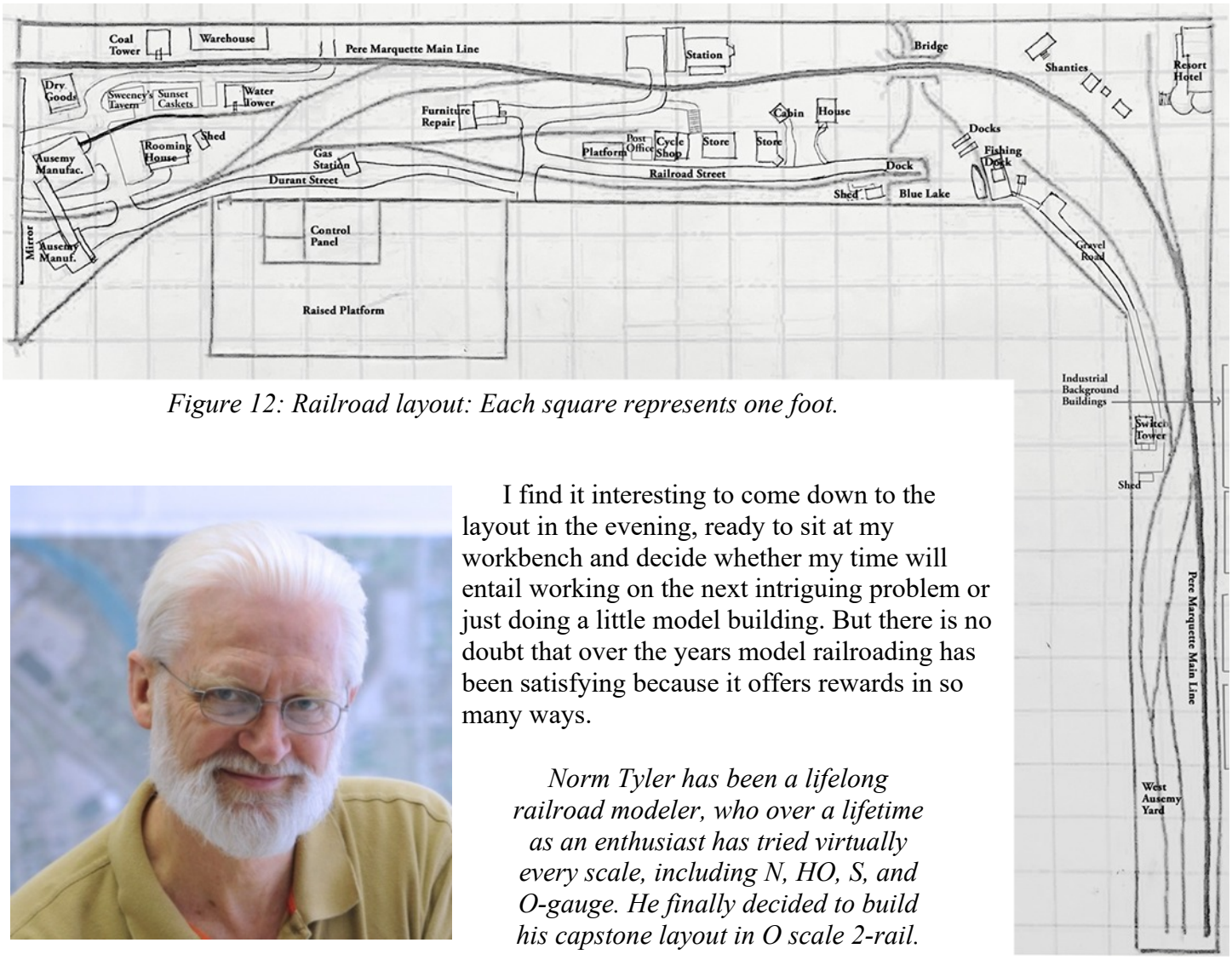


Figure 12: Railroad layout: Each square represents one foot.

I find it interesting to come down to the layout in the evening, ready to sit at my workbench and decide whether my time will entail working on the next intriguing problem or just doing a little model building. But there is no doubt that over the years model railroading has been satisfying because it offers rewards in so many ways.

Norm Tyler has been a lifelong railroad modeler, who over a lifetime as an enthusiast has tried virtually every scale, including N, HO, S, and O-gauge. He finally decided to build his capstone layout in O scale 2-rail.

Drawing for 3D Models: The Issues and Considerations You Need to Watch Out For

Editors note: Glenn's series on building his steam locomotives is on hold for the time being as he winters in Florida. He'll get back to it but for now he'll take a look at 3D drawing and some of the issues involved.

By Glenn Guerra

At the end of the last installment in my steam locomotive series, I said we would talk about the tenders for my models. Since that time, I have been pulled away from my models and don't have anything to write about. However, I have received some nice comments from people about how they like the planning and thought that goes into making something. That is what we will talk about in this article.

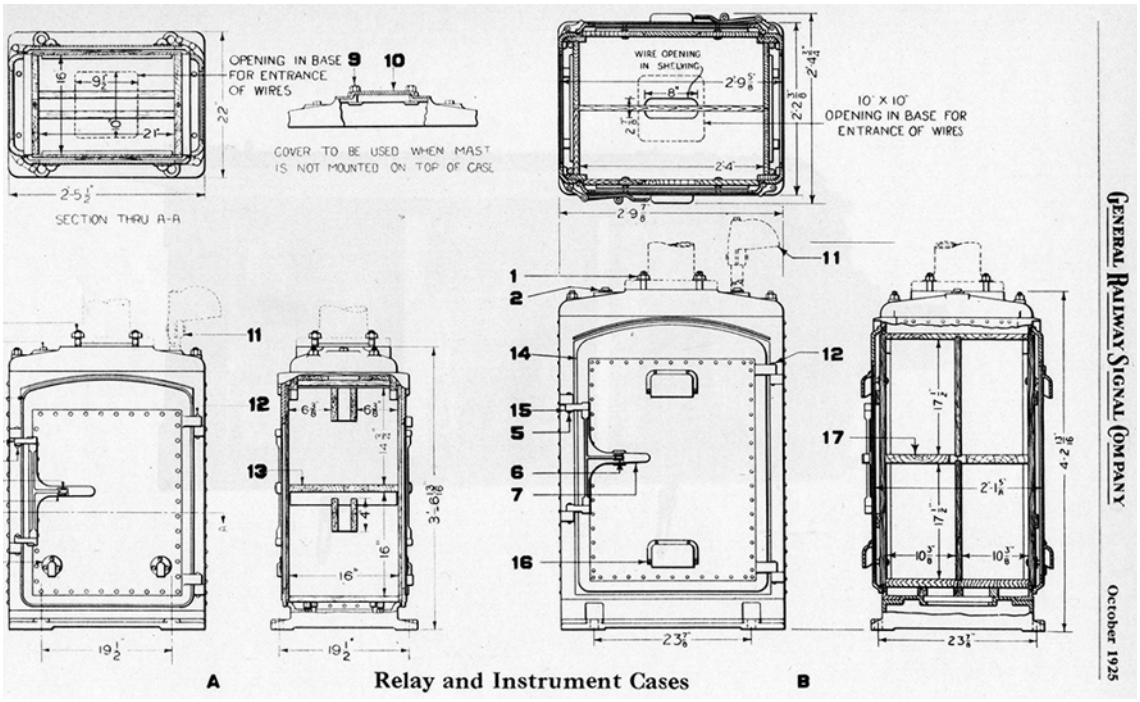
I have been building and designing things most of my life and have learned some hard lessons. Dan has purchased a 3D stereo lithography machine, and I have been helping him with some design and drawing. He asked me to talk about some of that in this article, and that should be of interest to those of you who like the discussions about why I did things the way I did.

When designing a part, we need to consider a few things. One of those things is, what are we going to make this item out of? Things that will influence that choice are, do I have the tools or ability to make this item out of this material? Are there sizes of raw material that will work for what I want to do? Will my material choice be strong enough? Does my part fit into another assembly? Is that influencing my choice of material? There are lots of things to consider and it is easy to make things harder for ourselves.

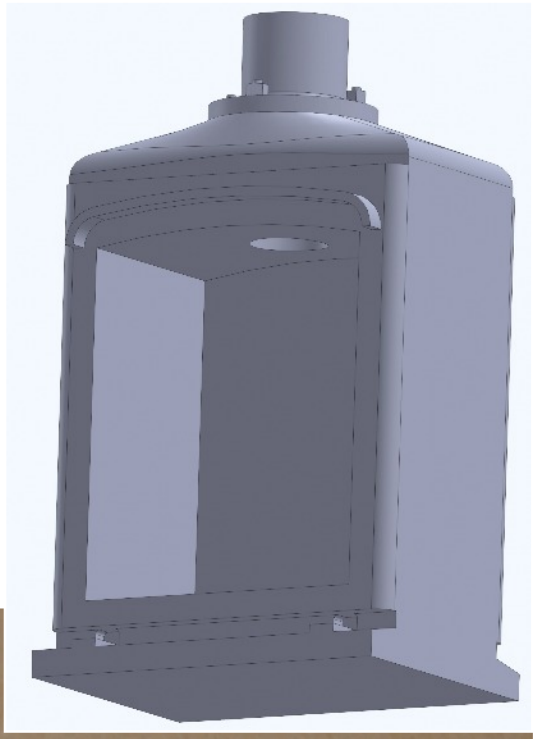
Another item I would like to spend some time on relates to computers and computer design. Now that Dan has a 3D machine, he is getting into this and is starting to see what I have been talking about. More than one person has told me about the virtues of scaling drawings and how easy it is. As you have heard me say, always draw your model in the scale you will build it in. When you scale a drawing, you will get into parts that are too small or thin to manufacture, or parts that will not fit in the assembly they should. Before you write me, there are cases where a full size drawing does work. I was talking with Bill Wade from BTS Models one time about this. He does draw all his buildings full size to start with and then scales them. Bill does acknowledge that the scaled drawings do need work for all the reasons I will get into. Essentially what Bill is doing is creating the prototype drawings. Then, as we do, he scales them and makes the correction, basically making a new drawing for each scale. This makes sense in his situation as a manufacturer, but remember he is still making working drawings in the scale he will make the building in. This is just like us making scale drawings from prototype drawings.

Now that you are wondering where this is all going, let's go through some examples of things I have done and I will show you some of these points. As always, these are things I do based on my knowledge, skill level, and resources. The common denominator here is, think your job through. Take into account your own knowledge, skill levels, and resources. There is always more than one way to do things, but some of the things I have done and why, may help you.

Signal Cabinet

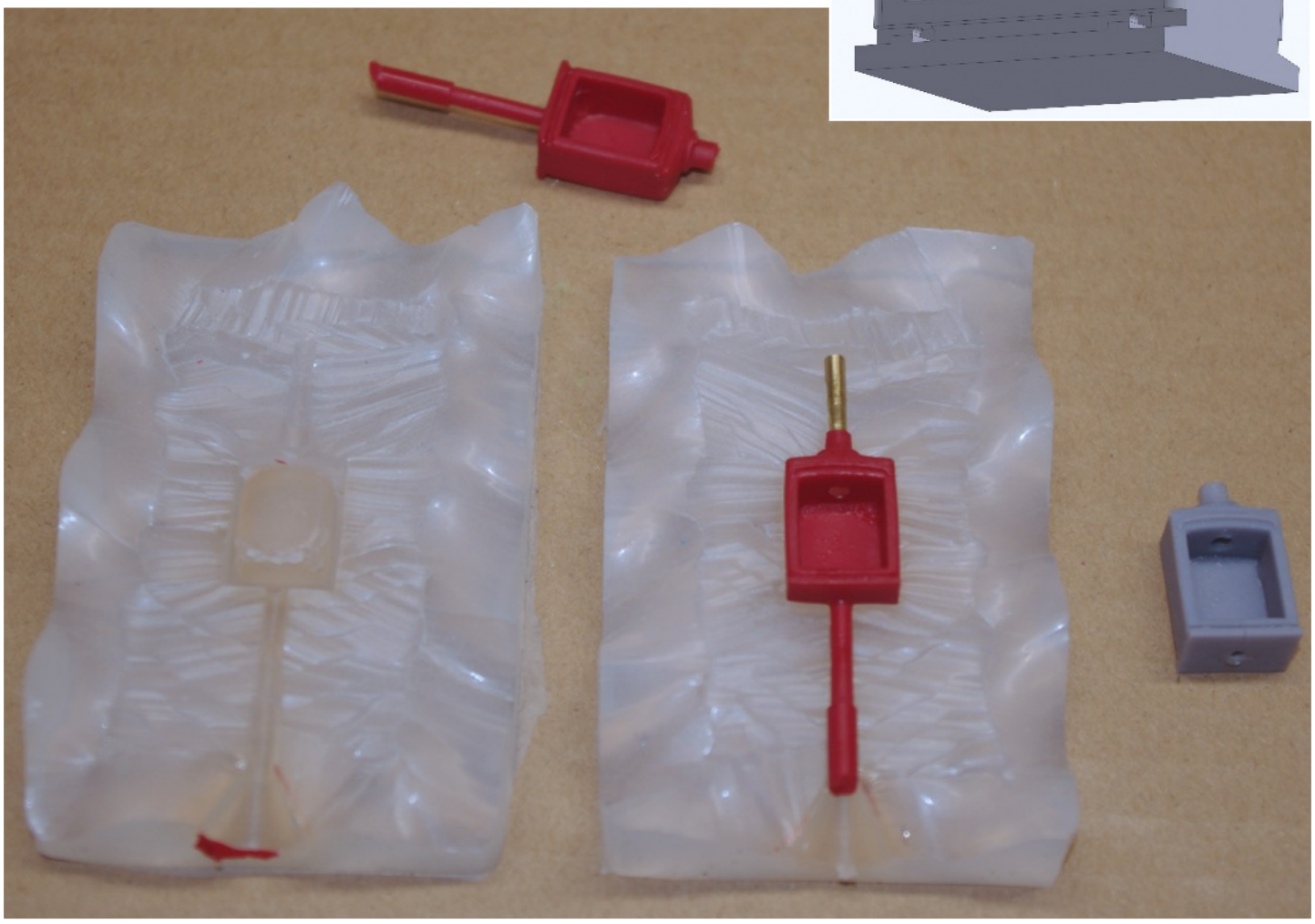


This signal cabinet is being done in S Scale. We would like the signal to be lit and that will mean we need to run some wires to a light in the signal head. The part we make will be a pattern for molding. We would like the final parts to be brass, so we are looking at the lost wax casting process. That is one of the things that will drive our design. The mast on these cabinets was 5" OD pipe and that will be another concern. If we scale the mast for S Scale we will need a .078" diameter tube which is not available. Metric sizes are also not an option because they are no closer than the inch sizes to the scale 5" pipe size. Now let's talk about scaling. If you scale this cabinet up from S Scale to O Scale, the mast size will change to .116" from the .093" that we used in S Scale. We are back to the same problem of tubing that comes in .093" or .125" diameter. We will need to do some work on the drawing. If your part is a stand alone part, you can get by with scaling in most cases. If your part is part of an assembly, scaling can cause some problems.



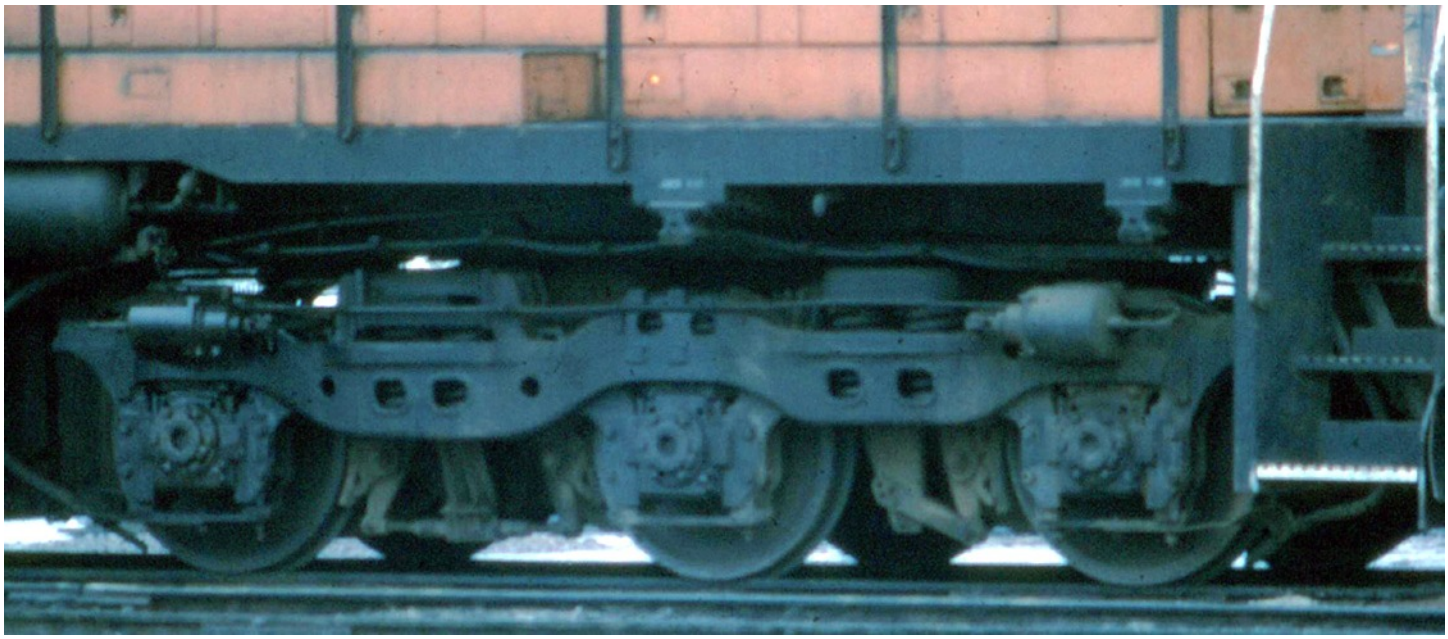
This is the drawing for the signal cabinet. The door was done as a separate part so the cabinet would be hollow. A large part like this will develop hollow spots as the brass cools in the casting process. Uniform cross sections are always a good idea when doing castings.

Notice there is a hole for the mast tube to be inserted in the top of the cabinet. This hole could have been drilled, but it is not difficult to cast this hole in.



Here is the mold for the signal cabinet with a wax part in it. The brass pin was inserted into the pattern, which is the gray part on the right, when the part was molded in the rubber. To make a wax part, the pin is inserted in the mold and the two halves of the mold are put together. The wax is injected and cools. The part with the pin is removed from the mold and the brass pin is removed from the wax. It will take a little bit of clean up on the brass case after it is cast, but that will be easier than drilling the hole and keeping it centered or square.

SDL 39 Trucks



I am working with Lou Houlemard at Central Locomotive Works on some truck designs. He has orders for O Scale EMD SDL 39 locomotives and needs this truck. We are going to make these in brass by the lost wax process. From our drawings, we will have 3D Stereo Lithography parts made that will become our patterns. Some of the other considerations are: all axles will be powered, the bolster must be sprung, the journal boxes must be sprung, and lastly, the truck must stay with the locomotive when it is picked up.

I drew these parts in Solidworks because I have that. Other drawing programs will work if you have them. The beauty of the computer drawing is you can see how all the parts will fit together. If you want to go this direction with your modeling, you need to develop drafting skills with the computer. Take some classes at a local tech college which is what I did when I started the 3D work ten years ago. Your program must be able to produce a 3D image that can be turned into an STL file. All the 3D printing systems need an STL file format for input.

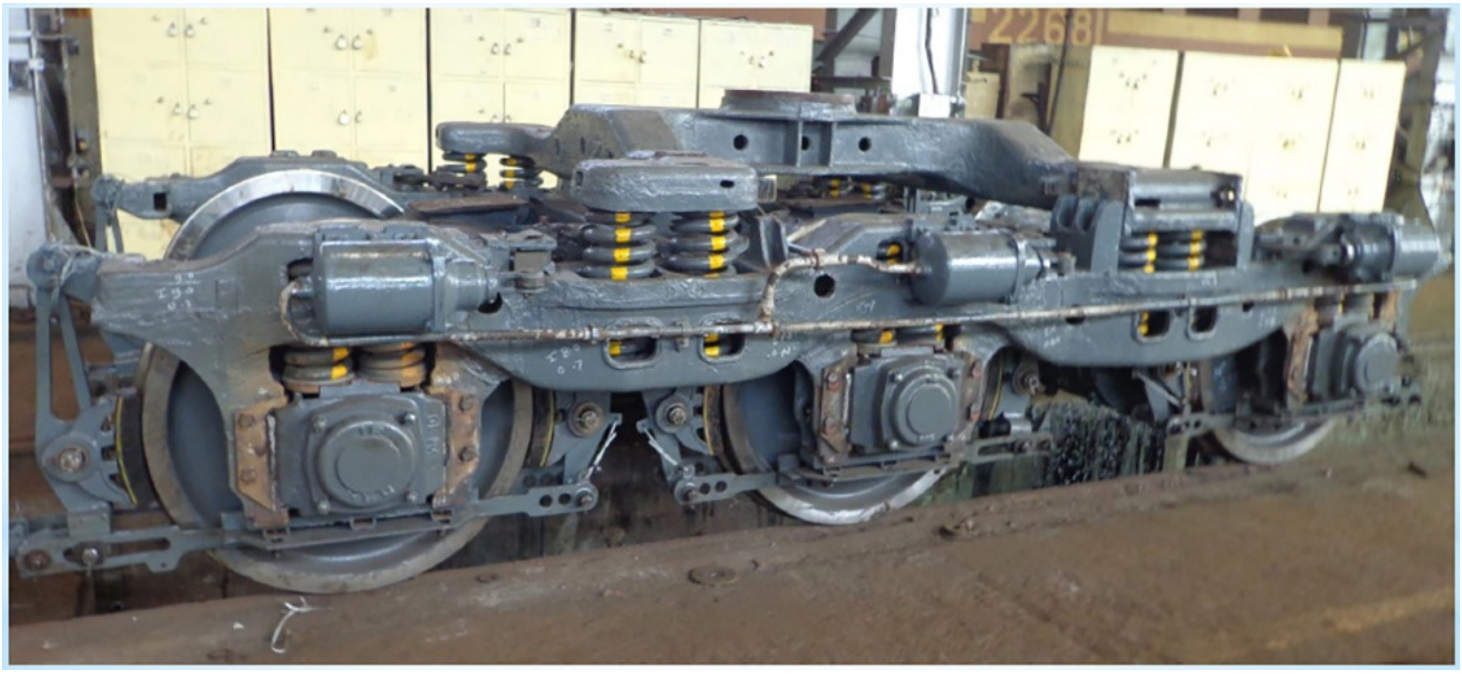
By having the center axle powered, we need to have clearance under the bolster for the gear box. When designing like this, draw the other components you plan to use even if you will be buying them. They will become models that can be inserted into you designs to check fits.

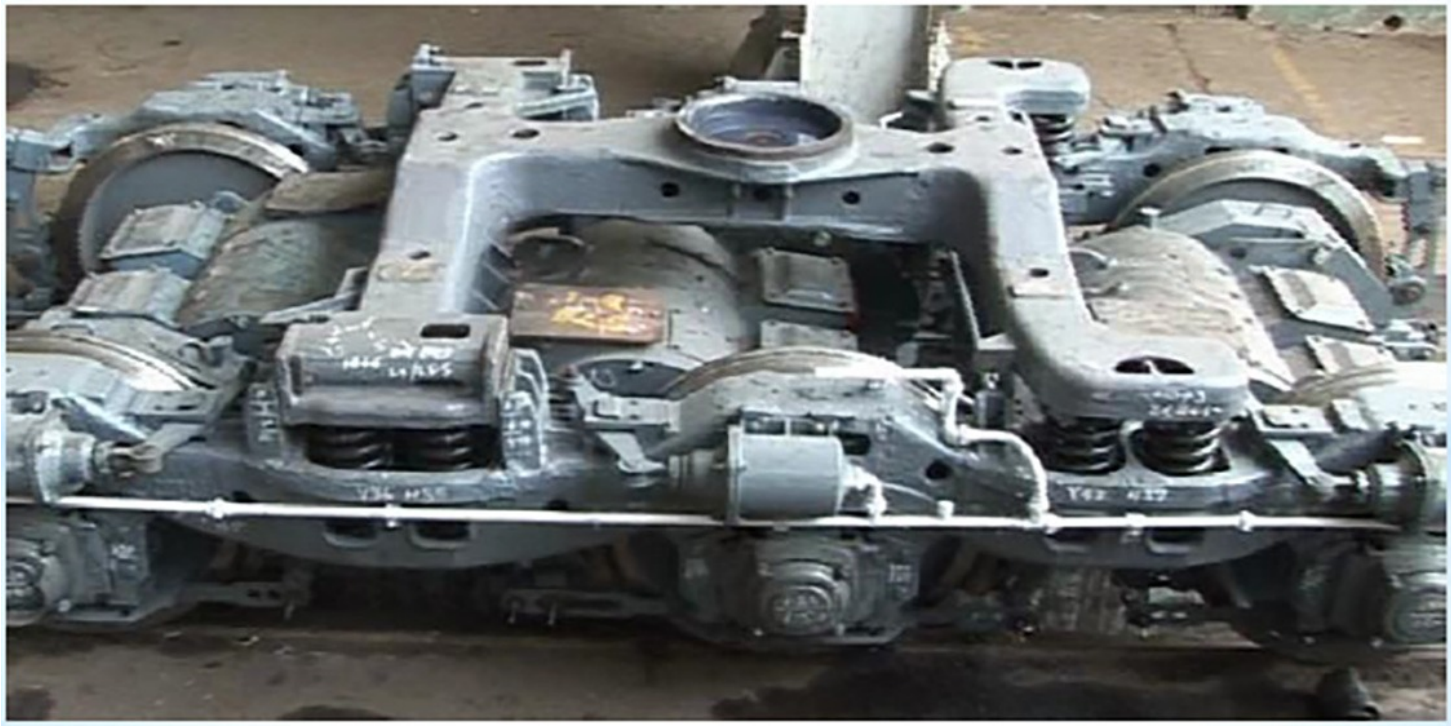
We want the bolster to be sprung and this presented some problems. One of the problems was how to cast the well where the springs are in the side frames.

Springing the journal boxes was easy, but it took a second try to get it right. More on that later.

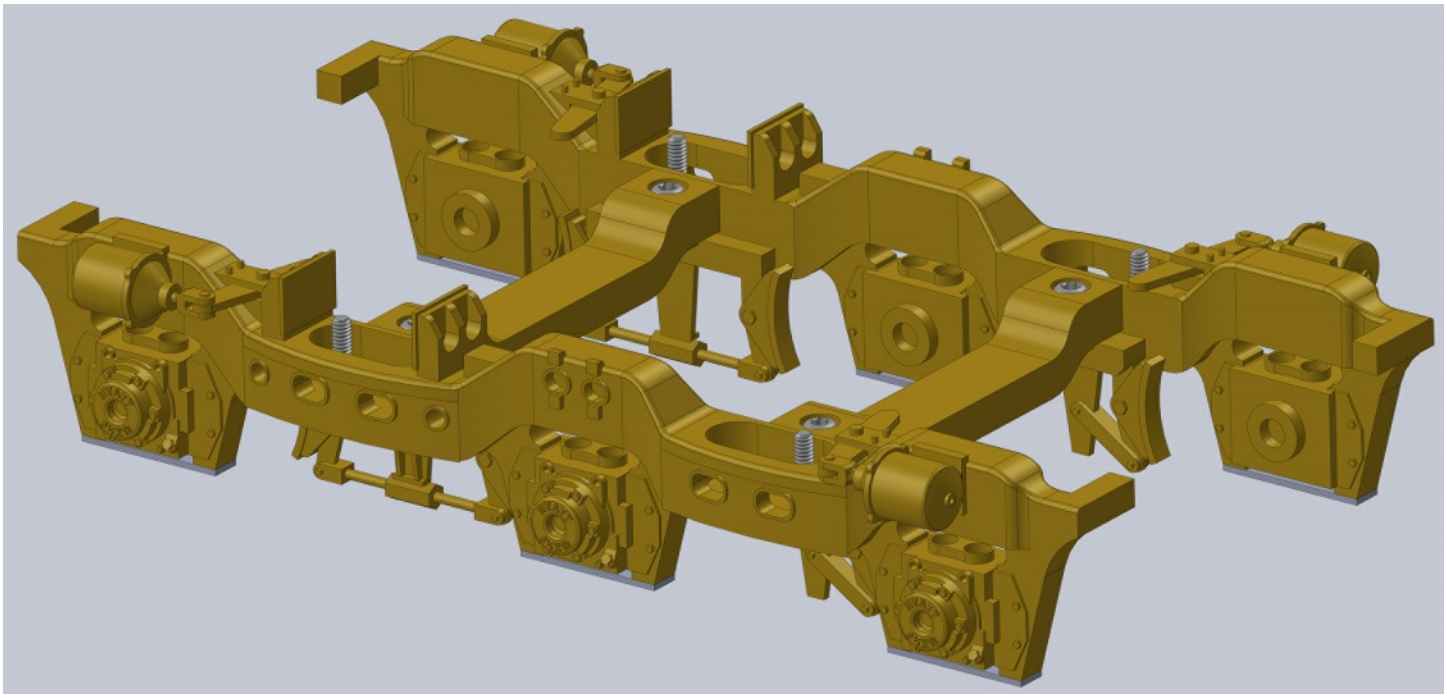
On the prototype, the bolster is held in place by gravity and the locomotives are not meant to be lifted up like model locomotives. I would need to find a way to keep the bolster and truck together and not have that mechanism show on the finished model.

These are some of the considerations you need to make prior to getting patterns made. If you draw the truck up full size like the prototype, you will have all kinds of fit problems when you shrink the drawing down and try to insert a drive mechanism in it. Much better to start in the scale and size you will build in.

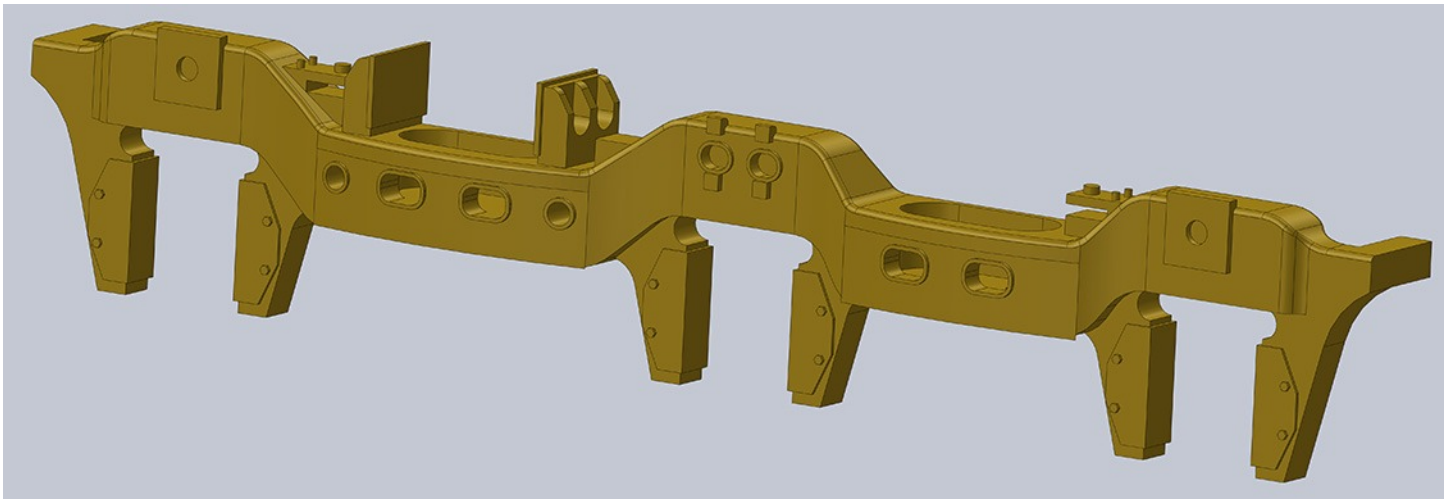




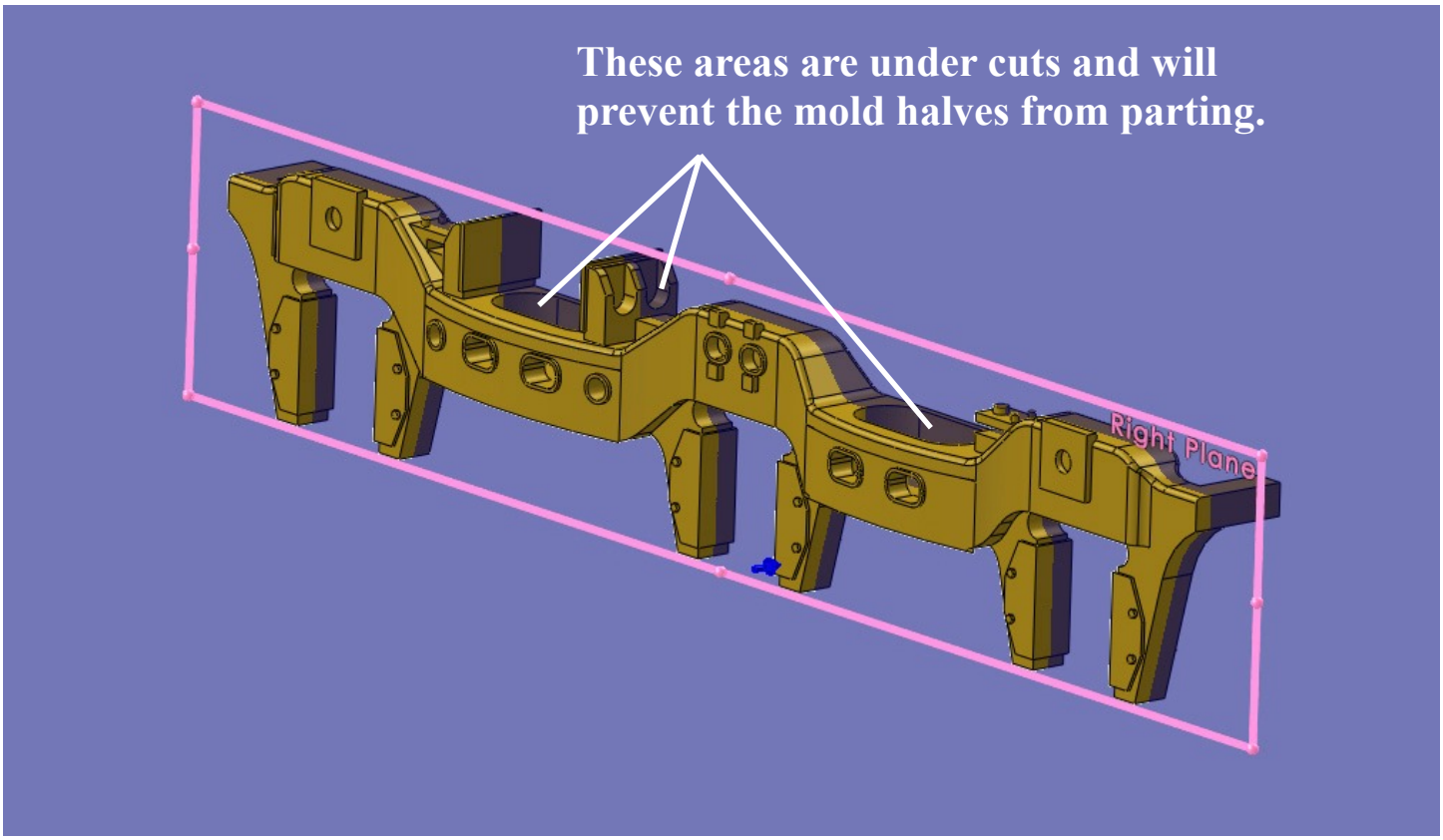
These two photos came out of a report someone did about the different trucks used in India on the railroads there. This is the same flexicoil truck used on the SDL 39 locomotive built for the Milwaukee Road here. One of the miner changes is the addition of the center brake cylinder. Go back and look at the photo on the previous page of the Milwaukee Road truck. The mounting pads for the center brake cylinder are there, but the Milwaukee used only one brake shoe per wheel, and in India, they had clasp brakes with two brake shoes per wheel. These trucks have the side frames and transoms all cast as one piece. You can't see the transoms in these photos because they are hidden by the bolster. Notice that the bolster just floats on the springs.



For this model, we needed to be able to get the side frames apart to install the gear boxes and drive. This is done by having the transoms screwed into place as shown here. Look in the spring wells and you will see some screws sticking up. These screws come up from a recessed hole in the side frame and screw into the bolster. This holds the bolster to the truck so the model can be lifted up and they do not show on the finished model.

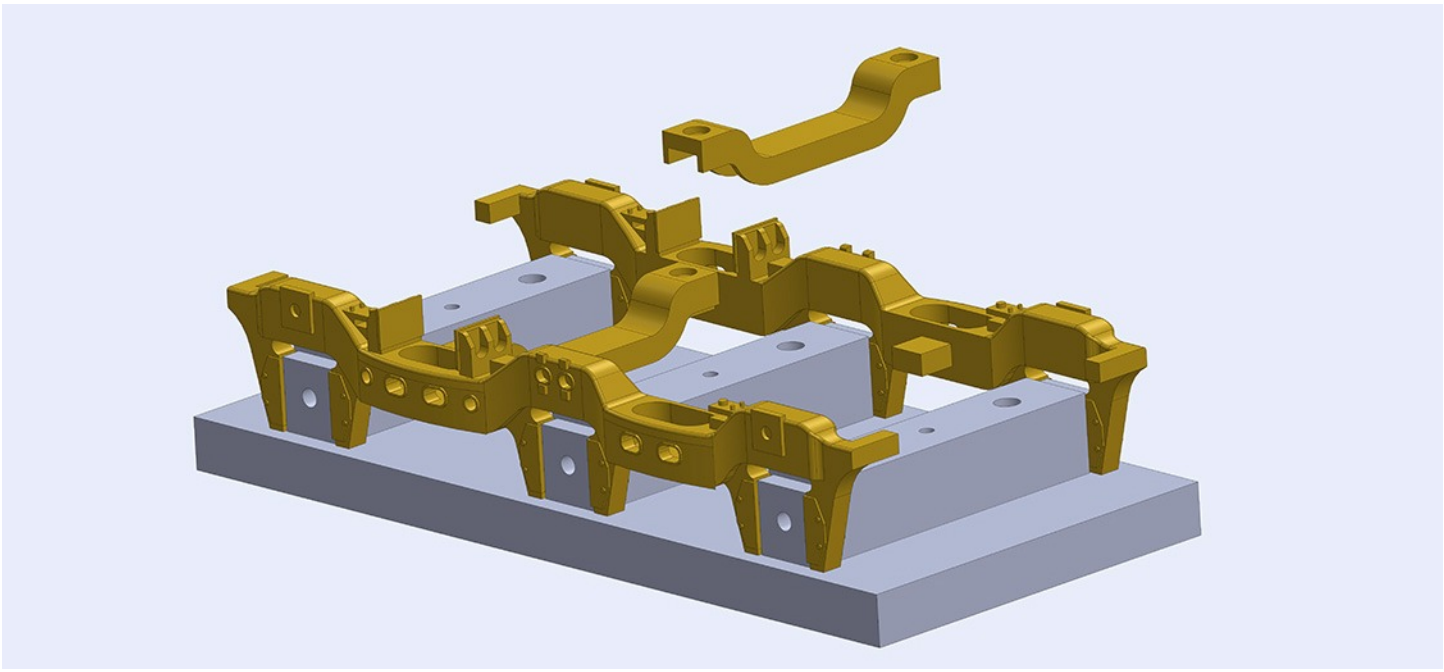


This is the final version of the side frame. On the first version, I tried to cast the holes for the journal springs with the side frame. This did not work well. One problem was separating the mold halves which we will talk about more. Another issue was the holes would trap air in the investment part of the process and we would get some holes that were filled and needed to be drilled out. After thinking about this, we decided to not cast the holes in, but drill them out later. This also gave us more control of the hole depth, and as a result, more control of the ride height of the model.

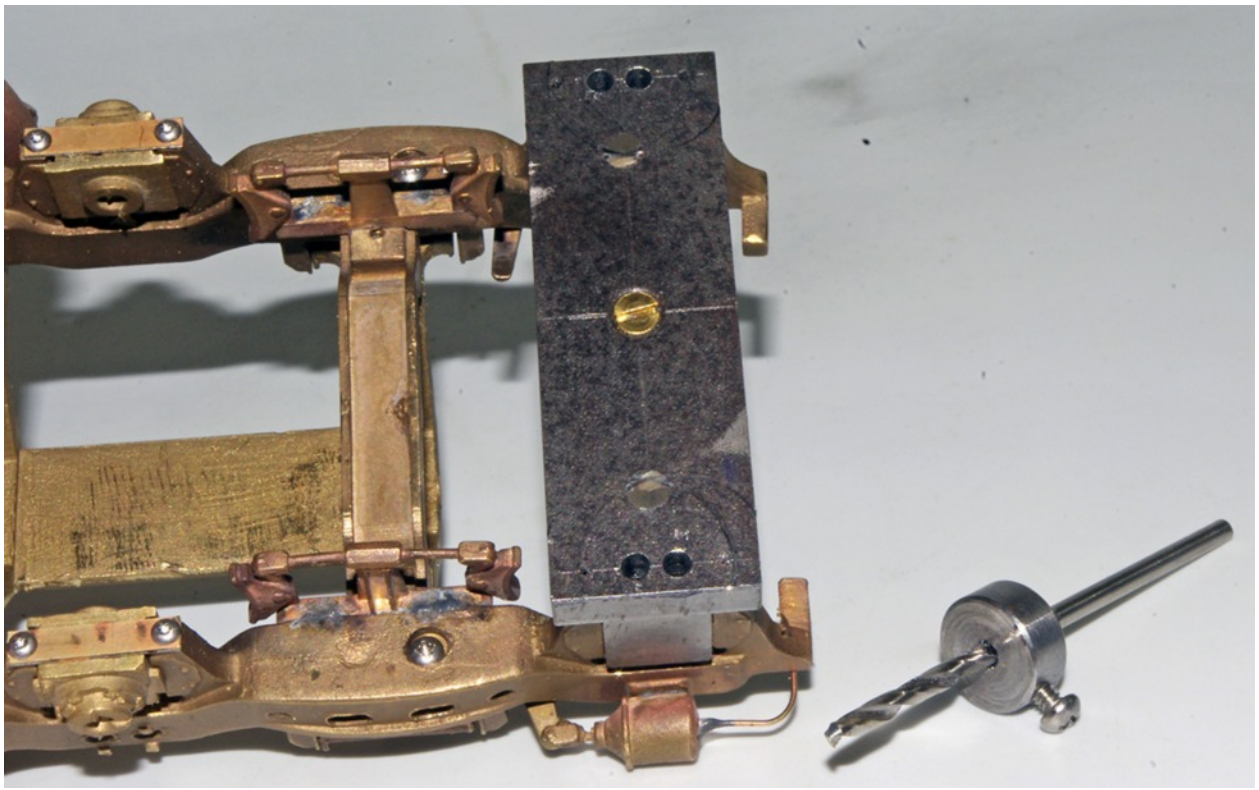


This drawing shows the parting line of the mold we will make for shooting the wax into. The brass color is one half of the mold and the purple color part is the other half of the mold. The problem areas are the spring wells and the two thrust pads. These areas are under cuts and will prevent the mold halves from coming apart. The spring wells are taken care of by using an insert like I did on the signal cabinet. On the thrust pad, the rubber is flexible enough that you can gently pull it away. These issues need to be considered in the design phase of your project. How you decide to deal with these issues will affect your final design. You could leave the spring wells solid and drill them out later, but that would be a tricky process and especially if you need to do 96 side frames. If you split the mold up and down that would make a very deep mold that would be hard to get the parts out of. You would also lose the detail of the holes in the side frame for inspection. They would become the under cuts.

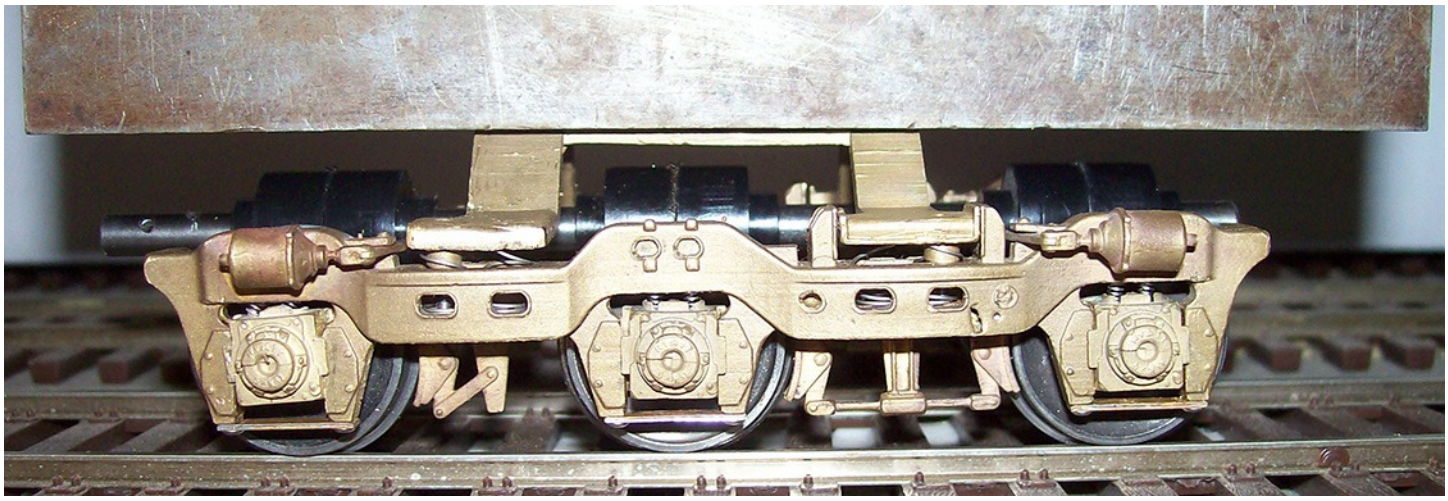
The top photo shows the two mold halves with the brass inserts. To make this mold, make the inserts fit the pattern and have them in the pattern when you make the rubber mold. In this case, I made the brass parts after the side frame pattern was done. Make sure your inserts are keyed so you know where they go in the mold. Another consideration is to captivate the insert so it will not move when the wax is injected.



When you are making an assembly out of parts, you need to make sure the final assembly is square and that the components are easy to assemble. In the case of these trucks, the side frames are what we will see and we made the least amount of compromise on them. The transoms are to hold the side frames in alignment and are not visible on the finished model. This is an area where function will take precedence over prototype fidelity. The side frames are inserted in the fixture and then the transoms are fitted. They are drilled and the holes tapped for the mounting screws. The truck frames can now come apart to insert the drive components. It is much easier to think this all through on the computer rather than trying to make random parts fit together.



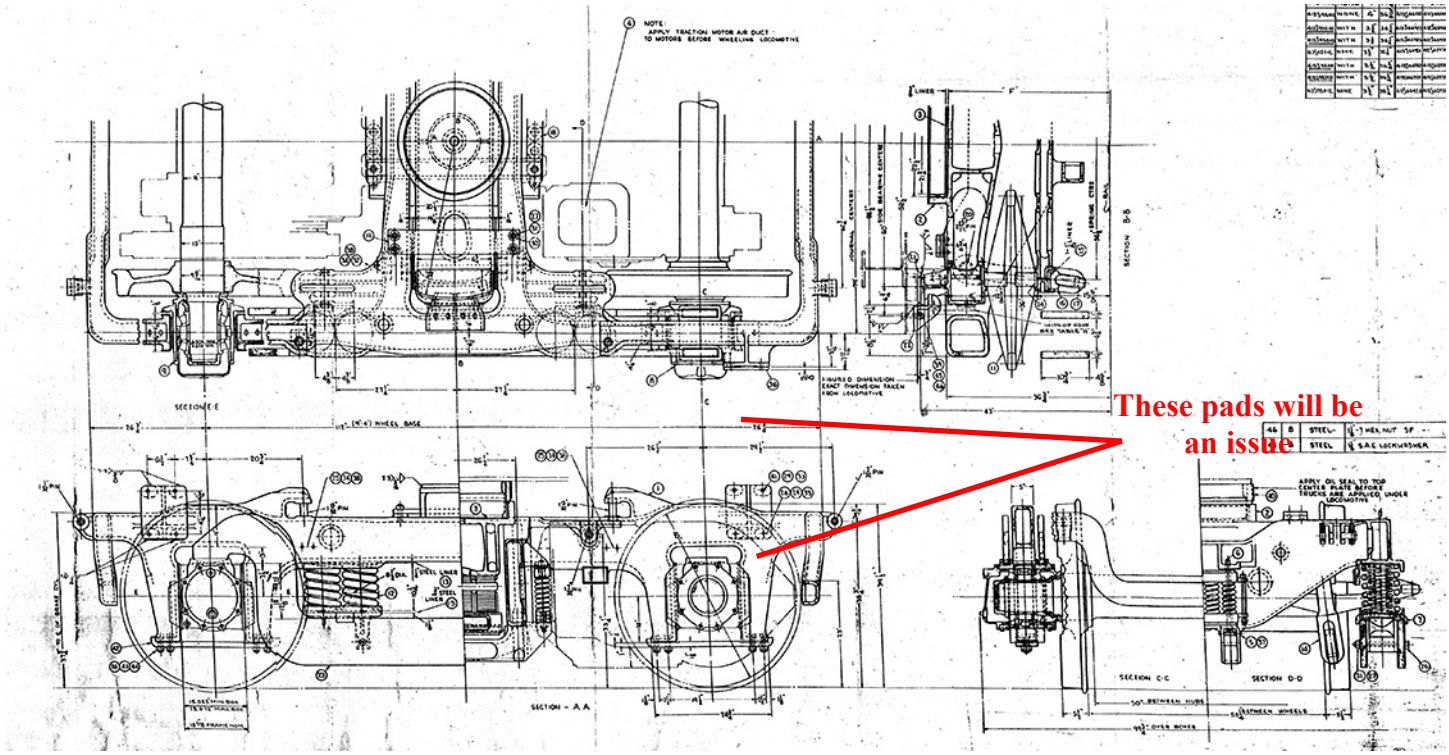
For this fixture, we will drill the spring holes in the side frames and the holes for the pedestal binders. It was simple to make and is easy to change the depth of the spring holes. Look close and you will see the screws in the bottom of the side frame that hold the bolster to the truck.



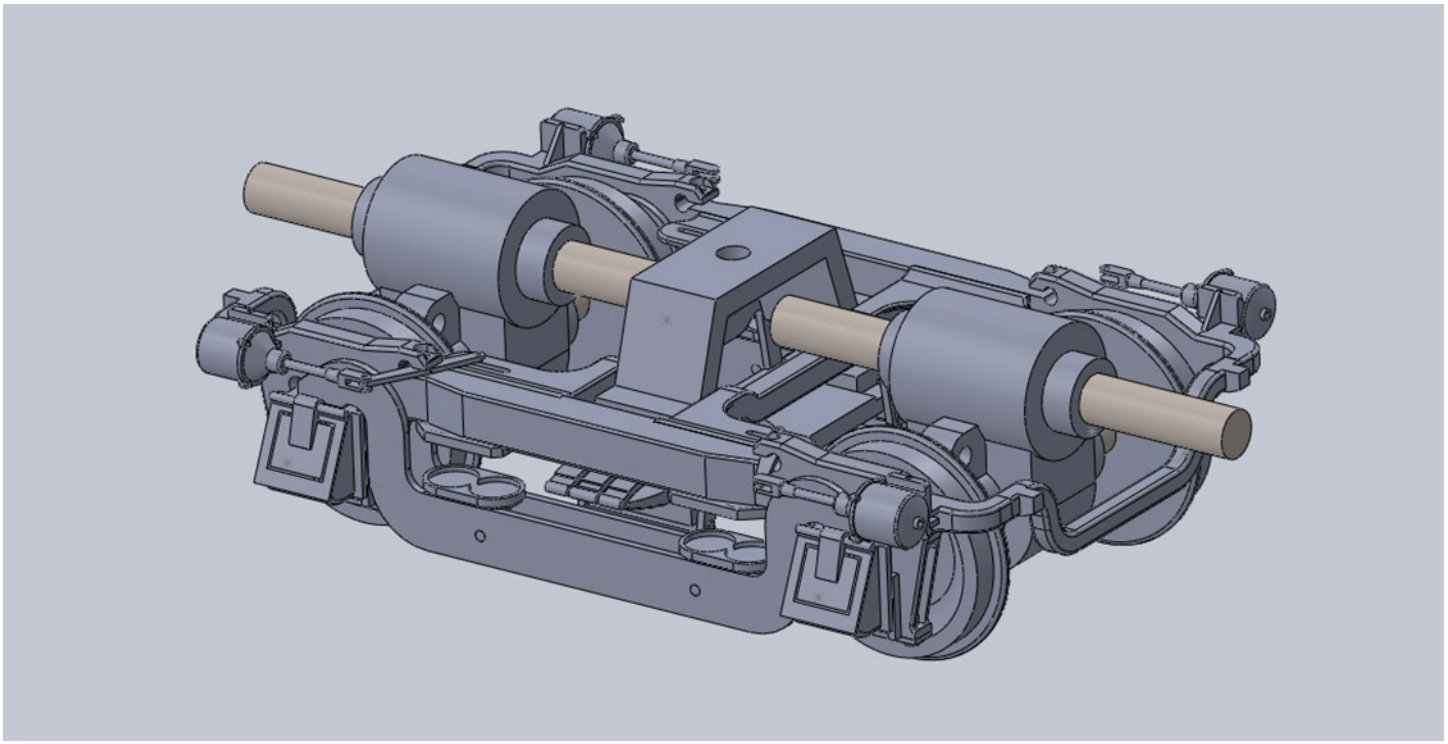
The spring design was calculated for a locomotive weight of 6 lbs. Here Lou has tested one of the trucks with a weight that the truck will carry. The journal boxes were touching the pedestal binders with no weight on the truck. The journal springs have compressed this much and the journals will float like the prototype. The trucks were designed to use commercial components and not special springs. Take these factors into your design also. Here we have a truck that looks a lot like the prototype and functions like the prototype. The truck uses a commercial drive and off the shelf springs.

AAR Type B Truck

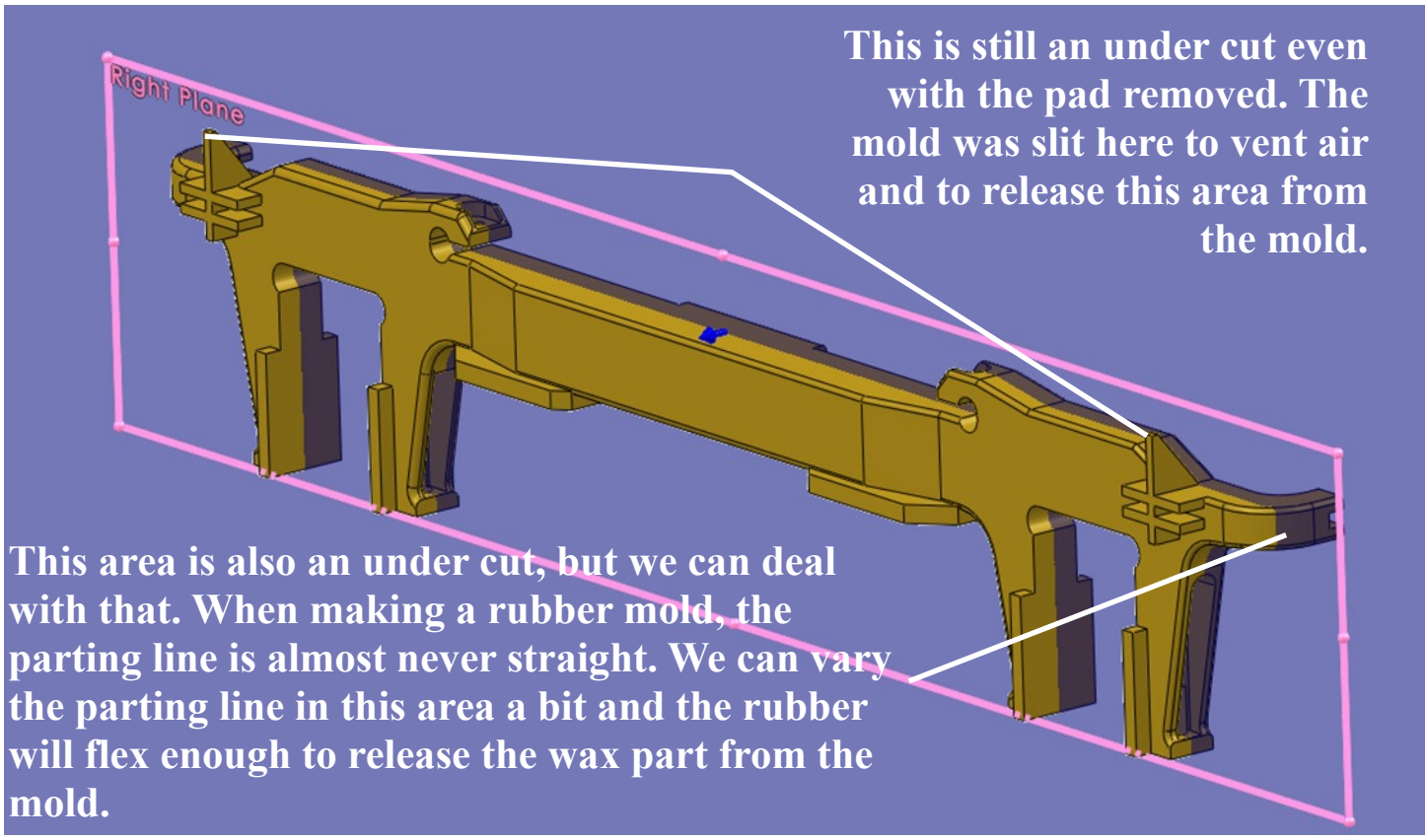
The next truck Central Locomotive works has coming is this AAR Type B truck



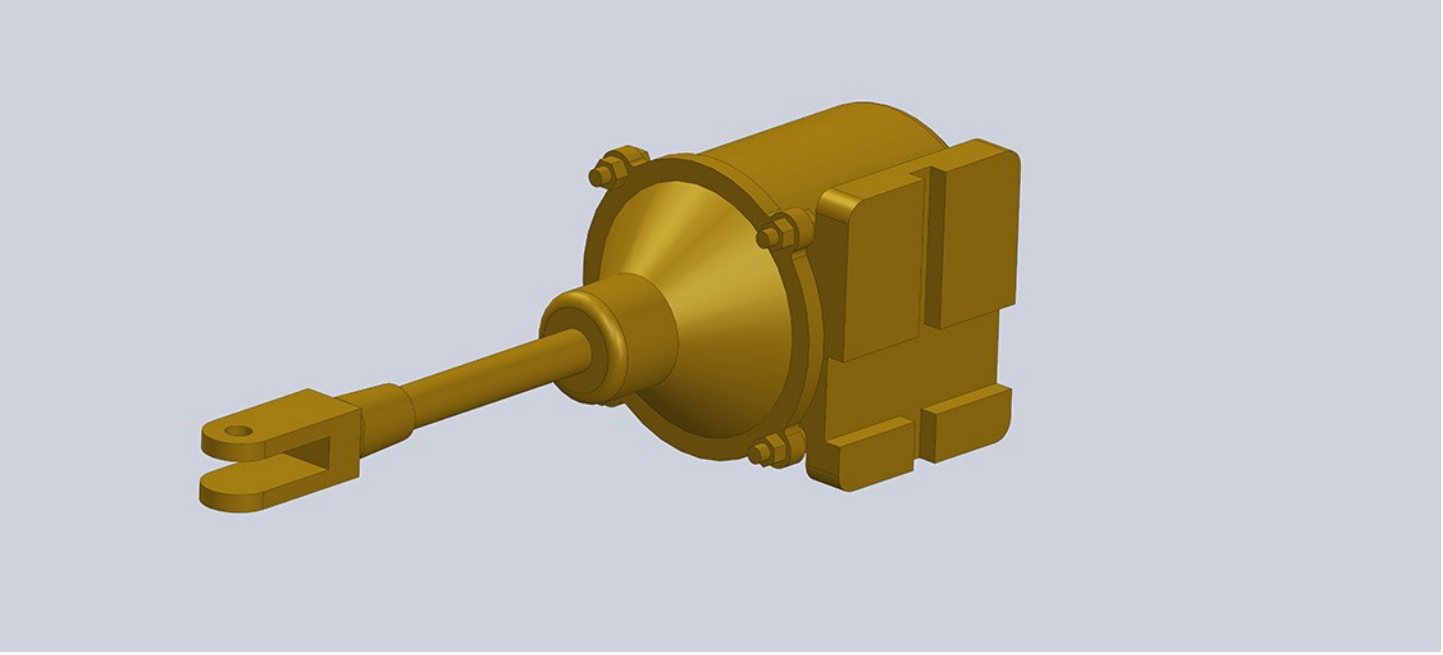
For this truck, we were fortunate to have some good drawings. Notice the pads where the brake cylinders mount. These pads will be an issue we need to deal with. The prototype truck frame was cast in one piece. When they do this, the mold is made of many small parts. After the molten metal is poured into the sand mold and cools, the sand mold is broken away. For our model, we will need to cast the side frames, transoms, and end beams separate and assemble them later. An investment casting of the whole truck as one piece would cost more than the combined cost of the parts. We will cast the side frames as one piece using a rubber mold. The rubber will tolerate some under cutting but not a lot. This is where we will have trouble with the brake cylinder pads. I will show what we did in the next few photos.



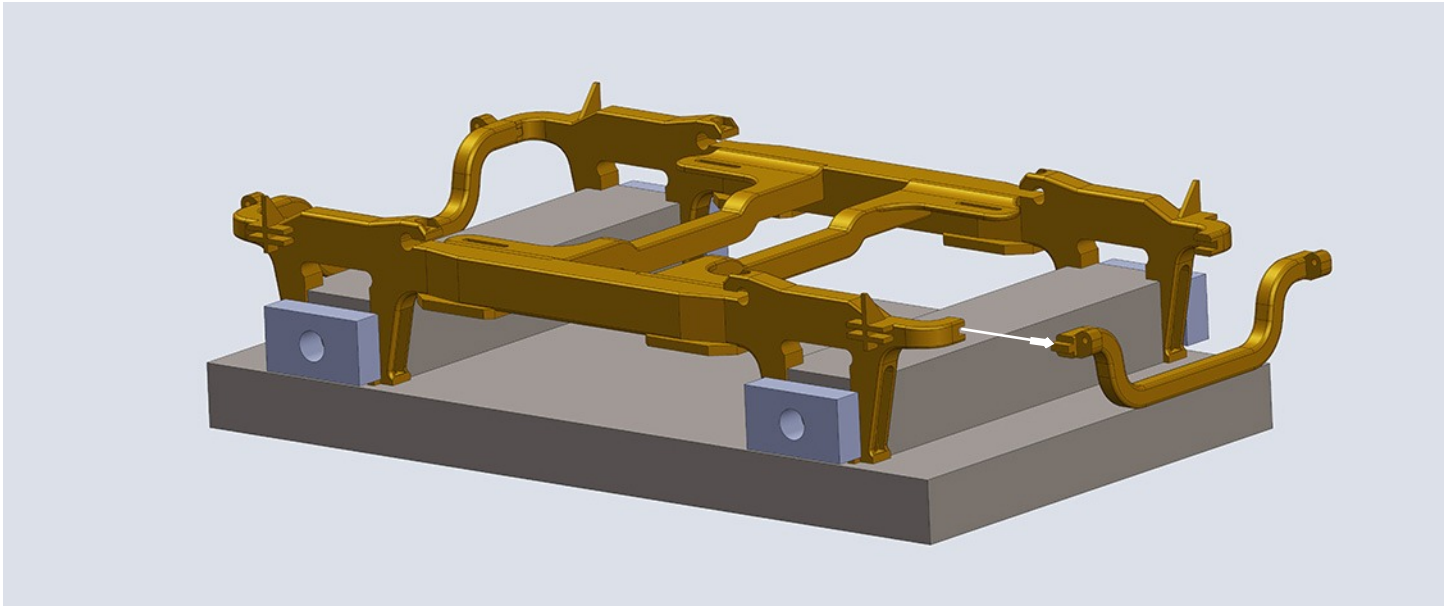
This is the drawing of the truck as we will make it. Use the computer drawing to its full advantage, and make assemblies like this to check your clearances and fits.



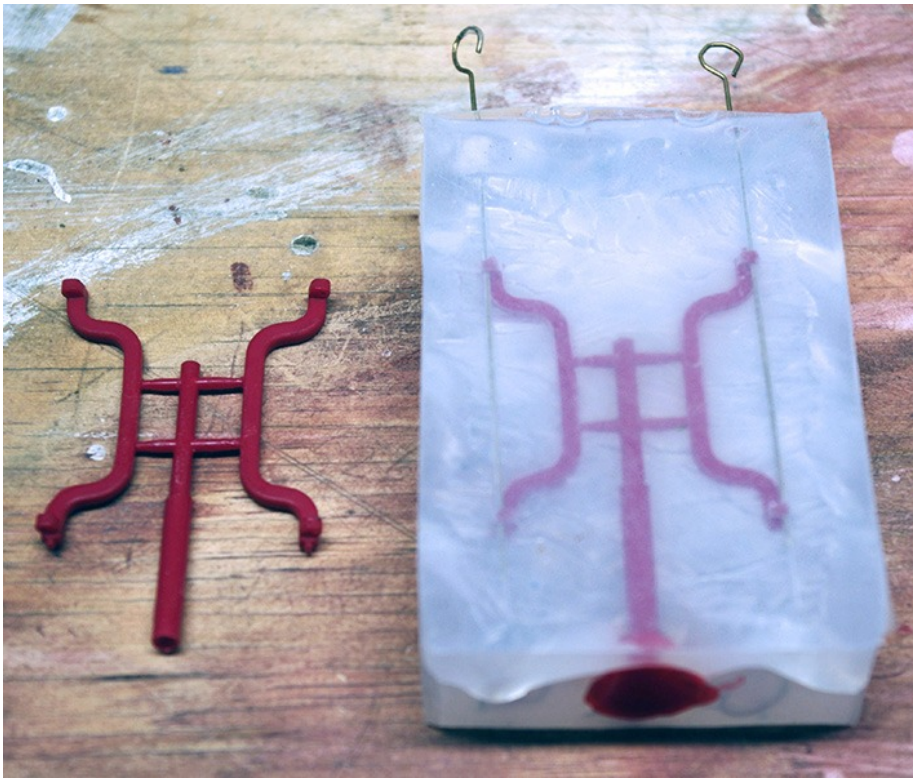
Here is the side frame showing where the mold halves will be split. There are some issues and they are shown and explained on the photo. There are pockets for the springs, but they are shallow and the rubber will flex to release the wax from the mold. The other area that will be a concern are the hollow spots in the pedestal legs. These under cuts are not very deep and part of each hollow spot is in each side of the mold. The rubber mold again flexed enough to release these parts.



For the brake cylinder on the AAR truck, I put the pad that was on the side frame onto the brake cylinder. The notches on pad locate the cylinder on the side frame. This meant there is a left and right brake cylinder, but that was less worse than trying to cast the pads on the side frames.



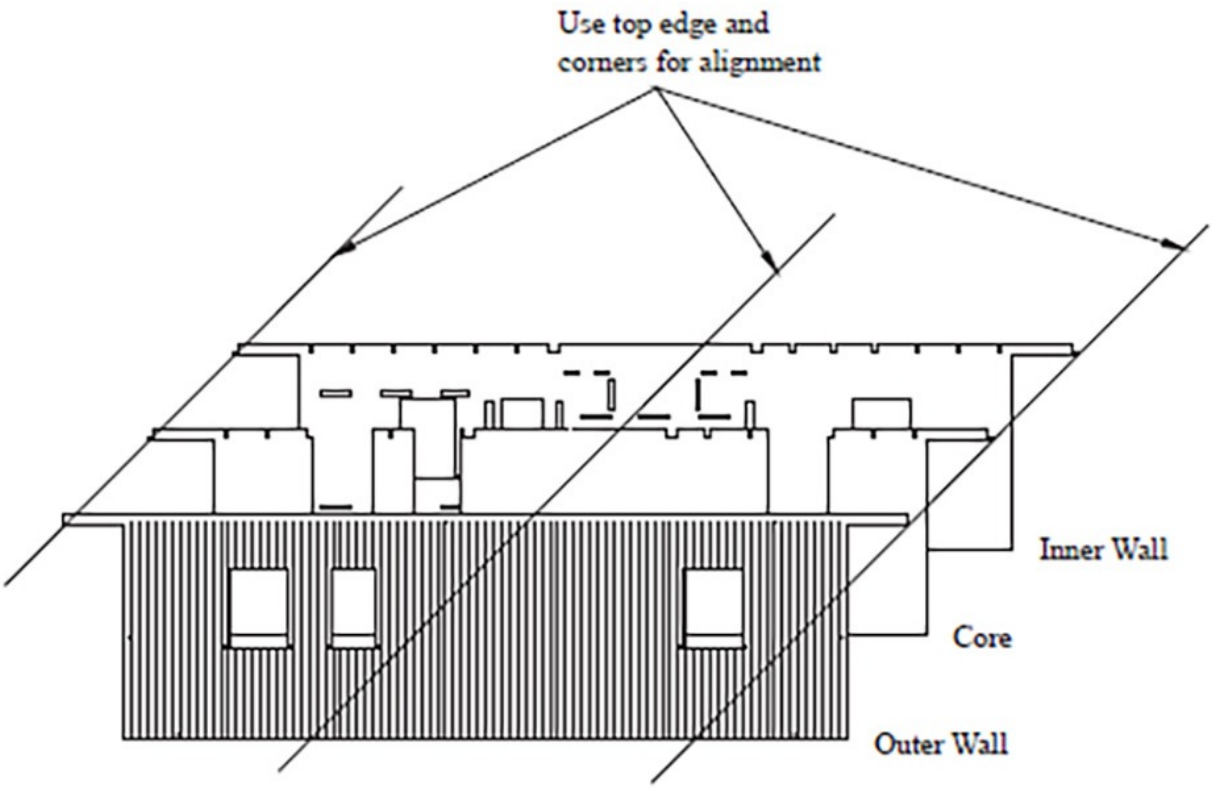
For this truck, I made an assembly fixture also. Notice the end beam has a tab that fits into a slot in the side frame. In the past, I have tried mortise and tenon joints for these locations. They look good on the drawing, but don't work well in practice. During the casting process, air bubbles get trapped in the small mortises and that causes the mortise to be filled in with brass. They are hard to clean out. I tried holes and pins and that did not work for the same reason. I ended up drilling out the holes later. The other concern I had here was how would I get the end beam into the side frame? The side frames will be held tight in the fixture and will not spread. By making the slot and tab arrangement shown here, I can slide the end beam into the side frames and solder them. The tab and slot arrangement is also easier to clean out if there are issues with the casting. The transoms are also located in the side frames with a tab and slot arrangement. This whole assembly will get soldered in the fixture so it will stay in alignment.

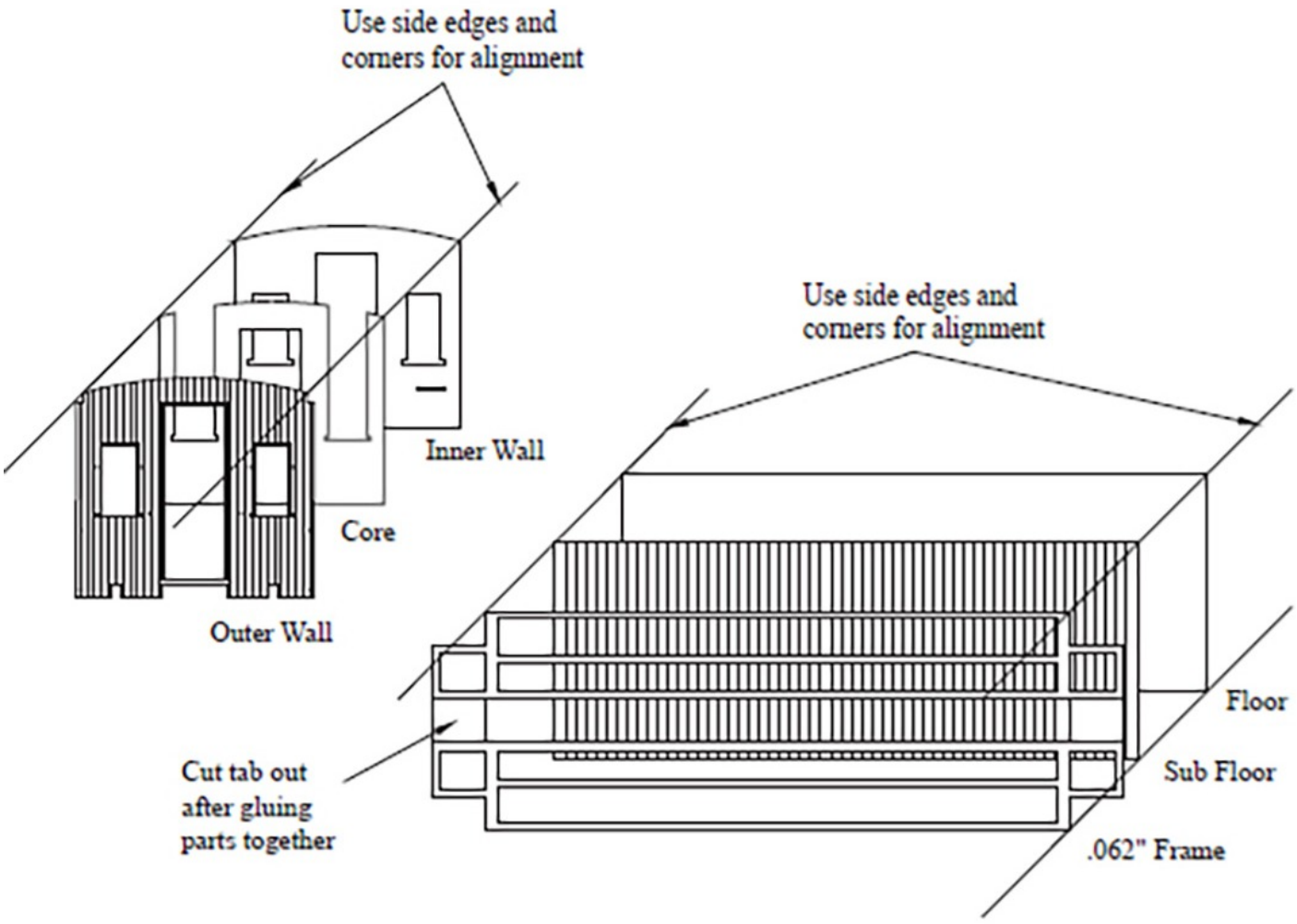


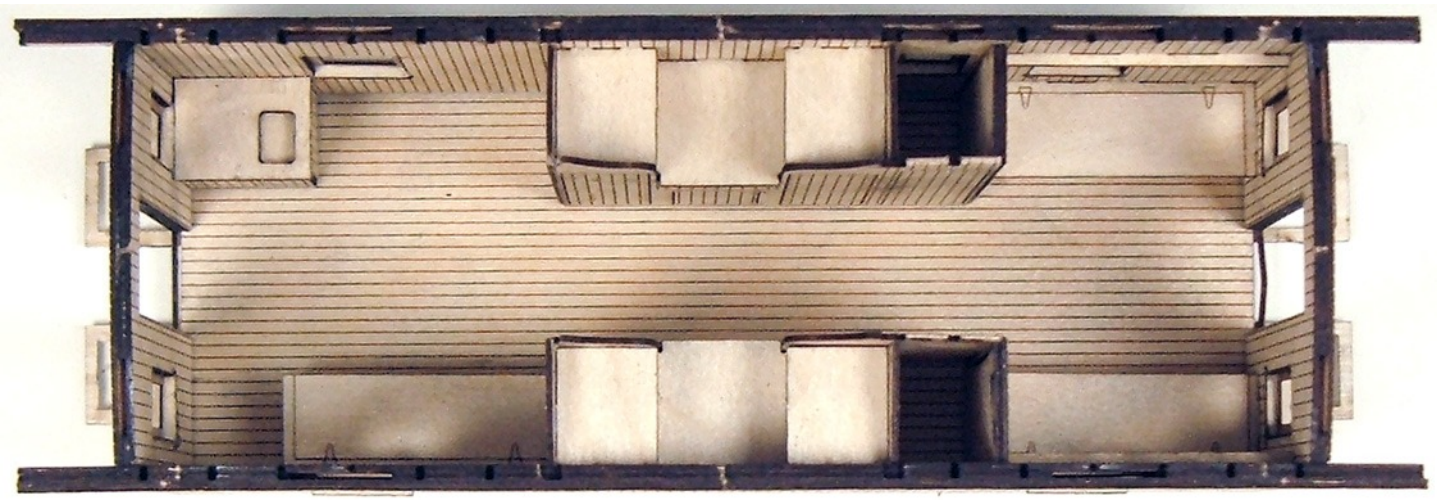
During your design process, you need to consider the capabilities of other people you will be working with or who will be making things for you. The above is an example. These are the end beams for the up coming Central Locomotive Works AAR Type B truck. We made our rapid prototype patterns from my drawings. I mounted the patterns and made the mold on the left. I mounted the patterns on the sprue the way I did so it would be easy for us to clean up the area where the sprue was. This is the bottom of the part and not very visible on a model. In addition, it is an easy area to clean with a file. I sent the photo to the foundry to see what they thought, and they didn't like it. Their concern is the brass may not fill the bottoms of the end beam,s and they have a point. My mold vents there and the wax does not have a problem filling the bottom of the mold. When the wax is cast in the investment material, it may not vent as well as my mold.

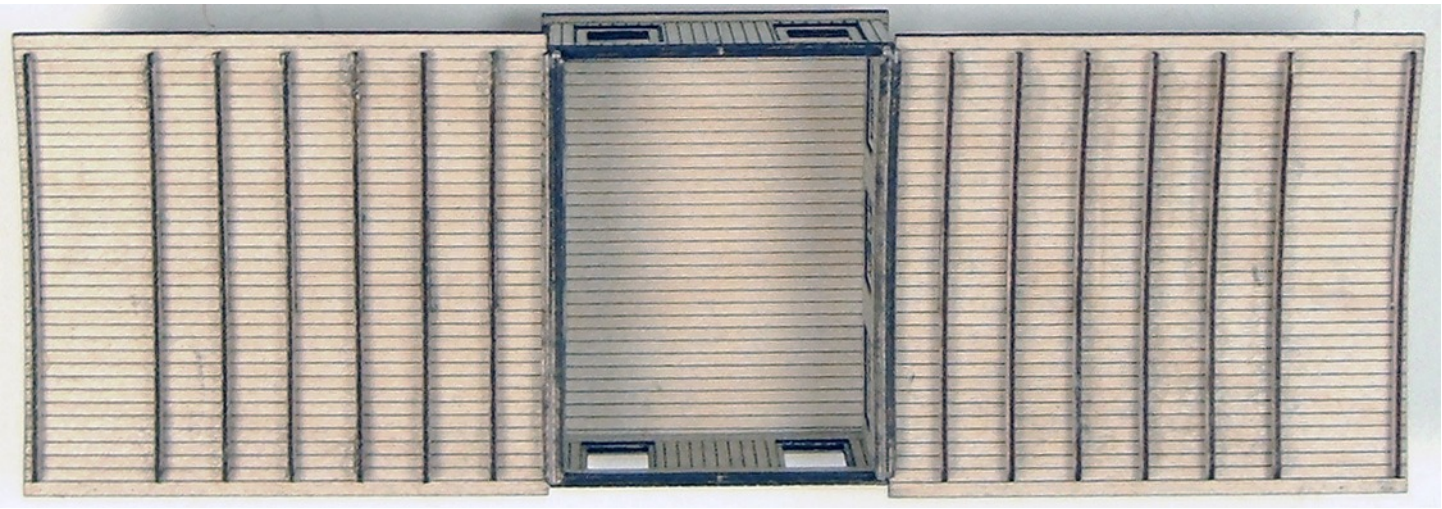
The solution was for me to make a new mold, as shown to the right, and now there is better flow through the mold. This brings up another point I have talked about in the past. Industrial manufacturers are not like the big box retail stores and will not put up with a lot of whining. They will have no trouble telling you to look elsewhere to get your work done. If you want to give them orders for many thousands of parts they will bend a little, but for a few parts, consider yourself lucky that they are even talking to you. I think the parts on top would have worked, but I went and made the new mold on the right. It keeps the peace, and sometimes you need to do that.

Mullet River B&O Caboose









This is one of my old Mullet River kits. Look at the drawing on the previous page for how the sides were laminated out of three pieces. I had people ask me if I could do these models in 1/32nd scale. I could, but it would take some time to redraw the art work for the laser machine. I was informed that all I needed to do was scale the drawing. Simple right? So lets's go through the process.

This kit was designed to use 1/32" thick plywood. That also means all the tabs and slots are sized for 1/32" plywood. During the design process, I had cross sections of the car drawn and I was able to derive dimensions for the drawing and use them in other views. In other words, everything fit for 1/32" plywood. To scale the drawing, we take 1/32 and divide by 1/48 and we get 1/32 scale is 1.502 times bigger than 1/48 scale. On our cross section drawing, the .032" plywood is now .048 thick. This is correct and all the parts on the drawing will still fit. The problem is, where do you buy .048" thick plywood? Now I need to go back through all the drawings and adjust things back to using .032" plywood. Not just a simple mater of pushing the scale button. Remember material choices are driving part of your design.

Those are my thoughts on the design process. I am a big believer in technology and use it a lot, but it is not a cure all. There are still things to be considered and thinking the whole process through is a good idea. Computers will only do what you tell them to do. If you say, make this part twice as big, the computer will do that. It will not check to see if you can get materials in the new size or if your part can be cast and so on. The computer does give you the ability to easily modify parts and check fits in assemblies. Now we have the ability to make what we can draw using rapid prototype technology. 3D printing is wonderful technology and able to do a lot for us, but there are limitations and issues. Dan will be getting into some of what he is finding out in his article.

Dan here… next time we'll look at the art of 3D printing. Yes, it's an art, it's frustrating, it will make you happy and then the next time tear your heart out. All the fun of resin printing. While Glenn's drawings are superb in every way, unless you know how to set up the timing and supports within the slicing software, you will fail. We'll talk about the extra software you will need, as well as, the accessories you will be using and a few things that you can make yourself to keep costs down and so much more.

As a heads up, I bought the Elegoo Saturn MSLA 4K 8.9" Monochrome LCD Resin 3D Printer. Cost was around $500. Note they also make a smaller Mars which I have seen around $250. The difference is the build plate or the size of the object you can print. The Saturn's is 7.55in x 4.72in x 7.87in while the Mars' is 5.08in x 3.15in x 6.30in.

There are new 8K printers coming on-line also, but for the extra resolution looking at real models, I might hold off till their pricing comes down. I bought the Elegoo because a few of my friends had them. There are other great printers out there, but I wanted to get help when I needed it, so that's why I went with the Elegoo.

New Tracks

Mentor Definition: A Trusted Counselor or Guide

By Contributing Editor Jim Kellow MMR

Modeling with Mentoring from Talented Model Builders and even from Modelers in other Hobbies

Manufacturers and Modelers who may help your Modeling

New Tracks Announcements

Merry Christmas and Happy New Year.

I hope Santa fulfilled all your modeling wishes and the New Year provides you many model building opportunities.

We are adding a new feature: The "New Tracks"After Show with moderator, Clark Kooning MMR

A lot of you don't get enough of "New Tracks" in our regularly recorded show, and after we stop recording, you stay on Zoom for what has been unofficially named the "After Show" All of you on YouTube are cut off when the recording stops, and therefore do not know about the After Show. Well that is about to change.

Clark Kooning MMR, has agreed to moderate an official "After Show" segment that will be a part of our regularly recorded "New Tracks"show. That means that everyone on Zoom and YouTube will be able to see and participate in it. Clark Kooning MMR is a very talented and knowledgeable modeler that I believe will bring a new view to the show and help make the total show more informative and useful to modelers of all skill levels. Please welcome Clark to the "New Tracks" team. Thanks Clark for your friendship, and help, welcome aboard.

Another Step Forward for "New Tracks"

"New Tracks"is now a member of the Hobby Manufacturers Association. I am looking forward to meeting the manufacturers in various hobbies that I may never have heard of that can be beneficial to my modeling and become part of "New Tracks" articles and Zoom shows. I have been very well received by the Association, and look forward to being able to make a contribution to the organization. If you are not familiar

with this organization, I encourage you to visit their website and to see their new YouTube video on Modeling. https://www.youtube.com/watch?v=bxrwl13N1Rc&ab_channel=HMAHobby

Subscribe to our Website and YouTube Channel

We currently have over 1,000 subscribers and hope you will join us. Please subscribe to our website, newtracksmodeling.com. You will need to verify the confirmation email to get the latest information about what we are planning on our shows and get the Zoom log in link. Also, please subscribe to our YouTube channel, New Tracks Modeling, click the BELL and hit ALL to get notices about all our live streaming YouTube shows and view our past recorded show videos.

Please also send the Zoom and YouTube log in links to your friends so they can also join in the mentoring and fun of our shows. Thanks in advance for your help and support. Word of mouth is the best way to advertise our shows.

Want to Help? Volunteer to participate in a segment of our show, or help produce our Zoom/YouTube shows.

We are fortunate to have three new volunteers helping us produce our shows. Chris Smith, Dennis Kamper, and Kris Blackmarr. Thanks to all of you for your help.

Everyone who watches our shows has a contribution to make. Offer your help in participating or making and producing our Zoom and YouTube shows, or help with our website. Any amount of time and help you are interested in providing is greatly appreciated.

Our show is a live participation show, not just a sit and watch show. Keep in mind that mentoring is a two way street. It requires communication between modelers who want to share their knowledge and skills and modelers who want to learn their skills and techniques to improve their modeling. All skill levels are welcome and needed. Contact me at jimkellow@newtracksmodeling.com and let's discuss.

Our "Build Along" modeling experiences give you a personal mentor. Join in a great learning experience.

Kershaw Models

Starting February 9, 2022, Paul Reeves, owner of Kershaw Model,s is teaming up with Martin Breckbiel MMR who will build his O scale kit called Stanzack's Bar. This is a laser cut structure with detailed front and rear. Paul says it is an: "easy build with craftsman results. Comes with adhesive backed shingles for added realism. Footprint is 41/2" x 5"."

There is a 20% discount off the kit for Build Along modelers who use the code word "New Tracks" On their order for the kit between January 9, 2022 and February 16, 2022.

Sea Port Model Works

Starting February 23, 2022, Bruce Nickerson, owner of Sea Port Model Works, will start building his Kit #H136W, a Waterline kit of a 53' Coastal Steam Passenger Ferry in HO scale. Bruce is offering a 25% discount off the price of the kit to New Track modelers who want to build the kit along with him.

This specific vessel would have been designed, built, owned, and operated by local families, captains, railroads, or investors, etc. The steamer that we present through this kit is similar to the one we are familiar with called the Sabino or originally called the Tourist. The Sabino is up and running in Mystic, Connecticut at the Maritime Museum. This model is not a model of the Sabino, but similar, and would have been used for very similar purposes. It will carry a lot of passengers, mail, and heavy cargo and attempt to keep schedules. It will make multiple stops at various islands and mainland harbors to deliver and pick up mail, produce, dry goods, livestock, groceries, etc. This kit, with some minor modifications could be converted to a double decker which would increase passenger capacity.

This kit represents a small steam powered vessel working on the east or west coast, lakes, rivers, or oceans carrying on commerce that was vital to the growth of our nation, from the mid 1800's to mid 1900's.

There is so much to say about these steam powered vessels that have a distinct parallel with our nation's history. I strongly recommend that you read up on the subject. Here are a few great books that you might have a hard time putting down.

- STEAMBOAT DAYS by Fred Irving Dayton
- STEAMBOATS YESTERDAYS (ON CASCO BAY) by Capt. William J Frappier
- STEAMBOATS of GLOUCESTER and the NORTH SHORE by John Lester Sutherland
- STEAMBOATS COME TRUE by James Thomas Flexner

Bruce was recently on our Zoom show and this "BUILD ALONG" is a result of modelers' interest in his models during his presentation. If you have not built a ship, before Bruce says don't worry it is not much different than building a craftsman structure kit since the hull is a resin one piece part and there is very little rigging to do. I am looking forward to this as it is our first ship building project for the show.

Thanks Bruce for your help.

Hunterline

Starting March 30, 2022, Rick and Maureen Hunter will start building a Hunterline 50' Queen Post Covered Bridge. Kits will be available in Standard or Narrow gauge in N, HO, S, and O scales. This time, they plan to video the segments and pre-send them to whoever will be doing the Build Along with them. They will also build the model live on each of the show segments. More details, including the price discount for modelers doing this Build Along, will be available soon on our website newtracksmodeling.com.

Wit and Wisdom Models

Starting April 6, 2022, David Vaughn, owner of Wit and Wisdom Models, will start a Build Along of one of his new John Armstrong inspired kits. Details including what scales will be included price discount for "New Tracks" modelers, will be available soon on our website newtracksmodeling.com.

Conowingo Models

Starting May 25, 2022, Chris Course owner of Conowingo Models will be building one of his new kits. The kit is called "THE KELLOW STATION". Chris said since I am a Trolley modeler, it will be a Trolley station. What a great honor to have your name on a model kit. Thanks Chris. I can't wait to see it. More details can be found soon on our New Tracks Modeling website.

More Build Alongs to Come

I hope you want to participate in all the "Build Alongs". The modelers and manufacturers, who are making these events possible, are doing them to try to help you improve your skills and give you more enjoyment and confidence in your modeling. They are a true learning experience that have helped many modelers. Join us.

This program is providing modelers, their own personal mentor on our shows. So if you have been sitting on the sidelines for awhile, give model building a try. I believe you will have some fun. It is really great for me to hear the enthusiasm and excitement from first time or previous armchair builders about their experiences by having participated.

Please show your support for these events by your active participation. Thank you.

I am looking for more modelers and manufacturers to be involved in future "Build Alongs" in 2022. I have several scheduled so far, but if you are interested please let me know. Remember a model builder can select the dates, manufacturer, and specific kit, you want to build. A manufacturer can build his own kit, provide a model builder, or I will find someone to build their kit. Contact me at: jimkellow@newtracksmodeling.com.

Other Modeling Segments on our Zoom Shows

"Watch Me Build"

These segments which are meant for modelers to share their scratchbuilt, kitbashed, or kit building efforts, and discuss their modeling skills and techniques so others can benefit. These segments can be for one or more shows, depending on the details included for the model building presentation.

You may never have shown your modeling before in public for a variety of reasons. I assure you I think you will enjoy and benefit from participating in these segments. For example: October 6, Kris Blackmarr started his soapbox modeling series. This is great modeling; presented in detail, by a talented modeler. Join us and see how he builds his models and why he calls them soapbox models. Contact me by email at jimkellow@newtracksmodeling.com, or if you would like to discuss your idea by telephone, you can get my contact information off our website

"Ask A Modeling Question"

These segments are where viewers can ask modeling questions and get answers from other modelers on the show. It is a forum where viewers can help each other solve specific modeling problems or offer advice on modeling techniques. We have a form on our website you can use to ask your questions. This allows us to schedule the appropriate time for this segment on each show. Don't hesitate to ask questions, after all that is how we learn new things.

"Remembering Old Kits"

Modelers will be building kits from our distant past that are either no longer manufactured or hardly available. Kits whose names we may have forgotten, but when we hear their name again, bring back great memories from our youth and remind all of us what modeling used to be like.

The first two segments had Martin Breckbiel, MMR building a Van's Car Shop and a Train Craft kit. As with our "Build Along" segments, these will also be recorded and available on our "New Tracks Modeling" YouTube channel. I hope you tune in to our Zoom shows and check them out. If you have an old kit and want to participate, let me know at: jimkellow@newtracksmodeling.com

"Let's Go To The Hobby Shop"

Meet local hobby shop owners who may become your new best friend. I must admit, it has been a very long time since I have been to a hobby shop.

Anita Walter from California was our first hobby show owner on our June 9 show. I hope you were able to meet this lady who brought back so many great memories of past hobby shop visits for me. Actually, she planted this idea in my mind. So after floating the idea of asking hobby shops to appear on our show and getting positive comments from viewers, I decided to start this new segment.

Next you met Mainline Hobbies on July 28, and Nick's Trains on August 7. All of these hobby shops were recommended by viewers and after talking with the owners, I certainly understand why I wish I lived closer to one of them so I could visit. More hobby shops are scheduled in future shows including Mike Zucker, owner of Spring Creek Model Trains, on February 23, 2022.

I recently talked with the National Retail Hobby Shop Association and wrote an article for their publication called "A Modelers View" where I talked about the importance of model builders and mentoring to the hobby shop industry and the issues that we both, modelers and hobby shop owners, have in common. It was published in the Association's October member only magazine, "Hobby Merchandiser".

I believe it was very well received and I have already scheduled some of their members on future shows. The first member will be Steven Elliott a member of the NRHSA Board of Directors and owner of Fundemonium hobby shop on February 9, 2022.

If viewers have a hobby shop you recommend to be on our show, or you are a hobby shop owner who is interested in being on our show, please let me know. There are not many hobby shops left around the country and I believe they need to be recognized and supported. So please tell me about your hobby shop at jimkellow@newtracksmodeling.com, and I will ask them to be on our show.

Show us Your Modeling on "My Build"

We have a monthly segment called "My Build" on our show where modelers can show their modeling. The next ones are scheduled for January 19, 2022 and Feb 16, 2022. To participate, all you have to do is send in a photo(s) with captions and your name to moderator Chris Coarse at Chris.Coarse@newtracksmodeling.com to get included in a "My Build".

Now Let's Meet Some Manufacturers in Our Hobby

Pre-Size ModelSpecialties with owner Steve Wolcott

My interest in model trains followed a common path. I got an American Flyer train set when I was around 5 years old. I played with and acquired American Flyer trains until the normal distractions took over in high school. What those trains taught me included learning how to finish off my parents' attic so I could fill it with track and trains, and learning how to repair them and wire layouts. I found learning these skills and working

with my hands very satisfying. This, in part, led to my life as a farmer/rancher, even though I was a city boy.

So when my own boys vacated the room I had built intended for a layout, I thought the time had come. My wife suggested that if I wanted to do something with model trains, maybe I should think about something that made money. About then I saw an ad in a magazine that Pre-Size Model Specialties was for sale and that the sellers would teach me how to do resin casting. I was intrigued with resin casting. It seemed like the right technology for S and O scales because it lends itself to making copies in the dozens. HO & N typically calls for hundreds or thousands of copies which is better suited for plastic injection molding. I looked at the Pre-Size website and found that along with many HO and N scale products, they actually had products for S and O scales.

Below: Hoosac tunnel portal in HO.

Below right: O scale double bridge abutment.

So I bought the company and learned how to cast tunnel portals, bridge piers and the like, which is relatively simple because they use 1-piece molds. And I learned how to make molds because they wear out after 20 or 30 castings. And I started thinking about what new products were needed, like a double tunnel portal in S scale. I get calls asking for new products like the Hoosac Tunnel portal in HO, and the Soldier Summit tunnel portals in O. These are interesting challenges to scratch build the masters.

In the back of my mind, I knew I wanted to expand into making rolling stock kits. The S scale lists regularly delve into "I wish someone would make this car, or that car". And as an S scale modeler collecting models for my someday layout, I had the same wishes. So when an outfit that had been commissioned to produce a composite GS gondola in S backed out after producing some prototype parts, I acquired the project. Now, I know many model railroaders are intimidated by kits. What I got for the GS gon was parts for a flat kit. I saw that other resin kit makers were starting to make 1-piece bodies, making assembly much easier. I

S scale kits of Greenville gondola and coil covers.

decided that's what I want to do. So, I assembled a car body adding details that could be part of the casting. I made a frame from scratch. Then I needed some help.

Casting a 1-piece body is a more complicated mold-making and casting project. I attended my first Prototype Rails meet in Cocoa Beach so I could go to Tom Madden's seminar on casting resin rolling stock. Then I continued learning by trial and error. I did get the process to work with the GS gondola. Of course, a kit

TTX is a built S scale kit of a TTX flat car.

requires a lot more than a car-body casting. There are parts that must be cast separately such as frames and detail parts, and grab irons, brake systems brake wheels, etc. Decals have to be found or custom made. All this requires research in order to get the model true to the prototype. Getting all the pieces together and packed in a box is a job. And then I have to assemble one of them, hoping it all goes together as planned, taking photos as I go so I can make the instructions.

This is a long involved process with many different tasks. My first kit, the GS gon was already started when I took it on. What happened next was I was approached by Jim Kindraka and Scott MacKenzie with a proposal for a 60' TTX flat car. Jim had done the research, Scott did the 3-D drawings, and they sent me a 3-D printed frame. I did a little work on it so it could be cast in resin, had the wood deck pieces laser cut, got the detail parts together and had my second kit.

There is a pattern here. Collaboration means better results, and more results. There are others out there who are better at some things than I am. When we put our heads together we produce a better model. And even though we are all doing this part-time, we can get more done together.

This same team, Scott, Jim and I, next produced a Greenville corrugated gondola kit. Then coil covers for this gondola. Then coil covers for the RTR Thrall gondola made by S Scale America. Then I made a steel-sided version of the GS gondola and beet extensions and beet loads for both GS gons.

Now I'm working on a 50' single sheathed automobile boxcar. This time I was supplied with parts for a flat kit by Bill Green who made the prototype, but never got past having a few flat parts cast. So again, I added details, assembled a body and scratch-built a frame. Now I'm gathering detail parts, making some grab irons and hope to have a kit out this fall.

I am not retired from farming and ranching, but I have more free time in the winter to pursue model railroading. Pre-Size is as much a hobby as a business, it is not a livelihood. It gives me satisfaction making

things, and making things that help others realize their dreams. As the saying goes, it is never too late to have a happy childhood.

In talking with Steve, I asked him to offer a Contest Drawing for my readers. He immediately agreed and said he would offer a $50.00 Gift Certificate for any of his products. Thanks Steve for your very generous prize for our Contest Drawing Winner.

How to Enter Pre-Size Model Specialties Contest Drawing:

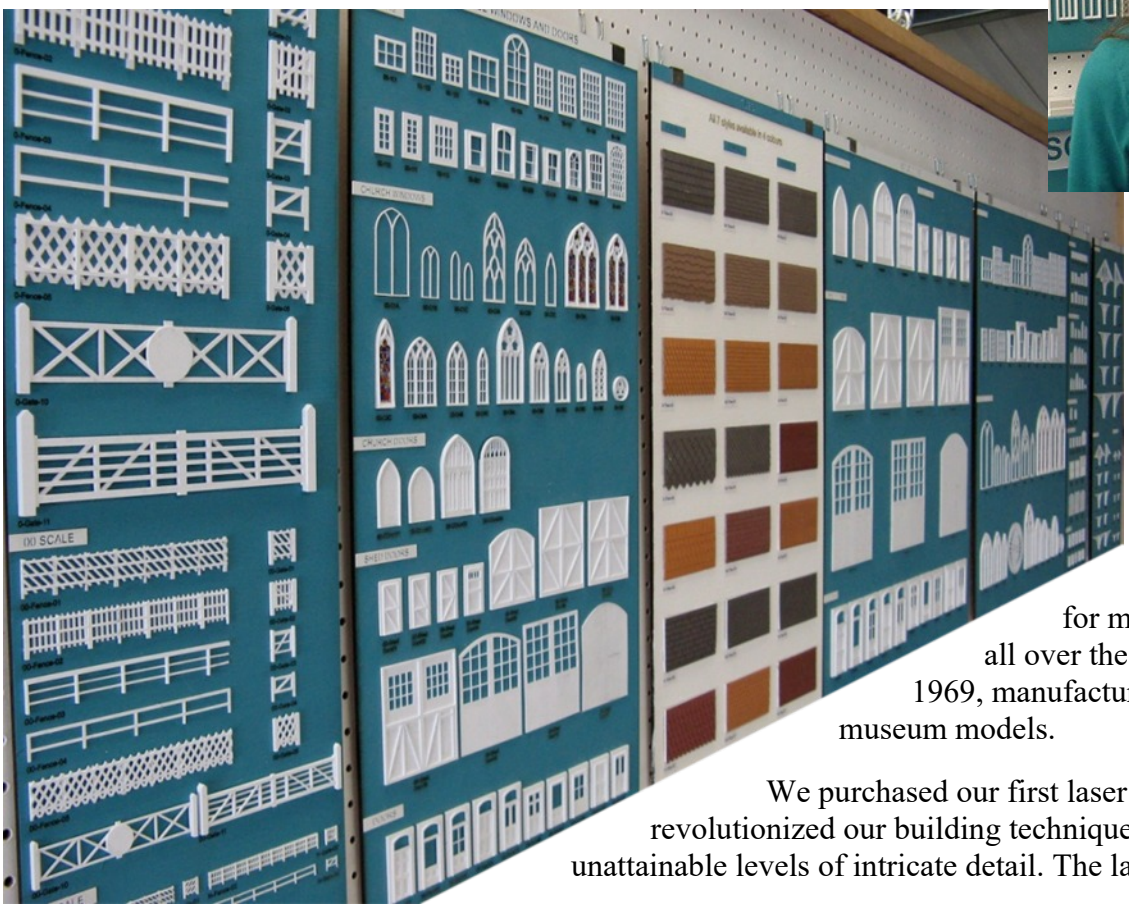
To enter the Pre-Size Model Specialties drawing, each modeler must complete the form here. The winner agrees to use the prize and share it with us in a future article.

I look forward to seeing the winners use of the prize in his/her modeling, and sharing it with you in a future article. Good luck to everyone.

Thanks Steve for all your help and interest. He can be reached at Steve.Wolcott@sscaleresource.com.

York Modelmaking with owner Julie Lightburn

I first heard about this Company in 2019 and have talked with Julie Lightburn, the owner several times since then. Julie is extremely busy, but took the time to provide the following comments about her company. I hope to get her involved in a future "Build Along" on our Zoom show.



"York Modelmaking offers a laser-cutting service tailored to the needs of model railway scratch builders via their website: www.YorkModelrail.com We are based just outside of the "Railway City of York" and work for model railway enthusiasts all over the world. We started in 1969, manufacturing architectural and museum models.

We purchased our first laser cutter in 2007 which revolutionized our building techniques, giving previously unattainable levels of intricate detail. The laser-cutting process also

sped up the manufacturing of the building components, making these quality items affordable for hobby modellers. We launched our initial range of laser-cut architectural components for railway modellers in 2008.

York Modelmaking's unique collection of architectural components includes a wide range of windows, doors, valances, canopy brackets, barge boards etc as well as footbridge kits, line-side detailing and building kits. The website is laid out by scale and category for ease of finding what you are looking for, but remember that if you need a particularly large or small version, you can go to a different scale. For example if you need a small toilet window for an 0 scale model, a 00 scale window would be most suitable.

Everything is designed and laser-cut in house so if required, we are able to alter the designs, sizes and materials to meet exacting individual needs. This way we are able to provide affordable products in all scales and weather resistant materials for garden railways."

We also offer a bespoke service for anything not available readymade – whether you need a single window or a full set of station buildings. We can laser-cut individual components, design a kit of parts for you to build, or fully complete the model for you. We can work from photographs and hand sketches, but if you are able to provide your own computer drawings it will save you the cost of having these produced. Do look at the information sheets on the website or get in touch for advice before starting your drawings for laser-cutting.

There's also information on the website about material options and the glues to use, etc., but if you don't find the information you're looking for email your queries to laser@yorkmodelmaking.com. With over fifty years of architectural model making experience, we are able to provide advice and suggestions for materials, building techniques and help with problem solving.

We can cut up to 8mm thick sheet material, but can engrave onto the surface of deeper items. Most commonly, we laser-cut Rowmark Plastic, acrylic, timbers, MDF, card, and stencil materials. We can't cut any metals or PVC / Styrene (plasticard) or anything else that creates toxic fumes when laser-cut. We can provide advice on the best materials for your project.

We take a great pride in the quality of our work and our bespoke service that enables all railway modellers to produce models they can be proud of. Whether you're a total beginner or a seasoned professional modeller our precision-cut components and kits are easy to put together.

As well as catering for all scratch-building requirements, our architectural parts are great for up-grading off-the-shelf card and resin kits, to add realistic detail."

Many a modeller has wished they had heard of York Modelmaking's range of roof slates a lot sooner. The self adhesive strips of tiles are so fast to use, giving a perfect layered texture. With a little weathering and a broken tile here and there a great sense of realism is quickly achieved."

In talking with Julie, I asked her to offer a CONTEST Drawing for my readers. She immediately agreed and said she would offer a £40.00 Gift Certificate for any of their Products or Bespoke services. Thanks Julie for your very generous prize.

To enter the York Modelmaking drawing, each modeler must complete the form here. The winner agrees to use the prize and share it with us in a future article

Whether you've used standard items or have commissioned a bespoke order, Julie would love you to send her photographs of your model; she enjoys seeing what they have helped achieve and the creativity of all of their customers; and most importantly, being able to share the photographs, and other modeller's tips and techniques so generously passed on, all go to help other railway modellers.

Julie can be reached at laser@yorkmodelmaking.com. Thanks Julie for your interest and help.

Now, lets go to Scotland.

PPD Ltd with owners John and Stuart McCartan

John wrote: "Just to give you a quick history of the company. My Dad was a photographer and often took pictures of Glasgow based steam trains in the fifties and sixties. This interest lead him to making his own layout and he looked into different ways to make model loco nameplates. The etching process was the best way and from this idea PPD Ltd. was formed. I have copied the text from the website below for further info.

John McCartan

Precision Photofabrication Developments Ltd. (PPD Ltd.) Is a family run business located in Argyll on the west coast of Scotland, formed over 40 years ago by Jean and Ian McCartan, PPD Ltd. is now owned and managed by their sons John and Stuart. We are a family business that has grown over the years through attention to detail, competitive costs, and by treating every customer with the same care and respect. We export throughout the world and supply many high profile companies and also the individual hobbyist. We are happy to discuss any project or ideas that you may have to help you make them into a reality."

In talking with John, I suggested he offer a Contest Drawing and he immediately agreed. He is offering a great prize to the winner. The prize is a free Photo-tool for a project. (standard sheets are around A4 to 12"x12") and 1 free brass sheet of that tool. I look forward to seeing how the winner uses the etched parts in their modeling and sharing with my readers in a future article.

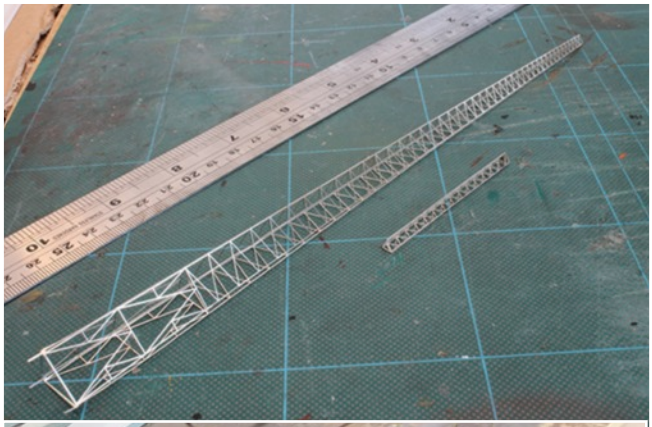
To enter the PPD Ltd drawing, each modeler must complete the form here. The winner agrees to use the etched parts in their modeling and sharing with my readers in a future article.

John also provided this information: "Here are some pictures that are a mix of

customer pictures and a couple of one of my father's locos, a Black 5 Stanier and Golden Arrow Pullman. This and the Night Ferry Pullman are interesting because they were used to travel from London to Dover and then onto France on a ferry and then onwards to Paris.

My dad and I used to buy and build kits when I was young and then he started the company and now the model rail business is a critical part of our business.

We are happy to advise modellers of the best way to achieve their project. We advise on metal thickness and which metal to use.



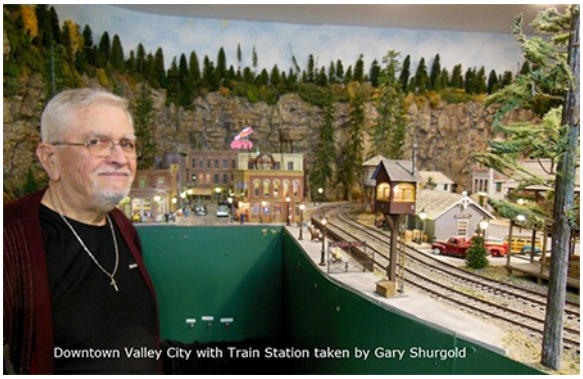
The LNER brass loco is from a customer who sent us the CAD and we etched the sheet for him to build up the model you see

The Duncan Hunnisett pictures show a radio tower we etched in Nickel Silver and the other one shows it installed on the layout. We also etched the grills on the Diesel unit picture.

I have also put in a photo of one of the early Harry Potter parts we made for the Golden Snitch just to show other uses of etched sheets".

Thanks John for your help and interest. You can reach John at John.McCartan@oscaleresource.com to discuss your projects and their services.

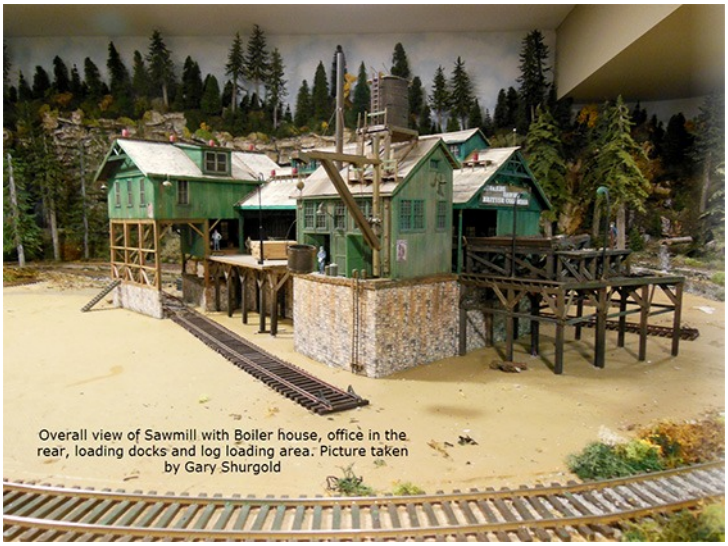
Now let's meet some Talented modelers and see some of their model building


Downtown Valley City with Train Station taken by Gary Shurgold

Patrick Rivard

My name is Patrick Rivard. I live in Chatham Kent which is in Southwestern Ontario, Canada. I worked as a cabinet maker in my latter years for my father's business. We also worked a Sawmill business for the life of the business.

I was introduced to the hobby when I was in my early years. As usual, I received a Lionel train set for Christmas. This of course got me interested in the hobby for years to come. I did a lot of reading of model train magazines at that time. There of course, was a time where I left the hobby to pursue other things. I am a licensed marine outboard and inboard outboard mechanic. I did continue to build many kit models as the years passed before getting married.


Overall view of Sawmill with Boiler house, office in the rear, loading docks and log loading area. Picture taken by Gary Shurgold

After my marriage to my wonderful wife Mary, I became interested in Garden Railroading. I started a hobby shop from my home in the late 80's, specializing in model trains, especially G scale. This was my introduction into a deeper understanding of the model train hobby.

I was fortunate to meet a lot of good modellers while I was in the business. I had joined the local model train club and made a lot of good friends. The people encouraged me in the hobby were Gary Shurgold, MMR, Don Eastman, MMR, and Ed Hayden MMR. As I progressed along, I learned a lot from trial and error.


Scratch built Planning Mill, interior. Picture taken by Gary Shurgold

During my early years in the hobby, I became a life member of the NMRA. We eventually sold our home and the business and moved to a condo type home. I decided at that time to move into O scale. I found this size to be easy to super detail.

The one challenge I had was the size of the room for O scale modeling. I spent many a day for about a year designing my layout even before building it. I used many resources, talked to many friends in the hobby and came up with a viable plan. Twelve years in the making and a lot of heart and soul poured into that small room in the basement. The layout is fully freelance.

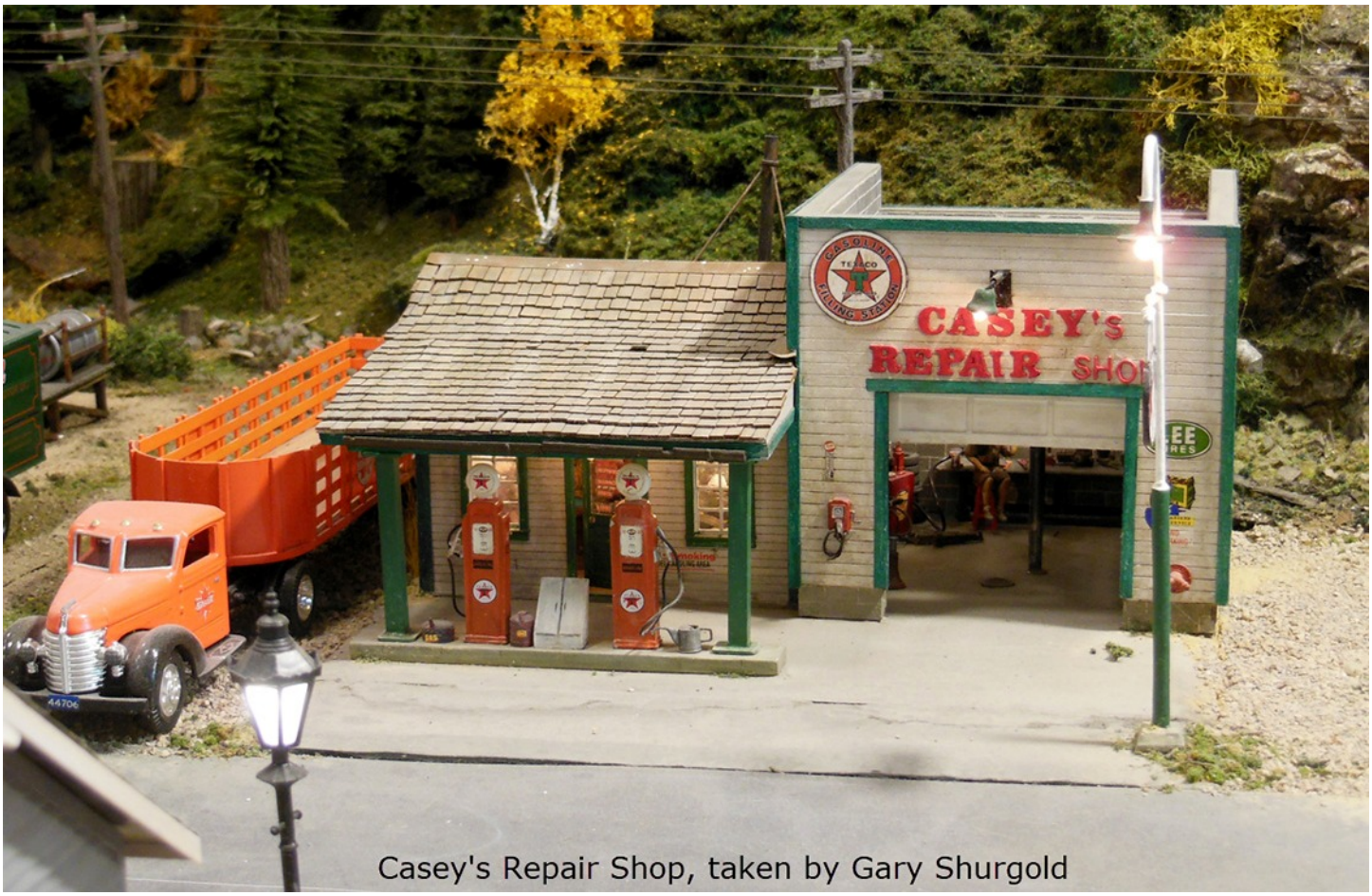
I was given a bridge to install as well as two more which were totally built from scratch by myself. One was a curved trestle and another a straight trestle. It was very challenging because I had the idea in my head and wouldn't compromise.


Curved Trestle Bridge, picture taken by Gary Shurgold

Downtown Valley City, taken by Gary Shurgold

My rolling stock is mostly diesel switchers, SWs and Shay locos. I have allot of log cars that were kit bashed and a number of hopper cars. The sawmill and the planing mill, as seen in the pictures, are my favorite. The planing mill was totally scratch built by myself. The shingles were laid one at a time and were cut from veneer. The interior and exterior walls were built board by board as well as the floor and the decks.

As you can see in my pictures, I managed to win this challenge. I decided to model the logging industry (Gee I wonder why?) I liked all the aspects of the lumber and logging industry. I wanted to display all that I could in this field in a small area. As you can see from the pictures of the layout, it was no easy task. My favorite was doing the scenery, especially the making of the trees. These are my speciality. I have a full clinic on how to make these trees. I've done this clinic several times.



Casey's Repair Shop, taken by Gary Shurgold

The rock work on my layout is all plaster castings. These castings were made from latex rubber moulds designed by Braegdon Enterprise. I painted them using high quality Artist Acrylics with Gesso base coat. I also used plaster cloth and masking tape with cardboard webbing under the rock castings. The skyline is wallpaper with clouds already in it.

Overall view of Sawmill Office, Loading Dock and Boiler House. Picture taken by Gary Shurgold

The scene is to depict the BC Lumber industry. I scratch built some of the buildings and laid 90% of the track work and built 80% of the turnouts. It was fun trying to represent all aspects of the lumber industry. My layout is controlled totally by DCC (Easy DCC Radio Control). Most of the lighting is controlled by computer touch screen control. I was able to achieve this with the help of my son-in-law ,Matthew Labadie. My turnouts are controlled by slow motion Switch-master switch machine.

One thing I've learned about this hobby is that entails all aspects of carpentry work and model building. It is my life's joy. You can contact Patrick at: Patrick.Rivard@oscaleresource.com. Thanks so much for your help and interest.

George Downer

I'm originally from from Pittsburgh, but I've been living in Yorktown, Virginia for many years. My model railroading interests started on my first Christmas when my grandfather gave me a Lionel train. I've been told he would set up a loop of track on the floor and place me in the middle and I was one happy kid. It wasn't until I got into high school that I learned about HO and scale model railroading. A friend had built a Penn Line K-4 Pacific and I was impressed.

I wanted to get into HO, so my dad gave me a Roundhouse 0-6-0 kit for Christmas. I built it and it ran. I won't comment on the quality of the build, but I had fun with it. I started subscribing to model railroad magazines back then and, like many of my generation, was fascinated with the beautiful work John Allen

did. I always looked forward to seeing the Varney ad on the back cover of *Model Railroader* with a picture of the Gorre & Daphetid Railroad.

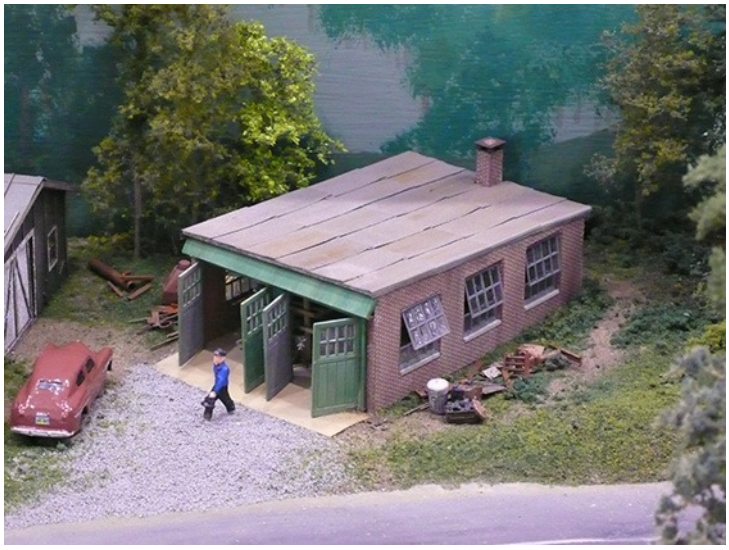
College, marriage, kids, career, etc. put my model railroading on hold. I was the classic armchair modeler, reading magazines and visiting layouts from time to time. Finally, in 1995 I had time to pursue the hobby and I joined the Chesapeake Bay and Western Model Railroad Club. The club has a large HO scale layout (16 scale mile run from one end to the other). The layout was about five years old when I joined, and in half of the building we now fully occupy. In other words, I've been involved in a lot of layout construction over the years. I've held every office except treasurer, and I've chaired several committees. My primary interest was/is scenery and structures.

Early on, I was asked to build a couple plastic kits for the layout. I was surprised how much I had actually learned from my years of magazine reading. I knew a lot more about model building than some of the club members. I spent a little extra time on these structures, applying my knowledge (from my magazine reading) of painting, weathering and detailing, and loved it. I continued to work on scenes and structures around the layout. My philosophy is to look at a space on the layout and decide what should go there, not take a kit and walk around looking for a place to plant it. I don't have a home layout, so almost all of my structure building has been for the club layout. (I do have some shelf queens.) Most of my work has been scratch-built, but I've done some kitbashing. In fact, I don't think I've ever built a kit straight out of the box, I always make some changes.

About the same time I joined the club, I also joined the NMRA and have been active with the Tidewater Division, giving clinics and learning from other members.

Maybe I better pause here and say early on I bought a CAD program (an early version of Autosketch) and began designing buildings. I would print the drawing in a mirrored version and glue it to the back of wood or styrene siding, then cut out walls, windows and doors.

I'm a member and a moderator of The Railroad-Line Forums. http://www.railroad-line.com/ and was involved in a low key personal challenge to build a welding shop. I co-authored an article on this build in the July 2008 NMRA magazine, Scale Rails, titled “Scratchbuilding in Cyberspace”. The plans were drawn on my computer.

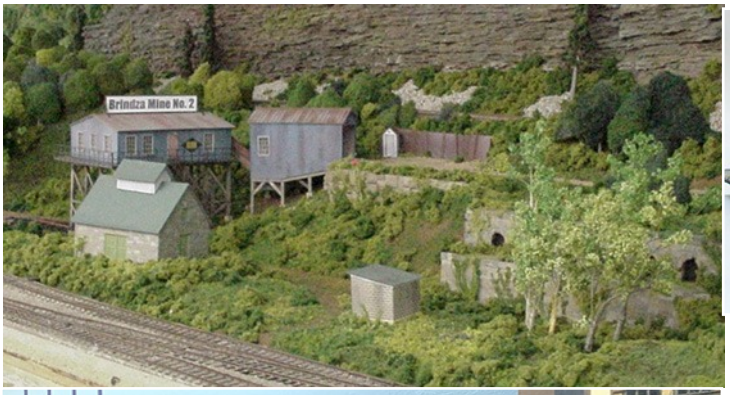


This picture is of the welding shop sitting on an NMRA module I built. I was active with the local module club for several years.

The nice thing about belonging to a club is learning from other members. I have a friend who is an architect who has given me a lot of guidance on prototypical construction and design. One key lesson he gave me was to do a floor plan first to make sure the windows, doors, loading platforms etc. have a logical reason for being there. Some of my buildings were a little weak in that area, and through his good-hearted kidding, I now do floor plans for all my structures. It's a good rule to follow.

Here are pictures of some of the structures I've scratchbuilt for the club layout.

This scene was one of my early efforts and is about four feet long. I built it off the layout and installed it when it was finished. The Brindza Mine buildings are styrene. The building in front is a kit. My architect friend gave me guidance on the internal structure of a heavy timber beam building like this. This is wood and styrene.



I picked up a half-built La Belle kit at a flea market and used it as the basis of this crew bunk house.

One of our club members was from Ohio and suggested I build this station which is located in Kent, Ohio. It's styrene. I did a lot of modifying of Tichy windows and doors.

One of the members on the Railroad-Line Forums designed a challenge to build a structure out of paper and I went for it. I wrote an article about the project in the April 2011 issue of the NMRA magazine titled, “Scratchbuilding with Paper” My building was based on E.L. Moore's Putty Knife Factory. The windows and doors are commercial, everything else is paper and cardstock.

This challenge got me started in using cardstock as my material of choice for buildings. To pass on my experience, I have given several clinics on building with paper. As a part of these clinics, I pass around some examples of what can be done with cardstock. Here, I briefly wandered into O scale. I made two sheds, one HO and one O using the same plans.

I also built this display, now sitting on the club layout, showing three sheds, one wood, one styrene and one made with cardstock. The middle one is cardstock.

About two years ago, I ran across an article on the Internet about the Cricut paper cutting machine. After some research, I ended up buying one on eBay. I figured I could load a drawing into the Cricut and it would do the cutting for me. It did exactly that, but it took a little time to figure out just how to do that. It's a fascinating tool, and I'm still finding new uses for it. I've given several clinics on using the machine for model railroading.

The first structure I built using my Cricut was an O scale lobster shack. It's a long story why it's O scale, but it has nothing to do with the machine's limitations. I could have built it in HO scale. Everything in the picture except the lobster buoys, chimney and the figure are made with paper or cardstock cut on the Cricut. The buoys we carved from styrene rods.

My most recent structure is a kitbash of a Walthers Import Motors kit. The Tidewater Division of the NMRA had a contest for members to build a diorama using the kit. The Cricut was used to make a jig for the rafters as well as cutting detail parts like the individual panes in the windows. The Cricut is great for boring repetitive cuts.

Recently, I scratchbuilt two swayback boxcars using the Cricut machine to cut all the parts. The car on the right was made first. The sides were cardstock with cardstock boards glued to them. I used wood (cut on the Cricut) for the sides for the one on the left. The stronger sides let me model it with open doors.

That's a long winded way of saying I'm a scratch builder and my primary building material has become cardstock. I think I'm up with the 21st Century in my model building, using CAD and a Cricut cutter, but I guess you can also say using paper and cardstock shows I can't give up the past.

As far as mentors go, I can't say I've had any, but I've been inspired by the work local model railroaders have done and their willingness to talk about their work. I've picked up a lot of tips helping on the club layout and attending clinics at the Tidewater Division meetings.

If you think I can help you with your modeling contact me at George.Downer@oscaleresource.com. Thanks so much for your help and interest.

John Jensen

My name is John Jensen. I have owned Jman Laser Crafts for a little over a year ago. My lovely wife Roni, helps me run the business, in reality she runs all the business side. I am just the modeler.

I have been building models since a was a child. I really can't remember when I wasn't building. My dad had a heart attack when he was a very young man. He was disabled and mom went to work to support the family. So we were pretty broke as a family, but my parents were always supportive.

Dad had a little HO scale train and since he couldn't seem to stop us from messing with his trains, I got a slot car track for Christmas.

With room for neither one in the house, my dad built a layout board that could be pulled up to the ceiling with a rope and lowered during play time. My dad always pushed that there was nothing you couldn't do if you put your mind to it. He lead by example. We were poor, I don't ever remember a repairman coming out to the house. My dad, my brother and I did everything.

This may seem like a long story, but it explains a lot about how I started modeling. I learned a lot about how things go together. I also learned to not be afraid to try stuff. As we got older, my brother and I did plastic model kits, model rockets, and then dad bought his first RC plane. I was instantly drawn to it! It was absolutely a "No touch"item for me. But I would sit and watch for hours as dad mixed epoxy and glued each part and sanded piece.

He finally bought me my first wood model. He gave me a price range and let me pick. Of course I picked a WWII aircraft that didn't have a straight line or flat surface anywhere. Dad tried to talk me out of it knowing it was way out of my skill level. I got it...but never finished it.

Sometimes he would challenge us. He would dump a big pile of scrap wood and discarded household items out on a table… and say "We are going to take the boats you build out and run them in the drainage pond this afternoon.". No instructions, no plans, just build off the top of your head. My first attempt was a paddle boat built from styrofoam and a blow drier. It worked with a D cell battery. It was slow and had no steering, but it floated a ran across the pond!

My point here is let your kids stretch their imagination, it's important!

My building slowed in my teenage and military years, but it never really stopped. I had moved to RC models. Some kit cars and a lot of scratch built boats. Scratch building is great when you don't have money. That's a good lesson l learned, along with don't be afraid to try different materials, techniques, and ideas...if you start with something that was going to get chucked and you mess it up and need to throw it away, what did you really lose? You spent some time and gained free education. If it worked it's a win, win, win!

When I met my wife, she begged me to take her to my first dollhouse show. In my mind I was thinking why would I want to go see a bunch of girls toys. But she kept at it and since she was supportive of my habits of building crashing and sinking my boats, cars and planes, I really didn't have a choice. I was blown away at the skill level and detail. Mostly not my topic but, wow! The craftsmanship and detail and not trying to crash it!

I told her I would build whatever house she wanted… I do the outside and you the inside. It was a perfect marriage since she had no interest in actually building a house. Even during this time, I never lost my interest in building boats, I just think they are cool. My boats kept getting bigger. But if you are building 5ft long boats you run out of room pretty quick! But I never stopped trying new materials and ideas. Many of them fails.

Most new modelers are surprised when they find out the mentor fails, but that's the way it is. I figure if you aren't failing you aren't growing and learning. A fail teaches you more than success. So even though stuff ends up in the trash, it may be your most valuable model.

A few years back I bought a little self contained mill call a Carvey. It's cut footprint is only 8"x12", but it was a fun learning curve and I was making simple carvings and little models. One day one of my wife's dollhouse friends stopped by and gave me a set of plans from a 1990s dollhouse magazine. The plans

were for a 1/48 Scale craftsman bungalow. Then she said " bet you can't!". Well she lost and won. She got the craftsman bungalow for Christmas.

After my wife's friend got her little bungalow, she took it to their miniature club to show off. Next thing I know I have no shortage of requests and suggestions for projects or ideas. That timing was interesting because we had been thinking about some ideas we could work after retirement. If I was going to try a business, I wanted it to be somewhat established before I got to retirement.

The models and toys have been a life long interest, but there was a problem. Milled models at kit prices would be break even at best. A way to help pay for a hobby, but certainly not a business. That's when doing some digging, I figured out a laser could be 20 times faster than a mill. Suddenly the number might make sense.

If you like classic, here is Dorothy's farmhouse from the Wizard of Oz. A customer ask me to do a kit of this one. My wife has always loved the Wizard of Oz series so she informed me I was finishing this one.

So about 15 months ago I invested in a laser and revamped a piece of my shop. My business is still a labor of love that might pay me 50 cents an hour. But Jman Laser Crafts was born. 1/48 Scale scale architecture is where I focused most of my efforts.

That scale happens to be O Gauge railroad and small scale dollhouse. Worldwide, those are two of the most popular hobbies. Also, many people who do dollhouses run out of room sooner or later. So many downsize.

While HO railroading is more popular than O gauge, there are many more commercial kits and items available for HO. I am not a high speed production company and I don't want to price compete. I would rather stick to that custom stuff no one else can or will make. I have made replicas of real buildings. I have made movie or TV related buildings and parts and just family related buildings that have special meaning to someone. That gives me a great sense of pride when someone wants to do something that means a lot to them and they trust me to get it right.

The laser has taught me a lot and I still have much to learn. I thought it would be a cut through only tool because that' typically what you see out of cheap laser stuff you see imported. I figured out that's not true at all. Your edges don't need to be all smoked either. That comes from production runs where the cutter isn't being tuned to the specific cut. I want people to say Wow! when they open my kit because they haven't seen anything like it.

Currently on the drawing board. The PRR Hunt Tower. I decided to put a little paint on the prototype for this one. People seem to think that when the see stuff like my bricks on a building they are marked on or printed by the laser. You have to show them that they are cut into the wood.

Many people are surprised to find out that I don't have a big train layout. I would love to have one, but the truth is, I simply do not have the space.

When you develop kits, you end up with several prototypes of every model type you have sitting around. I live in Texas where there are no basements so that's not an option. I do have multiple O gauge locomotives and a few little sets. One needs those to make sure the stuff you're building works with the trains. I never realized when I started down this road that shipping would take up a big space, but it does. I always tell people my wife has the world's most eclectic Christmas village because there are little houses and buildings everywhere. Occasionally, I just need to do a quick sell to un-bury. There are a few models I will never sell because they are a first. I will do other scales, smaller or larger, but I typically stick to 1/48.

This one is my SF style Painted Lady.

If I have the opportunity to mentor any modeler, the first thing I would like to say is you do not have to have a lot of money or tools to do this. Sometimes it's nice to have great tools, but 90% of the scratch building I have ever done was with a hobby knife, a piece of sand paper and a ruler, along with some basic paints and a brush.

Next is don't be afraid to try. Try different ideas and materials. Never shoot down an idea because of a preconceived notion that it won't work. About a year ago someone told me I should try Chipboard. I never had really used it or considered it as a building material. Now about 75% of my kits have at least some chipboard in them. Not because it costs me less, because it doesn't, but because it works well for what I do. When I was hand cutting I tried using foamed PVC. It isn't the cheapest building material, but wow is it great stuff to work with. It's pretty tough, available in a variety of thicknesses, cuts easy, every glue works, every paint works. It's available in thicknesses from 1mm to 10mm and no grain direction. It sands easy and has a clean edge. So what's the down side? You can't cut it with

a laser. It releases chlorine gas. It will destroy the laser and kill the operator. So I don't use it in my models. But if you are hand cutting and want a great result, it's a winner. My point is just because you are used to seeing wood doesn't mean that's what *you need to use*.

Also, never let someone tell you your model is wrong. It is your model. You are the only one who can decide if your model isn't working. This is supposed to be fun, don't stress about it. Do it the way you want to.

Remember that working with your hands is muscle memory. I hear people tell me all the time they can't cut straight. Well, your hand writing wasn't great when you started either. But after doing it a few times, you got better and better. You have to practice, and yes, after a bit you will look back at the first project you did and it will look like that first grader's hand writing. Suddenly, you will see you have came along way.

Thanks John for your interest, help, and great advice to modelers. You can reach John at: John.Jensen@oscaleresource.com.

Well, that is about it for this article. But before I go, let me show you one of my recent unusual projects.

I found a photo of a 1932 Ford Lincoln KB on the Internet. Loved those rear side windshields so I just had

to model it. I drew up an O scale model and scratchbuilt it in brass. The wheels are card, and the headlights are basswood dowel. I still need to install windshields… they were damaged in transit.

Something different you will not see on many model railroads. My kind of modeling!

Thank you for reading this far and don't forget to follow my Facebook page Jim Kellow MMR to stay in touch and subscribe to my website newtracksmodeling.com to get the log in links for my Zoom meetings. I really appreciate it. As always, best of modeling to you till next time. Model building really is fun.

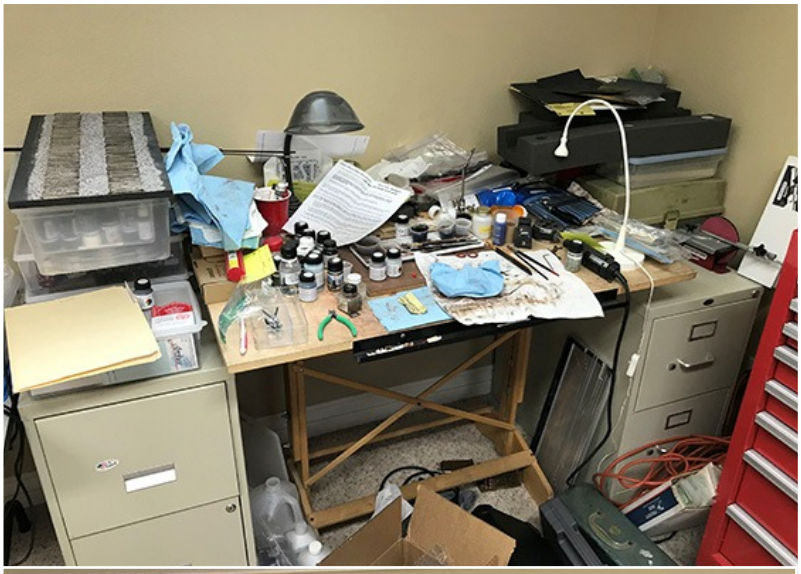
"New Tracks Modeling"
Where Mentors Help Modelers Build!

Backshop Solutions

By Ross Dando

Have a modeling question for our experts? Please send your description of your modeling problem to backshopsolutions@oscaleresource.com.

What's in a Bench



As I have moved to 1/48, I just out grew my work area. So that became my weathering and storage area where I just put what I didn't have a place for. Pictures are to give you an idea of the hell I have created for myself.

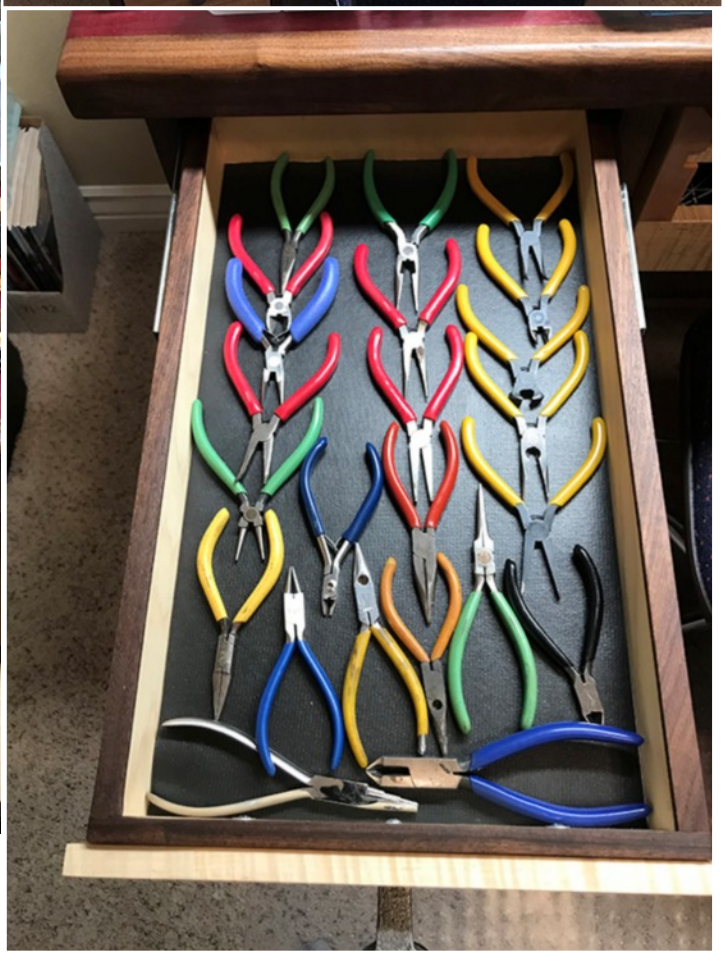
Now, let me start by saying that it helps to have skilled friends. It really helps when they say "we can build it better than that". Greg Green has helped me with a couple wood working projects, this project turned out to be a multi month undertaking and Greg hit it out of the park. I was able to be the $5 guy who did what he could to try and help.

Talking with Terry Van Winkle, I determined that it was time to stop sitting hunched over at my 6' Costco folding table to work on models and getting a sore neck and back. The goal was what looks like a jewelers work bench. It would bring the work up to where I could sit and comfortably work on something.

Now this is where things went sideways. After looking at prices and designs for benches, we headed off to the lumber store. Not Home Depot or Lowes, a real rough sawn lumber yard.

After looking at the price of hard maple and grain structure of it along with black walnut and purple heart, I wanted it all. So we started picking out boards that could be milled to what size we needed. I will spare the fine details and countless conversations Greg and I had agreeing on things.

I learned a lot during the project and am grateful for Greg's friendship, even if he has trains with an extra rail.



Once the workbench came home, the next thing was light. I welded up a frame to hold a 4' LED shop light and have been finding the right spacing from the front edge. Once I get a few things done over the holidays and weld on some hangers for my optivisor and rotary tool, I will send the frame out for powder coat and can finally hide the wire that bugs me when I turn on the light.

I still need to work on what to keep in which drawer and if I will have room for any tools such as my soldering iron, resistance soldering unit and all the other odds and ends that have lived on the floor around where I work. Now let's talk about modeling!! I have been trying to get things going for Twin Star Cars and I knew I needed to re-release some of the Modern Era O Scale kits. But people keep asking what I have available and if I have a website. Awhile back, Dan Dawdy was able to secure my web address that I had lost years ago. So we started working on a website. After the first of the year, we will get it turned on and you can see what is available.

Modern Era O Scale will see two kits being available after the first of the year. The Thrall RailGon and the FMC ABOX will be the first kits. The big news on the ABOX is that it will be a one piece body.

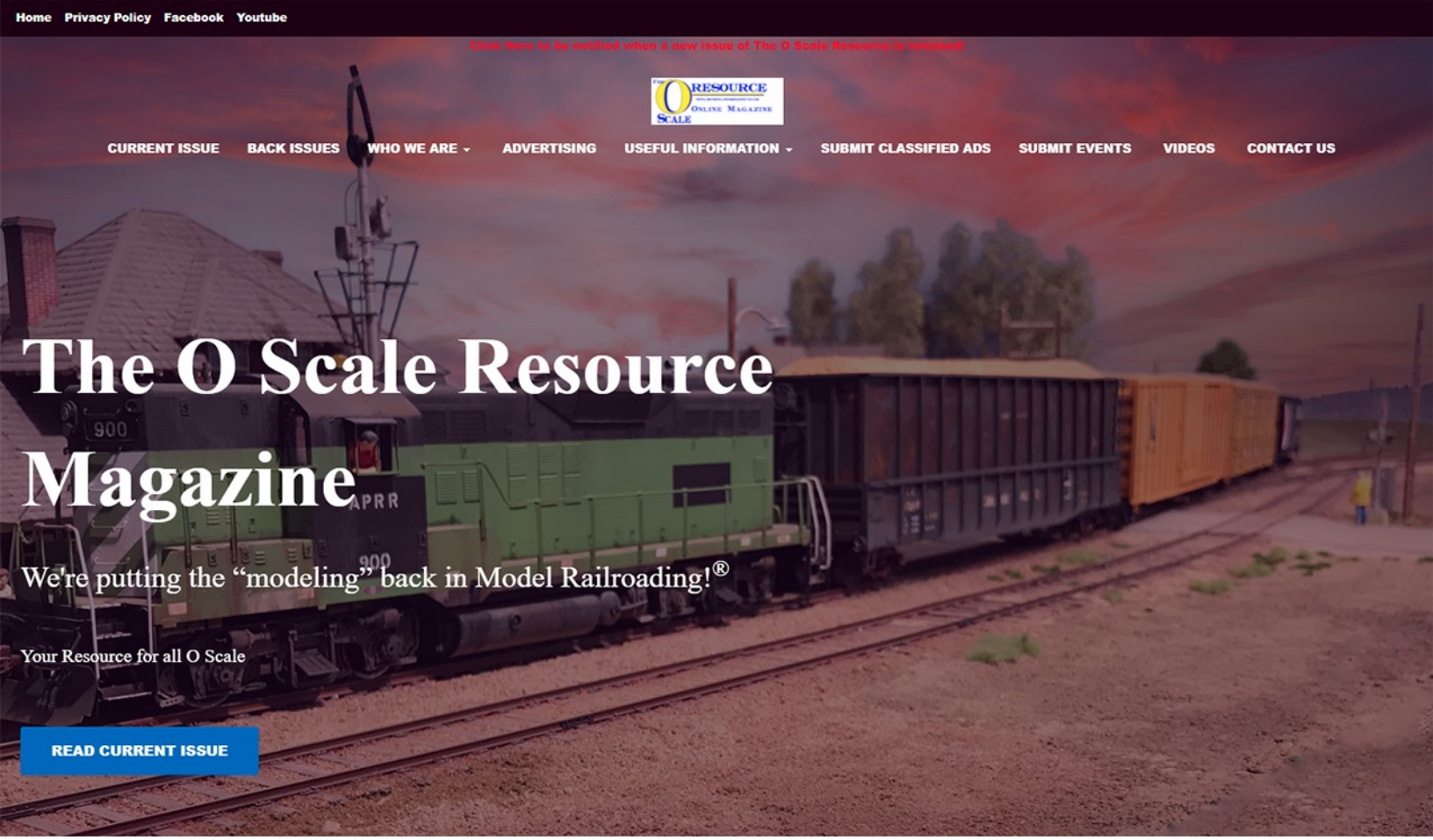
Currently, I am working on pilot models for both and will be writing instructions once I figure out how to stick things together without finger prints.

We will be adding to the line by offering some detail parts to improve available cars or for scratch building. First part is an etch running board for the Atlas PS 4427 Covered Hoppers.

Jon Cagle has been busy improving the drill and assembly jig so I can actually put one together and not have it look like I dropped it after I was done. The samples look great.

Twin Star Cars has been busy with detail parts and other items, but no new car is ready at this time. We have Rock Island etched heralds for the F units. One other item is a four sheet set, for all things, Rock Island. While I respect all those making decal sets for the Rock Island, I just prefer Microscale when it gets a decal to lay down over detail, so if Microscale offered it in 1/87, I had it scaled up to 1/48. Finally, we are working on a master for a USRA rebuild that promises to be great kit. Once I get back from the Cocoa Beach RPM meet I will get back to making the masters for it.

Not a lot of words this time around, but hope you enjoy the pictures.



Check out our Website. All back issues are available for download. Submit your events and classifieds ads online, or request advertising information. Need information like drill sizes or prototype pipe dimensions, nut bolt dimensions or even Westinghouse brake diagrams? It's all here. Check out our videos also!

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WHAT'S ON YOUR WORKBENCH?

Toronto, Hamilton and Buffalo Gas-Electric No. 301

By Ralph Nelson

Picture of a Larry Fisher painting, titled "Late Arrival At Hamilton Station".

Many of you regular readers of *The O Scale Resource* Magazine may notice my liking for motor cars, motor cars of every description. I've built and collected a great number of them over the years, some of them featured right here in "What's on Your Workbench?".

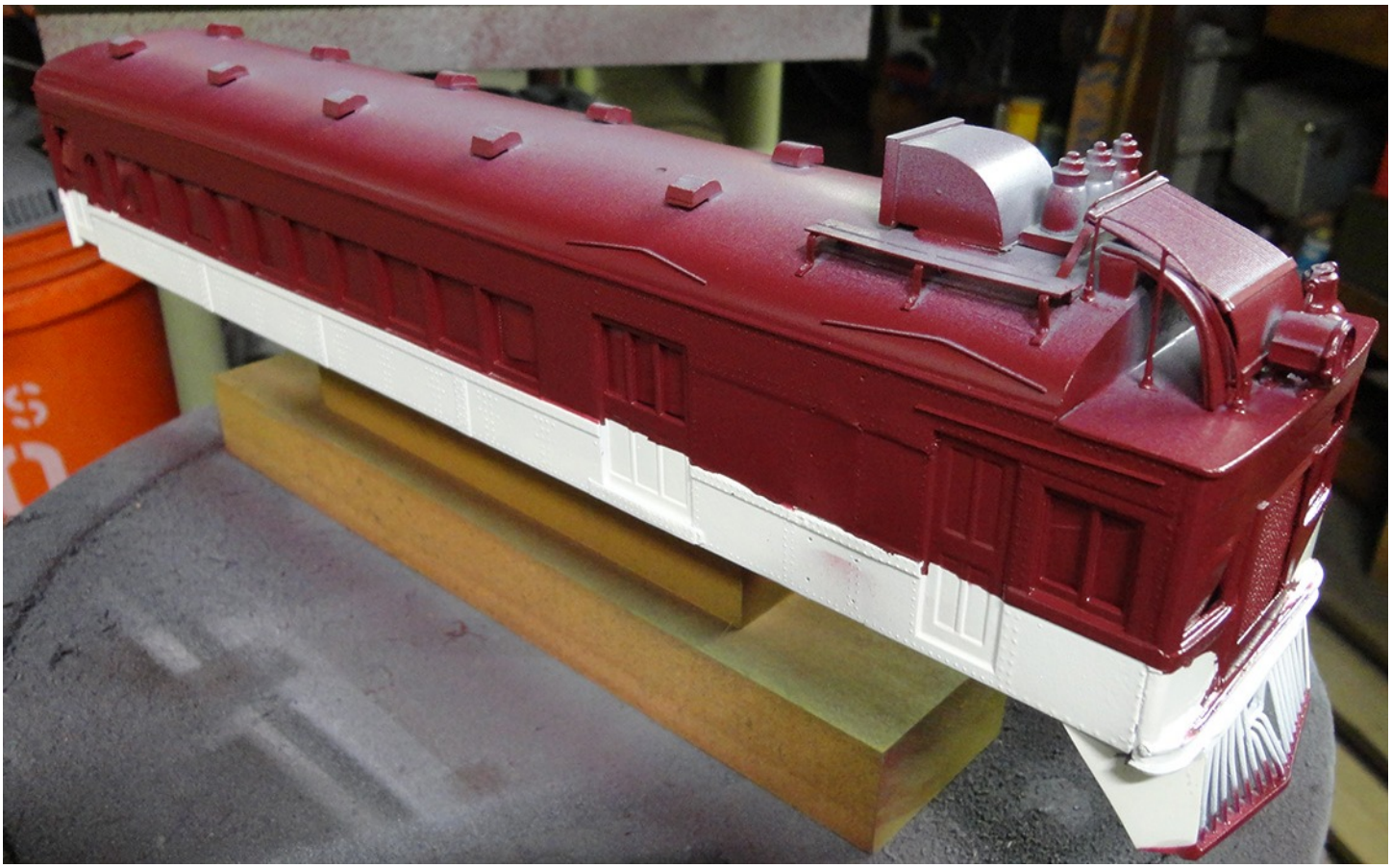
This is a model of another motor car, a gas-electric passenger car. The car appeared in a painting by Larry Fisher, titled "Late Arrival At Hamilton Station". I have a print of this painting hanging in the stairwell leading to my basement train room. What drew me to this painting at first was the motor car in the lower left hand corner of the composition. With the car's striking color combination and basic good looks, I knew I had to build a model of this car.

Like the American Standard Car gas-electric kit, of which I have several, the prototype is a St. Louis Car Co. product, so initially I thought it would be an easy build. However, after getting additional photos of the prototype, showing not only the rear of the car, but also the front and left sides and comparing them to the car sides in the kit, I realized that there were a number of changes that had to be made to leave a convincing rendition of the prototype.

There were three basic changes to the car body that were required, these involved moving the baggage door closer to the windows in the car, eliminating the small compartment behind the passenger door at the very end of the car and eliminating the small arched window closest to the baggage door. Once these cuts had been made, the removed portions were used to re-assemble the car to the proper length, adding plastic supports on the inside where necessary. A lot of "Squadron Green" was used to fill in the seams, sanding and filling, sanding and filling. Once all of the sanding had been completed, rivet decals had to be used to replace the rivets that had disappeared. I've included a photo showing the finished TH&B sitting above an unmodified American Standard Car kit to show the differences.

The front and rear of the car are soft metal castings, as are most of the small detail parts that come with the kit. These also required some changes in keeping with the prototype.

The center of the front casting has louvers cast into the part, so these had to be cut out and replaced with a framed screen, the end sill above the pilot was beefed up and made to look like a channel, the engineer's window was shortened in length, and the window on the other side of the cab, was divided. The rear casting has two windows on either side of the center train door. Both of these windows were too tall and had to be shortened as well by filling in at the bottom. More "Squadron Green", sanding and filling.



The roof detail has the most scratch built parts, radiator tubes, exhaust mufflers, hatch plate, railing, horn and what appeared to be a large vent to help exhaust engine room heat. Also, small utility vents along the length of the roof.

The basic kit pilot was used, enhanced with small steps and fairings mounted to both ends, again as seen on the prototype. A fuel filler shroud was added to the left side of the car, the underbody components were added according to the photos.

The trucks used are modified Wagner C80P trucks which I've had for years, insulated of course, just for such a purpose. I added interior partitions, a restroom enclosure, and seats. Eventually, an engine and generator set will also be added.

In Larry's painting, the car body has a rich deep maroon and white paint scheme. I used my old favorite, Scalecoat paint, to finish the model. Once again, Stan Cedarleaf came to my rescue, making custom decals for me.

The following pictures were shot at the Rockford O Scalers Open House this past November 2021.


TORONTO HAMILTON AND BUFFALO RY
301
TH&B


TORONTO HAMILTON AND BUFFALO RY
TH&B
301


TORONTO HAMILTON AND BUFFALO RY
TH&B
301

This series shows our readers what other modelers are working on. All that's needed is a simple snapshot of what your workbench looks like and the project on it. Send us a picture or two along with a short description of what you are working on so we can share it here. If it's a project under construction, send it in. Repair job, send it in. Completed project, send it in. Send your pictures and descriptions to daniel@modelrailroadresource.com

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O Scale South 2022
February 26th, 2022
Atlanta, GA USA
Cross of Life Lutheran Church,
1000 Hembree Rd, Roswell, GA 30076
7th Annual Atlanta O Scale 2 Rail Meet; Sales Tables, Swap Meet, Modular Layout Display, Layout tour information at the meet. 9am to 2pm Saturday February 26, 2022, $5 Admission (spouses & children free)/ $25 per 8ft table includes admission, email or call 770-337-5139 to reserve tables/more info.
Email: daniel@southernoscalers.com
Web: www.oscalesouth2021.com

O Scale Invitational 2022
March 4 – 6, 2022
Tequesta, Florida
The 2nd Annual O Scale 2-Rail Meet.
Friday and Saturday 10AM – 6-PM, Sunday 10 AM – Noon at the American Legion located at 775 US-1 North, Tequesta, Florida 33469. Admission is FREE, Tables are $20 each (tables limited reserve now). American Legion full-service dining room and lounge open to all attendees, modular layout, raffles, swap meet, buy sell or trade. Sponsored by the Southeastern Florida O Scalers. For information and tables for sellers contact Stephen Pariseau (561-222-3908) or e-mail sdpariseau@gmail.com or Walter Horlacher at horlacherw@bellsouth.net

O Scale March Meet
April 1-3, 2022
Westin Lombard Yorktown Center
Lombard, IL
Under new management and new dates!
The March O Scale Meet is a 3 day gathering of vendors, customers, clinics, and fun held annually in March in the Chicagoland area.This is the Chicago O Scale train show you've heard of.
Website: http://marchmeet.net/
Email: ChicagoMeet@yahoo.com

Harrisburg All O Scale Meet
April 2, 2022
Sponsored by: Narrow Gauge Modeling Company
St. Thomas United Church of Christ
6490 Linglestown Road
Harrisburg, PA 17112

Strasburg 2 Rail Train Show
April 23, 2022
Strasburg PA
Strasburg Train Show: Two-rail swap meet at the Strasburg Fire Co, 203 W. Franklin St, Strasburg, Pennsylvania. 9 am-1 pm. Admission $5, wives/children/military w. ID free, tables $25 for first table, additional $20 per. Great food, modular layout, clinics. Contact John Dunn (609-432-2871) Click here for info.

O Scale West - S West and Narrow Gauge West
May 27-29, 2022
Hyatt Regency Santa Clara (San Francisco area)
Website: www.oscalewest.com

Harrisburg Narrow O Summer Meet
June 10th and 11th, 2022
Sponsored by: Narrow Gauge Modeling Company
St. Thomas United Church of Christ
6490 Linglestown Road
Harrisburg, PA 17112

Strasburg 2 Rail Train Show
August 6, 2022
Strasburg PA
Strasburg Train Show: Two-rail swap meet at the Strasburg Fire Co, 203 W. Franklin St, Strasburg, Pennsylvania. 9 am-1 pm. Admission $5, wives/children/military w. ID free, tables $25 for first table, additional $20 per. Great food, modular layout, clinics. Contact John Dunn (609-432-2871) Click here for info.

42nd National Narrow Gauge Convention
September 1-5, 2022
42nd National Narrow Gauge Convention. Join us in the beautiful Pacific North West for outstanding clinics, world-class narrow gauge layouts, stunning modular displays, your favorite exhibitors/vendors, and The Contest. All under one roof at the chic Hotel Murano in downtown Tacoma, WA.
Email: registration@seattlenngc.com

Strasburg 2 Rail Train Show
October 15, 2022
Strasburg PA
Strasburg Train Show: Two-rail swap meet at the Strasburg Fire Co, 203 W. Franklin St, Strasburg, Pennsylvania. 9 am-1 pm. Admission $5, wives/children/military w. ID free, tables $25 for first table, additional $20 per. Great food, modular layout, clinics. Contact John Dunn (609-432-2871) Click here for info.

The O Scale Resource — Classified Listings

Manufacturers

Shows & Meets

March O Scale Meet
April 1-3, 2021
https://marchmeet.net/WP/
Ph. 414-322-8043

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Beautiful view of Hendrik Kersten's Amtrak locomotives on outdoor trackage.