

THE

# S SCALE

# RESOURCE

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NEWS, REVIEWS, INFORMATION TO USE

February/March 2019

Volume 5 No. 3

**Survey: The State of S Scale  
New Tracks - You Can Build  
Great Models**

**Rail-Scale-Models Contest**

**Let's Build Something -**

**1937 AAR Boxcar**

**The Chassis: Motor & Gearbox  
Shows, Meets and so much  
more...**



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**February/March 2019**  
Volume 5 No. 3

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Welcome to the online S 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

*Sunset over Fonebone Mining Company with our AAR 1937 Boxcar build.*

### Rear Cover Photo

*It's time to kick off your modeling season!  
The best of O Scale and S Scale in one Show  
September 20-22, 2019*

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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



Happy New Year! I hope everyone is enjoying 2019 so far.

This issue has a link to an online survey that we hope all our readers will take. The intent of the survey is not to compile personal information, but to provide us with information regarding the state of S Scale and what modelers are looking for. We keep hearing there are no young people entering the hobby, it's just "grey hairs". We know this not to be true, as this magazine continues to attract younger readers and authors. By completing the survey, you will be helping us to determine what the real demographic is along with what S Scale modelers are looking for. We will publish the results in a future issue, and hope that these results will encourage manufacturers, show producers and modelers. [So please, take 10 minutes out of your busy schedule to complete the survey.](#)

Now I am going to get on my "Soapbox" and ask (once again) for submissions from our readers. We can't continue to produce a quality magazine without your help. We now pay for articles, and are always looking for new authors. If you don't want to write an article, but have a layout (even if it's not completed) and some pictures, we can write the article for you. We are also always looking for pictures and a brief description for "What's on your workbench today?" Please ACT NOW and send an email to [daniel@modelrailroadresource.com](mailto:daniel@modelrailroadresource.com) or [amy@modelrailroadresource.com](mailto:amy@modelrailroadresource.com) so we can include you in an upcoming issue.

Don't forget to register for the O & S Scale Midwest Show September 20-22, 2019. [We've got a new schedule and a new website, so be sure to check it out.](#) We hope that the schedule change to a Saturday/Sunday show will increase attendance as we continue to improve the show. As in the past, there is online registration or you can print a form and mail it in. Be sure to get your vendor table reservations in early. We sold out of tables last year, and hope to do the same again this year. We will continue to take attendee registrations online up to 2 days prior to the show and walk-ins are always welcome. We are still finalizing the contract with the hotel, but will make an announcement when the room block is open. We encourage you to stay at the host hotel, the Wyndham Indianapolis West. There are a couple of reasons for this: one is convenience; but the other reason (as I explained in my December/January 2018 note) has to do with hotel revenue. The amount of space utilized needs to be in proportion to the number of sleeping rooms a group consumes. Do we as the promoter save money on meeting room rental if our room block is sold out? No, the price is the same regardless. However, if our room block is not sold out, there is a penalty clause in the contract. So I encourage you to stay at the host hotel. In order to continue to provide this show in the future, we need to back it up with consumed room nights.

This issue has some great building articles, along with some talented mentors and a contest from Rail-Scale-Models, so sit back and enjoy!

Happy Reading & Happy Modeling,

*Amy Dawdy*

# **S Scale Survey**

## **State of S Scale Survey**

As we go to shows around the country and talk with fellow modelers, we hear much of the same. **“The hobby is dying off, look at all the gray hairs in the room, there’s no one new in the hobby...”**

My take is totally different coming from an on-line publishing perspective. Look at many of the authors we have published over the years. Look at our Facebook page and some of the many S scale specific Facebook pages. Many of these people are much younger than you may realize. They are modeling, building, creating 3D models and a lot more. So why the disjoint in the perspective? That’s what we want to find out. Many of these people don’t or can’t get away to shows because of family or career obligations. Many are too busy with other things in their lives at the moment to travel.

We are running a similar survey for O scale. The one question that stands out is: “If you did not start out in S scale, what scale did you start with?”. The overwhelming response was HO. I suspect that may also be true for the S scale survey. If it is, that tells us that the scale side of S is poised for much more growth than the non scale side. That’s one reason we are hanging in there with this publication. We feel the scale side of this will continue to grow as people coming from HO will demand more scale products.

This is the first real comprehensive on-line survey dedicated to S scale ever done. We need your input. The survey will take less than ten minutes of your time. We don’t want your name or location, we only want your honest answers to help us understand just what the state of S scale is today.



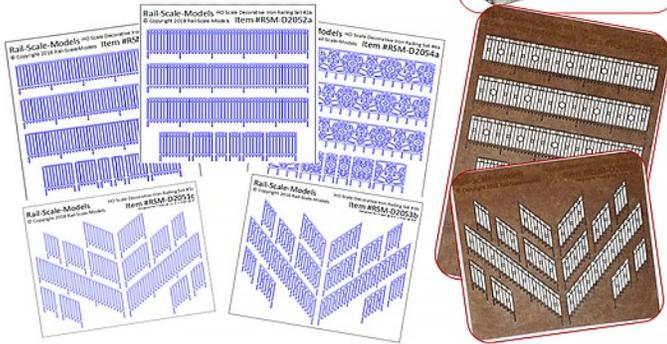
**Please take the time to complete our survey. In the coming months, we’ll share the results and see just what is going on with the state of S scale.**

# NEWS YOU CAN USE



[Rail Scale Models](#) has new Fencing available.

Sample Assembly in HO Scale



Sheets of laser-cut porch/patio decorative railings. 4 decorative styles from which to choose, straight sections, 8"x8" tread/riser sections, and 11"x8" tread/riser sections. Everything you need to build that patio and staircase railing. Available in HO, S and O scales.

[See their Website](#) under the "What's New" section.

[Dan Navarre of River Raisin Models](#) sent us an update on his products. We are in the design phase of the project now for the C&O and SP Pacifics.

Arn Menke Collection



Tom Dixon Collection



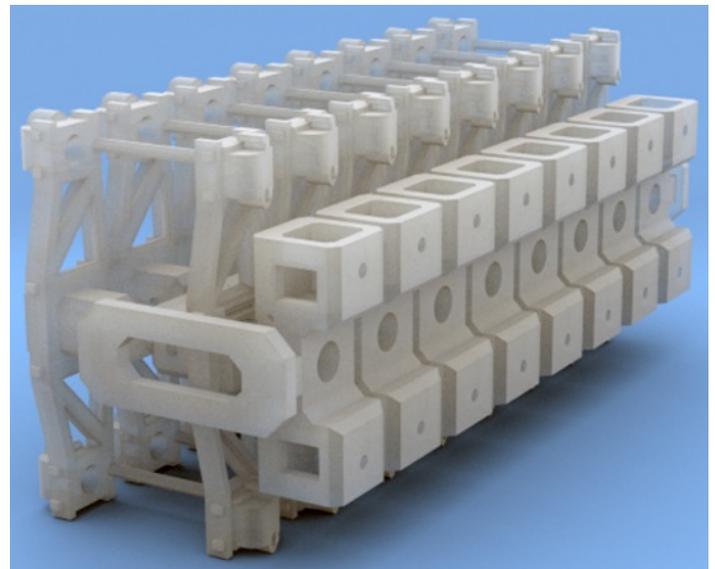
Tom Dixon Collection

Also, the super detailed REA cars are in stock with several versions in limited quantity. They make a good post holiday gift to yourself!



[See their Website](#) for full information.

[Jeff Bissonnette's Farmington Avenue Model Engineering](#), a Shapeways shop, has made available the frames and bolsters for Sn2 diamond archbar trucks. This is a fret/sprue of truck frames and bolsters for Sn2 diamond arch bar trucks. They have a scale 4' wheelbase and require Micro Trains/Kadee HO<sub>n3</sub> wheelsets to complete. The fret of parts makes 8 trucks, enough for four cars.



[See their Shapeways store](#) for more information.

CatzPaw Innovations, LLC continues to release new figures covering several eras.

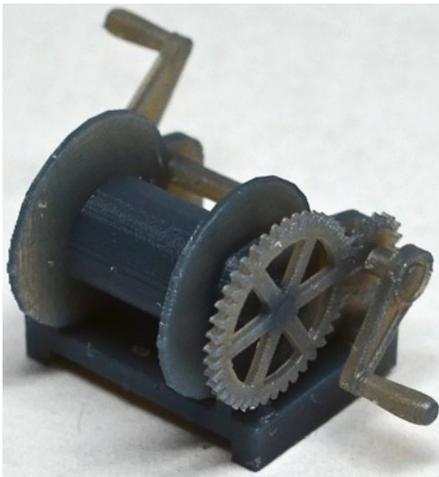


Need traffic control, this is the figure for you. Stopping traffic one direction and waving cars on in the other direction.

[See their Shapeways store for more new figures.](#)

[Rusty Stumps Scale Models](#) has some new items for the S scaler modeler.

A quality 3D print of a manual winch for winding rope or chain to lift what is needed to be lifted.



Easily painted by first giving it a light spray of automotive grey primer or brush it on. Then finish with acrylic craft paints and aging chalks.

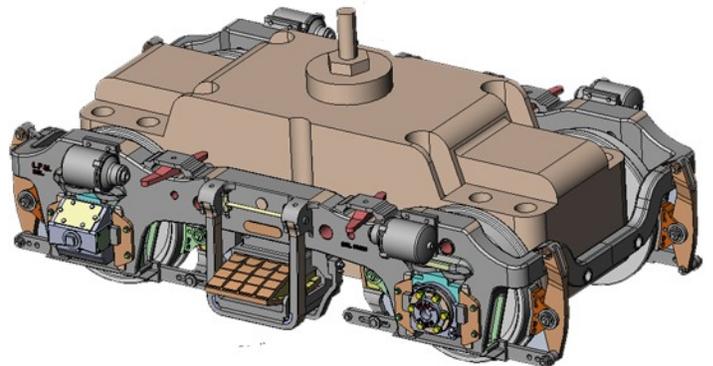


These scale beer bottles (top image) were first designed and offered by Ed Traxler of Micormesis, and are now available from Rusty Stumps. There are 10 bottles to a strip and you can order various numbers of those strips.

The scale wine and whiskey Bottles (lower image) give you a nice variety of bottles to put on shelves of a bar, restaurant, home, office, etc. They can also decorate the floor in some situations. There are 10 bottles to a strip and you can order various numbers of those strips.

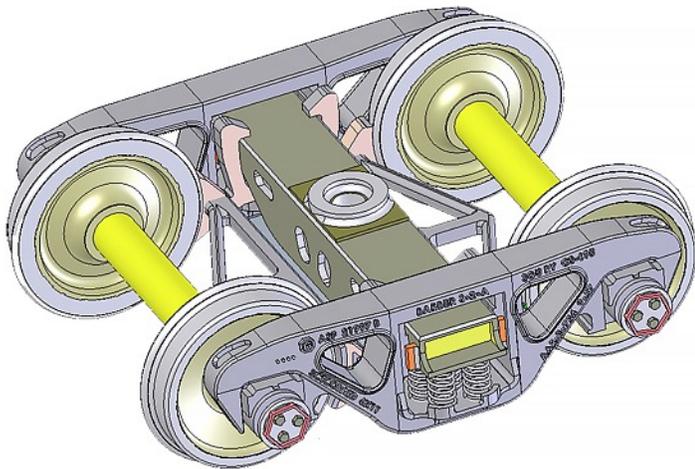
[See their Website for more great items.](#)

[Smoky Mountain Model Works, Inc.](#) has announced S-Scale Sideframes to Fit Stanton Trucks. Stanton trucks must be purchased from NWSL or your favorite dealer. Smoky Mountain Model Works only offers sideframe kits.



AAR Type A and B: Each kit is comprised of highly-detailed, grey-tinted urethane castings made from Stereo Lithography patterns plus injection molded brake lever clevises, wire and (4) #0-48 x 3/8" screws. These are made-to-order from in-stock molds.

Also new: Barber 50/70/100-ton Roller Bearing truck kits now with brake shoes/beam detail.



Fully sprung and equalized kits WITH ROTATING END CAPS are comprised of 3D-printed sideframes, cast urethane bolsters, pre-assembled wheelsets made from bright Nickel-plated code 110 brass rims with injection molded ABS centers, (2) styles of molded end caps, springs and #2 screws. Bolsters and sideframes include locating "posts" allowing for easily positioned springs. Spring load keeps them in place no glue required.

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

[American Models](#) has announced their new Pacific 4-6-2 locomotive with USRA round roof cab and Vanderbilt tender.



Scheduled to be released in the Spring of 2019.

The South Jersey S Gaugers Club in celebration of our 30th Anniversary presents a limited edition Dupont Alathon Plastic Resin Hopper Car produced for us by American Models

We chose this car to represent the industries found in our New Jersey area. DuPont Alathon Polyethylene Resin was made by the Polychemicals Department of DuPont in two basic forms: granular powders and The S Scale Resource February/March 2019

low-bulk density powders. Once melted, the resin could be extruded to make plastic films, containers and various coatings.



*Artists rendition. The final car design will differ slightly from image shown.*

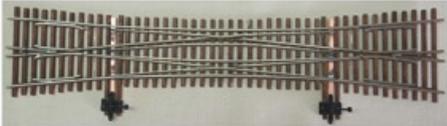
The Alathon resin powder was shipped all across the country, and the DuPont covered hopper car could be found on sidings near any manufacturing industry that made plastic-based products, giving all modelers a legitimate reason to run this car on their layout. More info at: [southjerseysgaugers.org/Projects](http://southjerseysgaugers.org/Projects)

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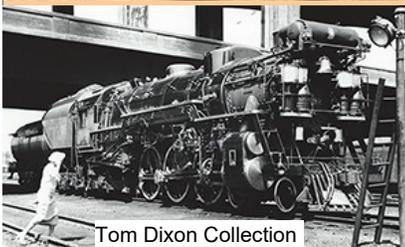
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For more info & prices visit: [tomalcotrack.net](http://tomalcotrack.net)

**“Southern Pacific P-10 and  
Chesapeake & Ohio F-17, F-19  
4-6-2 Pacific Project”  
In S Scale Brass!**

Arn Menke Collection



Tom Dixon Collection



Tom Dixon Collection

These classic locomotives will be built in very limited quantities.

The SP P-10's will be built in four versions; regular boiler, skyline boiler, Daylight Paint scheme with full streamlining, and with early and late lettering.

The C&O F-17 will be built in three versions and all five of the F-19's will be offered. These classic locomotives powered the famous *The George Washington Sportsman*, and the *Fast Flying Virginian* passenger trains.

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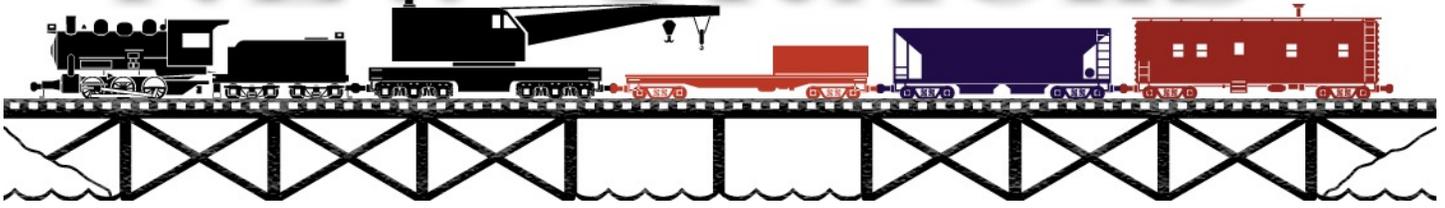
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# NEW TRACKS



**Mentor Definition: A Trusted Counselor or Guide**

**By Contributing Editor Jim Kellow MMR**

## **A Great Manufacturer and Talented Modelers Who Can Help You Improve Your Modeling and be Your Mentor**

I recently had an article published in the NASG Dispatch publication about a contest Rail Scale Models offered to NASG members. If you are a NASG member, I hope you entered the contest, got lucky, and won the prize. This same manufacturer is spotlighted below, and is offering another special contest drawing for readers of this magazine. I really appreciate Stephen's commitment to my mentoring project and to S Scale modelers.

I think this marks a year that I have been writing my "New Tracks" series for this magazine, and I want to thank you for your support and interest in the series. I have a really special article on card modeling for the next issue I think you will find interesting. But for now, let's meet Stephen and his company, Rail-Scale-Models.

### **Manufacturer**



A reader of my "New Tracks" Mentor series told me about a manufacturer he liked and recommended I contact the company about being in one of my articles. So I contacted Stephen Miley, owner of Rail-Scale-Models to see if he was interested. He is a great guy and experienced model builder. He did not hesitate to be a part of my mentor project. I believe his company is an excellent addition to those firms we have spotlighted before, and I know you will be pleased with his products and service.

So please meet Rail-Scale-Models: a great source for model railroad craftsman parts, kits, custom scale structures, and laser-cutting services. Details about their products and services can be found on their website [www.rail-scale-models.com](http://www.rail-scale-models.com).

Rail-Scale-Models acquired the laser-cut details product line from Rusty Stumps Scale Models. This line-up includes over 300 unique items within many categories: Windows & Doors, Roofing, Ladders & Stair Stringers, Fencing, Crates & Pallets, Wall Materials, and other miscellaneous details. Many of the products are available in different colors and on different materials – giving the modeler plenty of choices. The product line covers the popular model railroading scales: N, HO, S, O; and many items are offered in other scales: TT (1:120), OO (1:76), 1:35, and G (1:25). This line-up of laser-cut detail components is combined with the craftsman structure kits that Rail-Scale-Models already offers in N, HO, and O scale. The addition of the Rusty Stumps collection gives modelers a one-stop location for complete structure kits and scratch-building components.

Available Services:

- Structure Design & Development in N, HO, S, & O Scales.
- Design Development in CorelDraw or AutoCAD.
- Laser Cutting & Engraving of a Variety of Materials:
  - Scale Siding: Clapboard, Board-and-Batten, Scribe.
  - Custom Engraved Siding: Brick, Block.
  - Basswood, Plywood, Laserboard, Matboard, Card-Stock, Paper, etc.
  - Acrylic, Styrene, Acetate.
- Variety of Other Materials Available:
  - Stripwood, Window & Door Castings, Roofing, Corrugated Panels.
- Production in Any Size Batch.
- Competitive Rates and Short Lead Times.
- All Work Completed in the USA on USA-Produced Laser Equipment.

If you're looking for a partner for your next scale structure project, contact them via email at [RailScaleModels@yahoo.com](mailto:RailScaleModels@yahoo.com)



When I talked to Stephen about his model kits and providing mentoring to the winner of his contests, he suggested a good model kit for the project would be the Tobacco Barn kit. Stephen believes this model will be an excellent representation of his product line, an excellent learning experience, and result in a finished model the modeler will be proud to exhibit on his layout. I wish all of you the best of luck going down these “New Tracks” with Stephen and his Company Rail-Scale-Models.

I look forward to seeing the winner’s completed model and hear comments about their model building experience. The photos and winner’s comments will be published in a future “New Tracks” article.

Again, I wish everyone good luck in this contest and best of all have fun going down these “New Tracks”.

**ENTER THE  
RAIL-SCALE-MODELS  
DRAWING HERE**

## Individuals who can be your Mentor



I am honored to be able to profile the following modelers, who I believe you will enjoy meeting, and if you contact them, you may find your mentor. I greatly appreciate their interest and willingness to pass along their skills, expertise, and building confidence to other modelers. Thank you all.

### Dick Pool

I'm a retired electronics engineer. I started in the hobby in 1954 with American Flyer S gauge. After 5 years, I switched to HO scale and have been there ever since.

My primary interest since I was young was scenery, particularly mountains. I read every book I could find on the subject and became well versed in a variety of techniques, including hard shell, lath and screen, and foam carving. I equated it to painting in 3D. It just takes standing back, looking at the space and track plan, then visualizing what you want it to look like. Then plan how you want to achieve that look. Detailing a scene also gave me great joy. It's the little things that really make a scene.



Since my career was very technical, my interests naturally evolved into the technical side of the hobby, particularly after DCC hit the picture. In addition to my own, I wired three different club layouts, two of them being computer operated when open to the general public. They feature full block detection of every inch of track (thousands of feet), ABS signaling, and automated scenes. It took quite a while to write the software for it, but that part of it was enjoyable for me. I kept thinking of new things I could make it do, so I would write new code.



My hands on involvement has tapered off a lot now, but I still give how to clinics on a variety of subjects. I am also active on several online forums answering questions. My hands don't work as well as they used to, but I can still contribute that way. If you think I can help you with your modeling please email me at [Dick.Pool@sscaleresource.com](mailto:Dick.Pool@sscaleresource.com). Best Regards, Dick Pool

**Dave Lull owner of DSL Shops**



I started in the hobby in 1957 when my parents built a 4x6 HO layout for my birthday using a Revell set. I have been designing and building layouts ever since, and in different scales. I guess I'd have to say I've had many mentors, including E.L. Moore and Frank Ellison; I was inspired by Bob Sherman's drawings for Lionel, the club layouts in the area, and of course the old books of layout design/construction and track plans. However, I learned mostly by trial-and-error, and just viewing pictures and modeling from them.

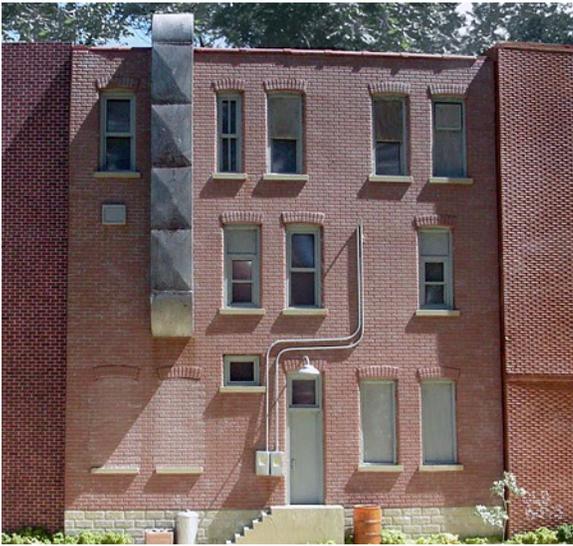
During high school, I hand laid code 40 rail on wood ties for a tiny HOn30 layout. Later when I lived in apartments, I tried layouts of different sizes and scales, including a 1x12 HO shelf layout. In 1980, I was able to buy a basement (with a house on top) and built various HO layouts there, small and large. In 1990, my wife and I moved to the house we now live in, where I have built S scale and O hi-rail layouts.



My first S scale product – the hobby shop

My 3<sup>rd</sup> S scale product – the corner drugstore

The S scale 1926 “Gladstone” Sears house



The “Back Wall” O scale flat.



O scale apartment building relief kit – modeled after a real building in Riverside IL

When I started the S layout, I realized I would need to scratch build the brick storefronts, and the Chicago bungalows and 3-flats I love and remember from my childhood (I've lived in the Chicago suburbs all my life). I started with a two-story storefront and realized that if I molded and cast the walls, I could save myself some time. After I successfully cast the front, I realized that there was a market for such buildings, and decided to make it into a kit. I sold a few, and made subsequent structures the same way. It took a while to make main street this way, but it was fun and I gained some popularity as a manufacturer. I made a single story store and a corner drug store, followed by a Chicago bungalow kit, which was a brick copy of my grandmother's frame house in Berwyn (it was so important to me I scratch-built one in HO as well). After that, I made just the fronts, as many modelers just needed a flat or relief structure and could make the side walls themselves, to whatever depth they liked. This included a bank, a Woolworth dime store and a double store for which I provided various signs. Along the way, I decided to try some O scale fronts that were quite successful. I also created a 1926 Sears house kit (full building) in S.

As far as mentoring, I would be happy to help people with layout design, model structures and control panel design. My business is now turning more or less away from the urethane kits and toward individual custom-built buildings for clients.

Most of the kits pictured are discontinued. I took all photos, and the photos are all of my models.

I am glad to announce that Dave has agreed to write a construction article for the S Scale Resource magazine. If you believe Dave can help you in your model building, he can be reached at [dsl@dslshops.com](mailto:dsl@dslshops.com).

## Colin Stewart



As a modeller: For the last few years I've been moving between scales on a fairly regular basis, modelling in O, S and G scales. I'm trying hard to stick to one scale and one theme. I'm a SOO fan, but don't really model the SOO, and whilst I like the SOO, my motive power interests are mixed. I have interests in Southern, Seaboard and MEC roads. S scale is my key interest at the moment, and I'm planning an 80s era switching layout.

I also have a long standing interest in G scale; where I am interested in detailing locomotives and one day might just finally build a garden railway. At present, I am working on Carolina Coastal 8310, an ex ICG GP10, which is converted from a USA trains GP7. For G scale, I'll also scratch build some cars including large wood chip hoppers.

I grew up surrounded by models of all types, my Dad is a talented model boat and aircraft builder, diecast collector and garden railroader, so it would be hard for some of that influence not to rub off. I'm not a collector, but more of a prototype modeller. Over the years I have worked in many scales from N and TT through to G scale and various stages sought to model UK, German and US trains.



*S scale SW1500*



*The first S scale SW1500, if ever a model was jinxed this is it. I made the casting masters and sent them off for casting. They got lost in the post. Another set were made, meanwhile a completed model of the same was needed for OSW, and the castings wouldn't be ready in time so I had to make a third set of masters just for this loco. The trucks were from the original batch of Stanton's which were faulty, and there was no time to send them back for repair. The loco made the show shipping deadline, just!*

Living in Scotland, we don't have basements or large lofts (at least not in our house) so there is very little room for a layout; so switching layouts have always been of interest. I am currently without a layout, although do have lots of plans. In the UK, kit building has always been an important part of the hobby and this where I stumbled across the Gilmaur kits.

Etched brass kits were, to my mind, something that was challenging and required specialist skills which I didn't have, but I was working in O and wanted an RS1. The kit was affordable and from a risk/reward basis if

The S Scale Resource February/March 2019



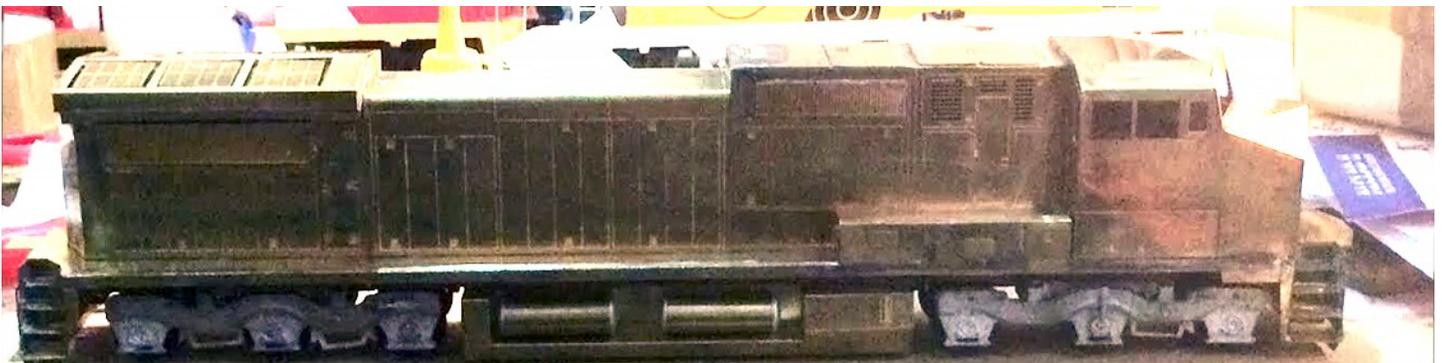
*S scale U18B on SHS F3 trucks*

it didn't work out, it wouldn't be the end of the world. To my surprise, the kit was buildable by a first timer and produced a nice model. After that, interests changed and the RS1 was sold on, a U18B came next, and once again, another nice model was possible. With both builds I received support and encouragement from Mike Calvert, the owner of Gilmaur.

Several years later in an email exchange with Mike after I'd moved to S, we had a discussion about doing his kits in S. Mike said that he would give S a go as he had been asked before, but always declined as this was not his area of interest. The move to S was conditional, I needed to build the test kits and make the casting masters.

To date, this partnership has delivered to S scale a U18B, U23B, U30B and SW1500. For me, I've learned lots of new skills, I've met lots of new people and got pretty good at

building brass kits. This is because before each kit is released, I'll have built at least 2 or 3 test models to make sure everything fits together in the way it should. In the case of the U18B and SW1500 the different drives in S scale meant at least 5 or 6 test models, although not all were finished.



*An O scale dash 8 40CW, this is a development model, and is the biggest and most complex locomotive I've ever built.*

## **Learning**

Learning over the years has been trial and error; the internet and the various email groups have been invaluable for a ready source of knowledge. For techniques, especially around etched brass kit building, there are excellent reference works from Wild Swan publications here in the UK. Techniques are the same regardless of your prototype or scale. Working to develop models from one scale to another also means you need to learn lots of new techniques and be innovative with what you have.

There is something about modelling in the UK where people often get obsessed about detail and the need to model things accurately. As a result, I am often keen to get things right, but have learned over the years, there is a balance to be struck between what could be done and skills and time you have. It's also important to remember that sometimes less is more, and it's far better to have fewer well detailed locomotives and rolling stock than lots of ready to run. With kit built or modified, it means your models are unique and its very satisfying to know "I built that".

Area to Mentor: Etched brass kit building, locomotive detailing (diesels) and general working in O and S scales. If you think I can help your modeling, contact me at: [Colin.Stewart@sscaleresource.com](mailto:Colin.Stewart@sscaleresource.com)

I am very pleased to announce that Colin has agreed to write a separate brass construction article in the S Scale Resource magazine . Keep your eye out for it. Thanks Colin for agreeing to do the article. I am really looking forward to reading it.

## Michael McCasland



Well.....I've been into N scale model railroading for 35-40 years now. The past 30 somewhat seriously. I did some modeling way back; oh, say, 1973-1983. I still have a couple of locos from that time frame that may or may not work now. And still have a few of the rolling stock from then. I was living in northern Louisiana at the time, and my nearest hobby shop that had model railroad supplies was about four hours drive away. Anything beyond a loop with a spur or two was a really challenge back then. Learned a bit simply by trial and error and from what I could read in *Model Railroader* and *Railroad Model Craftsman*. I also gleaned a lot of information from model railroading books published back in the 1950/60s.

In the late 1980s in Baton Rouge, Louisiana, I met a group of N scale railroaders who helped rekindle my interest in the hobby. One friend, who has since passed away, was very helpful; as were the rest of the group that I was a part of in starting the local NTrak club. A good many of us learned from each other and from trial and error. The one friend who really got me back into the hobby took some really good close up photos of my modules, and having those made into slides really allowed me to really see what sticks out for improvement. One thing I learned in that club was to respect everybody's efforts as we all see things differently and have widely varied abilities. When I offer my observations on others' efforts, I try to keep it positive.

One of the biggest things that these day pushes me in the hobby is my asking myself, "Can I do that?" I mean, why not? If I fail, I know that I need to look at it and see where I can improve what I do. If I succeed, great! I did it! This leads to a fair bit of trial and error. I also like to attend clinics at various train shows. Mostly on scenery. I think that is my strongest part of the hobby. I'm also fairly good at building structures.

I've been asked if I would like to mentor. I'm not sure just how this would work, but I'd be happy to help as best I can. As mentioned, scenery and structures seem to be my strengths.



Roundhouse interior -- I love the challenge of doing interior details in N. Thank goodness I've collected a good supply of interior details over the years as they're hard to find these days. Here is the inside upper level of the Cactus Valley roundhouse on my Western & Atlantic RR. Many casting were used, and I used black thread to simulate the fabric belts that were used to power machinery back in the day.

Saloon & Jail – It's the little details and lots of people that make a railroad layout come to life. It



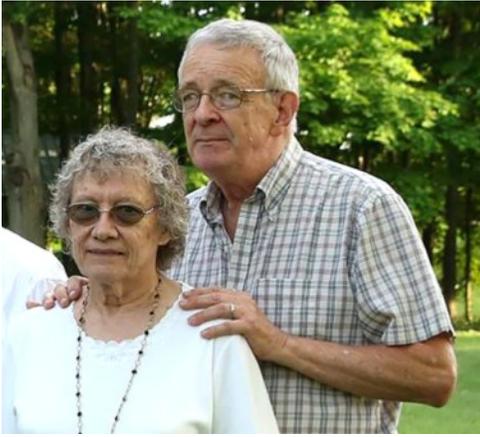
doesn't take much to make a good scene. Look at the sheriff coming out his office to see what the ruckus is all about. Looks like the guy sitting on the barrel at saloon next door is getting an earful from his wife (hidden behind the horse). The buildings are wooden kits with just a plain India Ink/alcohol wash for weathering. Items like hitching posts help lead the imagination to fill in those details that aren't practical to attempt.

Palace Hotel – Unless you defy the laws of physics and logic, anything can be done in



model railroading. Here with the Palace Hotel, I lost one of the castings for a support column (later found and lost AGAIN!). No big deal at I substituted an appropriate sized piece of wood to fill in for the missing column. This is a kit that required it be built one board at a time. Taking one's time made this project really easy. The wood being already stained right out of the box also helped.

If you think I can help you in your modeling, please let me know at :  
[Michael.McCasland@sscaleresource.com](mailto:Michael.McCasland@sscaleresource.com)



**Phillip Entingh**

My father always had a desire for model trains. I got involved with this great hobby 64 years ago at the age of 14. I have always had the need or desire to create. As a youth, my grandfather owned a lumber yard and we always had scrap wood and nails to work with as long as we didn't leave any in the driveway. As a teen, my older brother and I had a layout in a converted coal bin. Back then, I assembled a lot of Athearn and Mantua metal side kits and other wood models. I started the present layout about 35 years ago. The last few years, I got interest in scratch building structures. Then I saw some efforts to build paper models. I bought a few higher quality kits, quite expensive. I soon got bored and thought I'd try paper. Bought Evans Model Builder software, and played a bit with it.

Then I found [Textures.com](http://Textures.com) with thousands of pictures to download free. Buildings, roofing, siding, etc. Also loads of signs out there free for the taking. I built up a large library of items to build with. I believe any intermediate to advanced modeler should be able to develop skills to put their paper models next to Bar Mills or Fos Scale models and be proud of your efforts.



This need to create developed into a career first at Kodak and then Xerox, designing tooling, fixtures, research apparatus then products and then assembly line machines. All these skills learned from my train room university. These buildings are all paper textures on cereal box cardboard. I'm sure a lot of modelers would enjoy building their own unique structures.

Jim Kellow Comment: Well, I tried to download something from textures. I am not at all skilled in computer anything and could not figure out how to download the image and get it into my Scale. So I emailed Phillip and asked for help. Here are his comments.

Yes, I build HO scale. When you download Textures, make a file for doors and windows another for buildings, another for roofs, etc. You need the program, [Evans Model Builder](http://Evans Model Builder). This program will allow you to scale to your gauge. There is a setting for actual feet. So if a door is just under 7 feet tall, You can easily drag one corner to make it that size. If you want siding boards to be 1 foot wide, you make it that. I make a whole sheet of siding on 120 lb paper, print it it out, then have at it. I first start with my card stock, lay out the side or front of my building and cut out all the windows and doors. Then I glue on the printed siding, let it dry and then



cut out the openings. I use only Aleene's tacky glue, and in some cases polyvinyl acetate. They won't pucker as does Elmer's.

Go to textures.com. Sign up. You can download 15 items everyday free. Their site should blow you away. Also, just google textures. There are other sights with free stuff too. With very little, effort you can build a massive collection of free signs. I size them with Evans software often post a sign with various sizes Then after it is printed, I pick the one that looks best.

If you think I can help your modeling. email me at: [Philip.Entingh@sscaleresource.com](mailto:Philip.Entingh@sscaleresource.com)

I have an article on Card Modeling profiling "Evans Design" in the current issue of [The O Scale Resource online magazine](#) and also in my article for the next issue in this magazine. I believe Card model building will become a very significant part of the future of model railroading. Take a look.

## Mike Ashley

My name is Mike Ashey and like most people in the scale modeling community, I started building scale models way back in the early 1960's.



When I was 8 or so, my dad took me to the local hobby store which was called "Vince's Hobby Store" in Clifton, New Jersey. I will never forget the impression it left on me. The walls were lined with stacks of models and built kits were in display cases and hanging from the ceiling. On that day, my dad purchased a ship model which we built and floated in our pool. As I grew older and ventured around town on my bike, I discovered lots of places that sold scale models and so I built everything I could purchase. My dad, my brothers and I also built a large HO scale train layout and I built all the structures.

I was never satisfied with anything I built as the glue was always in places where it should not be, the seams always

bothered me and brush painting was always a disaster. However, I had lots of fun and I have fond memories of spending hours in my dad's workshop building all types of scale models.

In my teenage years, my model railroading and scale modeling interests gave way to girls. At 18 I joined the Marines, so for four long years there was no opportunity for any hobbies. After serving my country, I used my GI bill benefits, attended college and became an Engineer. After graduation in 1983 my interests in scale modeling and model railroading resurfaced.

As my professional career as an engineer evolved, I started purchasing all kinds of scale models in all scales, and I was determined to teach myself how to build good looking scale models. As I honed my scale modeling skills throughout the 1980's, I purchased all of the "how to" scale modeling books that were available. As I tried to duplicate the techniques presented in these books that were published in the late 1970's through the late 1980's, I concluded that the authors who wrote the books documented their techniques after the fact, if at all, which explained why I could not duplicate the author's techniques or their finished scale models.

Much of what I have learned was by trial and error and I had a lot of modeling disasters. Back then, scale models were not expensive so disasters did not impact my limited budget too much. What was very important was that each disaster had lessons learned, and with each additional kit, I got better and the disasters decreased.



*The F4U Corsair is a 1/32 scale Revell kit from the early 1970's. It is a good example of taking a dinosaur of a kit and turning it into a good looking model.*

In the late 1980's, I got to know some excellent scale modelers who were very talented and creative. They had an inherent ability at building in plastic, brass and wood and they were very gifted. They built in all the different mediums of scale modeling such as model railroad structures, aircraft, ships and ground vehicles. The scales that they worked in were mostly HO scale for model railroading, 1/72 and 1/48 scale for aircraft, 1/35 scale for military ground vehicles and 1/24 scale for civilian vehicles. Their finished models were truly inspiring.

Unfortunately, these gifted scale modelers did not document their techniques for building, detailing, painting, decaling, weathering and scratchbuilding; and the real shame is that some of them have passed on and their talent and skills died with them. However, I learned three valuable lessons from all of them.

The first lesson was to document your work and techniques in pictures and notes so that you can analyze your work, improve upon it and then pass on what you have learned and what your techniques are.



*The USS Alaska, CB-1 is a new state of the art 1/350 scale kit by Hobby Boss.*

The second lesson was that there are common techniques for building in all scales and all mediums, whether it is an aircraft, a ship, a tank or a model railroad structure.

The third lesson was to ensure that any technique that I presented had to be easily duplicated by readers. As such, my techniques can be easily duplicated with the standard tools, equipment and supplies that beginner and intermediate scale modelers typically use.

These three lessons became my passion as I started writing scale modeling books and articles. Before digital cameras, I used black and white photography and I had to be very careful when taking pictures as a roll of film, and the associated processing, was very expensive, especially when you shoot 10 rolls of film for each project.

Of course now I can shoot hundreds of photos in color for each project and document each and every step involved in a technique that I use for building a scale model. I also have a laptop and monitor on my work bench and I can easily call up any scale modeling project to refer to a technique or project.

## **BACKGROUND AND HISTORY IN THE HOBBY:**

In the late 1980's I purchased a 1976 Toyota Land Cruiser Jeep that I rebuilt. I also purchased the Toyota repair manuals, and when they arrived, I was very surprised that the manuals were filled with step by step black and white pictures of every maintenance and repair procedure. As they say, "a picture is worth a thousand words", and using the manuals to rebuild the jeep was a great success thanks to the step by step pictures.

What does rebuilding a Jeep have to do with scale modeling? Well everything actually!!

Successfully rebuilding that Jeep by using the manuals, gave me the idea to apply the manuals' formatting to scale modeling books. By documenting the steps involved in a scale modeling project in sequenced pictures, scale modelers could easily follow and duplicate my techniques. I also wanted to write a scale aircraft modeling book that demonstrated all of my techniques as I knew that a book of this type with all step by step pictures and organized by topic was just what the world wide scale modeling community needed. I also wanted to do self-publishing and take a very different approach to traditional book formatting.



*The 650 ton Cheyenne Coal Bunker is an IHC HO kit.*

By 1991, with much support from my wife, I had completed my scale modeling aircraft book which had almost 1,000 photos. My very different book formatting approach was based upon the military technical repair manuals that I was exposed to while working for the US Navy and the US Marine Corps as a Senior Engineer.

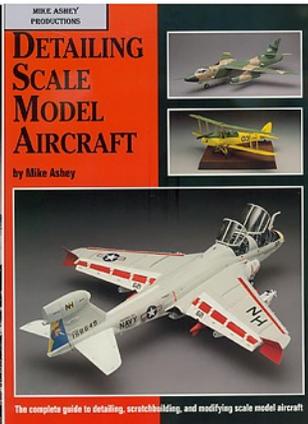
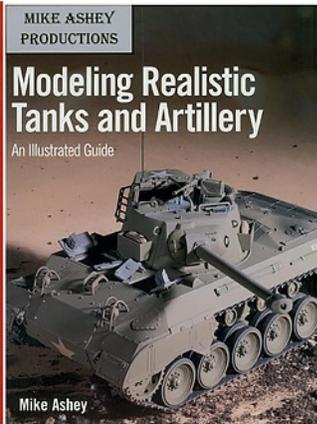
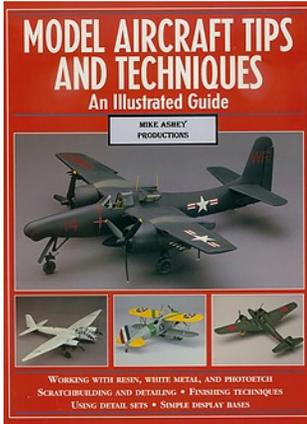
These technical manuals were published and stored in 3 ring “D” type binders so that they could be opened up and laid flat on a work surface. When updates were published, instead of issuing a new manual, just the updated pages or chapters were provided, and the user simply added the new pages or chapters in the appropriate sections of the manual and removed outdated pages and sections.

I wanted to use this same concept for my scale aircraft modeling book. Some of the advantages of using a customer supplied 3 ring “D” binder are:

- Huge amounts of information and sequenced photos could be incorporated into the book.
- Scale modelers could easily update pages or chapters.

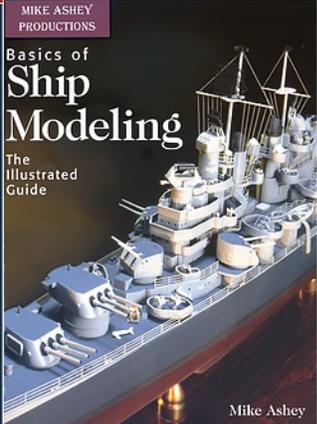
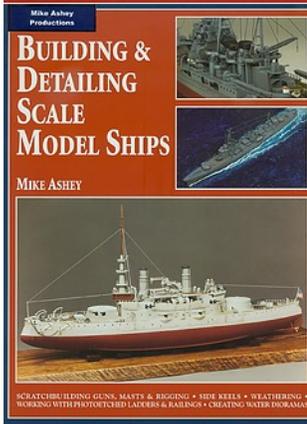
- Scale modelers could inexpensively add new chapters to the existing book without having to purchase a whole new book.
- There would be no limitation on the total number of pictures or pages for the book.

Unfortunately back in 1991, the Internet was in its infancy, there were no websites for advertising, no digital cameras, and computers and desk top publishing still had a long way to go. Fortunately I also subscribed to *FineScale Modeler Magazine* and I had seen an advertisement in the magazine for prospective authors. I sent the book editor of Kalmbach Publishing (Mr. Terry Spohn) a letter, and after a positive response, he received the entire book for his review. Kalmbach is the most prolific publisher of hobby books of all kinds such as



astronomy, doll houses, scale modeling and model railroading. They also publish *Model Railroader Magazine*, and *FineScale Modeler Magazine*.

Soon afterwards, I received a book contract under the condition that there not be more than 115 pages in the book, so I had to re-shoot a lot of pictures to condense the 1,000 photos down to a few hundred, while still being able to



demonstrate, in sequenced photos, all my techniques. My first book on scale aircraft modeling, which was titled “Detailing Scale Model Aircraft”, became Kalmbach Publishing’s best-selling scale modeling book. Terry and I collaborated very well, and between 1992 and 2000 I wrote a second aircraft book, two ship books, one military ground vehicle book, and then my “O” scale model railroading book. In addition, I wrote almost two dozen articles for *FineScale Modeler Magazine*.

All my books and articles follow the three lessons I learned from master scale modelers back in the 1980’s. They

all demonstrate techniques in sequence photos and everything that is presented can be easily duplicated by the reader.

In 2001, my wife’s medical issues and raising our two sons required my full attention, and I did not get back into scale modeling again until 2007 several years after my first wife died. In 2007, I remarried and my wife Leah and I set about raising our four children.

My wife Leah encouraged me to get back into scale modeling, and she also gave me the idea for establishing a website, which I did in 2008. The website is dedicated to the scale modeling hobby and it is a teaching website. I have been using my website ([www.mikeashey.com](http://www.mikeashey.com)) to create articles on my projects and provide the world wide scale modeling community with a mentoring resource that shows how to build better scale models. My old scale modeling books on ships, aircraft and military ground vehicles and my “O” scale modeling railroading book have long been out of print, so I created PDF files of them and they are now available on my website for free.

Now that I am mostly retired, I have improved and expanded my website and I am implementing the vision that I had all those years ago when I started writing my first aircraft book. My Comprehensive Series Scale

Model Manuals for aircraft, ships, model railroad structures and military ground vehicles are formatted very differently than traditional books. These manuals are available on my website for purchase, they are also sold on EBay, and very soon, they will be available on Amazon. Each manual comes printed on heavy gloss paper with a cardstock front and back cover and the manual is pre-punched for a 3 ring binder. Each manual also comes with a front and back cover for the binder and a side sleeve with three different sleeve sizes so that the scale modeler can decide what size binder to use.

These manuals are very comprehensive and they are formatted for six color pictures for each page. Every picture has an associated caption and all the pictures are sequenced. I have focused the manuals on models that are fairly complex such as ship models or on models that are good mediums to demonstrate techniques for assembly, detailing, fixing kit problems and challenges, scratchbuilding, painting, decaling and weathering.

Each manual not only teaches you how to build the subject model, it also demonstrates dozens of techniques that have applicability to other types of scale modeling. As an example, I use a Waldron Punch Tool, and a Northwest Short Line chopper and true sander for just about every modeling project and these tools are from the model railroading community. I discovered these valuable tools years ago in *Model Railroader Magazine*.

I am presently working on a model aircraft book that will use the same formatting as my manuals. However, the aircraft book will be designed to be updatable and expandable. When I update chapters or add new ones, all the scale modeler needs to do is purchase the updates or new chapters and insert them into the 3 ring binder that holds the book. This unique approach to scale modeling manuals and books represents a paradigm shift in thinking for the scale modeling community.

Once my aircraft book is completed, I will begin working on a model railroading book focused on building and weathering structures, and then my last book project will be a ship building book.

### **What areas will you help by mentoring a new modeler?**

All my books and articles from years past, my website, my Comprehensive Series Scale Model Manuals and my future books all teach modeling skills, techniques and building in all mediums. I primarily work in 1/32 scale and 1/48 scale for aircraft, 1/350 scale and larger for ships, 1/35 scale and 1/24 scale for ground vehicles and HO scale for model railroad structures.

Typically scale modelers do not think outside their boxes.

Examples of this are aircraft modelers or model railroaders who focus on articles and books and online resources in their subject areas. What they are missing is that you can learn a lot from other scale modeling mediums and their associated techniques and apply them to your medium.

Another example is the use of different shades of the same color to create depth perception and call attention to certain areas of a model. Scale model aircraft builders use this technique for painting cockpits and aircraft interiors, and I demonstrate this technique and its applicability to painting model railroad structures in my IHC 650 ton Cheyenne Coal Bunker manual.

Yet another example is applying decals and weathering them so that they blend into their surroundings. Aircraft modelers use these techniques, and I demonstrate these techniques and their applicability to model railroad structures in my Cornerstone Crane & Shovel manual.

Scale modeling skills and techniques have applicability across the full spectrum of scale modeling, and one of my biggest challenges as a mentor has been to convince the world wide scale modeling community to recognize this fact. If you think I can help your modeling, [please send me an email](#).

I am very pleased that Mike has agreed to write a separate article in a future *O Scale Resource* magazine. Keep your eye out for it. Thanks Mike for agreeing to do this. I am looking forward to seeing what you build.

## NOVICES

Yes there are other “Novice Modelers” out there looking for help. If you are a novice you are not alone. Take a look at [Neil’s Facebook page](#).

### Neil Brooks

I first got into Model Trains as a young child. I was given a train set for one of my early birthday presents by my parents. It was then not until my early teens I expanded my collection, running track on bits of wood on my bedroom floor on an old Hornby controller. Sadly, for a few years University got in the way, and then work life and lack of space in the home at the time. I then dabbled in N Gauge in mine and my wife’s first flat. Space was an issue, so I never attempted OO. Upon the arrival of our first born son, we took a leap of faith and bought a house with a bit more room, and it was then that the ball truly got rolling again.



I heard of a couple of local club shows and went along, each time picking up more stock or locos. My wife then also bought my father-in-law a train set, and he bought and built some



Metcalf card kits. Seeing how great they looked, I bought a couple to start with, but having found them easy and loving how they looked, I have since bought and built over 30 kits, and fitting lights to most of them.

The lights started off with the Woodland Scenics Plug and Play range, but given the high cost, I decided to try LED's and wiring them in myself. Not all my lighting is done in this fashion, which allows much more flexibility and at a fraction of the cost.

My layouts are all OO gauge shelf layouts, with the exception of one, which is an N Gauge layout measuring 3 foot by 2 foot. I also am currently working on a layout at my father's garage, an 8 foot by 5 foot layout. I am currently doing all the scenics on it and building and fitting buildings, again mostly all Metcalfe with lights. I find the building a nice relaxing undertaking, and love seeing the finished results when fitted with lights.

Because I was always delving in the unknown with all aspects of the hobby, I decided to set up a group on Facebook - [Model Trains for Novices](#) whereby members could ask questions to any problems they may come up against, and for those that have already faced those problems to offer help and guidance to get past them. The group grew slowly at first, but then started to snowball after about 10 months or so, and now has, after only 14 months, a membership of over 5000 members, with monthly posts over well over 800 a month covering many aspects of the hobby. Membership I have found is a mix of all ages, gender and ethnicity, and truly is there for everyone.

Any questions you think I can help you with, please contact me at [Neil.Brookes@sscaleresource.com](mailto:Neil.Brookes@sscaleresource.com)

Well, we come to the end of this "New Tracks" article. I hope you have enjoyed it and found some inspiration for your own model building. By the way, if you are a modeler, manufacturer, or organization, that I have not already contacted for future articles, and want to participate in my mentor project please contact me, at: [JimKellow@sscaleresource.com](mailto:JimKellow@sscaleresource.com). Thanks for reading this far. Time for me to go back to the work bench. Good luck with your modeling.

**"Don't settle for the copycats..."**

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# Let's Build Something

## AAR 1937 Boxcar

By Dan Dawdy

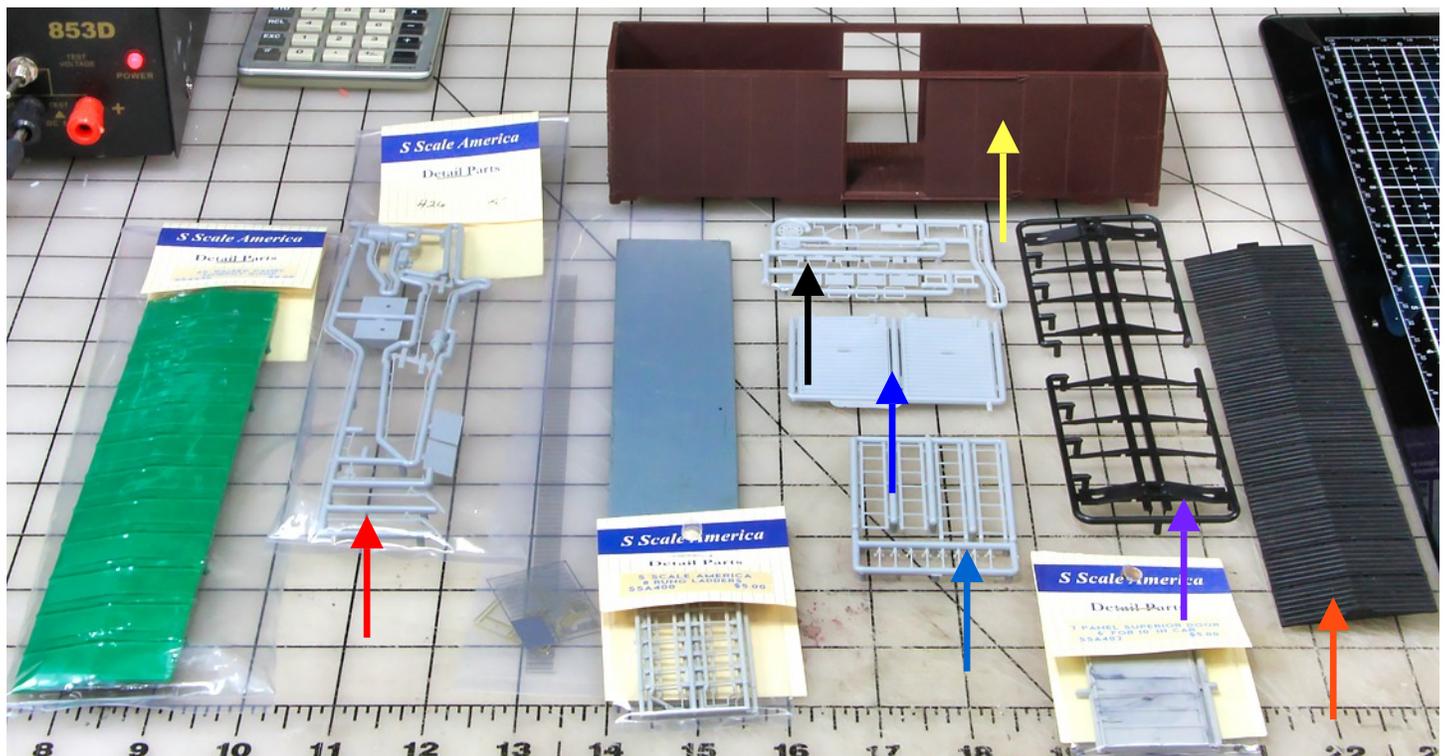
As many of you may know, I am an O scale modeler. I have built many InterMountain boxcars and reefers over the years. In fact, I did a complete article on building an InterMountain boxcar in the [O Scale Resource Magazine in the January/February 2018 issue](#). Though long out of production, these are readily found at shows, many times for under \$20.00.

The model I will be building was put out by Pacific Rail Shops, and many kits show up at shows and on eBay. This line is now owned by [Des Plaines Hobbies](#). The PRS story may be found on the [S Scale Sig Website](#).

I was most interested to see how the S and O scale cars compared as far as parts and building.

The picture below (Image 1) shows the mix of parts I received from Ron Sebastian at Des Plaines Hobbies.

The original parts that I was used to seeing are shown with arrows below. The others parts are from S Scale America and sold as detail parts. I'll use a mix of these here, describe when I use them and why.



- Brake Rigging under floor
- Underframe
- Doors
- Body
- Roof
- Details above floor
- Ladders & stirrups

Image 1

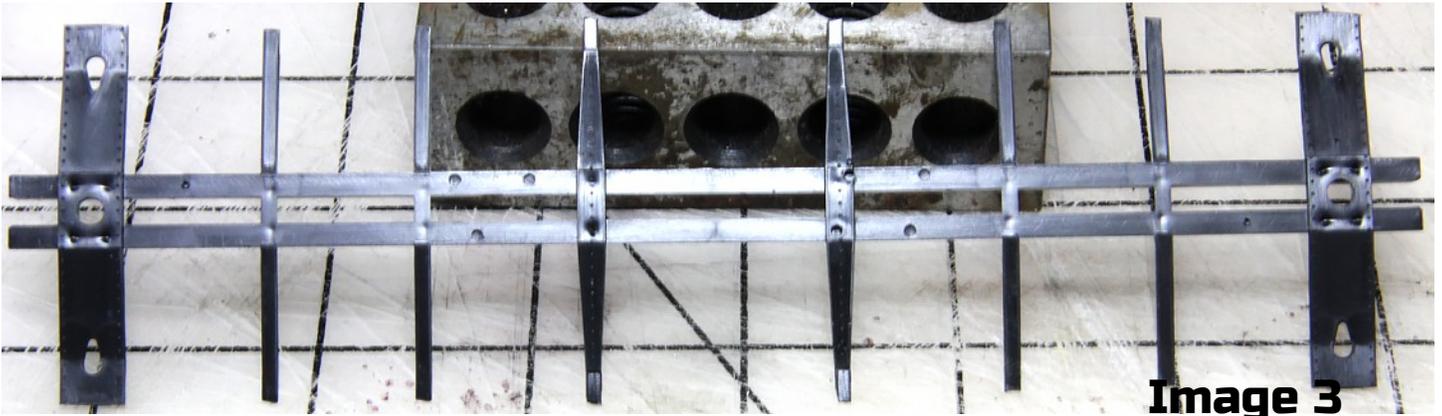


**Image 2**

Above (Image 2) are the tools and other things I used for this build. As far as tools, the number one thing is a lot of new sharp X-ACTO No.11 blades. I buy mine in a 100 pack so I can change them as needed. A sprue nippers will not work as well since you risk breaking the part. An emery board type nail file is also a must, along with Liquid Plastic cement – I have switched to MEK for all gluing of parts. It’s less money, and I simply refill the old bottles. **Always use caution with any glues.** Tweezers are helpful, as are glue applicators. There will be optional items which we’ll cover within the article.

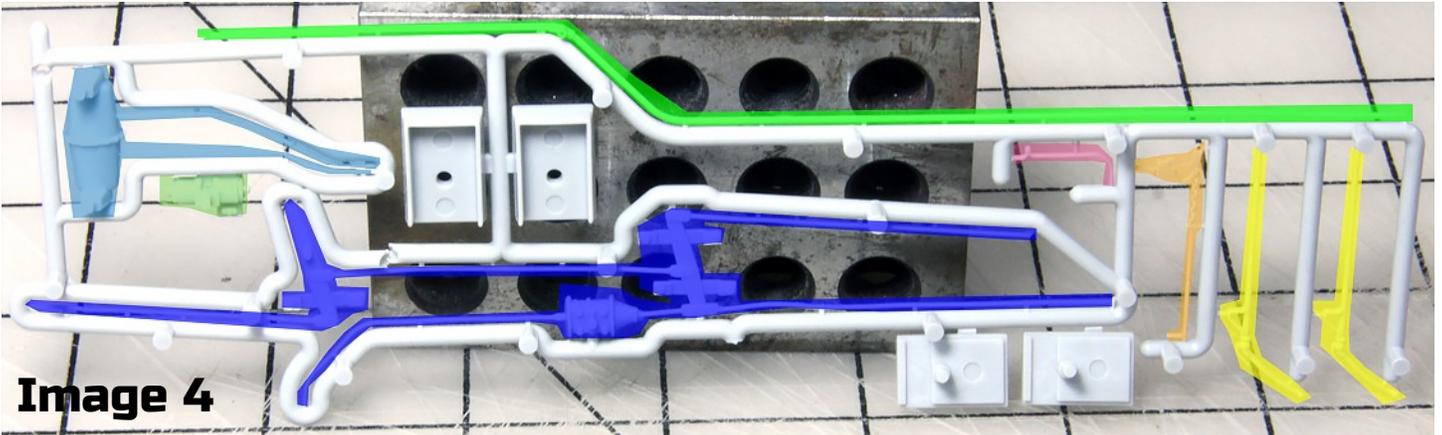
Ok, let’s begin. I should point out I had no instructions with this; however, I followed the O scale InterMountain version which I am guessing was almost identical. I started by removing all the parts from the sprue and placing the smaller parts in a container. They WILL disappear if you don’t. The underframe (Image 3 next page) was the first and probably easiest to clean up. Next came the brake parts (Image 4 and 5 next page). If you are going to break something, it will probably be here. The whole brake system with air lines and clevises is one piece.

I always cut small parts like this on a hard surface such as glass. Those green self healing mats have too much give, and you will break the part. The good thing here is if you do break something, it’s easy to glue back together, and once painted, no one will know.



**Image 3**

*This will be the easiest part to remove from sprue and clean.*

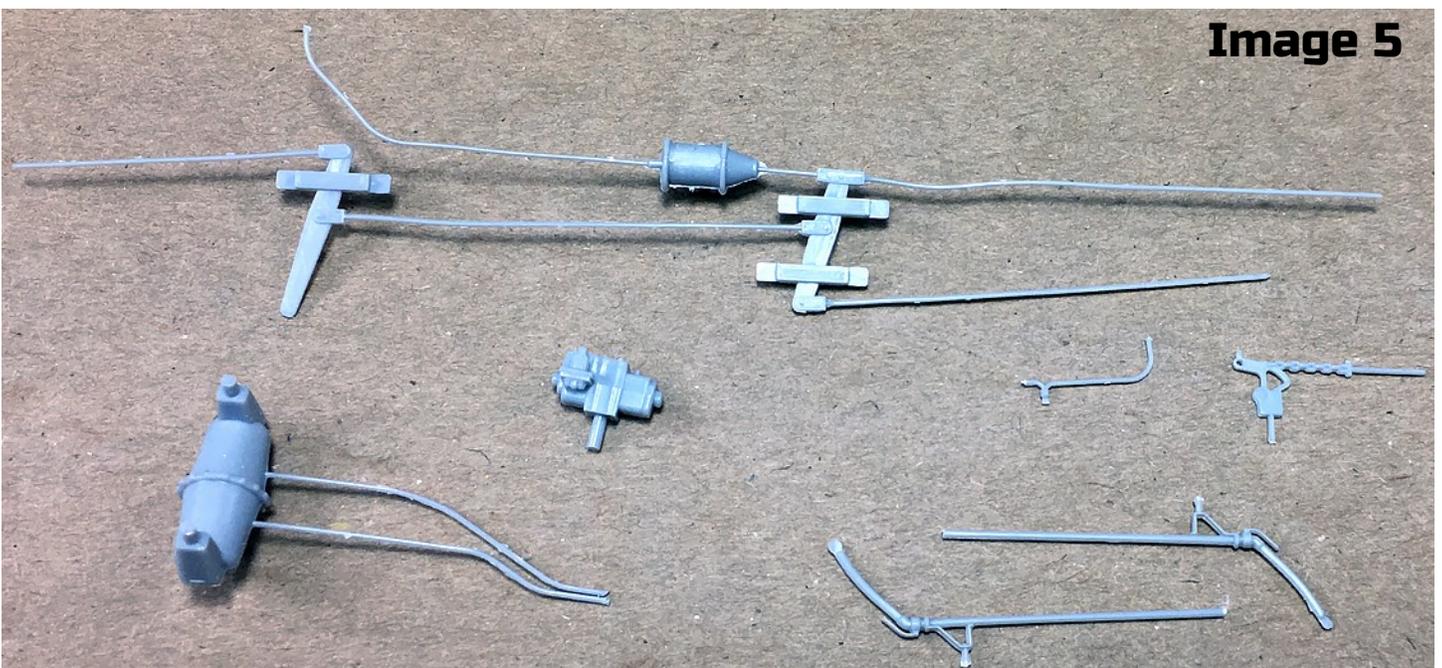


**Image 4**

*The brake sprue. For explanation purposes, I have color coded it to show the different parts.*

Image four above shows the different brake assemblies and how they should come off the sprue.

The green line on top is the air line that runs the length of the car. The light blue is the air tank with its two lines. Just below that is light green, this is the AB valve. The dark blue represents the air lines, clevises and cylinder which are all one piece. The small red piece goes from the AB valve to a dimple in the airline. The



**Image 5**

*Figure 5 shows the air line piece, and above that, the brake assembly after cleaning up.*



**Image 6**

orange piece connects the bottom of the brake staff to the underbody, and the two yellow pieces are the air hoses. Taking these off the sprue is one thing, but cleaning them to remove the traces of the sprue is another. If you cut too close to the airline, you will break it. I cut closer to the sprue than the part. Once the part is free, use your X-ACTO to further clean the part.

Image 6 shows the cleaned up parts in a small container for safe keeping.

Now we can begin assembly of the underbody. Both the black center sill and car body have a B end (brake end). These must match up. The B end of the car body has more holes for the brake equipment. Image 7 shows the NON B end with holes only for the ladder. The center sill has dimples for the clevis that form a triangle shape as seen in Image 8 below. This faces the A end.



**Image 7**

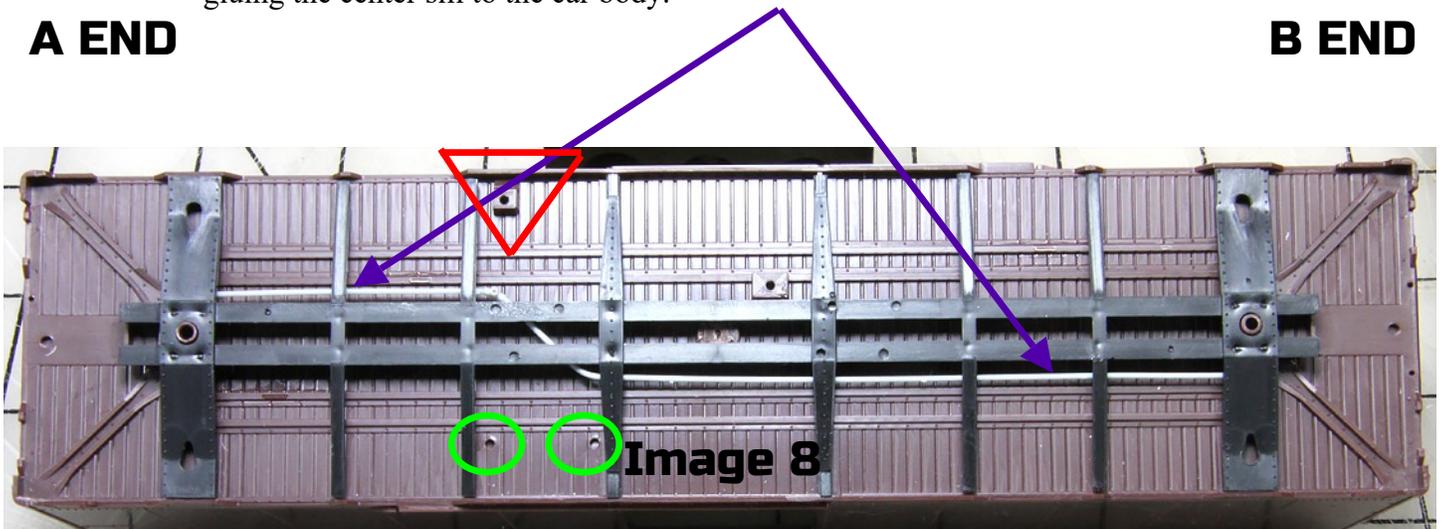
Before gluing the center sill, insert the airline through the braces and then through the holes so it can cross over to the other side. The air line could be added after the center sill is glued (ask me how I know), but is so much easier before.

I did a test fit of the air tank and found the holes in the body to be too small (green circles below). I carefully reamed them out with a No. 55 drill so the tank fit properly.

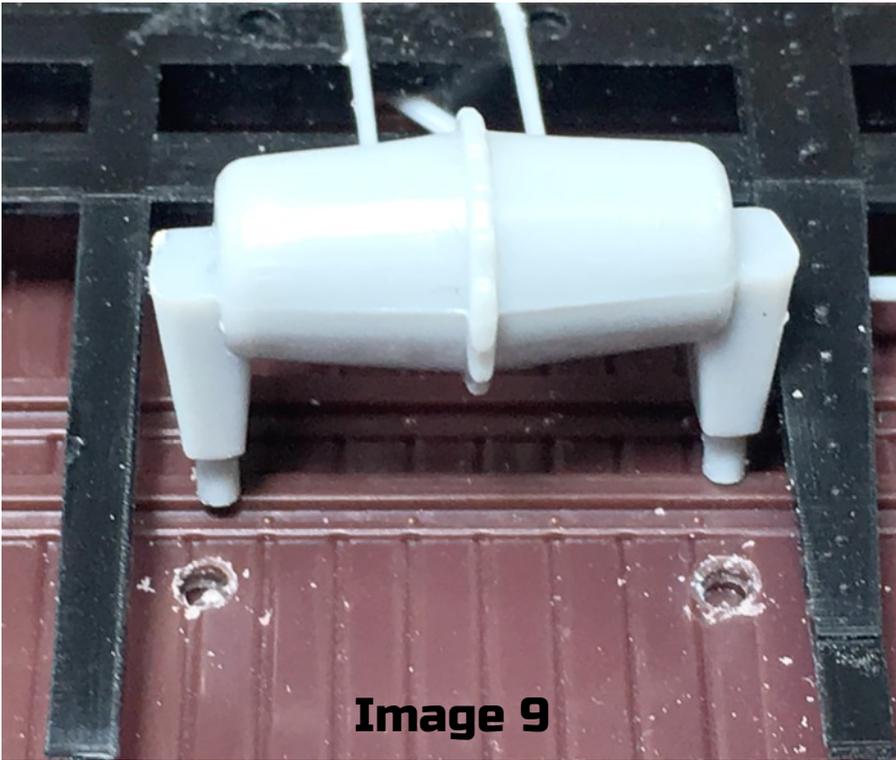
Arrows show airline in place. Do this before gluing the center sill to the car body.

**A END**

**B END**

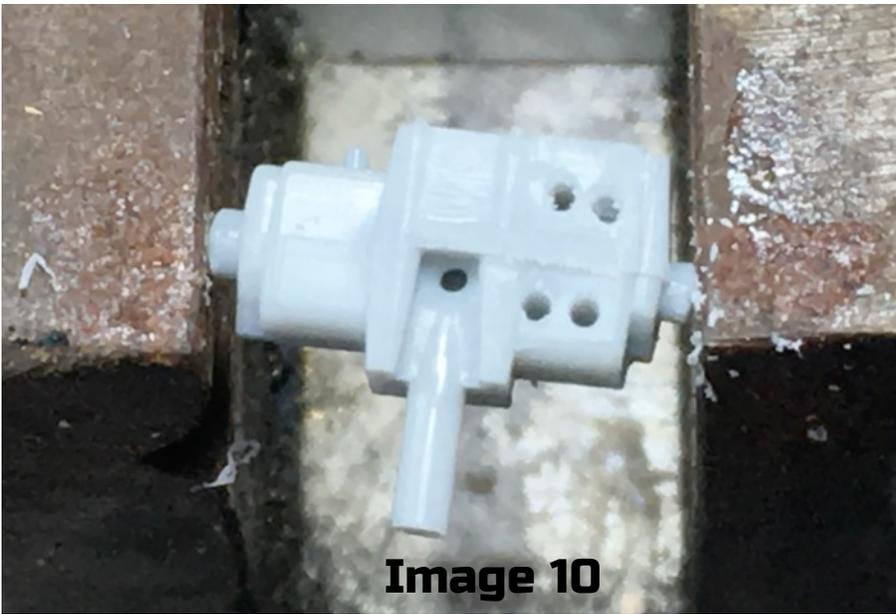


**Image 8**



**Image 9**

Image 9 shows the holes slightly reamed out for a better fit.



**Image 10**

The AB valve on the O scale model had four holes molded for you to attach the air lines. The S scale version does not. Carefully placing the part in a vise, I used a Dremel and drilled four holes using a No. 72 drill as shown in Image 10. If you do not do this, you will end up bunching up the four lines together and trying to glue the whole bunch to the valve. It's possible that was what the nice looking hole was for above the mounting plug. Again, I had no instructions for this car so I'm not sure what that hole was for, if anything.

Image 11 shows the AB valve glued in place.



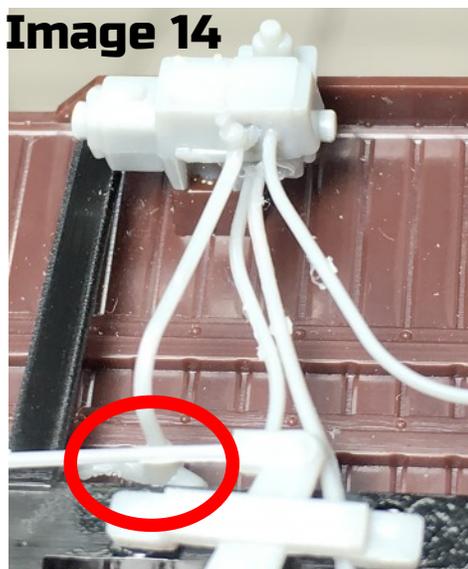
**Image 11**



**Image 12**



**Image 13**



**Image 14**

Image 12 above shows the air tank installed and its two lines going to the two bottom holes in the AB valve. Image 13 shows the the rest of the brake rigging in place. I glued the clevis on the left side, and once dry, came back and properly aligned the right side and glued. It almost seemed the lines were too long as you can see from the slight bending. I left well enough alone. Note the air line from the cylinder going into the AB valve.

The last part is the “red one” as shown back in Image 4. This small pipe goes from the AB valve to the main brake line. It’s hard to see, but look at the red circle in Image 14.

The mostly completed underbody is shown on the next page (Image 15). I would normally tap the holes for the trucks and couplers at this point so I could check for the proper coupler height, but I did not have them yet so we’ll do that later.

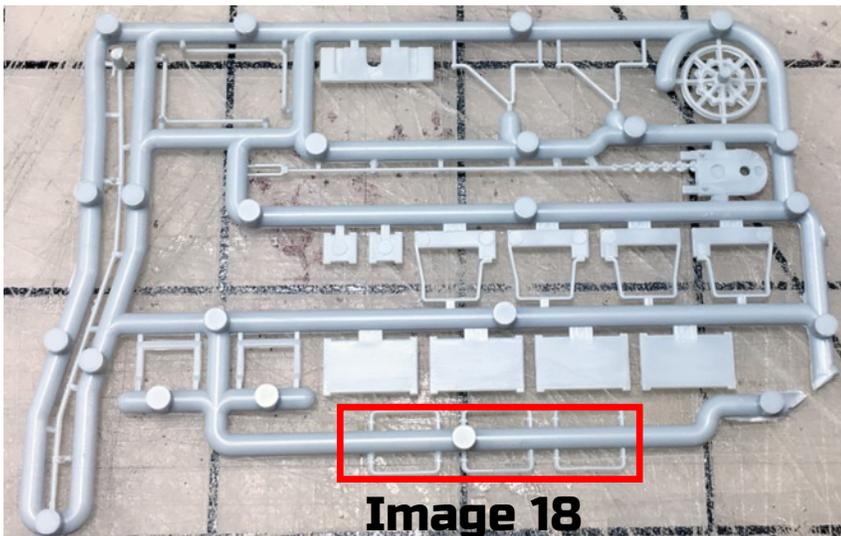
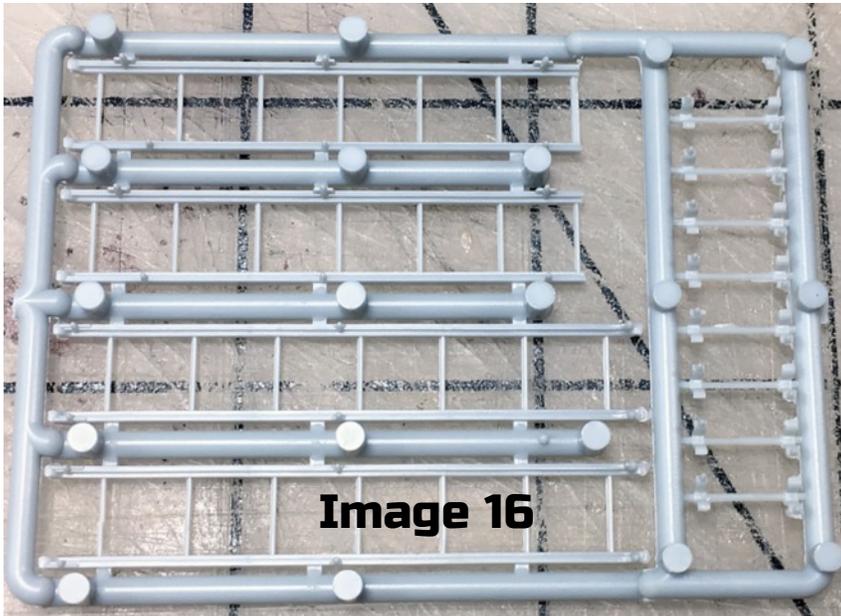
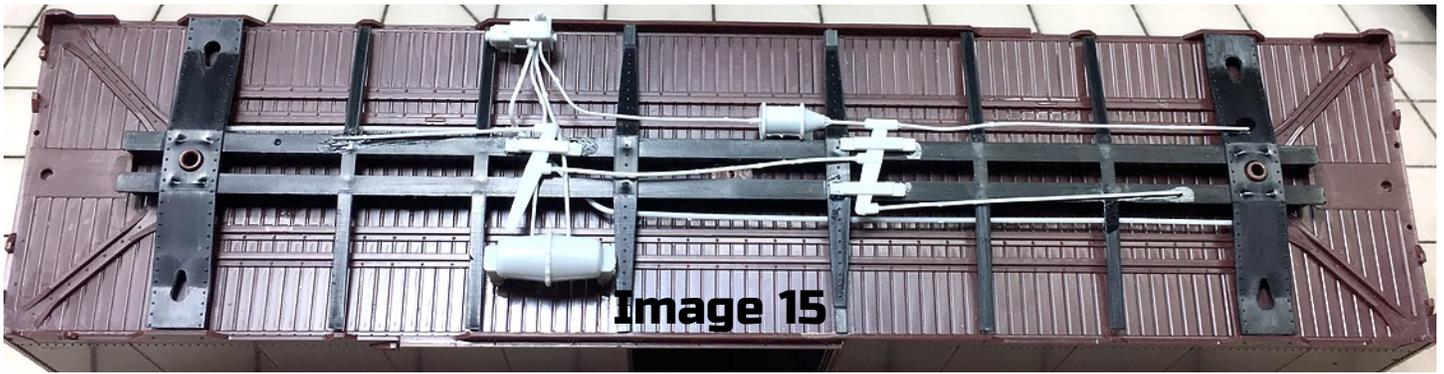


Image 18 shows the end brake system, running board grabs, tack boards and end grabs. The end grabs, in the red area, are way too delicate. Use them if you want, but I'll replace those with brass wire.

Now come the upper body sprues. Get a new blade and go slow. Image 16 shows the ladders and hand grabs. Just to let you know, you have two extra hand grabs. I broke three of them. You can fix them as you will see later. I would have liked to replace these with wire, but the holes on the car are offset to match the pins on the grab. That would mean drilling one new hole and filling another. Also, the ladder rungs are extremely delicate (Image 17). You may have one split in the center. Don't worry, you can butt the two pieces and a bit of MEK you will be fine.





**Image 18**

Figures 18 and 19 show the ladders and grabs on the side of the car. To attach these parts, I use a very small brush dipped in MEK Image 20 shows the “B” end of the car. So far, I have use only stock parts from the kit.

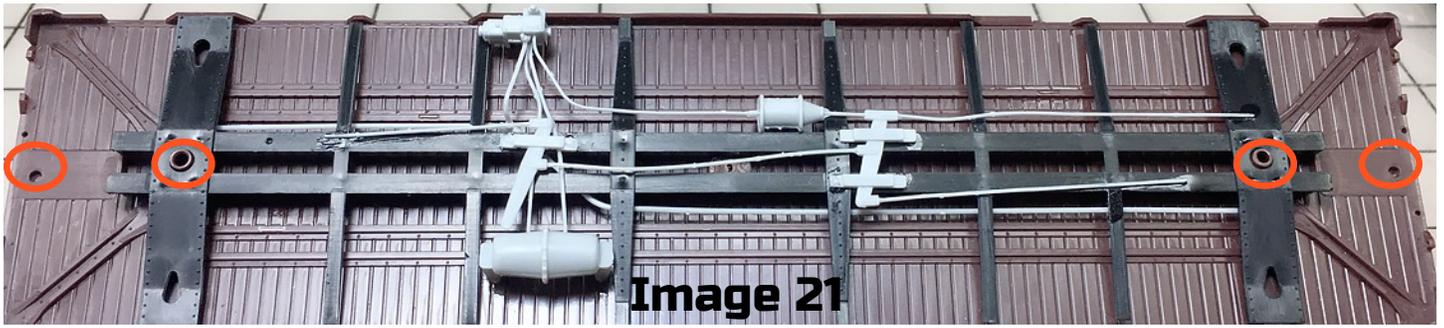


**Image 19**

After a quick trip back Des Plaines Hobbies, I now had a set of nice trucks with metal wheels and a set of Kadee couplers. Now I can drill and tap for those parts. Normally I would have done this before doing the full underbody.

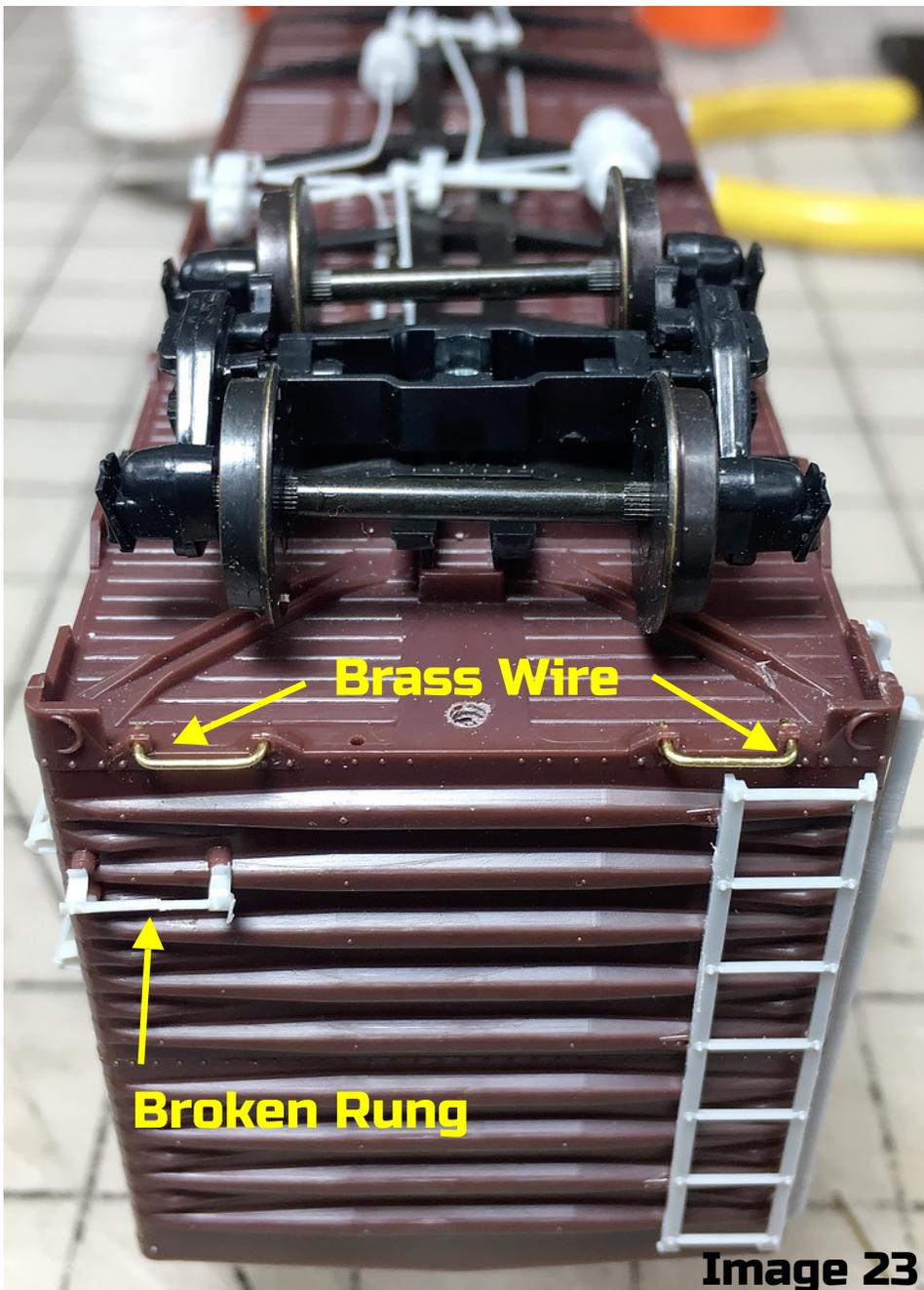


**Image 20**

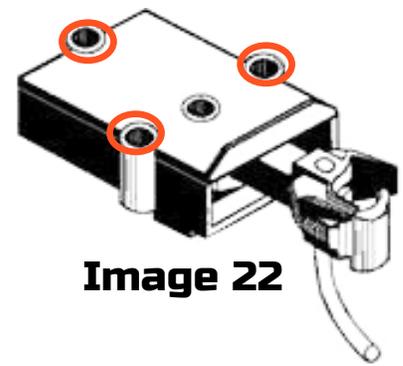


**Image 21**

Remembering that I am an O scale modeler, I did not have the smaller taps this build so I went with 2-56 for screws. My suggestion, and I'm sure most S scale builders know this, would be to use smaller screws such as 0-80. The red circles in Image 21 above show the drill and tap locations. NOTE: On the Kadee coupler, I normally place the coupler on the car and then drill three small holes as shown in red in Image 22. In my build, I just made a single screw hole as I did not have the proper taps.



**Image 23**



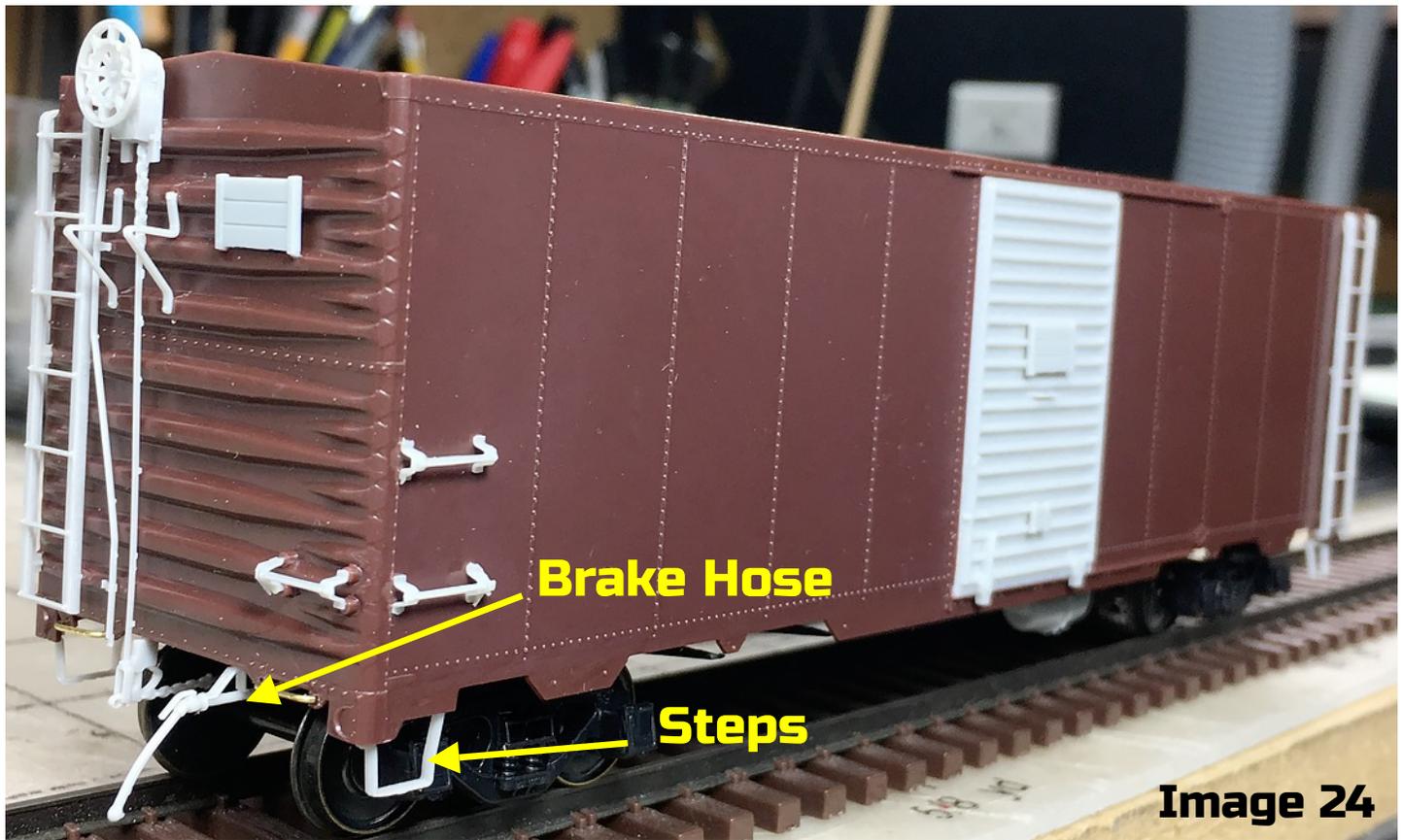
**Image 22**

Image 23 shows the trucks mounted and the hole tapped for the coupler. Also note that I used brass .015 wire for the end grabs.

If you look closely, you see the broken rung on the hand grab. This was placed in two pieces and then glued in the center. Best case, you won't notice it. Worst case, it will look bent which is not all that bad.

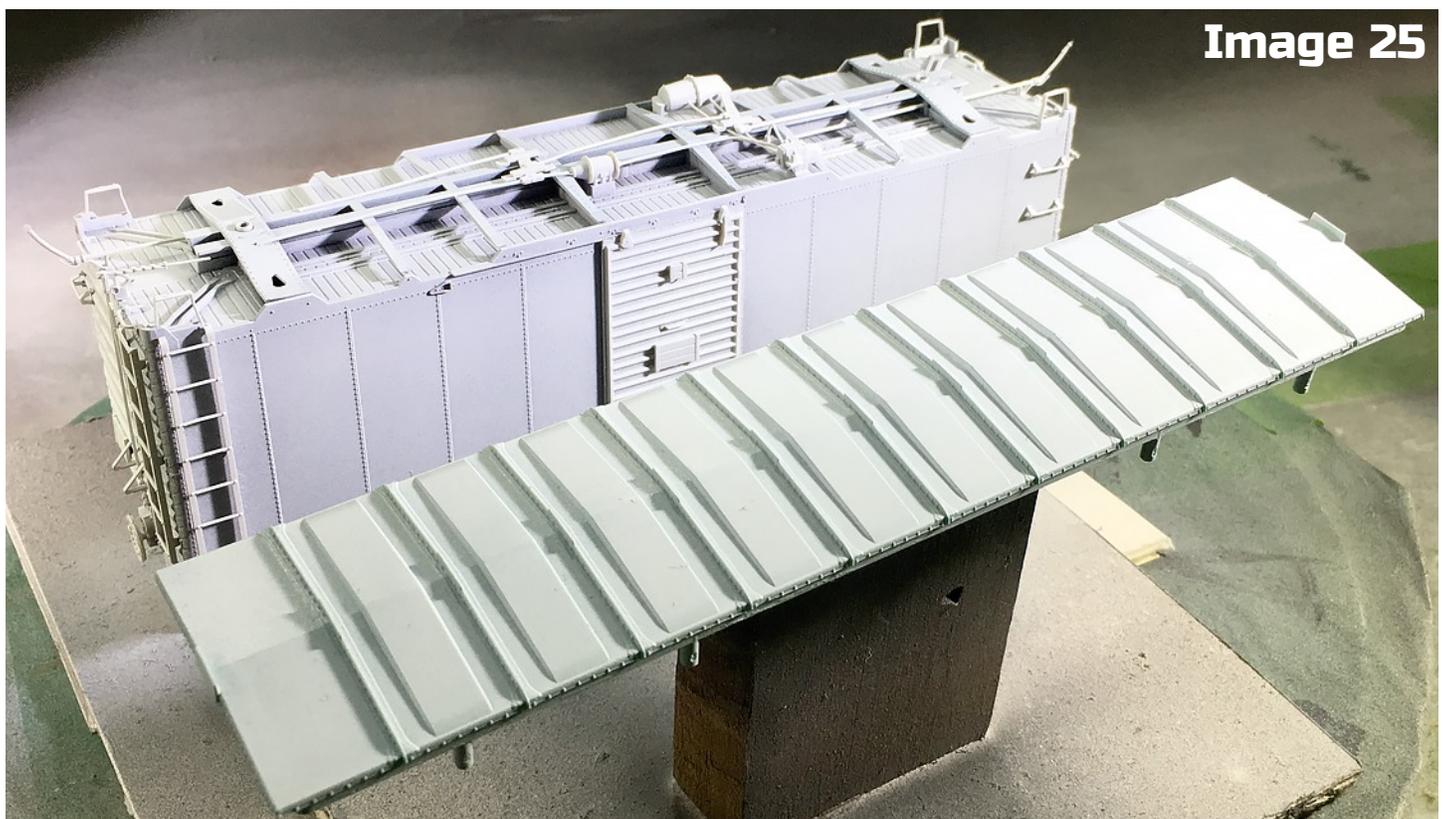
Image 24 shows the completed car body with air hoses and lower step attached. The tack boards were added on the doors and ends of the car. At this point, we are ready for priming. I used Scalecoat II UP Hopper Car Gray as my primer. The car was shot upside down first and then another coat was shot right side up.

The roof was also primed as we are using the S Scale America 40'



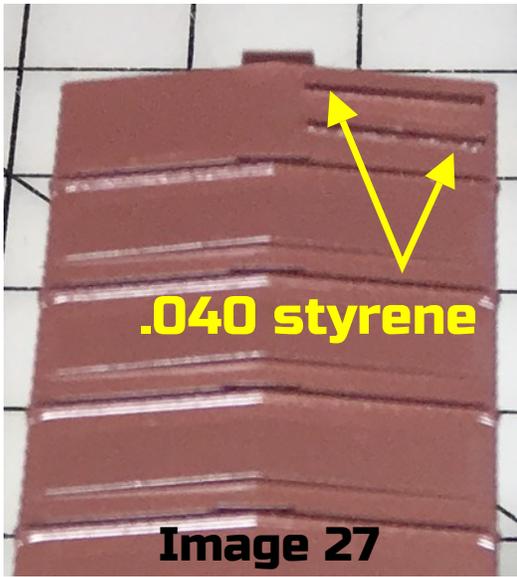
raised panel Murphy roof (SSA430) in place of the Viking roof that came with the kit. After two light coats of primer (Image 25), I let everything sit for 24 hours.

The metal roofwalk was also primed and then painted with Floquil old silver and bit of black mixed together trying to give it more flat look.





**Image 26**



Scalecoat II Boxcar Red was used for the finish coat. (Image 26) One thing I forgot was the standoffs for the roof walkway ends. Because I was using the Des Plaines metal roofwalk, I needed to add supports for the ends. I ended up using two strips of .040 styrene as shown in Image 27. This brought the height of the ends to the same height of the main roofwalk.



**Image 28**

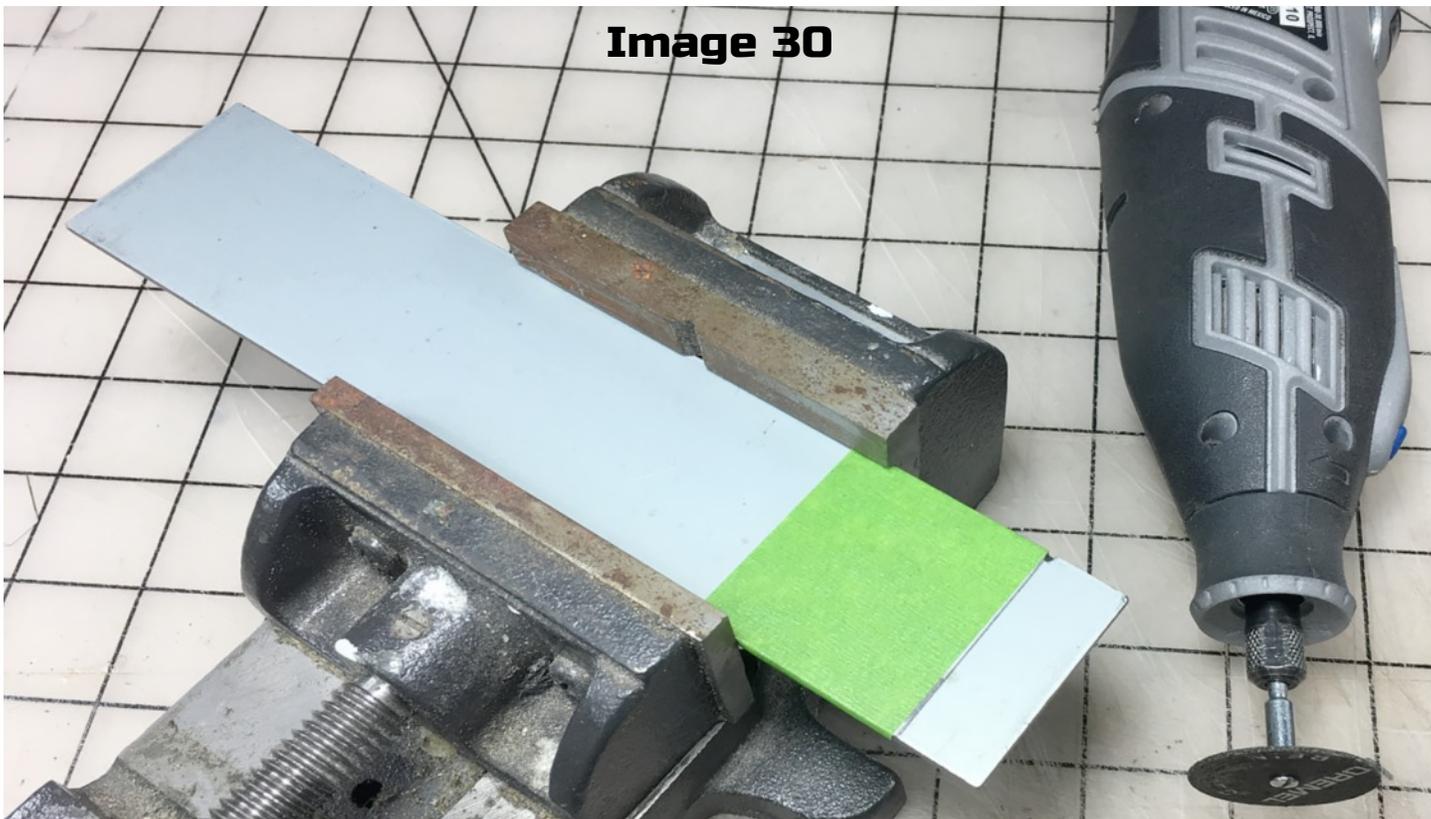
**Image 29**



Image 28 shows the completed roof. I used a very quick drying ACC type glue to secure the roofwalk to the roof. Starting at one end and securing that, I was then able to lightly bend up the roofwalk from the other and to get a application of glue where it was needed. The stock grabs were used (Image 29), as it's all I had.

For weight, the kit I received came with a piece of steel which fit widthwise but needed to be cut for the length. (Image 30) Once cut, I used double faced carpet tape to secure the weight to the floor of the car.

**Image 30**



**Image 31**



Image 31 shows the completed car. The roof was left off, and you will see why next. At this time, the car was shot with a matte finish since I am using dry transfers and not decals.

The dry transfers came from Clover House. I may have gotten the last package of the New Haven, but Tom has many of the 8148-34-DT-S Southern Pacific 1937 AAR Standard Box Car available in S scale.

Image 32 shows how I needed to set up the car. Because of the delicate grabs on the sides, I could not put any pressure on the car if laying on a flat surface. I used a 2x4 inside the car and a piece of ½ inch Homasote to keep the car off the workbench top. This also allowed a place for my arm to rest while I applied the transfer. Using painters tape to make a “hinge” for the transfer and a image of the car I found on-line, I applied the transfer according to the instructions. Once I thought I had burnished all the transfer, I gently lifted the bottom and looked for any missing white. If I saw any voids, I laid the transfer back down and burnished that area. The tape hinge makes sure you lay the transfer back in the same place as before you had a look.

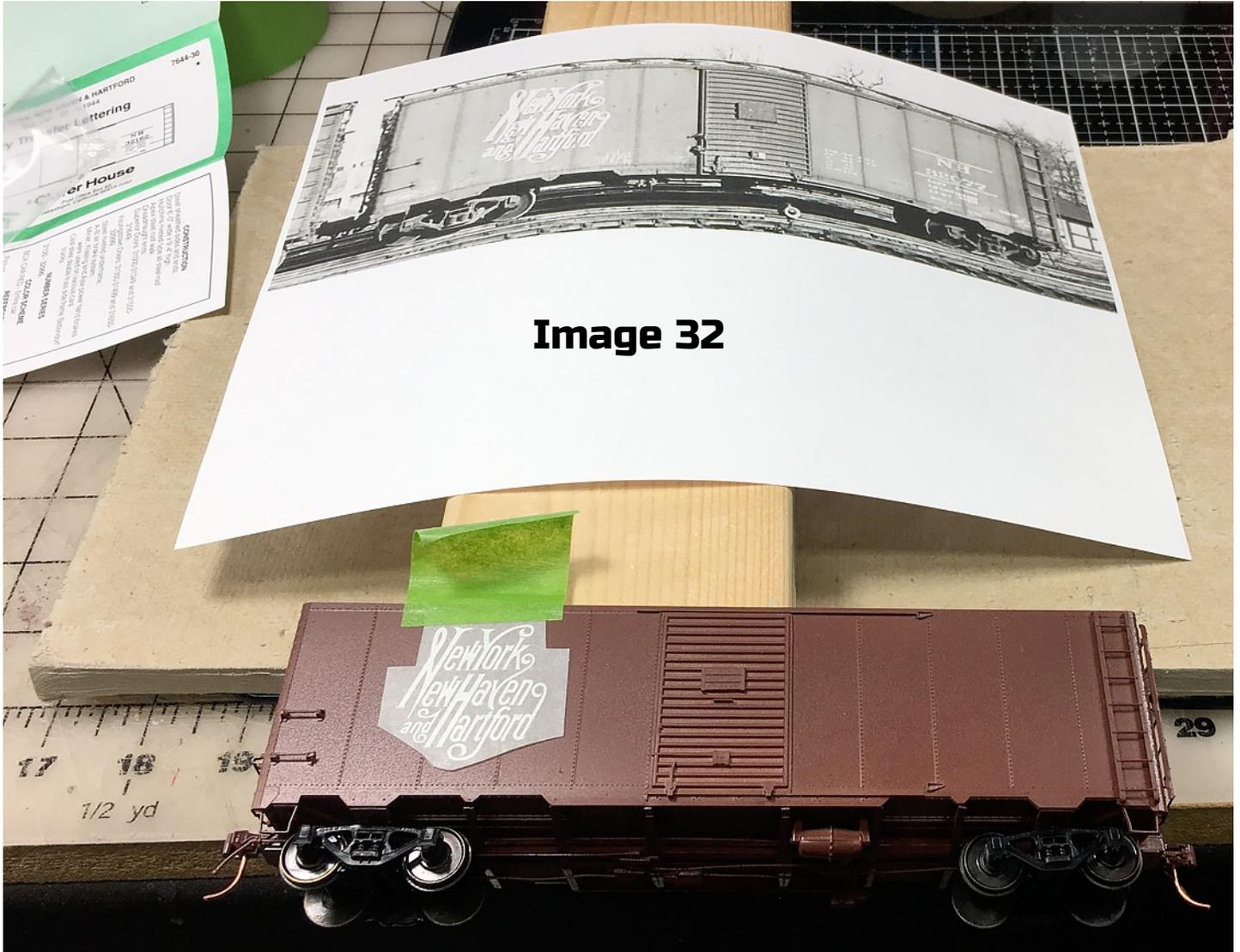


Image 33 shows the completed logo. Then I moved on to the the right side reporting marks and data.



**Image 34**

Once you have one side of the car completed, stop and seal it. In my case, I was up in the air and the car was not touching a surface (such as a workbench), so I went on to the other side. If you are working with dry transfers, just turning the car over will cause the transfer ink to smear. **Always seal one side and wait 24 hours before doing the other side.**

I use Krylon 1311 Matte Finish Clear Coating Artist Spray for sealing, as well fixing powder weathering.

Image 34 above shows the completed car with all transfers on. Now the car received another coat of matte finish to seal on the transfers. The roof was added. It was a tight fit, so no glue was needed. I then lightly weathered the car with PanPastel powders just enough to cut down the sheen of the transfers and give a more dingy/sooty look one would have seen the in the 1940's. A final seal and we are finished.

This was an enjoyable build, and makes a very nice looking car at home on the rails up through the 1960's. These show up at shows and eBay, and of course [Des Plaines Hobby](#) can put together a kit for you. The trucks are not listed on the Website, but are \$15.00 including the metal wheel sets. Give them a call, but may want to hold off until after Ron gets back from the Amherst Railway Society Railroad Hobby Show January 26 & 27<sup>th</sup>.





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# The Chassis

By Jas Millham

Jas Millham returns with the chassis part of his build. We featured his Motor-Gearbox Unit for this locomotive in the [August/September 2018 issue of The S Scale Resource Magazine](#).

Before describing the chassis in detail a few words of explanation may not come amiss.

In 1900, the Great Eastern Railway (UK) needed a larger express loco than the 7' driver 2-4-0's then in front line service. A 7' driver 4-4-0 was produced which was a very handsome machine and a real humdinger when it got on the front of an express. Steam locomotive design at that period could be a bit hit and miss, the GER having previously produced a freight engine that was a dud. Not surprisingly, when a larger freight loco was required, they took the successful 4-4-0 design and put their standard 59" freight engine drivers under it, replacing the front bogie with another coupled axle to produce an 0-6-0. In UK practice, the 0-6-0 was a general purpose loco more akin to a road switcher than a yard goat. Having the cylinders and a narrow firebox between the frames tended to produce a fairly long wheelbase and a low pitched boiler, the loco thus having a low centre of gravity, capable of stable running at normal freight train road speeds and pinch hitting on local passenger work. The freight loco the GER produced was every bit as good as the 4-4-0, and 90 were eventually built. The use of the boiler, cylinders and valve gear of the 4-4-0 produced a loco with a coupled wheelbase of 17' 8" equally divided. Even the full size loco had 1 1/2" of side play in the front axle, as did their 2-4-0 predecessors. Originally used for coal drag work, they gravitated to cross country, branch line and pick up work as 8 coupled engines took over the coal drags. They thus became widely dispersed across East Anglia and any model of that area needs at least one in the loco stud. The 4-4-0s were later fitted with larger boilers, but on these less arduous duties, the 0-6-0s were overkill as they stood and retained the earlier pattern. The last four were withdrawn in 1962. That wheelbase, however, means that they are pigs to get round model railway curves. The prototype could negotiate 4 chain radius curves (4 ft radius in S) presumably dead slow and with much flange squealing. The chassis described here was my answer to the problem.

In the 1860's Edouard Beugniot patented a device which comprised a lever pivoted like a compass needle between the frames of a locomotive acting on collars on adjacent axles so that as the side play allowed in one axle moved to the left, the other axle was pushed to the right, sharing the side-play evenly. One of several possible ways of compensating a model 0-6-0 has two compensation beams pivoted directly to the frames on one side of the chassis, the beams on the opposite side being pivoted to the ends of a third lever whose mid-point is pivoted to the frame, thus resolving the ensemble to three point suspension. If the two levers that are pivoted directly to the frames are spaced away from the frame so that their ends can move closer to, or further from the frame, as well as up and down, and their ends are joined to the axle boxes with king-pins, they will compensate sideways movement as well as vertical movement in the axleboxes. If the axles are mounted in the axleboxes with ball races, then the axlebox will follow the sideways movement of the wheels on a curve and the beams will double up as Beugniot levers compensating side play in all three coupled axles, as well as providing vertical compensation. One odd feature of these engines was the absence of a separate hinge in the coupling rods, the front end of the rear rod fitting in a fork joint in the rear end of the front rod, the crankpin doubling up as the hinge. This provided more coupling rod bearing surface on the driving axle.

Some 20 years ago I made a model of one of these engines (class J17). The drawing I had available at the time was a 1950's era 00 offering known to have some errors. When I made a second model a couple of years ago better plans had been published at 3/8": 1 ft, ideal for "S". They showed a number of areas where the previous model needed upgrading, and I turned up a new chimney and dome at the same time as the ones for the

new model. The cab area also needed some corrections, but this could not be done using the existing chassis, so this one, a duplicate of the one I made for the second loco, is a replacement for the earlier model's, made feasible by the old 00 wheels I was given from which I reclaimed the nickel silver tyres.

I worked on the various sub-assemblies in no particular order as the mood or ability to work up the necessary enthusiasm took me. I had exhibiting commitments with my layout including a major train show at Alexandra Palace in London and work on the new chassis had to be fitted in around these. Ball race axleboxes were produced for the middle and front axles incorporating pieces of K&S tube to take the king pins; the one for the centre axle had to be hinged like a coupling rod. 8 king-pins were made from 1/16th" steel rod and more K&S tube, silver soldering the joints, the ones supporting the motor gearbox unit being relatively highly stressed. I had a soft soldered joint fail on an earlier loco so now I take no chances. It was while testing the loco that I discovered the hard way that the pivots for the beams had to be in line with the axles. It had turned out that way on the previous chassis, but I hadn't realised it was important. Until, that is, the new chassis started bucking under load. The whole thing had to be stripped down, corrected and rebuilt, after which it performed as intended.

The chassis is designed for split axle pickup and the axle boxes and motor gearbox frames were joined to the main frames with flexible jumper wires, there are too many pivots between the wheels and the mechanical attachment of the beams to the frames for reliable electrical continuity. The model already had a two pin plug and socket connection to the tender which is also a split axle design, and this was retained, the model has pickup on all 12 wheels. While I was working on the tender, I found I had never got around to fitting the brakes. They aren't very noticeable, but without them the shiny treads of the tender wheels catch the light through the sausage shaped slots in the tender frames. Adding the shoes and hangers cured that.



The hinged axlebox for the middle axle. The right hand component is made of Dural to ensure the whole thing doesn't solder up solid while getting a good solder joint between the tube and the brass bush.

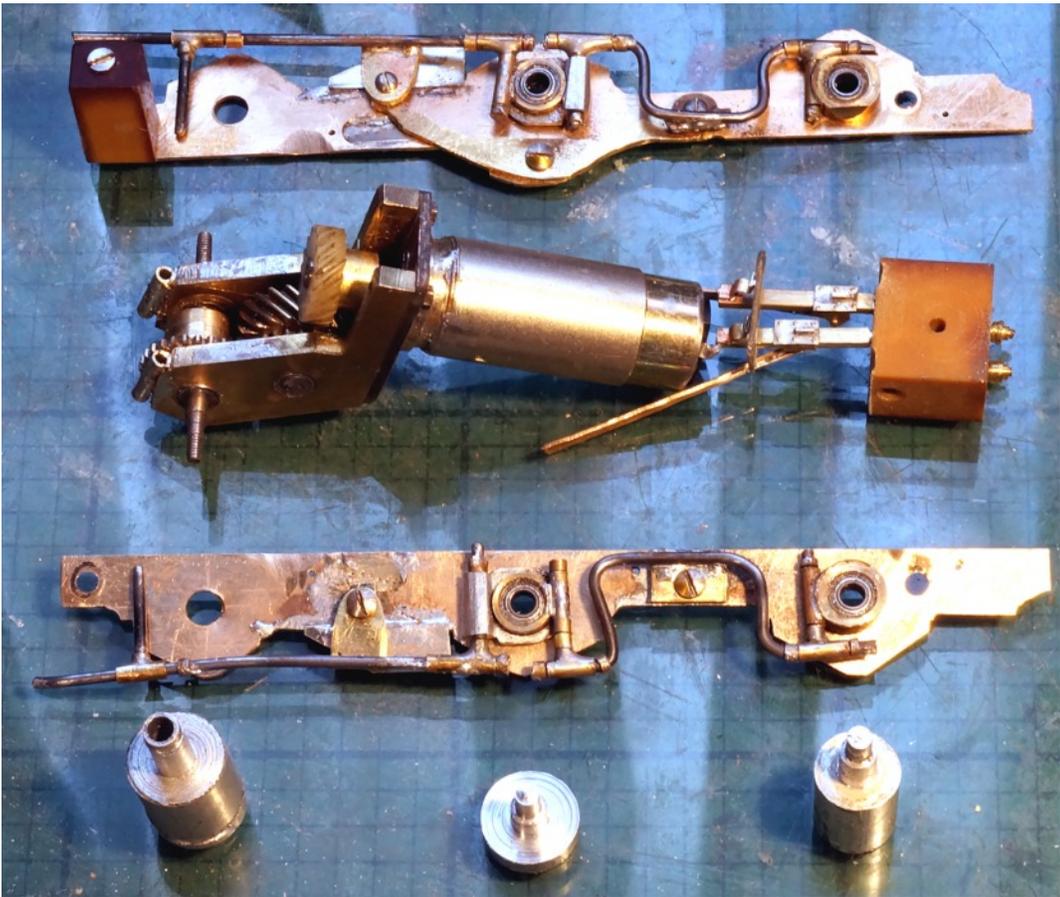


A close up of the king pin assembly and the set up for silver soldering; the parts are held to a piece of aluminum sheet which has two lines scribed at 45 degrees to the edge to ensure the parts are at right angles to each other. Assembly was carried out on the kitchen cooker as this was the least inflammable place in the house!





These photos show the attachments for the levers and the fifth lever pivoted at its mid-point with attachments for the other levers at its ends. This shows where I goofed, the pivots should have been in line with the axles.



A view of an earlier chassis that shows the layout of the levers better than the present one where the axleboxes were mounted to the axles earlier in the assembly. It also shows the collars that locate the fore and aft position of the king pin assemblies on the compensation beams, and it shows the correct positioning of the lever pivots.



The front and middle axle and axlebox assemblies.



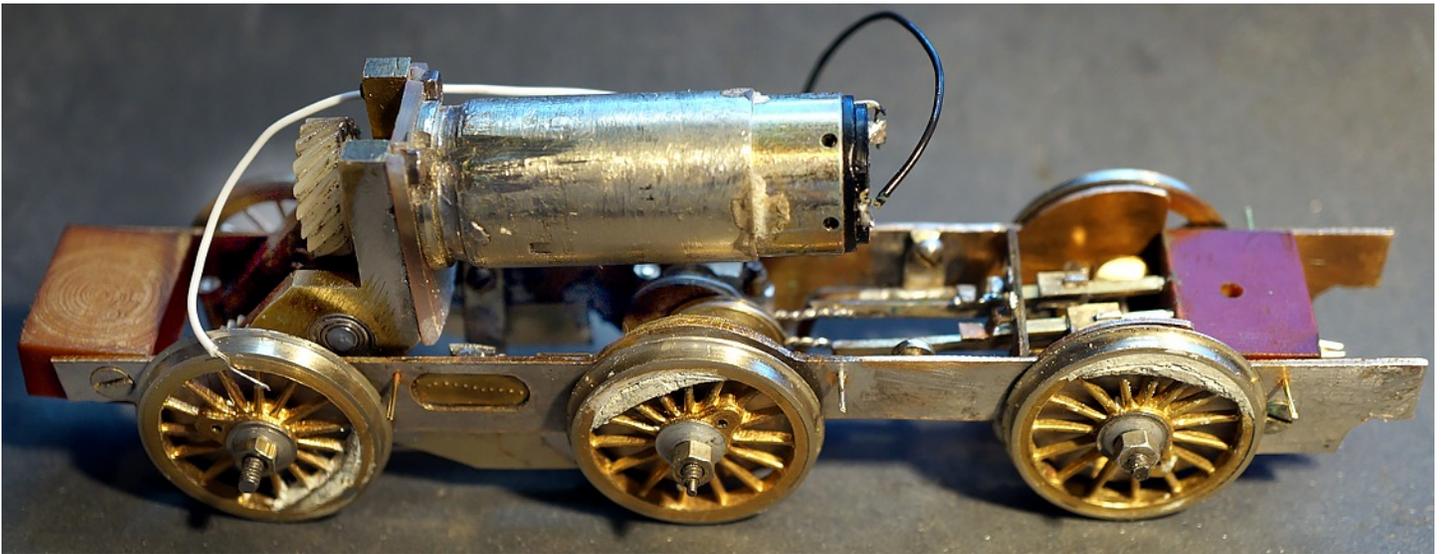
Trial assembly of the front and middle axles and the compensation beams.



The king pin assemblies added to the motor gear box unit



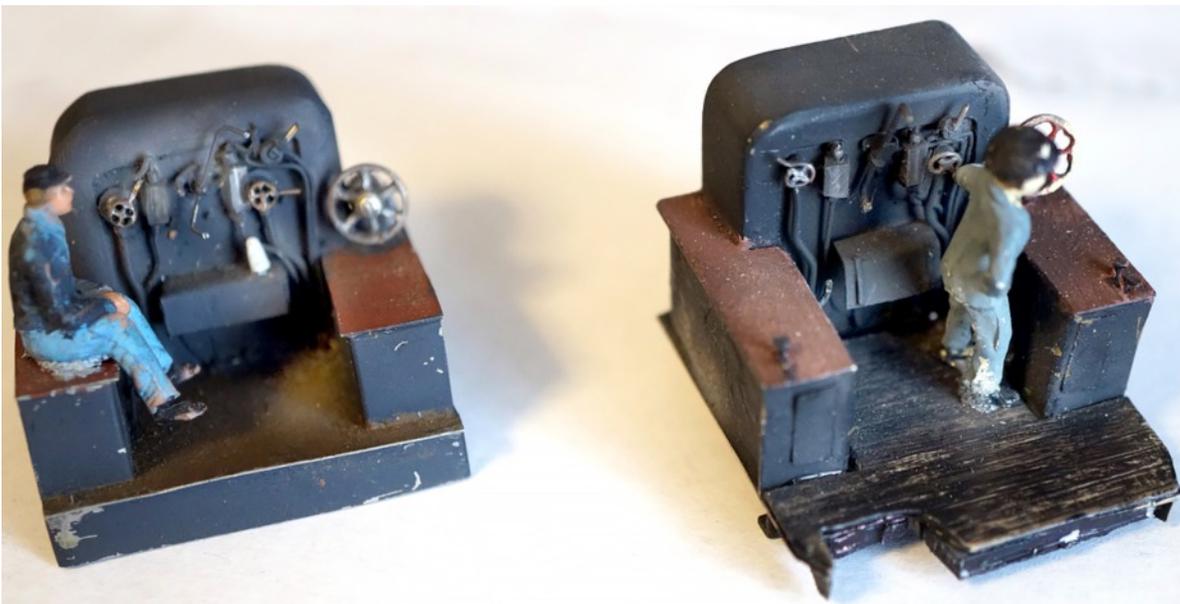
One of the frames with the bush for locating the  $1/8^{\text{th}}$  axles centrally in the  $3/16^{\text{th}}$  holes during assembly of the compensation beams to the fulcrum plates. When withdrawn, the axle has  $1/32^{\text{th}}$  up and down play. The pivots later had to be reworked.



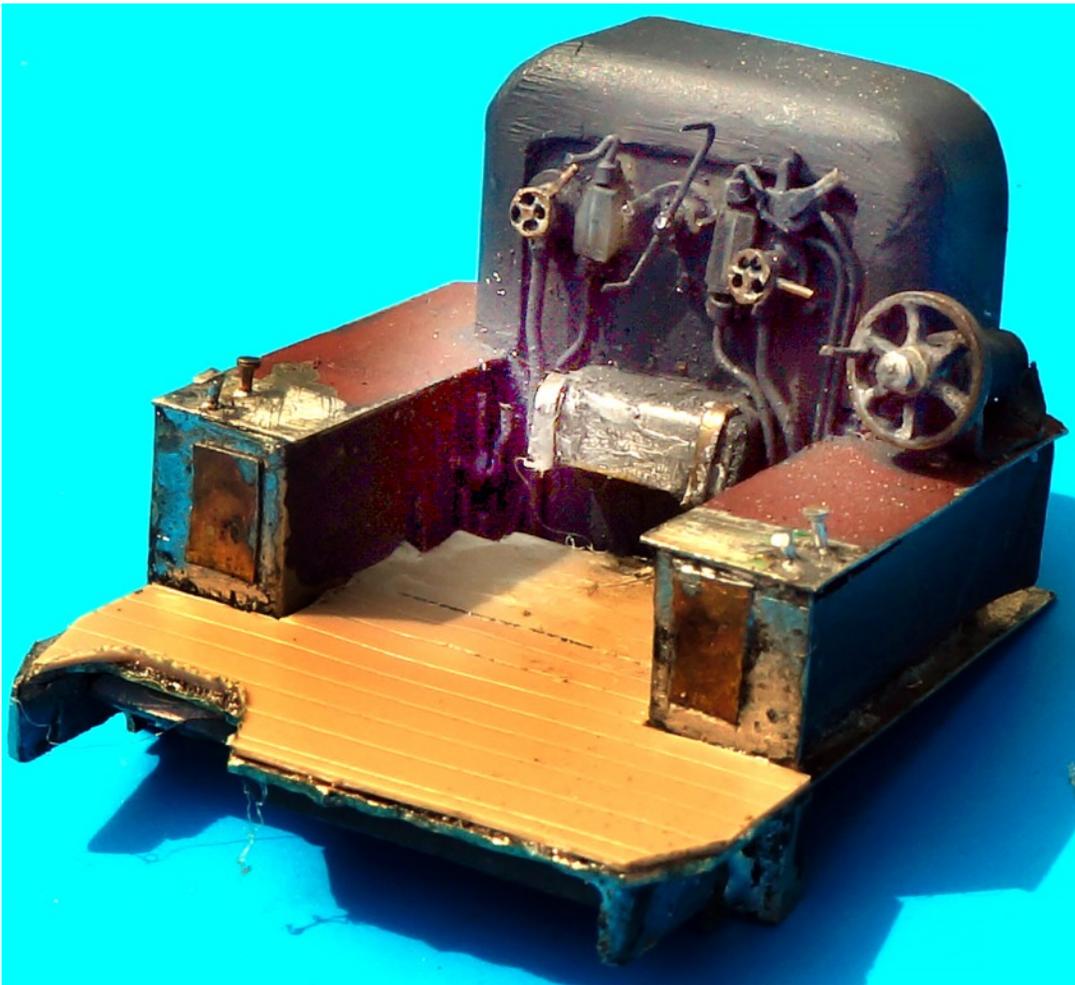
The chassis assembled



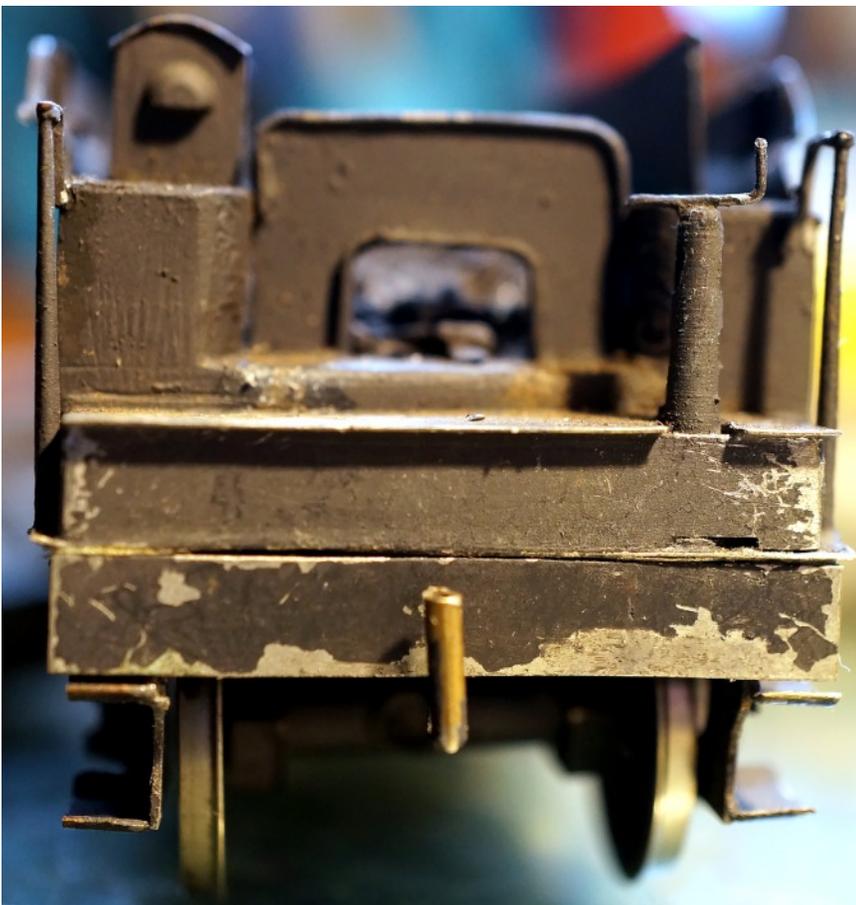
The chassis offered up to the loco to check that the angle of tilt of the motor will align with the boiler. Minor adjustment proved necessary by bending the compensation beams. The incorrect gap between loco and tender copied from the older drawing is glaringly obvious in this view.



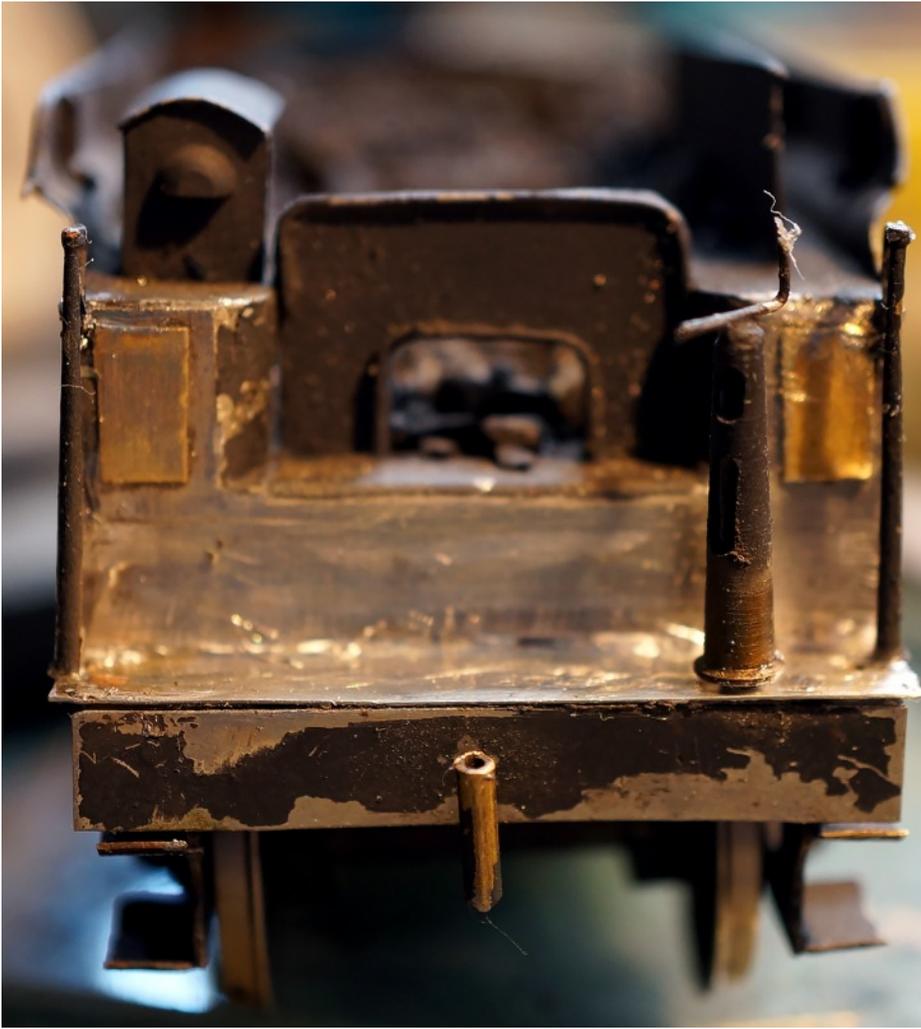
The cab fittings from the earlier model on the left, with the more detailed fitting from the later model on the right.



The upgraded cab fittings with corrected footplate.



A view of the tender front showing the incorrect platform.



The platform has been removed and locker doors added. The loco footplate can now reach up to the front of the tender.



The brake shoes and hangers.

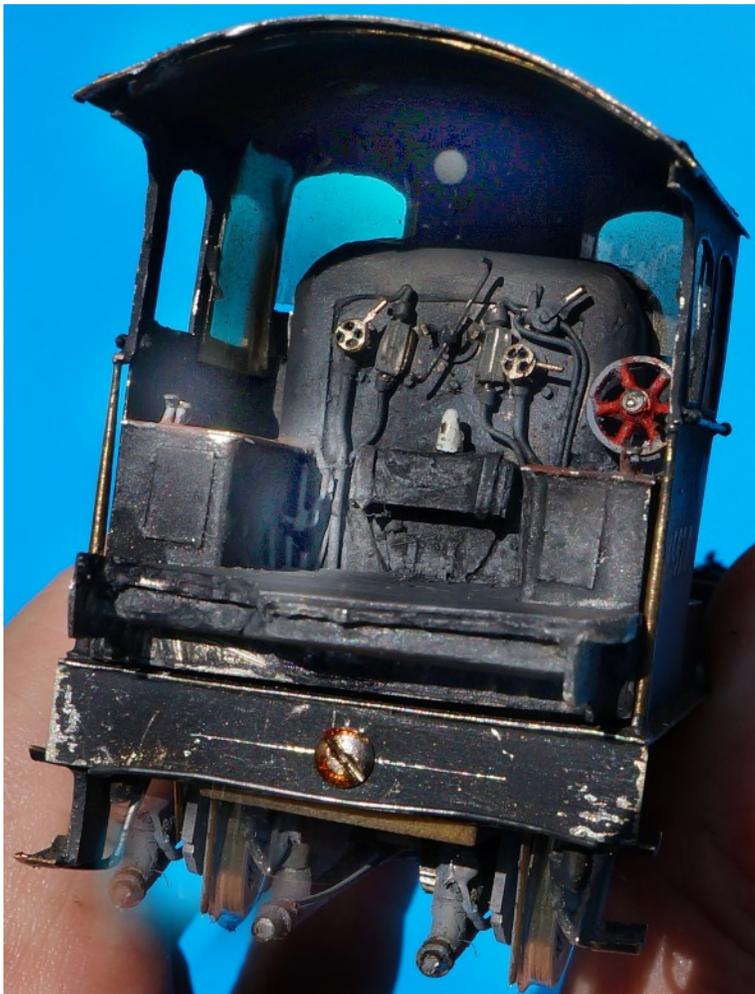


The chassis with the coupling rods, brakes and sand pipes added.



The cab/footplate unit is offered up to the chassis to check the fit. Once satisfied, the firebox was added. The recess into which the rear of the boiler fits can be seen. The smokebox end is clamped by a screw from below into the base of the blastpipe.

A view into the cab showing the brass former onto which the cab fittings are a push fit. The screws go into tapped holes in the rear firebox former, thus fixing the firebox to the cab front.



The upgraded cab fittings are now in place.



I didn't have a digital camera when the earlier loco was built, so this is a photo of the second engine which shows how the boiler was made of heavy gauge tube with the boiler bands turned integrally with the boiler.



A view showing the smokebox interior detail on the second loco, both engines are identical.



65528, the upgraded engine, is in the foreground with 65531 whose construction from better drawings led to the need to upgrade the earlier model behind. 65528 is coupled to a small tender as fitted to the first 20 locos. When larger tenders were required to increase the range of the 4-4-0s they couldn't be any longer due to the size of the turntables then in use, so they had to go up! Later 0-6-0s received them from new. 65528 was supplied with a large tender when new, but emerged from a works visit with a small one which it kept until withdrawn. 65528 has the later Ross pop safety valves, 65531 has the earlier encased four column Ramsbottom valves. It was probably the last of the class to carry them, and probably still had them when withdrawn. These locos are if anything too clean, the cabside numbers and tender emblems were frequently totally obscured.

These were common user freight engines, driven by anybody and everybody on the orders of somebody and cared for by nobody. They are modeled as running in the late 1950's.



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(Table holders must pay the \$25.00 registration fee)

# Of 8 ft. Tables \_\_\_\_ \$50.00 ea/\$60 after 8/1/19 \$ \_\_\_\_\_

O Scale vendor  S Scale vendor  No preference

Number of add'l registrants \_\_\_\_ @ \$25 each \$ \_\_\_\_\_

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

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

**TOTAL AMOUNT ENCLOSED: \$ \_\_\_\_\_**

(No refunds after 8/20/19)

Electrical needed? Yes   
 (Subject to availability)

**OSCALEMIDWEST.COM OR SCALEMIDWEST.COM**

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

The parties, whose names appear on this registration form, have agreed to hold harmless all of the organizers, sponsors, Model Railroad Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, loss, damage, misadventure, or other inconvenience suffered or sustained as a result of participating in the Indianapolis O Scale Show and S Scale Midwest Show 2019 or in connection with any activity related to this event, whether of negligence by agents under their employ or otherwise.