The S Scale Resource

NEWS, REVIEWS, INFORMATION TO USE

August/September 2016
Volume 2 #6

Getting Together
State-Line S Gaugers
What's on your Workbench?
Using Soldering Fixtures
Building a Kinsman Hopper
Shows, Meets and So Much More!

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THE S RESOURCE
NEWS, REVIEWS, INFORMATION TO USE
S SCALE

Published Bi Monthly

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August/September
Volume 2 No. 6

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

Module built by John Mann which is part of the State-Line S Gaugers display at shows. Photo by Glenn Guerra. Photoshop by Daniel Dawdy

Rear Cover Photo

Another view of John Mann's module.

Photo by Glenn Guerra.
Photoshop by Daniel Dawdy

Bill Of Lading

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

As I write this, Dan and Glenn are getting ready to attend the NASG National in Novi, Michigan. Be sure to stop by the table and say "Hi!". Glenn will be doing a clinic on soldering, and if you're a master solderer, or just curious and want to see what's involved, attending a clinic is a great way to get tips, techniques and advice. Check out his article in this month's magazine on "Soldering Fixtures - How Not to Burn Your Fingers". Speaking from experience with hot glue, soldering burns must hurt a lot more; if you do any soldering at all, this article will provide you with some great tips.

Be sure to check out the article by Raymond H. Hall on building a Kinsman hopper. These cars are readily available at shows and swap meets, so why not give one a try? This issue of the magazine features not one, but two projects in "What's on Your Workbench?". We love seeing what modelers are doing, and Bob Frascella sent an example of a self designed ALCO C420 project using 3D printing. In addition, Ken Zieska sent us photos of the "make it and take it" project being highlighted at the upcoming NASG National Convention.

We always like to feature layouts, and this issue features the State-Line S Gaugers from Rockford, Illinois. If you belong to a club or modular layout, contact us so we can feature it in an upcoming magazine. We want to continue to promote the hobby, and what better way to do that than highlighting the modelers that love it!

Most people learn by example, so if you can't attend the show, please send your comments and pictures of your current projects to:

amy@modelrailroadresource.com or daniel@modelrailroadresource.com

For now, sit back, enjoy the warmth of summer (or the cool of the airconditioning) and relax with this issue of *The S Scale Resource.*

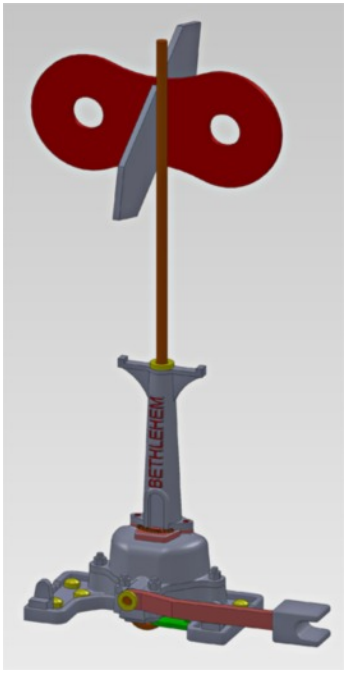
Happy Reading & Happy Modeling,

Amy Dawdy

NEWS YOU CAN USE

Jim King from Smoky Mountain Model Works, Inc. has an updated (with tinted urethane targets) Bethlehem 53A low-profile switch stand and the NEW intermediate-height 53B

The 53A throw bar is etched NS; the base and counterweight are separate urethane castings. Separate pieces allow you to position the arm on each side.
The 53B is a single piece (bar cannot be repositioned). Add wire, an eccentric crank and targets of your choice, a little black paint and you have a "functional" switch stand.



Jim also has tie plates, joint bars and track gauges. Click here to see all of these products in S Scale!

Daniel Navarre from River Raisin Models has announced Boo Rim and RRM just agreed to build the Early Berkshire Project. It will be a limited quantity project with the following versions: B&A with short tender, B&A with short tender and green boiler, B&A with NYC Tender, Boston & Maine with 4 axle and 6 axle tender, AT&SF with 6 axle tender, SP with coal tender, SP with oil tender, and IC version. The project is a go and final quantities will be set soon so final reservations are being accepted now.

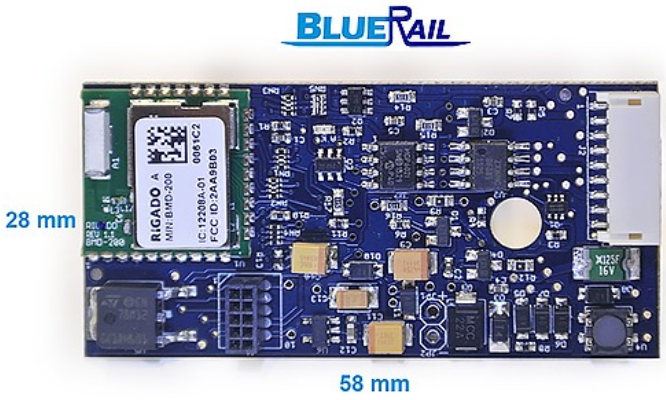
NEW S scale Figure series, now underway from modeltechstudios.com. Bucker operating his Dragsaw, sawing felled trees. This unique backwoods set includes both the Dragsaw and its operator, the Bucker. Both come pre painted for you as well.

This LOGGING FELLER is "IN ACTION" striking the tree with his axe as he chops it down. Compliments our FELLER #1 in our series of "In Action" S Scale Logging Scene Figures.

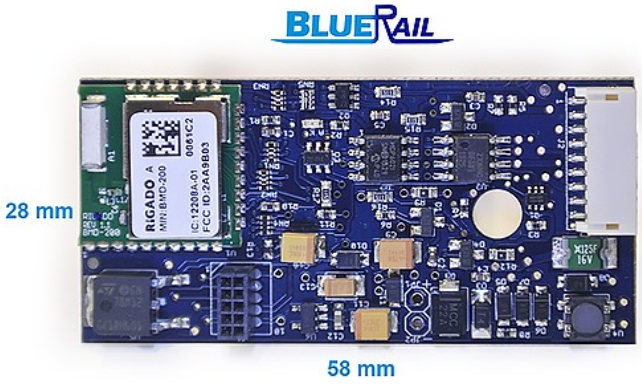
The Iconic LumberJack/High Climber or Tree Topper as they were known. Every Logging company had men who "went up the trees" to top them for Spars used in their logging operations. Includes the saw and Axe and Rope.

See all the S Scale Logging Scene Figures at modeltechstudios.com

BlueRail Trains has released bluetooth plugin boards that will allow you to control your loco with your iOS or Android phone or tablet from over 100 ft with no additional equipment.



The board is perfectly sized for S scale use and compatible with Bachmann E-Z App. Control motor and up to 4 lights, optional battery power, wireless firmware updates and more.



Complete DeadRail kit also available. Visit BlueRailTrains.com for more details.

Tichy Train Group has new decals are available in all scales and in 6 packs. Numbers below are HO, add N for N scale, S for S scale and O for O scale. Other scales, send an email request. Single decals are: HO $4, N $4, S $5, O $6. All are in stock.

10018 DSDX (MILW) RIB SIDE REEFER
10019 URTX (MILW) RIB SIDE REEFER
10021 MILW RIB SIDE HIAWATHA BOXCAR
10022 PRR H-32 COVERED HOPPER RED CAR
10023 PRR H-32 COVERED HOPPER GRAY CAR
10024 PRR H-32 COVERED HOPPER SHADOW LOGO
10025 PRR GLD USRA HOPPER (KITS 4027 & 4029)

10026 B&O N17 USRA HOPPER (KITS 4027 & 4029)
10027 WABASH USRA HOPPER (KITS 4027 & 4029)
10028 SCL STUMP CAR (KIT 4043)
10029 MP USRA HOPPER (KITS 4027 & 4029)
10030 SL-SF USRA HOPPER (KITS 4027 & 4029)
See their Website for more details.

Railroad Line Models is yet another new manufacturer from New England. The new line of kits will be laser-cut and offered in all four major scales, with a focus on budget pricing and simplified construction. Their first offering is “Pete's Garage" featuring laser-etched concrete stone work over heavy cardstock, heavier wall panels help to eliminate additional structure bracing, while the "keyed" corner construction adds to the strength of the completed structure.

This entire line of kits will be available through your local hobby shop... or visit railroadlinemodels.com for more information.

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TELL YOUR FRIENDS ABOUT THE S SCALE RESOURCE
HELP GET THE WORD OUT ABOUT THE BEST S SCALE MAGAZINE

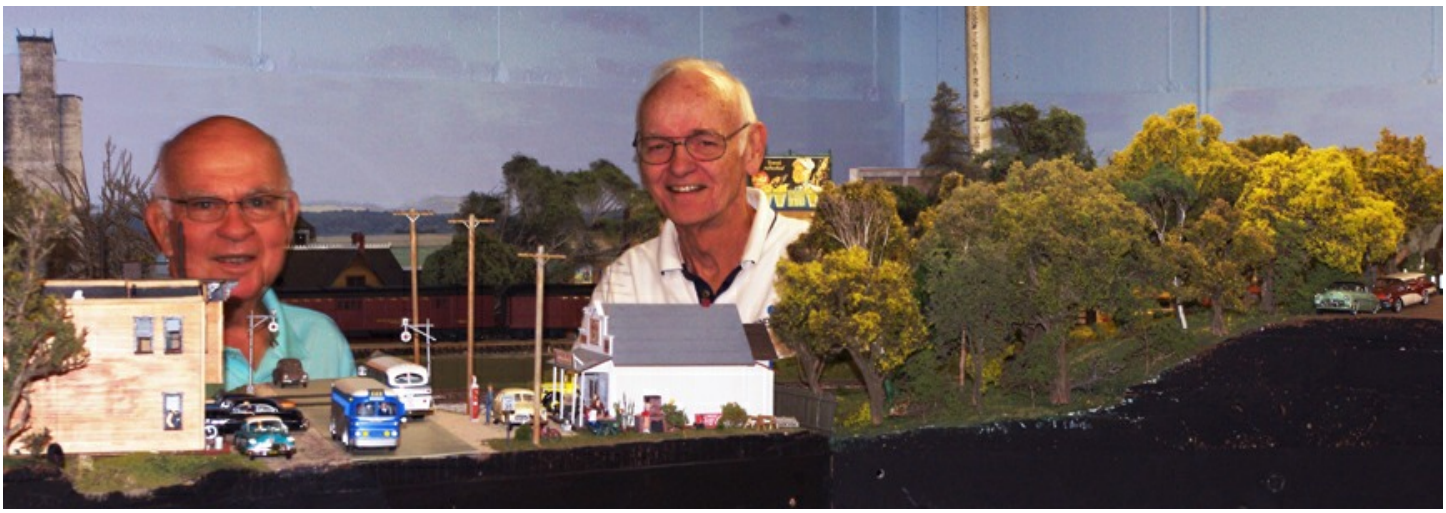
Getting Together

Mike Hurlburt George Sorenson Greg Anderson Frank McCabe John Mann

Some of the group at a recent get together in Rockford, Illinois at the Rockford O Scalers

By Glenn Guerra

I recently contacted John Mann member of the State Line S Gaugers about their group since I was interested in doing a short article about them. John mentioned that they get together on Tuesdays or Thursdays when they feel like it, and have the layouts stored in a warehouse. As we were talking, I asked what they were doing on the upcoming Thursday. John told me that there was an O Scale club in Rockford, Illinois and they had invited the group over for a visit on Thursday. He asked if I like to join them, and after lunch, he would show me the S Scale layouts. It sounded like a great time, so off I went.



Mike Hurlburt, an O Scale modeler, and George Sorenson, an S Scale modeler, were talking about track when I snapped their picture. Mike and George live about 30 minutes apart and came to the event together. Both are just completing trackwork on their layouts, and were interested in how the switches on the Rockford club's layout were made.

John Mann Frank McCabe George Sorenson Paul Drake
Paul was the lone HO Scale modeler at the get together and was impressed with the models

At the O Scale, layout I met George Sorenson who is a member of the S Scale group. Frank McCabe and Greg Anderson were there from the O Scale group. Later, Bruce Morrall stopped by. Paul Drake, an HO Scale modeler, was there to see the layout as well and another O Scale modeler, Mike Hurlburt, came with George. We had a good time running the trains. This was during the weekday, and all of us are retired, so we could goof off. We talked a lot about modeling and compared notes.

During Lunch we were met by John Handlogton, another member of the Rockford O Scale group. I live about 2-½ hours away and was the farthest away. The rest of the group are all within about an hours drive. After lunch, John and George showed us the State Line S Gaugers module layouts which are nearby. It was a great day and I would recommend this type of outing to everyone. The scale means nothing, and there is always something to learn talking to other modelers. This will also bring you in contact with other local modelers who you may not have known, as it did for me.

Greg Anderson Bruce Morrall John Mann
What a nice way to visit and talk model trains.

Using Soldering Fixtures

How Not To Burn Your Fingers

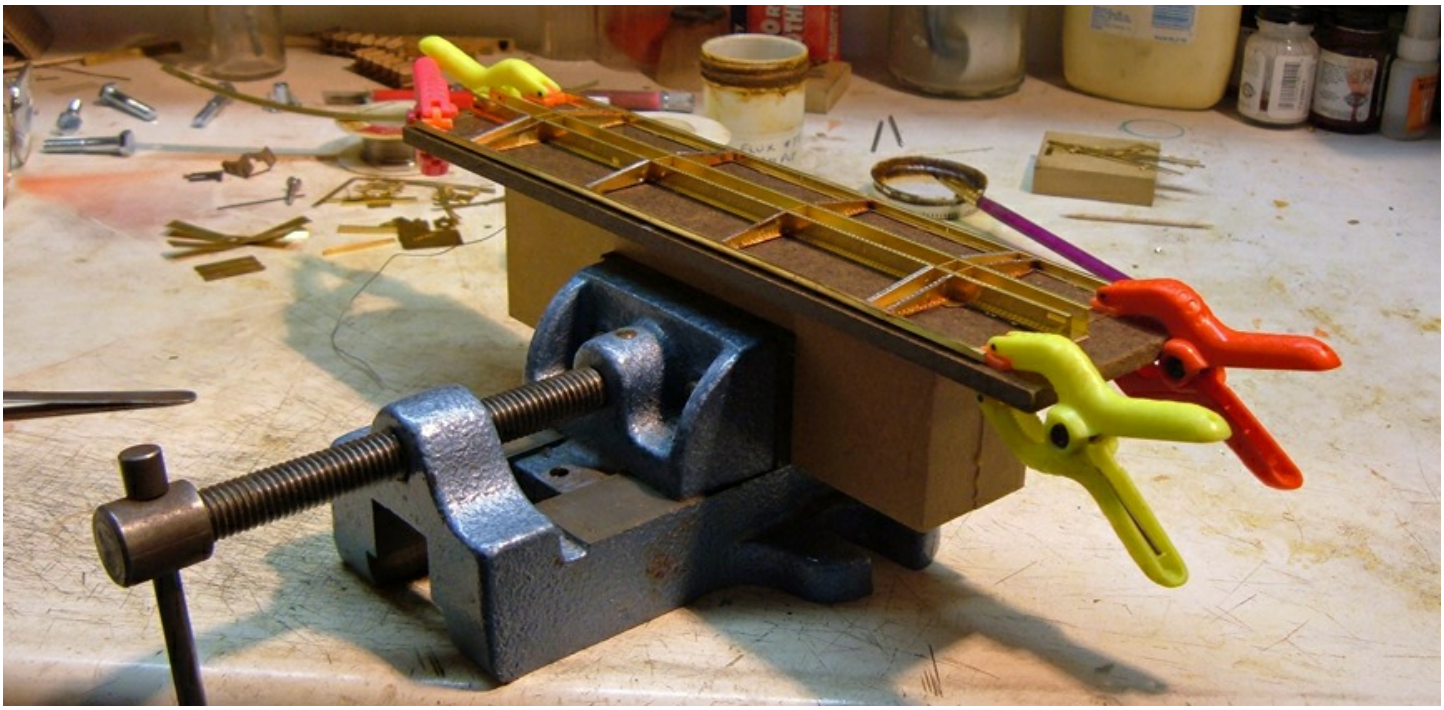
By Glenn Guerra

In the February/March 2015 issue of *The S Scale Resource*, I talked a little bit about soldering models together. That article was an overview of the whole process. Before I get into this article, let me say a little about the NASG S Scale National in Novi, Michigan this year.

The people who are running the NASG convention this year asked me if I would do a clinic at the show. I don't claim to be an authority on the subject, but agreed to do the clinic. When doing a clinic, the skill level of the audience varies and what you cover can be beyond where the people in the audience are or of no help at all. What I plan on doing is covering some of the basics for about 15 minutes and then opening it up for discussion. That way, you can ask a specific question about something you may be having trouble with, and I will see if I can give you some help. This way, the program should be better suited to the individual's needs. I will also have a table throughout the show where you can sit down and we can talk about what you are doing. This is done in England at their shows, and Ken Zieska has done it at S Scale shows here in the US. It seems to work well so I will give it a try.

Now on to this article. As I mentioned, some of the basics were covered in the February/March 2015 issue. For this article, I will try to focus on a specific part of soldering. One of the problems when soldering is holding your work while you solder it. The work gets hot, and that means your fingers usually do not work well. Since I don't like burning myself, I have been trying to find other ways to hold things. Another problem is holding the parts tight enough to keep them from moving. It can be frustrating when your alignment changes as soon as you touch the part with the soldering iron. Soldering is something I always wanted to be able to do, but never spent much time at. About 12 years ago, I started producing kits with etched brass frames. I needed to learn how to solder them together. That is when I got heavily involved in soldering. I have learned a lot about heat sources and solder temperatures which is some of what I covered in the February/March 2015 article. I also had to learn how to hold things, and developed some techniques that worked for me with the tools I had available. I have assembled a bunch of photos here that span about 12 years, and will show you some of the ways I hold things. In the descriptions of the photos, I will try to explain why I did things the way I did. Understanding why helps you to come up with your own way. As an example, understanding why you need to insulate your clamps from the heat will help you devise insulation for your particular set ups. I will also show you some of the past ways I did things, along with what didn't work very well. Understanding why some things don't work helps you to know what you need to correct. It's been a lot of fun for me, and it has opened a lot of modeling possibilities. So, here we go.

This was one of my earliest attempts at holding things while I soldered them. This photo was taken in 2004 and is one of my Mullet River Model Works O scale Rock Island box car kits. This is a brass etching and was the technology I used on all my O scale and S scale car kits. I needed a way to keep the frame square and flat while I soldered it together. What I used was a piece of particle board as you can see. I added some basswood strips along the edge, and you can see the burn mark on one of them. This worked good for a quick and cheap fixture. There were some problems though. I like to use a liquid solder flux and when that soaked into the wood it would boil off when heating the joint. I think it was boiling off some of the resin in the wood at the same time contaminating the solder joint. I could see a build up on the brass that I assumed was the charred resin from the wood. I think what aggravated this was that I was using a 96% Tin 4% Silver solder that melted at around 450 degrees. The extra 100 degrees was a problem. It worked if you went quick, but before repairs could be made, you needed to clean the brass again. The other problem was the fixture did not stay put. It needed more stability.

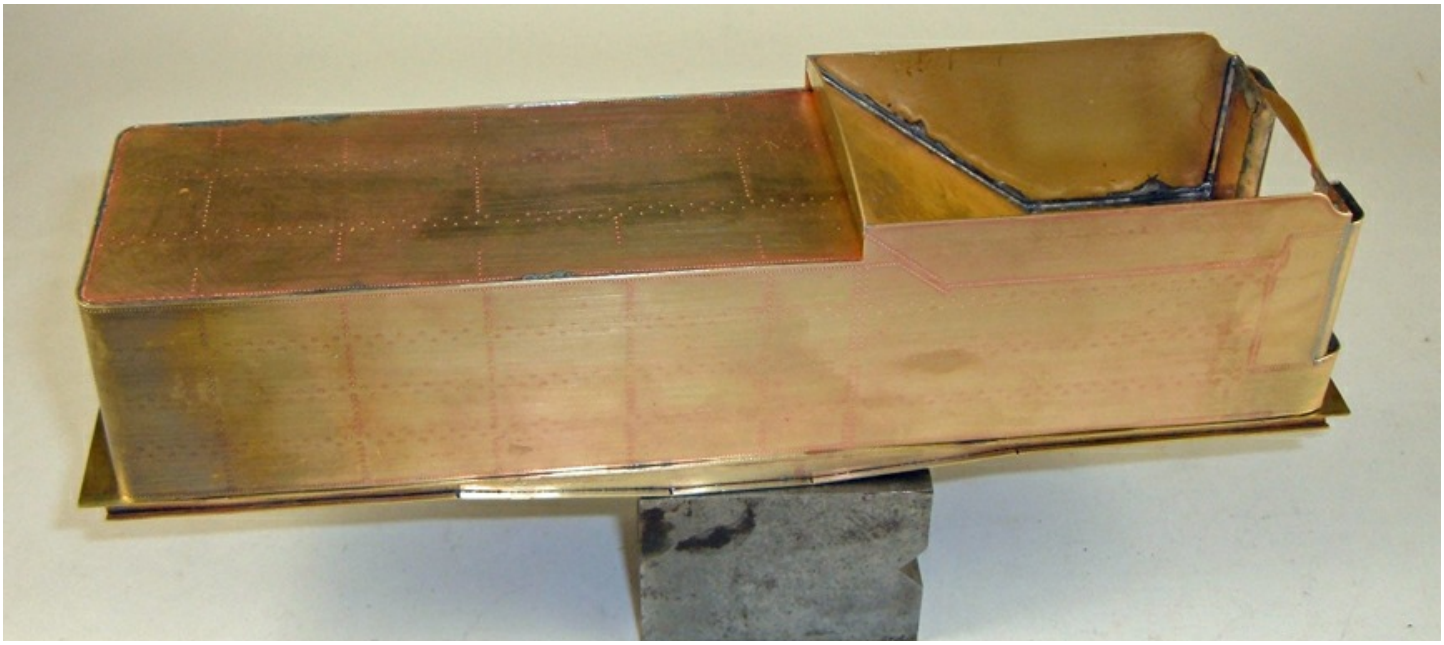


This is what I came up with next. I glued two pieces of particle board together and glued some 1/4" thick masonite on top as shown. By holding this in the vice, it was very stable and not easily pushed around the work bench. It also was easier to put small clamps on as shown. However, it did not take care of the wood charring and contaminating the joints.

This is the current version of my worktable idea. I made this table to assemble one of the Des Plaines Hobbies S scale RS 1 kits. I solved the wood charring problem by facing the masonite with counter top laminate. This is working very well. You can get the laminate from any cabinet shop. Just ask to buy some scraps, and tell them what you are doing. They will probably give you an arm full since they throw away a lot of cut offs anyway. Notice also that the strong back is only a single piece of 3/4" particle board. I found this was plenty strong enough so I did not need to double them up.

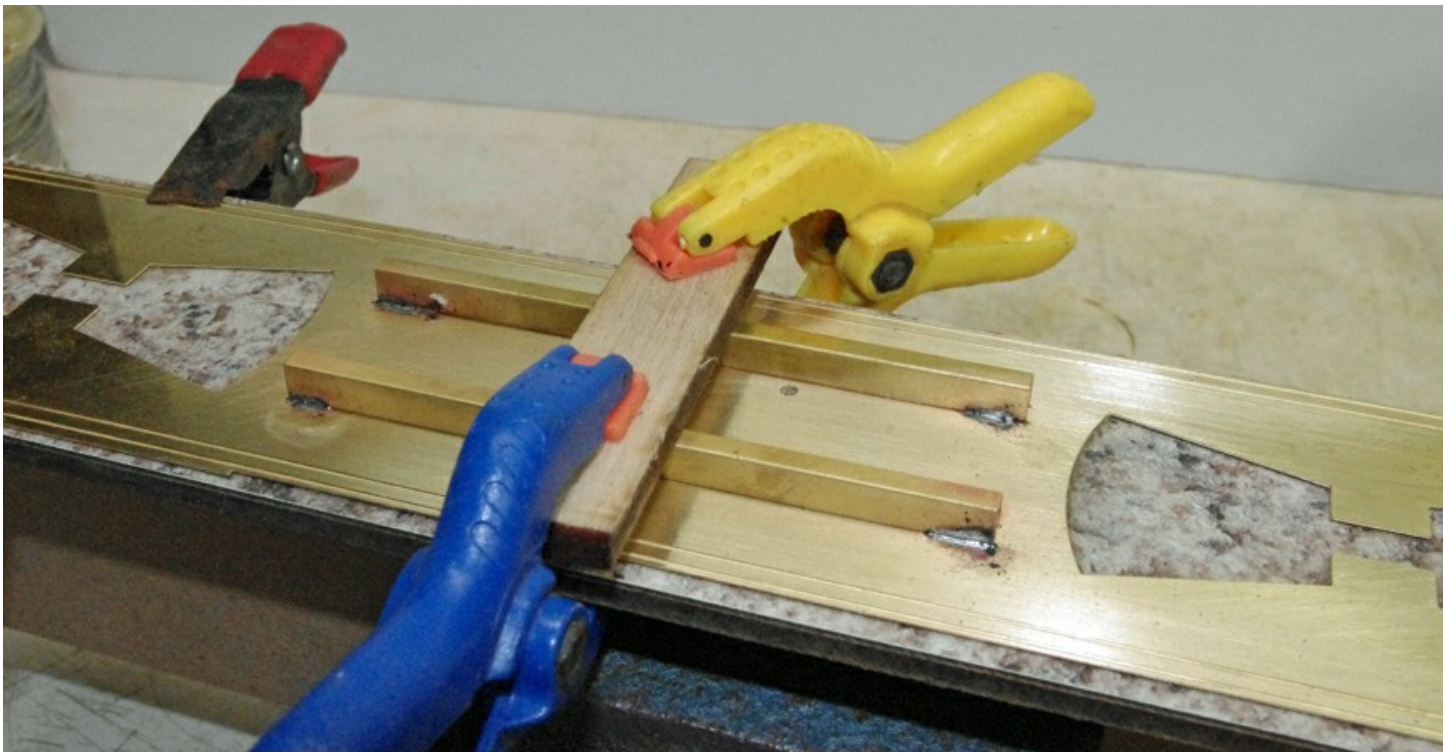
This photo was taken in 2013 and is an S scale CB&Q 2-10-4 tender kit I designed for Jettie Padget. I wanted to put one together to see how it all worked. At this time I had developed the work table idea, but not the countertop laminate covering. I am using a piece of printed circuit board material as insulation between the model and the table to prevent the wood charring. In addition, I was using a bar of Garlite plastic under the "C" clamp. The Garlite and the circuit board material used today will take the heat and not burn, but they do melt and smell really bad. Circuit boards were made of Bakelite in the past, and that was the right material for this application. This is what led me to look at the countertop laminate.

In this photo, I am soldering the ring around the base of the S scale CB&Q tender shell. You can see the Garlite bar and printed circuit board again. This worked OK and I was able to solder the tender shell to the base from the inside to keep solder from showing on the outside. I had to hold the ring down with some circuit board which is held by the "C" clamp. This kept the ring flush with the base of the tender shell. For a single model this will work, but I think I have found a better way. I will highlight that at the end of the article.

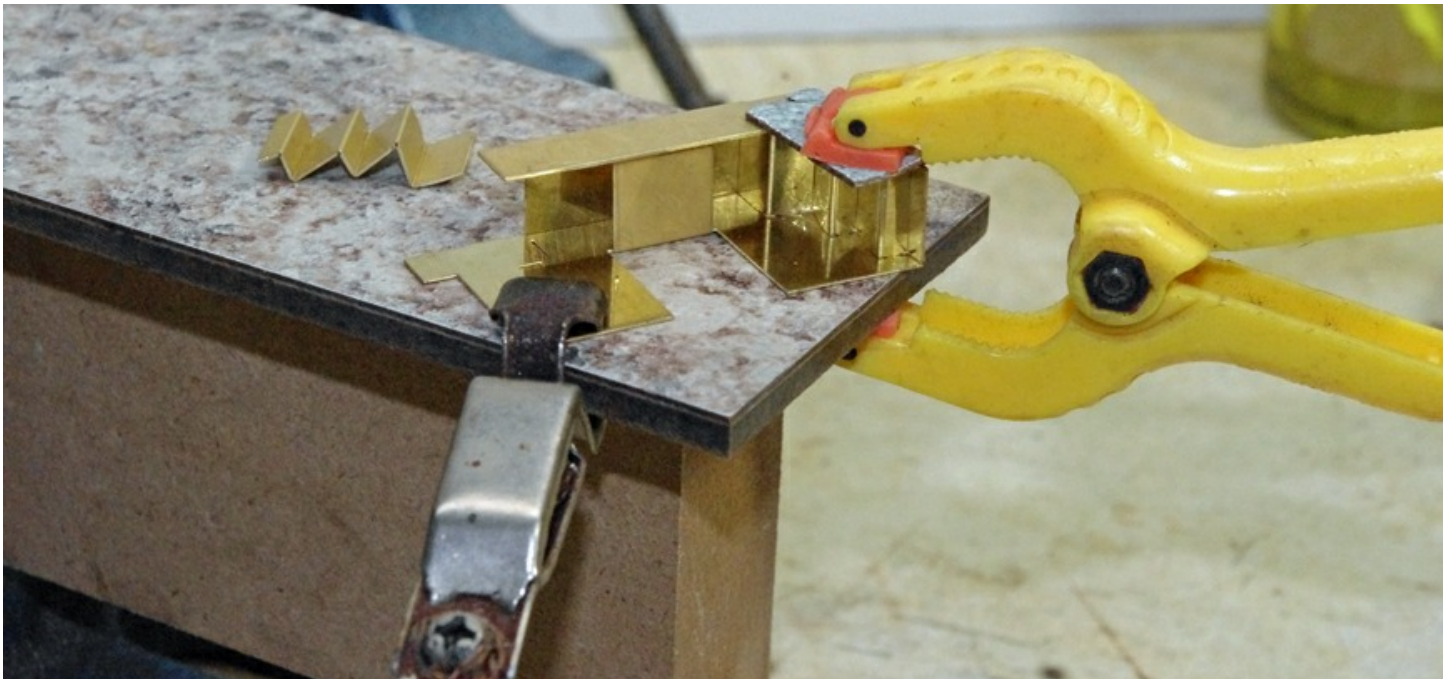


This is as far as I went with the CB&Q tender. This and the rest of the kits went to Jettie Padget and Rusty Rustimier. The worktable idea helped me a lot in assembling this tender. There was much more to learn though.

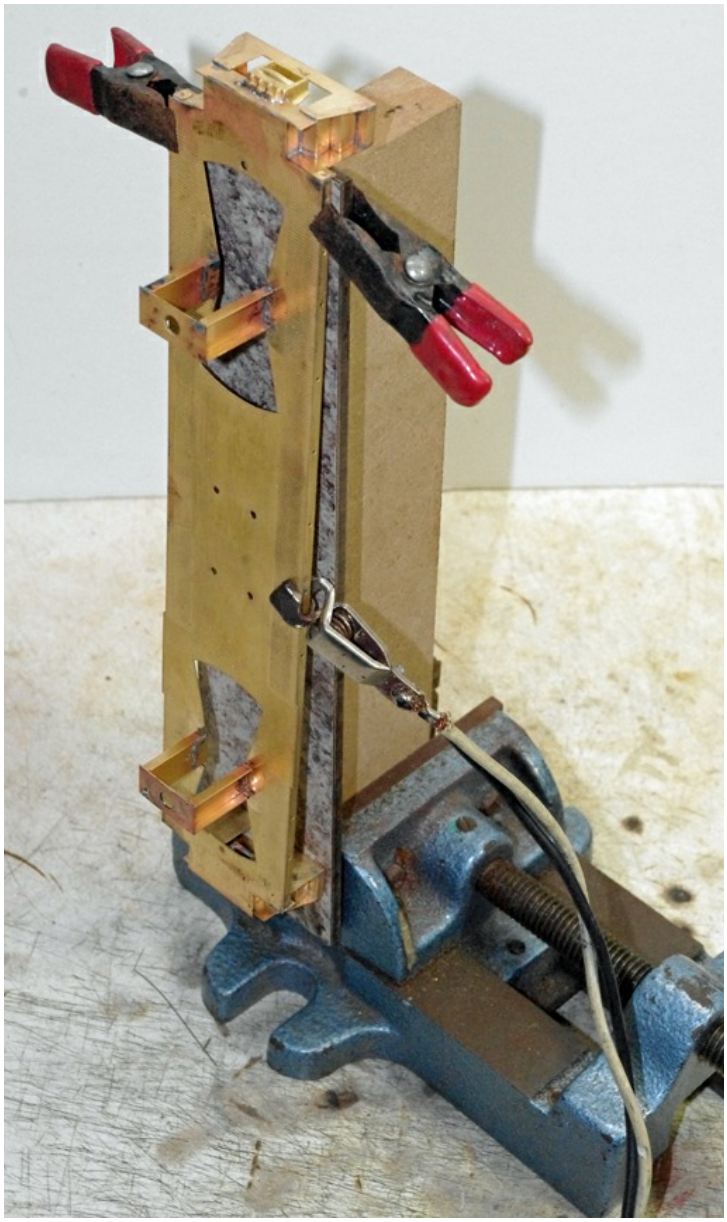
This photo shows how I assembled the frame on the Des Plaines Hobbies RS 1 Kit using my latest version of my work tables. I like to use resistance soldering, and you can see my ground lead attached with the spring clip. When clamping the ground lead, pay attention to how the current flows through the lead. The wire is attached to one part of the clip, and that part must contact your work. If the clip were the other way around here, the current would need to travel through the spring in the clip to get to the jaw of the clip. After I over heated a few of these clips and took the temper out of the spring, I started to pay attention to what was going on. Since then, I have not burned any of the springs.



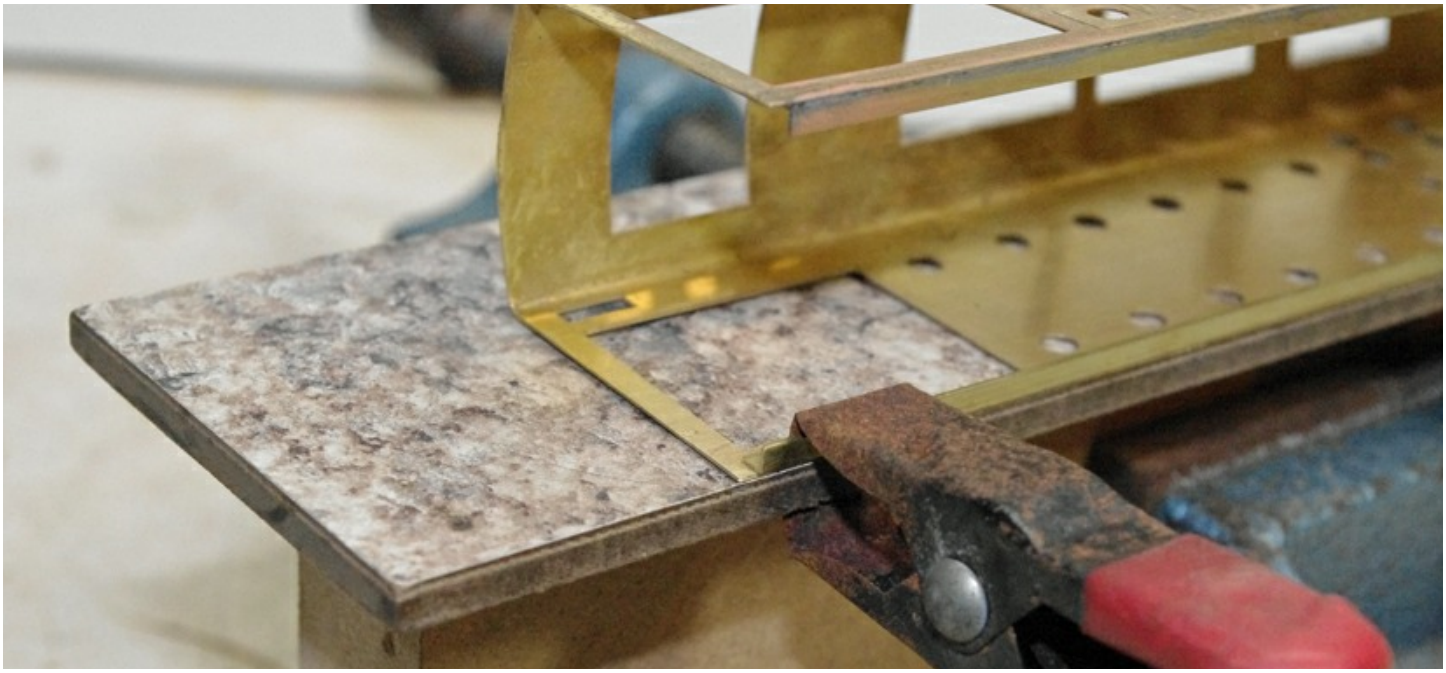
Here I am soldering on the center sills to the RS 1. By using a piece of wood, the plastic clamps are insulated and they will not melt. I like these cheap plastic clamps and use them a lot. They maintain pressure even if the brass expands or moves, but they do need to have some protection from the heat. Notice that I have just tacked the sills at the ends. This is to control heat expansion. Tack the parts in place first, and then come back and fill in a little at a time.



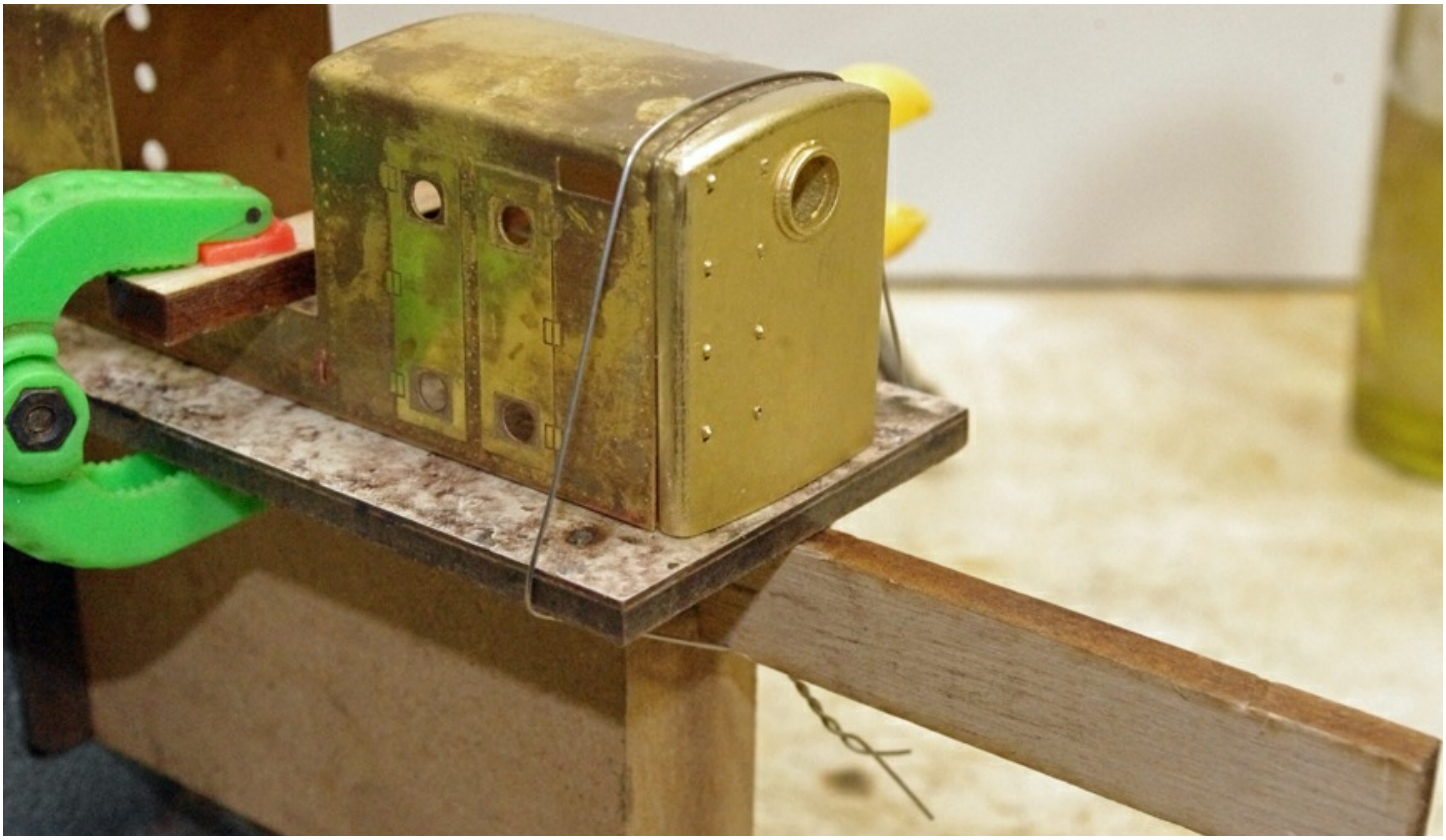
In the photo above, I am soldering the steps for the RS 1. Notice I am using the ground lead as a clamp, as well as, the ground lead. Look close at the plastic clamp and you will see a small piece of countertop laminate between the clamp and the work. This little bit of insulation is enough to protect the clamp. Also, look how handy the work table is. It's stable and allows you to clamp things in place with cheap clamps. The 1/4" masonite is flat and strong enough for this overhang which is another reason I went to a single hard back.



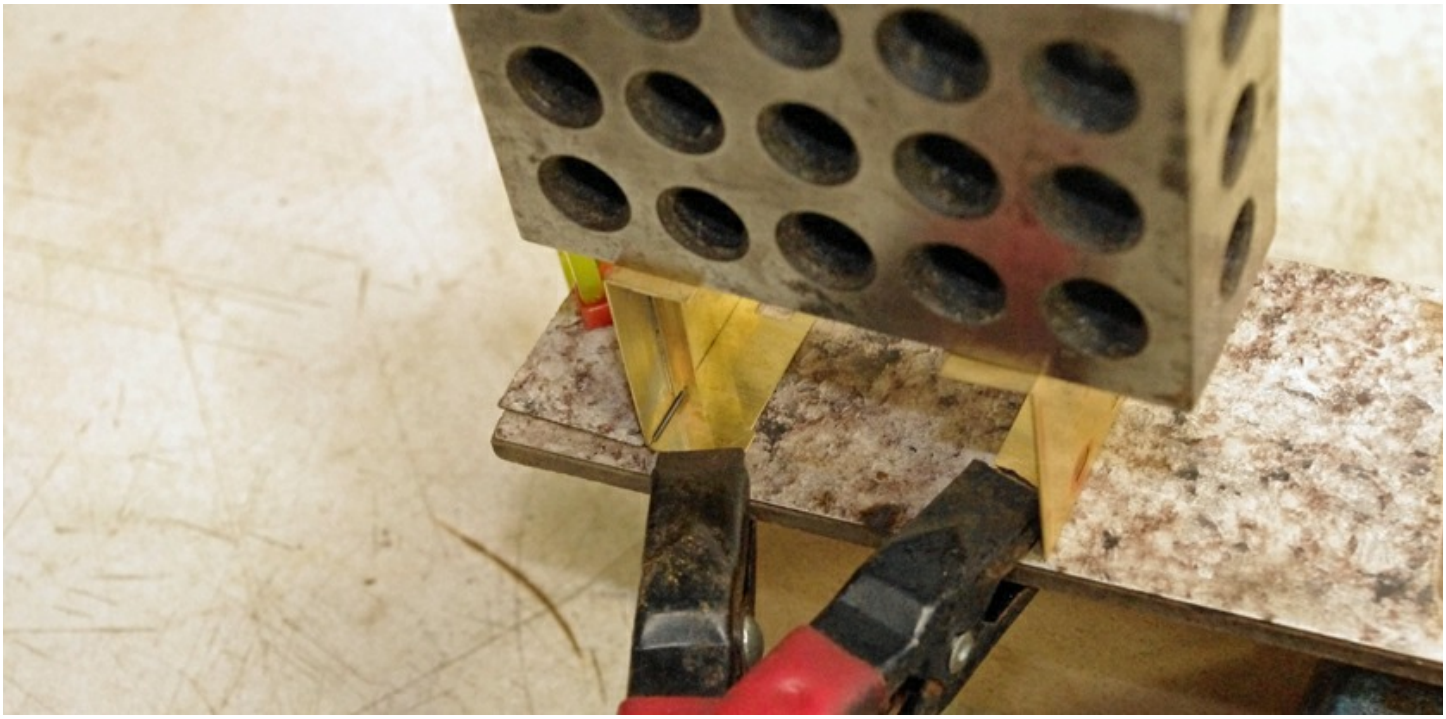
In the photo on the right, I am working on the end of the RS 1. The more I use these simple work tables, the more ways I find to use them. The work is held firm and in a position for me to work on it. They are simple to make, and I have a variety of sizes. This particular one works well for S Scale models. Jim Kindraka put his RS 1 together on this table and also a few Mullet River S Scale brass caboose frames.



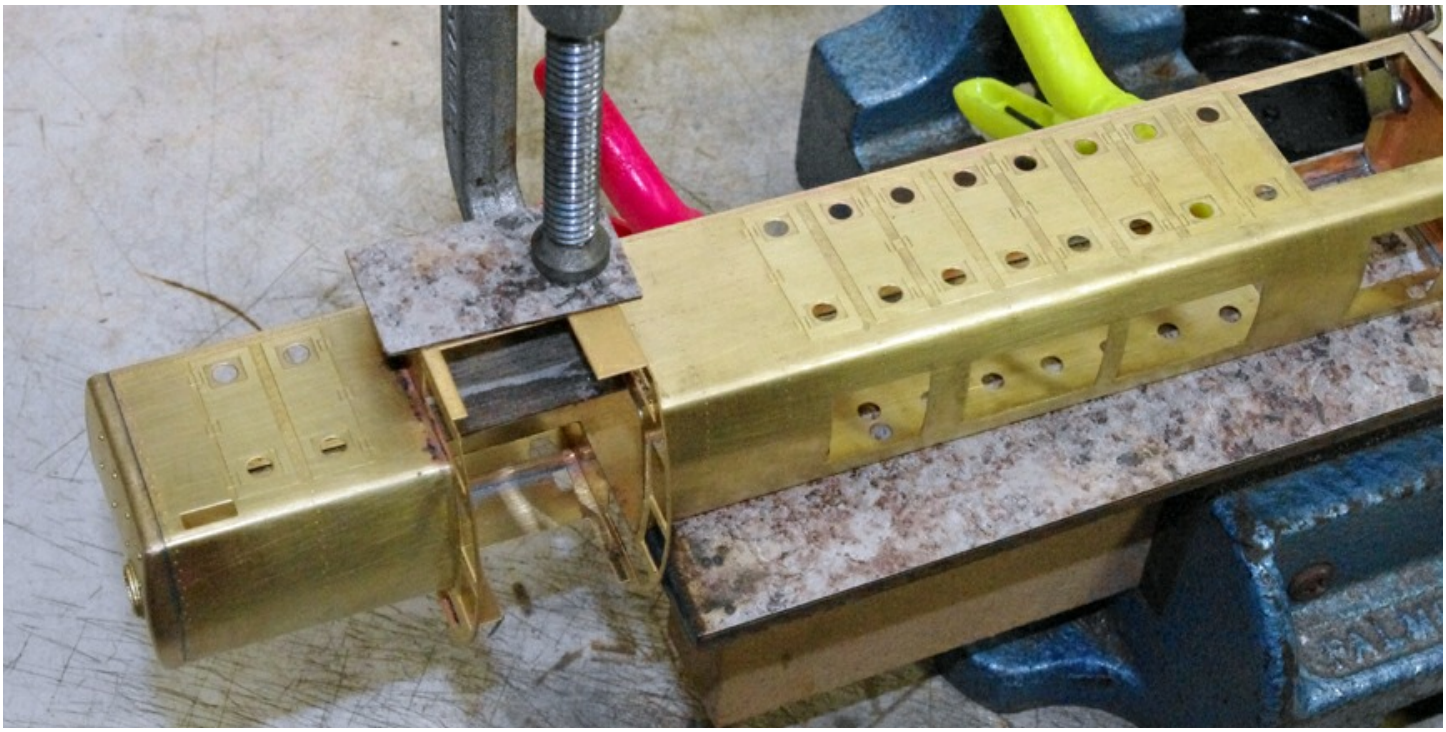
On the RS 1 kit, there was a brass angle soldered to the bottom of the side for stiffness. The spring clamp is something cheap that I buy by the dozen at train shows. Notice how I bent the tip to fit around the brass angle. These are cheap tools and not something sacred – don't be afraid to modify them to do what you need.



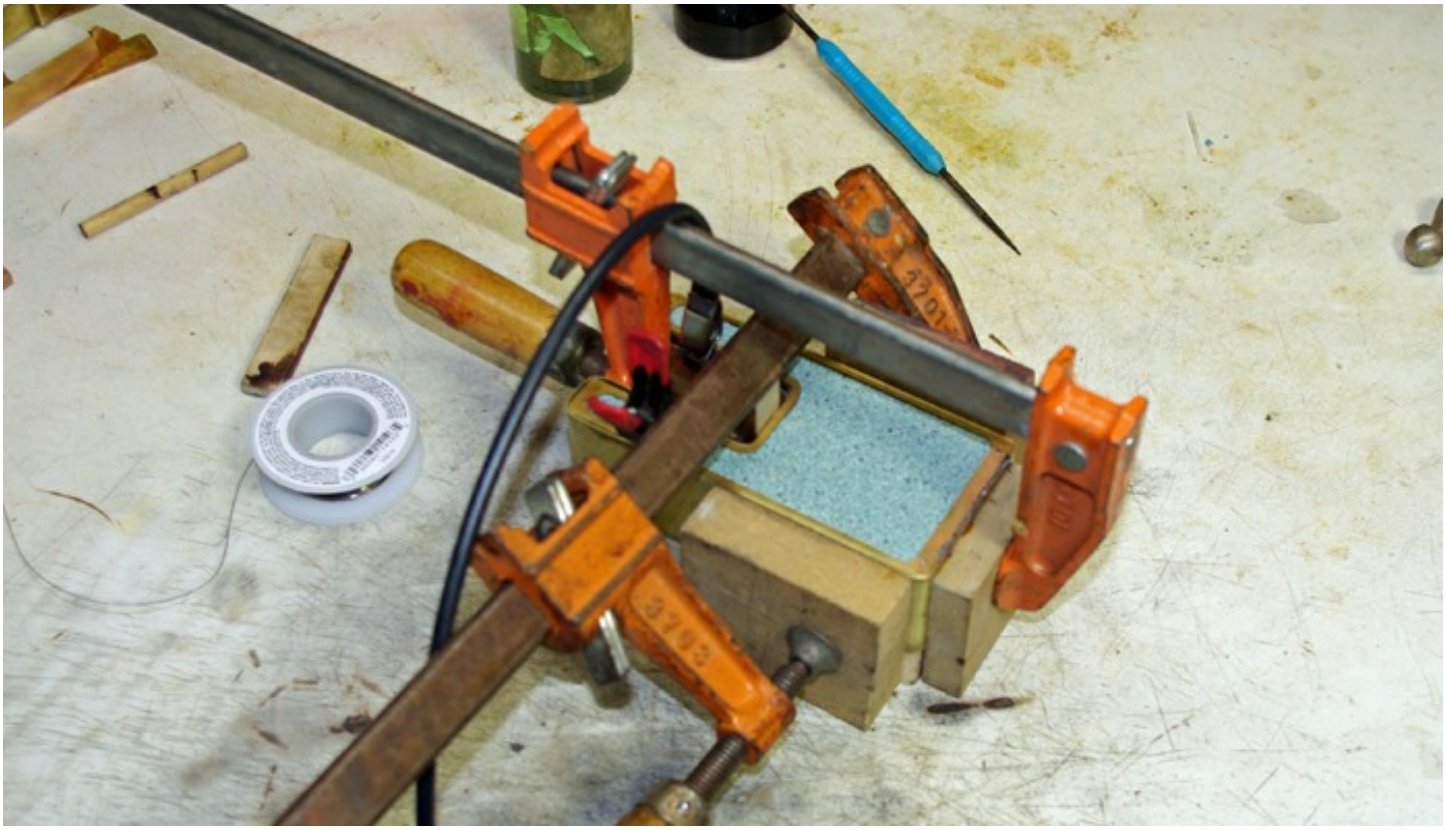
On the RS 1 kit, I needed a way to hold the shell tight to the end casting while I soldered it. I remembered that someone told me to wrap a boiler with wire to hold it tight while you soldered the seam. In this case, I used some old safety wire I had left from my racing days. The wire is stainless steel and strong. I think you could use any steel wire that you could get at a craft store. I was having trouble getting it tight and I ended up wedging the piece of wood under it. That worked fine. Lastly, I tinned the top inside of the shell first to keep solder off the outside. Then, I heated the casting with a small torch.



In this set up, I am soldering the butt joint on the RS 1 cab. The cab was too delicate to use a spring clamp, so I used a block of steel and that worked fine. I ended up putting a second block along the right side to keep the whole thing square. On the left, you can barely see a plastic spring clamp holding a piece of countertop laminate. This gave me an edge to push the cab up to so the corner would remain lined up. This was all tenuous, so just tack the corners first. Then fill in the rest of the seam.



This is another example of how versatile these work tables are for me. Here, I am soldering the cab in place. By clamping the hood to the work table, I have secured it and am keeping it straight. The cab is hanging over the end of the table. The piece of countertop laminate under the "C" clamp is not to protect the clamp, but to prevent heat transfer to the clamp and away from your work. You want to concentrate the heat at the joint, making the solder joint before the rest of the model gets so hot that other parts fall off.



I said I would get back to the tenders again. Here is an O scale tender I am working on. For these, I made a block of wood that just fit inside the wrapper. Then I put some countertop laminate on it. Now I have something solid to form the tender wrapper around and force it into final shape. The block also keeps the wrapper square while I solder the base ring on. I have done four of these this way, and this is working well.

There you have it. Try to clamp your work to something flat and stable that you can move around. The work table gives me a flat surface, and I can clamp to it in a variety of ways. The weight of the vice will keep the work from moving around. The ground lead on your resistance soldering unit is stiff and has a way of dragging your work around the bench. The vise will prevent that. As you solder, heat is being spread into your model. If you have metal clamps in contact with your model, the heat will be spread to the clamp as well. This will make your joint harder to heat up, increasing your chance of the whole model getting hot enough for something else to fall off. The countertop laminate works great as an insulating pad. In addition, it will only char and not burn or smoke. Lastly, it is cheap. Get some and cut it with metal shears to what ever little sizes you need. Spring clamps work well because they always maintain pressure even as the work heats up. On large pieces, tack them first in a few spots to prevent warping, and then finish the joint a little at a time. I was talking to Rusty one time about using a torch and soldering castings. He had some good advice. Tin the parts first, and heat the largest part to make the joint. The casting is usually the largest part, so heat it first; which is what I did on the RS 1 end casting. I also do that when soldering brass castings to things. It works well. Rusty is a master with a torch, and I am just learning. Torches can be handy because they provide a lot of heat quickly.

Lastly, don't be afraid to ask other people how they do things. It may not be exactly your problem, but they may have some information you can use. If you can make it to the show, I will see you at the NASG National in Novi. Bring your problems, and let's see what we can come up with. There are no guarantees we will get it figured out, but let's talk about it anyway. It's always fun to talk about modeling.

Building a KINSMAN 30ft Composite Hopper

By Raymond H. Hall

I was fortunate to be able to buy four of these kits from William Oertly, an S-Scale modeler from Roanoke, and these photos show how I made the final model.

I was originally planning to make all four as NYC cars with sequential numbers and had seen a typical finished model on the NASG website. However, when I did some further investigation using NYC information on the web, I could not find reference to this type of car, and by chance, came across some photos of B&O composite coal hoppers. This led me to the official B&O Historical Society web site where I found listing of this type of car entering service in the Second World War when steel was at a premium for the US war effort.

I had hoped to buy some suitable decals from one of the suppliers to S-Scale for four sets but got no reply, so I decided to make my own, but more about this exercise later.

As for the KINSMAN kit, I followed the instructions with a few changes from the experience gained from the first three. I did not fit the small diagonal straps on the end panels, as they were not on the B&O cars.

All the wood sections that represented metal on the prototype were treated with sanding sealer per the instructions, but the remaining sections were just given a light sanding to remove any roughness or fuzz.

CONSTRUCTION

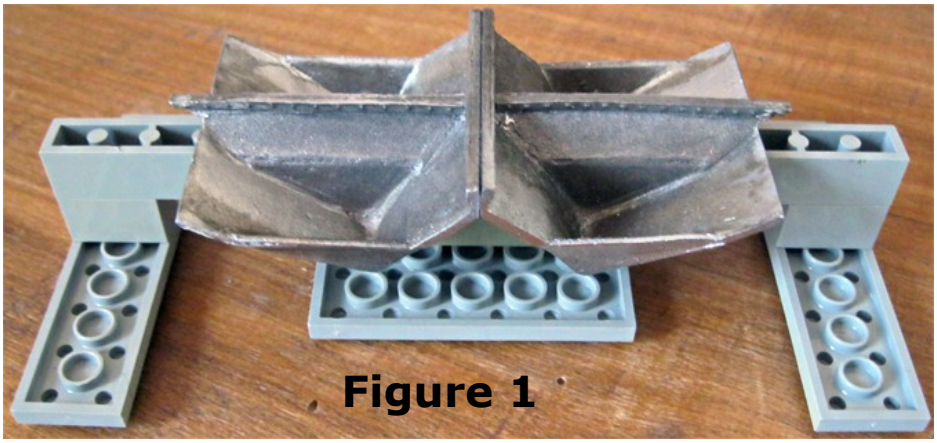


Figure 1

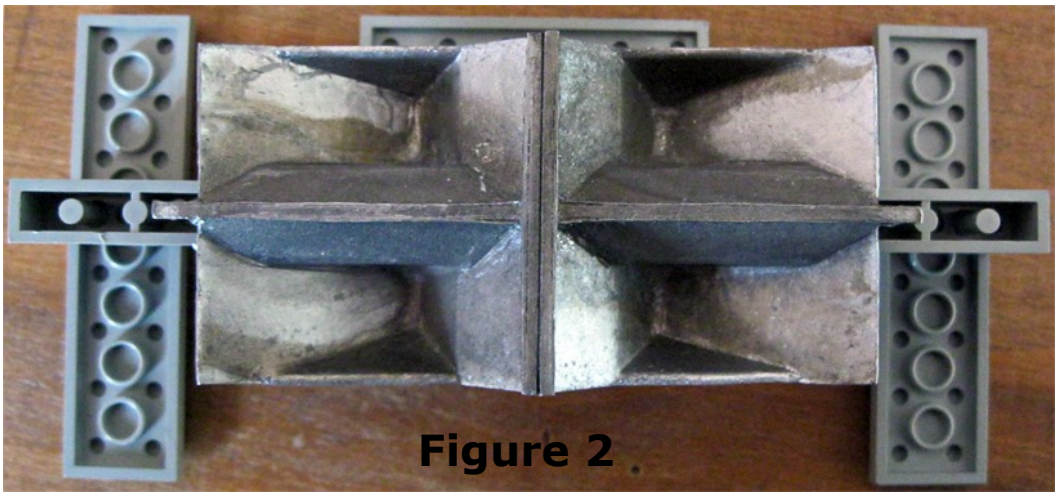


Figure 2

I wanted to find a better way of aligning the two metal hoppers so that the underside would sit properly on the center sill. The solution was the use of LEGO bricks to make a fixture that represented the sill. I was able to file the vertical joint on each piece to give a good fit when resting on this fixture; I then applied AC to these vertical joints and pressed the parts together on the fixture as shown in Figure 1 and 2.

The center sill and the bolsters were already prepared to assemble. They just needed a bit of sanding to give a step free joint, but the end sills had to be rebated for the coupling pocket, and the assembly required both positioning for length and to be square. I found this difficult to achieve.

Again LEGOs were the answer. I made up another simple fixture, shown figures 3,4 and 5 below, to guarantee good square joints at the right position. I used Tightbond Original Wood Glue for nearly all of the wood-to-wood joints.

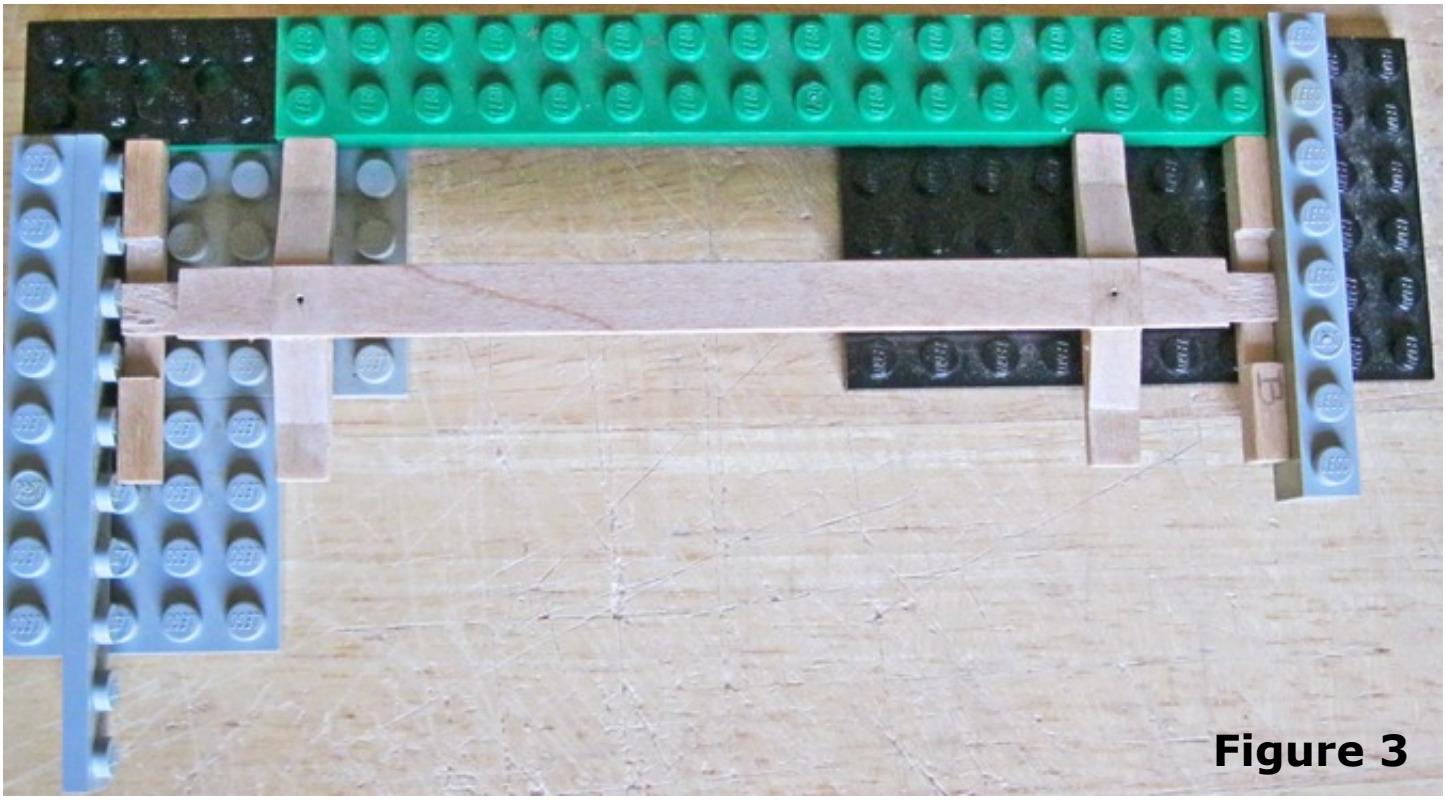


Figure 3

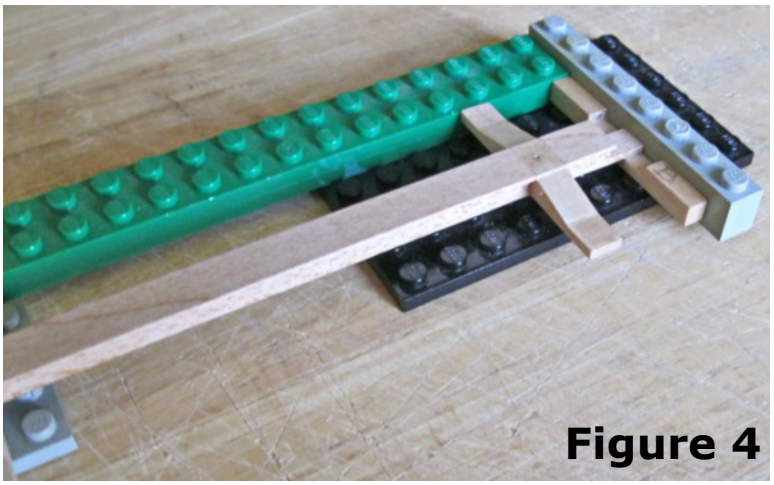


Figure 4

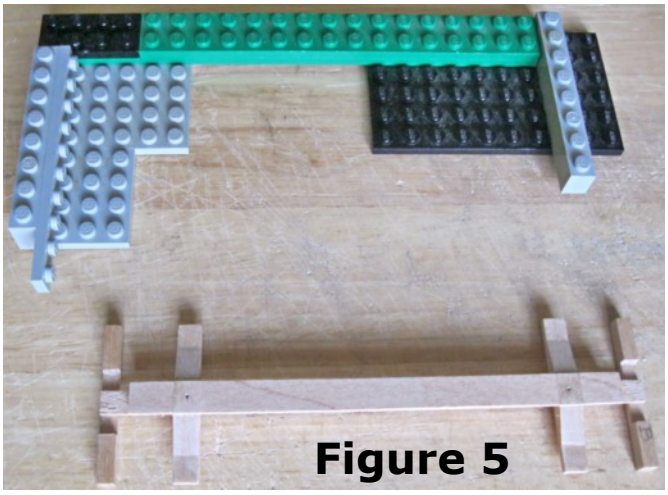


Figure 5

I de-flashed the metal parts for the brake gear and the coupling pockets. I did not want to destroy these pockets by cutting them away to suit KD 802 couplers, so on advice I had read on the S-Scale Yahoo Group, I bought PROTO Max couplers part number 920-6001 from Walthers; I did have to file out the width of the pocket but not the depth.

I drilled out the pockets to take the brake pipe and the brake staff and holes in the brake cylinder etc. for the various pipes. The wire used to form the pipes was glued into these holes using AC. The piped up under-frame is shown in Figures 6 and 7 on the next page.

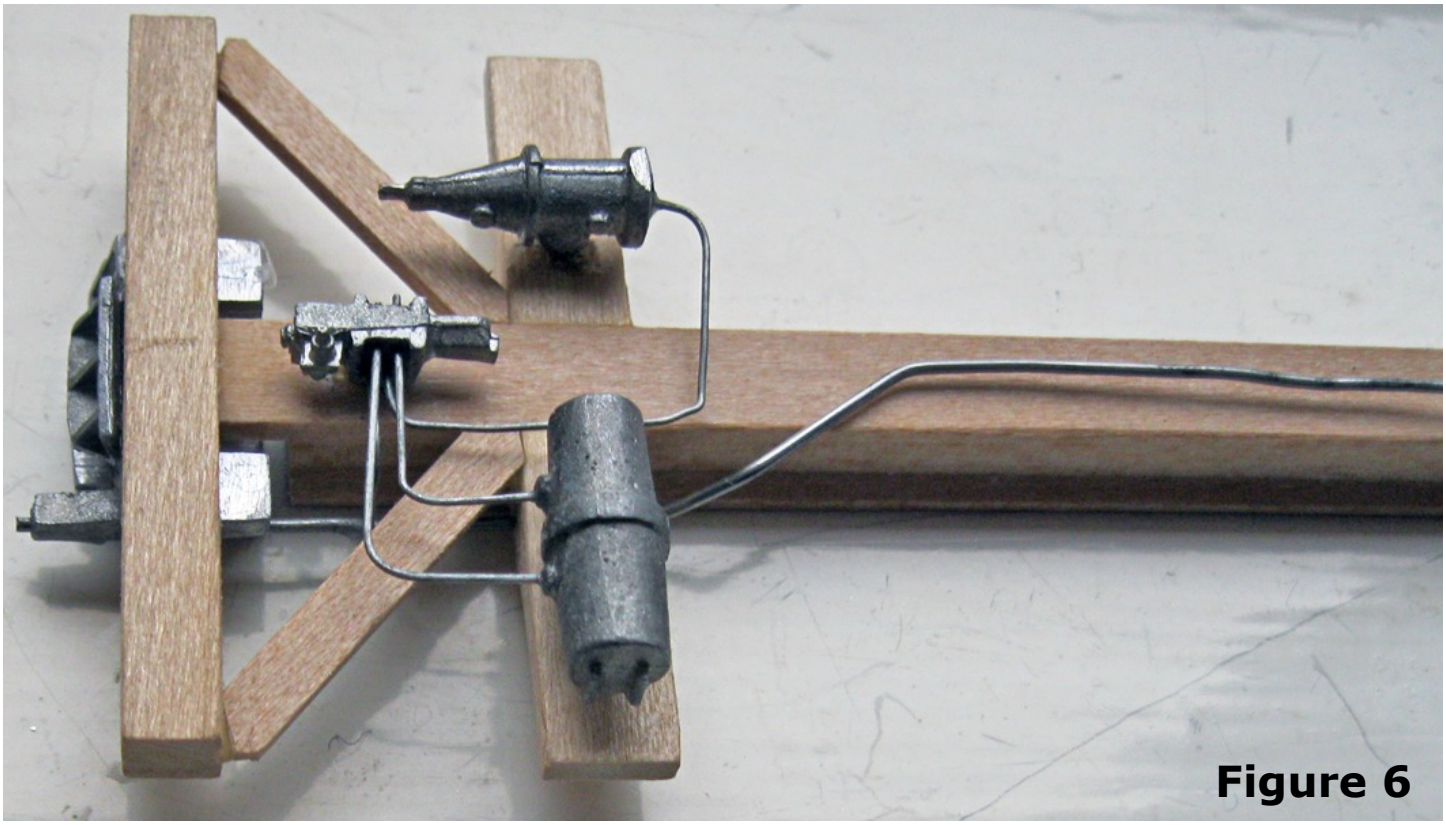


Figure 6

Figure 7

Figures 8 and 9 show the side sills, the top-hat bracing, the slope sheets and end panels glued together. I found from experience with other hoppers I had built that the slope sheets need to be fitted before the ends since they determine the overall width; this was checked against the under-frame before gluing.

Figure 8


Figure 9

The glue area is small, and although the assembly is quite robust, I have adopted a policy of reinforcing such joints on the inside with a bead of BSI 5M QUIK-CURE Epoxy applied with a cocktail stick. This flows very evenly to form a fillet.


Figure 10

Before final assembly of the body, I painted the under-frame and the outside faces of the slope sheets using matte black acrylic as seen in Figures 10 and 11.


Figure 11

After a final trial fit, the under-frame was glued into the body and held in place using elastic bands until the glue set. See Figure 12.


Figure 12

The remaining straps and corner angles were then glued in position as shown in Figures 13 and 14 on next page.

Figure 13

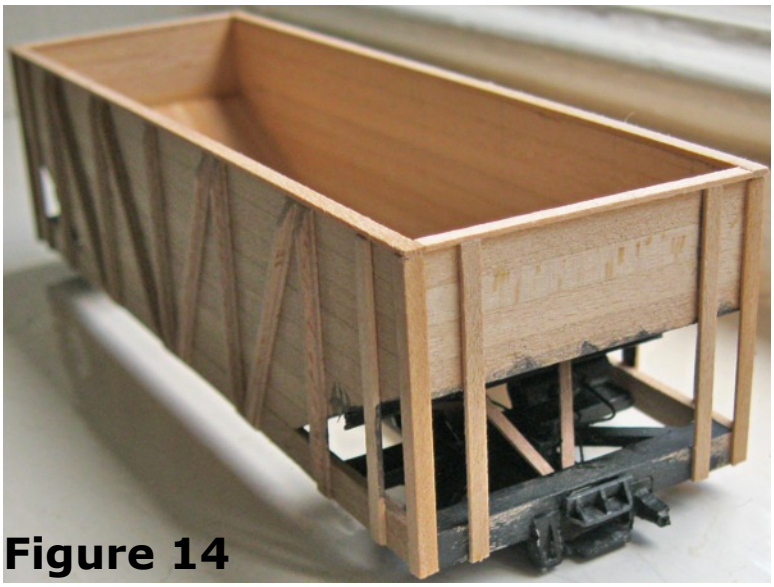


Figure 14

The last pieces to be positioned were the diagonal braces that run from the slope sheet to the inside of the end sill. I have found these to be the most awkward pieces for me to fit because of my big fingers! The task is still troublesome even when using fine tweezers.

These pieces are secured with AC, and then reinforced with epoxy.

After allowing the glued joints to set properly, I measured the inside width using a digital vernier caliper and checked this against the width of the metal hopper assembly. I had found in the previous models that they were too narrow; and this assembly was no different.

Figure 15

The width was built up using scraps of thin plywood coated with 3M contact adhesive that I had in the 'box of things that might be useful sometime'. In this case, strips on either side were exactly right for a close fit. The outer ends of the metal hopper were filed until it fitted between the slope sheets, and a small groove was filed on the underside to clear the brake pipe before gluing into place using a combination of AC and epoxy. A top and bottom view is shown in Figures 15 and 16.

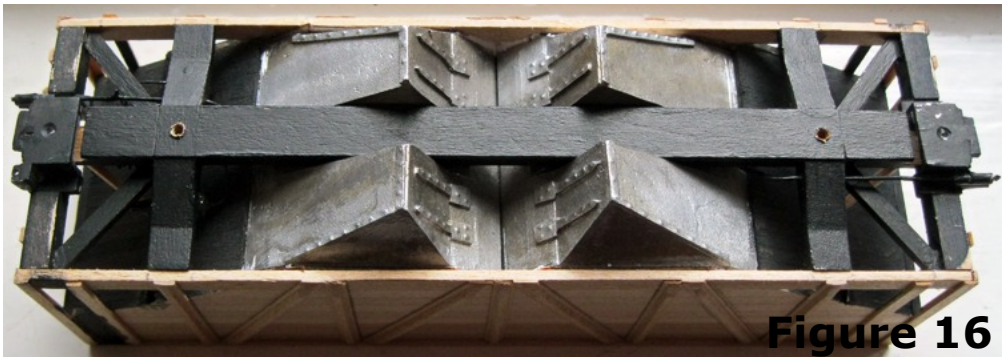


Figure 16

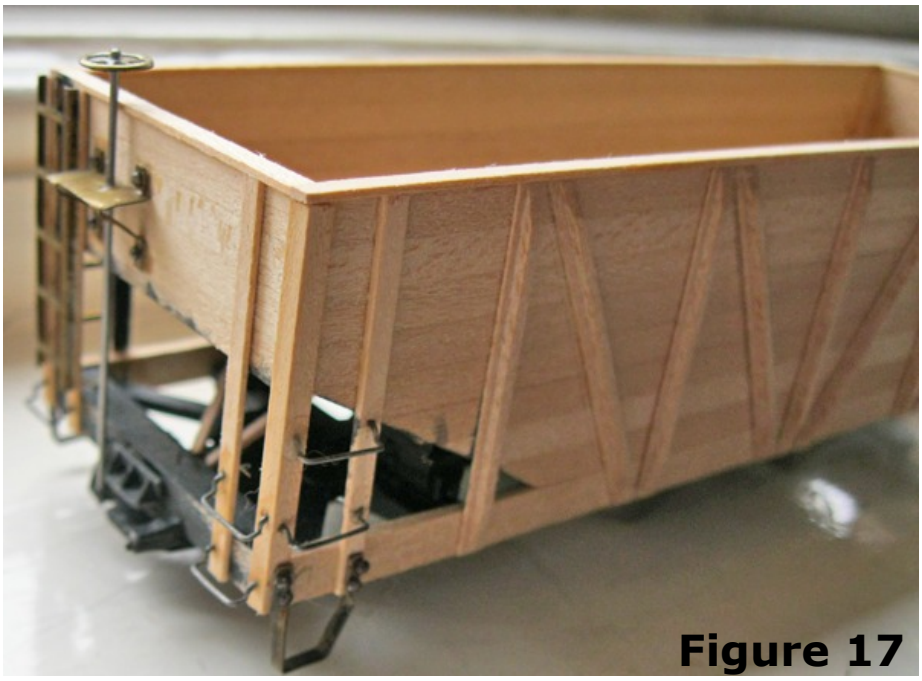


Figure 17

I next prepared the four brass ladders by filing the backs to give smooth flat faces; I did not use the method suggested in the instructions of inserting steel pins and sweating the ladders in place using solder. I attached them using AC, and reinforced with epoxy as described above.

I marked off the positions of the brake platform, drilled the holes for the brake staff and the bolt holes, glued it in position using AC, drilled through the bolt holes and inserted the pins provided that I had shortened. The corner steps were assembled to the body in a similar manner, and wicking AC from the inside secured all the pins.


Figure 18

The hardware envelope in the kit contained many more grab-irons than were needed, but this is so much better than just having the exact number of a small part. I also shortened the legs of these before inserting into holes drilled in the various positions shown on the drawing; these were secured using AC, from the back where possible.

Finally, the brake staff was cut from a piece of 0.032” music wire, the brass hand wheel fitted and the staff secured in place with AC. See figures 17 and 18.

PAINTING

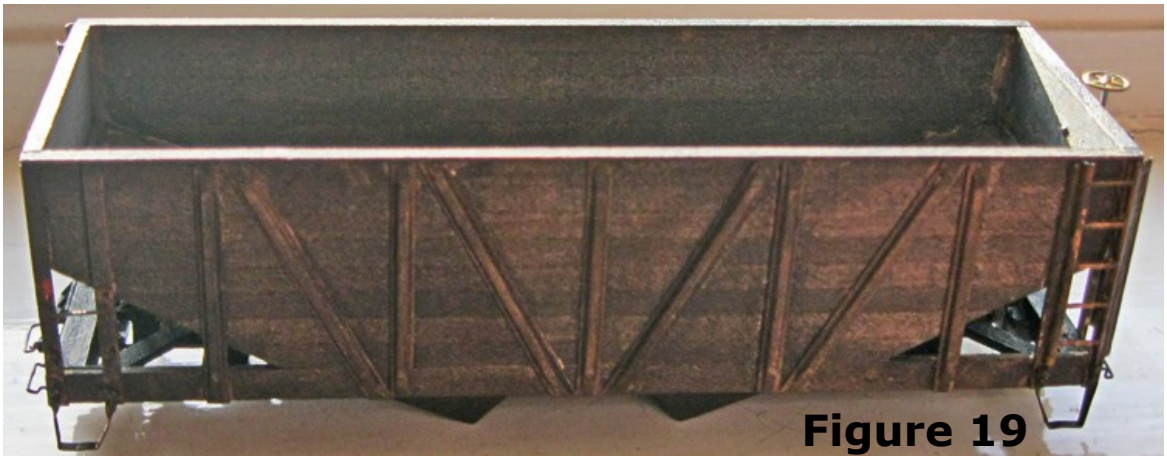


Figure 19

All the joints and edges were sanded smooth using emery boards before the first coat of thinned matte black acrylic paint was brushed on. The thinned paint was soaked up by the wood as can be seen in Figure 19

I applied several more coats of thinned paint to build up the depth of colour and finished with a coat of the undiluted paint. I used Humbrol black #33. Figures 20, 21 and 22.

Figure 20

Figure 21

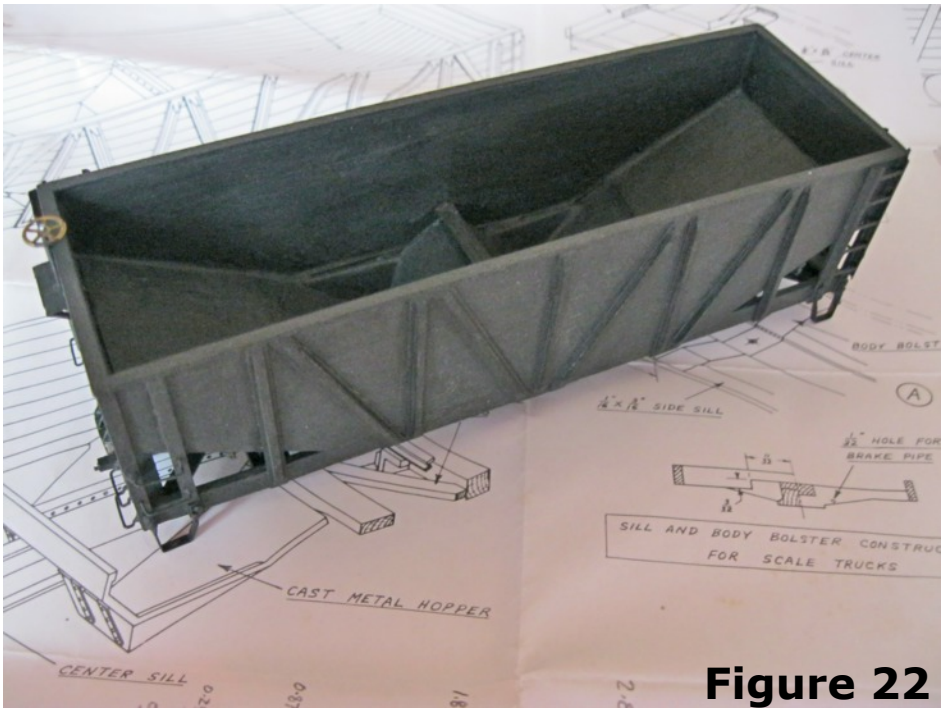


Figure 22

Those parts that represented metal, such as the top hat sections, look quite different from the wooden parts, the wood grain really does show.

Truck assembly

I carefully de-flashed the Mazac (Zamac) castings for the Andrew's trucks using needle files; this material is quite hard unlike the other white metal part of the kit. After a trial assembly of the all the parts with the wheels, I wire brushed these parts before painting them as shown in Figure 24. I used an artist acrylic paint for this, Windsor & Newton

Galleria Lamp Black. This paint gives a slightly oily black finish. I polished the axle end with very fine wet and dry paper. The springs were threaded onto cotton to keep them from wandering. Figures 23 - 26.

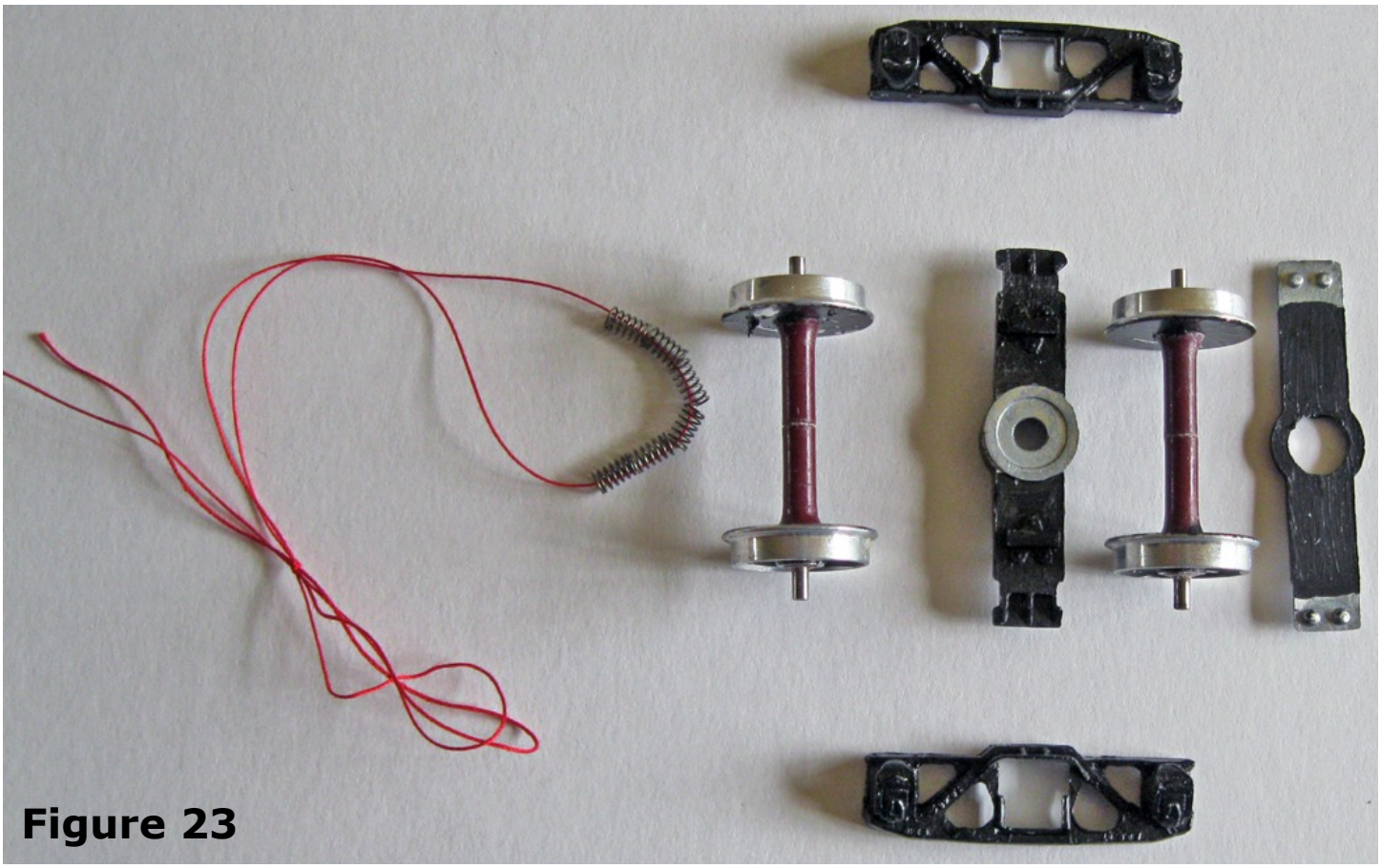


Figure 23

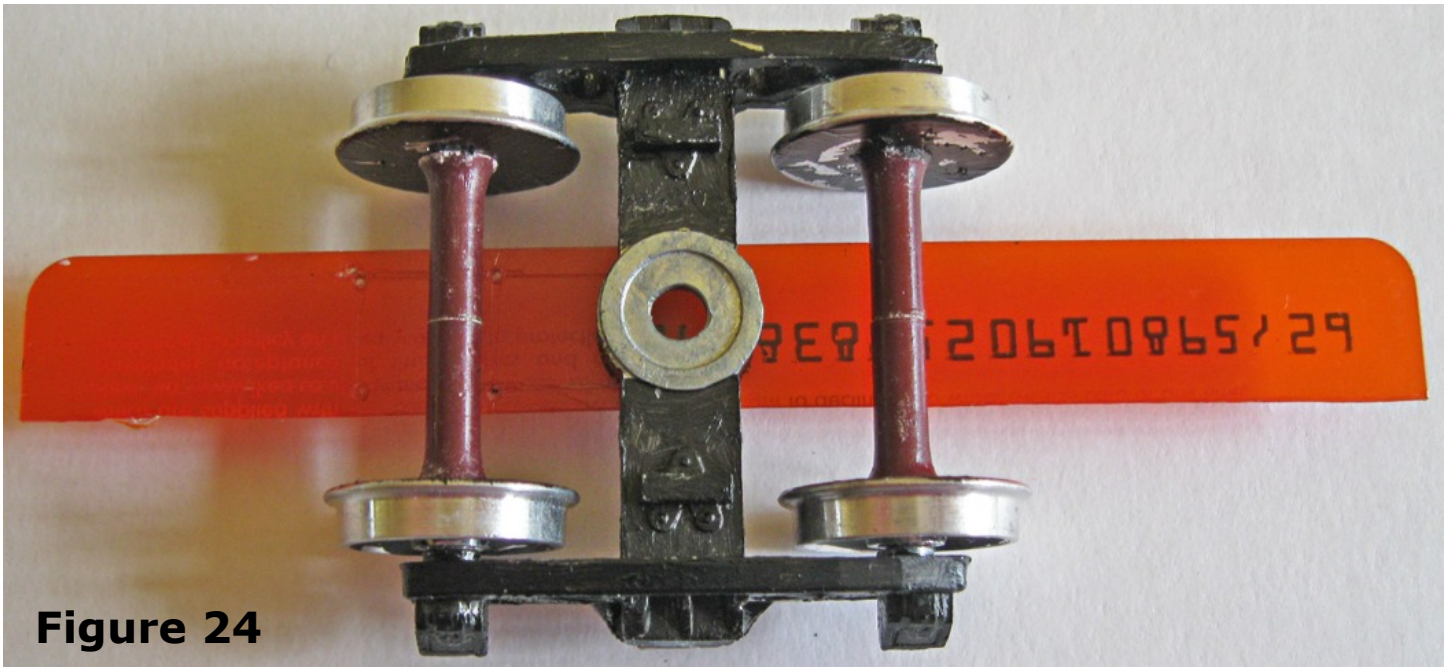


Figure 24

The assembly stages are shown in the remaining photos of this group. Note the use of a strip cut from an IKEA card I used to separate the bolster and the spring plank, and the use of yellow thread to capture any fly away springs. Even with fine nosed tweezers, there seemed to be only one position to grip the spring that allowed it to be inserted.

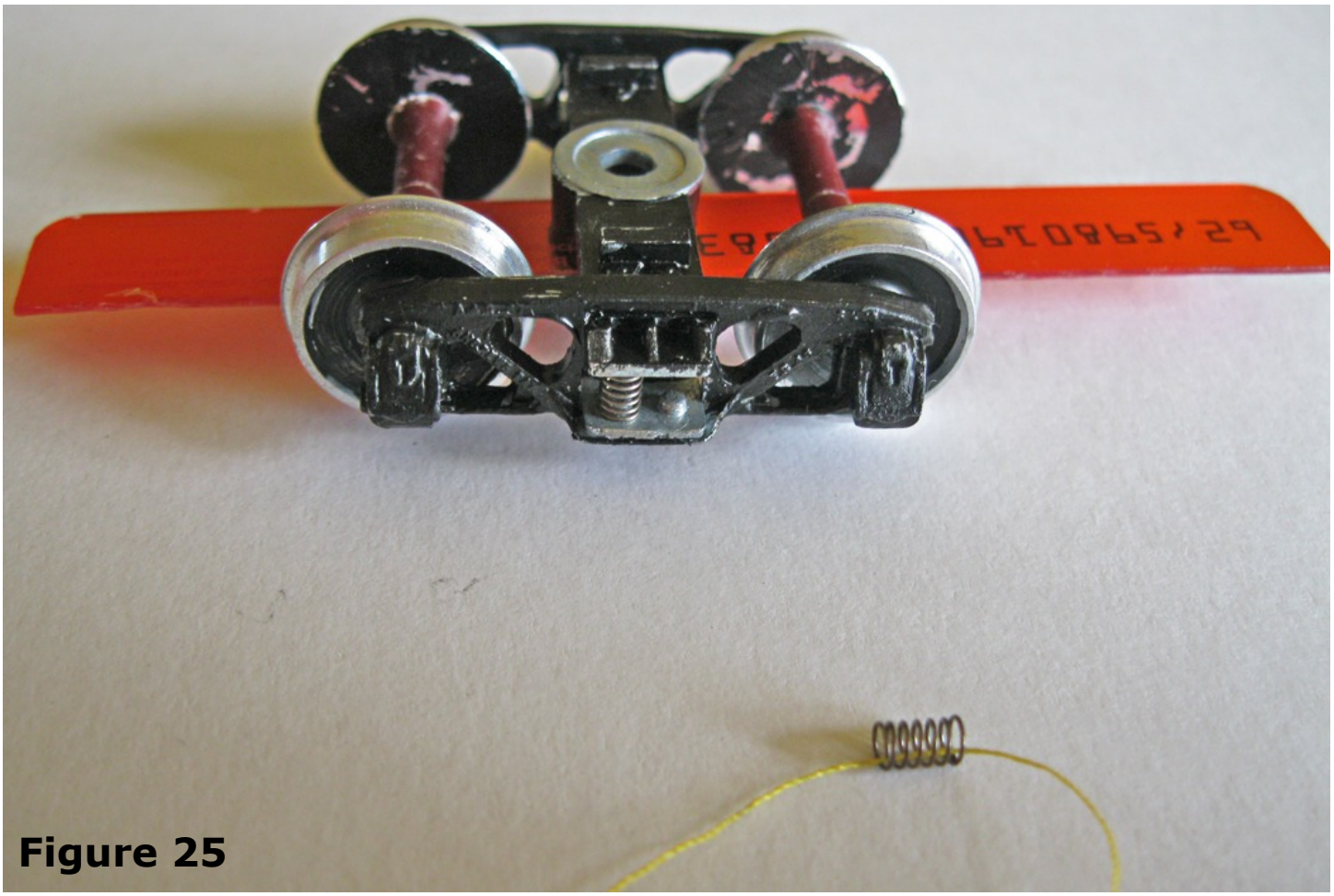


Figure 25

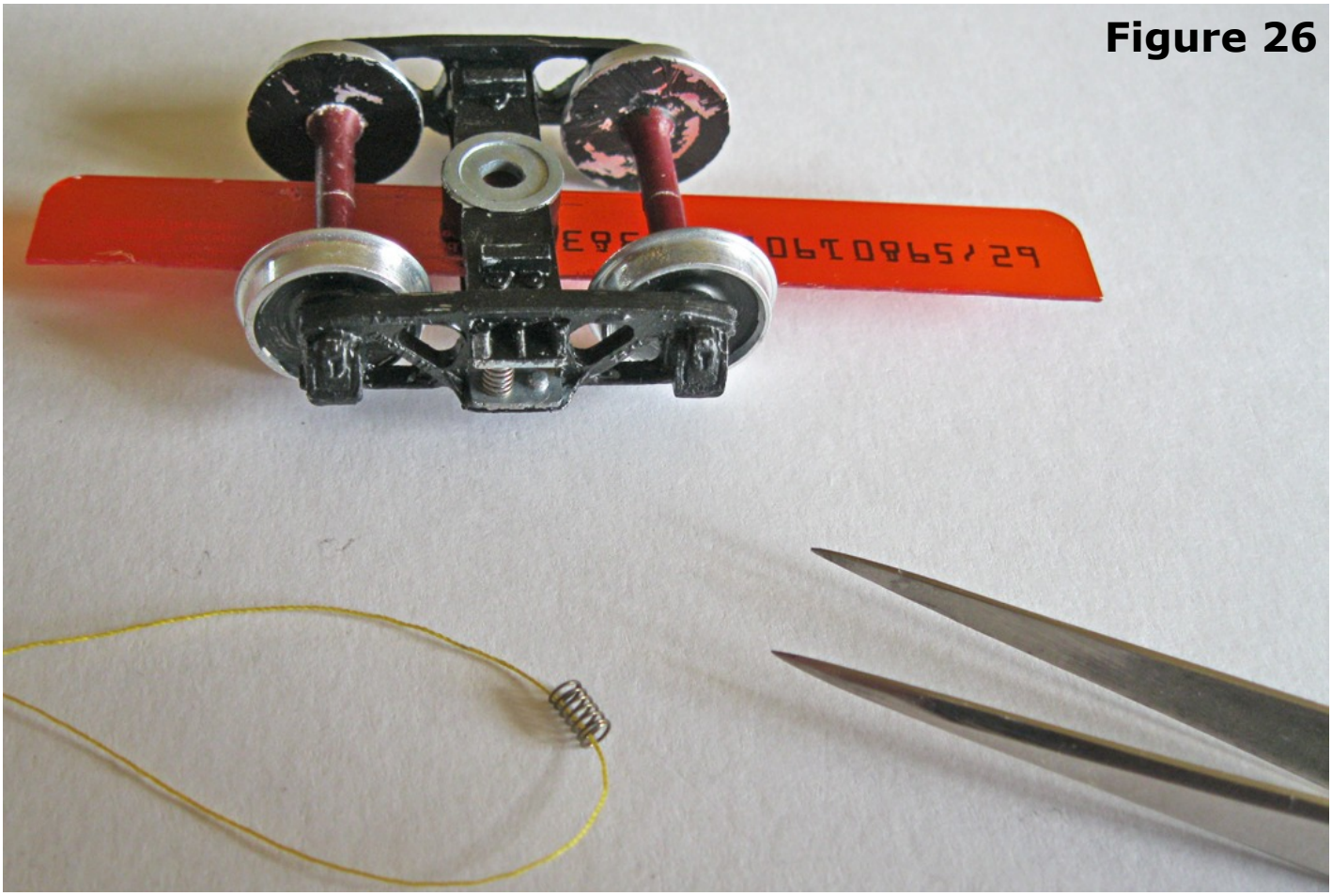


Figure 26

The last spring has been fitted; all that remains to gently pull out the yellow thread. Some touch up of the wheel backs was required. Figure 27.

I have found that a little baby oil applied using a piece of wire makes these trucks run smoothly.

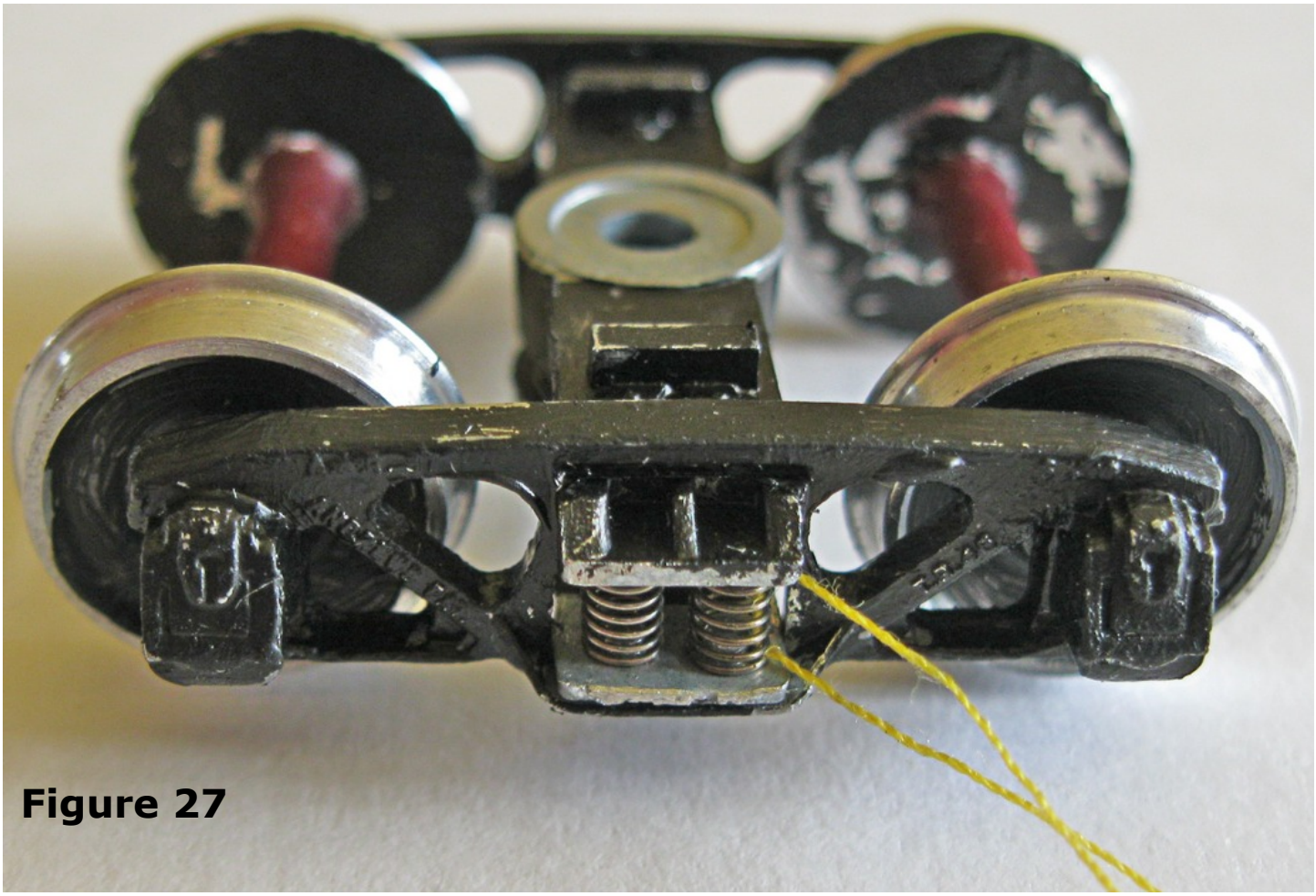


Figure 27

MAKING AND APPLYING THE DECALS

As mentioned at the start of this article, I was unable to find a supply of suitable decals and decided to attempt making them myself. I do not have the means to print white on clear decal paper but discovered a unique product made by Evan Designs of Colorado that is white allowing the background to be printed black by inkjet. Figure 28.

Figure 28

The B&O Historical Society has a section devoted to markings, and I was able to download a true font from their website of the letter set used.

Figure 29

By experimentation, I established the point sizes of the print to give as near as possible the S-Scale dimension for the various sizes of lettering and line size used and to reproduce the B&O Capitol Herald. I printed this on my EPSON XP-700 to check the sizes with a digital vernier, recording all this information on a document saved in my computer.

I printed all four sets onto one sheet and the prior photo shows the set (and a few extras) for this car. All the excess black was cut away from each decal before applying to the model.

The areas to have decals applied were gloss coated before application; this is a waterside material but after positioning, is seated by pressing the decal using a small piece of sponge soaked with lighter fluid. This can be done repeatedly until the decal is well

Figure 30

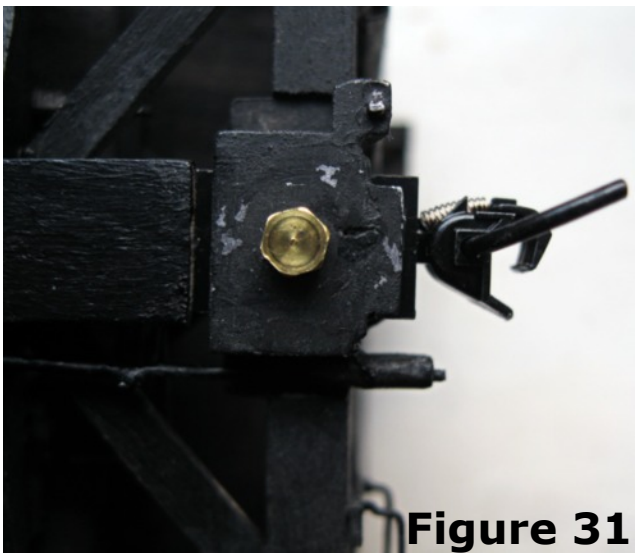


Figure 31

seated. Figure 29 shows the first decal I applied.

Figure 30 shows all the decal applied to the side. I applied a final coat of clear matte to produce an even appearance after decaling.

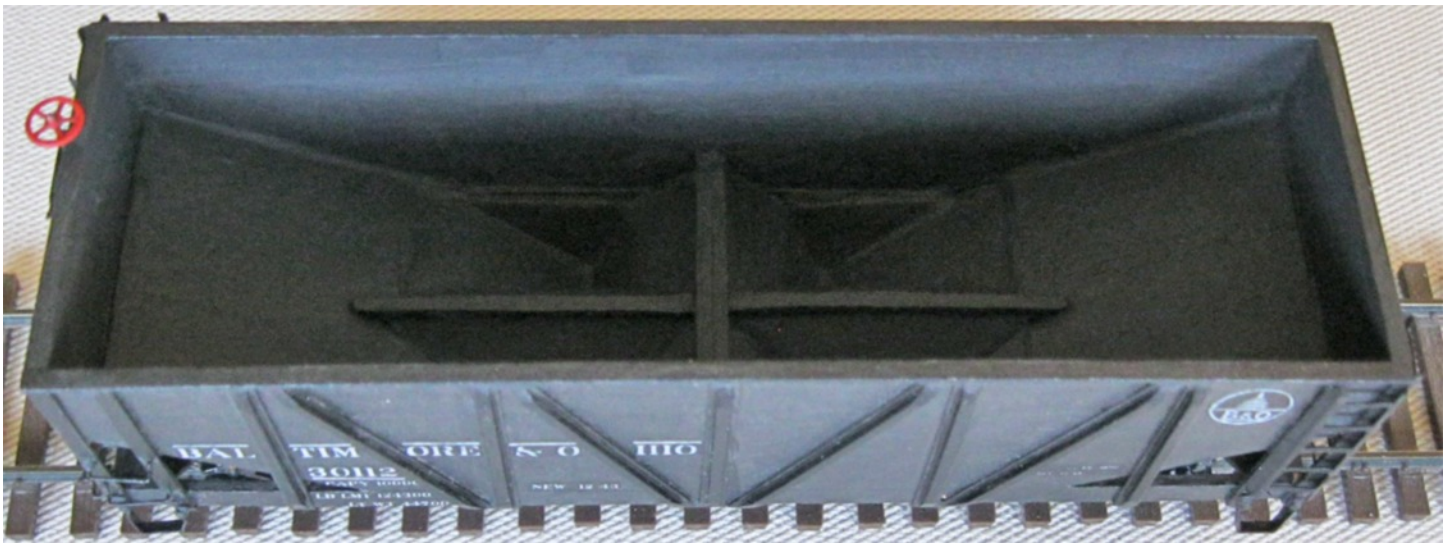
Final assembly

I modified the PROTO Max coupling pocket by cutting off the mounting lugs from the base and the cover; this gave a close slide in fit to the end pocket. I drilled and tapped # 2x 56 through the metal end pocket and into the center sill. The coupling assembly was secured using a 1/4inch long hex headed setscrew as shown in figure 31.

Before I attached the trucks I painted all the little areas that had been missed by viewing the body from every conceivable angle; there were quite a few areas that showed up in strong natural daylight.

The hand wheel was painted red, this may not be prototypical, but I think it adds a relief to the all over black.

The trucks were attached using the wood screws provided and the finished model is shown below.



I have enjoyed making these and other KINSMAN kits; their drawings are works of art produced by draughtsman with skill and no computers!

By Glenn Guerra

I was recently put in touch with John Mann from the Rockford, Illinois area so I could get some information about the State-Line S Gaugers. After calling John and talking to him about the group I asked when they usually get together. He said they get together informally on Tuesday or Thursday morning where they have the club layout stored. I jumped at the chance and said, "How about this Thursday?". Well, that was fine, but there were some other plans already. That was the day that the Rockford O Scale Club had invited the State-Line S Gaugers to come over. Wow, when do I show up? Two clubs in one day. I was off to see John. We went to the O Scale club first and then to lunch. After lunch, John and George Sorenson, another member of the State-Line S Gaugers, took a few of us over to see the S Scale layouts.

The State-Line S Gaugers is a group that started in 1981 and is centered in the Rockford, Illinois area. Many clubs tend to have members who are very local, but not the State-Line group. They have members in Illinois, Wisconsin, Iowa, and Indiana. As you might suspect, the layout is not the only thing that keeps the group together. The common interest in S Scale is only the starting point. There is a desire to promote S Scale, and to do this, the group has built some module layouts to take to shows. In addition to taking the layouts to shows, the group is also one of the clubs that rotate sponsoring the Fall S Fest. But, there's more.

Let's start with the scale. The group has S Scale collectors, high rail operators and scale modelers. The main layout reflects all of these interests. John and George are two of the scale modelers in the group. John was

This is the State-Line S Gaugers main module layout at their storage facility. George Sorenson, in the white shirt on the left, was showing us the layout. Mike Hurlburt and Paul Drake are on the right.

telling me he has always been a scale modeler since childhood and likes building. George had a traditional American Flyer layout. He started getting more interested in scale operation and took down the American Flyer layout. Don't fret, it did not go up for sale. This was George's train from a long time ago, and it is now displayed in the train room. Most of the rest of the group likes the high rail and traditional models, but wait till you see what they have done. I will get into that when we talk about the layouts.

Another function of the club is sharing good times. Take a look at their website http://www.state-linesgaugers.org and you will see dinner engagements, parties, and trips to museums. These are the types of events that keep such a far flung group together. Another benefit of these social events is keeping people of varied interests together.

An American Flyer loader that has been rebuilt operates on the main layout. I like how the accessories have been built into the scenery. This is a different way of displaying them.

This photo comes from the State-Line S Gaugers website and shows the main layout at a show. Take a close look at the two white stools in the center of the layout. That will give you some idea of the height of the layout when it is at a show. The layout is built low so kids can see it.

As I mentioned, promoting S Scale is another big function of the group, and they do some interesting things. First, they are one of the sponsors of the Fall S Fest and rotate with three other organizations. This is where the module layouts come in. I say layouts, plural, because there are three.

Let's start with the main layout. This started as a high rail layout, but now has two loops of scale track. The high rail portion uses American Flyer traditional track and accessories. How these accessories are displayed is great. Let me back up a minute. The layout's purpose is to promote S Scale and who do we want to attract? Kids, right. The layout is only 30 inches off the floor so kids can see it. What a great idea. Now, back to the accessories. Each one works, and there is a big red button for kids to push to see them operate. I thought this was a great idea. The whole display is focused at the kids, and is positioned and designed for them to see.

In addition, the layout is sceniced, and all the American Flyer accessories are built into the scenery. For those of you who are true collectors, don't cringe, the artifacts weren't defaced. How many times have we seen collectible toy trains that look like they have been outside for years? They do not have a lot of collectible value because of the condition, but what if you rebuild them? The collector value is not as good as an original model, but they look like new. That's what is on this layout. Look close and you will see what good condition all the accessories are in. And, who doesn't like pushing the button and seeing things operate. I liked how the

accessories are built into the scenery also. The outer two tracks are scale track using scale wheels. This is a good way to let people see a variety of interests in S Scale. People who are interested in knowing what is going on in S Scale can see a little bit of everything on this layout.

Besides the main layout, John has been working on a switching layout based on John Allen's time saver track plan from many years ago. One of the things he is doing with this layout is showing some of the detail S Scale has to offer. People who may be interested in S Scale can see some of the detail that can be achieved. The layout is equipped with DCC control, and people can see how that works. Lastly, people get a feel for operating a layout as if they were a train crew switching cars. By having this layout as a separate one, it avoids congestion on the main layout, and John has more time to work with the operators on this small layout.

Lastly is the helix layout made with American Flyer track. It's fanciful, but fun. Watching the train climb around and around and then come down entertains small kids.

I had only a short visit but this group is doing some good things.

You can see the big red buttons for operating the American flyer accessories. In this case, the barrel loader. There is a nice mix of scale model railroading and traditional accessories.

All around the layout are big red buttons to push so the American Flyer accessories will operate. Here Mike is trying one while George watches. The layout is low so kids can reach these buttons.

In this view of one side of the main layout, we can see the mix of American flyer accessories and scale track. This layout shows all aspects of S Scale railroading, and displays them well.

John Mann, on the far right, showed us his time saver layout. John likes scenery and scale models. He built this with hand laid code 100 track. The layout is equipped with DCC operation as well. Besides being fun to operate, it shows people who would like to do detailed scale modeling what can be done in S Scale.

This photo from the State-Line S Gaugers website shows John's time saver at a 2014 train show. Compare this with the photo above and you will see he keeps adding more detail to it.

Some of the scenery on one end of the main layout.

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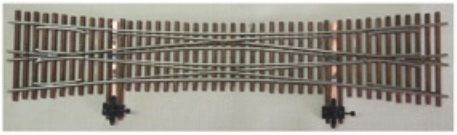

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What's on your workbench today?

This series shows our readers what other modelers are working on, and we need your help to make it successful. 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

By Bob Frascella

Attached are some photos of my S scale ALCO C420 locomotive. These locomotives are not currently available in S. In fact, no second generation ALCO Century series locomotives were ever produced in S scale. The C420 was the first ALCO locomotive to feature the 'V" shaped cab front with individual marker and classification lights above the number boards. It also included many of the same features that were common to all late model ALCOs, such as the distinctive draft gear box and ladders at the corners instead of steps.

Between 1963 and 1968, there were 131 C420s produced for 13 different railroads in both high and low short hood versions. Some had steam generators in their short hoods, but most were used in freight service. The 2000-hp locomotive competed directly with the EMD GP-30 and GP-35 locomotives which were produced during the same time period.

My version of the C420 represents the phase 1 version as purchased by the Lehigh Valley Railroad, and subsequently owned by the Delaware and Hudson. Some C420s are still in service today, and one in particular is owned by the Delaware and Lackawanna Railroad in Scranton, PA. Their former LVRR C420 No. 414 was on display at Steamtown during the 2013 NASG convention.

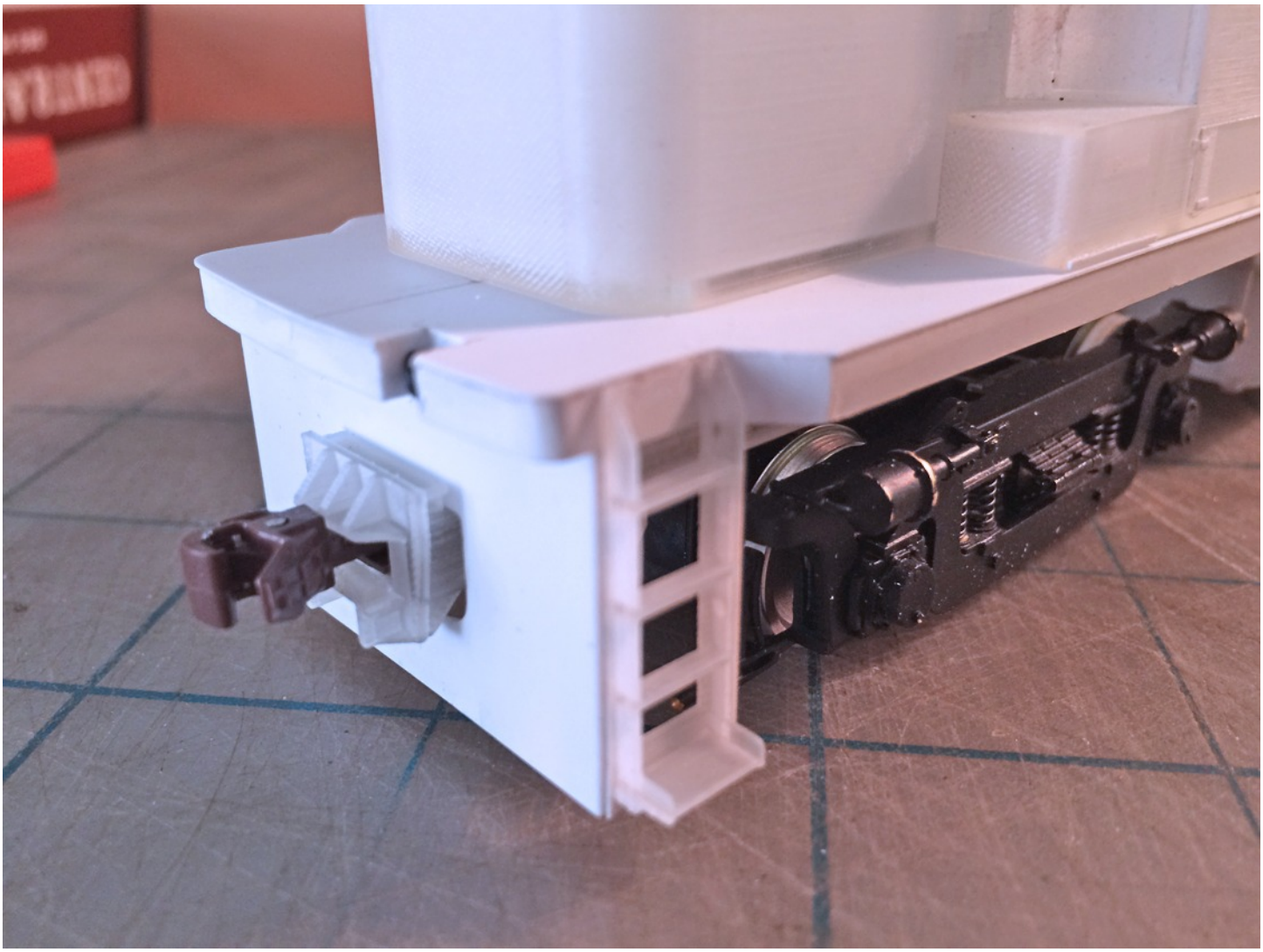
This would have been a very difficult model to scratch build because of the curved hood tops and the angled cab front, so I chose to draw up 3D plans and have the more challenging portions of the body printed by Shapeways. Essentially, everything above the frame is 3D printed, and the frame and substructure are built up with brass and styrene. I also printed the draft gear and corner ladders because they would also be difficult to produce from scratch and multiple copies were needed.

My drive system uses the Railmaster North Yard drive, which is not currently available. However, the new Smokey Mountain Model Works Stanton drive with AAR type B frames would work well and leave the cab area open for detailing. My frame design can also accommodate the American Models gear towers and drive system.

I've run several test prints of the body, and the one shown here in my first production model. The shell is printed in three pieces - the cab and short hood, the front section of the long hood, and the rear radiator section. Shapeways limits the length of items to be printed, but the final assembly goes together nicely. The model is printed in Frosted Ultra Detail (FUD) which is a translucent plastic material that Shapeways claims will render the best detail. I have yet to paint my 3D print, but once I do the details should become more apparent.

Once I'm satisfied with the results, I'll offer prints on Shapways so that others can create a similar model in S. It won't be offered as a kit, but you will be able to get the difficult body sections printed as shown here. With simple modifications to the 3D files it's possible to create other ALCO Century series locomotives such as the C424, C425, and C430. A bit more challenging, but also achievable, would be the C628 and later six axle versions if a suitable drive can be found.

What's on your workbench today?



What's on your workbench today?

We normally only show one Workbench an issue; however, Ken Zieska sent some pictures of a great building that will be part of a clinic at the 2016 NASG Convention in Novi, Michigan August 10 through 14, 2016.

Ken writes: The structure is the special run of Modular Industrial Buildings produced for the Pines and Prairies S Scale Workshop's "make and take" clinic to be held at the 2016 NASG Convention in Novi, Michigan. This low relief building is 8 inches wide, 6 inches tall and 3 inches deep, shallow enough to fit into a tight spot on the layout while providing a great industrial customer for your railroad. The Pines and Prairies will hold two clinics, and have a workspace on the Convention floor to assure that a modeler can bring home a completed kit, ready to install on their layout by the end of the Convention. If the modeler wants to be a bit adventurous, the clinics will also assist with kit bashing projects, such as adding doors, docks and even additional floors.

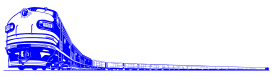
S Scale Shows & Meets

The S Scale Resource Magazine will now be providing a free listing of upcoming events. This small, text only listing will include the Event, Date, Location, Type of Event, and Contact Information. Click here to go to the sign up form. This form will take your information, and we will publish it in our next issue. If it is an annual event, you will need to submit your information every year.

2016 NASG Convention
August 10 to August 14, 2016
Novi, Michigan

The 2016 NASG Convention, sponsored by the Southeastern Michigan S Gaugers will be held at the Sheraton Detroit Novi hotel.

Website: http://www.smsgtrains.org/2016conv.html



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