

THE **O** *RESOURCE*

NEWS, REVIEWS, INFORMATION TO USE

Volume 8 No.1
September/October 2020
8TH ANNIVERSARY
ISSUE

Scratch Building Steam Locomotives PT 1
New Tracks: Trolley and Traction Action
The Sherline Milling Machine
Plotter Cutter Decals
O Scale Central
The Backshop
And So Much More...



Sunset / GGD Update 2020

New Project Announcements



NYC H-10a 2-8-2



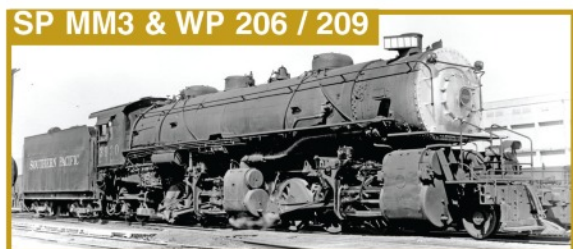
C&O Streamline Hudson



MILW EP-3 ELECTRIC



DASH 9



SP MM3 & WP 206 / 209



Krauss Maffei

- (Sunset) - GE Dash 9, Milwaukee Road EP-3 Electric, SP MM-3 2-6-6-2 also WP 206/209.
(GGD) - SP Daylight, 1948 Broadway Ltd., 1948 20th Century Ltd. (Aluminum 8 Car)
(Sunset/GGD) - FA-1/FA-2, FBs, VGN 120 TON GONDOLA (C&O, PRR, UNL)
(Sunset) - NYC H-10 2-8-2 (Also P&LE and B&A) - Unique Tender (4 wheel truck) for B&A
(Sunset) - C&O Streamlined Hudson #490 + The Chessie Train (6 Aluminum Car Set)

Project Progress Report

- (GGD) - Milwaukee Road "Olympia" Hiawatha, 2nd Run, Order Now!!!
(Sunset) - F3 Diesels - 2nd Short Run, Reserve Now!!!
(Sunset) - GP7/GP9 In Production Coming December 2020. Reservations Closed.
(Sunset) - Krauss Maffei - Design and Production in Late 2020. Reservations Open.
(Sunset) - D&RGW L-105 - Coming August 2020, Fully Reserved.
(GGD) - SF Super Chief 1938-41 Coming October 2020, Res Closed.

Models In Stock

- (Sunset) - SP S-12 0-6-0 Green/Black (2R/3R), VGN EL-2B (3R)

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Volume 8 No. 1

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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

*Santiago Pineda's beautiful Car Works CB&Q
VO-1000 showing his plotter cut decals.*

Rear Cover Photo

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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



What a year it's been so far! We hope all of you are doing well wherever you are and staying healthy.

This is our 8th year of publication. We have been extremely fortunate to have so many readers and contributors over the years. Readership now averages worldwide over 6500 per issue measured by IP address. Our authors come from all over the world to bring you the best in two rail O scale.

Let's get to the show news as a lot has been happening.

The Harrisburg Narrow O Summer Meet 2020 that was already rescheduled to September 18-19, 2020 has been canceled. They are on again for next summer. [Check their Facebook page for more information.](#)

[The O & S Scale Midwest Show](#) was canceled for this September, but we already have a contract for next year. Mark your calendars for September 17th through 19th, 2021. We had more dealers signed up than in past years, but the attendee numbers were not there. We felt it would not be fair to those dealers if the numbers were light, so it was decided to postpone to next year. <https://oscalemidwest.com/>

[The March Meet](#) has been revived. The show is scheduled for March 26th through 28th, 2021. <https://marchmeet.net/WP/> You may pre register securely for the show on-line at their Website.

As of this writing, August 23rd, The Eastern PA 2 Rail O Scale Train Show and Swap Meet Strasburg, PA October 17, 2020 is still on. Facemasks are required. Contact John Dunn (609-432-2871) for details.

Also the [Cleveland Show](#), Saturday, November 7, is still a go. Facemasks will be required per government regulations. Contact Sam Shumaker via email: j3a5436@gmail.com for information.

[The 2021 O Scale National](#) has been announced. See the News You Can Use section for more details.

As you can imagine, all our plans for the summer were canceled. So Amy and I will be off, Covid or no Covid, to the Strasburg show this October. Even if there is no show, we have a 10 day road trip planed. Part of the trip will take us to Johnson City, TN which is in the area that my model railroad, the Richmond, Danville & Southern, would have been located. I need some backdrops, and after reading [Serge Lebel's idea about using a laser for removing the background on backdrops](#), I really want to try that technique. So photography is on the agenda. Also, we will make a quick side trip to Saluda to see firsthand the steepest standard-gauge mainline railway grade and how I justify my own "widowmaker" grade.

This is a great issue for trolley fans with some history and new builders in the New Tracks column. Glenn Guerra begins his build of two steam engines, first looking at the research one needs to do, as well as a short primer of the Sherline Milling Machine. Santiago Pineda is back with an fantastic idea for making one off decals using a cutting plotter. There is so much more, but Amy only allows me one page for this so I'll have wrap it up.

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

Happy Reading & Happy Modeling,

Dan Dawdy

O&S Scale Midwest Show



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

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NEWS YOU CAN USE



2021 O Scale National Convention.

The O scale community will head to Denver June 17-20 next year 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.

Colorado offers an amazing destination for families, as well as, O scalers," says event Chair Bob Kjelland. "Denver and the Front Range are blessed with world-class museums, great local foods, lots of microbrews, boutique shopping, and much more. The Rocky Mountains are minutes away and equally packed with outdoor activities to experience," he says. "Of course, Colorado is also home to numerous narrow and standard-gauge train rides and museums."

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.

The Colorado-based executive planning committee is working with modelers who've planned previous national conventions to design a convention O scalers won't want to miss. The group is inviting O scalers to share their ideas and recommendations [by participating in a short on-line survey](#).

The committee is finalizing negotiations with the convention hotel to secure an affordable facility with access to public transportation. The registration form will be available soon.

For the latest information, go to the website - oscalenational.com - or [Facebook page - O Scale National Convention](#).

[Bill Wade from B.T.S.](#) has a new kit O Scale: The Estuary Trestle



The estuary is a partially enclosed body of brackish water where freshwater rivers and streams flow into it, and then mix with the salt water of the open sea. While frequently not very deep, the estuary is often wide. This trestle is patterned after one built in 1906 in Illinois and the design is a basic standard of low trestle construction.



The model consists of laser-cut wood parts with styrene nut-bolt-washer details that build into a realistic, and very strong, trestle. Rail and spikes are not included.

Approximate Scale Size - 14' W x 90' L x 9' H

[See their Website for more details.](#)

[New from Atlas O:](#) 25,000 Gallon Tank Car
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Atlas' model of the Trinity 25,500 gal, insulated, general-purpose design. This was introduced in 1986 and production continues today. There are at least 13,000 presently in service. Typical commodities include vegetable oil, tallow, styrene, benzene,

asphalt, biodiesel, acrylates, and numerous other chemicals.



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Each 4½ ounce can has a suggested retail price of \$10.29. The first four (4) colors are TCP-4000: Black, TCP-4001: Gloss Finish, TCP-4002: Flat Finish, and TCP-4003: White, and they are set to be released September 1, 2020.

We will release four (4) new colors in November and December, 2020 and January, 2021, and then two (2) new colors a month for the rest of 2021 & the first half of 2022- until we get forty (40) colors.

For further information on these and what other spray paints are scheduled to be released when, please contact Dr. Martin Cohen by phone at 623-551-2548, or by email at tru.colorpaint1@yahoo.com.

March “O” Scale Meet Chicago August Update: We were successful in renegotiating our contract with the Westin Lombard. We will now have until January 15th to meet our hotel room commitment. We also have a few extra days after the 15th to cancel the event, without penalty, if we do not have enough Meet and Table Registrations etc.

We have no cutoff date to cancel the event if Covid-19 is still a problem that makes it impossible to hold the event in our format.

Thank you to those of you who have already registered and who have reserved/paid for your rooms! It's because of you that the hotel was willing to bend a bit on the terms of the contract.

Now it's up to the rest of the O Scale Community to decide if the March Meets continue or if they become another part of our history. It's a possibility that Covid-19 might shut us down for 2021; however, if we have enough support up to the cancellation date, we can pick up where we left off in 2022.

Some sad new here, Donald Degner, of Neenah, passed away on Monday, July 20, 2020. Don was a long time railroader and O scaler.

Glenn Guerra wrote an article called “The Railway Postal Service - A Visit With Don Degner” in the [May/June 2014 issue of The O Scale Resource Magazine](#).

On June 24, 1958, Don started working for the post office and became an RPO clerk until the end of the service. If you have not already read this article please do, it very informative. Don was also a fixture at the Neenah O Scale club for many years.

Early 2000's both photos. Don's purchase at Sommerfeld's Trains in Butler, WI. and Don with Matt Wittmann at the Neenah/Menasha Model Railroad Club in Neenah, WI.



Above courtesy of Brad Kowal

David Rees of [BlueRail Trains](#) says: BlueRail Trains and Tam Valley have released new compact circuit boards that allow any DCC decoder to be controlled by a smart device using the free BlueRail Trains iOS app.



The boards are available in 5 amp and 2 amp versions with a control range of 75+' (150' with optional external antenna). Power supply options are DCC, battery, or track power (AC/DC).

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Bill Yancey of [Modern Era O Scale](#) has two new decal sets: Wisconsin Central and Burlington Northern. WC boxcar decals (will work with Soo cars) and BN general freight decals. The BN set will work for boxcars, hoppers, gondolas etc. Note that as far as I know, these are the only BN decals in O scale. Modern Era O Scale will be selling decals until December 31st.

See his [Website](#) for details.

[Atlantis Models](#) has released the old White Fruehauf Gas Truck Sinclair / US Army Plastic Model kit. 1/48 Scale.

This kit was originally released in 1956. features detachable trailer, tilting front cab with detailed



engine and interior, detailed chassis, opening gas compartment doors on trailer and 2 figures with sign. Comes with Markings for Sinclair and US Army gasoline tanker. Features 57 parts Molded in green. Measures 10.75 inches long.



See their Website for more details.

Steve Moore fromof K.I.S.S. Method Inc. is offering free “Planners Have More Fun!!” and “How about a Big Kiss!!” billboards. These colorful, fun billboards will be, sure to fit-in with whatever scale you are modeling.



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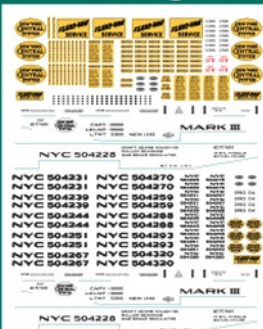
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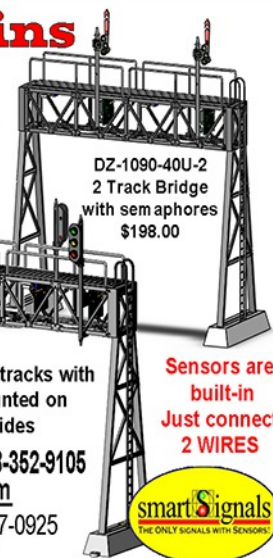
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Due to technical difficulties, you were unable to read a report last issue. So, some of this may be old news to those of you are really keeping up with everything O Scale 2 Rail. And some of it may be a rehash. To those of the first group, I apologize.

I guess it goes without saying in these times that has a lot has changed since I last wrote. Let's start off with a review of train shows, I'm sure most know the 2020 NMRA and joint SONC was canceled due to the virus. Lots of things figured into that decision which the O scale Kings organization fully supported. We will never know what may have happened, so let's look forward and not backward.

I am pleased, excited, and ecstatic to once again let everyone know that the 2021 O Scale National will be held in the Denver area. Bob Kjelland has taken on the role of Chair for this convention. Bob and his committee are moving quickly and putting together what looks will be just a total knockout national convention for the O Scale 2 Railers. Bob has lots of experience in many of the facets of running a convention, is an all-around good guy and most importantly, an O SCALE 2 RAILER. A lot of preliminary work has been going on, and definite dates and location in the Denver area should be made known shortly. A lot of crossing the T's and dotting the I's going on. I would also like to report that the acronym of SONC for O Scale National convention is being changed to OSN for O SCALE NATIONAL. The OSK's Board of Directors and I feel that this is a much needed change. I have always felt that having to explain what SONC stood for was not a natural, flow off the tongue explanation. O SCALE NATIONAL or OSN will also work into our current O Scale Central Plan. Wait what? What is this O Scale Central Plan? I'm glad you asked! Posted below is some basic introduction by young Nick, (I call him that because he is indeed younger than I am and I can't pronounce his last name "Bulgarino"... I have enough trouble with Smith and Jones. Thanks for your understanding Nick.) and before you say it, yes the following information is a little dated but please read on.

O Scale Central
A Plan to Revitalize and Improve O Scale 2-Rail
Bi-Weekly Yardmaster Update
originally Posted by Nick Bulgarino, June 12, 2020

To our Blog Contributors, Followers, and OS2R Community,

The signals for O Scale 2 Rail are flashing red. The threatened loss of the Chicago Show and the announcement by MTH that it will close its doors in 2021 are but two signs that we need to rally together and Save Our Scale. That effort is more important now than ever before. O Scale Central has a Plan, adopted by the O Scale Kings (OSK) to help revitalize and improve OS2R. This message describes the Plan and tells what you can do to help and make it work.

The Plan has three major parts. First, OS2R modelers need complete, up to date listings of products, services and resources for new and long-time modelers in the Scale. Second, we need a dedicated place on the Internet to host OS2R-specific discussions. Third, we need to promote the Scale and make the case for OS2R to modelers in other scales and those who haven't pick a scale. There are other aspects to the Plan, but these are the core online components. Each website in the network will have specific, focused content. To make the

programs work, we need your help. Commitment, enthusiasm and skills are needed. Please read carefully, and feel free to reach out to us if these areas interest you.

O Scale Central is the hub of the O Scale Network. It will be a single webpage, with logos, links and descriptions for each of the other websites in the network. There will be a tab on each website titled “O Scale Network” with a drop-down menu of clickable links to the other sites. Clicking on the tab itself will link back to the O Scale Central page.

O Scale Info will collect and display available information on the Scale, including links to the O Scale Product Reference Guide, the O Scale YouTube Channel, articles on getting started and links to O Scale events. Sections on O Scale history, articles, catalogs and kit instructions will be posted here as well. O Scale Info will need help gathering and updating information on the Scale. We will need people to send in the contact information (name, address, phone number, email and website) of businesses that sell products or provide any services for modelers in 1:48. This work can be done through Google searches, reviewing magazine advertiser indexes, articles and searching your wallet for all those business cards handed out at shows. O Scale Info will also need help with formatting the Guide, including help from O Scalers with technical skills to help input the information into the Website and format it for public use. The Guide will be searchable by region, product type and name. O Scale Info will also need volunteers to keep these listings up to date. This will involve periodically checking to make sure the links, phone number and addresses are valid and the lists of products and services up to date. To volunteer to work on the O Scale Info program, contact Nick Buglarino at nbugarino@gmail.com with your interests, talents and time.

O Scale Forum is the website to discuss all topics in OS2R. There will be a public section and an OSK member’s only section. Community announcements will be hosted here. The site will also serve as a point of contact between OSK admin, OSK members and OS2R modelers not yet members, as well as manufacturers and other vendors. O Scale Forum will need moderators with knowledge of the Scale, as well as knowledge on specific topics, such as electronics, different track gauges (P:48, On3, On30, etc.). The Forum will also need people to post on behalf of the O Scale Kings. Please contact Nick Bulgarino at nbugarino@gmail.com if you’re interested in moderating the forum.

O Scale National (www.oscalenational.com/) This site is home base for convention activities, programs and updates. The 2021 convention will be in Denver, CO. Please check this website for updates. The Convention Committee is starting up. To help, contact Bob Kjelland at osn2021@oscalenational.com.

O Scale YouTube will be OS2R’s video library. Playlists will be focused on specific topics, including orientation and getting started, general skill building, layout tours, workbench troubleshooting, member submissions, product reviews, etc. This site is the place to find and access videos on OS2R. We will need content creators for different video series, as well as video editors. If you are interested in making or editing content, please contact Nick Bulgarino at nbugarino@gmail.com.

O Scale Kings (www.oscalekings.org/WP) is the OSK home website. It will include a listing and description of OSK and O Scale Central programs. It will also be the administrative and organizational home for OSK, and will include membership information. The site will allow users to see what is happening with the organization. The site will include the President’s Message, a rotating photo display, “What’s on Your Work Bench” and the O Scale Hall of Fame.

OSK needs you to become a member to support our efforts. To join the O Scale Kings, visit: <https://oscalekings.org/WP/on-line-membership/>. We also need your help. Specifically, we need a photo editor for the photo gallery and a coordinator for the “What’s on Your Workbench?” column, as well as regular contributors (<https://oscalekings.org/WP/whats-on-your-workbench/>). We need your submissions to help showcase the wide range of projects in all the 1:48 track gauges. To participate in the “What’s on Your Workbench?” article series and work with photo submissions, please contact Bruce Blackwood at: bruce@oscalekings.org. This Plan can impact the future of OS2R, and to do that we need your support. Your membership dues will help make this project a reality.

There are important parts of the Plan in addition to the online programs. Many newer modelers aren't even aware of OS2R. A large part of the O Scale Central mission is to increase our presence, including at all-scale and O Scale 3-Rail train shows. We need volunteers to identify local shows for our master calendar of events, as well as to run OS2R booths at your local shows, with information, models and literature on OS2R. We also need help writing, producing and distributing literature for this initiative as well as volunteers to run the booth during shows. To volunteer, please email Nick Bulgarino at nbulgarino@gmail.com.

O Scale 2 Rail means a lot of things to a lot of people. We think OS2R includes any modeler who models in 1:48 with two rails. This includes all of the track gauges within that Scale: O Standard (OW5), P:48, On3, On30, On2, On18, as well as sub-communities like Traction and Interurban and Mass Transit/Subways. As the NMRA Special Interest Group (SIG) for 2-Rail 1:48 modeling, OSK represents the interests of all these communities, and will include them in the website network, Product Reference Guide and Forum. If you are active in any of these important groups and can coordinate OSK programs, reach out to Nick Buglarino at nbulgarino@gmail.com.

The signals for O Scale 2 Rail are flashing red. Our community is small, but dedicated. We have the ability to Save Our Scale, and through this Plan and your help, we will. Promote the Scale; work with us to project this Scale as the viable modeling scale.

As I said that last bit was a little bit dated. Want to be up on the current/recent happenings? Go to: <https://oscaleforum.com/>

Chicago 2021: as I hope all of you have seen, a group of fine gents are attempting to run a 2021. Same basic concept of a show, same hotel, and of course with Covid 19 some not so minor changes to the way that business needs to get done. The current deadline for meeting room requirements is January 15, 2021. The first block of rooms are being sold on a prepaid basis, not your traditional cancelable reservation 48 hours out. If the show just does not go on, I understand that the rooms will be refundable. Yes, I said prepaid, that means that you are going to have to pay when you make the reservation. Of course if Covid 19 or some other virus is upon us at that point and the hotel has to shut down by governmental mandate, you will get a refund. I have a room reservation that has been paid. If for some reason the show does not go on, and we cannot get a refund for the room, I have committed the O scale Kings as an organization to at least have a general membership meeting at the hotel and to seek out and put plans together for some activities such as rail fanning, layout tours and the such. Maybe it will just be a big opportunity to catch up with old friends and chitchat. Maybe we can work out some sort of show and tell like in our old elementary school days. But we're going to have a good time. I believe at this time, 82% of the required rooms in the first block have been sold. This would be a great opportunity for those of you who have not already made a reservation to step up and show your support for O scale two rail and reserve that last 18% one room at a time. Please go to: <https://marchmeet.net/WP/> for the latest flyer and info.

Cleveland: Sam reports that things are still a go for the show and advises that facemasks will be required per government regulations. Please also check the President's message on the O scale Kings website for August to find details of a face mask contest and award. Information available for this November 7th show: <http://www.cleveshows.com/PDFS/2020%20Cleveland%20O%20Scale%20Meet%20table%20registration.pdf>

I hope by reading this that you are now excited about happenings in the O scale 2 rail community and are asking what YOU can do to get involved and help. This really is the dawning of the best of times in model railroading with all the advancements that have been made. Some of you may argue that not all these things are for the better, but I'm telling you I believe they are. Think about the ready to run market and how many modelers can join our scale without having to be the type of craftsmen that early 2 rail pioneers were. DCC alone invites the younger generations because of its many technical facets to the younger generations. And the list goes on and on and on. So here are some things that you can do to help.

1. If you're not a member already, Please Join us: <https://oscalekings.org/>

2. Bob will not be able to put on a fantastic convention by himself. He is looking for volunteers to serve on both the executive committee and the steering committees. If you have skills, and even if you think you don't but want to help, please contact him direct. Bob Kjelland at osn2021@oscalenational.com
3. Lots to be done on the O Scale Central Plan. Again, if you have skills, and even if you think you don't, but want to help, please contact Nick @ nbulgarino@gmail.com.
4. Elections for the O Scale King's Board of Directors is just around the corner. New officers will take their positions January 1, 2021 And again, If you have skills, and even if you think you don't, but want to help, please contact me @ Bruce@oscalekings.org. Nominations are underway and will be accepted until September 30. If you know of a member of the O scale Kings in good standing that you would like to nominate, please do so by sending the name directly to Sam Shumaker, past president, at jld464@yahoo.com and copy me at Bruce@oscalekings.org
5. Dues are due on Jan 1st. DON'T PROCRASTINATE, PAY NOW! PAY OFTEN! <https://oscalekings.org/>

I am always available for your comments and concerns @ Bruce@oscalekings.org

Thanks,

Bruce B. Blackwood

President, O Scale Kings dba O Scale 2 Railers

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O Scale Central Launches!

By Nick Bulgarino

This updates the March/April 2020 O Scale Resource article, “State of Two-Rail O Scale, and Update,” by David Vaughn.

O Scale Central is a program resulting from the initial “Save Our Scale” Blog and discussion. Its purpose is to provide free online information and resources to connect and meet the needs of the current and future O Scale 2 Rail (OS2R) community on a central online platform. A network of websites will link as many other OS2R sites, businesses and resources as possible. [O Scale Kings \(oscalekings.org\)](https://oscalekings.org) has adopted the plan.

The first program has been launched! O Scale Forum (<https://oscaleforum.com/>) is an online forum dedicated to OS2R discussion. Got a question? Want to explore a topic? Run into a problem and need help from fellow OS2R modelers? Check it out. Visit the site, create a free account and jump into OS2R discussions! Other forums also have 2 Rail content. This forum is not intended to replace them, but others may include lots of 3-Rail discussion. O Scale Forum is exclusively for O 2-Rail specific topics.

We are also working on the O Scale Info website, which will serve as a central information resource for OS2R. The most important component on the O Scale Info website will be the OS2R Product Guide, which will be an up-to-date listing of as many current O Scale 2 Rail businesses, manufacturers, vendors and service providers as we can find. If you know of a business, please let us know via [email \(oscalecentral@gmail.com\)](mailto:oscalecentral@gmail.com).

O Scale Info will include descriptions and information on how to use and navigate the highly important secondary market, including train shows, resellers, eBay and auctions. O Scale Info will also include topics on how to get started in OS2R, basic kit building and small and medium sized layout design and construction, and will also provide links to as many other forums, guides and social media outlets as can be found. We want to make getting around the OS2R community as easy and inclusive as possible.

We want to keep everybody, including newbies and converts exploring the scale, as informed and connected as we can. The future of the scale depends on it.

The “[Save our Scale” Blog \(https://tworailoscaleblog.wordpress.com/\)](https://tworailoscaleblog.wordpress.com/) referred to in the March/April O Scale Resource article has become the home to O Scale Central. Each week, the Blog is updated with O Scale news, program updates and topics about OS2R. Topics have included outreach to other scales, how best to work train shows and stories about how to get started in O Scale. Please visit the Blog to follow this program and comment.

Want to help with O Scale Central? There are a few ways we need help. First, if you have not done so already, visit our Blog and our [Facebook page \(facebook.com/OScaleCentralPlan\)](https://facebook.com/OScaleCentralPlan). Share our posts with O Scalers and other model train enthusiasts alike. Spreading the word about O Scale will increase its visibility. Write into the Blog or our [email \(oscalecentral@gmail.com\)](mailto:oscalecentral@gmail.com) with your skills and interests. There are many jobs that need to be done, and we want to give you a choice in how to be a part of the revitalization of OS2R. Finally, join the O Scale Kings. Your support of the OSK supports this Plan.

Thank you for reading. We hope to see you on line with us and at a local train show soon!

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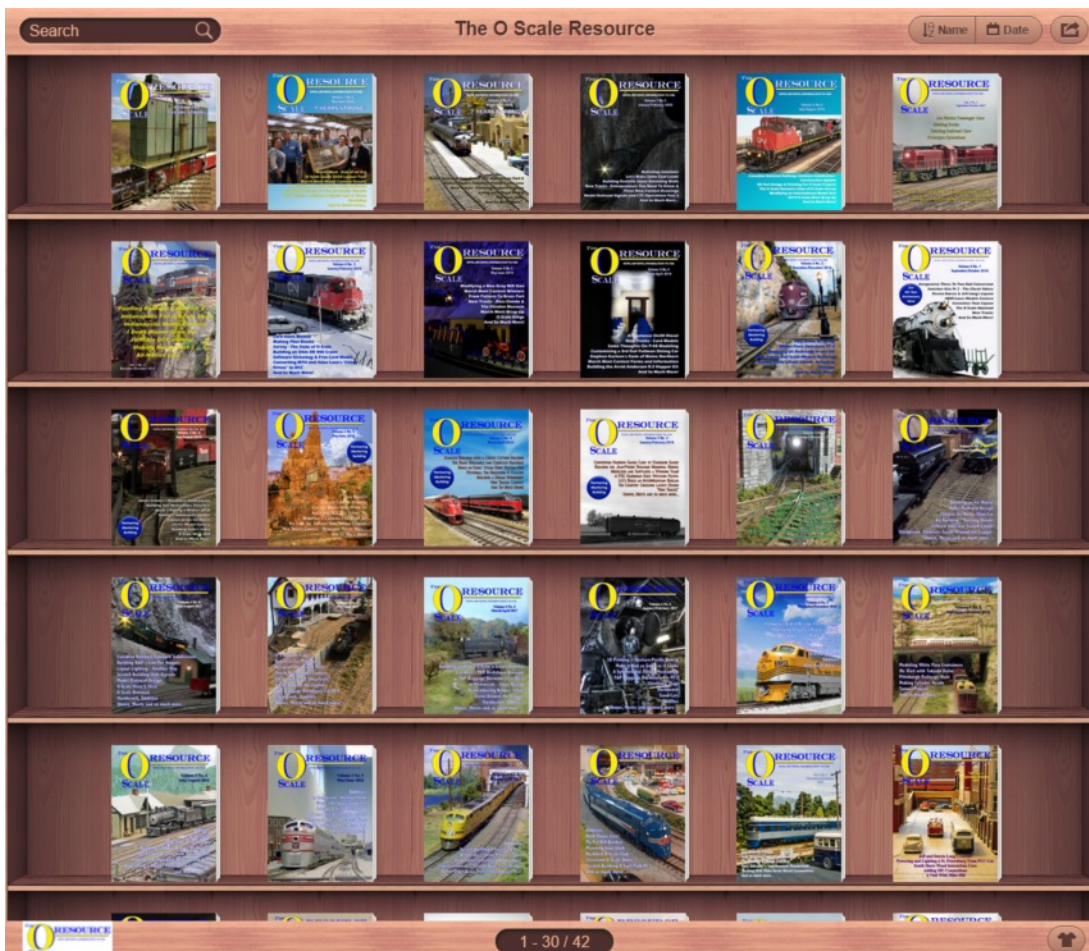
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***A*LL NATION LINE
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By Dan Dawdy

Earlier this past Spring I received an Email from Danny Pope who was looking for some assistance in finding someone who may be interested in acquiring what is left of the All Nation Line. Danny's Father William B. Pope Sr. bought the All Nation Line from Bob Colson back in 1972 and continued till his passing in 2006.

In the [November/December Issue of The O Scale Resource Magazine](#), Glenn Guerra covered the All Nation story in the Bob Colson era.

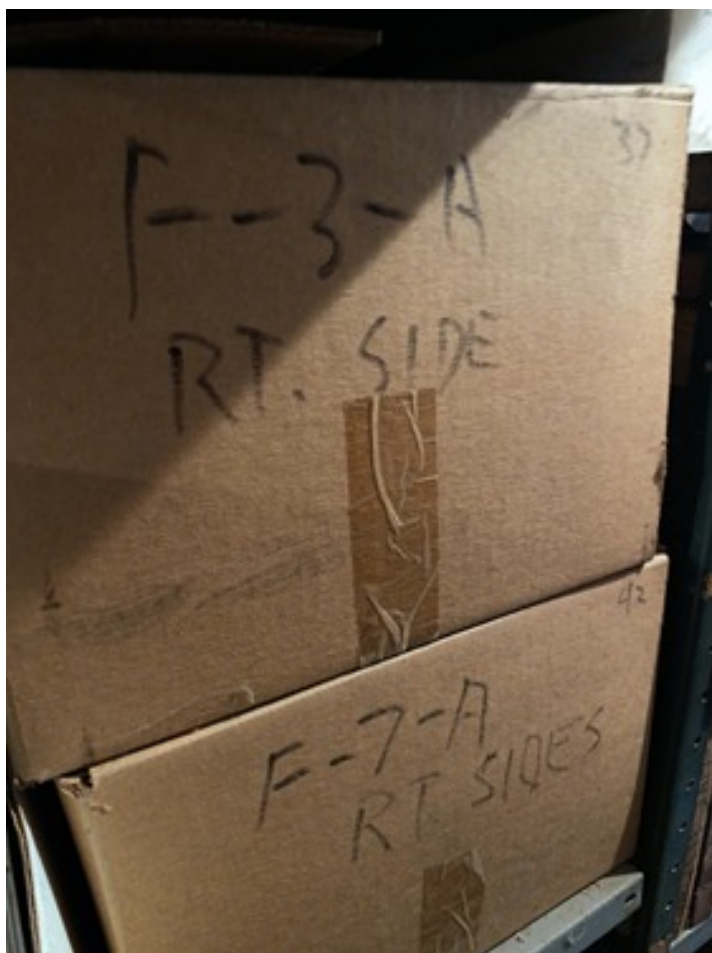


Back in July of this year, I went up so see Danny and tour the old building. There is a lot of stuff as you will see. They want to sell it as one lot. They don't want a bunch of looky-lou's walking around cherry picking items. While I don't know an exact asking price, I do know it's not as much as some would think. And after looking at the pictures (which are just a small sampling), I think you will agree the the sum of the parts is greater than the whole. It would be a great opportunity for a group, or even a club, to make an offer and sell parts at shows or on-line to possibly recover their investment and still have a lot of parts and pieces left over. There is very little, if any, tooling left, but a lot of stock, parts, castings and rolling stock.

If you have a serious interest in getting in touch with the family as to a possible purchase, please email me at AllNation@oscaleresource.com and I'll pass on your inquiry. No, I am not getting a finder's fee for any of this, but I do feel it's a part of O scale history which should not be forgotten and, well, there is some cool stuff there. If I only had a place to stash it and a little time...









BAG OF TRICKS ADDITION: *PLOTTER CUTTER DECALS*

By: Santiago Pineda



*The Burlington received thirty VO-1000s starting in November 1943.
It was only after WWII that they were dressed in the famous black bird livery.*

O scale has made major offering advances in the last decade. Except, every once in a while, we are forced to find an elaborate solution to a dull problem. This time around the issue was: decals availability. Looking to decorate a Car Works Baldwin VO-1000 in an as delivered CB&Q, all-black livery, proved too difficult. Finding a decal set with the famous Everywhere West and Way of the Zephyrs slogans was simply not possible. So, I put on my “Builder’s Scale” hat and solved the impasse using a computer and a plotter cutter.



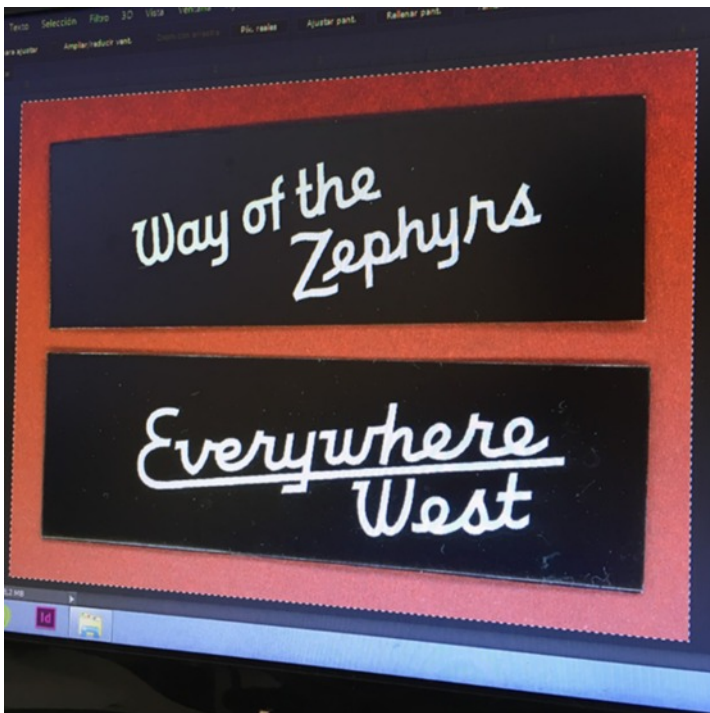
The Car Works made some outstanding imports with remarkable variations. This VO-1000 with curved walls required little detailing work and was very pleasant to work on.

Having used self-adhesive vinyl cut letters in my college years, I was well aware of the use and precision of plotter cutting technology. With some [Microscale White Trim Film \(02-1\)](#) paper at hand, all I needed to try this experiment was a file with the correct artwork.

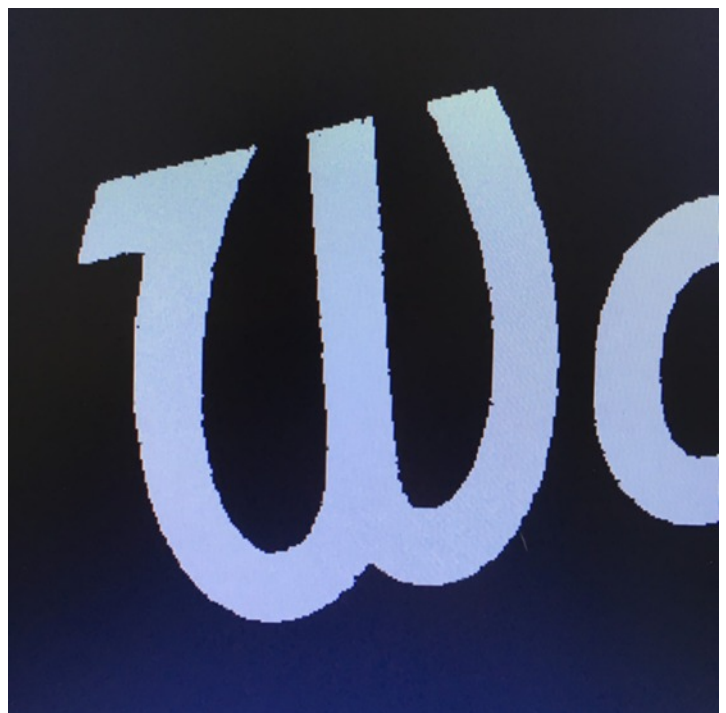
To obtain and digitalize the slogans, I purchased an HO scale CB&Q switcher decal set. The slogans were applied in a traditional fashion on a previously painted copper plate, and later scanned in high resolution. Once scanned, Photoshop was used to the set contrast to the maximum level. That is, until the file was composed of only white and black pixels. Thus allowing for an easier selection and further manipulation of the slogans, which blown up from HO scale start to show the tradeoffs of further miniaturization. In other words, HO scale decals are not as sharp as one might think!



The HO slogans were applied on a separate plate for a high contrast scan.

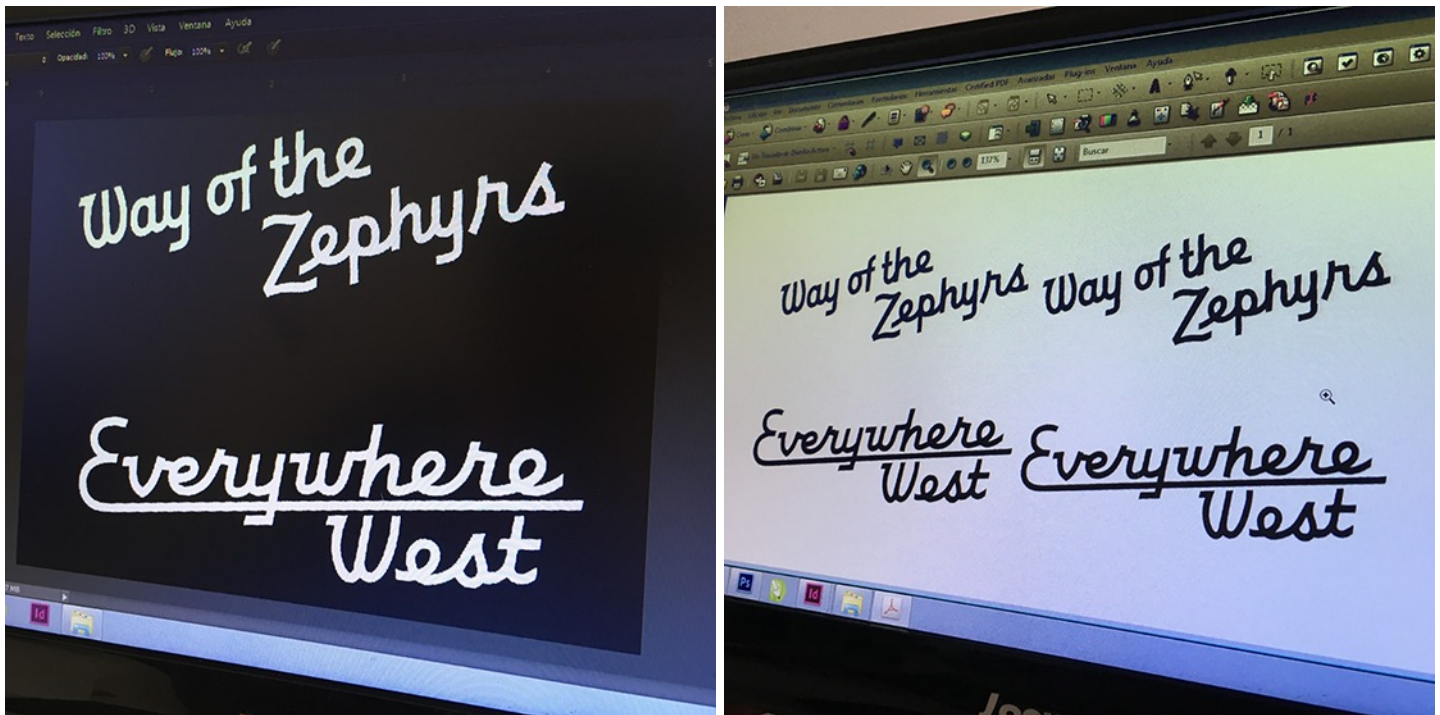


The high-resolution scan before digital manipulation.



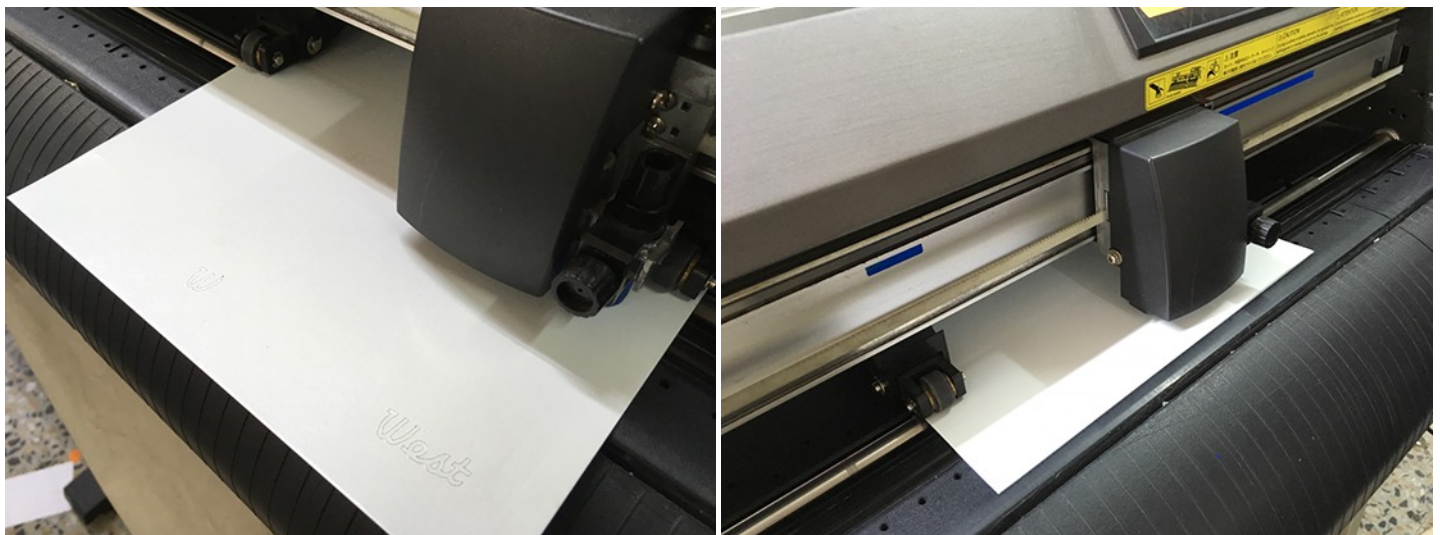
The irregularities on the edges of the HO scale decals became apparent when scanned in high-resolution.

Once the slogans edges were refined, the file was vectored. This last step is simple yet tedious to describe, so consider watching one of many YouTube video tutorials on how to obtain a file in either Photoshop or Illustrator that will be appropriate for plotter or vinyl cutting machines.

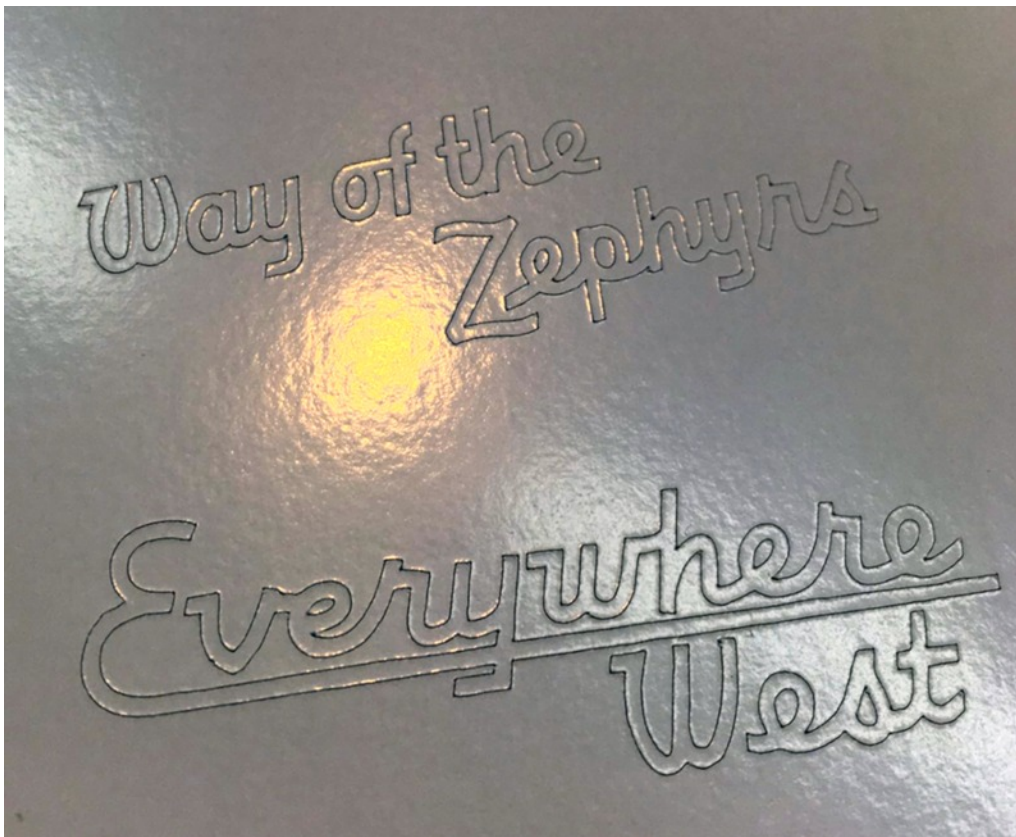


The treated files being vectored for cutting.

After letting the sturdy Graphtec Ce6000-60 do its work, the cutout paper sheet looked encouraging. The cutter left a clear mark on the surface, effectively cutting through the decal film without separating the blue backing paper. Other than a couple of spots where some minor snipping was needed, the sheet came out fine.



Running a first test on the Graphtec Ce6000-60. Keep in mind that blade pressure and paper thickness acceptance may require calibration.



A close-up of the Trim Film sheet as it came out of the plotter cutter. One compromise of using this technique is that there may be spots where the blade tore the paper rather than cut it. At any rate, these slogans sure pushed the machine to its limits.

Applying the decals was no different from the traditional method apart from the fact that the film was the shape itself; there was no clear film around it. This resulted in a benefit and a drawback. The advantage was lack of clear film showing around the slogans, and the impossibility of such film silvering over time. The disadvantage was being extra careful with a more delicate decal, which was somewhat difficult to align.



A quick test before final application. I was all agog to see the test yield results.



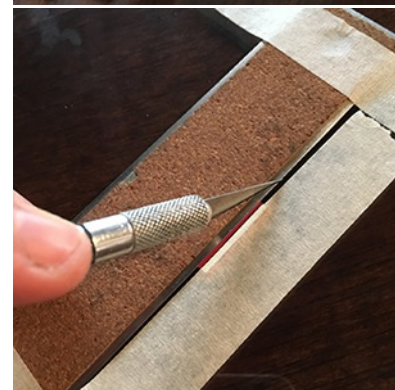
Decals soaking in distilled water.



Here, the final application was completed. To finish the paint job, the engine was clear coated using Microscale Satin.

Pursuing this solution was worthwhile. In the end, I was able to complete a special project while adding a new trick to my scale-modeling bag. There must be a variety of other applications for this approach. Just off the top of my head, I can see myself using it on Tamiya's masking paper sheets when complex curves are involved in painting a model. Whatever use someone may find, I hope it serves fellow modelers at the encounter of those pesky O scale-modeling roadblocks we know only too well.

The rest of the decals came from a Protocraft CB&Q refrigerator set. Kudos to Protocraft for their ongoing additions to their exceptional decal line!





According to photographic evidence, the conspicuous handle on this side of the engine was black despite being on a white area of the slogan. I kept it black for prototypical fidelity.

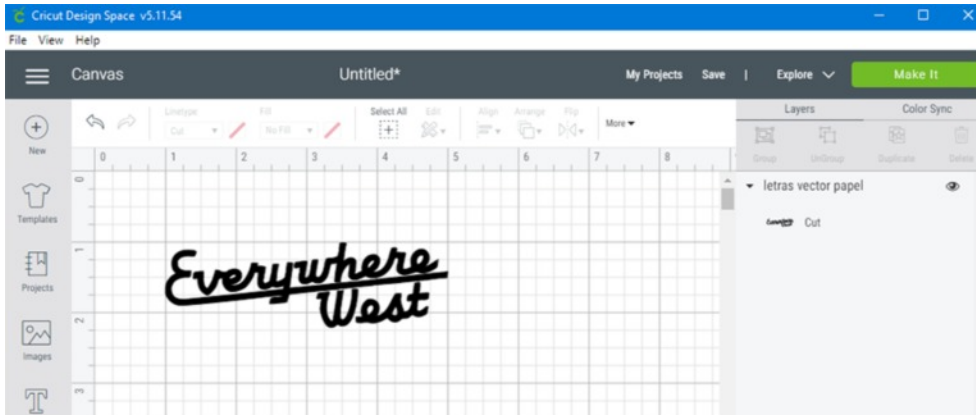






Editors note: After reading Santiago's article I thought this would work with my Cricut. I have used my Cricut for buildings as written up here in the [March/April 2018 issue of The O Scale Resource Magazine](#). I never even thought about running white, or any colored decal paper from [Microscale Industries](#).

Microscale calls this Trimfilm which is basically a single color sheet of decal paper. So I asked Santiago for his file to see if I could cut this. He sent a Corel file which is the one program I don't use. No problem as I went to <https://cloudconvert.com> and uploaded the Corel CDR file and had it converted to a PDF which is just one of many options. I open the PDF with Photoshop and cropped and flattened the image. I then saved it as a PNG and imported into Cricut Design Space. I resized and printed. I did not have white decal paper so I just tested with plain printer paper.



The results were excellent. Now of course, we can't do this with everything as you will be getting individual letterers and numbers which make decaling a challenge, but in some cases, and depending on the lettering this is a great option.

*Chesapeake and
Ohio*

Would work well as would as would:

Canadian Pacific

I want to again thank Santiago for thinking outside the box. I am kicking myself for not coming up with this idea on my own. It's a great idea and has many uses!



The Sherline Milling Machine

A Good Machine and a Good Size for Model Railroading



Sherline Products makes small precision machine tools. This is one of their vertical spindle milling machines and some of the accessories they make for it. Note the size of it on my work bench.

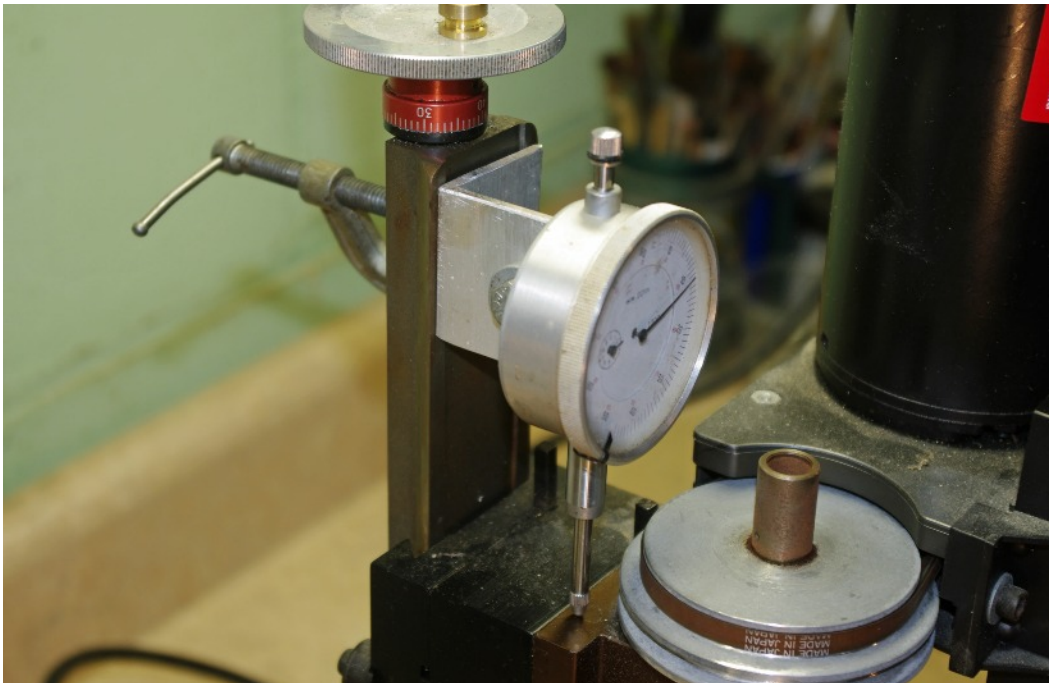
By Glenn Guerra

I recently acquired a small milling machine made by Sherline Products. In the past, I have had to go to a friend's house to use their mill. This was not always convenient, and they are machinists, so their machine was large. One thing on my wish list was to get a vertical mill similar to a Bridgeport mill. The problem is these machines are very heavy and need three phase electric to run them. The smaller bench machines also seemed a little big, but at least they ran on 110 volts. I did not care for the machines with the round columns and the moving heads. To adjust the "Z" axis (up and down) on these machines you need to raise and lower the whole head. This takes the load off of the lead screw and the head can settle more than you want. There is a small machine made by Grizzly that has a raising table, or knee as it is called, just like a Bridgeport style mill and this is a much better way to control your "Z" axis. To increase the depth of cut with a knee mill like this, you raise the knee and are always working against the lead screw. There is no backlash to deal with. This mill had all the features I wanted, but was still 600 pounds and more money than I had to spend. When Harmon Monk passed away a few years ago, Marie Monk sold me his tools and I was able to get his Sherline mill. Harmon had also acquired many of the accessories they make.

Well, I thought I was off to the races. Not so, I had to learn how to use the machine. My initial reaction was not too good. This summer, I have been working on two scratch built steam locomotives for myself and have been using the mill a lot. Now that I am learning some better machining practices, I am finding it's a very good machine. I am glad I got it, and I'm learning a lot and having a lot of fun.

For starters, the machine fits on the work bench and can be picked up and moved. In addition, it's a good size for an O scale model. I can sit at my workbench and use it just like sitting in front of your computer. Another thing I do like a lot is they make all kinds of good accessories for the machine, and this means the machine will do a lot of different things. When working on models, we are using very small cutters and the Sherline mill gives you good feel for those small cutters. I have used some .032" diameter cutters and not broken them.

One thing I don't care for and had trouble with, is the mill does have poor control of the "Z" axis because the head moves up and down. After some fooling around, I was able to deal with that. I will be doing a lot of articles about building my models, starting with this issue, and the Sherline mill will be used a lot. For now, let me show you a few photos to give you some ideas.

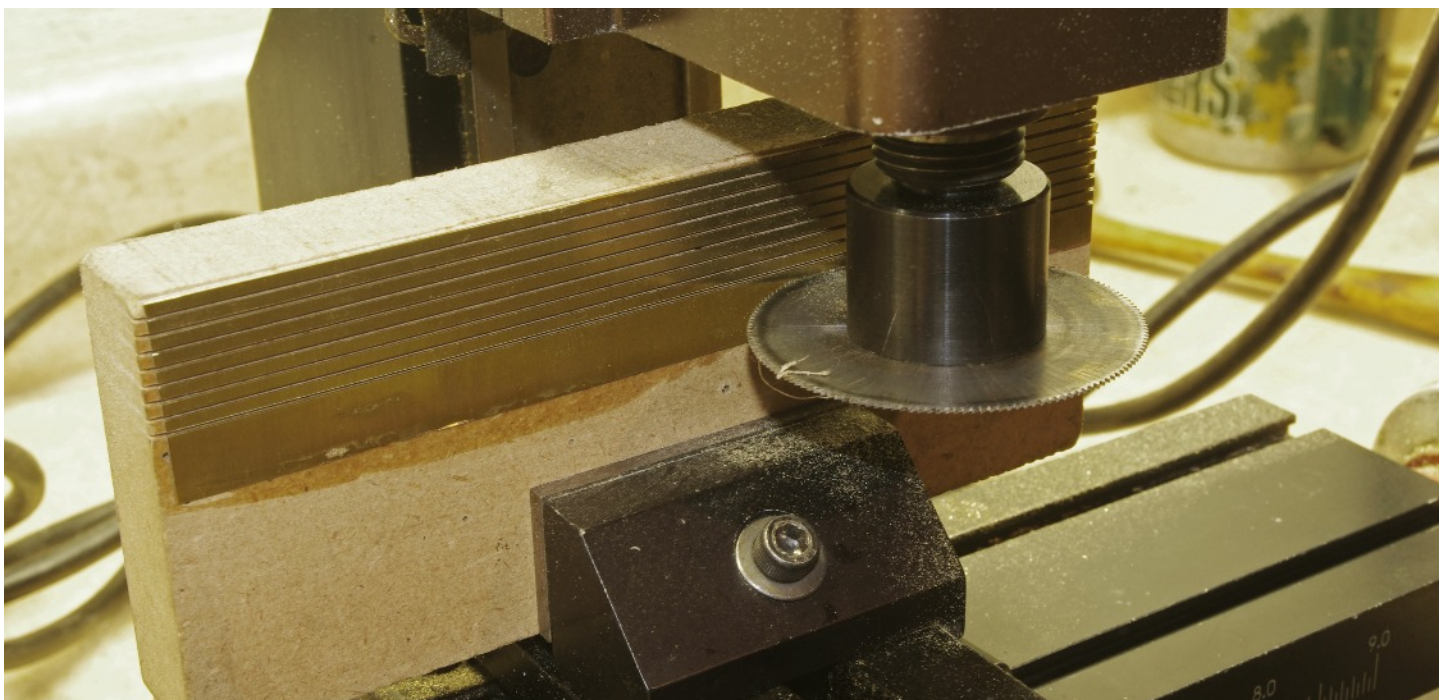


As I mentioned, machines that use raising or lowering the head to control the "Z" axis have poor control of the "Z" axis. The problem is the lead screw is holding the head up and the nut is seated against the thread. To make the head go down, you need to screw the lead screw the other way. All machines have play in their lead screws and good machinists know how to work around this. Most of us are not good machinists, and this becomes a real problem for us. When you turn the lead screw to force the head down, it will show 10 to 20 thousandths of an inch on the dial before anything happens. So if you want to move down only .010" how do you know where you are? The dial is not showing you because of the play in the lead screw.

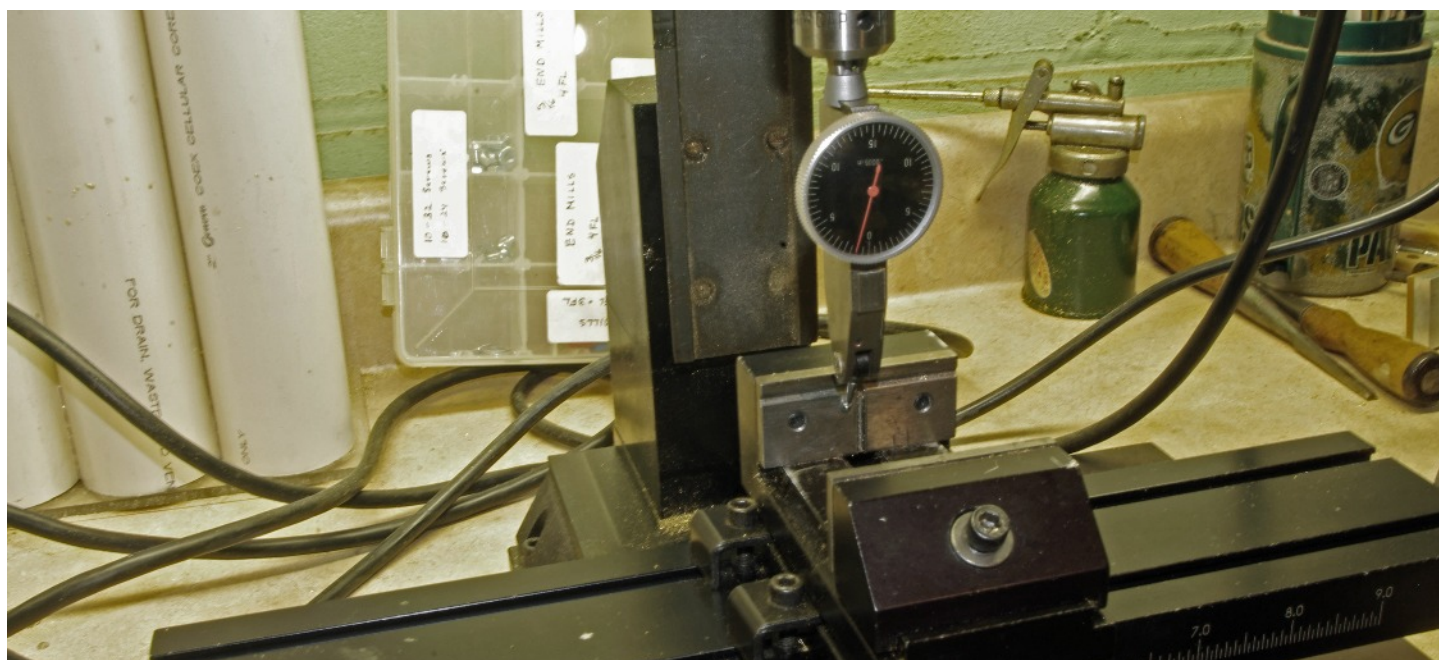
The solution is a digital read out or an indicator on the head that tells you what the head is doing instead of what the lead screw is doing. The digital read out for the "Z" axis on this machine is cheap, but more than I have right now, so I needed to do something else. I have some dial indicators, and thought I could use them.

This photo shows what I did. A small piece of cheap hardware store aluminum angle, which I had laying around, worked as a mount. I drilled a 1/4" hole to bolt the dial indicator to the angle. The angle is held to the vertical column with a "C" clamp. The dial indicator is only a 1" travel so I set it where I need to. When I touch off the cutter to my work, I set the dial indicator with the "C" clamp and then rotate the dial to read zero. Now, when I need to move down .010", I move the cutter off the work and drop the head with the lead screw. Watch the dial and overshoot your mark. Then come back up so you are showing .010" on the dial. The lead screw is now holding your head up, and the dial has shown you exactly how much deeper your cut will be.

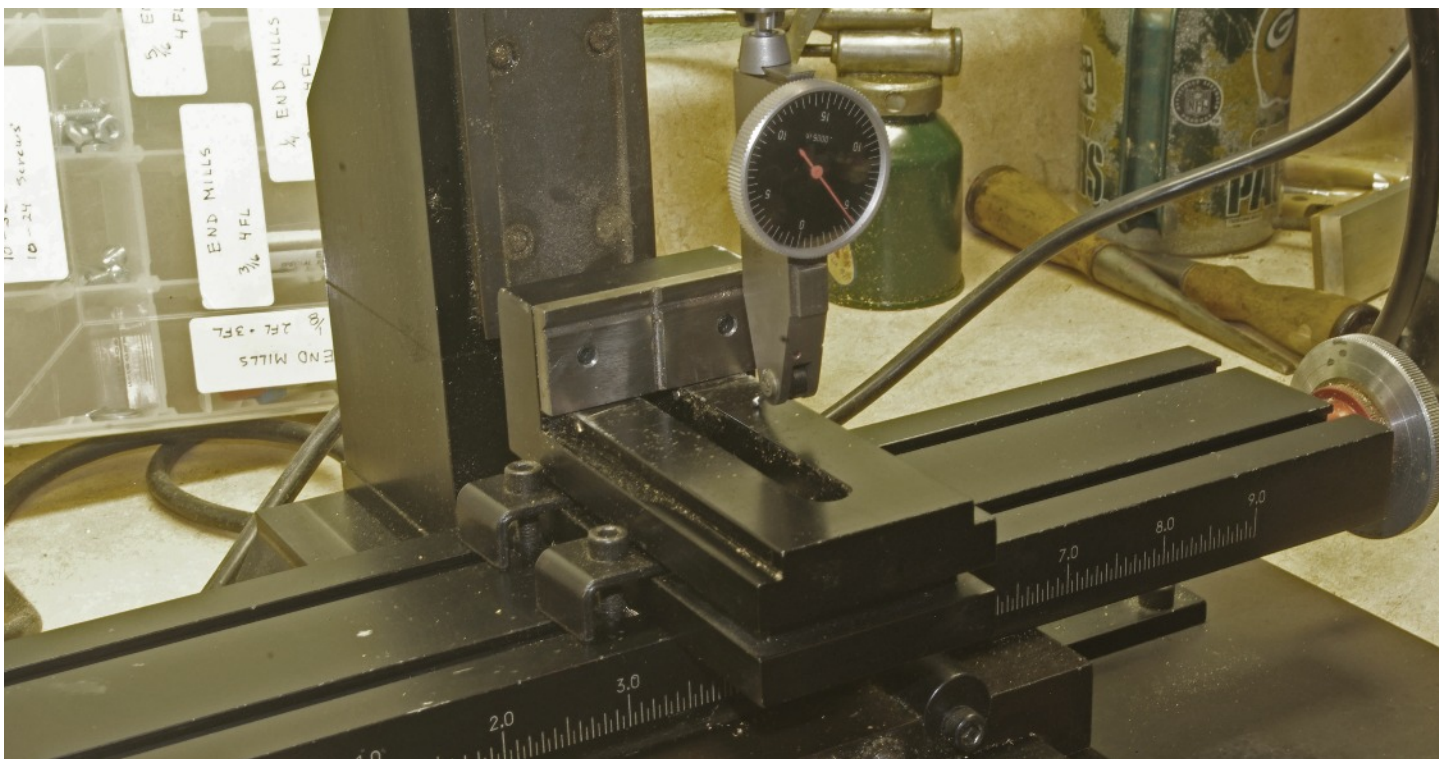
The accuracy of my work has gone up a lot since I started using the indicator this way. If you can afford the \$90 digital read out I would recommend getting it, but if you already have a dial indicator like this, it will work for you.



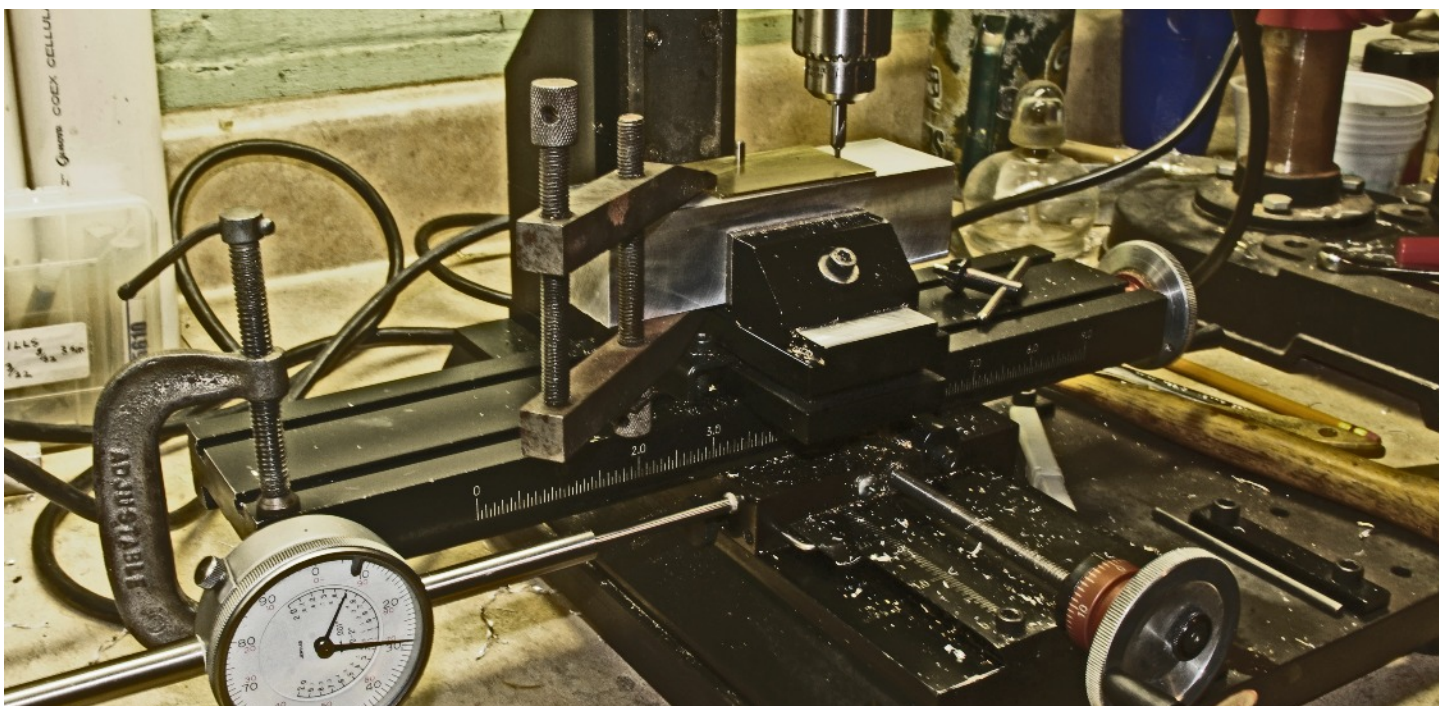
This is one of the ideas I came up with. I found I could glue brass to fiber board with ACC glue and it would hold while I machined the brass. You need to go slow and take small cuts, but it will work. I will have lots of examples of this in future articles. Here I glued some .008" thick brass to the wood. I am using the slotting saw to cut some .052" wide strips that I will use to make the springs for the models. When you get the strips cut, gently pry them off and soak them in Acetone to get the ACC glue off. I can now cut any size bar brass I want, no need to look for something that will work.



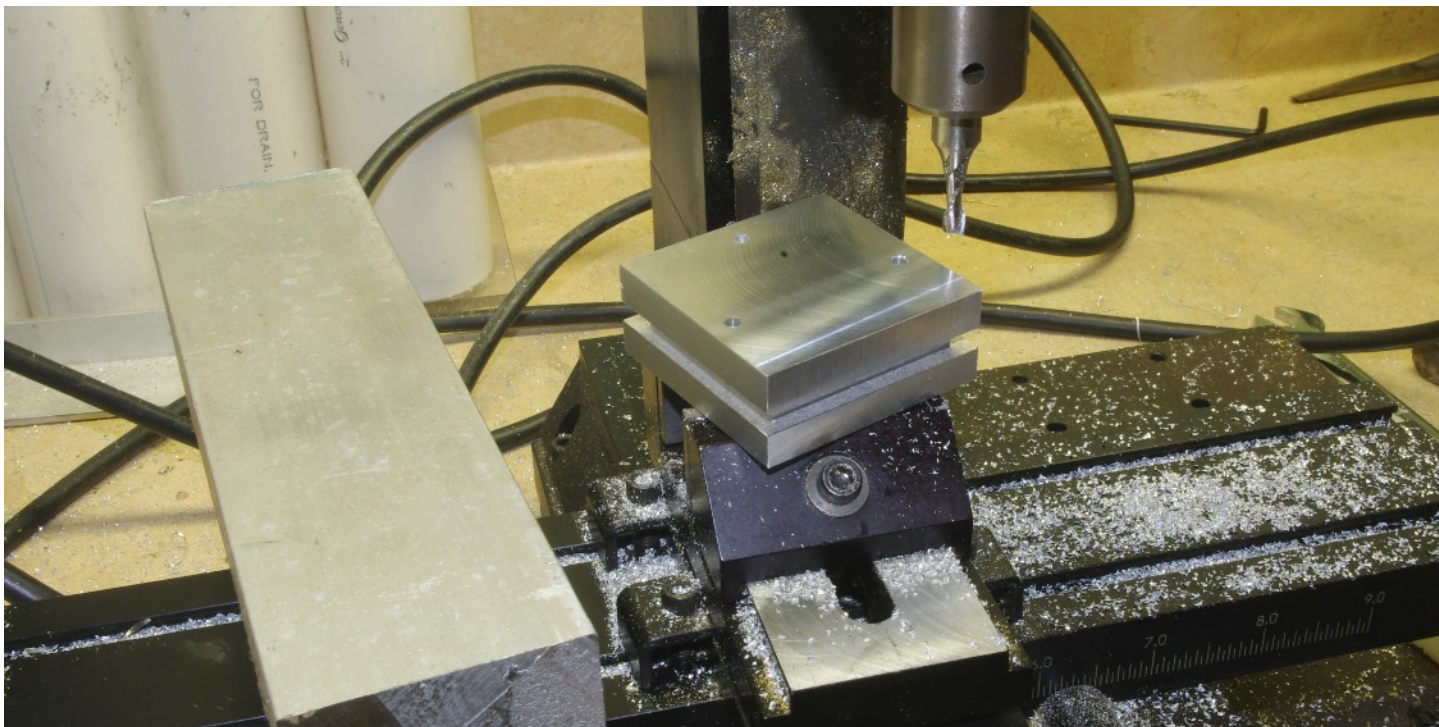
When machining anything, think about how you are holding it. The accuracy of your work is dependent on the accuracy of the machine. My machinist friends would check their machines and vice to make sure it was where it should be. These are some of the things I am learning about good practices. Here I am checking the fixed face of the vise with the dial indicator. When you put the vice on the table, the fixed face must be parallel to the travel of the table. The relation to the table is not important, all you care about is if the face of the vice is parallel to the travel of the table. Move the "X" axis table back and forth so the dial indicator reads the same all the way across the face of the vice. Position the vice so you get a consistent reading across the fixed face and you will get square cuts.



Here I am checking the bed of the vice. I was having trouble squaring up a block and thought I was doing something wrong. When I checked the bed of the vice, it was .015" lower at the end than it was at the fixed jaw. I fixed this by taking a very light cut on the bed of the vice to make it flat and parallel to the table axis. This also greatly improved the accuracy of my work.



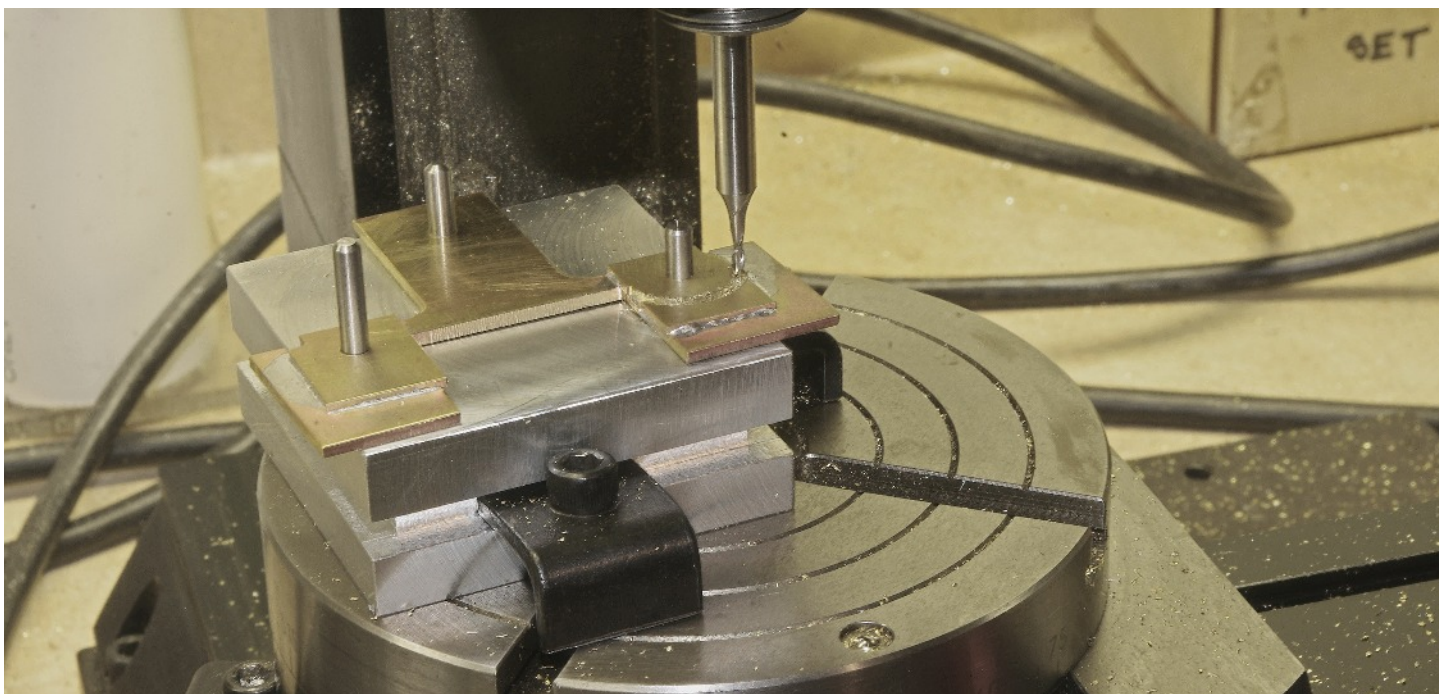
Here I am using a fixture I made to drill three holes in some brass. The holes will be the boiler centerline and the two cylinder center lines. More on this in the article about making the cylinders. Note that I was so happy with my dial indicator on the "Z" axis that I put one on the "X" axis. This is working very well for me. If you can afford the digital read out get it, your work will be much better and you will be much happier. If not, consider doing something similar to what I did.



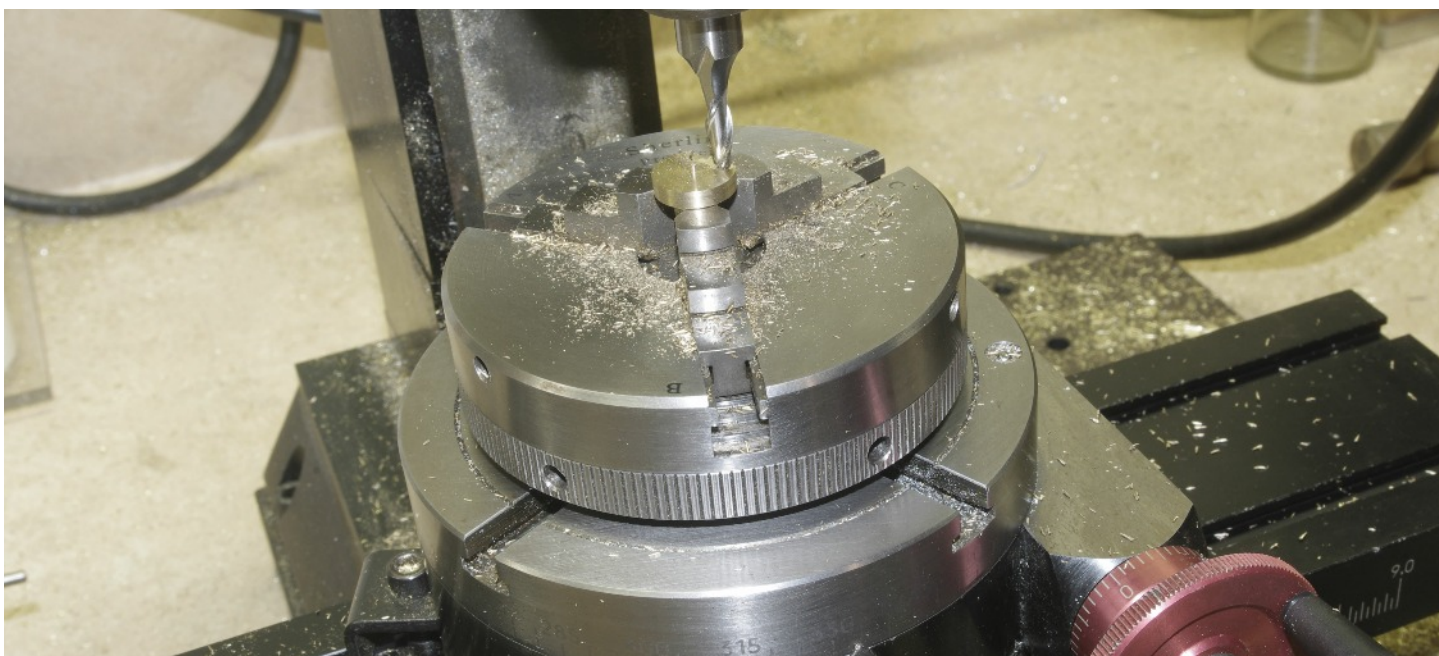
This is a fixture I made for making my cylinders. You will see more about this in the cylinder article. I made this from a piece of the bar on the left. After I cut off a piece, I had to square up the block. Now that I have the vice square and the bed of the vice flat and parallel to the table plane, I was able to square up the block. This is no fault of this machine; it is all just good practice and things I am learning. When good machinists change vices and other accessories, it is always important to see they are where they are supposed to be.



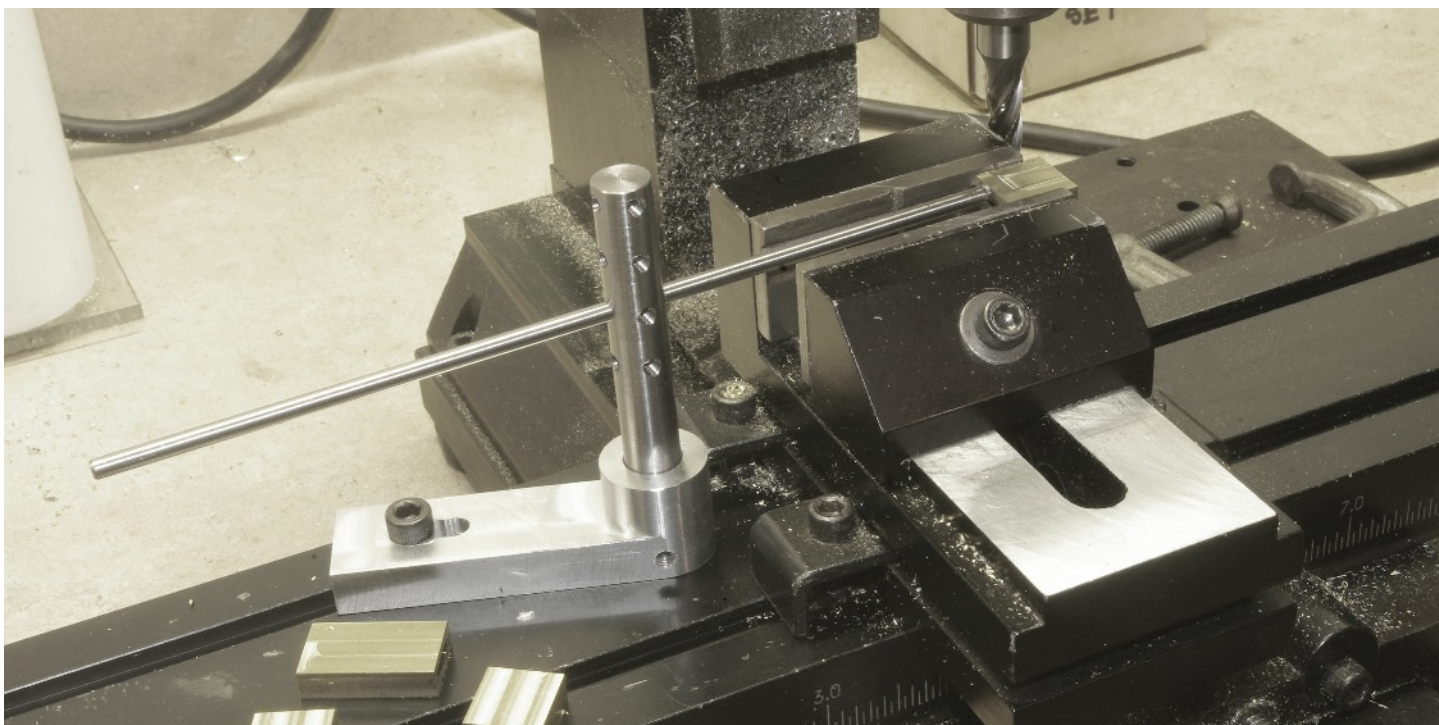
The fixture in the photo above is going to be used with the rotary table. When you put the rotary table on, you need to establish where the exact center of rotation is. The reason you are using the rotary table is to cut some curve or layout a circular pattern of holes. With the rotary table bolted down, use a dial indicator as shown. Move the table in "X" and "Y" axis to approximate the center while you rotate the chuck with the dial indicator in it. Don't rotate the rotary table. When you are close, lower the dial indicator into the hole and rotate the chuck. Keep moving the "X" and "Y" axis until the dial indicator reads the same all the way around. Once you have located the center, set your digital read outs to zero.



Here is my fixture block in the rotary table and I am machining the contour of the cylinder fronts. The rotary table is a nice accessory to have and it is well built. After using the dial indicator to square up the vice, you will have some practice for setting up the rotary table to do what you want. In the previous photo, I found the center of the rotary table when I mounted it. When I set the fixture on the rotary table, I used the dial indicator and set the pin closest to the cutter on the center of the rotary table. For this operation, you will be rotating the rotary table with its crank. Leave the hold down clamps loose enough that you can move the fixture to position it. Lock the fixture down tight when you have it where you want it. You want to cut an arc with the center of the arc on the center of the pin, and you need to be sure the center of the pin and the center of the rotary table are the same.



The Sherline lathe chucks will fit the rotary table like this. Here I am cutting the cylinder covers. Since I set the rotary table on the center of the spindle, I know where I am starting from. I was able to them move the "X" axis over to give me a cut diameter I wanted. Now I moved the cutter into the work and rotated the rotary table with it's crank. I will go into more detail when I do the cylinder article. This is turning out to be a very handy accessory for the Sherline mill.



I made this stop attachment myself and it was a good training exercise. Make things like this and you will be learning on something other than your model. This stop will save you from finding a zero or reference point on each part you need to make.

I think this is a very good machine for the money and works well for a model. There are some things to be aware of, but good techniques and set up will take care of them. Over the industrial age, we have been able to make machines that are more accurate than the ones they were made on. This is because practices and techniques were developed to overcome the shortcomings of the machine. This is what makes a good machinist, and what we amateurs need to learn. It can be done, as I am finding out, and it is a lot of fun. The Sherline products are a complete miniature machine shop. If you like doing this, or want to do some of it, take a look at what they have to offer. You may open up new doors for your hobby.

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Scratch Building Steam Locomotives

Pt. 1 Where to Start

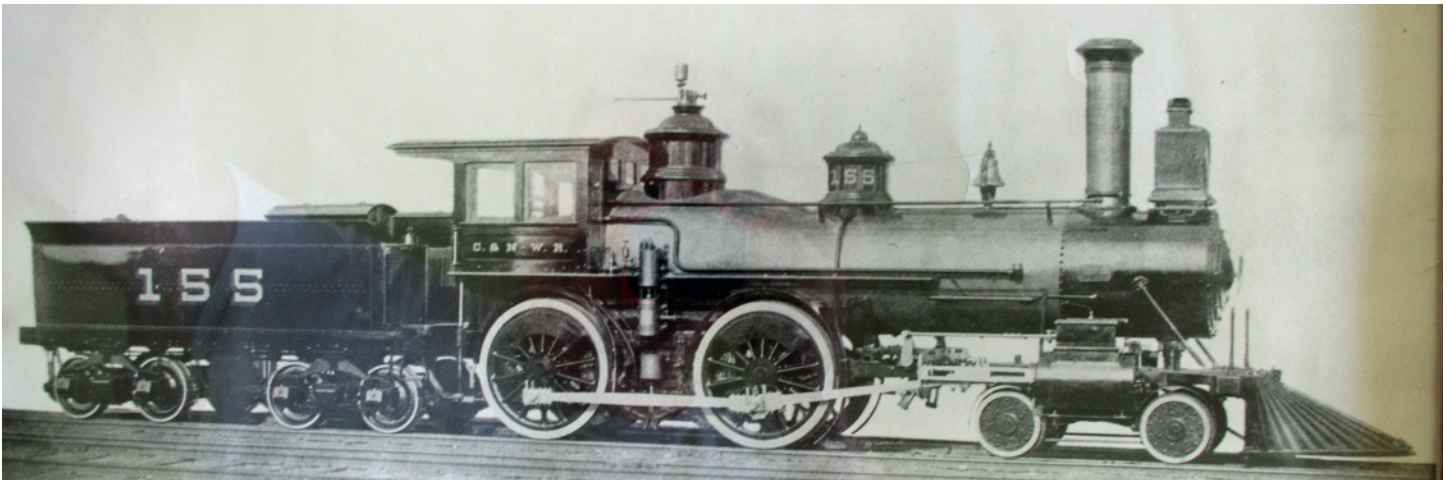


This is one of the locomotives I want to model. It's a one of a kind and class A-4. It was made in 1884 along with class A-3 locomotives. The difference is the #274 has 1" larger cylinders, a slightly bigger boiler and larger drivers. Some of the class A-3 locomotives were made in the Chicago shops where this photo was taken. I am working on the assumption that what happened was they took one of the class A-3 engines and modified it, more on that later.

By Glenn Guerra

For a long time one of my desires has been to scratch build a steam locomotive model. When I was doing the Mullet River kits, I was doing a lot of brass forming and soldering. Once I started to learn more about soldering and brass work, it became fun and really opened up new possibilities for me. I designed some brass locomotive kits and assembled them learning even more, so I thought it was time to try scratch building my steam locomotive. If that were not enough, I decided to do two similar models at the same time. The work was started a few years ago with cutting the frames. The project lay dormant while I had to do other things and I was missing some machines I would need. I have a lathe and have been using it for years and am getting more comfortable with the lathe, but I needed a milling machine. A few years ago, I acquired a Sherline milling machine and have been learning how to use it. There is a separate article on the milling machine in this issue. Now that I had the milling machine and some time, I decided this was the year I would build my models, and I started in earnest in May of this year. While I have been working, I have been taking photos and Dan asked if I would do a series of articles, so here we go.

As Dan and I were talking about the articles, I was telling him about the two different prototype locomotives I was modeling. He suggested that my first article should be, where do you start? There are a lot of things to do before you make the first piece of your model. Where do you get prototype information? Then how do you translate the prototype dimensions into some model dimensions and a design? Let's start with the prototype information.

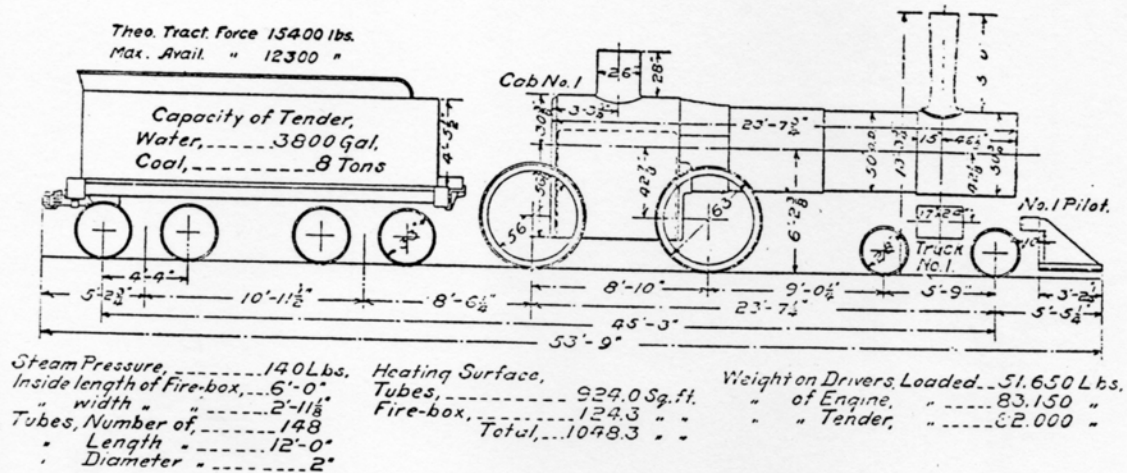


This is an Alco Historic Photos print of a class C-3 at the Schenectady plant. These were made in 1886. Schenectady also built most of the class A-3 locomotives from 1883 and 1884. I am working on the assumption that there is a lot of similarity between the A-3, A-4, and C-3. The basic dimension of the driver centers, lead truck, and overall length are the same. For my models, I will use the same frame and cylinders.

I like the older era of railroading in the late 1800's. Since 1985, I have been doing museum work on old wood equipment and developed a real liking for it. While doing this, I also learned what the old railroad periodicals were, and I made many trips to libraries all around the country to read them. In addition, I met people who had large collections of railroad blueprints. That was a lot of scrounging and effort to get the information. Today it's at our fingertips. The Linda Hall Library in Kansas City has all the pre 1900 periodicals digitized and available for free download. The amount of dimensioned drawings in these periodicals is staggering. The post 1900 periodicals are a little harder to find, but most of them are online. What I found was they are full of dimensioned drawings until the late 1930's. Both car and locomotive drawings are available. The Car Builders and Locomotive Builders Cyclopedias are also full of good information until about 1950. When looking at the Locomotive Cyclopedias, you will see many parts drawings. In the wheel section, for example, you can find drawings of quite a few different railroad's wheels. Something you want may be there or close enough. Lastly, all the drawings that were in private hands are now starting to find their way to libraries and historical associations. The Lake States Railway Historical Association has over 100,000 drawings in their collection from the C&NW, CSt.PM&O, Rock Island, and Milwaukee Road. They also have the entire Sheffield Car company drawings, as well as, Fairbanks Morris locomotives. These latter two are not entirely catalogued yet, but are accessible if you go there. The other railroad historical societies have collections that are available, so check with them. For traction fans, there are extensive holdings at the Indiana Historical Society, as well as, museums that feature traction equipment. At the Southern Methodist University library, they have the Baldwin drawings in the DeGouyer collections. The Allen County Museum in Lima Ohio has the Lima Locomotive works drawings. Some of the Shay drawings are at the California State Railroad Museum. Between the two, you can get the drawings for every nut and bolt on any Shay you would like to build. There is a lot of information out there, and it is getting easier to access every day.

Now that you have all the information, what next? For starters, you can have too much information. In these drawing collections, there are drawings of the tapered bolts that hold things together. Are you planning on making .020" diameter tapered bolts to hold your frame together? This is where we need to sit back and think about what is really important. I know a guy who was going to build a live steam model for the backyard. He collected every drawing he could find, including the number plate on the front. When he started building his model, he started with the number plate. All was going well until he finished the front and realized there was no drawing for the back. There was complete gridlock, he could not go on and the model went no further. This is one of the most important parts of any building project. What can you realistically build and what really is important. This will lead us to the next point, how will you make the model.

Class A-3



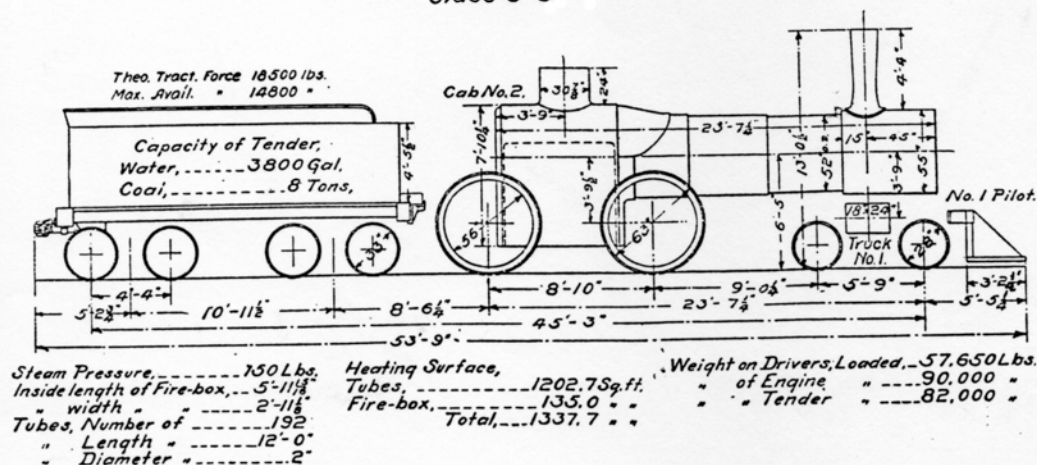
CLASS A-4.

Built by C. & N.-W. R'y, 1884.

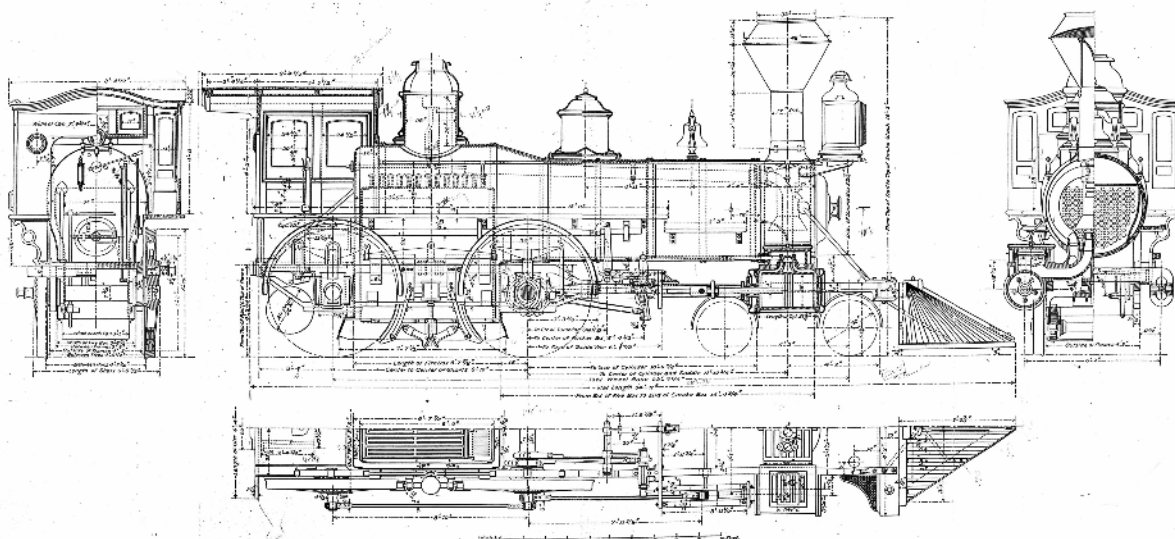
Cylinders	18x24 in.	Firebox, length	72 in.
Steam pressure	150 lbs.	Firebox, width	85 in.
Driving wheel, cen., diam.	62 in.	Boller, diam. 1st ring	52 in.
Number	4	Tubes, number	201
Wheel base, driving ...	8 ft. 10 in.	Tubes, length	12 ft. 0 in.
Wheel base, total eng.	23 ft. 7 1/4 in.	Tubes, diameter	2 in.
Wheel base, eng. & ten.	44 ft. 8 in.	Tubes, heating sur.	1,288 sq. ft.
Weight, on drivers	57,800 lbs.	Tender, cap., water	3,200 gals.
Weight, total engine	90,900 lbs.	Tender, cap., coal.....	8 tons
Weight, eng. and ten. ...	156,400 lbs.	Theo. tract. force	16,900 lbs.
		Max. avail. force	13,500 lbs.

Engines in this Class.—274.

Class C-3

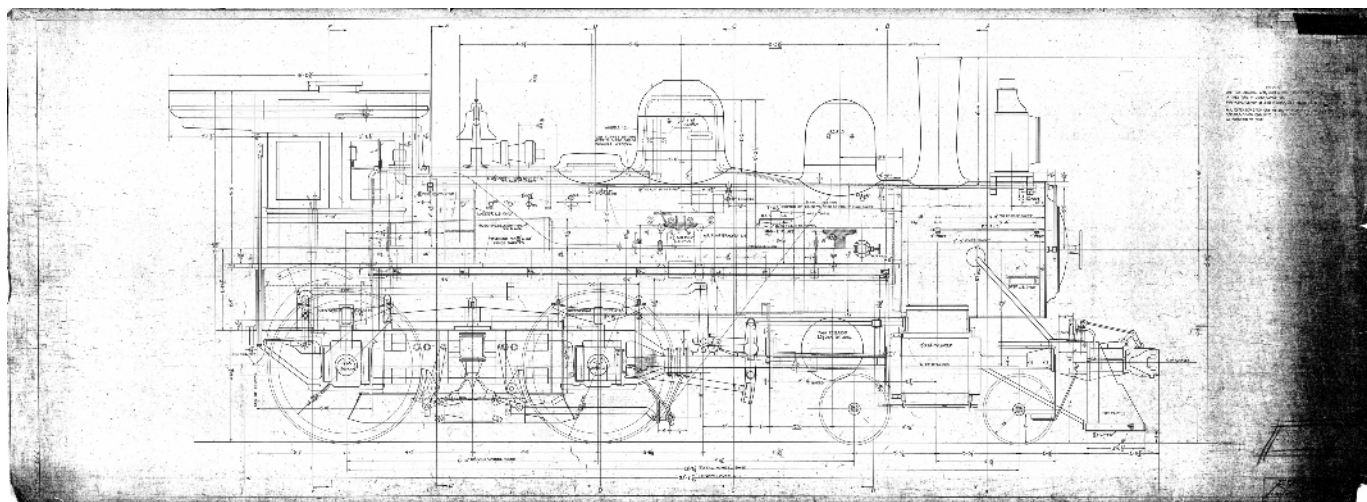


These three images came from a 1910 C&NW locomotive diagram book. Note the similarity of dimensions between all of the locomotives. It looks like they bought and built a bunch of A-3 locomotives in 1883 into 1884. In 1885 they bought a C-2 class that is very similar to the C-3. In 1886 and 1887 they bought the C-3 class in large numbers. I suspect the basic frames are the same on all these classes and that is how I am going to build my models. This is a reasonable assumption and one we need to make when making models.



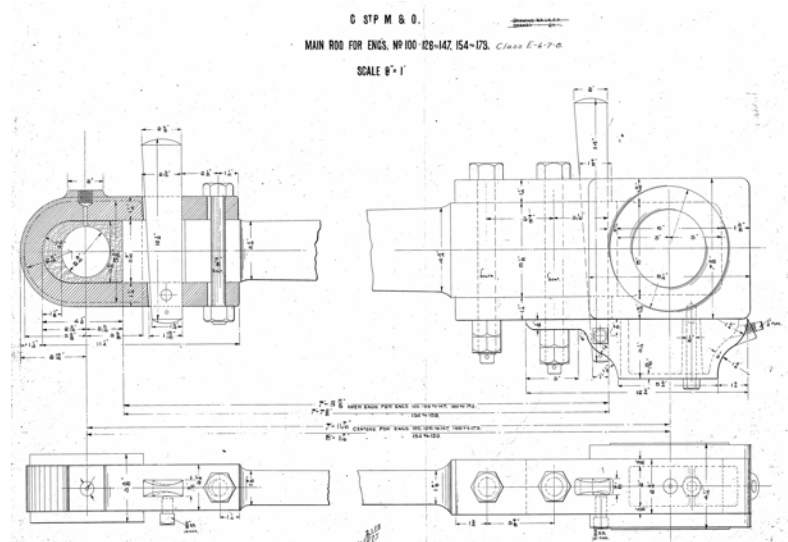
I was able to find this in an old railroad periodical. This was described as a C&NW passenger locomotive and I think it is the #274, the class A-4 that I want to make a model of. This is the original configuration of the locomotive and was a real find. Things like this are out there, all you need to do is dig a little.

I say this a lot and will repeat it here, draw your model in the scale you will build it. This is especially important in the computer age where many of us do computer drawings. It is tempting to draw what is on the railroad drawing and just scale your drawing. So let's look at what happens when you do this. Suppose there is 1/4" clearance between some of the valve gear parts and you draw it up that way. When you scale your drawing to O Scale, you now have around .005" clearance. How good are your machining skills? Can you actually make that stuff? Suppose your prototype has a dimension of 4-3/4" somewhere on it. If you divide 4.75 by 48 (our scale) you get .0989". Great, where are you going to get material that thick? On my models, the frames were 4" thick. That's .083" in O Scale. You can't get sheet brass in that thickness, but you can get .080" thickness, so that is what I used. The other problem is all the parts of your model are related. Now that I changed the frame thickness, how does that effect other parts of the model? I decided the outside dimension of the frame, from side to side, was what I felt was important, so I made that to the drawing. That decision now affects dimensions of the cylinders, firing deck, pilot beam and valve hangers. As you draw the model, you will be thinking of how things are going to fit together and how you will make them. I would recommend that you get the mechanism and boiler designed to fit before you start building. The rest of the parts are not critical to your model running.

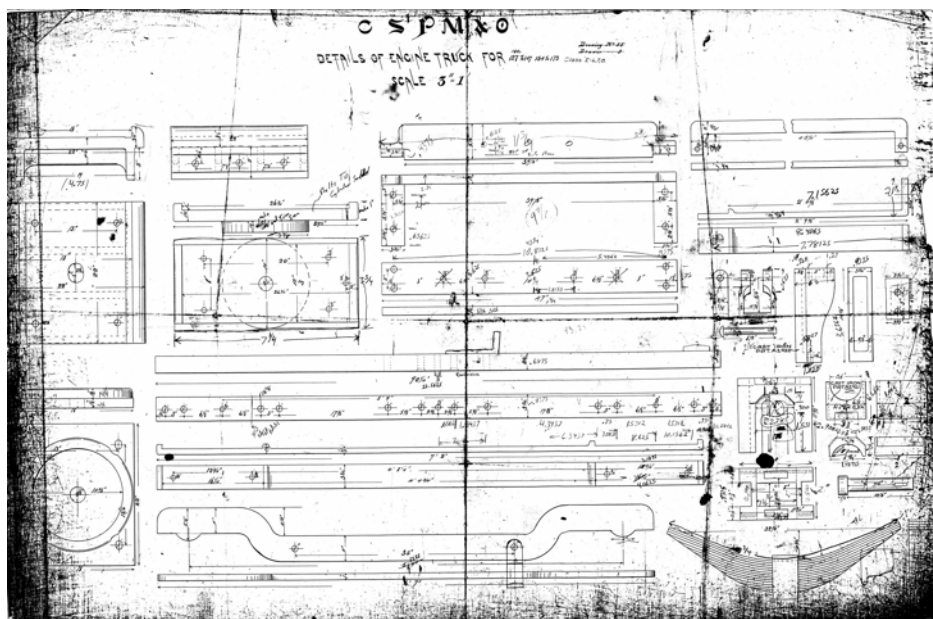


This drawing came from Lake States Railway Historical Association and shows one of the C-3 locomotives with the new boiler. This drawing has the information for the pilot with the knuckle coupler so I can draw it.

This drawing came from Lake States Railway Historical Association. This is the main rod for a CSt.PM&O locomotive of the same era as the models I want to make. These locomotives were bought from Schenectady at the same times as the C&NW locomotives. In addition, the C&NW controlled the Cst.PM&O and there was a lot of commonality. The drawing will show us the main rod construction and the dimensions. The next step is for us to draw it to our scale and as we plan to build it. While not specifically for the locomotives we want to build, the information is still good.



I mentioned that I am making two models at the same time. We all have some favorite prototype and we probably want a model of it. Many of us convert existing models to more closely match a prototype photo we have. This is what the hobby is about, but it raises some questions. Let's start with the prototype locomotive and the builders photo from the factory. Once this locomotive enters service it is a tool, not a sacred monument. The first time it goes in for a monthly inspection, things start changing. Before long, many of the details are different and this is what we model. All good. Now one of the questions is what era is our prototype photo from? Does that even mater? In my case, my models all started with link and pin couplers, but were soon modified with knuckle couplers. One of them was rebuilt with a larger boiler. I don't know the dates of any of these modifications, so now what? Well, I am going to make the models with knuckle couplers on the tenders and the front of one of them. The other will still have the link and pin. Is this "correct"? As far as I'm concerned, it is just fine because I don't think I could ever find the answer. So the photos of your model's prototype are a great help in locating details and changes to your model. Don't get hung up on when the exact date of those changes was. So are photos from other eras worth anything, let's see.



This drawing also came from Lake States Railway Historical Association and shows the parts for the lead truck. Again it is a CSt.PM&O locomotive but it came from Schenectady in my era and it is the right wheel base. I can use these dimensions to make something that will work for my models.

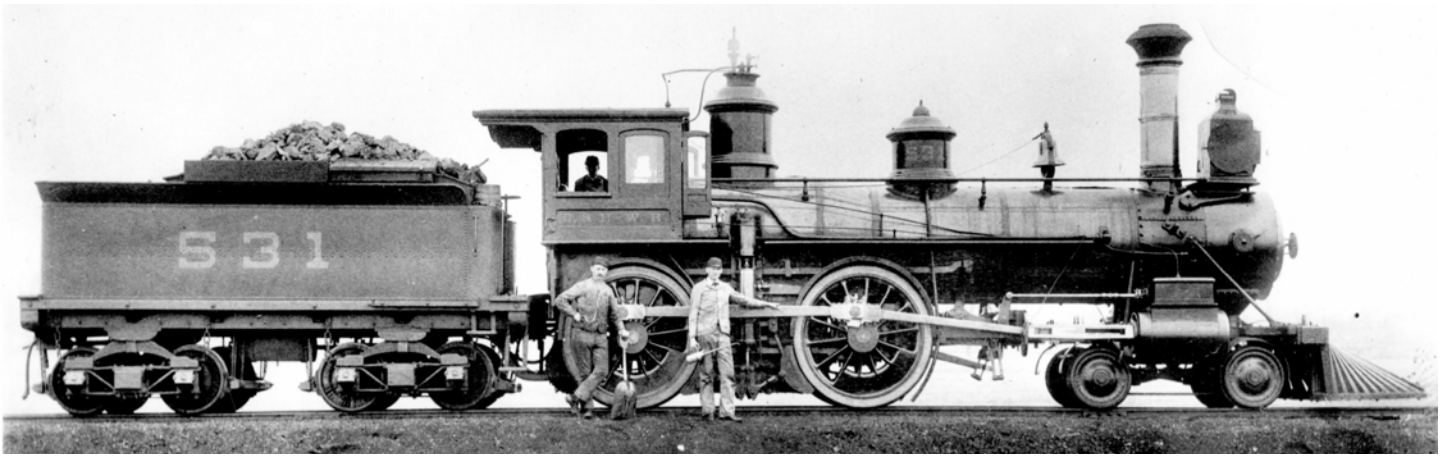


This is a photo of the #274 A-4 taken in Williams Bay, Wisconsin late in the locomotive's life. This is not the era I would like to make the model of, but there are many interesting things about the photo. The first one is the front coupler. Look at how low the coupler is compared to the pilot beam. Most of the time, the coupler is centered on the pilot beam. On all the class A-3 locomotives the coupler ends up on the pilot beam. This makes me think the frames are the same, and since this locomotive has 70" drivers and not 63", the frame sits up higher.

For an example, one of my prototypes had a new boiler installed. I have a photo of one of those in the scrap line. Is this photo any good for my 1890's model? Yes it is. The photo is sharp and clear which is a big help. There are some details on the cylinders that are clear which are not in other photos. Even if the photo is not from the era you are interested in, take a close look at it. There may be details in the photo that are from your era, and they may be clearer in the non era photo.



This is one of the class C-3 locomotives after some modifications. Start from the front. Notice how the coupler is centered on the pilot beam. Compare that to the photo of the #274 at Williams Bay. This is the more common location. One of the main differences between the A-3 and A-4 engines was the driver size. The A-3 had 63" drivers, and the A-4 has 70" drivers. That would mean the frame would sit up higher by around 3-1/2" if they used the same frame. I think they did to save some money while they saw if the higher drivers would work. They probably did not work all that well because locomotives that came after had 63" drivers again. On the 70" driver A-4, the lead truck wheels are 30", and on the 63" driver A-3 and C-3, the lead truck wheels are 28" Taller wheels and a shim on the center bearing and they were all set. This is why I think I can use the same frame on both locomotives. I like the lead truck wheels on this locomotive. They appear to be paper core wheels with bolted on tires. Common on passenger cars. This will be a nice detail to model.

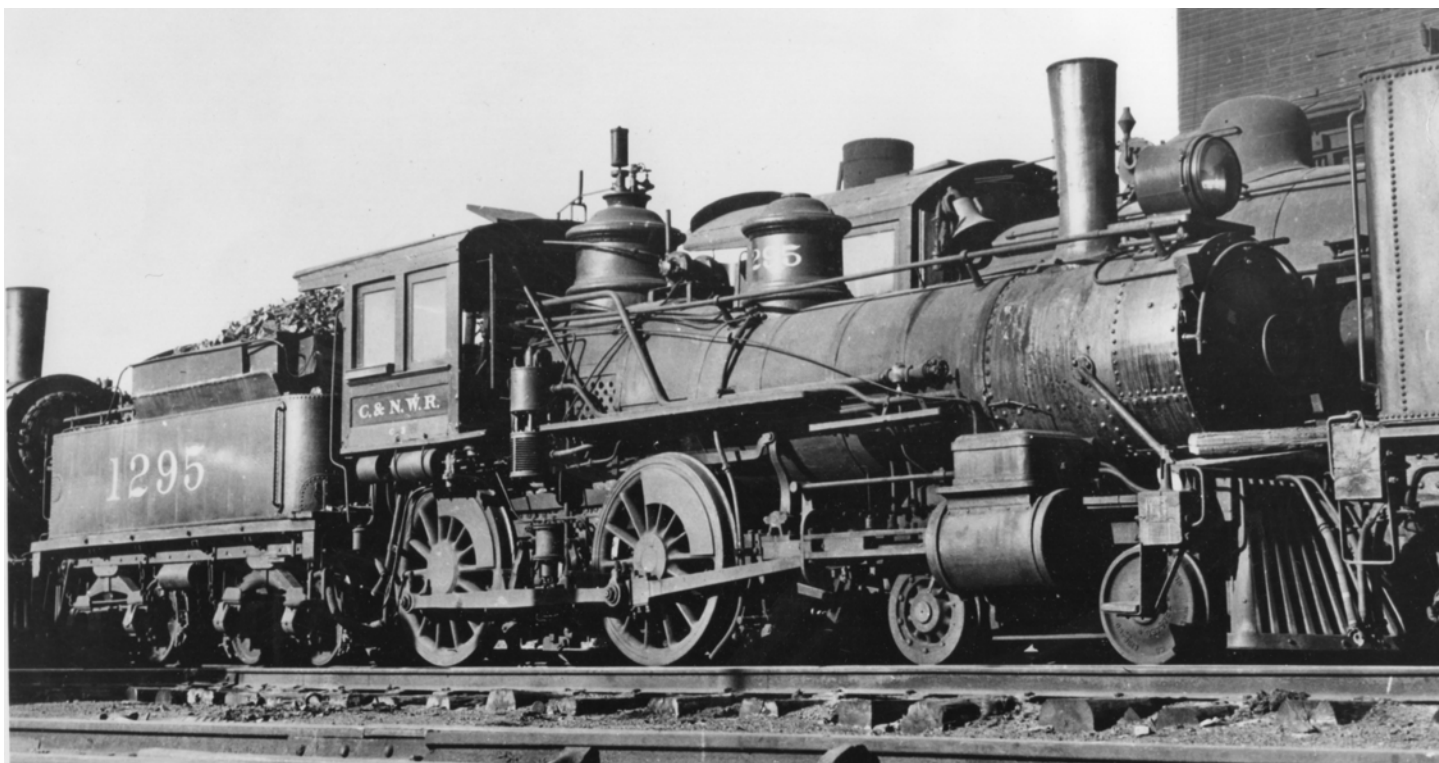


This is a class A-3 locomotive. Look close at the smoke box. These locomotives came with short smoke boxes. Around this time, they found that an increase in smoke box volume made the locomotive steam better. Rather than put a whole new smoke box on, they just added an extension. The next improvement would be the tapered cast stack which this locomotive does not have yet. The photo is early though because the locomotive still has link and pin couplers. The smoke box extensions came soon after the locomotives were purchased because the C-3 from 1886 had a long smoke box when delivered.

Now on to my models. The frames on these locomotives were made in a front half and rear half. They were bolted and keyed at the joint. I am not going to do that. The frames will be one piece. I will add some nut bolt detail though. On the prototypes, they had wedges in the frame to adjust the clearance of the driver bearing box and the frame opening. This is not necessary on a model. There are braces across the axle openings on the prototype that are called pedestal binders. These are keyed to the frame and add a lot of strength to the frame. This is not hard to do on the model, and I will do it to my model for the added strength. The frames are only 3-1/2" wide on the prototype which is .073" in O Scale. There is no .073" brass sheet so I am going to make the frames out of .080" brass which I can get. These are all reasons to draw the model in the scale you will build it and think about the compromises you need to make as you are drawing your model.



This photo was taken at the old Wells St. Terminal in Chicago. The terminal was not used after the new terminal opened in 1910. The #251 is a C-6 that was delivered in 1900 so this photo is between 1900 and 1910. The #656 is one of our C-3 locomotives. This gives you a good view of the pilot and the front coupler. You can see how the frame sits lower on this locomotive than the #274 photo at Williams Bay. It has a newer cast stack and a different cab. I think for my model, I will stick with the older style cab shown in the builders photo and the straight capped stack. This photo still has a lot of value though. Notice the drifting valve on the front of the steam chest and the style of boiler check valve. The drive rod has also been changed and no longer has a split bearing. I think I will do the older version.



This is one of the C-3 locomotives in the scrap line at the Proviso yard near Chicago. It still has the original boiler and domes. The view of the air pump is good and will help. It has newer boiler check valves with shut offs and I don't think I will model them.



This is one of the 1886 C-3 locomotives in the scrap line. It was one of the locomotives that got the new boilers with the extended wagon tops. This was done to move the steam dome off the fire box and get rid of the crown bar supports for the fire box. With this arrangement the boiler could be radially stayed. The photo shows some good detail around the cylinders and cross head bars that will help with some details on my models.

I am going to make the two frame rails separate and join them at the firing deck, cross head hanger, cylinder saddle and pilot beam. This will also make the frames easier to handle for adding the nut bolt detail and brake mounting. I have done other frames this way to replace kit frames and it works well. When I do frames like this, I have them cut on an EDM machine. I will get into that in part two of this series. Lastly, on the frames there is an attachment on the cross head hangers for the rocker shaft bearing. On the prototype, these are separate castings that are drilled and bolted to the frame. I will incorporate these into the frame when machining the frames. This is less small parts I need to make and they will be in the exact location since the frames will be cut by a computer driven machine. This is one of the things you think about when considering how to make the model.

I would like to make the equalization work on the main drivers. If you look at the photo of the A-4 diagram, you will see that some of the hangers are just hooks over the springs. This will not work on a model. I will do this model like the C-3 with the links that go through the springs and pit pins in it all to hold it together. Another compromise we need to make in order to be able to make the model.

Both models are going to have the original style of rods with the split bearings. I will not make the bearing split except at the cross head pin. The cross head is such that the pin will not come out on the prototype or the model. I have been thinking about this and I have some ideas. I would like to do as much of the valve gear as possible. The valve gear parts are drawn, but I still need to work out how it will come off the model. Again, this all comes about as you are drawing and designing your model.

I don't know what to do about the tender yet. They had massive wood timbers, and to make them out of solid brass would make the tender awfully heavy. That may be better for tracking with the old style outboard springs. I don't need an answer to that just yet.

Doing some of the collecting of information and then designing a model is a lot of fun for me. If you think you would be interested in something like this, jump in. When looking for information, look in the era the locomotive was built. Consider other locomotives of similar vintage from other affiliated railroads. Don't get intoxicated with the information to where it stops you from moving ahead. This is a hobby, and we do the best we can while having fun. Design the whole basic mechanism with boiler and cab. The smaller details will come later and are not that critical. When designing, think about how you will make the part. You want the part to look like the prototype not be exactly like it in construction. Think about clearances and if you can maintain them or do you need to open them up. Material selection is important, so while designing, make sure you can get the material sizes you want. If not, modify the part a little. After you do some machining, you will see that holding the part while machining it is very important. There will be a lot more of this in the future articles.

I am having a lot of fun with these models. Some of the parts have been made a few times before I got them right, but that's all part of life. Start collecting information on your project. See you next issue with the frames and spring rigging.



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By Brady McGuire, P.E. Ret.
Photos by the author

Languishing on the shop track of my O scale PRR Laurel Valley Secondary was an early 1950s era original Athearn stamped metal and wood body kit-built reefer car. I acquired this venerable model with its original yellow Athearn box. Photo 1. I believe the yellow boxes were used from the late 40s to the mid-50s making this model around 70 years old. The reefer car B.R.E.X. 74219 is well built by the previous modeler, needing little repair other than replacing the very old trucks and couplers. The reason the car was gathering weeds was because it was too heavy to operate, topping the scales at 24.65 oz. The time has come to first solve the too heavy mystery, then install new modern scale trucks, wheelsets and Kadee couplers and get the car back in service serving customers on my railroad.



Unrestored model from history. Athearn's original yellow box with the stamped metal and wood body kit-built B.R.E.X. reefer car. Date of model unknown, but thought to be around 70 years old. This author believes that the yellow box was used for model kits produced from the late 1940s to the mid-1950s. The older cast trucks and cast scale couplers to be replaced are evident.

Mystery Weight Inside: Athearn stamped metal and wood body cars normally weigh in at about 15-16 oz. which is more than enough weight for an operating layout. So why is 8 oz. or more of extra weight inside this car, loose and rattling around? In the off season, clean reefers were often used to transport high value products.

Maybe the original kit builder was hiding something of value inside? Maybe gold coins or a gold bar? It was time for the shop boys to solve the mystery of the excessive extra weight lurking inside this reefer.

Getting Started: The shop crews carefully removed all the escutcheon pins holding one metal side in place. The side was then removed by sliding downward toward the bottom of the car. Hopes were initially dashed when a solid wood wall was encountered. But the shop boys were not going to give up so easily. Hidden treasure you know. An exploratory hole about 5 feet square was cut through the wood wall using a large cutting disc on a Dremel tool. Photo 2. Peering inside with a flashlight exposed the contents.



Photo 2

One metal side removed from the model. Hole cut in the wood interior wall by shop crews to gain access and to remove the excessive weights rattling around inside.

Mystery solved: Sorry boys, no gold coins. It's a load of IRON! Photo 3. Boo, hiss! Hopes were dashed again! Rattling around inside were 3 large iron bolts. Two real size 3/8 dia. x 7 inches long carriage bolts and a 3 inch long x 3/8 dia. lag bolt. The small exploratory hole was too small to remove the bolts. So the shop crews had to open up 7 ft. extensions on each side of the exploratory hole. The shop crane was called in to lift and remove the large iron bolts. 8.6 oz. of extra excessive weight! The boys were disappointed in the find, but were glad the job was done. The metal side was re-installed.

New Car weight: With the extra IRON removed, the car with new trucks now weighs in at 14.9 oz. A good weight for my operating railroad.

Shop time. Restoring this 70 year old oldie but goodie required just one evening at the workbench. The original cast solid non-working couplers and boxes were removed and new Kadee #805 couplers installed. InterMountain scale wheelsets were installed in new Delrin Athearn plastic trucks.



Photo 3

Mystery weight solved. Excessive weight of IRON bars revealed and removed to the scrap heap of history. The shop crane had to be called in to lift the heavy IRON bars from the car.



Photo 4

The wheelsets' axles and inside faces and the truck frames were pre-painted dirty brown. The outside faces of the wheels were pre-painted an oily black color to represent leaking lubrication migrating from the truck bearings. I like to keep a supply of pre-painted trucks and wheelsets handy for one evening projects such as this. The original solid cast frames trucks of unknown manufacturer were set aside for now. If anyone can identify these early trucks [please contact the author through Dan](#) and the magazine. Photo 4.

Original cast trucks with the reefer model. Manufacturer unknown. The restoration project called for modern Athearn Delrin plastic trucks with InterMountain metal wheelsets. If anyone can identify these early trucks [please contact the author through Dan](#) and the magazine.

Final results. I am very happy with the end results. It's a cool looking reefer with its colorful **Burlington Route** logo and the "Way of the Zephyrs" slogan blazing across the yellow sides. Fresh from the car shops this restored 70 year old stamped metal and wood body kit-built reefer soldiers on with its cousins in the reefer block that's clearing Pitcairn Yard, east of Pittsburgh, Pennsylvania. Photo 5.



Photo 5

Freshly restored by the RR's car shops the venerable 70 year old B.R.E.X. reefer joins its cousins in a reefer block that's clearing Pitcairn Yard, east of Pittsburgh, Pennsylvania on Brady's PRR Laurel Valley Secondary.

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BACKSHOP SOLUTIONS

By Ross Dando

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

I am sorry I have been away for bit, but we had a family tragedy and a lot going on to heal our family that has taken me away from the hobby for a bit. Now it is time to return to my miniature world to help take me away.

Here I am, working on a project. Oh wait, there's another one I want to do and another, oh and another.



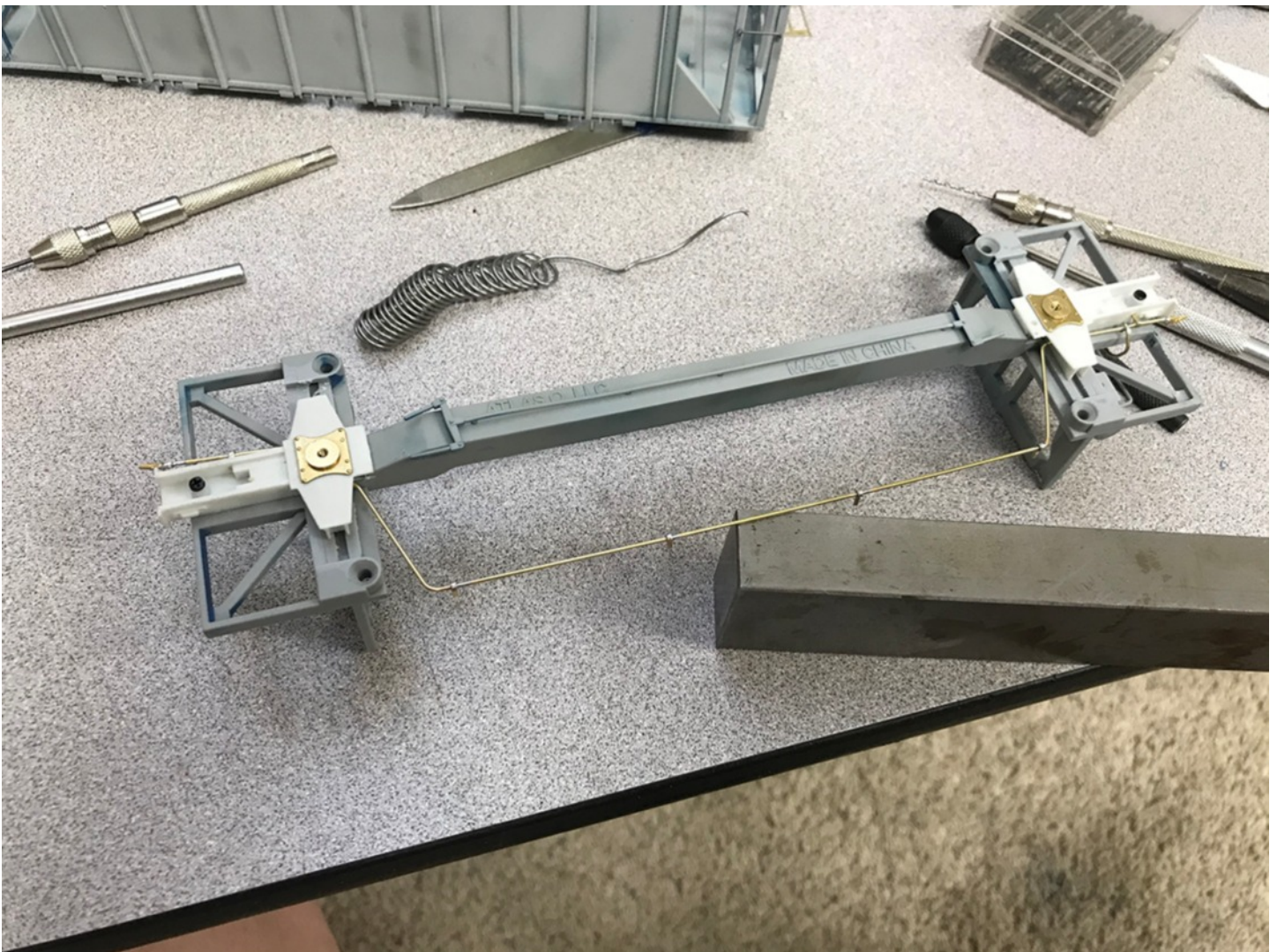
Those of you that know me, I have grand plans and have been collecting models to form my vision of the Rock Island in the later years of the railroad. Now as a recent convert to proto48 from HO, I have had to downsize my vision and scope for an operating layout. It won't be big and most likely just a few tracks. But my vision is to have a finely detailed environment that will showcase the models that one day may be finished.

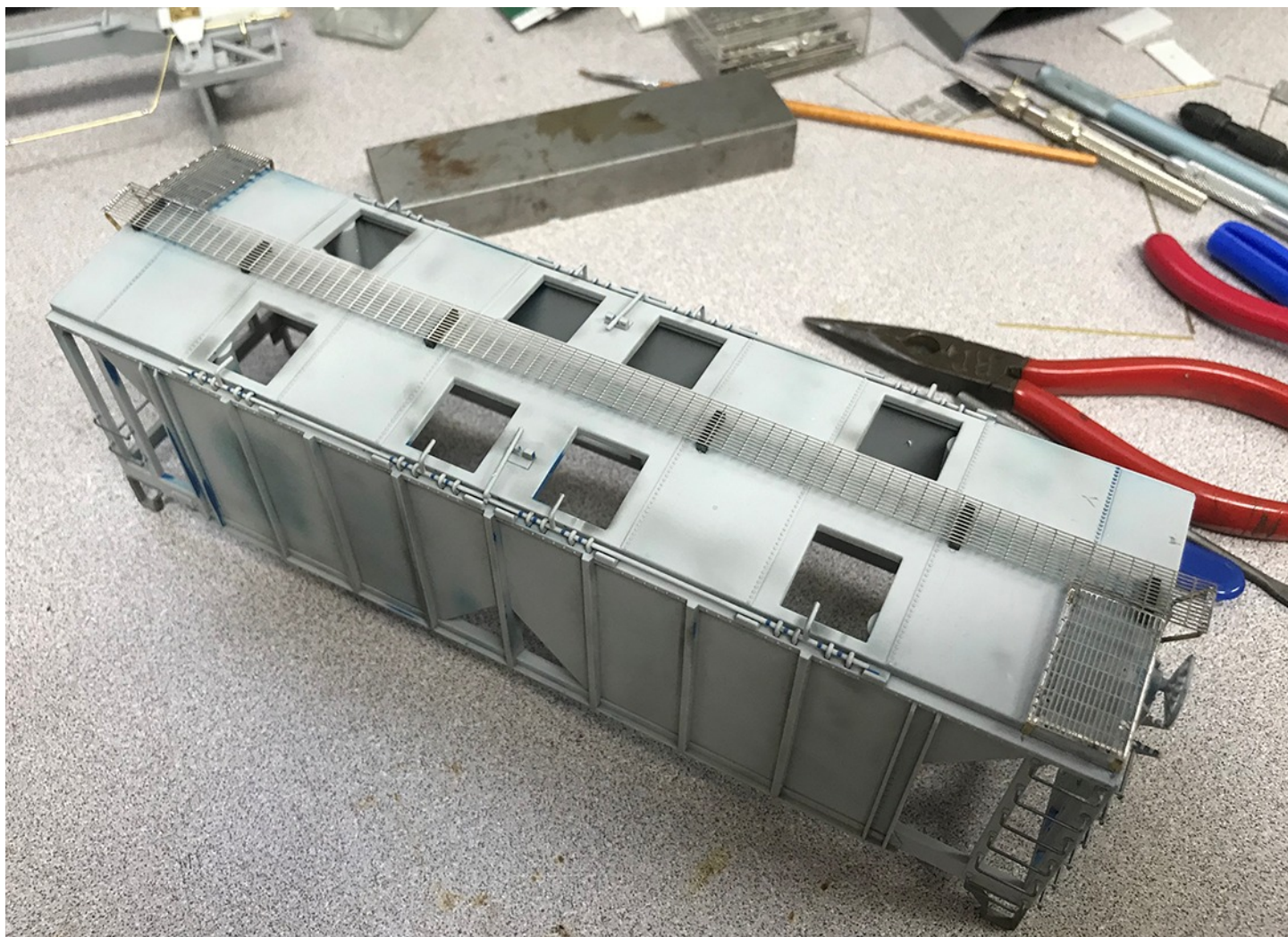
Fine scale. What does that mean? To me it is reworking or building a model that has the fine details that when you photograph it, makes you do a double take to determine if it is a model or not.

As a modeler, we will always work toward the perfection, but there are compromises along the way in most cases. For me, these occur more often than not. I have continued to search for freight cars that are well detailed and do not require much work to make them road worthy and have more details. Now there are many good offerings, but there seem to be the standard items that just don't measure up. First is the running boards, man if they would just add etched running boards to all models, we would have one less issue. Grab irons, the wire they use is just bit too big in diameter. Then there are the steps, always oversized to prevent breaking in the general public's use.

So where do we need to start? For me it is the general look of the car. Are things in proportion, are there any glaring errors? Then we move on to what is needed to convert the car to use scale trucks and couplers. In most cases, a new bolster and coupler box. I have found some great cars, but as usual, I get a car most of the way done and there is this or that I don't have on hand to finish it. In this month's write up I will give you an idea of where I am in the process with a couple cars.

First is the Atlas 70 ton covered hopper. Man, this car has a lot to offer but there are a few things that just don't work. I replaced the bolster and coupler box with a casting I developed for another car and it turns out a slight modification made it usable for this car. It allows me to use the brass bolster inserts offered by Protocraft along with their couplers. Once I added this detail to the frame, I turned my attention to the running board. I was given a DPH Apex running board by my friend Bill Yancey and it was just the ticket to get me where I needed to me. First I removed the one on the car and discovered there were no supports on the roof of the car.

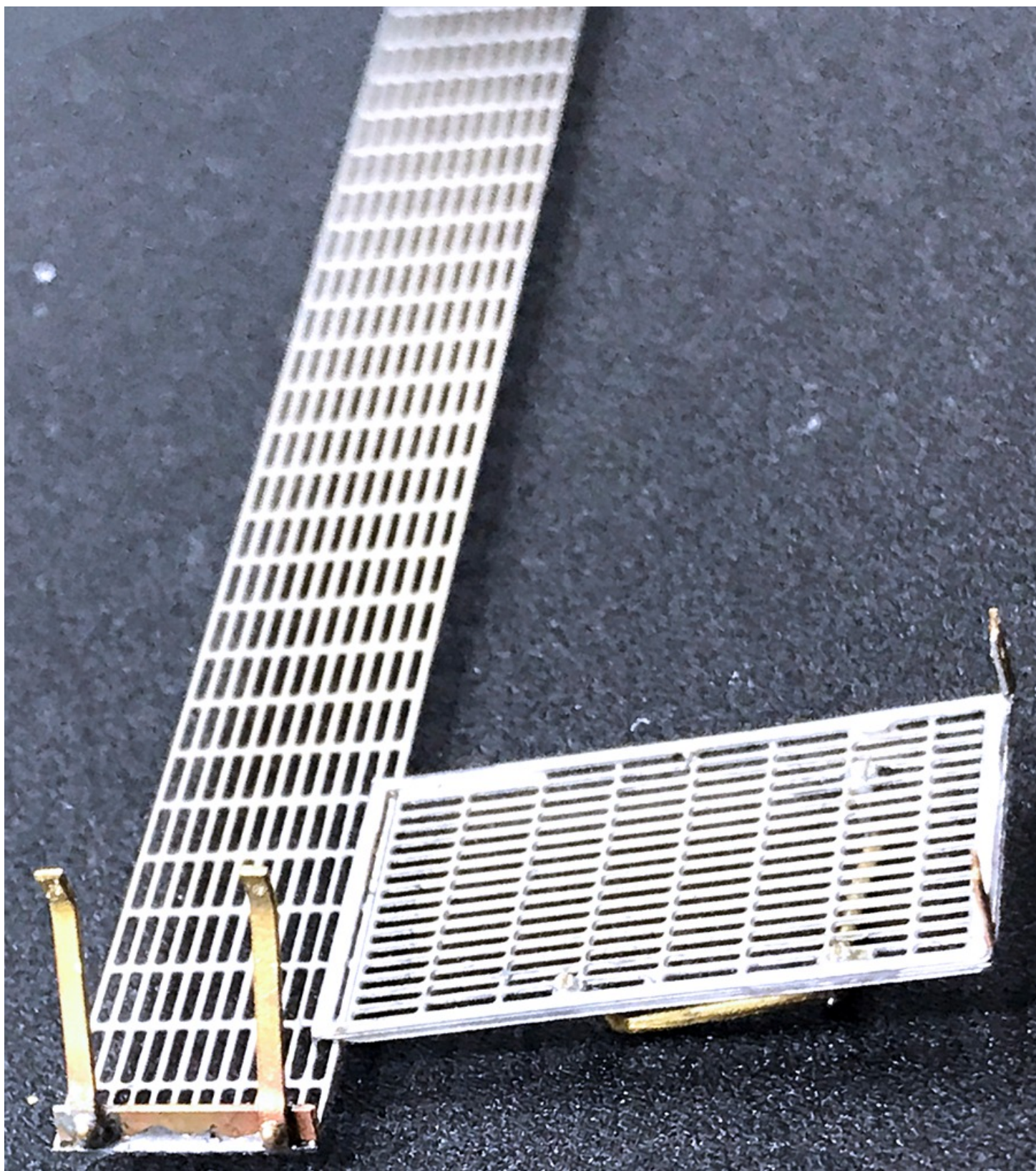


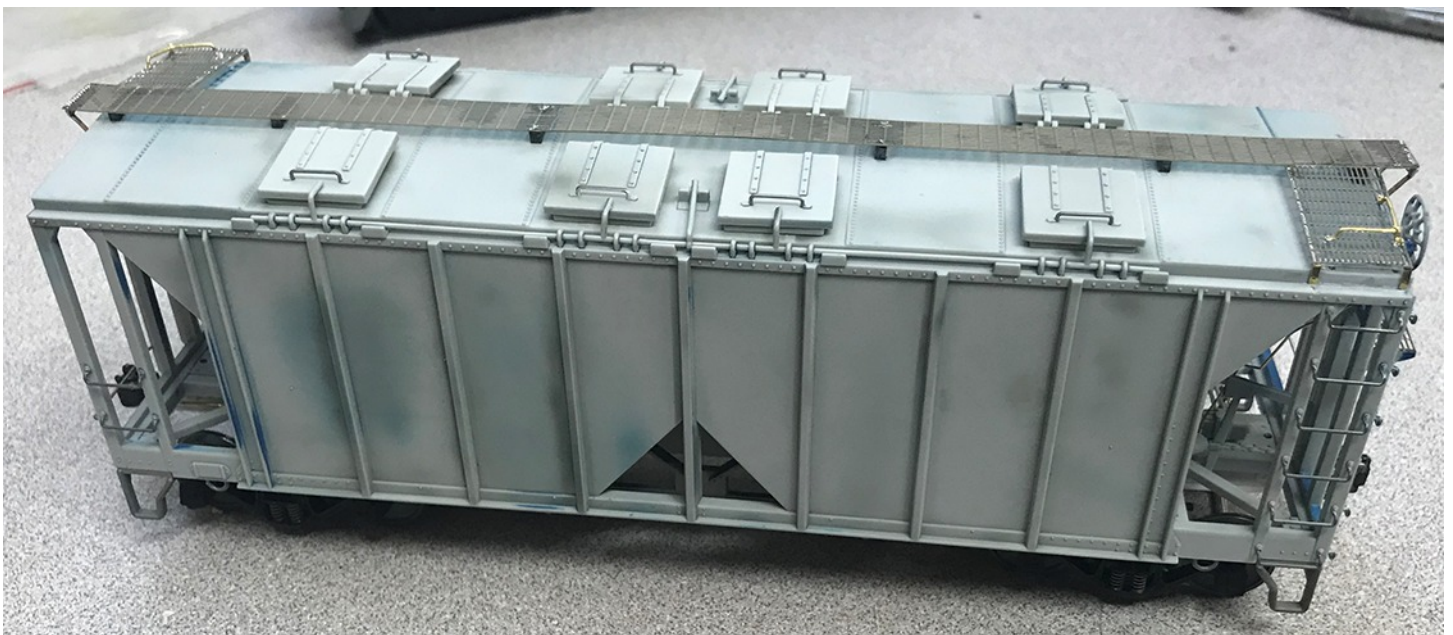


Turning to the box of various parts given to me over the last couple years, I found some Grandt Line running board supports that could be narrowed to work with the etched running board. The end supports for the running board were not satisfactory so I got out the bin of brass and found some flat stock and fashioned the acceptable pieces. I used Stay Brite flux to help in getting the stainless to accept solder.



The length had to be trimmed and the drop material is saved for making a brake step and other projects. I was also not happy with how well the etch laid on the supports, so I figured out I could solder a few pieces of wire to the backside of the running board where it sat on a support. I drilled small holes to accept the wire, and once assembled, the running board sits flat.







My second project currently underway is a group of Atlas PS2 4427 covered hoppers. The Rock Island had a lot of these and the offering from Atlas is a great model once you get some fine scale work done. In the case of the cars I am doing the bolster and coupler pockets needed to be changed out. Currently the is not an etched running board option and the models version is pretty good and will stay for now. All the added parts will need to be spot painted for the decorated cars and the undecorated (stripped of lettering) will receive full paint and decal jobs. I will make that adventure part of a future article.



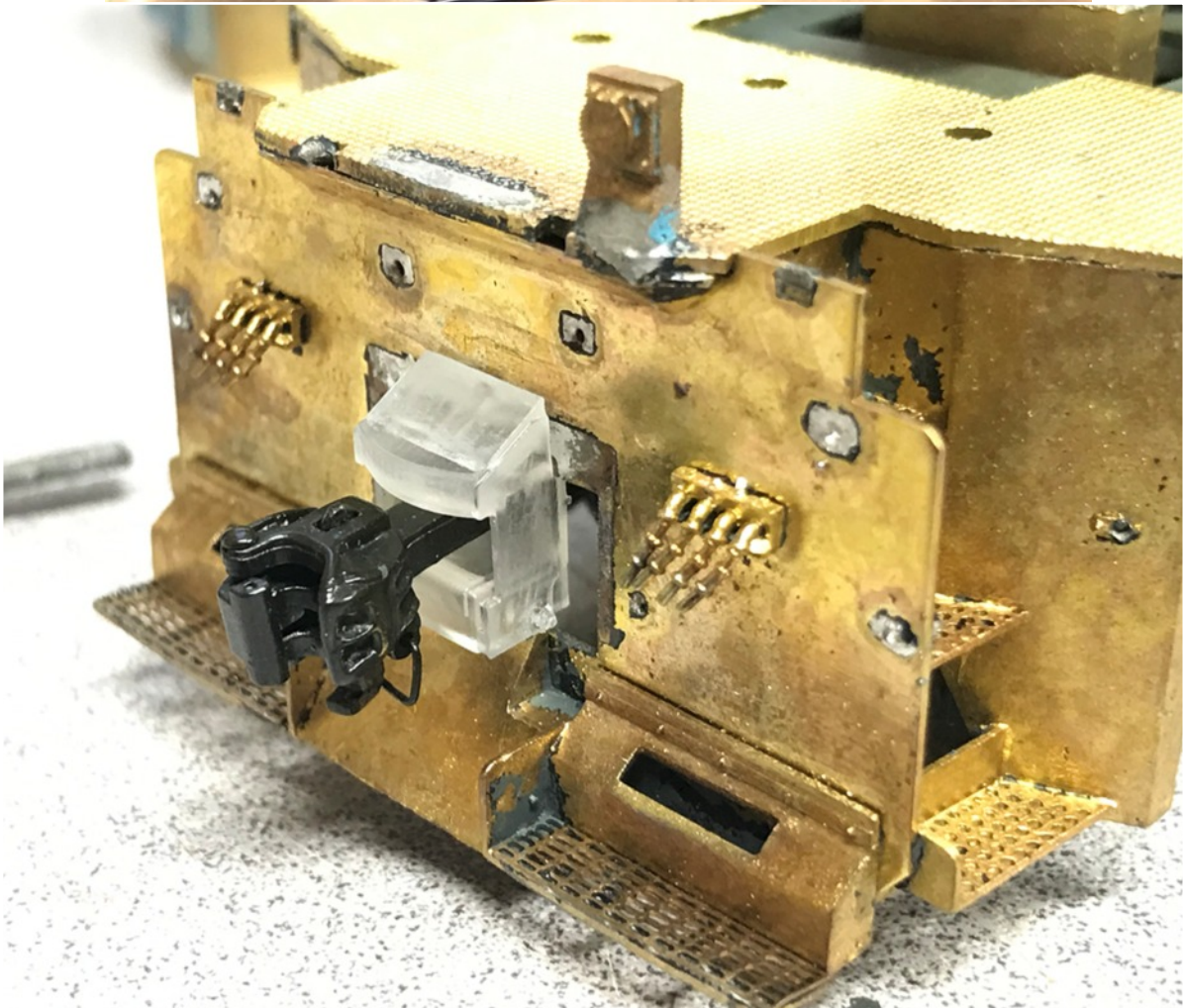
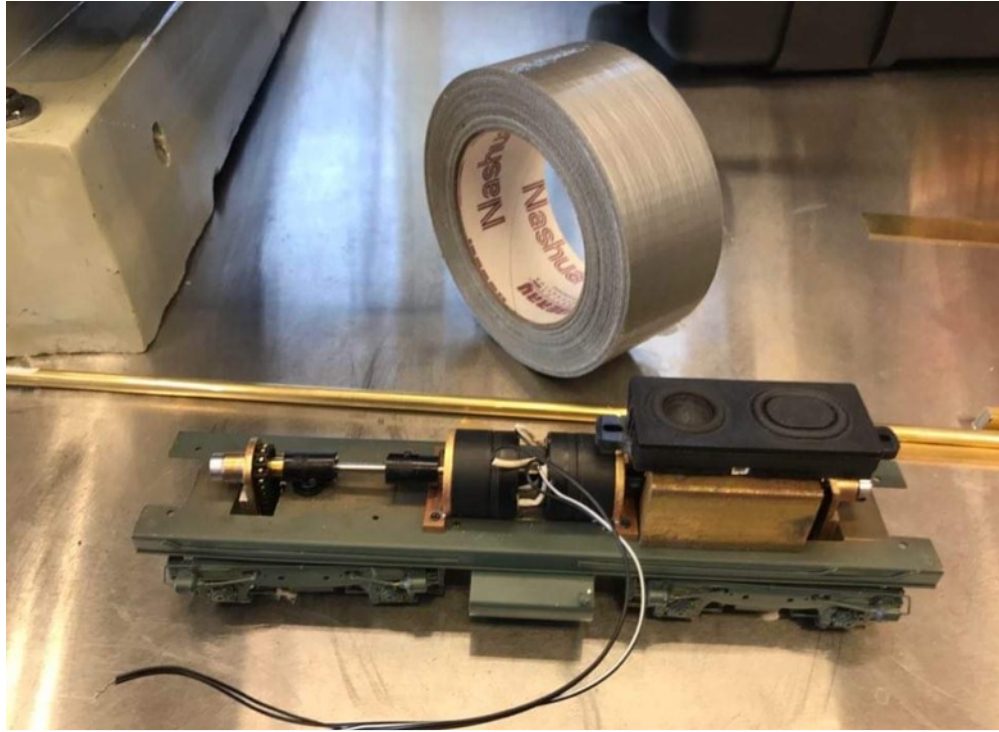
To be honest, I have many more projects started and tucked away in totes waiting for the right time. Yes, yes it would make more sense to finish something. But over the years, I have floated between projects enjoying the hobby. Sometimes I get a wild hair and actually pull out a finish of something.

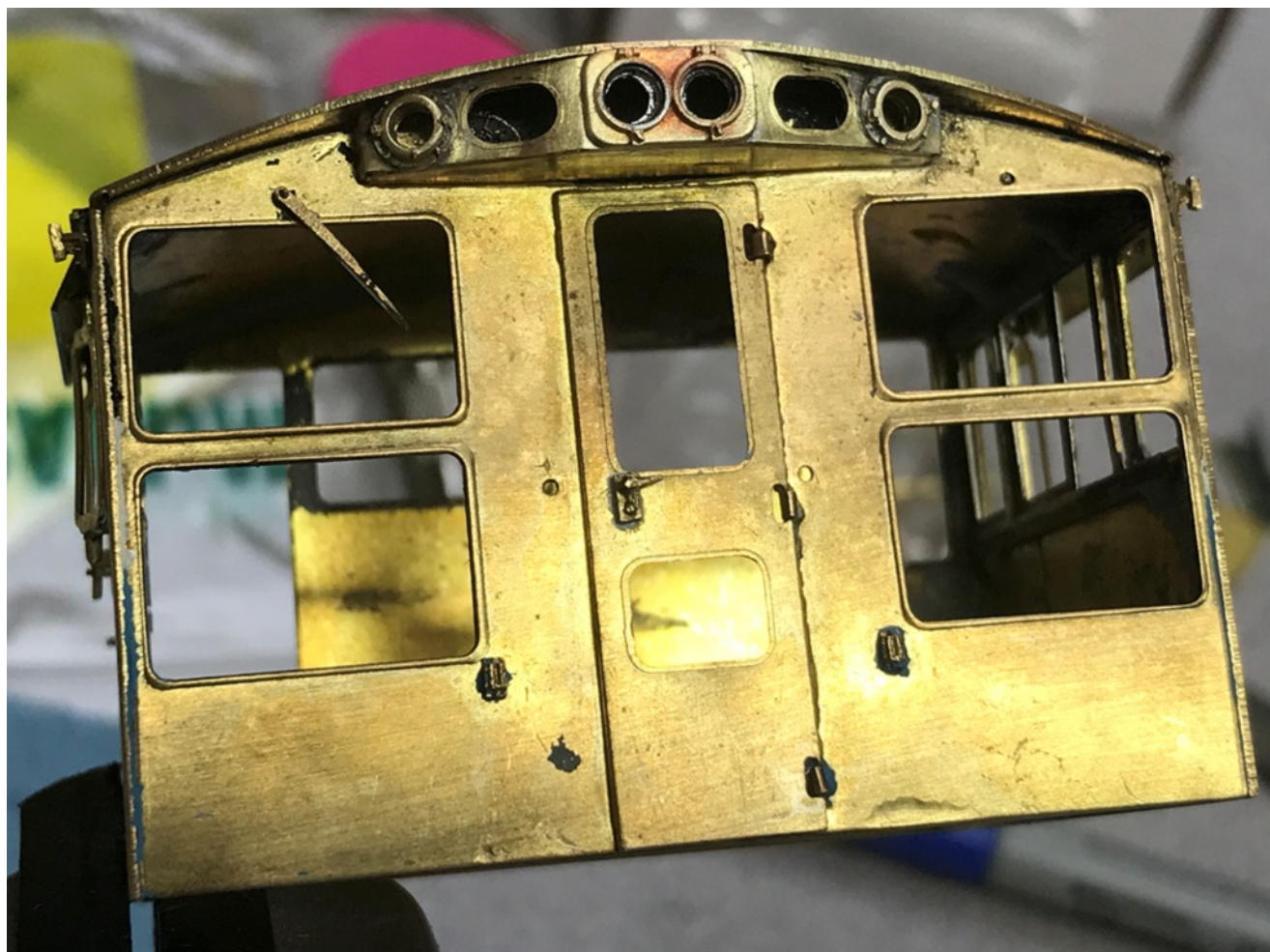
Why do I stop you ask? Mostly because I am not happy with how something is going or I don't have the full vision of how I will get to the vision I have. Mostly due to wanting a specific weathered look and I don't have the steps down to get there and need to practice on something. Soon, I tell myself, soon I will figure it out.

To close this time, I will give you a glimpse of yet another project. While I was in Chicago, I had to get an OMI SW-1500 and Jay Criswell has fashioned drive components for it that run like a Swiss watch. So while the iron is hot, I am going to focus on the 1500 and get it to a point that it can be painted.

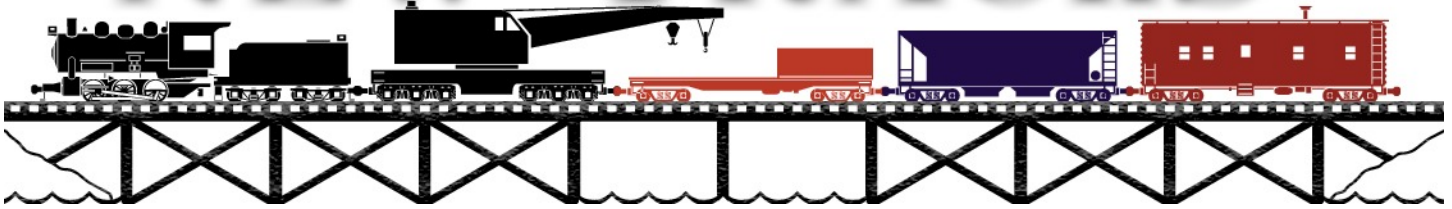
Not going crazy with details, but getting the right things fixed so it is correct for Rock Island. Stay turned for more details on what I learned during this new adventure.

Painting will be a big push before the cold weather comes in a few months.





NEW TRACKS



Mentor Definition: A Trusted Counselor or Guide

By Contributing Editor Jim Kellow MMR

MY LOVE OF O SCALE TRACTION But First, News from “New Tracks Meetups”

“New Tracks Meetup” is Presenting its First Virtual “Zoom Train Show” with Outstanding Vendors on Saturday September 19, 2020 at 1pm EST.

This unique opportunity is breaking new uncharted ground for my “New Tracks” series. I owe thanks to my Zoom Co-host and technical adviser Dylan Lambert of Lambert Locomotive Works for his help and to several other modelers who given me great advice and encouragement to do this.

Modelers and vendors haven’t been to a train show recently or plan on going to one anytime soon. So we are going to have a Virtual Zoom Train Show that will bring outstanding vendors to modelers in all scales world wide. Only a select group of vendors have been invited to this first show. Many of the vendors have previously been profiled in my “New Tracks” series. I hope you will support this effort by participating in this unique opportunity.

Interested modeler/buyers in all scales can attend and participate in this event by simply clicking on this link to the “New Tracks Train Show Meetup”: <https://us02web.zoom.us/j/81574471524>

Please go to my Facebook page. Jim Kellow MMR to get current information about the event including the list of vendors you will meet and talk with at the event. Best of all, you can participate wherever you are for free from your computer, tablet, or cell phone.

My goal for this event is for vendors to reach potential customers world wide, and to have modelers find vendors and products that can help them in their model building efforts and therefore buy from these vendors. A win-win for both vendors and modelers.

How will this event work? The vendors will talk about their products and prices. Participants can ask questions through the Zoom chat function or by email directly to the vendor, and of course, buy on the spot or later if they can only watch the recorded video of the event. The video will be posted on the Jim Kellow MMR Facebook page for three weeks after the event. All buyer’s purchases will be made directly with each vendor. There will also be an open discussion period at the end for questions/answers, comments, and ideas for future shows by all participants and vendors. If modelers and vendors, like this event, we plan to have more of these events.

Please let me know at JimKellow@oscaleresource.com if you have any questions or comments.

I look forward to your input, suggestions, and most importantly, learning that you enjoyed this event and it was helpful to your modeling. Thanks in advance for your support and participation. Click on this link: <https://us02web.zoom.us/j/81574471524> a little before 1pm EST on September 19, 2020 to participate. I look forward to seeing you.

In addition to the Train Show information, you can also find out what is coming up, and who are the Featured Modelers on my regularly scheduled twice weekly Zoom “New Tracks Meetups” on my Facebook Page: [Jim Kellow MMR](#). I look forward to meeting you, discussing modeling with the Featured Modelers, and learning how we can become better modelers on each of these Meetups.

Lastly, before starting this article I want to apologize to Larry Knapp, and Fred Morins, and all of you, for the error in their profiles in my last article.

Some of Larry Knapp’s photos and text were placed in Fred Morins’ profile by mistake. Here are Larry’s photos and text that was placed incorrectly.

Here are some of my builds. Many of them show the process:

[Tagish & Marsh Lake Railroad – Restart](#)
[Woodchuck rail bus build](#)
[Ore bin build thread](#)
[Tagish & Marsh Lake Railroad Phase I](#)
[Tagish & Marsh Lake RR – Town Diorama](#)
[Name the crew of the Tagish and Marsh Lake RR](#)
[BVM 18' Hunkered down box car build](#)
[Mocaleva Model Works Gas Desiel Switcher Kit](#)
[Two a month by the end of the year challenge](#)
[Building Short Passenger Cars](#)
[ON30 Plastic vehicle kit challenge](#)
[JY Coal Mine](#)
[Railtruck from Walmart 1/48 military truck](#)

The areas I can help other modelers by mentoring are:
Fixing Locomotives – I wrote several SBS instructions for this as well as installing decoders in older locomotives.

[Bachmann Shay Gear Replacement SBS](#)
[Bachmann Davenport Gear Repair SBS](#)
[Replacing Gears How To - Bachmann Railtruck](#)
[Bachmann Climax Gear Repair - How To](#)
[Bachmann Rail Bus Gear Repair](#)
[0-4-2 Porter - DCC install - TCS M1 decoder](#)
[Cool turntable for a Porter](#)

I am truly sorry Larry and Fred for the error. Thanks to both of you for your contributions to my mentoring and model building efforts. I really appreciate it.

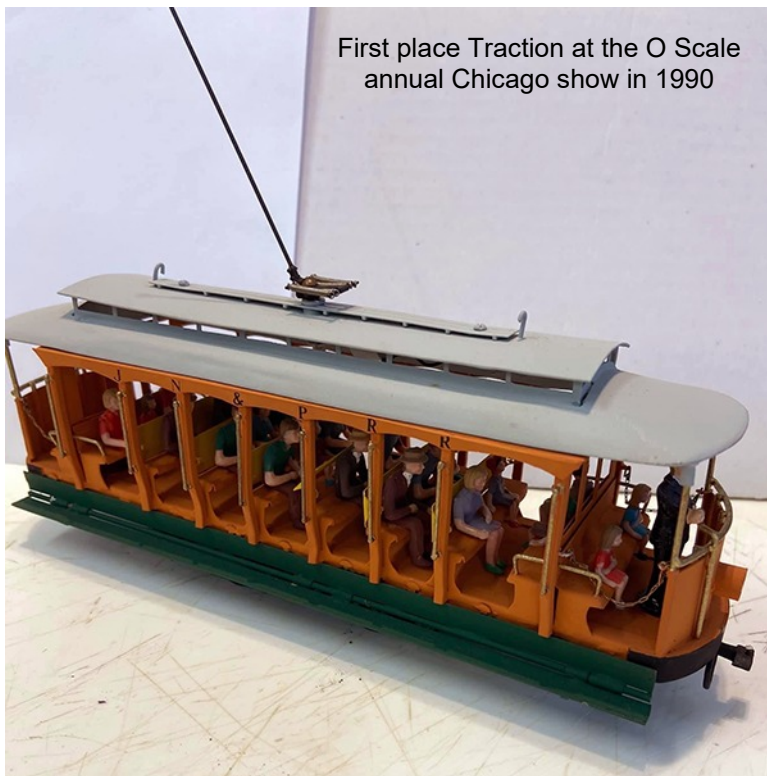
Now, let’s see if I can get this article done without any errors.

Traction Modeling. (My cup of tea. How about you?)

I know Traction modeling does not have as many modelers compared to other areas of O Scale modeling. However, I am one of the few who really got hooked on traction modeling about 30 or so years ago. Believe it or not, I went from Lionel 3 Rail O Gauge to 2 Rail O Scale traction. There were two motivating factors that caused me to initially build an O Scale traction model.

First, Harry Darst, my mentor, was a traction modeler who taught me how to scratch build in brass, and introduced me to a great group of traction modelers who belonged to the Detroit United Railway (DUR) club. Back when I joined, you had to have a traction layout, or at least have one under construction. Without the help of the club members, I doubt I could have been successful in building my traction layout. I joined the club and was immediately exposed to a wide variety of traction modeling. I was able to learn valuable lessons from people who had already made mistakes in building their traction layouts, and could mentor me so I did not make those same mistakes.

I used to go over to Harry’s home on Saturday mornings with a dozen donuts to eat with the pot of black coffee his wife, Hanna, provided and watch him build a portion of a traction model in brass. I then returned home and tried to build my model as I had seen him build his model. The next Saturday, I would take my model back to Harry and get his comments and suggestions for improvement. I finally learned to build a trolley on my own.

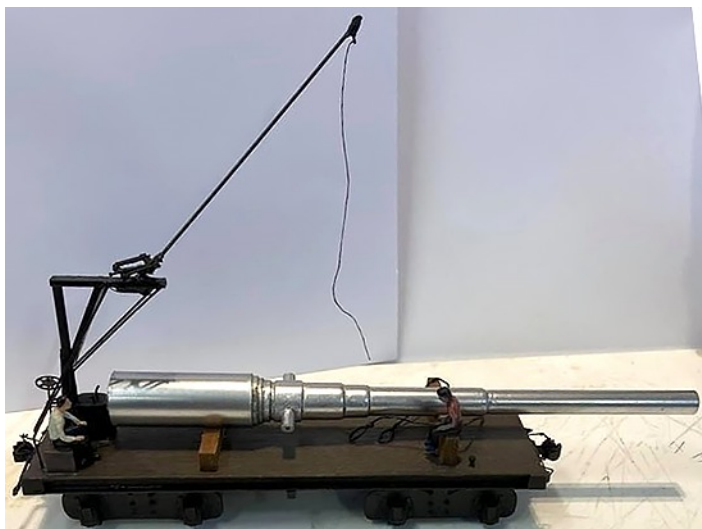


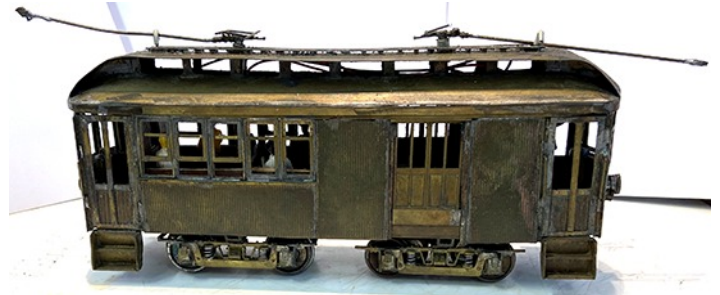
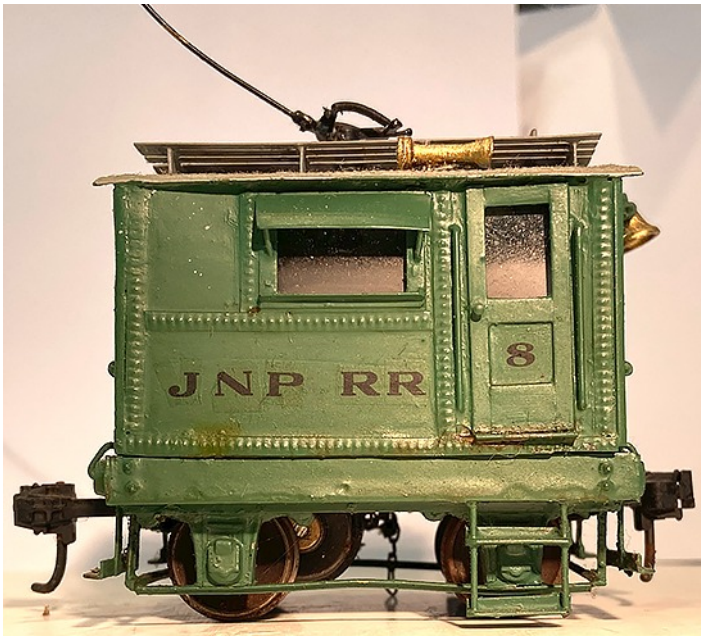
The second factor was I started working on the NMRA Achievement Program awards and wanted to be able to make scratch built models to enter in various contest. The more I built, the more I enjoyed scratch-building in brass. NOTE: I believe the NMRA Achievement Program provides a great educational opportunity for all model railroaders, and I encourage you to take a look at the program.

My first brass model was so bad I gave up and turned it into a diner. Second one was a little better, but I never even finished it, just used it for practicing my soldering techniques. My third model won First Place Traction at the O Scale annual Chicago show in 1990. That was the first time I ever entered a contest, and believe me, I was surprised to win.

After that, all my traction models were scratch built out of brass and either took First Place or Best of Show in every contest I entered. Funny, but I even won a "My Favorite Train" NMRA Division

contest by entering a trolley that Harry Darst, my mentor, had built for me. He had even named it Nancy, after my wife. A very special "New Tracks" for me. Thanks Harry! Here are photos of some of my scratch built brass trolley models.





I must admit putting up the overhead wire was more of a challenge than I anticipated. But, as with all our modeling, the more I built, the better it looked, and the easier it got. Now it is something I actually enjoy. Naturally, all the poles and switch parts are scratch-built out of brass. The overhead wire is phosphorus bronze.

One of the great advantages of traction for me are the very sharp curves I can use, 13" up to 15" and still have 40' cars on the layout. Plus, I can build city type structures and rural structures for the same layout. I model the early 20th century when one of the reasons for people using trolleys was to get out of town to a scenic or vacation site, or attend sporting or other events. This reasoning allows me to have a wide variety of scenery in a relatively small space.

You may not want to build a complete traction layout. But you may find a place on your layout where you may want to add some traction modeling. Or consider building a module and use it with other traction modelers in a club or for a display. Whatever you decide, just do not let the need to build the overhead wire keep you from including traction in your model railroading.

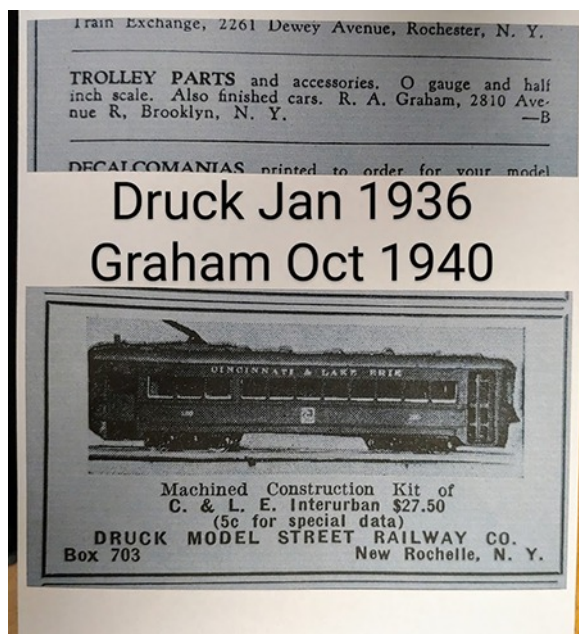


I just found this photo on the “Begging to be Modeled” Facebook page and I know sooner or later I am going to build a model for my Traction Line’s Headquarters Building. What a great sign. I belong to several Facebook Traction and Tram sites and found several modelers who have shared ideas and their modeling. Some of them really caught my eye, and I believe they are taking traction modeling to a very high level using 3D printing. I appreciate their interest in helping with this article and know you will enjoy meeting them.

First, let’s learn a little traction modeling history, and who better to teach us than my friend and historian, Cary Williams. When I asked Cary to share his knowledge with us, he immediately agreed and I am honored and pleased to be able to include it here.

Cary Williams, Traction History

Early O scale traction 1930’s -1950’s



Preface and confessions: I’ve been collecting early O scale for about 5 years and only started collecting trolleys 2 years ago... so there will be omissions and errors .. this a work in progress covering a fun niche within the greater O scale world. I do apologize if I have not mentioned your favorite trolley or its maker. My focus has been more on finding out who was making what, so the details of a particular “model” trolley which is not accurate for a certain line etc is beyond the collecting and research interest. In time, with luck much more paper work, additional trolleys will be found to help connect the dots. If you have corrections or additions to make, please let me know. Condition of the items photographed, being an old school tinplater where original is “king” many of the items are as found... clean up and try and get running yes, however rebuild, re-motor, update and repaint no. In 1933, the scale model train world had matured from its first humble roots mid 1920’s with a huge public exposition found at the Chicago World’s Fair, with several major O scale layouts that memorized and educated millions of the visitors that would no longer be satisfied with the tinplate toy trains from the mass manufacturers. Trolleys had been a main stay for the very early tinplate world, but by 1918, had pretty much vanished from the rails. American Flyer, the 2nd largest tinplate train manufacturer offered its first trolley as a cheap World’s Fair souvenir. Later that year, Model Craftsman began its publication which initially covered all hobbies and crafts, but the model train bug invasion and would take over the entire magazine 14 years later. 1934 *Model Railroader* with very humble beginnings.... Kalmbach in Milwaukee would heavily

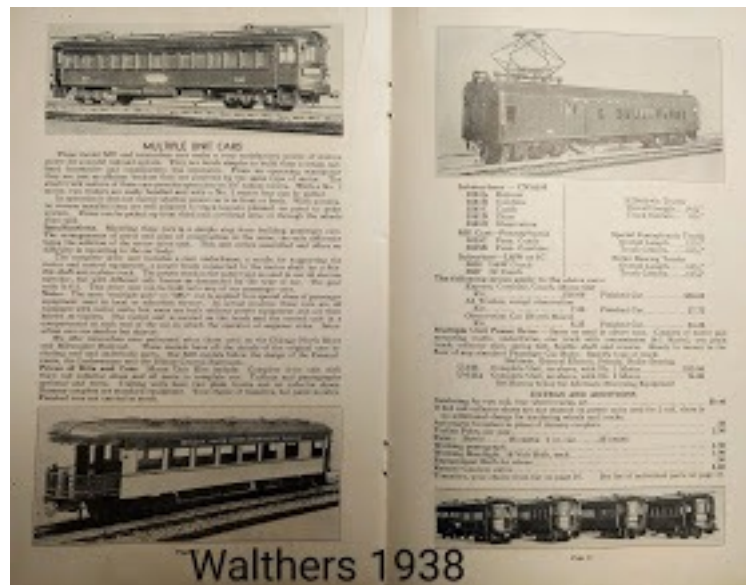
highlight trolley traction O scale ("scale" only in the loosest term) layouts from the first the first issue on. Traction was back with an ever increasing taste for nostalgia.

As scale models were coming into their own in the 1920’s, then as now, the various scales (gauges) all vied for popularity. Many live steam builders went for 1/2" scale (2 1/2" gauge) and 3/4" scale (3 1/2" gauge) for outdoor use whereas the electric train modelers chose O scale 1/4" and 17/64ths for indoor use. By 1933, there was a growing small group of 1/2" traction modelers and several manufacturers (Shaw, Icken, Druck),

providing components for the builders. 1/2" scale even with the shorter turning radius of the trolley world found only a limited market. Druck of New Rochelle, NY mid 1936 is advertising 1/2 scale trolley components... but by October 1936, he becomes the first to announce his introduction into the commercial O scale traction world with trolley poles, and in December, a C & L E "Red Devil" trolley in 17/64ths scale (the true scale for O gauge). The Druck "Red Devil" has cast bronze sides and roof. Druck also penned an article in the 1936

February *Model Craftsman* with full drawings and instructions for those who wished to scratch build the model.

1936 April, Walthers offers his first traction offering with an ad in *Model Craftsman* for his North Shore interurban which he had traveled with to the NYSME (New York Society of Model Engineers) annual open house and Model Show in NYC. By the mid 1930's, Model Railroad clubs were sprouting up across America... an individual living in a small environment for a small monthly fee could be part of a huge club layout. The Annual NYSME and Model Show attracted about 20,000 visitors over the week, planting the seeds of model railroading desire and dreams, hopes and obsessions among the masses.



Lang-Cincinnati late 30's BIRNEY SAFETY CAR

The single truck standard Birney Safety Car needs no introduction to electric railway fans. Because of its wide-spread adoption by street railways it is the universal unit applicable to steam railroad or interurban layouts in furnishing local transit to terminal stations, as well as regular city service.

Like all other LANG-CINCINNATI CARS, this model will easily negotiate curves down to scale city radius of 8 3/4 inches at center-line. This unique feature means that installation of such service can be made in a very limited space on your present or proposed layout.

Our Standard model comes fully equipped for double end operation with head-light, trolley and retriever, fender and pickup at each end. Body is of all-metal, built up construction and has metal roof.

The truck has bronze side frames, is equalized, and employs our HERCULES type direct worm drive to both axles. This feature, together with a 6-8 volt Mantua universal motor of ample size, assures quiet, trouble-free, long-life service. Motor is reversed merely by changing poles.

Three types of trolley mountings are available: regulation board mounted on roof; high board elevated from roof; and metal truss base. Either dome or box type ventilators are optional.

Complete, painted and lettered (no insignia).....	\$23.50
Prime coat of paint only.....	\$19.50

CONSTRUCTION KIT with sides assembled, ends assembled, motor truck and all fittings, with blueprint and easily-understood instructions. Roof has ventilators integral and requires a minimum of fitting.....

\$13.50

Traction/trolleys were attractive on many levels... cheaper entry price level (compared to a steam engine), much smaller turning radius, and ease to add a traction line to an existing home or club layout. Walthers' early cars have stamped brass sides and cast bronze ends... later stamped steel and die-cast ends. The popularity of the Walthers interurban line (1/4" scale) would expand to include many models and last for many decades in their catalog. Walthers being based in Milwaukee was close to the wide variety of locally found Interurban prototype cars a bit south in and around Chicago. Early on, Walthers offered kits and "ready to run" models, RTR opinion dropped after a few years. Walthers did offer power trucks for their trolley and interurbans, redesigned in 1940 to the "A" power truck which was continued in postwar wars with ladder chain drive to both axles. Considering the Walthers interurbans were offered for some 30 years, they trade hands publicly amazingly rarely, and when done, lively bidding can ensue.

1937 September *Model Railroading* Lang - Cincinnati introduces a Birney Safety with cast sides, later in the year a motor freight is offered. Cincinnati would become a major hub of the traction world with Richard M. Wagner in the early postwar years. Lang in 1950 would bring out a small publication *The Whistle Stop* dedicated to the O scale world

1938 Robert Graham of Brooklyn, who had a 1/2" trolley layout in his backyard, begins advertising for O gauge 17/64ths" scale Connecticut Co. 3100 Osgood Bradley trolley. Within a few years, Graham would

expand his line to include a Connecticut Co. 1500, Brill Birney Safety and the Brilliner. Graham's trolleys have bronze cast sides.

1940 John Grzywna of Hartford, CT with the help of castings by Elmer Norman, offers a Pittsburgh Butler Railway trolley with aluminum sides and roof (solid clerestory roof). Grzywna adds a traction line to the local Harford Society of Model Engineers club layout. Post war, Grzywna expands his line to a Chicago North Shore Milwaukee interurban and a clerestory with windows, the roof casting is dated 1949 and offered till the early 60's. John's models are scaled to 17/64ths, so true scale for the gauge, but tower over 1/4" scale cars. In the mid 50's, John adds a Philadelphia Red Arrow trolley to the line up,

Pittman, who built motors, was a 1/2" traction modeler and a major innovator of small and more powerful miniature motors which helped power many early trolleys and helped expand the OO and HO gauge worlds.

During World War II, the model train world was rather quiet, save Walthers offering whatever can be put together without using vital metals being used for war work. Walthers and several of the regular advertisers continued to support *Model Railroader* and *Model Craftsman* during the war even though they had little, if anything, to sell. Walthers with a heavily wood based product line was able to carry on with many of their kits including the trolley items... in most cases sans motors.

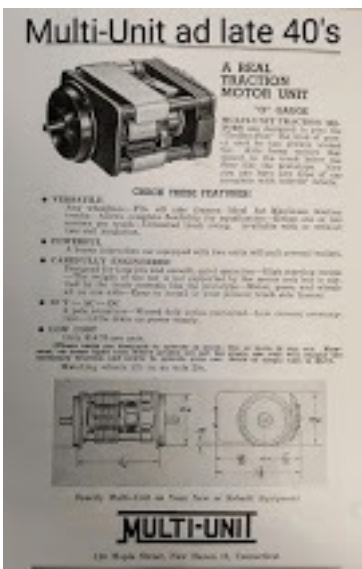
Model Railroader was very keen to keep its finger atop the pulse of the model railroad hobby with its annual poll survey. The various gauge competition was carefully followed, O scale long the favorite pushing standard gauge to its death by the mid-30s', was rapidly challenged by the smaller gauges HO and OO. Each gauge had its own devoted fans in the publications, but HO with its ever expanding products offered by many manufacturers and slightly lower price point quickly finished off OO gauge, and by 1941, had over taken O gauge as the preferred gauge to model in.



Post war consumers were hungry for new product, but many of the manufacturers who had been doing war contract work had difficulty and delays getting product to market which opened the market up for many very small companies.

1947 Vane Jones of Indianapolis, Indiana opens his (Indianapolis Car Co.) featuring the W B & A 20 articulated as their first kit utilizing "Presto-O-Plast" sides and wood roof and floor. "Presto-O-Plast" was a very thin plastic sheet that captured only the faintest of details. The O gauge line quickly expanded to a nice selection of trolleys, and cutting the windows in the sides proved to be a challenge to some modelers. Vane expanded to HO, OO and S gauge in hopes to fill all modeler's needs. O gauge kits were in short supply due to lack of "Presto-O-Plast" by 1949. Vane was keen to be the one stop shop for all things trolley publishing "Model Traction News" Vol 1 #1 May 1949.... promising in the first paragraph this may not be a "regular" published tome (anyone know if Vol 1 # 2 was published?). Vane would offer many trolley components allowing the builder to assemble a wide variety of trolleys. 1964 Vane would begin the publication of "Traction & Models" magazine dedicated to the traction world... with the slogan "Knowledge is of no value unless it is shared with others" on the cover.

1946 Exacta offered 3 Interurbans, taken over by or name changed to Central Lines (1947) and only one trolley kit offered in their line of die molded copper sided kits, for the ambitious trolley builder. Advertised as "90% correct, finest detail".



1948 Multi-Unit of New Haven came out with a clever miniature axle hung "traction" motor. Two of the units could be mounted on a truck for double motor &



TWO NEW PITTMAN TRUCKS

that set new standards for O gauge trolleys

In production now are Pittman's new trolley trucks, as we announced them last month. The 209 (illustrated) is based on the American Locomotive A-490 MU and heavy inter-urban model. It's two- or three-rail, AC or DC, according to your needs. And it's full of that famous Pittman quality . . . a steal at \$12.95!

The 204 has the Brill 27 MCB light inter-urban for its prototype. DC and insulated for 2-rail. Priced at only \$14.95, it's the top quality motor in its field by far. You'll find it a natural for that light car you've been wanting to build.

Ask to see these new Pittman trucks at your favorite hobby shop. You'll agree that the 204 and the 209 are the best yet . . . that Pittman continues to lead the field!

PITTMAN

ELECTRICAL DEVELOPMENTS CO.
Distributor Sales Division
123 W. Main St., Kutztown, Pa.
Send 3c Stamp for Catalog

1949 Sep MR 65

4 wheel drive. Multi-Unit drives can be found on many models from this period.

1948 Frank Lahodny of Cleveland brought out his 49' Street Car.. with his R&T company. By the end of the year, Bob Treacy was running R&T and the PCC trolley had been brought out. The PCC would become a traction favorite and remain on the market for 15 + years offered in two window variations.

1949 Al Pittman, with help of his friend Jim Thomas (Thomas Industriesearlier partner with Jim Tyler in Mantua), brought out a Brill trolley kit smooth sided... which was supplied in large quantity to Minitoys, Inc (sold through Hobby-Land Hobby Shop, NYC).. who assembled and painted the trolleys in two versions, #102 Public Service Trolley and #103 Rapid Transit Trolley...

"SMART RAILROAD BOYS BUY MINITOYS"

BY POPULAR DEMAND
THE NEW MINITOY O GAUGE TROLLEY IS HERE
READY TO RUN - NOT A KIT



COMPLETELY ASSEMBLED 1/4 INCH SCALE MODEL,
FULLY OPERATING TROLLEY CAR

Runs perfectly on any kind of 3-rail track, O gauge, 027, 072, etc.

For those of you who have been waiting for a manufacturer to put out an assembled working trolley, you have it now!

For those of you who want something new and different for your train layout, be sure to see and buy the new Minitoy Trolley.

Powerful AC-DC worm drive motor **Working headlights**
All die-cast parts **Realistic trolley poles**
Automatic sequence reversing **Richly colored**

Your choice of lettering
"PUBLIC SERVICE" 102 or "RAPID TRANSIT" 103

YOURS FOR ONLY \$19.95

If your dealer cannot supply you, send check, money order,
or write (no C.O.D.'s) direct to:

MINITOYS, INC.
25 PARK ROW NEW YORK 7, N. Y.
FACTORY AND PLANT, UNION CITY, NEW JERSEY

ATTENTION LIONEL AND TINPLATE DEALERS:
Minitoy trolleys for 1949 will be a tremendous seller.
Write early regarding dealers' setup.

1949 Sep The Model Railroad

deep flanges and center third rail. This model heavily advertised as RTR for \$19.95 was a big hit and opened the world of traction up to many a tin-plater .

1950 Pittman would improve the Brill with "wood" simulated metal sides. 1952 the #510 freight motor patterned after the Lehigh Valley "C" series which ran next to the Pittman plant. Pittman's freight motor would handle many heavy tons of revue service on traction layouts across the nation. 1953 the little #520 four wheel work car would round out the Pittman line motive power line. Pittman offered an "instant" overhead wire system with its "erect a wire" system for the soldered challenged. The Pittman Brill trolley would continue to be an entry level favorite... and/or base for many modifications for decades... continuing under Bowser.

1949 many of the trolley (traction) manufacturers joined together in February at the Chicago Hobby Fair to form the "Model Traction Manufacturers Guild" to promote the wonderful world of traction. Members of the guild at Chicago were Wm K. Walthers, R.M. Wagner, Richard Moore, Vane A Jones, Frank Westbrook, Al Pittman, and Mr. Baldwin. Al Pittman was in charge of the catalog committee which published a 34 page "Model Traction Catalog" showcasing the guild members' traction lines in HO, S and O gauges.

1950 Walthers publishes the "Guide to Trolley Model Building" prepared by the Traction Guild with the help of R.M. Wagner. The guide would be republished at least 4 times over for the next 20 years.

Post war years the O gauge slide continued from popularity in the gauge wars, and/or the huge expansion of the HO gauge market was amplified. Lobaugh and Scale Craft, both leaders

VINTAGE 1913

The Pittman Works is now prepared to furnish promptly, a box-body freight motor, especially advantageous for interurban lines.



Here's an old-timer that's still running daily schedules on the Lehigh Valley Transit Company lines. Why not put it in service on your O gauge line? It's a wood body, truss rod interurban faithfully reproduced with famous Pittman quality! Old-Timer operates on AC or DC, an overhead trolley, two- or three-rail scale track only. Fully detailed Zamac ends, sides, pilots and roofwalks, with non-operating doors and windows integrally cast. Pre-shaped wood roof, completely drilled. American Locomotive A-490 truck frames. Two full-working American-made trolley poles. Eight- or four-wheel drive optional.

EIGHT-WHEEL DRIVE - Center mounted motor drives through neoprene couplings to sealed-in-grease worm gear boxes. Will take ten scale freight cars, negotiate ten-inch radius curves. **FOUR-WHEEL DRIVE** - Uses Pittman AC 209 or DC 209 Trolley Tractor, will pull three scale freight cars.

PITTMAN
ELECTRICAL DEVELOPMENTS COMPANY
Distributor Sales Division
123 W. Main St., Kutztown, Pa.

1950

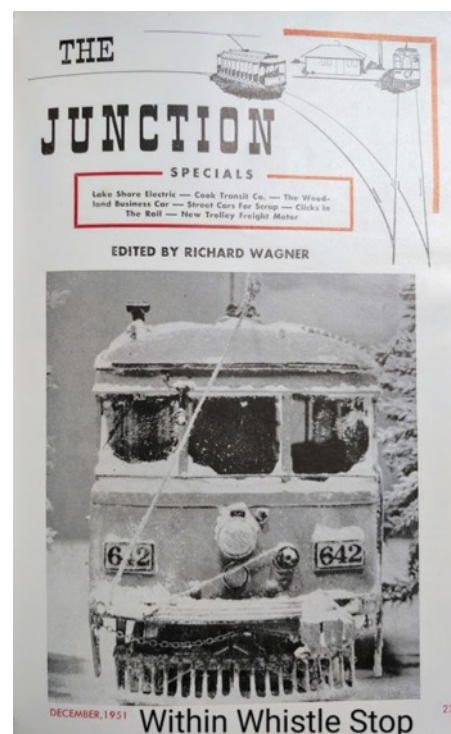
**How real does YOUR trolley car look?
Wagner accessories will do the trick!**

Trolley Pole, assembled—	Each \$1.50; Pair \$2.75
C-30 Smoke Stack 15
C-40 Single Air Horn 15
C-50 Dual Air Horns 25
C-30 GE Compressor 35
C-10 Resistor, set of 3 30
B-500 Pilot 2.50

These and other traction parts such as truck side frames are available at your Hobby Shop. Custom built trucks and cars may be ordered through your dealer or direct. Write for prices.

WAGNER CAR COMPANY
DEPT. O
59 EUCLID AVENUE, WYOMING
CINCINNATI 15, OHIO

1950 Nov WS



prewar, were mostly absent during the early postwar years. The HO market was happy to fill the void. Picking up a postwar *Model Railroader* or *Model Craftsman* (*Model Railroad Craftsman* by 1948), one can see the domination of HO from articles to ads on every page. The booming postwar years added many new hobby shops which did not carry O scale due to the lack of available product and higher price point. *HO Monthly Model Trains* began publication in 1948 exclusively dedicated to the smaller gauge. *Model Builder* (Lionel's magazine) mainly dedicated to O gauge ceased publication in 1949. The one bright torch running forward in the O scale world was held by Joseph Matthews of General Models Corp. Matthew's GMC had bought out Varney's O gauge line, JC Silver sides cars, took over the Atwater F3's, added a switcher and 4 steam engines over a 36 month period. With hobby shops' hesitation to carry O gauge due to availability and higher cost compared to HO, Matthews in 1950, decided to sell direct to the public eliminating dealers and hobby shops. February 1950 Matthews published the "O gager" (an in-house GMC magazine) promoting the new direct from manufacturer purchasing, by November GMC was bankrupted. The GMC bankruptcy helped push O scale further to the fringe of the model railroad hobby. GMC did offer one traction piece, the "Electraction" street car for tinplate use... a very cheap yellow plastic 4 wheel car that needed a push to start it in motion. After the GMC bankruptcy, the car was marketed by Kroll.

June 1950 Charles Lang publishes "The Whistle", a small magazine dedicated to O gauge - scale trying to bridge the ever widening crevice between the two. "The Junction" (a magazine within "The Whistle Stop") is added December 1951 edited and heavily promoted by Richard Wagner. 1953 "The Whistle Stop" changes its name to "O gage Modeler" (Jan-Dec). Charles Mischke takes over as editor of "The Junction". "The Junction" does a marvelous job covering many contemporary traction modelers providing some text and photographic documentation of early very talented builders such as: Art Wienman, Bill Hoffman, William Everette, Fritz Harden, J Huber Leath and many others.

Richard Wagner's company, Wagner Car Co., built custom built trolleys and provided an ever increasing supply of parts and thousands of power trucks for the traction world. Some of Richard's initial offerings were the added detail castings that could bring the standard Pittman trolley to life. 1954 Richard began the publication of "Trolley Talk" dedicated to all things traction. Richard helped create an active traction community hosting "gatherings" at his home for trolley running sessions. Richard, and later his wife, Birdella, would publish "Trolley Talk" for 40 years helping to grow and nurture the traction world.

International Model Product (IMP) of NYC was an early importer of models from Japan after World War II. IMP was a loose grouping of builders many working independently in Japan on a wide range of models. Unfortunately, quantity of the various pieces varied widely depending on the model and builder casting the overall "cheap" banner across the IMP line. IMP did produce several electric engines in American and Japanese design, and one generic trolley named "Desire" along with line poles offered early-mid 1950's. IMP would help open the importing doors for

NOW in 2-Rail SCALE or SCALEPLATE (3-Rail)



The "GREAT DESIRE"
... has a definite place on your layout!

A "kit" in the usual INTERNATIONAL manner. The body and underframe of heavy gauge brass are completely finished and ready for SDA (screwdriver assembly). The smooth operating four wheel drive is powered by a strong AC/DC motor, operating on 3 to 24 volts with minimum amperage.

Exceptional detail and realism in perfect scale. Designed so that the trolley pole can act as reverse or light switch in operating the headlights (bulbs supplied). When ordering indicate whether 2 rail or Scaleplate.

Complete Kit **\$15**
Completely finished, ready to run **\$22.50**

Send 10c for latest catalog
At better dealers everywhere
or write Dept. W-3

INTERNATIONAL MODELS, INC. 33 Union Sq., W.
N. Y. 5, N. Y.

March, 1953

International ad O gauge
Modeler

31

many that would follow... Max Gray, Ken Kidder, Suydam, etc . The best of IMP's builders were offered better positions in the later companies as the need to build higher quality models continued to climb.

Coast Cities Associates of Montclair, NJ offer 5 different trolleys (Railroad roof City Car, Lightweight City Car, Birney, Crandic Lightweight, and Brilliner) in the mid 1950's, both in kits and RTR. Aluminum castings of sides and roof.

Baldwin Model Locomotive Works of Stratford, CT offer Connecticut Company Trolley car models of the 1500 and 1900 series. Powered by Multi-

unit trucks. Custom built cars were \$90.00... pricey in the mid 50's. Baldwin used primarily bronze for their diesels and aluminum for their passenger cars. Unknown what was used on the trolleys... as I've yet to see one.

The traction world had even risen to the attention of the tinplate giant Lionel introducing their #60 bumper trolley in 1955.

Traction modeling offered then and now is a big bang for the buck if you had a limited budget and space in which to create a rail empire. The quickly disappearing full sized trolleys created a fan base in the model traction world. Visiting the East Penn traction show in Allentown last year and the annual Trainfest show in Milwaukee, the wonderful portable traction layouts set up by dedicated crews are a magical draw to once again see trolleys run from rural settings to gritty urban scenes whilst humming under the powered wire. Before taking the photos for this article.. the reality of the need for overhead wire became glaringly obvious. So I set up a run of 6' section with IMP line poles as a setting and the first piece of the "electric high line" to be added to the layout.

Let's take a look at some of Cary's collection.





R&T PCC and #1000



ICC WB&A 1947



Cincinnati-Lang Brill 1938



Robert Graham
Osgood Bradley



Coast Cities
RR roof City Car



Coast Cities
Brilliner



Robert Graham Brilliner



John Grzywna
Pittsburgh Butler



Coast Cities Crandic LW



John Grzywn NorthShore



Walthers
Northshore





Imports International
Poles All Nation NS

If you would like to see a few of the “veteran” trolleys in action please see links:

Walthers North Shore car early 1940's: <https://www.youtube.com/watch?v=gqkYAf7yTg0>

ICC WB& A car 1947: <https://www.youtube.com/watch?v=m0CyoFbCG2w>

Pair of John Grzywna cast aluminum Chicago and North Shore electric Interurbans/trolleys 17/64ths scale.

Circa 1950: <https://www.youtube.com/watch?v=10jLX4ka1Zw>

Thanks so much Cary. I really appreciate your contributions to our understanding of how traction modeling started and developed. You can contact Cary at Cary.Williams@oscaleresource.com.

Now, let's meet some modelers who are helping to take traction modeling into the future and who could become your mentors.

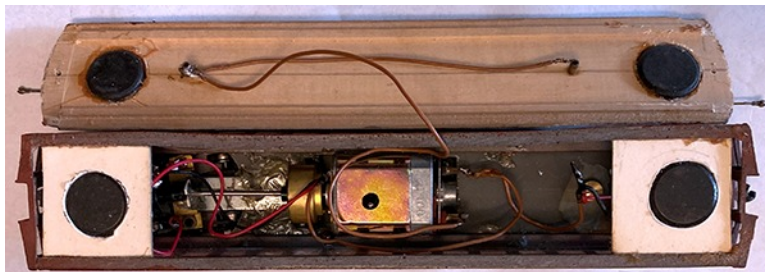
The first modeler I want to introduce is Eric Diehl. Eric has shown me what a small world we live in. You will see in his profile that he is a member of the Detroit United Railway Club, which I was a member of long before Eric. He also has some of the Traction models my mentor, Harry Darst, built. Third, he told me that his 3D printed models can also be made in various scales including O scale. I got lucky in finding Eric, and believe what he is currently doing in 3D printing may become the future for many O scale traction modelers. Please meet Eric:



Eric Diehl

I am almost 62 years old and have been interested in trains since my earliest memories. My father was an avid model railroader as was my grandfather (I still have some of their scratch built buildings, early Varney HO cars and engines, and a tinplate trolley car from the late 30's) and I remember at 4 years old trying to stand on stools to see onto my dad's 5x10 layout. He started to build a small 4x4 layout for my brother and me about that time, but atlas snap track came out and it was much

easier to set up and get trains running even though it was on the living room rug.



Interior of a Pennsylvania Reading Seashore Lines coach.

It is a resin kit, I wish I had gotten 2 of them when they were available, but I think it was when I was in grad school and didn't have much money. For power, I used a spare Ajin mechanism I purchased from Joel L? when he imported the P&W bullet cars. The running quality of this mechanism is outstanding and one of my favorite cars to run any time I want to just sit and watch something go around, never any problems and so smooth! The decals were designed and printed by Bill Zombory, Unfortunately the side view of this car tuned out as a video which we couldn't see. Maybe another time, I will try again. You can see the magnets used to hold the roof.

Dad was primarily interested in trolleys maybe due to the fact that they still ran in his hometown of Philadelphia (Moorestown, NJ). However, when he settled in Ohio in the late '50's, he took a liking to the Indiana Railroad, the Cincinnati and Lake Erie, and the Lake Shore Electric. I of course liked trains, especially the B&O, which ran in front of my house in Oxfore, OH, but did not take much interest in traction during my school years. Through scouting, *Boys Life* magazine, and my dad's encouragement, I began to build the 4x8 layout shown in the magazine about 1971 or '71. I didn't have much money and my dad showed me how to hand lay track and scratch build turnouts to save money.

I still prefer that method today, and even though I have prefab track and turnouts, I seem to have more problems trying to get them to fit my



Cincinnati Hamilton and Dayton #200 series suburban car. I heavily kit bashed a Kidder double truck plastic Birney body for this project. Actually, this may have been the project that made me realize on later projects that I was doing more work kit bashing than I would do if I just built from scratch. When I got done cutting this plastic body, all I had holding it together were the lower side panels, lower end panels, door posts, and roof. All the windows had to be re spaced and lowered, the doors resized and relocated to only the right side, and the gaps where they were removed on the left side filled in with sheet material. The power truck is a NWSL PDT, I still need to fasten it in better, it keeps falling out, maybe I can figure out a way to use a magnet to hold it in. The decals are Rail Graphics from my own artwork.

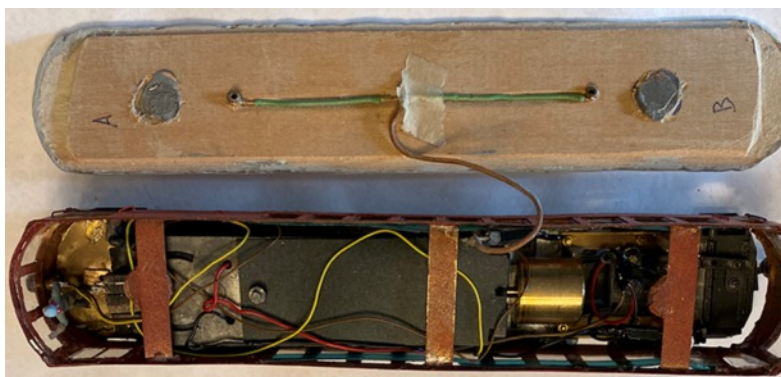
Below the CH&D car is a Dayton and Troy curvesider. This is a brass car that I painted and I just included it because I am happy with the paint job and wanted to show you.

track plan and still end up hand laying some of it. I went away to boarding school for high school and had just my vacations to use for working and recreation, so not much got done on the layout during that time, but at least the track was all laid and I could operate on one loop around. Trains began to take more of a back seat to soccer and interest in wildlife biology. In college I was primarily a soccer player and a biology major on the side. When I finished college in December, 1980, I had a job at a pheasant farm where there was nothing to do in my spare time and I began to take my dad's railroad books back with me to read.

I discovered the C&LE that way, and found that there were remnants from it all over the place where I was living in southwest Ohio. That inspired me to start modeling traction because it was unusual, no one knew much about it, and of course, I had a head start when it came to building cars because my dad's shop was full of unfinished projects and kits yet to be started. I had almost finished a Walthers heavyweight diner a few years before and a scratch built #2 galloping goose that had been a collaborative dad/me project from when I was 10 years old that only got the sides cut out. So I brought those projects back and finished them up in 1981. After that, I discovered some photo etched kits of C&LE prototypes in dad's drawer, and that was the beginning of my love of traction. I think I did a photo etched red devil first and then the next was a Labelle 61' Ohio Electric combine. The red devil was crude, and a few years ago, I went back and corrected some of the problems I had with it; primarily putting it on a floor and trucks from a Bachmann Peter Witt. It runs much better now. In that repair job, I also discovered a design flaw in the photo etched sides... they are a foot too high top to bottom.

I couldn't figure out for a long time why it looked different from my Hallmark and Car Works red devil models. Still, I like it and they all run together on my layout.

Even though I had a head start with resource books, plans, raw materials, tools, and my dad's encouragement, my dad was not able to help me much after college as his health had declined with MS to a point where he was no longer able to move much or communicate. I found one of my professors at college was a model railroader, and he helped me build a transistorized throttle from plans in a book. I scoured our extensive collection of *Model Railroader* magazines, *Trolley Talk*, *Traction and Models* magazines, and anything else I could get my hands on, to learn from and be



The next photo shows the interior of the Charles City and Western #50 pictured elsewhere. The power is from a Spectrum doodle bug and fills more than half the body. It is a smooth runner and is heavy, no weight needed in this one to pull trailers! You can see the magnets used to hold the roof.



An example of some easy and fun projects I took up after some back to back styrene scratch building projects that were fun, but very time consuming. On top there are 2 brass Birney cars, the one on the left is an Indiana Railroad city car; it could be one of several city systems, but I didn't want to get into modifying it for Richmond, IN so this is probably a Muncie, IN car. It has decals from Rail Graphics from my artwork. The one on the right is a Hamilton City Lines, Cincinnati Hamilton and Dayton, car that I detailed about 25 years ago using Rail Graphics decals from my own artwork.

inspired. I found a modular Trolley Club starting up in Cincinnati in 1983 and started building a 2x12 sectional shelf layout in my apartment.

I had been working for the county soil conservation office and coaching soccer at Wilmington College from 1981 to 1986. I started grad school in 1986, and after one semester, went to play soccer in Louisville for a professional indoor team so my layout went into storage in my dad's shop and I just took little projects with me to work on in my spare time. I spent the next 4 years trying to figure out what kind of career I wanted for myself, playing soccer was not going to last and did not pay much for the year; wildlife biology was my first choice, but I had to start with low paying internships and temporary jobs and that's what I did until 1992 when I went back to grad school again, this time at Central Michigan University.

I got a job as assistant coach for the men's team and my wife worked for a nature center in Midland, MI. It was there, with the help of my brother in Ohio, I learned how to use the computers at CMU to make artwork for decals. I started selling traction decals to pay for my cost of having them silk screened at Rail Graphics, then resin castings of car sides and ends, and in another year, I got into auto cad and making photo etched cars. I found a model railroad club in town with some outstanding modelers, a couple of them had articles published in *MRR*! Through that club, I met a model builder from Bay City who had made a business out of hand making high end scale model carnival rides. He showed me how to make cheap effective molds for soft metal castings. I still use those castings today and even the molds when I need a part and I don't want to buy it. Another modeler in the club let me come over some evenings and use his spray hood and I got a lot of brass cars painted in the last year I was in Midland.

I moved to Iowa to take a head coaching job in 1997 and continued to make photo etched kits, castings and decals for other people, but not much got done on my own projects. I was really busy with soccer coaching, recruiting, and refereeing. Still, I was able to do some sight seeing in my travels, eastern Iowa still has a lot of interurban ROW still visible and some very nice restored stations. Actually, 5 years earlier in 1992, I was on a temporary wildlife job and stationed in Boone, IA and I actually got to help restore the CCW #50 which ended up being my first produced photo etched kit in 1994. Even though I was busy coaching and making photo etchings for others, I did get a little bit of kit bashing done before leaving Iowa in 2002, one of which was a short little Barney and Smith car made from a MDC Roundhouse old time coach and a Walthers doodle bug



A set of Cincinnati Hamilton and Dayton (later C&LE) #100 series combine and coach. The coach at the top, designed and started building in 1996, is my own photo etching from nickel silver and using drawings I made in auto cad. The power truck is from a Bachmann Brill, the decals are Rail Graphics from my artwork. You can see I was using the large shower curtain magnets to hold the roof. The combine at the bottom is a Jan Lorenzen (Locomotive Workshop) photo etched kit my dad bought in the 70's and never got around to building. I started building it in 1995. Both coach and combine got their power trucks in 2006 and finally took a turn under power around the new layout modules. The magnets used to hold the roof are a combination of large magnets and smaller rare earth magnets to give a stronger hold.

floor and trucks. That was my first experience in kit bashing.

Going back to Michigan again, this time in Lapeer county and driving south every day to coach soccer in Rochester, I discovered the Detroit United ROW and ruins between Rochester and Flint. I did not have much time for model building and my supplies were in storage until 2004 when I started doing some more painting and decaling brass models and previous projects. In 2005, I discovered the DUR Trolley Club in the Detroit area and have been a member since then. With the club's help, I built 2 modules to East Penn standards, and that is what I have run my cars on since then. I took a job at the Detroit airport in 2010 using my biology degree for a change working for U.S. Customs as an agriculture specialist.

Although I kept my residence in Lapeer, on the nights before I worked, I rented a room from one of the trolley club members (Howard Andrews), and he was very helpful whenever I had a question or needed assistance on some project. I found that most of the club members were not model builders, but one of them (Bill Zombory) encouraged me to come to his house every Tuesday night and bring a project to work on. The next 3 years were very productive building photo etched cars I had sitting on the shelf waiting to be started; and I even tried scratch building in styrene

for the first time. The Tuesday night guys were very supportive, and I learned a lot from them. Unfortunately, Bill passed away and the Tuesday night group broke up. However, I bought a lot of Bill's collection and materials so I rarely have to go to a hobby shop any more so Bill's influence continues on. I also bought models from him that had belonged to Fred Gibson, Harry Darst, and Lewis Potter so their handiwork is saved for future generations.

Last December, 2018 I was attending a NMRA show in Livonia and met Andrew Hustead who was demonstrating his 3D printing machine and I talked to him about making trolley models. He was trying get a business started with it, and I think it has grown quite a bit since then with my orders and other clubs and individuals asking him to make buildings, trains, and vehicles. We have had a very productive collaboration with 8 model shells, as well as, side frames and interiors already produced in less than a year. I never could have gotten this far on my "to do" list if it hadn't been for Andrew coming along. I still think there is a place for photo etching, but 3D printing for most other things is the way to go. I still will do some scratch building too, but right now I am trying to paint and decal these 8 car bodies we have made. I have one running now, but again, my projects are being put on hold while I work on requests for my Michigan cars from club members to produce and paint the shells for them.

That is my story, I have about 70 models that are operable or what I consider completed, about 20 of those started out as RTR models or projects from my dad's collection after he died, and another 10 acquired from Bill Zombory's collection.



The car on the bottom is a Fort Wayne city car (Indiana Service Corporation) made from a plastic double truck Birney from Kidder with the old single axle drive power truck. I painted this car in 2017 when I was recovering from my time consuming scratch building projects and wanted to do something quick and easy. That is also why I did not re-motor this car, although it does run reasonably well on level track, just noisy. The Logo is Rail Graphics from my own artwork back in 1995, and I finally got around to using them.

There are a few things I would like to say about what I have learned in all this time. Overall, it is what others have said, it has to be fun and relaxing, don't make it a job. Don't be afraid to do something over, especially early on on the project.

Make shirt cardboard patterns when trying to cut and fit something so you don't waste time cutting brass, styrene or wood only to find out you measured something wrong. It also helps avoid extra solder joints if you can fold a piece of brass instead of cutting and soldering it back together.

Filler and a good paint job can cover a lot of mistakes.

Don't use the same shade of paint on too many cars or the roster will look artificial.

Know when to stop. "It's good enough". I used to try to detail a car down to the minute details on the under body or elsewhere that would never be noticed by anyone else but me. It would make a project last longer than it should, and I had many more that I wanted to get to.

Going along with that, is my realization that all modeling is an illusion. What I am trying to do is

create an illusion of the real thing, not recreate the real thing. For example, when I was looking for a car to kit bash into a Lima Route pool car, I had to decide whether to cut and splice a LVT metal Bowser shell to get 7 more feet of length and have the correct number of windows or just fill in one window for the baggage section and get the illusion of the whole car. No one else knows that it is 7 feet too short and minus one window. However, with this 3D printing, I may decide to print a correct version of that car. I still like the kit bash version, it was good enough at the time.

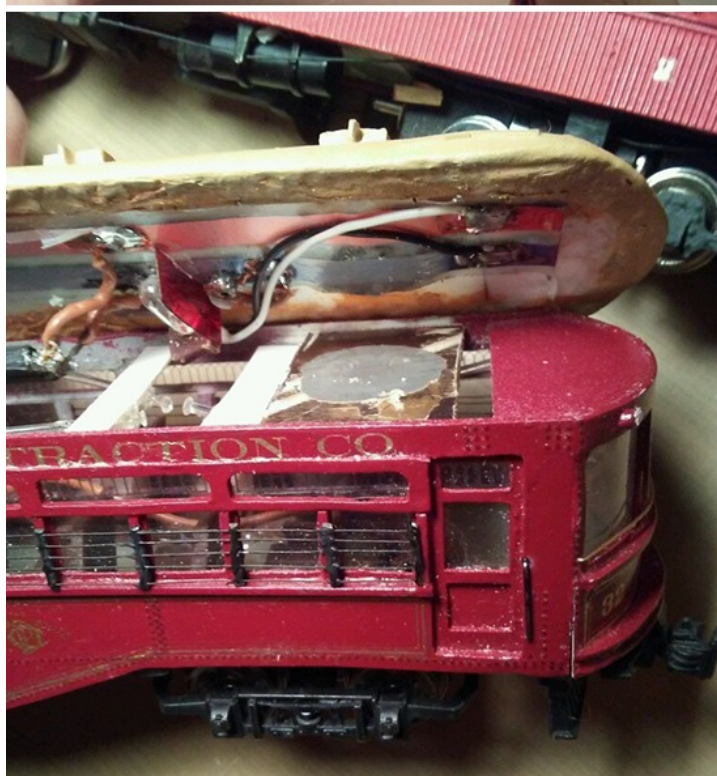
Use old passenger car frames, roofs, floors, trucks, pilots. Why recreate something that already is sitting there in your stock?

Can't find a part? Then you can make it or improvise!

And last of all, remember what Vane Jones said, "scrounge", and "knowledge is of no value unless shared with others."

Now I will write a bit about my roof attachment methods using magnets. First, something to avoid when using the rare earth or other round magnets is don't install them over the motor, the motor won't turn. Also, while sheet magnets are weak enough that they probably won't affect the motor, you should still avoid it if you can.

Years ago I thought about how to use sheet magnets because I had a lot of them. However, the problem I came up against was they are relatively weak and the small strips I was experimenting with would not hold anything. I was also testing them out with holding buildings down onto the portable module. Another thing that discouraged me was that when stuck together and subjected to shearing motion, they readily slide in one direction and not the other. If I tried using a sheet magnet to stick to a piece of steel, it would easily slide in all directions, and would only stick if it was touching the steel because the attraction was so weak.



This year, I began thinking about sheet magnets again. A unique characteristic about them is that the magnetization is in thin strips of negative and positive sensitized material. For example, if you hold one hand out, palm up and fingers together you see that there is a trough between each finger. If you then lay the other hand on top of it, palm up and fingers together, and slide your hand back and forth and up and down, you can feel that there is resistance one way, but not the other. The fingers will slide easily in one direction, but in the other you will feel them bumping over each other and if you press them harder together there is more resistance.

This is how the sheet magnets feel when you put them together and slide them one way and then the other. With this in mind, I started playing around with pieces of sheet magnet to see if I could use this characteristic to my advantage. What I came up with in this first car I have used it on is to use larger pieces of the sheet magnet to make sure there is enough surface area to hold on to the other piece, and to use the orientation of the positive and negative strips to keep the roof from sliding off sideways or endways. I realized that I could keep the number of square locations to 3 instead of 4 if I oriented the middle square positive and negative strips (“fingers”) across the car body so that the resistance was to the end to end shearing, then the squares on each end I oriented the “fingers” along with the car body so the resistance was to the side to side shearing.

The squares are glued to the center section of a piece of clear acetate (same material as the windows) bent in a square U shape bracket that fits right inside the window acetate and goes down to the floor. Since it is clear, it is not visible from the outside. It does not have to go to the floor since the only place I glue it to the sides is right above the windows, but I made it go to the floor because I wanted to have it braced by the floor when I was aligning and gluing the magnets. This could be done differently if I was working with the floor removed instead of the roof removed, but this is only my first try; maybe on the next one I will work from the underside. Working from the top is probably easier for this particular procedure. The next step is to glue one square sheet magnet to the center clear bracket and one to each of the end brackets. Alignment of the “fingers” should be checked at this point to make sure they are in the correct positions. Add the glue to both the side of the brackets above the windows and the interface between the bracket and magnets (I used a Loctite white silicon glue that dries clear and is easy to peel off if you make a mistake), place a sheet of clear plastic food wrap over them, place the other squares of sheet magnets over top of the ones that are gluing, then place the roof over top of that and make sure the roof is sitting down snug to the sides.

If your sheet of plastic wrap is long enough, you can use it to wrap and hold the roof on, or you can use rubber bands. This is to get the brackets to sit at just the right level to attract the other magnets and hold the roof, but not force it to stick up too high. After the glue dries on the first set of squares on the brackets, you can then glue the other magnet squares to the roof. I did not need brackets for this even though it is a railroad clerestory roof, because the edges of the roof were wide enough to glue the edges of the squares to it. You still have to make sure that the squares do not get in between the top of the sides and the roof and prevent it from snuggling down flush. The last step is critical to the perfect final fit of the roof. Lay each square on top of it's mate and again make sure you have the “fingers” oriented correctly. Make sure you have a sheet of plastic food wrap between them to avoid glue leaking where you don't want it. Check the resistance of the fingers, make sure you have the sides of each square trimmed so that it doesn't get in between the roof and the sides, put the glue on the edges of the roof or the squares and press the roof onto the squares and wrap with rubber bands or plastic wrap.



Penn Ohio freight motor on the top. It is a Labelle double door freight motor kit with a replaced arch roof instead of the clerestory that was in the kit. I used wood roof stock for this one. I built this car in 2010 while I was at the CBP academy in Frederick, MD for 3 months. The power is from a Bachmann 44 ton (or was it the 70 ton) engine. I read about using these power trucks for scratch building and thought I would try it. One truck was almost too weak to move the car by itself, and certainly not enough to pull any trailers, so I put both power trucks in according to the article I had read. I have not been very happy with this arrangement because the motors sometimes get out of sync. One will be trying to go while the other one stalls. It should help that they are wired together, but it doesn't so I ignore it as much as I can and sometimes it runs good. The decal logos are by Rail Graphics from my own artwork, and yes, those little red shields really have "Penn Ohio" written in gold on them, you have to use a magnifying glass to see it! Ha! Kudos to the screening process at Rail Graphics on that one! I used big shower curtain magnets on the interior to hold the roof.

Below the Penn Ohio car is a Dayton and Western freight trailer I made from a Jim Osborn kit (Midwestern Train and Hobby). I experimented with a magnetic coupler centering system I read about in a traction magazine. It doesn't work as I had hoped it would, maybe the magnets are too weak, but if they were too strong to let the coupler swing, then the car would pull off the track. I am still thinking about other applications for magnets, and this idea still might lead to something helpful.

Some final notes. The drawbacks to this method are that the squares are large enough to limit access to the interior of the car meaning that any other work in the interior should be done prior to installing the magnets. I will still be experimenting with decreasing the size to see what minimum size will still work, and of course the rare earth magnets are the strongest and smallest. The rare earth magnets can be placed on the underside of the brackets and do not need to be touching, can be a centimeter or more away from each other and still attract. The sheet magnets and others need to be touching or very close to each other to attract. I have also used a combination of rare earth magnets and shower curtain magnets with good results. Also, I have noticed that the sheet magnets seem to attract each other better from the un-printed sides.

I hope you can use this in your modeling. Magnets are very easy to use this way and others I am still experimenting with, and they are cheap. Don't throw away those kitchen magnets, you never know when they might come in handy! Scrounge!

I scratch build in HO and had been doing my own photo etching, kit bashing, or old fashioned fabrication from sheet and strip. This 3D process is so fast though, I can have a brand new car shell done in 2 weeks from CAD drawing to actual print. It takes me about a year or more to do 1 or 2 cars the other ways. Of course, I still have to paint the shell and put a floor and trucks under it, but the time savings is well worth the money spent. I now have 8 different model shells ready for finishing since starting up in January. I am not in business for myself, only getting a commission on the shells that I asked the printer to make. I am paying \$150 on each original print which includes the time for the CAD, but the next print is only \$90 which includes my commission. Of course shipping would cost about \$5 on top of that.

If I can help you please contact me at Eric.Diehl@oscaleresource.com. Many thanks Eric for sharing your knowledge, experience and advice.

Next I want to introduce a Modeler Turned 3D Designer/Manufacturer, that I know you will find interesting. Please meet Andrew:



Andrew "AJ" Chier

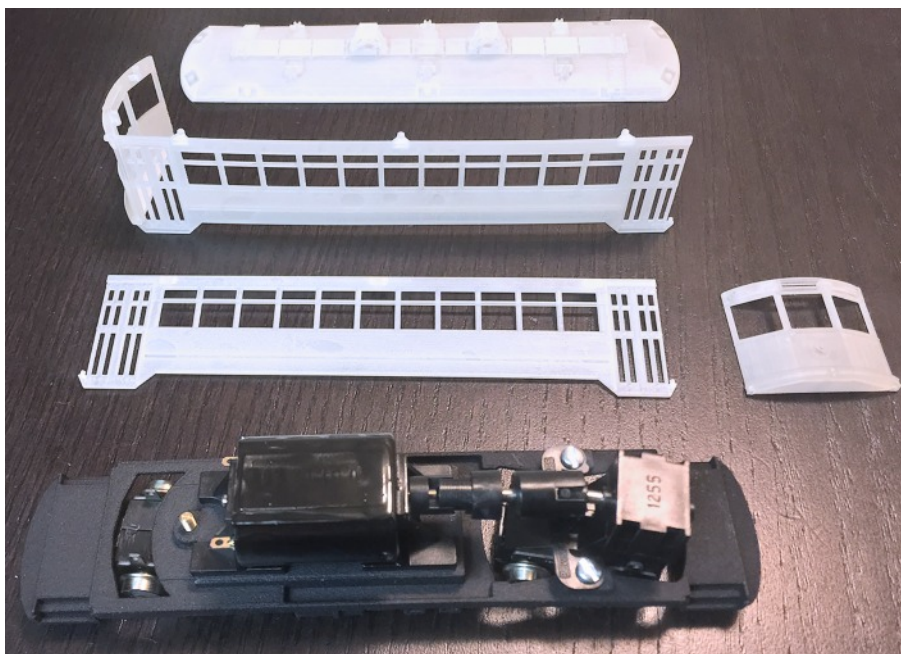
West Coast Traction Supply

I was first drawn into the hobby as a kid in the early 80s when my mother brought home a pre-war Lionel set she picked up at "Frank the Train Man" in San Diego. Birthdays and Christmases added track and rolling stock to the collection. I was never satisfied with any trip through North Park without a stop at Frank's.

My parents made the mistake of taking me to the San Diego Model Railroad Museum when I was around 10 years old and I joined soon after. At that time, there was no O27 component of the museum so I became active with the "San Diego Model Railroad Club" which has both HO and O (2 rail) scale layouts in the museum. Later, I also joined the La Mesa Model Railroad Club which has an impressive HO scale model of Tehachapi. By the age of about 12 years old, I was presented with a key to the museum and was present nearly every Friday, Saturday, and Sunday for the next five years, where my interest was primarily in mainline freight and passenger trains.

As time passed, I became intrigued by the streetcar operation found on the O scale layout. I began to spend time learning about city and interurban systems from a modeler named Roger Jenkins, who hailed from Massachusetts originally. He was a kind and patient fellow that was always happy to teach modeling skills and layout construction techniques.

Eventually, the HO component of the San Diego Model Railroad Club added a traction line to the new half of the layout. I was able to witness one of the great masters of the traction hobby, Parker Williams, install the



The HO Pacific Electric 100 series local car kit in its natural state. This shows how my later designs "snap" together with locating pins. This flattened approach makes the model less expensive and allows for finer detail. This kit is also offered in O scale.



The HO Pacific Electric 100 series local car kit can be painted before assembly. The snap together design of these cars allows for very precise alignment of the components. Masking for paint is a snap when painted in parts.

overhead wire over the hand laid track. The ingenuity of his homemade tools and precise workmanship left a lasting impression on me.

I graduated from high school in 1995 and also graduated to full-size trains at around that time. I volunteered regularly with the Orange Empire Railway Museum and gradually faded out of the modeling hobby.

Over the next 20 years, I worked as a carman for the BNSF, joined the USAF Reserves, got a degree in construction from Texas A&M, and went to work for a company which built light rail systems. While assigned to a project on the DART in Dallas, I volunteered as a Motorman on the McKinney Avenue historic streetcar line. I had not touched a model in two decades when one day I decided to see what Suydam's PE models were selling for on eBay. I bought a PE PCC and North Shore coach over the next couple months, but they sat unloved in a box as I had nowhere to paint them in my little apartment.

I left the construction industry in 2015 for a job as a supervisor in the rail fleet maintenance department of LA Metro. Finally, a stable life and a rented house gave me the opportunity to rekindle my love of transit modeling. After scratch building some equipment, I started taking notice of the emerging trends in modeling technology, namely DCC and 3D printing.

DCC, especially with a "keep alive" capacitor on the decoder, allows for realistic operation from overhead wire without the pesky stuttering stops and starts of a typical DC overhead operation with less-than-clean overhead wire. It also opens the door for realistic sound and lighting options.

Even more than DCC, 3D printing caught my eye. Not only could a custom



The HO Pacific Electric 100 series local car assembled after paint



A variant offering of the 100 series car is the one-off car 107. This single car was modernized at the same time as the famous "Valley Seven" Hollywood cars, but the other 14 cars of the class never received the treatment. The car was later "modernized" to closely resemble the rest of the 100 class after the 1940 red and orange modernization campaign.



A 3D printed kit of a "Valley Seven" subclass of the famous "Hollywood" cars.

car be crafted in the virtual sense in less time than scratch-building, it could then be manufactured as a product for other modelers to enjoy. This means cars with limited popularity, oddities, and cars otherwise never produced, could be economically produced in a quality rivaling brass, but without the costs of tooling. 3D printing companies like Shapeways host and print the designs in a virtual store. Designers can set a markup for profits on each unit sold that arrive as a monthly PayPal transfer.

I learned how to model in 3D using an online free program called "Tinkercad". There are many tutorials that really make the learning curve fairly short. Some early false starts and crude designs led to an increasing familiarity of 3D design in a way that optimizes the technology for a good quality kit at a price which is lower or about the same as brass.

The major hurdles to my development in the 3D modeling world were mainly based in understanding the rules of the minimum thicknesses allowed by the printers. My natural desire is to make a hand hold that is, say, a scale 1" thick like the prototype. One must remember that 1" in HO scale is only .3mm, and the minimum printable thickness for most printers is .6mm. As such, some concessions have to be made, sacrificing specific to-scale modeling for the sake of printability. Regardless, I have been pleasantly surprised to see that a .6mm part really doesn't look severely oversized, but maybe my vision is going!

I now market my designs in a "virtual store" on www.shapeways.com called "[West Coast Traction Supply](http://www.shapeways.com)", but I don't make any money on the models once the cost of prototyping is figured in. In theory, this will gradually change, as the designs will eventually sell enough times to yield a little profit. Still, I continue to plow the profits back into prototyping new designs.

My designs include several cars types of the Pacific Electric, Los Angeles Railway, LA Metro, and Illinois Terminal. Several other new designs are in the pipeline for the SF Muni, Johnstown Traction, and New York Railways.

A major hurdle I see in the future of traction modeling, and really in modeling in general, is the gradual loss of basic modeling skills. Painting and decaling are skills totally foreign to most model railroaders under the age



The HO prototype of the new Los Angeles Railway "Sowbelly" car kit which is also offered in O scale.



One of two LA Metro HO scale light rail kits offered, this is Metro's newest car class, the Kinkisharyo P3010. WCTS also offers the original P865 Nippon Sharyo "Blue Line" car.



The HO prototype of the San Francisco Municipal Railway "J" class "dinky". This may also be offered in O scale.



A scratch-built fully-operational HO scale model of Los Angeles Transit Lines' 9225 derrick. The crane is also motorized and DCC controlled to rotate on an independent control circuit from the main car drive.

of 30. They really do not seem interested if it does not come ready-to-run. I think we can improve on this.

One of the heroes of the traction modeling hobby, in my opinion, is George Huckaby. I have never seen anyone so persistent in his desire to attract new modelers to the hobby. He runs a small business called Custom Traxx that is dedicated to providing the otherwise-difficult-to-source parts needed to build a traction model. He talked me into joining the Southern California Traction Club, which has been an outstanding resource in learning more about scenery, track, and overhead wire, plus it gives me a venue to test my new designs and gauge interest in new product offerings.

Those with real modeling skills have to step up their efforts to pass on this knowledge and teach people. We have many new resources to do this, with the most promising, in my opinion, being "YouTube", where you can upload films of the process of building a model. You can give a step-by-step narrative that can reach a young modeler in nearly any corner of the world. It is free and costs nothing but time.

I recently uploaded a 30+ part set of videos to YouTube in which I build, start to finish, one of my Illinois Terminal Class B kits. I cover literally every stage of the process from box-on-the-doorstep to a functional, fully detailed, DCC-equipped model. You can find it if you search for my channel "[West Coast Traction Supply](#)" on YouTube. Each video averages about 3-4



West Coast Traction Supply's latest offering is an HO Illinois Terminal Class B freight motor in two designs for two drive systems. This is also offered in O scale.

minutes but gives a lot of the little modeling "hacks" that I have been taught over the years.

Other modelers have been doing this as well. For example, Will O'Malley of the Northwest Traction Group has been uploading track laying, overhead wiring, and car building tutorials that really do help a novice. You can find his videos if you search on YouTube for "[Midwest Traction Modeler](#)".

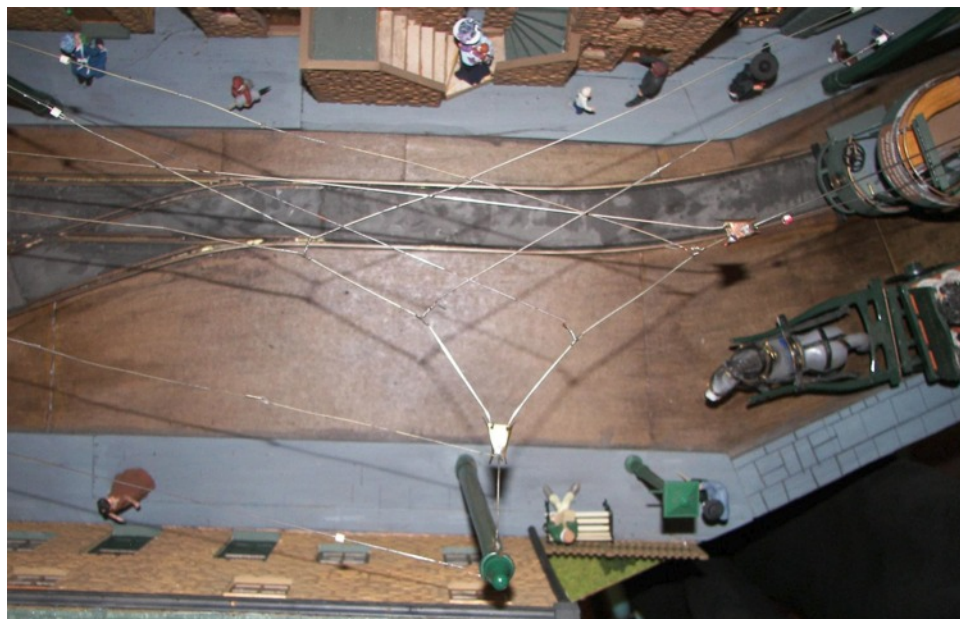
I enjoy spreading a love for our hobby. I am happy to teach tips and techniques to anyone that wants to learn. Please reach out to me at Andrew.Chier@oscaleresource.com.

Finally, here is something really special I recently learned from Tony Cooke. I had never heard of anyone being able to turn a trolley pole in the other direction without touching it! Read on.

Tony Cooke

NOTE: To reverse my trolleys I have always used my hand to turn the pole in the reverse direction. Tony shared some modeling that uses the English prototypical Reversing Trolley system. I have not yet build a model of this, but plan to try it. I think you will be interested in seeing the system.

Tony said: "G,day Jim, trolley reversers were very common in the U.K., but I do not know of any others. The principal is to turn the pole automatically, at a terminus instead of the conductor turning the pole by hand.



The car is driven in reverse in order to "spear" the pole into the reverser which will cause the pole to follow the wire around the reverser so it is then in the trailing direction. It is much easier to explain by looking at one!!!, I will send you a short video of mine in action."

Here is the video Tony gave me and also two still photos. (Go to Tony Cooke Photos on Facebook search and get the short video under the following comments: "Short video of trolley reversers in operation, for Jim Kellow and others, 1-24th.scale.")

Photos are on the layout of Arthur Dawson posted by Tony Cooke.

What a great concept. Thanks Tony for sharing it with us! I wonder why this system was never used in the U.S.? If anyone knows the answer, please let me know. Well that's it for this journey down some "New



Tracks”. I hope you enjoyed the trip and learned something along the way. Any comments or suggestions for the next article will be appreciated. Please contact me at:

JimKellow@oscaleresource.com

Also, please go to my new Facebook page: [Jim Kellow MMR](#) and follow/like it so we can keep in touch between articles and you can find the log in for all my Zoom “New Tracks Meetup” at 7pm Eastern time zone and our First Virtual Zoom Train Show, September 19th at 1pm EST. Please also leave any comments, suggestions, and ideas on my page for future Zoom events. Thanks for reading this far. Time for me to be off to the work bench. Good luck with your model building and have some fun going down your "New Tracks".

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Have an idea for a different way of doing things? Something you built to make things easier around the workbench or layout? Let us know and we'll share with the world.

[Send your tips and pictures to us here.](#)

By Glenn Guerra



For many of us, finding time to work on our models is a problem. There are plenty of distractions in life. So how many times has this happened to you? Finally you get some time to work on a model. You get the model out and sit at the work bench. Look the model over and decide what you are going to do. Now to get some materials, but you discover you don't have the size you need. Frustrated, you put the model down and go vegetate in front of the TV. End of the modeling. After this happened a few times, I started looking closer at the cost of the materials. A bag of styrene shapes is around \$3-\$4. Very few of us live down the block from a hobby store so that means getting in the car and driving to the store. Think about what you are spending on gas for that trip, it's more than the bag of styrene costs. The other problem is you never get back to the model. I started buying lots of styrene so I would have it when I needed. Think about what \$40 for styrene would get you. Then think about how much gas you will use to get that \$40 of styrene \$4 dollars at a time. Or how much freight you will pay to get it shipped to you. Start stocking up, and when you do sit down at the work bench, you will have things you need and it will be an enjoyable experience like it should be.

Now that you have the material, how do you find it? At first having a bundle of bags in a box worked fine, but as I got more bags it became a problem. I solved that problem by making a simple box with dividers. See the photo. This is all held together with masking tape and took 15 minutes to make. I have all the .01" thick strips in one bin. The next bin is .02" thick strips and so on. When I got to the .04" thick pieces I lumped them in with the .06" and .08" bags. The angles are all in one bin as are the other shapes. Now when I am working and get an idea, I have easy access to what I would need. I have started doing things like this for all my brass. All the leftover pieces would go in one box. Then I had to dig through all the pieces with a micrometer to get the thickness I needed. Now they are sorted by thickness, and when I need a size, I go right to that box and look for a suitable piece.

It's so much more fun sitting at the work bench fiddling with your models than waiting for something to show up in the mail!

WHAT'S ON YOUR WORKBENCH?

Ralph Nelson says: This is the latest project to come out of the shop. The stay-at-home edict has certainly helped bring this project to an end. The model is an old Ken Kidder McKeen car which I bought from Stan Richman, of Car Works fame, many years ago when the National O Scale Convention was in Hershey, PA. The model had an awful paint job, but the motor had been replaced and it ran well.



I've been wanting to re-do the car into Santa Fe M-100 for a long time and had Stan Cedarleaf make the special decals for me. I had to remove a large headlight and bell from the roof. fill the holes left behind, add some rivets, the whistle, a gong style bell and rain gutters above the doors. The new headlight was cut into the front and guard rail attached to the rear of the car.



John McCall, the noted Santa Fe author and historian, sent me photos of his "HO" version and I used them, along with a photo and description that was in his book, "Santa Fe Doodlebugs", to complete the car. I sent Stan Cedarleaf some old Champ decals to get the size and font style to use in crafting the new special decals he had made for me.



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



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Thanks for your considerations.

Jeffrey B. Haertlein
Email: GNX582@CenturyTel.net

FOR SALE: Westside 2 Rail DC O Scale Brass Union Pacific Big Boy #4012, built in Japan by KTM (Katsumi). The engine was remotored, painted & weathered by the late great Doug Cockerham of Texas. Doug put a 12VDC Pittman #9414 motor in this engine for me. It runs very nice in both directions and is heavy and powerful.

I paid Doug over a \$1,000.00 in machine work, painting, weathering and shipping costs. Kadee coupler on the tender and is ready to go to work. There is also a pilot mounted coupler. I took the engine apart and changed the gear grease in both the forward and rear gear boxes. Price \$2,750.00 includes Fed Ex Insured Ground shipping to you in any of the 48 states More info & 19 pics available.
Terry Paige
Email: uptrainman@aol.com

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O & S Scale Midwest Show

Saturday and Sunday, September 18-20, 2020

Indianapolis, Indiana

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

Harrisburg Narrow O Summer Meet 2020

Harrisburg, PA September 18-19, 2020

On3 - On30 - On2 - On18

New Hope Church

584 Colonial Club Drive Harrisburg, PA

Email: millcreekrr@yahoo.com

Southern New England 2 Rail O Scale Show

October 3rd, 2020

161 Chestnut Street, Gardner, MA 01440

Train show with a large selection of dealers specializing in everything O scale: On5, Proto48, On30, On3. Free Parking and on site refreshments available!

Show Hours: 9:30am-3:00pm Admission: \$6.00 per person, \$8.00 per family

Email: sneshowchairman@snemrr.org

Web Address: <http://www.snemrr.org/index.html>

Eastern PA 2 Rail O Scale Train Show and Swap Meet

Strasburg, PA

October 17, 2020

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 \$30 for first table, additional \$25 per. Great food, modular layout, clinics. Contact John Dunn (609-432-2871) [Click here for map](#)

Winchester O-Gauge Continental and American Meet

Saturday October 17th, 2020

Kings School, Romsey Road, Winchester

Hampshire, SO22 8PN, UK

All O-scale: layouts, traders, societies, running track, refreshments

e-mail: jasond1947@gmail.com

website: www.winchesterogaugemeet.co.uk

The Cleveland 2 Rail O Scale Meet

Saturday, November 7, 2020

Cleveland O Scale Meet our 38th annual show

9:00 AM to 2:00PM at the UAW Hall

5615 Chevrolet Blvd. Parma, OH 44130

Admission \$7, table fee \$37. Free parking, large facility

Please note show time changes

Dealer load in Friday 1-4PM & Saturday 7-9AM

440-248-3055 email j3a5436@gmail.com

Website: <http://www.cleveshows.com>

O Scale March Meet

March 26-28, 2021

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

O Scale West - S West and Narrow Gauge West

May 28-30, 2021

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](#)

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Harrisburg, PA 17112

O Scale National 2021

June 17-20, 2021

Denver Colorado

The committee is finalizing negotiations with the convention hotel to secure an affordable facility with access to public transportation. The registration form will be available soon.

O & S Scale Midwest Show

Saturday and Sunday, September 17-19, 2021

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