BAY AREA GARDEN RAILWAY SOCIETY

TRELLIS AND TRESTLE

MAY 2024

In This Issue...

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PRESIDENT'S PERSPECTIVES

GOOD NEWS TO KEEP 2024 ROLLING

OPEN RAILROADS - MAY THRU JULY

The schedule is set. 20 railroads will be open covering all 7 new Areas. See the calendar on the next page.

PROMONTORY DAY - SATURDAY MAY 11

A reenactment of the driving in of the golden spike to complete the transcontinental railroad is the centerpiece of an open RR party on Saturday May 11. Full details inside this issue.

HOW TO BUILD YOUR OWN STRUCTURES - SATURDAY MAY 18

Master Structures Builder, **Claude Leglise**, is hosting a clinic on this topic for up to 10 members at his home workshop in Portola Valley starting at 1:30pm. See how to sign up in this issue.

DATE SET FOR SWAP MEET/ACCUCRAFT OPEN DAY

Bing Cheng has agreed that we can meet at Accucraft on **Saturday September 28.** Mark your calendars now!

NEW EDITION OF GARDEN RAILROADING NEWS OUT

The new edition (2024 #2) features a garden railroad celebrating its **100th anniversary!**

No, that is not another Mick-typo. The **Fairplex Garden RR** was born in 1924 and has become a fixture at the annual Los Angeles County Fair in Pomona. 10,000 feet of G-scale track , 30 trains & 250 buildings delight thousands of visitors to the multi-week fair.

MEMBERS STEP UP

After Joe & Amber Bryce's RR was significantly damaged by a lightening strike on a nearby Redwood Tree and hail, a call to help them repair their RR was answered by 5 members. The work has been delayed but it was heartening to see members step up to help.

OPEN RAILROADS MAY - JULY

This is the schedule. It is of course subject to change based on the vagaries of life. However, upcoming open railroads will be featured in each edition of *T&T* and any changes will be reflected therein, so we will all have final information month by month. (We no longer send open railroad postcards which have been replaced by the great information in *T&T*)

BAGRS OPEN RAILROADS - MAY THRU JULY 2024								4/30/2024
May 11	June 1	June 23	July 13	July 28	Name	Email		Both Days?
Saturday May 11					Joyce Hennessey	metronome7@aol.com	El Cerrito	No
	Saturday June 1				Paul Wallace	pwallace@outlook.com	San Carlos	No
	Saturday June 1				Robert Burrill	Robert.Burrill@me.com	Milpitas	No
		Sunday June 23			Dart Rinefort	dartdot@comcast.net	San Rafael	No
		Sunday June 23			Bob Guinan	bobguinan@comcast.net	Novato	No
		Sunday June 23			Mick Spilsbury	president@bagrs.org	SanRafael	No
		Sunday June 23			Michael Laine	michaeldlaine@gmail.com	San Jose	No
		Sunday June 23			Ray Turner	rayjturner@ieee.org	San Jose	No
			Saturday July 13		Rich K Johnson	rjlatheart@gmail.com	Los Banos	No
			Saturday July 13		Ron Malouf	rcmalouf@onebox.com	Burlingame	No
			Saturday July 13		Richard Murray	steamer060@sbcglobal.net	Millbrae	No
			Saturday July 13		Thomas Elam	thomas_elam@yahoo.com	Belmont	No
			Saturday July 13		Bill and Katy Ackerknecht	willeacker@aol.com	Santa Cruz	No
			Saturday July 13		Jim Hays	jamesohays@sbcglobal.net	San Jose	No
			Saturday July 13		Gene Rickey	gene@rickeyfamily.net	Campbell	No
			Saturday July 13		John LaBarba	fjohnlab@earthlink.net	Santa Cruz	No
				Sunday July 28	Lawrence M. Silverman	LMSMD@outlook.com	Danville	Yes
				Sunday July 28	James P Burke	Jim@burke-design.com	Vallejo	No
				Sunday July 28	Don & Becky Herzog	beckyjoherzog@gmail.com	Sebastopol	No
				Sunday July 28	Robert Elia	rj67lfelia@msn.com	Gilroy	No

VISITING OPEN RAILROADS

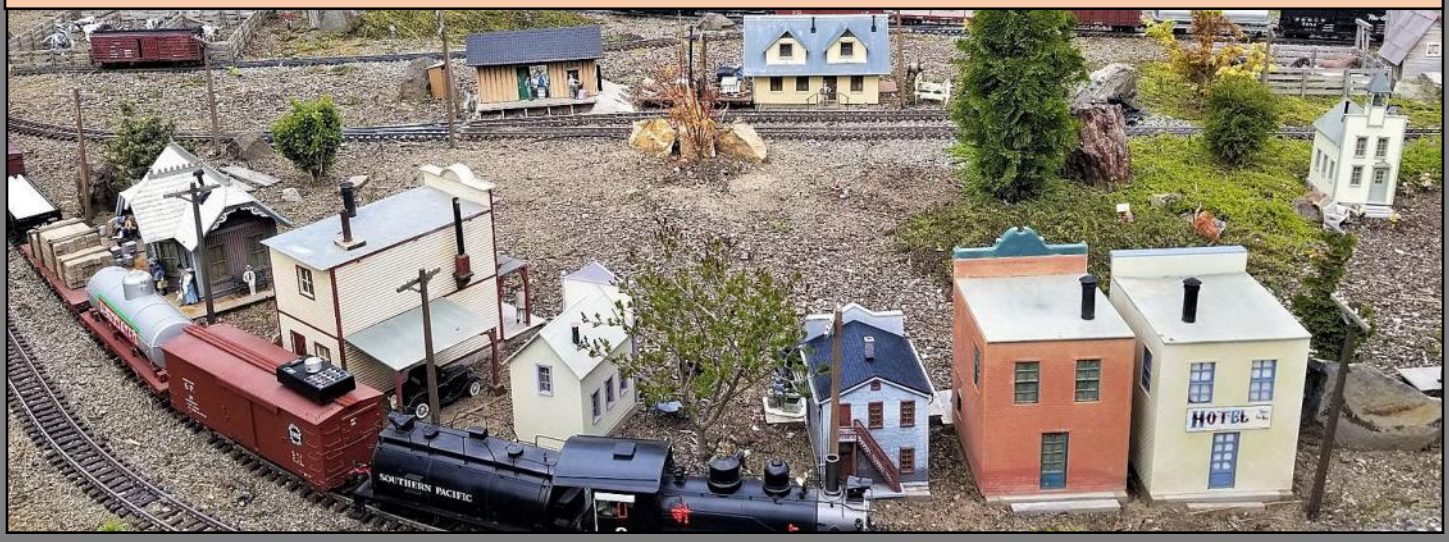
- ◊ Railroads will be open from 10 am to 4 pm unless otherwise noted in T&T.
- ◊ BAGRS members are encouraged to wear their BAGRS badges.
- ◊ BAGRS Members are welcome to bring guests (especially prospective members!).
- ◊ If you want an unaccompanied prospective member to visit a railroad, you must get the railroad owner's agreement in advance.
- ◊ Closely supervised children (no touching/running/shouting) are also welcome unless noted otherwise in T&T.
- ◊ Railroad owners often provide water/light snacks but this is not a requirement, so visitors are encouraged to bring water. Sunscreen and hats are also recommended.
- ◊ Please get the railroad owner's agreement to take photos before you start snapping.

INTERESTED IN HELPING TO RUN OTHER MEMBERS' RAILROADS?

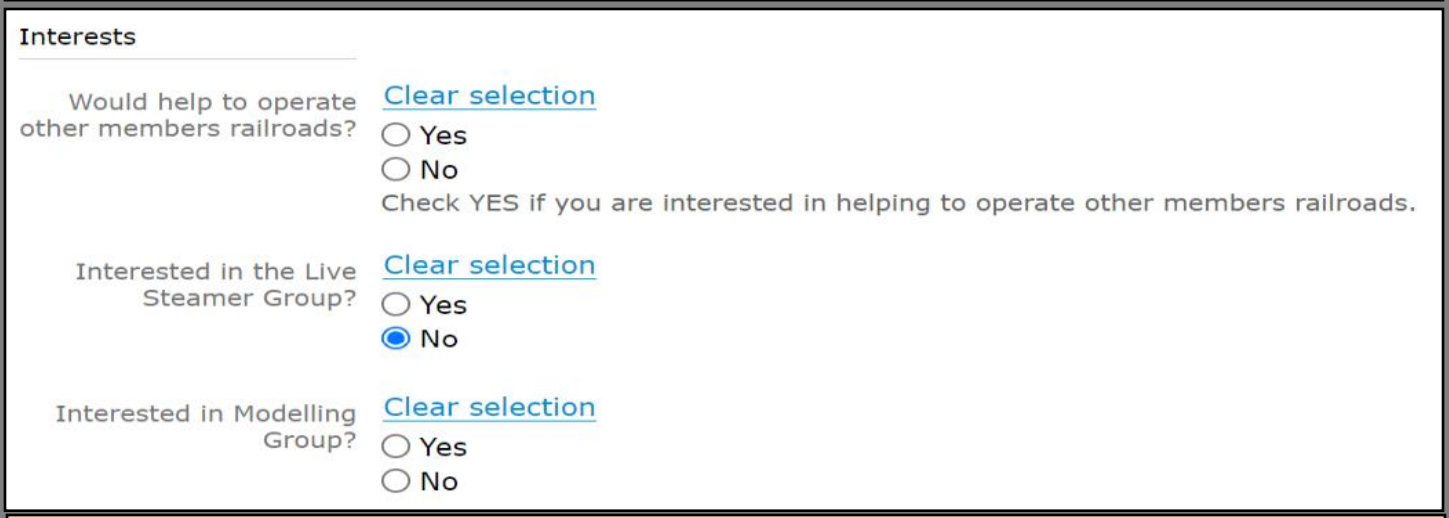
Members with railroads often need help to run their railroads on open days. During an open day, railroad owners get asked lots of questions, so it's really helpful if someone else is operating the railroad. Some railroads need multiple operators. Help doing test runs before visitors arrive is also appreciated.

Beyond open days, some railroad owners have operating days for their family and/or friends or simply to have fun seeing their railroad running, and need help then.

We also know that there are members who would enjoy helping to operate railroads.



To make it easier for members with railroads connect with members who would enjoy helping them operate their railroad, we have created a brand new field in member's profiles. The new field is in the 'Interests' section of your profile.



If you are interested in helping to run other members' railroads, log in to the BAGRS website at www.BAGRS.org and check 'Yes' in the new field.

From the Editor's Desk

Roger Nicholson grew up in Fremont, California, and operates the *Crystal Cove & Rose Railroad*.

- **On the Cover:** An abandoned mine car sits on a decrepit old mine on Bill Ralph's *Porcupine Gulch Railroad*. Judging from the looks of the mine car, it was resin 3D printed by Bill's brother Jim. (I know this, because Jim gave me several of these same mine cars.) Photo by Jeff Namba.
- **We begin our season of open houses and outdoor events starting this month.** Thanks to everyone who has volunteered to open their railroad or host an event. I know that there is a lot of prep work involved, but these events are really one of the major features of our club, and they also help bring new folks into the hobby. We have some exciting open houses coming up, including a few "first time" open houses. The open houses for the next four weeks will be prominently featured in the *T&T*. As a reminder, I will send your open house page to you for review prior to its publication in the T&T. This is your opportunity to change the photo or description of your layout.
- **This month I begin including some regular articles on 3D printing for the garden railway.** 3D printing provides a way to create items that we simply cannot buy on the market. I'm starting with an existing design: the OpenRailway EMD SW 1500 in 1/32 scale . Since the original design is for a static display model (although others have modified it to accommodate several different types of motors), I am modifying the design to allow the locomotive to use USA Trains motor blocks and light up. I am then scaling the design up to create a 1:29 scale model of the same locomotive. I even bought an airbrush and plan to teach myself to paint it in SP colors. I will write a series of articles about how I am doing all of this, as well as articles related to other 3D printing projects related to garden railways.
- **Unfortunately, I cannot open the Crystal Cove and Rose Railroad during the first three month block**—too many travel plans, including a coast-to-coast driving trip and a cruise. I do, however, plan to be open during the second three month block, and will likely host a clinic and/or gathering during that time. I'll figure it out…Stay tuned! Roger ■

PROMONTORY PARTY/OPEN RR—Saturday, May 11, 2024

11:00 a.m. to 3:00 p.m.

All BAGRS members invited

Joyce Hennessey & Bill Lavender are opening their railroad and hosting a Promontory Party to celebrate the historic Transcontinental RR Golden Spike connection of the Union Pacific and the Central Pacific railroads at Promontory Summit, Utah.

Costumes are welcome—come in jeans as a worker or in historical costumes. We have the script for the reenactment and will choose parts and act it out. We have both the Jupiter and the 119 model locomotives (track powered). Our railroad is 200 feet of track, "A Southern Pacific Railroad Folly in Gopher Hills". Prize for the best costume! It's the day before Mother's Day. We hope to have live music and train songs.

Location: 7324 Pebble Beach Court, El Cerrito, CA 94530

When: 11 a.m. to 3 p.m. on Saturday May 11.

Help setting up both in the 2 weeks before the event and on the morning of the event would be very welcome.

If you can help or want more information, you can contact Joyce at metronome7@aol.com or by leaving a message at **(510) 239-9082** (Note that cell reception is not great at Joyce's, so if she does not pick up, just start talking, then she will know you called.)

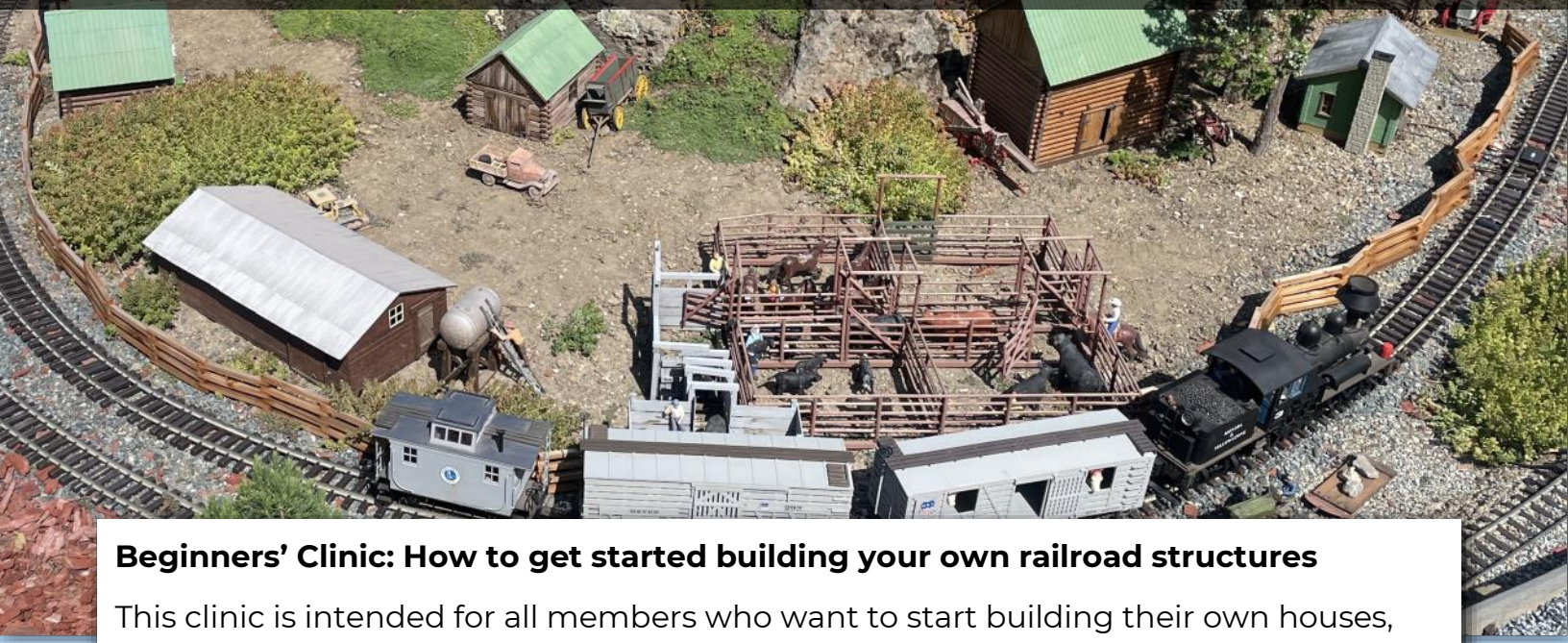
RSVPs would be helpful too via either of the 2 methods above.

CLINIC—Saturday, May 18 2024

How to get started building your own railroad structures

1:30 p.m.

10 person limit—please RSVP



Beginners' Clinic: How to get started building your own railroad structures

This clinic is intended for all members who want to start building their own houses, cabins, bridges, bumpers, turntables, etc. All BAGRS are welcome, and new members are encouraged.

Topics we will cover:

- Tools required to get started, and tools to add to a future wish list
- Dimensions: what is G-scale anyway and how to figure out building dimensions
- How to build simple jigs to ensure repeatability

The clinic will be held in my workshop in Portola Valley at the home of the **Monida and Yellowstone Railroad**. I will be able to show the tools, some basic techniques, and examples of finished construction.

Due to the relatively small size of my workshop, attendance is limited to 10 people, first registered first served. If popular I will hold the clinic again later this summer. There will be plenty of time for questions and answers.

When: Saturday May 18, 2024. Starts at 1:30 pm.

Where: My workshop in Portola Valley, CA (email for address)

To register, simply send me an email at claude@leglise.com

OPEN RAILROAD—Saturday, June 1, 2024

10:00 a.m. to 4:00 p.m.

White Oaks and Eaton Railroad

Wallace—2052 Eaton Ave, San Carlos, CA

The White Oaks and Eaton features a garden railroad in 12” gauge that circles the house. The locomotive is an Ottaway steamer.

OPEN RAILROAD—June 1, 2024

10:00 a.m. to 4:00 p.m.

Rural Burrill Garden Railroad

Burrill—817 Calero Street, Milpitas, CA

The **Rural Burrill Garden Railroad** is a homage to the Maine Central Railroad depicting the years that my grandpa Charley Burrill worked track inspection:(1890–1941). Come meet Charley in the studio through his photos. In 1995, LGB tracks were laid out by sight into a right-of-way found by removing edgestones of a meandering walkway, then over a fishpond to tunnel 25 feet to complete the first loop. SP railroad tie-ends form a series of walking paths to follow 5 AirWire controlled locomotives powered by Li-ion batteries.

See this railroad on YouTube:

Rural Burrill Garden Railroad at the 2023 National Garden Railway Convention

The Rural Burrill Garden Railroad—A Retrospective

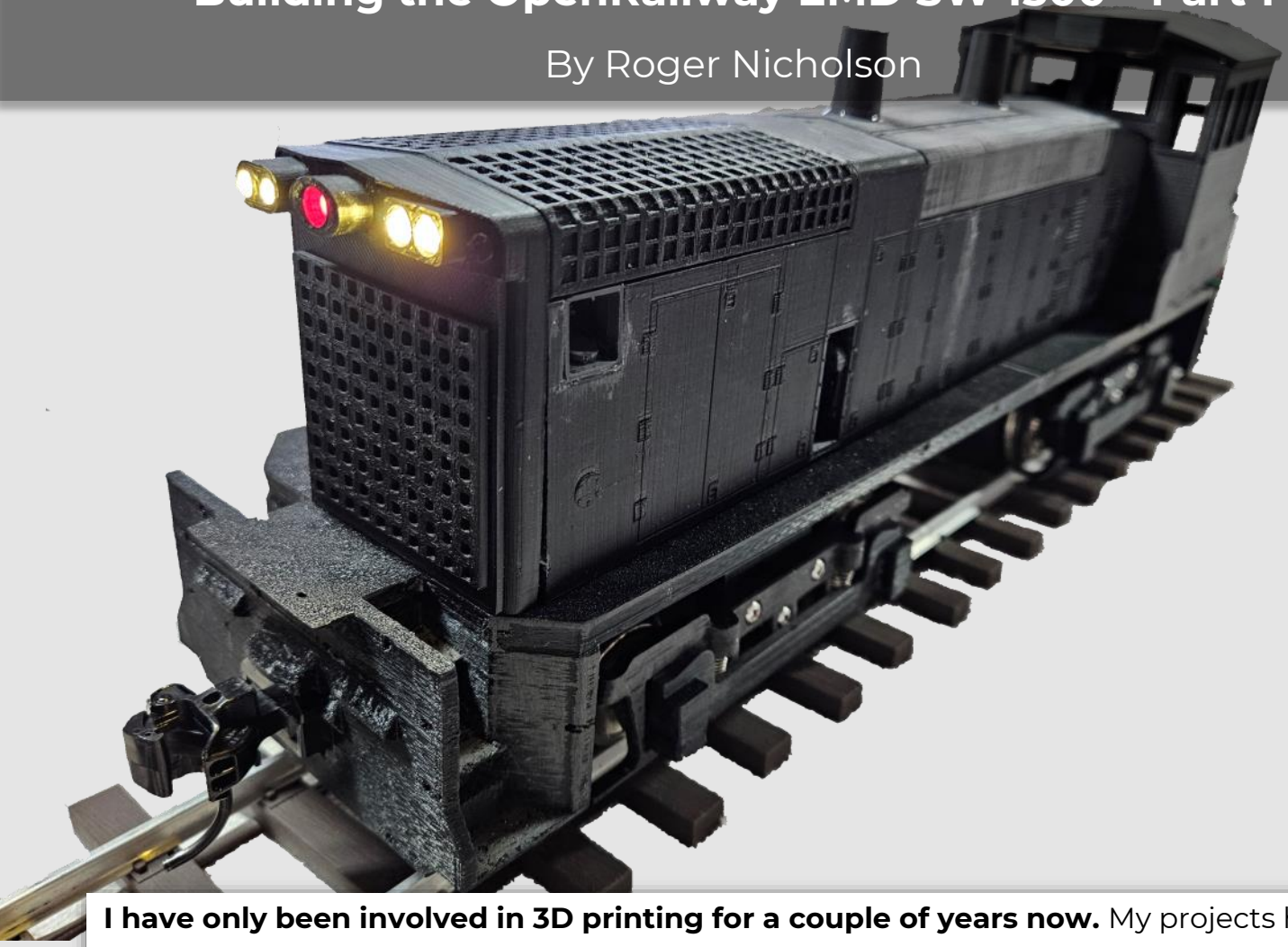
America's First Streamliners. Lifting the Spirits of America 1934–35

Photo by Jeff Namba

THE 3D PRINTING DEPARTMENT

Building the OpenRailway EMD SW 1500—Part 1

By Roger Nicholson



I have only been involved in 3D printing for a couple of years now. My projects have generally been fairly simple so far, such as platforms and switch holders to assist in my battery conversions. So when I was asked if I could print a couple of locomotives, I considered it a worthy challenge. I received two requests: an EMD SW 1500 diesel switcher in Southern Pacific configuration, and a Krauss Maffei Diesel Hydraulic locomotive, also in SP configuration. I decided to start with the smaller one first—the one that I *didn't* have to design from scratch. Many of you have probably seen the OpenRailway EMD SW 1500 in 1/32 scale locomotive that was designed and made available by Daniel Noree. This design has been publicly available for a few years. This looked like a great starting point to try my hand at printing an entire locomotive.

3D Printing for the Garden Railway

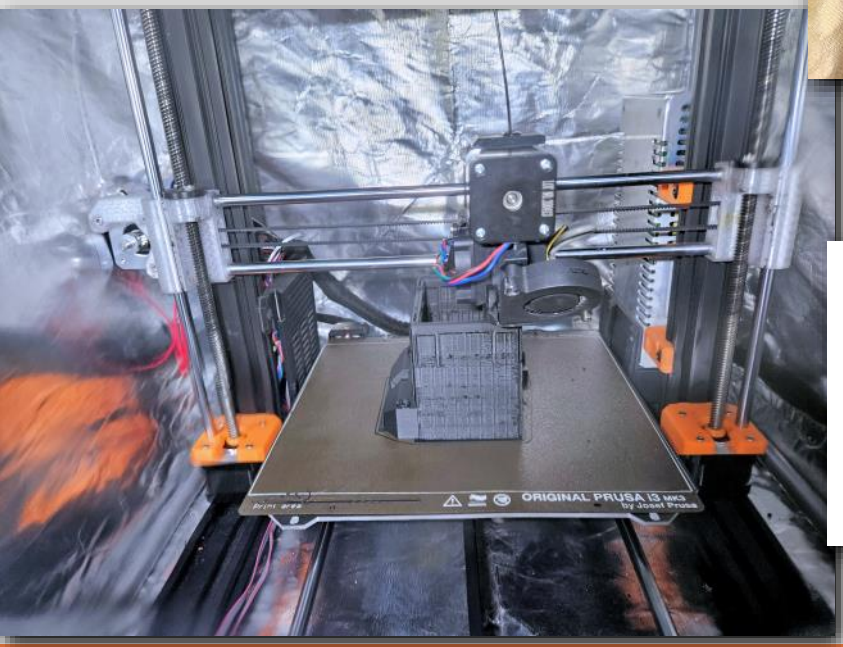
Before we talk about the SW 1500, lets talk a bit about how 3D printing can be used on the garden railway. 3D printing is a boon to garden railroading as it allows us to create entirely new pieces or objects that are either no longer sold, or have never been sold by the major garden railroad vendors.

3D printing can be very rewarding and a lot of fun. You can select designs that are made publicly available on the internet (such as the OpenRailway EMD SW 1500), or you can use design software and create your own. The possibilities are endless. I am already working on a design for a Krauss Maffei Diesel Hydraulic locomotive—you can find them in HO scale, but not G scale. Also my future plans include designing a water tender for a Challenger in 1:29 scale and a plow for a USA Trains PA-1.

There is a learning curve understanding how the printer works, and finding the correct temperature and speed needed to print certain objects or materials. Even the orientation of the model on the print bed can make a huge difference between failure and success.

A pair of 3D printed plows in ABS plastic for a USA Trains F3A. These were sanded, primed and painted.

This printer is printing a replacement power truck box to repair a broken one on an early Bachmann 2-Truck Shay.



This printer is building a cab for the 1:32 scale SW 1500. The exterior is obscured by temporary supports which hold up horizontal surfaces during the print process. These supports will be removed when the print is complete.

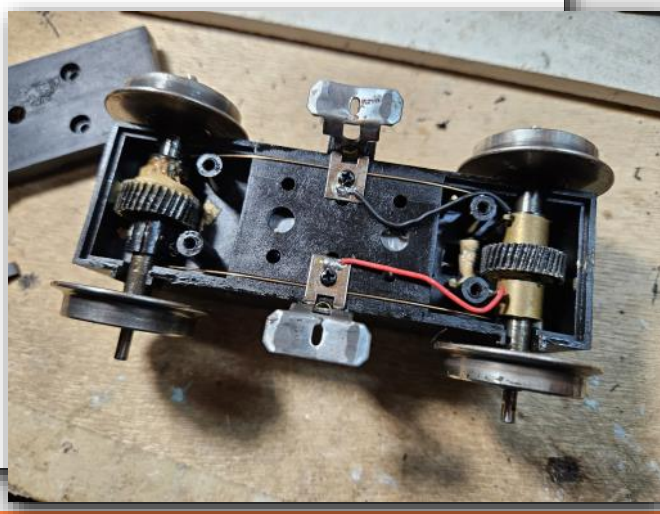
Material used to build the SW 1500

The first decision I made was to print this model in Acrylonitrile Butadiene Styrene (ABS) plastic rather than using the more common Polylactic acid (PLA). ABS melts at a higher temperature than PLA, and is more flexible. I can print very thin structures in ABS that remain quite strong and will not easily break, whereas PLA tends to be more brittle. ABS also sands easily, and visually resembles the plastic used in injection molding for locomotives. Printing in ABS is more challenging than PLA for a variety of reasons, so I had to do quite a bit of experimentation to get my printing recipes correct. I printed all of my ABS parts at 255 degrees F in an enclosure to minimize warping of the print, and also since the fumes from ABS are a bit toxic. I placed my printers in my garage so that I would not be exposing my house to ABS fumes.

Power trucks for the SW 1500

The next decision I had to make was how to power this model. I needed some power trucks. Fortunately, I had just attended the Great Train Show in Santa Clara, and while there I had acquired two used USA Trains R22-12 4-wheel power trucks for a reasonable price. I had no idea what I was going to use them for at the time—they just looked like a good deal that I couldn't pass up.

Soon after I purchased them, I did discover that the power trucks had several cracked axle gears, which allowed some of the wheels to turn freely. Since this is a fairly common problem, it is worth noting how to fix it. This is a fairly simple repair using brass sleeves. Simply cut some appropriately sized brass tubing to the proper length, insert it over the cracked plastic and then reinsert the wheel axle. The sleeve will compress the plastic onto the axle and grip the wheel, which will no longer turn freely. In this photo, you can see that I had to repair several of the axle sleeves on this power truck.



I repaired both power trucks and set them on my shelf to wait for a future project. When the SW 1500 project came along about a week later, these power trucks looked like they would be perfect for the job. I couldn't have planned this any better if I had known what I was going to be doing in advance.

Figuring out how to attach power trucks to the model

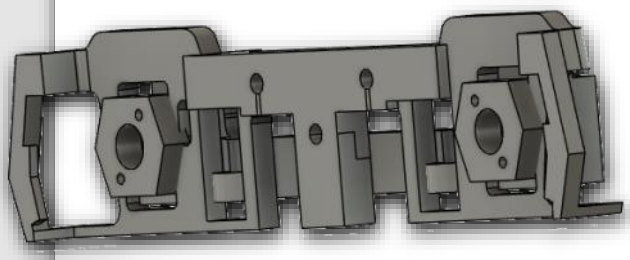
Now, I eyed these power trucks and wondered if they would fit the SW 1500. I had printed half of the SW 1500 base frame as a test. Placing the power truck under the frame, it immediately became apparent that there would be no clearance for the power truck to rotate due to the position of the frame rails. Also, the original design was set up to accept a "turret." The problem with a turret connection is that it does not allow the power truck to tilt along two axes and will result in derailments. There has to be a bit of play in all directions in order for the truck to deal with track imperfections.

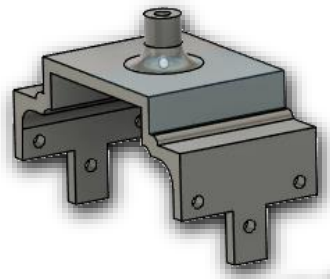
Since my power trucks had no mounting fixture, I decided to design one of my own that was more similar to what USA Trains uses. Therefore, I had to redesign the SW 1500 base frame to accept this design. That meant removing the hole for the turret and replacing it with a smaller opening with a bearing surface.

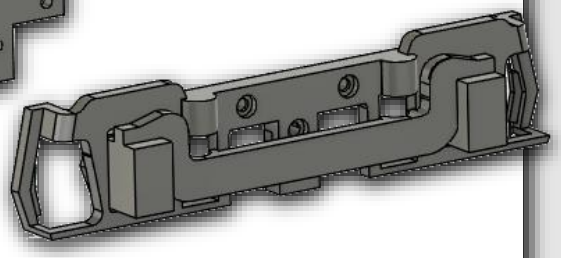
The frame rails in the original design (seen on the right in this photo) were also too tall, and too close together to allow these power trucks to fit and rotate. I modified the design to reduce the height of the frame rails, and moved them further apart from the center. I added a second opening for the motor wires that would come up from the power trucks into the locomotive body.

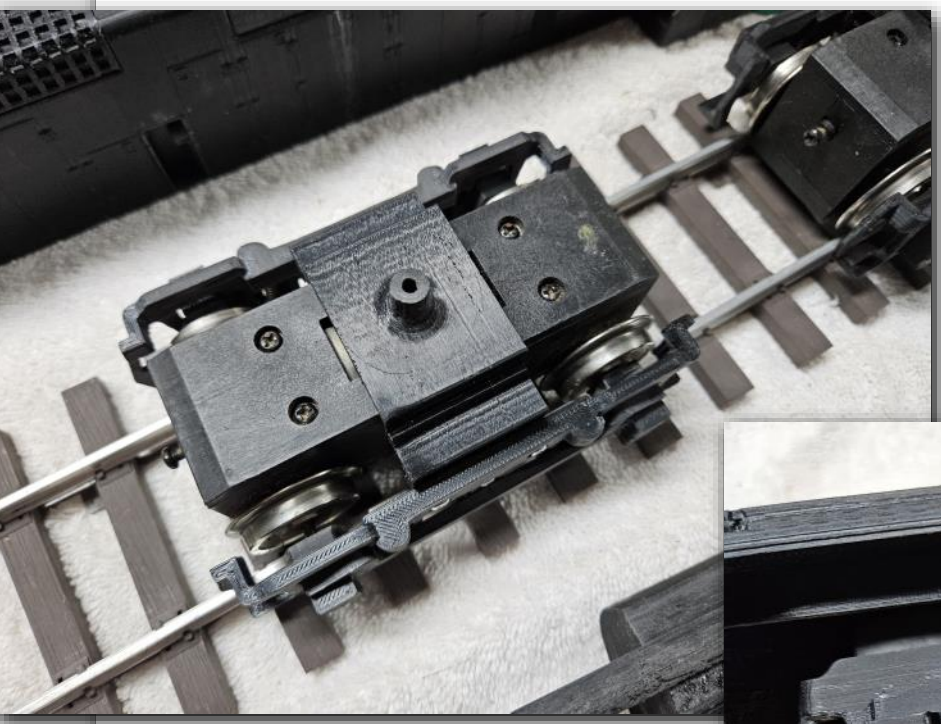
The next question was: Were the USA Trains R22-12 power trucks the right scale for this 1:32 design? I printed out one of the plastic side frames from the SW 1500 design and lined it up with the USA Trains power truck axles: The axles matched up exactly. I concluded that the power trucks would be "close enough" to the correct scale for this design. When I scale the design up to 1:29, I will use USA Trains R22-115 2-axle motor blocks, which have a slightly longer wheelbase than the R22-12.

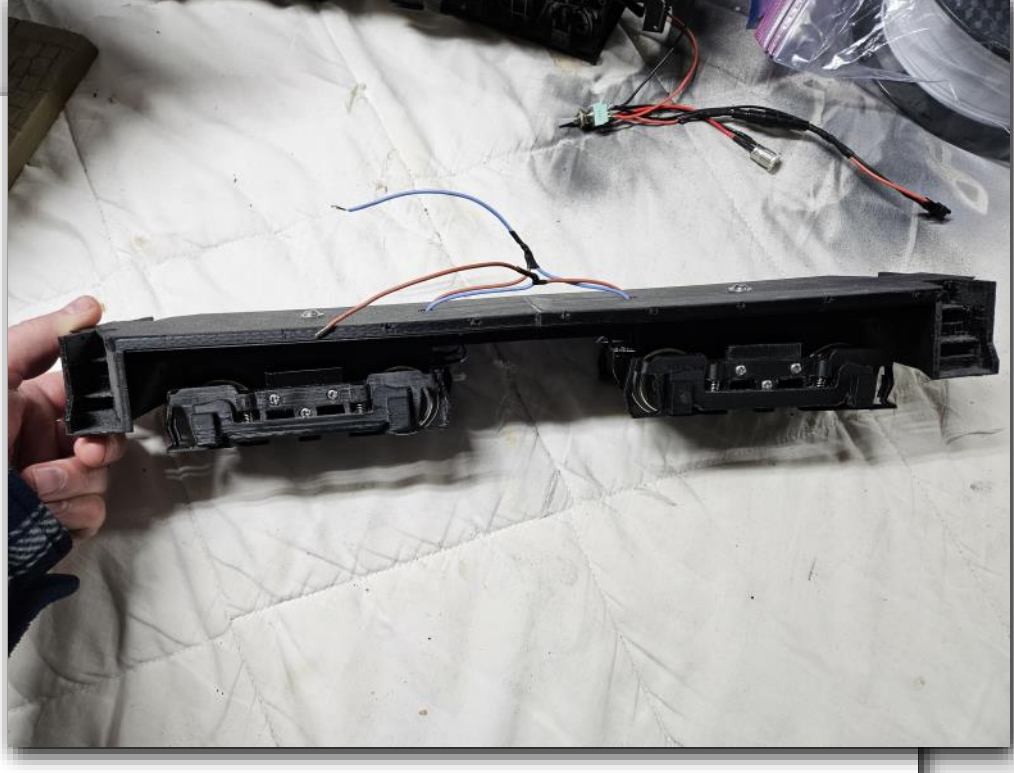
The plastic printed side frame from the SW 1500, however, was not designed to fit the USA Trains power truck—at least, not without some work (someone has actually done it and posted their design online, but it was designed with a “turret” to fit the original design.). The side frames in the original design were also a single piece of plastic, and I wanted sprung frames similar to what is on my USA Trains S4. I decided to design and print my own side frames. I had to create a design that would be amenable to being 3D printed in ABS material, so my side frame is less detailed and simpler than a real USA Trains side frame. I finally came up with a four-piece side frame, which could accommodate springs and steel ball bearing inserts to hold the axles. It does not have power pickups from the wheels, and I had to add full enclosures for each end of the springs to hold them in place. I also designed the mounting bracket to attach the side frames to the modified locomotive base. Below you can see the design that I created and the printed parts that were produced from them.











Once I got all of the side frame pieces to print correctly (after many failed iterations), it fit onto the USA Trains R22-12 motor block perfectly. I was quite happy with the result. I was now able to mount both of the USA Trains power trucks to the full locomotive base.

I printed out both halves of the locomotive base and connected them together using stainless steel brads with the ends cut off as guide pins and epoxy. This method seemed to work quite well.

A test run of the partially completed model

Since USA Trains power trucks are exceptionally easy to wire up, I built a simple motor wiring harness and connected the two motors together. This design would be very easy to convert to track power or DCC as well, since the USA Train power trucks provide separate pins for motor power and track pickup, but you would need to use real USA Trains side frames with proper power pickups in order to do this.

Just to prove it all worked, I hooked up a switch/charging harness, an AirWire G3 board and a Li-ion battery pack and ran it on my layout. It may not look like much at this stage, but it worked just fine!

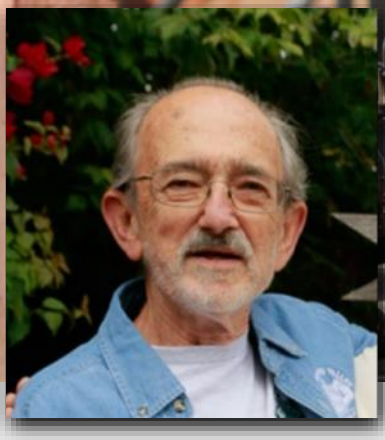
Coming up in Part 2: We start working with body parts!

Trust me . . . it will be more fun than it sounds! ■

Carnivale on the Green: A Railcar Based Traveling Carnival

Rail Car: THE WHEEL OF DEATH

By Jim Ralph



Jim Ralph is a member of BAGRS and the *Sacramento Valley Garden Railway Society*, and is the brother of BAGRS member Bill Ralph.

The WHEEL OF DEATH was a very short-lived motorcycle exhibition structure early in the rapidly evolving world of stunt performing venues. When the newly invented internal combustion engine was added to the bicycle, the carnival world took note. Seeing the public's fascination with this daring new act, promoters could smell the money to be made.

Motorcycles quickly overpowered the existing wood-planked bicycle tracks and racers were forced to move on to an open loop venue (like a kid's Hot Wheels track). Unfortunately, it required a large operating area for the approach and exit runs. Containing the crowds for ticket sales was difficult at best since they could see the show from a distance for free. The WHEEL OF DEATH was designed as its replacement, but was quickly proven to be too dangerous.

The MOTORDROME, also referred to as the WALL OF DEATH, eventually became the standard venue for the exhibition performances. It offered a reasonably sized foot print and could be a permanent amusement park structure, or a portable unit for traveling with the carnivals. The crowds couldn't see the show going on inside the silo, but they could watch the demos performed on the ballyhoo and hear the roar of the motorcycles inside along with the cheers and gasps of those on the observation platform. A "must-see" ticket purchase!

I built the MOTORDROME model a few years ago as an entry for the California State Fair (an actual one appeared at the State Fair in the 40s) and it is now offered out for display at motorcycle dealerships and various events. It was scratch built using construction methods that pre-date laser cutting and 3D printers. This meant cutting strip wood, making and casting resin molds, and shaping/soldering brass rods, all by hand.

Years later I built the WHEEL OF DEATH for CARNIVALE to fit on a railcar and this time used both the laser and 3D printer machines. ■

THE GARDEN DEPARTMENT

Dwarf Colorado Blue Spruce

By Richard Murray

BOTANICAL NAME: Picea Pungens, ‘Globe'

COMMON NAME: Dwarf Colorado Blue Spruce

USDA ZONE: 2-8 (Down to -45 degrees F)

SUNSET ZONE: 1-10, 14-17

Description

This fantastic globe-shaped evergreen conifer is a dwarf. It is flat-topped and densely branched. The bright blue needles hold their color all year long, and the new growth is an even brighter blue in late spring. The plant provides a stunning contrast when planted among green plants. Stiff 1.5" needles point outward from the branches in all directions. Its growth rate is slow. It may eventually get to 4’x4’. The plant in the photo is 12" tall and was planted from a 2 gallon pot about 9 years ago. I prune it once a year to be sure it stays very small.

Culture

Picea pungens, ‘Globe’ is easily grown in average, acidic, well-drained soils. It likes full sun best, but will tolerate some light shade. It prefers rich, moist soils. Although established plants have some drought tolerance, soils should be kept consistently moist and not allowed to dry out in the early years.

It generally prefers cool climates and will struggle in the heat and humidity of the deep South. There is no serious disease or insect problem. Most often it is sold as a grafted plant. Its parent, Picea pungens, is native to the central Rocky Mountains where it is typically found growing in moist locations from 6,000 to 11,000 feet in elevation.

It is a low maintenance plant. No pruning is required unless, like me, one wishes to keep the plant very small. When pruning is necessary, it is recommended to trim back only the new growth of the current season. Deer don't particularly care for this plant and will usually leave it alone in favor of tastier treats.

Uses

Use it as an accent in Asian gardens or for contrast in gardens heavy in cool colors. It looks great next to a green lawn, or it can add brightness to dark parts of the yard. It can work nicely in a rock garden. However, its real value is as a simple specimen. Don't forget that it can look terrific in a garden railroad!

Nomenclature

The genus name, Picea, is reportedly derived from the Latin word pix meaning pitch in reference to the sticky resin typically found in spruce bark. Pungens means sharp-pointed in reference to the needles.

Special Features

It is a North American native. Because of its many fine qualities, it has been the winner of the prestigious Award of Garden Merit of the Royal Horticultural Society. It is certainly one of my most favorite plants. ■

THE GARDEN DEPARTMENT

Blue Ribbon Plants for Bay Area Garden Railroads

By Mick Spilsbury

LESSONS FROM MICK SPILSBURY'S BLACK CANYON RAILROAD

There are a lot of plants below, above and next to the Black Canyon Garden Railroad, but my focus here is smaller trackside plants. I have tried many varieties of them and share 4 that have consistently thrived, so, in my book, they are 'BLUE RIBBON WINNERS'. All 4 :

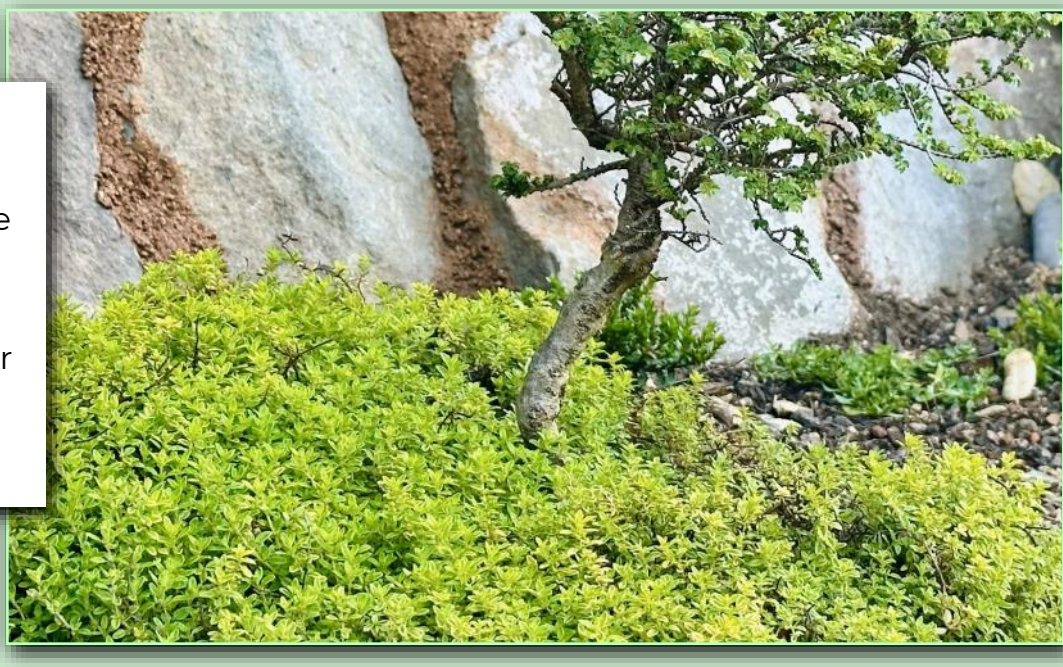
- Went into the ground as inexpensive starters
- Have a 100% survival rate
- Require minimal maintenance

After sharing them, there are some notes about how they got planted, the conditions they grow in and their care. There are no Latin names, because I am not that sort of gardener, even though I have been gardening longer than I care to admit.

OK—enough preamble. On to my 4 BLUE RIBBON WINNERS.

DWARF MEXICAN HEATHER

Evergreen. Small pink flowers for 6+ months of the year. Grows about 3 inches tall and spreads slowly to a diameter of 8+ inches. Easily clipped with scissors.



LEMON THYME

Evergreen. Vibrant green. Stays compact and low to the ground to a diameter of 12+ inches. (Does not get stringy and unkempt like some other varieties of Thyme). Easily clipped with scissors.

BOX HONEYSUCKLE

Evergreen. Small leaves. With consistent clipping, it can be formed into a dense, medium size tree (that's medium G-Scale!).

‘LITTLE MISSY’

This sedum is a member of the ‘Stonecrop’ family. Its light creamy green leaves contrast well with other darker green plants. Stays very low to the ground and spreads to a diameter of 12+ inches. Enjoys more shade than the other three.

NOTES

GROWING CONDITIONS: All are planted at the bottom of the south facing bank above my RR, so they get lots of sun. One section gets more shade and that’s where ‘Little Missy’ does best.

PLANTING: While my plant selection is the result of trial and error, my planting approach is consistent. I use high-quality planting mixes. Sloat’s Organic Planting Mix for most of the plants. EB Stones Organic Succulent & Cactus Mix for those varieties. (Given the expenditure on the plants and the labor involved to plant them, I am happy to pay for the best planting mixes I can find). The size of the hole, and the amount of planting mix is appropriate for the size of the plant when mature. Beyond their hole, roots will find lousy soil or rocks, or a combination of both.

WATERING: Outside the rainy season, the bank is watered every other early morning. During particularly hot spells, the bank will get supplementary evening watering. Some plants have individual drippers. Others receive water via sprayers. Regular watering schedules and supplementary watering are both managed with the Rachio app. **

FERTILIZING: These trackside plants need very little fertilizing, just a few slow release pellets each spring, one kind for most of the plants and another for succulents and cacti.

PLANT SOURCES: Mine are of course in the North Bay. Cottage Gardens in Petaluma is excellent and Lone Pine Gardens near Sebastopol is a treasure. As with planting mixes, I prioritize quality over price because of all the other direct and indirect costs incurred when I have to pull out a failing plant and start again. I keep costs down by buying 2” and 4” starters.

** If you are interested in the Rachio app, see my Article ‘Water Wise’ in the May 2022 *T&T*. This watering management system is one of the best gardening investments I have ever made. There are other consistent trackside plant ‘winners’ on my railroad, so, if this article is deemed useful, I will share some more later this year. Mick Spilsbury ■

Dave's Corner

by Dave Frediani

Dave Frediani lives in Sonora, California and, among his many talents, constructs 7/8 scale rolling stock.

16 mm Cars With O Gauge Wheels?

I ran in to a fellow live steamer at a train show who's been after me to build him two freelance 16 mm cars, with a wheel gauge of 32 mm or O gauge. This isn't the first time he's asked me to build these cars. I've always been too busy to start another project, but this time, I explained that I would be able to start on them within a month or so. We exchanged emails and addresses, so I guess I was committed.

After about three or four weeks, I was all caught up and we emailed back and fourth and he decided on the two cars he wanted, as well as color: One boxcar and one brakeman car.

The 16 mm cars are the same as 1:19 scale cars, so I knew the height and width I needed. Both cars would end up being 6" tall and 4-7/8" wide. Knowing that theses cars were going to be narrow gauge cars, I decided to shorten them up a bit. So the length of the boxcar would be 8" and the brakeman car would be 7-7/8".

Both cars would be built at the same time using 1/8" and 1/16" styrene and Evergreen styrene strips where needed.

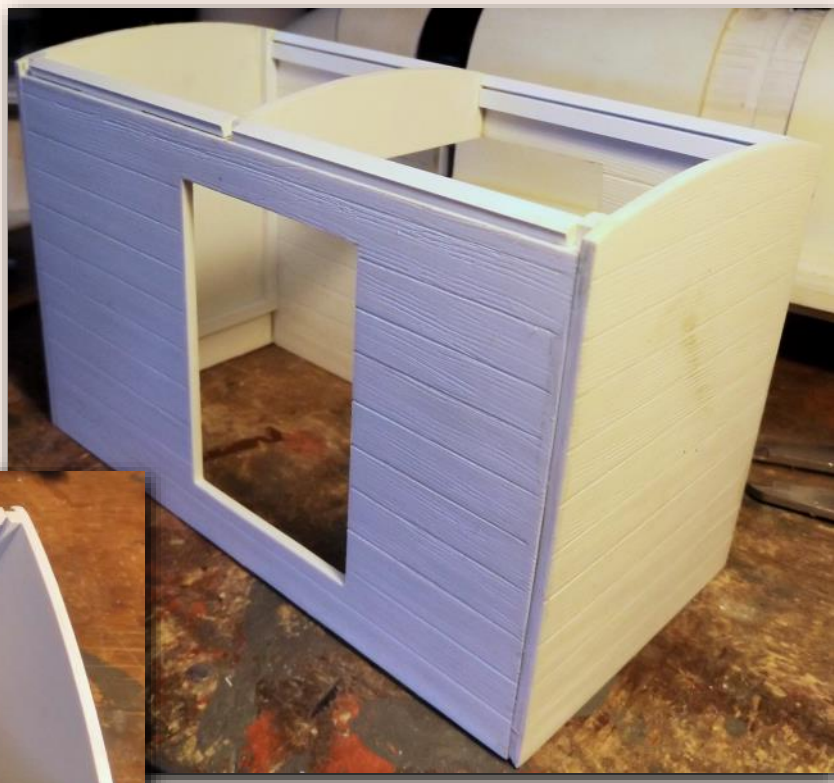
For all the outside bracing on both cars, I used Evergreen #169 styrene strips and for the window trim on the brakeman car only, I used Evergreen angle #295.

The roof on both cars would be built with 1/16" styrene and trimmed out using Evergreen #159 strips.

Photo of the brakeman car ready for it's roof.

Another photo of the brakeman car ready for it's roof.

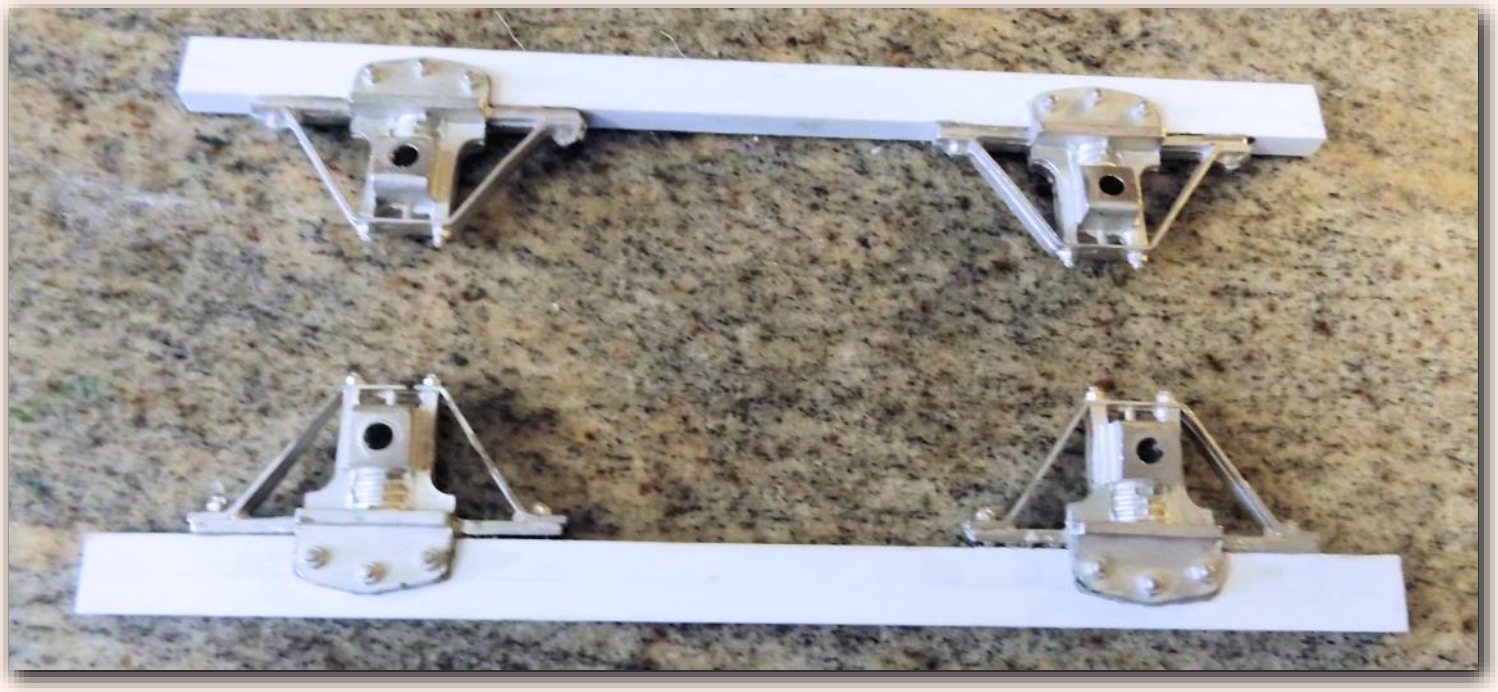
Photos of boxcar ready for roof.



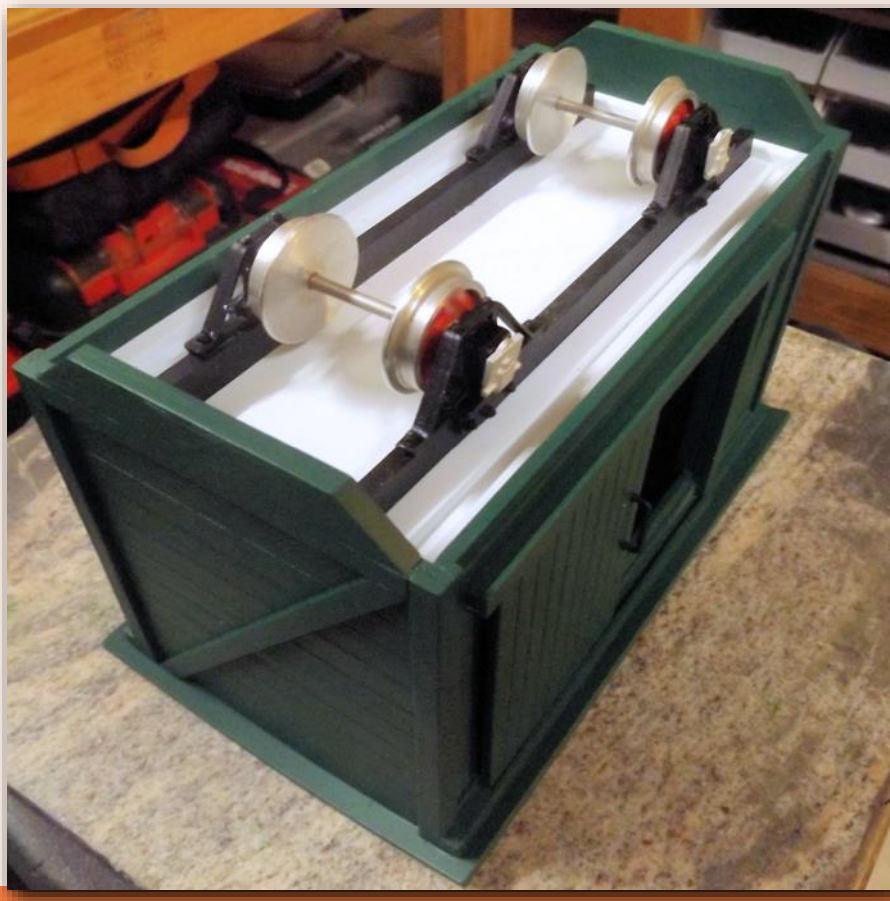
Both cars have been planked and etched with simulated wood grain inside and out. Their roofs are in place and trimmed out and all the outside bracing installed.

For the boxcar I used the same door tracks and channels that I used on the yellow 7/8 scale yellow cars from a month or two ago.

For both cars I mounted a set of #1011 coil spring journals from Ozark Miniatures, to two styrene strips 1/8” x 1/4” x 6-5/8”. For the wheels, I used two sets of Mamod passenger car wheels.



Here you can see the journals and wheels mounted.



The completed boxcar

The completed brakeman car

These cars turned out to be a fun project and my friend was very pleased with them. I hope he enjoys them as much as I did building them. ■

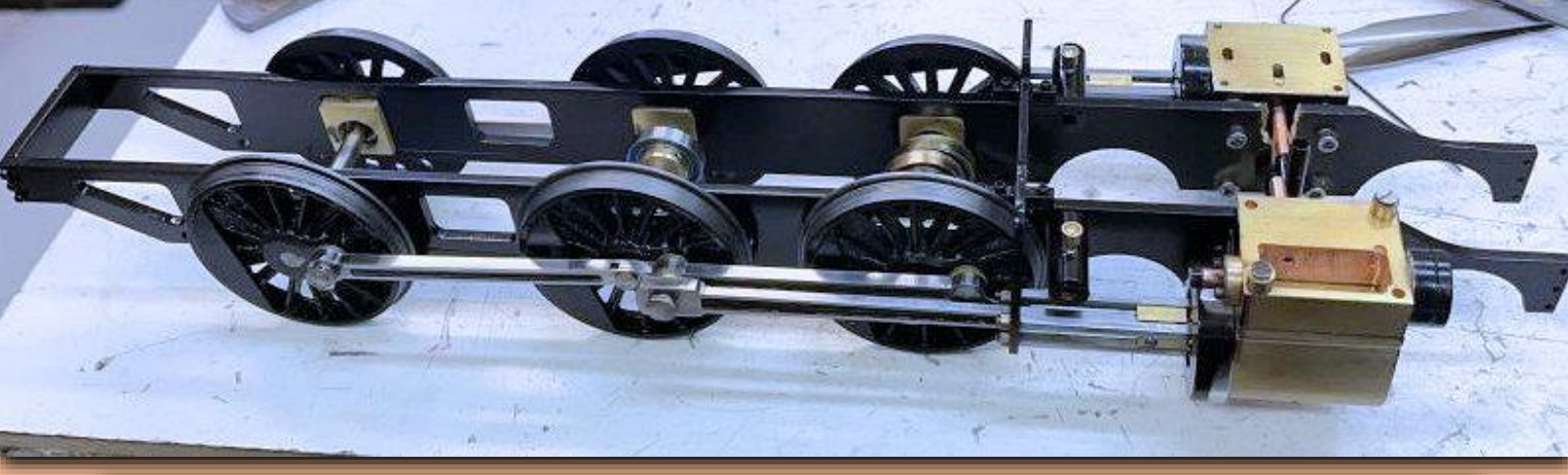
East Devil Hills Modeling Group

by Henner Meinhold

Henner Meinhold resides in Berlin, Germany. The *East Devil Hills Modeling Group* meets regularly to create, collaborate, and share incredibly machined models.

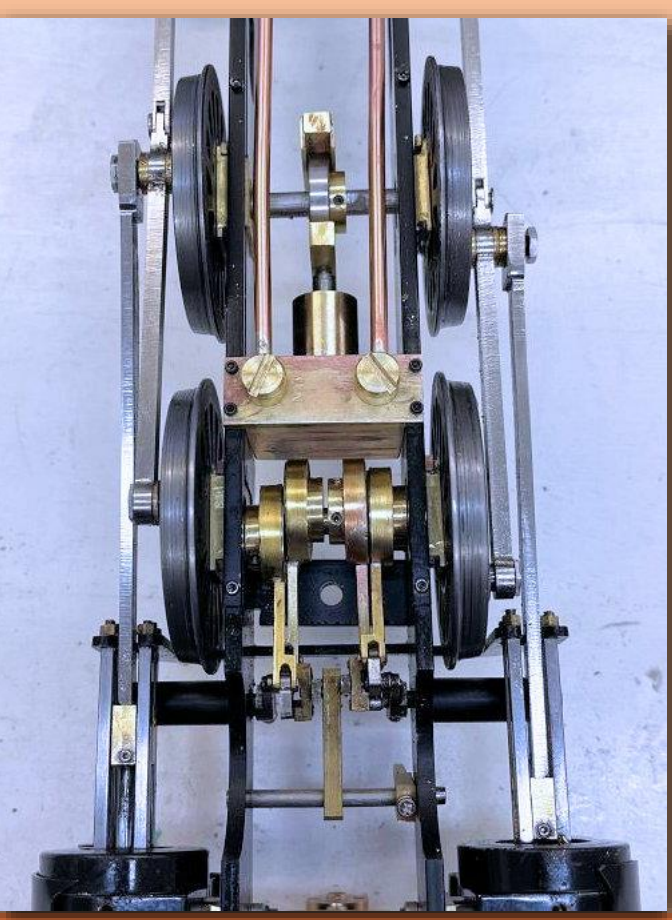
Again we start with Bill's NWP build. By now, Bill received the wheel castings from Walsall:

Here the wheel set is already fully machined. Bill tried a new method to secure the wheels to the axles. He drilled a hole through the parting line between wheel and axle. The advantage of this method is twofold: It prevents the wheel from slipping on the axle and also ensures that the angular position of the wheel is kept after a wheel had to be removed.



With the driving and connecting rods milled by Dennis, Bill now has a rolling chassis, a big milestone in a locomotive build.

The Stephenson valve gear is also finished, as it had to be mounted inside the frames.

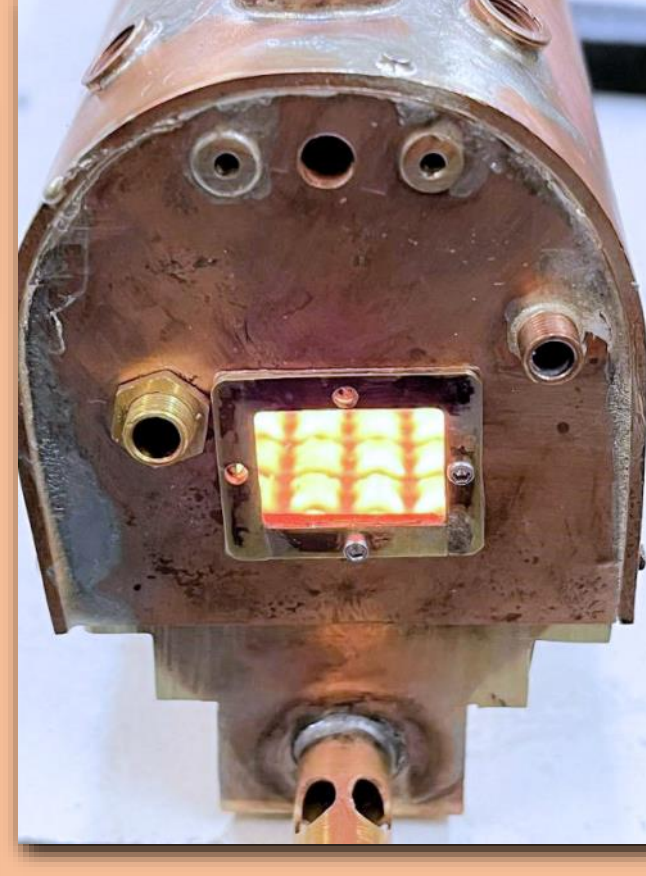


Here are the valve gear and the axle pump inside the frame.

Bill also continued with the boiler. It is his proven design with a dry backhead and wet firebox top.

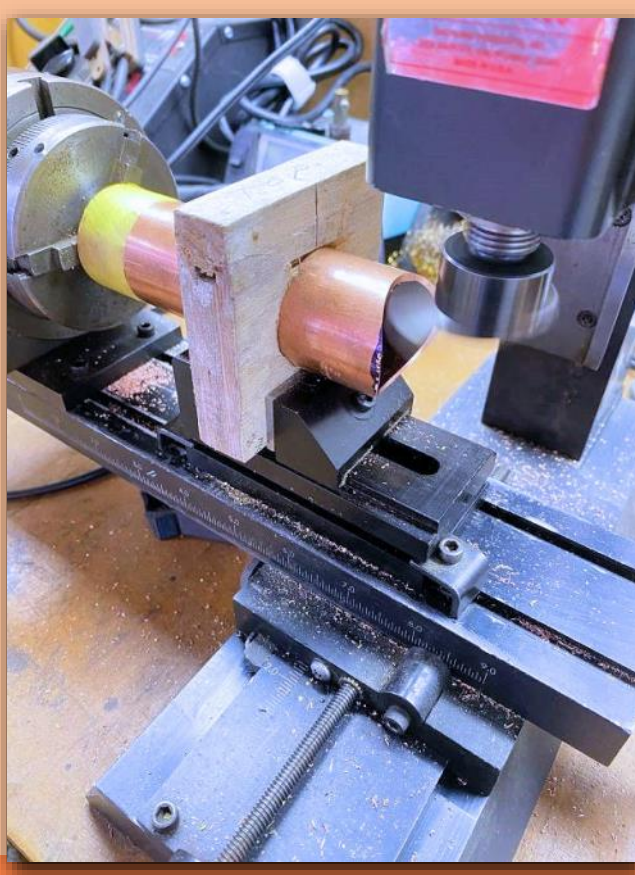
The stays have a specific shape to keep them in place during silver soldering. The ceramic burner is also Bill's proven design. In this case the shape was fairly complicated due to the restricted space.

Instead of a fire door Bill adds a mica sheet, which withstands the temperature and allows the flame to be observed. This ceramic burner delivers a lot of valuable radiant heat.



Dennis CNC-milled a smokebox door, which will be in two parts. A convex plate will be mounted on the base.

Ron Malouf makes good progress with his Shay. Currently he works on the quite complicated T-boiler. Preparing the parts required some ingenuity. Here is a wooden fixture to hold the boiler for milling. This is a method used by model engineers for decades.



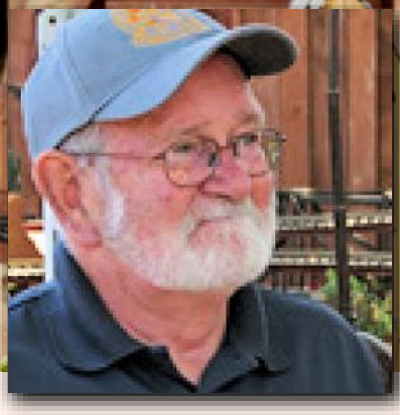
The next picture shows the design of the boiler.

Interesting the shape of the flues between the firebox top and the smokebox.

Ron also went with a ceramic burner. Here a first test where the ceramic is not yet glowing as designed (compare with Bill's loco). This can be adjusted by altering gas flow and the ratio between gas and air. ■

Postcards from the Past

By Bill Ralph



Bill Ralph operates the *Porcupine Gulch Railroad*, and knows a thing or two about amusement parks and postcards.

BUSCH GARDENS "SKYRAIL" TOUR

Besides the offer of "Free Beer," one of the most popular attractions at Anheuser-Busch's brewery and 1966 theme park in Van Nuys, California, was the monorail brewery tour. Park guests rode on one of a dozen custom designed, electrically operated, fiberglass and magnesium overhead monorail cars on a ten-minute 3,500 foot "Skyrail" tour of the brewhouse and then were deposited into the adjacent Bush Gardens theme park where they could collect the promised free beer. Competing with the major Southern California attractions, Disneyland, Knott's Berry Farm, Universal Studios, and Magic Mountain, the twenty-two acre park offered boat rides, a barrel flume attraction, magic show, extensive animal programs, beautiful manicured gardens, a second monorail ride through a huge bird aviary, and . . . free beer. Unable to keep up with the nearby big parks and a brief unsuccessful attempt to attract a conservation minded audience by re-branding the park "Busch Bird Sanctuary," the theme park and Skyrail tour closed after just thirteen seasons. The birds were relocated to the Los Angeles Zoo and to the other Busch Garden locations in Tampa Bay and Williamsburg, while the brewery refocused on making Bud Lite. ■

Circa 1970s postcard from the collection of Bill Ralph

Trellis & Trestle

Vol. XIII, No. 9 http://www.bagrs.org/ September 2000

Track Connectivity, by Bart Coddington

Reprinted from the September 2000 *Trellis & Trestle*

It has been a couple of years since I was a member of the club. You may remember my wife Mary in her blue wheelchair at club events. Mary died in March from complications due to multiple sclerosis, which she fought for 32 years.

As her legacy, I will be building railroads for the next 50 years to use up all of the section names that Mary came up with for our Morningstar Railroad (Cloud Canyon, Cricket Creek, Grizzly Gulch, No Name Stop, Buffalo Ridge, Spider Tunnel, etc.).

The only track I have is a small highly irregular dog-bone, directly in front of our house in an area approximately 12-feet-by-24-feet. It is about 60-feet of track built in 1995. The roadbed is cut through Vinka Minor with a layer of weed control cloth covered by gray fines that was packed down before watering. The track is Aristocraft and it floats freely in one-quarter-inch gravel.

I decided to use the screws that come with the track, so I assembled sections on the deck where I could work at eye level. I smeared each joint with Noalox, anti-oxidant joint compound before screwing the track together. I only had a few screws to deal with at ground level to connect the sections.

For power I loosened the screws that hold the track to the ties and inserted the wires (12-gauge). I covered the connection at the track with Starbrite, liquid electrical tape. Both of these products I purchased at Home Depot.

My best guess is around 1996 is the last time I ran trains. Like any right-of-way, if abandoned, nature takes over. We live in the Santa Cruz Mountains, where rainfall is considerably more than in the rest of the Bay Area. Our front yard was once a Christmas tree farm, but now the trees are over 50-feet tall. This is where the real Morningstar RR will go, once I take out about 30 of these trees.

In May I decided to work on the railroad. Only about 10-feet of track was visible. It took a full day to cut away the ground cover and clear the layers of pine needles and leaves (about two wheelbarrow loads). The track looked tarnished, but OK. The roadbed was washed out in the section under the gutter and one other place.

One side note: Everyone says there are no absolutes in garden railroading. Wrong! Never, ever lay track directly under a roof gutter. Particularly one that gets plugged and overflows.

After reading articles about all that can go wrong with track in more hospitable climates, I was planning for the worst case. It took about an hour to clean the top of the track. Rotting pine needles can really do a job. In addition to pine needles, we have banana slugs. The slime trail they leave is awesome.

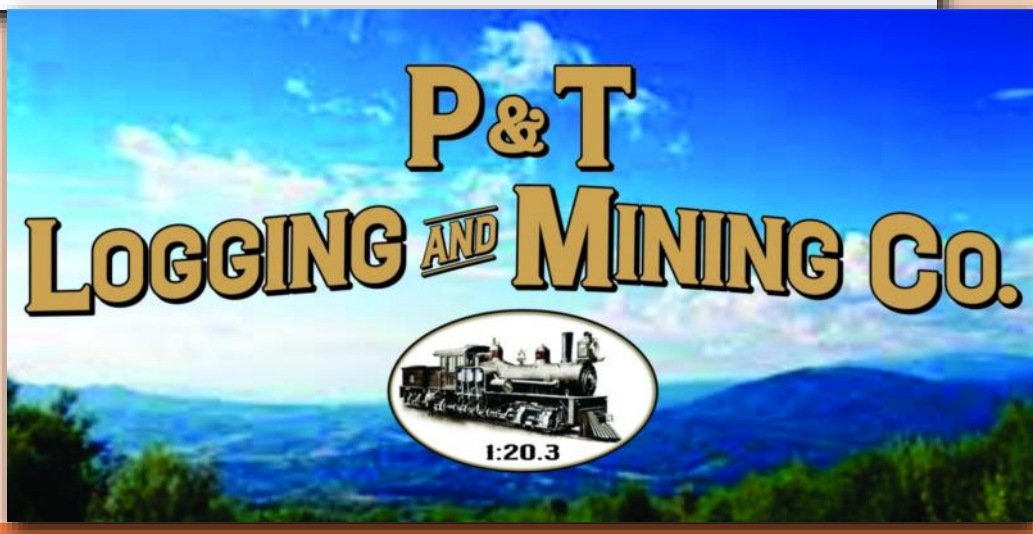
After getting dirt and cobwebs off the leads, got the transformer hooked up. Turned it on and nothing blew. I took that to be a good omen.

Next came the real test. Could a locomotive run? It ran around the whole track, just like it did when the track was brand new. I got so excited that I had our new neighbors come over with their two children. We watched the train run for about half an hour. I could hear "Dad, can we have a train in our yard?" as they walked across the court. And that, folks, is what it's all about. ■

MEMBER UPDATES

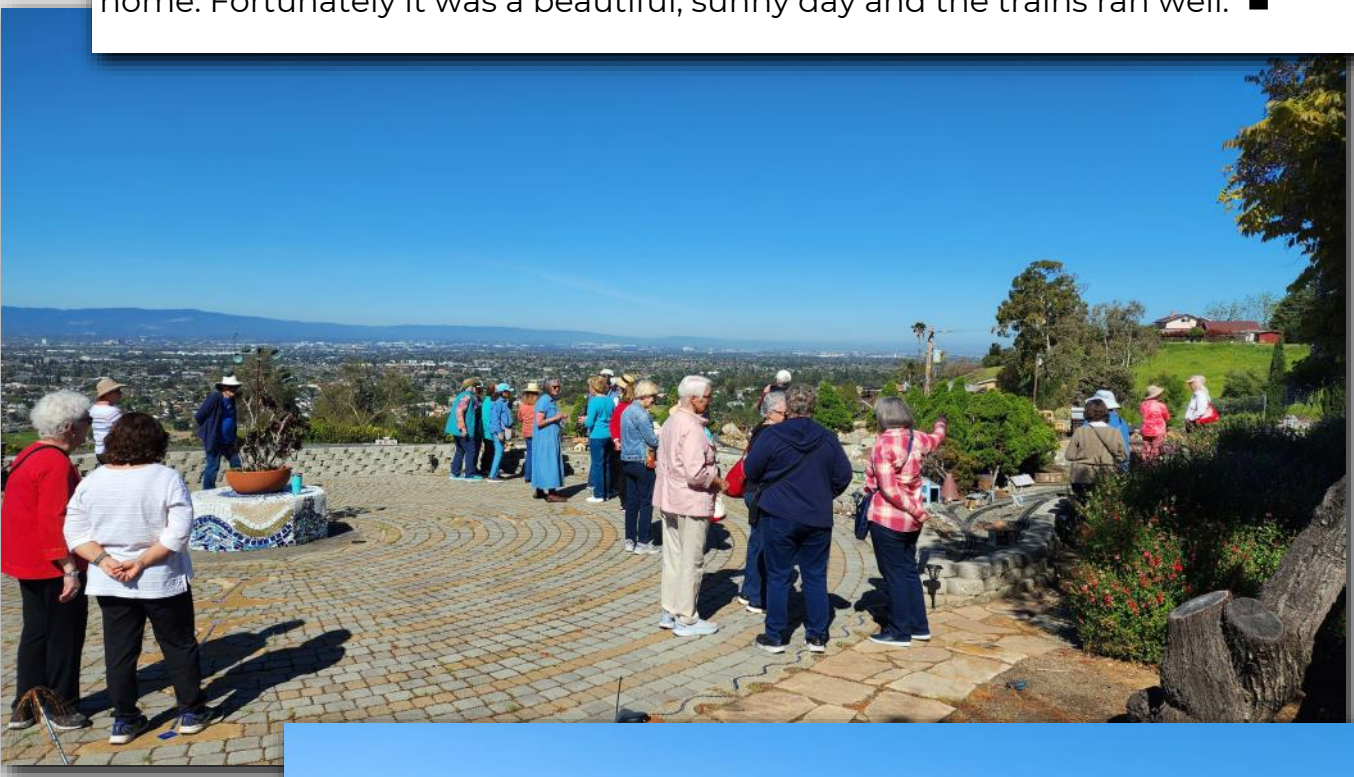
From Chris Gathard: BAGRS members Chris and Kelley Gathard have started an Instagram and Facebook account to chronicle the construction of their small space garden railroad.

You can follow along and watch the progress at;
ptloggingandminingco on Instagram, or on Facebook at
P&T Logging and Mining Co. ■



MEMBER UPDATES

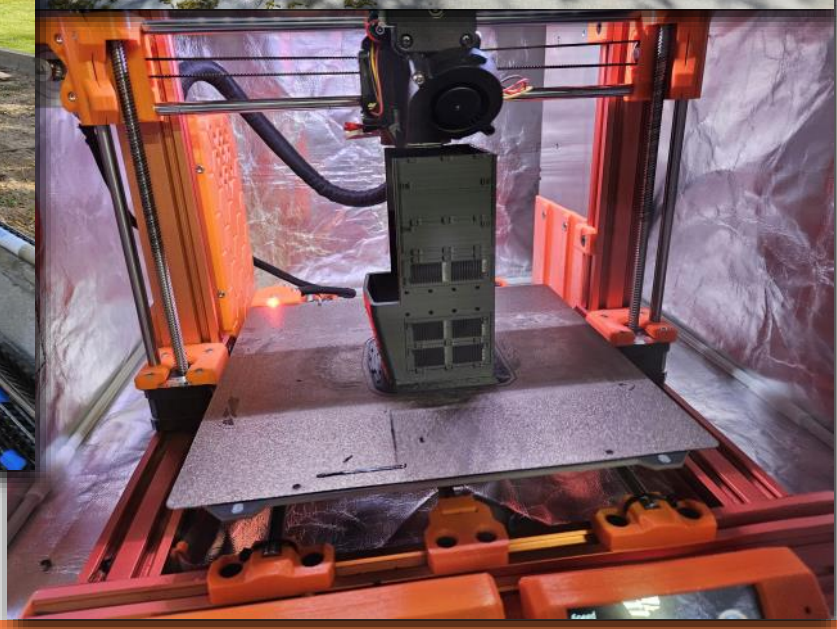
From Ray Turner: The San Jose Garden Club visited the Mystic Mountain. They wanted to learn about garden railroading. Ray Turner took them on a tour of the property and explained the choices he made, the plants, the age of the railroad, the maintenance involved, and the animals he battled. Nancy Schram (Carmen's Nursery) brought plants and discussed the various plants, how to propagate them, and how to pot and plant them. She had a variety of plants to sell as well and the Garden Club took quite a few home. Fortunately it was a beautiful, sunny day and the trains ran well. ■



MEMBER UPDATES

From Roger Nicholson: I spent two weeks at my dad's house (BAGRS member Bradley Nicholson). We made a lot of progress building the train room/building for my dad's layout in St. George, Utah. I also brought a lot of my extra track and train items from California (I didn't realize how much extra track I had!). I also did an AirWire battery conversion on an Aristocraft Pacific and brought it to leave at my dad's house.

I also brought one of my 3D printers with me and have been printing the parts to build a 1:29 scale EMD SW 1500 (similar to the 1:32 version that I already built, which you can see in the photo at the upper right). ■



GARDEN RAILWAY CLUB NEWS

BAGRS has a policy of reciprocal sharing of newsletters with the following garden railway clubs. We do not share private member information such as home addresses or tour information without the express permission of the particular member. We provide links here to the most recent editions that have been made available to us. For other clubs wishing to obtain a copy of the latest BAGRS *Trellis & Trestle*, please contact **Roger Nicholson** at communications@bagrs.org

Central California Coast Garden Railway Society—March 2024

Central Ontario Garden Railway Association—Winter 2024

Denver Garden Railway Society Newsletter—April 2024

Gold Coast Garden Railway Society—April 2024

Puget Sound Garden Railway Society—November 2024

Redwood Empire Garden Railway Society—April 2024

Rose City Garden Railway Society—March 2024

Sacramento Valley Garden Railway Society—April 2024

The Garden Whistle New Zealand Large Scale Newsletter—March 2024

Garden Railroading News—March/April 2024

The 2025 NGRC 2025 will be hosted by the Sacramento Valley Garden Railway Society.

Website coming soon at ngrc2025.org

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The upper-left corner has a pull-down menu to select ALBUMS. Then click on the album of interest.

THE LAST PAGE

This pair of work cabooses is located at the Nevada County Narrow Gauge Railway Museum in Nevada, City, California. There is also a railcar that offers rides (if you get there early enough to sign up before they are full!). These cabooses look like they would be a nice little scratch building project in G scale.

TRELLIS AND TRESTLE

Editor: Roger Nicholson, Assistant Editor: Noëlla Simmons

Regular Contributors: David Frediani, Henner Meinhold, Rob Lenicheck, Bill Ralph, Mick Spilsbury

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