



Garden Railroading News No.4 May/June 2021
A Digital Magazine

Growing the Garden Railroad Community

The committee members of GRNews summarized our mission in the statement above. We continue to seek ways to support the “stakeholders” in our hobby — the Hobbyists, Garden Railway Clubs, the Vendors — and to attract the Public interested in garden railways, but not yet engaged, into the hobby. Garden (and indoor) large scale railroading should be a fun, friendly, hobby everyone can enjoy. Your ideas are always welcome.

Letters to the Editor at: editor@GRNews.org and Club Corner at: bill@derville4.com

Free downloadable editions of GR News are available at: www.GRNews.org and visit our Facebook Group: www.facebook.com/groups/gardenrailroadingenews and our Instagram channel: @grnewsimages

Please share the GR News and support our vendors. Thank You to all the club newsletters editors and contributors who made this edition of GR News possible!

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Magnifying GR News and the "Hamburger" Icon.



THE GRANT FUNK RAILROAD



Layout Design & Editor Carla Brand Breitner
Webmaster Mick Spilsbury

Suggestions and questions regarding the *Garden Railroading News* should be sent to:

Mick Spilsbury, Bay Area GRS at: marketing@GRNews.org

Carla Brand Breitner, Santa Clarita Valley GRC at: editor@GRNews.org

Bill Derville, Club Corner, Rose City GRS at: bill@derville4.com

or www.facebook.com/groups/gardenrailroadingenews



Photo by Mark Edwards

Above: Dave Hayes' LGB Uintah Mallet with AirWire controlled battery power effortlessly climbs the concrete 2% grade of Horseshoe Curve on Mark & Michelle Edwards' Cascade Peak & Buena Vista Railway in Santa Margarita, California.

Below: At Milepost 29, a work train rounds a concrete-cast mountain on Bob Treat's Snow Creek Railroad in a photo composited with a San Jacinto Mountains background.



Photo by Robert Treat from Nemo to Snow Creek ... and places in between ©2020

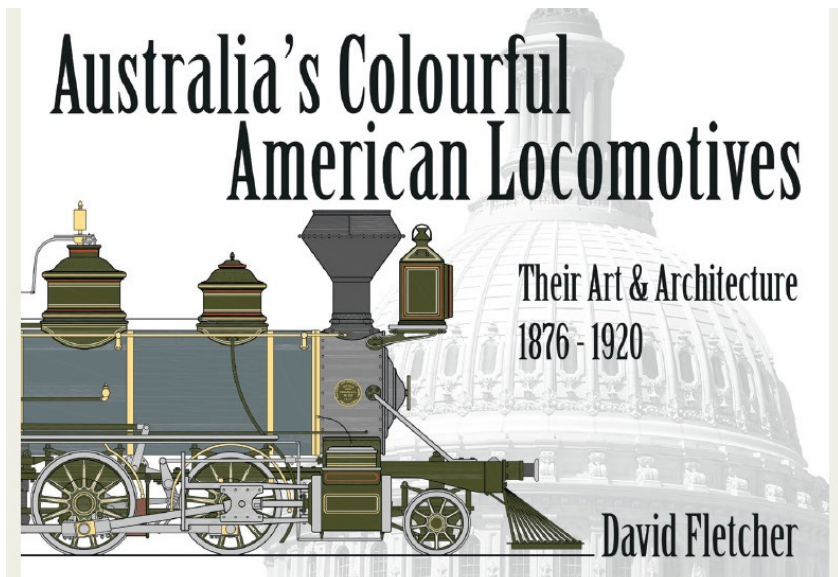
*MAY
WE SUGGEST...
Something New*

Cumbres & Toltec Scenic Railroad 19th Century Victorian Steam Locomotive Round-Up

C&TSR #168 4-6-0, C&TSR #425 2-8-0, the Glenbrook 2-6-0, E&P #4 Eureka 4-4-0 and C&TSR's original Pile Driver and Steam Derrick will all be on display and under steam on **Monday, Aug. 23, 2021**, for a **Steam Fest at Antonito, Colorado**.

Excursions behind various engines will run daily from Aug. 21 to Aug. 29 and are currently "Sold Out," but more seats may be available as COVID-19 restrictions are relaxed.

For more information and a place on the waiting list, call the C&TSR at 1-888-286-2737.



A Masterful Reference for Pre-1920's Modelers

Locomotive artist David Fletcher has written a new book titled "Australia's Colourful American Locomotives." The book is a large "coffee table" style volume of 160 pages, and is available now for pre-order from Light Railway Research Society of Australia Inc (LRRSA). Pre-order price is \$102 AU, which amounts to roughly \$77 American. Production will be limited to 500 copies only.

Fletcher, an Australian, says "The Book is about the Architectural origins, styling and liveries of Australia's US built locomotives 1876-1920 (i.e. almost all that we imported). While it is about Australian US built machines, the work is far broader and is equally relevant to the locomotives on US soil and other export destinations."

"Fletch" has become familiar to American readers through his scratch-building "Master Classes" on MyLargeScale.com, his consulting work with Accucraft and Accucraft U.K., and his detailed color locomotive portraits that appear regularly in the pages of Narrow Gauge and Shortline Gazette.

A preview of the book is available on Youtube at www.youtube.com/watch?v=Jfkb67KjQaE

It may be ordered from LRRSA at <https://shop.lrrsa.org.au>, using Visa, Mastercard or Paypal. Delivery is expected sometime after mid-July.

National Garden Railway Convention News

The Nashville 2020/2021 NGRC is now in the rear view mirror. Our hosts with the Nashville Garden Railway Society showed that layouts come in many sizes and styles—with ideas to take home to try. And the entertainment in Nashville lives up to its reputation as Music City. Thank you to Ken Miller, Steve & Malinda Jungst, Tyler Black and the many NGRS members and friends who were everywhere with a helpful hand.

Ken Vogel of New Jersey stepped up at the banquet to start planning for a 2024 NGRC that would rove around the Northeast metropolitan centers, sharing the tasks of a convention among multiple clubs and venues. We at GR News look forward to sharing updates as Ken works out more details.

The Denver 2022 NGRC, June 19th to June 25th, 2022, will be based at the Crowne Plaza Denver Airport and plans to open registration by August. Check their website: www.ngrc2022.org for updates.

The Bay Area 2023 NGRC will be back at the Santa Clara Convention Center/Hyatt Regency on July 3 -9, 2023 at the 2016 convention room rates. Celebrate Fourth of July at some of the finest garden railroads in the United States. Look for more information later this year at: www.ngrc2023.com



PIKO America August Arrivals

PIKO America brought the DRG IV BR50 Steam Loco (with disappearing coal load) to display at the Nashville National Garden Railway Convention.



The DRG II BR50 will be arriving in August.



The August shipment also includes Rib-Side Hoppers with coal loads in additional flags...



And just in the "Nick of Time," a Christmas Package Transporter for the North Pole Express will be available to deliver smiles around your Christmas display.



Rainbow Ridge Kits Announces Closing

Ross and Sue Piper of Rainbow Ridge, home of patterned Precision Board, engraved and illuminated signs, and great building kits, are closing down their company. They write, "We will be accepting Precision Board orders until September 1st, 2021. Custom acrylic signs will be available until December 1st, 2021." The time to customize your railroad is now:

www.rainbowridgekits.com



Our railroads will miss the creative work of Ross and Sue. Please support the vendors who supply our hobby. They can continue only if we take time to place orders, rather than delay our purchases.

USA Trains Mid-Century Memories

World War II box cars commemorating battles from the Pacific campaigns are available now. European campaign box cars are coming soon. And, for those who remember sock hops, there is the Dog House Diner ready to serve on your layout now.



FEF-3 UP #844 is even available to steam past your diner on a heritage tour.



Two New Bachmann Eggliners

Coming soon (and shown at the Nashville NGRC): Bachmann is adding a School Bus eggliner to their First Responders series. A Monarch Butterfly eggliner can fly around with the Ladybugs and Bumble Bees.



Reindeer Pass Railroad Website Announcement

"You may have heard rumors about Reindeer Pass RR closing. We, Mike & Renee, are retiring from the business, but Reindeer Pass RR will continue! We are working with a young Train Family who are excited and interested in buying the company! So hopefully, in a few weeks, we can officially announce more information, so stay tuned!!"

Info at: www.reindeerpass.com



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USA - Colorado "Best of the West" - to include the Cumbres & Toltec Steam Fest
August 17 - 24, 2021

Gold Rush, beautiful National Parks, and Indian culture are famous for Colorado. The state has an amazing selection of wildlife and natural wonders, rich cultural heritage, narrow-gauge railways, and mining museums. Our tour starts and ends in Denver, the gate to the Rocky Mountains. The days will be filled with breathtaking rides on board the Georgetown Loop Railroad -crossing the famous Devil's bridge-, the Royal Gorge Route Railroad -running along the mighty Arkansas River-, the Durango & Silverton Railroad -one of the most impressive railways in America-, and the Cumbres & Toltec Scenic Railroad -America's longest and highest narrow-gauge steam railway-. We will visit the Colorado Railroad Museum in Golden and explore the Great Sand Dunes National Park -the tallest sand dunes in North America-, and Garden of the Gods - filled with amazing sandstone rock formations.



copyright Cumbres & Toltec Scenic Railroad

For details please contact:

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The Grant Funk Railroad • Grant & Jenny Sweer, Proprietors

The Inaugural Run of the Grant Funk Railroad: A Building Log of Four Years of Planning and Perseverance

By Grant Sweer & Carla Brand Breitner

Grant Sweer packed up his railroad in Santa Clarita in 2017 to take with him to a new job in Huntsville, Alabama. The Santa Clarita "Tricycle Track Railroad" had hosted multiple Santa Clarita Valley Garden Railroad Club Train Play Days. Club members were invited to bring their trains to run the multiple mainlines set out on the previous owners' childrens track. Grant and Jenny had picked that house in part to allow Grant an easy way to build a railroad. They took a different approach for their Huntsville railroad.

Their Alabama home yard sloped away from the house. Railroad plans included building retaining walls to level much of the backyard while maintaining and improving the original drainage, and a train shed/storm shelter architecturally matching the house brick and roofing. Plans and material lists required Home Owner Association approval, received in January, 2018.



6-3-18

Digging began; by end of August the floor concrete was poured.



8-18-18



2021 The Grant Funk RR

Nashville 2021 National Garden Railway Convention pre-tour visitors saw the inaugural run of three mainlines and a point-to-point on the Grant Funk Railroad.

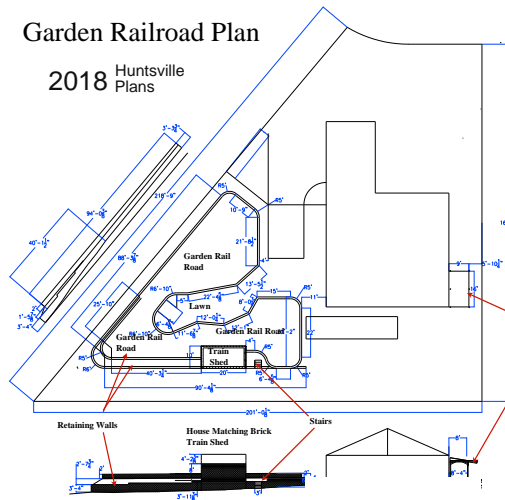


2017 Tricycle Track RR

Grant's Santa Clarita "tricycle-track;" a simple solution to quick railroading.

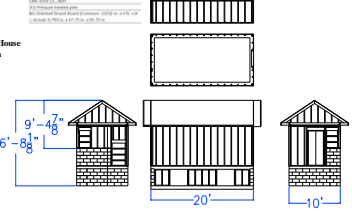
Garden Railroad Plan

2018 Huntsville Plans

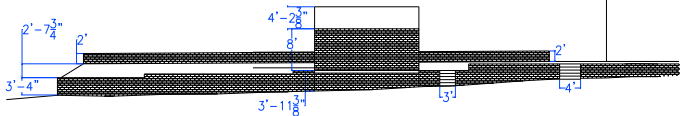


Train Shed Materials List

Item	Quantity	Notes
2x4s	100	For roof structure
2x6s	50	For roof structure
1x4s	200	For roof structure
1x6s	100	For roof structure
1x8s	50	For roof structure
1x10s	20	For roof structure
1x12s	10	For roof structure
2x8s	10	For roof structure
2x10s	5	For roof structure
2x12s	2	For roof structure
3x4s	100	For roof structure
3x6s	50	For roof structure
3x8s	20	For roof structure
3x10s	10	For roof structure
3x12s	5	For roof structure
4x4s	10	For roof structure
4x6s	5	For roof structure
4x8s	2	For roof structure
4x10s	1	For roof structure
4x12s	0.5	For roof structure
5x5s	1	For roof structure
5x6s	0.5	For roof structure
5x8s	0.2	For roof structure
5x10s	0.1	For roof structure
5x12s	0.05	For roof structure
6x6s	0.5	For roof structure
6x8s	0.2	For roof structure
6x10s	0.1	For roof structure
6x12s	0.05	For roof structure
8x8s	0.2	For roof structure
8x10s	0.1	For roof structure
8x12s	0.05	For roof structure
10x10s	0.1	For roof structure
10x12s	0.05	For roof structure
12x12s	0.02	For roof structure
1x4s	100	For roof structure
1x6s	50	For roof structure
1x8s	20	For roof structure
1x10s	10	For roof structure
1x12s	5	For roof structure
2x4s	100	For roof structure
2x6s	50	For roof structure
2x8s	20	For roof structure
2x10s	10	For roof structure
2x12s	5	For roof structure
3x4s	100	For roof structure
3x6s	50	For roof structure
3x8s	20	For roof structure
3x10s	10	For roof structure
3x12s	5	For roof structure
4x4s	10	For roof structure
4x6s	5	For roof structure
4x8s	2	For roof structure
4x10s	1	For roof structure
4x12s	0.5	For roof structure
5x5s	1	For roof structure
5x6s	0.5	For roof structure
5x8s	0.2	For roof structure
5x10s	0.1	For roof structure
5x12s	0.05	For roof structure
6x6s	0.5	For roof structure
6x8s	0.2	For roof structure
6x10s	0.1	For roof structure
6x12s	0.05	For roof structure
8x8s	0.2	For roof structure
8x10s	0.1	For roof structure
8x12s	0.05	For roof structure
10x10s	0.1	For roof structure
10x12s	0.05	For roof structure
12x12s	0.02	For roof structure
1x4s	100	For roof structure
1x6s	50	For roof structure
1x8s	20	For roof structure
1x10s	10	For roof structure
1x12s	5	For roof structure
2x4s	100	For roof structure
2x6s	50	For roof structure
2x8s	20	For roof structure
2x10s	10	For roof structure
2x12s	5	For roof structure
3x4s	100	For roof structure
3x6s	50	For roof structure
3x8s	20	For roof structure
3x10s	10	For roof structure
3x12s	5	For roof structure
4x4s	10	For roof structure
4x6s	5	For roof structure
4x8s	2	For roof structure
4x10s	1	For roof structure
4x12s	0.5	For roof structure
5x5s	1	For roof structure
5x6s	0.5	For roof structure
5x8s	0.2	For roof structure
5x10s	0.1	For roof structure
5x12s	0.05	For roof structure
6x6s	0.5	For roof structure
6x8s	0.2	For roof structure
6x10s	0.1	For roof structure
6x12s	0.05	For roof structure
8x8s	0.2	For roof structure
8x10s	0.1	For roof structure
8x12s	0.05	For roof structure
10x10s	0.1	For roof structure
10x12s	0.05	For roof structure
12x12s	0.02	For roof structure



Train Shed Plans



Sections from the Sweer HOA Application for a Garden Railroad Modification. The application was approved January 30, 2018.



May 2019

With the 3.5 foot retaining wall with drains in place, fill dirt started coming.



November 2019



November 2019

Grant set track stakes for ladder-style track bed in late 2019. Retaining walls and fill for hills went in that winter. Leveling track bed came next.



April 2020



March 2020

As the train shed was built and retaining walls put in place, Grant used a mini-excavator to position multiple loads of gravel and fill from the lower edges first, ending with the areas close to the driveway. The sprinkler water, 110, track and accessory power were installed, the three logging hills situated, and the Alabama rainfall settled and compacted the ground throughout 2019.

Returning from the 2019 Portland NGRC convention, Grant replanned the track and eliminated or split some of the mountains to maintain maximum train visibility from the viewing areas, with the trains momentarily disappearing, as opposed to momentarily appearing—an idea he borrowed from one of the most beautiful Oregon layouts.

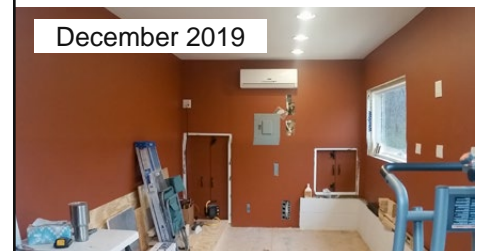
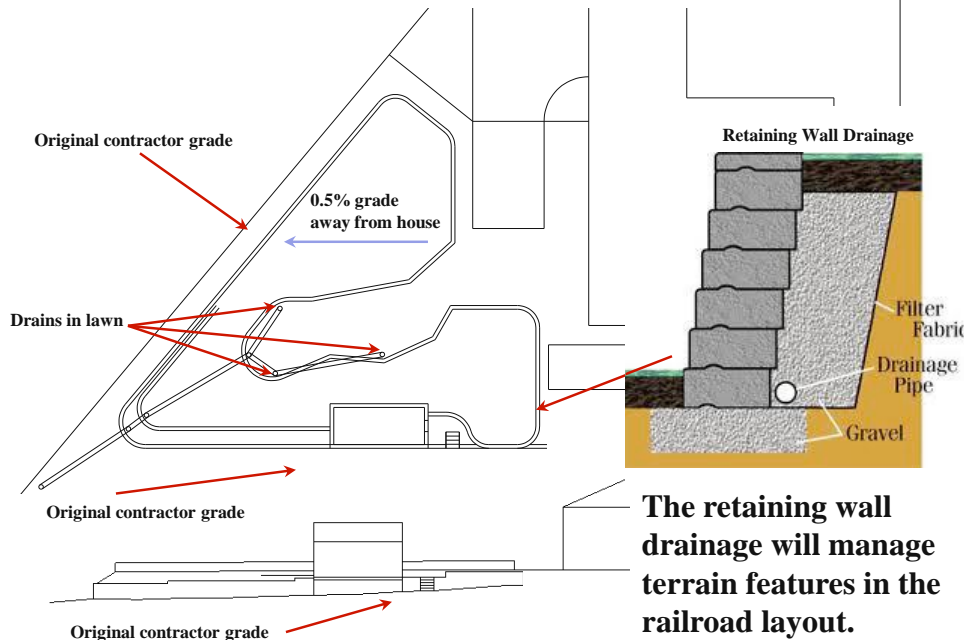
Grant started installing a PVC ladder-style track bed using 1-inch PVC pipe hammered 1.5 ft into the ground in early 2020. Gravel was built up to the top of the track bed. Where the upper layer tracks require a sharp transition to the lower level, he used a gravel-compacted bed under dry stacked cinder blocks, gravel filled and rebar enforced. Rock faces made from Bragdon Enterprise molds will eventually be created.



April 2019

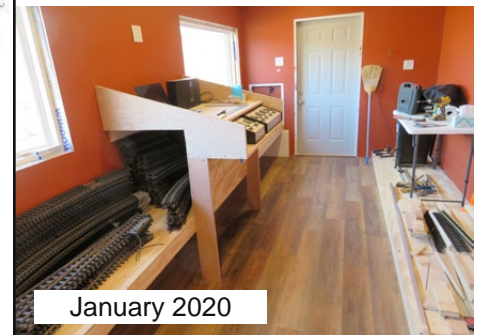
Retaining Wall, Drainage and Material List

Retaining Wall	Material
Retaining Block Material List	
3.5 foot high wall section	Tremron Compact III 18w x 8h x 12d color Santa Fe
2 foot high wall	Home Depot Sierra Blend Concrete 10.3w. x 10d x 5.88h
Reinforcing fabric wall anchor	Geogrid stratagrid 200 6'x100' REINFORCING MESH fabric
Drainage back fill material	Compactable Gravel
Drain Pipe	4 in. x 250 ft. Corex Drain Pipe Perforated
Filter Fabric	3 ft. x 300 ft. Black Polypropylene Non Woven Filter Fabric



December 2019

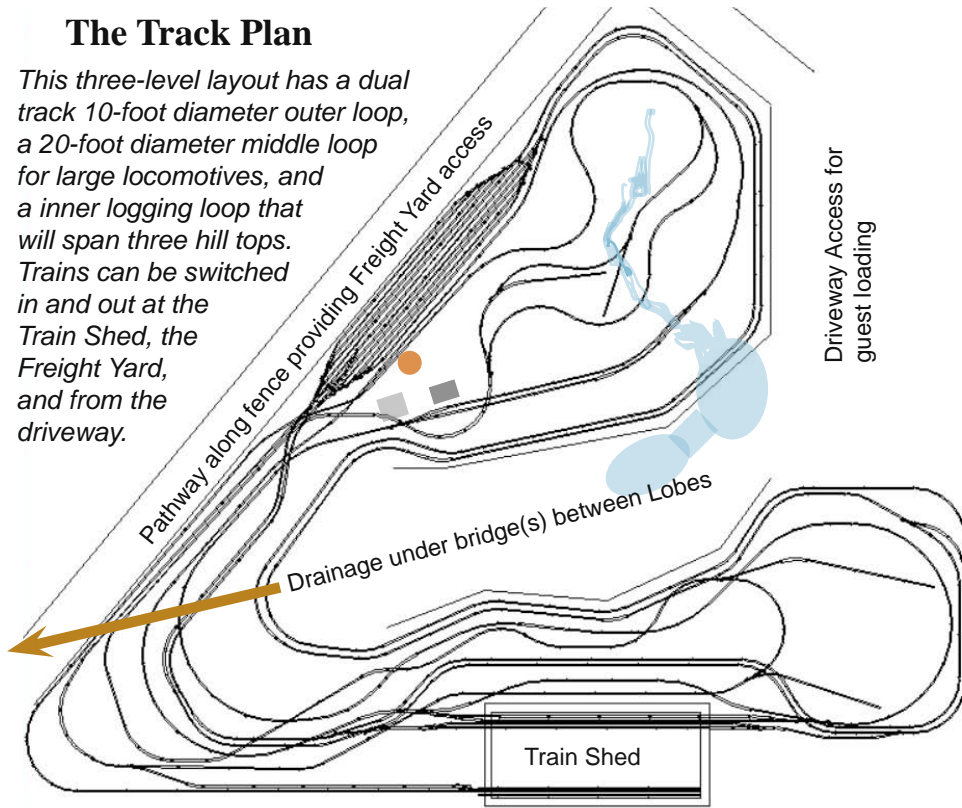
The Train Shed: Small red doors at both ends will allow consists to be set up and sent out onto the railroad. The shed is insulated and climate controlled against both summer heat and winter cold. Shelves go in next.



January 2020

The Track Plan

This three-level layout has a dual track 10-foot diameter outer loop, a 20-foot diameter middle loop for large locomotives, and an inner logging loop that will span three hill tops. Trains can be switched in and out at the Train Shed, the Freight Yard, and from the driveway.



Driveway Access for guest loading



May 2020

Walking the outside of the railroad, viewers will encounter a dramatic rail underpass leaving the Freight Yard for the bridges to the train shed lobe.



May 2020

Grant decided to bridge the "Valley" without trestle bents—for drainage and to keep the rocks and greenery visible.

While building up his "mountain" topography, Grant laid out the pipes for his stream and conduit for electrical, then brought in a crew to make a concrete path to the train shed and pour a concrete pad for his freight yard. He will float the freight yard track and switches for ease of maintenance, based on his experience with his old layout (on concrete) in Santa Clarita.

In April, Grant started setting the PVC posts for his ladder-style track bed and roughing in his bridges. By May, track bed installation was in progress. Jenny started planting to prevent erosion in the "Valley" and establish a few plants above the freight yard. Grant added additional drainage to protect the "mountains" and to drain additional water away from the train shed basement.



March 2020

To prepare for the concrete pad under the freight yard, water and electrical pipes were placed. The area was filled with gravel before the concrete pour.



March 2020



May 2020

← To Train Shed

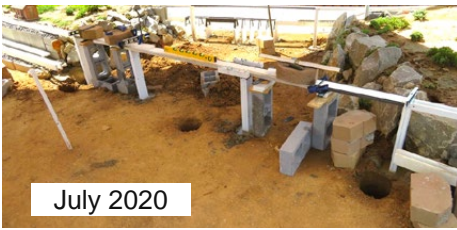
Drainage

under bridge(s)

Ladder-style track bed installation.

Freight Yard

Bridge building, drainage improvements and track bed completion continued through the end of the year. After weather delays and contractor missteps, the waterfall, river and pond were completed just in time.



July 2020

Above: Leveling an access lift bridge.
Below: Bridge raised as paint dries.



July 2020



August 2020

Bridges placed on concrete and stone buttresses will span the river waterfalls on the north lobe of the railroad.



August 2020



October 2020

The four-track bridge will carry two mainlines across the "Valley."



April 2021



May 2021

Once the water feature was complete, a new lawn was planted.



February 2021

Winter progress was slow, but the occasional snow was beautiful.



November 2020

Above: Roadbed installation on the south lobe. Platform along the train shed will support upper level track.



November 2020

Below: Drainage grates along the retaining wall take rain to a pipe.



October 2020

May 2021 was a rush to get track down on the completed roadbed and bridges, to install a new lawn in the valley between lobes of the railroad, and to add a new paver patio/spectator area between the driveway and the patio at the back of the house. Friends came to help. Local friends Barb and Tommy Lundberg helped with construction and planting throughout the years of layout building. Pat Miller came from Texas to lay track in early May. Two generations of the Vance family from Colorado came to help set up on their way to the Nashville convention. Scott Vance

and his father, Bob, helped install the reversing unit to run the upper level lumber line. DeAnn Grady and Elisabeth Vance helped with planting, buildings and figures. Gary Woolard and your GR News editor came the week before the pre-tour inaugural run to assist. The morning of the inaugural run, the Grant Funk Railroad welcomed Nashville convention goers—and neighbors as well. Four tracks ran trains for two days without problems. Grant and Jenny's planning paid off and the many visitors all enjoyed their introduction to this new garden railroad.



May 2021

Above: The railroad is almost ready to run. The last minute paver patio addition made railroad viewing easy for all spectators.
Below: Photos from the Inaugural Run of the Grant Funk Railroad, May 29, 2021!



May 29, 2021



Lessons learned: Do make plans. Don't let delays stop you. Do improve your plans. And, most important, have FUN!

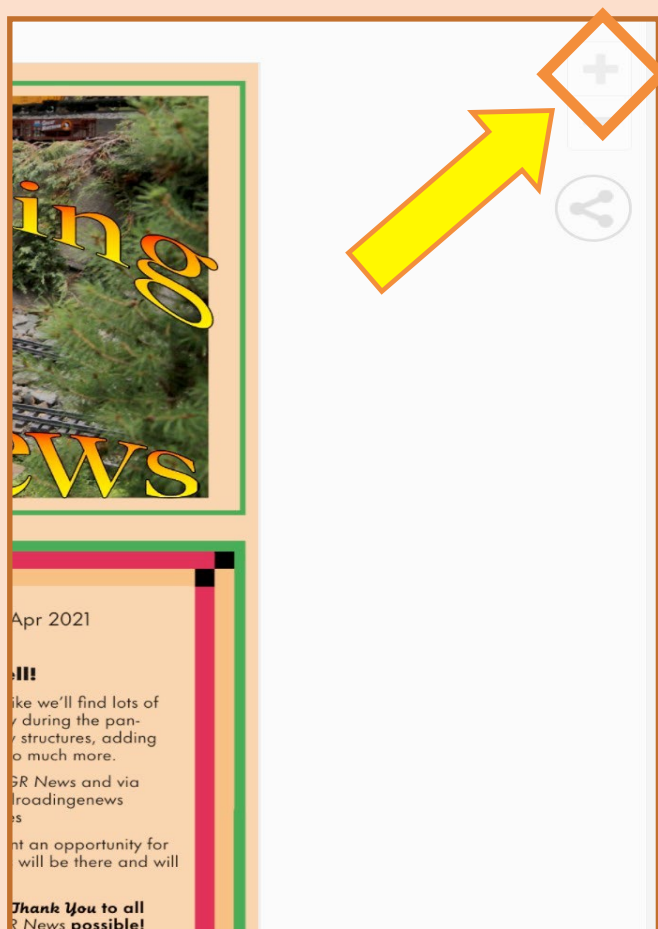
A Build Log for the Grant Funk Railroad as reported in the Santa Clarita Valley Garden Railroad Club Newsletter will be available as a download Bonus at www.GRNews.org

MAGNIFYING THE NEWS
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PAGE MENU**



CLUB CORNER

Curated by Bill Derville, Past President
Rose City Garden Railway Society • Portland, Oregon

Welcome to Club Corner, a new column in our magazine where we will share what clubs are doing that their members enjoy and ways to successfully attract new members. Your club might like to try a new idea... or share some of your activities.

Our first idea for this month is to start a monthly breakfast for members at a restaurant. Now that COVID restrictions are finally easing, we can begin meeting in person again. My club, the Rose City Garden Railway Society in Portland, has two breakfasts per month, one on the first Monday of the month on the east side of town, and one on the third Thursday on the west side. I often attend both of them, but most members just attend the nearest one. We can discuss anything but politics. Sometimes we bring pictures, sometimes a model we built or bought, or usually we just talk and get to know each other better. Sometimes we discuss club issues, but it is not a club meeting where we conduct any official business. Some very strong friendships have been kindled at these breakfasts.

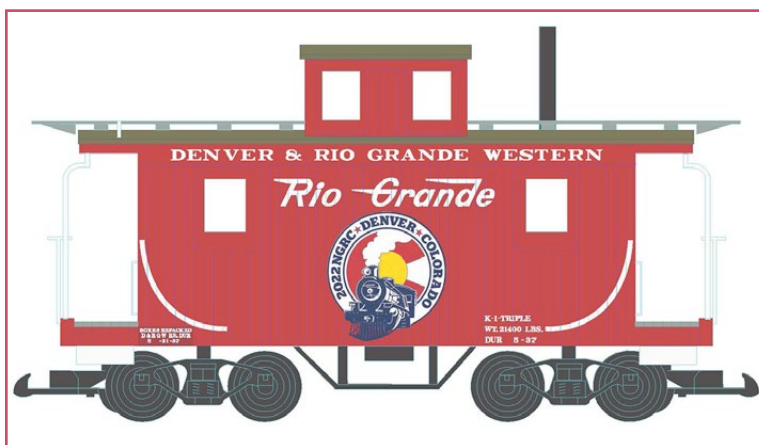
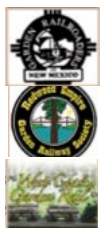
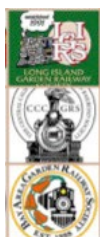
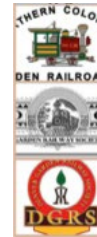
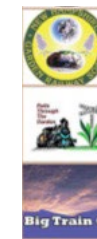
One note of caution: Go out of your way to make anyone you don't know feel welcome. Sometimes clubs become cliques, and we talk only to those we know well. Be sure everyone is included in the

conversation, and make a point to sit with people you don't know well and engage them in conversation. Spouses should be invited and made to feel welcome too, which brings up the last suggestion I will make this issue.

If you haven't done so already, consider making all your memberships "family" memberships. When I joined, our club had dues for members, and a reduced dues rate for spouses. We now have one dues rate that automatically includes everyone who lives under the same roof. A spouse attending a railroad open house should feel they belong there, not just be a guest tagging along with their spouse. Have club name badges and encourage everyone, including spouses, to wear them at all club activities, including breakfasts. At our club, a few of the wives of members are the most active hobbyists in the family, as well as in the club, and we are a stronger club because of it.

If you have ideas that you would like to share in this column in future issues, send me an e-mail at bill@derville4.com. I can't promise every suggestion will get published, but together we can share what makes our clubs successful. And perhaps some hobbyists that are not members of a club may decide to give it a try.

I look forward to hearing from you. — Bill



RESERVE YOUR 0575 REPLICA

THIS CENTER CUPOLA, RED OXIDE CABOOSE was made in Colorado for the D&RG in 1886, serving the state until its retirement in Ouray where it was on display for over 30 years. In 2006, the Ridgeway Railroad Museum restored the 0575, which now resides at the Ouray County Museum.

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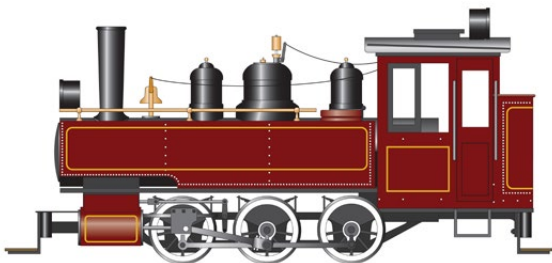
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O NE WAY TO BUILD A VIADUCT - Part 2

by Bob Dransman

Last month in Part 1 of this article the main focus was on pouring the straight sections of the concrete viaduct structure. This article will address the making of the curved concrete portions as well as construction of the top walls. Because I assume here that you remember the basic construction methods I used in Part 1, it might be helpful to refer back if you don't understand part of the discussion below.

There's not much new as far as taking pictures is concerned. Curved sections look exactly like straight sections, as shown in Fig. 1.

The OSB side forms worked well for the straight sections, but they are not flexible enough to be used on the curved sections. Instead of the OSB, I used the more flimsy Sureply $\frac{1}{4}$ " whitewood plywood (Lowe's Item #520357). Because of the curve, the width of the concrete pillars is about 1-1/4" narrower on the inside of the curve than they are on the outside. I chose to keep the inside curve dimension at the same nominal 4" width, just like the straight sections. This gives a nice uniform look to the structure.

To start making the forms, and using the 4" pillar width, I attached the foam to the inside piece of plywood with the top threaded rod only (outside curve plywood not installed). This allowed me to put the assembly in the trench and position the arches vertically like I did with the straight sections. (See Part 1 of this article.) I then re-

moved the form from the layout, drew the outline of each foam section on the inside plywood, removed the threaded rods, then hot-glued the foam pieces to the inside plywood. I then put this glue-up back into the trench with the outside curve piece of plywood laying behind it.

With these major components in the trench, I clamped the two pieces of plywood to the existing concrete, but only at the top. This let the assembly "float" in the trench. I also lightly clamped the foam piece farthest from the existing wall in such a way that it approximated the desired curve, using a level across the two large pieces of plywood. I then checked the slope and shimmed the form on the bottom for an acceptable track grade (about 2% in the area shown). An inch or two gap at the bottom lets the concrete squirt out a little bit but it doesn't hurt anything.

Starting at the existing wall, I shimmed the form against the dirt trench walls as necessary to center it under the track. One foam piece after the other, I ran the threaded rods through and secured them through both pieces of plywood. When all threaded rods were installed I went back to where



Fig. 1: Curved Form in Place

I had clamped the plywood to the dry concrete and ran a couple more threaded rods through the foam to keep the wet concrete from leaking out.

Once the concrete was poured it was time to build the small walls at the top. I tried using "Hardiebacker" board, but it would snap and break on the curves. I switched to OSB, gluing it to the concrete with Sika construction adhesive (Lowe's Item #78066); see Fig. 2.

After some YouTube surfing, I realized that the OSB would have to be waterproofed before stucco could be applied. I wrapped it with Vycor rubber-



Fig. 2: OSB for Wall Material - FAIL



Fig. 3: Walls in place

Fig. 4: Drain Pocket

ized flashing and covered that with chicken wire for lath. This was extremely labor-intensive and the flashing—although pretty sticky—wouldn't stay stuck on the contour of the drain pockets. There had to be a better way.

One day I woke up thinking about how to curve the Hardiebacker board ("HB"). After some trial and error I decided to soak the strips of HB in water for about six hours. I spread a Harbor Freight blue tarp on a flat spot on the driveway and used four 2x4s on the perimeter to form a pool. After soaking, I took the wet strips of HB to the viaduct and clamped stacks of three on the curve. **THEY DIDN'T BREAK!**

I left them clamped overnight, then placed them in the sun for the entire next day to dry them out. They had retained enough curve to stand on end. I'm sure that voided the HB warranty, but—after ripping off the failed OSB—I was able to glue the HB to the concrete using the construction adhesive. See Fig. 3.

I glued a continuous wall the entire length of the viaduct, both sides, then cut the notches for the drain pockets using a 4" diamond circular blade. Other cutting of the HB was done on a chop saw with a worn-out carbide blade.

The original Glenfinnan Viaduct has these "drain pockets" over

every other pillar, so I decided to construct these as well (knowing that they would make the stucco work a real pain!) See Fig. 4.

Here you can see the first drain pocket. Also notice that areas under the arches are stuccoed with what is called a "brown coat" (Menards SKU #1891175). I plan to use a brushable product by Styro called "Flexcoat" (Home Depot Model #FCFG2) for my finish coat because I'm really lousy at stuccoing.

Will there be a Part 3? I don't know. I suppose it depends on if I've worn Larry* out publishing all of this info!

[*Larry Koehl edits the GCGRS BRANCH LINE.]

The BRANCH LINE



AUGUST 2020

ONE WAY TO BUILD A VIADUCT - Coda

by Bob Dransman

Last summer I wrote a two-part article on the subject topic. This project did get finished as winter threatened to curtail operations, but other duties have kept me from finishing the story. With other elements of the Manistique Railroad well underway

now, here is the wrap-up of the project.

We left off with some success of building the wall and drain pockets across the top of the structure, and the promise of stucco as the finishing touch. Pre-formed Hardiebacker board (See Part 2 of this story) attached with construction adhesive worked great!

See Fig. 3 & Fig. 4 Part 2 Above.

The stucco application proved to be difficult for me. The "brown coat" described in Part 2 was necessary to fill voids left in the concrete and to ensure that all corners were sharp enough to look good in their final form. Mixtures that are too dry wouldn't stick to the concrete; mixtures that are too wet wouldn't stay on the trowel, but too wet was better than too dry.

To make the application do-able, I made three customized tools. See Fig. 5.



Fig. 5: Homemade Tools

The first tool - a "corner" tool - is just a simple strip of metal bent to about 90 degrees and welded to a short ¼" rod. I'd like to say it worked great, but it was still difficult to form the corners. Without this tool in certain situations though, the job would have been even more difficult.

The curved trowel in the center of the picture was made from a piece of 6" furnace duct. This tool was the workhorse of the brown stucco application when it came to doing the arches. I would load the "mud" onto the convex side of the blade, then press it directly to the underside of the arch. As a complement to this tool I used a variety of flat trowels to apply brown coat to other parts of the structure.

The application of the brown coat was followed by a coating of "Flexcoat", which is where the third tool - a simple 2" nylon brush with a cut off handle - came into use. See Fig. 5 & 6.



Fig. 6: FLEXCOAT

Lacking great stuccoing skills, I was very fortunate to have found this product, which is a brush-able stucco. It wasn't cheap, but it was the only brushable stucco product that I found. The brush was the primary tool for applying the "broom" finish to the Flexcoat, not only in the arch but on all surfaces of the bridge. A full-handed brush would have hit when finishing beneath the arches, but this simple brush got right in there without messing up the opposite side of the arch.

I'd like to also mention that it is very important to get full coverage of the Flexcoat, especially around the attached Hardibacker board. Without this, water will

certainly seep into any unsealed crevices, freeze in the winter and cause structural failure.

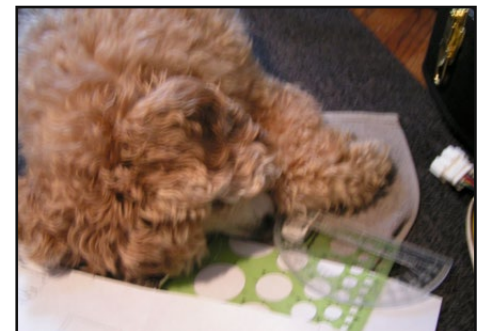
...and below we have the final product, back-filled and ready for use. See Fig. 7.

The viaduct made it through the winter completely unscathed—not a crack or a shift of any kind. The Flexcoat apparently has enough "flex" that it didn't even crack at the rubber expansion joints. In the background, you can see the new "pavilion" going up, which will protect an Arduino coded, computer-controlled roundhouse and turntable from both the weather and falling hickory nuts—but that's a story for another time.



Fig. 7: Finished

I have to give full credit to Mona, the Wonderdog, for all of the design work she contributed.



Mona, the draftsman dog, making plans & after a hard day's work



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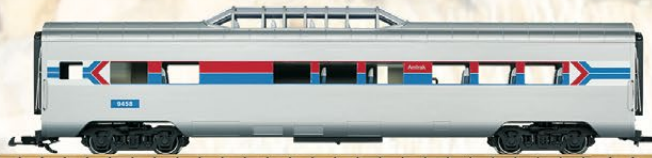
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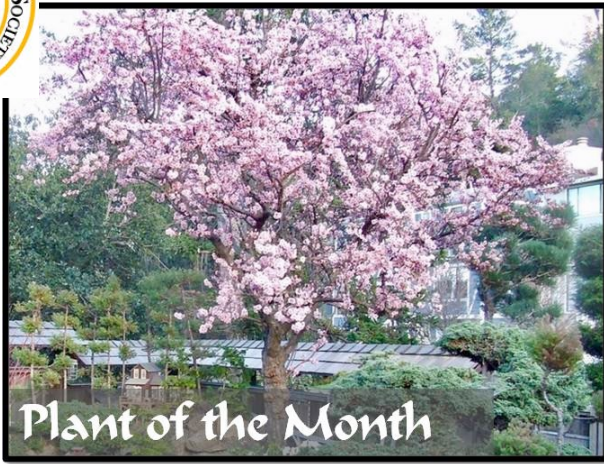
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-- By Richard Murray

Common name: Mugo pine,
 Botanical name: Pinus mugo
 USDA hardiness zone: 2-8 (Down to -50 F)
 Sunset climate zone: 1-11, 14-24
 Soil ph: 4.0 - 7.8



Pinus mugo is a popular dwarf conifer with dark green needles on dense branches. It's a useful slow growing evergreen perfectly suited for rock gardens. With great age and lack of pruning it can get to be 4-5' in the Bay Area. With pruning it can be kept much smaller. The specimen (*lower left*) has had its candles trimmed once a year. The plant is now about 14 years old and is just 12". Normally, *Pinus mugo* is a round mound with branches starting at ground level. This specimen has had its lower branches trimmed away. Also, it is usual for the plant to have multiple trunks starting at the ground level. This specimen was selected at the nursery because there happened to be one trunk that could be selected as a main trunk. Mugo pine does best in well drained loams but is also somewhat tolerant of clays. Avoid poorly drained wet soils. It likes full sun but prefers the cooler summer climates of the bay area and not the hotter desert summers. Of the small conifers this is the one that is the easiest to grow.

It is native to the mountain ranges of central and southern Europe. It was first introduced into Denmark in 1798 and has been widely grown in Europe commercially since 1860.

There are a number of varieties of Mugo pine, some larger and some smaller. Stanley and Sons Nursery in Oregon sells 17 varieties of Mugo Pine. I prefer the smaller varieties. Supposedly, "Gnome" is the smallest, but I have found that the "Paul's" variety, developed and sold by Lone Pine Nursery in Sebastopol, is just as small. Mine is just 5" after 15 years.





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The World of Sculpey is Wide and Varied - by Nola Olson



What do you need/want for your garden railroad?

The first thing you think of making for your railroad using Sculpey is usually PEOPLE, but that is really just scratching the surface of the possibilities. I've only made 5 people for the railroad so far. (More are coming!) However, I have made REPAIRS on 5 items that run the gamut from ax head replacements to repairing feathers on a flying eagle, 12 brand new ANIMALS and 30+ ITEMS that the inhabitants of our railroad needed.

When I made the list, the amount of items amazed me, but maybe it shouldn't. For instance, take a look at our newest project, a stagecoach.



The coach itself with the attached horses came to us via Jeff Lange (thank you, Jeff!) Alan added the wood brake handle and I made Sculpey brake pads. The next problem to be addressed was to add passengers. I do use existing figures when I can, so I adapted a sitting railroad man by using a Dremel to take off the cap's bill, reshaped the crown of his hat, and completed the transformation to stage driver by using Sculpey to add the large brim of a cowboy hat.

Continued on next page



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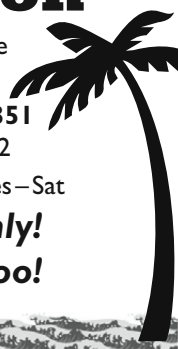
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The male passenger is also a railroad figure I used as is. His only problem was that his arm was up in the air, so I gave it support by adding a suitcase on the seat next to him for his arm to rest on. The woman and boy passengers are completely new, made with Sculpey. It was challenging to make figures that fit inside the

Sculpey creations; a Mexican blanket, and a box tied with string. The luggage rack up top had to be filled so I used an existing barrel and then added a hat box, carpet bag, valise, bed roll and strong box, all made with Sculpey. So the total is 4 people (two adapted with Sculpey and two total Sculpey) and 11 items, (2 store bought and 9 Sculpey creations.) All we need to complete this now is the reins (made with jewelry wire) and the Sculpey curtains that will be added last. The point I wanted to make here is if you find making people too daunting, grab some Sculpey and start making the THINGS you need for your railroad. You may be surprised at how well you do!



coach. The boy was small enough to get inside

The Sculpey project high on my husband's list was a highball puller. Proportions of people are always a bit tricky, especially with this one having to lean over and hold the chains. He ended up being tall and thin, so I just decided to name him "Slim" and declared that he was finished!



whole, but I had to make my pretty lady in two pieces that were maneuvered in and glued in place. Other items inside the coach are a doll house store bought basket, and two more

I needed a goose that was running because in our railroad he is being chased by a fox, who is also being chased by a dog. This one I made turned out well, thanks to Google, which had multiple pictures of a running goose for me to choose from. As for the squirrel, I've always thought they look so cute when they stop halfway up a tree trunk that I wanted to make one for the railroad. I left little wire hooks at the ends of the paws that I will stick into one of the railroad's trees. We'll wait and see if anyone notices him!

Continued on next page





Reading about the "cane" technique in one of my Sculpey books gave me the idea to make the "quilted cover" for the porch swing. The same technique allowed me to make the afghan for the farm house glider, but required some trial and error. The first effort ended up being a rug because I sliced it so thick. My second effort was with thinner slices and with some added adjustments hung together. Trial and error works out sometimes!

The world of Sculpey is wide and varied. What you need/dream for your railroad may be just around the corner. But, you will never know-unless you try.

Sculpey Materials & Tools List

Flesh color Super Sculpey
(Buy at a craft store. Must be "Super Sculpey" because the clay comes in different strengths.)



Cuticle Tool



Straight Pin with a bead head
(to smooth Sculpey with)



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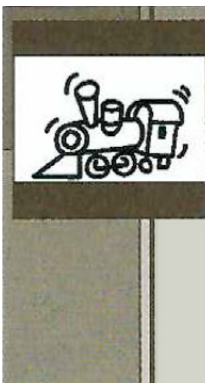
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The G Scale Society by Eric E. Upton • Chairman, G Scale Society



Based in the United Kingdom, the *G Scale Society* was founded in 1987 following the introduction of the LGB range of outdoor rolling stock. We do have overseas members and we make provision for them to join with us when visiting. [Ed. Note — GR News Marketing Director Mick Spilsbury is a member.]

The *G Scale Society* is the National Society for those modelling railways predominantly using a track gauge of 45mm and in this we cater for a variety of scales: 1:22.5 (the original 'G' scale); 1:29; 1:24; 1:20.3; 1:19; 7/8ths and Gn15. These scales cover all types of prototypes from standard gauge through narrow gauge to seaside, mining and estate railways.

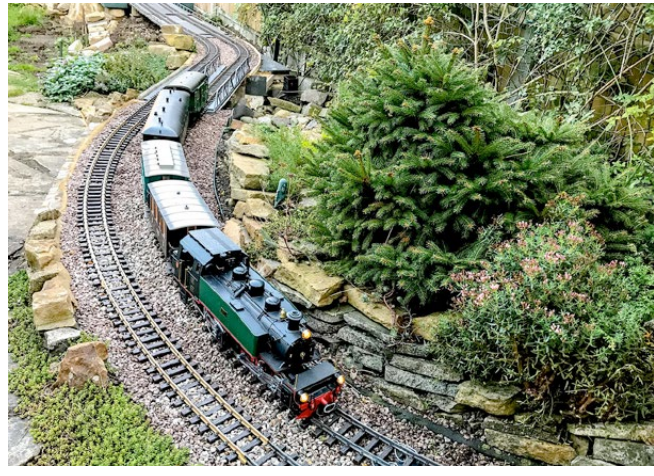
The Society has a liberal approach, believing that enjoyment is just as important as full detailing but with no

bias in either direction. Thus at any get together, one can experience totally prototypical trains alongside freelance consists. Many of our members insist on accuracy while others choose to run what appeals to them.

The Society has a national committee administering the membership fees and database, originating and producing the GSS Journal for members four times a year, promoting the Society to the larger world by attending relevant shows and advertising in relevant publications. The Society is governed by a constitution and this is monitored and updated as required with the will of the membership.

During these past pandemic months and continuing until we are back to normal, our Membership Secretary has been producing an e-newsletter to all members with a digest of news, in those months that we do not produce





our Journal. Many of our Area Group Leaders have been doing likewise.

Area Groups were instituted many years ago to enable members in a local area to meet together and enjoy their garden railways, swap ideas, gain and give advice and socialise with like-minded people.

Although LGB started and remains a track-powered system, now with the option of DC or DCC operation, increasingly members are turning to alternative power solutions such as live steam and battery with and without radio control. We have also had rubber band powered models at one area group but not yet a clockwork mechanism, as far as we know.

Many of our members remain firmly in the camp of LGB / Trainline 45/ KISS, etc. following the German, Austrian and Swiss railways (HSB, SteyrtalBahn, RhB, etc.) and other metre gauge concerns. However, we have a large following for the wider than 2ft (60mm) narrow gauge railways. Popular amongst these are the Isle of Man (3ft) and Welshpool & Llanfair (2ft 6in) both served by Accucraft. We also stretch a point with the Tallylyn (2ft 3in)! Many of us also operate 1:19 (16mm) scale locomotives re-gauged from 32mm to 45mm just because we like them.





Increasingly, we are seeing many of our 'cottage industry' and single trader suppliers here in the UK producing kits and models suitable for running on 45mm track.

We also have members who have more specialised interests. Following a Chairman's challenge in the autumn of 2019, one of our members, John Bint, picked up the baton and was in the process of building a 1:24 scale model of the Wuppertal, Germany, suspended railway. Unfortunately, John suffered a stroke during building and was unable to complete the model. Following an appeal, member Dave Tilling stepped in and John was able to view the completed model before sadly passing away. (See Wuppertal pictures on left.)

Some of our members also have an inclination towards our standard gauge railways alongside their G scale interests and produce some wonderful examples of the locomotives.



Wainwright DS238 converted from a Piko DB BR80



Merlin 40940 converted from a Bachmann "James"



Jubilee 2012 converted from a Bachmann "Thomas"



Perseus 1351 converted from a Bachmann "Bertie"



Above: Progress photos taken during assembly of a Tango Tram.

Below: A finely detailed Soller Tram.



Trams are not forgotten either; we have a sub-group whose interest is in both heritage and modern trams.

You may have noticed above the mention of Gn15 and 7/8ths scales. These are relatively new to the Society and, although 7/8ths is a garden scale, Gn15 tends to be indoors as a winter activity. Gn15 uses 00 (16.5mm) track and mechanisms to depict what we call estate or pleasure railways at 1:24 scale. These are railways usually of a track gauge of 15, 18 or 20 inches. Pleasure railways can usually be found at the



seaside, in theme parks, zoos, etc., and estate railways were built to transport the needs of country estates or, in the case of Lincolnshire, potatoes! Mining railways speak for itself. An additional advantage of this scale is that we can use our 'outside' buildings and take advantage of 1:24 scale doll's house furniture and effects.

In recent times we have actively encouraged 'family' membership. This is not limited to parents and children but extends to grandparents, uncles & aunts with their grandchildren or nephews & nieces, as these adults are increasingly being asked to supply child care.

The Society has also embraced new technologies with layouts being controlled from iPhones & iPads, Zoom meetings and, for Society members, access to all back copies of the Journal which have been scanned and are available on request digitally with an index on our website to aid content searching.

Given that we are now escaping from the restrictions imposed upon us due to the Covid pandemic and that our better weather is approaching, we are looking forward to returning to our usual activities of open garden meets and Area Group events.

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ON DEMAND GARDEN RAILROADING Part Two

by Mick Spilsbury

We got a lot of positive feedback on the first article in this series. Thank you. One correspondent reminded us that ‘**On Demand Garden Railroading**’ is not for everyone. We agree! One appeal of Garden Railroading is that we all have different priorities and approaches to our wonderful hobby.

THE ROLE OF GLUES

Most every garden railroad uses glue. My version of ‘On Demand Garden Railroading’ uses more glue than most. **Why?** To reduce the incidence of small derailment-causing items getting on tracks, and for faster, more efficient cleaning.

GLUE APPLICATIONS

BALLAST: Techniques for fixing ballast in place vary according to climatic conditions and product availability. Northern California is baked by sun most of the year and winters can produce 30–50 inches of rain. I use a mixture of 1-part TITEBOND #3 wood glue and 3-parts water to affix my ballast. I created ballasting frames like the one pictured for the application.

TRACKSIDE: Most track has tiny pebbles either side of it, bonded in place by the same mixture as the ballast.

LANDSCAPE ‘DIRT’: ‘Dirt’ on my RR is a combination of lava sand (fines) mixed with TITEBOND 3 and 1-part water, applied to a depth of at least an inch in dry conditions. It bakes to a hard surface that repels winter rains effectively. Holes are created for plants that are watered by drip irrigation below the ‘dirt’. It looks like dirt.

BUILDINGS: Buildings are set on painted, lacquered, slim building bricks which are glued together with a heavy-duty outdoor construction adhesive.

ROCKS: Rocks are bonded with heavy-duty outdoor construction adhesive. Crevices between the rocks are filled with the lava sand/TITEBOND 3/water mixture that also serves as the RR’s ‘dirt’.

FIGURES & PARAPHERNALIA: After 30 years of experimenting with all manner of glues, E6000 is my choice to affix figures and paraphernalia to surfaces that can be protected from winter rains (buildings and cars/wagons). Industrial-strength Velcro is used to fix people and paraphernalia to surfaces that cannot be protected from winter rains. The Velcro lasts for 2 or more years, is easily replaced, and facilitates bringing figures and paraphernalia in during the rainy season.

RESULTS

REDUCE DERAILMENTS: Very few derailment-causing items end up on the track. In fact, so few that they can be removed quickly during inspection or by a track cleaning loco.

EFFICIENT CLEANING: 95% of leaves and debris can be sucked up by a Shop Vac, without disturbing ballast, ‘dirt’, figures, paraphernalia & plants.

A FINAL NOTE

All my track is laid on solid surfaces, either atop a stone wall or on poured concrete, which certainly increases the endurance of these gluing techniques.



The ballasting frame for straight track; there was an articulated version for curved track.



From left to right, hard-baked lava sand 'dirt', trackside glued pebbles and gray ballast. Note the plant holes in the 'dirt.'



Another view of the hard-baked lava sand 'dirt.'



The Shop Vac is ready to get the RR Spick and-span!

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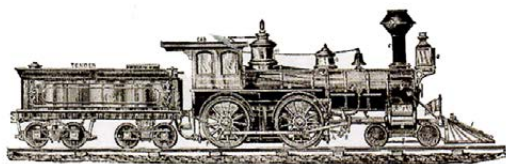
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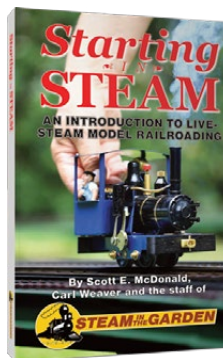
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Dual Power Locomotive

Adding Battery Power to a Track Power Locomotive

In last month's DGRS Newsletter, Pete Hendel presented an article about converting a "Doosie" from track power to battery power. I found it very interesting and decided to undertake a conversion project of my own. But I was worried about taking a perfectly good locomotive and potentially making it unusable. I thought I would experiment on an old, tired locomotive. So I purchased an old, tired locomotive (a brand called 'K-Line') from an on-line auction house, on which to experiment. For \$97, I purchased a test platform and proceeded to experiment.

Much like Pete, I run a modified DCC system for my locomotives – Train Engineer Revolution. It is a radio-wave control system with a receiver in the locomotive (inserted between the power intakes from the motors to the drive mechanism in the motors). It is a relatively simple system to install by snipping the power intake wires, splicing-in wire to extend the length of the power intake feeds, connecting the receiver to those wires, then running wires from the receiver back to the motors.

To run solely on battery power, the power intake wires can be removed, or just isolated and capped. However, I thought I would try giving this locomotive dual-capability rather than just track or battery power. I secured a double-throw, double pole toggle switch into the body of the locomotive, ran the track-power intake wires to one of the poles and ran wires from the battery to the other set of poles. (See Photo 1 below.) So by flipping the toggle switch, I can run either track power or battery power, which provides greater flexibility.

Photo 1



Photo 2



Photo 3



Installing the battery was a more complex task. Since I run about 18 to 20 volts to my tracks, I chose to use 19-volt batteries that come with battery powered hand tools (drills, impact driver, small circular saw, etc.). Using one of the battery chargers for the hand tools, I copied a design from Kirk McGuire to disassemble the charger, removed the electronics, isolated the contact points to pull power from the battery, and used just the receptacle to hold the battery in place on a depressed flat car. Next, I soldered wires to the contact points and ran a connector to the front of the car that coupled to the locomotive. (See Photos 2 and 3.)

With the battery installed in the cradle, and power to the test track in the shop, I switched the toggle to 'battery power' and tested the locomotive. I was purely delighted and surprised when it ran fine. Next, the switch was thrown to 'track power', and tested the locomotive again. Again, I was purely delighted and surprised that it ran just fine.

With the concept proven successful to be able to incorporate dual capability to the locomotive, the final step was to construct a cover for the battery and then add paint and decals to the locomotive and battery car. (See Photos 4 and 5 below.)



Photo 4



Photo 5

One of the main reasons I wanted to try using a battery-powered locomotive was to be able to plow snow on the railway. A while back, Cindy purchased a pusher snow plow car that needed a locomotive to push it on wet track. The only solution I could think of was a battery-powered locomotive, just like Pete discussed in his article. That project is now complete with a 3-car consist of battery car, locomotive, and snow plow. See Photo 6 below.



Photo 6

As I gain experience with this dual-powered locomotive, I might try doing more with battery-powered locomotives. This project has opened several new doors for me.

Jim Desautel

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April 2021

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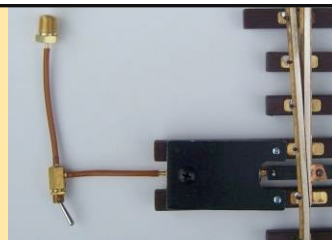
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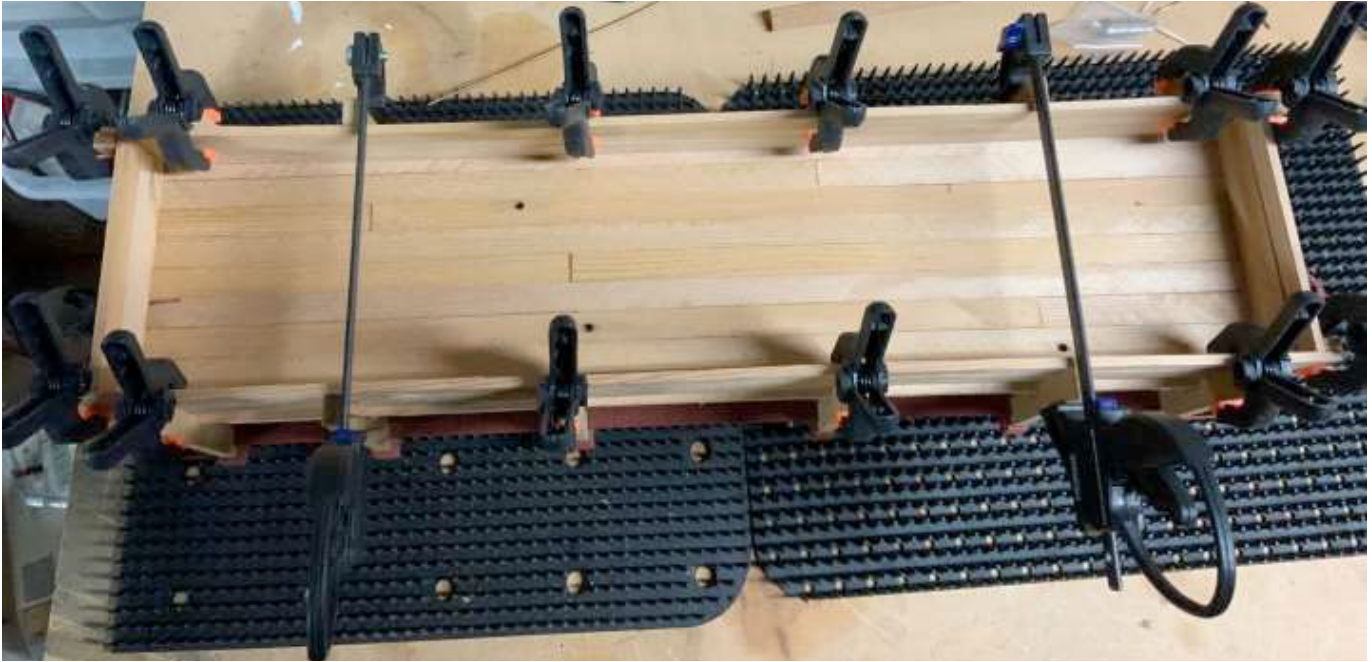


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Tie and Rail Car Build

Photos and text, Editor



Tie And Rail Car Build

After purchasing an Accucraft tie and wheel car I felt the need to add to my 'Work train' and went looking for an easy build to compliment my tie and wheel car.

I was looking through my set of narrow gauge pictorial books and found a tie and rail car, and already having an Accucraft flat car I thought that would make a great starting point.

First hurdle was not having any plans, so as having the flat car a reference I used that as my scale and guide along with the pictures to build the car from.

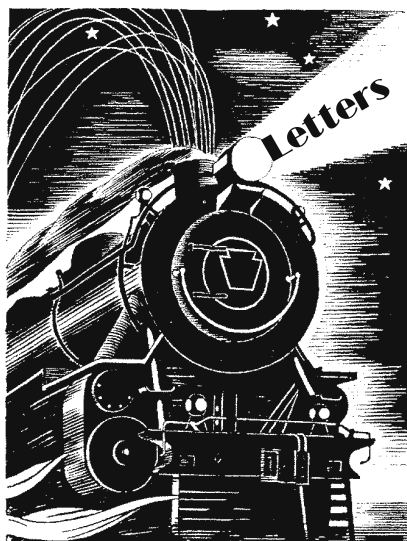
I started construction with making the vertical legs that went into the stake pockets followed by the support beams under the bunker, then completing the planking on sides and end thus creating the tie bunker on top.

Next step was to bend some support bracing and install at each corner leg and also add bars between each vertical leg width ways, [Ozark miniatures](#) and [grantline](#) parts were also added for more detail on the car.

Next step will be paint and decals — watch this space.

Iain Collingwood





STRAIGHT FROM THE IRON HORSE'S MOUTH

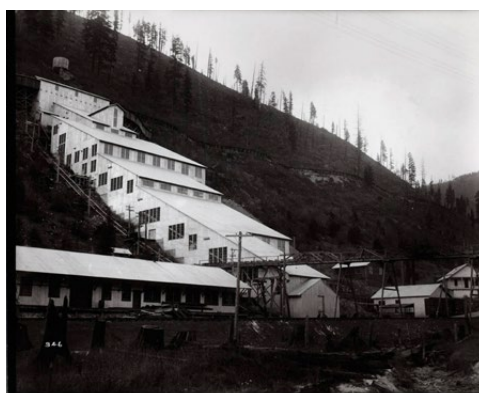
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Cover Photo March/ April 2021 GR News

I particularly liked the Cover!!! Thanks. The cover is a picture from my layout, the Coeur d'Alene branch of the Northern Pacific. Here is a picture of the prototype, the 500-ton National Concentrator, from which this model was patterned.

Bill Derville
 Rose City Garden Railway
 Society



National Mill, Mullan, Idaho

Photo by Barnard Studios 1915
 Barnard-Stockbridge Collection
 University of Idaho Library, Creative Commons



Photo by Carla Brand Breitner

The Mill Building on the Derville Coeur d'Alene branch of NP included rails for ore car delivery to the top of the mill.

Photo taken during the 2019 Portland National Garden Railway Convention

Your editor has been selecting cover photos from years of photographing layouts during National Garden Railway Conventions, Western Regional Conventions, and layout open houses. This month's cover photo was taken at Carter & Patsy Johnson's Small Town USA railroad during this year's Nashville NGRC. This garden railroad is inside a garage, but takes the viewer outdoors with a sky backdrop and rock & river detailing by Tennessee artist, Kathy Roddy. John Cushman from the Denver area photographed the snowy scene on the November/December 2020 cover; his railroad may be on the Denver 2022 National Garden Railway Convention tours. The first issue featured Dennis & Sheri Buckley's elegantly staged railroad in Santa Clarita, California.

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