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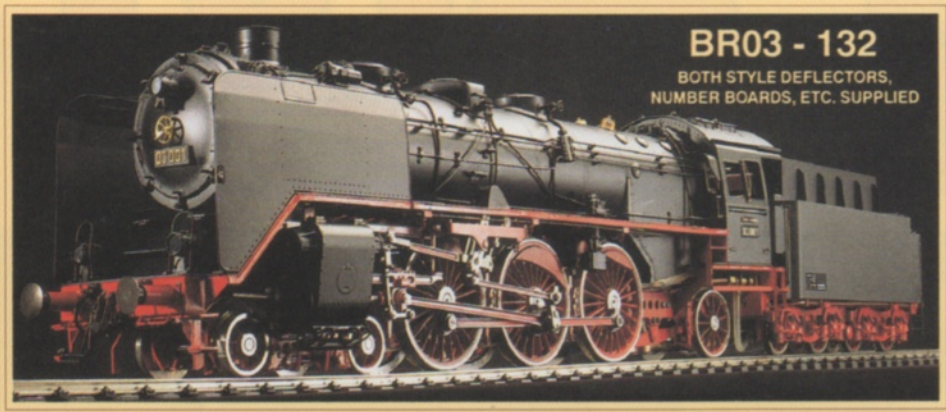

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STEAM IN THE GARDEN

Vol. 8, Nº 3
Issue Nº 45
May/June 1998

Articles

Departments

ON THE COVER: Another Heisler is rolled out of the Works onto a convenient siding, where the company photographer dutifully records it for the firm's archives. The 14-ton Heisler in 1:20.3 scale is one of a batch of 25 built by Mike Chaney for Catatonk Loco Works. ***photo by Mike Chaney***

Back Cover (Top): An Aster New York Central Hudson roars across the trestle with a passenger train at the Pennsylvania Live Steamers Memorial Day Steamup in May, 1998. The loco, which looked like the real thing and performed beautifully, is owned and operated by Bob Hekemian. The coaches are by J&M, and the front end cars were scratchbuilt by Bob Moser. ***photo by Ron Brown***

Back Cover (bottom): Marty Maloy prepares his Great Central Railway class 11B "Queen Mary" for a run at the Pennsylvania Live Steamers Memorial Day Steamup. The loco is G1MRA project based and was built about 3 years ago by Tom Barratt. It runs very well and quite economically according to Andrew Pullen, who sold it to Marty at the National Spring Steamup in Diamondhead earlier this year. ***photo by Ron Brown***

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Larry Herget ● Steven Gatke

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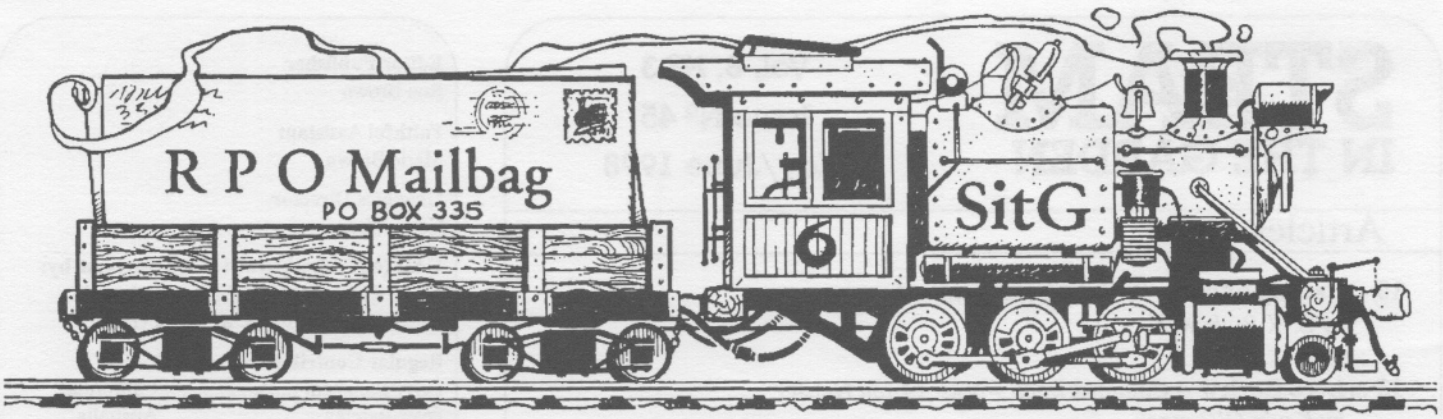


Letters from readers are welcomed and encouraged. Offer advice, encouragement, suggestions or constructive criticism. Tell us about your current project (and don't forget the photos!) or just share live steam experiences. But please keep your letters to a reasonable length so everyone has a chance to use this forum. Letters may be edited for length or clarity. Send your letters & photos to: SitG, Dept. RPO, P.O. Box 335, Newark Valley, NY 13811, USA.

* * * * * *

Bonita Springs, Florida

Dear Editor:

After reading an article taken from the *Yorkshire Evening Press,* 28 April 1998, and published on the *Live Steaming* web site, titled "York Model Engine Business Finally Runs Out of Steam", I feel that it is imperative that I clarify any misconceptions to my customers and future customers. Regarding the U.S. Agent filing bankruptcy and owing the model making company US$79,000 - Rio-Pecos is not bankrupt and never has filed bankruptcy. Our business relationship with John Hemmens of Maxwell Hemmens International Ltd. was terminated on January 30, 1997 because of his inability to provide models and parts in a timely manner. It was a clean financial separation as far as both parties were concerned.

Bob Osterhoudt
Rio-Pecos
May 26, 1998

* * * * * *

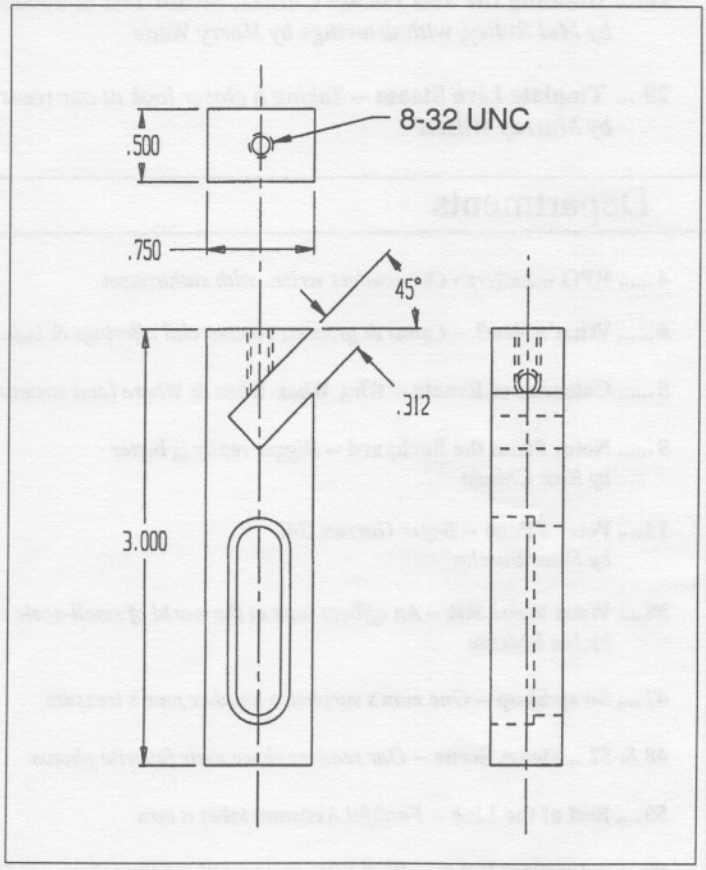
Hillsboro, Oregon

Dear Ron,

Here's another quick and handy shop project for you and your readers. This handy little pin vise was introduced to me by a toolmaker from Scotland. Everyone in the shop made one or more of these for their own use. Some were made larger, and some were quite small, using a 4-40 Allen cap screw as the hold-down. This pin vise can be made in just about any size you want, and it's a very versatile design. Simply use an Allen capscrew in the size of your choice as the hold-down. It works quite well to use one of those press-on plastic thumbscrew caps on the screw.

These pin vises can be clamped directly to a work surface or held in a vise at any angle you wish to set. The slot in the body also allows for mounting the pin vise to an angle plate. I've found these to be some of the most useful tools I've built.

Steven Gatke



* * * * * *

San Diego, California

Dear Sir:

I have two problems with which your readers might be able to help. I am experiencing problems with the radio control receiver on my locomotive. I have tried a number of different ways to expose the antenna, and they are either ineffective or detract severely

from the engine's appearance. Is there a sure fire way to improve reception and keep the antenna hidden? The locomotive is mostly aluminum - could this be causing problems?

Secondly, is there a good source for British/European style cast brass name and number plates in this country?

I have enjoyed every issue of your magazine. Please keep up the good work!

Sincerely,

Daniel V. Herrscher

Thanks for your kind words about the magazine, Daniel. I hope that some of our experienced and knowledgeable readers will respond to your plea for help.

You might try a Brandbright dealer or Sulphur Springs Steam Models for the cast brass nameplates.

As for your R/C reception problems, "glitching" has been a problem encountered by nearly everyone who has tried to fit their steam locomotive with radio control. There are a number of different approaches to solving this problem, and the only way to determine which is right for you, unfortunately, is to try it and see what happens.

Servo smoothers have been quite successful in many problem installations. These little electronic devices plug in between the servo and the receiver, and they screen out spurious signals. The down side is that they slow down the response, giving a sort of "momentum" effect. Some users like this, while others find it unacceptable. Several of our advertisers carry servo smoothers, and they are a relatively inexpensive fix for glitching.

Moving up to an FM R/C system will often eliminate or reduce the amount of glitching, and PCM systems work best of all. The down side here is cost, but most steamers will gladly spend a few extra dollars to improve and/or perfect the performance of their little iron steeds.

Radio Control Systems (RCS) of Australia has just announced a radio control system designed specifically for use in steam powered model locomotives. This is a PCM system, which has proven to be the most glitch-free of all the R/C systems in general use. We will be reviewing this new system from RCS soon in these pages. - ed.

* * * * * *

DeSoto, Missouri

Dear Ron,

Here's an EASY way to cut glass tubing for water gauge glasses or whatever.

Mark the glass with a fine RED marker to the length you need, plus about .020". Set your drill press or lathe to about 900 - 1000 rpm. This speed is not real critical, you can go lower or higher. Line up the table hole so the glass goes through at a height that is comfortable to rest your hands on. Place the glass tubing in the chuck, hand tight only. The red line should be about 1/2" below the chuck.

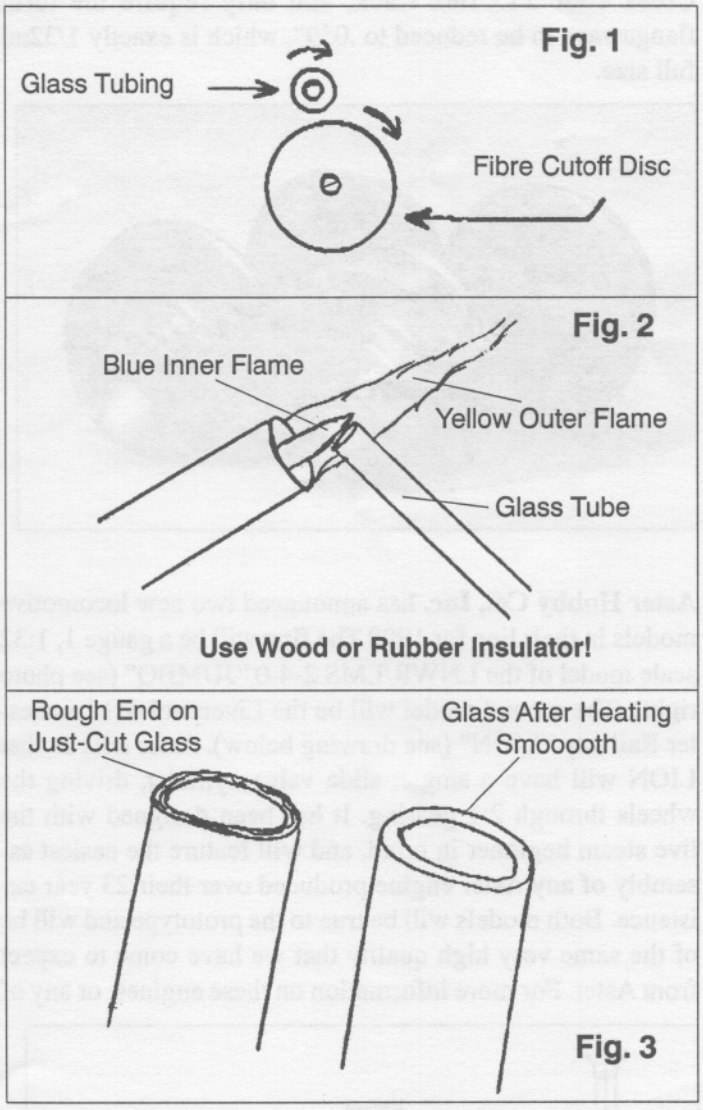
Put a fibre cutoff disc in your motor tool and turn the tool on to high speed. Turn on the drill press and cut 40% to 50% through the glass (BE SURE THE ROTATION OF THE TOOLS IS OPPOSITE ONE ANOTHER). See Fig. 1.

USE SAFETY GLASSES USE SAFETY GLASSES

Remove the glass from the chuck. Place your thumbs 1/4" from each side of the cut you just made and snap the glass tube cleanly in two.

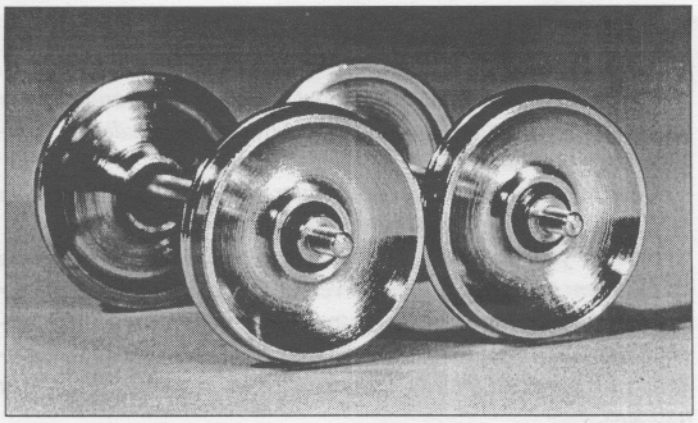
BEAUTIFUL ENDS: Refer to Fig. 2. Place a wood dowel in the glass tube, or a piece of rubber hose over the end, for a handle. Place the other end in the flame of a torch as shown and turn the glass tube slowly. Watch the end and you will see a transformation from scratchy to SMOOOOOTH. Not too much or the ends will get round...just til it's SMOOOOTH (see Fig. 3).

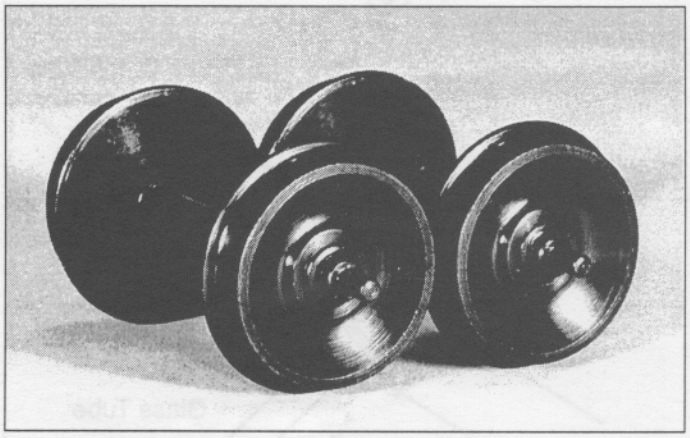
Larry Herget



WHAT'S NEW?

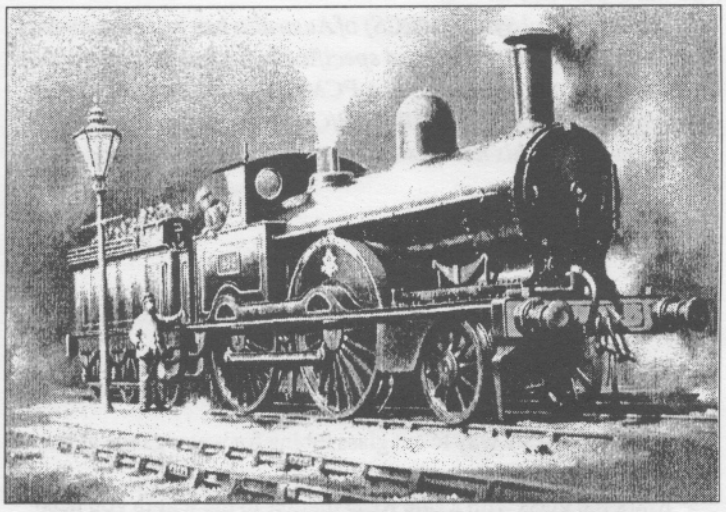
Gary Raymond Quality Large Scale Metal Wheelsets™, PO Box 1722, Thousand Oaks, CA 91358 - phone 805-492-5858, has introduced two new wheelsets. The first is the 1 33 RS AAR, the first exact scale 33" wheelset for 1:32 scale on Gauge 1 track. This wheelset is built to the new proposed NMRA AAR standards and G1MRA Scale 3/8 Standards, which do not allow any compromise in the model wheel's proportions. The wheelsets feature exactly scaled 1" flanges, correctly offset hub and full front and back contour. They are designed for those wishing to upgrade their finescale brass imports with semiscale wheelsets. The 1 33 RS AAR wheelsts are reliable on Llagas Creek code 215 flex track, and only require the turnout flangeways to be reduced to .059", which is exactly 1/32nd of full size.

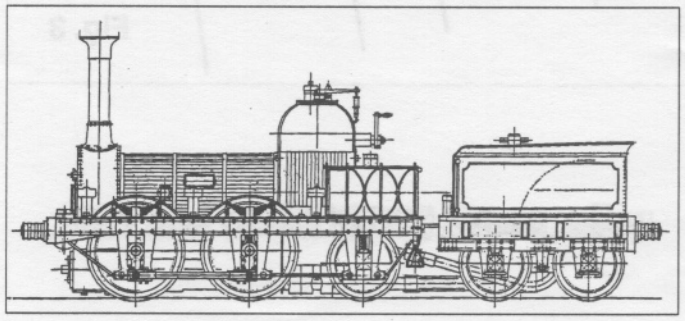




The second new wheelset from Gary Raymond is their new line of BLACK BEAUTIES™ wheelsets for LBG logging disconnects. These wheelsets are easy to install and feautre an advanced tread design which is reliable on all track with radii as small as 2-feet. The part number is G 26 BL SS. For more information on the Gary Raymond line of quality wheelsets, or to place your order, contact your favorite large scale model railroad dealer or the manufacturer.

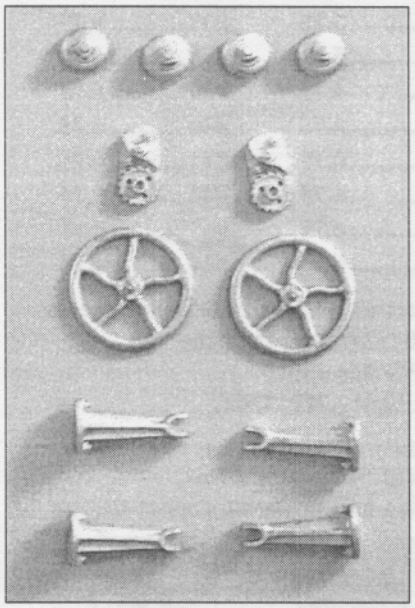
Aster Hobby Co., Inc. has announced two new locomotive models in their line for 1999 The first will be a gauge 1, 1:32 scale model of the LNWR/LMS 2-4-0 "JUMBO" (see photo right). The second model will be the Liverpool & Manchester Railway "LION" (see drawing below). Aster tells us that LION will have a single, slide valve cylinder, driving the wheels through 2:1 gearing. It has been designed with the live steam beginner in mind, and will feature the easiest assembly of any Aster engine produced over their 23 year existence. Both models will be true to the prototype and will be of the same very high quality that we have come to expect from Aster. For more information on these engines, or any of the engines in the extensive Aster line, contact your favorite Aster dealer or Aster's USA agent, **Jerry Hyde of Hyde-Out Mountain Live Steam, 89060 New Rumley Rd., Jewett, Ohio 43986. Phone 740-946-6611. Check their web site at: http://www.steamup.com/aster**

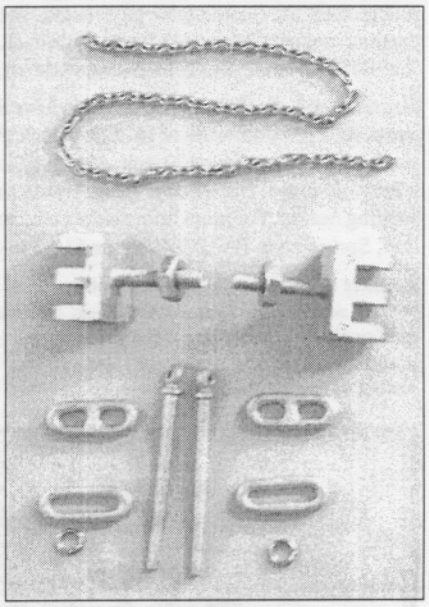




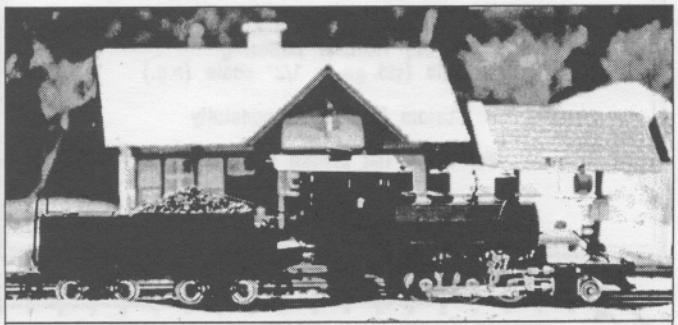
Sulphur Springs Steam Models, PO Box 6165, Chesterfield MO 63006-6165 - phone 314-527-8326 - e-mail: SSSMODELS@AOL.com, now has available Nitrile balls in several sizes. These have proven to seal better and not stick in applications such as safety valves, check (clack) valves, water pumps and so on. SSS Models also has a great deal on double-ended, 4-flute end mills at $1.00 each. Stock up at this price! ALSO....check out SSS Models' new online catalog at: **http://www.steamup.com/sulphur/**

Ozark Miniatures, Dept. RB, PO Box 107, DeSoto MO 63020 - Fax (314) 586-2480 has a whole catalog full of nifty detail castings, kits, and more. Recent additions to their line of 1:20.3 scale items include those pictured here. The photo at left actually contains 3 separate items. On the top row are OM-8120 6" trussrod nbw's (16 per pkg.). The next two rows show OM-12120, 16" Brakewheel w/lock pawl (2 sets per pkg.). The bottom two rows contain OM-4120, 12"Queenposts (8 per pkg.). The photo to the right shows OM-106-2, Coupler, links & pins w/chains. Each pkg. contains all the items shown in this photo. This item is great for those of us who model logging or industrial lines; and backwoods shortlines as well. The pins have an eye at the top, and the pkg. contains a tiny split ring which can be used to attach a length of the included chain to the pin, with the other end attaching to the pilot beam or to the coupler itself. How many pins have you lost because you or someone else turned your loco upside down for a look? I've lost count! This simple setup will take care of that problem forever. When you contact Ozark Miniatures, please tell them that SitG sent you. The good folks at OM have told me that SitG readers don't respond to their ads or buy their stuff, and I know that can't be right!

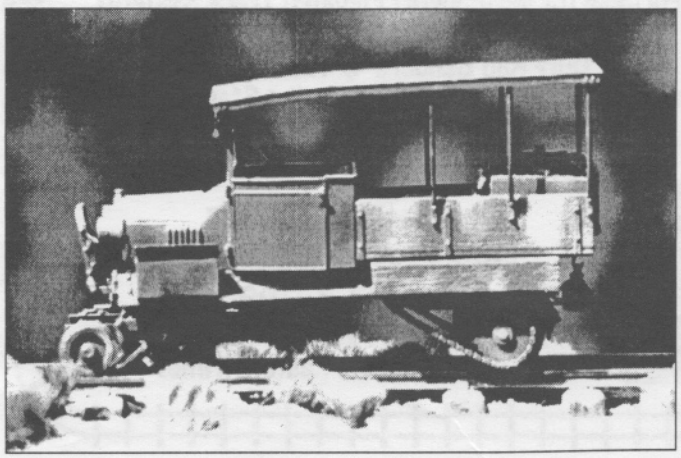




Bayou Ltd. Garden Railways, 107 Easy St., Houma LA 70360 - phone/fax 504-857-9464, announces the availability of plans to convert the Roundhouse 0-6-0 chassis and boiler kits into an American outline, 2-6-2 "Prairie" type locomotive. Price of the plans is $25.00 plus shipping and handling - or free with the purchase of the Roundhouse kits. A list of commercial suppliers for the detail parts, additional materials, etc. is provided with the plans, along with all the technical advice necessary to build the engine. The prototype (see photo) was build using only a small drill press and hand tools. No machine shop necessary!



Bayou Ltd.'s 2-6-2 "Prairie". Owner and photographer, Tom Toth



Snake Ridge Lumber Company, 1 Meadow Court, Bradmere Lane, Docking, Kings Lynn PE31 8NQ, England - phone 011-44-1485-518604, produces some of the most stunning battery powered railbuses, railtrucks and inspection cars in 1:20.3 and 1:24 scale we've ever seen. Graham's models look more like the real thing than the original! The accompanying photo shows just one model in their extensive line. The detail and craftsmanship is absolutely superb, and the running qualities are excellent. Interiors are detailed, the door handles work, brakes work and in some models the windows even roll up and down. I am in awe of Graham's talent and skills, and we love the little Model T Railbus we acquired from him. A word to the wise...all models are built in limited runs, and the value skyrockets once the run is complete.

1998 CALENDAR OF EVENTS

July 5, 1998 - STEAM BOATS ONLY FUN FLOAT RALLY, hosted by Valley Forge Model Ship Society at Gotwalls Pond in Kimberton, PA, off Rt. 113 just outside of Phoenixville, PA. Condensed navigational course set up, but no judging, no prizes - just a good time. Lots of steam talk ensues. Call Ernest Morris at 610-948-8107, or write to him at 82 Spring City Road, Phoenixville, PA 19460.

August 21, 1998 - Chip Rosenblum's track will be the "official" steam track for the LGB National Convention in Columbus, Ohio. Anyone who would like to come and run steam (gauge 1 or gauge O), and help to educate and convert the electric mice guys & gals will be welcome! For more information, contact Chip at 111 North Roosevelt, Columbus OH 43209 - (614) 235-7732 - e-mail: DOCFLAME@worldnet.att.net.

September 4 - 6, 1998 – Pennsylvania Live Steamers Memorial Day Steamup, Rt. 29, 1 mile north of Rt. 113, Rahns, PA. Come and steam with us on our beautiful new Gauge 1 track. Also available - ground level track for 1/2" - 3/4" - 1" and 1-1/2" (7-1/4" gauge) scale trains. Food is available on site, lodging nearby. For more information, contact Harry or Paul Quirk, PO Box 215, Springtown, PA 18081, phone 610-346-8073.

Because of publication lead time, please send info for Calendar of Events well in advance. Include name of host and location of event, with address and/or phone number to contact for complete information. Some basic info about the site is also useful (i.e., ground level or elevated, minimum curve radius, ruling grade, etc.)

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Notes From The Backyard

by Rich Chiodo

Bigger is better...

Off to the side and perhaps a bit behind the curtain has been a bubbling of something new and quite interesting with regard to the scale and gauge wars that periodically erupt in all the hobby press.

A few garden rail hobbyists and several general rail modelers have taken up with and are promoting the scale/gauge combination of 7/8 inches to the foot on gauge one track, thus accurately modeling 2 foot gauge prototypes. The most widely known of these pioneers is Steve King and his exquisite models of the Maine 2-footers. More on Steve later.

In previous musings in these pages I mentioned how the Isle of Shoals Light Railway and Navigation Company has struggled of late to find peace in its overall being. As a live steam line, the basics are well accounted for with broad curves and no grades on a slightly elevated right-of-way. During the last year or so I contemplated changing the line from an out and back (return loop) to a full loop (round 'n' round) plan, based partly on the natterings of those I respect in the hobby.

Well, I returned to my original plan of an out and back concept, not because my expert friends were wrong in their justifications but more because it wasn't what I had in mind. The overall plan did not look like the picture in my mind's eye. And this brings us to 7/8n2.

You see, these friends of mine also chided me about my choice of track, that well known brand that started it all. I have justified its use here and in other venues and still consider it bullet proof, but...

In my mind's eye I also had that light rail, narrow gaugey look of a better than average maintained branch line. The look of my track just wasn't it, even though it performed just fine. What to do?? Here I was with miles of code 332 brass rail, gauge one locomotives, rolling stock, wheel sets and more. Do I pitch it all and start over? Doing so would excommunicate me from parsimonious New England forever.

During these soul searching re-evaluations this 7/8" thing entered my consciousness. What would it do to the track? The fact is that in this bigger scale code 332 rail becomes medium duty 75 pound prototype, not out of the question for a well run 2 foot branch line.

The gauge is spot on 2 feet. The ties? Well, the plastic tie strips would have go. To achieve the look I wanted, something like 5" long ties, 5/8" square, spaced every 1-3/4" seemed right. So I would have to re-lay the line, something I had not planned on, but also something that could be done a bit a time.

Now, the track would be the easy part. I thought the hard part would be motive power and rolling stock....but this proved not so difficult, either. I measured up several of the smaller live steamers in the I of S stable and discovered close relationships to models of small prototypes in the larger scale. A bigger cab, wider drag beams, taller stack and some other identifying details would convert a 1:20 scale model into a 7/8" scale tea kettle. This is kool!!

Rolling stock in this scale, if limited to basics like several house flats and some low side gondolas could be quickly built up using the largest metal G1 aftermarket wheels, some slightly modified axle boxes and other fixings. In 7/8" scale, even the tiniest flat car measures 9" long by 5" wide and has the heft of a very substantial model! Scrap wood run through my table saw made several thousand scale board feet of drag beams, deck boards, sills, etc. Staying with industrial protoypes would fit with my current curve radii and loading gauge...and I really like those crittery things.

Look at the scale more critically with regard to scratch building live steam locomotives you become aware of some distinct advantages. Even the smallest Decauville 3 ton 0-4-0 becomes a sizable locomotive with a respectably sized boiler capable of center flue gas firing. The cab and tank offer lots of room for lubricators, sight glass, pressure gauge, blower and blow down valves, gas tank, Johnson bar, radio control, etc. In other words, all the advantages our ride 'em scale brethren enjoy, but on a locomotive no bigger than a bread box.

Frame and plate work are substantial and decidedly unfiddly, and the fasteners can be those you can actually see (for those of us in the bifocal crowd). A while back the Steamlines Aileen ventured in this direction. Perhaps it was ahead of its time.

The "Deuce" is my first locomotive in 7/8n2 on Gauge 1 track. It is a radically converted Berkeley Locomotive Works geared 0-4-0, the "Cricket". I won't bore you with the laundry list of modifications. Suffice to say that the boiler, burner, engine and running gear were left functionally untouched. Everything else was shopped.

The engine driver, G. Ennis Plammer, whose motto is, "Every day is Monday", adds a certain charm and scale reference (he is over 5" tall).

All this feels pretty comfortable. More of my Garden Railroad goals are being met. Less compromise is inherent in what I do and the Isle of Shoals is looking more like what I had in my mind's eye.

For more information, Steve King is publishing a newsletter for 7/8" scalers. Its focus is on the Maine 2 foot lines, but the information and reference materials noted, as well as the usual moral support, make it worthwhile reading regardless of your prototype interests.

Additionally, several well known suppliers of detail parts are beginning some offerings in this scale.

Contact me through SitG if you want to learn more about 7/8n2.

Casting About

by E. V. Rutkowski
drawings and photos by the Author

Chapter II - Getting Started

When I had assembled the makings of a home foundry in my garage I began to think seriously about where to actually do my casting. Commercial foundries have fume hoods, sand pits, molding tables and so forth but none of these were very practical, or possible, in my garage where I had to park a car, stow the lawnmower and garden furniture and put my lathe and other machine tools. The last thing I needed was spilling molten metal in the garage and having the whole thing go up in flames. After some thought I conceived the idea of a moveable foundry.

After doodling with a few concepts, I arrived at my final design for the moveable foundry, shown in a drawing, Figure 1 and a photograph, Figure 2. It is basically a sandbox on wheels made from 2x6's, with a plywood bottom. At one end of this box is a platform of firebrick, which forms the base for the furnace and its blower. This platform has a firebrick wall along the wood frame and is open to the foundry sand bed along the other edge. This sand bed used more than half of a 100# sack of sand.

The dimensions I have shown are not critical and should be adapted to accommodate the available furnace and its blower, if one is used. I wouldn't recommend enlarging the dimensions too much since the unit is fairly heavy as it is. I cut the 1x6 sides to the length shown and used large, hex head wood screws to join them, forming the basic frame. I had a piece of 1/4" thick plywood which I used for the bottom of the box. Anticipating the weight of the sand, I put two 2x2 cross members across the bottom panel for extra strength. After the basic box was constructed I gave it several coats of enamel to protect it from dampness.

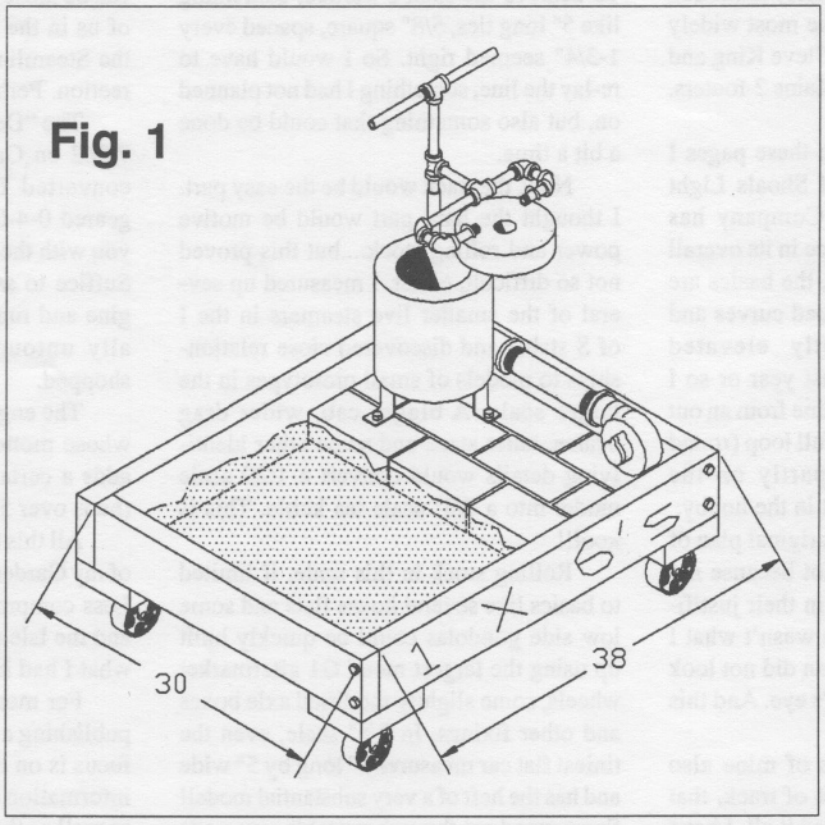


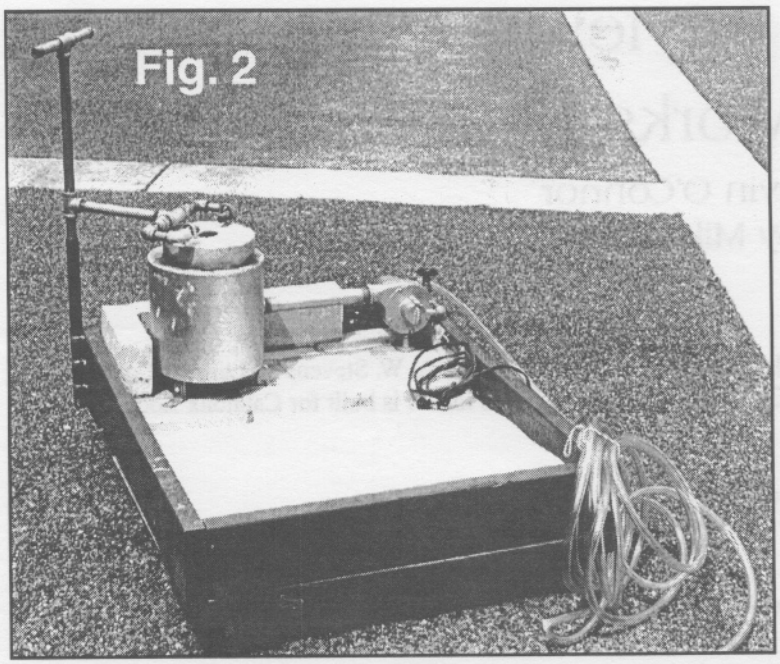
Fig. 1

At each corner I nailed 6" squares of 1x6 to provide mounting pads for the wheels. Originally I used what were advertised as 6" diameter "industrial" casters with rubber wheels. That proved to be a poor choice. When the cart was fully loaded with sand, bricks, furnace and blower, the weight was great enough to collapse the rubber wheel walls. I replaced them with steel-wheeled casters which work just fine.

After making the basic box I added the firebricks, using furnace mortar at the joints. These bricks could have been placed using only sand between the joints just as well. Just make sure there are no open crevices into which any spilled molten metal could flow and set fire to the wooden bottom. The furnace and blower were mounted on the firebricks using screws and lead screw anchors.

The lid for my furnace had a couple of inverted "J" shaped lugs for lifting. I took a page out of Dave Gingery's furnace description and designed a handle for lifting the hot lid and swinging it out of the way. This apparatus is shown in the photograph, Figures 3. It is put together from 1/2" pipe and pipe fittings screwed together to form the lifting parts, and the shaft which slides up and down in a larger pipe attached to the wooden frame. The lengths of pipe were selected so that the lid can be raised and swung aside to get access to the furnace interior.

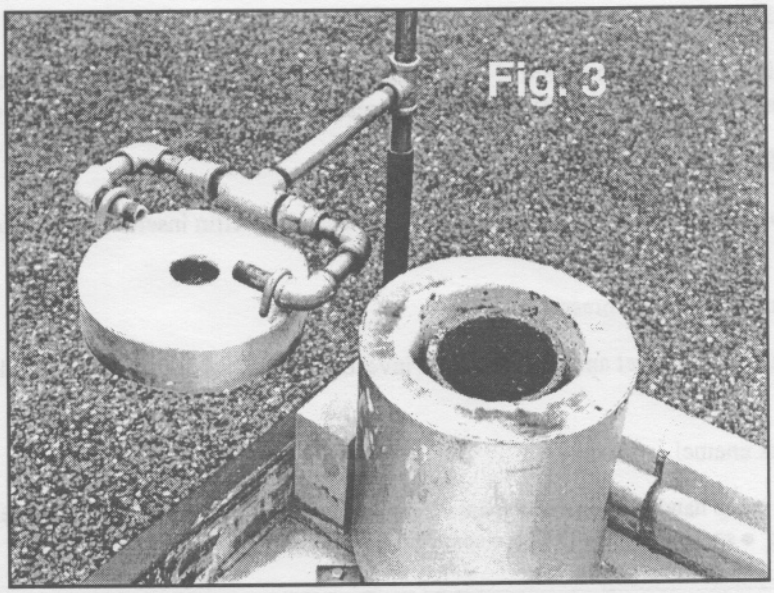
In order to be able to roll my foundry

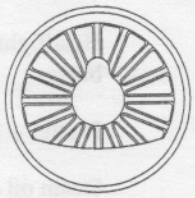


size, also proved very useful when melting down scrap metals to make up a stockpile of metal for later castings.

During all this activity I was also searching for alternative sources for foundry supplies and bronze for the drivers, and eventually, for the cylinders. Looking up foundry supplies in the Yellow Pages of the phone book I found a supplier that was only a few miles from my home. I went to the supplier with some trepidation. They had told me on the phone that they were a major supplier of foundry equipment, metals and sand to several large manufacturers in the area, including the Boeing Aircraft Company. I felt that it was unlikely that my puny needs would get much attention. I couldn't have been more wrong! When I explained what I was doing and why I needed foundry supplies they took a great interest in my hobby and one of the managers walked me through their facility, explaining the different sands that were available in small (50 lb.) quantities, the different casting metals available and the tools they carried. I left with 100 pounds of fine molding sand and a 25 pound ingot of virgin bronze. Incidentally, I was surprised to discover that the ingot bronze, which came with a certificate of composition, cost less per pound than the scrap bronze I had previously purchased.

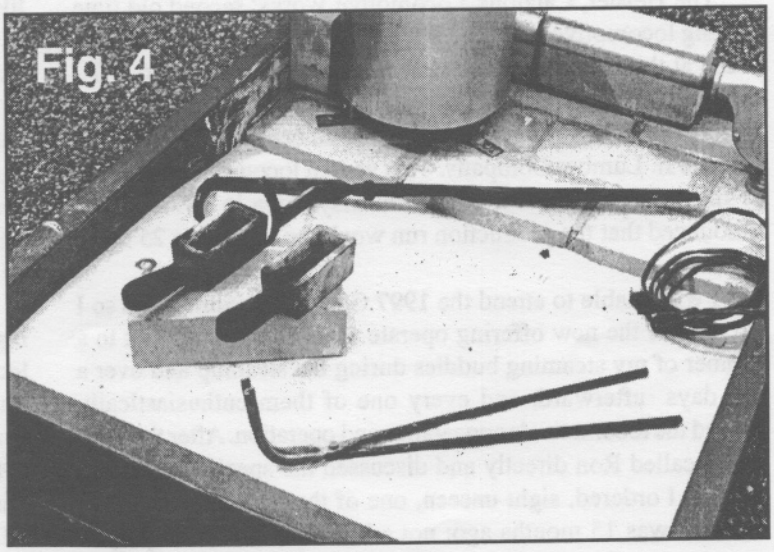
Having gathered all the equipment and material I needed, and having read books on casting, my next move was to actually do something.





out of the garage and use it I had to provide gas to the furnace and electricity to the blower. In Figure 1 you saw my solution; an extension cord for electricity and a long flexible, plastic tube to extend the household gas supply to the driveway. When extending the gas line care should be taken to use an installation which is safe both when in use and when not being used. What I did was added a tee joint in my gas heater line with an additional gas valve for the furnace supply. Downstream of this valve I used a short length of threaded pipe which was a tight fit for the plastic tubing. In use, I slide the plastic tube over the pipe end and clamp it in place using a screw type tube clamp. When not in use, the gas valve is off and the end of the pipe stub is covered with a threaded pipe cap to provide a double seal.

Figure 4 shows some of the other equipment I gathered together for my foundry work. Shown are two different kinds of crucible tongs and a pair of ingot molds. I purchased three of the ingot molds from a jewelers equipment supply house. Their primary purpose is to provide a place to dump excess molten metal after a casting has been poured. These ingot molds, which produce ingots about 1x1x3 inches in



Loco Review – Catatonk Loco Works 14-ton Heisler

by Kevin O'Connor
photo by Mike Chaney

Specifications

The Catatonk Heisler is a model of a 14-ton, 2-truck, 2-cylinder Heisler locomotive, based on A. W. Stevens Jr. Lumber Co. № 1, a 3-foot narrow gauge locomotive built in 1896 by Stearns Mfg. Co., Erie, Pennsylvania. This model is built for Catatonk Loco Works by Mike Chaney.

Scale: 1:20.3 (correct scale for representing 3 foot narrow gauge on gauge 1 track).

Minimum Radius: 48" (will negotiate LGB 1600 curves)

Cylinders: 10mm bore x 14mm stroke, O-ring seals, brass crossheads.

Crankshaft: 1/8" dia. main journals, single-throw.

Valves: Slide valves actuated by Stephenson valve gear.

Boiler: "T" configuration. Single flue, gas fired. Fitted with gauge glass, safety valve, regulator & pressure gauge. All copper, silver soldered, hydro-tested to 120 psi, working pressure 60 psi. Safety valve set to 50-60 psi.

Frame: Brass sections, link & pin couplers, steps.

Trucks: Plated mild steel & brass sections, 3/16" dia. axles, cast iron wheels (Delrin inserts on one side), 3:1 gears, universal joints.

Bodywork: Cab, roof and bunker are all etched brass sheet.

Fittings: Headlights, dome, bell, steam turret and whistle are all investment castings in brass. The builder's plate is etched brass.

Finish: Primer + 2 coats black enamel.

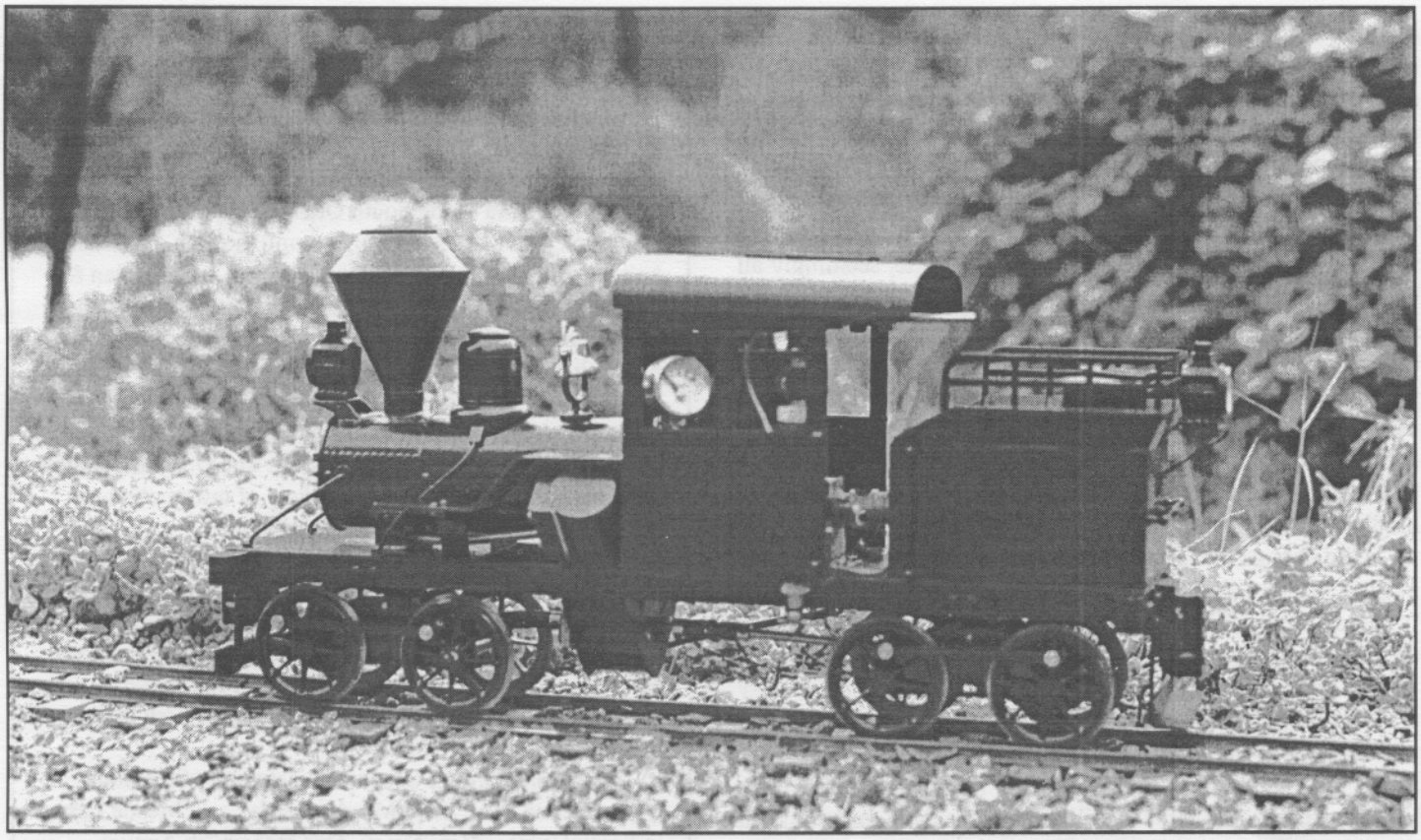
Spares: Steam oil ● combined pump handle/valve key ● spare #6 gas jet ● spare Ronson filler valve ● spare lubricator O-rings ● spare throttle O-ring ● spare gas valve O-ring ● spare gauge glass and four O-rings.

The Heisler, Catatonk Locomotive Works' second old time logging locomotive in 1:20.3 scale, for gauge 1 track, was introduced at the National Gauge 1 Steamup in Diamondhead, Mississippi in January, 1997. The prototype chosen to model was a 14-ton, three foot gauge Heisler that was operated by the A.W. Stevens Jr. Lumber Company. This geared locomotive was built by the Stearns Mfg. Co. of Erie Pennsylvania in 1896. It was announced that the production run would be limited to 25 models.

I was unable to attend the 1997 Gauge 1 Steamup, and so I did not see the new offering operate at its debut. I did talk to a number of my steaming buddies during the steamup and over a few days afterward, and every one of them enthusiastically praised the locomotive's appearance and operation. After the steamup I called Ron directly and discussed the specifications and pricing. I ordered, sight unseen, one of the last in the series of 25. That was 15 months ago; not a bad lead time for a project like this.

UPS delivered the Heisler in perfect shape, as it was superbly packed in bubble wrap and surrounded by foam peanuts in its own smaller box inside a larger box also filled with foam peanuts; kind of like the belt and suspenders approach to packaging. The only problem was chasing all those static charged peanuts around the kitchen floor! This attention to detail is a telltale of the concern that Catatonk Locomotive Works has for its product and ultimately for the customer.

I need to confess right up front that I studied the enclosed instruction manual before I did any more than admire the new locomotive (I also get out of the car to ask instructions the instant that I feel that I am lost). To my mind this is a beneficial characteristic that pays dividends down the road. I remember a 1989 Frank S. locomotive review that was published in the English modeling press in which the author was ready to put steam oil into the gunk tank that is contained in the Frank S. smokebox



(that is where a number of English model locomotives hide their lubricator tanks due to their more streamlined appearance and general lack of exterior equipment). An acquittance of his, aiding in the steamup process, called his attention to an "air tank" with a screw on cap on the left side of the locomotive. They retreated to the LGB instruction sheet and discovered that if they had followed their innate practice they would have test run the locomotive with dry piston valves and piston rings! Instructions are a good thing, are not anti-macho in their intent and should be followed until such time that local practice indicates that they be changed.

Mercifully, Ron is an accomplished writer and he practices brevity. As a result, the Heisler's instruction book is brief and to the point. A very nice feature of the instruction book is that the original owner's name is is inscribed in the inside, on page two, along with the works number and the month and year of manufacture; an elegant touch.

If one follows the instructions to the letter, for at least the first few runs, no problems of any kind should be encountered in getting into steam and having successful runs. There are two portions of the instructions that I purposely modified to my own prejudice. One is "Clearing the Cylinders...". During the steam raising process I normally block my locomotives up, with the wheels off the track, until they self-clear their cylinders of condensate. During this process of condensate clearing I do not exercise the reversing lever, but depend on leaking steam to heat the cylinder mass until the wheels start to turn in one direction or the other. This gentle approach precludes any damage to the motion, and does not strain the non-moving parts nor loosen the cylinder attaching bolts. Since the Heisler cannot be blocked up due to tbe danger of damage to tbe line shafting and universal joints, I elected to let boiler pressure build while reducing the burner flame to prevent lifting the safety valve; I did not cycle the reversing lever nor did I "rock" the locomotive. In fact I did not touch it, but rather let it take its own time in coming up to temperature.

In about six minutes, at 30 to 40 psi, the cylinders and steam lines were sufficiently heated that the locomotive made one or two jerks forward and then proceeded to run down the track at a high rate of speed. I had opened the throttle a bit too much as I waited for the locomotive to heat up. Here is the caution to this method of clearing cylinders. One has to pay close attention to the Heisler as it heats in order to prevent a runaway locomotive, because when it jerks once or twice, the next move will be a run down the siding toward the mainline.

The second thing was to immediately service the lubricator. Just to be on the safe side I scavenged it out using one of those slender, disposable, plastic pipettes that are now available from Bob Paule at Sulphur Springs Steam Models. They are a grand idea and work well. With a little skill one can tell when they are sucking up water and then oil. When you get to the oil, remove the pipette, leaving the existing oil in the lubricator, and top off the container with new oil. Easy and clean. I store my pipettes (being frugal is not only a Scots trait; all Celts have a common ancestral survival mentality) in two holes, one each for the smaller and larger pipettes, step drilled in the top of a quart plastic ice cream container. The holes are sized to support the major diameter of the pipette so that they can drain between uses, and to prevent the ends from becoming icky from resting on the bottom of the container.

Once the Heisler has cleared its cylinders and starts its circuit of the track, the rest is pure poetry in motion. My locomo-

tive ran flawlessly right out of the boxes. Initially, while I was awaiting delivery, I was thinking that the Heisler might be a visually boring locomotive since the major portion of its power and valve motions are occluded by their 90° orientation and position under the boiler; kind of like the left side of a Shay or both sides of a diesel. Definitely not true!!! The Schwinn-type spoked wheels and connecting rods display a visual variety that is truly stunning, and that darn near Victorian silhouette, seemingly all bustle, cinched middle, and, well you know, er, ah, big hands! It really is a show stopper! The darn thing absolutely prances around the track and reminds me of a Tennessee Walking Horse in competition. This Heisler, unlike the more modern ones built in the thirties that resembled a Frigidaire, or maybe a modern Volvo, has unlimited pizzazz and plenty of sex appeal. Suffice it to say that I have fallen in love with my Catatonk Heisler and I can hardly wait to personalize it.

I did change the Heisler's outline somewhat by twisting and pulling off the diamond stack and replacing it with a stock "Cricket" straight stack with a homemade spark arrestor fitted to the top. It looks just different enough to make it one of a kind.

To temper the orgy of adulation just expressed I must say that there are a few, just a few, things that I am not so fond of with respect to the Heisler. All of them are predictable as they afflict the vast majority of small scale live steamers. The two biggies to my mind are the inabilities to dial in both throttle steam and butane fuel flow rates. Both control valves have nonexistant modulations. The biggest offender is the throttle valve which is impossible to set for a slow speed run without a couple of loaded cars behind. The butane valve is tough to throttle down and inattention to its minimum setting will lead to short runs as the butane tank is on the small capacity side of the equation. Both shortcomings can be rectified and will be the subject of a future "how to" article.

The lower ball check in the bunker boiler feed pump did not seal perfectly and so boiler water, under steam pressure, leaked back into the bunker. In a way this was a partly desirable defect insofar that this leakage of hot water back into the water bath surrounding the butane tank made up for the heat taken from the water as the butane boiled off, and served to keep butane pressure up. The safety valve constantly weeped steam, but operated flawlessly at about 40 to 45 psi. Actually the slight weep on a humid day sort of adds to the locomotive's character.

All in all I absolutely loved my Catatonk Heisler right out of the box. My relationship with it started off sight unseen. Like an arranged marriage where all you know is the general arrangement of the components but not the proportions, packaging, or performance characteristics. You have no idea of the chemistry nor the temperament. My prediction is that this locomotive will please all its present owners for some time to come, and that it will become a hot item in the secondary market. I was so pleased with my example, and Mike Chaney's craftsmanship, that I have just ordered the 24-ton, 2-cylinder Shay that Mike is producing for Catatonk Locomotive Works. I'm counting on taking advantage of a sister act, so to speak.

Model Steamboaters Association Forming

This is to all model steamboaters in North America. Two model steamboaters on the East Coast, Ernest Morris of the Valley Forge Model Ship Society in Pennsylvania and Charlie Roth of the South Orange Seaport Society in New Jersey, have been kicking around the idea of a loose knit model steamboaters association as an organization for the exchange of ideas and information, with some scheduled steamboat meets throughout the year in various parts of North America.

We have been in contact with an association in the U.K., which was the first of this nature. No formality, as boaters are far flung, even in the U.K. The U.K. association has periodic meets and share a variety of information on steamboats through a quarterly newsletter.

If you feel you would like to be a part of this type of association, please drop one of us a note or a phone call, giving us your name, address and phone number.

With this type of organization there would be no need for a formal organization, with officers or insurance. A postcard, phone call or letter is all we ask for now to get this started.

The South Orange Seaport Society has a Steamboat Only meet on June 7th at Meadowlands Park, Meade Lake, in South Orange, New Jersey. This is their 7th Annual running of this event.

The Valley Forge Model Ship Society has scheduled their Steamboats Only meet for July 5th at Gotwalls Pond in Kimberton, Pennsylvania, just outside of Phoenixville. This will be the 3rd Annual running of this event. We are a small group, but we hope to get bigger as our lake is dredged and deepened.

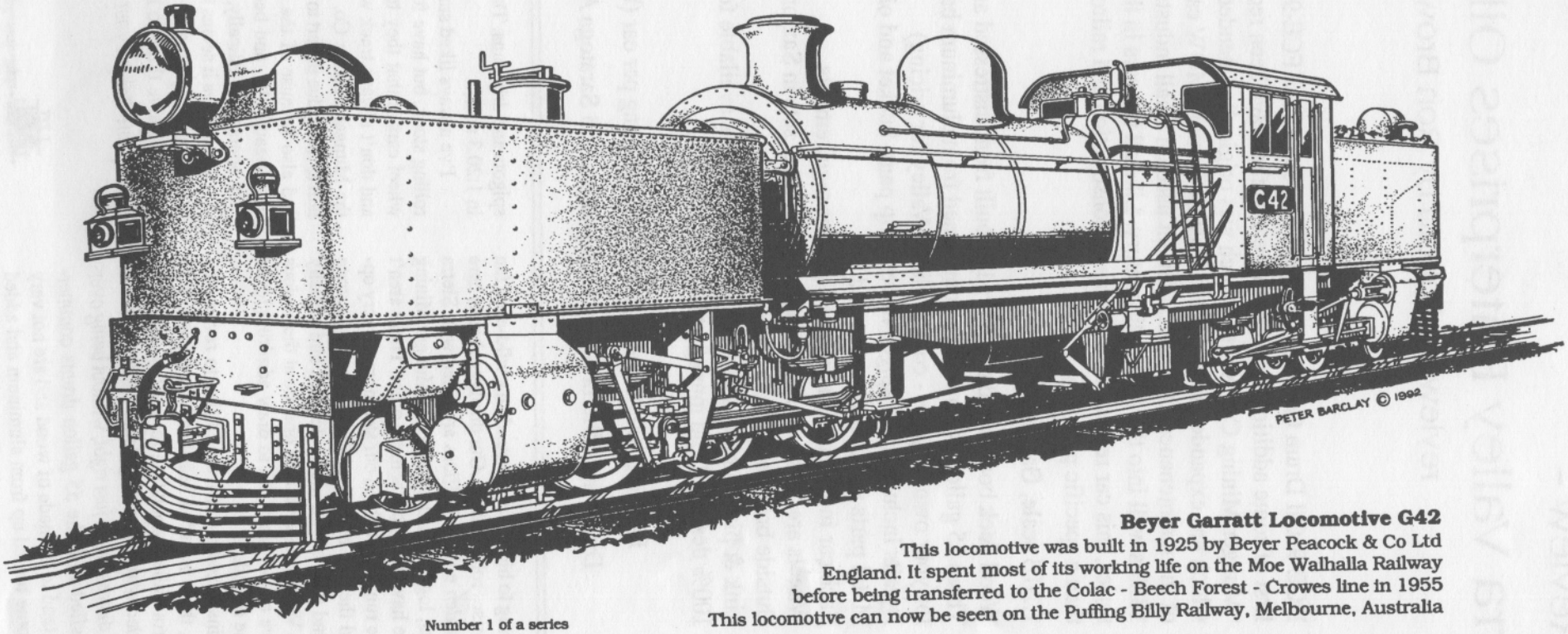
Both Societies have tables available, and lodging nearby. The lake at South Orange has been refurbished and there are lovely high trees for shade and a nice meeting place.

We hope to hear from many of you!

Ernest Morris
929 Spring City Rd.
Phoenixville, PA 19460
610-948-8107

Charlie Roth
212 Rt. 513
Glen Gardner, NJ 07726
908-638-8341

Peter's Page



Number 1 of a series

Beyer Garratt Locomotive G42

This locomotive was built in 1925 by Beyer Peacock & Co Ltd England. It spent most of its working life on the Moe Walhalla Railway before being transferred to the Colac - Beech Forest - Crowes line in 1955 This locomotive can now be seen on the Puffing Billy Railway, Melbourne, Australia

Product Review –

Sierra Valley Enterprises Oil Drum Car

review and photo by Ron Brown

Specifications

Description: DCE-9' Oil Drum Car #M5. This car is based on the FCE-9' wooden flat car #M-1. It is the first of some additional maintenance cars that have been requested by collectors of the "Munger Mining Co." series, which was originally intended to have only five cars, but which has expanded to include at least three more MOW cars. The oil drum car is typical of the maintenance-of-way equipment used on small industrial railroads from the early 1880's well into the twentieth century. Like all the cars in the "Munger Mining Co." series, this car represents the general construction and railroad practices of the day, rather than a specific prototype.

Scale/Gauge: 1:20.3 scale, Gauge 1

Features:
Wood deck boards and drum cradles built from distressed and weathered mahogany
Three 55 gallon oil drums custom turned from aluminum bar stock (available separately for your own projects - contact Sierra Valley for pricing)
Details include drum spigot valves, drip pans, bucket and oil can
Metal parts weathered and rusted
Each car individually numbered to your requirements
Wheels are Sierra Valley 20" dia. metal wheel sets in Saxton Car & Foundry sprung journals
Outside brake beams and shoes included
Link & pin couplers standard, modified Kadee's available for an additional charge of $5.00
100% designed and manufactured in the U.S.A.

Price: R-T-R $100.00 each, plus $10.00 shipping per car (UPS surface)

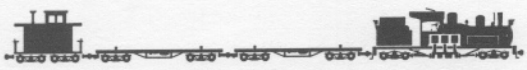
Available from: Direct from Sierra Valley Enterprises, 2755 Saratoga Ave., Merced, CA 95340

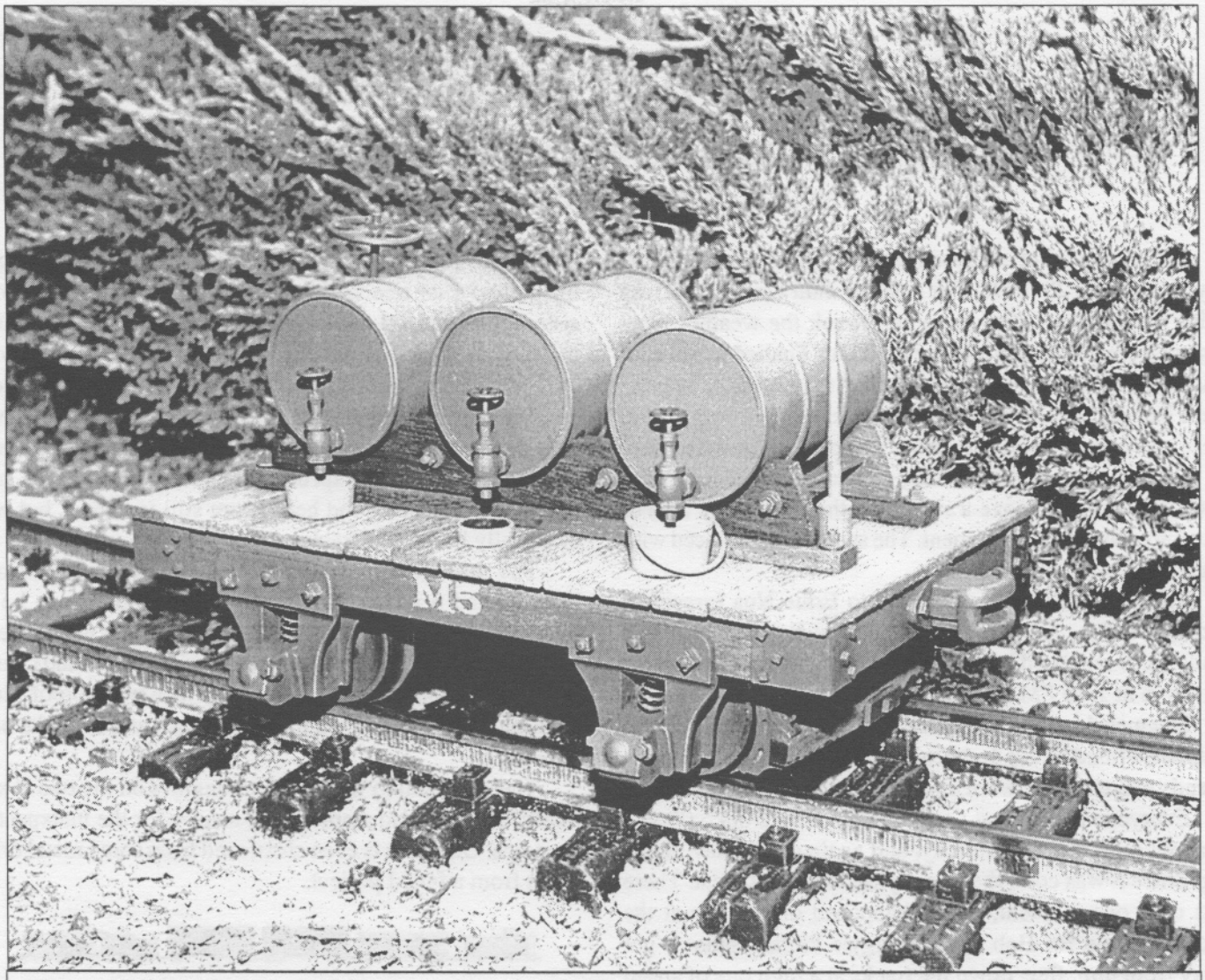
There's no use trying to hide it from you...I'm a wild-eyed fan of Sierra Valley Enterprises rolling stock. Our display cabinets here at the *Steam in the Garden* editorial offices are filled with Sierra Valley flatcars, boxcars, log cars and a variety of Munger Mining Co. series cars, and we have more of them on order. These aren't just hangar queens...we run them behind our steamers at every opportunity. We've found them to be extremely well built, accurate 1;20.3 scale models, and they are all nicely detailed and visually interesting. The Sierra Valley trains that we operate at the various steamups and shows we attend never fail to draw admiring looks and comments from the attendees.

When Gary Watkins asked me if I would like to review the DCE-9' Oil Drum Car, there wasn't a heartbeat's hesitation. This car lives up to the Sierra Valley reputation for quality, detail and visual interest. It's loaded with interesting detail castings, and the tasteful weathering and distressing is just right, without being overdone. Gary wasn't satisfied with the 55 gallon drums commercially available, as they tend to be made of wood and are not very convincing, so he had some turned up from aluminum and added spigots and drip pans. The effect is perfect....a slice of railroading in 1:20.3 scale.

I've always liked small industrial and backwoodsy locos and rolling stock, but have found that a big drawback to the small 4-wheel cars is that they tend to be light, and they bounce around and don't always track well. This definitely isn't a problem with the Munger Mining Co. series cars. These little cars have some heft to them, due in part to the use of Sierra Valley's metal wheelsets, and also because of the many detail castings on each car. They track beautifully, and because a train of them has some weight, they operate realistically, without the toy-train bounce and jitter.

These days it seems to be required to find something negative to say about any product being reviewed. Sorry, but I can't find a single negative thing to report about the Sierra Valley Oil Drum Car. Try one behind your favorite small loco and see for yourself!





Sierra Valley's DCE-9' Oil Drum Car #M5, another winner in the Munger Mining Co. series of small, 4-wheel industrial rolling stock.

Steam and Gold Spikes

on the Garden Central RR

text and photos by Ernie Noa

There were a lot of tense moments leading up to Saturday, September 20, 1997. The weather didn't look like it was going to cooperate. For the whole week the weather forecasters were predicting rain for Saturday. I called to see who was coming, and to recommend that they bring rain gear, and I had put up two canopies just in case. As it turned out, there was no rain and the weather was perfect for a steamup.

Some problems showed up, which is normal for a new track. We had to remove a switch on the dual gauge area to accommodate some equipment. The switch was replaced with straight rails for running.

The gold spike was presented to Ernie Noa (president and CEO of the Garden Central RR) by Bob Paule. It was made from real gold by Amos Harting. The gold spike was driven in at 1:15 PM on September 20, 1997.

Steamers in attendance were: Bob and Carol Paule, Erwin Mueller, Friend Bruce and Ernie Noa. Several non-steaming friends and relatives were also on hand for the occasion.

Everyone had a great time! We ran trains from 6:00 AM to about 6:30 PM on Saturday, and again on Sunday morning. Since it was cool, the steam plumes looked great. There was only one incident, which happened on Sunday at the end of the run for Bob Paule's Argyle Philadelphia. It got away from him, flew down the tracks at a high rate of speed and left the rails at the highest point of the track, crashing to the ground after ricocheting off the fence. The damage consisted of a bent rod and many small parts scattered around the yard. We repaired the engine and got it going again with only few broken cosmetic parts to show for the experience.

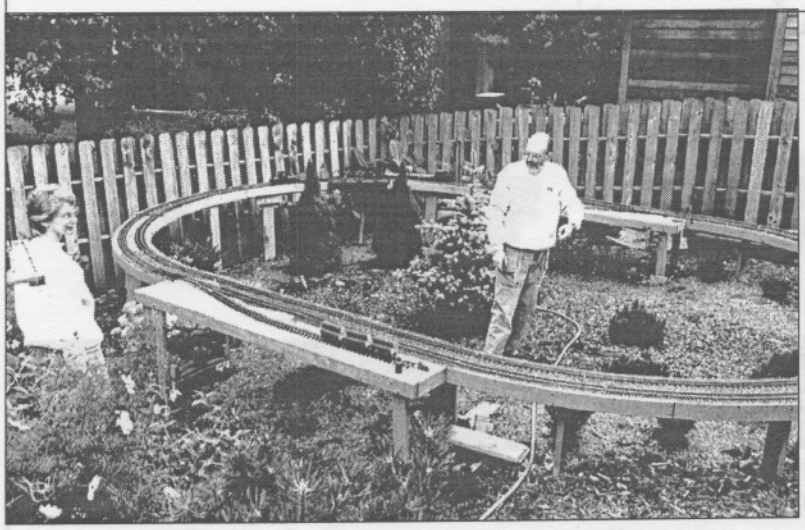
Our new track is elevated 3.5 feet high on one end, and only a foot off the ground on the other end. There are many trees, including blue spruce, dwarf Alberta spruce and pinemugs. The boxwood hedges are still too short, but will eventually border the track.

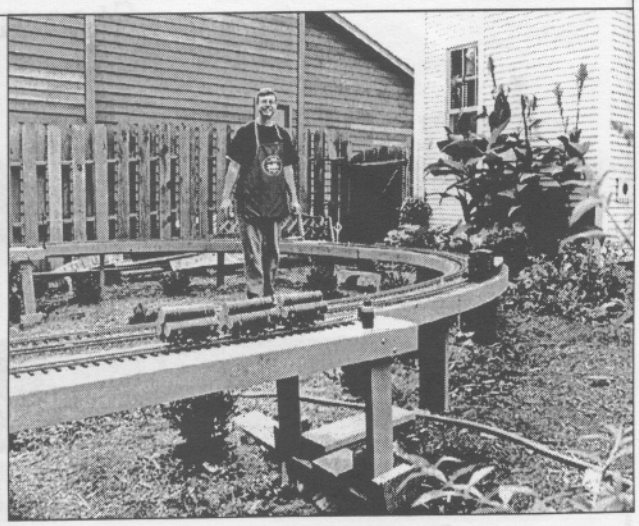
The main line is paralleled with a dual gauge branch line, located 6 inches on center so two engines can be in operation at the same time. The gauge on the main line is Gauge 1, and the dual gauge branch line is Gauge 1 and Gauge 0. Ballast is applied and glued down with waterproof glue. Minimum radius is 7.5' on the inside track and 8' on the outside track.

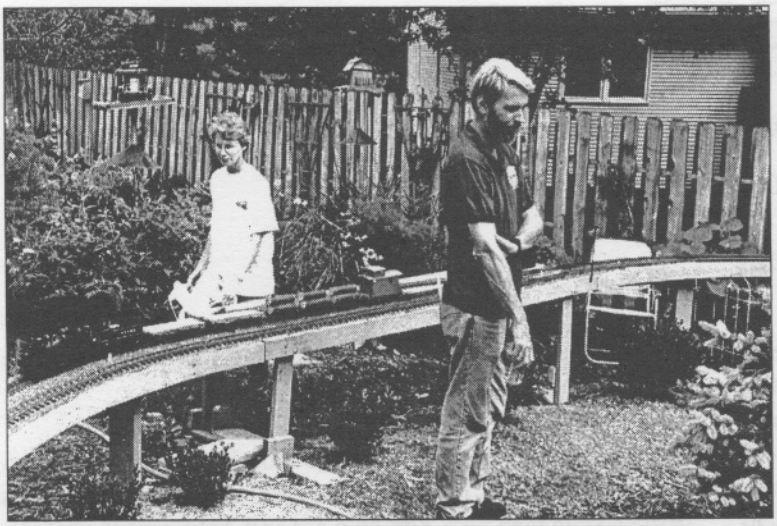
There is room to work on four engines on the two 8' x 2' tables. There is also ample water nearby for the unexpected flare-ups. One table is even christened from some metal drippings from a failed project.

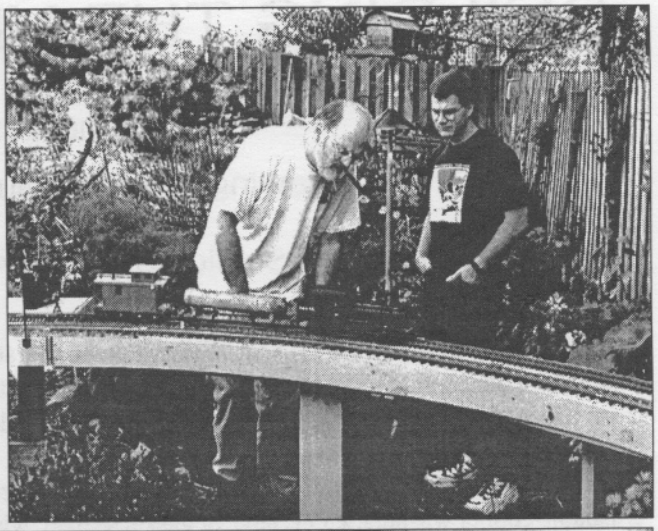
Below, left: Bob and Carol Paule look over Ernie Noa's new elevated track

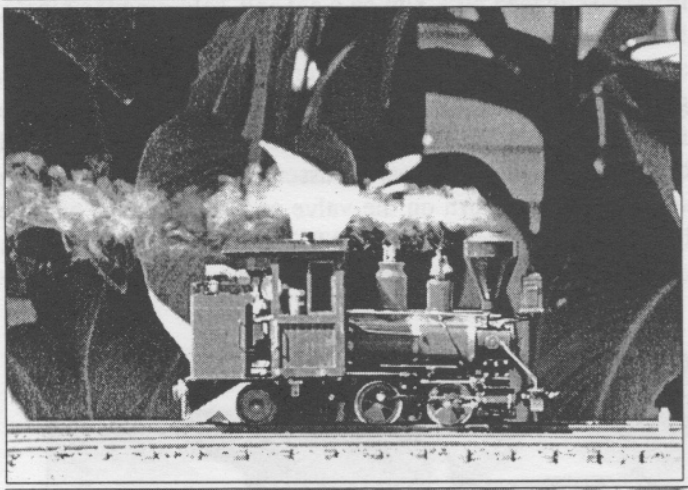
Below, right: First run of the morning produces a nice steam plume for Ernie

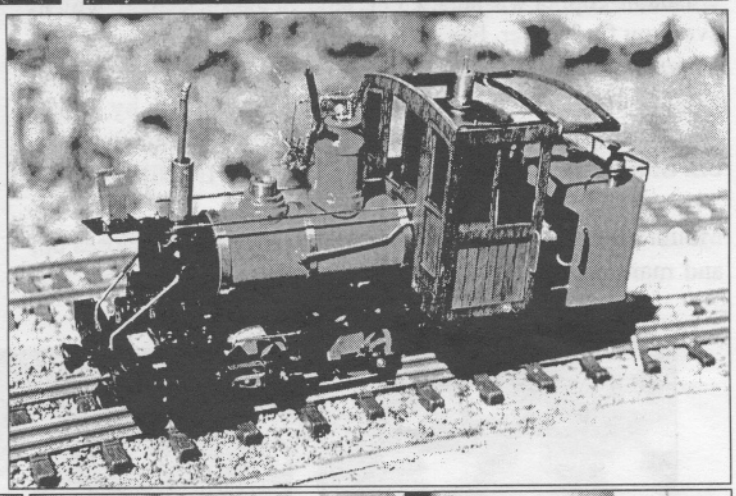


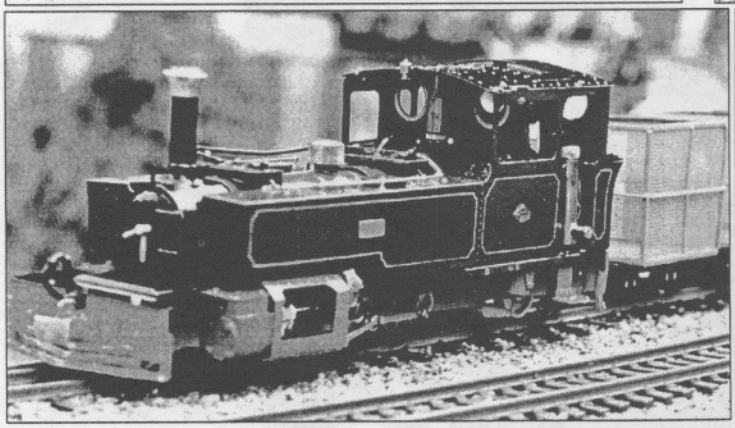


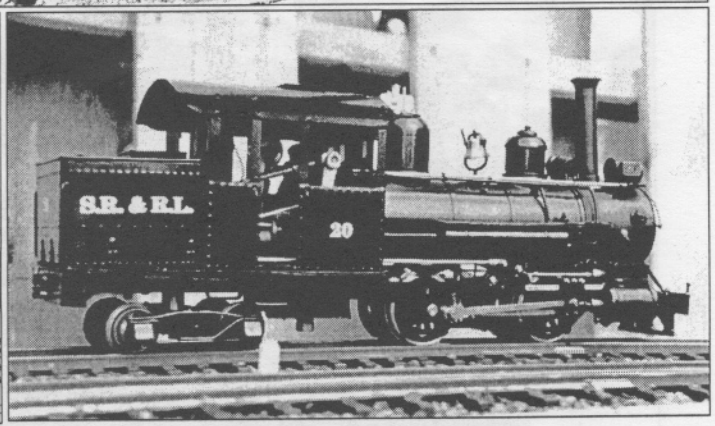












Top left: Carol Paule keeps a close eye on her train, powered by an Aster Western Maryland Shay, while Erwin Mueller admires one of the Noa's blue spruces.

Top right: Bob Paule and Brady Mann with an Argyle Forney.

Center left: Bob's Argyle Philadephia rolls along light engine before the Great Train Wreck.

Center right: Philadelphia after the wreck, with the stack, sand dome and light missing and debris still clinging to the steam dome.

Bottom left: Erwin Mueller's Roundhouse TAW at the head of a cane train.

Bottom right: Bob Paule's Argyle Sandy River & Rangely Lakes Forney.

BUILDING THE VEST POCKET CLIMAX

text and photos by Mel Ridley

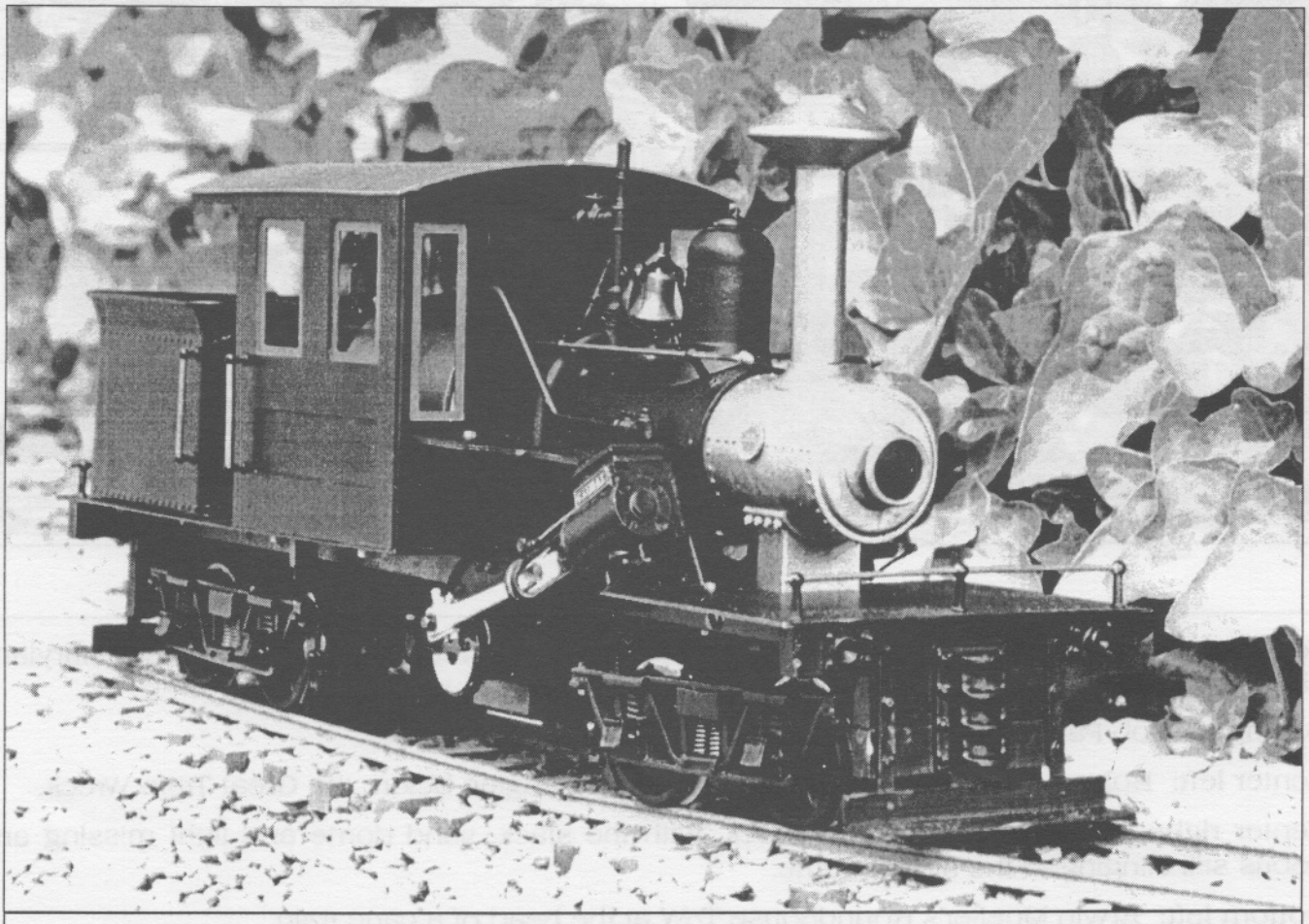
drawings from the author's sketches by Harry Wade

Initial Steam Test and Section 8 - Platework

7:7. INITIAL STEAM TEST ASSEMBLY: For the first steam test, we are only going to 'jury-rig' the gas supply. Whilst this is in effect 'doubling the hill', it will save a total strip down later on in the event of any problems arising now. We can refit the boiler fittings using traditional methods - i.e. fibre or crushable copper washers, PTFE tape, or gasket sealant, whichever you find easier. For the gauge glass, measure the distance between the two glands without nuts and seals and allow about another 1/16" or 3/32". The tube is best cut to size by lightly scoring one edge with a knife-edge Swiss file and snapping off. Slip on the nuts and tighten up USING FINGERS ONLY.

Mount the lubricator and screw in the valve until it closes up, and mark a position on the body just forward of centre. Remove, drill through 1/16" and solder in a 1/2" long pin as the condensate drain lever.

Locate the gas control valve in the footplate and fit the securing nut underneath. Following Drg. 7:7. make three 90° bends in the nozzle feed pipe, slip on a nut and, soldering the nipple, fit in position. Nip up the nozzle screw to hold it in place. Wind a half turn of the gas tank lead around the tank and with a gentle bend so it sits roughly in its allocated position on the footplate, secure it to the control valve. Inject a tiny shot of butane into the tank and test the assembly for leaks around the seal and unions. Turn on the valve and listen for an audible hiss from the burner jet. DO NOT light up at this stage. If you can't hear a hiss, strip out the nozzle and eyeball it against the



Completed Vest Pocket Climax locomotive, built and photographed by the Author.

light. The hole is only about .006" in diameter and can easily get blocked with foreign bodies. Clean it out, using air or a fine jewellers broach.

Having connected the superheater to the cylinders, slide the smokebox into position around the boiler flange and secure the stretcher screws. Invert the assembly and, securing the trucks with spacer washers and split pins, link up the universals.

7:8. FIRING THE CLIMAX: Fill the boiler until the water registers just under the top nut on the gauge glass and top off the butane tank. Turn on the gas valve about a quarter turn and ignite either by way of the stack top or underneath the rear of the smokebox. If for any reason the flame doesn't pop back onto the burner, gradually turn down the gas supply. When ignited, turn up the gas to about half or three quarters of a turn.

During steam-raising, fill the lubricator with steam oil to just below the cross tube, and lightly lubricate all the moving parts. You can reach the gearbox interior from above, and the journals between the spokes with a slim spout oilcan.

Operating pressure of 60psi will be reached in about 5 or 6 minutes. Move the flycranks half a turn forwards and gently open the throttle. Boiling water and steam will issue from the stack top initially so keep your eyes well clear. Nudge the loco along, and within a few seconds, having brought the cylinders up to working temperature, the priming and condensate will clear, so open up the throttle and you should hear a nice staccato exhaust as she starts working. Turn off the steam, move the flycranks back half a turn, and open the throttle again for reverse. As the loco beds in, the reversing process becomes a lot easier and will require a simple flip for either direction.

To check the timing, restrain the loco under steam and listen for the individual exhaust beats. They should be clear and evenly spaced. If the timing is out, check the procedure as outlined in Section 6:8 on CYLINDERS, as thermal expansion may cause slight misalignment of the valve setting.

7:9. GUIDANCE NOTES: The boiler has a maximum capacity of 200ml of water and the gas supply is designed to run out before the water on one filling. The boiler can be topped up at any time during running. **IMPORTANT:** Ensure the burner flame is totally extinguished before refilling the butane gas tank at all times.

In everyday running, it is not necessary to maintain the water level above the flame tube WHILST IN STEAM, unlike a conventional crown firebox. However, turn off the gas before the pressure shows zero or, when firing from cold, that the water level is always above the top of the flame tube.

Drain down the lubricator after every run. If you also want to remove the remaining steam oil, blow down by gently opening the throttle. Drain the boiler during very cold or freezing weather.

After each run, check for loose nuts and bolts which may have slackened off, and lubricate all moving parts.

In the next section, we will build the cab and bunker assembly, finishing off with the running boards and exterior boiler detail to complete our Climax.

COLD WEATHER RUNNING: If you experience cold weather conditions at this stage, you may have problems with the gas tank freezing up and so reducing pressure to the jet. When the loco is fully assembled, heat from the boiler radiates through the footplate and bunker to the tank. When we come to the relevant section, an additional insurance for freezing conditions is to make a simple water jacket surround for the fuel tank, and this is covered in the text.

8:0. PLATEWORK & DETAILS: For those wishing to construct the Cab and Bunker from scratch, the material is 20swg (.036") brass (etch quality Cz108) and all can be made, including the running boards and cab roof bracket, from an A3 sheet, size 16.1/2" x 11.3/4". The cab roof requires an extra piece - size 4.3/8" x 4.1/8". Guidelines together with drawings are contained in the text. However, a full set of pre-machined and etched parts is available for the fainthearted.

MATERIALS REQUIRED: Brass sheet or set of etchings. Set of castings comprising Sand Dome, Rear Sand Box, Steam Turret, Throttle Connection, Large Globe Valve, Water Hatch and Lid, 6" of 1/4" x 1/4" brass angle. 3" x 5/32" and 2" x 1/8" brass rod. 5" - 1/4" x l/16" brass strip. A short length of 3/4" o/d brass tube, 12" - 1/16" half round brass beading. 14 - 8BA x 1/2" c/h screws and 12 nuts. 6 - l0BA x 1/4" hex steel screws. (plus a small jar of solder paint - see notes).

PRE-CONSTRUCTION NOTES: The pre-machined parts have built-in fold lines for easy assembly. For the scratch builder, it is recommended that the cab sheets be fretted out as separate components, i.e. front and two sides and additional angle used to brace the corners, due to the close proximity of the front cab windows to the side sheets. Rivet detail on the bunker can either be embossed or drilled and dummy riveted, or ignored altogether. In the materials list, a pot of solder paint is called for as the simplest and most effective way of soldering the sheets together. They can also be soldered by traditional methods if that is preferred.

8:1. CAB BODY & ROOF: Identify and remove the components from the fret, cleaning off the sheet retaining lugs. Prior to folding, locate positions of the 4 mounting holes (as per Drg: 8:1) in the tabs, mark off, centre pop and drill through 3/32". On assembly, these will be used to mark off hole positions in the footplate.

FOLDING: Folding can easily be done in the bench vise. Do the inner sides first, starting with the tabs, then the front windows. On the outer sides, fold the cab wraparound at the rear first. When fitting together, you may have to slightly trim the rear edge of the inner side to accommodate it.

SOLDERING: We are going to solder paint these one side at a time. If this process is new to you, experiment on a pair of running boards first. It is very simple. Lightly smear the outer section with solder paint. Only a small thin coat is required. Clamp the two sides together and gently bring up to heat with the torch. A series of small cramps or surgical type forceps are ideal here to prevent movement. You will first see the solder paint boil and then change colour to a bright silver as it melts. Concentrate on one part at a time and follow the process around. Repeat for the other side, then wash off the water based flux residue with an old toothbrush or wire wool.

Locate over the boiler and, leaving a lip with the cab front 1/16" behind the front edge of the footplate, scribe through the mounting holes in the tabs, ensuring the assembly is square.

The last task on the body is to drill and tap for the handrail knobs, screwing them in position, and fashion a couple of 3/4" long x 1/4" angle brackets for the running boards. Using one of the running boards as a guide, mark the hole position for the rear mount, drill and tap l0BA and soft solder in position, locating the top edge 1" from the bottom of the cab sheet and abutting the boiler cleading.

8:1:1 ROOF & MOUNTING BRACKET: Curve the roof section from 20swg brass sheet size 4.1/8" wide x 4.3/8" long to 6" radius. Best done with rollers, it can also be formed in the bench vise every 1/4" or so using a piece of broomstick or similar material as a mandrel.

The mounting bracket has been designed to avoid any unsightly slots or screwheads when fitted in position. Using the fret or cutting to size per Drg. 8:l:l, scribe the fold lines 3.5/8" apart on centreline. Fold at 90° to be a tight sliding fit between the cab sides.

Drill out the centre 1/4" o/d hole to clear the safety valve spigot, but check on the job first. In the centre of the two radiused ends, open out the pilot hole for 8BA clearance. Clamp in position with the front of the bracket 1/2" behind the leading edge of the roof front. In this position, the roof will overhang the cab front by 1/16". Solder the bracket to the roof where the two angles are formed.

Referring to the side elevation in Drg: 8:1, the bracket mounting holes are 7/32" in from the cab front and 11/32" down from the top. Before drilling and tapping these 8BA, check the assembly in position for any errors and mark off accordingly. If the holes do not coincide, the radiused ends will not perform their correct function of holding the roof open in its elevated position. Two 8BA screws are fitted from within the cab and the excess material on the outside removed, leaving a flush surface.

8:2. BUNKER: This piece of platework construction is the most complex because of the valance or flare and radiused top corners to the tank, a feature so typical of late nineteenth century design in order to increase fuel capacity and load stability. In later years, the valance was largely dispensed with, so if anyone chooses to go for the simpler and less time consuming option, you can ignore the relevant text.

In the materials list, a piece of 3/4" o/d brass tube is used to form these flanged corners, and is available in the K&S Metal Center at your local hobby or train shop.

Clean up the fret sheets. On the outer wrapper, and locating from the vertical centreline, mark and cut out the four 3/8" square notches along the top using a piercing saw. Dependant on the folding process, the outer edges which form the inner corners of the water legs may have to be trimmed back slightly on assembly. Locate and drill 3/32" holes for the gas tank, sandbox, mounting lugs and through the etched locations for the four handrail knobs.

8:2:1 The 1/4" radiused corners can each be made in three separate bends, starting with the inside edge from centreline and working outwards and checking as you go and using the bunker top as a template. Having done this, fold in the mounting tabs. The flared tops are bent outwards 1/8" away from the vertical EXCEPTING the two outer pieces which remain as they are (i.e. vertical, so as not to encroach on cab access).

Cut three 1.1/2" long pieces of 1/4" brass angle to size and solder in place level with the base of the flare to form a support for the outer edges of the tank top.

Straighten out the beading and form it around the flared top allowing a 3/8" radius on the corners (for extended development of the curve). Because of the angles involved, it will require bending in two planes as each corner is met. Clamping a small section at a time, work around, soldering as you go.

FLARED CORNERS: The rear corner pieces are sections of an inverted cone, but the front pieces are a bit more tricky as they are square at the front and coned to the rear. Both require eyeball treatment to fit, and as the rear ones are easiest, we'll cut our teeth on those first.

A simple measuring job across the top of the gap to be filled comes out around 1/2" with the bottom about 5/16". The depth of the piece to be fitted APPEARS to be 3/8" but it isn't (see detail 8:2:1).

Using 3/4" o/d tube, lightly score a line around it with a tube cutter or tape as a guide 9/16" long. Offer it up inside the gap to be filled resting against the beading and tank top and scribe vertical lines against the notch sides. Cut the piece out with a piercing saw and check for fit. The top diameter will be ok but the lower part needs to be bent to the sharper 1/4" radius using round nose pliers.

Try for fit again noting side-on that the top and bottom edges are concave in this elevation. Trim the bottom edge to a parallel fit leaving the top as it is. Clamp in position against the beading and solder up. You can now saw and file off the top piece flush with the beading.

The front corners come in for the same treatment, except for a little more juggling to form the curved-to-vertical transition.

8:2:2. Bend up the inner wrapper, this time to 1/8" radius, again using the bunker top as a template, fold the tabs over and solder in position.

To accurately position the water tank hatch (actually the gas refill access hole), locate the gas tank with the mounting lugs against the rear wall and measure the distance to the filler centreline. Measure again with the top in position and, if necessary, open out the hole accordingly. It will be covered by the water hatch base when soldered up.

Place the rear sandbox in position so the sand pipes just clear the footplate. Mark off, drill and tap 8BA, screwing from inside the tank, and remove the excess thread for a flush fit. Fit the handrail knobs, either soldering in place or retaining with 8BA half nuts.

Position the body 1/2" in from the end of the footplate and score through the mounting lug holes. With the top cover in position, mark off the mounting holes and drill № 55 through into the angles beneath. Tap the angle brackets 10BA and open out the cover to 10BA clearance. Fix with two 10BA hex head screws.

Remove the rear footplate from the chassis by taking out the burner jet assembly and boiler retaining bolts, along with the two outer handrail knobs. Centre-pop and drill the scribed locations to fix the cab and bunker and a hole for the water gauge blowdown pipe. Refit the footplate and locate the cab in position, slipping in the retaining screws without bolting up.

8:2:3. BAFFLE PLATE: Mention was made earlier of running in freezing temperatures. Whilst you could make and fit a separate water jacket to house the gas tank, a far easier and more effective solution is to make up the baffle plate shown. It is simply "gunged" in place with silicone gasket compound immediate in front of the gas tank whilst at the same time covering the joints and holes around the base and rear. It is so fixed as to enable the gas tank to be removed at any future date, and because the water is in direct contact with the footplate, it soaks up the radiant heat transmitted along the floor from the boiler. The baffle height is such that when topping up with water, any excess runs away and won't cover the filler valve.

8:3. BOILER DETAILS & RUNNING BOARDS: We can now finish off the loco by making the dummy turret and throttle linkage with associated steam lines, the footboards, and adding the bell and sand dome.

Ensuring the boiler and lagging are truly horizontal, we can now mark out positions of the handrails and injector lines on the cab front. Butt the components up against the face of the cab and gently scribe a mark every 90° around the location. When the cab is removed, having made the turret in 8:3:1., we can pop each centre and drill to size. Refer Drg. 8:1.

8:3:1. STEAM TURRET: There are three castings for this assembly - the turret, throttle linkage and large globe valve. In addition, we need to turn up three simple 'steamlines' to complete it. Refer Drg. 8:3:1. When assembled, the two steam legs straddle the boiler with the turret base mounted in the locating hole on top of the cleading.

To mount the globe valve, using a 1.1/4" length of 1/8" o/d brass rod turn down one end to 3/32" x 3/16" long. Open out the globe valve bore to 1/8" and slip it on. The two steamlines to the cylinders are made from 1.3/8" lengths of 5/32" brass rod. Turn down one end of each to 3/32" x 3/32" long.

At the top of the turret casting, drill 3/32" x 3/16" deep into the union and for the bottom angle collars, 3/32" x 3/32" deep. The throttle link is located by drilling № 54 x 7/64" deep into the throttle stem, indicated by a dimple on the casting. Carefully remove the linkage from the sprue, bending as necessary, and solder the bracket around the stem studwork together with the throttle link just drilled, noting that this assembly is mounted at a transverse angle to the main turret. The cab front is drilled 1.7/32" on centreline above the boiler top for the main steam line, but check on the job first together with a № 54 locating hole for the throttle pull rod (nominally offset 1/8" to the right and 27/32" above boiler top . In assembly, both the cab and the turret will have to be brought together as they meet over the boiler top. Check the position of the globe valve so as not to interfere too much with the front edge of the cab roof on opening, and solder in position.

8:3:2 RUNNING BOARDS: These are fitted at the cab end with 10BA screws to 1/4" angle brackets, and at the front, secured by screws to a bracket which sits on and between the cylinder saddle walls. Two each are sandwiched and solder painted together. On two of these only are etched dimples indicating mounting hole positions. After soldering, drill through

10BA clear. Excess material has been left over at the front end and should be removed before assembly. Check on the job and refer Drg. 8:2:3.

The bracket is simply bent from a 5" length of 1/4"brass strip around 3/32" thick and later trimmed to size.. Following the drawing, bend up to shape. The important dimension here, apart from the overall 1" height, is a maximum width of 1.3/4" so it can locate and slide between the bolt heads within the cylinder saddle. Slip it into position and score through the running boards to locate for the 10BA tapped holes each side.

8:3:3 SAND DOME & COVER: The sand dome casting slips over and is retained by the boiler top-up valve. Clean out the core for the dome cover and epoxy in place.

8:3:4 BELL: The bell is from Trackside Details (part no. TD-10). Remove the sprue from under the base, drill down through the centre 1/16" and open out to 3/32". Countersink the top sufficient to hide the 8BA screw head and cut the shank to size.

EXTRA DETAILING: There are a number of areas where further detail would enhance the model, but as no firm evidence could be gained from the photographs, this area has been left as a matter of conjecture and choice for the builder. Obvious amongst them are headlights (a row of rivets is apparent on the smokebox top), an ashpan located behind the gearbox, and footsteps or straps to the cab. Additionally, there is plain evidence of a generator, type not known, in place of the globe valve in front of the cab, and fuel rails, perhaps originally holding boards, atop the bunker. I presume there must also have been a single stage air pump together with air tanks and brake cylinder. By no means finally, the logging fraternity just couldn't have resisted placing jacks and other clutter on the bare front footplate and other 'free' areas.

Happy steaming!

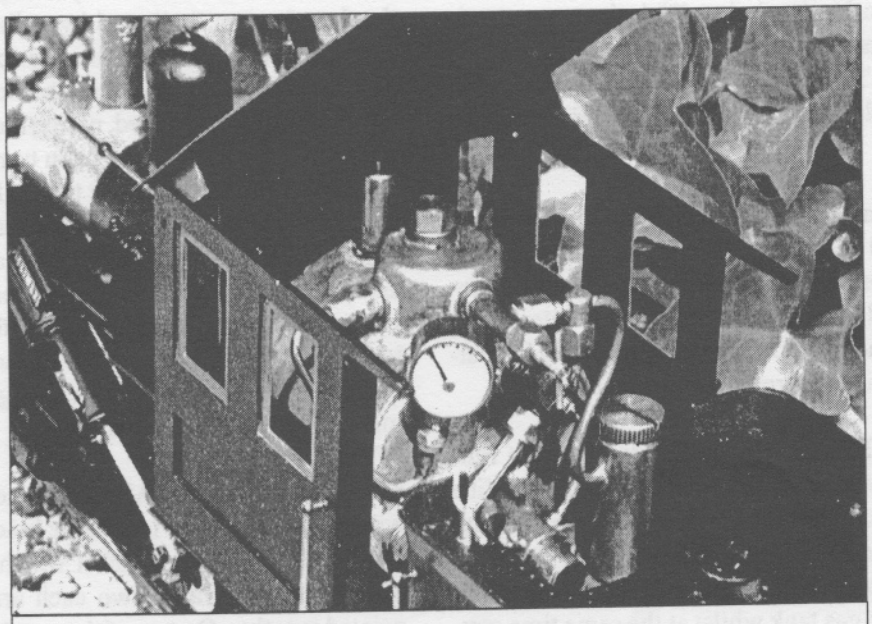
SOURCING

In order to assist our readers in the acquisition of all the bits & pieces needed for the Vest Pocket Climax project, we offer this list of sources.

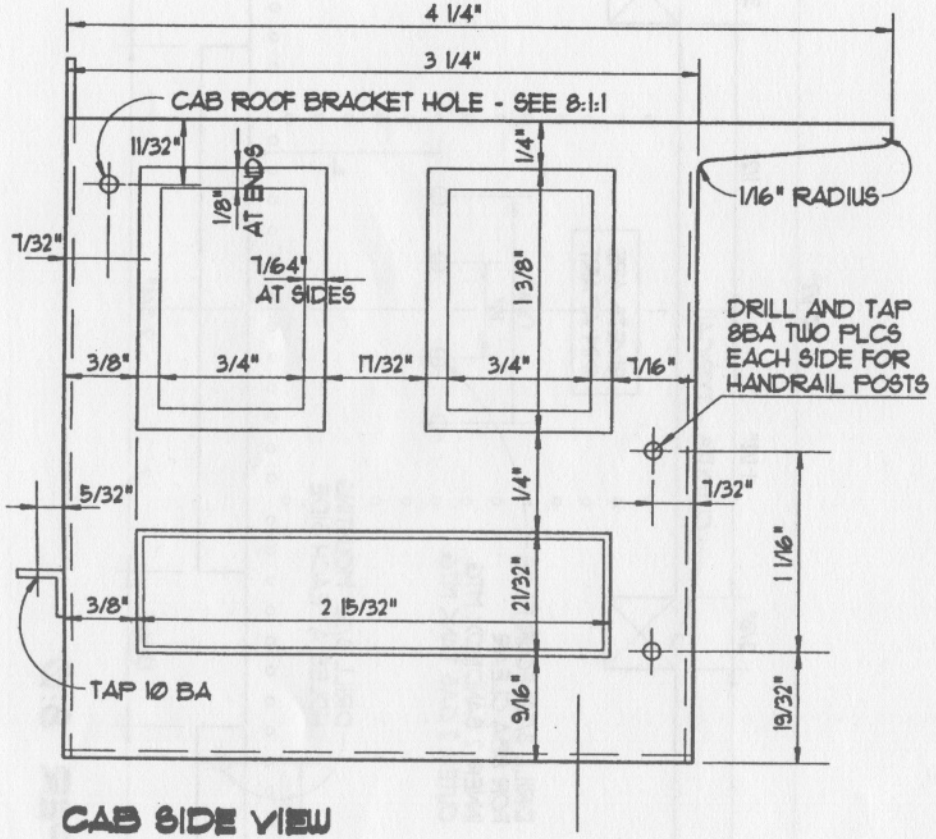
Castings & boiler ..... Mel Ridley,
Cornwall Southern RR Enterprises
High Noon, Gorway,
Teignmouth,
Devon TQ14 8PX
England
Phone/Fax 01626 779908

Fasteners (BA & ME) .... Sulphur Springs Steam Models
(including taps & dies) Dept. RB
Machine Work PO Box 6165
Raw Materials Chesterfield, MO 63006
Phone/Fax (314) 527-8326

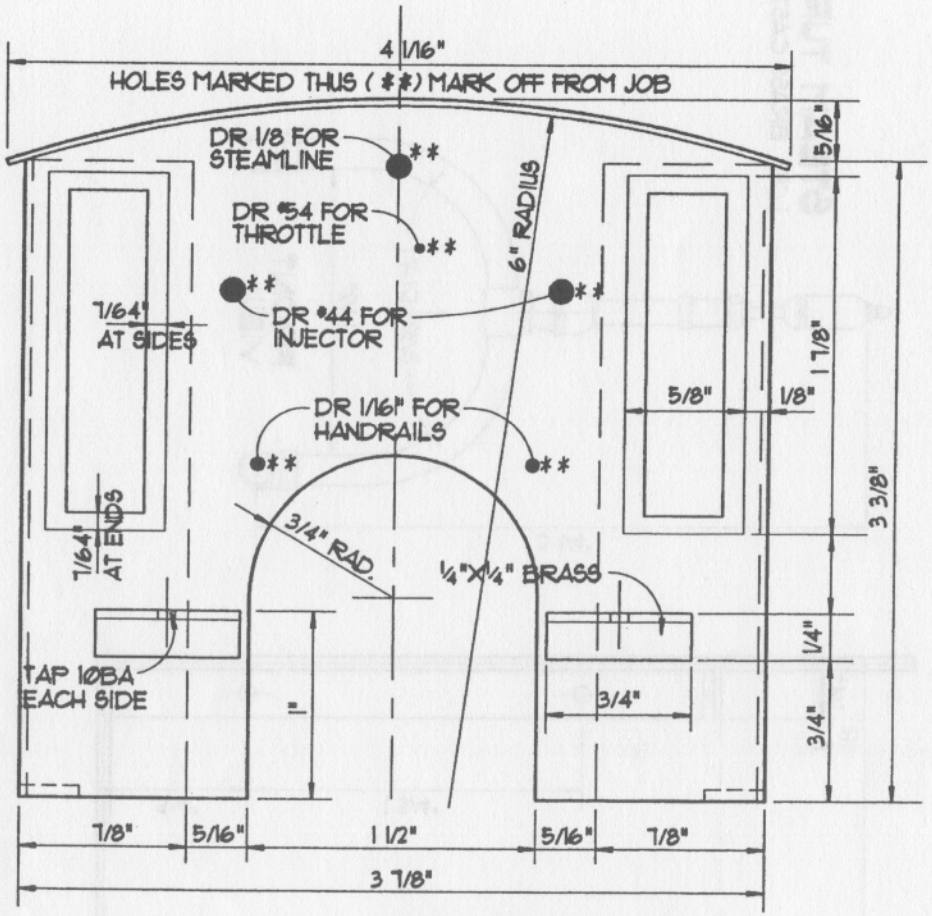
Clarification Notice: Due to variations between manufacturing runs, ready made boilers may be furnished with either 3/16"- 40 ME or 1/4"- 40 ME threaded bushings for the water gauge. Although the drawings call for 1/4"- 40, USING 4mm glass, either size is acceptable.



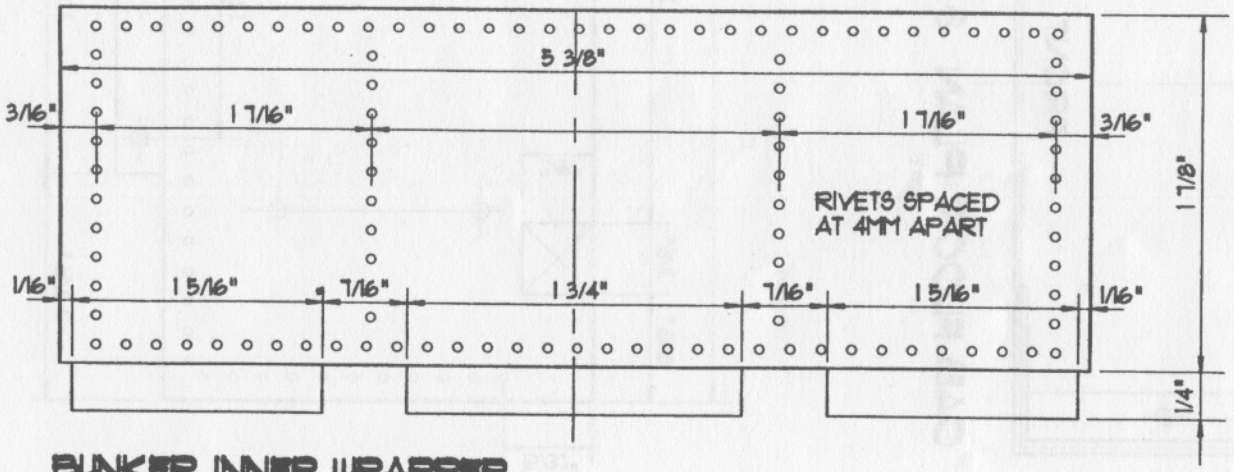
The real heart of the loco...the controls and gauges.



CAB SIDE VIEW



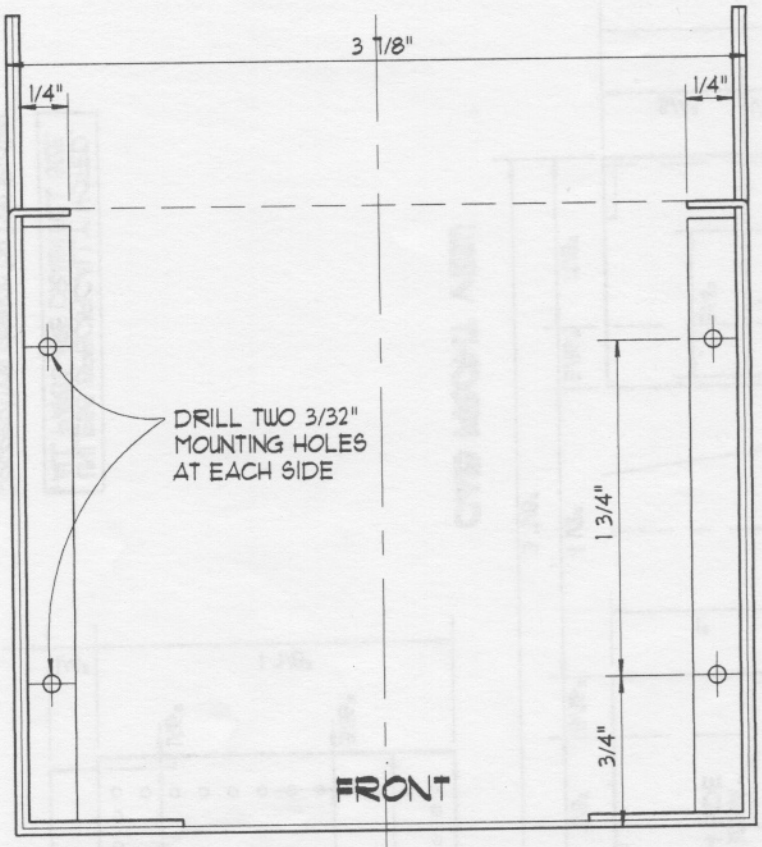
CAB FRONT VIEW



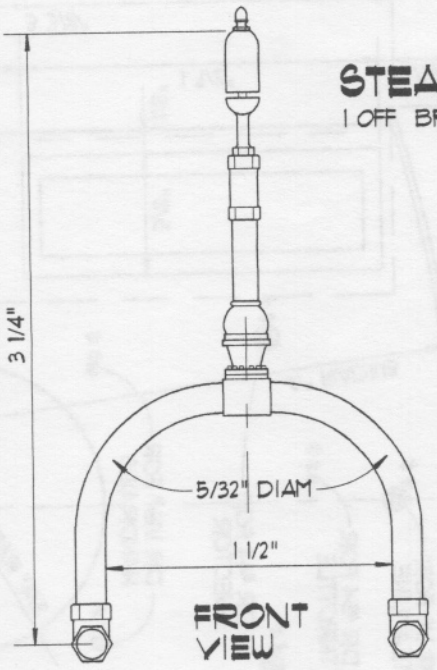
BUNKER INNER WRAPPER

1 OFF 20 SWG BRASS

UNLESS SPECIFICALLY NOTED, ALL PARTS ARE DRAWN FULL SIZE.

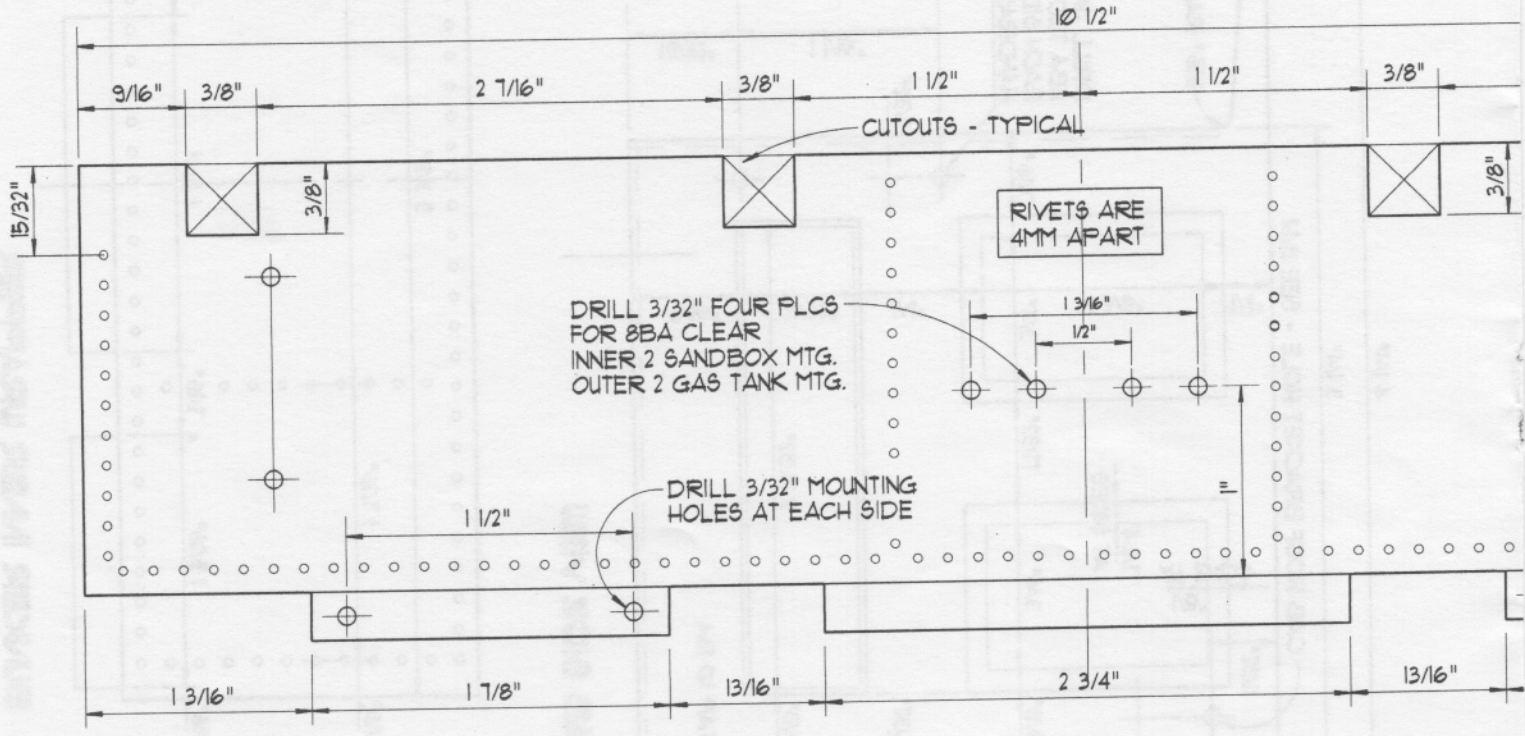


CAB FLOOR PLAN 8:1



STEAM TURRET

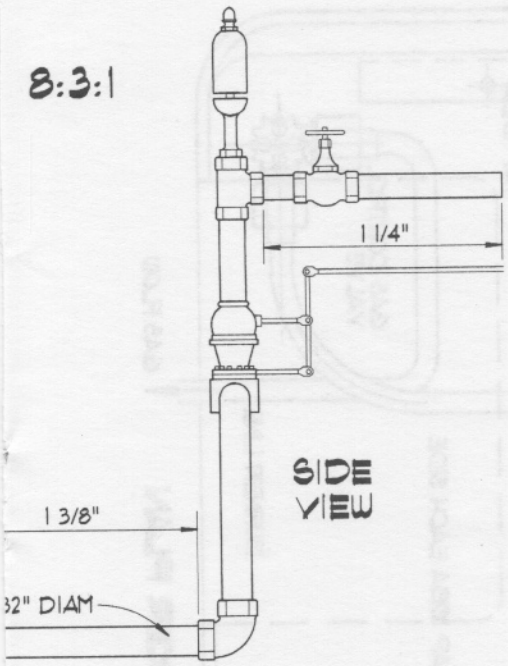
1 OFF BRASS CASTING

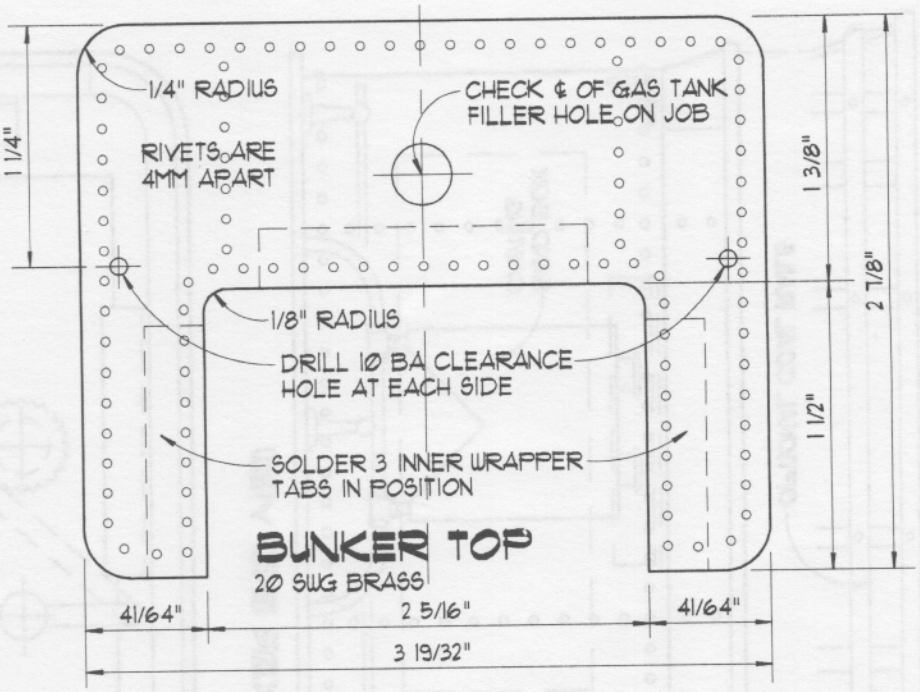


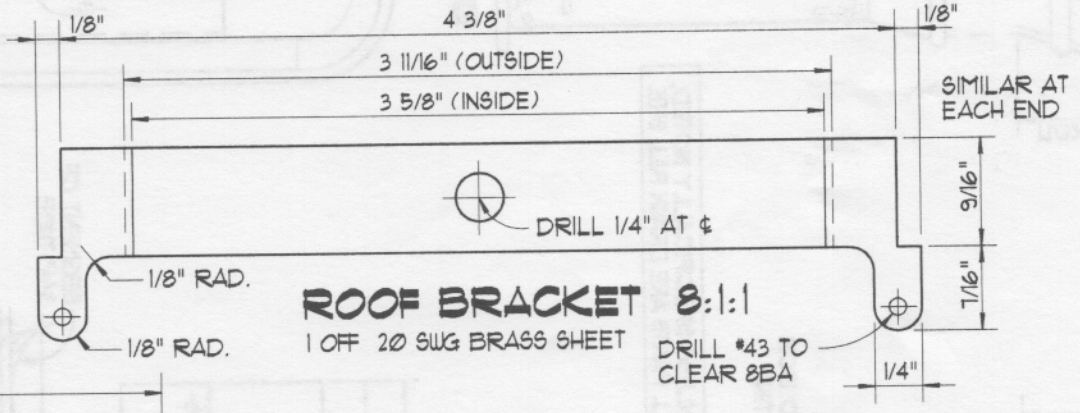
BUNKER OUTER WRAPPER 8:0

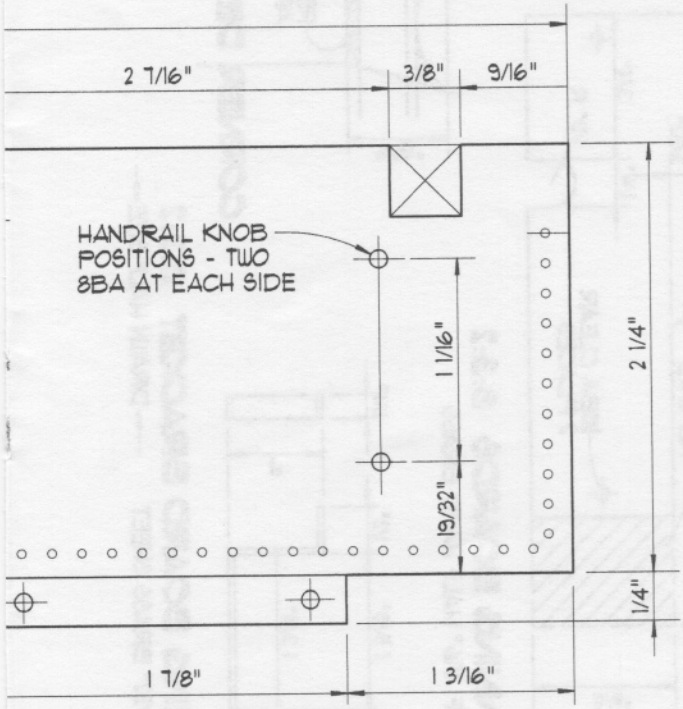
1 OFF 20 SWG BRASS

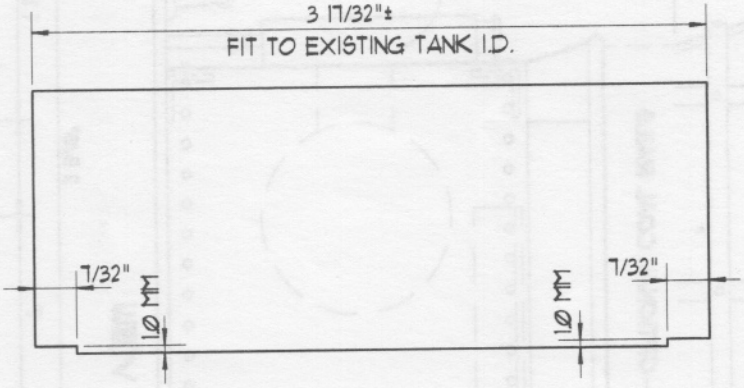
8:3:1







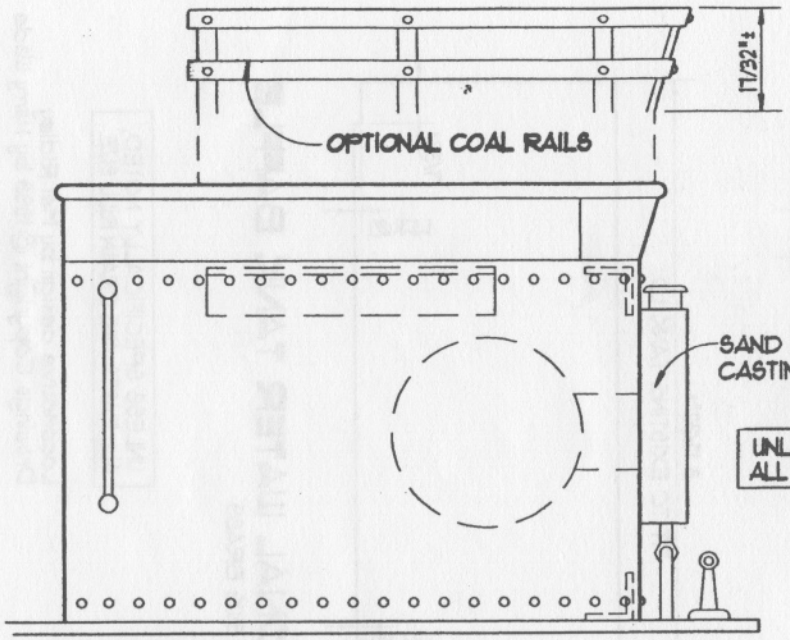




OPTIONAL WATER TANK BAFFLE

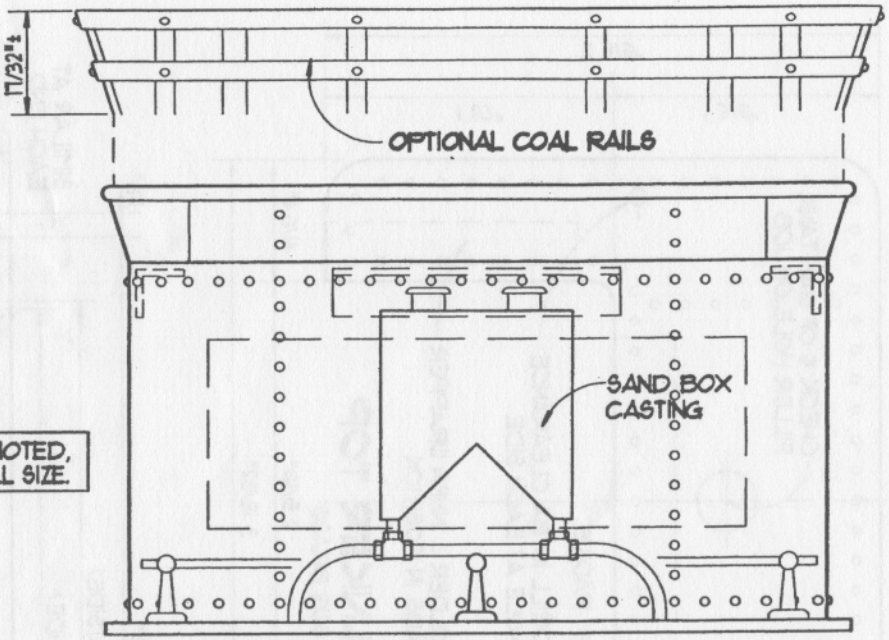
1 OFF 20 SWG BRASS

UNLESS SPECIFICALLY NOTED, ALL PARTS ARE DRAWN FULL SIZE.

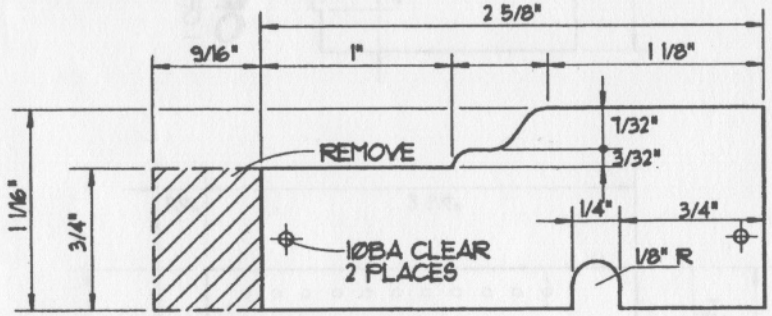


BUNKER SIDE VIEW

UNLESS SPECIFICALLY NOTED, ALL PARTS ARE DRAWN FULL SIZE.

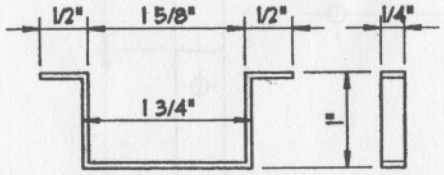


BUNKER END VIEW



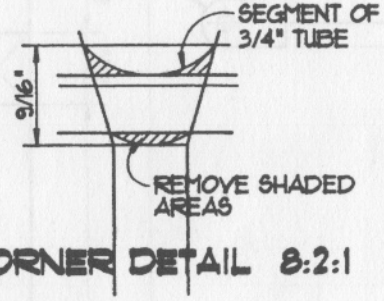
RUNNING BOARDS 8:3:2

4 OFF 1/16" HALF HARD BRASS

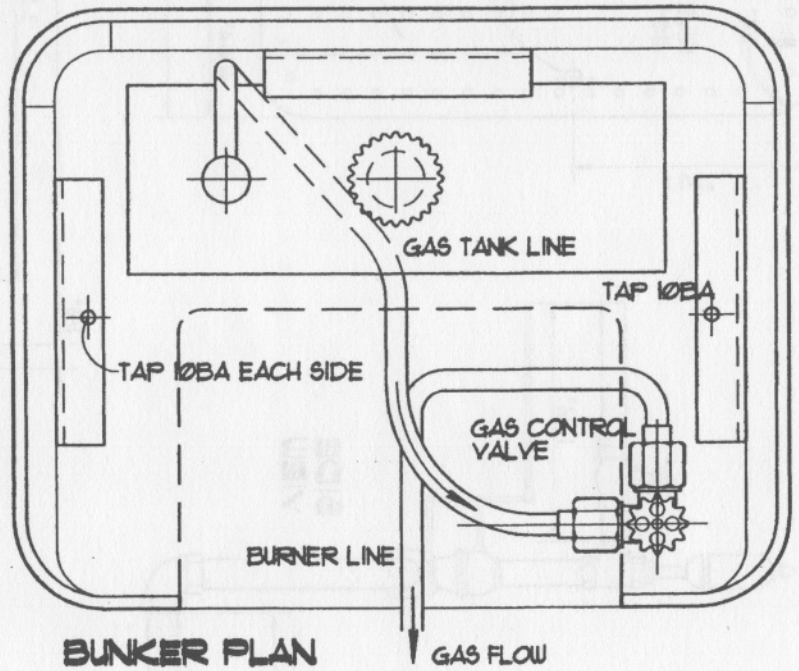


RUNNING BOARD BRACKET 8:3:2

1 OFF 3/32" BRASS SHEET —→DRAWN HALF SIZE←—



CORNER DETAIL 8:2:1



BUNKER PLAN

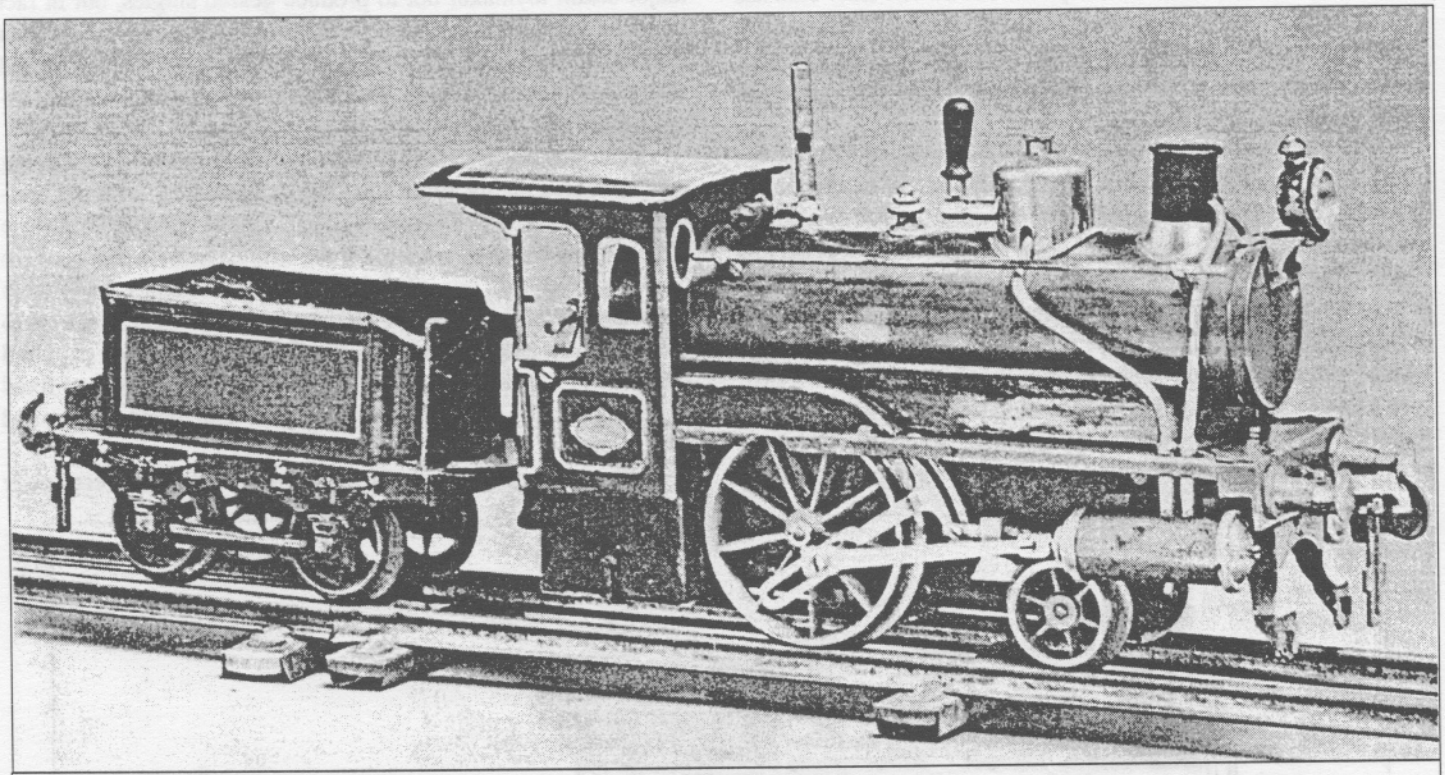
Tinplate Live Steam

© by Murray Wilson

From whence we came...

Tinplate live steam engines are not familiar things to most readers of SitG and our editor has asked me to write a little about them. They were really intended to run indoors, but I suspect many were banished to the great outdoors. Certainly that is where I run them whenever possible, so they are eligible for this magazine. I am not an expert on the subject, but I do seem to be one of the few people to be operating tinplate live steam.

First of all, why are they comparatively rare in North America?



Carette "Storklegs", c. 1900. Typical fancy valvegear.

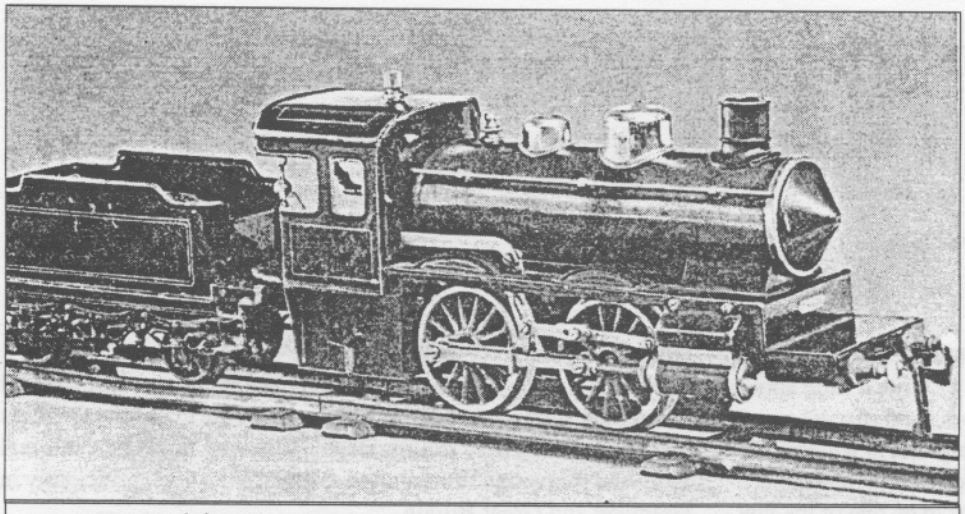
My belief is that the early availability here of affordable electric trains, with their unlimited run, made clockwork and steam engines unattractive. In Europe electric trains were expensive, so the usual choice was between the 90 foot run of the typical clockwork engine, or at least 10 minutes and possibly half an hour run with a steamer. If Mother didn't have a say in what was bought there was a fair chance it would be a steamer.

The very earliest engines were floor toys and had no tracks. They were primitive representations of pioneer locomotives such as "Rocket" and had two single acting oscillating cylinders. They were not impressive runners, these infamous "Dribblers", and fortunately the market soon started demanding rails for toy trains to run on. Equally fortunately, the German industry quickly standardised the gauges. For this we operators of all old tinplate owe a particular debt to Marklin.

Once put on to rails the little engines no longer just tottered along solo, spewing condensate, they were able to pull two or three pieces of four wheel rolling stock. This was more like the real thing and numerous firms started to make such toys, principally in Germany and Great Britain.

A curious style of engine became popular at the turn of the century, a 2-2-0. The leading wheels were small and the two driving wheels usually very large. They were known as "Storklegs", presumably because in motion the piston rods of the oscillating cylinders gave the same impression as one of those wading birds whose knees bend "the wrong way". At rest they are unrealistic, but at speed with a train of three or four coaches behind they are more evocative of full size steam than any scale model I have ever seen.

By about 1915 the Storklegs had disappeared from most catalogues. They'd been made by many companies, notably Bing, Carette and Schoenner, but not by Marklin. Their place had been taken by simple "0-4-0" engines, with either oscillating or fixed cylinders, and the geared singles that will be dealt with in a moment. The oscillating 0-4-0's were usually really 2-2-0's, as it is not advisable to couple the driving wheels of single acting engines



Typical fixed cylinder, piston valved 0-4-0, by Bing, c. 1910

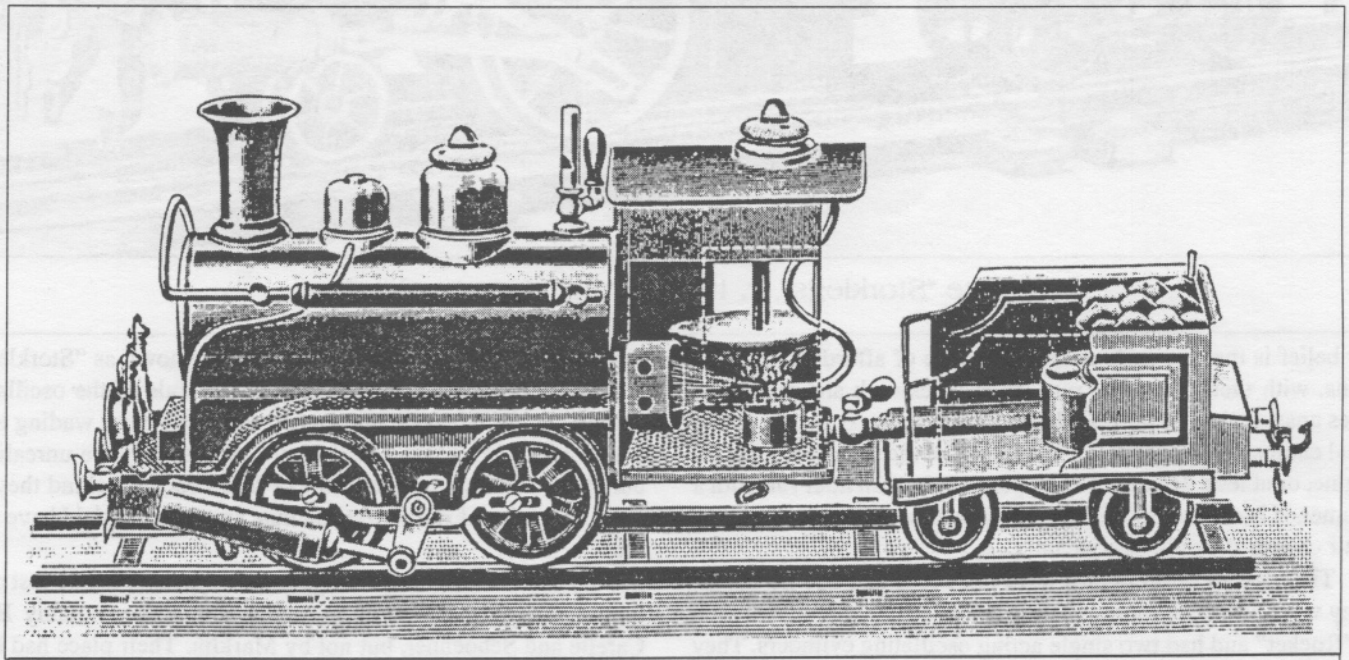
unless a fly crank is fitted for the piston rod on one side. This has to do with the crank pins needing to be 90° apart for the connecting rods and 180° apart for the piston rods of single acting cylinders. A few engines did have the flycrank and it can be seen today on the Aster 'Old Faithful'.

The thing you'll find with many of these old oscillating engines is that they like to run fast. It's tempting to add another coach to a train that is safely, but speedily circling the track. The chances are, though, if you do that it will soon slow down to a dispirited dawdle, the boiler cannot keep up because the steam consumption is actually higher at the slower speed. A paradox? No, because although the oscillating cylinder has fixed valve events it cannot take a "cylinder full" of steam when it is at high speed, so it then runs more economically. Let it slog at too slow a speed and it may pull the boiler pressure down. This is not so apparent on the modern Mamod because of the small wheels, but a gauge 1 Storklegs has wheels about 2 1/4" diameter and it is going to run fast.

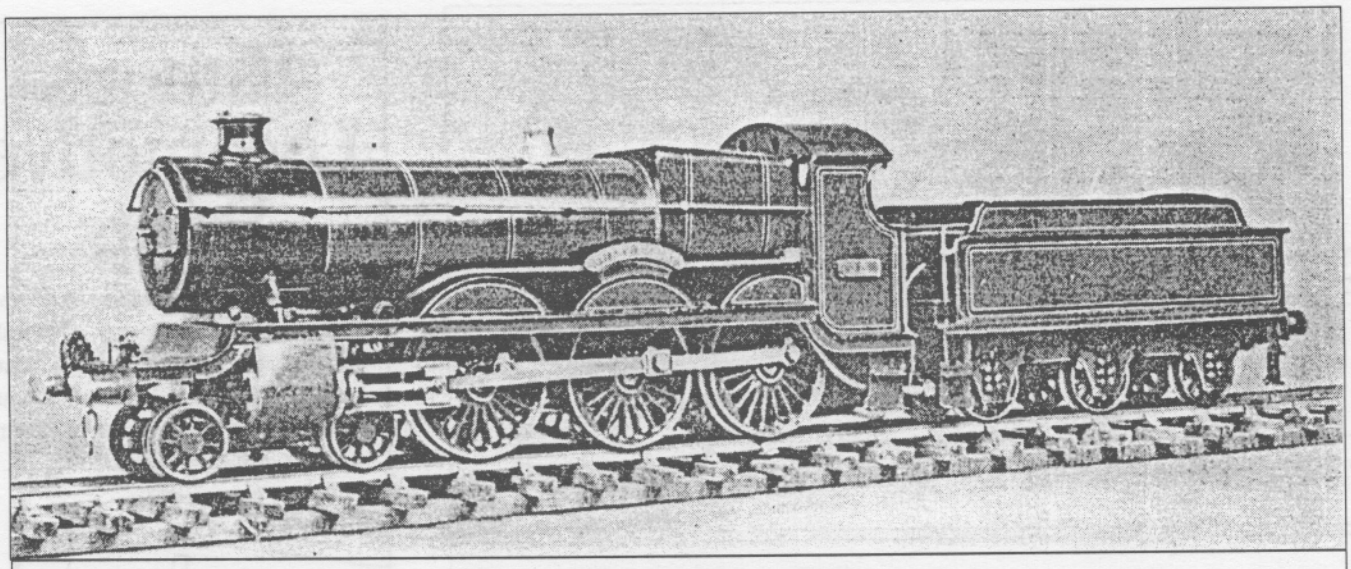
This phenomenon of liking to rev was well known to the toymakers and they took advantage of it in the single cylinder, geared engines they built. These usually have the cylinder in the cab and it may be either vertical or horizontal, horizontal being usual in the smallest gauge 0 engines. Some of the very least expensive engines used a friction drive instead of gears, and it worked very well. Aster made a geared single a few years ago, with a double acting cylinder in the smokebox, but the engine was not popular. The idea is used today in "Cricket", originally with a fixed cylinder, but now alternatively with an oscillator. One respected reference book states that Marklin was the only major steam toymaker not to produce geared singles, but in fact they did, though again with a fixed cylinder. You may also see in print that inexpensive gears are very inefficient and that the geared single brings no advantage. Don't believe it, it's an excellent arrangement and ideal for a first attempt at a homebuilt steamer.

I like toy trains, but they were not what most of the buying public wanted eighty years ago. The demand was for more realism. The simple 0-4-0's continued to be made because they were all that many could afford, but for the enthusiast with money there now appeared truly beautiful tinplate "scale" models. They were not scale models as we know them today, more what is known to the model airplane fraternity as standoff scale, but they captured the spirit of the locomotives of the day perfectly. They had fixed cylinders, usually slip eccentric valve gear with piston valves, and pot boilers.

Who made these wonderful engines? Initially they were nearly



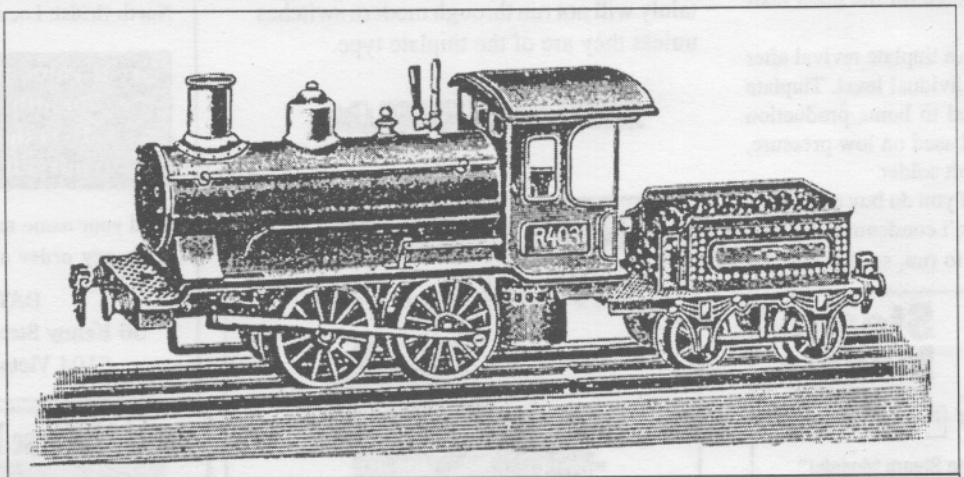
A very rare Marklin with blowtorch type burner



Bing "Titley Court". Now isn't that beautiful!

all German, but largely made for the British market. The outstanding makers were Bing and Carette, and later Bassett Lowke. Although Marklin steam locomotives tend to be quite highly regarded today, they were not in the same class as Bing and Carette. Most Marklins are rather ugly by comparison and in general they don't perform as well. The fact that Basset Lowke sold mainly Bing and Carette, very few Marklins, confirms, I believe, that my opinion is not just personal prejudice.

Piston valves have advantages, particularly in commercial manufacture, but in general they need lubrication. That takes the engine out of the realm of the simple toy. Some toy engines had unlubricated piston valves and I have such a Marklin that is 90 years old and still spry, but it is the exception. The lubricated engines all too often have been run without oil and I think it must be experience with these that has given tinplate steamers a bad name.



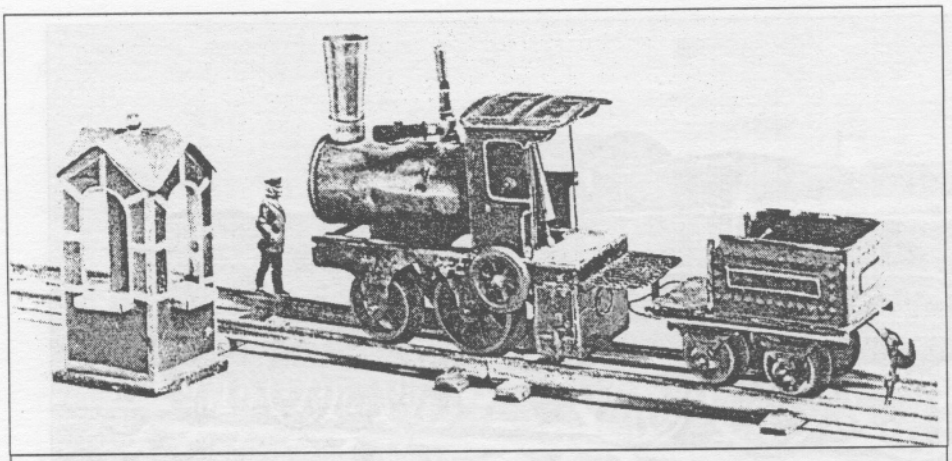
Marklin 0-4-0 oscillator c. 1912-1920

Carette went out of business in 1917, Bing in 1932 and so the major market for steam, which was Britain, had to be supplied from elsewhere. Basset Lowke started their own production about 1924 using tooling obtained from Carette to make a gauge 0 0-4-0, but quickly went to original designs intended for higher volume production. Thus came the famous Mogul 2-6-0 in 1925, the Enterprise 4-4-0 in 1931 and the Super Enterprise 4-6-0 in 1937. All were in gauge 0 (though a few Moguls were also made in gauge 1) and all used what appears to be the Bing cylinder design. These models were in production into the 1960s, the last, the Moguls, being assembled in 1969. They are not difficult to find for sale, but finding one at the right price is getting hard. The higher quality, much more expensive models previously referred to, were also produced by Bassett Lowke after the German suppliers failed, but only until WW2 came in 1939.

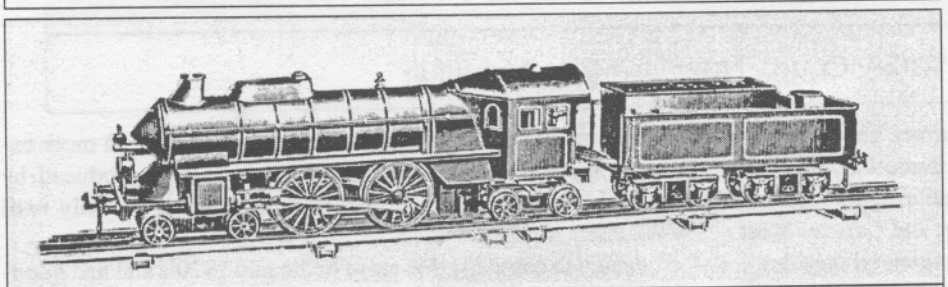
A British company that arose in the mid 1920's and had disappeared by 1935, but nonetheless made a lasting mark, was Bowman. They made four different engines, three of them tank engines and all in gauge 0. These engines were strongly built and there must be a higher percentage of the original production still around today than with any other make. They are all single acting oscillators, with again just two of the driving wheels actually driving, but each will outhaul anything else in its class. The two larger engines, although still gauge 0, are otherwise of gauge 1 proportions. Bowman made special rolling stock for them (they look a little ridiculous with normal gauge 0 stock), and this is far harder to find than the engines.

Bowman made stationary engines and steam boats for a company named Hobbies, and when Bowman went out of business their place with Hobbies was taken by the firm we now know as Mamod. I mention this because vestiges of the Bowman design are still to be seen in some Mamod products, though not in the locomotive.

By 1939 Basset Lowke were the only significant producer of tinplate live steam left. After the war they came back with just the Enterprises and Mogul, in gauge 0 only. Production of the last of these, the Mogul, ceased in 1969, and that seemed to be that. It wasn't however, for in 1980 Mamod introduced their train set and a tinplate revival appeared possible. However Wilesco, the only other likely manufac-



Plank geared single cylinder c. 1895 - 1900 "Cricket" like, no?



Bing "Windcutter" c. 1912

turer, did not follow suit and it seems their judgement was sound, for Mamod has been in persistent financial difficulty. A tinplate steam train today is too expensive for the mass market.

So there will not be a tinplate revival after all, unless it is at the individual level. Tinplate technology is well suited to home production by the beginner as it is based on low pressure, light gauge metal and soft solder.

A few last words. If you do buy an old tinplate steamer, please don't condemn it to a display shelf. It was made to run, so if it checks out as safe, fill it up and fire it up. Just remember there were no wheel standards when it was made and that it almost certainly will not run through modern switches unless they are of the tinplate type.

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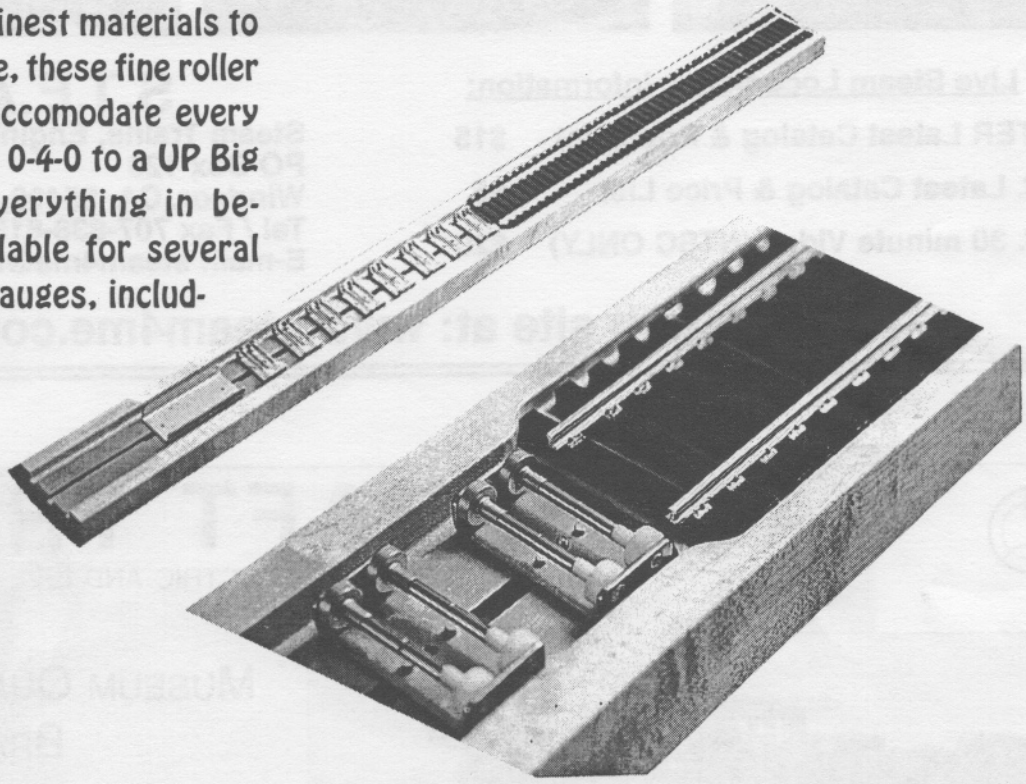

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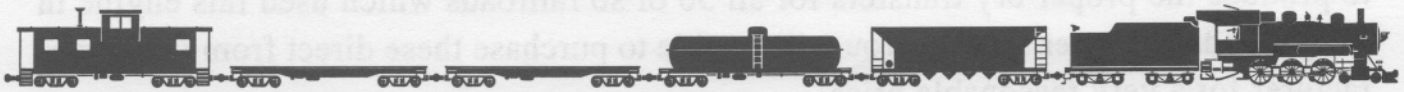

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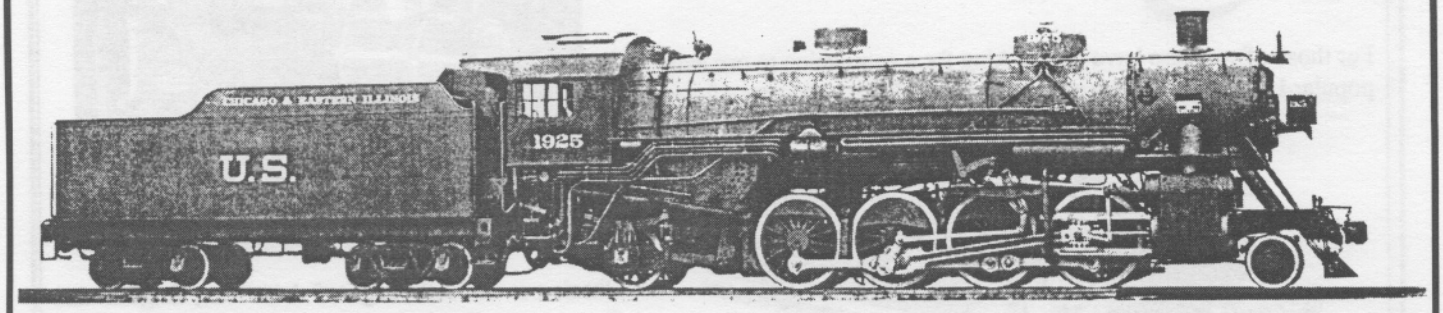

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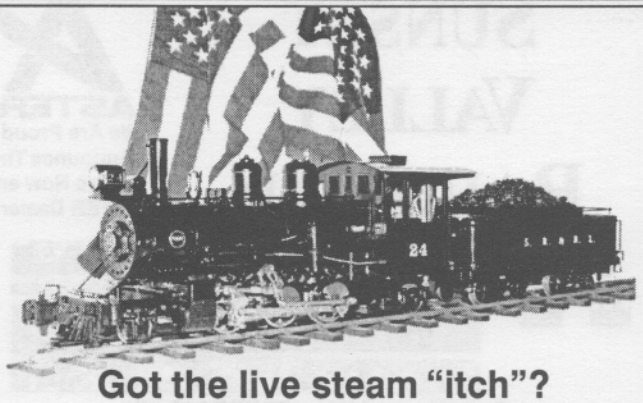

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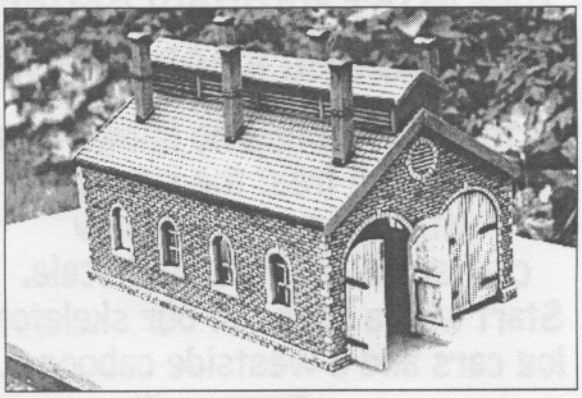

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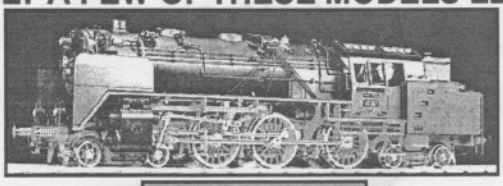

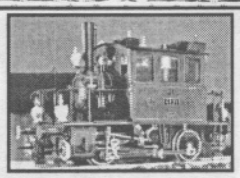

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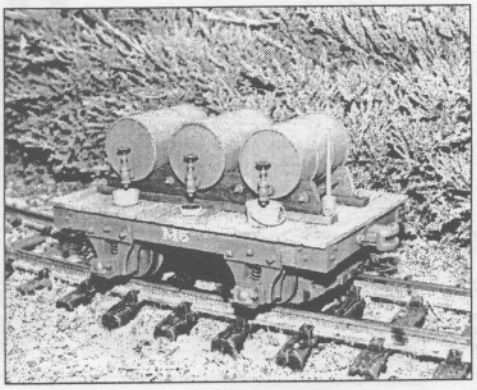

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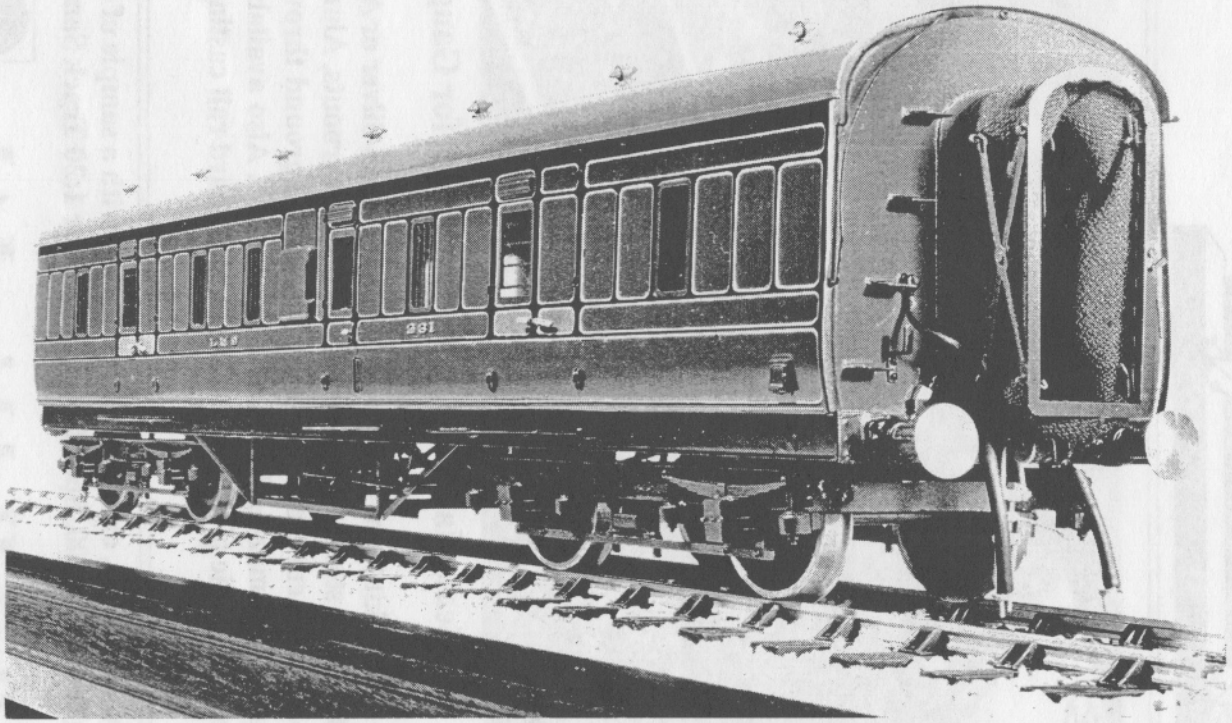

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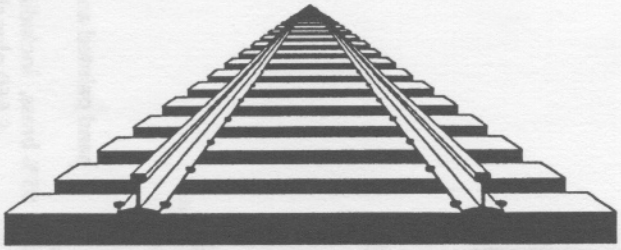

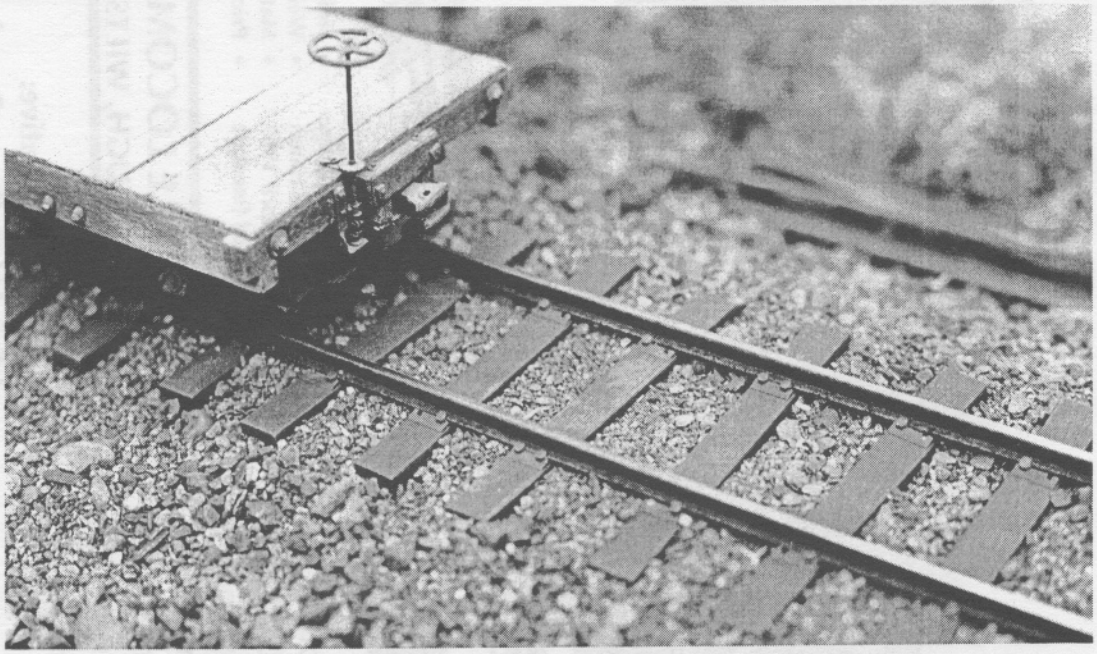

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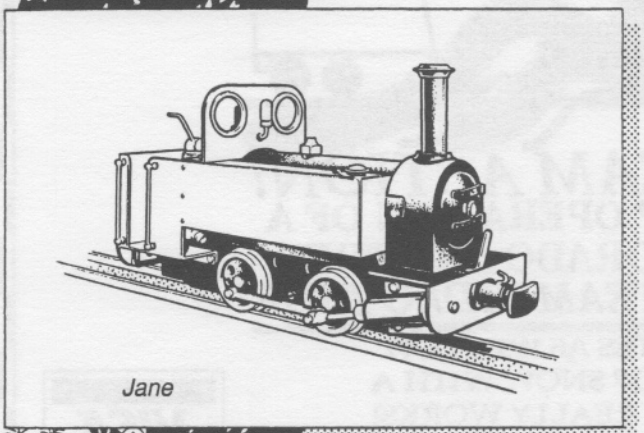

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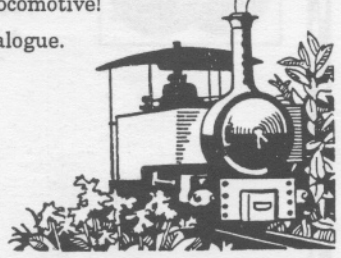

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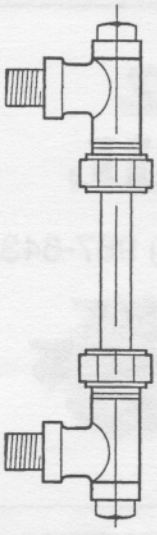

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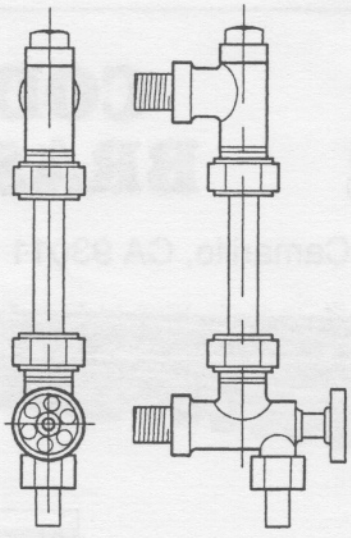

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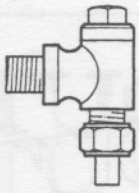

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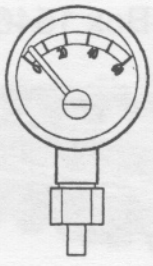

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For Sale: Hyde-Out Mountain Shay. Needs valve block & burner. $400.00 as is. Call Bill at 941-674-0566 ● Fax 941-674-0564. (44)

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Lost or Missing: My Aster suction fan disappeared at Diamondhead '98. It is easily identified by the thumb switch in the power cord. If it showed up in your box and you don't know who it belongs to, please call Barry Harper at (216) 464-8126. (44)

For Sale: (1) Beck Helene 0-6-2, green, butane fired, external slip eccentric, runs great, unique. $900. (2) RH Pooter 0-4-0, maroon w/ yellow lining, named "THE BARON", meths fired, runs great. $900. (3) Aster GER 0-6-0 (Two for sale) both run great. One is missing a drive rod bolt, the other has a black boiler (original is blue). $600 each. (4) Merlin Monarch 0-4-0 (based on the quarry Hunslet saddle tank look), maroon, perfect condition, runs great, 27Mhz R/C, $1000. (5) Frank S. Americanized, two truck tender, all black, new cab w/o side tanks, Goodall type filler valve, mounting bracket has been installed for pilot truck (not included). Single channel R/C in tender, Runs great.$1200. If anybody has an Aster Schools KIT I would gladly accept that on trade.Richard Finlayson, e-mail <richardf@steamup.com> or phone 408-374-8486 (California time). (44)

For Sale: Gauge 1 Model Railway Assoc. Newsletters, #114 (July 1982) through #156 (Dec. 1992). 10 years of British Garden Railroading, (mostly live steam). Also 12 issues of 16MM Today and 5 issues of Garden Railway World. Condition of newsletters is fair/good, magazines are all Good/Very Good. $40.00 for the lot +S&H. Also available, many copies of Narrow Gauge Gazette. Robert Nowell, 160 Woodside Dr., Jim Thorpe PA 18229 - 717-325-8246. (45)

For Sale: LGB Frank S. locomotive. Like new in original box, only one hour running time. Perfect condition, $1200.00 Lloyd Lautner, phone 228-875-6488. (45)

For Sale: Aster JNR C11 2-6-4T loco. Brand new, built up from a kit. The boiler has been pressure tested but the loco has never been fired. US$1600 plus freight and insurance. Tony Walsham, Radio Control Systems, PO Box 1118, Bayswater, Victoria 3153 AUSTRALIA. Phone/fax (03) 97 62 77 85 – e-mail rcs@alphalink.com.au (45)

Swap Shop listings are offered at no charge as space permits. No dealers and no phone-in ads, please! Send your listings to SitG, P0 Box 335, Newark Valley NY 13811, or fax to 607-642-8978 (24 hours), or e-mail to <docsteam@spectra.net>. Ads must contain sellers name, plus address and/or phone number. Ads will be run one time only unless previous arrangements are made.

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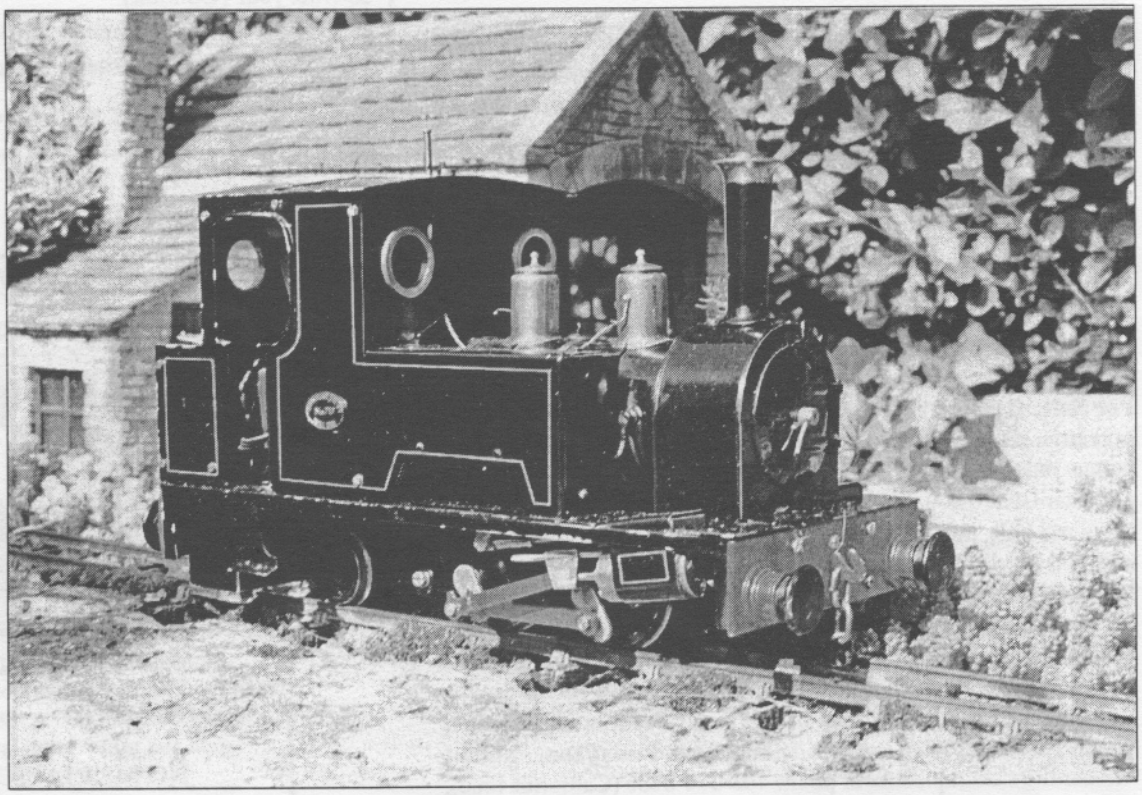
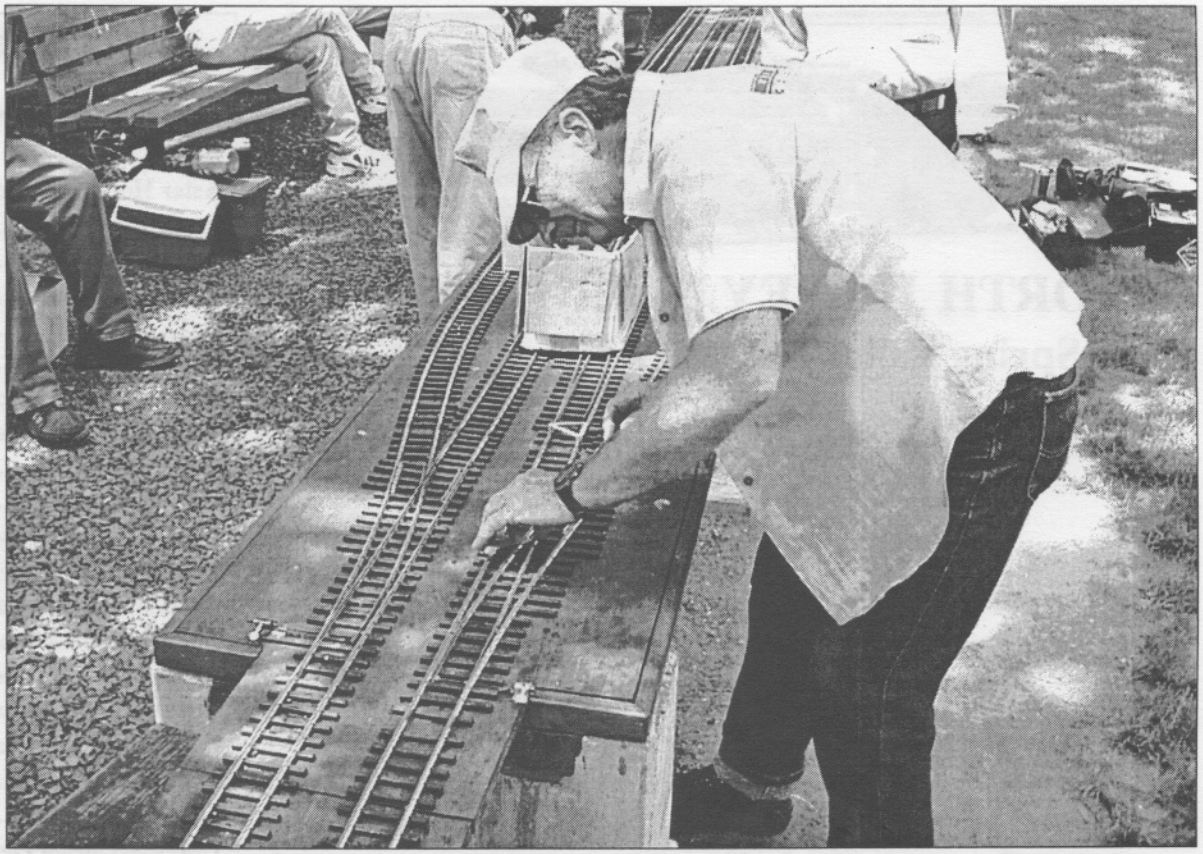


Vintage Archangel. An early (1981) Campbeltown and Machrihanish Kerr Stewart 0-4-2T "Princess", a meths-fired pot boiler, on test on the Ambledown Valley Railway before going to the USA.

photo - Dave Pinniger

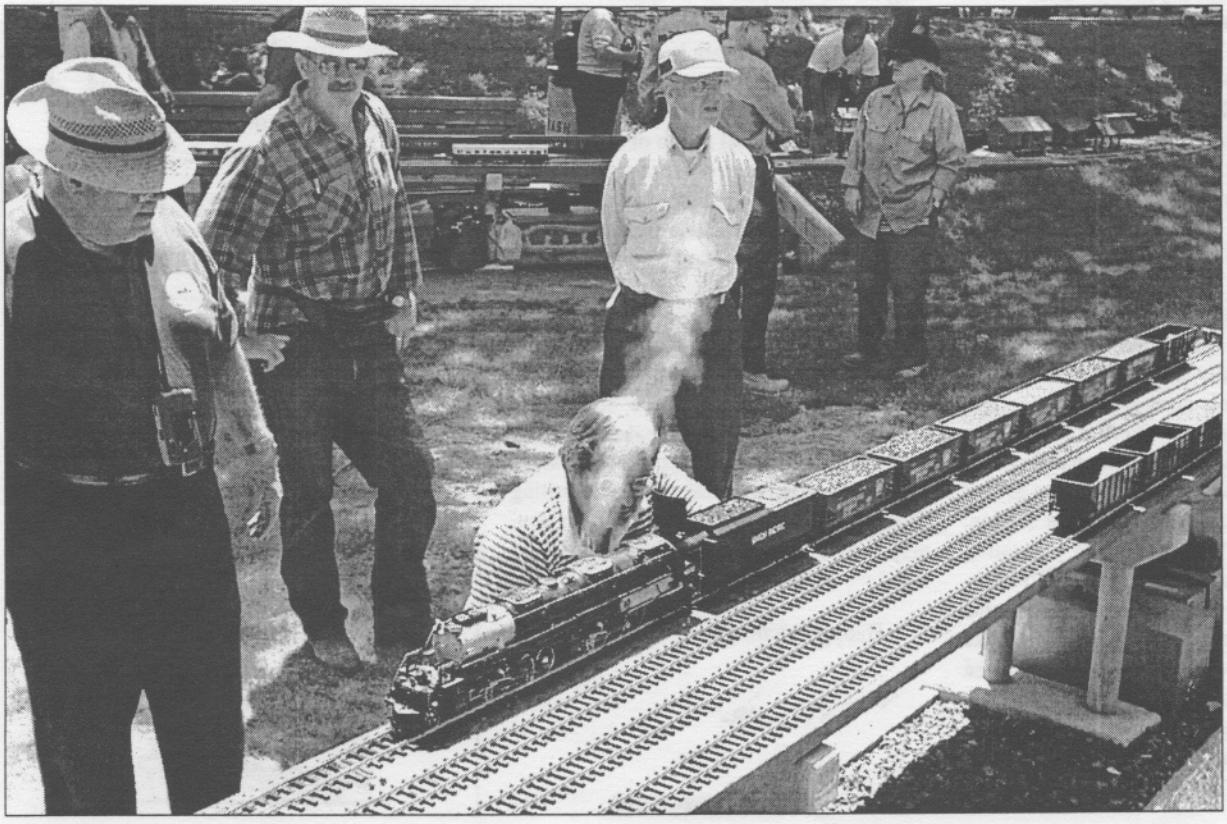
Vintage Archangel X 2! Stewart Browne firing an early coal-fired "Jack" built by him in 1983. The loco is now owned by the Ambledown Valley Railway.

photo - Dave Pinniger



Paul Quirk checks the gauge on a switch at the Pennsylvania Live Steamers Memorial Day Steamup in 1998. The new PLS Gauge 1 track is a beauty - one of the finest in the country.

photo - Ron Brown



Mike Moore (hiding behind steam plume) prepares Bill Crane's Aster Big Boy for a run on the PLS track while Bill Crane (left), Dan Long and Frank Ulman look on.

photo - Ron Brown

End of the Line

This Spring has kept us quite busy here at the SitG office, what with publishing the magazine, building a new railroad and traveling to steamups, train shows and open days. One of the most disapointing things about attending steamups is that there are times when more than one of them are scheduled on the same day. This has happened to us a couple of times already this year...these are times when we would like to be able to clone ourselves!

The season started out with a trip to Holley, NY to Ridge Road Station's "Rail Blast '98". If you're looking for a place to take your family for a day of shopping and enjoying model railroading, this is the place to go in Upstate NY. They have something for everyone, including the largest inventory of rolling stock and buildings I have ever seen in one place. Peter Mills has built a large (3000' of track), spectactular layout, which he has whimsically named "Peter's Starter Set". Okay, there's no live steam...yet...but we're working on him! There is also a huge toy section for the kids, and even a play area to keep the kids occupied while Mom & Dad enjoy the trains and the Christmas section. We had a great time there (can you tell?), and we appreciate the opportunity to introduce a lot of model railroaders to the delights of miniature live steam railroading, thanks to the generosity of Peter and Janet Mills and the efforts of local steamers Tom Bowdler and Kevin Strong.

Our travels also took us down into Pennsylvania, to the Pennsylvania Live Steamers Memorial Day Steamup. For those who love trains this has got to be a heaven on earth. The park-like setting is beautiful and well kept. The nicest club site we've ever seen. Trains of all sizes and gauges, from small tinplate toy trains (yes, Murray Wilson lives nearby!) to gauge 1, to ride-on sized trains in all the popular scales and gauges are running all day and part of the night.

On the weekend following the PLS Steamup, we once again headed south, this time to Williamsport, Pennsylvania to Frank and Phyllis Ulman's annual steamup. This was a small, informal group of friends running trains, sharing new ideas and enjoying each other's company. Everyone always has a great time at the Ulman's steamups.

Our calendar is filled with more of the same for the rest of the steaming season, and we look forward to meeting new steamers and seeing old friends in our travels. There's no better way to learn about miniature live steam than attending some steamups, whether they be local, regional or national. And as an added benefit, you'll meet some of the nicest people and make longlasting friendships. Why not tell us about your steamup experiences? And don't forget the photos!

Happy steaming!

Marie

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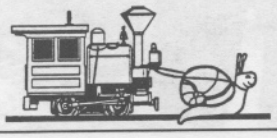

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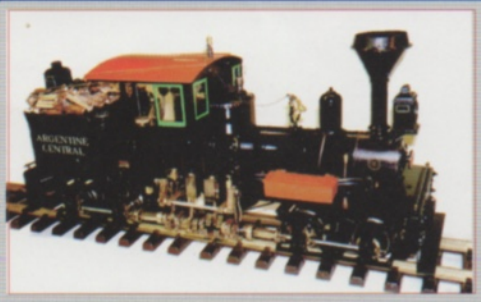

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