



The 2023 GGLS Board Members

Jon Sargent, Rich Croll, Matt Petach, John Lisherness, Mark Johnson, Jerry Kimberlin, Rick Reaves, Lisa Kimberlin

The CallBoy

March 2023

Pat Young CallBoy Editor
10349 Glencoe Drive
Cupertino, California
95014

The CallBoy Newsletter

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Tilden Park 2491 Grizzly Peak Blvd, Orinda, California 94563	Pat Young, Editor phty95014@yahoo.com March 2023	A 501(c)(3) Non-Profit Corporation www.ggls.org or www.goldengatels.org
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Board Officers

President:	Jon Sargent	510-233-6481
Vice President:	Rich Croll	510-227-9174
Secretary:	Matt Petach	408-256-2883
Treasurer:	John Lisherness	510-647-8443
Safety:	Jerry Kimberlin	510-809-7326
Director at Large:	Mark Johnson	510-889-9451
Past President:	Rick Reaves	510-479-3386

Ombudsperson

Lisa Kimberlin 510-214-2595

GGLS Trust Fund Members

John Lisherness
Jerry Kimberlin (elected March 2015)
Sammy Tamez (elected August 2022)

GGLS Committee Chair People

Bits & Pieces:	Jeremy Coombes
Boiler Testing:	Jerry Kimberlin
Building:	Rick Reaves
CallBoy Editor:	Pat Young
Dues:	Lisa Kimberlin
Grounds:	Andy Weber
Landscape:	Jo Ann Miller, Bruce Anderson
Librarian:	Pat Young
Locomotive:	Paul Hirsh
Membership:	Sammy Tamez
Public Train:	Walt Oellerich
Refreshments:	Walt Oellerich
Rolling Stock:	Rich Croll
Security:	Jon Sargent
Shop Foreman:	Rich Croll
Signals:	John Davis
Technical Talks:	Charlie Reiter
Track:	John Lytle
Train Storage Rental:	Jon Sargent
Web Site:	Pat Young

Club Correspondence

All correspondence to the Golden Gate Live Steamers should be sent to the secretary, Matt Petach at this email: secretary@ggls.org

Membership

To qualify for membership, attend 2 monthly meetings. At the first meeting, please introduce yourself and obtain a membership application from Membership chairman or Secretary. At the second meeting, return your completed application, a signed release form, the yearly prorated club dues, together with the \$25 initiation fee and you are officially a member.

CallBoy

Articles, pictures, photographs, items for sale or any other information that would be of interest to the club should be sent to Pat Young, the CallBoy editor at phty95014@yahoo.com

Deadline for submittals to next month's issue is the 19th!

2023 Calendar of Club Sponsored Events

- 03/12 General Meeting/Board Meeting/Swap Meet
03/18 Spring Grounds Cleaning & Pruning Work day
03/18 BAEM meeting
- 04/02 General Meeting/Board Meeting
04/15 BAEM meeting
- 05/07 General Meeting/Board Meeting
05/20 BAEM meeting
- 06/10-11 GGLS Spring Meet/Open House
06/11 General Meeting/Board Meeting
06/17 BAEM meeting
06/17-18 PV&A Spring Meet at PV&A RR
- 07/09 General Meeting/Board Meeting
07/15 BAEM meeting
- 08/13 General Meeting/Board Meeting
08/19 BAEM meeting
- 09/09-10 GGLS Fall Meet
09/10 General Meeting/Board Meeting
09/16 BAEM meeting
- 10/08 General Meeting/Board Meeting
10/21 BAEM meeting
- 11/12 General Meeting/Board Meeting
11/18 BAEM meeting
- 12/09 BAEM meeting
12/10 General Meeting/Annual Meeting/Board Meeting

Please Notice This



Jon reminded everyone that if you haven't paid your dues, it's now \$10 higher because you delayed too long. If you haven't paid for your storage, you are overdue and at risk. Don't forget, you have to sign in on the bulletin board in the club house when you run your equipment, four times a year, as per the rules.

Announcements

The new 2023 club calendar shows that this March 2023 General Meet is our yearly swap meet. So get ready for an opportunity to make some money by selling some of those nick-knacks, tooling and surplus material hidden away in those dark closets, corners in the garage & under the work bench. For those in the buying mood, come and look. Bargains galore (we hope) where one can practice the fine art of the haggle, locate that missing item for a collection or end up buying something you really don't need!



Speaking of dumping, Jon reminded everyone to not just leave stuff here. If you want to donate something, ask first & get approval; Don't just abandon it here.

Stormy Weather at the Club

Photos by Sarah Buhre and Bruce Anderson



From Sarah Buhre:

Hi,

I've seen the snow photos at GGLS before but figured it was a long shot to ever be able to see this scene myself! First time walking around in the snow since I left Connecticut in 1995. It was fun.



Snow photos from Bruce Anderson



From Bruce Anderson:
Yowser, the TV snow reports! I think one short scene on (KTVU 2?) was shot on the picnic hillside across from Redwood Valley's main parking lot.

A second scene with a snowman on (KPIX 5?) I think was shot near Centennial Drive and the road that leads to Tilden's golf course.

Stay warm, Bruce



From Sarah Buhre:
Bummer was the big tree branch that fell out at the Heinz loop that took out our water tower feature.



Hi All,

Using a sawhorse and one of Mel's saws, large debris is going. Many families up here enjoying last of the snow. I'm currently planning on putting on a little show for RVRy passengers showing how things worked before "smartphones" came along. Having my fun talking with families.



Also, water tower will survive. Both tank and tower are basically okay.

Keep smiling, Bruce

Hi All,

Rich and Walt showed up with a chainsaw. Track is clear.

Editor: You guys make the club!



The club facility needs lots of cleanup work from the storms that came through recently.

The Board has schedule a work day on March 18th to prune trees & cleanup material dumped from the storm. Lunch will be provided, so worker please join us to help from 10 am to 5 pm!

Guests and New Members

The following potential new members came to see what our club is all about. If you see them at the club, please give them a warm welcome and hope that they were favorably impressed by us.



Ajay Pande, from Los Gatos, is a novice to metalworking and is interested in building Kozo's A3 0-4-0 switcher but is unsure of the scale yet. He is looking for advice from other members about this and wants to be more familiar with the hobby.



Jim McKibbin, from Fairfax, is a retired mechanical engineer who designed steam power plants for a living.

He enjoys all forms of railroading, but his main interest is steam. Ultimately, he would like to build something but will probably end up buying something in the meanwhile. He has a fairly well equipped shop but his skills are far short of the tools he has so it may be a while before he gets around to completing anything.



Mike McGue, from Napa, is a retired shop keeper and BAEM member came for the first time today.

Please to meet you all and welcome!

Railroad Activities



Matt Petach visited the historic Central Pacific erecting shop in Sacramento and gave an account of the different architectural styles present in the building. He was there to prepare a 120-ton steam crane for relocation to Niles Canyon.

As part of the storm cleanup at Niles Canyon Railroad, he also got to operate a 50-ton air powered side dump gondola used to move roughly 250 tons of mud & rocks that landed on the right of way after the storm.

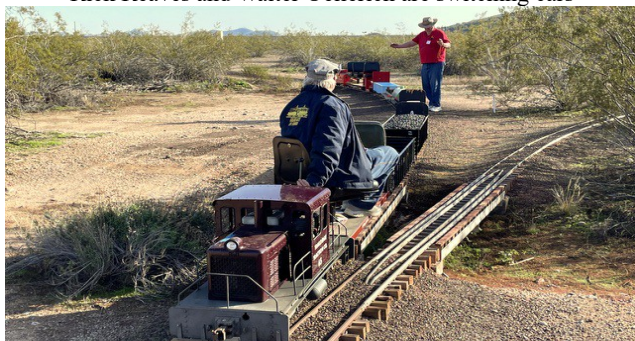
Jon's grandson Gregory visited the California State Railroad Museum, and the staff was nice enough to open up the Southern Pacific cab forward so he could go inside to see what it was like.

Maricopa Live Steamers

Mark Johnson visited Maricopa Live Steamers before their Winterfest and boy was it cold!



Rick Reaves and Walter Oellerich are switching cars



John Croll is directing Rick in switching

Rich & John Croll, Walt Oellerich, and Rick Reaves went to also Winterfest and they had a good time, but as Mark noted, it was cold!



A gentleman was handing out flyers about his club, the Walnut Creek Model Railroad Society. Here is a description from their web site:

The Walnut Creek Model Railroad Society (WCMRS) operates the Diablo Valley Lines (DVL) model railroad, one of the most mountainous and one of the largest exclusively HO scale model railroads in the United States. This model railroad features standard gauge, narrow gauge, and interurban (overhead electric) freight and trolley lines.



At our public shows we invite you to view our permanent 34'x56' [1,904² ft] layout. The DVL is comprised of approximately 4,300 feet of hand laid track on more than 175,000 individual ties with over 240 turnouts. The model railroad is contained in a purpose-built building designed and constructed by the club members. Diablo Valley Lines is viewable from the 160' perimeter that includes multiple elevated viewing platforms.

Please visit our Photo Galleries to see more of our railroad.

WCMRS membership is always open to those 18 or older with an interest in HO Scale model railroading. Membership in the National Model Railroad Association (NMRA) is required as we are a 100% NMRA Club.

More information can be found at their web site at:

www.wcmrs.org

Minutes of the General Meeting

OFFICERS PRESENT:

Jon Sargent, Rich Croll, Matt Petach, Jerry Kimberlin, Mark Johnson, Rick Reaves was present as past-president and Lisa Kimberlin was present as Ombudsperson.

Treasurer John Lisherness was absent. President Jon Sargent called the meeting to order at 1005 hours Pacific time.

Officer Reports:

President, Vice President & Secretary had nothing to report and the Treasurer was absent. The Safety Chairperson & Ombudsperson had nothing to report. Director at Large Mark Johnson reminded people about cleaning up and taking their junk home with them.

Committee Reports:

Buildings: Rick asked for an update on rat proofing buildings and Jon reported that an update would be provided during the Board meeting.

Grounds: Andy noted he will need another 3 cubic yards of road base to finish up the parking area once the truck parked here is moved out of the way.



Alex O'Donnell and Paul Hirsh are leveling the first turnout while Rick Reaves and John Croll supervise



New member Jim McKibbin is finishing installing the third rail

Ground Track: Rich reported that the 7.5" portion of the crossover is complete but the third rail for the inside loop still needs to be completed.

The ground throw has a padlock hasp with a flag on it. It will be LOCKED using the public gate padlock when the Public Train is running to ensure nobody crosses onto the outside loop. There is no signaling, so be mindful when running through it. Walt noted that the switch going to the shop isn't working and needs to be fixed.

Signals: Paul noted all the rain is causing spurious signal indications so if in doubt, treat the signals as YELLOW and proceed with caution. The signal by the roundhouse is actually out of order and needs to be repaired.

Locomotives: Heinz & Hunter Atlantics are non-operational and the RG22, diesels and electric are all working. The RG20 locomotive is reassembled and rolls smoothly. The next step is to run it on air and make sure everything still works.



Rolling Stock: Rich has obtained Alex O'Donnell lettering for the last two riding cars that got repainted and will get it applied. If you take riding cars out of Clerici barn, don't forget to couple & chain them back into the rest of the cars when you put them back!

Shop: Shop is still on lock down with RG20 inside so see Rich if you need to get inside. If you borrow a tool from the shop, PUT IT BACK WHEN YOU ARE DONE! Rich may implement a paint color code on shop tools showing which tools came from the shop and which ones came from the tool shed.

Public Train: Walt Oellerich reported that last year, the Public Train ran 51 Sundays except Christmas. This year, it already got rained out 3 times of the first 6 Sundays. Once RG20 is back in service, we'll run a double-headed Sunday.

Landscape: A few daffodils are starting to come out and we will need to do our annual pruning soon.

Security: Jon & Paul have been troubleshooting a small issue with the camera pole at the Roundhouse.

Membership: Sammy asked the new members to meet with him in the kitchen after the meeting for questions and a tour of the club. Andy asked new members to see him for training on the water system for winter protocol.

CallBoy: Pat noted Yahoo might be marking messages starting with ALL CAPS as spam, so your CallBoy online issue may have ended up in your spam or trash folders.

Website: The 2023 club event calendar will be posted in the CallBoy & the club's web site once it is finalized by the Board.

Builder's Group: Charlie's series of tech talk articles have all been posted in the CallBoy. We hope that Charlie will come up with new ones.

Old Business:

Can we accept venmo yet? No, the Board will talk about that during their meeting.

New Business:

No new business.

Jon adjourned the member's meeting at 1047 hours Pacific time.

Minutes of the Board Meeting

Officers Present: Jon Sargent, Rich Croll, Matt Petach, John Lisherness, Jerry Kimberlin, Rick Reaves, Mark Johnson, John Lisherness; Lisa Kimberlin was present as Ombudsperson.

President Jon Sargent called the Board meeting to order at 1133 hours Pacific time. Secretary Matt Petach presented the minutes from the December 11th Board meeting & Annual business meeting. Rick Reaves moved to accept the minutes of the Board & Annual business meeting. Mark seconded the motion. There was no discussion of the minutes. Jon called for the vote and the motion passed unanimously. For the record, it was noted that no January meetings were held due to the closure of the park by the East Bay Regional Park District.

Parking Lot Road Base Rock: Rick Reaves made a motion to approve ordering another load of rock for Andy Weber to finish the parking area. Mark Johnson seconded the motion. During discussion, Rich Croll recommended we get another 9 cubic yards instead of the 3 cubic yards Andy had asked for. The motion was amended accordingly. Jon called for the vote; the motion passed unanimously. American Asphalt is still teed up to reseal the paved areas once the weather dries up; the \$4700 for the work was already approved.

Building Repairs: Additional building repairs are needed on Diamondback and we have already approved Christian to repair the Long Barn. We will request him to provide an estimate for how much it would cost to repair the Diamondback Barn when he is here working on the Long Barn. John Lisherness will pick up the materials needed for the Long Barn repairs. Rat proofing will happen separately once the building repairs are completed.

Roundhouse: Mark Johnson made a motion that we update the Roundhouse rules to require members to keep the doors closed except when actively moving equipment in or out. Rick Reaves seconded the motion. During discussion, it was decided we should paint "Keep Doors Closed" across all the doors to remind members of their duty to keep the doors closed to keep rats out. Jerry can make a paint mask for that. Jon called the question to a vote. The motion passed unanimously.

Michael Smith presented his request for reimbursement for rodent proofing supplies. Rich noted we would reimburse for the expense, once the seven pairs of safety goggles were accounted for. The reimbursement request for chips for the 2023 Chili Run is fine.

Drainage around the Roundhouse was brought up. Andy and John will work on punching holes in the concrete walls around the turntable pit to collect water and improve drainage around the Roundhouse.

Grounds Cleanup: After some discussion, Saturday March 18th was chosen as the date for grounds cleanup & tree pruning. We need to make sure Andy is on board with that day. Work will be from 10 am to 5 pm, and GGLS will provide lunch for members who come to work. We will need gasoline for the chipper so it can be taken to Heinz loop and used to break down branches into chips.

Paul Hirsh has added “painting the steaming bays” as an Eagle project for local scout troops. He also asked if we can remove the oak tree & bay laurel on the exit side of the tunnel as they are dropping branches on the track. Jon will talk to Ellen about removing them, as they’re on her land as well.

New Members Information Sheet: Mark Johnson made a motion that we adopt the new member information sheet Lisa prepared as a document to be given to all new members. Rick Reaves seconded the motion. During discussion, it was decided we should update the document to avoid listing specific people, so that we don’t have to update it every time we change officers. Andy Weber was replaced by “Grounds Committee Chair”, Jon Sargent was replaced by “Security Committee Chair” and Pat Young was replaced by “Communications Chair” with the contact address being communications@ggls.org. Jon called the motion to a vote. The motion passed unanimously.

Electronic Donation: The question of getting a second bank account for accepting electronic donations is raised again. Mark Johnson made a motion that the Board adopt a resolution that the President, Treasurer & Secretary open a second bank account in order to be able to accept online donations. Rick Reaves seconded the motion. During discussion, Mark noted there is likely to be a specific person at the specific branch that we will need to meet with in order to get this done. Jon called the motion to a vote. The motion passed unanimously. Matt will craft the resolution on GGLS letterhead and have it signed by the President and Treasurer.

A question was raised about whether a donation of \$250 through BrightFunds from VMWare on behalf of Andy delHierro had arrived or not. John noted he has not received any donation of \$250 from BrightFunds or VMWare.

2023 Calendar: After long discussion about dates, the Board approved the following dates for the calendar:

- March 12th General meeting
- March 18th Spring Grounds Cleaning & Pruning Work day
- April 2nd General meeting & Swap Meet (one week early due to Easter Sunday)
- May 7th General meeting (one week early due to Mother’s Day)
- June 10th -11th GGLS spring meet (General meeting on the 11th)
- June 17th -18th Portola Valley & Alpine Spring Meet at PVARR
- July 9th General meeting
- August 13th General meeting
- Sept 9th -10th GGLS Fall Meet (General meeting on the 10th)
- Oct 8th General meeting
- Nov 12th General meeting
- Dec 10th Annual Business Meeting & Board elections

Matt Petach will file request with East Bay Regional Park District for our meets on June 10-11th & Sept 9-10th, including portable restrooms.

Smith New Train Barn: Jon had the contract for Chris Smith's new Train Barn by the Roundhouse. They need to clean up the barn and put the extra track down to replace the one they took up before it gets signed. Once signed, a hard copy will be kept with the Secretary briefcase with an online scanned copy stored in Google Drive in the GGLS Secretary account.

2023 Financial Summary: John Lisherness has the 2022 annual financial summary for our organization.

Club Website Expenses: Matt will investigate shifting the Internet bill from credit card to a purchase order/invoice based going forwards.

Log Splitter: A question comes up about getting a log splitter. Rather than purchasing one, United Rentals has a 24” stroke 20-ton vertical log splitter rentable for \$110/day in Berkeley, if someone with a truck can pick it up & return it.

Jon adjourned the meeting at 1252 hours Pacific time.

Bits and Pieces

From Jeremy Coombes

(Photos from Pat Young & Bruce Anderson)



Bob Morris brought in an 18" Mitutoyo height gage. Jeremy Coombes gave a brief description of its function & uses.

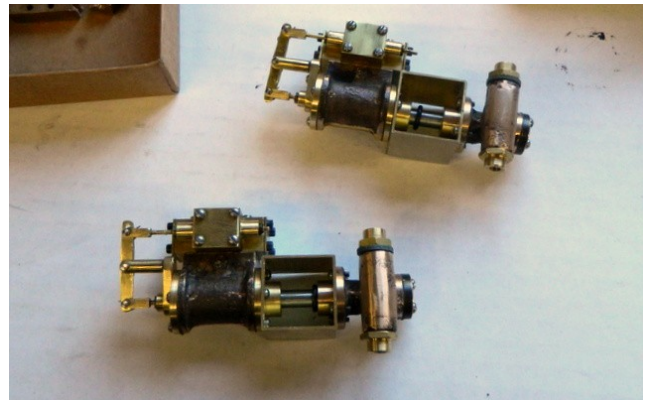


Rich Croll displayed a switch stand he manufactured for the new cross-over. It has several nice features including a "lock-out" to protect the switch when running the Public Train.

The idea is to use the main gate lock for the switch, which forces the switch to be unlocked when the facility is secured at the end of the day. When the switch is locked (protected) the switch position flag is in the down position, and when in the up position it alerts drivers that the switch is unprotected. An elegant solution!

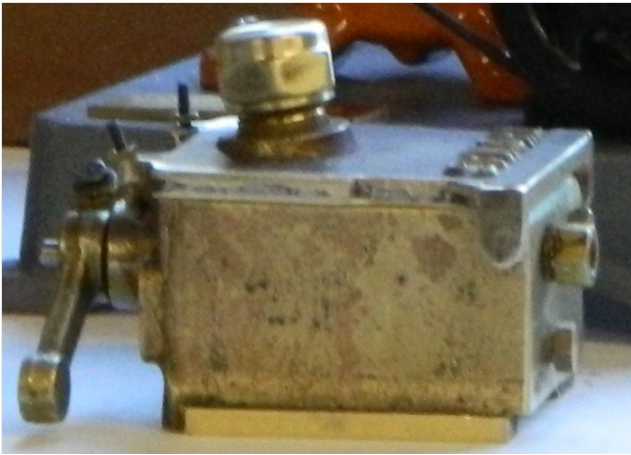


Rich also brought along a wheel from his RRSC G40 that was in very bad shape. However, Rich did say it was 40 years old, so it sounds like he got his money's worth out of it.



Charlie Reiter has been busy as usual and brought in a number of interesting pieces. Several months ago Jerry Kimberlin passed two delicate (cute), but non-working, steam driven water pumps to Charlie as Jerry knows he has a addiction for fixing things that refuse to work.

So Charlie obtained a set of drawing for what he determined to be Little Engines products. After a quick study of the drawings Charlie realized there were subtle mistakes and therefore redesigned them to his liking. He eliminated the gland on the pump, and fitted all the pump features to be closely aligned. And, as if by magic, they now work very nicely!



Jerry also gave Charlie an interesting mechanical lubricator that was originally made by Dick Thomas. This required a complete strip and rebuild, but in true Charlie style the finished product turned-out very nicely, has terrific ‘curb appeal’, and of course it works.



A while ago Charlie purchased some castings from Pringle Engineering in England to make, as Charlie puts it, a Christmas-type toy. However, due to a little mess-up with the order the casting didn’t arrive in-time for Christmas 2021.

So, as Christmas 2022 approached Charlie felt the yearly influence of old Saint Nick and got to work making an electric generator powered by a steam turbine. And on Christmas Eve Charlie fell asleep with visions of sugar plums dancing in his head! I hope Santa brought you lots of coal for Christmas Charlie!



But like most of us Charlie occasionally has an 'oops' moment, proving that he is in fact mortal.

Recently, Charlie was holding a steam chest in the lathe using a four-jaw chuck, and the set-up turned-out to be not as secure as Charlie hoped. During the interrupted cut the part move in the chuck causing the tool to dig in. The lathe stopped instantly (thankfully without damage), but the shank of the brazed carbide cutting tool was severely bent. Charlie says it was an opportunity to fix everything that was wrong with the part anyway.

John Sargent reported there is a 1” scale Atlantic with a Vanderbilt tender for sale that was built by the late Frank Smith, a former GGLS member. Asking price is \$17,500 and John has placed some photographs & information on the bulletin board.



The author is convinced Pat Young has gone quite mad. His continued fascination with 3D printing continues to evolve while printing more & more complex shapes & items. His latest undertaking utilizes the “Vase Mode” that follows the contour of the part while printing. This method significantly reduces printing time and appears to improve the surface finish. A win-win!

As an example of this printing technique Pat produced two roses that are impressive and presented them to the Landscape chairpersons Bruce Anderson and Jo Ann Miller.



Pat also produced “Chili Run” medallions to recognize all the members of the Chili Run crew that made the 2023 New Years Day Chili Run such a success. Well done to all.

Builders Group **Video Recommendation**

By Bruce Anderson



Hi all,

YouTube’s hobby machinist channel Blondihacks (a.k.a., Quinn Dunki) recently started a series on building Kozo Hiraoka’s 3½” gauge Pennsylvania A3 0-4-0 switcher. Go girl go!

She has six episodes uploaded so far. And she said she will be continuing with other projects too, as this locomotive will take a while.

Let’s Build A Locomotive! Pennsylvania A3 Switcher Part 1:

<https://www.youtube.com/watch?v=yiAWsopdr0A>

Hammer-Forming Boiler Parts – Pennsylvania A3 Switcher Part 2:

<https://www.youtube.com/watch?v=xRj5EdVLWaw>

Finishing Boiler Bulkheads – Pennsylvania A3 Switcher Part 3:

<https://www.youtube.com/watch?v=8ZmoB1cQdJk>

Rolling The Boiler Shell – Pennsylvania A3 Switcher Part 4:

<https://www.youtube.com/watch?v=sovMTMbB-qE>

Adding Boiler Features – Pennsylvania A3 Switcher, Part 5:

<https://www.youtube.com/watch?v=OvJsNMqF6Gs>

Finishing The Boiler Shell – Pennsylvania A3 Switcher, Part 6:

https://www.youtube.com/watch?v=h4_0g4qRrjM

To Infinity & Beyond! Bruce

Who Says Men Can't Decorate?

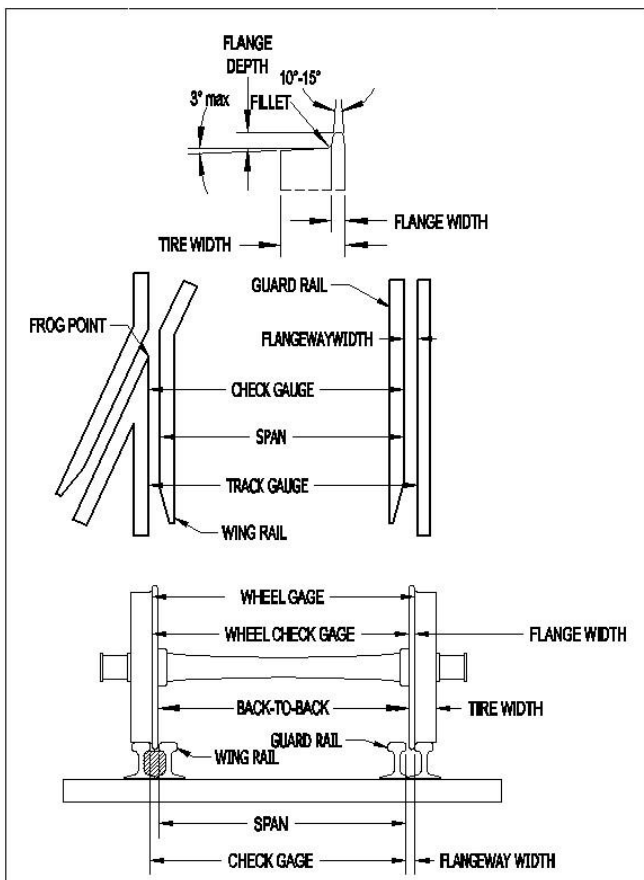


Avoiding derailments:
A primer on the key relationship between
wheels and track

By Chris Harding, New Jersey Live Steamers

Editor's note: NJLS Member Chris Harding has worked for several short line railroads, Amtrak, and a number of Class 1 freight railroads over 47 years. At Amtrak, he was responsible for track design and safety for the entire national system. Although retired from the railroad, he currently serves as a consulting engineer with HNTB Inc. and as a visiting instructor in Railroad Engineering at Rutgers University in New Brunswick, NJ.

The New Jersey Live Steamers were kind enough to allow this article to be reprinted in the Callboy.



Equipment with wheels must run on the track, and smoothly pass through curves and frogs. Both the wheel sets and the track must be made compatible and within tolerance so that smooth operation results.

WHEEL

Wheel sets:

Definition: The combination of two wheels placed on an axle. The wheels are fastened to the axle so that everything turns together, and the wheels do not turn

independently. The wheels must be placed within tolerance of the correct distance apart.

Wheel Gauge:

Definition: The horizontal distance between the outsides of the wheel flanges on the two wheels. This distance must be less than the track gauge so that the wheels will fit within the area between the rails. This has nothing to do with the wheel thickness, or the wheel diameter.

Wheel Tread Taper:

Definition: The angle between the center line of the axle and the surface of the wheel's tread. Taper is used to steer the wheels around curves apart; when passing through a curve, the wheels will ride toward the outer rail of the curve where the wheel has an effective larger diameter, while the wheel on the inner rail of the curve moves away from the rail thereby providing an effective smaller diameter. The difference in effective diameters of the wheels steers the wheels in the direction of the curve.

As a wheel set rolls along tangent track, the wheel set will hunt back and forth across the track gauge, first toward one rail and then toward the other. The wheel taper helps steer the wheel away from the rail it is approaching thereby keeping the wheel set more centered on the track gauge. Wheels with a taper more than 3° can steer around sharper curves, but will tend to hunt back and forth across the gauge more frequently and provide an inferior ride. Wheels with less than 3° taper put more lateral load on the outside rails of curves and turnouts. Tie plates have a 1:20 taper so that the rails are turned slightly inward. This has the advantage of directing the wheel load more through the center of the rail. If the wheel has a 3° taper, then the wheel tends to make contact with the center of the rail-head thereby reducing both wheel and rail wear.

Flange: The flange keeps the wheel from rolling off the rail-head. The sides of the flange must be tapered about 10° on each side so that the wheel can pass through irregularities in the rail's gauge face including curves and switch points, and also pass through the ends of guard-rails, frog wing rails, and spring-frogs. The angles between the side of the flange and the top must be rounded so that the top of the flange is a continuous curve between one flange-side and the other. The corner between the tread and the flange needs a fillet radius to help keep the flange from riding against the side of the rail-head.

TRACK

Gauge:

Definition: Gauge is the distance between the rails. It is measured from the face of the rail-head that the flange runs against (this is known as the “gauge face”) to a similar point on the other rail. Because the rail-head has a curve where the head surface meets the gauge face, the point where the measurement is taken must be slightly below the top of the head of the rail. On the prototype, the distance is 5/8” below the top of rail. Track gauges rest on the rail tops and the gauge measurement is taken 5/8” below the line between the rail tops. Prototype track gauge is 4 feet-8 ½ inches or 56 ½ inches. In sharp curves, the gauge is increased slightly to prevent the wheels from binding as much against the outside rail. (NJLS gauges include Gauge 1, 2 ½”, 3 ½” & 4 ¾” Elevated, 4 ¾” and 7 ¼” Ground level).

Minimum: If the rails are too close together, the wheel flanges will not fit between the rails. Prototype distance is 4 feet 8 ½”.

Maximum: If the rails are too far apart, the wheels will fall between the rails. As the distance between the rails increases from the minimum, the wheels will start to “hunt” back and forth across the track moving from one side of the track to the other until the flanges contact the side of the rail. At higher speeds, this hunting becomes a problem and leads to instability. Consequently, higher quality track requires a gauge that is closer to the stated standard value.

In 7¼ inch track, the gauge is often increased to 7 5/16” or 7 3/8” at least partially because of the relatively sharp curves on most live steam railroads. As track ages and the wood ties disintegrate the gauge tends to increase and track maintainers must ensure that the gauge is not excessive to the point where wheels drop between the rails.

Equipment built to run on 7¼” gauge track can run on track gauged for 7½” gauge if the flange ways through the frogs are about a quarter inch wider than normal. If the frog flange ways aren’t sufficiently wide, either the flange will ride up on the frog’s wing rail or the flange on the other side will ride on the top of the guard-rail and potentially pick the frog and derail. 7½” track gauge will cause 7¼” gauge equipment to hunt, but at lower speeds this usually isn’t a problem. However, the gauge must be carefully held to a tighter maximum so the 7¼” equipment won’t drop in between the rails.

Guard-rails: Short pieces of rail placed between and

very close to the running rails so that only a little more than a flange-width exists between the rail-head of the running rail and the rail-head of the guard-rail. The end of guard-rails must be tapered to allow wheel flanges to smoothly enter the flange way adjacent to the guard-rail.

Guard-rails are primarily used at frogs to keep wheels from rolling into the wrong flange way in a frog. They can also be used on sharp curves to help guide the wheels around the curve, and to distribute the lateral load to both the guard-rail and the outside running rail.

Guard Face:

Definition: The vertical side of a guard-rail-head that’s closest to the wheel flange at the point where the inside of the wheel flange may rub up against the guard face.

Frog:

Definition: A collection of rails or a casting assembled and machined so that flanged wheels moving along one path can cross the path for wheels moving in a different direction. The flange ways must cross each other. The point of frog is where the gauge faces of the two paths cross each other.

Frogs for turnouts are named for the angle between the paths. The greater the angle, the smaller the frog number. Turnout frogs typically range between #4 and #12 although high-speed turnouts may have much higher frog numbers. Frogs for crossings are measured in degrees.

Check Gauge:

Definition: The horizontal distance between the guard face of the guard-rail and the gauge face of the frog. As with the track gauge, the Check Gauge is measured slightly below the top of rail line. The check gauge value is important because it determines if the wheel set will safely pass through the flange way next to the frog point or else strike the frog point and create a derailment. This is probably the most critical dimension in a turnout.

Minimum: If the Check Gage distance is too small the wheel set may strike the frog point and derail.

Maximum: If the Check Gage distance is too large the wheel set may not fit in the frog and guard-rail flange ways.

Seen at the Track
From Bruce Anderson



Simon, Theo, Finley and Kassie give Walt a hand removing debris left by the January storms.



I was operating the Dave Gumz 4-6-0 "Miller" on a Saturday while others were working. In thanks to their contributions, I gave them a one-on-one learning experience about operating steam locomotives.



Paul Hirsh replaces a driver on the RG20. New tires were turned and assembled by Jerry Kimberlin.



Rich Croll, John Lytle and Sandy continue work on a new cross-over between the inner & outer rails.



Looking to help the club? Possibly re-space ties that have been knocked out of position.

Video Recommendation

My 1:11,3 scale, 5" gauge working model of the Bucyrus-Erie 250 Ton Steam Railway Crane

A 4:44 minute YouTube video from author Alberto Celot titled "A working model of the Bucyrus-Erie 250 Ton Steam Railway Crane".

This is Alberto Celot's "1:11,3 scale, 5" gauge working model of the Bucyrus-Erie 250 Ton Steam Railway Crane", recommended by John Faucon and this video can be found at:

<http://www.youtube.com/watch?v=XHawAQhZ404>

From Sandy Morris



Killamarsh Humor



For Sale
Shop Equipment

Chinese Drill/Mill 1/2 hp, 220 VAC motor, 1.5: x 22" table with vise, end mills, collets, drill chuck, boring head with boring tools

Taiwan Engine lathe, bench type, 7" swing, 9" gap bed x 18" between centers, 1/2 hp, 110 VAC motor, quick-change gear box, turret-type tool post, face plate, 3 & 4 jaw chucks, steady rests, miscellaneous cutters.

Arbor press, 2-ton capacity

Craftsman drill press, floor type, 1/3 hp 110 VAC motor, 7" swing, 1/2" capacity.

Enco Metal cutting band saw, horizontal & vertical 1/3 hp 110 VAC motor, 4" x 7" capacity.

Sears Radial arm saw, 10" blade, 3/4 hp 110 VAC motor with extra blades. Needs repaired but priced to sell.

Air compressor, 3/4 hp 110 VAC motor with 50' hose.

Victor Ox-acetylene welding/cutting set, including small tanks, hoses.

Portable tool cabinet & machinist tools.

Miscellaneous hand tools.

All this can be viewed in Walnut Creek.
If questions or interested in any of these items, please contact:

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