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STEAM IN THE GARDEN

Coal-Fired Uintah #50

* Summer Steamups * Portable Layout Build * CF Finescale Caboose Build * ... and lots more!

Vol. 32 No. 4 Issue No. 182; November/December 2022

STEAM IN THE GARDEN

Gather friends, while we inquire,
into trains, propelled by fire ...

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In This Issue

O Gauge Hudson Part III - Back from the National Summer Steamup for some tweaks **- by Joe Rothwell**

CF Caboose Build - A finescale build of an iconic caboose. **- by Ross Schlabach**

Coal Fired Uintah Articulated #50 - Rob shares some insights about some of the details of his two year build project. **- by Rob Lenicheck**

Portable Layout - Part Four Bringing it all together **- by Bob Sorenson**

Tale of Two Steamups- It was a busy summer for the Aikenback Live Steamers **- by Jerry Bohlander**

Cover
The Coal Fired Uintah #50 project makes a stunning appearance on the garden railway of Richard Murray - **Photo by Rob Lenicheck**

Also inside:

Steam in the Garden Magazine Transition to All Digital is here!

This is our first digital only subscription issue.

For those who want to continue to receive a printed version of the magazine, you can order a paper version from our Print-on-Demand provider at *https://www.blurb.com/user/sitgeditor*.

We will continue to send out notifications of when the digital version is available for download and include a link to the Print-on-Demand version from *Blurb* in our issue announcement via Mailchimp. Be sure to stay signed up for notifications by at least having an online "free" account.

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Back issues that we have in our warehouse will still be available for purchase up until June 30th, 2023. After that we will liquidate our inventory and shut down the warehouse.

The Train Department Has Moved

New Address:

The Train Department
214 Cross Ridge Dr
Rutherfordton, NC 28139

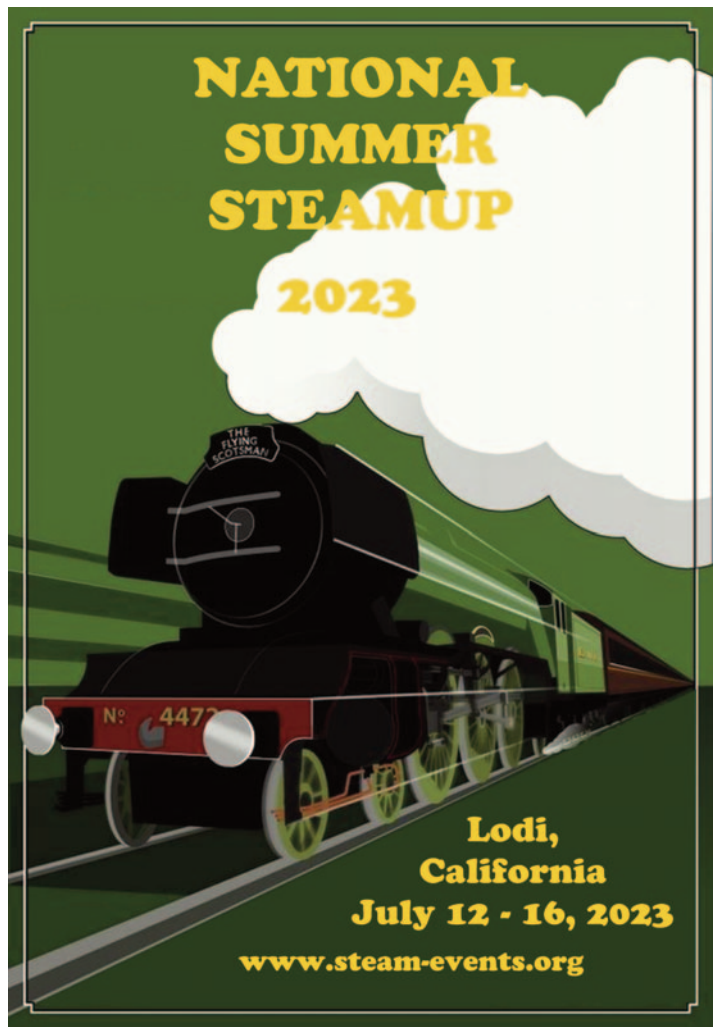
New and Updated website:
http://www.thetraindepartment.com
Phone remains the same as does their email:
732-770-9625
thetraindepartment@gmail.com

Eratta - In our previous Issue #181 we inadvertantly misidentified a live steamer at the National Summer Steamup. Our apologies to Bob Trabuco for misidentifying him on page 19. The correct caption should read:

"Bob Trabuco carefully tilts a "Big Boy' over to allow John Polen and Jim McDavid to debug a problem. A small crowd looks on with bated breath." — ed.

Diamondhead, MS - International Small Scale Steamup at DH Inn Cancelled - "As many of you know, the Diamondhead Inn has been under remodeling for the last few months. They were getting ready to reopen and applied for an occupancy permit. Unfortunately the local Fire Chief shot down the permit due to a non-standard sprinkler system.

The bottom line is that we will not be having the steamup at the Diamondhead Inn/Ramada in January. The steamup committee has been searching for an alternate location, but so far none have panned



out. If you made reservations at the Econo Lodge or elsewhere in the area, I would cancel them now, unless you plan to come and enjoy the beaches and food in January. All reservations made at the Diamondhead Inn will be cancelled.

In the meantime, Richard and I will be searching for an alternative location and we will keep everyone advised if one is found.

If we do have to cancel this event in January, we will refund any advance payments.

Until then keep watching our website at *www.diamondhead.org* Happy Steaming,

Pat and Richard"

Spencer Shops Steamup, 1 - 5 March 2023 - North Carolina Transportation Museum, Spencer, NC will play host to a small scale live steam steamup in one of their car barns. Organizers are still working out the particulars but are planning on having two large 45mm dual main tracks (10'+ radius) and a smaller dual gauge one layout. The event will include a train ride, motor car rides, access to the museum exhibits and a private shop tour of the restoration facility. Watch *https://www.nctransportationmuseum.org/* website for more information. Steamup point of contact: Jason Kovak
email: thetraindepartment@gmail.com
phone: 732-770-9625. Please leave message for callback.

Just Like A Steamup We Can't Exist Without You!

We're Looking For your Submissions

Locomotive Reviews

We're Looking For:

Accucraft
- Black Five 4-6-0
- Victory 0-6-0T
- A1 'Tornado'
- 61XX GWR 2-6-2T
- L&B Baldwin 2-4-2T
- Ragleth 0-4-0T
- Mortimer 0-4-0ST
- WD Hunslet 4-6-0

Bowande-Wuhu
- Britannia G1

Roundhouse
- Palmerston
- Lilla
- Darjeeling 'D' Garrett
- Beddgelert
- Alco 2-6-2
- Clarence

Aster
- British Railways BR9F "Evening Star"
-

Tips & Hints

Workshop Projects

Steamup Reports

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O-Gauge Hudson Part III

Text and Photos by Joe Rothwell

After completing my O-Gauge Hudson project (see *Steam in the Garden, May/June — July/August 2022, No's 179-180*) I took it to the 2022 Summer Steamup along with its smaller brethren, the pair of Commodore Vanderbilts, to get some track time on the PCLS dual-gauge oval. The simplicity of the Commodores allowed them to speed around the track with almost zero maintenance, however the Hudson's complexity demands more time in the roundhouse. She refused to budge one inch on her first track run at the Steamup. It had three great runs on the test stand in the shop just prior to the Steamup, so my confidence was high…our hobby has a charming way of dealing with such lofty dreams!

The Hudson just sat on the track with the safety popping off occasionally and a steady stream of steam jetting out the stack while the wheels refused to turn even a little. The gas was turned off and when cool enough to pick up, the Hudson was packed away for more time in the roundhouse. Back in the home shop, the slide valve chests were removed and the main problem was identified. A weird residue build-up on the face of the ports was lifting the slide valves off the face and allowing steam to bypass them. This explains the constant plume of steam at the stack. One thing I never did was pull the pistons during the work I did to get this engine going. I don't like to fix things that seem to be working, but this time, that came around to bite me in the rear end.

The front cylinder covers were removed (**Photos 3-1 & 3-2**) and the piston rods were disconnected from the main side rods which allowed removal of

Photo 3-1

the pistons. The cylinders were full of gunk and the pistons ring of graphite-string packing material wound in a groove was completely shot (**Photo 3-3**). There must have been surface rust on the cylinder bores that mixed with the steam oil and water. This, along with the probability of some residual solder flux from the new boiler mixing with the gunk and hardening somewhat on the port face is what most likely caused the stalled engine. Also, my 15-year-old bottle of steam oil probably didn't help, contributing to the witch's brew of sticky goo. Some new steam oil was purchased and the old stuff will be used elsewhere.

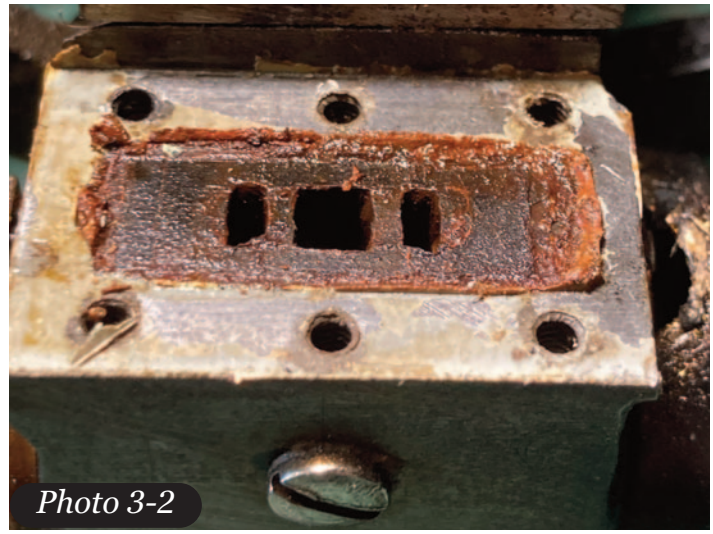


Photo 3-2

A good cleaning had the cylinders walls back to their metallic sheen and a coat of fresh steam oil preserved the work. While staring at the valve chests that were sitting on the bench, I finally saw a way to remove the slide valve rods, something I thought would never be possible. When the front of the slide valve chest was drilled out and threaded for the banjo-bolts, the hole created was now big enough to insert a needle nose plier and grab the end of the slide valve rod (**Photo 3-4**). A little modification to the needle nose pliers was needed to ease the grab by grinding a shallow groove on the inside gripping faces and a whisper of material removed from the outside surface at the tip. This made grabbing and un-screwing the rod a simple task.


Photo 3-3

With the rod removed, the packing gland nut was unscrewed and the graphite string pulled out. Water always leaked out of both slide valve rod gland nuts when running. Likewise, water also poured from the piston rod gland nuts and when these were removed, no packing material was found at all...that explains the flood.

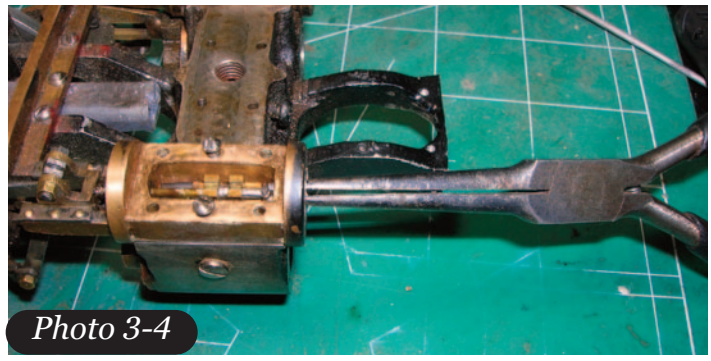


Photo 3-4

Finding graphite string proved to be elusive, but a vendor in the UK sells some. Maybe it's time to upgrade with O-rings. The gland nuts for the rods had cupped shapes machined into their faces as did the bottom of the threaded holes. This would have compressed the graphite string into an O-ring shape anyway. So instead of buying graphite string, measurements were made and a search on eBay resulted in some bags of red silicone O-rings arriving a week or so later. Three sizes were needed for the overhaul, which included the piston ring, piston rod and slide-valve rod. I ordered several sizes for each ap-

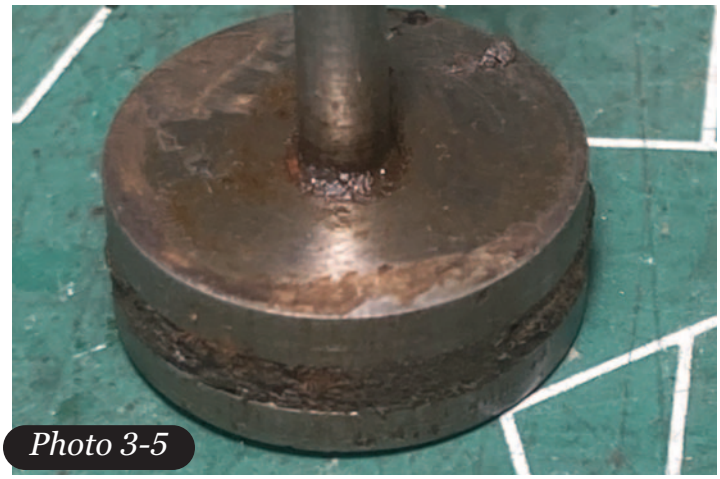


Photo 3-5

plication just to make sure a usable set was received. The groove for the piston ring was a bit too deep for the new O-ring, so some fine copper wire was wound in first until the depth was about right (**Photo 3-5**). The fit on all three O-rings was as good as you could hope for (**Photos 3-6 & 3-7**).

Before the slide-valve chest and covers were bolted back on, the slide-valve rod needed to be re-centered since it was removed for the new O-rings. This was a snap now that the rod could be grabbed with the needle nose pliers. During the slide-rod re-centering operation, I noticed that the piston timing was a bit off, so this was addressed by loosening the eccentric crank and retarding it a bit. New stainless steel slide chest bolts were used to replace the ones that came with the chassis. These new bolts were a bit longer, allowing a nut to be threaded on and run all the way up to the head. Now the bolts could be screwed all the way down tight into the block, but without tightening the chest and lid. Then the nuts were run down (using a nut driver) for final torquing of the slide-valve lid, converting the bolts into studs and making the set-up much stronger (**Photo 3-8**).

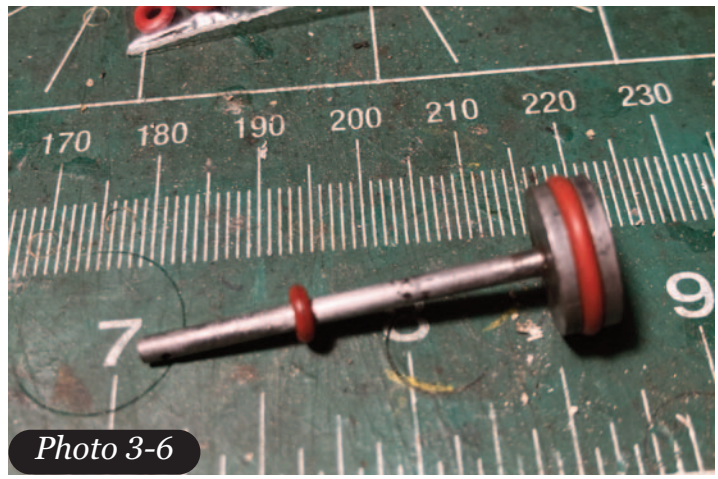


Photo 3-6

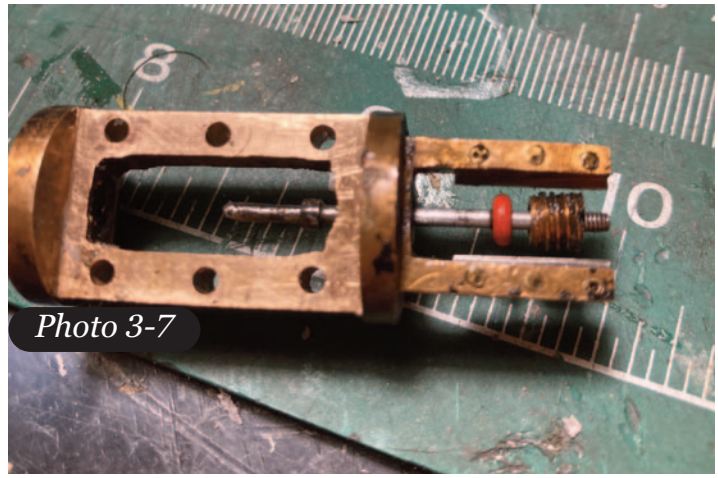


Photo 3-7

While the boiler was out during the upgrades mentioned above, I noticed a slight bulge on the flat sides of the firebox. The accepted wisdom is a stay every linear inch on flat spans. My boiler violated this distance by half an inch — I thought I could get away with it. So, after drilling a hole on each side, some heavy copper wire was soldered in (**Photos 3-9 & 3-10**). The ends of the copper wire were bent over instead of rivet heads — seemed easier that way and just as strong, in my opinion. There is a risk of un-soldering something elsewhere on the boiler during the re-heat, but I lucked out. The stays were done in four separate solder sessions, soldering one end at a time...this way the heat was very focused on one small spot at a time. It was a calculated risk and the firebox needed them anyway.

Other changes included lead weights added above and below the drive wheels, in the open spaces between the wheels. About three-quarters of a pound was added, making the total weight around seven to eight pounds for the Hudson. A new fire door was turned from brass and fits in the tiny circular 'fire ring' (**Photos 3-11 & 3-12**). The door does not get

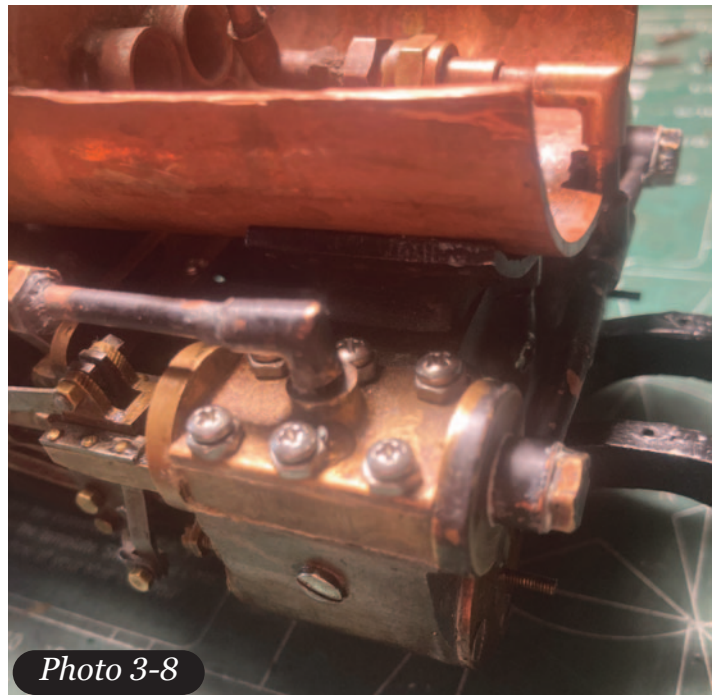


Photo 3-8


Photo 3-9

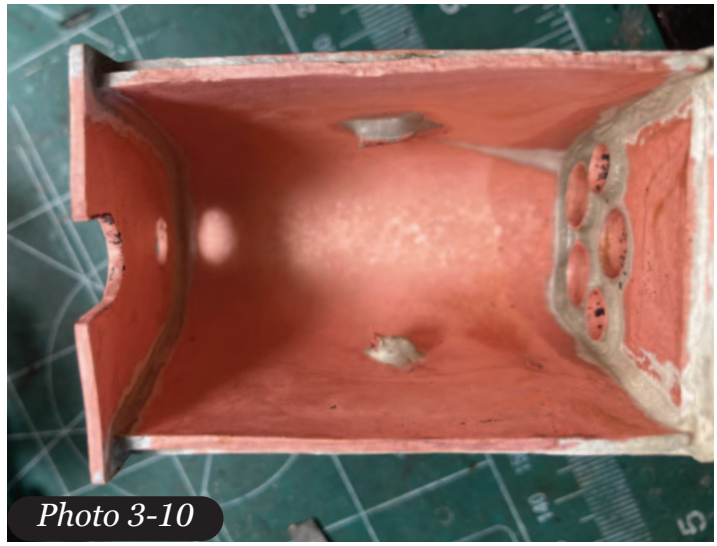


Photo 3-10


Photo 3-11


Photo 3-12

removed during operation for a couple of reasons, one being it's hard to get to. Fire is lit and checked through the open smokebox door during start-up and once the burner is 'on step', it's good to go, usually until the end of the run.

After installation of the O-rings and better timing, the increase in power and ease of operation was unbelievable. It always argued before letting the wheels spin, but now spins effortlessly. Before, you could stop the wheels with a fair amount of pressure...now, the wheels cannot be stopped when a finger is pressed against them at full-throttle setting! And not one drop of water leaked from the rods, making the overhaul that much sweeter. Though my efforts fell shy of the mark at the 2022 Steamup, these corrective measures taken just might allow the Hudson to perform like the Thoroughbred she is. Yes, our hobby has a charming way of rewarding persistence and granting such lofty dreams!

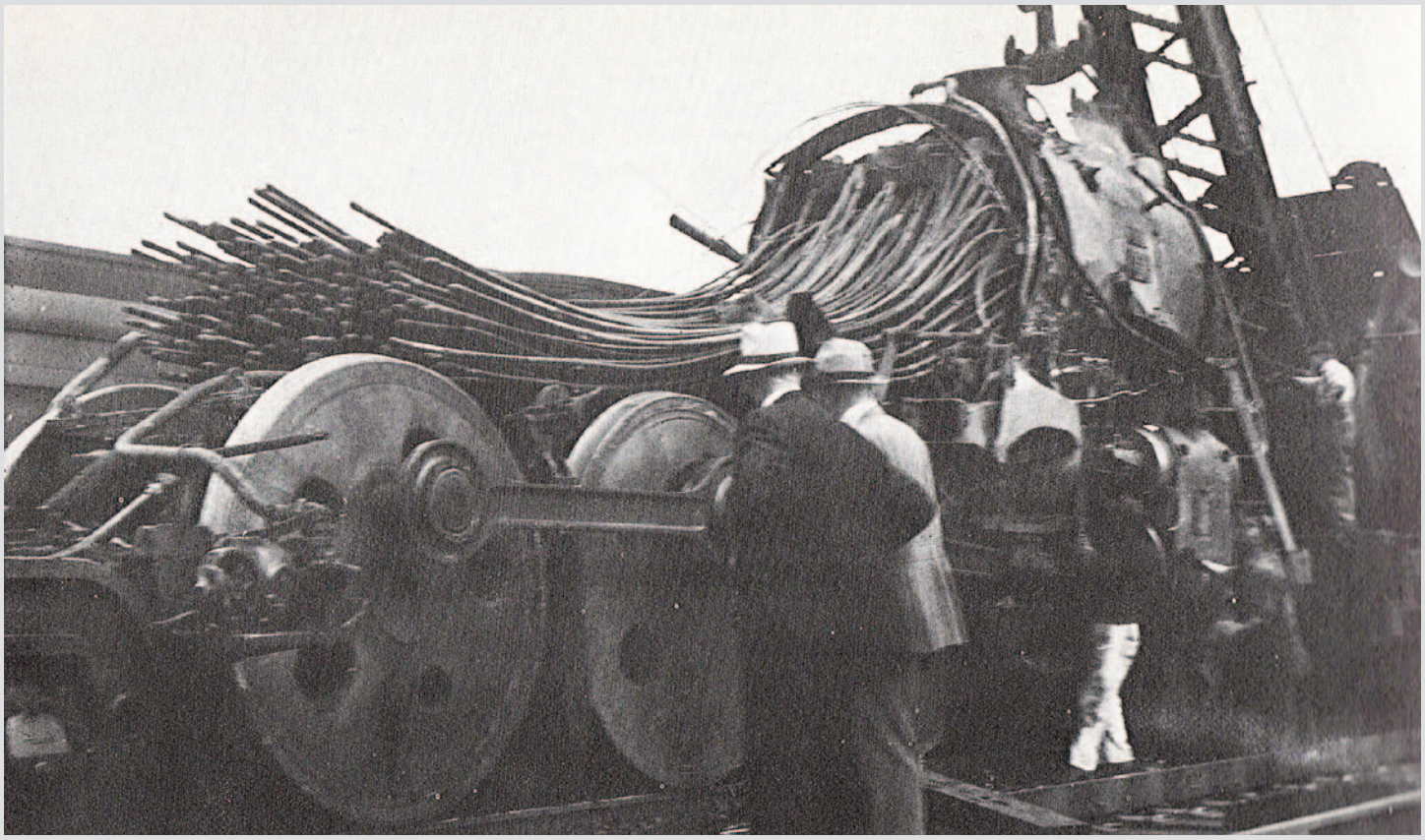
Ode to the Mighty Hudson

The New York Central (NYC) was the first railroad to get the 4-6-4 into revenue service, so they were bestowed with the honor of naming the type. Named after the great river that winds through the state of New York, the 'Hudson' debuted in February 1927. And they embraced the type more than all the other railroads combined. Less than 500 were built by all Roads, with NYC building and operating 275 of those examples. They all have one thing in common; a massive cylinder chest requiring four-wheeled trucks to support it, and massive fireboxes, also needing support from four-wheeled trucks. Dual-service (freight/passenger) engines were not yet popular, so the Hudsons were strictly passenger engines, with six six-foot tall wheels built for speed on flat ground. They served the prestigious New York City/Chicago run (known as the "Water Level Route") along with their arch-rival, the Pennsylvania Railroad, and did it with grace and style. Stay away from the mountains or a long drag of freight cars though, because the Hudson is a true thoroughbred, not a beast of burden.

By the mid 1920's, ridership had grown to the point that the current stable of engines couldn't pull the number of cars needed to keep up with demand. Travel between the two greatest cities of that era, New York City and Chicago, could only rationally be done by train. Paved roads as we know them today did not exist until the mid 50's and it would have been an adventure to drive between the Cities. Not all the small rivers and creeks would have bridges over them, gas stations would have been sparse, and mechanics shops about as rare as an honest politician. No problem, the Hudson was more than willing to make the run, easily pulling a dozen cars or more; and would log over 20,000 miles a month without too much fussing. Considered by their crews as the finest in locomotive power at the time, they were easy to operate, powerful, but still efficient, using their fuel and water with precision, delivering performance and real revenue for both the railroad and passengers alike.

To help shorten travel time between destinations, NYC adopted the European method of the tender taking water while on the fly. Special track pans a mile long were filled with water, which was scooped up at 80 miles an hour. It was discovered early that the air venting of the tender was inadequate when the tender exploded during a water pick-up test and nearly derailed the engine! There are contemporary movie films of these operations and they are spectacular. The tender was specially designed for the Hudson and created a visual balance rarely achieved with such large pieces of machinery. Near the end of the Hudson's reign, the tender was swapped with a 'PT' centipede tender, a massive car that looked great behind a 'Niagara', but an abomination behind the Hudson, though it cut coaling time in half. NYC also had the most severe restrictions on the width and height of their locomotives due to several factors. Different sources proclaim various issues, from tunnel and bridge clearances to the wash-racks located system wide. Whatever the reason, it gave the Road a distinct sleek and uncluttered look that borders on minimalism and simplicity; some may even say austere...I say gorgeous.

So valuable was the engine that when Hudson #5450 suffered a boiler explosion, it was rebuilt and put back into service. Investigators determined that the crew was letting the water get 'thin' above the crown sheet. This was a tempting condition as any engine would absolutely fly without all that extra water above the crown sheet. They surmised that the crew's calculations were off and unintentionally let the crown sheet get exposed. It ruptured under the strain and the entire remaining load of super-heated water flashed into steam



all at once. The Engineer, Fireman and a travelling Fireman that had hitched a ride were killed. The blast cleaned off the chassis, leaving only the smokebox standing above the wheels with the fire tubes hanging like spaghetti.

Incredibly, only one Hudson of the NYC's 275 was scrapped during their entire tenure. Hudson #5315 suffered this fate when she slowed down too fast on a curve and the consist of cars bunched up, shoving her off the tracks. It was the bent cast steel frame, also broken in two places, that sealed her fate. All Hudsons rotated every five years through the shops for a total rebuild, sometimes getting a new boiler and always getting the latest upgrades in technology. Test, test, test was the style at NYC, more than any other railroad, and it seems they shared a lot of their data with the other Roads, opposite of what constitutes business today.

Though NYC was the first to use the 4-6-4, they were last to adopt the 4-8-4, called the 'Niagara,' the engine which replaced the Hudson. It was the Hudson's capable characteristics that delayed the inevitable arrival of the Niagara. However, being last meant that the Niagara was adorned with every advancement known for steaming and was probably the last serious steam engine built in the US. She was a duel-service engine which was the trend of most railroads at that time. They were introduced in 1945 and were gone by 1955, barely broke in. Let me quote 'steamlocomotive.com' on the Niagara... "Unfortunately, no examples of this magnificent locomotive were preserved and all were scrapped. This is especially disappointing because these 4-8-4's were head and shoulders above any other Northern in the areas of boiler and drawbar horsepower. They were also better than any steam locomotive in the areas of weight per horsepower, availability, monthly and annual mileage, and total life cycle cost." The Niagara still holds the passenger record of fastest time (16 hours) between New York City and Chicago to this day...Hmm, OK, I guess it can replace my beloved Hudson... and I have a couple of old 'Max Gray' brass O scale Niagaras sitting on a shelf...

Workshop Project

Modeling a N&W CF Class Caboose

Text & Photos by Ross Schlabach

This is not your ordinary modeling article; this is an experience - with modeling included. I hope you'll come along and enjoy the ride.

I've been doing serious custom model building for a while now in my retirement. Most recently I had done a series of Norfolk & Western REA baggage cars and a matching run of N&W RPOs. But sometimes when you undertake a modeling project, the project takes control of you. This was one of the latter. Among the many other RR modeling projects I had tackled, I had previously built a custom run of eight Chesapeake & Ohio wooden cabooses. And while that was a challenge, it was nothing like the building of an even smaller run of N&W CF Class cabin cars. The C&O caboose chassis were hand fabricated in brass, the bodies were made of basswood, the cars had no interiors, and the only fancy parts were the corner steps which were hand bent, soldered, and then finished on a Bridgeport milling machine. But the CF cabin car project was intended to take my modeling to another level. I wanted the car to be as detailed as reasonably possible: my tour de force! A grandiose plan, but there you have it. The cabin car body parts would be precision laser-cut styrene, the chassis would again be fabricated in brass —this time using pre-bent channel stock soldered with a few custom components added. There would be a full interior to be sure, but a significant number of exterior parts would have to be designed in 3D and later cast by a New York jewelry firm—something not anticipated when I started down this path. Put another way, I was in over my head at the git-go but I just didn't know it at the time.

As I do on all modeling projects of this type, I started out with research to find drawings and photos that would help me build an accurate representation of the CF cabin car. I spent hours of computer time going over the drawings and photos available on the Norfolk & Western Historical Society website. When I was finally ready, I placed an order for about twenty drawings and a few photos - and then I waited. My first $100 gone - but it would not be the last! In due time, the precious round tube arrived with my drawings. Some of those drawings were big - bigger than my work bench in fact.

But just having drawings was nowhere near enough. I needed to see, photo and measure the real thing. So a trip to the Virginia Museum of Transportation in Roanoke was in order. I should mention that at just about this time, Accucraft Trains, had just started delivering copies of its long-awaited Gauge One model of N&W J 611. I received two of the first models and assisted in producing a technical review of the model for the *Steam in the Garden* magazine (*SitG Vol. 27, No. 1, Issue No. 149; May/June 2017*). And, as a special thank-you to the VMT for their help with the J project, one of the sponsors of this model wanted to donate an early production model to the museum. Since I had received my own copy of the J and a spare copy for use as part of my magazine review of the locomo-

tive, I was in possession of the model destined for the VMT. That was all I needed to get my trip planning started, and my son made it even more interesting by offering to fly me and the model up to Roanoke for a day of fun and research.

The appointed Saturday arrived and my son flew in from Raleigh, picked me up at Asheville and off we soared to Roanoke. Now this couldn't just be a simple VFR flight to Roanoke; that would be too easy. Instead we had to contend with miles and miles of dense smoke courtesy of a very large wildfire in the vicinity of Lake Lure, NC. This fire had created a huge blanket that hung over the airport and stretched nearly to the Virginia line. So almost as soon as we took off from Asheville, we were engulfed by this dense cloud and had to transition to an IFR clearance for the rest of the flight. But about half an hour of flying later and we were finally clear of the haze and able to enjoy the remainder of our ride into Roanoke. Upon arrival at Roanoke Airport, we hopped in a car with our J cargo and headed downtown.

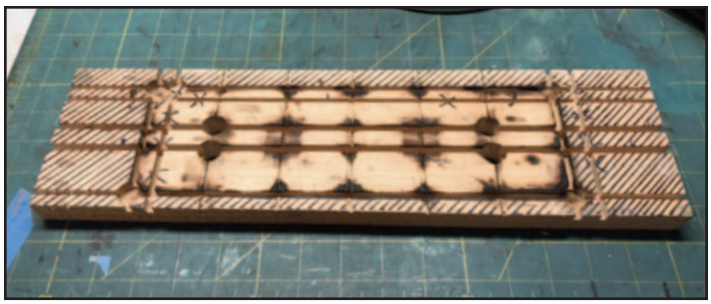
We were warmly welcomed at the museum and presented them with the beautiful working live steam model of the J, which I hope has since gone onto display! Then we were given carte blanche and provided with a delightful and very knowledgeable docent to help us around. Most importantly, we were given "climbing" rights to their very own CF cabin car. Inside and out we made photographs and checked key dimensions. We very nearly ran the camera battery dead in the process as my son ventured inside the CF and recorded all the interior details he could find. The afternoon zoomed by, but when we reluctantly said goodbye to the museum staff, I finally felt that I had enough information to tackle this cabin car model — little did I know!

Once back home, I began poring over the drawings and photos to familiarize myself with the car's construction. Next, I headed off to Kinkos to get scale, sacrificial copies made for mark up and for use by my CAD guy. He would be the one who translated the body drawings into laser instructions to cut the body parts. With him in New Jersey and me in western North Carolina, resolving any unclear or confusing drawings would be difficult, but I naively pressed on. And because he hated to work on caboose projects due to a previous nightmare of a design project in the form of a PRR N-5 cabin car, he was in no mood to immediately tackle the body parts for my CF. So again it was time to wait — this

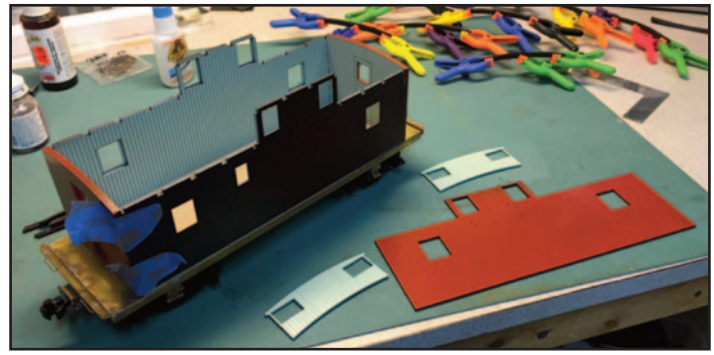
A trip to the Virginia Museum of Transportation yielded lots of information.

time for over 6 months before the "spirit moved" in him.

In the meantime, I went ahead and created a wooden building jig for the brass framing parts. This involved a lot of careful measurement and precision cuts on the table saw. But once it was done, I was able to cut and position all the main frame members. And with my PBL HotTip resistance soldering unit, I was able to solder together the components into a sturdy underframe. Of course, the frame coming out of the jig was devoid of all the detail parts that would turn it into a CF underframe, but it was a start. I just had to hope that my CAD designer would get all the crucial measurements correct so that when finished, the bodies would fit properly over the underframe. Around this time I placed an order for the few parts I could order commercially, with the most important ones being the



This framing jig received plenty of soldering scorch marks from building the five chassis.



Each piece of the body had to be individually painted before assembling.

five sets of parts to make the distinctive trucks. Several hundred more dollars gone.

I finally got the word that my designer was hard at work on the CAD drawings to create the body parts. Before too much more time had passed, I had a trio of sheets with laser cuts scattered across the black plastic. Of course, this is a craftsman project so there are no instructions. You cut the parts off the styrene sheet and then figure out how they go together. Now I must acknowledge that I have plenty of history with my CAD designer, so I knew how his mind worked when it came to designing styrene parts. So in short order, I was able to decipher the jigsaw puzzle I'd been sent and in an afternoon I had turned that pile of pieces into a test CF body, sort of. The side windows were too small and too low and the cupola windows were all wrong as well, but it fit on the chassis so all was not lost. So with drawings and photos still in hand, I was able to relay to him the necessary corrections. After another wait, a long flat package arrived at my door with another set of body parts. To my delight, it went together with everything where it should be and the scribing was spot on.

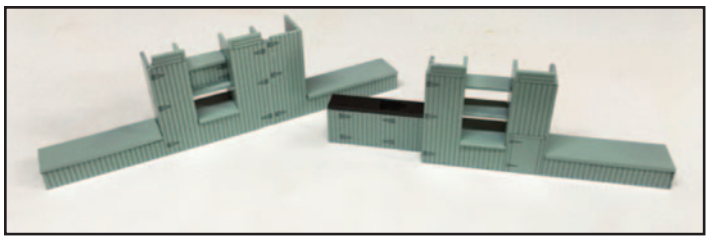
But this was no "rattle the box" construction because with different colors inside and out, each wall had to be painted separately, then assembled, and only when all six walls (don't forget the cupola end walls) were completed individually could the body be joined together. But did you notice that I said paint first? With styrene, you don't just whip out a brush and your favorite brand of RR model paints. Paint brushes and nice finishes on styrene don't belong in the same sentence. You have to airbrush — or in my case, you rattle can. For these bodies, I needed to carefully paint up the interior and exterior components before glue touched plastic. This was a bit unnerving since the joints of the prepainted pieces needed to appear clean and precise with no glue visible. During the course of building these models, I became enamored with Gorilla Super Glue and shocked several check-out ladies with the numbers of bottles I had in my shopping cart. And with each trip, I never bought enough!

With the first production body done and approved, I went into the next cycle of waiting for my CAD guy to tackle drawing up the interior parts. He had all the photos I'd taken, but you can never replace actually seeing something in person. Finally a small package showed up in my mailbox with the parts to make up the interior. Again, a new jigsaw puzzle of parts, but this time it only took one phone call to my designer before I figured out the proper way to put them together. And I must admit that they turned out very well; two separate wall units with careful scribing all around and with all hinges and latches scribed into the panel surfaces that could be attached to the finished walls to create the full interior, complete with bunks and the head.

Well, I still needed a stove. With some help, I was able to locate a guy who was doing PRR cabin car parts in 1:29 scale on the Shapeways website and I was able to convince him to rescale his stove drawing to 1:32 for me. I promptly ordered five sets of stoves and to my delight they even included a correct stack. Another $150, poof! For those of you who are N&W detail experts, I admit that the PRR stove was not a perfect imitation of the N&W stove, but sometimes you have to make do and peering through the window it does looks perfect.

Now I had proof of concept for both the bodies and the interiors, so the laser could be turned loose to produce the parts for the four remaining "body kits" and "interior kits". Do remember, no instructions, and not everything you need is on that sheet of plastic, you have to make them from scratch!

Amidst all this chaos, I received the brass parts from Precision Scale Co. including the "kits" for the



Interiors assembled, complete with scribing & hinges.

More parts of the "puzzle" arrive to be prepped for installation on the model.

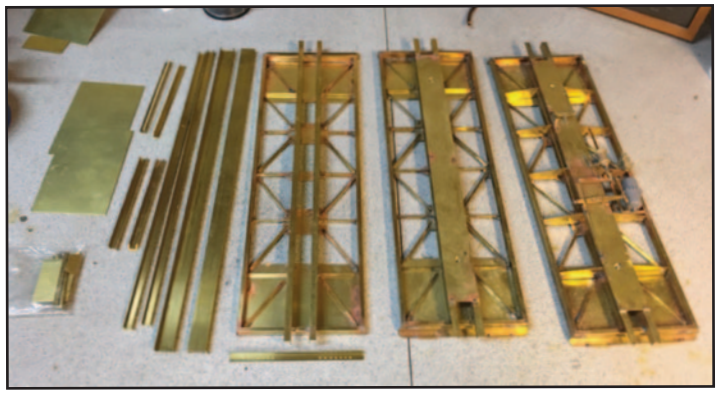
trucks. There is that word "kit" again and once more it is a bit of a fib. Again, no instructions but lots of little brass pieces with a few plastic ones for garnish. I hadn't mentioned earlier, but even before I started this project, I had four guys already signed up to buy the extra four CF models I wasn't gonna keep for my own. Brave souls, these folks. They had bought scratch models from me before, but with their commitment to this project, they didn't know when the cars would be done or how much they'd cost. The bravest of these fine men was one of the owners of Triple R Services and he offered to build the trucks for me. I bow down to that young man, because I already had way too much on my hands. So off those "kits" went in a flash — not to be seen for some months, but no matter. I was tied up on other matters.

In just a couple of weeks, a long, thin but very heavy package showed up on my doorstep. Now I was in it up to my hips. This box contained all the basic body parts as well as the components needed to detail the interiors for four more cabin cars. But in the interest of total disclosure, just having sheet after sheet of beautifully laser cut and etched parts is hardly much more than a beginning. The painting and then assembling processes had to be repeated four more times, and here is when one begins to understand just how deep you are in it! However, I pushed forward and eventually I had five completed body shells.

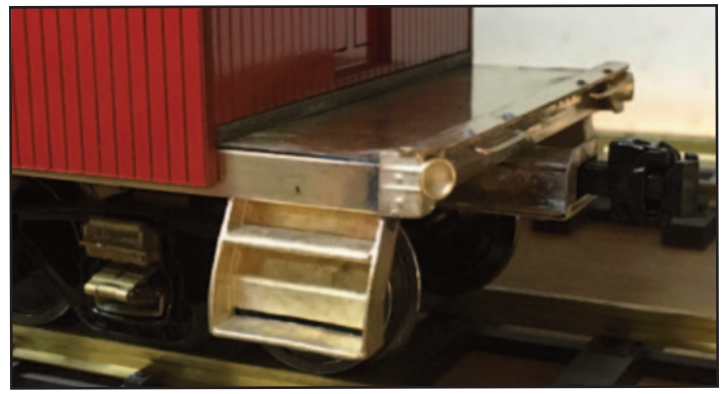
Time for another round of dealing with subcontractors — decals. I have had a longstanding relationship with a wonderful gentleman who makes up my custom decals, and he always endeavors to please. Still, there is the long-distance process of describing just how the decals should look; the font, the character thickness, and height and so on. Oh, and don't forget character spacing. In what seemed like the blink of an eye compared to the time dealing with my CAD & laser guy, I received by e-mail a PDF (please don't ask me what that stands for) that I was able to print out and confirm that all my myriad decal instructions had been followed to the letter (pun intended) and I was able to approve the design. And in another blink the finished decals arrived in the mail.

If you think I've been making real progress here, you haven't been paying attention! The mere presence of decals and finished bodies just means I'm ready for the next monkey wrench to get caught in the works. I've always faced decaling with more than a bit of nervousness because I know all paints don't play nice together. I once used a single manufacturer's line of paints and clear sealers and discovered to my horror, that the sealer could cause the paint to lift. A true disaster. And when you use a single manufacturer's products, you expect them to be compatible. But what if you had to use multiple manufacturer's products? Then, you read the paint instructions multiple times, follow them explicitly and hope for the best. That hope was to be in vain! To find a suitable Red, I had to buy paint from one producer; but they don't make a decal sealer I could trust with their own color products. So I used a trusted sealer from another maker and the results on the first body dried to the appearance of the skin on a 90 year old who had been seriously into sun tanning all their life! This was my worst nightmare. Now I was faced with the challenge of removing the exterior wrinkled paint while not touching the paint inside, OR ordering, paying for and building a replacement body. I opted for the former and was successful with a plastic paint stripper product, but my nerves were frazzled by the time I was done. Then I got to paint, decal, and seal it a second time - without getting any overspray on the interior walls. I'll shorten this part of the story by saying I didn't make the same mistakes twice. I just made new ones, but we'll speak of them later.

OK, I had car bodies and trucks checked off, so I



The brass chassis nearing completion.



Corner steps and poling pockets -- the details make the difference.

could move on to building five complete brass chassis. Hold on now; not so fast! As it turned out, the truck "kits' included functional leaf spring components that were to be put together with short pieces of wire to make operating leaf spring units to be affixed to each side of the trucks. But the leaf spring castings were substandard and didn't have complete holes to run the wires through, and drilling out 80 leaf spring pieces with #56 drills just wasn't working. Oh, you caught on that I used "drills" plural! My sainted sub-contractor for the trucks was breaking so many drill bits that it instead made better sense to have the leaf spring parts re-cast by a jeweler. $$$ Yes, friends, this project had taken control of me! And before you ask, the original maker of the truck kits was in the process of being sold and therefore there was no hope of getting the parts redone by him — at his expense. Another lesson learned.

A couple of brass orders to Special Shapes later and I was at last able to build up the five chassis. And my HotTip soldering unit didn't let me down, but I do admit to some burned fingers.

With the basic chassis done, it was easy to see that the models would be inadequate without suitable poling pockets, protective end shields, ladders and corner steps. This meant another round of expensive but unique castings from the New York jewelry manufacturer. But once you saw how good they looked on the chassis, you forgot all about the price; right? Wrong? You can finally see where this is all going now, can't you?

Now, I have completed bodies (minus roofs), completed basic chassis, and completed trucks. So I'm nearly done. Uh, uh! The roof sections needed to be fabricated, cut to size, and fitted to match the car bodies and end platform ladders & corner posts.

At long last, the chassis custom parts showed up, and it was time to start the final chassis assembly. You don't think of a caboose end platform as being all that complex — until you try to solder one together. I had had the foresight to pre-fabricate the four end railing sections for each car and had expended the dollars to acquire all the other custom bits and bobs that were needed to turn the bare end of the chassis into a decent representation of an end platform. But again I had underestimated the effort, solder, and time that it would require to render a solid and detailed CF end platform. Burnt fingers were common, and DE-soldering was needed on more than one occasion. And the expert jewelry casting folks knew nothing about railroads, so I was sent 20 right-hand protective shields and no left-hand shields. That mistake cost me no more money, but the time to make the correct number of left-hand shields again put this step on hold for several more weeks.

Of course you knowledgeable N&W fans out there are aware of one special feature peculiar to the CF: GUTTERS! There may have been in the whole wide world other cabin cars with gutters, but I haven't seen them. But the CF had them and the model looks naked without them. So gutters it would have. That just cried out for its own jig, but of course the left and right sides were not the same but mirror im-

Five CF bodies, (almost) completed

Forming the curve of the roof sections

ages of each other.

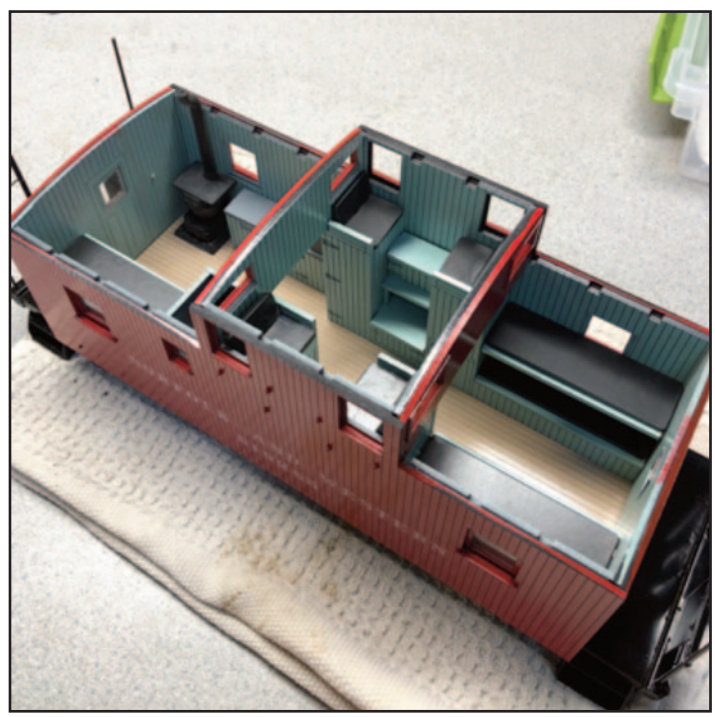
And I couldn't be lucky enough to find some preformed brass in the shape of a CF gutter. No such luck. I had to figure a way to make my own. This ultimately involved a small bending brake, some thin brass, a vise, a piece of thicker brass stock, and a mallet. First you bend the material in the brake to just beyond 90 degrees. Then you open the vice jaws a bit, lay the folded brass into the narrow slot between the vice jaws, and take that thicker brass piece and pound the folded brass through the slot with the mallet. Repeat several times with decreasing jaw gaps and if you are lucky, the thin brass will have taken on the shape of a gutter channel. If you aren't lucky, you get to try it again!

Well, gentle readers, it is always difficult to make a removable three section roof, but to create a removable three section roof WITH gutters is well and truly beyond me. Somebody did it with a CF in O scale courtesy of some talented Korean model builders, but I tried and failed in Gauge One. This left me with the sad realization that I was going to have to glue the roof sections on, which forever entombed the beautiful interiors and left them only marginally visible through the windows. But I know they are there and they look good. I took pictures for proof!

Picture proof of the handmade gutters.

With the roof sections in place, it was time for the gutters to be installed and the cupola roof hand grabs to be added. I find these last steps the most nerve racking because I am attaching painted parts to other painted parts, and I must do so by drilling mounting holes without damaging the finishes of all the pieces involved.

Lest you conclude that I am a well organized modeler, I must disabuse you of that impression this instant. The building of the basic chassis and the bodies were about the only times when I displayed any formal organization toward this modeling project. Usually, to avoid sheer boredom, I would zero in on one car at a time and move from process to process until the car was complete. Of course this did have the added benefit that later models came together quicker because of skills learned on earlier victims — I mean cabin cars. I must also admit to project burnout that led me to set aside the cabin car project altogether for a cou-



All of the detail that will be hidden by the roof

ple of months just to let me regain my enthusiasm for the project. As I write this remembrance, I have completed and delivered four of the five cars, and the last one is well on its way to completion.

I can't leave you without passing on a tidbit or two about this kind of modeling. First, understand what you are putting yourself in for. A caboose doesn't always look that intimidating —except maybe a B&O wagon top. But it has components that are not found in any other train car or are made differently. In that way it is sneaky. I have learned, to my everlasting frustration, that cabooses are far more difficult to build than even a much larger RPO or baggage car — even if you take into account the clerestory roofs on the latter. I can build three baggage cars in the time it takes to build one caboose! Take a good look at the different detailed components and think long and hard about how you will reproduce them. Corner steps on a baggage car can easily be fabricated from brass strip but I would challenge any modeler to find an easy and inexpensive way to make a CF corner step. Yes, you might make a master in brass and cast copies in resin, but would they be strong enough to hold up over time and handling?

And one last thing. Sign your work. Models are made by people and the modeler who pours his/her time and skill into their models need not be ashamed to brand their work: "I did this and I'm proud of it". You'd be surprised to know that others in the hobby actually want to know who built their stuff!

The final detail -- handrails!

As mentioned above, I am well on the way to completing the last of the five CF cabin cars. It has been a wild ride on the journey. Despite my supposed years and experience in model building, I have learned a lot while working on this project and I'm aware that there is so much more out there to learn if I choose. As originally planned, this cabin car project has been my tour de force, but it is by no means my swan song. I can not imagine a time when I'm not building models; that is unthinkable. But I do plan to scale back & refocus my activities to models of personal interest and leave the production work to others. If I've made a little mark in the hobby, that's good enough for me.

CF Class Caboose in repose - Public Domain Image

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1:32, Plastic body, Metral Trcks
$295/Car

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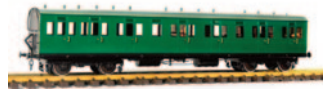

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$170/Car

Open Ended Gondola
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$150/Car

“Talyllyn” Railway 0-4-2ST
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1:19, Butane Fired
RTR $1600

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KIT $1695
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RTR $1900

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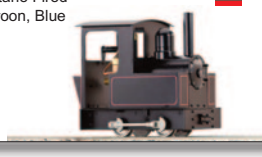
Pennsylvania Caboose
1:32, Brass
$499/Car

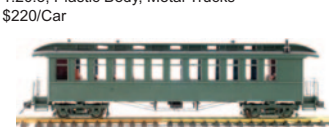
Dora 0-4-0T
1:20.3, Butane Fired
Black, Maroon, Blue & Green
RTR $499



Saxonian IIIK
1:20.3, Butane Fired
RTR $2975

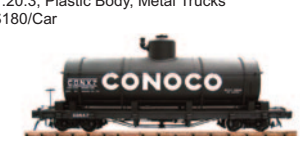
Jackson & Sharp Combine
1:20.3, Ball Bearing Trucks, Lighting
$295/Car

Jackson & Sharp Coach
1:20.3, Plastic Body, Metral Trucks
$220/Car

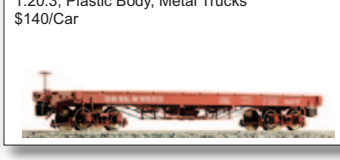


Stock Car
1:20.3, Plastic Body, Metral Trucks
$180/Car

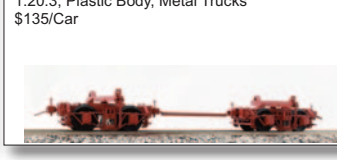
Tank Car
1:20.3, Plastic Body, Metral Trucks
$180/Car



Flat Car
1:20.3, Plastic Body, Metral Trucks
$140/Car



Logging Disconnects
1:20.3, Plastic Body, Metral Trucks
$135/Car



Short Logging Car
1:20.3, Plastic Body, Metral Trucks
$140/Car

Short Flat Car
1:20.3, Plastic Body, Metral Trucks
$80/Car

Iron Mountain Car
1:20.3, Plastic Body, Metral Trucks
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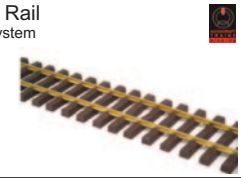
1.5" Scale, Butane Fired
RTR $3800
Water Tank $300

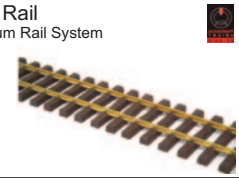
Fowler Ploughing Engine
1" Scale, Butane Fired
RTR $5295

Kerr Stuart 'Wren' 0-4-0ST
1:13.7, Butane Fired
RTR $1775

Code 250 Rail
Brass Rail System



Code 332 Rail
Brass and Alum Rail System



West Coast 1" Rail
Steel, Rail System

Workshop Project

Coal-Fired Uintah #50

Text, Drawings and Photos by Rob Lenicheck

Kevin Schindler Photo

Although there were other large, articulated locomotives which were proposed to be built, none came into fruition on the narrow gauge except the two built for the Uintah Railway. They were 2-6-6-2s and were designed to handle the challenging curves and grades of this railroad. So demanding were the design challenges that Baldwin Locomotive Works, the builder, built a track at their Philadelphia factory to test the design. To clarify, these were simple articulateds, as opposed to being called "Mallets" because, unlike a Mallet, both sets of cylinders ran off of equal boiler pressure. (A Mallet uses exhaust steam pressure from the rear cylinder set to power the front cylinder set at a lower pressure.)

According to Wikipedia, always a reliable source, the maximum grade on the Uintah was seven and a half percent. And to make matters worse they had very tight curves, often at the same location as the worst gradient. Hence, the locomotive had to adapt, employing a very wide boiler "swing" plus the added traction of having side tanks to enhance rail adhesion rather than a tender for the water.

One more interesting design item on these engines is that the reversing gear worked in opposite directions between the front engine and the back engine. I wanted to incorporate that fact into my design but, contrary to the valve gear books I consulted which led me to believe that the eccentric crank could be moved to force the forward motion to match, I simply could not make it happen. (In the photo on page 27, notice that the position of the expansion links is opposite each other, one up and one down.) More on the fix for this later.

Ok, enough of the history. As usual I designed the engine in Fusion 360. This 3D modeling software allows you to design the parts, make them to that model, and know they will fit. Of course, it's a big assumption that I could always make the parts to the print. Third time around was sometimes my mantra.

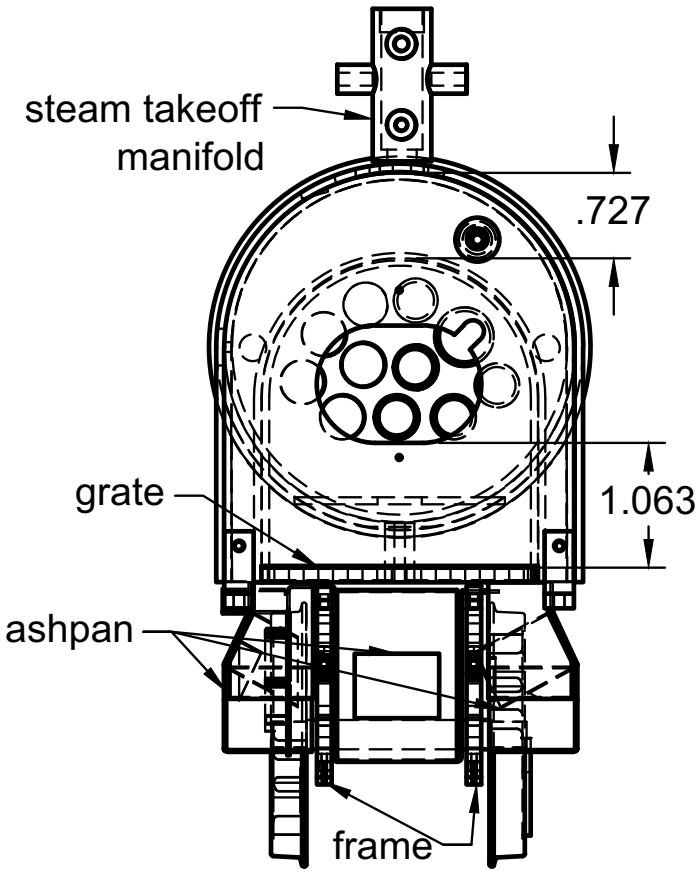
To start the design process, I needed to get a good set of plans. Miraculously, I did manage to find a set someone was selling over the internet, although I

Expansion links on the Uintah #50

Denver Public Library Collection Photo

couldn't understand why they were so expensive. When I received them I rolled them out in my living room only to discover they were in 2 ½-inch scale, 7 ½-inch gauge – ride on stuff. Oh well, Fedex office to the rescue for a reduction down to 1:20.3.

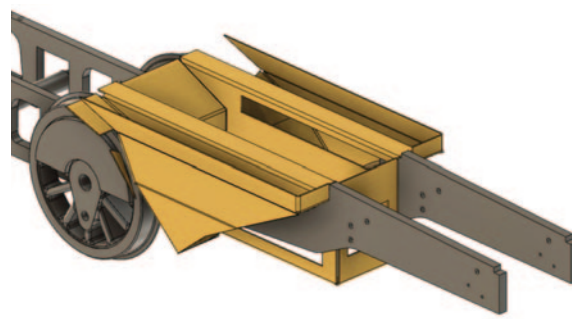
Starting with the boiler, I tried to keep to the parameters described in the Harris book, "*Model Boilers and Boilermaking*," and the Baguley spreadsheet I've discussed in earlier articles. One of the significant problems with adapting the prototype to a 1:20.3 coal burner is that the engine has an inside frame. This forces the large firebox to be above the frame, straddling it on both sides. The solution I came up with was to put the grate right down on the frame and have the ashpan below it as best I could.



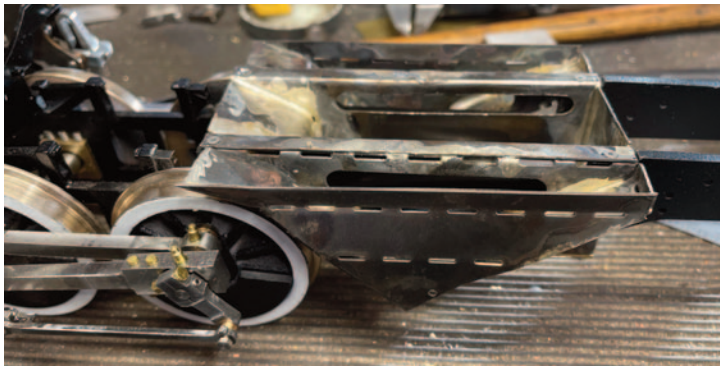
Backhead Detail

In the backhead detail drawing you can observe several design items. The grate is at the bottom of the firebox but still allows over an inch of depth between the grate and the bottom of the firebox door. This is sufficient to allow a good coal fire. This layout does squeeze the amount of steam room available above the crownsheet to a bit less than ¾-inch but, in my experience, this is not detrimental to performance.

The ashpan was designed in three pieces because of its complexity. I then had the three pieces waterjet cut and had to figure out how to place them into the frame.



Ashpan Design

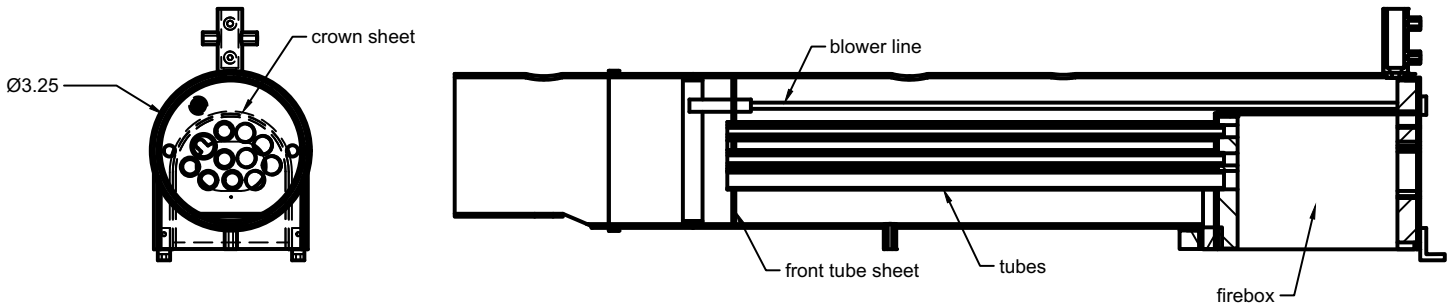


Ashpan Attached

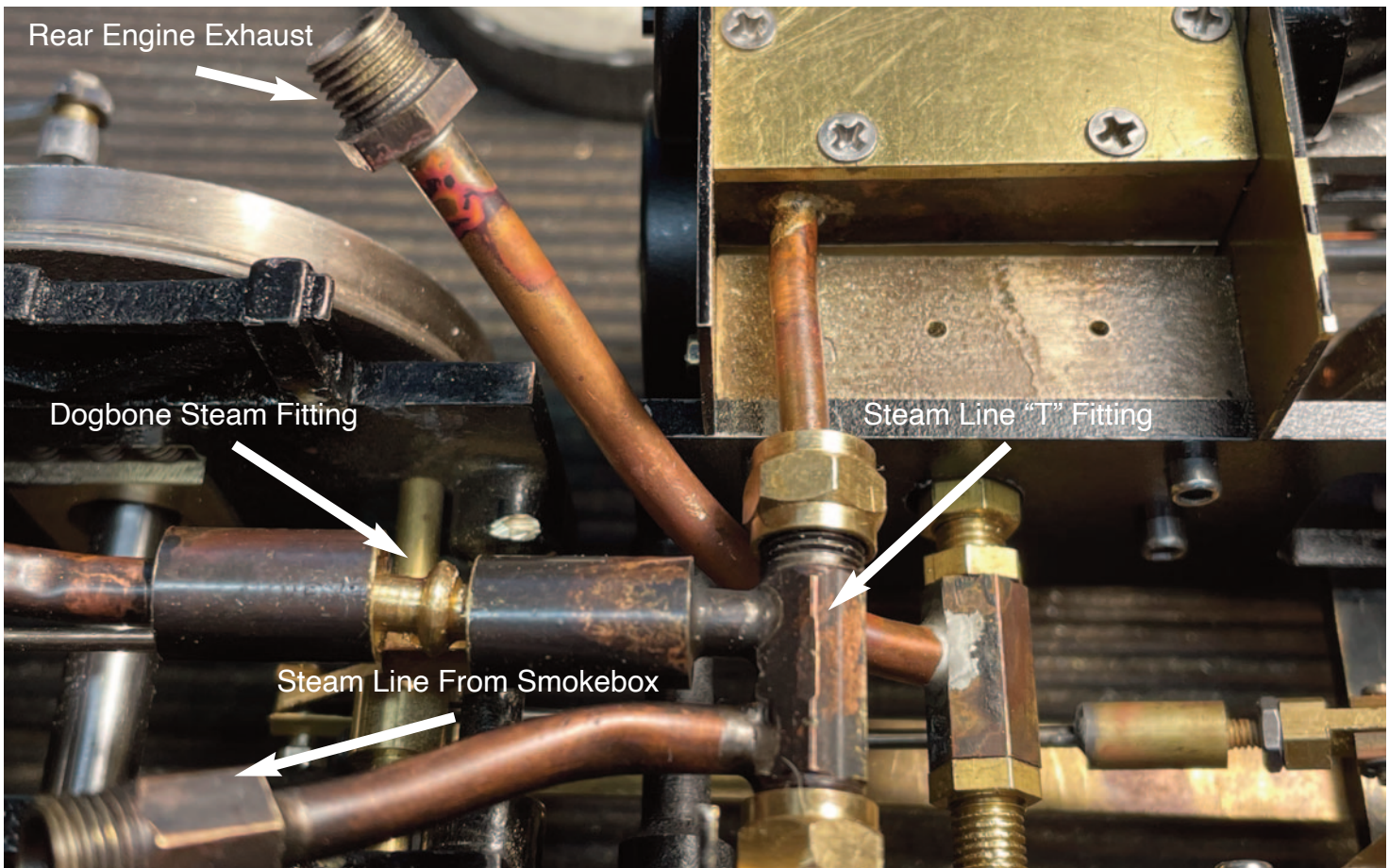
Needless to say, things get pretty hot with the grate right down on the frame. That's just one of the compromises I had to make.

In general, the boiler follows a traditional design and I stuck to the parameters which have worked for me in the past: multiple tubes and a superheater "flue," blower line through the boiler and a superheater tube through the top of the firebox. Notice that there is a significant distance between the front tube sheet and the front of the smokebox. This is driven by the Harris parameters relating to the length of the tubes, their diameters and the grate area. This doesn't seem to affect performance, although I wish someone made a longer flue brush!

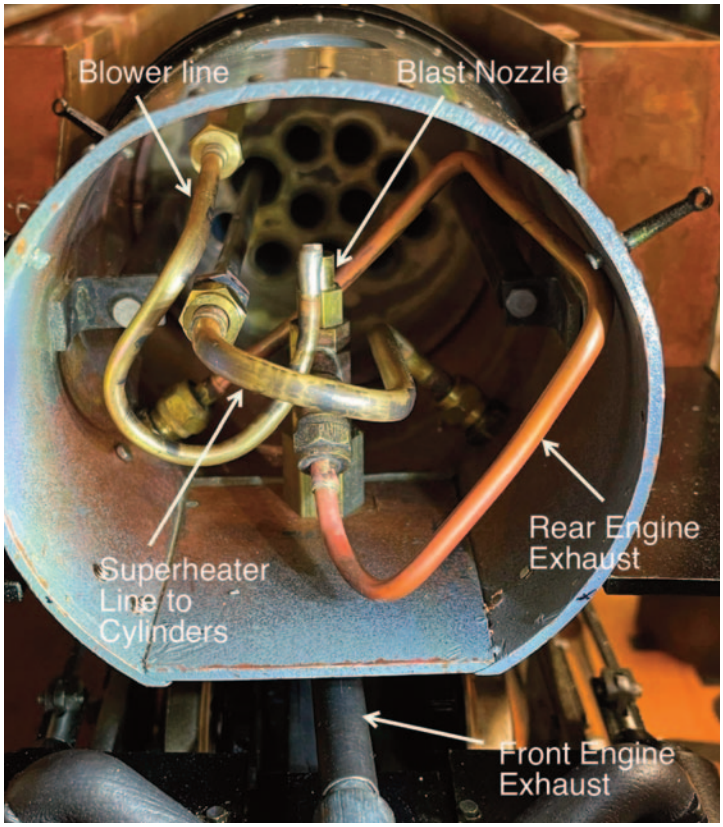
The "superheated" steam gets delivered into the smokebox. Okay, so now how to deliver it to the two sets of cylinders? Ryan Bednarick and Bill Allen were both helpful in suggesting that the steam line



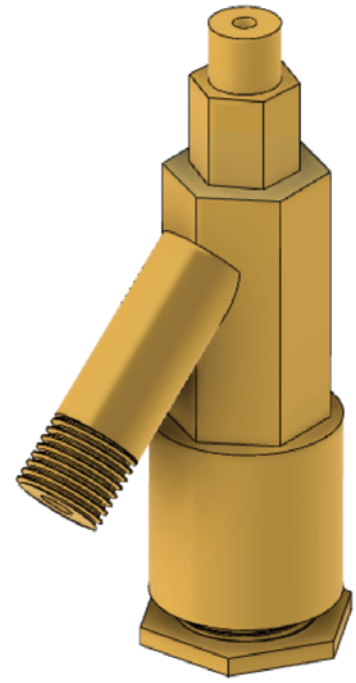
Boiler Layout



Rear Engine Lines



Smokebox Layout



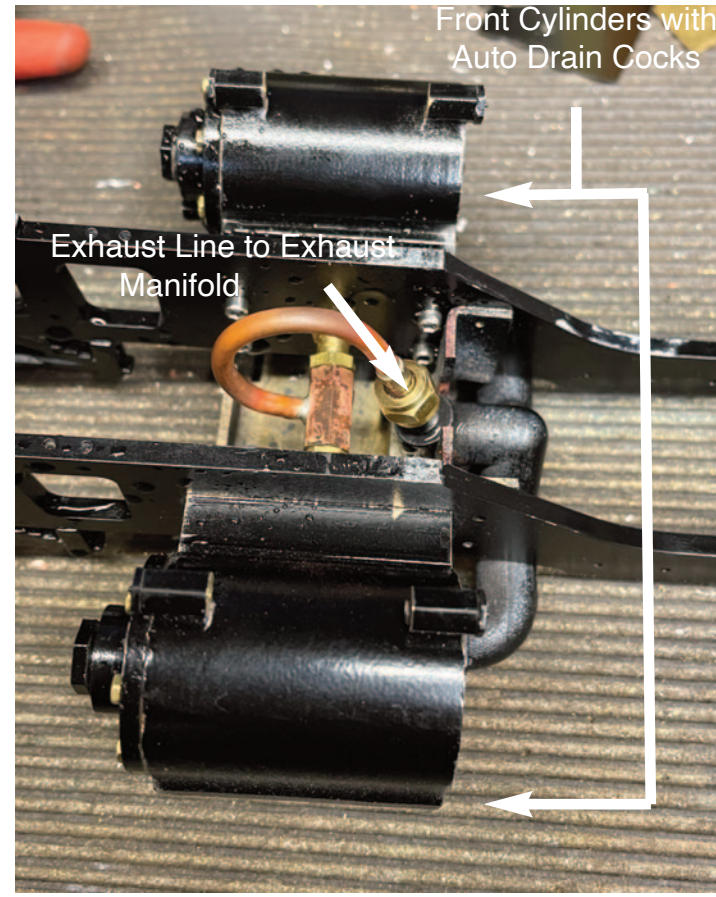
Blast Pipe

could come out of the smokebox, be shuttled back to the rear cylinder set first, and then, through "t" and dogbone fittings, be sent to the front set. The exhaust is then routed separately from each into the smokebox.

The dogbone fitting is steam-tight if it's made right. Of course, mine took twice to get a good fit. Remember, if it's worth doing it's worth doing twice.

As to the exhaust system, both the rear and front engines get delivered separately to the blast pipe in the smokebox. The blast pipe itself accommodates both lines but in a separate manner. All the lines are in evidence in the the photo above. Notice that the blast pipe is configured this way so that the exhaust from the rear engine doesn't interfere with the exhaust flow from the front engine. Speaking of which, the front engine exhaust is routed through some 3D printed parts, simulating the protoype design. The pipe which runs into the smokebox is sealed with a rubber O ring so it can rotate and swivel. The pipe can be seen in the picture above showing the Smokebox Layout.

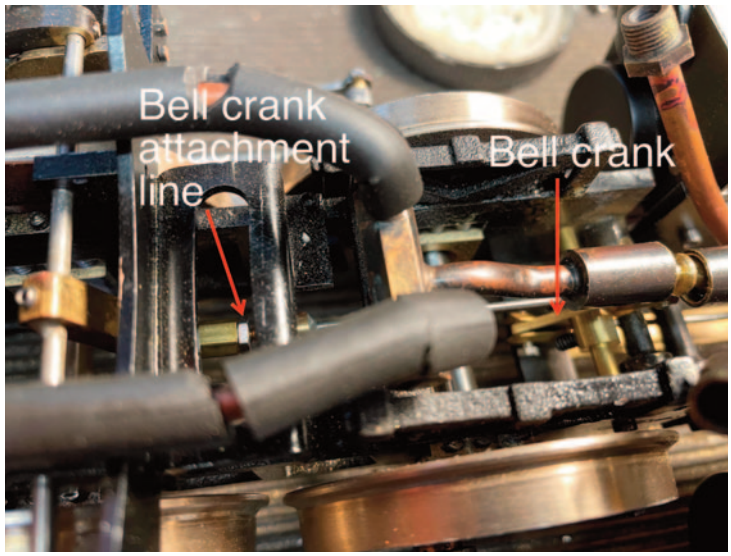
I would have to say that the front exhaust configuration does leak a bit. But it doesn't seem to affect the draft noticeably and looks pretty cool when it's running.



Front Engine (Underside)

Now let's revisit the situation I talked about earlier regarding the inability to duplicate the opposite reversing scenario between the front and back engines. Even though I was led to believe from several valve gear publications that it was possible to reverse the gear by simply rotating the position of the eccentric arm, this certainly did not work that way for me. Perhaps it was because it can never work that way without altering the position of the radius rod with respect to the valve rod. (But that's a discussion for another time.)

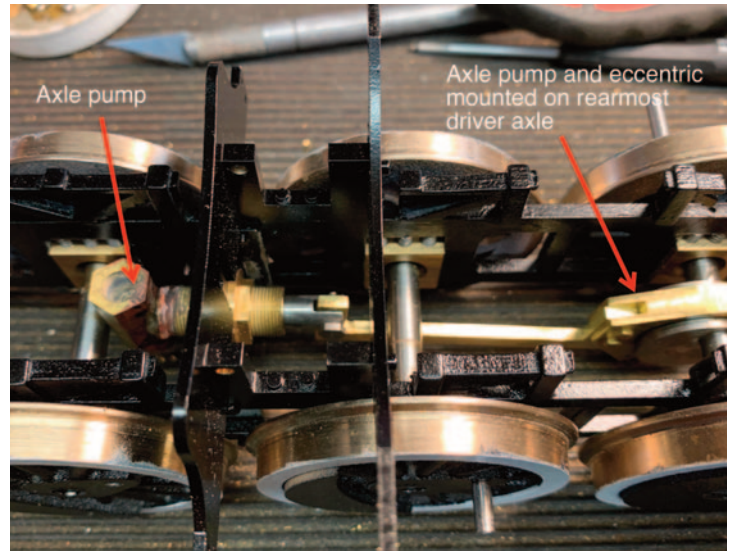
I wanted this engine to reverse mechanically through using a reverser (Johnson) bar. So, I decided to fix the situation by incorporating a bell crank between the two engines. Not a very good view here:



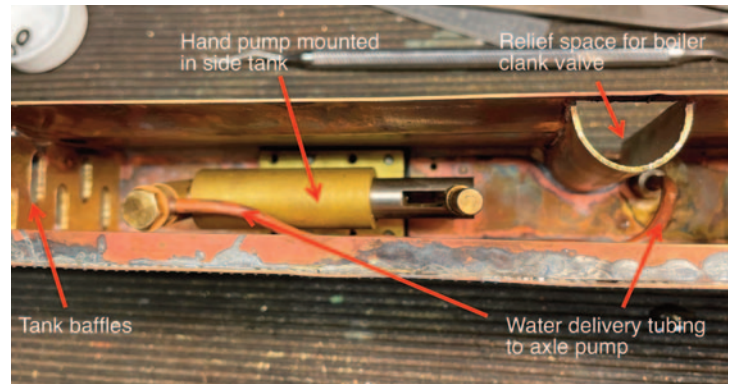
Bell Crank Layout

Almost all coal burners employ the use of an axle pump, because they go through an immense amount of water during a run. I took a SWAG (*Scientific Wild Ass Guess*) at the eccentric throw and the axle pump bore figures based on my experience and the amount of available room. Apparently it was a decent guess as the pump more than keeps up with the water needs. The axle pump design is based on Kozo Hiraoka's design with some modifications. (That's right – why reinvent the wheel?)

The axle pump is plumbed in-line with the hand pump in one of the side tanks where the water is initially picked up. The axle pump is mounted on the axle which is directly driven by the main drive rod, thus eliminating extra stress on a secondary driver joint.



Axle Pump Layout



Tank Hand Pump

Another thing worth mentioning is that both side tanks hold water. Because of that it is necessary to have a connection line between the two so that the water can equalize from side to side.

One of the great modelling advantages we have these days is the ability to get the metal parts we need if they are unavailable on the market, assuming, of course, that you have the ability to model the part using 3D software or know someone who does. (*I'd say that's worth a few beers.*) There are several companies now which accept your 3D models electronically and turn them into the parts you need. These parts can be printed in steel, stainless steel and brass (through the lost wax process). I used Shapeways almost exclusively to have my parts printed. True, they are not cheap but if you can't get them otherwise it's worth the price, IMHO.

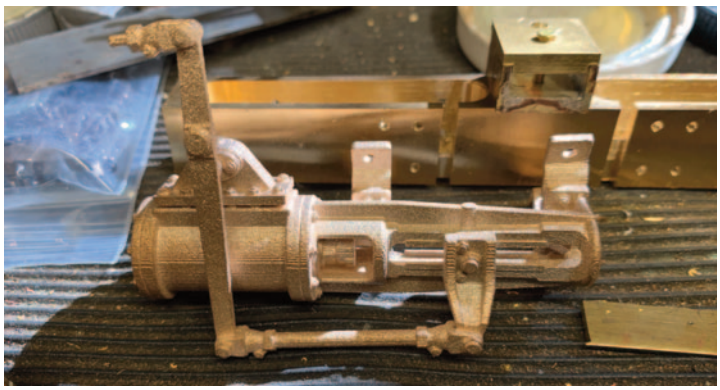
The parts I had printed were the drive wheels(!), the power reverse, the expansion link hangers, the front and rear truck sideframes, the front engine manifold parts, the smokebox front, the cosmetic smokebox steam fittings, and the exhaust steam injector.

3D Printed Parts

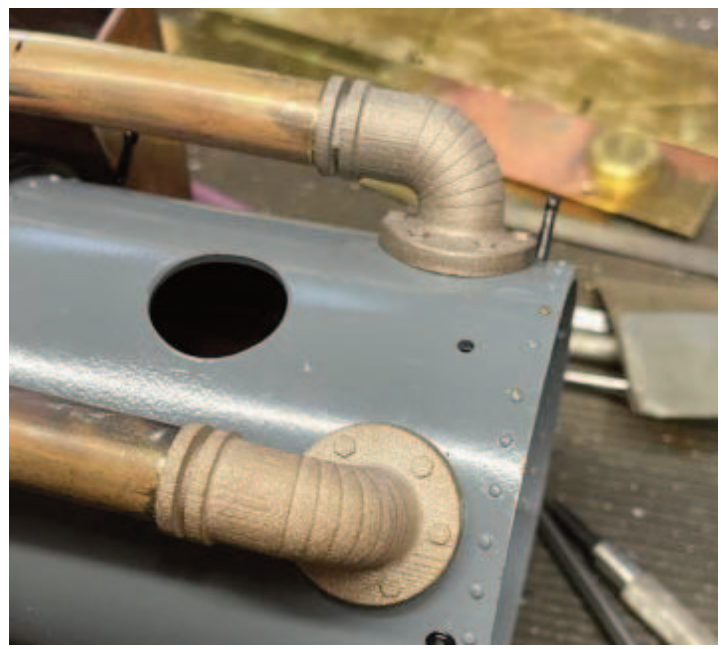
Drive Wheels

Expansion Link Hangers

Front and Rear Trucks



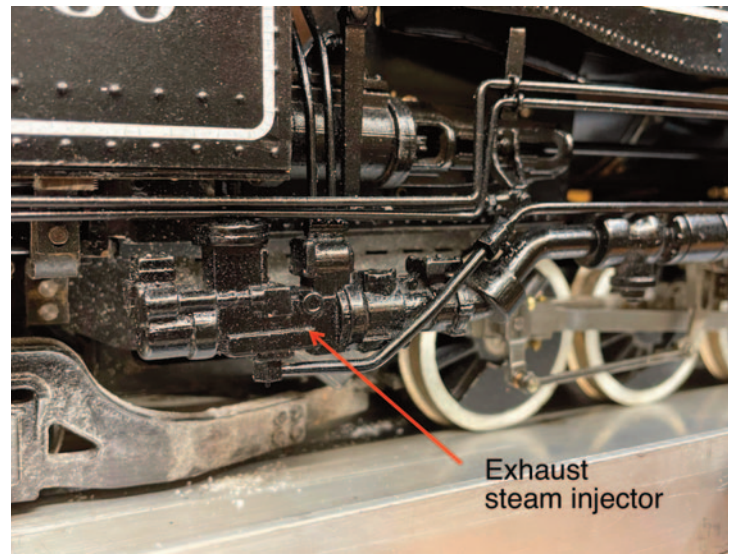
Power Reverse



Smokebox Steam Fittings

Manifold Parts

Smokebox Front



Ehaust Steam Injector

In some cases the parts were printed purely as a time-saving effort. Sure, I could have fabricated them but it would have taken much more time. Some parts, however, such as the exhaust steam injector, would have been very difficult if not impossible to make.

I tried, as much as possible, to stay in keeping with the prototypical design. For example, in order to allow access to the firebox door, the coal bunker has to fold down out of the way. Now, I'm the first to admit that I'm no mechanical genius but I knew that I did not want any hinge to show at the back of the engine. The *Internet Cavalry* came to the rescue once again. I managed to find a downloadable CAD design for a hidden hinge. The model simply needed to be scaled down, easily doable in the Fusion 360 software, to be useable. As the picture on the next page might suggest, the bunker does fold out of the way quite nicely.

In addition, the coal grate, mentioned previously, was inaccessible through normal means. So, I did something unusual, but it seems to work well. I have used this method in some of my other coal conversions: when there is no option the grate can simply be slid out of the back of the firebox, scraping the ashes off as it gets pulled out. The extension seen in the photo is so that the grate is reachable for cleaning. When in place, the back of the extension is flush with the back of the rear buffer beam.

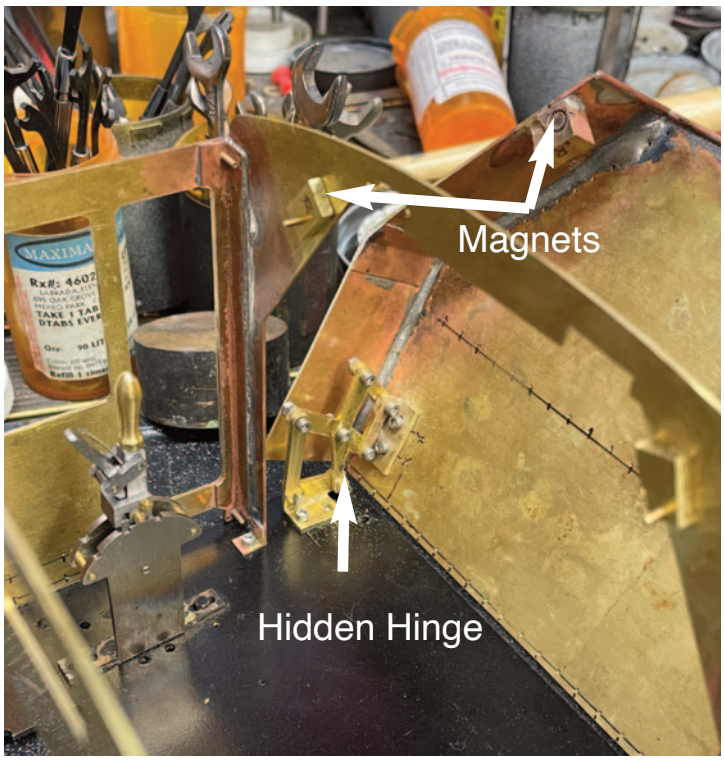
Most folks who are familiar with coal engines know that the boiler tubes need to be cleaned periodically. This engine's design makes it particularly difficult to have easy access to the smokebox, with all the front pilot details in the way. I had initially thought I could manage, but after seeing the situation firsthand I decided it would be much easier to have a design which would allow me to remove the front pilot in one piece for easy access. The pilot is removed with a pin which secures it through both frame members.

The cab on #50 is pretty narrow and requires that the controls be squeezed into a small front-to-back space. I did manage to get everything fitted in, with the main controls available through the top of the coal bunker.

Every new build has problems to iron out and this engine was no exception. The first issue was that the fire burned too hot. This is usually caused from the blast pipe orifice (the small hole at the top of the blast pipe) being too small. Opening the hole a few thousandths solved the problem.

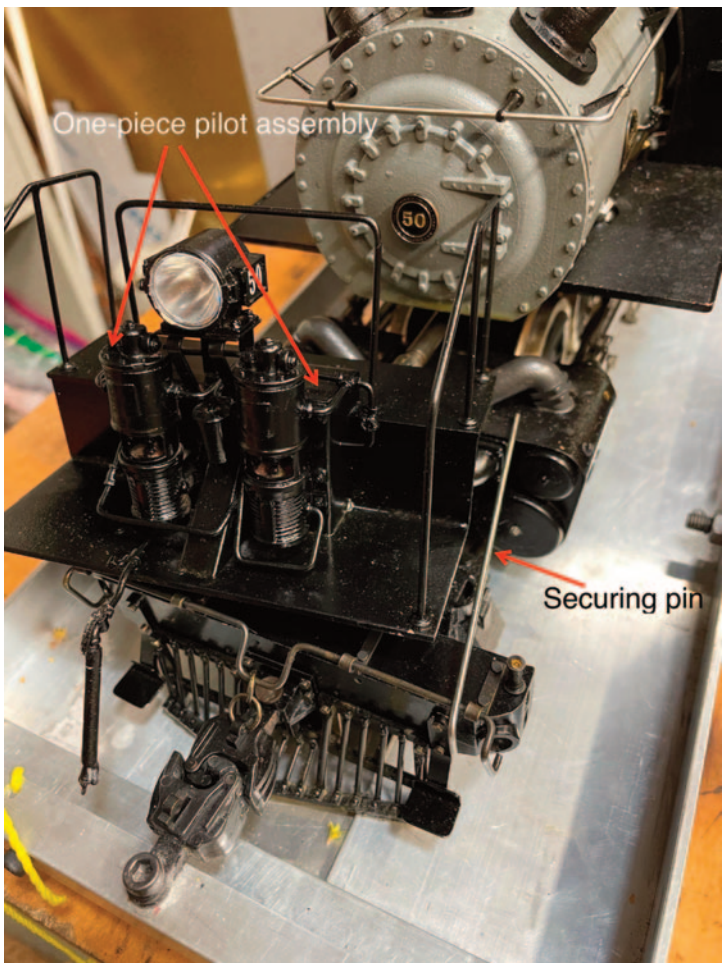
The second issue, and certainly more problematic, became evident during the second test run. The driver set closest to the firebox became loose on the axle. I knew things were going to get pretty hot in that area but melting the Loctite joint is something totally new! (*An aside: when using any Loctite retaining compound be sure that the stuff has not gone past its expiration date. Out-of-date compounds do NOT hold.*)

Wow, how to fix this? At the suggestion of some of my Bay Area live steam friends, I remounted and quartered each driver set on the rear engine and then drilled and tapped for a 2-56 screw at the interface between the axle and the driver. This prevents the driver from coming out of quarter, and also from slipping axially. It appears to have worked.

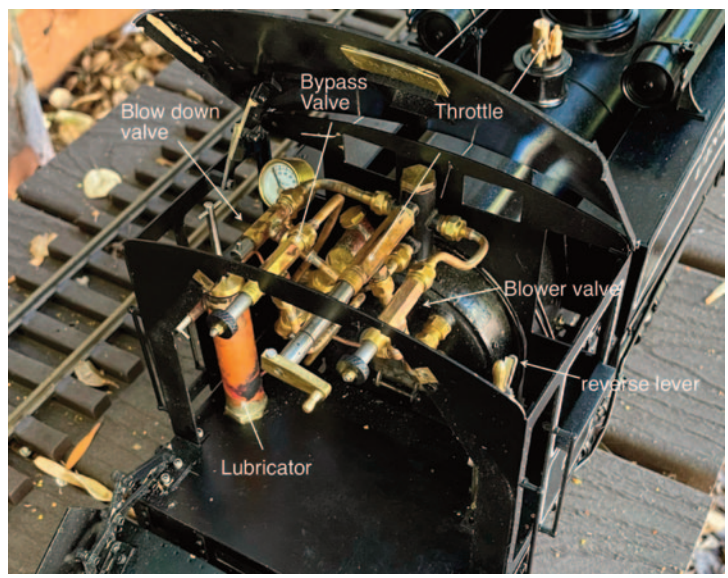


Rear Oil Bunker

Grate and Extension



Front Pilot Removal



Cab Controls

Wheel - Axle Fix

This two-year build has been quite a journey and I've learned a ton of things. And that's all we can hope for when undertaking something of this magnitude. Now on to my next challenge: going on a weightlifting program so I can heft the engine off of the workbench and take it to some steamups!

The glow of the grate along with the smell of the fire lets you know that this one is running on coal!

Kevin Schindler Photo

The Author/Builder keeps a close watch on his creation's public debut at the National Summer Steamup 2022.

Kevin Schindler Photo

Bob's Bit's

Weekend Projects for Steamers
by Bob Sorenson
Photos by Bob Sorenson

Building a Portable Layout
Part 4, Track and Wrap Up

Last time we finished up the layout to the point of installing track. Today we'll get the layout set up, install some track and get steaming. This layout is a plain circle, however straight sections are easy to add. Make straights the same way as curved sections. Everything is straight this time, no steep angle cuts, nothing goofy. Straights are 18 x 48 inches. Legs are the same as before. Make one leg for each straight section. **Photo 4-1** shows a bridge I want to incorporate into the layout. It is 50 inches long, so there is a corresponding 50-inch straight on the opposite side.


Photo 4-1

Now for track. The very best way to do track is call your favorite supplier and order all the rail, ties strips and other materials. Of course, that's too easy, so we'll hand lay the track. Hew at least 520 ties, ½-inch x ½-inch x four inches, additional for straight sections. Use ordinary framing lumber for the ties. Select nice tight grain. Use new lumber that still has some moisture. Old dried out material is difficult to spike and prone to splitting. Using a track gauge, layout one ties to use as master as shown in **Photo 4-2**. The black dots are locations for pilot holes to aid in spiking the rails. Notice that hole pattern is in the form of a trapezoid. This is the best hole pattern. Do not use a parallelogram hole pattern, trust me on this one. Drill pilot holes in each tie using a stop block jig as shown in **Photo 4-3**. Use the master tie to set the jig for the first hole. Drill all the ties with this setting. Relocate the jig to drill the second hole and so on. The "drill bit" is a half-inch long #20-gauge nail. Drill about 3/16-inch deep.

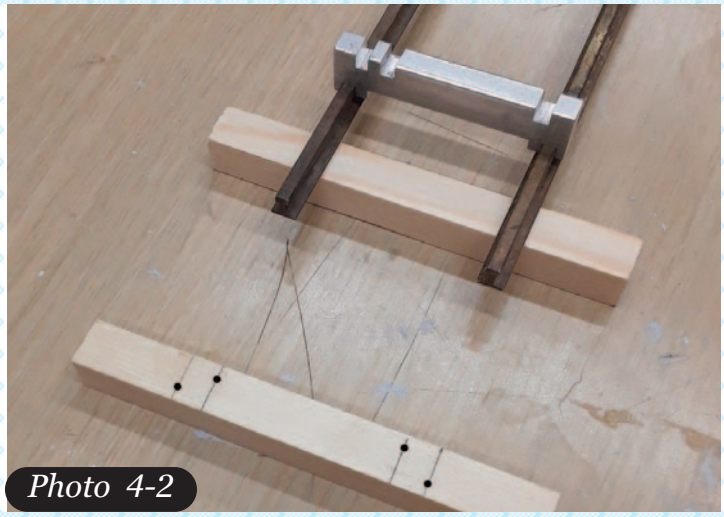


Photo 4-2

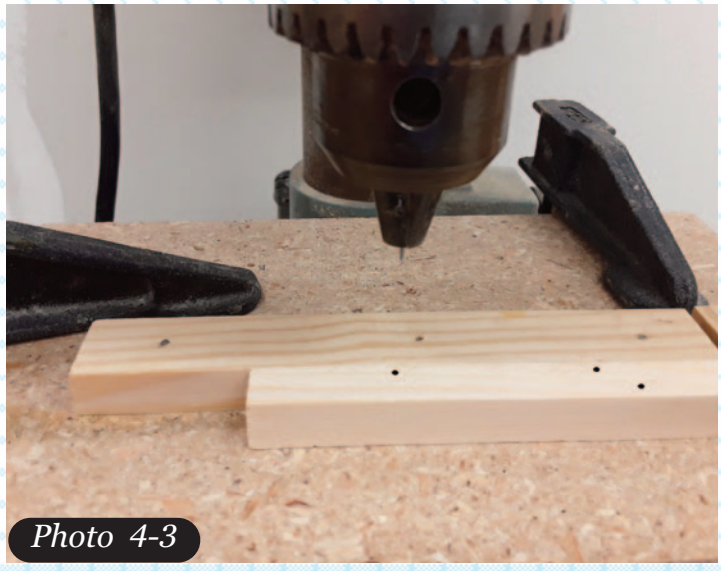


Photo 4-3

To accurately space the ties, make a full-size pattern of the track as shown in **Photo 4-4**. Either draw the pattern in a CAD program or use a trammel arm to draw manually. Make two patterns, one for the inside track and one for the outside. The centerline is the radius of the track section. The outer lines are the ends of the ties. Space the ties about 1-3/4-inch apart. Tape the paper pattern to a backer board and nail strip wood in place to hold the ties for spiking. **Photo 4-5** shows ties in place. Remember the trapezoid hole pattern drilled in the ties? "Point" all the ties in the same direction.

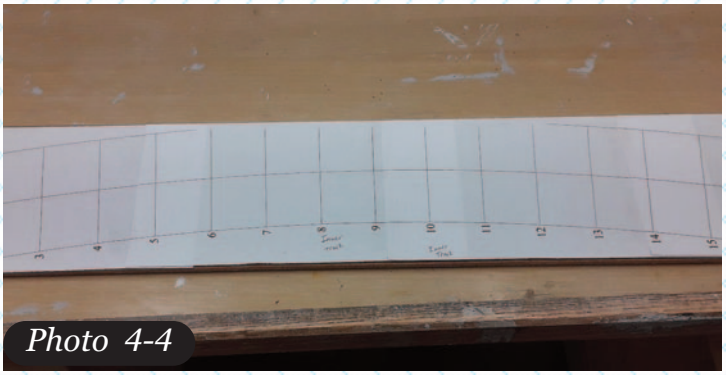


Photo 4-4

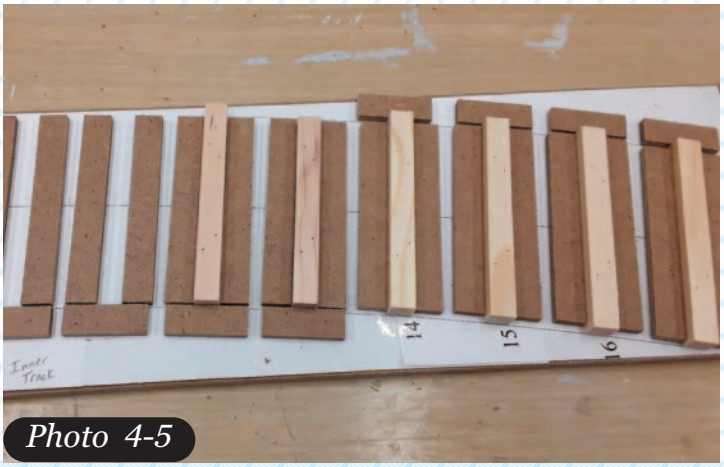


Photo 4-5

To assemble the track sections, cut the rail about one inch over length. Use a rail bender to curve the rail to the center radius of the track. Don't try to hand bend rail, a rail bender is the way to go. Lay out ties in the assembly jig and start spiking down the rail. "Spikes" are half-inch long #20-gauge nails. McMaster-Carr part# 97820A736 are the best to use. They come by the pound, with about 7,000 per pound. **Photo 4-6** shows the process. Use a forceps to hold a nail vertically and a punch to drive it in. If the spike is too hard to drive by hand, tap home with a hammer. Drive the spike in just enough to hold the rail firmly. The pilot holes in the ties provide very accurate gauging on the rails.


Photo 4-6

The backer boards I used for the track assembly jigs were a little too short and narrow to do a whole track panel in one set up. Didn't have any other materials left. Scooting the panel over and re-keying some ties to finish the track panels worked out just fine (**Photo 4-7**).


Photo 4-7

After spiking all the track panels, there was enough rail left over to dual gauge one track. To do this last-minute modification, sharpen the tip of a small screw driver to a very sharp point. Use a track gauge to hold the third rail and the sharpened tool to make pilot holes for the spikes, **Photo 4-8**. The hasty method for the third rail worked well and went quickly.

Photo 4-8

We are basically done with the layout. It's a matter of assembly, trimming and tacking the track panels in place. I used a 23-gauge pin nailer with three-quarter inch pins to hold down the track panels. 23-gauge pins are nearly invisible. Pinning every six ties is sufficient. There are two options for joining the rail sections together. One is the use of rail clamps and the other is slip joiners. Rail clamps are easier to fit, but look kind of clunky. I used slip joiners. New slip joiners are very tight and don't slip very well. Expand them out a bit with a screw driver tip to loosen them up.

This was a fun project. Lots of work, but the use of jigs and fixtures helped immeasurably. The only word of caution is to plan out very carefully, set up jigs accurately and cut a practice piece first. Make sure the practice piece is correct. Misplaced jigs can make industrial sized mistakes very quickly.

Here is a very interesting website by Mr. Jean-Pierre Duval in France, http://jpduval.free.fr Mr. Duval shows a neat portable layout concept based on rectangle sections. I bet his concept is based on standard material sizes available in Europe, but would adapt easily. Changing to 48" x 24" sections would produce a 48" track radius. That's pretty good. Mr. Duval's layout sections use integral leg assemblies too. If I ever do another layout, I might use his ideas.

Link to YouTube Video of Track in Operation:
https://www.youtube.com/watch?v=j2wmy4FSOCI

A Tale of Two Steamups

Text and Photos by Jerry Bohlander

September was rapidly approaching, and the summer was winding down, but my live steam group, Aikenback Live Steamers, headed by Mike Moore, still had two steamups scheduled. The first, over Labor Day Weekend (September 1 through 4, 2022), was at Pennsylvania Live Steamers (PLS) in Rahns, PA. The second was less than two weeks later. That one took place as part of the Edinburg, VA Ole Time Festival. This festival, in the Shenandoah Valley, is an annual event featuring many activities, including the Aikenback steamers running live steam on their Gauge One portable track on September 16-18 2022 for the crowds gathered for the festival.

The PLS steamup took place on the PLS grounds. This organization, established in 1946 on a five acre site, has over 3000 feet of track for the ride-on live steam and diesel aficionados. Several buildings support this activity. There is also a permanent 219-foot dual track Gauge One layout. In addition, the Aikenback group brings their portable two track layout and sets it up for additional steaming opportunities.

PLS has a large grass area adjacent to the facility where members may camp for these major events. I took that opportunity to bring my small camping van, packed with trains, and camped for a four day total immersion steaming event.

Arriving Thursday, we set up the portable track and began running, concluding on Sunday afternoon. We were blessed with (mostly) clear weather and moderate temperatures. Since this is a major event for PLS, there were many ride-on trains on their tracks from early morning to after dark, providing plenty of entertainment and a few rides for Gauge One folks as well. There are also members of the public permitted, and many families came to watch the steamers on both layouts. About a dozen Gauge One steamers came to enjoy this fantastic opportunity for fellowship and steaming.

The Edinburg Ole Time Festival attracts hundreds of people with lots of families with children. The track was set up at the base of a large lawn adjacent to a school. This allowed many people to visit and view our trains. The smiles on faces young and old was evident as our steam engines and consists ran around the double loop of track. About 10 steamers showed up to run their trains. Once again we had clear (hot!) weather and plenty of good country cooking to support our efforts. These events wound down the outdoor steaming season for our group, providing memories to keep us going until the steamups start again.

Rob Kuhlman (left) watches Mike Moore cruising with his Accucraft "Duchess of Atholl" on the portable Aikenback track set up for the Labor Day weekend at PLS.

The main in-ground layout of the PLS Gauge One track in the foreground with the portable track in the distance. There was a lot of opportunity for running with four mainlines available for steaming.

The author's Southern Pacific "Slim Princess" #9 putting on a show on the PLS Gauge One highline.

Rob Kuhlman doing some shunting on the portable track in the ample shade provided in the PLS park setting. Perfect weather for the weekend made for a fitting close to and end-of-summer meet.

A Bowande Decapod owned by Mark Layton making a run for the highline and bridge on the PLS Gauge One mainlines.

Steaming HQ for the Edinburg, VA Ole Time Festival show.

Looking like it just came out of the box for the first time an Aster/LGB Frank S. gets ready to make a few turns on the track for the visitors.

With full steam, Frank S. takes off with a young engineer in tow

A classic in action. Peter Thornton's Aster C&S Mogul with a proper C&S consist plies the track. It was a great end to the summer festivities.

THE CUPOLA VIEW

Clearing the Warehouse

With our transition to digital complete we now have to turn our attention to the backlog of paper issues in our warehouse. Simply put, they have to go. We have a special for orders of ten issues and need to clear out all paper back issues in our inventory. After 1 January 2023 the back issue order button on our website will go away and any unsold back issues will be sold off at a paper recycling plant.

We have placed all of the 2022 issues in our blurb.com/user/sitgeditor account, so after 1 January 2023 this is the only place to get paper copies. To answer the next question you may have, the answer is no, we will not be putting any issues older than 2022 on Blurb. The complete inventory of Steam in the Garden is available in our www.steamup.com archive. You just need the digital subscription to our website to have access to the entire collection and can print from the PDF for your own personal collection. Please note that the magazine is still protected by copyright laws in digital form and the printing and selling from an archive PDF is prohibited. Blurb is the only company that we have given printing rights to.

This will be my last editorial on the digital transition. I promise to get back to something more steam related in 2023. See you then! Happy Steaming!

Scott

Cupola view' is written by Editor Scott E. McDonald: you can contact him at sitgeditor@gmail.com or P.O. Box 1539, Lorton, VA 22199.

TIMETABLE

Special or Annual Meets

Cabin Fever Model Engineering Show January 13-14 2023 - Lebanon Valley Expo Center & Fairgrounds, Lebanon, PA. Gauge One Tracks available for steaming. Visit *www.cabinfeverexpo.com* for more information about 2023.

International Small Scale Steam Steamup. Cancelled until new venue is found - 103 Live Oak Drive, Diamondhead, Mississippi. Visit *www.diamondhead.org* for more information.

Staver Locomotive Spring Steamup, April 27-30 2023 - Staver Locomotive, Portland, Oregon. Visit *www.staverlocomotive.com* for latest information.

Spencer Shops Steamup, 1 - 5 March 2023 - North Carolina Transportation Museum, Spencer, NC. Watch *https://www.nctransportationmuseum.org/* website for more information.

National Summer Steamup, July 12 - 16 2023 - Lodi Grape Festival and Events Center, Lodi, California. Visit *www.steam-events.org* for more information.

The Seventh Annual Gathering of North American members of the Association of 16mm Narrow Gauge Modellers, 2023. - Visit *www.northamerican16mmmodellers.org* for registration and venue information.

Regular steamups

Crescent City High Iron. Steamups as necessary on an elevated backyard layout on Northern California's upper coast. Info: Don Cure, diamondd1947@msn. com.

Greater Baton Rouge Model Railroad Club Open House and Gauge One Steamup. Info: Ted Powell, (225) 236-2718 (cell), (225) 654-3615 (home), *powell876@hotmail.com*.

Puget Sound Garden Railway Society. Two steamups per month, one at the Johnsons' on the second Saturday and a steamup at a member's track on the fourth Saturday.
Info: *http://psgrs.org/* or call Pete Comley at (253) 862-6748.

Southern California Steamers. Contact Jim Gabelich for dates, places and other pertinent information. (310) 373-3096. *jfgabelich@msn.com*

DIAMONDHEAD

♦ International Small Scale Steamup ♦

January
14-21
2023

Important Contacts

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15616 Hwy 1085
Covington, LA 70433
985-867-8695
k5pat@bellsouth.net

Richard Jacobs, Manager
504-343-8091
trainmax@yahoo.com

Cancelled

DIAMONDHEAD INN & SUITES
DIAMONDHEAD, MS
228-255-1300
Fax 228-255-9848

For more information and registration forms, visit: www.diamondhead.org

ASTER HOBBY

ACCUCRAFT TRAINS

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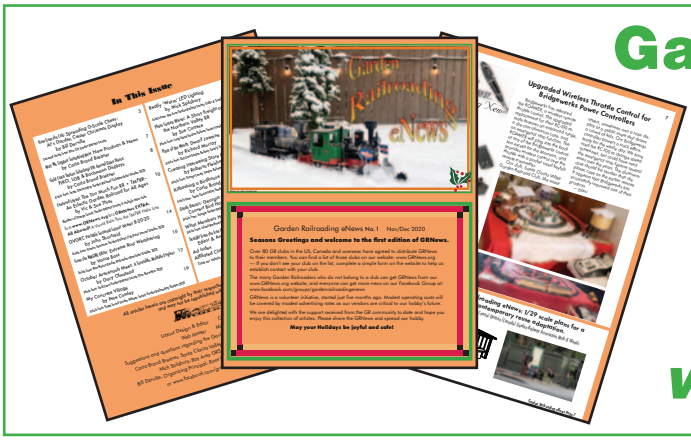
LIVE STEAM GAUGE ONE LOCOMOTIVES



Garden Railroading News

A free bi-monthly digital magazine

G-Scale layout tours, tips, and how-tos shared by 110 garden rail clubs in North America and overseas — and providing sources and product news for GR supplies to help you build your G-Scale layout!

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CONTRIBUTOR BIOS

The magazine couldn't exist if it were not for the dedicated individuals who take time from the hobby to chronicle their endeavors, interests, and joy of live steam. If you get a chance to meet any of our contributors at a steamup, please thank them for their contribution.

Jerry Bohlander - Jerry is a retired ocean engineer, having spent 35 years with a U. S. Navy laboratory doing research on materials engineering. His foray into garden railroading started when he saw Goose #5 in Delores, Colorado on one his many camping and exploring trips out west. He soon discovered that his wife's love of gardening could be applied to a backyard layout. He found live steam through the many friends that the hobby has given him, and was hooked. He had the good fortune to find live steam fellowship with the Aikenback Live Steamers, and attends many steamups, as well as running live steam on his Spa Creek and McKendree garden railroad, and recently he built his first live steam kit.

Rob Lenicheck - Being a Colorado native, Rob Lenicheck was born with narrow gauge steam in his blood. He started modeling in HO in junior high, thanks to a suggestion from a "friend", moving on to HOn3 in high school, and finally to On3 in his early twenties. Unknown to Rob at the time, the Gauge One live steam hook was set deeply about 20 years ago when that same "friend" revealed his collection. Rob now spends much of his time scratch building engines. He has degrees in Music Education and Mechanical Engineering.

Joe Rothwell - Joe started building models as far back as he can remember, mostly due to having an older brother. He would simply follow his brother's lead. Plastic kits gave way to balsa/tissue planes. U-control planes gave way to R/C planes. The family always had a train set, O scale at first (both wind-up and electric), then HO and ending with N scale. Joe now has a 4-foot x 6-foor table top N scale layout, running mostly NYC equipment. Steam interest was rather late; he purchased his first engine in 2006. Joe finds the hobby very satisfying and still looks forward to working on the various projects he has lined up. In real life Joe is a land surveyor in order to foot the bills.

Ross Schlabach - Ross developed an early interest in trains, and even got a steam locomotive cab ride before he was five. His first models were an American Flyer set, and by his early teens, half of his bedroom was taken up by an HO layout. During high school and college, classical guitar got in the way. Upon graduation from Virginia Tech, Ross joined the Air Force and piloted the F-106 Delta Dart. This gave him the opportunity to fly cross country on a number of occasions, including to Colorado where he got his first exposure to narrow gauge -- which has been a major focus of his railroad modeling ever since (with a bit of 1:32 thrown in for good measure). Since his retirement in 2007, the absence of quality kits pushed Ross into custom modeling and LS locomotive bashing to create the models he wants.

***Your Name Can be on this Page!* -** The whole world is waiting to hear from you! We are always looking for Live Steamers to share their thoughts, experiences, projects, latest acquisition... The list goes on!

We need Locomotive Reviews, Tips & Hints, Steamup Reports, etc. All contributors are compensated for their submissions. Submitting is easy. Just e-mail your idea to sitgeditor@gmail.com and we'll work with you to bring your article to our pages. Visit www.steamup.com to view our Contributor Guidelines to see how easy it is to show the world your small scale live steam interests!

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Issue #183
January/February 2023

A Primer on Bushings
by Les Knoll

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