

RIDING RAILWAYS NEWSLETTER



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Reedley Railfest has come and gone. Sean and Melissa Bautista put this event on themselves, though it was similar to our convention last year. The highlight for the Robinson family was the return of Frank Allen's *Sonoma* to service. Sean worked with the California State Railroad Museum to bring the locomotive and tender, on loan from the museum, to Hillcrest for the weekend. Not only did Greg have the opportunity to work on it in the museum shops, but he was able to run it repeatedly, and quite contentedly, all weekend. Our thanks to the Hillcrest crew and to the museum staff for making this possible.

Regards,

Susan

COMO ROUNDHOUSE PRODUCTS?

We receive many, many phone calls inquiring about the late Rudy Van Wingen and his Como Roundhouse products. Rudy's death was a big loss for the live steam community but his product line continues to be available. Paul Lavacote has purchased Como, as well as Conway Locomotives, and is using the name **RIDGEWAY ROUNDHOUSE PRODUCTS**. Those of you who were at the TM Triennial no doubt had the opportunity to meet Paul. If you would like to learn more, please contact Paul directly at **909-628-9601** or via e-mail at LMWP-BL@hotmail.com. His mailing address is 12188 Central Ave. Unit 558, Chino, CA 91710-2420.

FRANK ALLEN'S SONOMA

This article is reprinted from Vol 10#4 of the 7+RAILROADER magazine. The magazine itself is no longer available but we thought some of you might enjoy this article on how Frank built the Sonoma. —ed]

Frank had always enjoyed trains. For a short while during high school he had worked in the shops of the Northwestern Pacific in Tiburon, California and he had ridden the NWP electric cars to and from school.

For a young man just back from serving aboard ship during WWII, though, railroads couldn't hold the same excitement as race cars. The rumbling exhaust of the uneven idle. The smell of burnt rubber. The scream of machines always on the brink of self destruction. And the brotherhood of men enjoying expensive and dangerous toys. These lures would satisfy Frank's urge to build machinery for over three decades.

When he was in his 50's, though, he began to wonder what it would be like to build something that wouldn't tear itself to pieces. One day he went by the Redwood Valley Railway (15" gauge, Berkeley, California) and saw the equipment built by Erich Thomsen and crew. He chatted with Erich for a while and left for home thinking, "That would be fun, I'd like to build one of those." Best of all, a 15" gauge, 5" scale steam locomotive is unlikely to slam into a wall at over 100 mph.

People often comment about how supportive and cooperative Frank's wife Mary is about his railroad obsession/hobby. Frank says it's simple to get your wife to like trains. Build race cars for over thirty years first.

Following Erich's example he began to create a couple of freelance designs of his own. As Frank admits, "It just wasn't working". Erich advised him to find a narrow gauge engine that appealed to him, and use that as a prototype. A trip to the relatively new California State Railroad Museum (Sacramento) gave him just the source he needed: the *Sonoma*. It was an 1870's Baldwin model

8-18C 4-4-0. It had all the character and flare of the best Victorian era steam in America. What made it the perfect choice was that it had run on the North Pacific Coast, predecessor of the Northwestern Pacific, his "hometown" railroad. Frank's engine has since participated in two international Railfair's in Sacramento.

THE DESIGN

The Museum had very detailed drawings for the parts of the engine that had to be recreated, such as the original wooden cab, the balloon stack, and many smaller miscellaneous parts. Unfortunately, there was nothing on the rest of the engine. Frank's search for plans from other sources was in vain. Later he did find a source of copies for many of the original Baldwin drawings, but he was virtually done with the engine by then.

Living in Orland, California he was 100 miles north of Sacramento and the Museum. He estimates putting 10,000 miles on his truck driving down to get "just a few more measurements". The museum staff soon became accustomed to Frank showing up with a notebook and a tape measure. He was allowed to crawl on and around the engine in a fashion normally frowned upon.

Frank wanted to build a very accurate model, which he succeeded in doing. In a couple of instances it was perhaps too accurate. The frame of the original engine was made from layers of wrought iron strap. It was flexible. Frank's instincts from race car construction led him to build strong and light. He used square structural tubing to recreate the frame of the prototype. Like the original, it is strong and flexible. It does not, unfortunately, add the extra weight so much desired on live steam engines. Were he to do it again, he says he would use solid bar stock or plate.

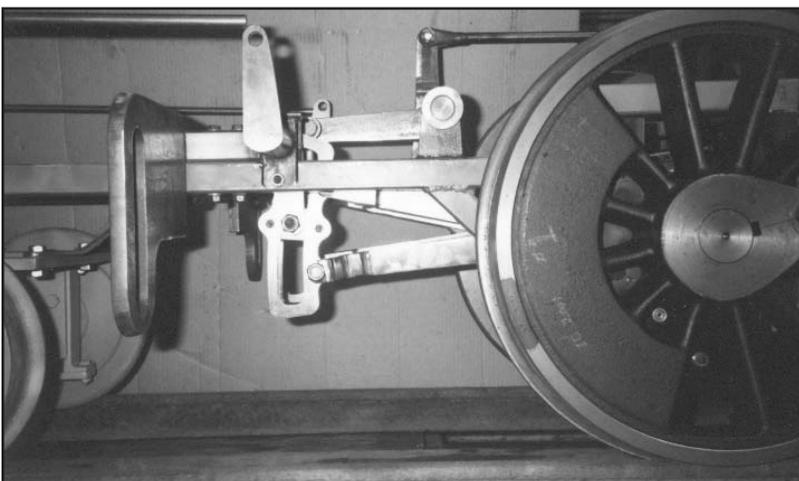
He would also build the valves differently. He never discussed valves with Erich or the other members of the Redwood Valley crew. They cast their valve bodies to look like nineteenth century slide-D valves, but the guts contain nice "modern" piston valves. The deception worked. Frank assumed they were regular slide valves. He built slide valves. They work well, but probably do use up a bit of the engine's horsepower.

CONSTRUCTION

Frank has a lifetime of experience welding odd shapes of steel together. But he doesn't consider himself much of a woodworker. For the sake of time and expense, he found it better to fabricate as many parts as possible. He had only

"the scream of machines always on the brink of destruction"

"to get your wife to like trains, build race cars for 30 years first."





planned to build one locomotive, so most patterns would end up making only one or perhaps two parts.

The few castings used were for drivers, tender

truck wheels, steam domes covers, valve body covers, the smokebox door, the steps, and the bell harp. Some of the patterns were made by Frank, and others came from his friend Bill Fahey.

Initially the drivers were going to be cast in iron, then given steel tires. When the time came, though, it was decided to cast the centers and tires as one piece of steel. There is a step that gives the appearance of a separate tire, but it is all one casting. Years from now when the flanges are too thin to be reshaped, the flange and tread will be turned down to what would be the center. A new steel tire will be shrunk and welded into place.

The cylinders are 6" tubing with 1/2" walls. They are welded to a saddle made of 1/2" plate. Fake flanges were put in the center of the saddle to simulate the seam of two castings. The joke is that fifty years from now some poor guys will spend half a day try to break that saddle in two! The valve body was fabricated from plate and solid stock. It is supported above the cylinders by curved plates welded to form the steam passages. The real valves are hidden by an accurately proportioned polished brass box and cast iron cover.



The base of the smoke stack, an item traditionally cast, was also fabricated. A thick steel plate was cut then curved in a press to very near the radius of the boiler shell. Then it was turned on the lathe to get an exact match. The pilot wheels were hogged out of 2 1/2" plate.

Only the portions of the steam and sand domes with the double curves at the top were cast. The bases and the other shapes were built up from plates of various thickness that were flame cut and turned on a large lathe.



LOCOMOTIVE PROFILE

Loco #: 12	Name: Sonoma
Home Ry.: ON&P	Lettered as: NPC
Gauge: 15"	Scale: 5"
Builder/Owner: Frank Allen	Fuel: Oil (diesel)
Construct. began: 1983	Completed: 1991
Wheel Arrange: 4-4-0	Couplers: Link & Pin
Prototype: NPC #12	Overall Length: 18' 4"
Baldwin 8-18C, 1874 model, built 1876	Working Weight: 4500 lbs.
Cylinder Size: 5" x 63/4"	Boiler Press: 170 psi
Valve Gear: Stephenson	Driver Dia: 17 1/2"
Main Bearings: Brass	Valve Type: Slide
Water Capacity: 74 gal.	Boiler Tubes: 49 - 1" dia.
	Tender Trucks: 2 4 -wheel
	Fuel Capacity: 25 gal.

There were a few parts of the engine that Frank had done outside his shop. Since he wanted to be able to haul the public at some point in the future he chose to have the boiler made at an ASME certified shop: Dixon Boiler Works in Los Angeles. The Stephenson links were milled by Ed Yungling. And the wooden cab was built by a friend with a cabinet shop.

The prototype engine was originally a wood burner. Frank wasn't interested in chopping that much wood. His *Sonoma* is an oil burner. The atomizer is a "dribble" type designed by Erich. A small slot emits a spray of steam and the oil is allowed to flow by gravity on top of the spray and is thus atomized. Like all oil fires it can be sucked out, if the fire is cut low then pulled by a heavy exhaust.

The colors of the locomotive were made with the same well-researched recipes used by the Museum. The stylish pin stripes and lettering were added by an artist friend, and they too match the prototype design exactly. Construction was completed in eight years.

The *Sonoma* is a gem of a locomotive. It elicits heartfelt *oohs* and *ahhs* from visitors. During its debut at the 1991 Railfair, one of Frank's friends, helping to endlessly wipe carbon soot and oil off the paint and brass, said, "I'm beginning to see why they started painting these things black!" But in the end it is well worth the work.

A recent addition to the engine is the air pump. It was built in the shops of a friend's 15" gauge railroad. The sound of its slow breathing really helps the *Sonoma* come to life. Frank built a hydrostatic lubricator for it, and it took a while to find the balance between a pump squeaking from lack of oil and a pump that showered the engineer with cylinder oil. Fortunately a happy medium has been established.

When the subject of cost comes up, there is an indication that spousal support may have it's limits. "I never kept track . . . if I knew how much I spent on this engine I would probably jump off a bridge. If my wife knew how much I spent, I wouldn't have to jump."

OPERATIONS

The *Sonoma* will soon begin her tenth year of operat-



Frank tightens the last bolt in 1991.

ing for the public. As with any locomotive there have been small adjustments and modification that have needed to be made. A baffle in the steam dome has helped reduce priming. The solid blades in the Stephenson valve gear have been replaced with adjustable ones, perfecting the timing. The engine runs very well.

The large cylinders supply ample power to pull a passenger train loaded with fifty adults plus children jammed in every nook and cranny. Once the train is underway, though, it is helpful to notch up on the Johnson bar. It saves a lot of steam.

A few unfortunate derailings and at least one cornfield meet have proven that Frank's frame is sufficiently durable. During one a switch stand shifted a little due to rusted lag bolts and deteriorated ties. For the next pass of the train, the points were thrown neither one direction nor the other. The hapless engineer (who shall remain nameless) went for a ride across country between the diverging routes. The engine slammed over 12 lb. rails and 4x4

ties. All eight wheels of the engine and all eight wheels of the tender were on the ground. The only damage sustained was a minor bending of the bottom bar on the pilot. This happened during the re-railing by the exasperated crew. Otherwise the engine was entirely unharmed.

Only a couple major changes are slated for the near future. A new mechanical lubricator for the cylinders will either be bought or built. The "temporary" ones have been working for a decade. Some touch up painting of the pin stripes needs to be done in preparation for the 50th Anniversary of the Redwood Valley Railway.

If you would like to see the *Sonoma* running, come to the Glenn County Fairgrounds in Orland, California. The railroad runs on the weekends in the Spring and Fall. For details you can call 530-865-9747. ←

Author Greg Robinson is the new editor of the 7+ Railroader and a regular engineer on the Sonoma. He is proud to call Frank Allen a good friend and to call the Orland Newville & Pacific his home railroad. (Photos: Collection of the ON&P)

“The hapless engineer went for a ride across country. . .”



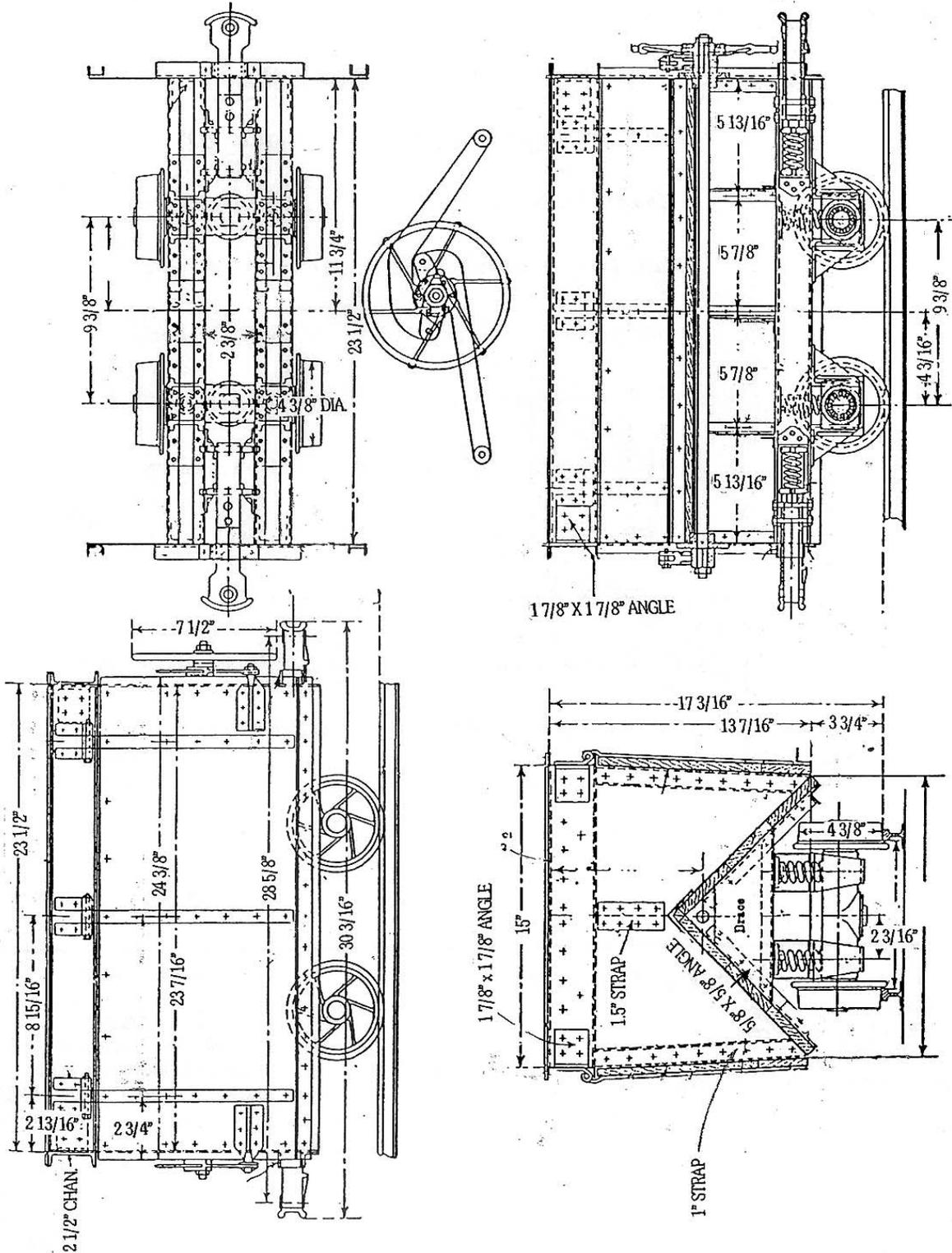
The *Sonoma* poses next to the “Bud Switcher”, the ONP's four wheel side-rod Davenport.

DRAWINGS FROM THE 7+ ARCHIVES

These Two Foot Galbe-Bottom Side-Dump car drawings come from Vol III, No. 4 of the *7+Narrow Gauger* (the former name of the *7+RAILROADER*). Enjoy!

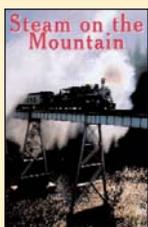
TWO FOOT Gable-Bottom Side-Dump Car

SCALE: 1/8" = 1"
(APPROXIMATE)





Dan Crean, Cornelius, NC cleans 900 real miles of road scum off nose of G-16 No. 680 after Golden Spike Ceremonies at Lexington, IL opening Oct 1st, 2006 of the B&W RR owned by Charles Wright. Cathy Jugle, Elmhurst, IL looks on as Dan works on train she rode in 1955 at Lincoln Park in Chicago, IL.. No. 680 probably did another scale 900 miles in run at B&W RR after inaugural run of Milwaukee Road G-16No. 784, freshly restored by Troy Whitley of Yankton, SD. A good time was had by all.

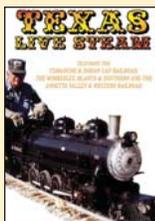


STEAM ON THE MOUNTAIN DVD

There aren't many places left where a steam engine can be seen working on the very rails it did when it was brand new. In

Steam on the Mountain you'll see a 1914 Baldwin Mikado working the same grades in the shadow of the same mountain it saw over ninety years ago. You'll ride in the cab with the engineer and the fireman as they reign in the power of a loud, bucking "iron horse". You'll see close-up shots of the powerful drive rods and steel wheels. You'll enjoy the dramatic scenery and hearing the engineer describe what it's like to run a steam engine over a railroad he has worked on for decades. And there is no sound in the world like a lonesome steam whistle echoing through the pine trees.

\$19.95 plus shipping.



TEXAS LIVE STEAM DVD

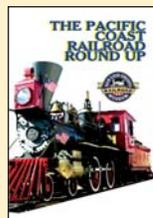
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PACIFIC COAST RR ROUND UP DVD

The Pacific Coast is a private railroad on the



Central California coast. It is opened to the public only once each year, as a fund raiser for the San Luis Obispo Railway Museum. This DVD takes you aboard the charming narrow gauge train. It features vintage steam engines (including the one that was in the opening shots of Dr. Quinn, Medicine Woman TV show with Jane Seymour). The coaches are genuine Disney coaches - the first coaches to be used in service at Disneyland. Great for railfans, narrow gaugers, families, Disney enthusiasts and anyone else who would just enjoy a good show. Approx. 1 hour with bonus features. **\$19.95** plus \$4.50 shipping

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REEDLEY RAILFEST!

Left: Al Di Paolo of the California State RR Museum runs the **Sonoma**.

Right: Rod Plaisted's fun new Circus Car.



Left: Chris Allan and friend run the Joshua Tree & Southern shay.

Right: Redwood Valley Railway's Ken Pimlott runs the No. 11 over the trestle.



Left: The beautifully restored **Marie E.**

Right: Formally of Bell Gardens, this diesel will soon make it's home at the ATT&NW.



Left & Right: Hillcrest had several static displays available, including these trucks and this new Shay boiler under construction by a Hillcrest crew member.



GIFT SHOP

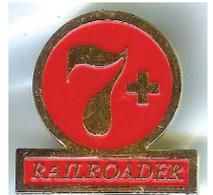


GRAND SCALES QUARTERLY MUGS

These attractive ceramic mugs are just the thing you need! Grab a few to use while sitting around the engine and sharing railroad stories with your buddies. Maroon with a tasteful white design.
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