sometimes

Mud Ring Monthly

Cinder Sniffers News

February 2015

I HAD A DREAM, DEAR. IT WAS OF . . . . McALLISTER STATION !!

Dreams

Yes dreams, crazy dreams … The year is young; there is still time for **pondering**, **brain-storming** and some **New Year's resolutions**. What would we like to do as a club in … 2015 … in 2016 … Ideas I've overheard:

- A "diesel" only run
- Steam only run
- Reverse direction run
- Outside-loop: clockwise, inside-loop: counter-clockwise
- Fall foliage run
- All trains must be double headed day
- What is the longest train that we can make up?
- Classes on operating the club engine
- All enginers/owners invite two club members as crew
- Move the July run to ***Fourth of July*** (like the old days)
- Produce a "quality" YouTube video [as per LALS]
- Issue Special Membership to kids who ride our trains that day
- Wear an "Ask Me" button to encourage talk with guests.
- Continue realigning track to achieve 50+ foot radius curves
- Enlarge our mouse-proof lockable storage in the Diner
- Enlarge our property to the east for more parking

You may recognize some of these as *your* suggestions. Most are not new. Even so, hopefully, you will add to this list and discuss your thoughts at an upcoming meeting.

Let's dream —- and plan.

NEXT UP:

Business meeting, Feb 13 at Cincinnati Test Systems: Look for the announcement from Dave Sams. **IMPORTANT: please bring your dues money**: $65 for regular family members, $25 for spousal members and $5 for junior members who are in school or are less then 18 years of age.

EJ's Model Engineering Show March 7-8 .. **plan to exhibit.** Chuck Balmer wrote: *"We could encourage members into dragging their equipment out for display like we used to do. We really need to get members off their behinds and show some real enthusiasm for the promotion of the hobby. It takes some work to set up, man, and tear down a display but it is a fun weekend. Larry Koehl would like suggestions about providing a means for unloading and displaying the larger engines. Maybe some members could loan out display stands even if they aren't able to bring their equipment."*

Chuck, yes, in past years we participated in many shows. Most prominent was the annual Great American Train Show (GATS) downtown in Convention Center. It was a well attended show. Even though that show is no longer available, we should still participate in exhibits to let folks know we exist. ... *jsk*

2nd Annual Tri-State Invitational Meet, April 18 at Indiana Live Steamers: Harvey tells me that this is our next rail outing. It should be fun.

Charlotte Hughes reports:

The following are extracts from emails received from Charlotte. It sounds like her treatments are moving along OK. Let me know if you would like to read the full emails. She wrote:

Jan 9: "It's been a while since I let you all know how things are going since my last updates. ... I'm feeling quite exhilarated that the treatment has begun and confident that we have selected a very competent orthopedic oncologist. He was extremely open and spoke with us with caring and information that we were missing with the specialist in Cincinnati. The additional benefit, of course, is not having to deal with snow, ice, and cold for our daily trips for treatment. It was 81 degrees here [in Arizona] a couple of days ago when you were suffering with zero. I noticed that when we did go out in the cold, my leg became more painful as my muscles reacted to the temperatures, so I'm very grateful to be here.

"Ray has seen a doctor here to manage his Coumadin levels and check the abscess site. It has almost closed up now, so hopefully we won't have to deal with packing it much longer. He's not thrilled with this doctor yet, as our first visit lasted 2½ hours at his office. I hope this is not the norm, or we will be looking elsewhere.

"Thanks again for all your prayers and well wishes. I am certain this is what has resulted in our peace of mind and positive outlook as we move forward.

Jan 26: "Nothing much has changed other than the fact that I hit the half way hump Friday with radiation treatment #13. My leg is still quite large and painful, but we're managing it. I'm finding myself sleeping a lot which is probably good because it keeps me off my feet. My appetite isn't too good, but I'm making myself eat enough.

"We've rented a wheelchair so we went to Dessert Breeze Railroad Park (http://www.desertbreezerr.com/rides) about a mile from the house on Sunday with the family and enjoyed the sunshine. It has a lake with ducks and picnic areas, playgrounds, and rides which includes a C.P. Huntington replica engine. Last year we would ride our bikes there and got some exercise, but that isn't currently possible. Ray walked quite a bit pushing the wheelchair, and he did real well with the right leg. At one point, the left leg hurt a bit, but he didn't have to stop.

"My orthopedic specialist called and set up my pre-op appointment for March 23 which is six weeks after the last radiation treatment. The tumor is supposed to continue to shrink long after radiation has stopped. I want to find out if there is anything I can do during those six weeks to build myself up for the best result after surgery. I know I won't be doing any squats, leg lifts, or leg presses anytime soon, but I want to be in the best shape possible for a speedy recovery.

. . . . nap time z-z-z-z-z-z-z" Charlotte Hughes

The Knox shop stove was out of commission because the cast iron pieces had cracked from long usage. After pricing new stoves and a lot of head scratching, **Carl Schwab** brazed the pieces together and is here checking the reconstructed grate.

Photos: Jim Keith

Charlotte Hughes warming her hands over the rebuilt wood stove on November 29 2014.

2014 Financial Report (abridged)

The year began with financial assets of $10,175. During the year we had income of $4,890 and expenses of $5,412, leaving a balance at year end of $9,653. $4,890 income was made up of:

61%	dues
3%	donations from members
15%	donations at the farebox
13%	proceeds from the diner & hot dogs
9%	flea market sales

Our expenses were 111% of our income. Our largest expense, $1737 (36%), was for the SPECIAL project of re-aligning the curve at North Comfort. (A small portion of this project's cost will fall to 2015.) Other 2014 expenses (as a percent of our $4890 income) were as follows:

2%	other track related expenses
14%	grounds
2%	building maintenance
29%	real estate taxes*
7%	liability insurance
6%	electric utility
3%	printing & postage
2%	web hosting & domain name
2%	meeting refreshments
3%	memorials and misc.
4%	on-board air compressor (capital expense)

* Thanks to the efforts of Dave Sams and Harvey Bond, we now have tax-exempt status with Dearborn County and we will have no property taxes to pay in 2015 and beyond ...

At year end, membership counts (full, spousal, assoc, junior, life, total) were (40, 6, 8, 9, 3, 66). This compares to (40, 6, 6, 7, 4, 63) at year end 2013. New members in 2014 were **Don** & **Katelyn Frozina**, **Dave Keith** and **Gabriel Mense**. Unfortunately, we lost life member Fred Lohmoeller. . Jim Keith, CSI treas.

New Associate Members

We are fortunate ... fortunate because CSI tracks provide for the smaller scales. Our first president made sure of that. ... Not only do we continue to have members with 3/4" scale equipment, but this month, Dave Sams got a membership inquiry from **Ed Heeg** of Asheville, North Carolina. Why was Heeg interested in CSI ... because he is now finishing a Yankee Shop NYC Hudson in 3/4" scale. Yeah there are tracks in NC, but not 3-1/2" ga. The closest (he told me) was the Cinder Sniffers. Actually, Ed is not a stranger to us. He grew up in the area .. When he lived in Cinci, he modeled in HO and N and was for a short time a member of CSI. .. We welcome Ed back as an Associate Member.

Another new Associate member is **Kent Bolerjack**. Kent's involvement with ground level scale railroading goes back many years. Live Steam magazine reported that "22 live steamers met in January 1969 at the home of Kent Bolerjack in Englewood CO and voted to organize as the Colorado Live Steamers." And, I might add. Kent was duly name President. Within a few months they had rails laid for 3-1/2" and 4-3/4" gauge.

In a recent note, Kent wrote: *"I have a few pieces of rolling stock, some I travel with and some I leave at my "Home Road" in Bloomington Indiana at Pete Pedigo's NEWX <newrr.com>. Right now I am rebuilding a 1½" scale model of Northern Pacific's #1, the* Minnetonka*. I started building this engine in May 1961, built it narrow gauge to run on 4 3/4" track. Now I am rebuilding it to run on 7½" gauge track as it should have been built in the first place.*

Over the years I have had the pleasure of meeting a lot of nice people, and Linda and I feel right at home at the Cinder Sniffers. Thank you and the other members for extending a warm welcome. …. See you in the spring. .. Kent

New tender for *Lewis Brown* – Part 3

Friends Don't Let Friends Make Horseshoes

Denis Larrick

Photo: Denis Larrick

It became obvious to me that the first part of the tender tank that must be installed was the coal bunker. This would leave the outside open to tweak the plumbing and to use a heavy paint to seal all the joints of the coal bunker without having to work in the narrow 3" space of the water legs. As it turns out, the very first tank wall part that I formed would be the most difficult... a shallow horseshoe at the back of the bunker. It is flat along the back of the bunker with a 90 degree bend at 2" radius on either end, then straightening out for a half inch of flat for the rivet joint. With a precision air powered brake of the 1880s, it might have been easy to bump it around to shape in full size. But with my C clamp and wood die method, not so much. Even though I scribed tangent lines and centers of bends on the aluminum, I couldn't keep the bends centered or square to the bottom and top of the sheet. I re-bent the part at least a dozen times before I was satisfied. Thank goodness I listened to Ken Hemmelgarn when he encouraged me to build the tank out of aluminum, not stainless. If I ever have the luxury of building my own small track, one of the towns will be named Lottacussin. If I had it to do over, I would ignore the prototype and make the horseshoe in halves with a butt strap in the middle.

The ½" aluminum angle frame is held together with (Bob Maynard, close your ears) countersunk aircraft bolts and locknuts that I inherited from my dad (who inherited them a pocketful at a time from Wright Patt, I'm sure). The sheets are riveted in place with stainless drive screws from McMaster-Carr. I had to make a trip to Harbor Freight for a close quarters drill to get into the 6" wide bunker, for two 12" deep throat C clamps that could hold the bottom of the walls to the angles, and for three packs of 1/16" drill bits (most already broken) in order to make the first two joints. Fortunately, those joints will be buried in coal where they won't show. I will get better with practice, I hope.

When it came time to order drive screws, I had a problem. The McMaster-Carr catalog listed shank size, but not head size. A ¾" head in 2½" scale comes out to 0.156" diameter. I called McMaster in Cleveland and explained the dilemma. I'm sure the lady thought I was totally crazy, but in a half hour I had a call back with my answer. Not only that, the next time I looked at their online catalog, they had added the head size! How's that for customer service? I am using #2 Type U 18-8 stainless drive screws with a 0.162" diameter head and 0.100" diameter shank. They call for a #44 drill (0.086" diameter), but Harbor Freight's 3/32" (0.094") value pack is working fine.

One last thought. I guessed at 1000 rivets. When I went back to the drawings I made almost fifteen years ago, it says I will use 1770 rivets. Now I know why I spent thirteen years riding a wooden tender. Methinks it is going to be a long war… *Denis*

LOCOMOTIVE TREADMILL

Tentatively named ***Locomotive Cyclinder*** **(Pronounced: *sigh-klin-der*)**

Jim Balmer

The following is part of a longer article prepared by Jim. The complete article, with six drawings, is available here: http://www.jasdot.org/BalmerJim_LocomotiveTreadmill.html

I've been working on the locomotive treadmill idea that Denis and I were discussing at the last meeting. This idea is for a machine/mechanism that would allow for adapting 3-1/2" gauge locomotives to 7-1/2" or 7-1/4" track by means of a treadmill of sorts using V-belts coupled somehow to trucks or axles as the motion transfer mechanism. So far the idea seems very promising even with the requirements that I've set for myself.

The requirements so far are:

- Must be able to be built using the minimum level of tools with as little machining skill required as possible.
- Frame must also be long enough to accommodate both the engine and tender.
- Design must result in the back end of the loco being even with the back end of the frame to allow for proper control by a person riding behind the unit. Accommodations for connecting to a 1-1/2" scale riding car or providing some sort of place for the engineer to sit following the unit must be provided.
- Base design is limited by whatever parts and materials are available through sources like McMaster-Carr, MSC, Enco, Amazon.com, and Travers.
- Unit must be able to be fit in the back seat or trunk of a "standard" car. (No elements over roughly 4' to 4'-6" in length...) Splitting the unit into two or more assembleable parts is acceptable to meet this condition.
- Unit is to be of a general/universal design such that one or more parts are easily "scalable" to match the needs of any given engine.

So far the only exception is that I have opted for using trucks available from Plum Cove Studios as my drive mechanism. In fact, on that subject I contacted Plum Cove. I was chiefly looking at their AAR roller bearing trucks. It is a very nice kit that looks to be easily assembled and solves most of the worst machining concerns with this project, and at $399 for a pair seemed to be a more than reasonable solution.

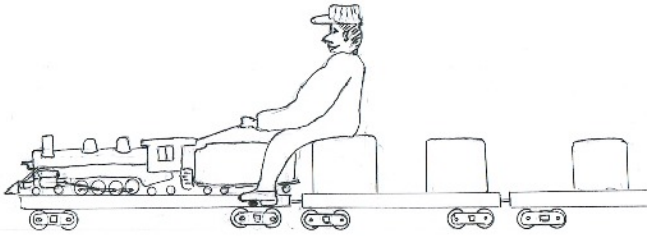
The truck can be seen here:
http://www.plumcovestudios.com/AAR_trucks_01.html
My biggest concern was whether or not they would be willing to put a pulley or sprocket on one axle of each of the truck before they pressed the wheels on the axles. Specifically I asked that if I either provided them with the pulleys/sprockets or provided them with a vendor and a part number for a pulley/sprocket would they be willing to put them on two of the axles of the set before pressing the wheels on understanding that I would cover the cost of the pulley/sprocket and that there may be a small fee for the "extra work". After hearing back from them regarding the diameter of their axles and wheels as well as their willingness to accommodate my request, I found a chain sprocket that will mate and clear the wheel diameter nicely. With that, what is probably the BIGGEST hurdle is solved.

Even in light of this though, the recent issue of the Mud Ring showing Lou Lockwood's arch bar trucks has made me consider getting with him to potentially included his design as a possible alternative to buying fully machined trucks. Since Plum Cove does sell individual axles with wheels and bearings pressed on for $80 an axle, and I'm assuming they would not have a problem putting a pulley or sprocket on a pair of those axles (when you bought 4), Lou's design would potentially be a substantially cheaper (though more labor intensive) option.

The next issue to tackle was where to get the bearings for the rolling portion of the treadmill. Since I was going to need a significant number of them I needed cheap bearings, but bearings that were still decent in quality and would take some punishment. The answer to this came in the form of rollerblade/skate bearings. Thinking lightly about it, you consider the average adult rollerblading means about 180 lbs on both feet. At four wheels a foot that comes out to roughly 22 lbs. on each one statically standing still OR dynamically just coasting. When you combine that with the thought that they have to withstand the impact from a person pushing off to accelerate there really is no question that rollerblade bearings should do the trick. A company by the name of VXB makes an "economy" set of bearings that they sell in bulk lots that are available through Amazon.com. They are 22mm O.D. x 8mm I.D. x 7mm wide, which is roughly 3/4" x 5/16" x 7/16". They come as 8 @ $8.51, 30 @ $19.04, 100 @ 46.96, and 800 @ $345.95 and can easily be found by searching on Amazon for "608ZZ bearing VXB" followed by the quantity you want. Do make sure that it says "by VXB" below the item listing.

With that solved I moved onto design and doing some initial layouts and dimension checking. I have included some screen captures of the CAD drawings that I have been working on so far, and will try to give a short explanation of each. ..

(Note, the CAD drawings and their explanation are here. .. ed.)



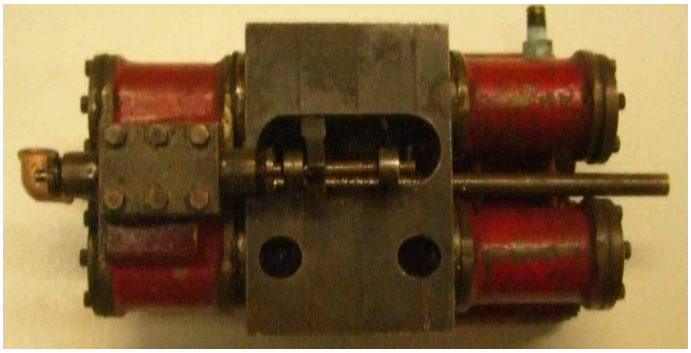
Narrow Gauge Switcher - 2 - The Front End

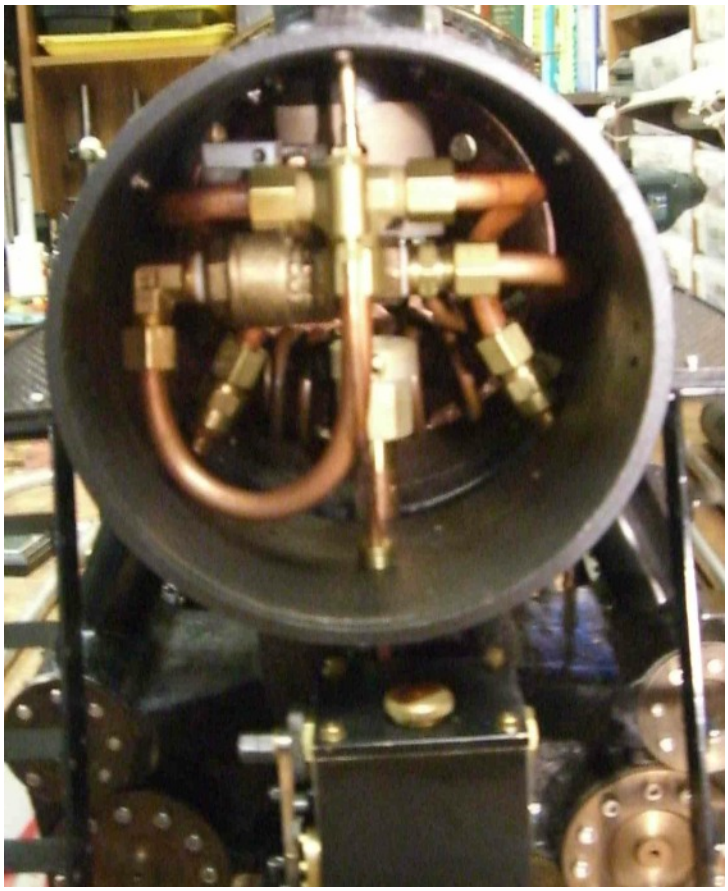
Chuck Balmer

The smokebox, aft looking forward, showing the copper coil feed water heater. This configuration does limit the access to the flues for cleaning from the front of the smoke box. However with the large fire door and the grates removed, most of the flues can be cleaned from the back. The heater will warm the water delivered from the axle pump.

If your wondering about the smallish copper tube on the left side which ends under the smoke stack, it is the exhaust pipe for the planned duplex steam water pump pictured below.

The pump was built back in the 70's from a set of 1" scale Little Engines castings. Its been sitting of a shelf for a long time. I removed it from a small Stuart stationary boiler I use for testing purposes. While it does run, it will need some additional work to make it pump effectively.





The smoke box from the front. The superheater feeds forward to the horizontal ball valve throttle. The throttle then feeds a compression "T" at the top. The steam lines then are routed to the pipes that feed the cylinders. An oil line also comes up from the mechanical oil pump to a check valve at the "T". On the back side of the "T" is an inverted check valve that vents through the roof of the smoke box. This valve serves as the drifting valve. The throttle linkage comes through a dry pipe from rear of the boiler. A second dry pipe is used for the blower line.

I use ball valves from Lowes. They are rated for 150 psi steam. As long as they have PTFE or Viton seals, they can withstand the hot smokebox environment and will not leak. I have one in the Hudson that has been in use for years and has never shown any signs of leaking.

I've run the cylinder lub into the steam line "T", again in the smokebox. With one mechanical lubricator, this saves the worry of making sure that the oil is evenly split between the two cylinders. I've followed this practice in all of my engines except *Sugar* and the Allegheny which have their oil supply lines feeding the cylinders directly.

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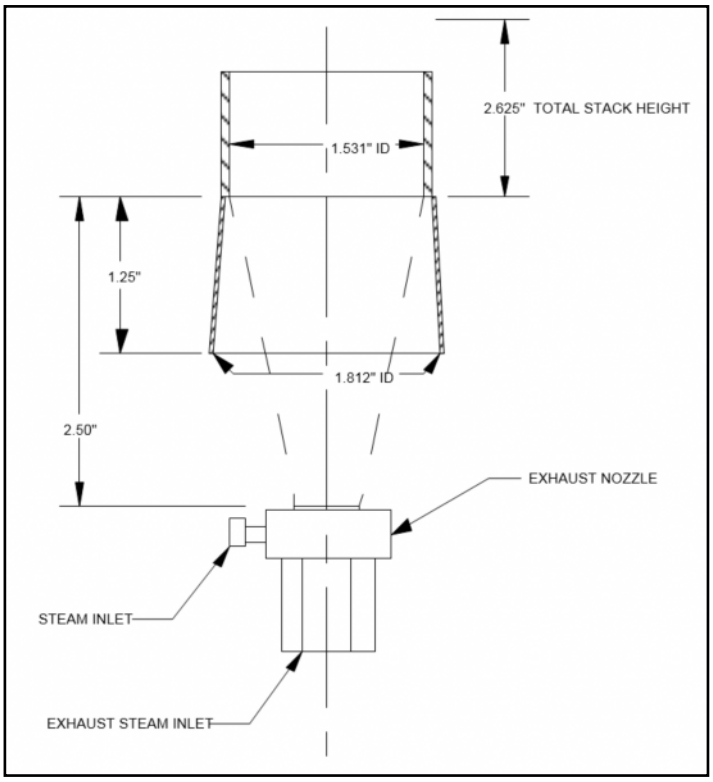

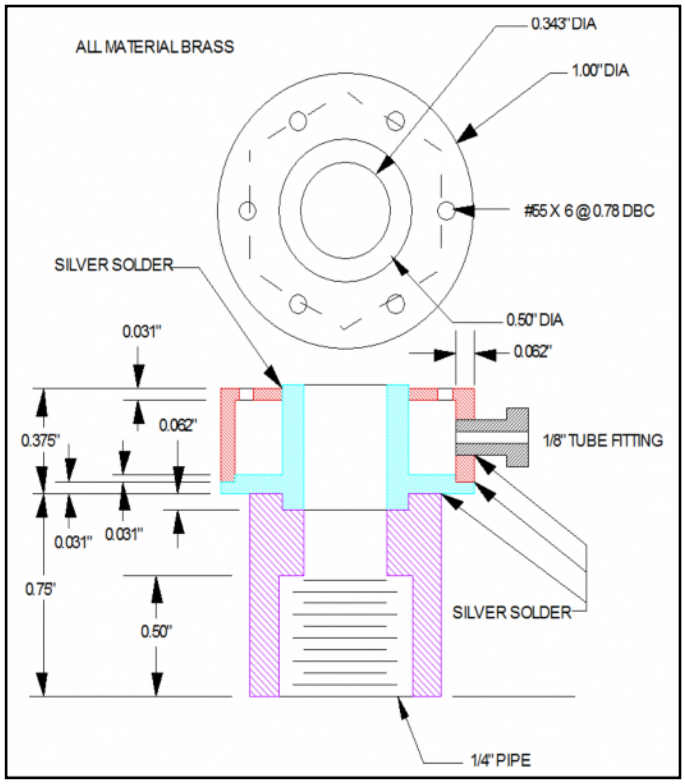

Blast Nozzle: These drawings show the details of the exhaust nozzle and how it is positioned in relation to the smoke stack. While this layout may not be ideal, it was somewhat constrained by the smoke box and the exhaust pipe that came with the engine.

Blower: On my small boilers, the blower supply line is typically a 1/8" OD copper pipe. This would supply up to 5 #70 holes. The only problem we've had with such small holes was with Bob's Atlantic. We noticed that the blower holes would get plugged with soot. We concluded that the soot mixed with cylinder oil would coat the top of the blower and eventually restrict the steam flow. This seemed to be made worse by the fact that the holes were quite small. I opened the holes up and this seemed to be better.

Boiler: The new boiler will be silver soldered when the weather gets a little warmer. It is designed for 100 psi. The pipe is 6" diameter and has a 1/8" wall. In order to solder it all together, we build a firebrick box around the boiler and use 1 or 2 500,000 BTU propane torches to preheat the boiler sections so that we don't use so much expensive acetylene to complete the soldering. This usually requires several soldering sessions to do the front flue sheet, the rear flue sheet, and the fire box and stays.
All of the sheets are cold formed over wooden blocks after annealing. I usually takes 3 or more annealing sessions to completely form a part. After all of the soldering is done, the boiler will be pickled in muriatic acid to clean off all of the copper oxide and some of the flux. The remaining flux will be removed by rinsing with hot water. Once complete it will be plugged and hydro tested to 200 psi.

Chuck, thanks for this preview. We'll be watching. … ed.

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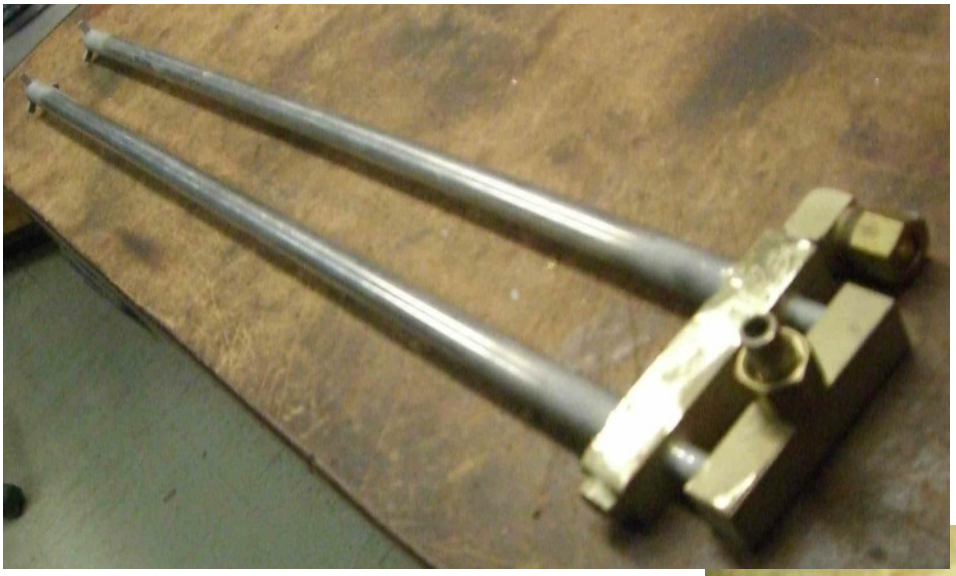
Front Page Illustration

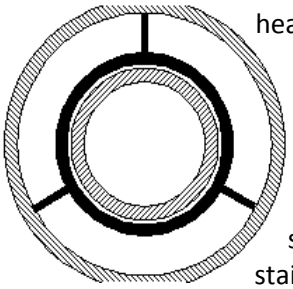
If you are wondering:
I discovered the cartoon that appers on the front page when digging through our "CSI Library" - my name for the boxes of stuff that former Pres. Vince Bradley left us.

The image is initialed and dated. But I won't tell. I'll leave that for you to find and decipher. Good luck! *jsk*

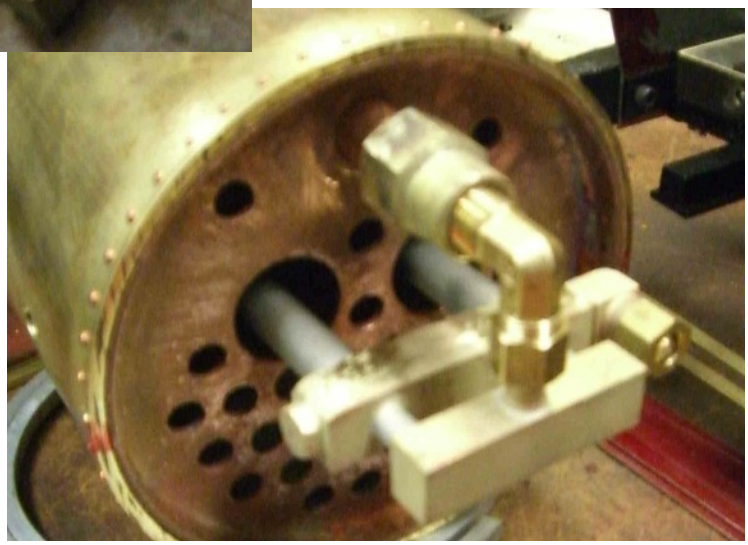
BLW's NG Switcher's Superheaters



The super heaters are made from thick walled stainless steel tubes. At the manifold end the tubes are silver soldered concentric. In the case of the 0-6-0 switcher, the super heaters are not that long so I didn't feel it was necessary to support the inner tube. If the inner tube is not perfectly concentric, it won't affect the operation since the cross sectional area is not dependent on the concentricity.



For the Allegheny, however, the heaters were quite long and I did provide support at the end of the inner tube by making a spoked insert out of brass that got pressed onto the inner tube. Similar spoked supports were made out of stainless steel to support the outer tube in the flue.



The super heater inserted into the front of the boiler and connected to the steam supply line from the steam dome

Six photos, two drawings: Chuck Balmer

An updated view of the BLW's Narrow Gauge switcher with the rough cab in place