PGRS TRACKIN'

Newsletter of the Piedmont Garden Railway Society

July 2020

Editor: Scott Williams

This country has weathered many a storm in over 244 years since Independence Day and the unique character of the American spirit seems to prevail through tragedy and triumph. Our latest fight is against a microscopic virus not like anything we have seen in one hundred years. I hope we will all follow the best advice of our leading scientists and doctors and with luck we will all stay safe from this threat until science can hopefully beat it.

One reason America is the great nation it is today is because it embraced the technology of the ‘Iron Horse’. Railroads connected the vast resources of the North American continent with the export hubs of the seaports. They connected the west coast to the east coast of this vast country and they also delivered the industrial might of America to conflicts around the world when called upon.

J.R. Snider sends this 4th of July Photo. He states that his Brewery and Fireworks factories are running double shifts preparing for Independence Day.

**** [**"**On another note, I have 5 new activators and a linker for Airwire 900 switching. They are left over from the Potter project. Found them in a box I had forgotten about. If anyone is interested, let me know." J.R. Snider **]** **336-391-3048 or jrs@triad.rr.com**

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Bill Davies has been busy in East Asheville building himself a backyard railroad.

Bill includes this copy with his photos:

These pictures of the G Gauge layout that I've built over the past couple of weeks in my back yard after buying two large bins of LGB track and 4 switches at the show in Johnson City last year. The wall is built from Belgard Quarry Riverblend retaining wall blocks from Lowes which are alternately free stacked and then capped. The layout has a slight 3% grade in spots but level in the curved portion where the trestle will be built (a future project when I have a better idea of how to do that). Future plans also include a yard barn for storage, a passing siding, and completion of industries....but I ran out of switches. I have 2 Bachman Big Hauler 4-6-0's and a 36 Ton Shay that I hope to convert to Remote Control, similar to what we use at the AVMRR Depot, but have no clue how to do that since I am new to G Gauge (I am primarily an S Gauger that operates a small layout in addition to collecting American Flyer). I was hoping to meet

more PGRS members at the spring meeting for guidance in that endeavor of converting to remote controlled operations which I have discussed with Larry and Terry. Hopefully you can use these photo's and I look forward to finally getting to meet more members of PGRS.


SR
SERVE THE SOUTHERN
INVEST THE SOUTH

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Social Distancing train fun at Fran's

Fran, Doc, Jim Hendley and I met one morning about two weeks back to enjoy some fresh air, catch up and run some trains. Fran's layout ran flawlessly.

It was a lovely sunny Monday morning. Marge appeared briefly to say Hello and produced a plate of yummy glazed doughnuts and a huge pitcher of iced tea. Thanks Marge!
Fran thought it would be cool if his trains ran through the screened back porch. I might have moved the train tracks to the porch but not Fran. He built an addition to the porch.

My recently converted Aristo RS3. The RailBoss and MyLoco sound cards worked flawlessy but fresh batteries in the transmitter would've been helpful.

Fran ran the Santa Fe F Units that he purchased from Jim a while back. Very nice!

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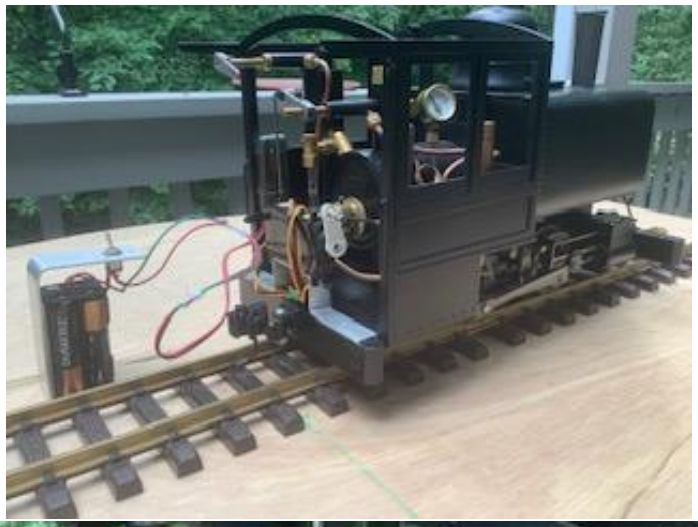
Terry Ketcham converts his live steam Emma to Radio Control.

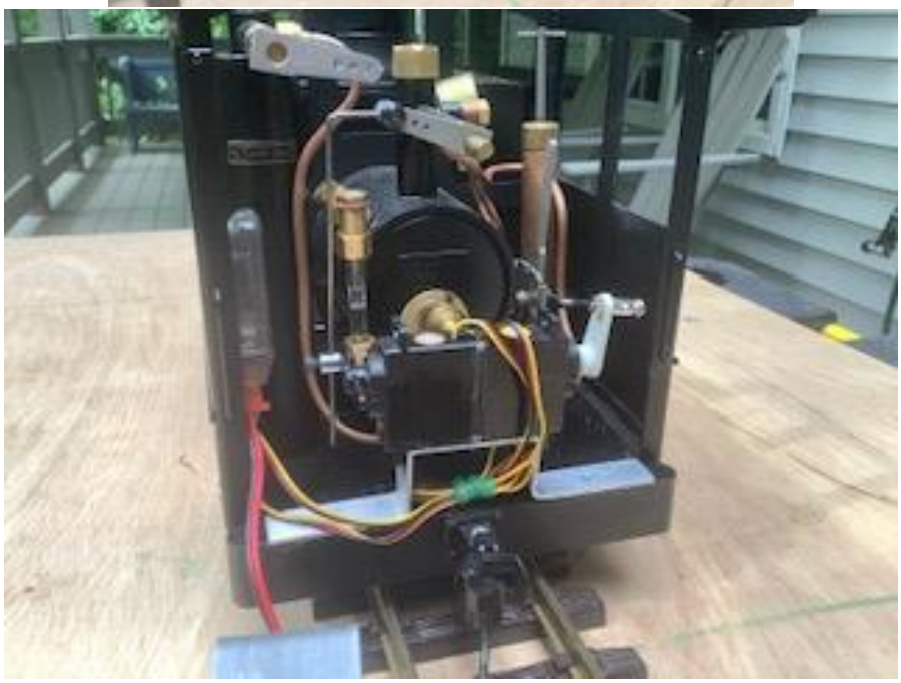
Whenever Les Knoll visited the Apple Valley Club he always brought his collection of live steam engines. They were always a big hit with our visitors and drew lots of attention as Les prepped these engines for running. He uses a radio control system to run the engines similar to what model airplane owners use. Very impressive !! A while back, Les donated a live steam engine to Apple Valley to run on our large scale layout. Les said he built the engine with spare parts he had which were left over from other projects. He showed us how to prep the engine for firing and gave us distilled water, steam oil and butane fuel to keep us running for awhile. After a few attempts at firing the engine myself I added a pair of gloves to this equipment. Don't ask me why I did this !!

Last year I purchased an Accucraft 0-4-0 Live Steam engine. The EMMA model is 1:13.7 scale so it is larger in size than the 1:20.3 or 1:22.5 equipment that I'm used to running with either battery control or track power. Of course it still runs on our 45mm track.

With the cab roof removed it provides a spacious environment to install radio control servos , receiver etc. if I wanted to try to add radio control equipment. Not knowing ANYTHING about RC I asked Les for advice on how to get started. He suggested I purchase the SPEKTRUM DX6 controller along with servos with he felt would be small enough to fit inside the EMMAs cab and still do the job.

The DX6 came with a detailed book on how to set up the unit and linking it to the servos to control the EMMA. The DX6 looks like a complex unit however I'm only using the 2 large control knobs and the on/off switch .
So it seems I needed a power supply consisting of AA batteries which connects to a receiver mounted inside the engine using double faced foam tape. The battery pack will fit inside the EMMA but it would need to placed next to the boiler which generates a lot of heat so i decided the battery pack will be placed in a trailing car instead.





The receiver accepts wired plugs from the servos and is mounted under the fireman's window using foam tape. I also mounted the 2 servos inside the EMMA using E6000 glue. Each servo controls a separate item on the engine. One servo controls the throttle or the amount of steam supplied to the cylinders and the other controls the forward, neutral and reverse lever. I was surprised at the power that these little servos can deliver. The direction lever on the EMMA requires a little effort pushing it back and forth just with my finger but the servo had no problem moving it. I think the trickiest part of the install was trying to decide the best type of servo connectors. Fortunately there are a ton of connectors and all sorts of linkage available for just about every type of RC installation.

I purchased all of my RC equipment from HobbyTown in Asheville which carries a nice supply of RC equipment. Before even thinking about installing any of the RC equipment inside of the EMMA ,i connected all the components together on the workbench to get a feel of how everything worked together.

My next project might be an Accucraft Live Steam Shay. This is a 1:20.3 scale engine so the space inside the cab is smaller than the EMMA and could be a bit of a challenge. Maybe just have the throttle controlled with RC will be enough, we'll see.

Anyway I want to thank Les for all the help he has provided me and and other club members as well. A few months ago Les made a 2 hour trip from his home to one of our young members home in Swannanoa to help him with a problem he was having with his new live steamer. What a guy !!

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From Dave Carpenter over in Southern Pines:

This is a fire tower house for a fire tower I acquired that had no lookout house on top. The plan is from a 7-foot square version from the USDA Forest Service obtained on-line. They also have specs for a 14 x 14 one.

The windows and the door were laser cut for me by Stephen Milley of Rail-Scale Models. He was in Garner at the time but now resides in the Hendersonville area. Recruit him for membership in PGRS if he's not already a member! The rest is stick built mainly with O scale lumber from Fast Tracks of Canada.(so an O scale 4x8 = a 2x4 in 1:24 or 1:20.3 approximately. Except the floor is cut from a cigar box lid.

The wood is stained with Minwax Red Chestnut which matched my fire tower structure best. The roof was specified to be canvas so I consulted a friend who owns a fabric store for a thin material, weatherproof as possible, that will resemble canvas on a G scale structure. His answer was Sunbrella, used for patio cushions, umbrellas, etc. He offered a light gray and a brown that could maybe be dark khaki and I chose the brown one. It is glued to the roof with 3M Super77 and rolled up under the eaves.


**** Looking great Dave! Tell Stephen to check our website out. It has club info and also an application to send in to join up.**

https://piedmontgardenrailway.org/

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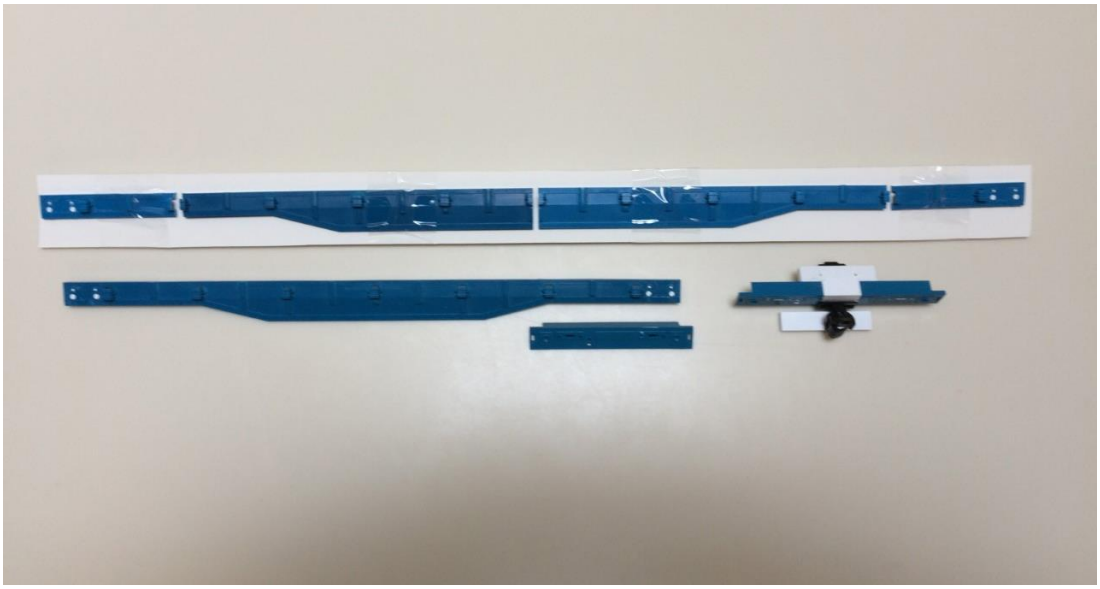
Larry Williams' Kitbashed 7/8n2 "Maine" Flatcars

A couple of years ago I kitbashed an Aristo 1:29 scale 42' flatcar into a 1:20 scale logging railroad flatcar. In 1:20 that made it a 29' car. Since then, I have been working in 7/8n2 because I love the Maine two-footers. I still had some Aristo flats, so I got to measuring. The Maine cars were between 24 and 33' long. In 7/8" scale or 1:13.7, an Aristo flat is only 19 feet long. After measuring and staring a while I realized I could splice two sideframes together to make a 30' car that matched a drawing I had. I made the cuts through the stake pockets so the cutline would be harder to see. I had to cut the endframes and add a spacer which worked out to be exactly the width of a Kadee coupler. I added enough styrene framing to keep them from falling apart. I didn't bother with any underframe detail. The decking was cut on a small table saw and is shiplapped like the original. The trucks are Maine 2 foot kits from The Train Department. The only snag is that the Maine roads didn't survive long enough to have steel flatcars, but I like them.

I made four of them, because except for boxcars, all of the other Maine freight cars are modifications of flatcars. I first added sides to make a gondola which they used primarily for hauling coal. In the good ol days they shoveled them full and shoveled them empty. The next one is a pulpwood rack. Pulpwood was one of the largest volume of freight especially for the Sandy River & Rangeley lakes. I still have to add the end racks. Once again they were all

loaded and unloaded by hand. Presently I am working on a tank car which I am bashing from two Bachmann tank cars. It is still in pieces.

Larry Williams



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Ken Majchrzak has been very busy at his place and sends in these photos along with this copy:

"I have finally finished laying all the track on my layout. I thought I would send you a bunch of pictures to give you and the PGRS members an idea of what I have built so far. The whole layout is above ground built on PVC lumber throughout. It is a double loop - kidney shaped - with 400 plus feet of mainline. There is a large train yard, many industrial spurs and three long

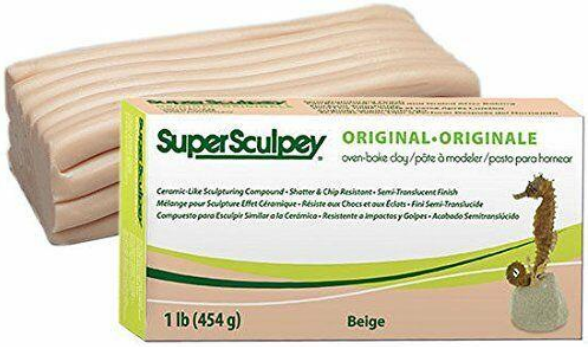
passing sidings. I have five locomotives which are all battery powered with Airwire controls and Phoenix sound systems. I have about 100 freight cars. The layout was designed to be operations orientated but can be continuous run of trains. Scenery has only begun. All my buildings are going to be scratch built flats to be appropriate for multiple car spots. There is no electricity at the layout. The layout consumes about a 75 foot by 100 foot area in my back yard. I would be happy to answer any additional questions you might have.” K.M.


VICE

GAC
GREENE ACRES CO-OP

Polymer Clay figure update:

I mentioned last newsletter that I was experimenting making figures with Polymer Clay sculpting that you bake in your oven @ 275° and then you can paint with model paint.



For my first attempt I decided to try sculpting a larger figure and made a 1:13 scale figure for my brother Larry to go along with his 7/8ths scale trains. He's about 5" tall.

Well, I finished and painted the 'overall dude' and then after looking at him for a few days I decided that what he really needed was: 1) A name. and 2) A dog.

I have therefore named him Clement Boggs, ['Clem', for short] and his hound dog is named 'Otis'. I don't know if Otis is much good for huntin' but he's probably pretty good at layin' around the Engine House in a shady spot and barking at the occasional squirrel or delivery man. For that matter, I'm not too sure if Clem is good for doin' all that much either. But, they show up most days…unless the fish are really biting.

I also finally made a smaller 1:20 scale figure to drive my Davenport diesel switcher. No ready made figures will fit in this loco so I made this guy with very skinny legs:

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MEMBER PHOTOS?

Jon Bole sends this with the caption: “One of Hartland's last Big John's switches the sawmill.”

Jon heard HLW was closing up shop and he found one of the last ones in stock and ordered it.

I include a photo of my finished scratchbuilt Water Tower, PLUS; the big difference that lifting off the ‘buckboard sides’, a little paint and weathering and gluing on a few Bachmann pieces can make to a HLW Big John which is a great running loco if you find one.

Randy Theis sends photos and captions from up on the mountain. He says things are tight at his lumber mill so maintenance is getting lax. They need to make time to replace some roof boards before winter.

The Slick Rock Mountain Quarry and Lumber Co is getting ready to reopen after being shut down due to the pandemic.

Mrs. Wilson waiting at the Brevard station for the 4:30 to Hendersonville. Station master explains that in addition to the 6’ distancing, she must now wear a mask.

Water and coaling tower ready for the first train.

Construction on the lumber superintendent’s home is starting back up after being shut down due to the Pandemic.

Lumberjack cabins have been aired out and the outhouse has been moved to a new pit.

The bears got into one of the cabins. Quite a surprise for the cleaning crew.

The mill crew found a few logs around the mill and sawed up a load of lumber to get the saws tuned up.

The aggregate plant has started crushing in anticipation of the first shipment of ballast.

The sawmill complex and the super’s new house.

Track crew heading out for some switch repairs.

Randy also includes some photos of his groundcover planting's progress from last year.

He said they are very pleased overall with the survival and growth.

I hope you have been enjoying our hobby while we're all staying close to home. I give thanks SO often that I have a hobby like this to occupy my days. I encourage you to PLEASE send me some photos to share with our club members of any recent projects that you might be working on.

I asked members to send photos of the 'trains' they've been working on lately and apparently Sky Mayo thought I said 'planes' and sent me these instead. But what the Heck? So long as it's kept him from getting in to trouble elsewhere. Nice work Sky!!

Free-flight rubber powered model planes…13” to 24” wingspans.

Send any idea, project or photo. We all love trains so…if it's about trains, and you've got it on your computer, chances are you won't be the only person who might enjoy viewing it.

Send your photos and articles to: srwavl@outlook.com

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Trivia Question: When you hear the term "Bipolar" nowadays you may think of some poor individual who suffers with manic depression disorder. Did you know that there was once a locomotive that was commonly referred to as a Bipolar?

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Membership:

Please consider sharing this newsletter with friends who might be interested and if they wish to become members ask them to contact our PGRS Secretary/Treasurer for a membership form.

Don Watson
125 Mistletoe Trail
Hendersonville, NC 28791

docwatson@morrisbb.net

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Train Lovers Luncheons and Apple Valley Model Railroad Club are temporarily postponed until further restrictions have been lifted.

*** Terry Ketcham has been running some Large Scale trains on Saturdays at the Apple Valley during the Farmer's Market. He say's to drop on by and visit if you'd like.

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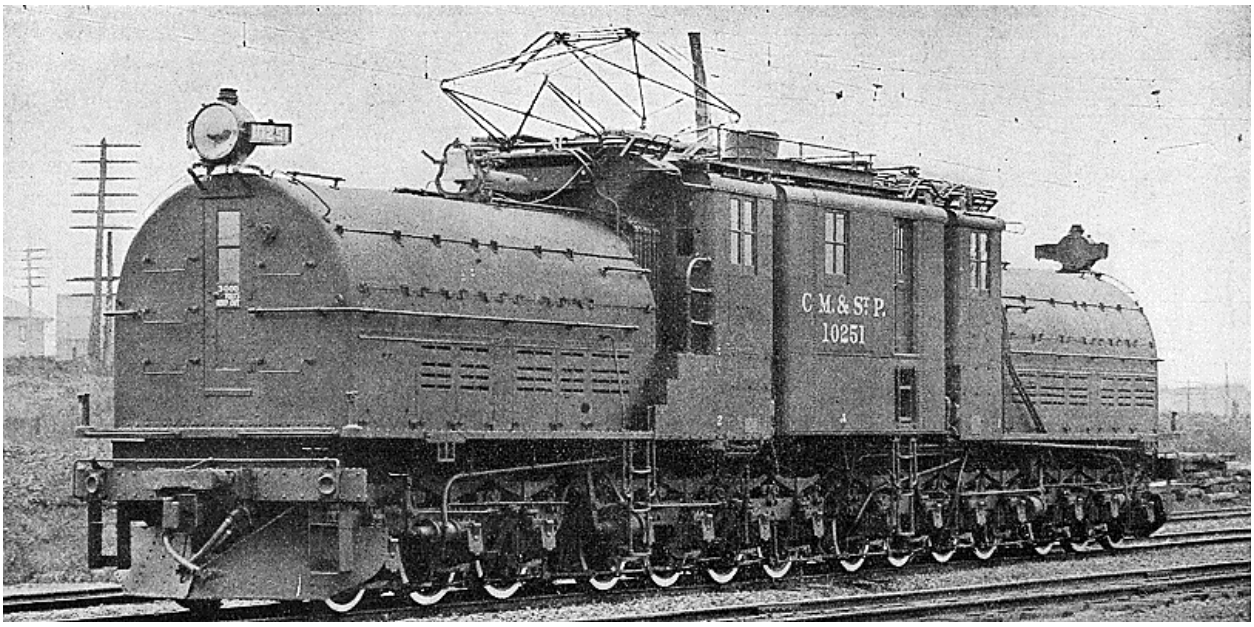
Trivia Answer: The Milwaukee Road's class **EP-2** comprised five electric locomotives built by General Electric in 1919. They were often known as **Bipolars**, which referred to the bipolar electric motors they used. They were among the most distinctive and powerful electric locomotives of their time. They epitomized the modernization of the Milwaukee Road. They came to symbolize that railroad during their nearly **40 years of use**, and remain an enduring image of mainline electrification.



In 1917, following the tremendous success of the 1915 electrification of the Mountain Division, the Milwaukee Road decided to proceed with electrifying the Coast Division. As part of this project it ordered five new electric locomotives from General Electric for **$200,000 each**. Their design was radically different from the boxcab locomotives previously provided by General Electric for the initial electrification of the Mountain Division two years earlier. The Milwaukee Road was the only railroad to order this design of locomotive from GE.

The most remarkable mechanical improvement was arguably the traction motors used on the new locomotives. They were known as **bipolar motors**, because each of the locomotive's **12 motors** had only two field poles, mounted directly to the locomotive frame beside the axle. **The**

motor armature was mounted directly on the axle, providing an entirely gearless design. This design was almost entirely noiseless, as it eliminated not only gear tooth growl, but also the whine of higher-RPM electric motors typically used in standard nose-mounted applications. The EP-2s were not the first electric locomotives to use bipolar motors, which had first been designed by Asa F. Batchelder for the New York Central S-motors over a decade earlier, but at the time they were the largest.

The layout of the 'bipolars' was unusual as well. The locomotive carbody consisted of three sections. A small center section contained a boiler for heating passenger cars, while the larger end sections contained the locomotive's electrical equipment and operator cabs in distinctive round-topped hoods. The locomotive's frame was split into four sections, hinged at the joints, with the two middle sections attached to the end sections of the locomotive body. There were twelve sets of driving wheels, plus a single idler axle at each end, for a 1B-D+D-B1 wheel arrangement. All buffering forces were transmitted through the locomotive frame.

The bipolars were designed to be able to pull any Milwaukee Road passenger train singly, and were originally delivered without multiple unit controls. General Electric claimed a top speed of 90 mph for the locomotives, but the Milwaukee Road rated them at 70 mph. They were rated at a continuous 3,180 horsepower with a continuous tractive effort of 42,000 lbf and a starting tractive effort of 116,000 lbf.

When the Bipolars were introduced, their modernity and distinctive design made them the most famous of the Milwaukee Road's electric locomotives. They came to symbolize the ***Olympian***, the railroad's premier train from Chicago to Seattle. Their unique appearance and power made them ideal for publicity purposes, and there was a series of demonstrations in which a Bipolar was able to out-pull contemporary steam locomotives. During a short period of testing on the Mountain Division, the EP-2s were shown to be less expensive to operate than the GE and Westinghouse electric locomotives then in use.

The five EP-2s, numbered 10250-10254, were placed into regular service in 1919 on the Coast Division. The Milwaukee Road saw immediate cost savings over the steam locomotives previously in use, as the Bipolars could run from Tacoma to Othello without stopping for servicing and could haul trains up grades that had required double-heading steam engines.

The Bipolars operated on the Coast Division from **1919 to 1953**, for most of that period without any serious rebuilding. In 1939 they were renumbered E1-E5. In 1953 all five of the EP-2s, which were 35 years old and worn out from heavy wartime service, were heavily rebuilt by the Milwaukee Road at a cost of about $40,000 per locomotive. The rebuild included additional traction motor shunts for increased speed, roller bearings, multiple unit capability, flash boilers, and streamlining. The E5, rebuilt in the Tacoma Shops as the prototype, performed as advertised, but went over budget, so the Milwaukee Shops were tasked with rebuilding the other four Bipolars. Unfortunately the Milwaukee Shop forces, unaccustomed to working on electric locomotives, did a "poor job" in the opinion of Electrification Department Head Laurence Wylie. (Wylie's successor, T. B. Kirk, stated that he saw a group of disconnected wires in a newly rebuilt EP-2 bundled together and tagged with a written message**, "We don't know where these go".** Afterwards the Bipolars were prone to electrical fires and failures, despite repeated attempts by Tacoma Shops to correct them.

Between 1954 and 1957 the Bipolars saw decreased use, and in mid-1957 were transferred off the Coast Division to the Mountain Division. Their problems persisted; moreover, passenger train speeds in the Rockies (over 80 miles per hour or 129 km/h in some locations) were generally in excess of the Coast's top speed of 60–65 mph (97–105 km/h), further exacerbating these problems. Between 1958 and 1960 all five were gradually retired, by which time they had received the Union Pacific-inspired yellow and gray passenger paint scheme. In 1962 all except for E2 were towed to Seattle and scrapped. Locomotive E2 was donated to the Museum of Transportation in St. Louis, Missouri in 1962 and moved there that year. It has remained on static display ever since, and has been fully restored to its appearance immediately after its 1953 rebuilding.

E-2 on display in 2008

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Businesses associated with our club:

Peggy Keyes
Owner / Chief Conductor
RightTrackTrainMuseum@gmail.com
828/625-5551

The Right Track Toy Train Museum
A non-profit museum to benefit Pancreatic Cancer research
2414 Memorial Hwy (Rte 64/74)
Lake Lure, NC 28746
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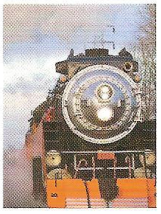

Garden Railroad Design
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Email: jhh1218@att.net
Phone: (828) 891-7570
Fax: (828) 890-3346

**

** **Jim Hendley has moved**. To reach him use the following number:

828-333-2523 and if the email above does not work try hendleyjim4@gmail.com