



# STACK TALK

## AUGUST 2016

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

Pete's Corner

August 2016

Summer is in full swing and temperatures are in the 110 degree range. As an extra precaution, please make sure you and those around you stay hydrated with water during these extremely high temperatures. Many people this summer in the Phoenix area have succumbed to the hot weather by not staying hydrated.



We are still pushing ahead to get the Railroads ready for the Fall Season which includes the upcoming Sunday runs, Fall Meet, and finally the Christmas runs.

Now with that said, we need to start preparing for the Sunday runs, the Fall Meet coming up, and the Christmas season of runs. We will need a lot of help to get things ready for these coming events. There will be a list of things needing to be done on the White board in the Clubhouse. Please check the list and see how you can help to get things ready.

Mike and Fred have been working on a new tall Christmas tree lighting system. We can't wait to see it up and running.

The high temperatures we have been experiencing have caused an increase in more kinks on all the branch lines. Please keep an extra watch out for the OPEN/CLOSED board by the Station/Tower for which branches are open.

There will be a list of jobs that need to be filled for the Fall Meet. Please check this list and see where you can help. We need your help for these Meets to take place.

Thank you to all that joined in working on the railroads during the hot sweltering summer days. Also, the club would like to give a big shout out with thanks to Terry for working on the Signal system during this time.

May we each feel a sense of pride in representing our MLS club to the public this fall.

Pete Pennarts

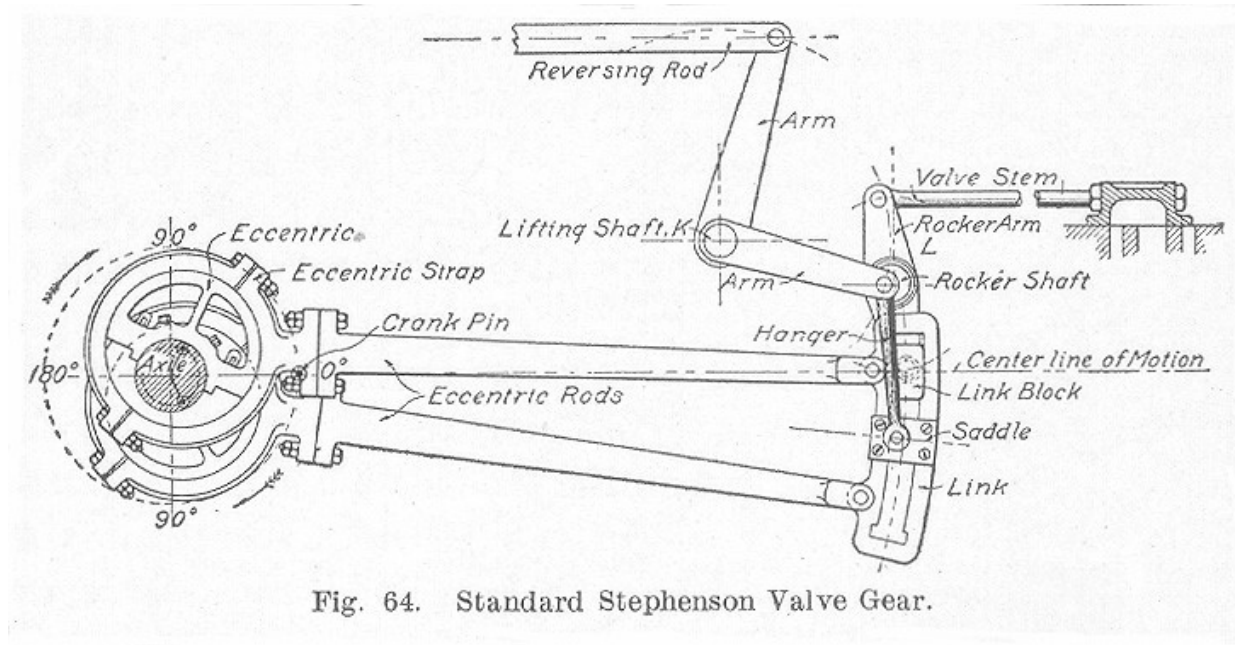


# STEAM LOCOMOTIVES

## VALVE GEAR

Hello again, here we are at mid-summer and am looking forward to the easing of the heat (hopefully.....eventually)!

We introduced the Stephenson valve gear last time in its basic form, which needs a bit more discussion to enhance an understanding of its characteristics.



Using the drawing from last time, we can see that the gear is quite straight forward in its construction, along with being easy to understand. It was these two characteristics that made it very popular with the staff and management, along with providing very good steam distribution.

This design was very prominent right up to 1900, even to the point that in discussions found in the "Proceedings of the American Railway Master Mechanics Association" from 1891, it was felt that there was virtually no other design of gear that could even come close to delivering the steam distribution provided by the Stephenson gear. As evidence, the 1906 Locomotive Dictionary (Cyclopedia) shows only one engine with Wal-schaert gear, the 1909-three engines and drawings on the Baker and Wal-

schaert gears, but by 1912 there are 51 examples of engines with other than Stephenson.

It appears that there was a massive shift in thinking between 1891 and 1911, in the terms of changing things on the railroad, this went at near “light speed”, a mere 20 years had brought disfavor to Stephenson gear. This phenomenon came from the ease of maintaining a valve gear on the outside of the engine frame rather than the inside and from the fact that the wear was becoming very significant on the eccentrics due to their increasing size and having to exert such a great effort to move the very large valves dictated by the increasing use of larger cylinders.

One of the great stumbling blocks for other gears was that Stephenson automatically provided increased lead as the reverse lever was moved from the corner toward center, (i.e. as the cutoff was shortened), where the other gears had a constant lead. This aspect was treasured by the “old school”, a gear without variable lead was questionable at best, why, is best left to the vagaries of history. A close study of Walschaert and Baker along with other gears notes that in fact the lead is affected and is quite capable of providing good steam distribution at high speeds.

As an aside, here is a site that has three of the Locomotive Dictionaries (Cyclopedias) (06,09 and 12). They are a wealth of information and can be downloaded FREE into your computer for future reference. Just gotta love this computer stuff!!

<https://catalog.hathitrust.org/Record/012336541>

This series of little articles cannot begin to deal with all of the numerous details associated with this valve gear. However, Don Ashton from England, is probably the foremost authority on the subject, he will even correspond via e-mail. Have done that and can confirm he is a true gentleman, very glad to share his knowledge. This is his website ;

[http://www.donashton.co.uk/html/stephenson\\_s\\_gear.html](http://www.donashton.co.uk/html/stephenson_s_gear.html)

The following web address takes you to a downloadable book titled “The Locomotive Up to Date”, by Charles McShane, probably one of the most detailed, practical discussions regarding Stephenson gear that we can easily access. Much more on locomotive engineering and shop methods are to be also found here, very interesting reading.

[https://books.google.com/books?](https://books.google.com/books?Id=1D9KAAAAYAAJ&printsec=frontcover&dq=editions:8Fh-016C9sQC&hl=en&sa=X&ved=0ahUKEwi6gYGg2Y_OAhWIPCYKHdQUAFoQ6AEIJzAC#v=onepage&q&f=false)

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Well, that’s it for now, take care,

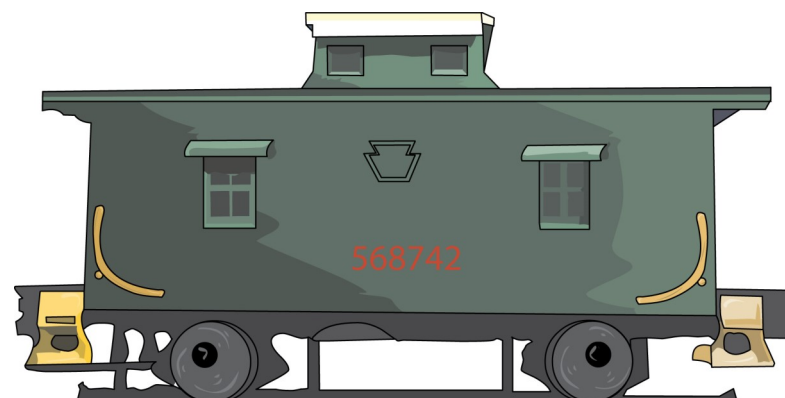
Dave Griner



## **UP-COMING MEETS**

**2017 OPS MEET JANUARY 19,20,21,22**

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



Our loco repair facility has really come a long way thanks to Pete and the construction crew. Fred and Mike have organized the shop to facilitate repairs.



With the condition of the track in this extreme heat. IF we go out on the railroad we should be at a maximum of 1 or 2 mph. For this reason, we're trying to keep Lil Blue switcher loco running, so everyone has an easy to re-rail loco.

We're sorry to report that as soon as we repair a club loco, another unit gets red tagged. With the high heat conditions, we are encountering, it is a lot to ask of Mike and Fred to keep these units going, along with the many other pieces of club equipment they keep running at the park. If you would like to assist, see Fred or Mike any weekday morning from 8am until noon. Please do not work on any club equipment without checking with them first. Many times a unit has been red tagged, but the problem cannot be duplicated. If you have an issue, you can email them at [mlsmaint@yahoo.com](mailto:mlsmaint@yahoo.com) with all the details. All red tagged equipment is not to be moved except by the maintenance crew. We observed a red tagged unit being used by a member, so keys have been removed from those units.

Loco Status:

7282: Red tagged as a special project, low priority

2001 BNSF Red tagged for final adjustments on chains and drive system

2001 UP: Red tagged Derails- has a twist to the frame. Calf requires new springs.

4402: Red tagged Front truck bolster pin requires replacement-which means the gas engine needs to be lifted out.

4403: Red tagged for reported charging system issue

SF 411: Red tagged - replacing throttle cable assembly, headlight & upgrading wiring and control panel. Adding & testing riding car air brakes to first riding car behind engineer car.

6005: Red tagged - reported stalling issue

Yellow Speeder: needs to be charged. If you use it for an hour you need to charge it for 2 hours.

Lil Blue: Fran will install a backup pull start rope this month.

Orange Speeder: Up for auction at August meeting.

Hank and crew



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

***It can be taken online at [Maricopalivesteamers.com](http://Maricopalivesteamers.com)***