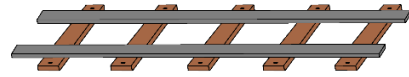


On Track



Vol 1, Number 3, December 2022

If you are receiving this newsletter for the first time, welcome to the fold! We are in the process of cataloging our visitors logs for the last few years and your name and email appeared! If you wish to be taken off our list, just let us know, but we hope that you will stay with us, follow us on line, and return as a visitor sometime soon. Previous editions of this newsletter may be found on our website, 2926.us. If you have comments on the newsletter, please send them to nmslrhs@nmslrhs.org.

Current Status: The locomotive is essentially fully restored, although work continues (as it always will!) on various systems, including the air compressors. As noted below, a significant focus is now on the paperwork required to allow us to get out of the site and onto rails where we can begin operational testing.

Accomplishments: After obtaining written permission from the City of Albuquerque to begin work at the Railyards, the area in and around the turntable has been cleaned up and the diesel engine that runs the turntable has been checked out and run for the first time in many, many years! Next up for the turntable will be hydraulic system evaluation and overhaul or replacement of the pump, gear motors, pipes, and hoses. Important discussions and contract negotiations are underway with various entities to enable us to use the Sawmill Spur and to restore the trackage that will allow us access to the turntable area.

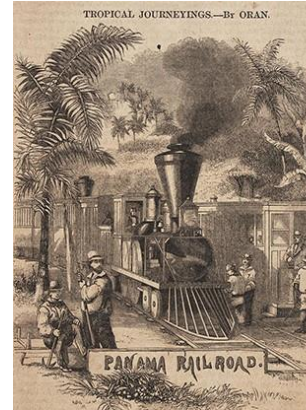


Profile of a member George Trever is our resident landscape architect—always seeing to it that the weeds and trash do not overwhelm us! He was introduced to NMSL&RHS by another member, Paul Beck, and has been a member since our brief tenure on the Menaul Spur. George hails originally from Boulder City, NV, and attended Baldwin Wallace University in Cleveland and Penn State before joining the Air Force. He rose to the rank of major and got a master's degree at Wright Patterson in the process. He spent time as a maintenance officer in Thailand during the Vietnam War, putting damaged F-4s and C-130s back together. One of his principal memories of that time was having to work outside in the near constant rain (a real monsoon). His last assignment was at Los Angeles Air Force Base where he was involved in the Air Force Space Test Program. After a 20-year Air Force career, he came to Sandia National Labs where he joined the satellite group and worked in satellite testing for another 21 years. After joining NMSL&RHS he spent many delightful hours needle-scaling the inside of



the tender and eventually decided that climbing on the engine was a bit scary since his heart surgery in 2020. Gardening in the sunshine and at a lower elevation might be a better use of his time, a decision all of us (and our visitors) greatly appreciate. George, his wife, Judy, and their cats have a cabin near Chama where he is a member of the Friends of the Cumbres and Toltec and, also, participates in their work sessions.

A short historical note: Everyone knows that the first transcontinental railroad was completed with the driving of the Golden Spike at Promontory Summit, Utah, on May 10, 1869. But was this really the first TRANSCONTINENTAL railroad? Actually, no. It was the first transcontinental railroad IN THE UNITED STATES, but the first railroad to cross North America from Atlantic to Pacific was the Panama Railroad which was completed across the Isthmus of Panama in 1855. This 47 ½ -mile long railroad saved passengers the arduous sea voyage around Cape Horn and would later facilitate the completion of the Panama Canal.

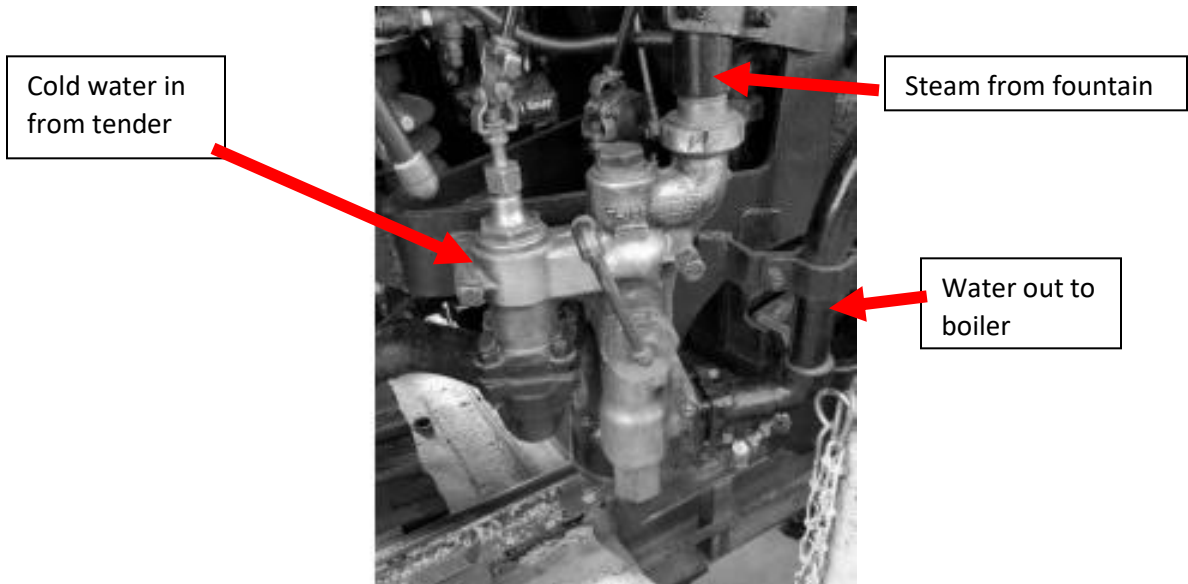


What's new in the store? The holidays are now upon us, so if you are in the area, consider stopping by our restoration site for a tour of the 2926 and a visit to our store. We have lots of ATSF2926 gift items—books, T-shirts, mugs, pins, patches, and logo ball caps. Be sure to check out our miniature Baldwin boiler serial medallions. These are hand-cast in brass by our crew members right here on site.



How does it work? Water is a critical material in the operation of the steam locomotive. It not only provides the steam that drives the wheels, but at the same time, keeps the firebox and other metal components cool enough to prevent overheating and potentially catastrophic damage. The 2926 has two redundant water supply systems. Last month we described the Worthington system. This month we examine the injector which is located on the engineer's side just below the cab. The injector was invented in 1858 by a French engineer named Giffard. Like the Worthington system, it has three purposes: provide a supply of water to the boiler, preheat the water to prevent thermal shock and to prevent cold water from cooling down the water in the boiler, and provide sufficient pressure to overcome the boiler pressure and deliver water to the boiler. However, unlike the Worthington system, the injector has no moving parts!

The basic component of the injector is a set of three venturi tubes. These are essentially cones with their narrow ends joined in something like an hourglass shape. The operating principle relies on the fact that when you increase the velocity of a fluid, you decrease the pressure in the fluid ($PV=nRT$, for the thermodynamics nerds in the crowd). The first of the three venturi tubes receives steam from the fountain. As the steam passes through the converging cone, the pressure decreases and the velocity increases to the speed of sound. In the second venturi, the steam mixes with the cold water that is sucked in because of the reduced pressure. The steam condenses in the cold water, transferring its heat to the water. In addition, the steam's volume is decreased by as much as a factor of 10, causing even more of a vacuum to suck water from the tender. The resulting stream of hot water then passes into a diverging cone where the velocity decreases and the pressure increases sufficiently to push the water into the boiler.



What's new on the website (2926.us)? The website continues to be populated with more and more images, both current and historic.

Follow the money: Our fund-raising campaign is proceeding apace under the leadership of Bob DeGroft. We are actively applying for various grants to underwrite completion of the support car and to complete evaluations of the repairs that may be required on the Sawmill Spur and at the Railyards. Your continued support is greatly appreciated as we enter our next (and costly!) phase and advance to operations on the main line. Every little bit helps!

As of early November, our project is valued at \$3.9 million, \$3.0 million of which is the value of the locomotive and tender. The other \$900,000 represents tools and infrastructure. We have invested 234,000 volunteer hours in the project.

If you are interested in donating to our cause, check the website!

Have a safe and blessed Christmas/Hannukah/Kwanza!

