

The Mud Ring

The Official Newsletter of the Cinder Sniffers, Inc.
Home of the Original CiShay!

www.cindersniffers.org



Celebrating 64 Years



October 2020

A Bit More Steamy Thought

by Denis Larrick

It has been nearly 50 years since I first jerked the throttle of an engine at Kings Island. One of the big discussions of the time was what boiler pressure we should use. The engines were built with pops that went off at 193 PSI and 197 PSI in accordance with code that required they be about 3% apart. We kept the boilers at about 180 PSI and tried not to pop since propane was NOT cheap, and we carried 600 gallons of it. I was the filling in the sandwich between a big steam boiler boom and a tender full of propane boom. That sort of kept me safety conscious.

As you stuff heat into the boiler, the molecules get closer together. Whereas it takes 3.2 BTU per pound of water to take steam from 120 PSI (350 deg F) to 150 PSI (366 deg F), it takes only 2.4 BTU per pound of water to raise it a similar 30 PSI from 150 PSI to 180 PSI (380 deg F). The transition is about 33% more efficient at the higher temperature/pressure. True, you have to spend some heat to get up to the initial pressure, but once you are there, horsepower is cheaper at a higher boiler pressure. That's why the real thing wanted 300 PSI...efficiency!

For our little engines, that also proves why it is harder to get your fire back if you let the steam get too low. It simply takes more heat to recover, especially under 80 PSI.

But wait. Steam engines also radiate heat, and since insulation is linear, the loss of heat is dependent on the difference between the boiler temperature and the surrounding air. On a 70 degree day and at 180 PSI we radiated and wasted $(380-70)/(366-70)$ = almost 5% more heat to the atmosphere than at 150 PSI. That is especially important during station stops when no work is being done.

In the early days, we pulled loaded six coach trains on an 8 minute trip with a 4 minute stop at the only station for a total 12 minute turnover. Our duty cycle was $8/12 = 67\%$. The engine was actually doing work two thirds of the time and when it worked, it really worked. We needed that 180 PSI to keep costs down.

But today they have two stations. Run 4 minutes, sit 4 minutes, or a duty cycle of 50%. Half of the time, the engine is sitting still and wasting heat to the atmosphere. And they run with fewer cars on many days at 150 PSI, I'm told. A lower boiler pressure may make more economic sense today, but it might take quite a computer program to prove it!

Member Calendar

Nov 14 Special Nov. Run 10am
MEMBERS & INVITED GUESTS ONLY

Nov. 28 Thanksgiving Run 10am
MEMBERS & INVITED GUESTS ONLY

Jan 1 New Year's Day Run 10am
MEMBERS & INVITED GUESTS ONLY

Feb 13 Annual Meeting 10am
Greenhills Community Church
Facemasks and Social Distancing Req'd

COVID-19 Update

Your Exec. Committee, with the consent of the members have decided:

- No public run days through 2020 and New Year's Day 2021.
- All runs during this time are Members and Invited Guests ONLY.
- No private parties on scheduled run day times and work day times.

Special Nov. Run!

In lieu of having a holiday party this year (due to COVID-19 concerns), will be having a special run on November 14—the second Saturday. Perfect time to bring out your equipment for a Autumn day adventure.



Note, this run is in addition to our regularly-scheduled after Thanksgiving Run.

It Takes a Clinic (and a Village)

By Donald Frozina

Donna’s 1-1/2” scale Railroad Supply 4-4-0 was purchased and picked up from an estate in Southwest Missouri where it had sat for 8 years after the passing of its builder.

Then following a 3-day stay at the world-renowned Balmer Locomotive Works Clinic and Spa in Urbana, OH—mostly for plumbing issues—it made its steaming debut in Mechanicsburg, OH.



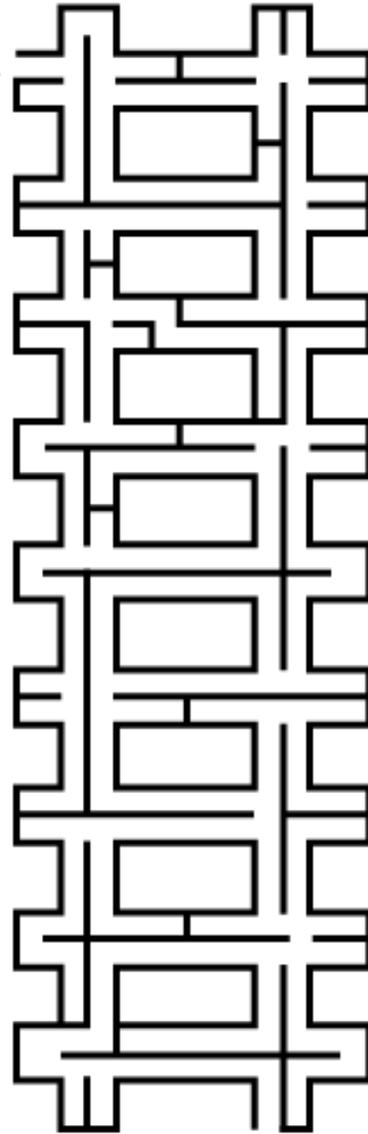
Donna had some initial issues as both the engine and Larry Gordon’s track (a friend of Chuck’s) were new to her. After settling in, she was able to make 2 laps around the track—some 3,000+ feet before calling it a day and a success!

Later that week, Donna brought her American to the Cinder Sniffers for it’s first boiler inspection. Chief Boiler Inspector Steve Chromic presided while other interested parties (the village) watched on and (sometimes) made constructive comments and/or observations.



Photo by Carl Schwab

A-Maze-ing Track



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A Brief Comment on the Mississippi Steam Boat Engine

by Carl Schwab, Builder

In the pictures you will see over three and one-half years of work. No, I didn't work every day but that was the time lapse for the project. There were many days that the scrap pile looked very tempting.

The plans and paddle wheel frames came from agelessengines.com. (Check this site out.) Lee and Peggy Hodgson are CSI members.

Lee's Dad and Mother took a trip on the Delta Queen in the 1980's. My wife and I took a trip in 1981 and you could go to the engine room for a fascinating look at the engines and equipment.

During the Hodgsons' trip many pictures were taken of the engines but the pictures did not turn out.

It was Mr. Hodgson's desire to build a steamboat engine. So, from memory and an International Correspondence book on California cutoff valve gear, he started working. He had built and designed model radial aircraft engines, so this was no big deal.

A very brief explanation on California cutoff valve gear: Basically, it is a poppet valve design controlled by wedges for the amount of steam desired. This is the "Johnson bar" for everyone else. I think all modern diesel engines use wedges to control the amount of fuel.

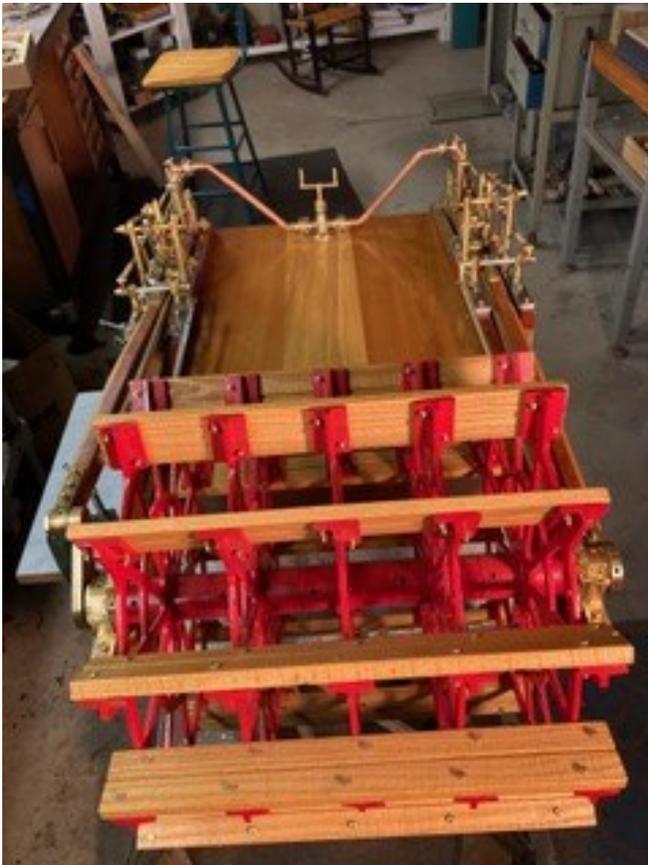
In his designing, Mr. Hodgson also designed fixtures to aid in the building. I built and used some of the fixtures, but I also bypassed other fixtures and fabricated many of the parts.

You can look at the pictures and maybe imagined the frustrations that were encountered.

The most critical problem was the timing and getting the engine to run smoothly.

As I write this I have some small details to finish. Yes, I'm glad it is finished. Time for the next project.

I hope to bring the engine to a meeting in the near future.



Run Day Pictures: A Plethora of Trains

September 12, 2020



All Steaming Bays Full!



Chuck's 3/4" Scale Northern



Jim's 1" Scale 10-Wheeler



Chuck's 1-1/2" Scale GE-Inspired Boxcab



Rick's New Koppel Engine



Rick's Engine's Intricate Valve Gear

Run Day Pictures: A Plethora of Trains

September 12, 2020



Denis's 2-1/2" Scale Mogul



Steve's 2-1/2" Scale 0-4-2T



Dave's Gleaming Train with New Box and Tank Cars



Roger Enjoying a Ride on Dave's Train



Ray riding his 1-1/2" Scale SW1 around the track.



Anthony's 1-1/2" Scale "Generic Electric" Boxcab