THE O SCALE RESOURCE

NEWS, REVIEWS, INFORMATION TO USE

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

Volume 8 No.4
March/April 2021

New Tracks Train Show

Decoder Installation Atlas SW

Chipping Paint on a Wooden Car

How to Scratch Build "Genesis"

Scratch Building Steam Locomotives Pt 4

Gons and Flats with Interchangeable Loads

Scratch Building a Milwaukee Road "Quill" Pt 1

The Backshop Solutions

And So Much More...

O&S Scale Midwest Show

It's September! Time to kick off your modeling season!

The best of O Scale and S Scale in one Show

September 17-19, 2021

WYNDHAM Indianapolis West 2544 Executive Dr. Indianapolis, IN

DEALER SETUP

Friday 4pm - 9pm

Saturday 7:30am - 9am

SHOW TIMES

Saturday 9am - 5pm

Sunday 9am - 2pm

Room Rate $125.00* per night (until 8/21/20) Reference O/S Scale Show when calling

***Based on availability**

317-248-2481 / 877-361-4511

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Please print clearly – Detach and return lower portion with payment

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(Exactly as you would like badge printed)

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Phone: (_____) _____

Email: _____

Make checks payable to: Model Railroad Resource LLC

Mail registration form to: 407 East Chippewa St
Dwight, IL 60420

Or register and pay online at:

Early Registration through May 31st $20.00 $_____

Registration after May 31st $25.00 $_____
(Both days included)

 # Of 8 ft. Tables ____ $50.00 ea/$60 after 8/1/21 $_____

○ **Scale vendor** ○ **S Scale vendor** ○ **No preference**

Number of add'l registrants ____@ $20 each $_____

(Please list below/Use back if needed/Spouse/Children 15 and under free)

Name: _____

Name: _____

TOTAL AMOUNT ENCLOSED: $_____

Electrical needed? Yes ○
(Subject to availability)

(No refunds after 8/20/21)

OSCALEMIDWEST.COM OR SSCALEMIDWEST.COM

CONTACT INFO@OSCALEMIDWEST.COM OR CALL 815-584-1577 WITH ANY QUESTIONS

The parties, whose names appear on this registration form, have agreed to hold harmless all of the organizers, sponsors, Model Railroad Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, loss, damage, misadventure, or other inconvenience suffered or sustained as a result of participating in the O&S Scale Midwest Show 2021 or in connection with any activity related to this event, whether of negligence by agents under their employ or otherwise.

BILL OF LADING

THE O RESOURCE
NEWS, REVIEWS, INFORMATION TO USE
SCALE

Published Bi Monthly

The Model Railroad Resource LLC
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March/April 2021
Volume 8 No. 4

Owner / Publisher
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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

Sarah Griessenboeck's fantastic build and weathering of a Rails Unlimited CB&Q SM-16 stock car kit. The weathering and chipping paint on this car is exquisite.

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

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

As many of you now know the March Meet, Chicago O Scale Show, has been postponed until next year. The show committee really gave it all they had, but in the end, it was the state of Illinois and the hotel that would have made the show extremely difficult to put on. The 2022 March Meet will be held April 1-3, 2022. Also O Scale West has pulled the plug on this year's show and will look forward to next year.

The O Scale National Convention is still on and we look forward to heading to Denver for the June 17-20, show. Our own O & S Scale Midwest Show is also a go and scheduled for September 17-19, 2021. There is an early registration deal through May 31st . We really need to get a handle on people wanting to come to this year's show and hope you will register early. Please see our Show Listing in this issue for the other shows this year.

Well, here we are waiting for summer! It has been an exceptionally cold February here is Illinois and many other places around the US and the world. The cold has chased me down the basement to finally look at scenery and make some track changes. Also, I had some maintenance issues due to the cold weather. The humidifier on the furnace had a hard time keeping up and the humidity fell to 22% in the basement. A few tracks buckled and the main stock rail of one turnout popped out of its spikes! Yes, just like the real railroads, maintenance is an ongoing issue.

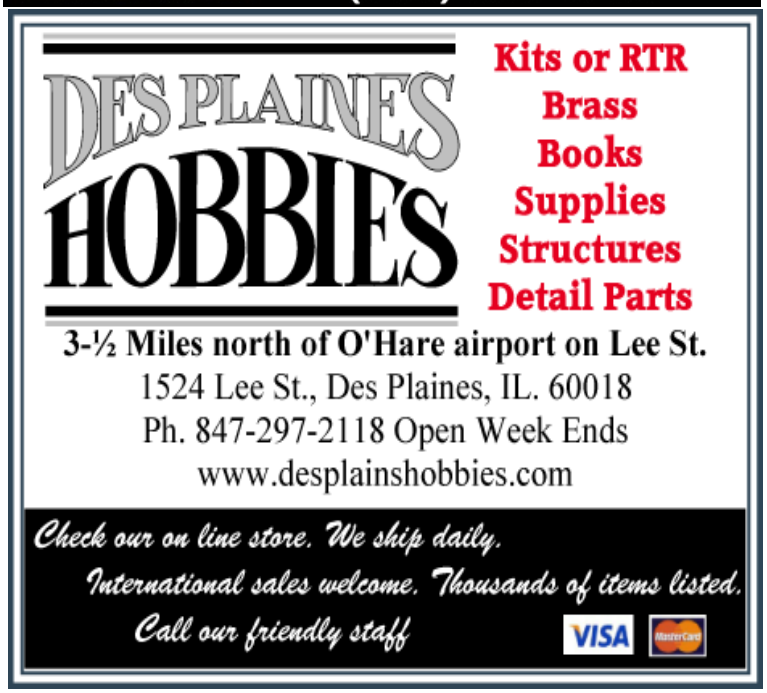
I also went back and added CurrentKeeper™ and/or Keep Alive® capacitor packs to all my older decoder installs, as well as did some lubrication and other maintenance to my fleet. Basically, anything that would allow me to out of doing scenery. But the time to do some scenery is now! We bought a bag of top soil that will be the first thing to glue down over the painted Homasote in the yard area. (After it's unfrozen, baked in the oven and sifted) Then ballast and finally grass and weeds. Baby steps….

This issue is packed and I need to apologize to a few people. Because of the articles I said would be in this issue, we pushed back layout visits again. It is entirely my fault and I promise we will pickup next issue with Attalee Taylor and Art Selby. This issue is a builders and detailers dream. From decoder install to weathering chipping paint to scratch building an Amtrak Genesis and a Class EP-3 Milwaukee Road electric to Glenn's continuing steam locomotive build and gon loads, and of course New Tracks. We really mean it when we say, We're putting the "modeling" back in Model Railroading!®

So let us know what you are up to. Any projects large or small, shoot us an email (daniel@modelrailroadresource.com) 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.

Happy Reading & Happy Modeling,

Amy & Dan Dawdy



NEWS YOU CAN USE

The Association of Professional Model Makers is pleased to announce the appointment of Jim Kellow as APMM Model Railroading Ambassador.

The APMM is the only organization exclusively for professional model makers. We believe there is no better place for the brightest and most experienced professionals, students, educators, along with the best vendors of materials and equipment to interact and share ideas within the model making community.

Jim holds the National Model Railroading Association status of Master Model Railroader and brings to his new position within the APMM community great knowledge, energy and enthusiasm for sharing ideas and technology. His community focus, knowledge, high quality skills and work as mentor to young model builders supports many of the missions of APMM.

The APMM is an international community of nearly 600 professional model makers, including students, educational institutions, freelance shops and corporations. We represent and unite specialists in diverse fields including architecture, automotive, consumer products, displays and dioramas, engineering prototypes, film/special effects, industrial design, and toy sculpting.

We provide members with opportunities to interact with their colleagues through a range of membership options: student, professional individual, model shop/studio and group memberships. Our members are involved in and remain at the forefront of technology and industry advancements, while developing professionally and through organizational leadership opportunities.

APMM Ambassadors work to strengthen the connections among these diverse model makers across the globe working in model making and prototyping fields. The APMM Ambassadors leverage their notable professionalism in the many model making branches to help the APMM unify our trade community.

APMM is honored that Jim Kellow will serve in this important ambassadorship. For more information on the Association of Professional Model Makers, visit: www.modelmakers.org

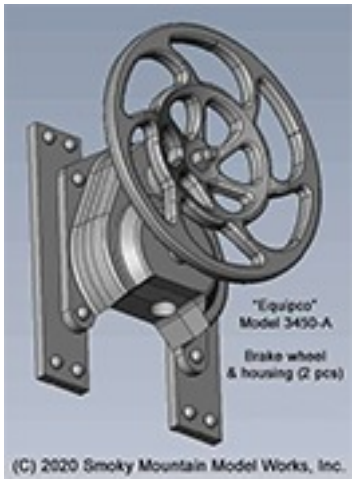
News from Lou Houlemarde of Central Locomotive Works. The current CLW project is a new run of Baldwin "Center Cab"; DT-6-6-2000 (the original CLW model - c1997) and the PRR version RT-624. Both models incorporate a full length chassis with a Pittman gearhead drive similar to the Cockerham drive. Cost is $1,450.00 unpainted. There will be 2 - 3 extras of each version.

Following the Center Cab, the SDL39 is planned. The cost of this model will be $1,800.00. The higher cost is due to new tooling for he unique trucks and body etching artwork. Not done in O Scale as far as I'm aware. Will incorporate the CNC solid brass chassis and fuel tank as currently used for CLW models.

As a "side dish", CLW will produce a totally re-tooled and accurate GSC AAR-B truck (Alco truck).

We are using 3D tech for casting patterns with some parts being etched. The truck will function much like the P&D / OCS Blomberg truck. Friction, Timken, and rotating bear journals to choose. Price expected to be about $150.00 / pair. Should be ready during this summer.

That's a lot on my plate for now - but maybe some U25B's around Thanksgiving.



Jim King from Smoky Mountain Model Works, Inc. has announced new Brake Wheels/Housings.

Parts are 3D SLA printed in clear resin. Wheels and housings are separate pieces. Each set will detail (3) cars and includes non-blackened chain. $15.00 per set

Kit No. 48-BW-1 ... Equipco 3450-A
Kit No. 48-BW-2 ... Miner D-3290-XL
Kit No. 48-BW-3 ... Universal 5700 XL

See their Website for more details.

Sherri Johnson and Yolanda Hayes at CatzPaw Innovations, LLC know a good thing with the see it!

"It is our privilege to present to you "Bernie Sitting" in a folding chair. A life like sculpt of the now infamous photo of Bernie Sanders as he sat and watched the Presidential Inauguration January 20, 2021. Bernie and the folding chair are separate sculpts, place Bernie in the chair or place Bernie any where. Printed in DLP resin; color may vary." Each package includes one (1) Bernie figure and one (1) folding chair. Figure comes unpainted.

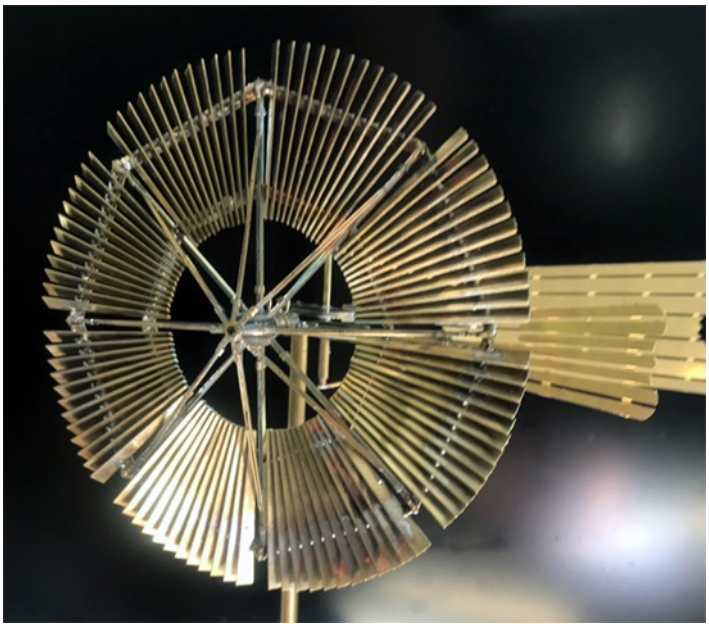
See their Website for Bernie and all their other great products.

Woodland Scenics has announced a new building. Whether you seek vinyl or valor, this O scale Built-&-Ready building is the place for you. The structure features eye-catching printed interiors of a record shop, an Army recruiting office and cozy apartments upstairs. Blinds cover the windows above the bustling businesses. It is hand-painted and authentically weathered. There are also exterior details like crates and barrels, as well as decals and signage.

The structure also comes with pre-installed LED lighting made for use with the Just Plug® Lighting System.

This item is coming soon. Check their Website for more information.

Mark Andrews from Mark's Model Works has a neat little brass Windmill for sale. This model is designed from the NZMRG plan LS11 and based on the preserved, working windmill pump at the site of the old Belgrove Station, on the Nelson Line.



These windmills were used throughout New Zealand for pumping water into the loco water towers. They were slowly replaced as electric pumps and town supplies become more reliable.

"Americanizing" these would be a fun project and make a nice feature model.

Click here for the instructions.

John Wubbel has some great news about The All Nation Line. A special thanks to Dan Dawdy for putting me in touch with the Pope Family, owners of The All-Nation Line. I acquired the business from Daniel Pope after having been dormant for approximately 14 years after his father, Bill Pope's passing. It is my intention to bring the business into the modern world to promote O Scale 2 Rail model railroading.

THE ALL-NATION LINE

The work promises to be a slow task at first; however, we will first try to provide parts for legacy products owned by model railroaders and clubs to maintain or upgrade their All Nation models. Where possible, we will apply new technology to improve the line and support scratch builders. Kits may be a long time in coming until we evaluate the tooling and dies as well as to reestablish manufacturing processes to produce the parts and sub-assemblies.

In the meantime, you can find us on our eBid, eBay Stores or my website product catalog https://johnwubbel.com/crh/O-Scale-2-Rail-Parts-Catalog/ and soon to be the allnationline.com site. Please see our advertisement in this issue and upcoming issues of *The O Scale Resource* magazine.

Ken Browning from Woodland Scenics sent us an update on their new Utility System. Also new is their readymade structure, part of the Utility System: Substation.

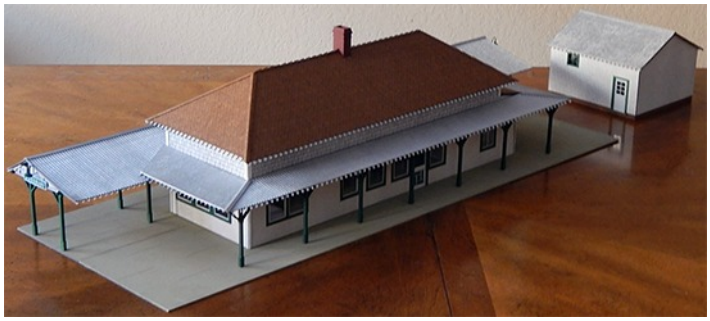
The NEW Utility System allows you to create the illusion of providing power and communication lines on a layout in minutes. Each utility pole is pre-wired, and all products are designed to work together with placement in mind so there's no guesswork. Innovative packaging lets you pull poles out of the package and plant them in place on a layout with ease.

Run Double Crossbars along railroad tracks to simulate communication lines and place Single Crossbars down city streets to represent power poles. Then use the Transformer Connect Set to imitate supplying power to buildings. Connect Single Crossbar Poles to the Substation to model a fully functioning power grid. It's that easy.

See their Website for full details.

New from Right On Track Models, Woodbury Station, NJ.

Built in 1883 in the Eastern Stick Style, the station also served Philadelphia Camden and Woodbury Railroad; West Jersey Railroad; West Jersey & Seashore Railroad; Pennsylvania-Reading Seashore Lines and Conrail.



Kits Features:

- 3 Structures, main station, tool shed and covered adjacent platform.
- Laser cut wood with tab and slot assembly, NOT A BOX OF STICKS
- Injected styrene doors and windows
- 3D laser etched roofing.
- Resin detail parts
- Full color step by step assembly instructions with photos

Available for Pre- Order Coming March. Shipping Mid April. See their website for pricing and release dates!

Kevin Macomber of Narrow Gauge Modeling Co. (NGMC) has completed the acquisition of the McKenzie Iron and Steel figures from Allen Pollock, Fun & Games (Scale Figures).

Originally created by artist Bill Roy, many of the figures have not been seen for decades. The acquisition includes an array of 70+ figures expanding NGMCs foothold into the 1/4" and O Scale marketplace. Production is being implemented and the figures are to be available to the market by April.

News from Scott Mann and 3rd Rail/Sunset Models.

EMD SD40-2 Production Scheduled for this Fall. Come reserve your favorite livery. The details and features will astound you. Horizontal Canon motor drive with ERR Cruise and Railsounds in 3R, and ESU Loksound 5L in 2 Rail. Come Join the fun and reserve your SD40-2s here.

B&O Capitol Ltd. Aluminum Sets. GGD is proud to announce this very unique train for the B&O. To see details of this production and make reservations, click here. Also order the B&O EA/EB sets to pull this train here.

O SCALE C&O STREAMLINE HUDSON #490 and "The Chessie" Train Design is complete and production is planned for Mid 2021.

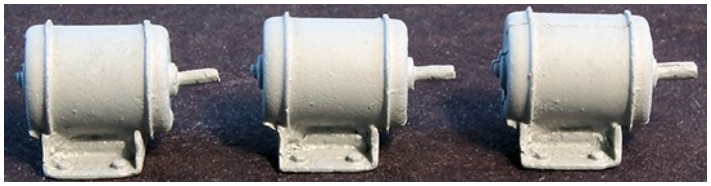
Never before produced in O Scale, No. 490 was constructed by the American Locomotive Company (ALCO) for the Chesapeake & Ohio Railway (C&O) in 1926. It is currently on display at the B&O Railroad Museum. Reserve your Piece of History today here. Also see on the same page, "The Chessie" 6 Car Set.

See these and so much more on their Website.

Richard Rands form Berkshire Valley has some great new parts available.

#570 Coffee Pots - 4/pkg. $3.00

#672 Motors - 3/pkg. $3.00 These are approximately 5HP in O scale



#674 Jerry Cans - 4/pkg. $3.00

The above are white metal castings.

#673 Wheelbarrow w/ shovel $4.95 These are laser cut wood and white metal.

#872 Pump House $39.95 The pump house is based on the building used at Forks Creek in Colorado on the C&S RR. It is perfect for feeding water to your water tanks. Also, can be used as a small power plant for a mine, mill, or manufacturing plant. The building is laser cut wood. Kit includes the #673 Wheelbarrow and #662 Coal Shovel.

Footprint for boiler house is 3-1/2" x 4-1/2". Coal bunker measures 1-1/2" x 2-5/8".

See these and all of their great products on their Website.

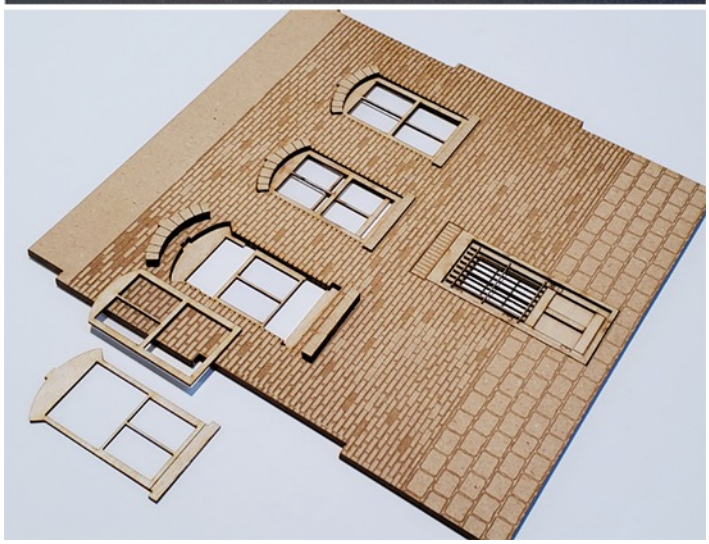
Nick Masney from ITLA Scale Models has some new O / On30 Scale - Brick Wall Panels

Modular Brick Wall Kits in Laser Engraved Wood, "3D" Laser Engraved weathered brick robust material with no bracing required.

Four styles of wall packages & sizes to choose from 3" / 5.75" / 11" widths, all 6" high.

Easy to paint with basic "rattle can" sprays or hand applied acrylics. Easily trimmed with a razor/Zona saw so wall heights can be modified.

"Trim-to-Position" Double Hung Windows with Pre-cut Glazing, Entry Door with Security Bars and recessed door frame where applicable. Separate (paintable) Window Sills & Headers. "No Mask" painting of these parts ensure a nice clean build execution in contrasting colours.



Cut Stone Foundation, Weathered Brick engraving, Pilasters & Cornice system.

Components install into the wall panels per our standard ITLA process. See their Website for these and more.

Our friends at Tru-Color Paint have more new products coming your way!

March, 2021
Railroad
381- Ontario Northland- Dark Blue
382- Ontario Northland- Dark Green
385- Canadian Pacific Rail- Modern Red

Brushables
884- Flat/Brushable Providence & Worcester- Brown
885- Flat/Brushable Burlington Northern- Green

Aerosols
4018- Reefer Yellow
4019- Matte Earth

April, 2021
Railroad
382- Ontario Northland- Light Blue
383- Ontario Northland- Yellow

Brushables
886- Flat/Brushable Northern Pacific- Light Green
887- Flat/Brushable Northern Pacific- Dark Green

Aerosols
4020- Boxcar Red
4021- Engine Black

We are always open to new ideas for paints. If there are colors that your readers need but aren't made, have them shoot us an email at tru.colorpaint1@yahoo.com. If we can find enough information on the color, we could put it in the next year's production schedule.

See their Website for all their paint and products.

Todd Architectural Models has added a sixth building to their offerings of semi-custom painted and assembled O Scale warehouses.

The McElwain Factory Warehouse of Nashua, NH (WH-06) was the location of the original contract manufacturer of Thom McAn shoes, founded by Ward Melville. The factory, still standing and being repurposed into office space, measures 48' wide and 800' long. With a half floor on the first level of the elevation, the model offers another variation of prototypical early 20-century warehouse architecture for the layout.

The model features a laser scored and cut elevation with prototypical brick patterning, textured brick coloring, individually applied star bolts, masonry opening frame and window sashes painted two colors like the actual building and separately applied granite sill details. Glazing offerings include clear, translucent, Roscolux Gray and Roscolux Gray with translucent behind.

The McElwain Factory Warehouse building may be purchased built-up and painted as a flat (nominally 3/8" deep), as a shadowbox (nominally 1-1/4" deep) and as a 12" deep (prototypical) model. Additional depth shadowboxes can be made to include one or more window columns to create a staggered building footprint on the layout. The model may also be built-up as a 3-1/2 (9-1/2" tall), 5-1/2 (15-3/4" tall) and 6-1/2 story (17-1/4" tall) building to create a varied skyline. 12V DC lighting is offered as an option in shadowboxes and comes standard in buildings.

See their Website for full details and also ask about custom peojects.

Chipping Paint on a Wooden Car

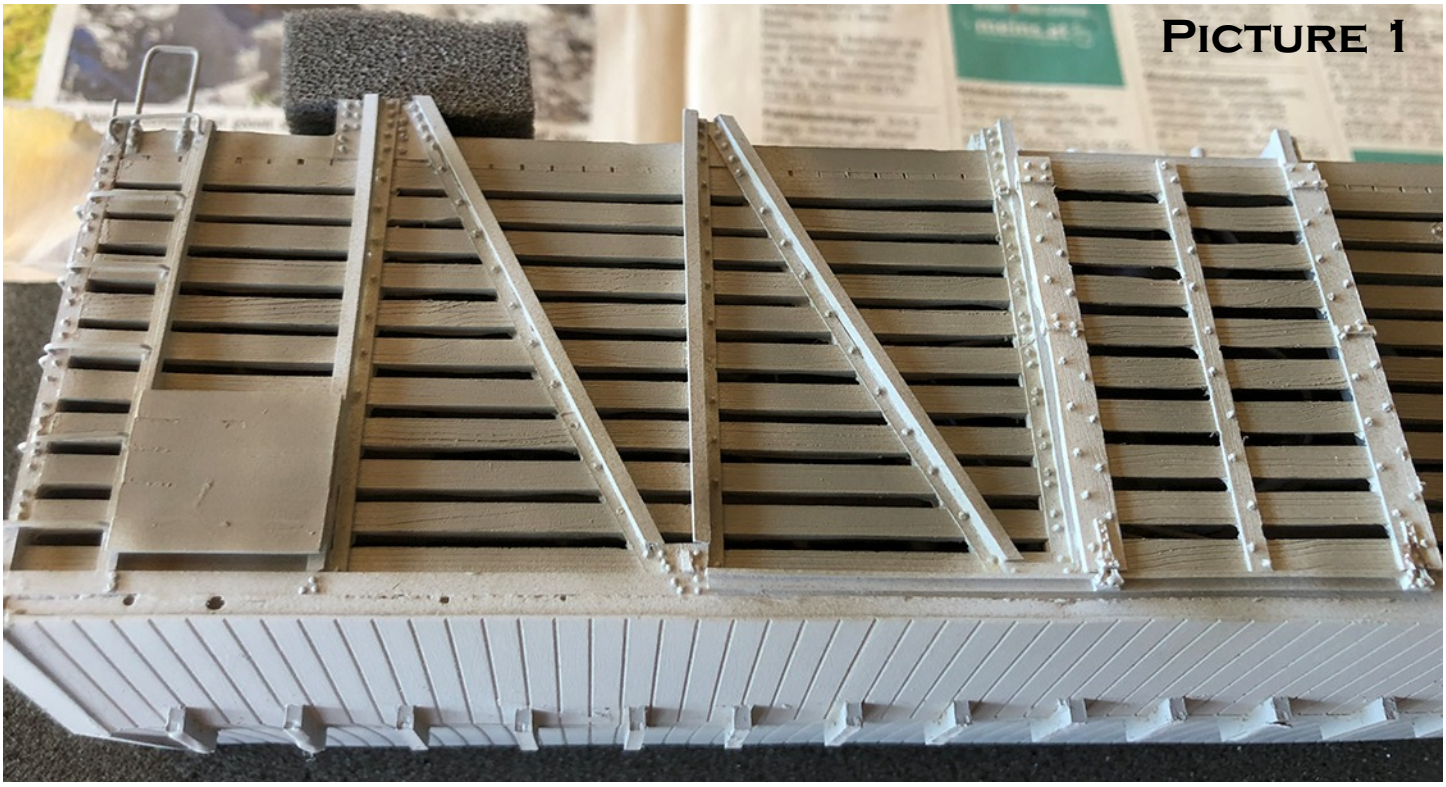
By Sarah Griessenboeck

The Rails Unlimited CB&Q SM-16 stock car is a great kit. The company offers the possibility to build both an SM-16 and an SM-18, almost identical but with different car body bolsters. This article is focused more on the simulation of fading paint than on the build itself.

My stock car was built in September 1924 by Streator as part of a 1000 car bunch, lettered 58000 to 58999. There will be a group of these stock cars on the layout, and I wanted them to represent different stages of maintenance to add to variation and interest. While other cars would be relatively good in shape, number 58214 has not yet received fresh paint in 22 years of service. To underline that overdue maintenance I gave the car a black herald that has been long gone on freshly shopped Burlington equipment. Also the car still has its K-brakes. Only the data has been updated, and the lettering crew repainted just the planks of relevance, a common prototype practice. A reference photo of the kind of effect I tried to create can be found in “CB&Q Color Guide to Freight and Passenger Equipment” by Michael J. Spoor.

I used the “Hairspray Technique”, a method that is fairly popular amongst 1:35 modellers and there are tons of videos on the Internet. I really watched many of them before I got started. The outcome of the chipping effect depends on many factors, and every modeller seems to have his or her individual approach. I found it useful to practice on something that did not take 20 or so hours to put together, so I tried a plastic boxcar roof, and it was a complete fail. This car has a delicate brake rigging that I protected by screwing to foam pads into the car bolsters, using the truck screws. This also made handling real easy.

On a resin car like this one, it is important to choose the right primer. You really want to make sure the paint stays on since you do a lot of rubbing and some scratching. I use Autoborne Sealer with great success. It sprays on easy and is somewhat forgiving, provided it’s well diluted with the matching product. I use their grey colored primer here which is easily covered with the next step, painting the planks a wooden color. (Picture 1)

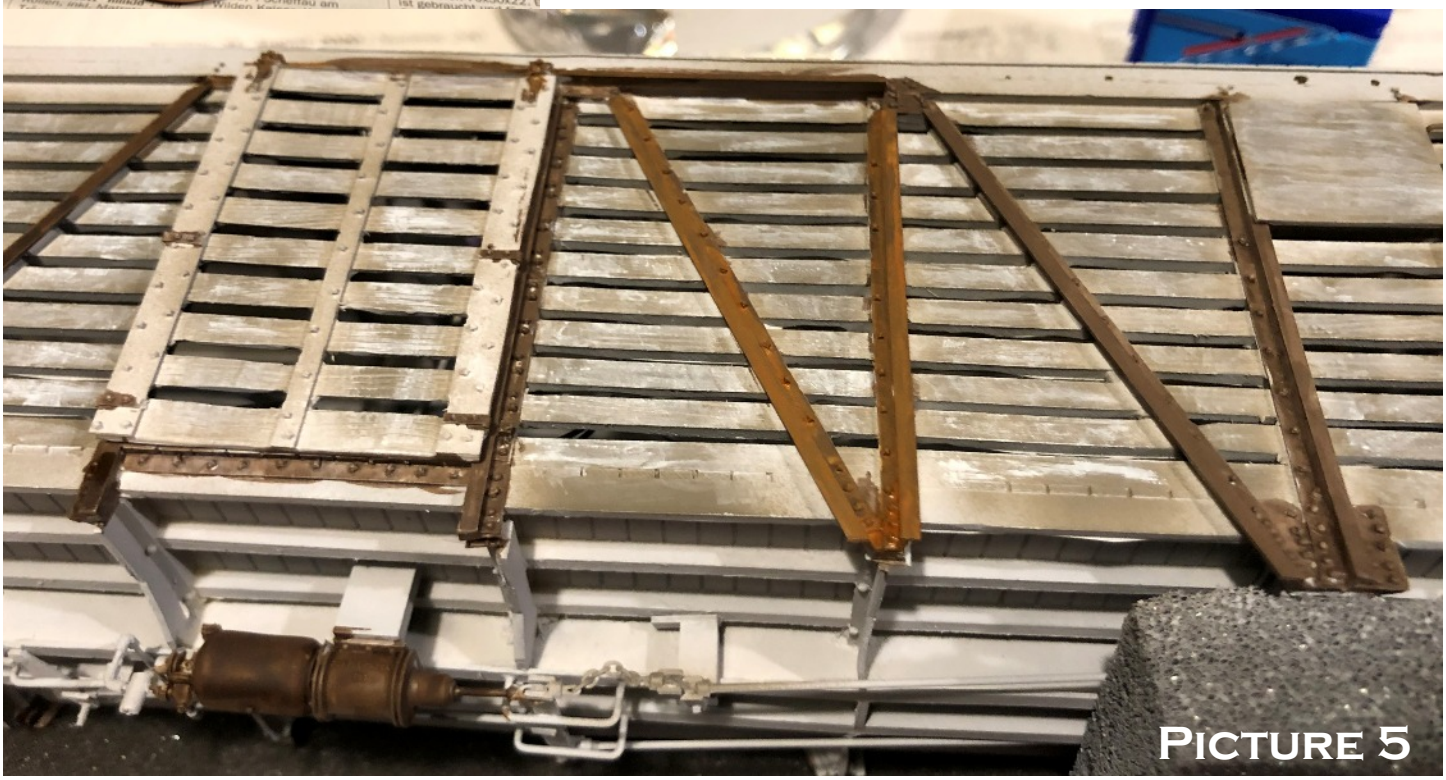


All planks were airbrushed with Vallejo Air 71.131 Concrete as a base and then variations were carefully hand painted with some light grey acrylics. I used a combination of dry brushing and focused application with the smallest brush I could find. Once I liked the result, I started to hand-paint the Z-braces and various metal parts of the car sides. (Pictures 2 and 3).

Picture 4

I wanted these parts to be completely rusty in appearance so I started with a base of LifeColor Frame, Dirt from their acrylic range and added AMMO enamel washes Track Wash and Light Rust Wash avoiding any leaking into the wooden panels. The rust would show where the brown top color of the car would chip away.

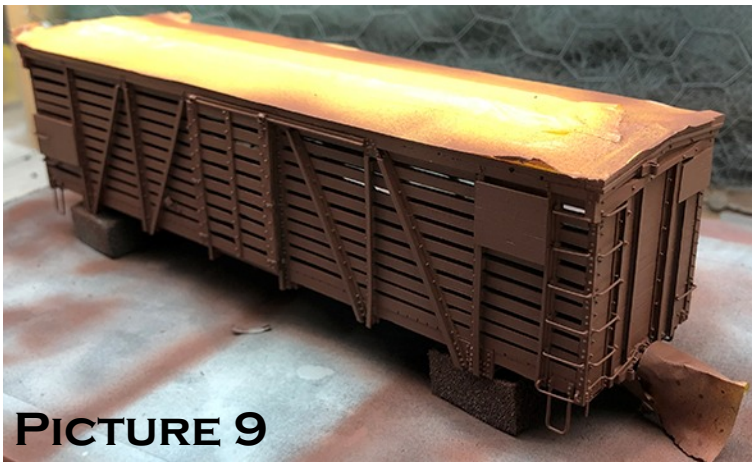
(Pictures 4, 5, 6, 7 and 8)


Picture 5

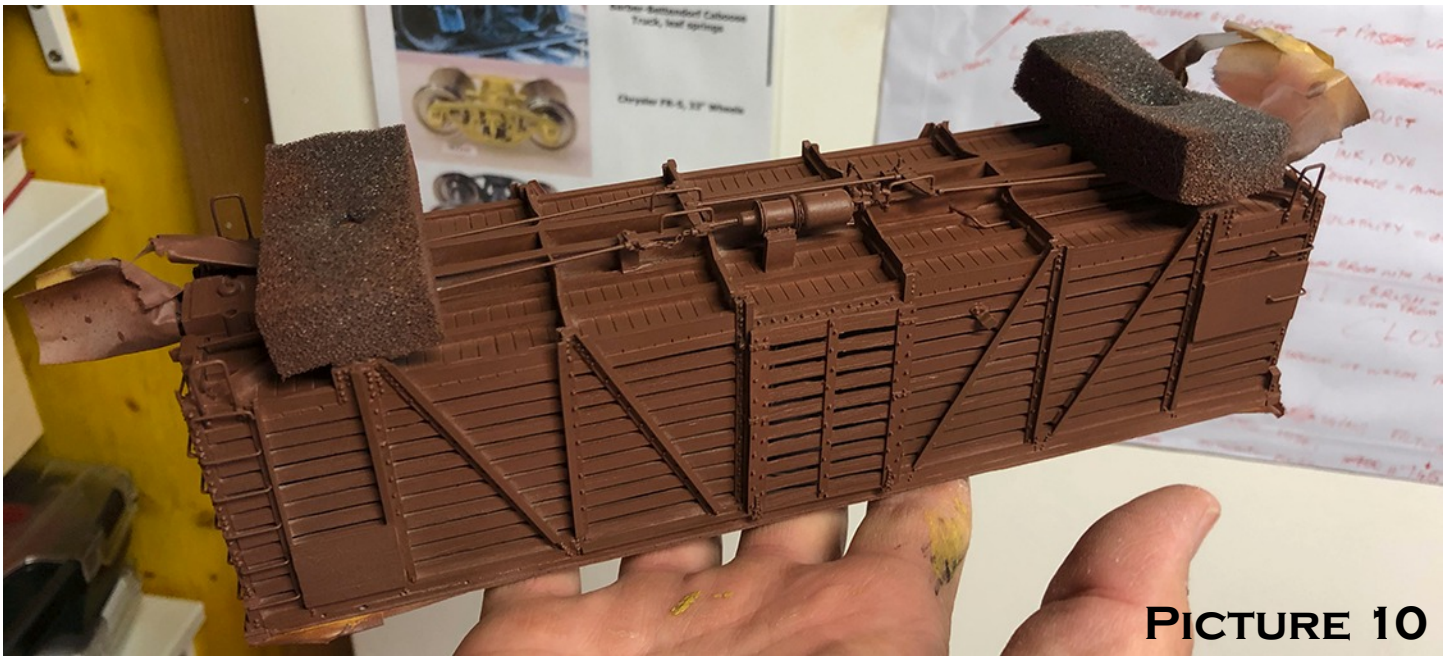

Picture 6


Picture 7

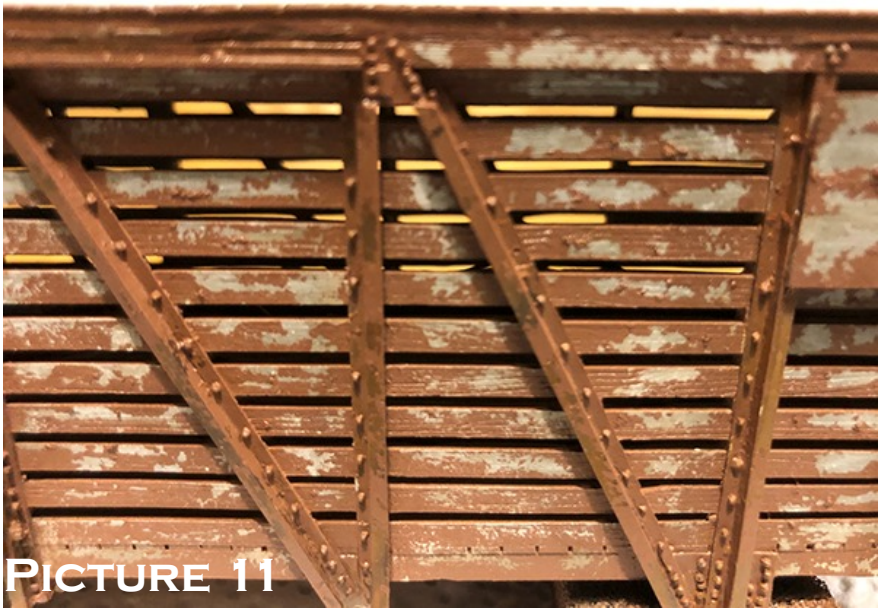

Picture 8


Picture 9

With the car sides prepared, I went on to the hairspray. I found that a stronger grade works very well. And I made a heavy application with several layers, wetting the surface. The roof was masked off and the hairspray fumes turned the workshop into a hairdresser's salon. I dried the model carefully and gently with a hair dryer, avoiding too much heat. Once dry, I immediately started to spray the top coat using a previously prepared mix of red and brown acrylics to represent the car's original paint job. After I achieved good coverage, the model was again dried with the hair dryer. (Pictures 9 and 10)



Picture 10



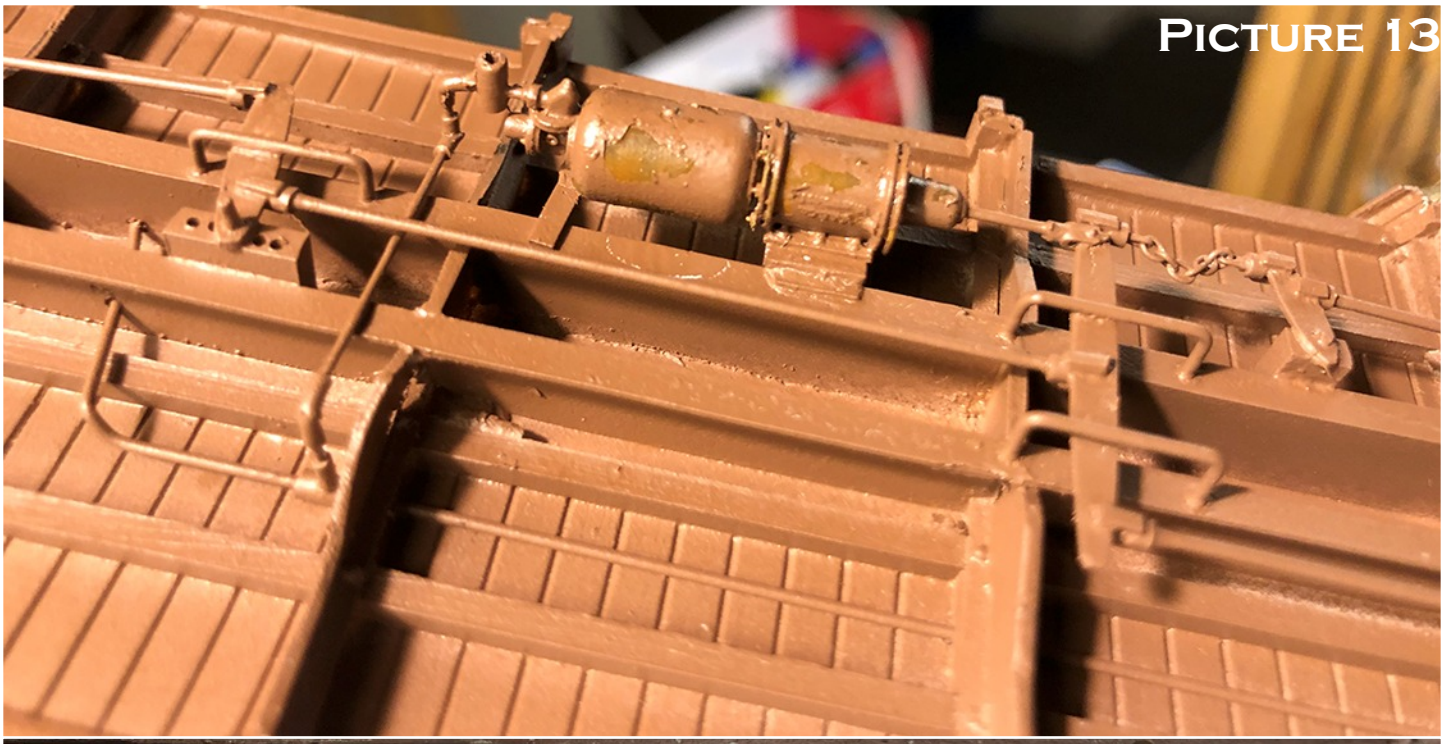
Picture 11

Picture 12

Chipping started immediately after the paint was dry. The time that passes between hairspray and paint application is one of the variables of the technique. The paint gets harder and thus more difficult to chip away from the hair spray underneath. To actually start the process, plain water is applied locally with a broad and somewhat stiff paint brush. A soft scrubbing motion creates little paint flakes that come off, allowing more water to enter the hairspray layer.

Another factor is the soaking time of the paint - after some time, the water softens more and bigger patches of hairspray, making the effect stronger. Some modellers use a wooden cocktail stick to chip the paint. It is more precise and allows for more control, but it's harder not to create too uniform a look. I try to use the brush whenever possible since it attacks the paint more randomly.

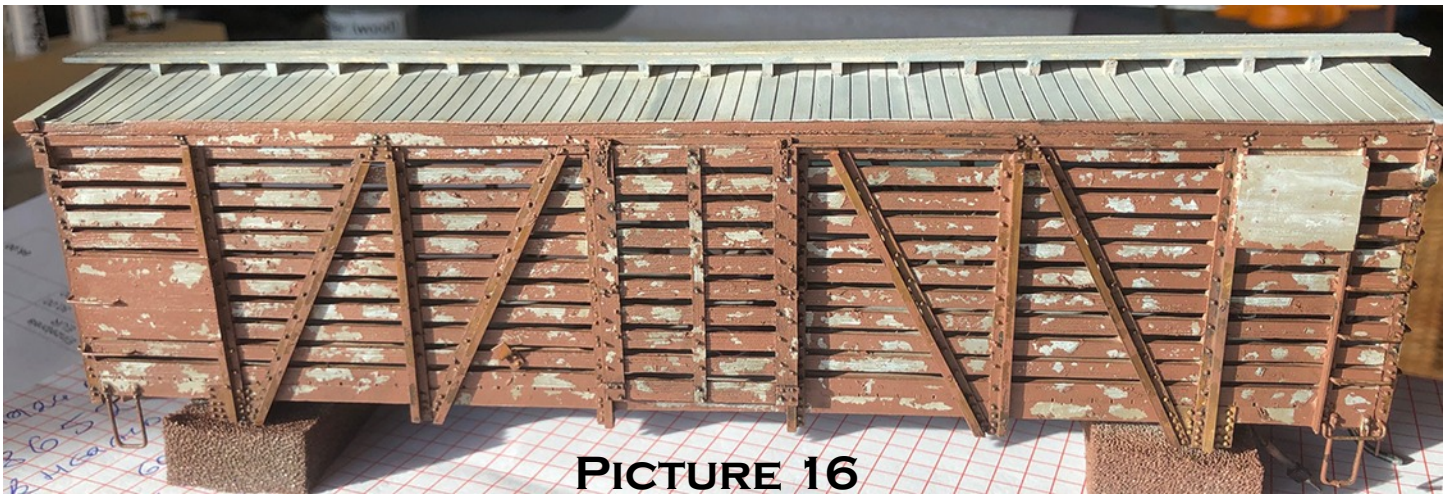
(Pictures 11, 12, 13 ,14 ,15 and 16)



Picture 13

Picture 14

Picture 15



Picture 16

Once done, the car was left to dry thoroughly. The data spots were painted a lighter brown to let them look new, the herald board received some black with a bit of grey for a faded look. I used a tiny brush with paint thinner to wipe away a bit of the black here and there so the bare wood could shine through. The decals for the reporting marks, car numbers and herald were scratched carefully with the tip of the hobby knife to flake away a bit of the white color. It is important to work only in small areas, otherwise the decal would fall apart when slid on.

(Pictures 17, 18, 19 and 20)

Picture 17

Picture 18

Picture 19

Picture 20

The roof received some brushed on grey acrylic paint at different shades to add some variation and to underline the individual planks. I cut strips of real wood for the roof walk with the mini table saw. The grey was painted on well diluted and a cotton swab soaked with thinner removed some of it to create a faded look. (Picture 21)

The car received a diluted wash using AMMO Brown Wash For German Dark Yellow to underline the wood texture and to kill the fresh look of the brown top coat. A black wash would have been too aggressive. I love these enamel washes, they can be modified with AMMO Odorless Thinner without attacking the rest of the acrylic colors underneath. Also some pigments were added for weathering, mostly on the lower side of the car and on the roof.

(Pictures 22 and 23)

Picture 23

The car still needs some finishing touches like brake wheel and running board detail and I am really happy with the outcome of that project. The battered stock car certainly was a lot of fun to build. Much planning and preparation is required, but it's so rewarding once the effect starts to show under your brush!

Sarah Griessenboeck *is Austrian and shares the excitement of many Europeans with US-Trains. She models Union Pacific and Colorado & Southern in P:48.*

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How to scratch build "Genesis"

By Hendrik Kersten

J.J. Cale in my earphones, "After Midnight", and indeed I´m traveling towards Omaha through Nebraska, looking out of an upper deck window of Superliner-sleeper 32017. It´s December 2003, it´s pitch dark outside and I guess that's all I will ever see of this nice, flat state. The "California Zephyr", with two roaring P42 (Genesis) locos at the front, is gliding towards his still distant west coast destination. The great plains are widely considered less attractive than the Rocky Mountains, we will climb them in daylight after a routine stay in Denver. I should be sleeping by now, listening to the discreet sound of the rail connectors and dream a typical travelers dream. Instead I´m drinking coffee, by the way, a splendid free Amtrak service for "sleepers". First thing I will do, once arrived in Los Angeles, is visit the local model railroad shop and get my desired set of KATO N Gauge P42´s. I already had researched the location, prior to the journey in Germany via Internet.

The next 10 years or so, they bravely pulled my 1:160 version of the "California Zephyr" right across through my version of the mighty Rocky Mountains in our kitchen. My wife and I liked very much sitting there and listening to the reassuring sound of the tiny rail joints, drinking coffee and dreaming – Well in my case I dreamed of a much lager version of the Zephyr. I grew up in the presence of a large O scale layout. Sometimes, when my mother went out shopping, my father and I undermined the carrying walls of our home, to allow the rails to reach another room of the cellar. Things like that tend to shape a personality…

In 2017, I was lucky to purchase an Overland/ Ajin P42. O scale, beautifully made, heavy and strong. But it was just one, not a pair. What I did not know by then, it turned out to be the starting point of an extreme "California Zephyr" scratchbuilding project. A second P42 had to be made from scratch, 8 Superliner cars, coach, sleeper, diner and a sightseeing version and lately, a brand new Siemens ALC 42 even before it enters service in late 2021.

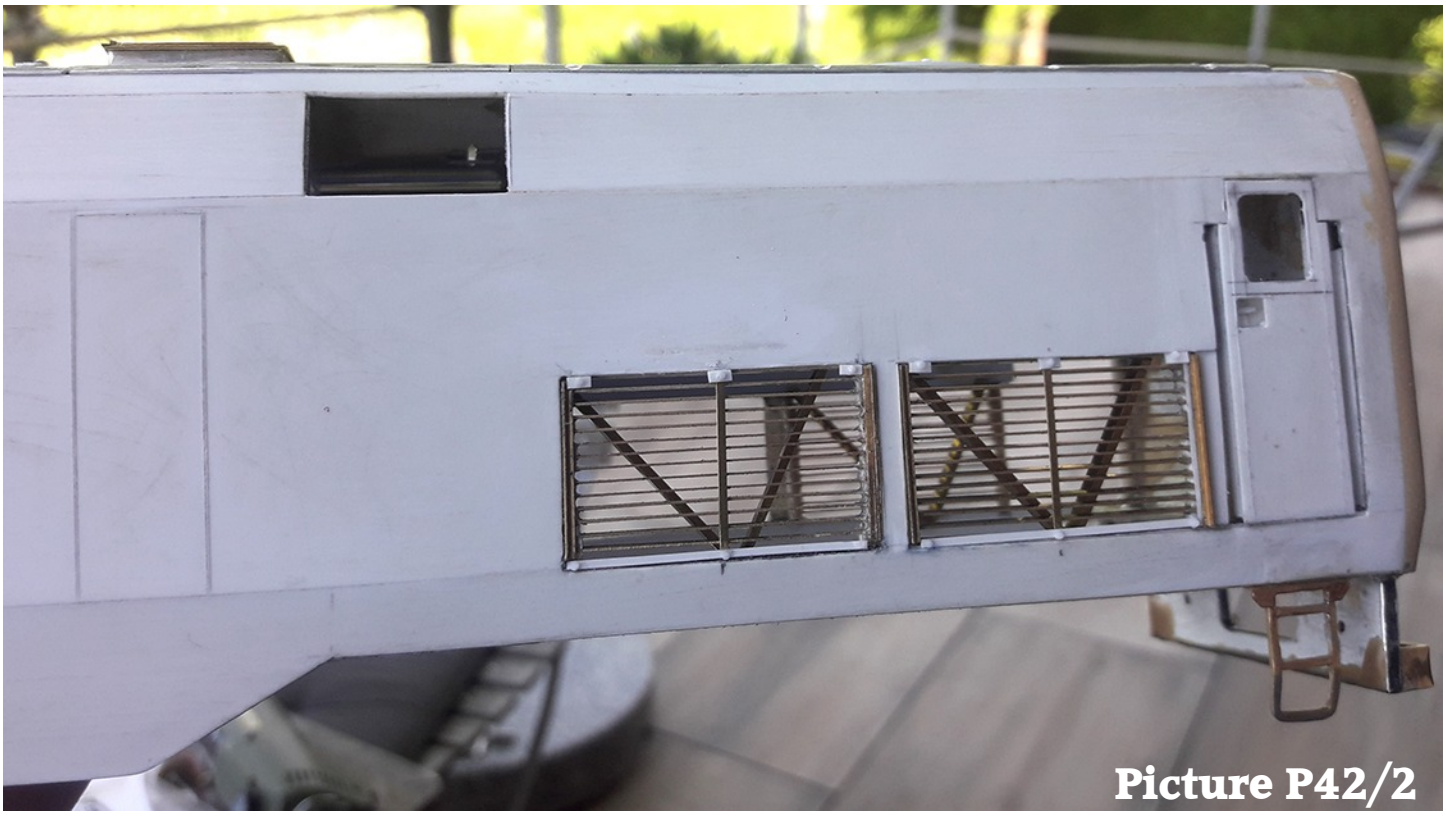
A word about scratch building. It´s necessary, it´s fun, it´s cheap and it´s saving time! European manufacturers tend to produce a huge pile of products which they try to sell afterwards over years to come. No problem to get your desired loco virtually any time, any place. Their American counterparts follow a different strategy, the products are cheaper, but limited. So clench your teeth and do it yourself, if you want to see your "California Zephyr" driving through your backyard before entering retirement.

Pictures P42/ 1 and 2

There are many ways to start a project, but one of the first questions to solve is the kind of building material you want to use. Brass is widely chosen, its durable and it can be soldered with ease. But the process of sewing, cleaning and grinding is very time consuming. I personally like "Alu-Dibond". A sandwich material of two layers of 0,3mm aluminum foil and black polyethylene in between. It´s not widely used in the model making business I am afraid, but it certainly has some advantages. You can scratch the surface with a knife and cut it through precisely, you can saw it the classical way and even bend it without much force. The major

Picture P42/1

disadvantage is, you have to put the pieces together using aluminum angles and screws or simply glue with the help of 2k-, putty, glue or resin. Once the basic hull is ready, it can be "planked" with plastic sheets, adhesive foil or whatever you like. Picture 1 and 2 show the nearly completed hull. You can easily distinguish the materials used and the whole thing is a matter of days to build. The cooling grids for the massive diesel took much longer to realize.



Picture P42/2

Pictures P42/ 3 and 4

Picture P42/3

Picture P42/4

Certain details of the roof, for instance, the big fan, are distinctive and quite recognizable parts. The realization can easily put you to your limits. For this reason I divided the whole thing into modules which are put together afterwards. The assembled and prefixed roof is then swung out with liquid 2k-resin, it hardens within minutes and the roof is as durable as an injection molded one. Nuts and bolts generate the necessary details to create a convincing look. Hexagonal styrene strips and a sharp cutter are the plain solution. But what about the radial spaced cover of the dangerous fan? Overland used a thin, etched foil and I used the hairdryer of my wife... Ok, this would possibly have put my model maker career to an humble end. The local electrical marked saved the day, the flamboyant etching was available as spare part.

Pictures P42/ 5 and 6

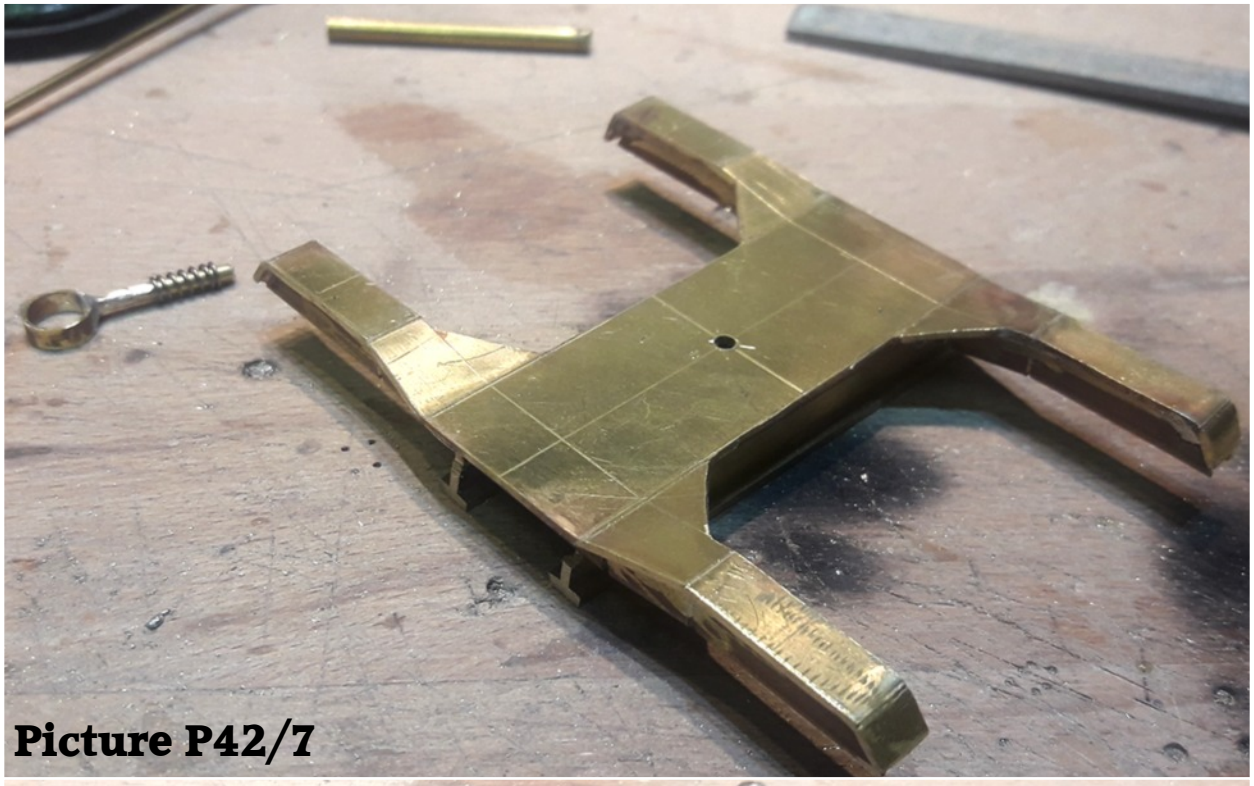
In comparison to the formidable Overland machine, my P42 is not allowed to look like an ugly duckling. In future the two sisters have to serve convincingly as multiple unit. Overland/Ajin reproduced the front sightly incorrect, too smooth, with rounded corners. In this respect my "twin sister" is a bit closer to the goal. All in all, it seemed to work quite well – and then I realized with mild horror, that my proud rooftop arrangement of 5 horns and their environment was an exact mirror image of the original. All over again? I mistrust the principle of perfection and choose to keep it with an eye wink.

Picture P42/5

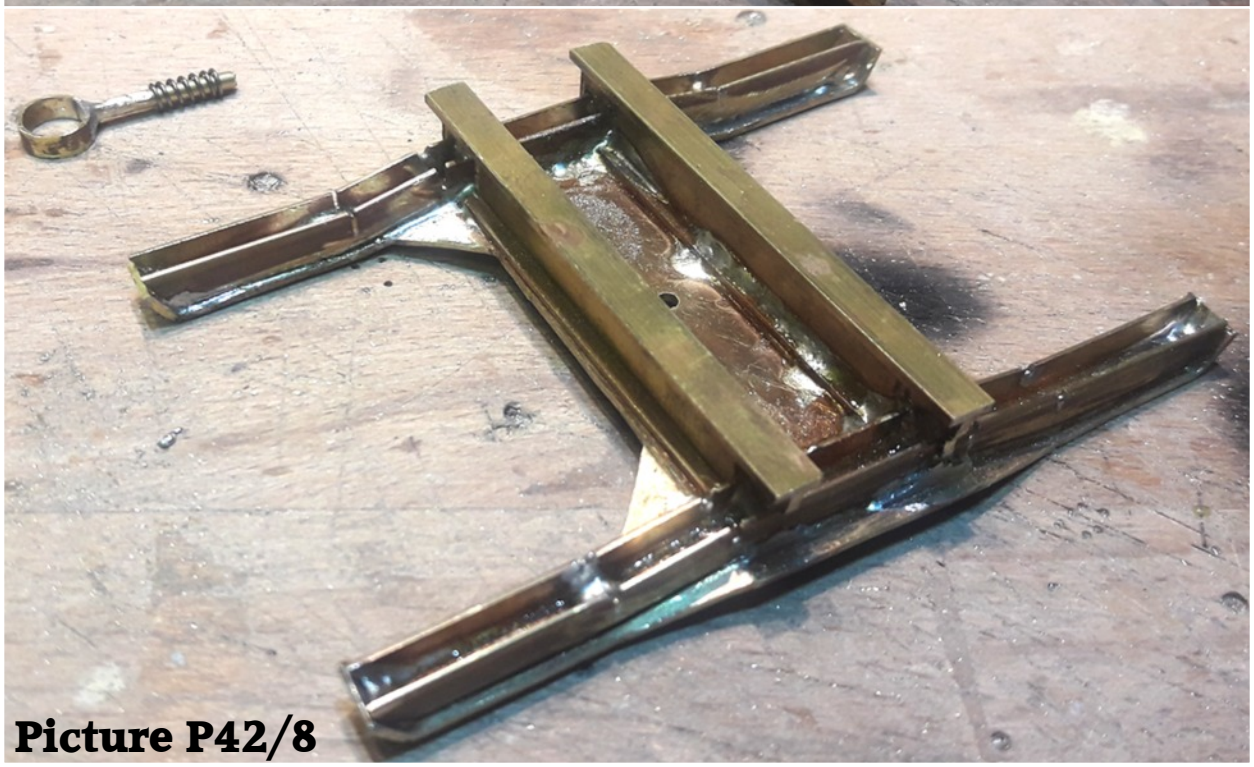
Picture P42/6

Pictures P42/ 7 and 8 8a

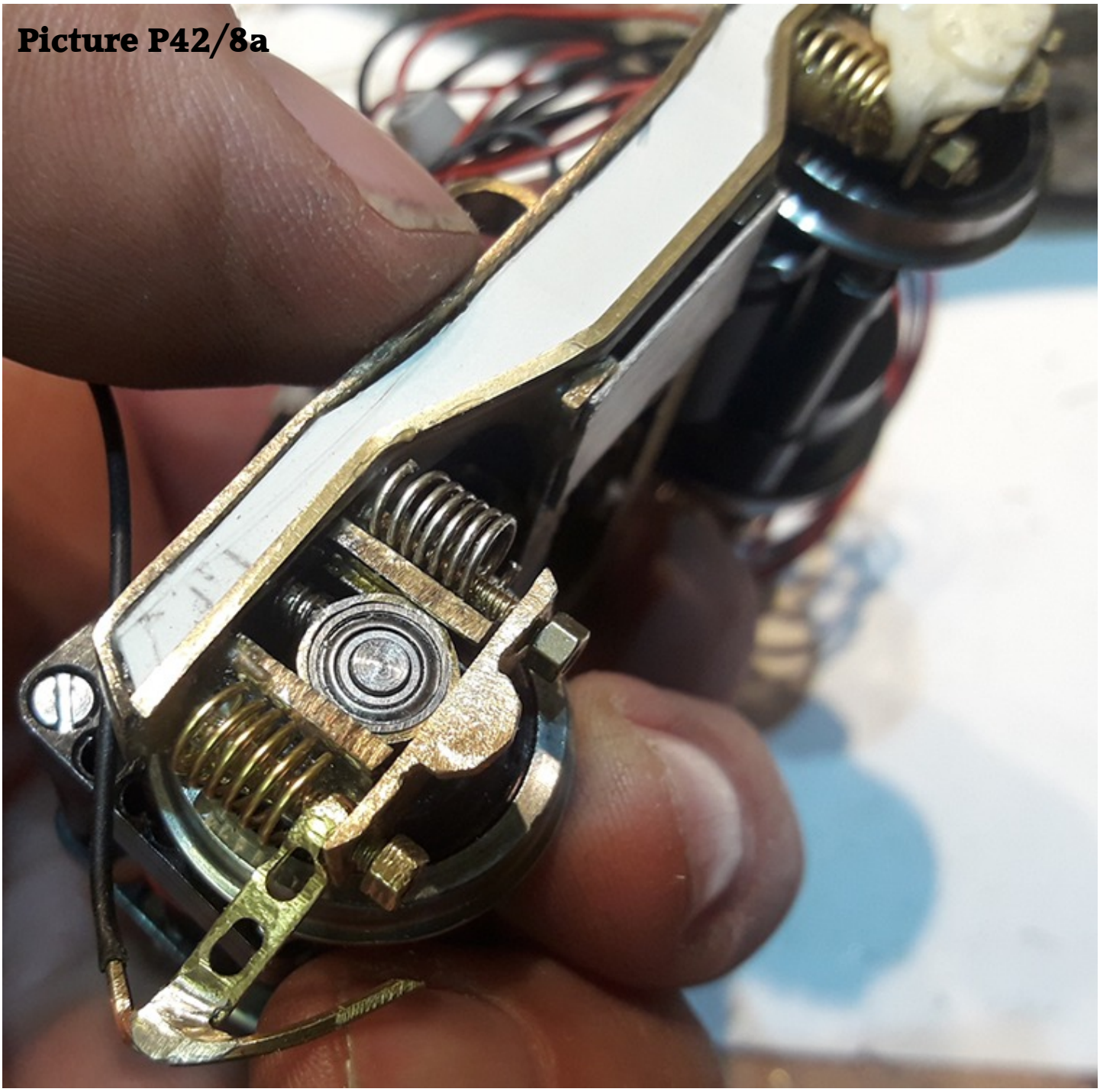
Compared to the then existing locomotives, the GE P42 was a revolutionary design. A self-supporting hull instead of a heavy frame and bogies which look rather fragile despite their task, bringing 4000 hp of the prime mover via DC motor on the rails. For my O scale P42, I chose the original configuration, one DC "Faulhaber" motor with transmission for each axle. Overland placed a big DC motor inside the hull with cardanic propeller shafts fore and aft. The fragile appearance of their trucks is perfect. My bogies have to cover the suspension, which is placed right in the center above the ball bearing of the axle. The (too) voluminous coil springs aside are fakes. Therefore is the framework of the bogie a bit too heavy and the whole impression is not quite as elegant as the original.



Picture P42/7

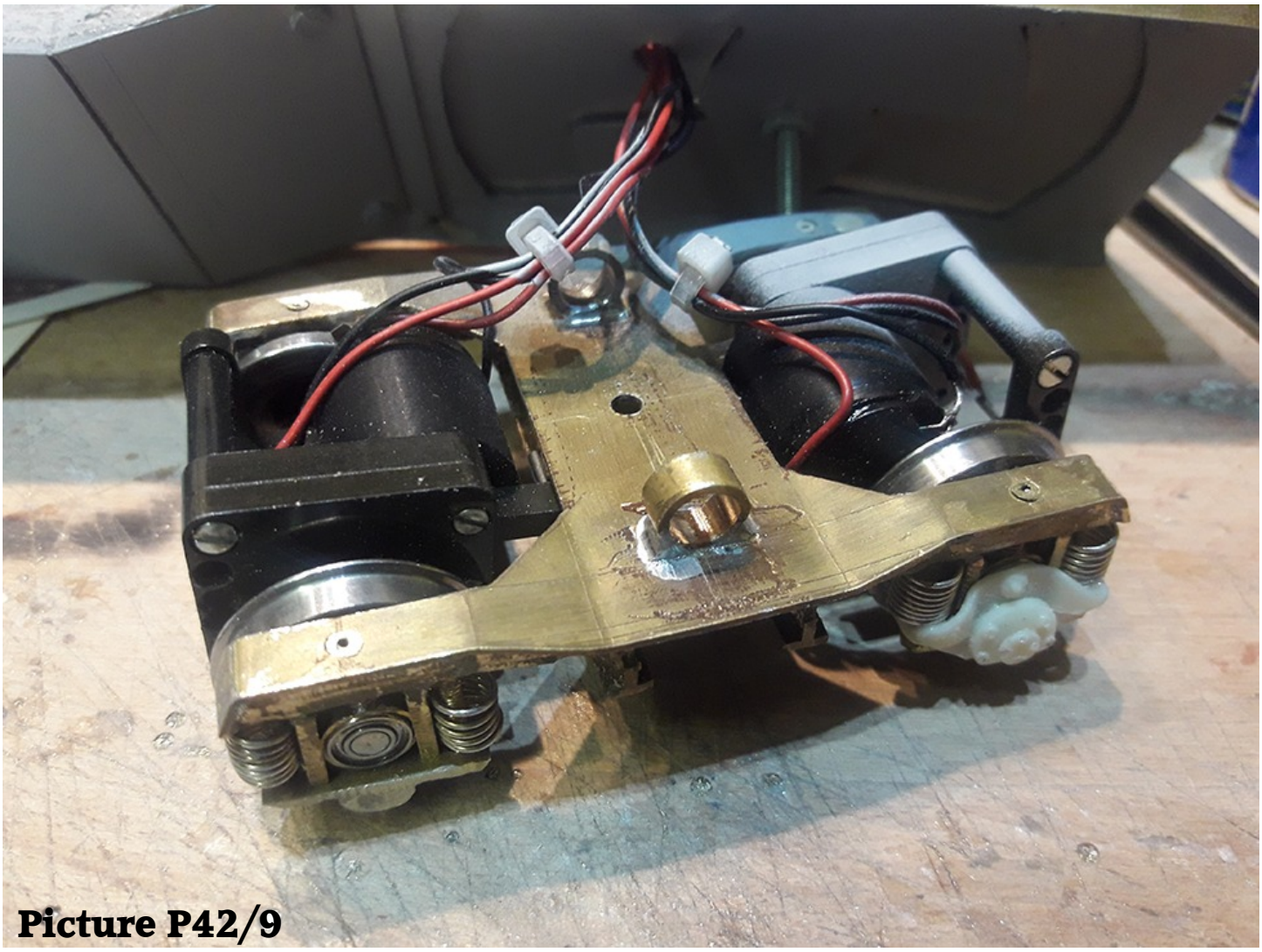


Picture P42/8

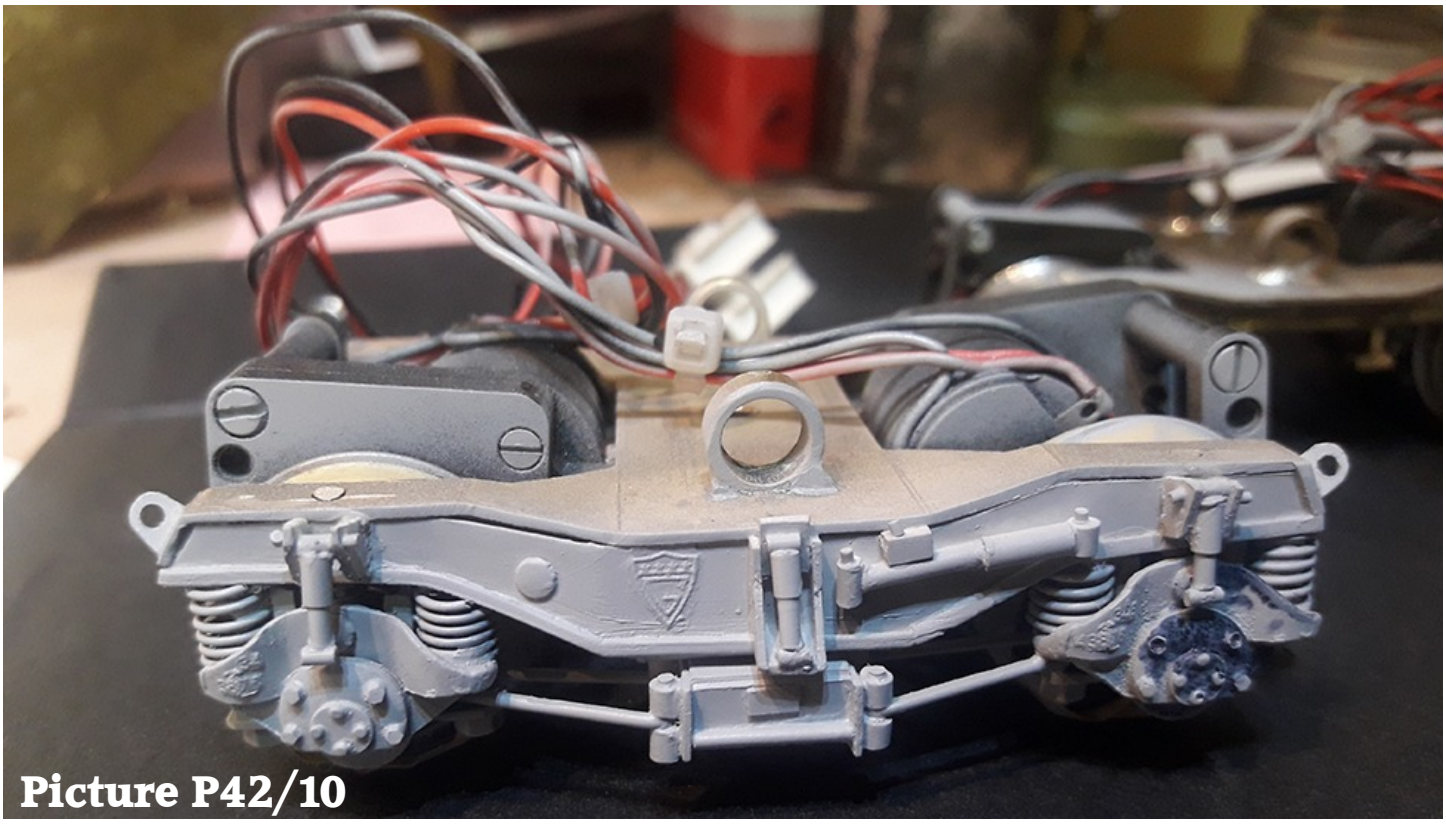


Pictures P42 9 - 13

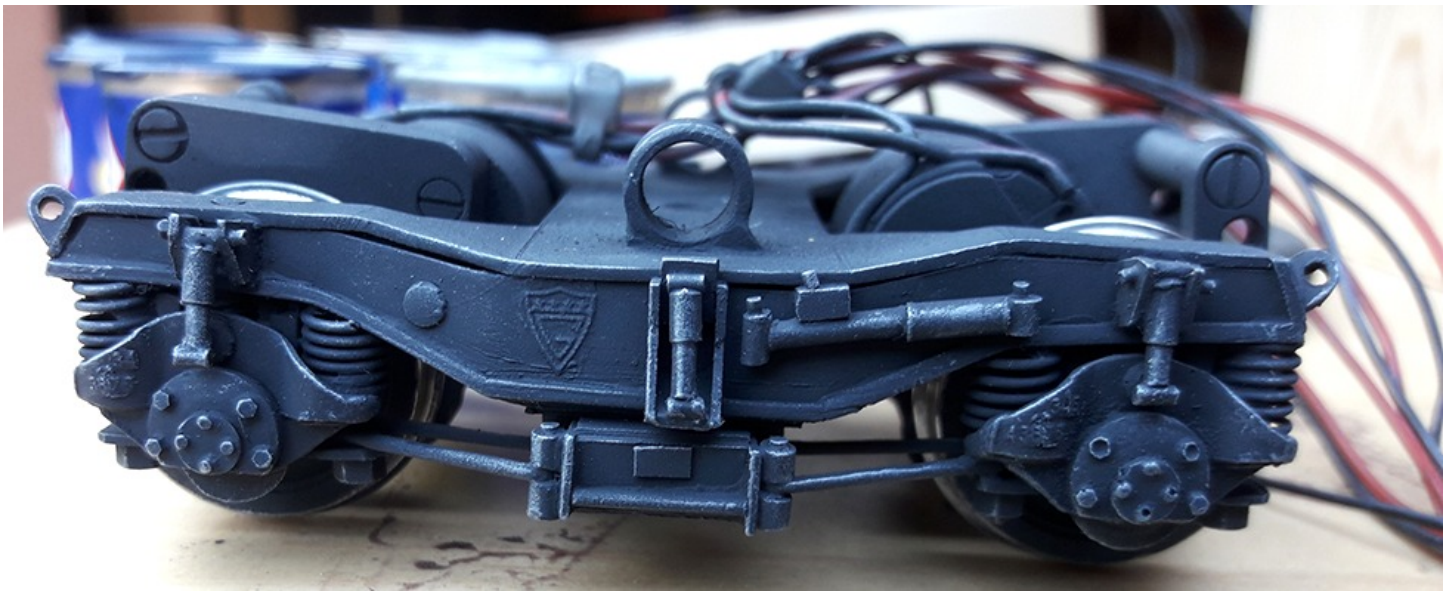
When the normal teething problems were solved, the trucks under their grayish coat of paint worked surprisingly well. Strong soldered brass parts serve as strong backbone and the motor-transmission combination is attached in just three places, The suspension of the axle, left and right and a flexible hook at the back of the motor casing. The additional parts of the fake suspension are resin casts from original moldings. The typical storage boxes and compressed air cylinders of the bottom side are important features for the recognition of the P42. The same is true for the fuel tank. In the typical American style, this bulky monster is normally attached beneath the main frame. In P42 the tank is smoothly integrated in the hull. One reason for the locomotive to look somewhat "European".



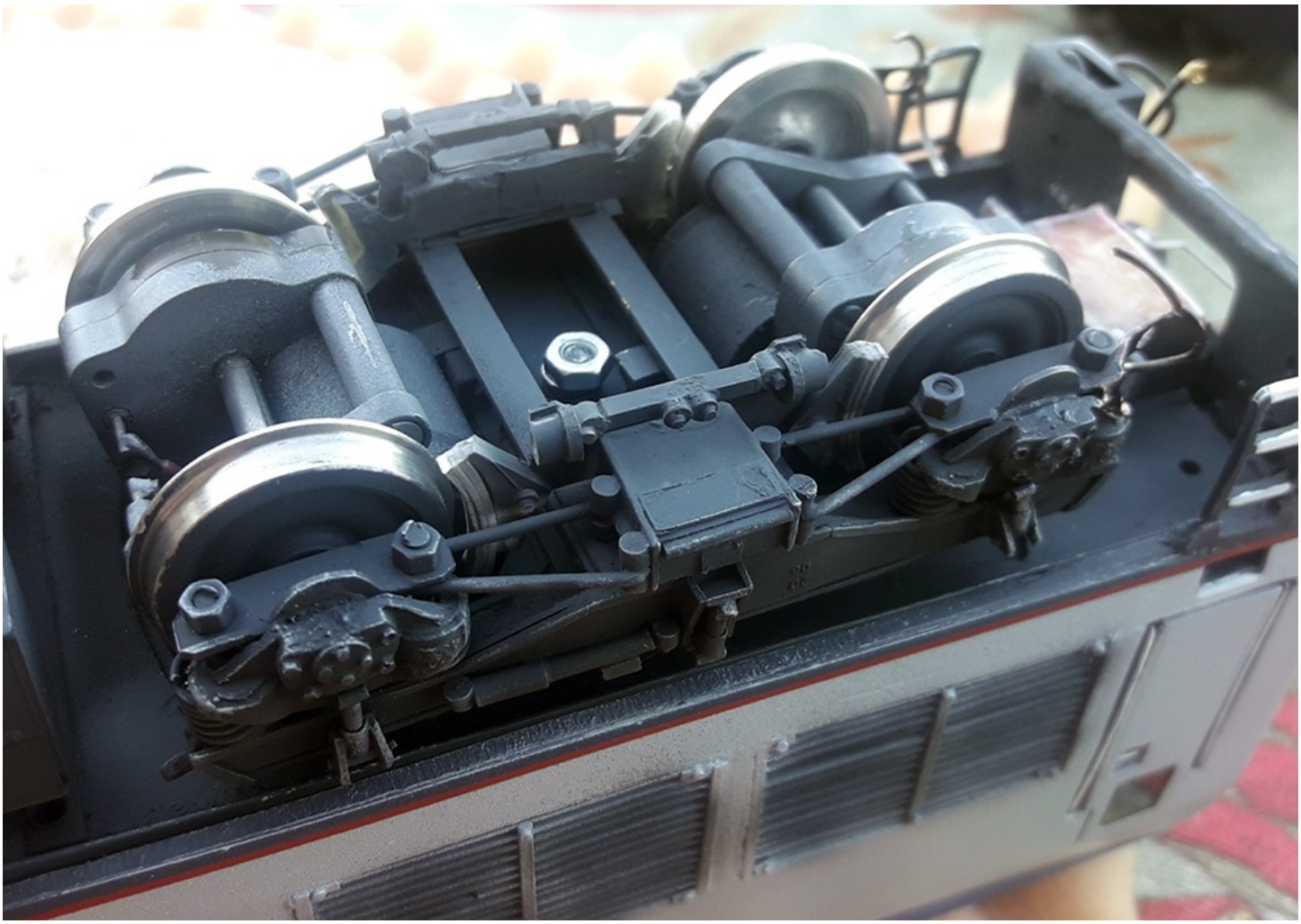
Picture P42/9



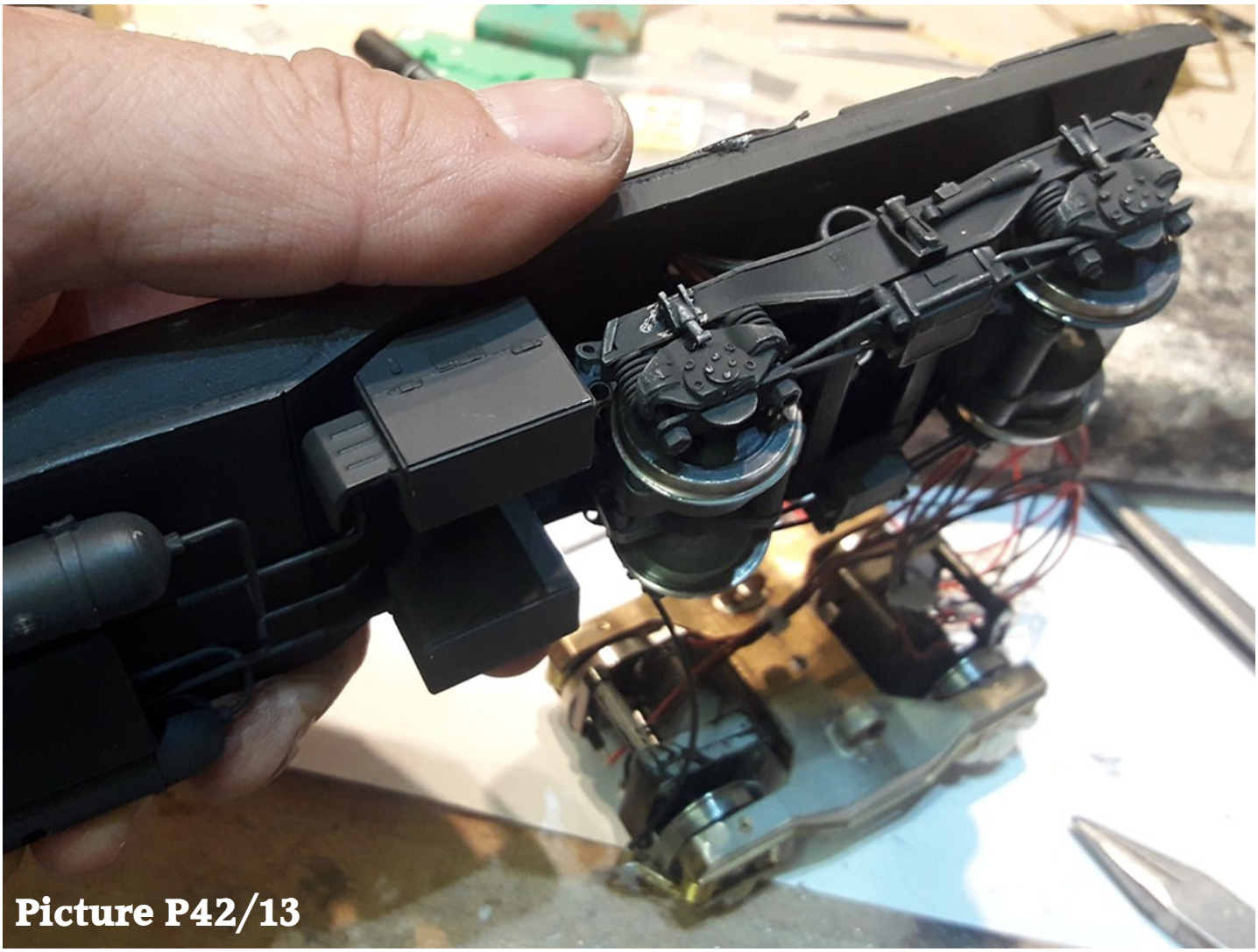
Picture P42/10



Picture P42/11



Picture P42/12



Picture P42/13

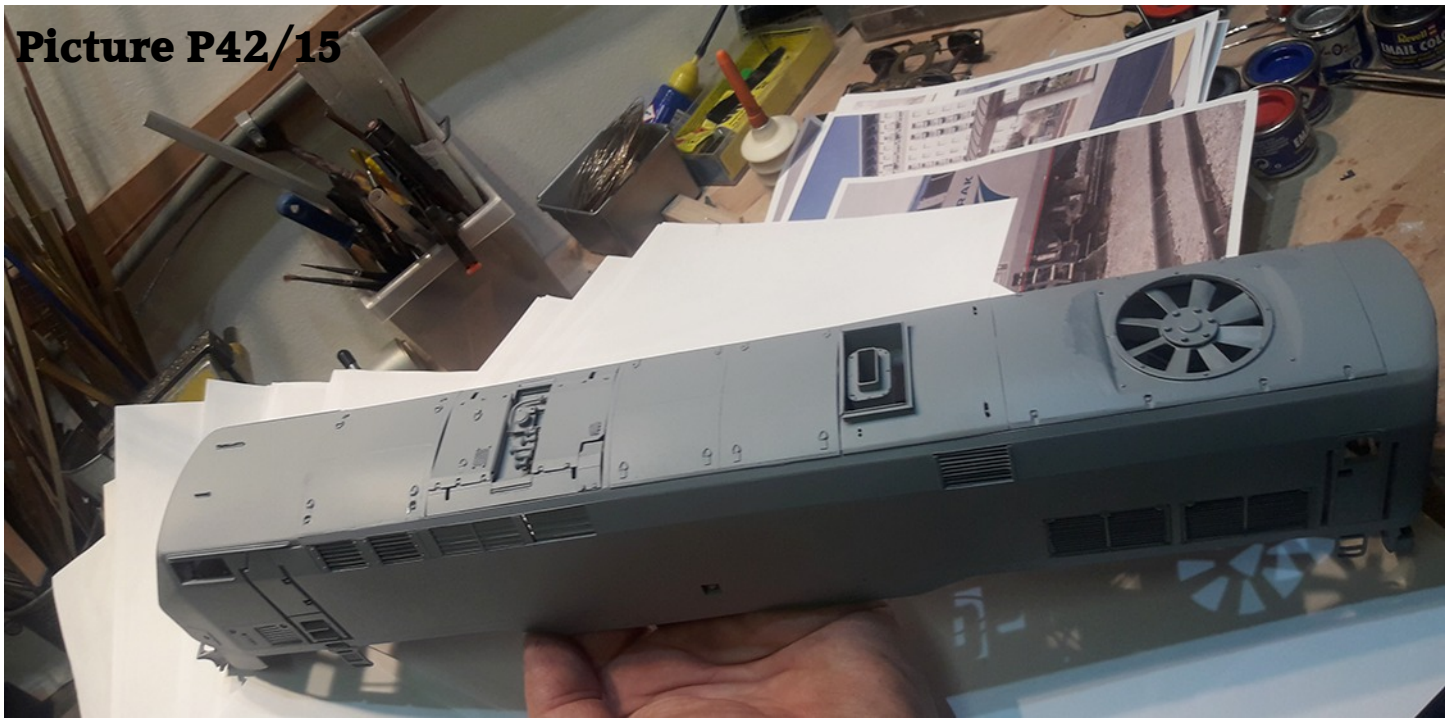
Pictures P42 / 14 - 16

When you think you´re finished, the gray primer reveals the truth. In fact, the uniformly applied paint shows merciless the flaws and mishaps of the construction process. There is nothing you can´t grind or scrape away, but it strains your patience over and over again. The final coating is nevertheless necessary in order to blend the different materials and surface textures. In this stadium, the machine looks for the first time convincingly like a machine. The front view shows the seemingly simple structure of the draft. Simple looking, but not an easy task if you try to realize a three dimensional body from a necessarily two dimensional plan view.

I tend to collect as many pictures of the original as I can get. Sometimes it´s helpful to purchase a HO scale model to have a three dimensional reference. Of course that is only an option, when you are sure the model makers did a good job. Fortunately, I had my "Overland" but as mentioned, even this brilliant model has it´s flaws. Despite the incomprehensible mistake, concerning the wrong orientation of the details on my roof, the appropriate section looks quite convincing. Ready for the final paint job!

Picture P42/14

Picture P42/15



Picture P42/16

Picture P42/17

Pictures P42/ 17 -18

Pre-shading the hull with dark, almost black paint, is rather a habit and not really necessary. Normally we don´t use glacé paint in this business. Still there is a clear advantage. The dark paint covers reliable all lower-lying areas and prevents them from "blinking" in your eyes, when the real paint job is finally done. In theory pre-shading emphasizes gaps and wells and when you choose to "drybrush" the same area with a bright colour, it results in a nice contrast. But this is not a model for a showcase, and in this respect, the airbrush is just a medium for the purpose of getting the surface uniformly bright gray and Amtrak-blue. My fancy hairdryer fan cover is mounted here with all sorts of nuts and bolts. You almost hear this enormous thing working.

Pictures P42/ 19 - 20

The underlying bright gray contains a portion silver to match the original. It´s neither gray nor real silver but something in between. The Amtrak-blue is a problem in itself. Depending on the photograph, the lighting and reflections it appears more ultramarine blue or petrol with a touch of green. My car roof is plain ultramarine and you may notice the difference. The famous "wave" pattern has been achieved quite simple, using "Tamiya" cover tape and kitchen tissue. The red stripe and the Amtrak lettering are not decals, they were plotted from self adhesive foil. Unfortunately, there is a clearly visible difference between the colour of the hull and the letters, but the thin foil is water resistant and that´s an important feature for a garden railway.

Picture P42/19

Picture P42/20

Picture P42/ 21

Two months later, the completed and digitalized P42 starts her test runs. The ESU receiver drives this little computer on 8 wheels, the sound is surprisingly realistic, at least for a guy who built his last locomotive 30 years ago... Coupled with acceleration, the funnel creates smoke and the combination of light and sound is a complete new experience for me. The backdrop is a stunning, 6 meters extending photograph of Chicago's "backyard". It took some time to find, most of the available pictures show the "windy city" from her more spectacular lake side. Spectacular the sight may be, but it revealed a not entirely unexpected problem too. The two P42 sisters with their completely opposite drive systems did not work well together. Despite various efforts this problem is still not solved.

Pictures P42/ 22 - 23

As plan B a complete new loco project was started. The era of the rapidly aging P42 is soon coming to an end. In 2021, the first new Siemens Charger locomotives ALC 42 will gradually take over the long distant connections. I tried to create an overall impression of this “spaceships on rails” in a manner, that show the two generations of railway history side by side. But that may be another story.

Picture P42/22


Picture P42/23

Pictures P42/ 24

P42 no.97 on it´s way west, towing the California Zephyr through the crazy looking St. Charles Airline bridge. In reality, the Strauss Trunnion bascule bridge is not quite the right direction to California, but it´s a famous landmark of the nearby Chicago Union Station. I simply couldn't resist building this technical highlight of the past.

Picture P42/24

Decoder Installation into an Atlas SW Locomotive

By Michael Culham

I have four of the Atlas O scale SWs and they needed to either have decoders installed or be redone with new upgraded decoders and speakers.


Photo 1

After trying out different decoder manufacturers I decided on going with LOKSound ESU as they have the best sound selection for my units. For speakers I decided to go with Tang Band as they had great bass response.

Because I am only running short 5-10 car trains on level ground, and the SW motors do not have a high current draw, I went with the ESU 58429. I do not recommended using these on large layouts with grades and 30 car trains.

The ESU decoder has a 12 pin connector that would mate with the NIXTRAINZ Decoder Buddy which makes decoder installs so easy. To make it even easier, my friend, Robin Talukdar, created a 3D printed base that slips right over the truck bolster and motor to give you a stand to hold the speaker, Keep Alive and Decoder Buddy while keeping all the wiring neat and tidy. Thank you Robin.

List of materials needed

You will need one each of these for each loco

- ESU 58429 12 pin decoder with sound file loaded
- Nixtrainz Decoder Buddy
- TCS KA2 Keep Alive
- Tang Band T1 1930S speaker

The decoder and decoder buddy can be purchased from Tony's Train Exchange and they will load the sound file for you onto the decoder.

The KA2 can be purchased from Train Control Systems

The Tang Band speakers from Parts Express

These are the links for the different items

Decoder: https://tonystrains.com/product/esu-58429-loksound-v5-dcc-21mtc-sound-decoder-emd

Sound files needed: For the SW-900s you will want sound file: S0771 EMD 8-567CR NT

For the SW-9 you will want sound file: S0560 EMD 12-567C

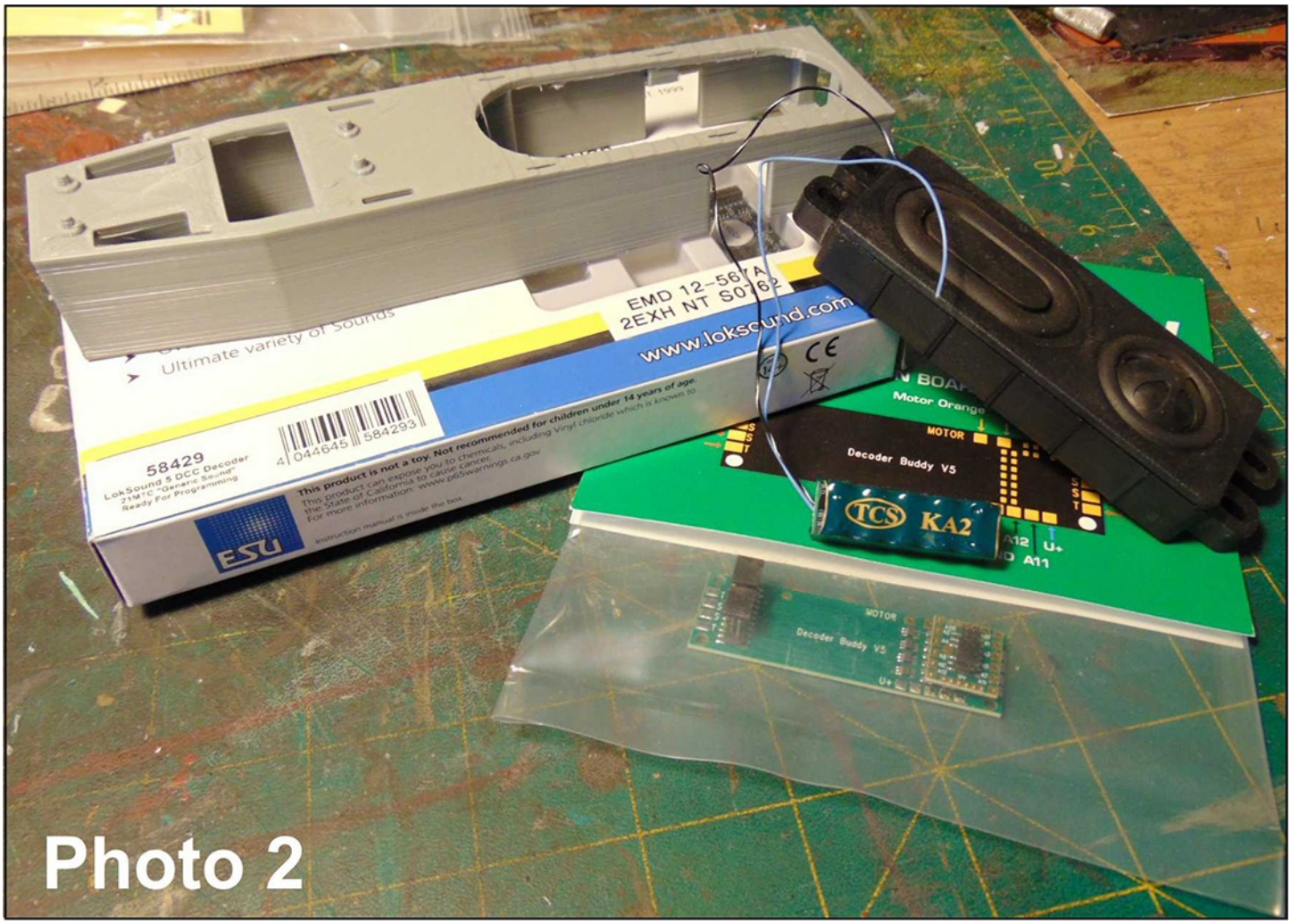
Decoder buddy: https://tonystrains.com/product/nixtrainz-decoder-buddy-includes-one-mother-board-and-one-connector-board

Keep alive: https://tcsdcc.com/index.php/1457

Speaker: https://www.parts-express.com/tang-band-t1-1931s-speaker-module-3-1-2-x-1-7-16--264-945

You will also need Robin's 3D base, which you can order from him at this email address: Robin@Bayviewjunction.com see his new Website also here.

Installing a decoder into an Atlas early version SW



Let's get started. With all your materials at hand, we can get started with the installation. (Photo 2)

First will be to remove the hood and see what's under it.

In the early versions, they had a small electronic board that controlled the lights and it also had a 8 pin connector for installing the early style decoders. There was also a speaker mounted to the hood, ready if you got a decoder with sound.

We need to remove all the old junk and get ready to stall or new DCC set up. (Photo 3 &4)

Next is to remove the motor and trucks as we will need to turn the motor 90 degrees so the brush wires are facing the cab area. Also the trucks will be swapped out end for end, so the truck with the log leads is at the

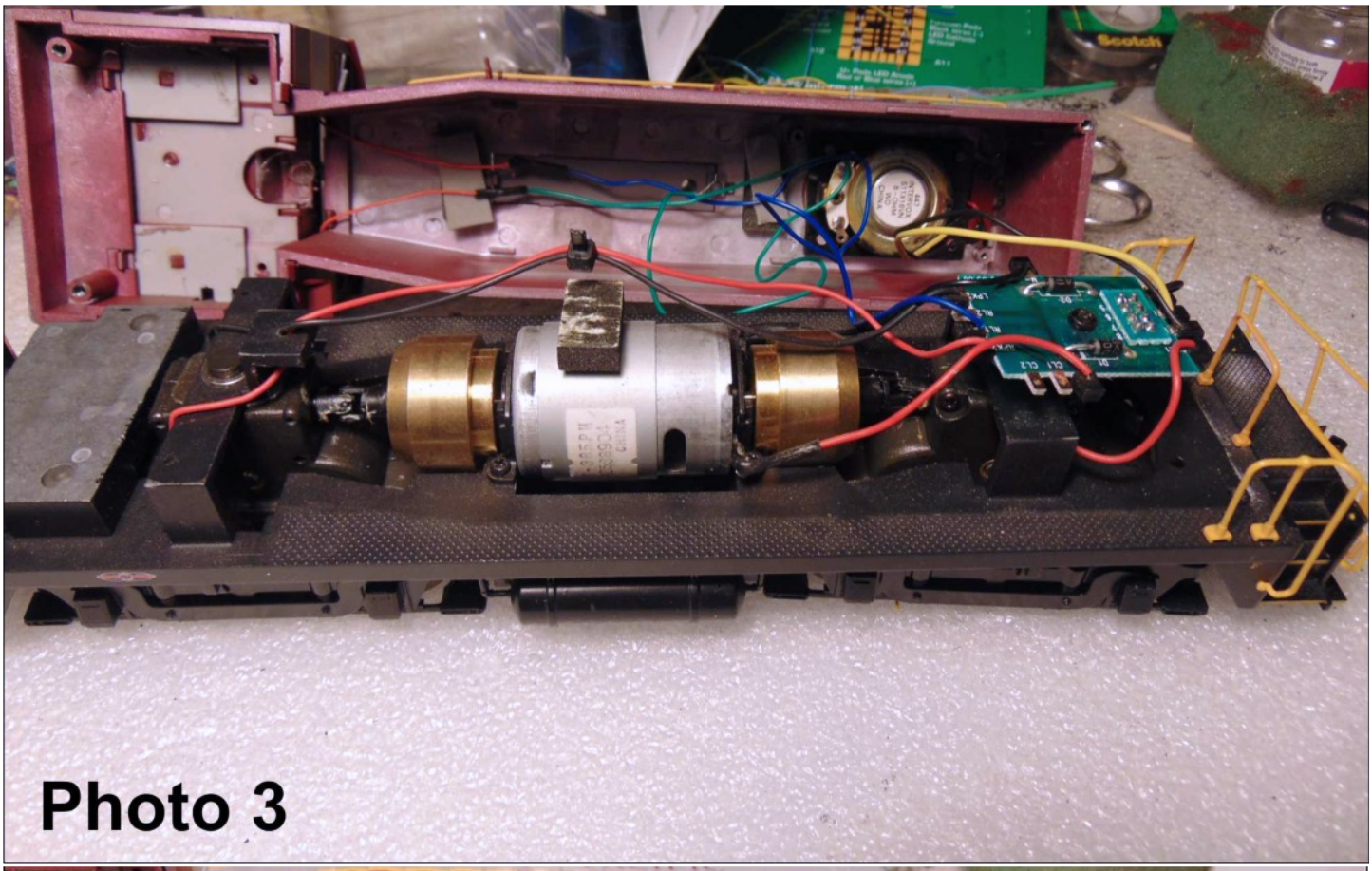


Photo 3

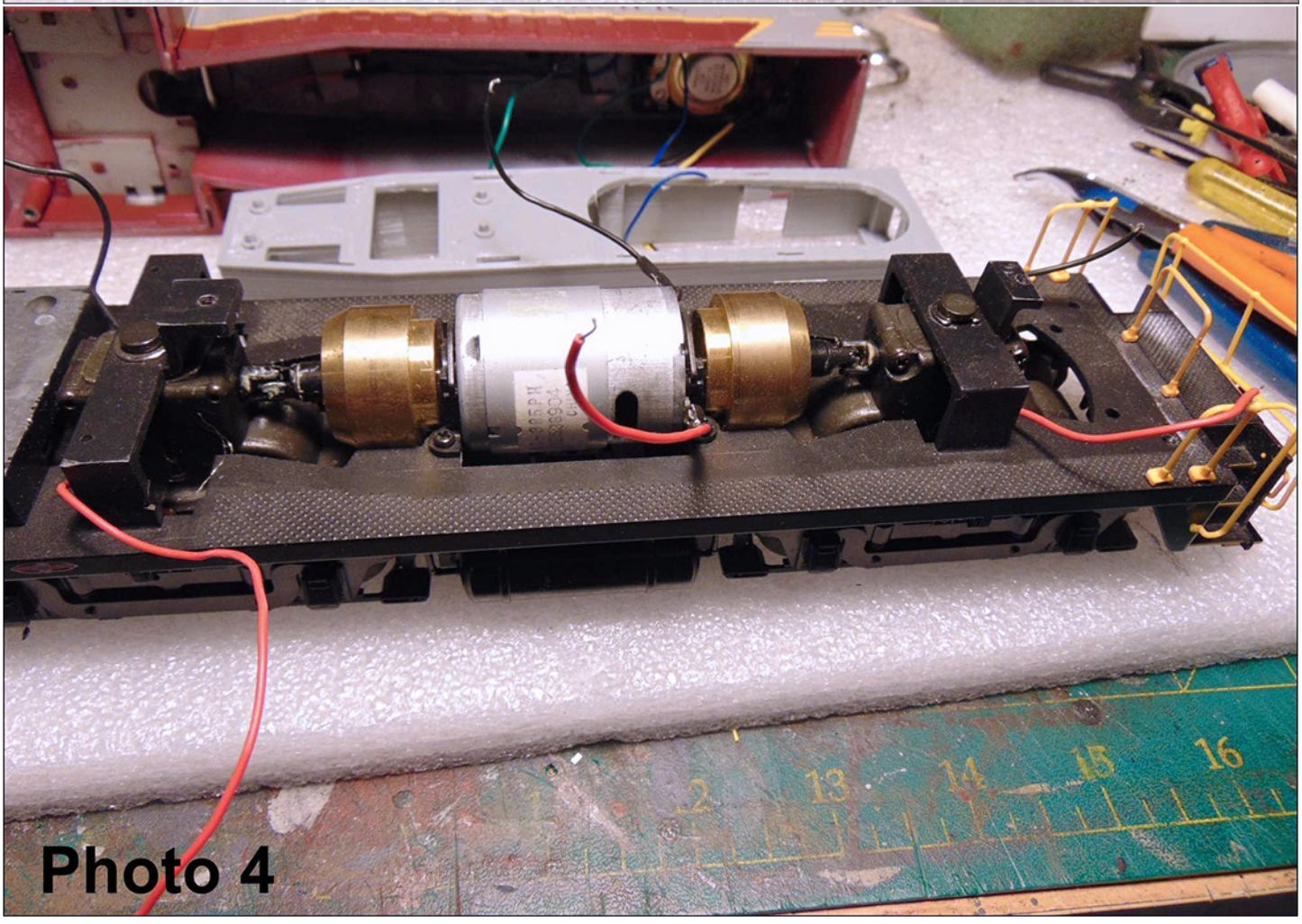


Photo 4

front of the loco. But do not reinstall these yet as there is some cutting to do and we do not want metal filings getting into the motor or trucks. I also removed the pilots so they would not get damaged. (Photo 5)

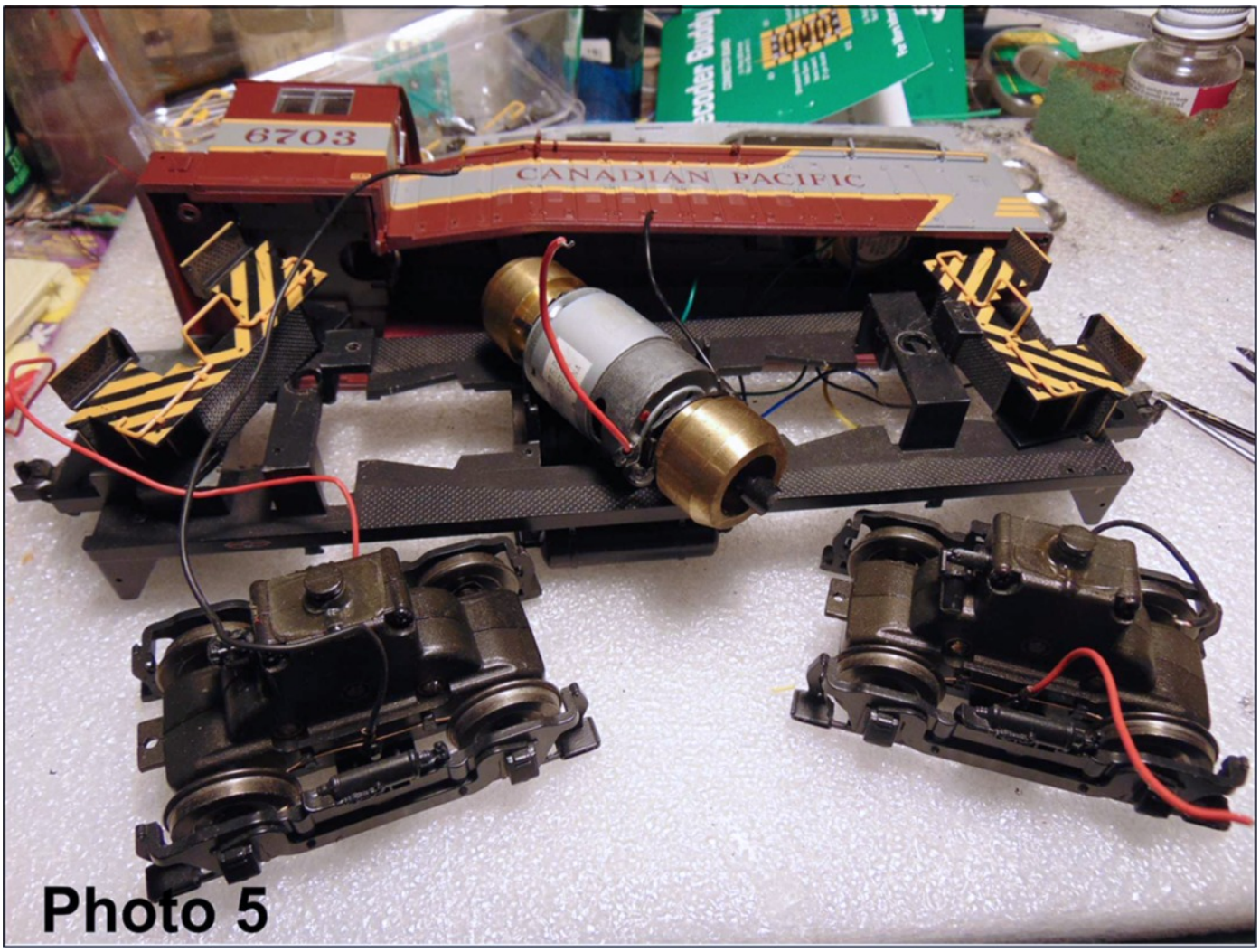


Photo 5

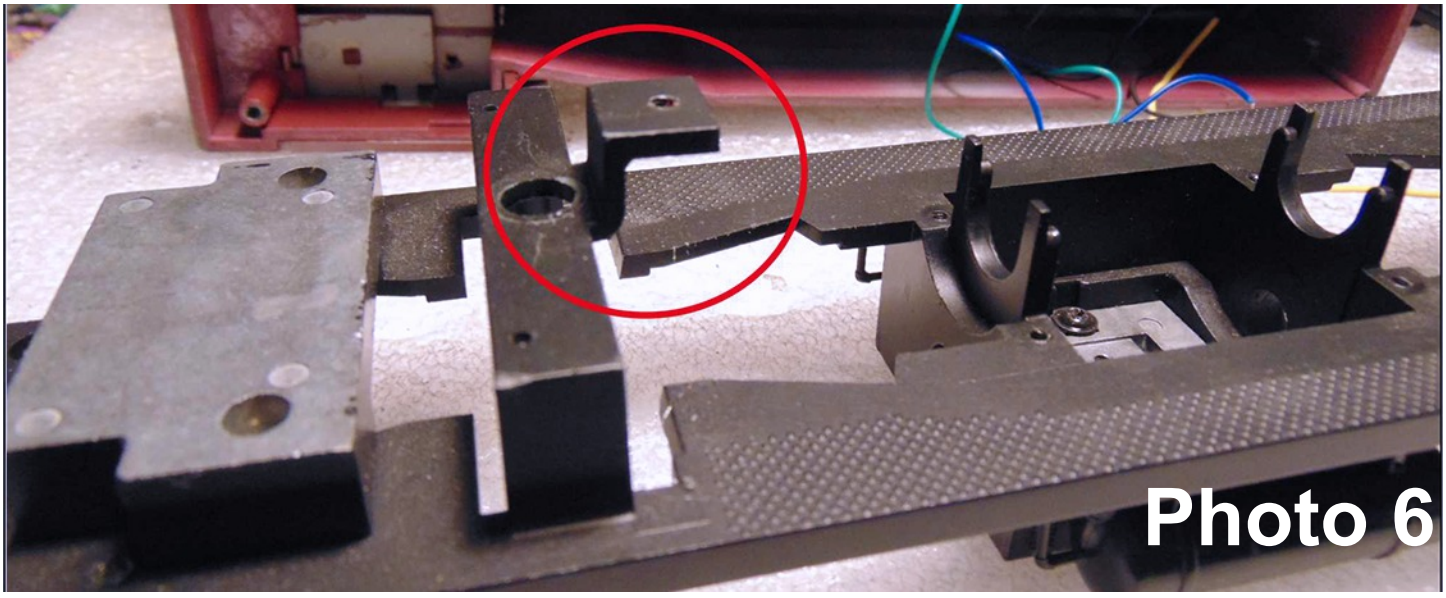
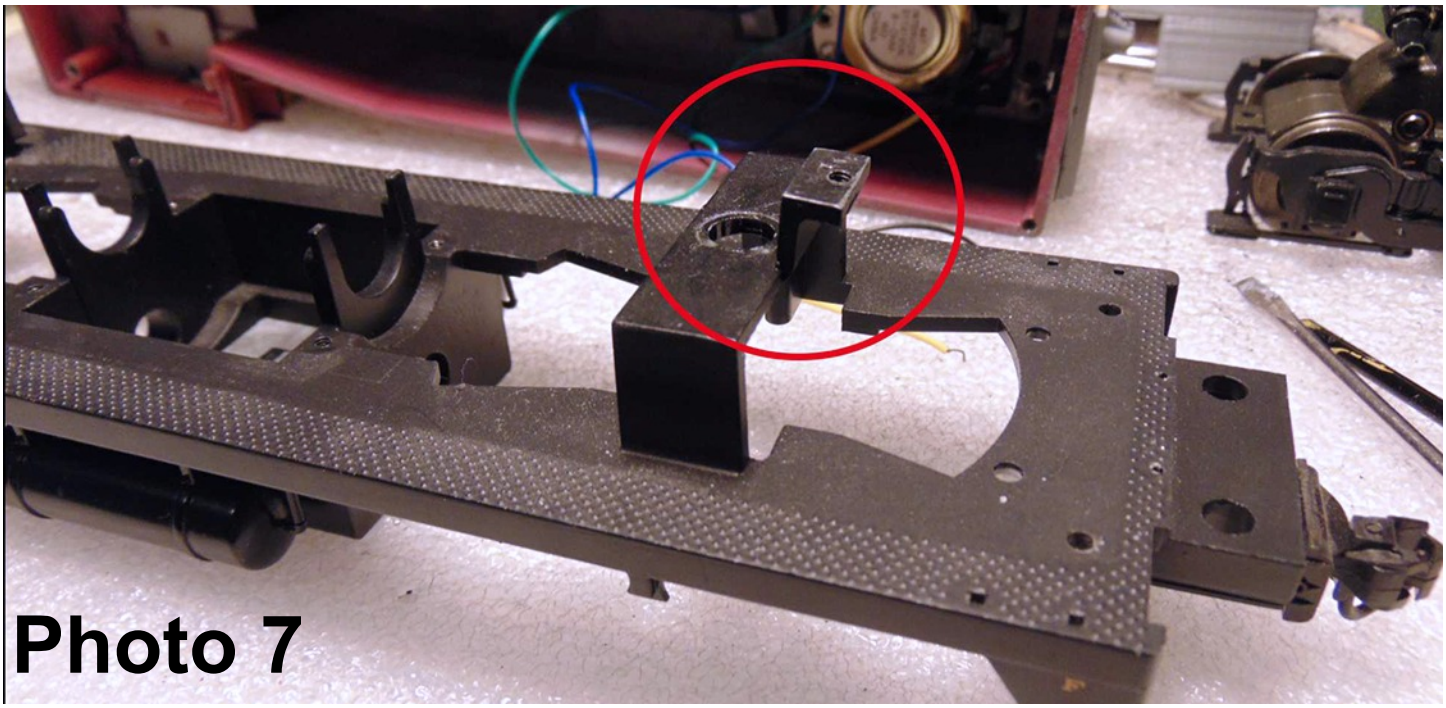


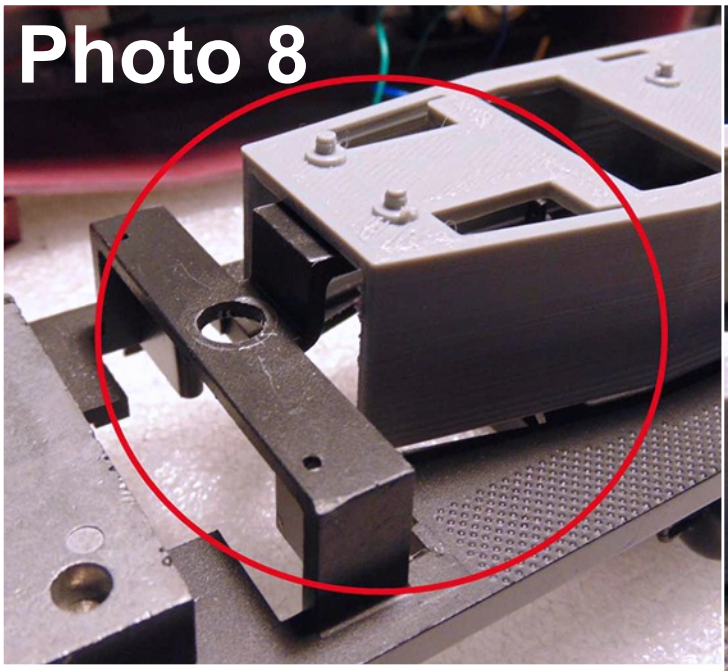
Photo 6

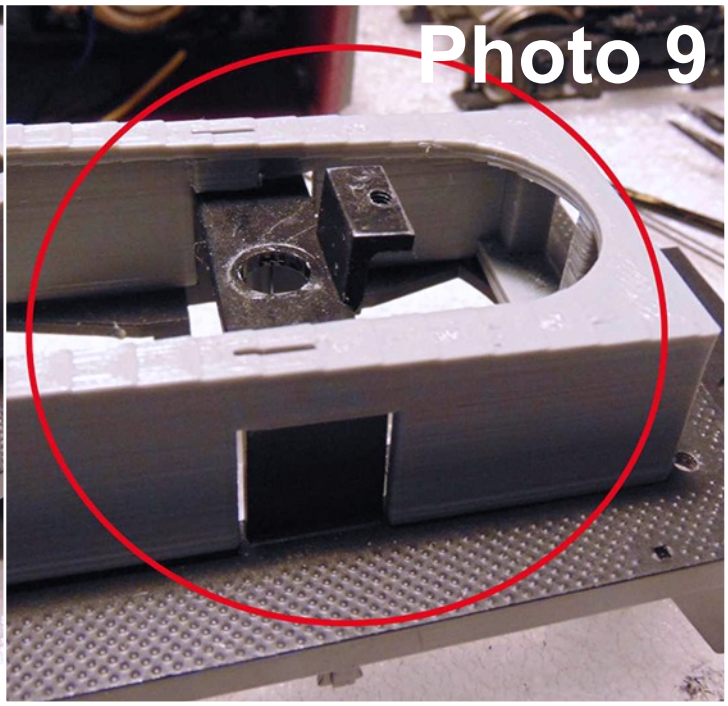
After removing the motor and trucks, you will find two tabs that stick out from the body bolsters for the trucks. (Photo 6 & 7)

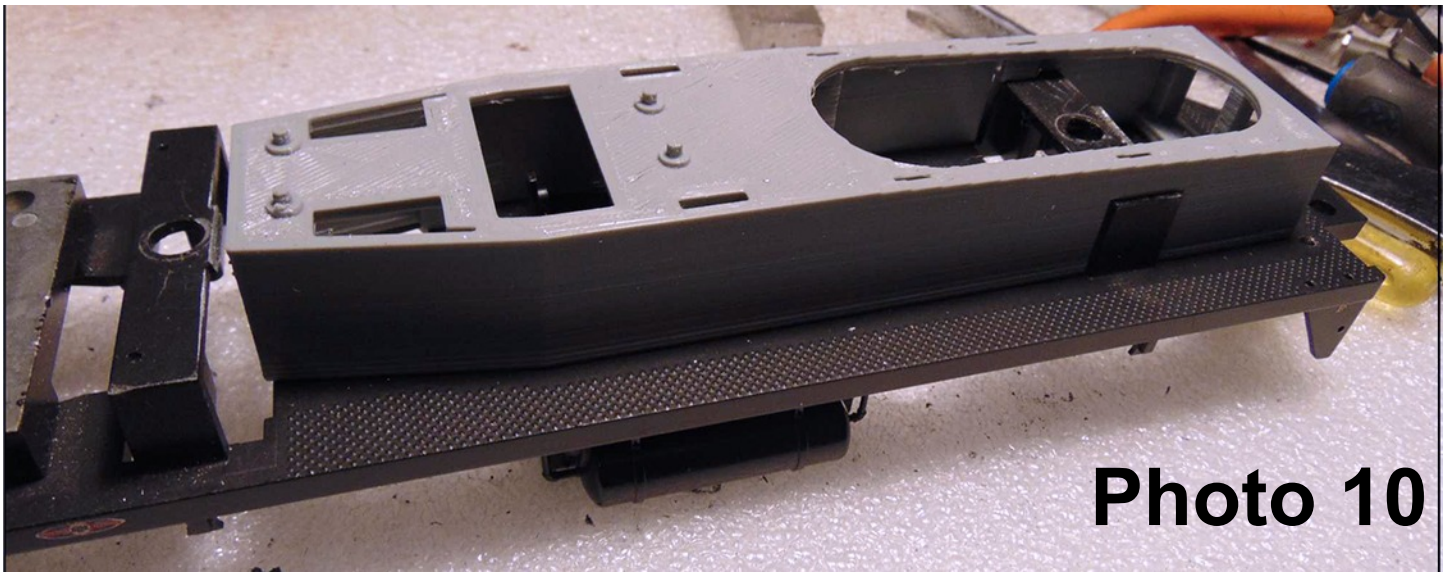


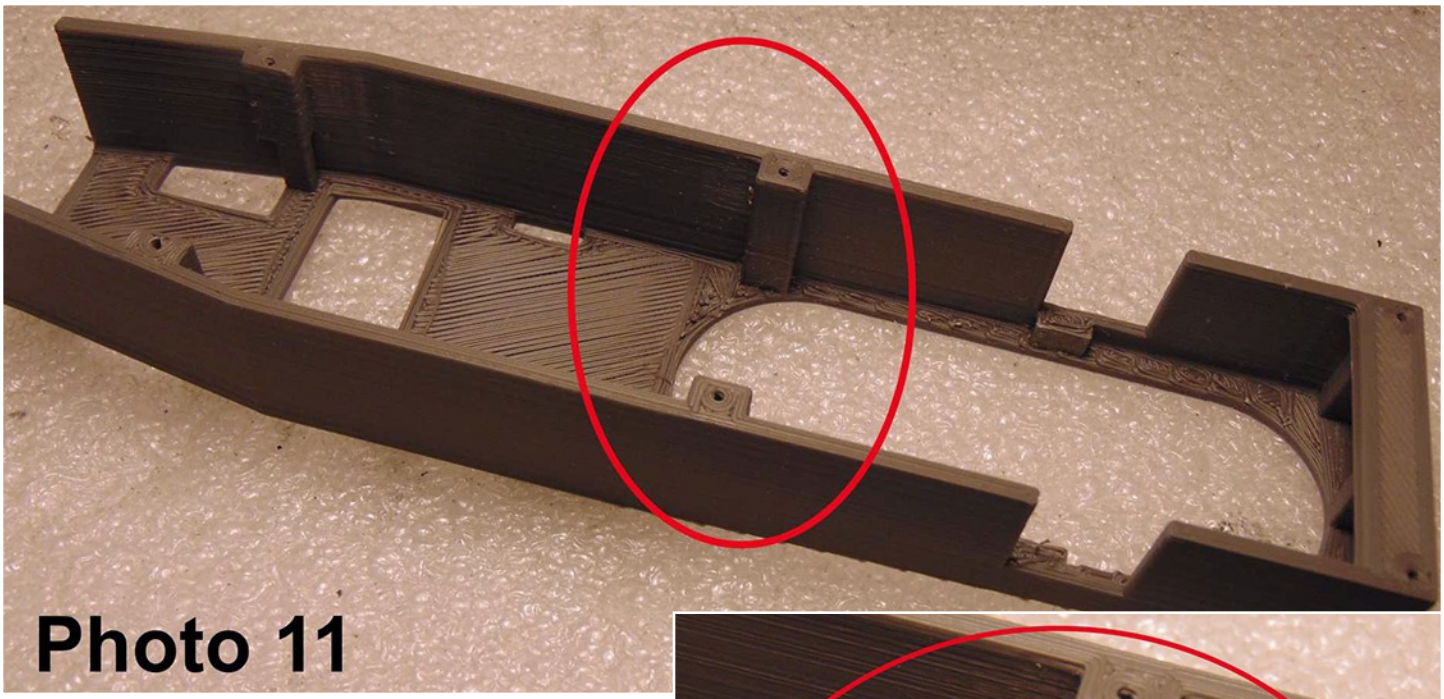
These will have to be cut off flush with the bolster because they will interfere with the installation of the Robins decoder stand.

The one at the cab end keeps the stand from sitting down on the deck of the frame, and the one at the front that held the old electronics board will interfere with the speaker (Photo 8 &9)





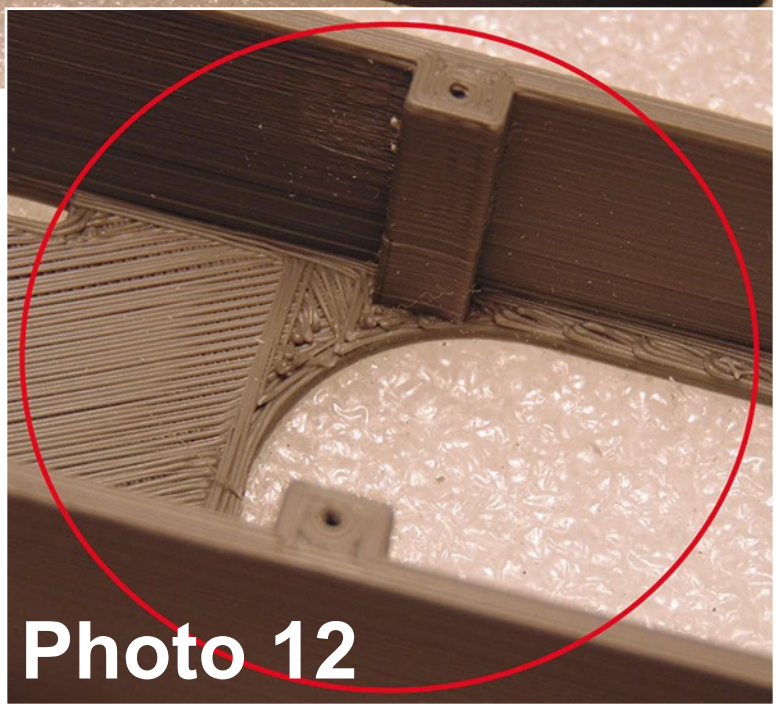




Once the tabs are removed, the stand will sit down flush on the deck of the frame. (Photo 10) Locate the center two mounting blocks located under the stand. Drill and tap for a 1-72 bolt. (Photo 11 & 12)

With this done, mark on the frame the matching locations of these blocks and drill two clear holes in the frame for the 1-72 bolt to go through into the stand to secure it to the frame. Test fit, securing it with the bolts, to see if fits well.

Now remove the stand and proceed reinstalling the motor and trucks as mentioned on page one.

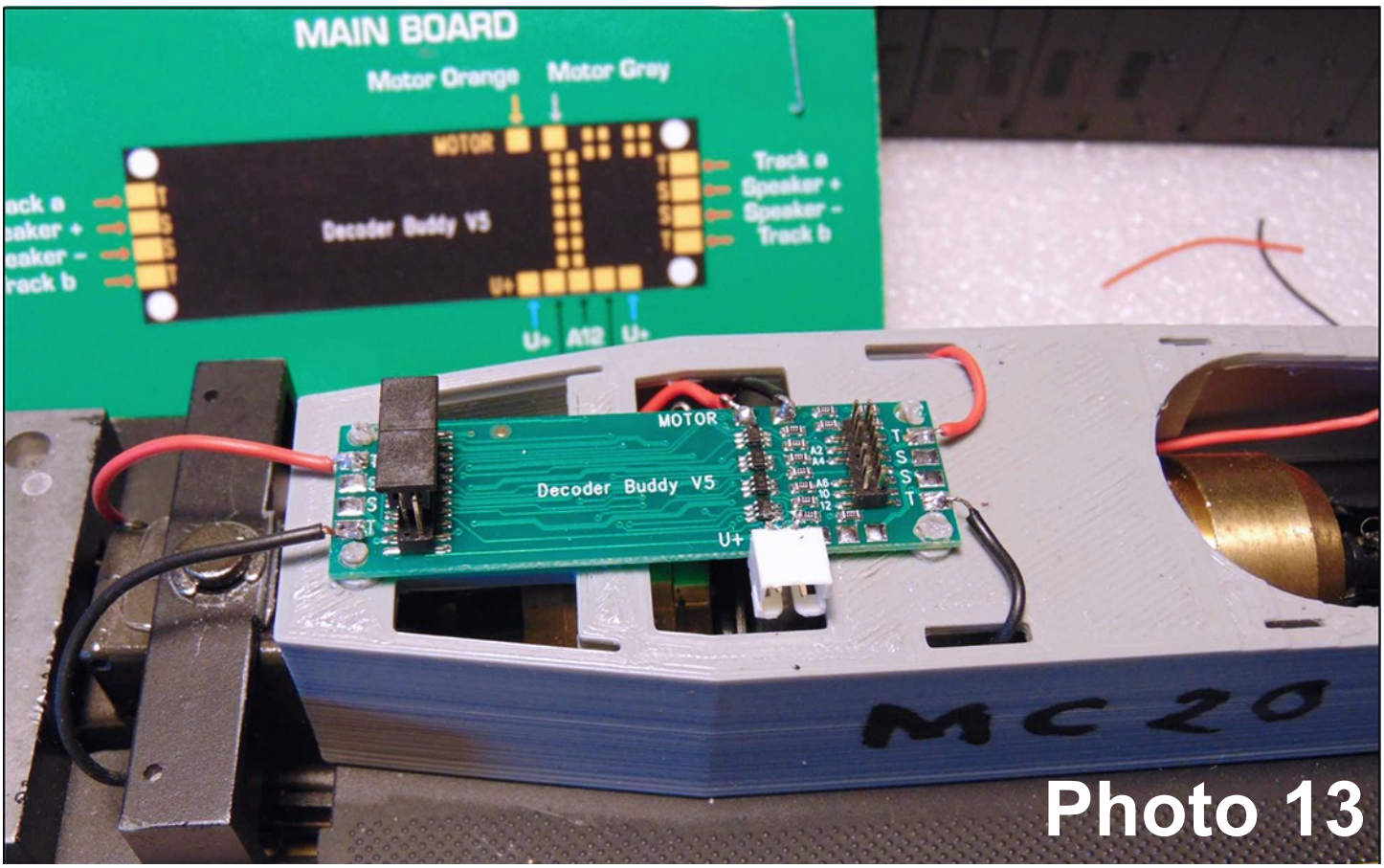


With the motor and trucks installed, you can reattach the stand to the frame. Now you are ready to start installing the decoder and speaker.

Now that we are ready for decoder installation, the first thing to do is put the decoder buddy in place on the four little nubs that are cast on the stand. Then feed the wires from the front truck through the stand to two little slits in the stand and pull them through.

Next locate the two wires from the motor and bring them up through the opening beside the decoder near the solder tabs for the motor. The wires from the rear truck come over the bolster to the buddy.

With your soldering iron, melt the four nubs to hold the buddy in place and then start soldering the wires to the buddy on the correct solder tabs as shown in the buddy wiring diagram that is included in last page of this



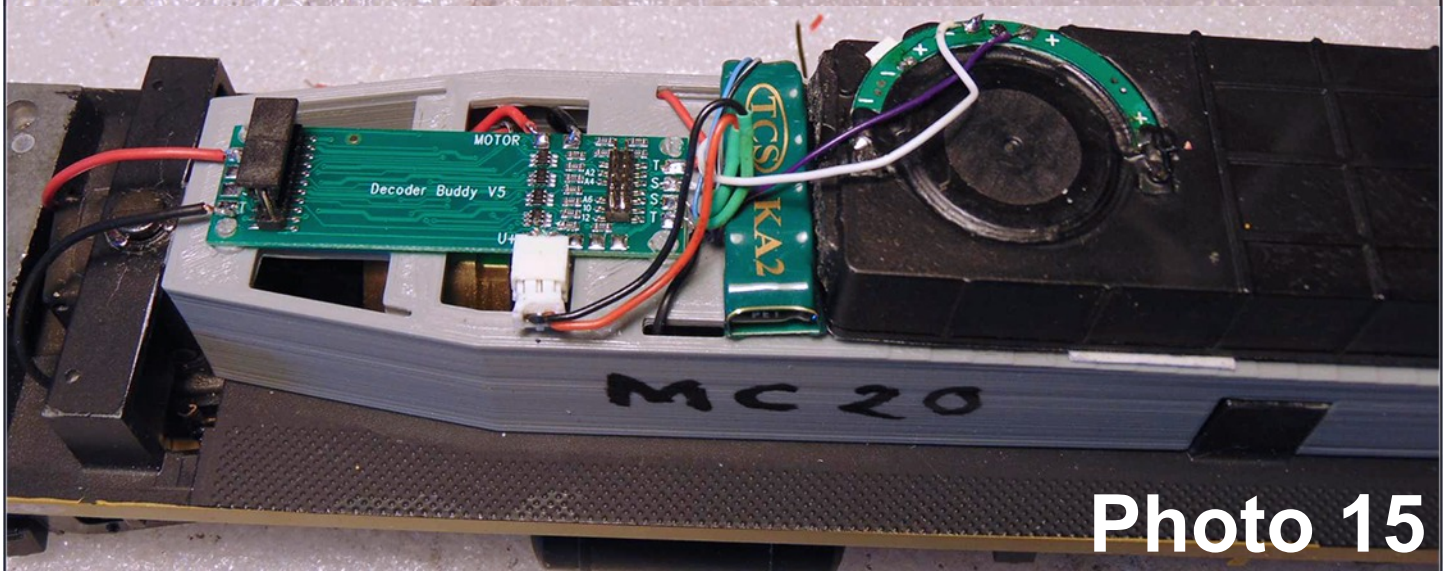
article. You will see a white plug soldered to the side of this buddy. It is used as a disconnect for the KA. The KAs that I suggested getting have a disconnect already attached so you will use them. You have to be able to disconnect the KA during programming (Photo 13)

Next will be to mount the speaker. Before you mount the speaker, you need to cut the mounting tabs off of both ends. I use some 1/16 inch thick double sided foam tape. I put small pieces as you can see in the photo. Then adhere the speaker to the stand making sure that it does not overhang at the front of the stand. Now solder the speaker leads to the decoder buddy solder taps and the other end to the speaker (Photo 14)

With this complete, then adhere the KA to the stand with the same double sided foam tape. (Photo 15)

Lighting:

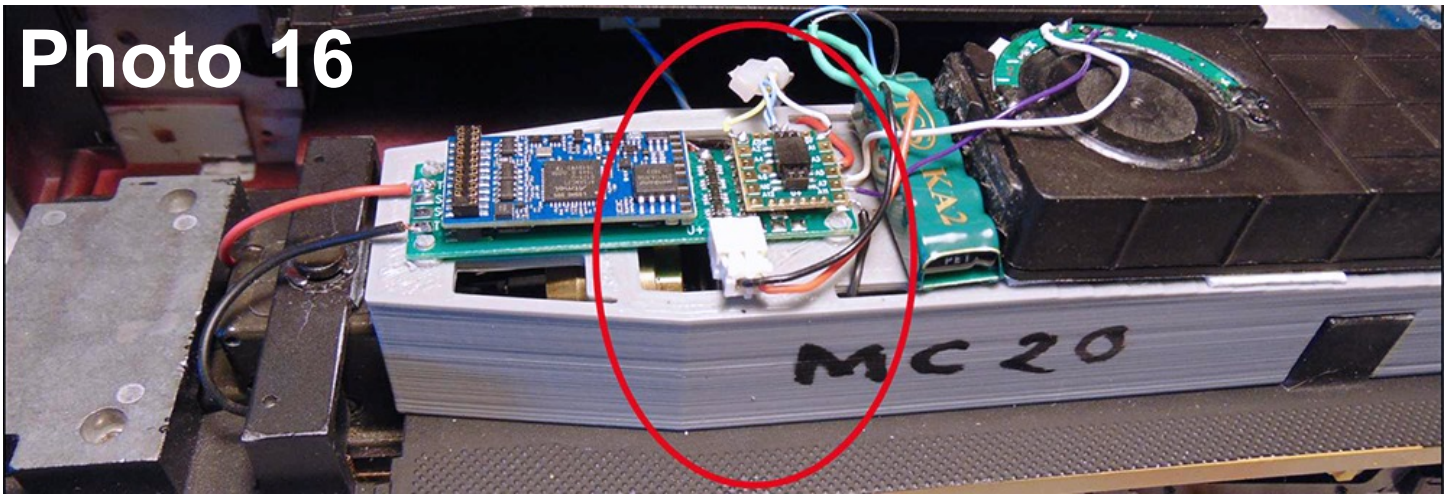
I use 3mm dia LEDs for my lights and there are resistors built into the connecting board so you don't have worry about them. Standard wiring for lighting with DCC is yellow wire plus blue for the rear light and white wire plus blue for the front light. Blue is the common wire or + wire and will be soldered to the common wire



solder tabs on the connector board with the yellow being soldered to the A or tab and the white being soldered to the A or tab.

With this done, gently plug the connector board to the Buddy. Now you're ready to install the decor which again you gently put it on the pins so not to bend them. (Photo 16)

All that is left is to test it out. Hopefully by now you have a command station set up either to your layout or a test track. Put the loco on the track and set the throttle to 03 and see what happens.



You want to make sure the loco goes in the same direction as what the throttle is set for and that the lights work in the right direction, plus the sound is working.

If all is okay, then you're ready to do the programming. Set the decoder to cab number of you loco as per manufacturer's instructions.

Installing a decoder into an Atlas later version SW

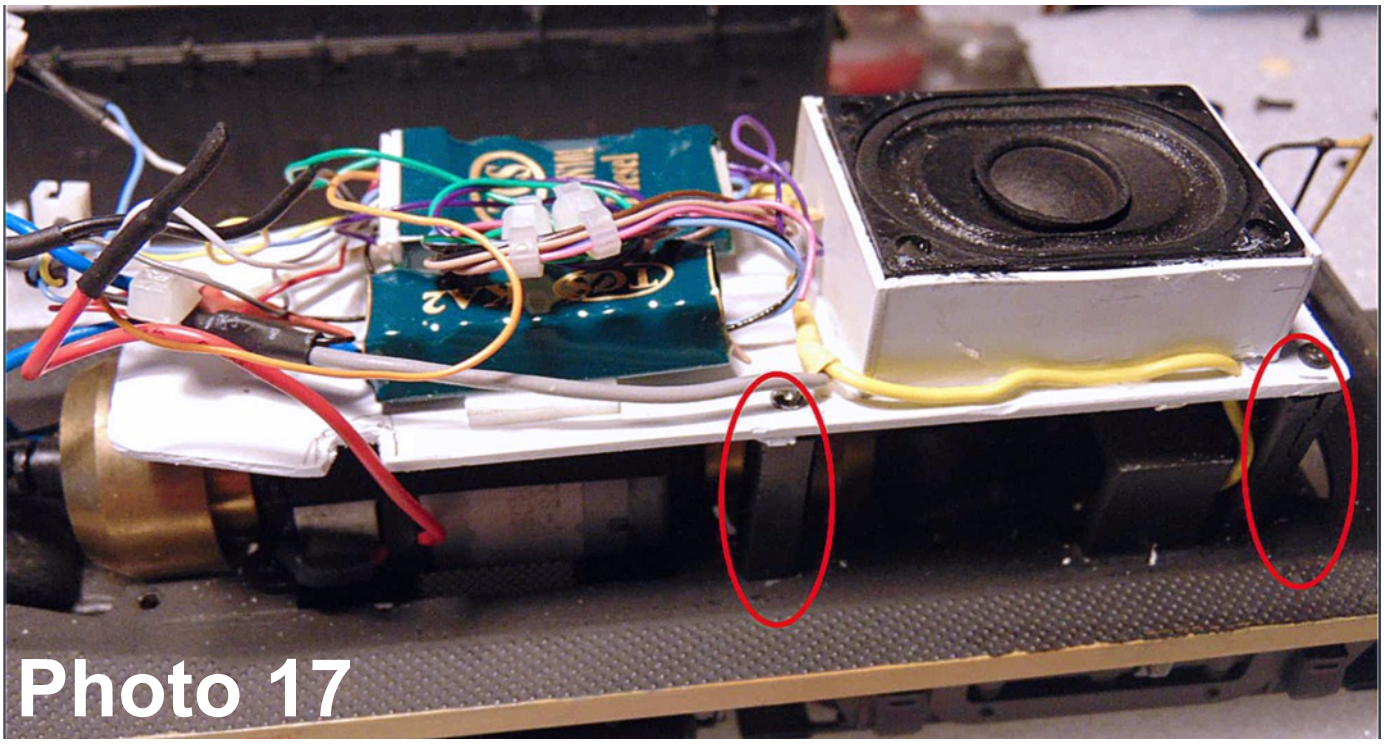


Photo 17

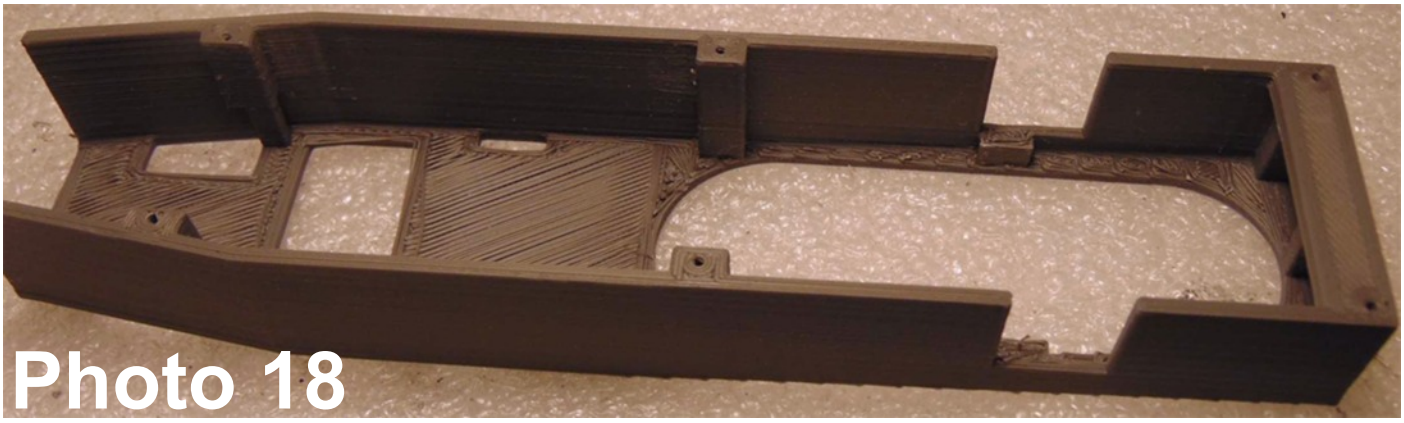


Photo 18

The only difference between the early version SW and the later is the four risers that hold the DCC system that Atlas installed in the later versions. (Photo 17)

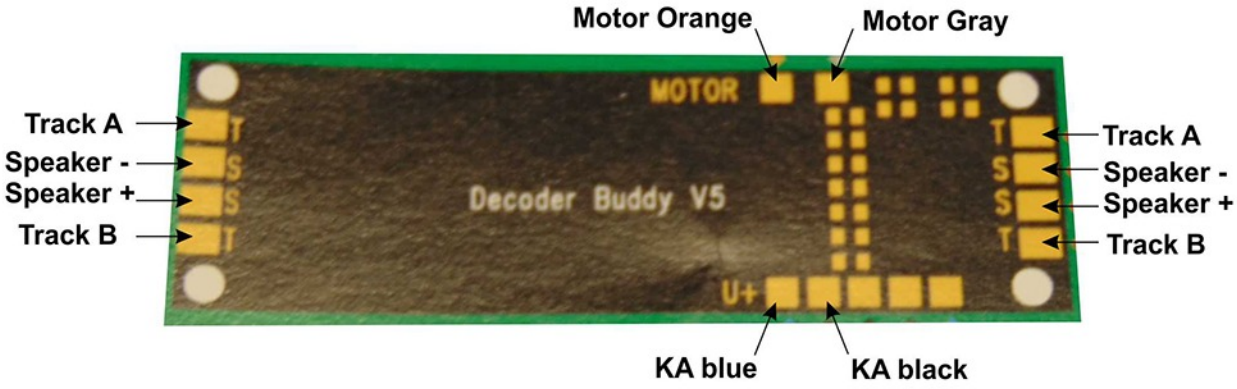
So you do the same as in the early version, getting rid of the junk and the risers. Drill and tap the center blocks of the stand for 1-72 bolts and mount it to the frame, putting the bolts through the holes left from the risers.(Photo 18) That is the only difference.

Now you install all the DCC items the same as already described in this article. I hope this has been helpful to you in the installation of the DCC decoders into your Atlas SWs.

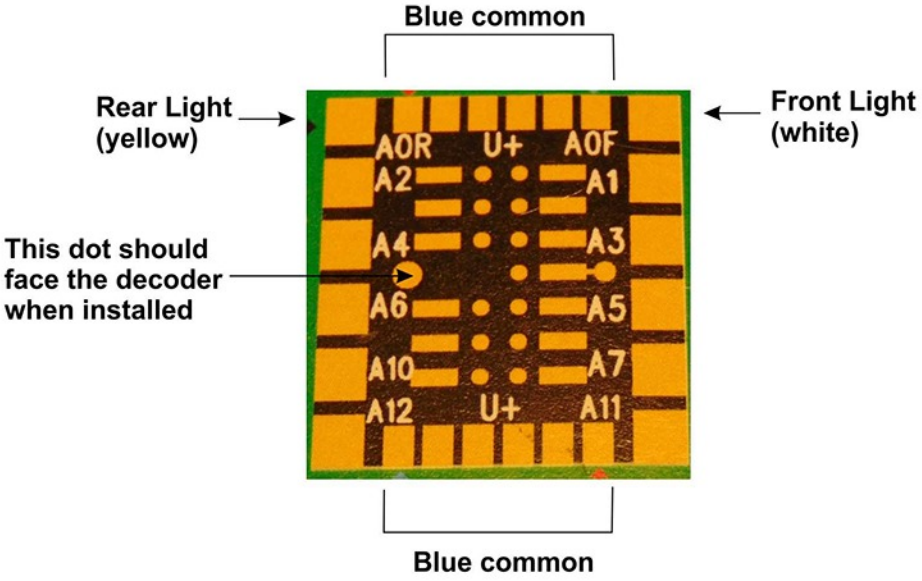
Atlas SW decoder installs

Decoder Buddy Wiring

Wiring the decoder buddy is easy and makes installing decoders so much faster

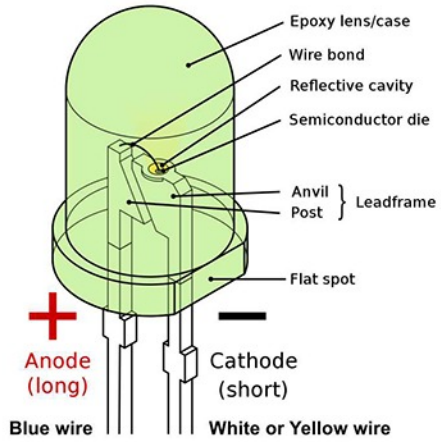


Connector board wiring



For any extra lights you can us tabs A1 and A2 for these.

LED wiring

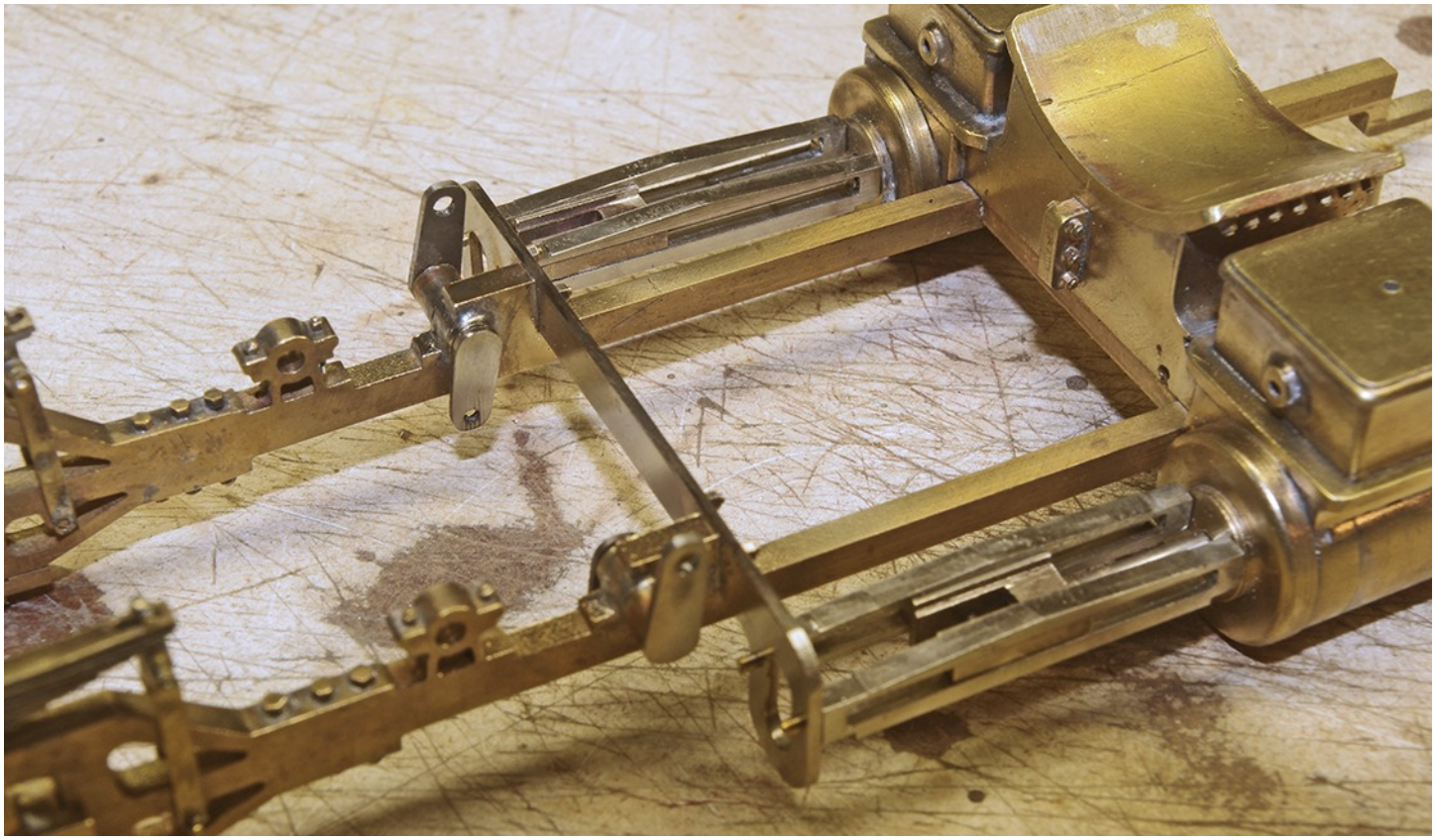


Be very, very carful when installing or removing decoder or connector board so you do not bend any pins

Scratch Building My Steam Locomotives

Pt 4 The cross heads, guide bars, and crosshead hangers

By Glenn Guerra

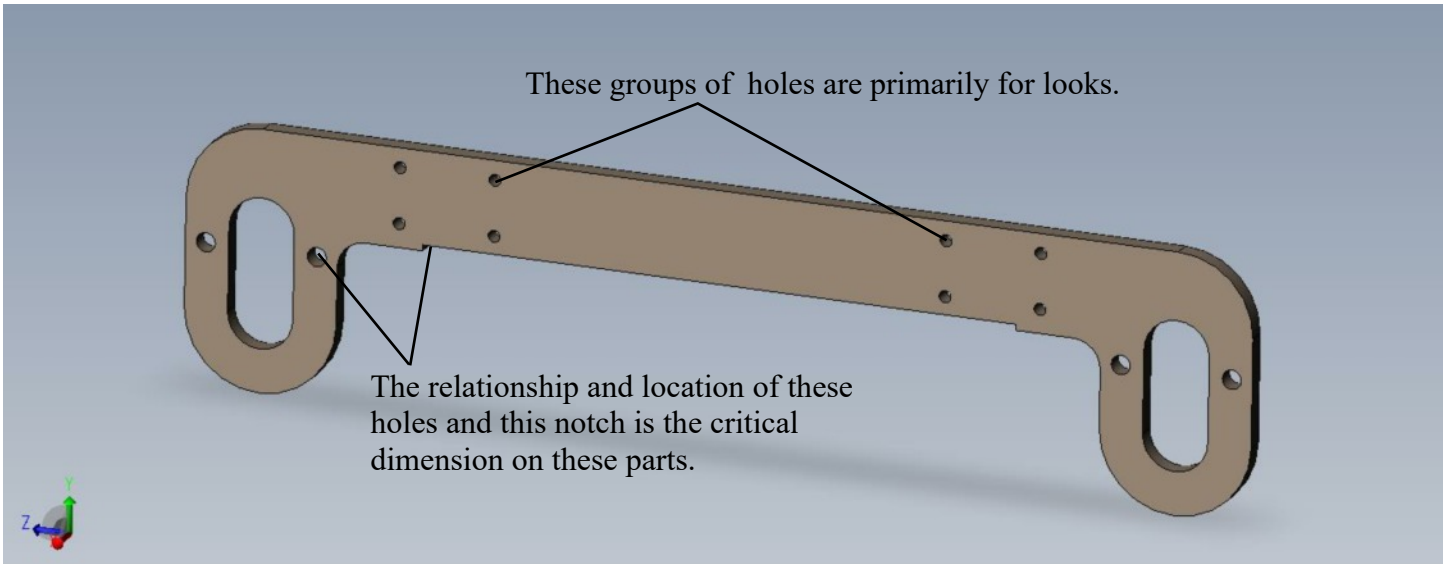


Welcome to part 4 of this series on scratch building my steam locomotive models. In this article I will cover how I made the cross heads, guide bars, and cross head hangers. These old locomotives used four bar guides and that made for some challenges in making a model of them. The four guide bars completely surround the cross head as can be seen in the photo above. In order to get the cross head and bars apart on the prototype locomotives, the bars must be removable. To do this, the cylinder head cover has a block cast into it so a separate top and bottom bar can be bolted to the cylinder head. At the cross head hanger, a block is bolted to the hanger so the bars can be bolted on the top and bottom of it. Construction like this would be difficult to replicate on a model. The parts are small and the fastener would be weak. Soldering it all together would work, but you could never get the cross head back out. I decided to make the top and bottom bars and the blocks that separate them all as one unit. That unit would be located to the cylinder head and cross head hanger by pins soldered into the guide bar. This also solved the problem of how to disassemble the guide bars to get the cross heads in and out. By removing the cylinder assembly, which is screwed in, I could remove the guide bars and separate them from the cross head. The problem was going to be machining them. I am not a good machinist and hitting the numbers consistently is difficult for me. As a result, I like to make fixtures so I can make consistent repetitive cuts which is what I did for the guide bars. In addition, the slot is small, but the Sherline mill gives me good feel of these small cutters and I am getting comfortable with using them. I did have some issues with surface finish and size which we will get into later. The next problem was the cross heads.

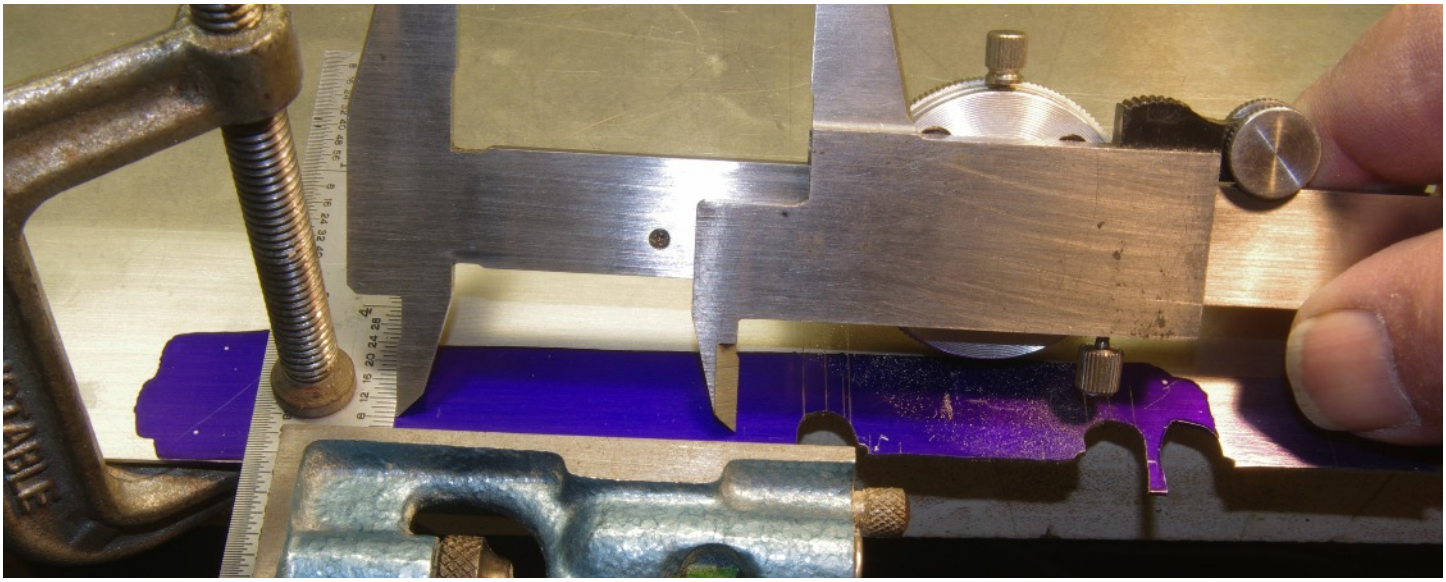
Now that I had a plan for the guide bars, the cross head was next. You will see when we get to the cross head that the rod pin is in a position that makes inserting it difficult. My machinist friend, Hank, built a 3" to the foot model of a locomotive of this era. We both looked at these cross head drawings a lot to try and understand how they made them and how we would make them. I followed a similar approach to what we came up with for that model. This presented another problem though. Since the pin is surrounded and does not come out, the connecting rod needs to be two piece like on the prototype. I think I have a way that will work and we will get to that when we do the side rods. The last piece of the puzzle was the cross head hangers.

I have made the cross head hangers for these models three times. Remember, this is just a hobby, if it doesn't come out the way you like, just do it over. The first set I made started with a sheet of Nickel Silver and laid out on the sheet. Then I drilled all the holes and cut out the parts with a jewelers saw. The idea was good, but my execution was not, so I tried again. The second ones came out better and I was going to use them, but by this time I was getting more familiar with the milling machine. For the third set, I used the milling machine and they came out much better. I will show all of it here so you can see what worked and what did not and why it did not work.

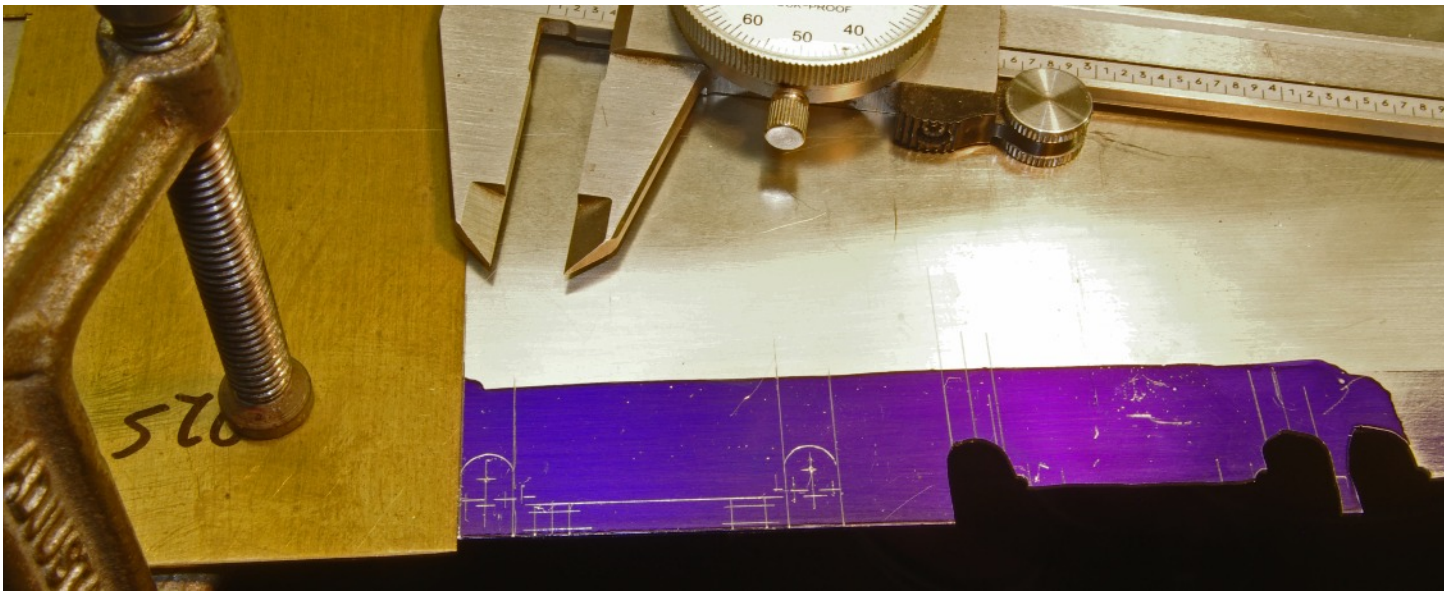
As in my other articles, there will be a photo and an explanation of what I was doing. Let's get started with the cross head hanger.



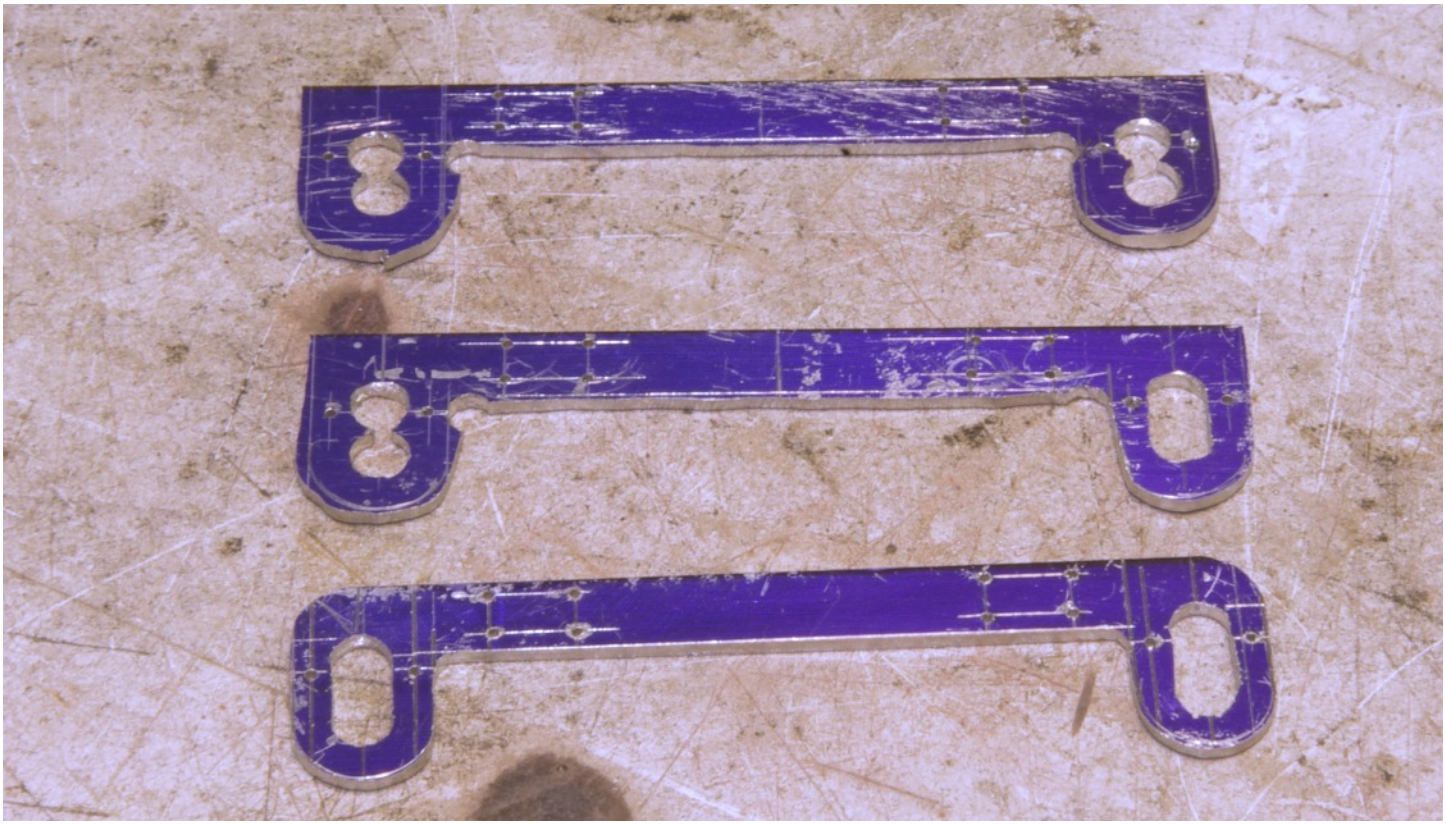
This is a drawing I made of the cross head hangers I wanted to make. I decided to make them from Nickel Silver. On some of these old locomotives, this part was left unpainted and was machined all around. I thought the Nickel Silver left unpainted would look nifty on the model. My first idea was to lay them out on a piece if sheet, then drill all the holes followed by cutting them out with a jewelers saw. This is an acceptable way of doing them, but my execution was not good. We will get into more of that later. One last point here is determining what are the critical dimensions. The notches will locate the cross head hanger on the frame. This will determine the location of the holes for the guide bar pins. These dimensions are important if the cross heads are to slide smoothly. In your work you want to identify these critical dimensions and take extra care to see they come out right.



When laying out something, it is always best to work from a reference line. What I was trying here was to work off of the square without moving it. This would have all my vertical lines off the same reference point. I was using the caliper to get a more accurate dimension than trying to set my dividers for each dimension. The theory here is sound, but I was having trouble scribing right down to the square.



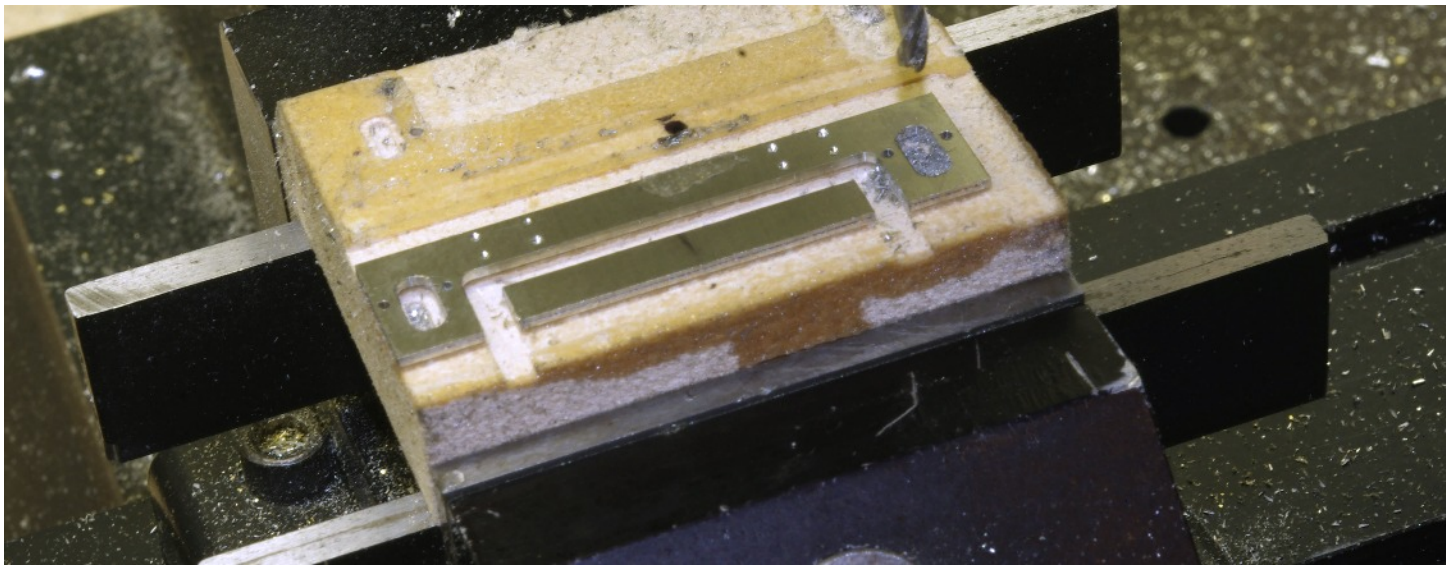
This was my next attempt at laying out and it worked better. I used the square to set the piece of brass and then removed the square. This gave me a fixed reference edge and it was much easier to work around. The idea was to draw all the vertical lines first and then come back and draw the horizontal lines. That gave me the centers of all the holes and radius centers. Using the dividers, I was able to draw the arcs. If you do this, I would recommend getting some layout dye like I did here. It is much easier to see your lines. The next step is to center punch all the hole locations and drill the holes. This takes patience and good lighting, two things I am a little short of.



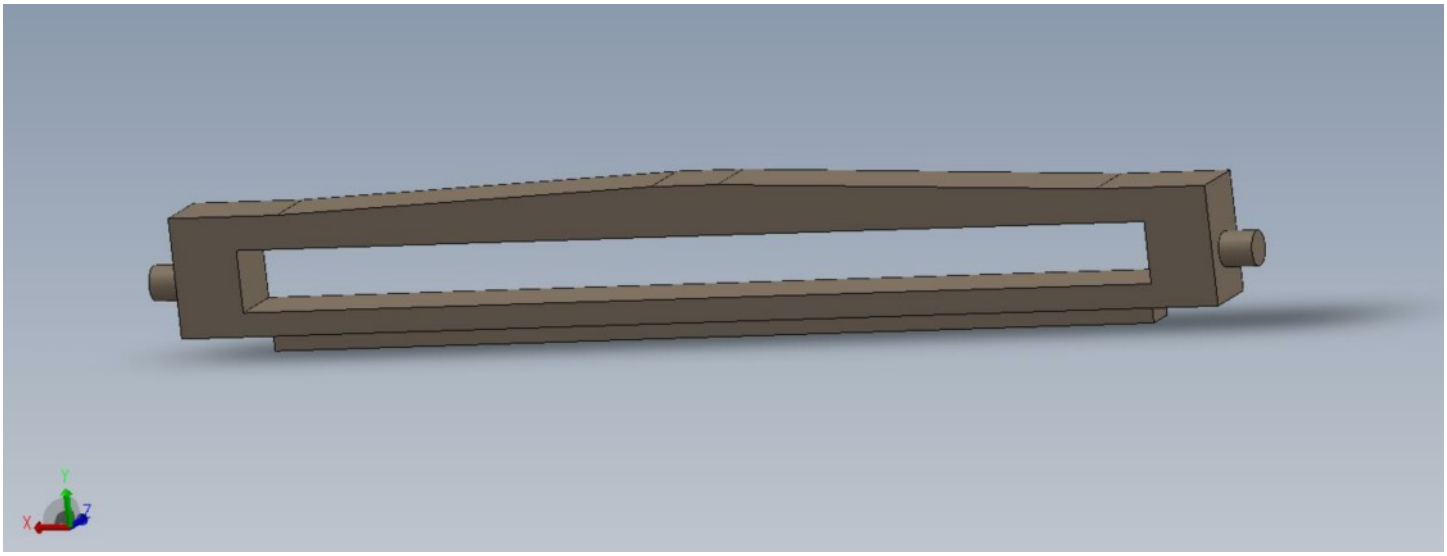
The top two parts are my first try. As I was cleaning them up and doing the filing, I could see that I did not do a very good job of drilling the holes. The bottom piece is from the second try, I did better on the hole locations except for the non critical holes. The filing was better, but not sharp and crisp. The second set would have worked, but I wanted something that looked a little better. I also could not accurately locate the notch in the bottom and I was worried about getting the guide bar pin holes in the right location on the locomotive frame.

Here is another view of one of the parts from the second try. The execution of the hole locations is much better and the parts would have worked. This is an acceptable way of making a part like this and it can be done, it just takes patience.

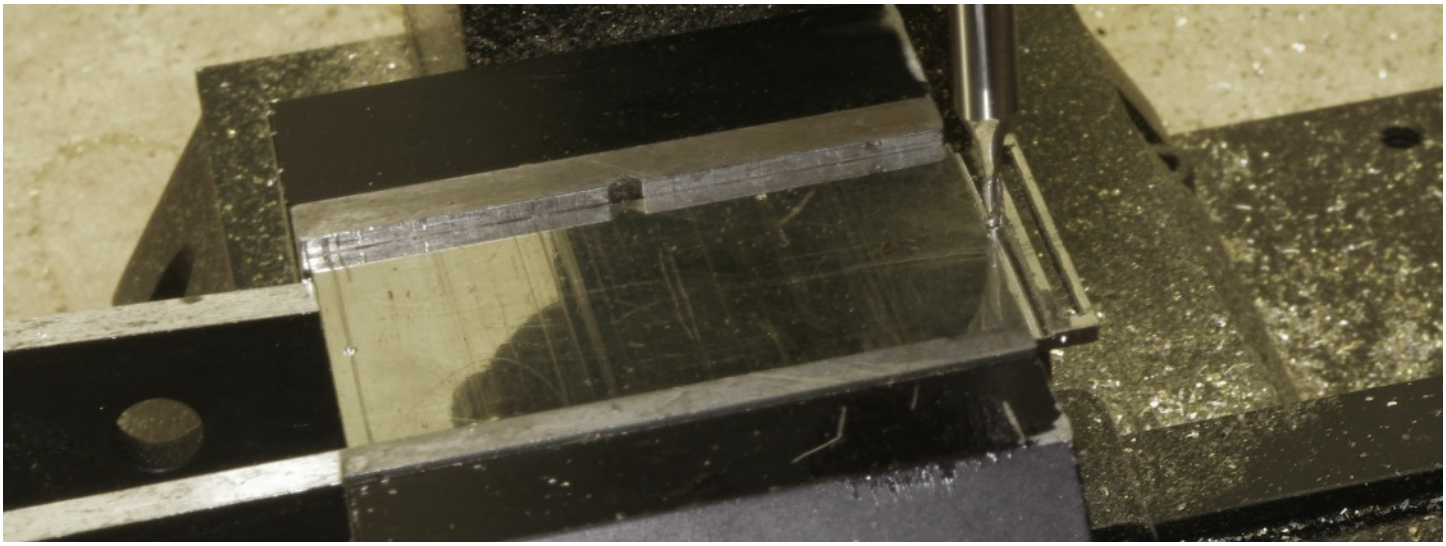
These are the two cross head hangers from my second try. They would work, but I was still missing the notch that locates this all to the frame. On the bottom right I got a little carried away with the file, and on the bottom left I need to do a little more with the file. So why did I put this in this article? These would have worked and with a little more care with the file they would look better. This is an acceptable way of making a part like this and it can be done. Follow some good layout practice when laying the holes out. Take your time on center punching the hole locations and take your time with the files. You don't need machines to do all of this work, but since I have a milling machine and I was getting better with it, I decided to try a third time to make these parts.



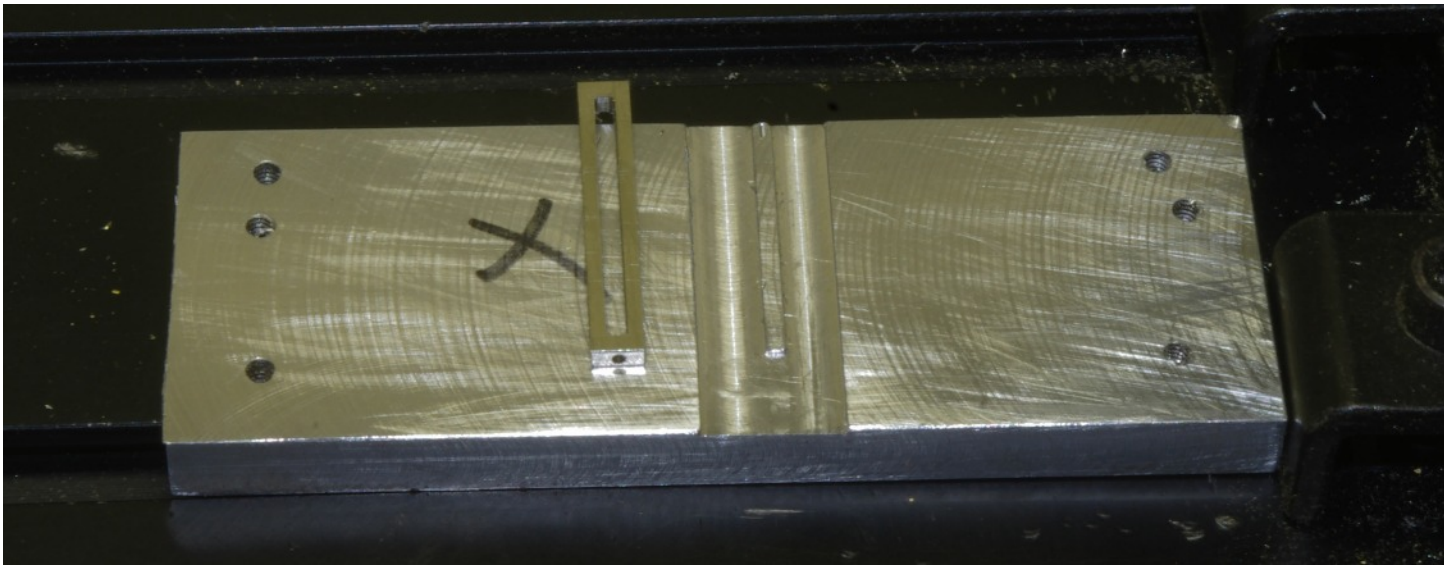
This is how I made the cross head hangers on the third try. I have found that I can take a small piece of particle board and face it off in the mill. Then glue a piece of metal to it with ACC. It will hold if you use small cutters and light cuts. Now I have the precision of the milling machine for all the edges and hole locations. The round corners at the bottom and top were still finished with a file. To cut the slots, I drilled a hole on the center of the two ends and then used a .093" end mill to cut a slot. In the next operation, I took the parts off the particle board and soaked them in Acetone to get the glue off. Then I put them on edge in the mill vise. I was able to touch each end and then determine where the center of the part was. This allowed me to mill the .010" notch. Since I had cut all this in the mill, I had confidence that the guide bar pin holes were in the right location and relative to the edge of the part.



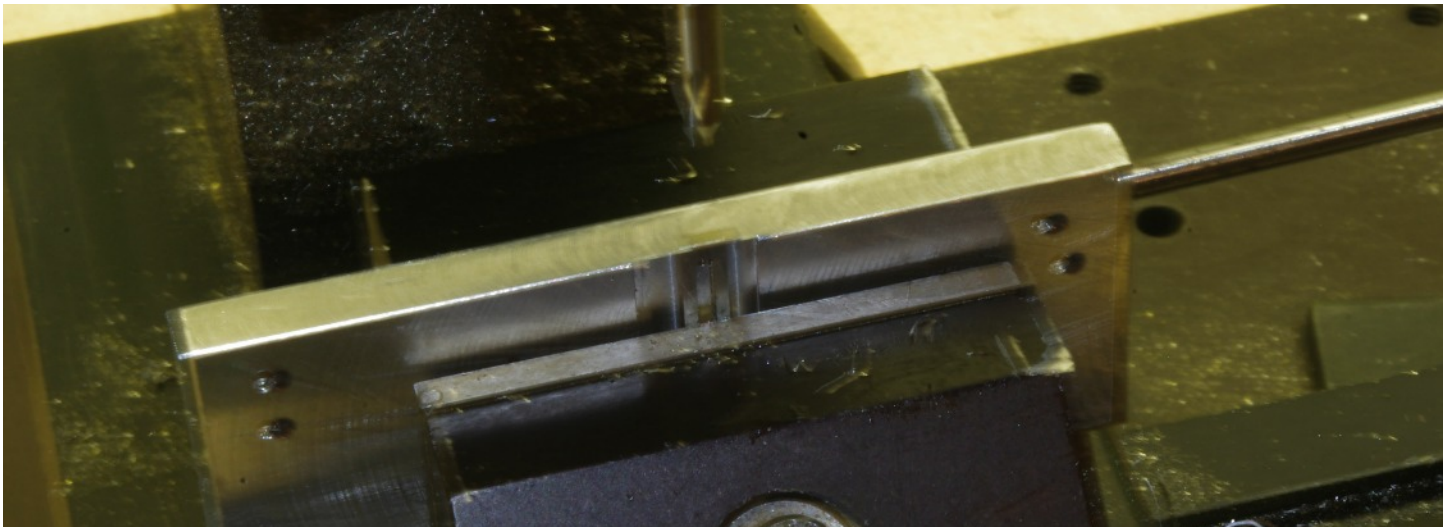
This is how I decided to make the guide bars. On the prototype, the blocks with the pins would have been part of the cylinder cover and a block bolted to the cross head hanger. The bars would have been bolted through these blocks. On the prototype, this makes machining the bars much easier and the bars are removable to get the cross head out. When you start thinking of the dimensions of a model, you soon realize that to make all this like the prototype would take a lot of very good machining technique and the parts would be hard to hold together. I decided to make them like this drawing, all one piece.



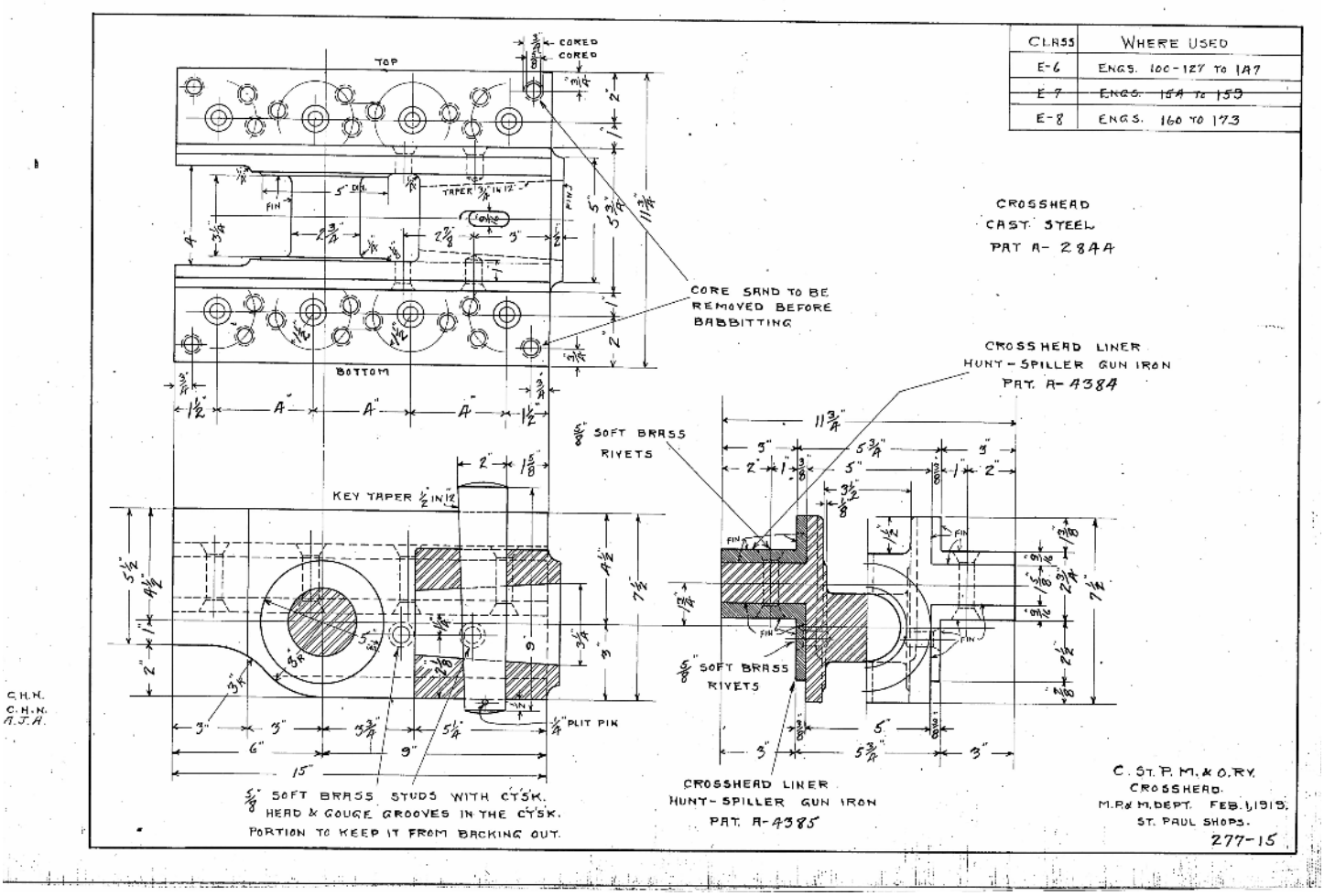
This is how I cut the slot. The first step was to take some Nickel Silver plate and mill it to the correct width for the overall length of the guide bars. Then I clamped it in the mill vice like this. I cut the slot using a .032" ball end mill. The ball end mill will drill its own hole so you can plunge into the part and then go back and forth to cut the slot. I only plunged in about .005" for each cut. After cutting a slot completely through, I moved over and cut the slot wider. This worked well, but there is something to be aware of, and I have been having trouble with this. The mill is a small machine and there is play in the lead screws. In addition, I am tending to run the machine with the gibs on the tables set loose. This gives me good feel on the handle when I am machining, but the downside is the cutter can pull the table. When the cutter pulls the table, it chatters and you get a rough cut. To counter this, tighten the gibs on the table in the direction you will not be going. In this example above, I should have locked the table down from going left or right and that would have given me a better finish when going front to back like I am cutting here.



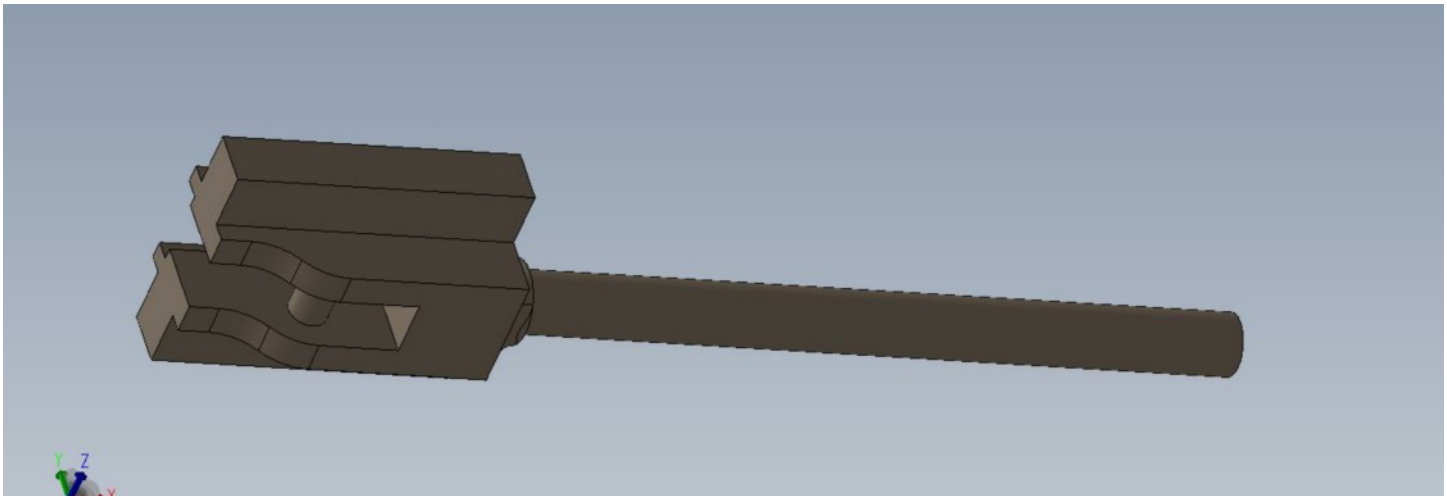
As I mentioned in the lead in to this article, I like fixtures. This simple fixture allowed me to drill the pin holes all in the same relation to the slots. I made eight of these guide bars and each hole would have required finding the edge and center of the part, then moving the mill tables to the location of the holes. Buy doing it this way, I put the aluminum block up against a stop in the mill vise to locate the block. Then I would use the slot in my guide bar to locate on the tab I milled in the aluminum block. The aluminum block did not take long at all to cut. This worked well for me. A machinist who does this all day long could have drilled all the holes without the fixture, but I am not a good machinist. Consider using fixtures in your modeling. A little time spent making the fixture will improve your repeatability in your machining.



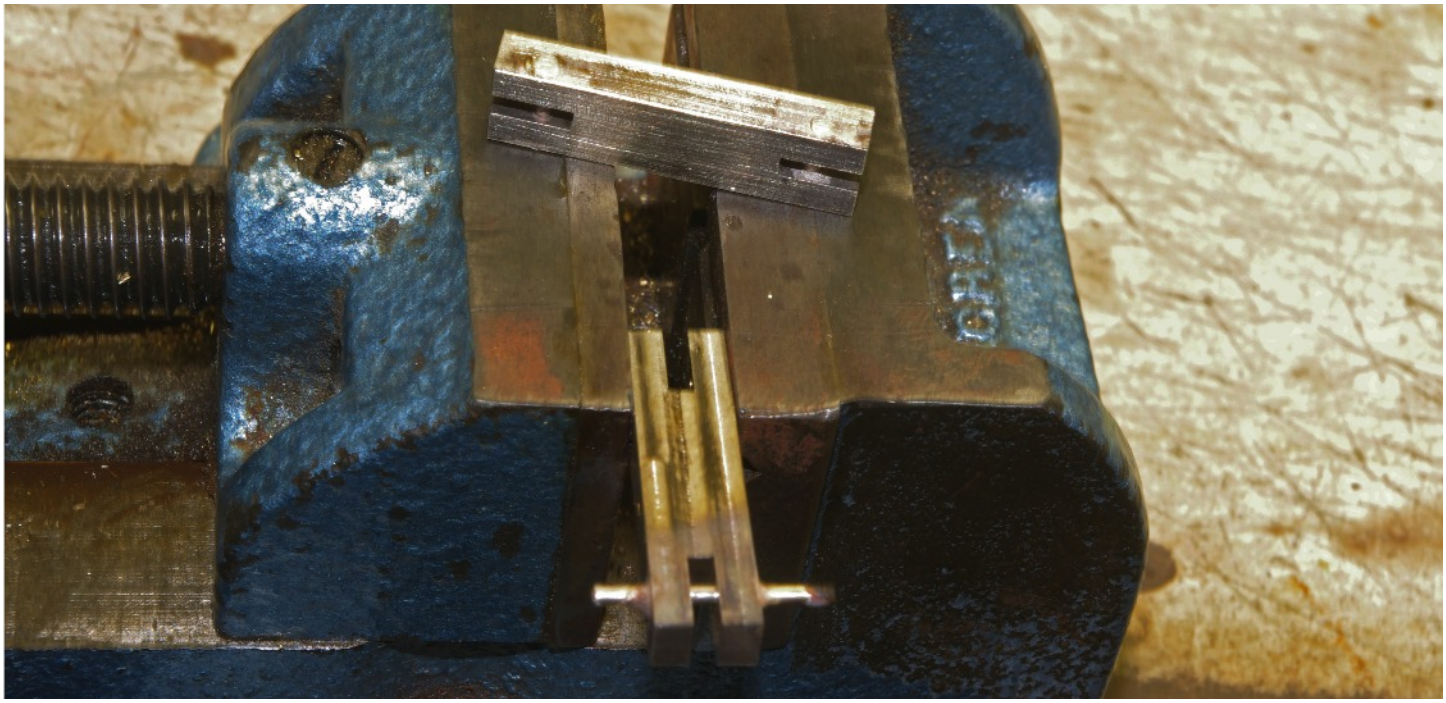
This is how the fixture shown in the previous photo works. The rod on the right is my stop to locate the fixture in the vise. Make sure the fixture is up against the fixed jaw of the vise and it will repeat well. Find the edges of the part first and that will give you two reference points. Then move the table to the hole location and lock the gibs to secure the table. Now drill your hole. Use a starter drill first to give a good lead in for the main drill you will use. Take the fixture out of the vise when you are done and set the next part in it. Push the fixture up to the stop and tighten the vise, you are ready to drill the next hole.



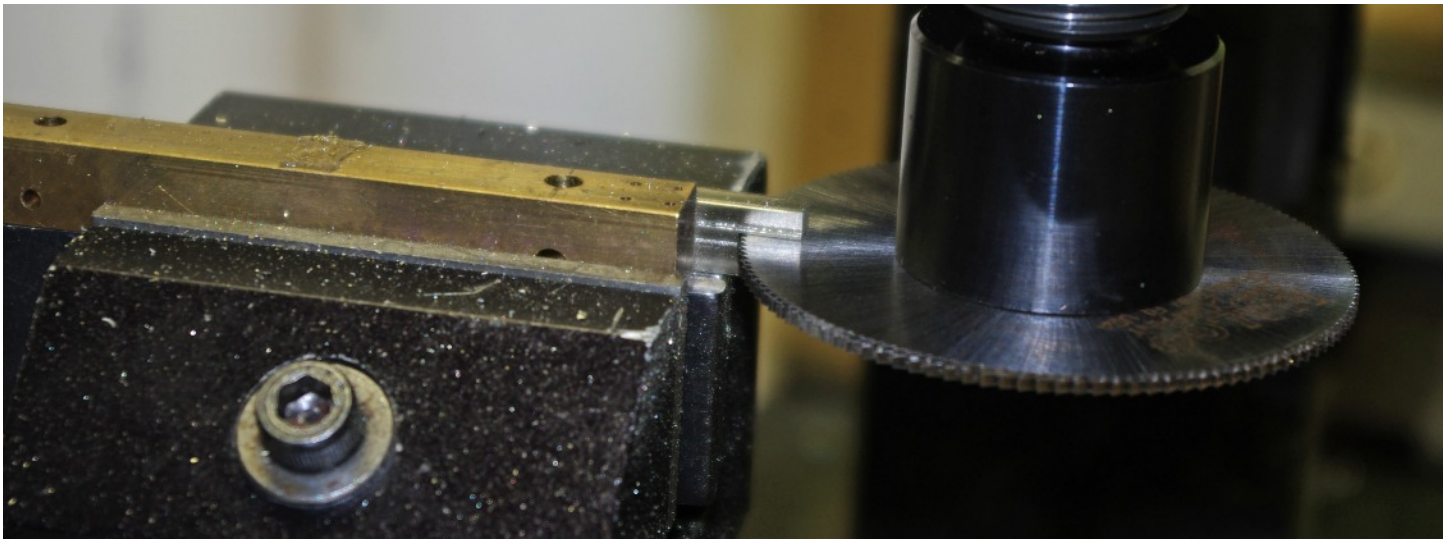
This drawing came from the Lake States Railway Historical Association and shows a typical cross head for a four bar guide. Note the location of the pin in the cross head. This will be difficult to do in a model. Hank and I could not figure out how they made the pin round on the prototype. Lots of good file work I guess.



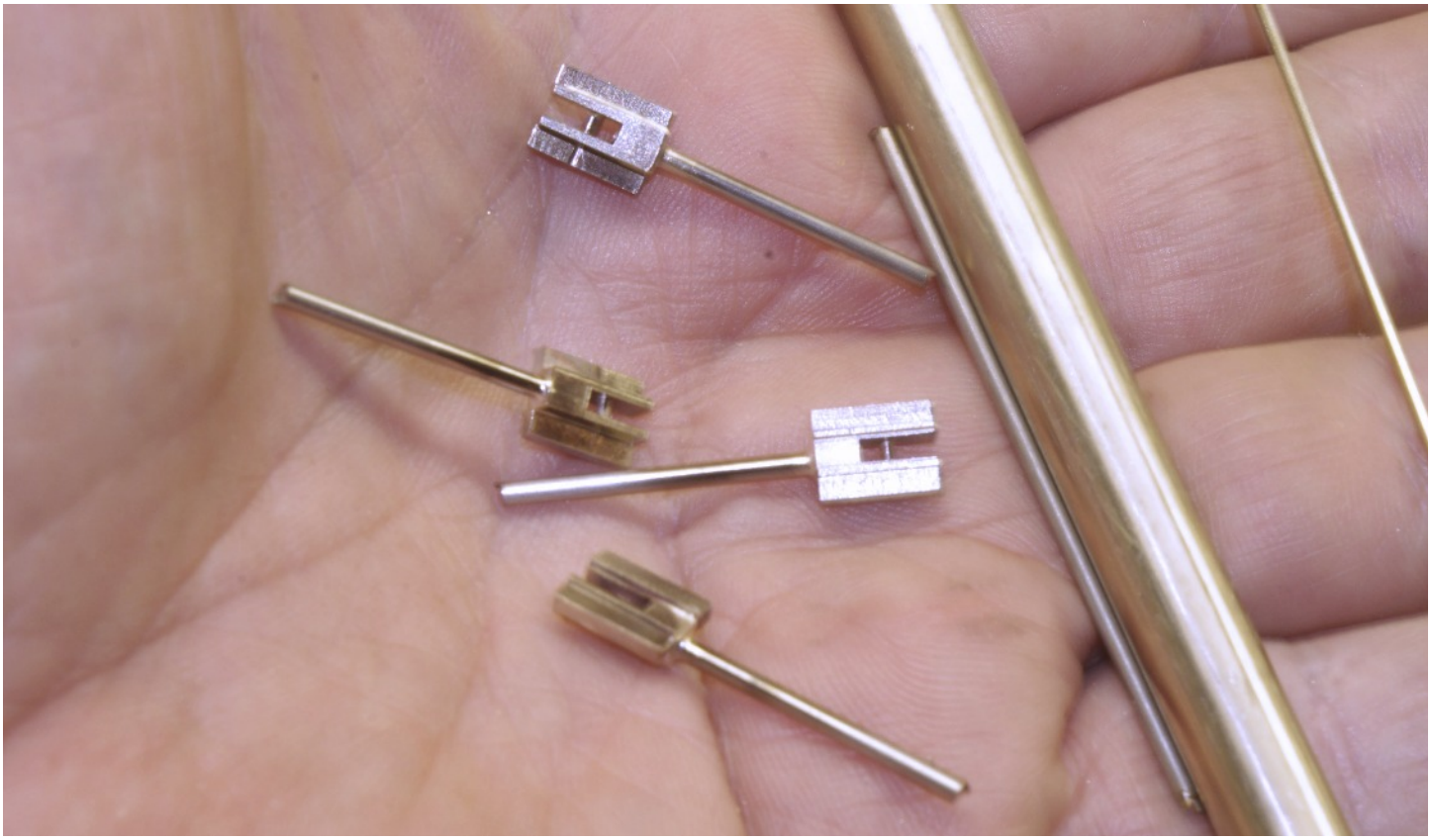
This is my drawing of what I would make for my model. I always use the prototype drawings as a guide and then draw what I want to make. On the prototype, there are removable bearing material pieces that we will not be using and so on. I was going to put the key in that holds the cross head to the piston rod, but after getting the model together, I decided you could hardly see that key; so for now I have left it off.



This is how I made the cross heads and put the pin in. I had to start with a round bar of Nickel Silver and I milled it into a rectangle bar. I made them two at a time like this so I would have something to hold onto when milling the slot. The next photo will show milling the slot. After the slot was milled, I drilled the hole for the pin. I made a pin out of Nickel Silver because the next operation would be to mill part of it away. What I am doing here is hard silver soldering the pins into the blocks.



This is how I cut the slots in the cross head blanks. I used two slotting cutters together because I did not have the correct thickness one. You can't use one slotting cutter and make two cuts, the cutter will wander. The way I did it is not great, but worked in a pinch.



These are my finished cross heads and the material I started with. For the piston rod, I used Stainless Steel because it is stronger than the Nickel Silver. In addition, the stainless steel will not anneal soft like the Nickel Silver would when the rod is hard silver soldered in place. The solder joint to the cross head is done with hard silver solder. This will hold to Stainless Steel and Nickel Silver, regular Tin Lead solder will not hold Stainless Steel. When I was done, the cross heads were tight in the guide bars. I cleaned up the cross heads with a #4 file until smooth. Then I cleaned up the guide bars and kept fooling with them until I got a good fit and smooth sliding. They look good on the models and work smoothly.

This wraps up some information on how I made the cross head supports, guide bars and cross heads for my models. I like the way they all turned out. For the next article, I was going to show the valve gear parts. I am working on these models while Rose and I are in Florida for the winter and I don't have all my tools here. The valve gear is made with the exception of the eccentric straps. They will take some careful machining and I want to wait until I get back to my regular shop. As I am writing this, I have finished the fire boxes and motor mounts and installed them. The boilers were next and they are done. I am currently working on back head details and the cabs. For the next issue, we will move to the fire box and motor mounts. Then a little on the boilers. By that time, Rose and I will be back in Wisconsin and I will see if I can make the eccentric straps. See you next issue.

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E-17

The Milwaukee Road EP-3 Quill

By James Schultz

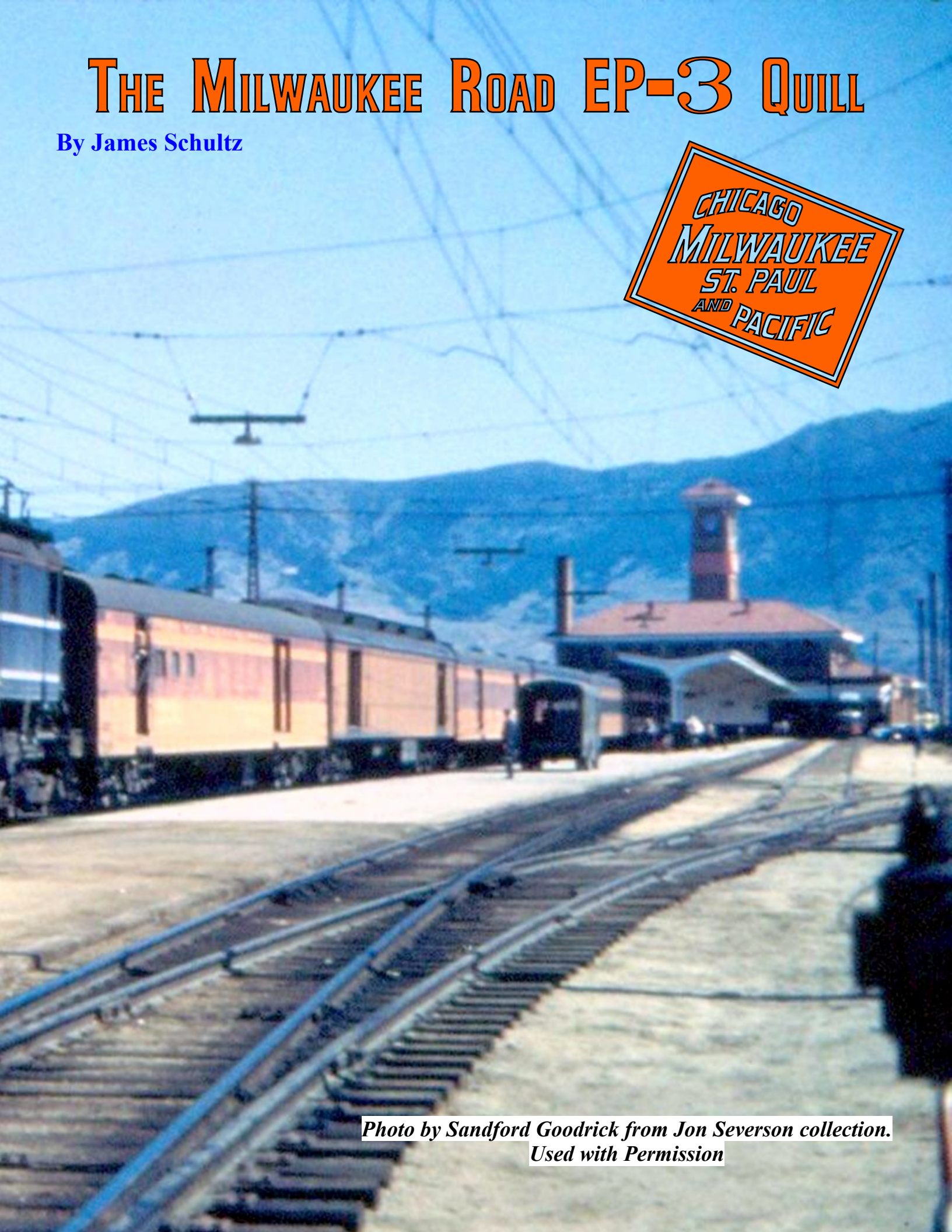
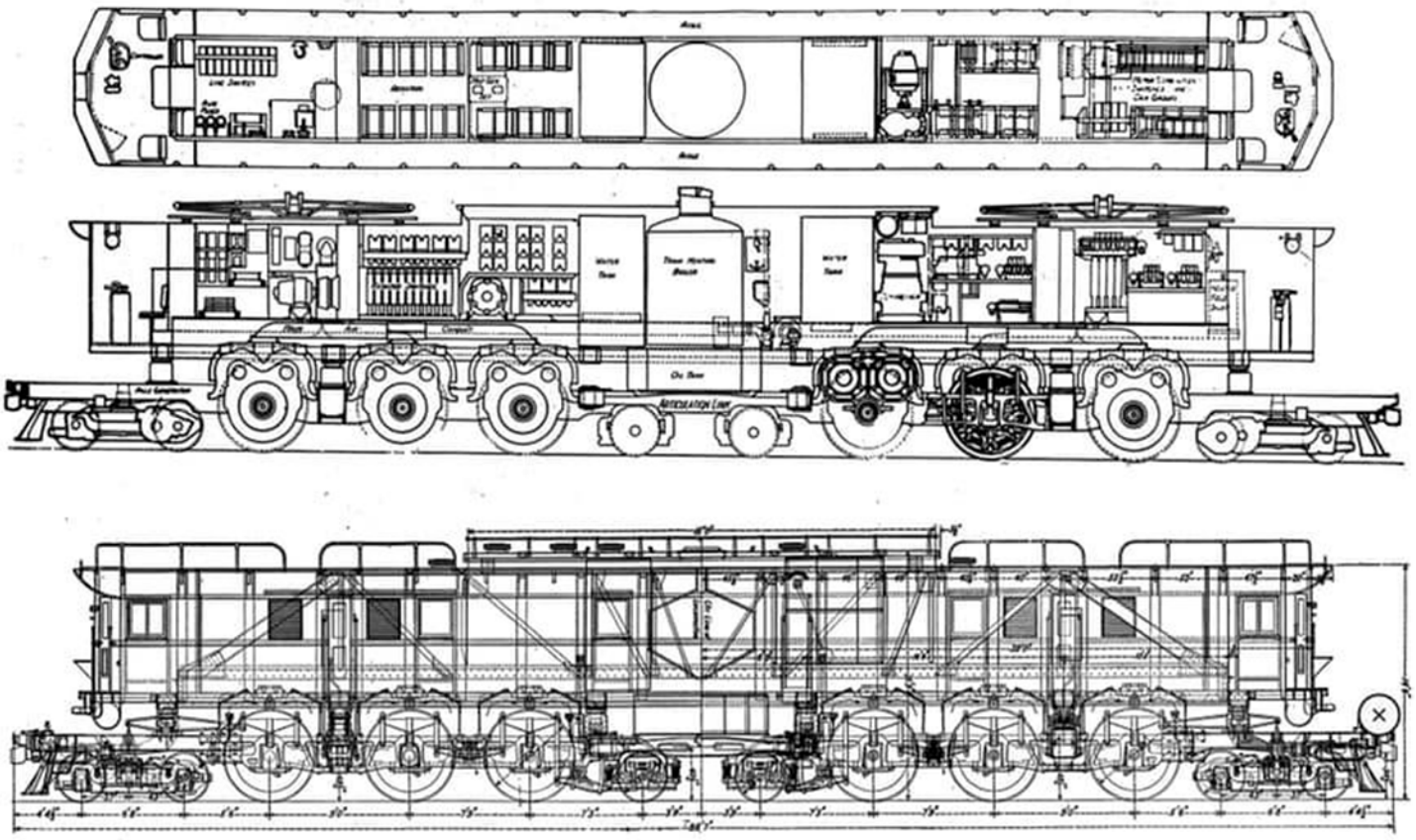


Photo by Sandford Goodrick from Jon Severson collection. Used with Permission

Scratch building has always been a great past time hobby for me. As a kid, I would watch my dad (David) work on his O scale models and I would try and copy his work through HO. I looked for projects that would need modification or building. I was always willing to try something new. Little did I know, the icy tentacles would eventually get me! Since switching to P48 O scale 12 years ago, scratch building has become a passion.

The Milwaukee Road piqued my interest from the beginning, especially the electrification. Large electrics handling heavy freights or sleek passenger trains racing across the big sky state, brought me great inspiration. The electric covered in this article did not receive the attention nor the fame of its other more successful brethren, though still unique on its own.

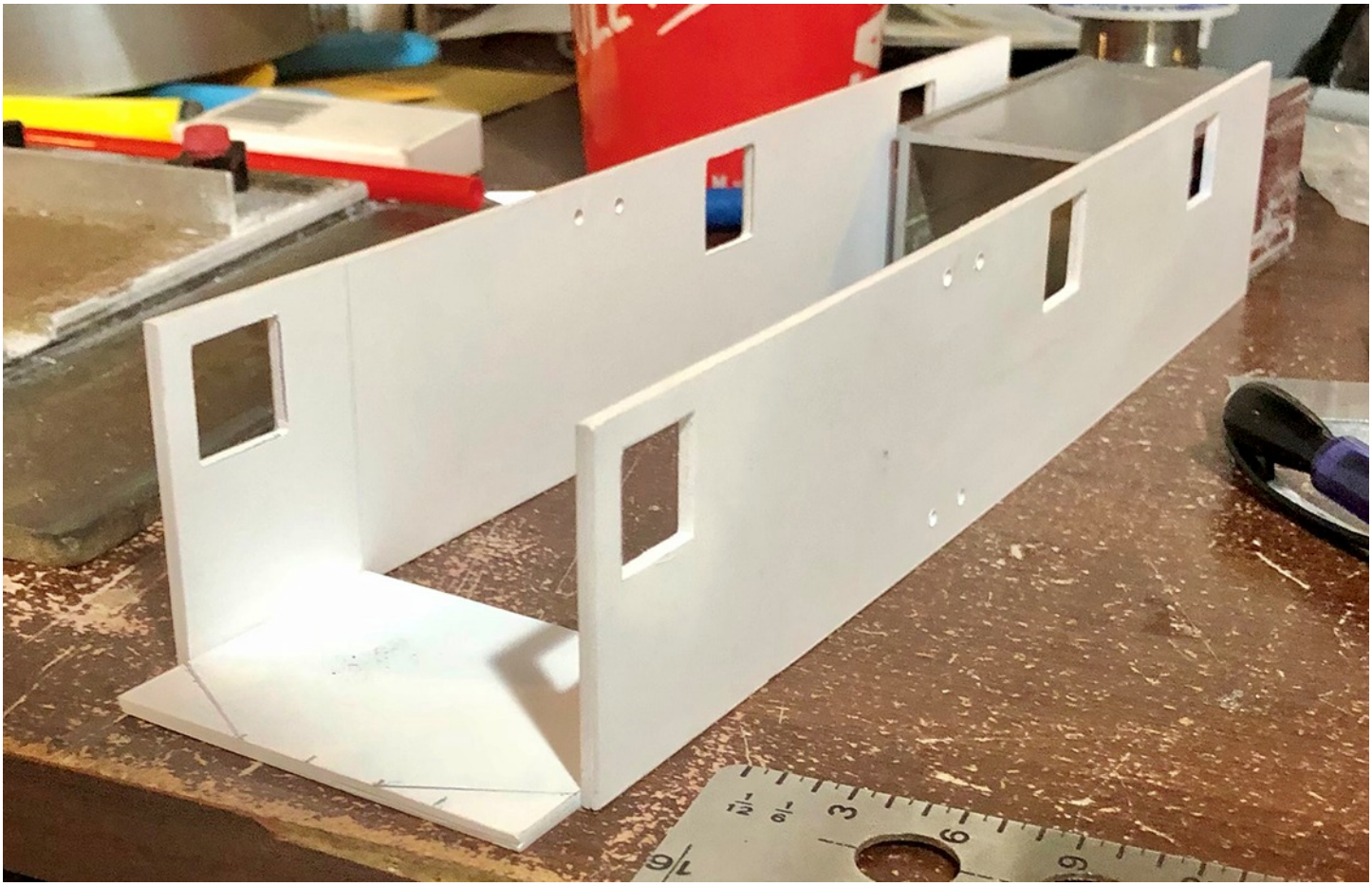
The Westinghouse motors, Class EP-3s, or simply known as the Quills (so called for the drive used to propel the locomotive, or Quill) was the largest yet most troublesome electric the Milwaukee fielded. In 1917, the Milwaukee was forced by the USRA, due to war efforts, to split an order of 15 passenger electrics. GE was contracted to build the famed Bipolars, Class EP-2s, while Westinghouse, in conjunction with Baldwin, built the Quills. The first of 10 Quills was delivered in Dec of 1919, and the last in May of 1921. They were numbered 10300-10309. Later, in 1939, they would be renumbered E10-E19. All 10 spent their career on the Rocky Mountain Division between Harlowton, MT and Avery, ID. Though similar to the New Haven's successful Class EP-2, that's where the similarities ended. From the factory, the Quills were plagued with issues. Weak frames and heavily overweight (over 100 tons more than the New Haven motors) spelled their doom, and by 1957, the last Quill was retired from service. While maintenance crews loathed them, transportation crews loved them. Smooth riding and powerful, they were the ideal locomotive for passenger service.



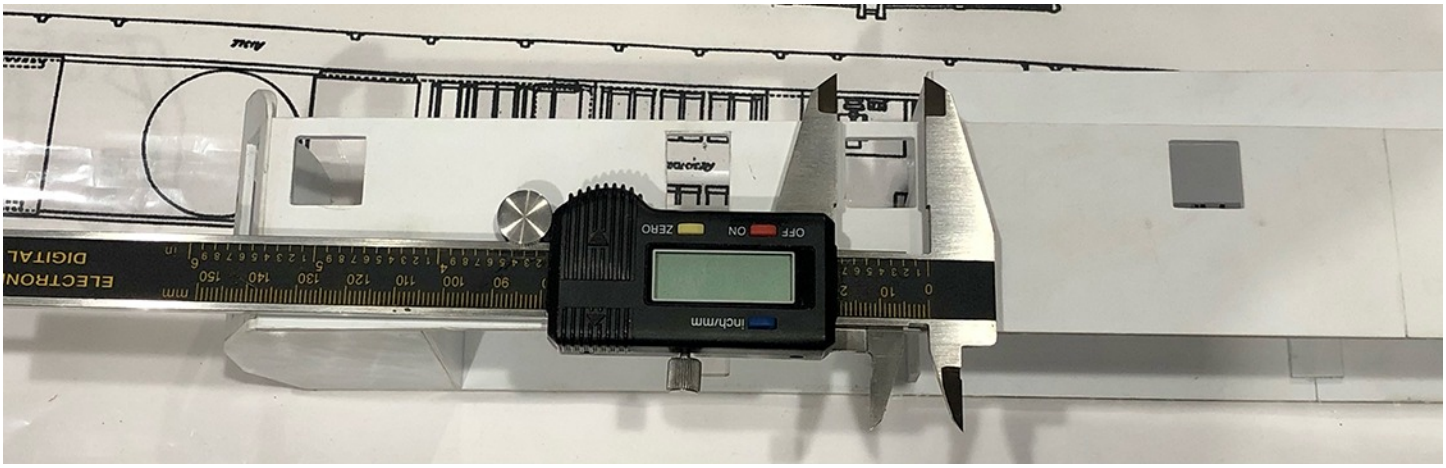
Research is a big part of scratch building and can become a hobby in and of itself. My first order of business was to find a good diagram or blue print. Fortunately, I had a friend come through with a diagram which I had blown up to 1:48 proportions at a local printing shop. The Quills went through many changes during their career. Some of the changes included: Heavier Built frames, No. 1 cab repurposed and blanked and numerous body modifications. The decision was made to construct a Quill for my 1952 Columbian. The Milwaukee's

second named west passenger train. Scratch building a locomotive takes some forward thinking and there are many materials from which this motor can be constructed. I am well versed in building with plastics. The main car body would be built from sheet styrene. Since the car body on this motor is very long, I thought it best to construct it in two sections, and then joined at the middle as one piece.

Once I had all the body measurements taken from the diagram, I got to work cutting up .040" sheet styrene. Most major hobby stores sell sheets, but they can also be ordered directly through Evergreen. I started with the sides, cutting a total of 8 body panels. It's always good practice to cut oversized, which makes it easy to correct any errors along the way. I use a true sander for finishing work. In order to give the body strength, I laminated two .040" panels together to create one .080" panel.

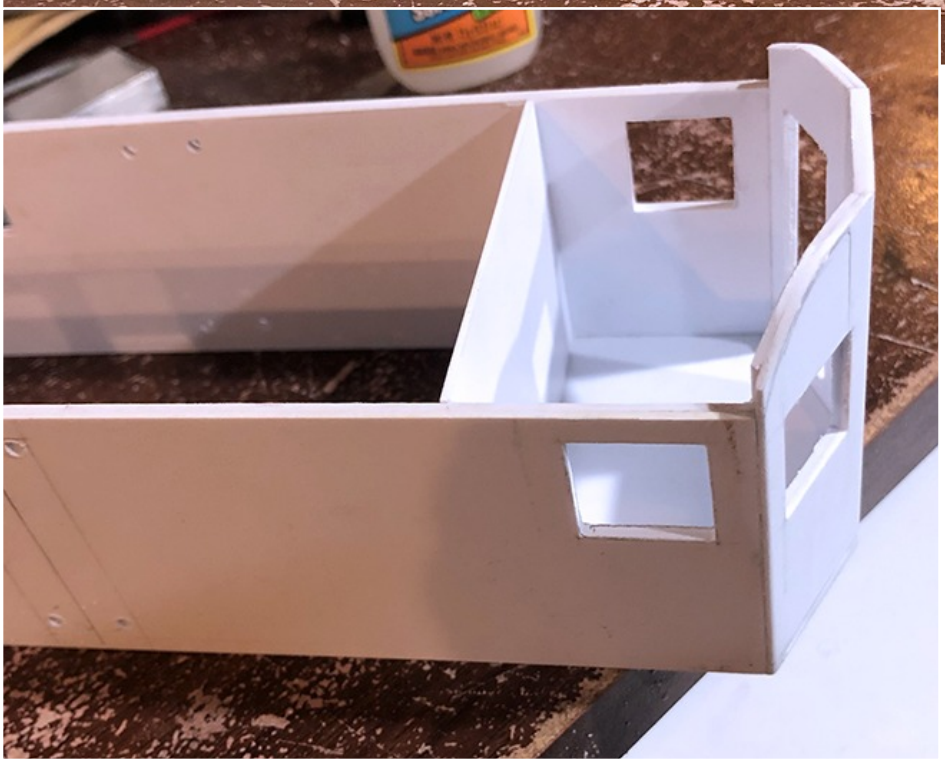


Above: Two side panels with windows cut in. Note the 4 holes drilled for doors. These help start the Xacto mini blades.
Below: My dial caliper shown measuring out the windows.



I used a rubber glove to distribute an even amount of CA across the panels. Once each of the four panels was squared using the true sander, I could start drawing in the windows and doors using a dial caliper. Each was marked and drawn out with a pencil. In order to cut them out, I drilled a few small holes to start an Xacto mini saw and followed the lines. Be sure to under cut here. This allows you to come back and square them with files.

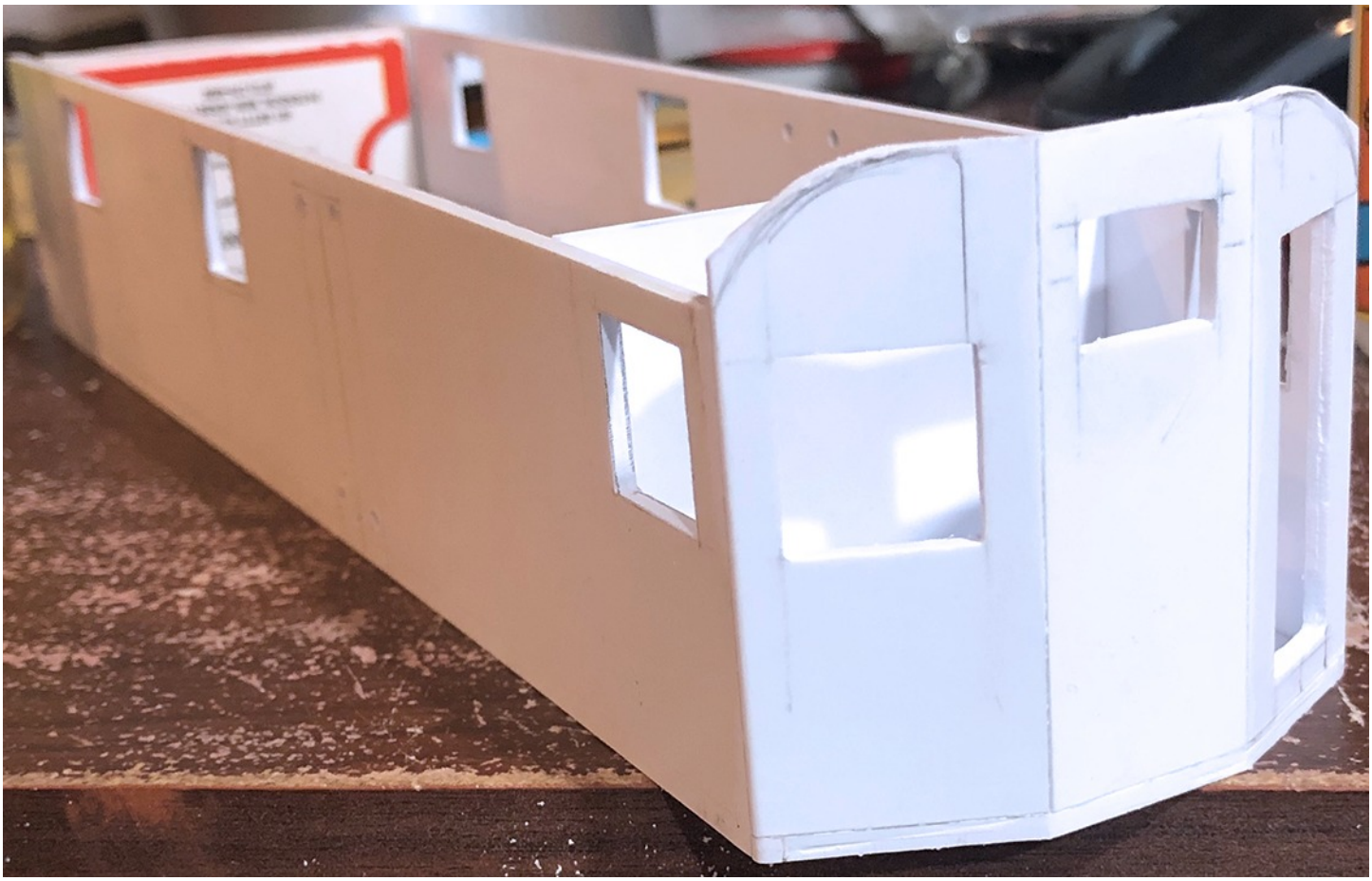
The cab on this motor is quite unusual. It is made up of three front panels, two of which are angled in from the center panel to the outside body panels. In order to achieve this, I had to make the floor and rear cab walls first. Again I used laminated panels to create both. Once squared, I used machinist squares and CA to attach the sides to the floor. I made sure the floor panels were longer overall so I had room to attach the front cab panels. Any excess could be cut off later with the Xacto saw. The back walls were then squared and attached to the sides and floor. Remember to take your time when squaring up each panel. Use small amounts of CA to begin with. The front cab panels were all cut from laminated sheets. I then cut in the windows and doors using the same practices from above. Each was squared using files. On this model, the doors would open out. On some Quills, the doors would open in. A detail that can be easily overlooked if not for earlier research. This also narrows down your choice of which motor to build. After drawing out the front panel locations on the cab floors, each panel was carefully glued into place starting with the center panel. A smaller machinist square assisted in keeping each in place. The excess floor was now removed.



Above: Center panel was placed first and then the angled panels followed suit. I did a lot of fitting here to make sure everything went together nicely. Note how I drew out the window after fitting the panel.

Left: An overall look of how the cab came together.

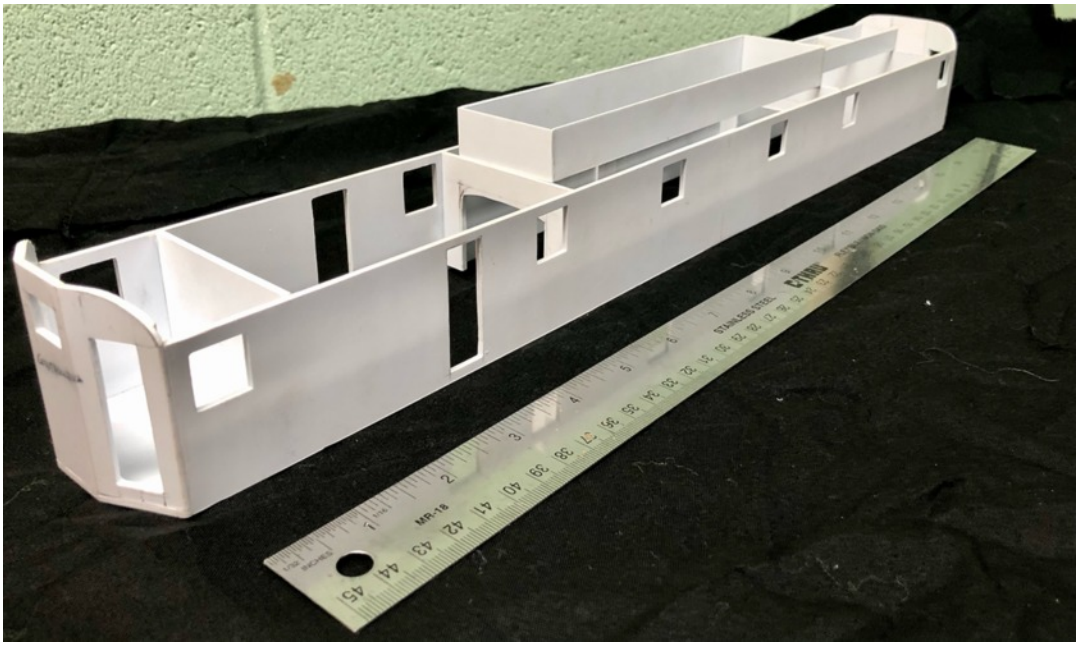
The toughest part about the cab is getting the roof contour correct. The roof extends from a flat center, curving out and down to meet the sides. I measured the floor, at the center, to the highest point on the cab. From



Panels glued and windows and door cut. Roof contour was now shaped. I used a pencil to draw out the contour.

here, I was able to determine the curvature and I cut away the top portion of the cab panels using an Xacto mini saw. I followed up with files and sanding blacks to smooth everything out.

Now that the basic shape of each section is complete, they can be brought together as one car body. Using a block of wood cut to fit inside the body, the two sections are squared and glued together using CA. As mentioned from before, I always leave a little extra material so I don't cut myself short. Hahaha!! Pun intended.



With the two halves complete, the car body could now be fully assembled. Here is an overall look of the body.

I then glued a pair of strips on the inside seams for strength. There were two electrical rooms located behind each cab end, and situated in the middle was the boiler room. The walls that separated the boiler room were constructed and placed.

Not only do they provide strength but will also help support the roof.

An almost complete master of the Quill's side frame. This will be covered in more detail in my next article.

While continuing to work on the body, I started in on the side frames. Since this Quill is taking after a later rebuilt model, the side frames will have been rebuilt as heavier versions than what was delivered. The master I created out of laminated styrene will help with casting the brass frames. Though I would like to go into more detail, this and much more will be covered in part 2.

Now, I know what you're probably thinking..... "James, you silly goose!? Why not order one from Sunset 3rd rail?" Well, funny story there. I actually started this project a year before Sunset announced the Quill. Imagine my surprise. Lol! So why not have two on the layout!? Fortunately this has made it easy to find the correct drivers. I can have P48 versions cast for both models now. So thank you to Sunset for helping me out.

I want to thank everyone for taking the time to read through my article. For those interested in this and other Milwaukee electrics, please check out my facebook page, "The Milwaukee Road in Avery Idaho.

See you in part 2!

ME Ry
Gons and Flats with Interchangeable Loads

By George Paxon

During a short recuperation break following a hip replacement, and while trying to get my layout back together after a move of house, we conducted a review of traffic opportunities and future operations on the ME Ry. During the review we worked out that more gons and flats will be needed. This was based on an assessment of car types and possible products to be hauled on the revised layout. We certainly could use cars to carry sand, sawdust, gravel, cinders, steel in different forms, pig iron billets, scrap steel, line/telephone poles, mine props, untreated ties for mine trackage, treated sleepers for use on the ME Ry and other standard gauge roads, firewood, and hay. Another obvious and excellent load would be lumber. But, I have three steam road flat cars with sawn lumber loads already so did not feel it appropriate to add more. And, I have two flats with loads of pipe, so did not need to include this in my list.

And I did not really address coal in this project because coal is the major freight item for the railroad and a project of its own.

To make cars with each of these loads would be a substantial project in several ways. First, I would need a lot of time to build them all. Then I needed a place to put them on the layout. Another issue was with the load vs empty thing. I was interested in having both loaded and empty cars so the cycle to and from an industry would make more sense and be all that much more realistic. When a box car, reefer, covered hopper or tank car moves on the layout, there is really no way to tell if it is loaded or empty other than looking at the way bill card (assuming you do that sort of thing). As a result, these cars always look the part. However, in the case of gons and flats, it is intuitively obvious if the car is loaded or empty.

But, I was not all that eager to build more than 20 new cars, and I had no idea where I was going to put that many new ones on the layout.

Space is generally always our scarcest commodity. Next to that is the limited time we all have for building cars considering all the other tasks a layout requires. After some pontificating, and probably as the result of a bad bottle of red wine, I came up with the brilliant idea of making about a fourth that many cars and using interchangeable loads. This would allow the cars to carry different loads at different times and still be available as empties when needed by the operating scenario. So we set off to develop the car designs, loads, and the operating approach to suite.

I sketched up a standard gon and flat car for the ME Ry. I decided on three gons and two flats for this new addition to the car fleet. And not all the gons would be the same with two low sided and one high sided. (So much for a Company standard.) The drawings for my gons and flats are at Figure 1**.** They are for use anywhere on the line so are built to traction trailer standards with radial couplers and rounded ends. They could just as easily had been made with flat ends and normal Kadee coupler pockets in steam road configuration.

The ME Ry is historically a rolling museum of sorts with old dilapidated cars of all sorts collected from the scrap lines of traction and steam roads all over the country. So, just for variety, these cars were built as more modern ones with steel frames.

The gons and flats were assembled over some winter nights at the desk in the den while my domestic manager watched some rubbish on the TV behind me. This desk was serving as my temporary workbench until

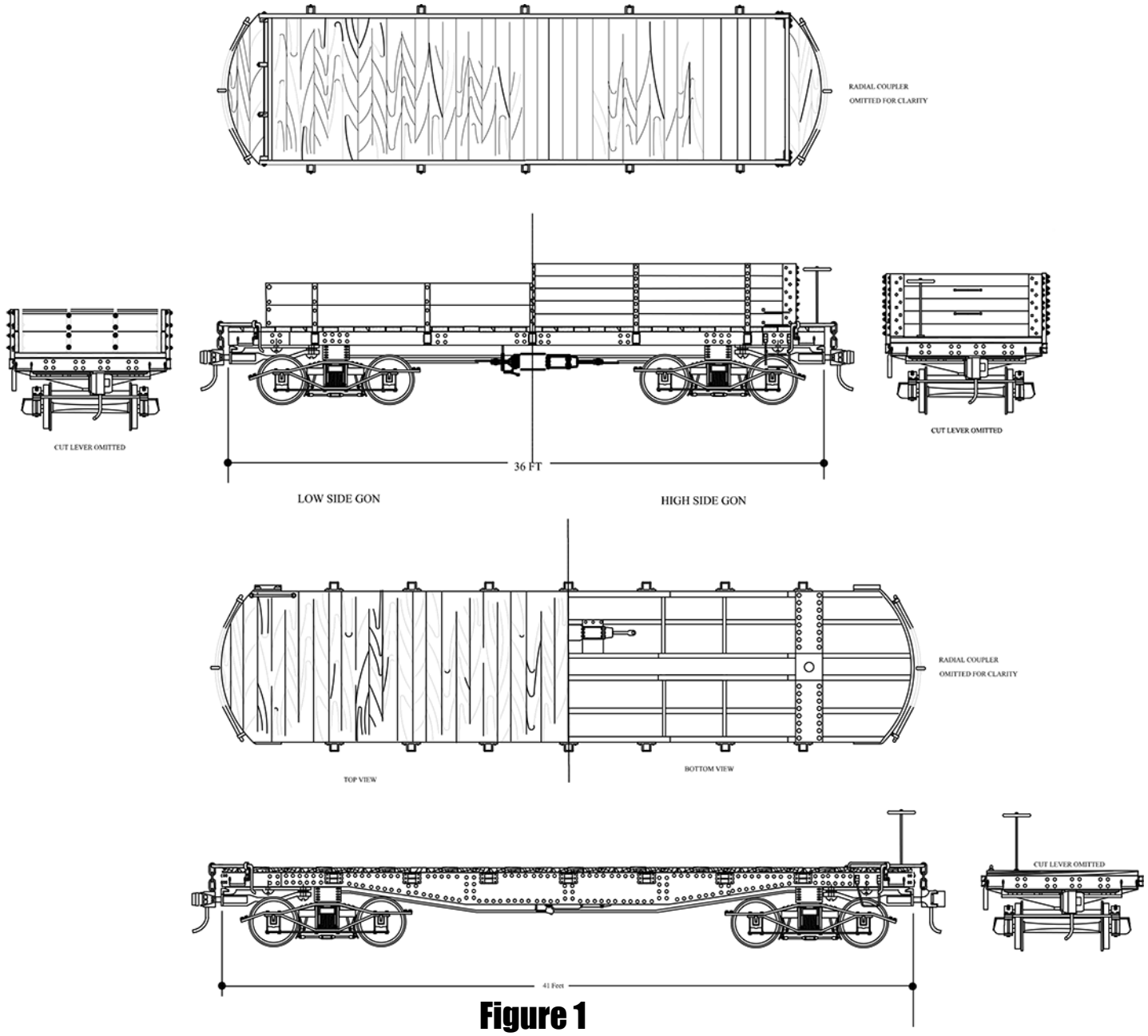


Figure 1

I got my workshop up and running. The material used for car construction was mostly strip styrene. I built all five cars over a floor laser cut from 1/8 inch thick MDF, so construction of the car bodies went quite quickly.

Adding the details to the five cars took most of the time. I used quite a few Grandt Line castings for stakes, corner brackets, and nut-bolt-washer castings. Some brass wire, and miscellaneous items found their way into the project, too. The stake pockets on the flats were some old US Hobbies ones that I found in my parts hoard. I bought the coupler lift bar brackets from Wiseman Model Service.

The styrene "wood" parts were pre-weathered by drawing my Zona saw along them to add some grain.

The floors of the gons were made of styrene strip, appropriately distressed, as I wanted to put them on early to enable me to add the stakes, sides and ends.

Micro Mark decal rivets were used as well on all the cars.

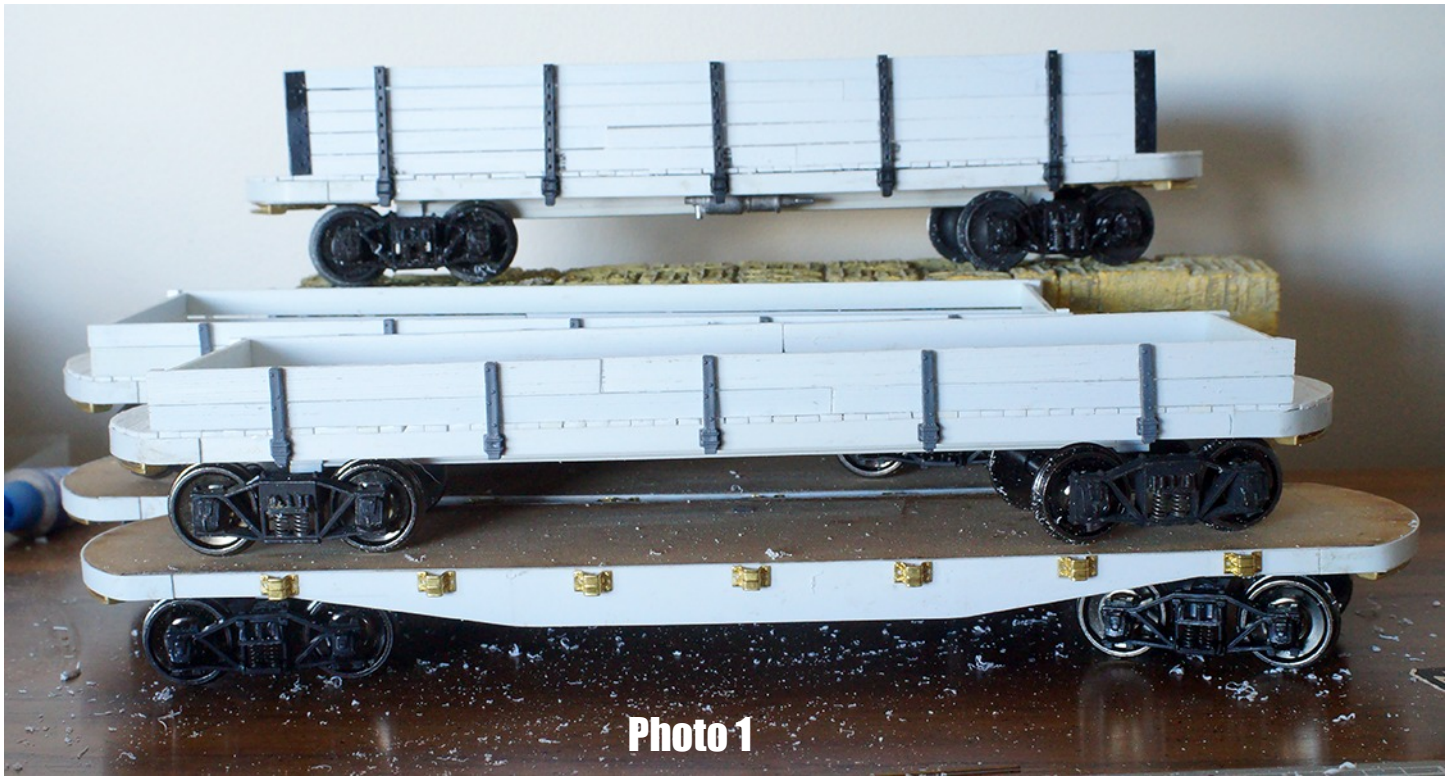


Photo 1 is an "in work" shot of the cars with some of the details, but not all, installed. Sorry about the mess on my desk/temporary work bench. I had not cleaned up yet after weathering the styrene "wood" with the Zona saw. My wife really loves all this messy stuff in the house. There has been talk of eviction.

In due time, the cars managed to get finished and painted. See Photos 2-6 which show some of the cars empty, some loaded and some of the loads. Painting was a bit of a chore while waiting to get my workbench completed. I definitely am not allowed to do that in the house!

All the cars were primed first where any rivets were needed. The grey primer also serves as the base color for bare wood such as car insides and floors. Rivets were added as required using decals. Then the rivet areas were again sprayed to set them well.

Photo 3

Photo 4

Photo 5

The undersides of all cars were sprayed using a dirt color. This medium to light brown paint provides a quite realistic dirty weathered look to the underframe and is far superior to black. I use this color for painting trucks, too. I now need to mix my own dirt color as I have just about run out of my hoarded Poly Scale supply and I cannot get any more of it.

The outsides and insides of the gons were painted a flat medium grey. Actually, the medium grey was sort of applied randomly over the lighter grey primer inside the cars and this helped provide some variation to the color. The outsides of the gons were then painted a freight car red. Some additional red was used to streak the side boards with a brush to yield a nice weathered wood look. The insides of the gons were weathered by dry brushing some boards with a wash made from darker grey paint. And, very dark grey and black chalk were also added. “Steel” parts were hit with some brown and rust color paint.

The sides and ends of the flats were painted black. This black had a bit of white added to really make it a very dark grey. I am not a believer in painting much of anything black-black as it sucks up all the light and makes details near impossible to see.

The decks of the flat cars were installed using stripwood after the cars were painted. Flat car deck boards were distressed with the Zona saw and pre-stained and installed after the car was painted. Brake wheels were added after painting and those touched up with a brush.

Cars were lettered and numbered for the ME Ry. I did not make decals for these cars specially so I had to pick and patch together what I needed from the decal box for all the lettering. I wanted to get the car numbers correct to fit my car numbering scheme of course. As a result, the fonts are not consistent, but then the real roads mixed and matched fonts quite often too taking advantage of whatever stencils they had on hand when needed. The dimensional data was from some very old Walthers decals and the lettering is a bit oversized compared to what we would find in newer decals. Helps me to understand how our modelling technology has

changed and how things have improved over time. When dry, the decals and gloss paint was over-sprayed with a flat finish.

With the cars done, the work moved on to building the loads.

Hay Load

Before the recent move of house I ran across a resin hay load for sale on Ebay. It appeared to be sized for a flatcar, so I bought it. It finally arrived in the middle of the move, and I put it aside while I worried about other issues associated with tearing down the old layout and the move.

When I finally got around to having a good look at my purchase, I was somewhat taken back but the immensity and mass of the bloody thing. I like my cars a bit on the heavy side, but hauling this load around would require a triple header on level track!

First I needed to reduce the size. I needed the massive chunk both shorter in length and height. To reduce the height, I passed the load through the table saw a few times and removed the bottom two rows of hay bales. Reducing the length was a little bit trickier. I worked out where a load retaining side stake would be based on the stake pocket location on the flat car. I cut the hay pile there twice. A small offcut was discarded and the hay pile glued back together. The vertical cut was to be hidden by the stake. Well that theory did not work as well in practice – may have been the wine. So, I used some squadron putty and touched up the paint to disguise the joint as much as possible.

Then, to remove some weight, I drilled holes into the bottom with a large diameter drill to remove as much material as I could. I hacked some of the material out between the holes as well. With all this work, I managed to get the weight of the load down to a ton or so.

The hay load came painted, but it was a yellow color that looked more like straw than hay. I dry brushed the pile with a bit of green and tan and it began to look a bit more like hay (at least to me). The hint of green also helped to make the color look a bit more random and realistic.

Side stakes and some retaining boards were added. Long stakes that reached just above the hay pile were inserted into the stake pockets of the car intended for the hay load. The bottoms of the stakes were whittled to loosely fit the stake pockets. The length of these stakes was a bit random. But I took care to keep the stakes reasonably vertical, but still a bit rough looking, so they would be easy to remove from the stake pockets. A few horizontal load retaining boards were added between the stakes and glued to the back of the stakes. Such boards would have been from reject timber so I cut a bit away from them here and there to help them look the part. And these were put on in a random helter-skelter sort of way as they probably would have been done for one time use with such a load in the real world.

When dry, the stakes with the load retaining boards attached were removed from the stake pockets as one piece, epoxy glue was applied to the back of the load retaining board, and the assemble was put back into the stake pockets to dry making sure it had good contact with the side of the hay pile. A few lengths of strip wood were added across the top of the hay between the side stakes to tie the two sides together. These were also glued to the hay as well.

This load retaining timber was not weathered as it probably would have been rough stuff made up from poor quality, but new timber, just for this load.

And in the interest of making the load more bullet proof and suitable for handling by ham fisted klutzes like myself, I drilled small diameter holes through the stakes and into the hay and installed pins to help keep the load all together when removed from the flat car. These pins were located at the joint between the side stakes and the retaining boards to simulate bolts at these points. Pins from my wife's sewing basket worked nicely.

She has been looking around the house for a few days now trying to work out where all her pins went, but I don't have the guts to tell her.

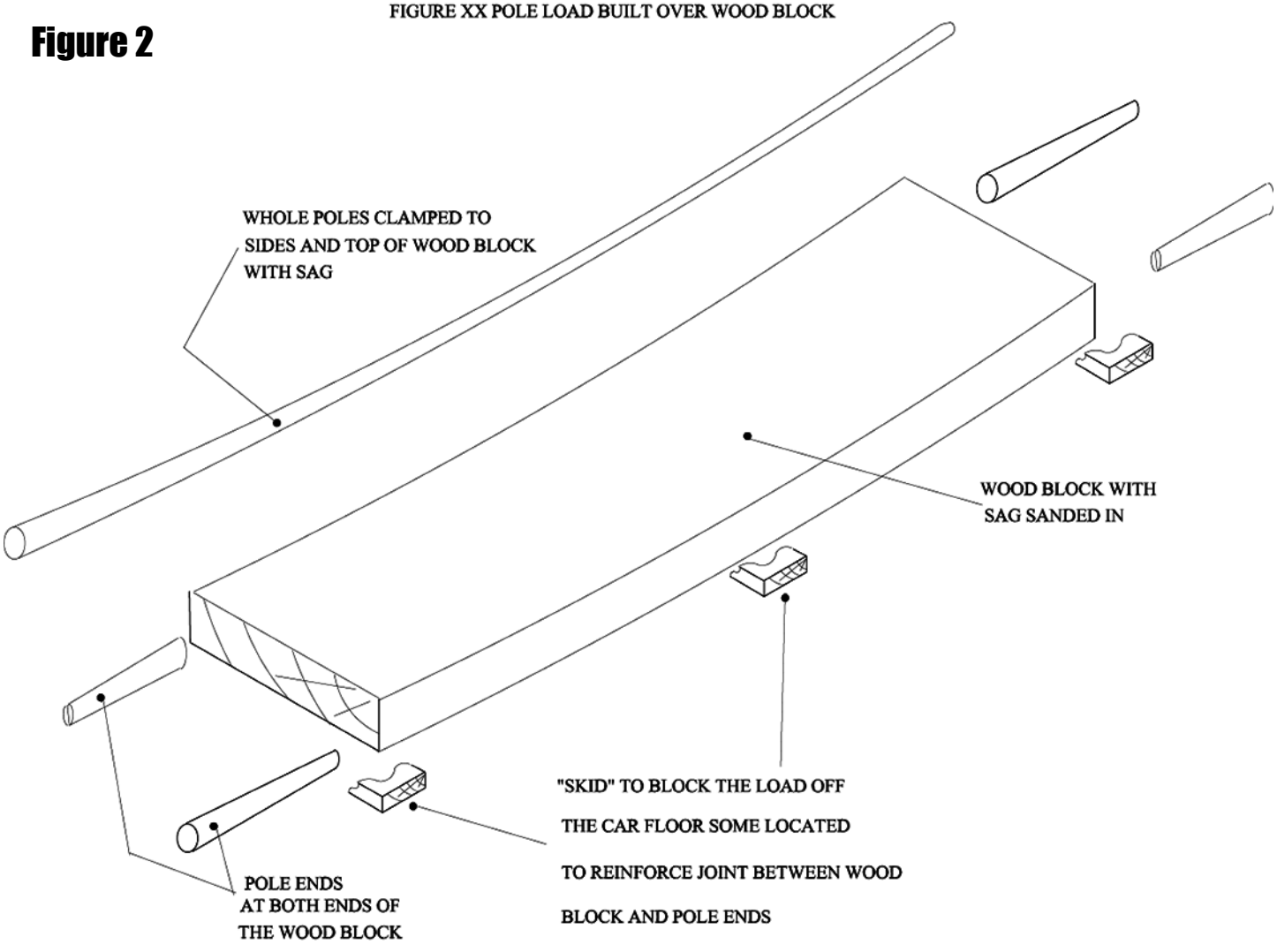
You can see the finished hay load at the top of Photo 3

Line/Telephone Poles

I had previously made a large batch of line poles for use in stringing my overhead wire on the layout some time ago. Since they were on hand and available, I decided to sacrifice some of these to make the pole load. These poles were made from hardwood dowels cut to length and tapered nicely on a sanding disk. The tops had been cut at an angle as is usually done with such poles to shed rain and reduce rotting. They had been weathered with a Zona saw and stained to a medium grey. That meant they were all ready for use on this project. I built the load over a small block of wood cut to size to reduce the number of poles needed for the load. See sketch at Figure 2. Poles were glued to the sides and top of the wood block. Short bits of pole ends were made from some additional dowel and glued at the ends of the block as shown in the sketch. Note that several lengths of wood were under the load as this would have been needed on the prototype to allow a sling to pass under the poles for car loading and unloading. Two of these lengths of wood were strategically placed at the joint between the wood block and the short pole ends to help tie the entire load together.

Figure 2

FIGURE XX POLE LOAD BUILT OVER WOOD BLOCK



Remember that these loads will be subject to handling and need to be substantially bullet proof. And, a few test fits were made during assembly to make sure the load of poles would fit between the stake pockets of the flat car.

One thing I have noticed in looking at prototype pole loads is the way they are loaded. Some poles are loaded with the larger butt ends at one end of the car while other poles in the load have their butt ends at the far end of the car. I assume this is keep the load level and avoid it succumbing to gravity during vibrations from the moving car and the load shifting toward one car end. And if strapped down, the load wound need to not have a tapered top which would result if all the poles were loaded the same.

Stakes and timbers to tie the stakes on each side of the load together were added as was done with the hay load. We did the pin thing again to strengthen the stake to load joints, too. Heads were cut off these pins this time since bolt heads were not appropriate for this load. I tried to file the cut off pins flush with the stakes to make them as inconspicuous as possible. I touched up the stakes with "aged white" paint as this was very close to the color of the natural wood stakes and this helped. The pole load can be seen at the top of Photo 4.

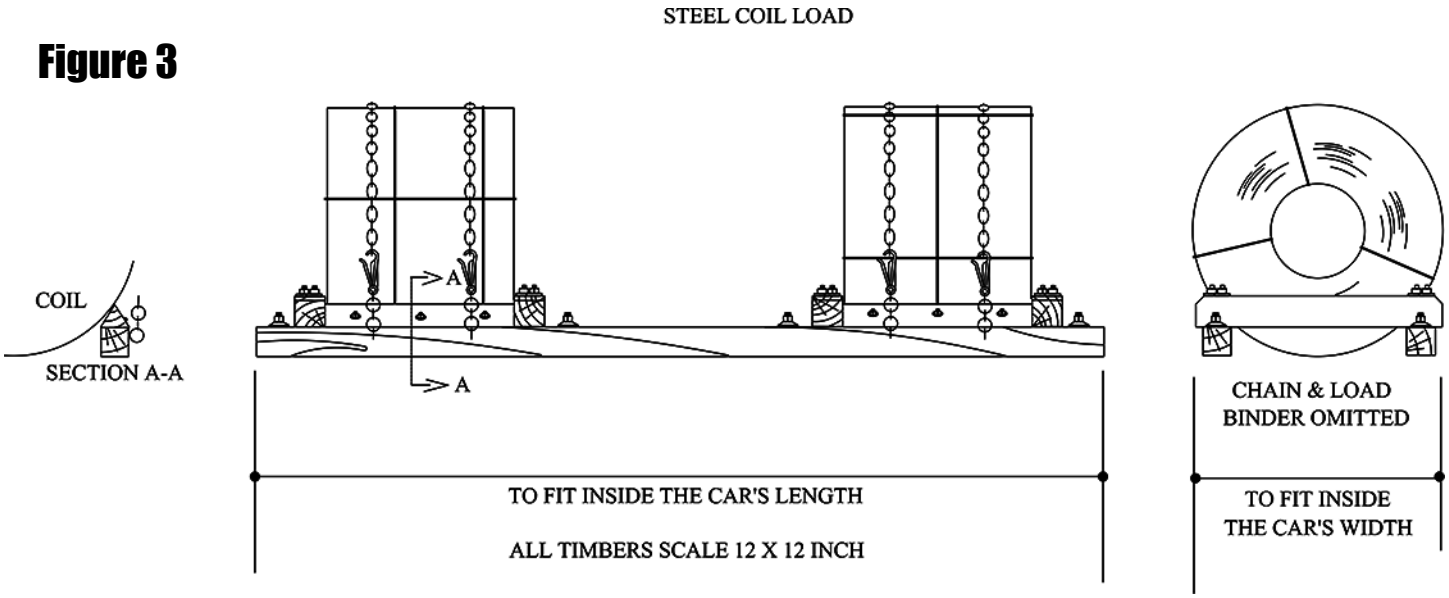
Steel Coil Load

In the real world, steel sheet is rolled into long coils when produced and moved in such coils to customers who needed a large quantity of such sheet product. These customers had un-coilers onto which the coils were loaded. The coils were then unrolled and fed into cutting, folding, punching, and stamping machines that turned the long coils of steel into their products. Coils were moved by railroads in more modern times in specially equipped gons that usually had large steel covers to keep the coils out of the weather. I assume in the dark ages–say 1930s and before, steel coils could have been shipped in the do-all box car or under tarps on flats or gons. Not really sure about this and have not had much luck researching this issue. But in any case, a whole carload of steel coils is more than my customer, American Steel Company, could use at one time. On the ME Ry, car loads of steel coils go through a break bulk step somewhere along the line and are transferred to a "standard" ME Ry gon for movement to American Steel. Two coils are all that American Steel wants at one time. Steel coils would weigh approximately 5 to 8 tons, so they were heavy freight. To secure the coils on the ME Ry, a heavy timber frame is used on the floor of the gon and the coils are chained down as was done when moving such coils by motor transport also. It was particularly important to carefully block the coils so they could not roll. I purchased from Wisemans Model Service some nicely cast load binder which are ratchet type devices that tighten the chains. These are used when transporting all sorts of heavy freight such as steel coils and machinery. Not sure when they actually came into common use, but on the ME Ry it was in the 1930s.

This load was made by first building the timber frame. Nut, bolt and washer detail was added to the stripwood assembly as were some brackets for attaching the chain. I used a variety of different nut bolt and washer types. The timber was not weathered much as it would have been renewed quite often in such service. In actual practice, such a load would have been well anchored to the car in some way I am sure. But as we wanted to make this load fully removable, we compromised by having the load secured to the timber frame only. The timber frame could have been bolted through the gon floor to the frame members I guess. Well, that's my story. See sketch at Figure 3 and the bottom left of Photo 5.

Next came the coils. I pondered how to make these for some time. I considered wrapping thin metal foil to make such coils. The problem I saw was keeping the edges of the coil roll even. I also came up with the scheme of turning them on the lathe from aluminium rod with the centre drilled out. This idea died as I can't get anywhere near my lathe at the moment. Walking through a junque shop with the wife one day, I ran across some aluminium colored tape in small rolls. Cheap and nasty stuff, but about the right size for my load. I bought two rolls and the rest is history. The tape was on a cardboard tube as usual. I spent an evening picking the cardboard out of the tape via the center hole with a knife and tweezers until very little was left. I then gave the rolls a few coats of a steel color paint, remaining cardboard and all.

Figure 3

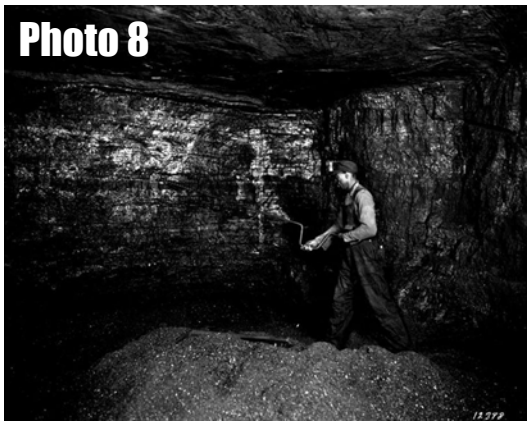


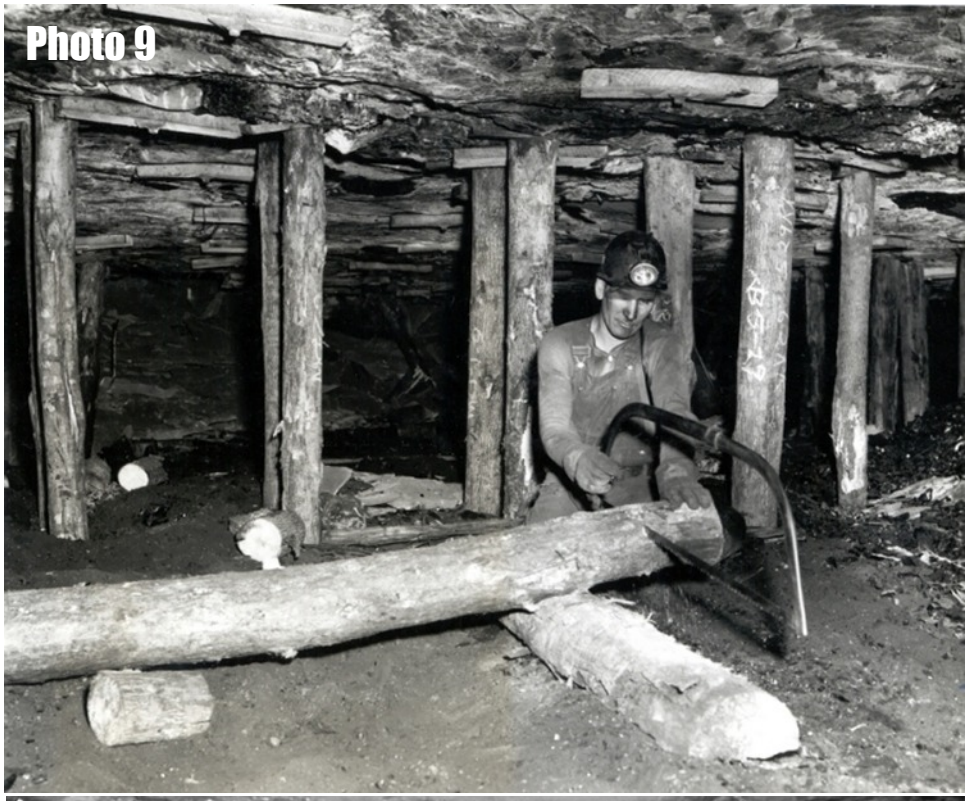
Such steel coils are tied using banding/strapping steel to keep them from unrolling in transit and storage. This became the next modelling dilemma. I was looking around for some very thin chart tape or similar product to model the steel strapping. When discussing this issue on the traction Facebook site I belong to, a friend and fellow O gauge trolley modeller in Salisbury, North Carolina, by the name of Gregg Rapp piped up and said, "why don't you just cut some thin strips from black electrical tape?" With that, the problem was solved.

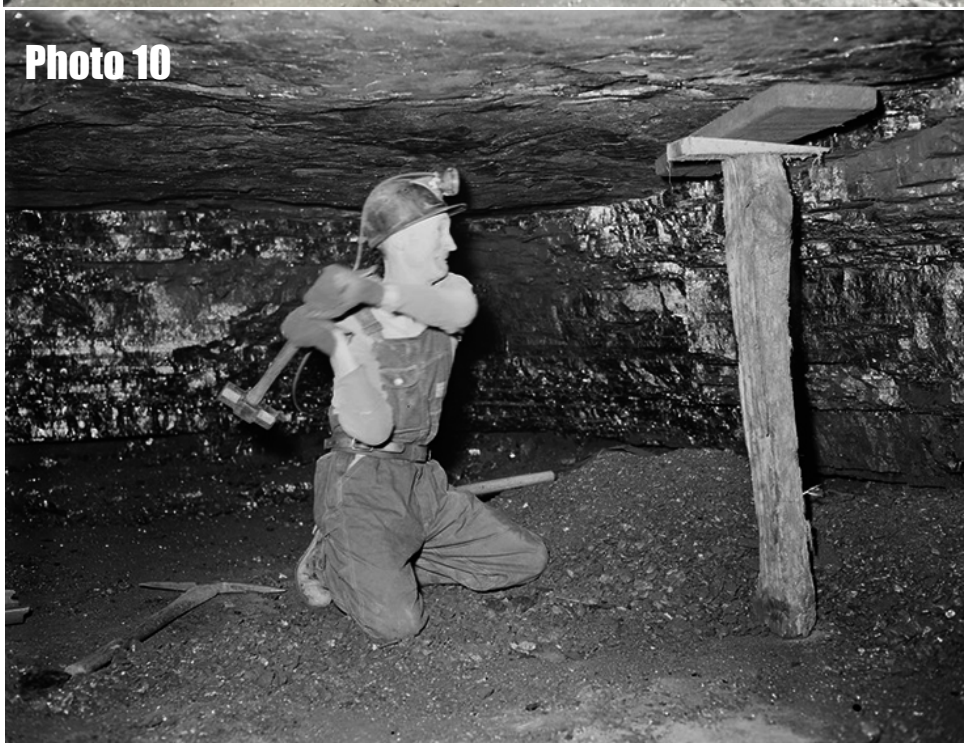
Lastly the chains and the load binders were painted rust brown and added. A bit of red was dry brushed on the load binders to indicate they had once benefited from a coat of paint. With this, the load was done and ready for movement as freight to American Steel.

Mine Props

One product we needed on the ME Ry was mine props as we have lots of coal mines along the line. I remember these in giant piles around the portals of mines when I was growing up. They were cut from small diameter hardwood trees, say 5 to 20 inches in diameter with 6 to 8 inches probably being most common. The length of the props I imagine was ordered to suit the mine customer. Some of the prop piles at mines had props of all sorts of lengths. Coal seams came in various thicknesses. Some seams lower than 36 inches were worked with miners lying on their sides, see Photo 7, sometimes in water, all day to pick at the coal or shovel it into mine cars. Some mines had coal 10 feet thick, see Photo 8 for high seam coal. Much of the coal in the southwestern Pennsylvania coke region, where the ME Ry is based, was the Pittsburgh seam and that seam ran about 6 feet thick. And the coal thickness varied considerably, sometimes in the same mine. The mine props needed to be long enough that they would reach from floor to roof of the mine with space for a roof beam and/or some blocking above. The mine props were stood up and the blocking driven in to tighten the prop. Props could be longer than needed and cut to length at the coal face to







suit the situation as shown in Photo 9. But, they were fairly useless if they were too short. I decided on 6 feet for my props. And, Photo 10 shows a prop being installed in a low seam of coal.

I wandered around our property looking for a reasonable tree or bush that I could raid for my prop material. Mine props were delivered bark and all and rarely with any preservative treatment. A main entry that would be used for a good number of years might be timbered with treated timber props, or even steel. But, at the working face, where mining would only occur for only a short time, rough untreated timber props were the norm.

With me out looking lovingly at the trees and bushes, my wife was really impressed and most pleased as she thought I had taken a sudden interest in botanical things. She finally figured it all out when she discovered me hacking branches off her trees and bushes that I needed for my props.

The harvested material was duly cut into 6 foot scale foot lengths.

The mine prop load was again built over a chunk of wood cut to size in the same fashion as the poles earlier. A piece of card about the size of the gon bottom was glued to the bottom of the wood block to help tie the prop load all together. I loaded my props parallel to the length of the car with some props placed upright along the car sides as stakes to help retain the load. When the load was dry, I trimmed away some of the card that was showing. The top of the card that remained I painted with a medium grey that matched closely the color of the car floors to keep it from being obvious. I also added a bit more white glue here and there to reinforce the joints between the upright load retaining props and the horizontal props. I had used glue sparingly when building the load in the car so as to not glue the load to the car. My load of mine props can be seen in a gon at the bottom right corner of Photo 2.

Mine Track Ties

As with mine props, material yards at coal mines included stacks of ties that would be taken into the mine for building and maintaining the trackage underground. In many mines, there were miles of tracks underground.

Such ties were usually untreated as most would only see use for a short period of time. Being an ex-narrow gauger I still have a few thousand On3 sleepers in my parts hoard. These would work fine for mine track as the mine track gauge was often 3' or 3'6". I used some of these to make a load of mine track ties in the same fashion, building the load over a block of wood, as done with the mine props. No coloring or weathering was needed as the ties would have come straight off the saw and delivered to the mine site green. Another very easy load.

Treated Standard Gauge Ties

On the ME Ry we have a sawmill just off- line that includes a creosoting facility and it ships standard gauge ties, as well as treated telephone/line poles, to the ME Ry and via the ME Ry to several other customers. These ties are delivered to the ME Ry at various team tracks along the line. Standard gauge ties also are bridge traffic and are moved via the ME Ry to other connecting roads such as Pittsburgh Railways, West Penn Railways and the Pittsburgh & West Virginia. This is another easy to make load using some ties previously dyed for use in laying track on the layout. The tie load was built over the standard chunk of wood to reduce the number needed. The chunk of wood was painted with tie stain to ensure bare wood could not be seen between some of the ties added to the top of the wood. This load was made for one of the low side gons.

Firewood Load

Even though the ME Ry is deep in coal country, there remains a market for firewood. Some of our layout citizens are offended by the smell of burning coal and prefer to heat their homes with good old - fashion wood. We have firewood dealers in several towns and they will receive goods at team tracks. To accommodate, we needed a load of firewood for one of the low side gons. The firewood load was built similar to the mine props above, and pig iron below. The firewood was made by cutting approximately scale 1-1/2 foot long slices from a round tree branch liberated from my wife's garden. Each slice was then cut into pieces of "split firewood" using a sharp wood chisel and a hammer. Sounds fiddly, but it does not take very long to produce a good quantity of such fire wood. I included some thin branches that were left un-split as they would have been in the real world. I also make stacks of split firewood and use it for details around buildings. See Photo 11 for firewood in work. Photo 12 shows some of our homemade firewood stacked in front of Frenchies ready for use in the pot belly stove there.

I made a wood block rounded roughly with a knife and a little sandpaper to shape the load, and I glued it to a piece of card cut to fit in the bottom of a low side gon. This "former" is shown at Photo 13. The card around the wood block was painted brown before adding any firewood. The firewood was glued to the former in a random fashion as I doubt such firewood would be stacked for transport, but rather just dumped or thrown into the car. I used contact cement for the first layer or so of fire wood on the brown painted card to ensure it would stick, and then white glue was used for the rest of the load.

The firewood was added initially with just the former on the workbench. After the firewood added in first session had dried, the load was placed in its intended car and then more firewood added to fill in the sides and corners. This was done carefully to insure white glue would not stick the load to the car.

The mine ties are in Photo 4, bottom left. The firewood is in photo 2, bottom left.

Pig Iron Billet Load

Since I will have a foundry or two on the layout, loads of pig iron billets would fit in quite nicely. In the dark ages – say 1880 to 1920 – pig iron was produced by pouring the molten iron from the blast furnace onto the ground where it ran through channels previously dug for it. The iron flowed into long furrows dug in the ground that had round bottoms. When the iron solidified in the furrows, it had a flat top. The result was a series of what were called pigs that looked for all the world like hot dogs split in half lengthwise. After some cooling, the pigs were broken from the channels, knows as sprues, by men with sledge hammers at one time. That must have been a fun job**.** The pigs were then collected by hand, stacked, loaded in rail cars, and shipped to market. Later, machines, known as pig breakers, and cranes were installed to reduce the manual labor required.

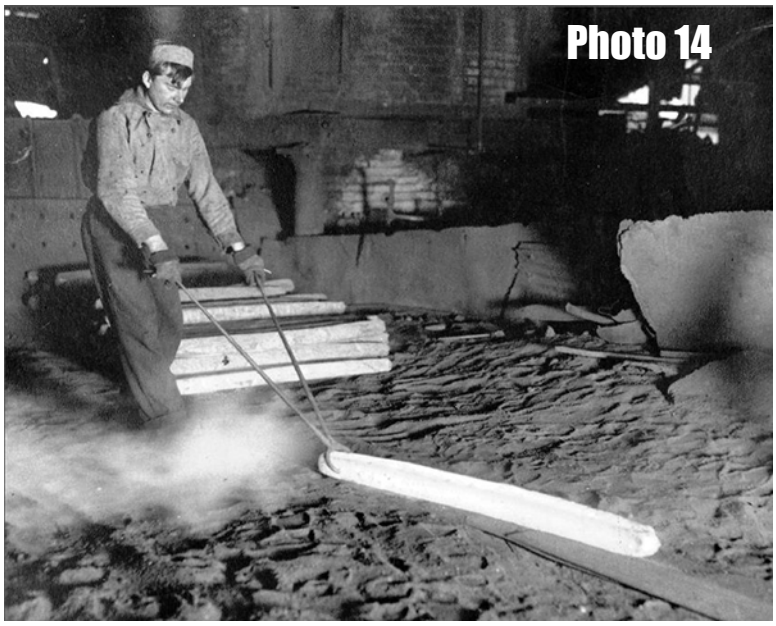


Photo 14 is a very old shot of a workman wresting with a still red hot pig.

Piles of pigs near an early foundry or mill were often mistaken for logs in poor quality photos of the day.

In later days, sand beds near the blast furnace were used in a similar manner to produce pigs. I would imagine this practice lasted till quite late as some of the older blast furnaces in the Pittsburgh region dated to well before the turn of the century. As the emphasis shifted to steel rather than iron, the liquid iron was moved in special cars from the blast furnace to the follow-up furnace for conversion to steel, and iron became less of a finished product.

But, iron remained a valuable and useful material as it was used for the manufacture of heavy machinery and still is to this day. Several very large users of iron remained active in the Pittsburgh area until very recent times and would have provided a market for pig iron. Mesta Machine Works was one such firm. They were located near an iron furnace at Homestead, just south of Pittsburgh proper. Other local firms would have included the Porter and Pittsburgh Locomotive Works that would have used iron in castings for their

locomotives. I rationalise that pigs could have been produced into the 30s; therefore, we shall have some as freight on the ME Ry.

Making a load of pigs was not much different that making the load of mine props. The big difference was that I sanded dowel flat on one side, rounded the end of a dowel slightly, cut a length of approximately 6 scale feet from the dowel, and then rounded the other end of the offcut just a little. A car load of pigs was thus created in hardly any time at all. I took a bit of care to first sand the surface of the dowel and then seal it good to get rid of as much wood grain as I could. Half lengths of pigs were made for the car ends to hide the wood block that filled most of the low side gon as was done with the mine props. Pigs varied in size. In the early days, they were probably 4 feet long and maybe 6 inches wide and deep. I am sure they increased in size in later days when machines were used in breaking and moving them.

The pig load was painted a rail brown, highlighted with rust, and then over-sprayed with a flat finish. The top of the load of pig iron billets would be low in the gon as the stuff was heavy. This was an easy load for sure and can be seen in Photo 3, bottom right.

Bridge Repair Timbers

I picked a few larger bits of stripwood out of the scrap box, stained them and arranged them in a load as a small quantity of timbers that might have been needed for a bridge repair project along the line. A few stakes were cemented to one side of the load so it could be anchored on the flat car by insertion in the stake pockets on one side. This load was made of a few 1/4 x 1/4 and 1/16 x 3/16 inch sticks. A few bridge ties were also included. This load can be moved from the offline sawmill and creosoting works to a bridge site along the line for offloading to get ready for a future repair job. Since we interchange with two other traction lines, Pittsburgh Railways and West Penn Railways, we could also route this load via the interchanges to these lines and this will provide some bridge traffic for the ME Ry.

Scrap Steel Load

Today much scrap metal is pressed into bales for shipment to steel mills for remelting, and it is shipped in gons with the load looking somewhat like large bales of hay. In the good ol' days it was loaded loose in gons by a crane equipped with magnet or claw.

For my scrap steel load, I raided my junque box. When building a model kit, I always seem to have left over parts. Might be due to my poor kit assembly process. Any such parts, plus any other scale size bits and pieces go into this junque box. I fished around for anything in the box that looked like it could make good scrap metal. A few bits of aluminium foil were crumpled up as well. Some wire from my junque box was rolled into a coil and included in the scrap.

There are pre-made cast resin scrap loads that probably could be cut to size and used as well. But, I wanted a more realistic load. All these loose bits were glued to the top of the 1/8 inch thick piece of MDF cut to fit the car. I took care to keep the epoxy from gluing the load to the car sides – or so I thought. I ended up spending a bit of time working around the load with a hobby knife trying to free the load from the car sides and make the load removable. Probably should have lined the car with some clear plastic food wrap before building the load in the car. But then I would probably have had a mess of a time trying to get the clear wrap off the load. Some projects are never easy.

When dry, the load was painted with rail brown paint. It was then dry brushed with rust and a few other colors to create a more life-like appearance. The completed load is in Photo 3, bottom left.

Sand, Sawdust, Crushed Slag, and Cinders

These loads were all built in similar fashion over a wood block but with a bit of difference. The earlier wood blocks, as shown in Photo 13, were considerably smaller than the inside space of the car to allow room to put some of the load at the sides and ends of the block. In the case of sand, sawdust, slag, and cinders, the

blocks totally filled the car space with only enough room around the block to make it easy to remove it from the car. The height of the block was such that the top edges of the block were just below the top of the car sides. And it was unnecessary to mount the wood block on a piece of card as the load would only cover the top of the wood block.

The sand load was made by first painting the top of the wood block a sand color then sprinkling on some grout of the appropriate color. When dry, more grout was poured on and fixed with matt medium and wet water. This load will also be used as "sawdust", which is needed by my ice house, so this load can do double duty.

For the crushed slag load, some light grey HO gauge ballast I had on hand was used. The top of the block was painted grey for this load of course.

The cinder load was made for the high side gon in the same fashion. I use a black sand that I get in my local hardware store for cinders when ballasting track and also used it here for this load. The top of the wood block was painted black first.

If any of these loads make the car too heavy, weight can be removed by drilling a hole or two, or three, in the bottom of the wood blocks. The cinder load is in the high side gone in Photo 5, middle left, and the sand/sawdust and the slag load, both for low side gons, are loose at the bottom right of that photo.

Steel Wire Coils

Having just finished an industrial flat for the industrial area of Jacobs Creek, I needed to ensure I had a load to deliver to it. The new industry was named "Welded Wire Products" and would need steel wire to turn into its products. In the good old days, wire was delivered from wire mills by gons in coils to such industries in need.

My industrial flat, by the way, was based on a Clever Models paper building. In setting up Jacobs Creek in the new layout room, I ended up with insufficient clearance to use several of the previously constructed

buildings intended for this location. Needing to conserve time for track laying and stringing wire, I decided to use the paper building as shown in Photo 15**.** With a bit of extra detail such as lights, downspouts, freight dock, etc., to add more of a third dimension to the model, such paper models make nice industrial flats when they are at least at arms length from the viewer. You should not overlook these buildings if you have similar needs.

To make the coils of wire, I decided to use fishing line as I needed a light load to ensure the loaded car would not be significantly heavier than the car when empty. Probably would have been much easier to use actual wire though. I bought a few rolls of 0.5 mm diameter fishing line – that's 20 thou to you guys and gals up north. I bought this fishing line on the cheap at a deep discount store. The coils were made by winding the line around the end of an appropriately sized paper tube I had in the shop. I save such paper tubes from wrapping paper, aluminium foil, etc., as I use them to store stripwood, brass shapes, and styrene strips in the workshop. Cheap storage for long sticks.

I made my coils about 7 feet in diameter. Small diameter wire usually was shipped in smaller coils, approximately 4 feet in diameter, and were packed two coils across in gons. I had seen photos of larger diameter wire in the larger diameter coils as well. I hunted all over the Internet to try and find the photos I had previously seen of these large coils. My intention was to include such a photo with this article, if possible, to silence any disbelievers among you. Unfortunately, I had no luck finding it again. One reason I opted for the larger diameter coils was that it would mean I had to make a lot less of them for a convincing load.

If you are interested in the smaller coils there are some ready-made coils for use as HO scale loads that might be workable in O scale, too. They are cast in resin. Can't recall who offers them, but I have seen them regularly in ads.

The plan was to wind the line on the tube until I had formed the coil of appropriate size – in this case about 60 turns or so; to slide the coil off the paper roll; and then to tie the rolls up in three places at 120 degrees apart with more fishing line. The first few attempts looked more like a bomb had gone off in a spaghetti factory as when not holding the coil tightly it would uncoil and spring all over the place. Finally, worked out a method of maintaining reasonable control of the bloody coil until it was tied. I used super glue to hold the ties in place as I made the coils. Super glue in not a very good adhesive for nylon; so when all the coils were done I mixed up some epoxy and touched the ties with a dab to provide a better joint.

About the time I finished fighting with the fishing line ties, it dawned on me that I could have used the fishing line for the coils and thin copper wire for the ties as this approach would have made tying the coil easier and still kept the weight of the load down. I tried this on the last few coils. It looked good and certainly was easier. And, it's faster as you don't need to glue and wait for it to dry. If I ever make this load again, which is not likely of course, I will know how better to do it.

To ensure the load would withstand handling, I made a base from some heavy card and two strips of wood. The square strips of wood were whittled to a triangular shape and glued to the edges of the card to form a cradle to which the coils were glued using epoxy cement. Each coil was also glued to the previous coil to make the load as bullet-proof as possible. The photo that I can no longer find showed such coils laying in a gon and leaning on one another in fallen domino fashion, and that is how I did mine.

The fishing line was a translucent grey and very shinny. The coils, and the mounting cradle, were painted with rail brown and dry brushed with a rust color. I also dry brushed them here and there with a steel gray color to indicate they had recently rusted from outdoor storage and transit.

This load, Photo 4 middle left, is now ready for delivery to Welded Wire Products in Jacobs Creek.

Coke Container Load

It makes sense that coke was a big commodity in the coke region, and it moved on all rail lines there. Most coke moved in hopper or gondola cars. But some smaller users ordered coke in LCL containers. I made some such containers and used them to form a removable load for a low side gon. One of these days I will do an article for **OSR** with more details about railroad coke service. You will need to wait for that additional information if Amy and Daniel see fit to publish such an article.

I mounted five of my 3D printed coke containers onto a mounting plate cut from 60 thou styrene. This left one position vacant. I had some old axles left over from installing Intermountain steel wheelsets into Athearn plastic trucks. I pulled the old plastic wheel off the Athearn axles and put them in the scrap box. Some of these wheels found their way into the scrap steel load previously described.

I needed four locating pins to mark the vacant container location. For this, I sawed the pointed needle ends of two of the axles and used them to make the four locating pins onto which the sixth container would be placed if there were a sixth. These locating pins were epoxied to the mounting plate.

The mounting plate was painted rail brown and dry brushed with rust. The containers were painted in traction orange, numbered and lettered for the ME Ry, and weathered. The five containers were then glued in place on the mounting plate to form another appropriate removable load for a low side gon. This load will be delivered to our container handling facility in Jacobs Creek where it will be transferred to trucks for delivery to our customer.

The coke container load is shown in Photo 6, bottom.

In thinking more about this interchangeable load concept while building the above mentioned loads, other potential loads for flat cars came to mind. I have continued to build on this concept and have added other loads such as cable reels, crates of machine parts and a steam boiler.

Cable Reels

I worked out I could use several different types of such cable loads: trolley wire to replace worn overhead wire, electrical transmission wire that the local electrical supplier, West Penn Power, would need to build high voltage transmission lines to support their rural electrification projects; and wire rope for use in vertical and inclined mine shafts. I also made one empty spool to use as a scenic piece while I was at it. Maybe an old Lionel cable reel could be spruced up, weathered and turned into such a load. I did not have a Lionel spool in my pocket so I made my own by cutting discs from 1/8 inch thick MDF and adding details made from thin card. I put plastic nut-bolt-washer castings on the reels as they were usually held together with steel rods accordingly.

After assembly, the MDF discs and card was weathered and some different colors were dry brushed onto the outside face of the discs to differentiate them by source.

To help each cable load better look the part and uniquely reflect it different contents, I made decals to add to each reel. Certainly not a necessary item, but something that adds a bit of interest and fits in with the detail in the car card system. I made one for John A. Roebling & Sons, Trenton N.J., the famous maker of wire rope; Kennecott Copper for trolley contact wire; and Westinghouse for transmission cables. Reels of copper wire were often covered by nailing thin boards around the circumference of the end disks. Wire was often run around the outside of the boards and nailed to them. I assume all this was do to the tendency of copper to disappear due to it's value. I modelled my copper carrying cable reels this way. The wire rope reel was modelled as open with the wire rope showing.

I made blocking to carry the coils on the deck of one of my new flat cars. This blocking was much like that used for the steel coils described above, but modified for shipment by flat car as will be described below. Two

loads were made using the cable reels as shown in Photo 2 top and Photo 5 top. A large gear that came my way when purchasing the steam boiler, to be discussed later, was added to make the load with a single reel of wire a bit more substantial.

Crates

I made a few large wood crates as loads which could contain machinery or machine parts that needed to be crated to protect them in shipment. These were made in several sizes from 1/8 inch thick MDF with 0.040 thick card overlays to simulate the wood sides and the crate framing. Such crates would have been mounted on heavy timber skids and these were modelled. You could also knock up crates from wood in your scrap box. I often build such crates using scrap stripwood over a small block of wood. This project came up as I was drawing some laser parts, so I just included the crate parts on the sheet.

The crates were sprayed with aged white as this is close to the color of new wood from which such crates would have been made. Some of the aged white was darken a little with a drop or two of black and diluted to a wash and this was used to vary the color of some of the crate boards. I added a small bit of white paper to some crates to model the shipping instructions the seller probably would have included on the outside of the crate.

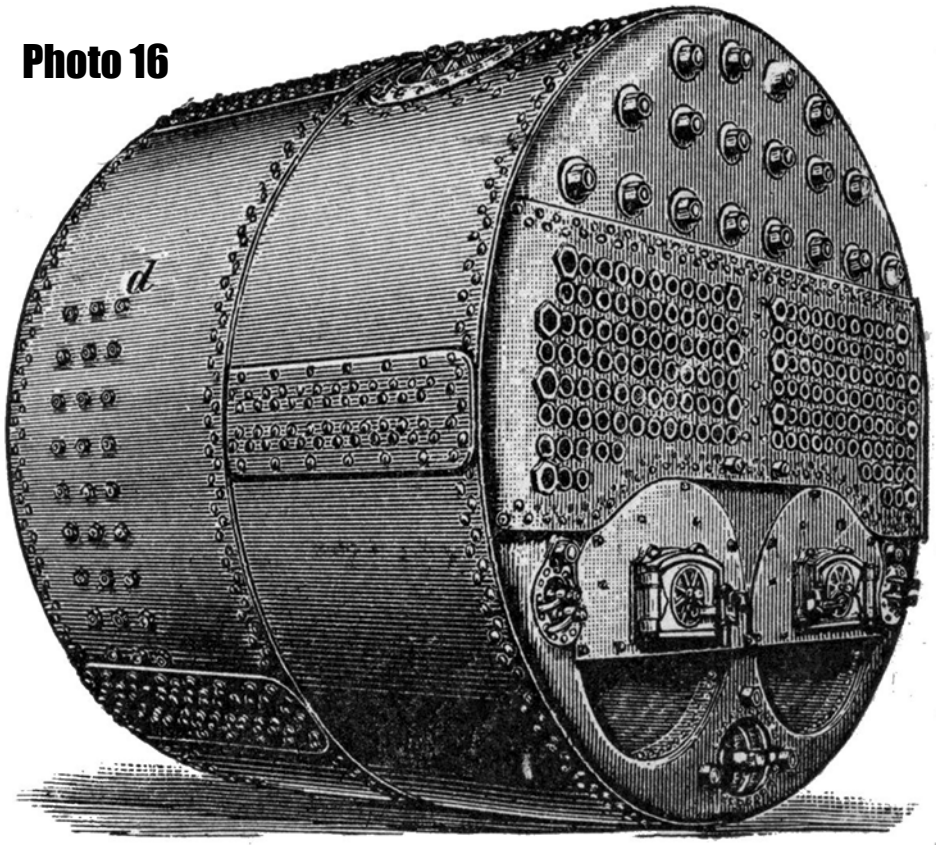
Steam Boiler

Another load was a scotch boiler. I was flipping through an old book for load ideas and ran across pictures of such a boiler.

I drew up parts to make the boiler using laser cutting technology. The idea was to make a few discs of MDF for the ends and center of the boiler barrel. Card overlays were drawn for the boiler "skin" and to overlay the discs on the ends with the firetube and staybolt details.

The design of a scotch type boiler made modelling it easier than many other complicated shaped boilers, so this boiler type was chosen due to my lazy nature. I am not sure if the firm, Combustion Engineering, ever made such a boiler, but they had a big plant in East Monongahela in my area of interest, so I also made a decal identifying the boiler as one of their products.

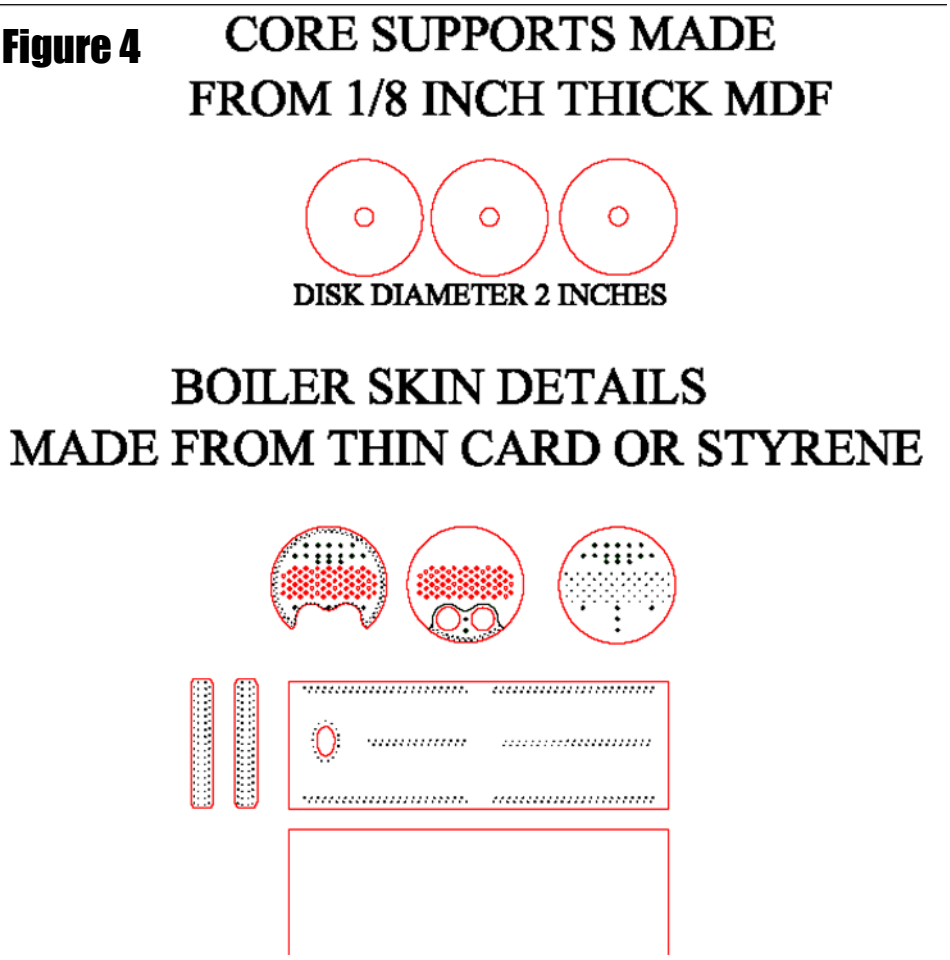
Photo 16



Such a boiler had about a zillion rivets on it. While pondering the monotonous job of adding all the rivets to the card boiler shell, I was browsing the shelves at the hobby shop and ran across a ready-made Scotch Boiler of appropriate size cast in resin. It was intended as a 40 ton HO load so would be about a 20 ton load in O scale. I bought it and did not need to continue with making one for the load at this time. Maybe later the scratch built boiler will get finished when I am in more of a rivet mode, but then, how many boilers do we need?

A crate of boiler fittings was included with the steam boiler to make a more imposing load. The steam boiler and the crate were tied

Figure 4



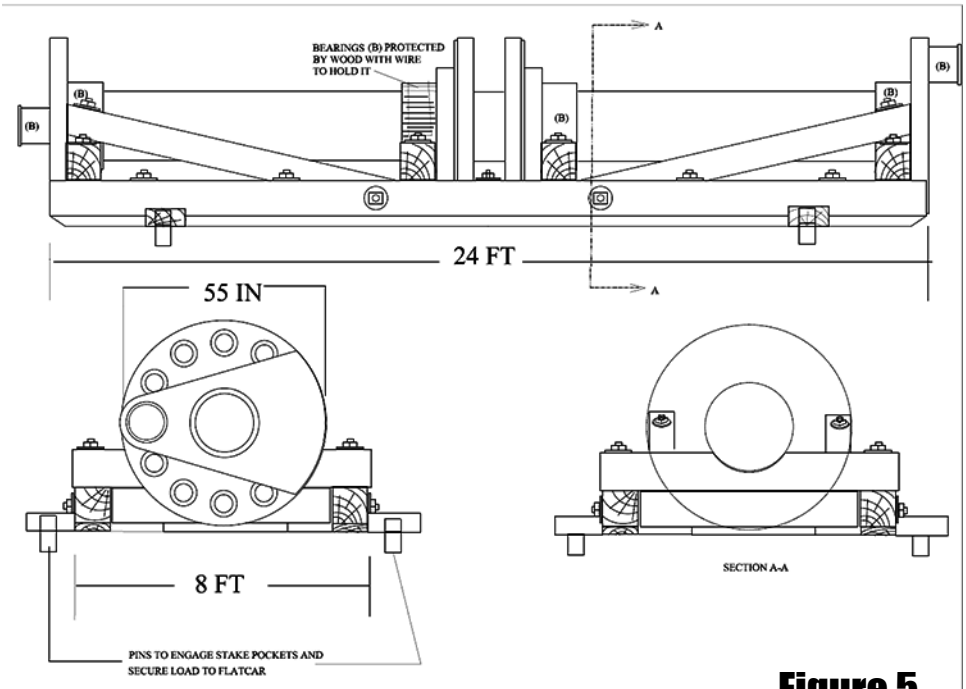


Figure 5

CRANKSHAFT LOAD

I will have a foundry that does loco repairs for local narrow gauge railroads. I am pondering mounting a loco frame and a set of drive wheels on blocking to make another two loads. I have such things in my junque box, so they only need a bit of paint and some blocking to make them ready for use.

together with the load bracing timbers so they could be removed and installed on a car as a single piece. This load is shown is in Photo 4, middle right.

Drawings of the parts for the aborted scotch boiler are shown at Figure 4. A detailed view of a scotch boiler is provided as Photo 16.

Securing the Loads to the Flat Cars

For flat car use, and to make these loads removable but still stable when travelling, I made wood framing for mounting the loads on the flat cars. I extended the wood framing out to the side stake pockets. And I added short pins made of about 1/16 inch diameter wire inserting the pins in holes drilled in the ends of the framing such that they would fit into the flat car stake pockets. This allows the loads to be removable but ensures they remain in place during transit. See Figure 5 for a sketch of this approach. Some nut, bolt & washer castings were added to the framing top to indicate the framing and loads were bolted down to the car floor.

I will keep thinking about this and look for other load possibilities for all open cars to add interest to my operations.

Steel plates and structural steel "I" beams and "H" columns are two examples that come to mind. Maybe a bridge girder could be made, too. I have seen photos of an entire fully assembled but short bridge section loaded on flat cars for transport to site. This would make a nice model.

The idea for a crankshaft load came from a construction article back in the June 1960 edition of Model Railroader magazine. This article described building a Wabash 1900-vintage four truck flat with a very large crankshaft as a heavy load. The article was based on a photo in a very old Car Builders Dictionary, I think. This article has been at the back of my "future projects" folder for many years now. I finally have gotten around to sketching up this load for use on my layout. I have lightened up the crank quite a bit to make it more suitable for a two-truck car of 40 tons capacity, and I am in the process of building this load for one of my new flats. See drawing of this load at Figure 5.

I have a few empty steam road gons in brass, plastic built kits, and scratch built. Eventually, I will continue with the interchangeability concept and work out loads that can be accommodated by these cars as well.

And, our fleet of steam road open top hoppers in both brass and plastic could get removable coal loads so that cars can arrive empty at mines and leave with loads. I am thinking that a few steel washers hidden under the coal load will allow me to use a magnet to lift the loads out of the car. This would eliminate the need to turn the car upside down, pry, shake, and otherwise coax the recalcitrant coal loads out of the hoppers. Doing this would probably shake most of the coal loose, so the magnet lift would be easier on the loads for certain.

But adapting these steam road cars to the interchangeable load concept is another major project for another time. I need to see what more I can do to provide additional interchangeable loads for my new ME Ry gons and flats before moving on to other things.

Labels to Make Life Easier

On the bottom of each load I added a label with the car number(s) they are designed to fit. Also, I included which end of the load goes toward the "B" end of the car. I felt this was necessary because, even though the cars are supposedly built to a plan, they are all probably just a little different particularly in the stake pocket spacing on the flats. The loads may not fit perfectly in other cars or even bass-ackwards in the right car. This labelling should reduce the stress when trying to match loads to the cars later during or between operating sessions. See Photo 17.

Photo 17

I am also pondering adding a note indicating where the loads are to be stored when not on the car. This could help a visiting operator, or maybe me if my memory gets much worse.

My plan is to store the loads as you would store cars is an off-track staging area. My loads will be placed on a purpose-built shelf under my layout and near the point where they would logically be added to the cars. They can then be easily selected and added to their cars when they are required by the bill of lading in the car card system.

For operations, the car can go from one point to another during an operating session, either loaded or empty, as required. In between sessions, the load can be removed from a loaded car, or installed in an empty car, to prepare it for a movement during the next session.

When a load is removed from a car between operating sessions it can be placed in the appropriate storage location for when it is again needed to load a car.

This will provide for quite realistic and diversified operations with a wide variety of loads while still matching the load vs empty status on the way bill. All this will be easier to do now that we have adopted the interchangeable load concept for open cars. And, it will help limit the number of new cars I need to do so.

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

New Tracks" Virtual Train Show

Announcements of "New Tracks " activities
New Tracks" Virtual Train Show March 20 & 21, 2021, at 1pm Eastern Time.

The Show will be broadcast live on Zoom and live streamed on our YouTube "New Tracks" Modeling channel. I am proud to announce that the show is Sponsored by: The Great Scale Model Trains Show, MRH Media LLC and Soundtraxx.

WWW.GSMTS.COM

Check out the sponsors video commercials below.

The Great Scale Model Trains Show commercial

Soundtraxx commercial

MRH Media LLC commercial

This is "New Tracks" 4th Virtual Train Show and promises to be the best one so far. We are excited to have prizes awarded during the show to viewers watching the show live on Zoom or YouTube. Some of the prizes to be awarded are:

- One Free Vendor Table at the Next GSMTS Show
- One Free Lifetime attendance passed for all GSMTS shows,
- One year subscription to MRH Train Master TV
- One Year Subscription to MRH Running Extra
- One $100 discount coupon off an Ultimation product
- One Touch Toggles Direct Base System for 4 Tortoise
- Type switch machines from Barrett Hill Trains
- One coupon for 10% off and free US shipping on any order from Dead Rail Installs
- One SoundTraxx. Keep Calm & Play with Trains T Shirt
- And more to be announced soon.

Please register at our web site: NewTracksModeling.com to get reminder notices for all our "New Tracks" Virtual Train Shows. Remember, you must be registered to win a prize. Also you will get reminders for our "New Tracks" Meetups every Wednesday and Saturday evening at 7pm Eastern time where we discuss a variety of model railroading issues and have Featured Modelers.

I am further very pleased to announce that we have a new "New Tracks" team member. Dan Dawdy, through his company, Ribbon Rail Productions, has joined the "New Tracks" team and is constructing a new Website for us. So even if you have been to our website before, please go back and see the great new site Dan is developing for us.

Dan helped me get "New Tracks" going over three years ago when he offered to publish my articles in his two online publications. I owe him a great deal for his encouragement and advice and really appreciate his interest in helping to make our online and virtual presence more effective

While there is a new member, there are other current members of our team that have been doing excellent work for a long time, producing our shows. I want to acknowledge and thank them for their hard work, dedication, expertise, and friendship: TC Carr, Ed Cady, Greg Cassidy, Chris Coarse, Paul Thompson, Keith McMillen, Paul Wussow, Nick Santos, and Joseph Guinto. In addition, I owe many thanks to the people who do our regular Modeling segments, and the Featured Modelers who have shared their expertise and modeling with our audience. Thanks again to all of you. Without you our efforts would not be possible.

Please put our upcoming Train Show on your calendar: Mar 20 & 21, 2021. at 1pm Eastern Time. Lastly, please check out our website and don't forget to register to get emails for all our "New Tracks" events and to be eligible to win the Train Show Prizes. Also, visit my Facebook page Jim Kellow MMR and follow/like it to stay in touch between articles.

I look forward to seeing you at our virtual events and hope you win a prize at our March Train Show.

I hope you saw the presentation, "Model Railroaders and their potential to be Professional Model Makers", I made to the Association of Professional Model Makers on February 17, 2021. If you missed it, please check out the video. I would really appreciate your comments on the presentation.

Now for some modeling:

When is a model finished? Have you ever asked yourself this question?

When I first starting letting people see my modeling, I always wondered in the back of my mind if my model was good enough. Initially, I really doubted if I was able to know when I should stop working on a model and be satisfied with it!

At some point while I was building a model, I would always sit back, look at it and say: "Is it good enough? Is it finished?" These questions bothered me for years. It took me a long time to be able to finally, I think, find an answers.

I found I had to first answer two other question. "Good enough for what? Good enough for who?". Once I figured out those answers, I was half way to a complete answer to my basic question.

I have asked the basic question, "When is a model finished?", to a lot of modelers and gotten a lot of different viewpoints. For me, I can now say: It is good enough and I am ready to stop working on it and show it to the world when I can say: "Yep, that model captures what I wanted to accomplish." At that point, I can put it aside and start on a new project. I can also, with pride, say: "I built that!". I bet, like me, every model builder has a thrill when they say those words.

I do not care if you are a beginning modeler or a very talented modeler, I think everyone can agree with this definition and sentiment.

With every model project I start, I always have a purpose in mind as to why I am building it, and how I will use it. Enter it in a contest? Build it just to see if I can capture the moment in time from a photo? Build it to complete a specific place or scene on my layout?

I build models for a lot of different reasons and to fulfill different goals. Therefore, I expect different results for different models. After building models for many years, I know what my skill level is and how much time I am willing to spend on a project. So when I think I have accomplished my goal for a model I am always happy with the final result. It's finished, at least for now. That’s not to say I may not come back later and work on it some more. I hope asking these questions helps your modeling by knowing when your models are complete and finished. This one is finished

for now. It is not powered, it is scratchbuilt out of brass and will be a part of an article on the "New Tracks" International Critter Corporation coming soon. Just a fun project.

Lets Meet Some Modelers:

Please meet a Modeler and Manufacturer who is offering some new products that I think you will find interesting and creative.

Mark Sebesta

My name is Mark Sebesta, and I along with John Howard, are the owners of Highways and Byways Model Railroad Graphics and LEDs, LLC. We produce high quality precision cut vinyl roadway graphics for model railroaders as well as creators of dioramas.

We began by producing our graphics in HO and N scale. We have recently added S and O scale to our products, which we produce by special order. Our instructional videos about using our products are posted on our website.

All of our products are sold via our website Highwaysnbyways.net and at several hobby shops across the US and in Canada. We also have a Facebook page Highways and Byways. We are always open to suggestions from modelers as to what products they would like to have produced. Especially those who model dioramas and not just trains. You can send a message to us via our website with your ideas.

I am planning to use some of these graphics in a scene for my Soap box racers and in another scene with my antique automobiles. I just have not had time to create the scenes, but will include photos in a future article.

Often overlooked, model roadways become real as shown by Robert Simmons using Highways and Byways Model Railroad Graphics.

When we first talked, Mark explained the roadway kits of graphics to me this way: "The O scale graphic pack includes 4 sheets of precision cut vinyl graphics. The sheets include: one sheet of grade crossings, one sheet of turn lane graphics that also includes assorted roadway graphics on it, one sheet of white road stripes and one sheet of yellow road stripes.

The grade crossing and turn lane sheets have transfer tape affixed to the sheets. This keeps the graphics and letters properly spaced and oriented for simple application. An instruction sheet is included and we suggest that users view a short video posted on the Highways and Byways Facebook page showing how to apply graphics that have transfer tape. The white and yellow road stripes are simple peel and stick.

We have found that the vinyl graphics can be weathered in a variety of ways including: using a india ink alcohol mixture, chalks, dry brushing paint and by using a diluted paint wash.

From roadways to parking lots, Highways and Byways Model Railroad Graphics add more depth and realism in this scene made by Robert Simmons.

Our graphics provide model railroaders and those constructing dioramas a way of adding more realism to their roadways, parking lots and industrial areas."

When we talked I suggested to Mark that he offer a special opportunity for O Scale Modelers to suggest graphics they would like him to produce that are not yet available. Mark is always interested in finding new products to make. So if you have a graphic idea you would like to see the company produce, send it to Mark. If it is produced, you will get a FREE set mailed to you as a thank you gift.

My second suggestion was for Mark to offer a contest drawing where readers send in an email with their contact information and a winner is drawn from the emails submitted. The winner agrees to use the prize of an O Scale Packet of Road Graphics in a scene and tell us about his experience using the product which I will publish in a future article. Mark said yes immediately.

Both of his actions show the Company's interest in providing products to the O Scale market. Please show your appreciation by entering their contest and giving them your ideas for new graphics.

How to Enter Highways and Byways Contest Drawing

To enter the Highways and Byways drawing, each modeler must complete the form here. The winner agrees to use the prize of a O Scale Packet of Road Graphics in a scene and tell us about his experience using the product.

I look forward to seeing how the winner uses Mark's products in his/her scenes.

Thanks Mark for your interest in the O Scale market. You can reach Mark at Mark.Sebesta@sscaleresource.com.

Boyd Wirkkala and remembering John Allen's Creation

Please meet again, Boyd Wirkkala, an old friend building a layout I wish I had the space and time to build. I have written before about his revival of John Allen's Model Railroad Masterpiece. Boyd calls his Model Railroad the Gorre Northern. Here is his current update on the project. I am really looking forward to seeing operations on his railroad.

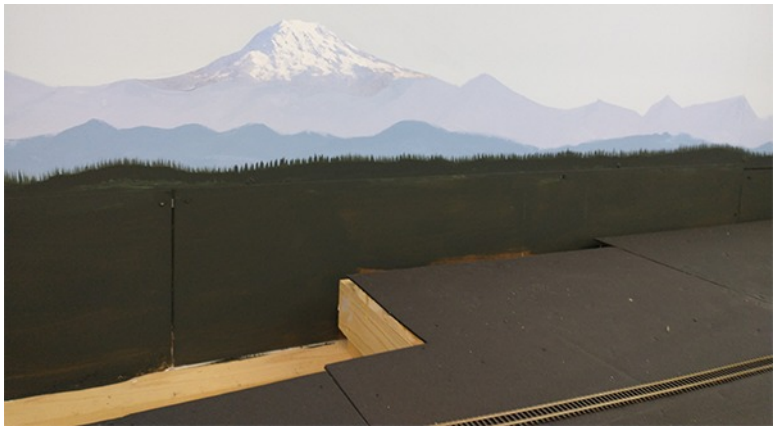
Boyd Wirkkala

"It's been a pretty slow year for my Gorre Northern, but I've been working on the layout a lot more lately. Issues of life and health, and of course 2020, can be very distracting, but I am firmly convinced about how this hobby can be very good for us senior citizens.

I have attached six photos some you may have seen and some that are new. The yard tracks at Great Divide are all in including the access hatch that John had right in the middle of his yard. Then there is the backdrop view including our Mt. Rainier from my Washington setting, a pasted-up photo copy surrounded by my hand painting. There is a photo of the bridges I am making on my 3D printer....the G&D was a bridge route in more ways than one....I believe John built 147 bridges!

The other three photos are from the mountain side of the layout where I am plotting the location of each bridge and planning for their eventual installation once built....but the main will run through on temporary spans even if un-prototypical in engineering and appearance. The wood support structure will be installed and the track cut for easy removal when the time comes to put the real bridges in.

I have been tuning up the track alignment through this whole area to get it close to John's original so that I can set up each scene for recreation such as French Gulch, Drains, Cold



Shoulder, etc. The Cold Shoulder area is altered quite a bit on my version, but the operation will be the same.

I have discarded the idea of a Summit Tier track along the wall that bypasses the two great Scalp Mountain bridges and decided to take the bull by the horns and build the bridges with the main going over the top of Scalp Mountain.

One feature that will be almost entirely missing in my re-creation is the whole Devil's Gulch alcove, but it is what it is. The operations will be the same as on John's G&D, and even more with the completed Summit Line through Angels Camp.

At the end of the mountain section will be the lead to Andrews which will be a high duck-under in front of the bathroom door and then curve around the end wall towards the wood stove that provides alternate heat for this building. Angels Camp also curves around the corner at the other end of the room rather than being a straight section. Speaking of heat, by some crazy coincidence, there is a heater hanging from the ceiling in the Cold Shoulder area...I will have to move that...and make sure it never catches fire!

After I complete the track through the Summit Tier, then comes the high line over Great Divide and around over Port ...that's where all those deck bridges I'm 3D printing will go. Then comes wiring, and for now it's gonna be DC block control with local panels.

My plan for the Gorre-Daphetid peninsula is to remake the original little layout, hand-laying the track, and the set inside the mainline loop that is already there. Also, once the mainline is completed over Great Divide and Port, I will start on the structures and scenery ad the wiring commences.

This is a huge project and I have come a long way in three years, but it would have gone a lot faster if I didn't have to work full time. As I am tuning up the roadbed and track alignment and making provision for the bridges, it is all becoming more real to me and the vision is forming in my mind of what my Gorre Northern will be. Thanks for the inquiry Jim and I have written you a novel in reply....health and peace to you and yours and God be with you all.

Boyd, thank you for this update. We look forward to your next construction phase.

You never know who you will meet in my "New Tracks" series or the ideas you can get to help your modeling! See for yourself

I want to introduce some modelers just like you, who I believe are talented and have skills that may help you with your modeling Every day when I open my email, I am excited to see what new model railroader I will meet. Therefore, let's see who we will meet today.

I recently wondered if there were modelers out in the world who had always wanted to have their modeling published in the model press, but had never submitted anything to an editor to be considered for publication. Some who have submitted articles are frustrated they never heard back from the editor? In my opinion, there is no excuse for that. I must admit it has happened to me, and I always hated it! For many, it stopped them from ever submitting another article. Well welcome back, I encourage you to try again with me. If you send something to me I promise I will reply, probably sooner than you thought. So give it a try and test me!

I still remember the first time I told my wife I was going to write an article and have it published in a modeling magazine. She laughed for a good fifteen minutes. Wasn't exactly what I had hoped for in a response. Oh well, onward I went, "Praying for Rain", all the way.

Thirty something years later, and many articles submitted to, and published in, a lot of different model magazines, my wife is now my editor. I always ask her to take a final look at each one and if I don't hear laughing, I know it is good to go.

So I decided to ask on my Facebook page if anyone had ever wanted their modeling to be published to see if anyone would reply. I was happy with the response from 15 modelers, and therefore, I would like to share with you some of the first replies I received. Other replies will be published later. You may be reading about some or all of these modelers for a long time to come, now that they are out in the sunlight. I hope so.

Now please meet some new friends.

Lawrence Eggering

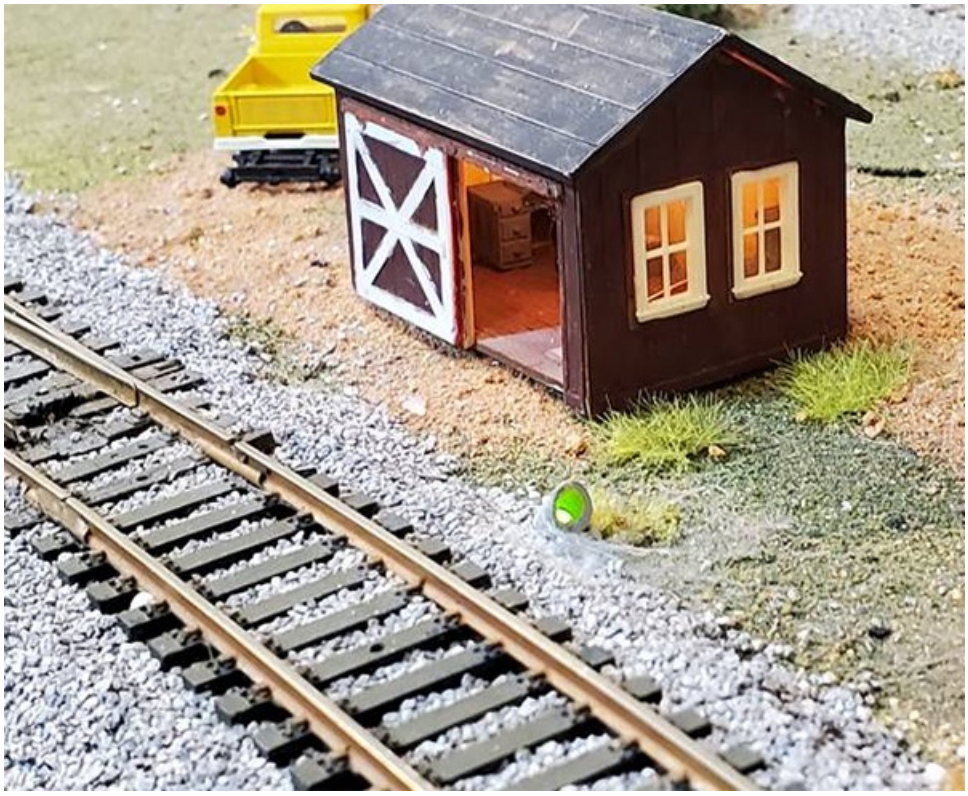
I have been building models since I was 5 years old. Mom bought my older brother and me plastic car models to keep us busy while we were out of school in the summer. I moved into trains about a year later after watching a family friend's Lionel trains run at Christmas time. Dad purchased them from him when he moved into HO. I have always been fascinated by electronics so there is a natural fit there.

I have had many mentors over the years who taught me great modeling tricks. Dave Henk, Richard Paul, and Henry Falken have been for the past 20 years. Now I can help anyone who asks. I study modeling to make myself better. As to the electronics, I do many decoder installs and create custom circuits for model railroading using Arduino and individual components.

I currently model in O, HO and N scale with HO being my primary scale. After an 8-year hiatus from 1988 to 1996, I was talked into modeling in HO. (My previous layout was N with O27 at Christmas time)

The first picture is a set of O scale models I built while traveling around the world as a technical instructor for a Navy Contractor in the mid 1980's.

In the second picture is a fun little building I built that shows a scratch-built dwarf signal in the foreground. It has a completely detailed interior including a clock on the wall.



The last picture is the first HO building I built 20+ years ago. It is a cardboard Swift's Meat packing plant that has become the infamous Schnausage Brothers spill. It features animated blinking lights on cars and a customized lighting sequence on the ambulance as well as a detailed loading dock. The cars in the front were custom painted by me. I also created the decals myself.

Along the way I started my company, Creaky Chair Models LLC, five years ago after I left the corporate world. I have been helping others out with electronics upgrades and animation for twenty plus years. When I started the business, I decided that although I can build and design new layouts, I have found that many people want to keep their existing layout and bring it closer to contemporary standards.

I have refurbished layouts that were 40+ years old and showed the customer how to maintain them (yes brass track) and have reliable operation.

My extensive electronics training and experience brought computerization into the model railroading sphere by using JMRI and other software packages to handle the more complex parts of signaling and automation. Learning to use Arduino and Raspberry Pi processors has added a new dimension to layout animation control in the past four to five years.

I have installed over 400 decoders over the past seventeen years. I enjoy taking on challenges that others would turn away from. I have literally worked on G to Z scale within the same week."

If I can help you with your modeling, please let me know at Lawrence.Eggering@oscaleresource.com

Now please meet a very talented Australian modeler.

Craig Marshall

I am a model maker from Blue Mountains, Australia.

I'm sixty-five now - a retired Teacher, Television Producer and Sheep Farmer, living at 3600' in the glorious World Heritage Blue Mountains region of New South Wales.

As a kid in the 1960s, I liked model making so I glued together and clumsily painted many of the popular plastic kits of the era - planes, trains and automobiles and for many years, I kept a Hornby train set double oval on a dull flat, green board, but I was never really into model railways as such. After graduating from Teacher's College in 1980 where I majored in film and photography, (as full time jobs for teachers were limited) I decided to shoot a Super 8 documentary on a local private coal company railway operating at the time in the Hunter Valley. Remarkably for the early 80s in Australia, this railway still operated a fleet of fourteen large side tank steam locomotives, supplied bespoke by Bayer & Peacock of Manchester. My eventual film entitled: *Steam Railways of the South Maitland Coalfields* was released via mail order on VHS/Betamax in 1982. Fortunately, it proved very popular among steam enthusiasts, so for many years, film sales became my sole income until I was offered a Broadcast Television apprenticeship in neighboring Papua New Guinea.

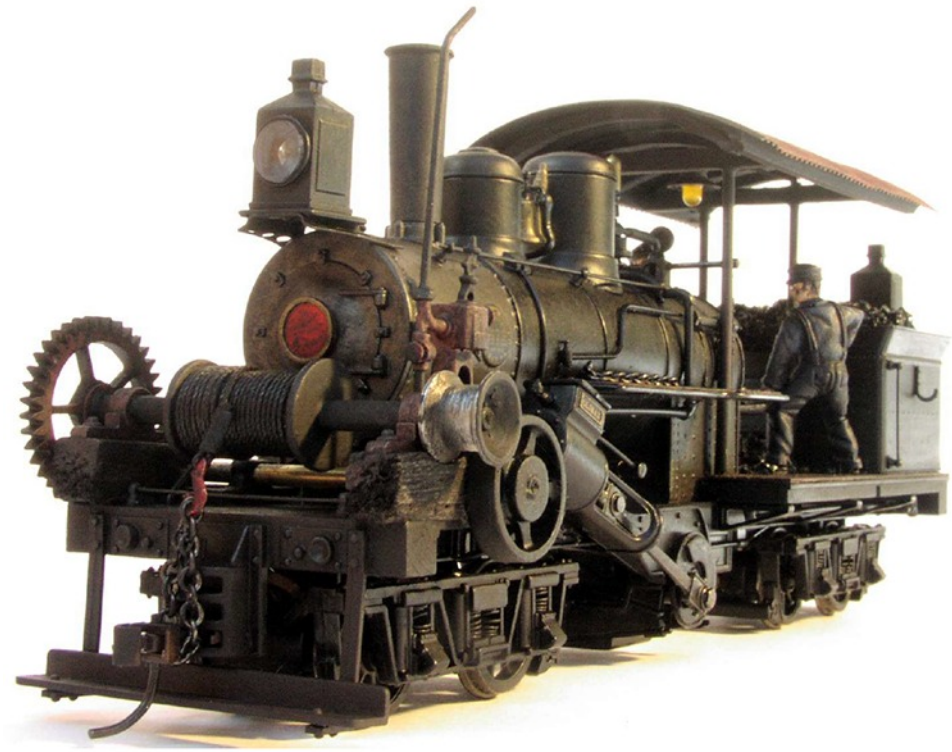
Suffice to say, my interest in model making and railways did not peak again until 2010 when I took a holiday to the island of Taiwan, formally known as Formosa. At that time, Bachmann in the US were marketing a suite of relatively affordable narrow gauge railway models in their Spectrum On30 range including a delightful two truck Shay locomotive designed to run on low cost HO scale track which represented roughly 2'6" gauge in O scale. During my visit to Taiwan, we took a scenic drive into the Central Mountains where I literally stumbled across an old 2'6" gauge railway line meandering around the contours of a mist shrouded valley some 4500' above sea level. Stunned at the discovery, I asked my driver to stop the car where I

Locomotive Display at FenchiHu on the Alishan Forest Railway, Taiwan

exclaimed that the rails appeared to be still in use! He suggested I walk over to an adjacent building just visible through the fog. Here, I discovered a shed full of Shays!

We had arrived at the mountain village of FenchiHu where the narrow-gauge rails proved to be part of Taiwan's famous Alishan Forest Railway, constructed in the early 1900s during the Japanese occupation of the Island. This scenic railway climbs from sea level to nearly 8000' in just fifty miles and originally accessed valuable mountain Cypress or Hinoki Pine which was much desired in Japan for temple construction and restoration. Remarkably, the railway still maintains several US built Shay locomotives with two of the original 20 odd fleet regularly prepared for special tourist operations.

After my return from Papua New Guinea in 1996, I lived on a yacht in Sydney, so with time on my hands and very limited space, I bought and assembled some HO scale Australian brass locomotive kits which I sold on eBay for surprisingly high returns. However, after that chance visit to Taiwan in 2010, I imported a couple of Bachmann's little two truck On30 Shays as they were almost identical to some of Alishan's earliest locomotives on the Forest Railway. Consequently, I commenced modifying and adapting them, just for fun, but within a year or two, I found myself running a very busy on-line mail order Store called “Steam in the Bush” via my OzSteam website where I exported locomotive dress-up kits and custom designed O scale kits and custom cast parts all over the world.



Bachmann’s ON30 Climax with my OzSteam log winch and bush cab fitted.

One of my creative 'assets' if you can call it that, is that I'm not really a 'railway' enthusiast so I'm not inhibited by convention. As a lateral thinker, I've always liked re-purposing objects. For example, a local Aussie business called Uneek make very nice cast model boilers and steam donkey engines in roughly HO scale so I was never afraid to adapt them to larger scale model locomotives if they looked right and my log winch/bush cab ‘dress-up kits' for On30 locos proved very popular with Bachmann customers all around the globe.

Even though I had spent nearly ten years building and selling 1:48 O scale model kits with a forestry and mining theme, I have never owned more than a few feet of test track, but after numerous visits to Taiwan and Japan since 2010 and having shot and published many short videos for my Youtube Channel documenting narrow gauge railways which are rarely, if ever visited by Western rail-fans. My most thrilling video expedition to date was a visit in 2019 to remote Yakushima Island of the southern coast of Japan. I had translated some Japanese rail fan accounts written in the 1970s so I wanted to see if anything remained of Japan’s last working 2’6” forest railway. What I found and filmed there exceeded my wildest imagination!

Consequently, I became fascinated by the art of the Japanese “miniature” so with Covid looming, I decided to construct my very first “model railway” in early 2020.

'Temple Stop' a Japanese themed micro layout in 1:150 scale.

With space still at a premium, my first layout was called Temple Sto, a 1:150 scale Japanese rural themed micro railway, set entirely inside a 500mm x 350mm dovetailed honey bee hive frame.

Apart from the simple running of trains on Kato N scale set track, I spent quite a bit of time installing dimmable lighting circuits and even a stereo MP3 player with speakers hidden inside the Temple buildings. In the interim, the Japanese firm, Tomytec, released a series of intriguing 1:80 scaled narrow gauge railway models under the Nekoya Line series.

A scene from 'Log Camp' which features a prototypically correct Japanese bridge from the Kiso forest and 65mm (2.5") radius curves!

These delightful Japanese models roughly represent 2'6" gauge so offer a cost-effective alternative to the more popular HOe and HOn30 9mm gauge models from Europe and America.

Craig Marshall inspects 'The Cableway', a forestry themed micro layout in HOe/HOn30 scale set in a beehive frame.

To date, (mid 2020) I have completed three separate micro layouts in my BeeBox DeLuxe series - each set in a removable timber cassette located in the same deliberately customized 500mm x 350mm beehive frame. Micro #2 Log Camp' and Micro #3. The Cableway both push the envelope in what I could achieve in the way of tight radii curves, steep gradients and electro-mechanical control. In this particular BeeBox series, I have deliberately maintained an old school approach by using physical switches, antique knobs, heavy brass control panels, fly-screen wire, Plaster of Paris, lichens and a mixture of LED and incandescent lighting as well as modern Pulse Width Modulation DC train control.

My current Micro Layout in the BeeBox DeLuxe series is #4 Bonsai Tramway – a real, growing forest railway and is well under way. I have also prepared a budget WineBox DeLuxe series of working display micro dioramas which, unlike the larger series, can be shipped anywhere in the world.

As a trained teacher, I've never had an issue passing on my skills - whether they be in the craft of television and video production techniques or model making. However, I am of the firm belief that the Japanese model makers remain the true Masters of the Miniature railway, and if it were not for the current Covid 19 crisis, I would delight in spending time in Japan as a somewhat elderly apprentice to one of the many Micro Masters in that country! Where time permits though, I'm always happy to assist anybody who may need help or advice on this, what amounts to a very unusual hobby for an Australian.

Thanks so much for your interest and help. You can reach Craig at: Craig.Marshall@oscaleresource.com

Another Modeler, who lives in Belgium, I want to introduce is:

Vick Bunkens

My first introduction to Vick came in an email. You better believe it got my attention and I replied.

Dear Jim,

I would be happy to see a building of mine in one of your articles in an O scale magazine. I would even be honored to see something published. Which do you prefer? My version of "Central Sundance 2020" this consists of 3 parts, but 2 parts are as good as ready, it is made in scale O and completely scratchbuilt. The buildings were built after finding inspiration on the MODVID website, which contains many well-known and renowned builders. Or the gas station with associated garage and tire center, which is built on a Fog model.

Why I do it; because here in Belgium we can not get much from the States because of the high VAT costs and import duties we have to pay on a building, if they are allowed to enter because of the fact that it is organic material (wood).

Please say hello to Vic and encourage him to write more in the future:

My version of "the Sundance Central", I built these buildings after some buildings that I have seen on the website of "MODVID" in which there are beautiful landscapes, dioramas and buildings in different scales.

I thought to myself, I can do that as well and with a more limited budget. That's how I started, and I have to say it's been a lot of fun. Because I was retired as a young person (since I recently turned 66 years old), during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the winter months and in bad weather, I committed myself to building homemade buildings in scale (1/48).

The main building is a neglected 1930s or 1940s apartment building. I have tried to work out everything in detail, with laundry threads full of laundry, a small workshop under the stairs, and other details like 2 water towers on the roof, maybe I will add several details in the future.

In part 2 of "the Sundance Central" you see a shed with a house upstairs as well as a company "Witzingers washboards" and a house, there is also a small addition to part 2, where the road disappears in the decor, on which you see a small company where they sell parquet floors and other types of wood. I still have to build the first part with a further extension of the city area. I am still looking for some ideas on this to work out. Check out my personal Blog about building my Module Train Track in scale 0n30. here.

Thanks Vic. You can reach him at Vic.Bunkens@oscaleresource.com

Now meet another modeler who replied to my post.:

Scott Zieske

Like a lot of model railroaders, I started with a Lionel set given to me by my father in the early 1950s. I built an O scale, three-rail layout on a 4'x8' sheet of plywood in our basement. My interest waned during my teenage years, but was re-kindled after I graduated from college and began a stint as an officer in the USAF. I got into N scale for a short period before heading to California where the narrow gauge bug bit and I began serious modeling in HOn3 including NMRA contest models.

After leaving California for the Black Hills of South Dakota, other hobbies took over, and I again set model railroading aside for a few years although I did write a series of articles on the historic narrow gauge railroads of the Black Hills for the *Narrow Gauge and Short Line Gazette*. In 2015, after retirement, I again was re-interested in model trains and picked up where I left off modeling the Colorado narrow gauge lines in HOn3.

But soon I became smitten with On30 too. In fact, today I'm not only working in both HOn3 and On30, but I've even done a few projects in HOn30 as well.

Thanks Scott. I look forward to more from you. You can reach him at Scott.Zieske@oscaleresource.com

Dwayne Calloway with his son.

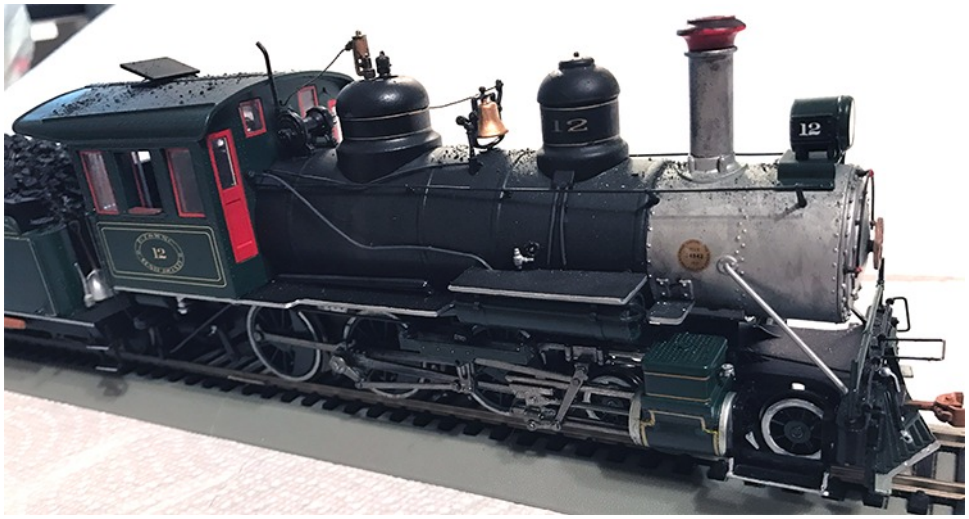
Another talented modeler you should meet is:

Dwayne Calloway

I have been modeling for as long as I can remember. My parents bought me trains very early on as soon as they discovered I had a love for them. We lived in LENOIR, NC above the Carolina and Northwestern depot (Southern Railway) when I was very young. The trains in the yard were always busy back then, even late at night. I was fascinated by them. This fascination later led to a job with CSX as a freight conductor, but the model building never stopped. My grandparents were from Banner Elk and Boone, NC. Both were in "Tweetsie Country". The Tweetsie was none other than the famous and legendary ET&WNC. Or, "The eat taters and wear no clothes" narrow gauge railroad. When Tweetsie went to Baldwin for ten wheelers, they had the perfect and nimble little engines for the rugged mountains and tight curves through the Blue Ridge mountains. Numbers 8, 9, 10,11, 12, and 14 we're almost identical with some small variations. They never rostered a number 13.

The model(s) shown here are Bachmann models based on those very ten wheelers. I took each model and stripped and re painted each one a dark Scalecoat green. Almost a hunter green, and had custom decals made that were more correct than the Bachmann factory lettering. Each model has a real coal load and added details

that made each locomotive different than its sister locomotives. Detail parts from Wiseman, PSC, Grandt line and others have been added. Finally, a touch of weathering was added to each locomotive.



Each engine now carries WOW Sound in the tender with the correct Baldwin 3 chime narrow gauge whistle.

These are all On3 scale. The ET&WNC, "The Tweetsie" Numbers 12 and 14. There are minor differences in each locomotive, built on the same blueprints. For example: the handrails on the front of the smoke box etc. and other little stuff. Thanks Dwayne. You can reach him at: Dwayne.Calloway@oscaleresource.com

Now please meet another new friend:

Steve Fisher

I have been reading your column about On30 and even though I am not an expert on On30, I have an almost 50 year relationship with this scale and gauge. I should say that having almost 50 years in this, I have met so many good modelers and friends that for me this is what the hobby is really about, regardless of scale and gauge. So with that said, let me bore you with my history and opinions, never advice and all for free.

I became interested in On 2 1/2 as it was then known, after reading and seeing photos in MR and RMC. My motivation was modeling in something that few others were doing and as it was larger, cheaper, and easily seen became an interest. Yes we used HO mechs, trucks, and KD 5&10 couplers, the look seemed right. At the Narrow Gauge convention in Valley Forge, I met a fellow modeler who was interested in this as well and as it turned out he was relatively close by. I also was involved with a group that started a module meet here in Maryland. We invited anyone, regardless of scale and gauge, and it was through this that I formed a module group known as the Manchester Mini Bunch. Our motto was, "we're not just cheap" "we're also particular", we were the class clowns, but the modeling was of a very high caliber. We established a set of standards, which we would hand out to anyone that was interested, they were intentionally kept simple, could be built with most hand tools, and were cheap. Yes, the motto! We exhibited our modules at numerous shows, meets, and conventions. The one reoccurring comment we would hear is, "I couldn't do that" and I had to explain that you should see the failures.

When we exhibited our modules, the control systems were as simple as we could make them, hand held, using a door bell transformer one for each of the two blocks. When we went to shows and conventions, if a kid was interested we would give them a throttle, a few instructions, and would leave to enjoy the show ourselves, stopping back to check on our engineer. After about 10-15 years of this, we decided enough was enough and we quit showing the modules. Some were simply stripped and scrapped, and others incorporated into home layouts but the railroading never stopped, and even today, many of the guys who were in the MMB now come here once a month to operate my railroad. Today my current railroad occupies a basement space of 1900 square feet,

95% is railroad. I have over the many years built at least 10 railroads, in at least 6 homes, but once I walked away from the public showings I never built another module.

I have embraced all of the technology to control my railroads, hand held and blocks, DCC, and now battery r/c control, and for me, this has been the very best way to operate. I still adhere that keeping it simple is the best for me. Yes, I gave up sound, not because I can't get it, I can; but my group didn't care, their focus is operating. We use train orders, car cards, and a dispatcher, with a single light system. This was based on an 1800's era B&O signal system, light out stop, light on continue all controlled by the dispatcher. Not only are my locos battery r/c, but so are the turnout controls, I use r/c servos with a "C" battery; again our motto.

I have been fortunate over the years I have had my old layouts in the model railroad magazines, including *Narrow Gauge Downunder*, being I believe one of the first Americans to be so honored. I do agree that sharing is keeping alive the hobby and I applaud those that established the mentor program, it is a good idea and I hope it continues. With that said, many years ago I was turned off by the turn in the hobby, and particularly the new group of "experts". These being those that didn't understand, have the experience, or decided that they know best. As an example, the issue you cited in regards to tunnel portals, water tanks, and wheel sets. As also stated O scale is O scale, On30 is O scale with a track spacing that is close to 30", the rest is O scale 1/4"=1'. The difficult part I think for these folks is that the track and equipment, i.e. locos and cars, are but one of the elements, the scenery isn't scaled down and neither are the supporting structures. At one of the gatherings, at one of the NG conventions, a somewhat known modeler held up a Model Power HO 4 wheeled diesel and emphatically stated this was the ONLY true On30 loco, again it is this attitude that hurts our hobby by causing confusion.

Needless to say, I could go on, but it is the reason that I have retreated into my own group of modelers. Many of them don't have any layout, one has an incredible mixed gauge O scale logging railroad, one is a Lionel modeler, and one is collecting and building On3 equipment for his future retirement railroad. The one thing we all have in common, our love for railroading and model trains and the enjoyment of getting together and running my railroad, for the good natured jabs, having conversation together, and sharing and simply being in each other's company. Today with the health issues, we regularly meet once a month on Zoom and you can

Town of Chestertown

see the enjoyment of being together. The other benefit, we all get to show and tell our railroads something we didn't do, because of the travel distances. This to me is the hobby. I could continue, but I think you get the idea, On30 is what one thinks it is to them, neither right or wrong, as long as you don't try to promote that your idea is the only way. Keep your column going and good on all of those who mentor.

I live on the Eastern Shore of Maryland, across from Aberdeen and Havre D' Grace. We are in Kent County, the smallest county in MD with a population of less the 20K people, been like that since the early 1700s. We have one high school/middle school and three or four elementary schools. We have no big box stores, one Mickey D's and a KFC/Taco Bell, a Tractor Supply, a Verizon store, and a handful of traffic lights; everything else is pretty much mom and pop. We do have Washington College, a liberal arts school and the only one that George allowed to be named after him other than Washington and Lee, and I don't think he was alive when it was founded and named. My wife and I live in the woods, within eye sight of the Sassafras's River, we are not boaters, but beg the occasional ride from a neighbor or two. We did at one time have three cats and a dog, but all have died but one cat. So at 73, life is quiet but still full of all types of adventure which suits us both just fine.

As far as my history, I think I pretty much covered it, did the traditional boy train adventure, Lionel and American Flyer as a boy, changed over in pre teens to HO, and at 21 changed over to On 2 1/2 and been there ever since. I also build 3/8n40 dioramas, using all scratch built locos and freight cars. I did have a railroad in a 12' x 25' shed, but last year changed it over to my modeling work shop. It is climate controlled and well lit, I like to refer to it as,"The Land Where Magic Happens".

The town of Chestertown was one of the first sections built over 15 years ago; it was torn out back in March and is now under reconstruction. The stone engine house, the over head crane in front of the green shop building, the ash crane and the sand bin all go back 50 years when I started in On 30. Motive power and cars are either Bachman or kit bashed or scratch built. I think the 4 wheel shop could have been built by Alan Littlefield. I have included a series of shots around the layout with verbiage.

Towns of Betterton and Whorton

Ok, here we have the Towns of Betterton and Whorton, which is home to the Wisenheimers Brewery. The brewery buildings are plaster castings by Dan Wolschon and Dave Kunz and were given to me as a gift because they thought the space needed a brewery. The harbor and its small water front town is Betterton, it is a fishing town, but also the terminus for the Bay Shore Lines ferry and barge service. The last photo is Langdon Mills, named after long ago neighbors. The bulk of the buildings are either scratch built or reworked commercial pieces. This section too has not only been stripped and relocated but totally rebuilt.

Most of the town and place names are actual places and towns here in Kent County, and I am using the names, but not modeling the towns. We do have a single track railroad that at one time was part of the Pennsy, but is now owned by the State and operated by the MD.-DEL. Railroad.

This is another section two years ago I tore out and decided to rebuild as a lumber company. As you can guess, there aren't any hills of this size on the Eastern shore, so I had to "move" the railroad to somewhere more north along the coast. I do have three versions of the railroad story on the computer in case I ever decide to write another article. So, here is one of critters built on top of a Bachman On30 trolley mech. I do have a full set of critters, trucks, and buses that I will send you later. The trestle is scratch built and the curved steel bridge, finally got it's underpinnings.

OK, I think this is it for awhile, maybe tomorrow, I need to do some more modeling, my only full time job, after that of wife helper, hole digger, and whatever other tasks are assigned.

Thanks Steve for sharing your modeling. To talk to Steve, please contact him at Steve.Fisher@oscaleresource.com

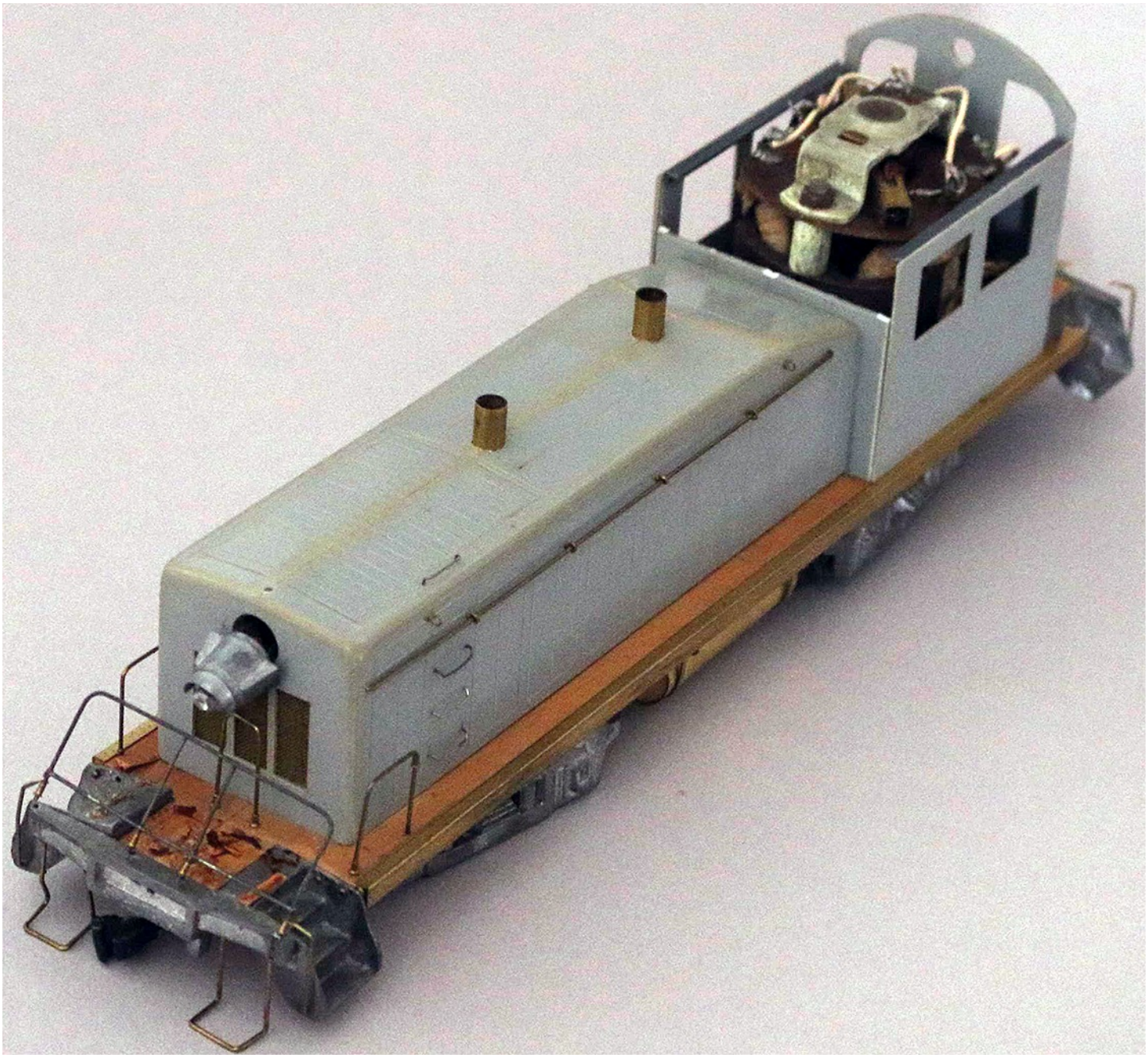
Well it's time for me to get back to my workbench and travel some more "New Tracks". Please visit my Facebook page Jim Kellow MMR and follow/like it to stay in touch. Also please register at my web site: NewTracksModeling.com to get notices for all my Zoom "New Tracks Meetups every Wednesday and Saturday evening at 7pm Eastern time, and my Virtual Train Shows. Our next Train Show is March 20 & 21, 2021 at 1pm Eastern time on Zoom and live streamed on YouTube. Hope to see you there. Maybe you will win a prize.

Thanks again for reading this far, and best of model building to you.

WHAT'S ON YOUR WORKBENCH?

By William Lubert

It all began when I told another modeler that I would be willing to scratch build a switcher. He sent me a old model of what he wanted. It arrived and I opened the box to find the model inside. A photograph of the model is included. Before starting, I decided to make the project bigger than what it was. Instead of just scratch building a switcher in O scale but tell how a model was built through the ages. Containing a number of parts because article couldn't be in one article or part the project grew. Part one is how to do research. Part two is converting scale drawings. Part three is building a model using wood. Part four is building a plastic model. Part five was to be building a brass model. It was during part four when the project came to a halt. The problem did not have to do with the modeling, but rather with the laptop I was using. That computer just quit on me and I couldn't get it fixed. I was using *Word Office* at the time. I purchased a new laptop but it did not *Office*. Later, I purchased a tablet but it too did not have *Office.*



A neighbor was getting rid his old computer and asked me if wanted it. I said yes and it does have *Office*. So now I'm deciding if I should continue.

A model of a pre WWII diesel switcher was the project. To help start with, an early model was sent to me. This model was someone attempt to build a switcher cheaply. Hood and cab is believed to be made by the *Hawk Model Company* back in the 1950's or 60's. One of the early O scale two rail companies that made plastic models. The basic hood and cab are modeled from a switcher that was purchase by railroad prior to *World War II* and later modify after *WWII*. For the time it was made, The model was well made. Rest of the switcher was made with available parts. Such as the frame is a piece of thin wood with brass channels on the sides. Steps and end frames are from *Walthers* passenger car. Trucks and chassis is unknown at this time.

During research I found a prototype at the *Illinois Railway Museum.* Because of the postponement, things gotten better. While on *YouTube* I found *Periscope Films* which old railroad films converted to video. One such video is *GM 1938 Promo of Diesels Locomotives.* Watching this video a person can see not the switchers but also other machines that EMC made.

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

Backshop Solutions

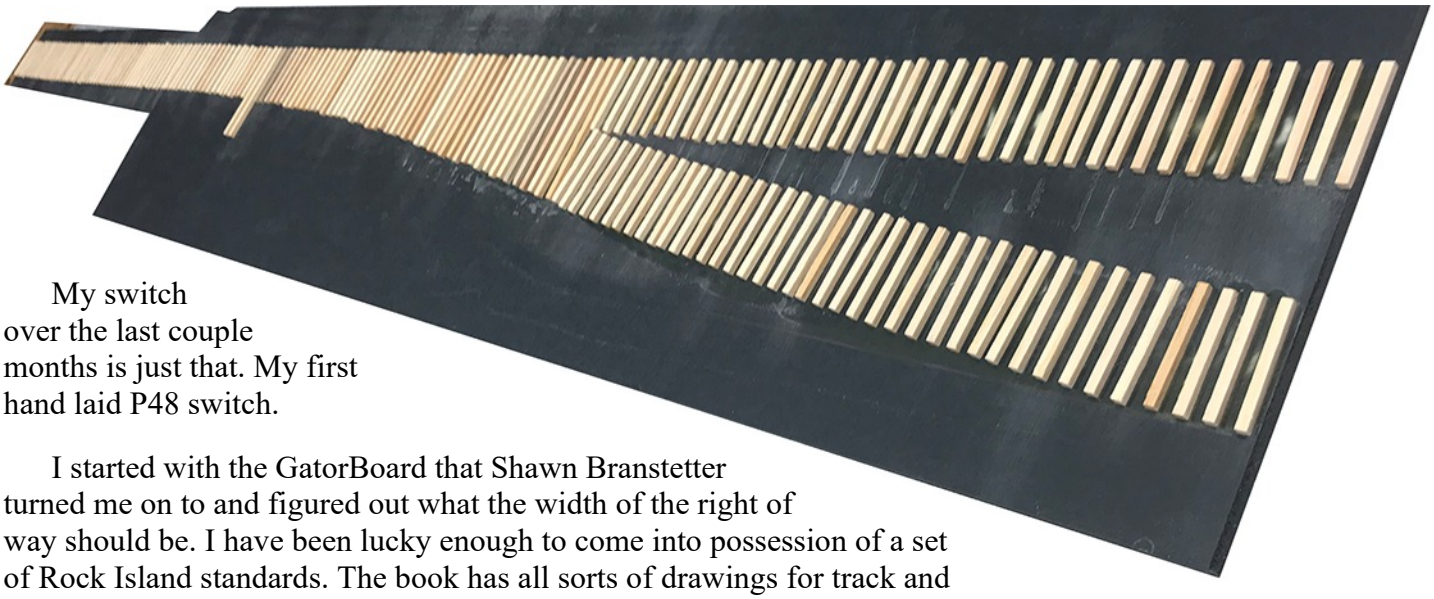
By Ross Dando

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

The last couple months have been busy. Haven't gotten much done, but it sure feels like I should have.

Quite literally, I seem to have switched gears a bit. I have modeled for over 40 years and never really had a place to run trains. With moving to Proto48 it is a goal to have something that actually moved and a place for it to move! The last couple issues you have seen the wood working, testing of module joints to ensure smooth operation and I have even worked on the running gear of a locomotive to get the brains in it and it actually moved! Well, as much as I would like to show trains running and my happy ass smile telling you how happy I am to be successful, there is the reality.

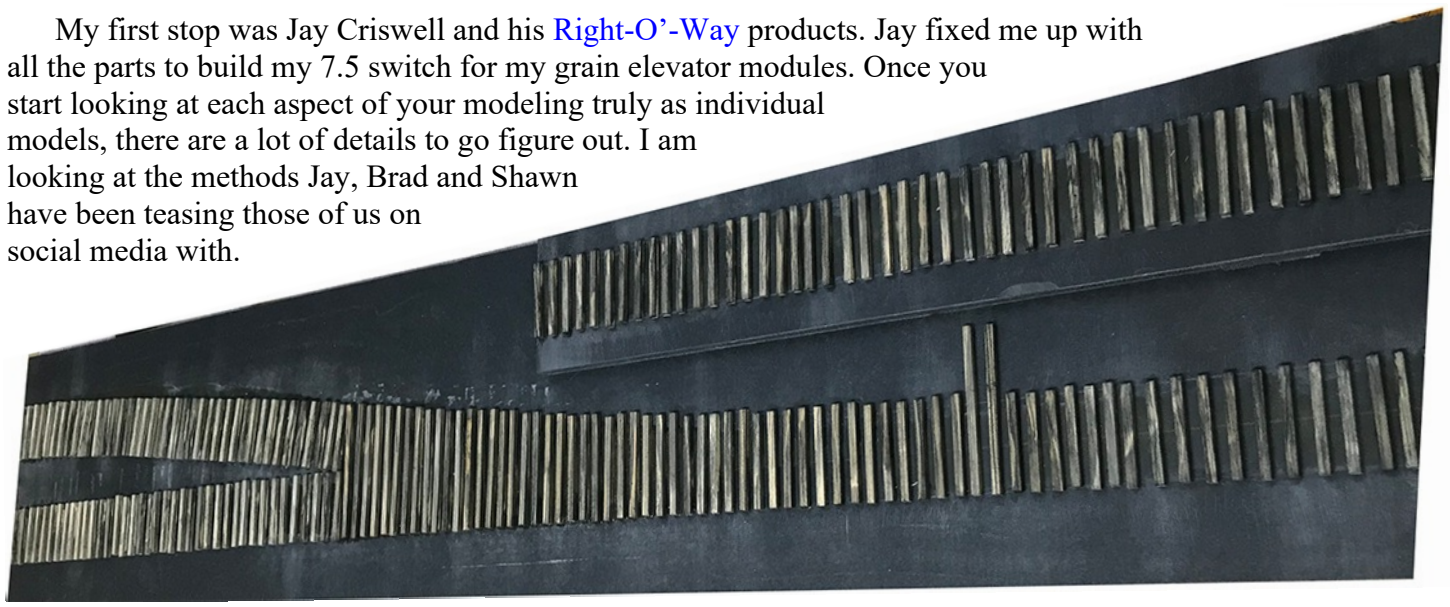
I've done a few things, burned up the sound part of a decoder, and I have been trying to make room to have modules set up. I also took the time to go out and see the world and visit the Mecca of resin and where the magic is created. So enjoy the pictures, hopefully learn something, or figure out something that I need to learn, and enjoy the journey I took.



My switch over the last couple months is just that. My first hand laid P48 switch.

I started with the GatorBoard that Shawn Branstetter turned me on to and figured out what the width of the right of way should be. I have been lucky enough to come into possession of a set of Rock Island standards. The book has all sorts of drawings for track and equipment. It wasn't until I was finished that it arrived, but others had sent me right of way drawings. Once I had that understood, the real fun could begin.

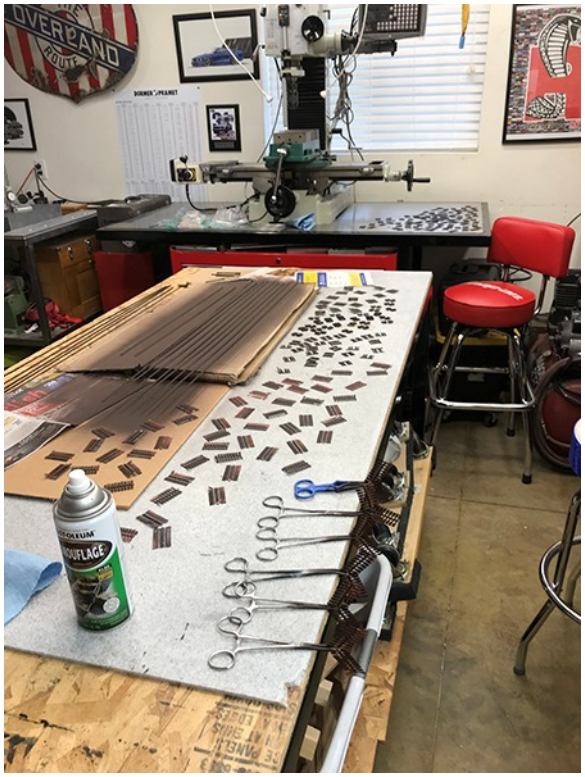
My first stop was Jay Criswell and his Right-O'-Way products. Jay fixed me up with all the parts to build my 7.5 switch for my grain elevator modules. Once you start looking at each aspect of your modeling truly as individual models, there are a lot of details to go figure out. I am looking at the methods Jay, Brad and Shawn have been teasing those of us on social media with.



Good things ahead. Now back to me stumbling through my first time. Once the ties were down, I turned to my trusty cross cut saw blade and roughed up the ties and started the staining process. This was done with colored India ink and 71% alcohol diluted 3:1. Multiple coats and colors were blended to get the look I wanted.

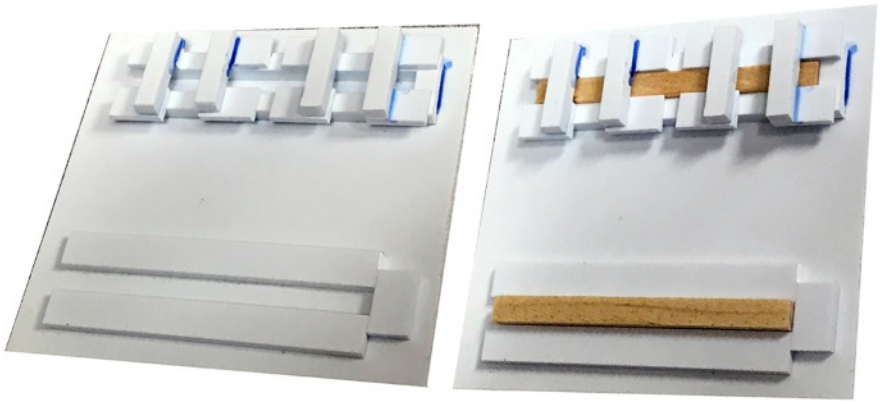
After this dried I went to the next step of applying ballast. (Insert impatient kid who just wants to see trains run here) The ballast process was not new to me, but I did take a different approach. I generally pour one size and color, then glue with diluted white glue. I have been watch master Branstetter and wanted my results to be more along the lines of what he has been showing. So I looked over more pictures and set about making a ballast mix for the area of Iowa where my elevator was located. I have various pictures showing what in the later days of the Rock Island was called roadbed but may not be considered that by other railroads. It's made up of Woodland Scenics fine and medium grey along with some black medium. Then I added plain dirt.

This was poured over the ties and then brushed level with a cheap 2" paint brush. If I wasn't happy, I poured everything onto the plastic table cover and poured it back into the cup to try again. Once I was happy with it, I misted everything wet with my water, alcohol and two drops of Dawn mix. Once wet, I then used good old Elmers glue thinned 50/50 with warm water and a drop of Dawn. The glue was then spread over all the ballast, making sure to cover everything. In areas where I want it to look like a tie or several were replaced, I added a bit of fine grey to add contrast. I repeated this process for all my track panels for the two modules. And as luck would have it, didn't take any pictures of the step by step..sigh.

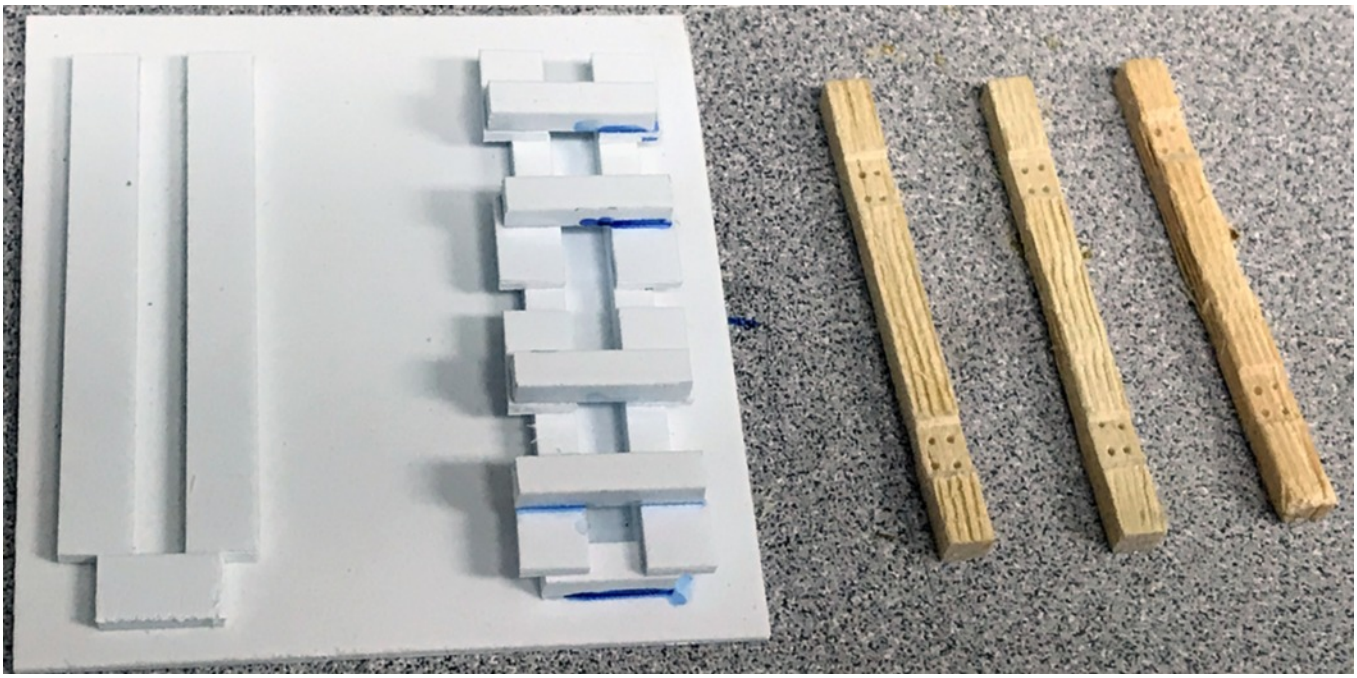


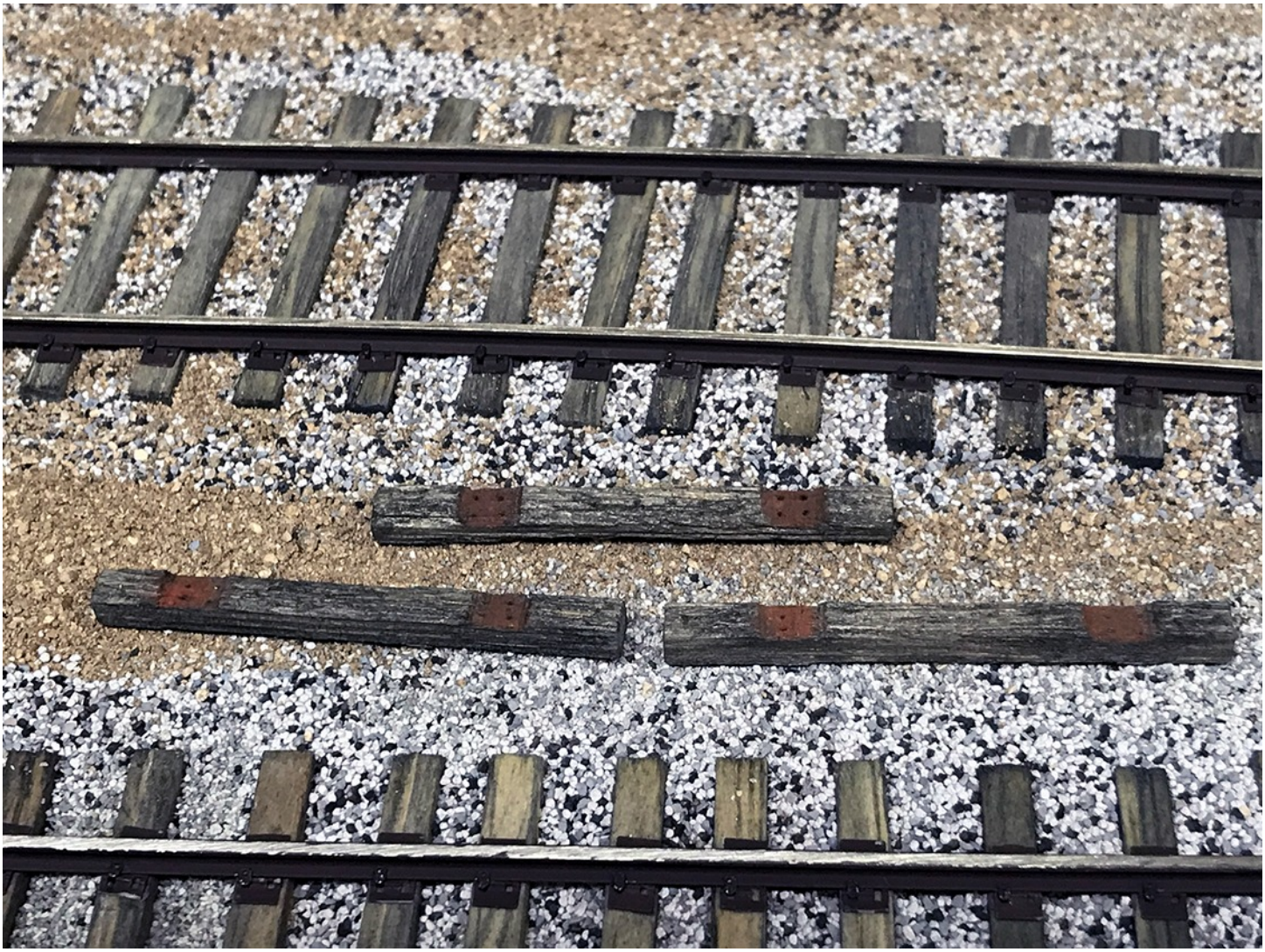
Then onto component preparations, all those great parts Right- O'-Way offers need to be painted. I debated on before or after assembly. I decided it would be easier before, and then when I go back to add pigments for detail on the track, I can do any touching up. I opened all the packages and turned on the paint booth lights and fan. It was nice to just shake the can and spray knowing that in the end I wouldn't have to clean the air brush. The Rustoleum camo earth brown is a perfect color and took me back to the Floquil Rail Brown days. Once the can was empty, I had covered every square inch of the shop with parts to dry. Time for liquid replenishment.

With ballast glued down, painted track and details dry, the next phase of the fun could begin. While all this preparation was taking place, I was watching recommend videos, asking the same question to everyone I could think of, and reading articles on other's work.



But before I could sit down and start, I let it all gel for a few hours while I came up with a way to make a detail piece that will be along most of my mainline. The Rock Island was constantly replacing ties. I need old ties to put by the side of the main, so following an example from James Lincoln, I set about distressing a tie and figuring out how to make a whole bunch of them. First I needed a way to hold the tie while adding marks and distressing all the sides of the tie.





Then a depression needed to be made for where the tie plates spent their lives. Lastly, holes for the spikes. With that done, I figured out a series of ink washes to make the ties look like their 9 lives had been lived. Finally, a dusting of pigments on the tie plate depressions. I am happy with the results and the look forward to making a pile of used ties.

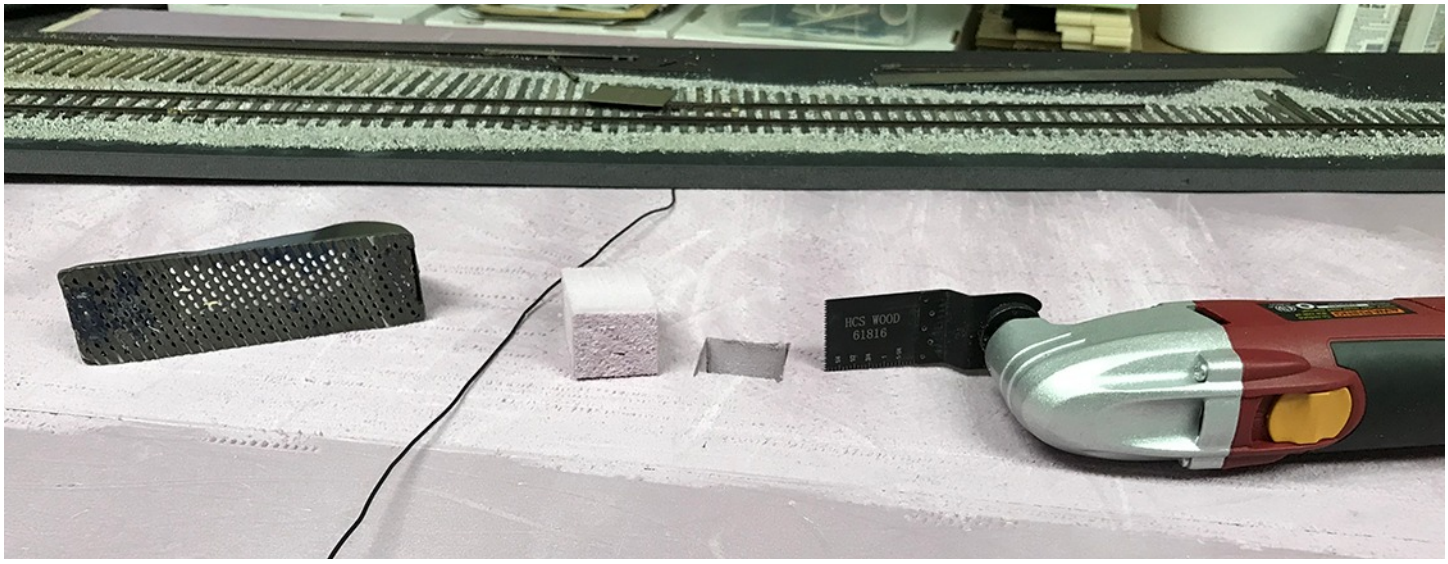
Off to the races we went. Day one: I successfully got the stock rail down and a guard rail in place. Day two: I pulled all the spikes and started over again.

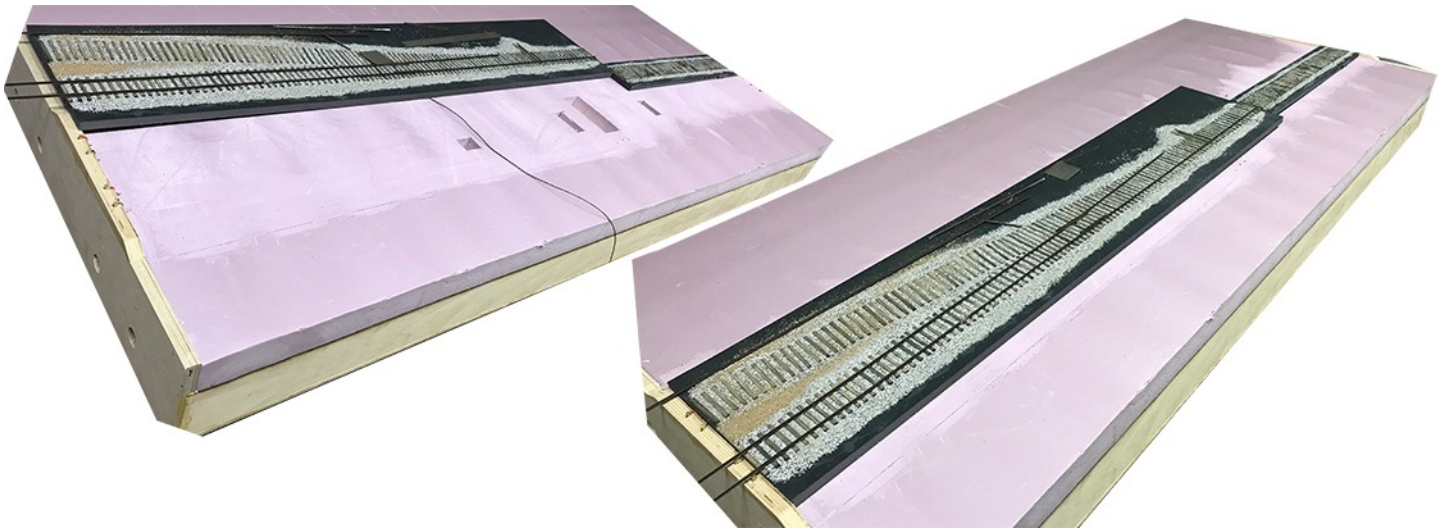
Apparently it's important to site things a bit better so you don't wake up to find a drunk monkey was helping you. Day three, with drunk monkey fired, we set about adding the frog and the associated rails. Gauge in hand, I made sure things were good. I then added spikes to the other side of the rail and saw how it moved. The process of learning and having the patience to go back and do it right is what is to be learned here. Yes, I had to do some rework. But in the end the switch works!

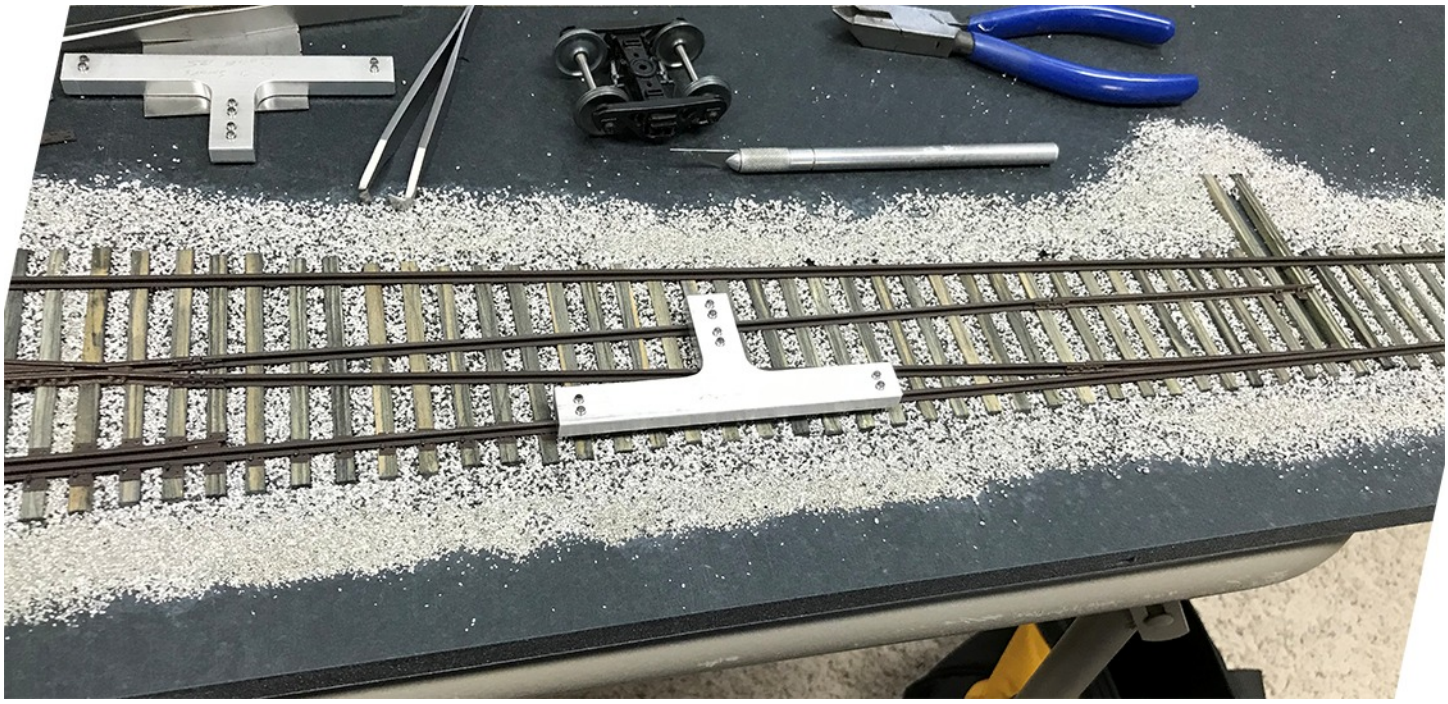
First a truck was sent through to test, then a car back and forth. The feeling of figuring it out and seeing it work are pretty good. Mind you, it took adjusting. I also added all the wires so each section of rail has its own power and the frog is powered.

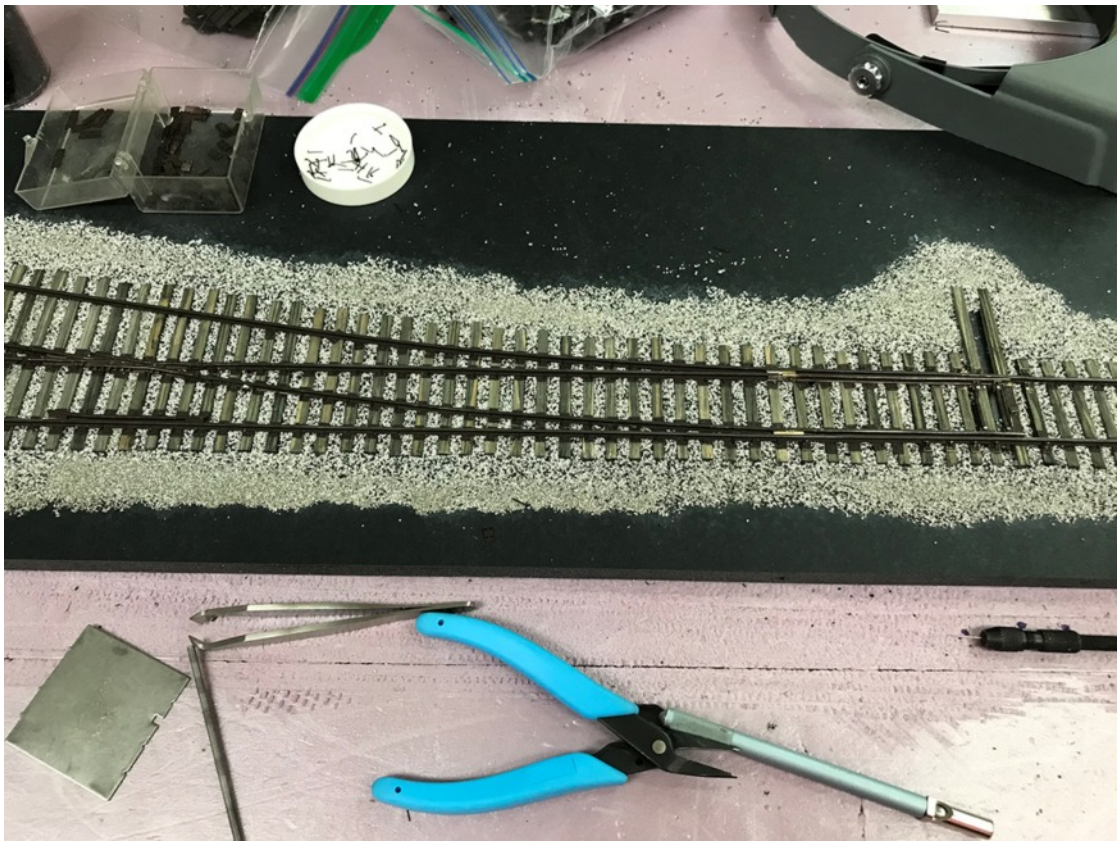
I was confident in the track work, let's see if the smoke stays in. I ran my newly powered and DCC with sound unit back and forth listening to the diesel notch up and down. With increased confidence so was speed. I split the frog and then there was a load buzz, but no smoke. Have no idea what happened, but it was now a silent DCC locomotive. Out came the decoder and back to the manufacturer for a diagnostic test. With another decoder on hand, it was installed and I was back to playing with trains!

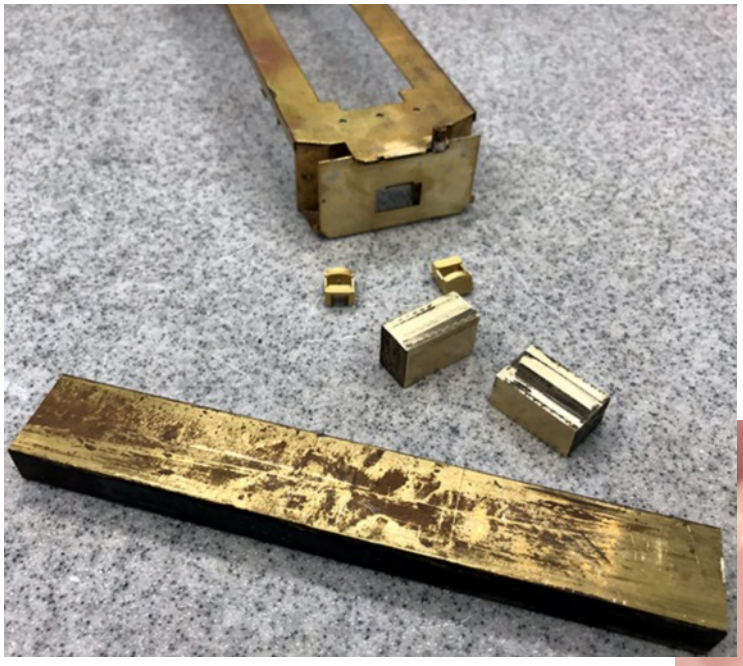
I am making sure I'm happy with the track work and switch point operations before I secure the Gator board in place.



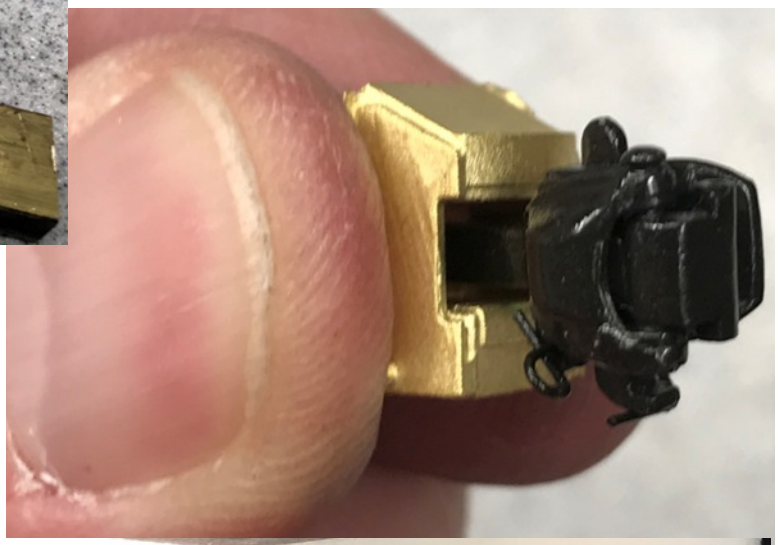


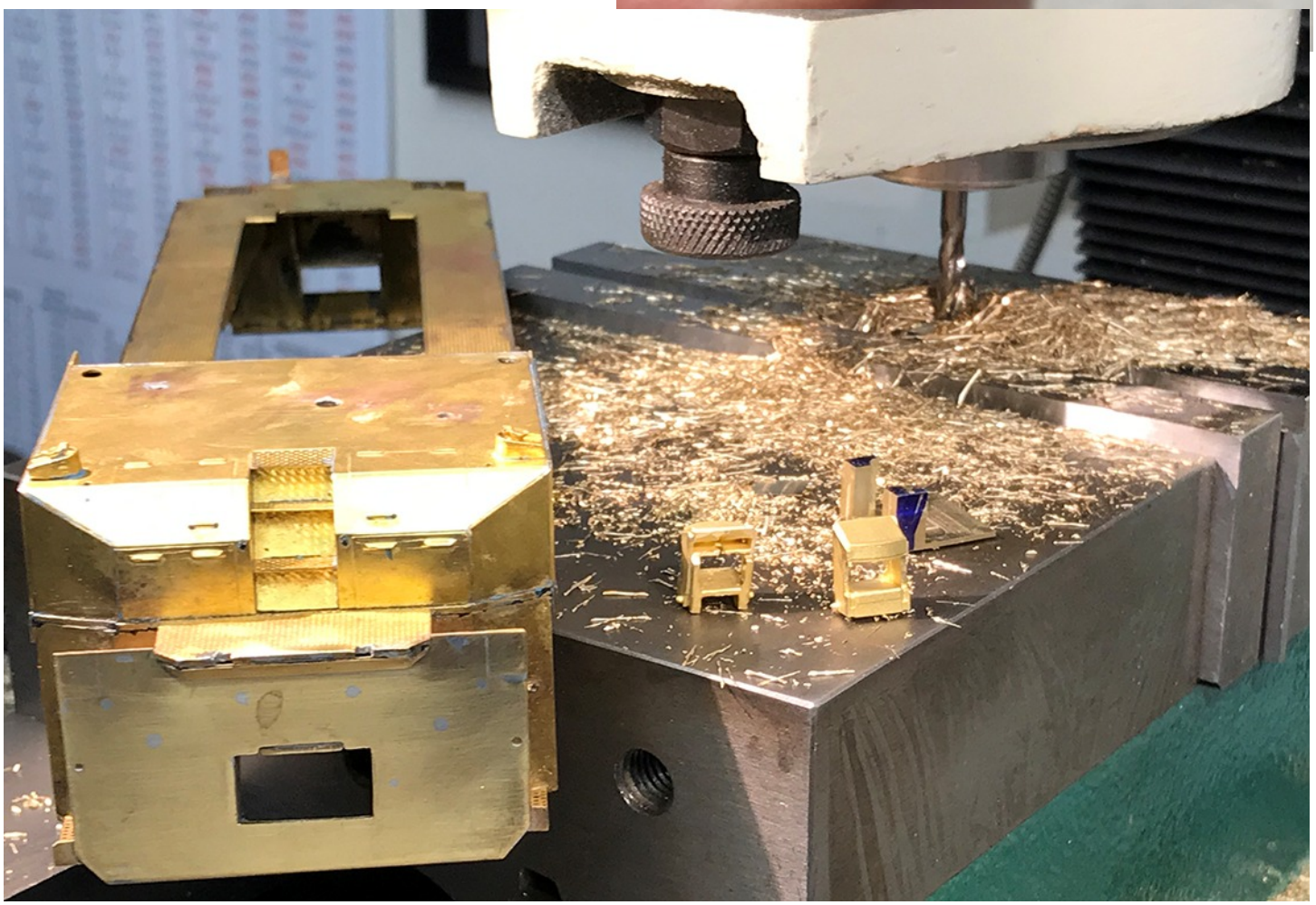


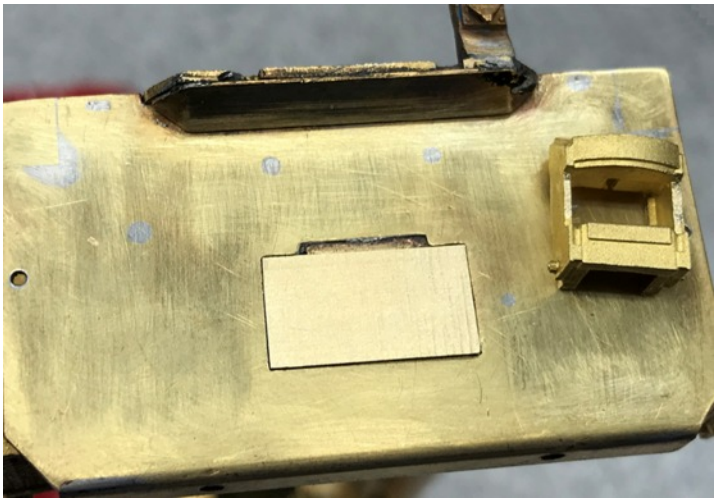


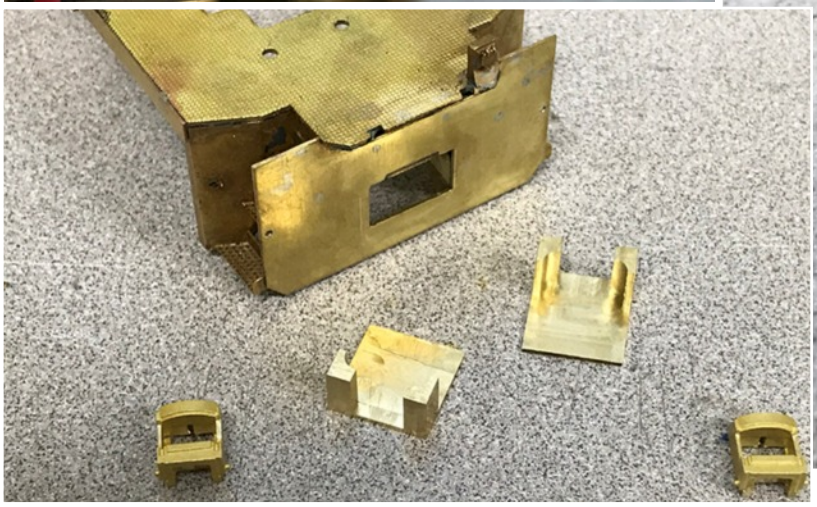


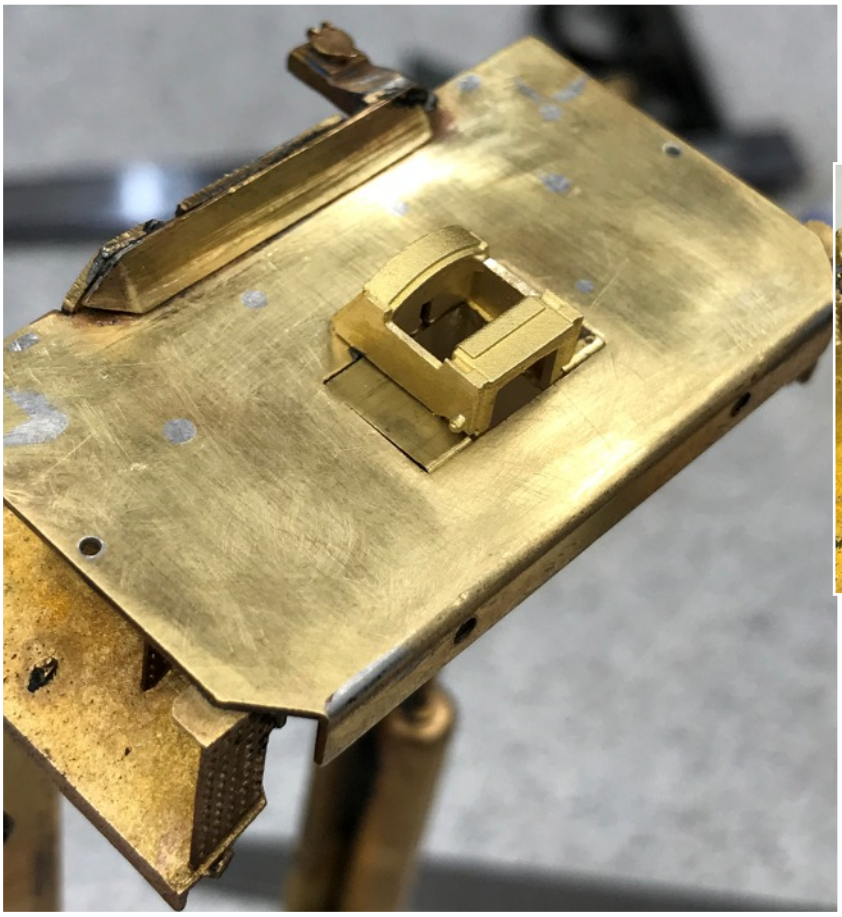
On to the next project… I was able to get more parts made for the SW1500. The coupler pocket openings are HUGE. The solution is to fill them in and add a scale buffer. I was able to machine a block that fills the opening and can be blended to the face of the pilot. The buffer casting really looks good on the pilot. Terry VanWinkle has made test prints and castings are on the way for the rock pilot and foot boards. Hoping to get these parts all assembled in the next cycle and have another progress update.

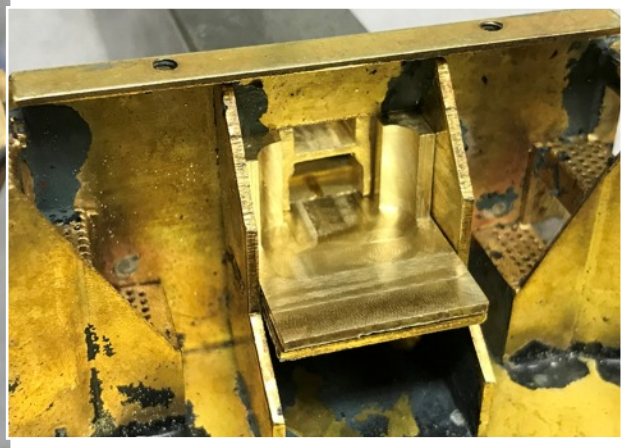


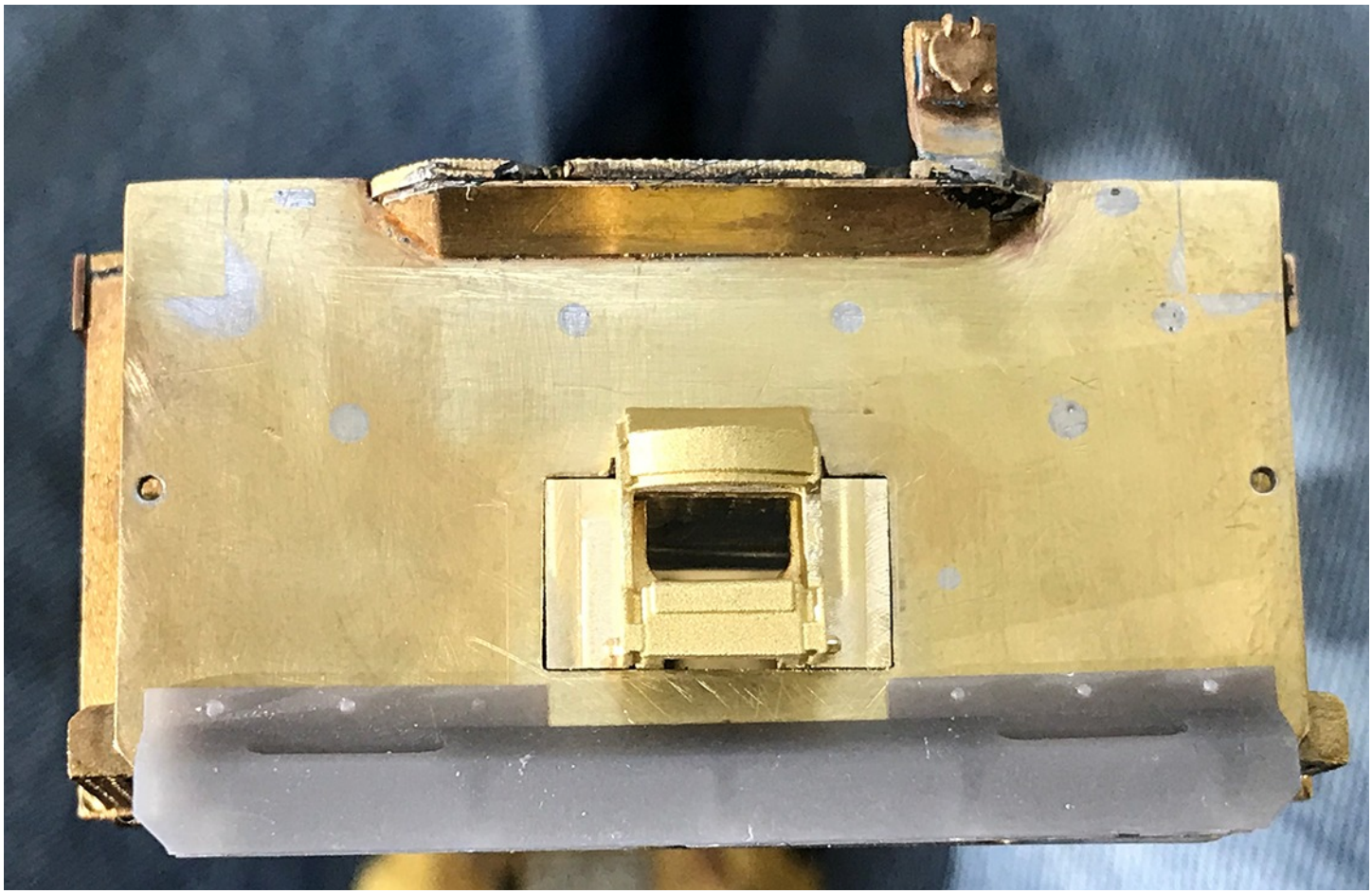












The next fun adventure of this period has been liquidation of more of my HO collection. You may say just junk it. I say it has to fund my Proto48 journeys.

I spent some time and sorted and figured out a final number I could agree on with the dealer.

It's amazing the things I found, all unbuilt!! Lets use this as a lesson for my collecting of 1/48 items.

Now, for my trip to Mecca. January is usually the first RPM of the year in Cocoa Beach and a come out of hibernation event. I try to attend, and while attending, look at the TV ads for the Rolex 24 hour race at Daytona and wish I could go to that the weekend after the RPM. We as luck would have it, the RPM was canceled. This provided two opportunities that I have not had. We flew down on a half full plane and stayed at the basically empty hotel where they hold the RPM since we have a routine and know where things are. The race was great, no one was there.

They say that in order to go racing, you have to have cubic dollars. But to win a race, you have to have the right driver. I would put my money on Jon Cagle in any resin race held. The guy is a resin god to me. Now Jon is a very humble man with a huge heart and he proved that by giving me a tour of his new shop that is not set up yet and then dinner in downtown Sanford.

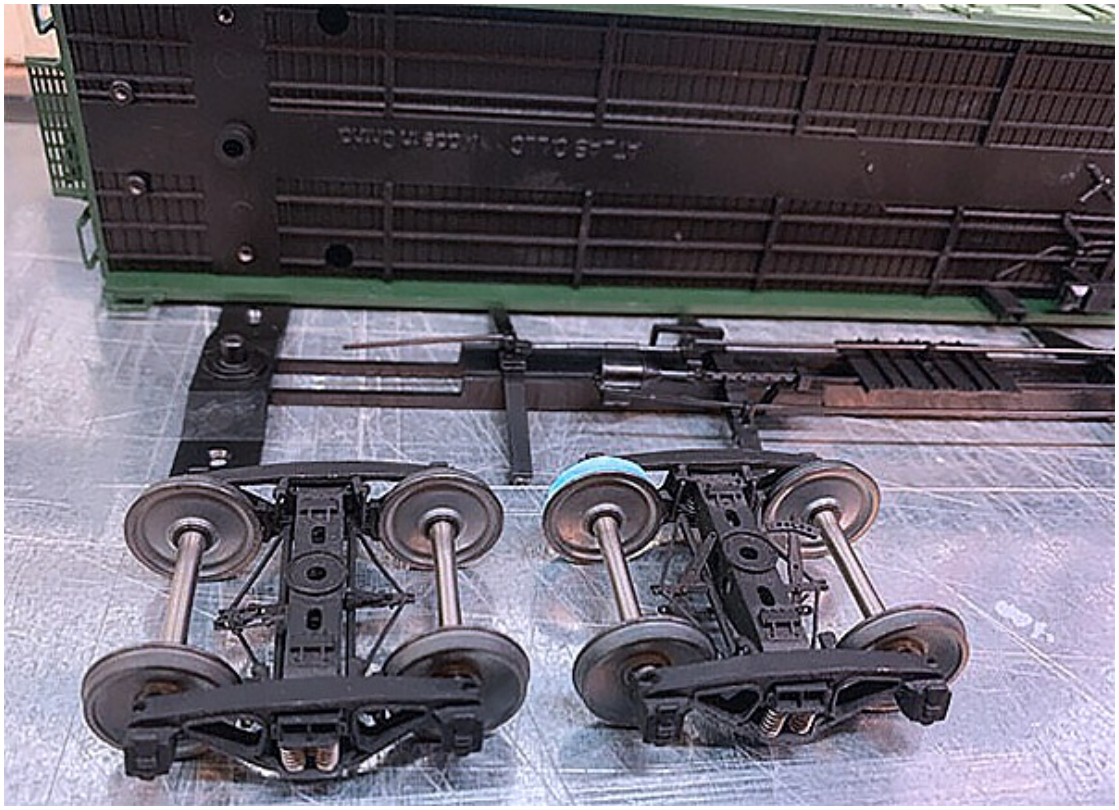
Jon has done so many different scales and projects it was amazing to see things he had out. I was also shown the coveted black cabinet where the magic is stored. Jon was nice enough to show me old patterns and molds from days gone by. He was also kind enough to show me projects in the works that I can't wait to see finish, just like him.

At press time, I had a package show up from the Czech Republic. I found a railroadlc3dp on Instagram and he has made some amazing drawings a sells parts in various scales. I contacted him and he was nice enough to send me a prime mover and parts to make crossing signals. The print quality is amazing as can be expected from a dialed in DLP printer. Some prep work and assembly is required for the crossing signals. Paint and weathering is needed for the prime mover. Stay tuned, maybe I will get to them soon.

Like all of you, I am plugging along trying to make progress and I am finishing each project I start. If you believe that, have you heard the one about.....

The purpose of Back Shop Solutions is to answer questions.

Greg Amer asked an excellent question over on the P48 iOS group and with the moderator's permission have borrowed it to answer here and give some inspiration to take on any conversions.



"I'm going to start building my P48 freight roster. Starting with my first Box Car an Atlas '53 Evans and will put Protocraft trucks on the car. I'm curious how people adapt the bolsters to fit the Protocraft trucks. Cut them off? Buy a conversion kit? Buy a different bolster? I've ordered Protocraft conversion kit, but I'm not really sure how they are used. How do you convert the bolster to work with Protocraft trucks?

Thank you,
Greg"

Greg,

The mechanics of the bolster conversion are to either replicate the correct bolster for the model you are building as the model is incorrect or to strengthen the existing bolster material. Either of these methods are done to give a solid mounting surface for the Protocraft conversion bolster consisting of a machined bolster and stamped plate.

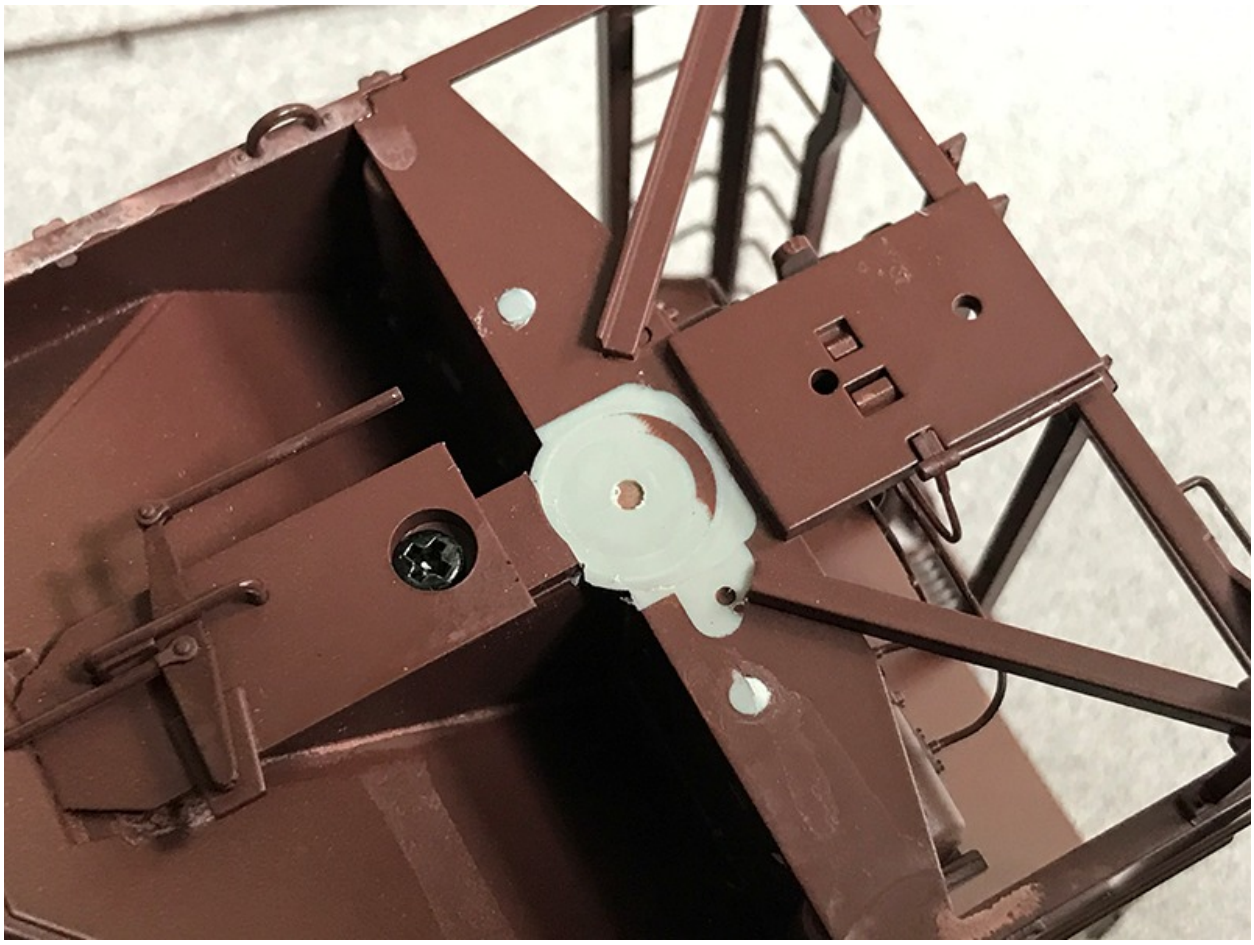
Each model I have done in my short time in P48 has been an exercise in patience and accuracy. It's is important to understand the prototype ride height of the car to accurately convert the car.

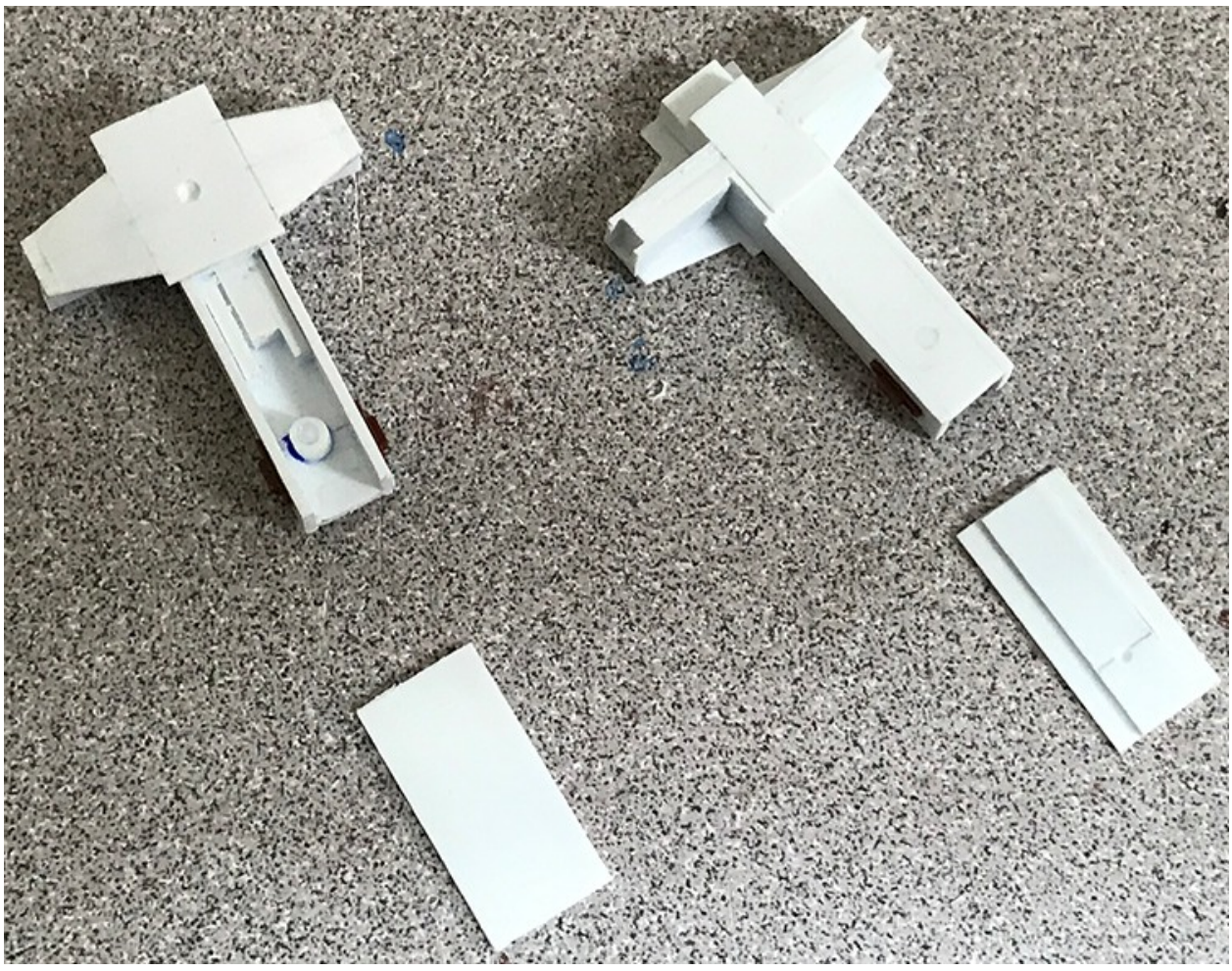
I have found that establishing the offset from the mating surface of the truck to the mating surface of the coupler box has been my starting point with any car. By doing this, you will have the couple height the same on every conversion. All the Protocraft trucks have the same height so it helps with all cars. Once I know that offset value, I build a styrene step that then puts the car at the right ride height.

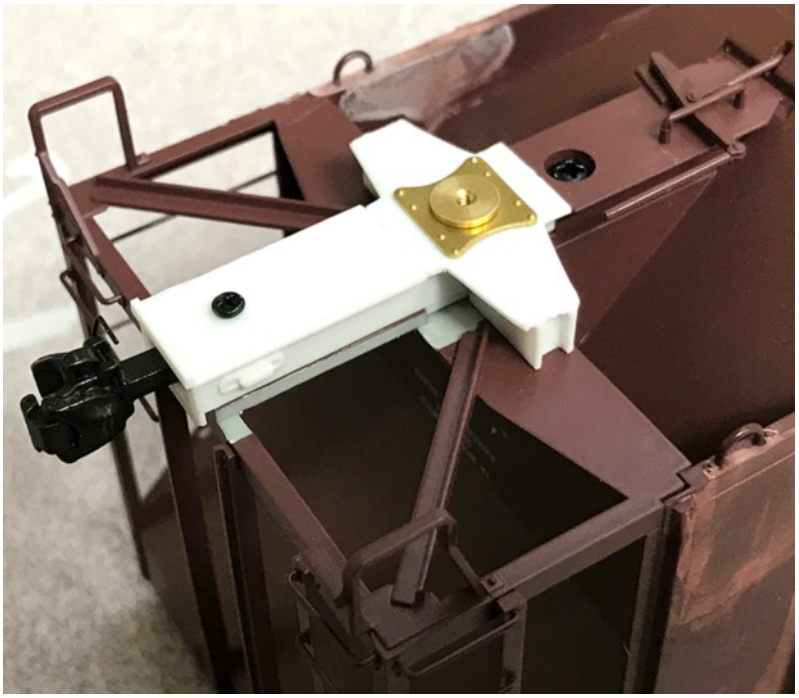
After this, I work to find drawings and pictures the the car I am modeling in order to then model the bolster as close as I can in the available space under the model.

Here are some pictures of an Atlas hopper I did.

Thank you to Gene Deimling for allowing us to use this.





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O Scale Shows & Meets

Have an upcoming O Scale event? We would like to help publicize it. Send us the information up to one year in advance, and we'll place it here along with a direct link to your Website and/or Email.

Click here to send us your information.

O Scale March Meet
March 26-28, 2021
CANCELED
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

Cleveland O Scale Meet our 38th annual show
April 10, 2021 Parma, Ohio
9:00 AM to 2:00PM at the UAW Hall
5615 Chevrolet Blvd. Parma, OH 44130
Admission $7, 6' tables $45, free parking, large facility
dealer load in Friday April 9,1 PM to time as needed PM
Saturday 7-9AM 440-248-3055 email j3a5436@gmail.com
reserve now as tables are limited
COVID19 rules apply

Eastern PA 2 Rail O Scale Train Show and Swap Meet
April 17th, 2021
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 28-30, 2021
CANCELED
Hyatt Regency Santa Clara (San Francisco area)
Website: www.oscalewest.com

Harrisburg Narrow O Summer Meet
Date to be announced for 2021
Sponsored by: Narrow Gauge Modeling Company
St. Thomas United Church of Christ
6490 Linglestown Road
Harrisburg, PA 17112

O Scale National Convention
June 17-20, 2021
Denver, CO
The O scale community will head to Denver June 17-20, 2021 for the annual convention of all trains scaled 48 to the foot. This will be the main event for O scale modelers looking for great layout tours, modeling clinics, and hundreds of vendor tables loaded with the news products as well as treasures going back for more than 70 years. Denver is home to a major airport that quickly connects the east and west coasts to the heartland. Amtrak's California Zephyr connects Chicago and San Francisco to the Mile High City.
More details coming soon
Website: https://oscalenational.com/

The 2021 St. Louis RPM Meet
Friday, July 30th and Saturday, July 31st, 2021
The St. Louis RPM Meet will happen at the Gateway Convention Center, One Gateway Drive, Collinsville, IL 62234. Collinsville is 12 miles east of metro St. Louis on I-55/70. The meet starts at 9 AM both days.
Website: http://www.icgdecals.com/stlrpm/

Eastern PA 2 Rail O Scale Train Show and Swap Meet
August 7th, 2021
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

41st National Narrow Gauge Convention
September 1-4, 2021
Crowne Plaza Hotel
Hickory, NC
Manufacturers exhibits, contest, home layouts, operating modules and clinics.
Email: 41nngc.chairman@gmail.com
Website: http://www.40nngc.com

O & S Scale Midwest Show
Saturday and Sunday, September 17-19, 2021
This is a dedicated 2 rail O Scale and S Scale show; however, we encourage and welcome the many modelers and collectors from the 3 rail and high rail side of the hobby to attend. There are many aspects of the hobby, including building, scenery and more that applies to any scale. Moreover, this show is a great place to get inspired while meeting old friends and making new ones!
Website: oscalemidwest.com/
Email: info@oscalemidwest.com

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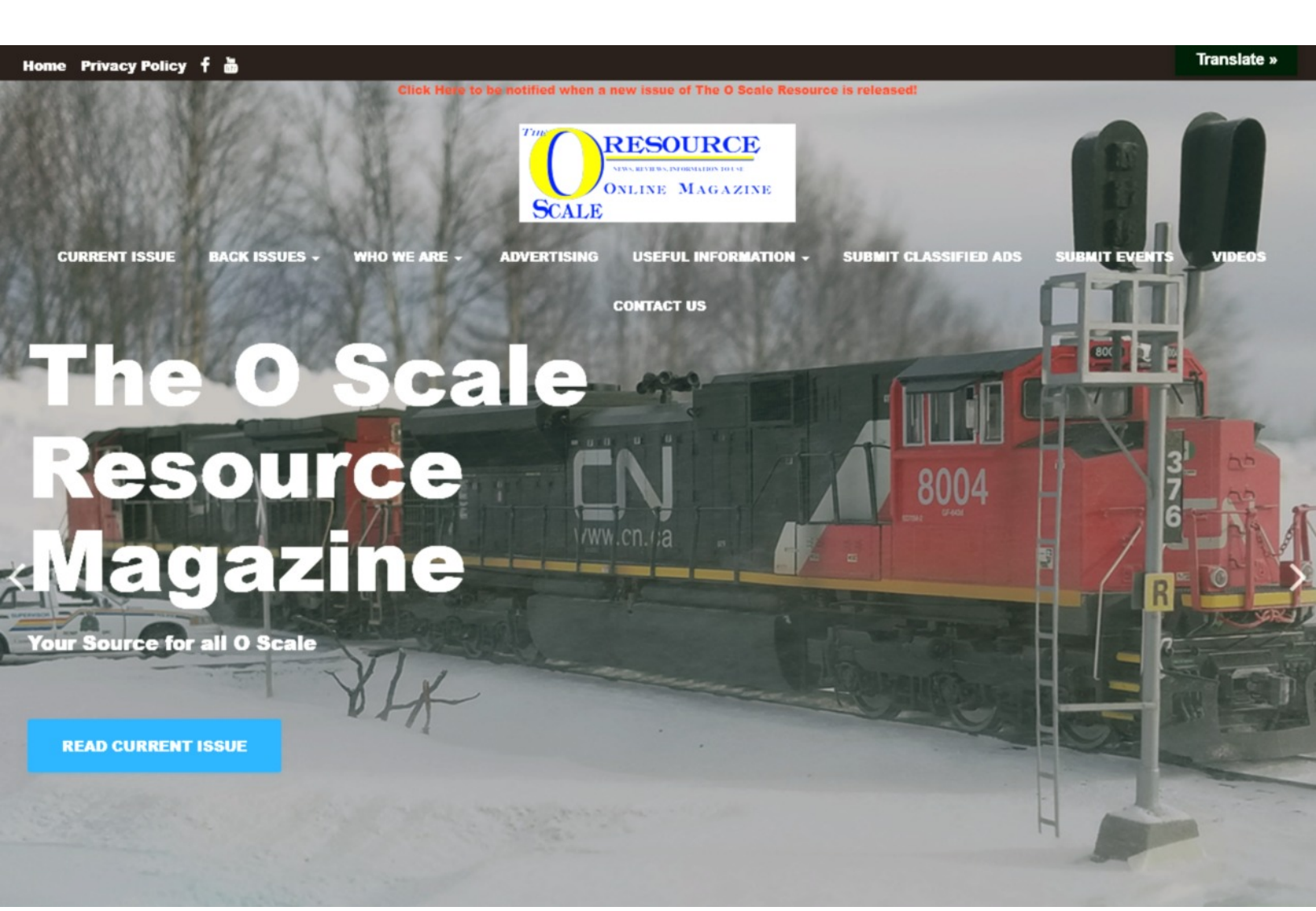

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