



STACK TALK

SEPTEMBER 2016

The Official News Letter of the Adobe Mountain Railroad
Phoenix Arizona, Operated by the Maricopa Live Steamers
Railroad Heritage Preservation Society,

UP-COMING MEETS

2017 OPS MEET JANUARY 19,20,21,22

2016 FALL MEET OCT. 27,28,29,30

Well, that summer flew by fast. A great “Thank You!” to everyone who has been working so hard at the park (and at home) to get everything ready for the upcoming fall run season. Another year of smiles and giggles is upon us. We still have some issues being worked on, such as the use of private locomotives to pull club trains, but I believe we will come to a conclusion that works for us. Thank you also to everyone involved with the ice cream social in August!



I do know of several new steam locomotives that will be calling MLS home this fall, and I encourage you to welcome them and their owners when you see them. Speaking of steam, we have been notified by the park department that the fire ban will be lifted on Sept 2nd, just in time for the holiday weekend. We can thank the rains we have had in the last few weeks for that. Hopefully they will usher in cooler temperatures for the fall as well.

Speaking of all the rain, the water drives the critters out of their burrows, so please be careful when moving around the railroad, and be vigilant of things that slither, slide, or crawl. I have been told by a friend who lives in the neighborhood north of the park that they are seeing Javelinas more often than before. Remember, don't bother them, and they

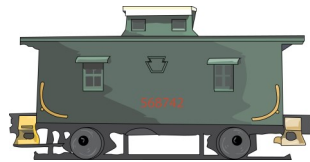
probably won't bother you. The AZ Game and Fish Dept. has some more info about how to live with them.

The rain will also be driving lots of growth of the weeds. Please help us keep the park clean, and pull those pesky weeds when you see them. Container owners are required to do weed control around their container as part of their container ownership agreement with the club, so please take care of your weeds, or make arrangements to have someone do it for you. I know there are several younger members who are always open to making a little extra money to help out.

Our run season starts on Sunday, September 11th. Don't forget that you need to have your engineer card, as well as attend the mandatory safety briefing, before you can operate as a crewmember on a public train. Please see Hank Gallo if you have any questions.

I wish everyone a happy holiday weekend, and a safe and very successful public run season! All Aboard!!

John Bergt



ICE CREAM SOCIAL



Pete's Corner

September is here and Sunday Public Runs are starting on the 11th. Saturday September 10th is a meeting for Sunday and Public Runs. Anyone planning to help with Sunday Runs or Public Runs during the week, are requested to attend this meeting. Also, make sure you have your new Engineer Cards.



Next is the upcoming Fall Meet. We are expecting a large attendance and will need your help to make sure everything runs smoothly and safely. We want to make sure that the club's safety rules will be followed. Please take a look at the signup sheet in the Clubhouse and see where you can help.

Work continues on the Park Track. We have been installing more steel rail and also repairing the switches and kinks. Please make sure you check the open/closed sign board by the station.

Our engine repair crew has been busy checking the public cars and making sure the club engines are ready to go for the season. The main parking lot has new car stops installed and the west side of the parking lot has been extended. Hopefully, this will make parking easier for the public.

Just heads up on our planned Christmas runs. We are making plans for the members of our club to park on the south end of the Tower by the picnic area. This will allow for the public to line up for rides in the area north of the Tower. This will help keep the public out of the parking lot area.

We have also installed boards between the tracks in the station to prevent people from tripping. We have painted areas yellow that may also be a hazard. Safety first!

A WORD FROM THE MAINTENANCE OF WAY SUPERINTENDENT

I would like to touch on an issue about the number of kinks that have happened this year. Most people have not been to a **sun** kink class so let me get to where you can not sit in on an all week class about disturbing the ballast. At MLS we do not have creepers on the rails to hold the rail, we have a ballast that sticks together like concrete after it has been watered very well. This being the secret to holding the track in place is the weight of the ballast rail and ties, along with compaction of the ballast. At MLS we use water. All the Railroads in the world use tamping ballast that is in fractured shapes to lock together and the trains going over it to settle it in. After the ballast has been disturbed by a tie replacement or a tamping machine the rail industry places slow orders on the track and restricts the trains to 10 MPH for the first 20 thousand tons over it , then they step it to 25 MPH for another 20 thousand tons of trains running over it yep your right it is called a **STEP SLOW ORDER**. then they go to 40 MPH for another 50 thousand tons then to 60 mph for another 50 thousand tons then they go to Maximum authorized speed for that area. Before the raise in speed the track inspector runs over it and makes sure the track is not shifting. This is where I get back to MLS, when I disturb the ballast by lifting a low joint or replacing a tie I tamp the tie solid either with my air tamper or a tamping bar made from a piece of 3/4 inch conduit, Then I water this spot with the water car. This keeps the ballast stuck together like it was before I disturbed it in the first place. Now this is where others have come along and lifted track to level a low joint and some have even tried to put elevation in the curves. Not knowing how to stabilize you must add water after you have tamped the low ties. or your disturbed spot is my next kink to fix. I understand you want to help the railroad but you have to understand how the railroad keeps from having sunkinks all over their systems. I have some old VHS tapes of lesson classes from the Rails that grow that are in the clubhouse and you can watch these and get a real good feel for how the railroads control rail growth in the summer. I understand you come from different areas with different problems that are not the same as Phoenix but if you would like you can come out at 5 PM and take a rail temperature reading and on a 110 degree day it will be between 175 and 180 degrees now in the middle of the winter we will drop to 28 degrees that is a 152 degree differential. in the cold of Train Mountain it will get to 10 degrees but only an afternoon temp of 105 that is a 95 degree differential and I get my information from the UP on the Black Butte sub which is next to Train Mountain. Also their rail laying temp is only 80 degrees there where in Phoenix it is 135 degrees.



This is what I am asking you to do if you want to level and tamp low joints Take the water car with you and put 100 gallons of water on it to stabilize the ballast.

Now this steps on another issue People walking on the track and knocking the ballast loose from the ends of the ties, Yes I know I am asking for the miracle on 34th street for people not to walk on the track or step on the switch throw mechanisms but it does not hurt to ask. This does not include the Adobe yard where it is all filled in level so you can walk across it without hurting the ballast but still please do not step on the switch mechanisms they bend easy. Mike Grant worked for about 5 days filling the Adobe yard in with ballast and he did it in the middle of the summer so it would be ready for the fall meet and the operations meet THANKS MIKE.

I would like to touch on another subject and that is elevation. I do not put elevation in our curves, also read the Tom Bee website for more info about level track. I would like the track to be level for the same reason we water the track and that is kinks. If one side is farther out of the ballast because it is elevated that just makes it easier for the heat to push it out of the ballast and into the air for a kink. Think of the track being level having equal stresses on each side. Physics teach you that less resistance on one side makes that side easier to move that is why the low side of the curve with the greater amount of ballast on it will stay better in the heat than the one side with less ballast weight. I do not want to discourage people from coming out to help but you need to know what helps and what hurts the track structure. Ballast helps keep it where we put it.

Later this month I will ask for some help building track panels in the sawmill. We will be rebuilding another section of our mainline track .

Thanks Joe Schnyder



UPDATE ON CHRISTMAS RUNS

We are asking for volunteers to install lights in 64 pixel strips. Mike Grant or myself can provide instruction on how to install the lights. Each strip has 120 lights that have to be installed in each strip.

Those who wish to volunteer can contact me at : subdriver39@gmail.com or call me at 815-263-3756.

Fred Greenwald.



Looked at what turned up in the UP yard in Muskogee? My guess it is bound for the [San Luis & Rio Grande Railroad](#) - Iowa Pacific Holdings some place. Correct me if I am wrong. By luck, I was coming home from work and running some errands downtown and there it was sitting on the UP side track just north of the Callahan overpass. I had to stop and grab some shots. Looks like an old BN commuter train work horse from days gone past in Chicago. Thought you might like to see this old relic. Hope all are well.

Tom Harrington



Maricopa Live Steamers
2016 FALL Meet Oct 23 - 30, 2016
Registration Form

Please pre-register by October 21, 2016.

Name:

(As you want it to appear on name tag)

Additional family members:

Address:

City:

State:

Zip:

Phone:

Email Address

Will you be bringing any equipment? Yes No

If yes Please list the type and car number (if applicable).

Motive Power

(Note: Due to dry conditions, solid fuel steam engines require spark arrestors.)

Rolling Stock

Are you bringing an RV? RV's are permitted from October 23 to October 31 only
DRY CAMPING ONLY: NO ELECTRIC, NO WATER, NO SEWER

Item	# of people		Price		Total
Pizza Dinner + Drink Thursday Oct 27		X	\$8.00	=	
Fried Chicken or BBQ + Drink Friday Oct 28		X	\$9.00	=	
Pot Luck + Drink Saturday Oct 29 Bring an item or pay \$10.00		X	\$10.00	=	List item you will bring
Registration Administrative Fee (Non Refundable)	1		\$5.00		\$5.00
Each Additional Family Member's Administrative Fee (Non Refundable)		X	\$2.00	=	
Total Enclosed with RSVP					

Continental Breakfast will be served on Saturday morning at a cost of \$2.00 per person.
Lunch and drink will be served Thursday, Friday and Saturday at a cost of \$7.00 per person.

ALL ATTENDEES MUST ATTEND ONE SAFETY BRIEFING.

Briefings will be held on Thursday, Friday, and Saturday at 8:30 and 1:00.

Please send this form and a check payable to Maricopa Live Steamers and send to,
MLS / Bob Douglas
17017 N 12th St Unit 1045
Phoenix AZ 85022
rdouglas9@cox.net



Engineer cards expired on May 31st, so now it is time to take your test

It can be taken online at Maricopalivesteamers.com



Work being done on Club riding cars for public runs

New riding cars are being built for use on public runs. The cars themselves are almost completed, except for the trucks which will be delivered by Tom Bee at the fall meet.

Mick Janzen

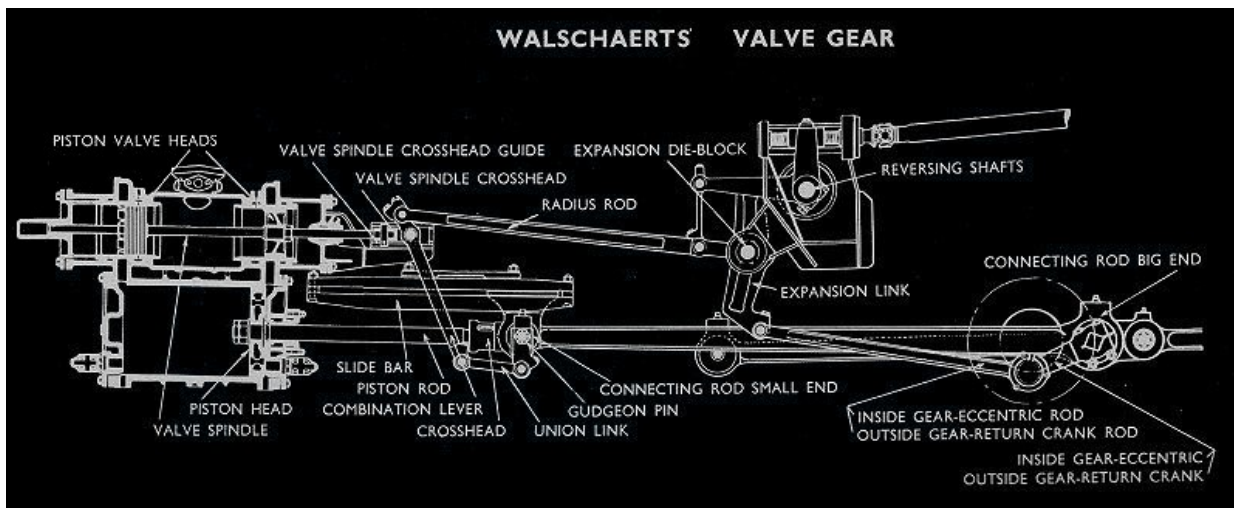


STEAM LOCOMOTIVES

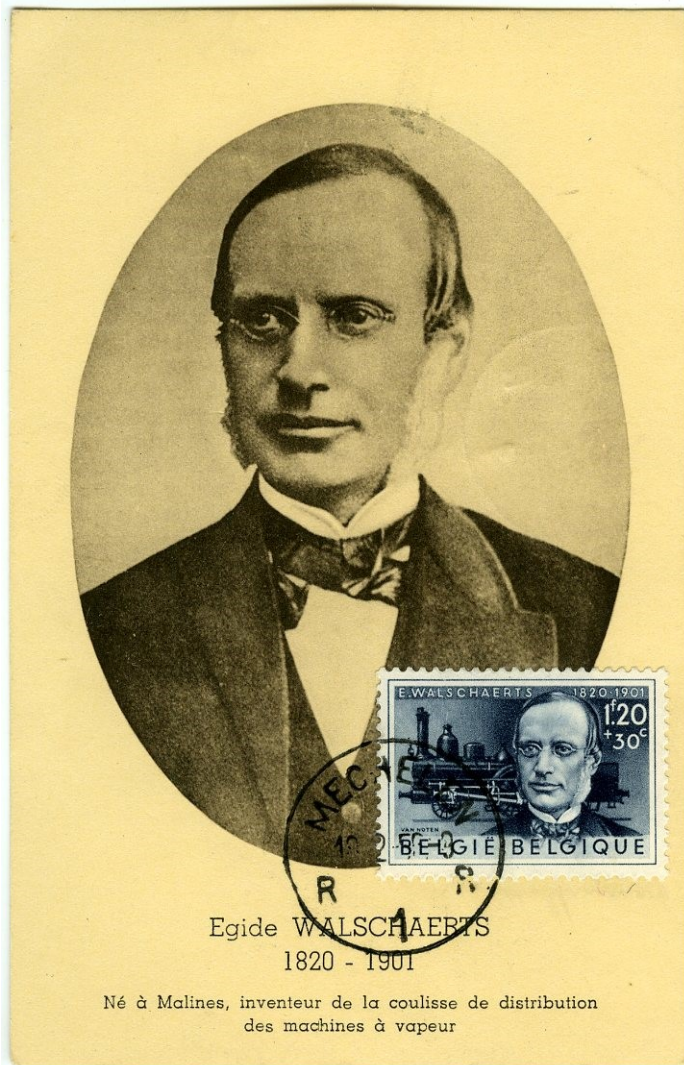
VALVE GEAR

Here's the end of August, just where we want to be, and time to move on to the next type of gear.

This one is the Walschaerts valve gear, and referred to as a radial type of gear. The term "radial" is derived from the aspect of the eccentric crank revolving around the axle as a function of the crankpin (requires a bit of imagination here!). A close review of the following drawing shows how all of the parts are connected and their relation to the movement of the valve.



By watching the gear at work via Mr. Dockstader's program (found here <http://www.billp.org/Dockstader/ValveGear.html>) it becomes apparent that the inventor Mr. Egide Walschaerts (correct spelling) was quite ingenious, and here he is;



He was a Belgian railway mechanical engineer, with his gear being invented in 1844. It was slow to be adopted, but first applied in this country in 1874 by the Mason Machine Works, Taunton, Mass., on a type of locomotive referred to as a “Mason Bogie”. This link provides an excellent discussion of its history and development along with extensive design information:

<https://archive.org/details/walschaertandot00woodgoog>

It becomes rather evident that the Walschaerts gear has a distinct advantage over the Stephenson gear, in being completely out side of the locomotive frame, all parts being easily accessible.

Another advantage was the reduction in weight. As locomotives became larger, the Stephenson gear became a problem when trying to move the

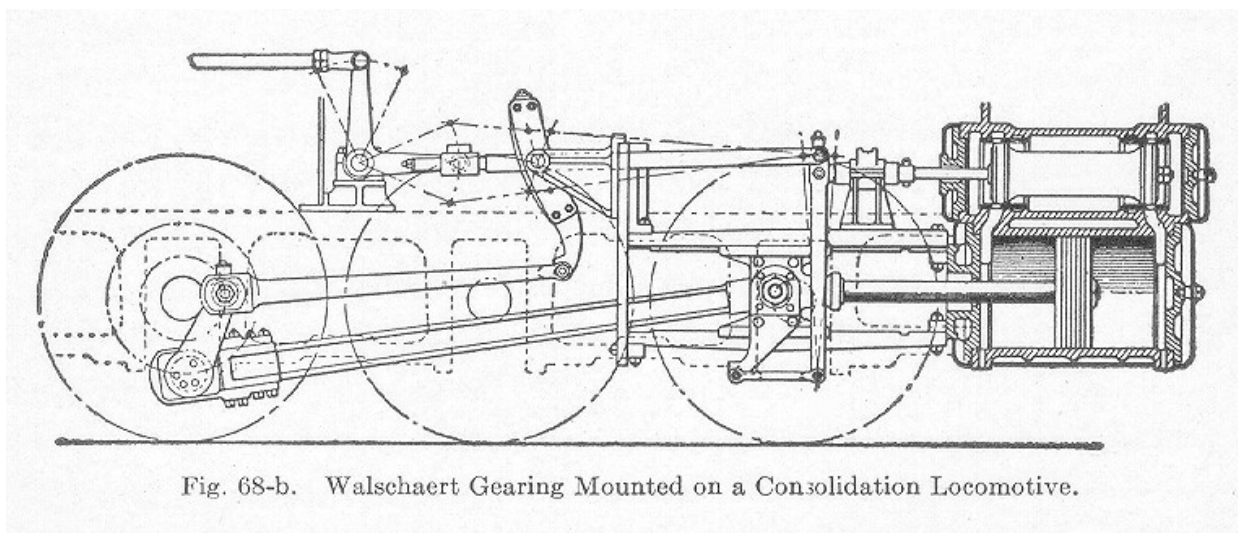
reverse lever to change cutoff while in motion, due to the large mass of the gear. Walschaerts reduced the weight by 1,000 pounds in some instances.

The next advantage was that the valve has its motion applied in nearly straight lines as compared to the Stephenson that uses several transitions of the line of effort, (i.e. the rocker arms).

Next is the aspect of wear. Stephenson employs large eccentrics which were very susceptible to wear, needing frequent adjusting. This gear has only pins and the link block subject to wear, much less maintenance being the result.

Walschaerts was not readily accepted until about 1910, where an answer to the need to do away with large eccentrics between the frame was required due the increasing size of the more modern locomotives being built. However, when its benefits were realized, it was quickly adopted, becoming almost a standard method of actuating the valves.

Here is a drawing that is easier to see compared to the one first used here.



Next time we'll take a look at the design aspects of this gear, might want to brush up on the "trig" and put new batteries in the calculator.

Take care,

Dave Griner



A WORD FROM HANK



We have a new public run safety video all volunteers must watch and sign the attendance sheet. It will be shown at 11am and 2pm (at the conclusion of the general meeting) on September 10th. A copy will be kept in the clubhouse for members that cannot attend that day. Everyone should have taken their engineers test by now.

Loco 411 has had air brakes installed on the first riding car in its consist. We purchased a set from Tom Bee and installed it from his recommendations. These brakes are intended to assist scrubbing off speed and not as a full train brake. So far it has proven effective slowing down the train with 4 loaded ballast cars. Since the loco, engineer car and first riding car are too long to keep coupled in the loco shed, we propose storing it in the car barn as a unit.

We just installed new Optima Yellow top batteries in the yellow speeder. Please remember to plug it in for twice the time you used it to keep the batteries charged. This is our primary Junior Engineer School equipment until the insurance company decides we can use our own equipment (if ever).

We'll need help cleaning the park for the fall meet and then to start hanging Christmas lights and decorations. Mike Lewondowski will keep a chart on each box of lights showing how they should be installed. We'll also need help hanging the LED's on the 40' tall Christmas tree that will be "planted" in September. It will have close to 9,000 LED's if you include the 4' stars at the top. We're expecting a great reaction from the public. If anyone has some waterproof speakers for the project we need at least 4 (2 for the south side and 2 for the north). As always monetary donations to the Christmas Light fund to Mr. Douglas will help us add more features. We would like to put the circle of track from Fisher (donated by Mr. Pardee) around the base of the tree and have a train running slowly around it during the night runs.

Thanks for all your hard work making this a most amazing club!

Hank Gallo

