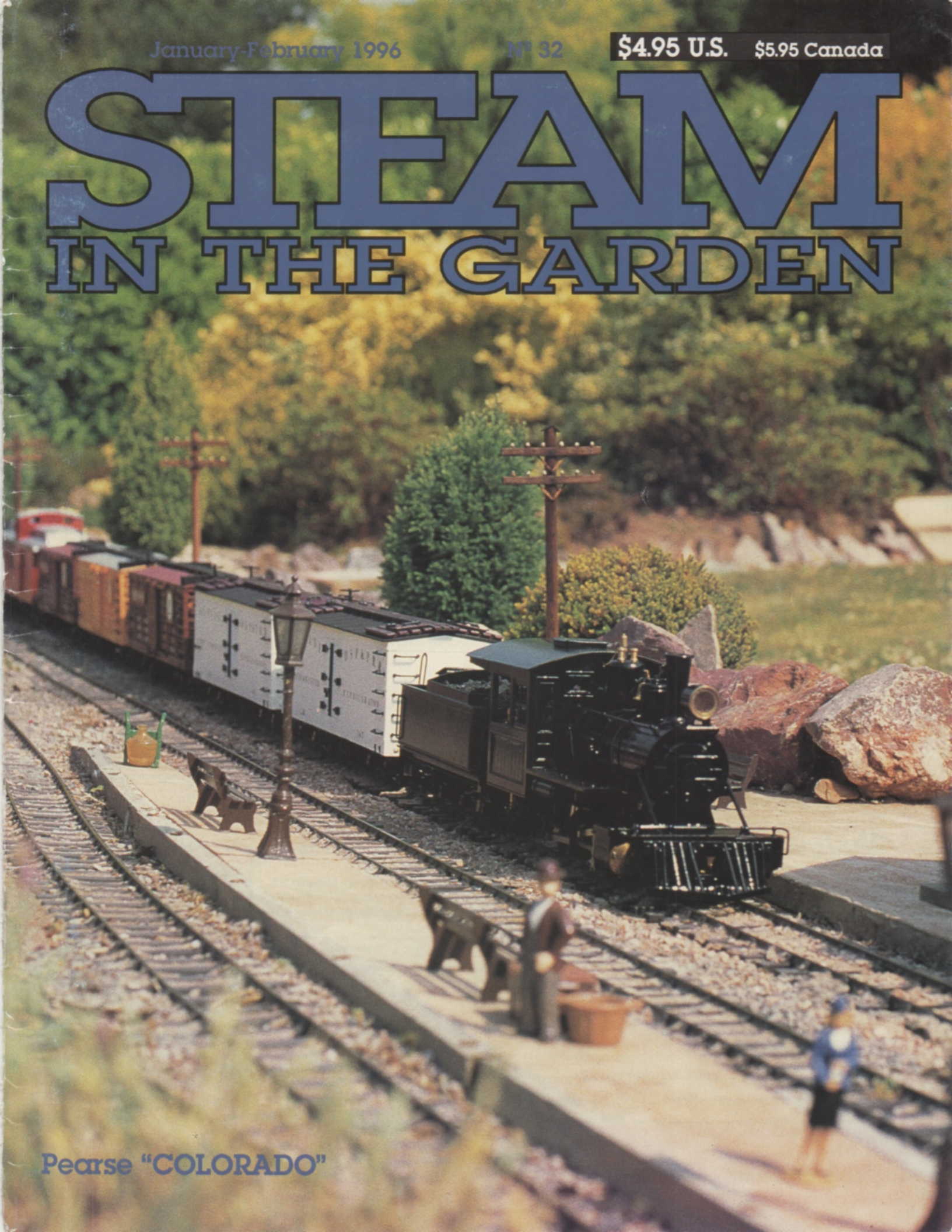
January-February 1996 Nº 32

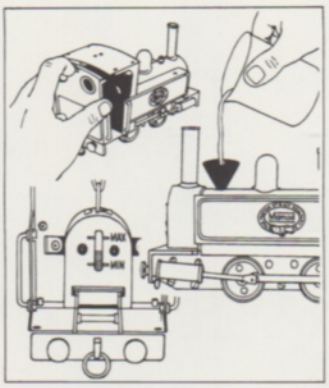
$4.95 U.S. $5.95 Canada

STEAM IN THE GARDEN



Pearse "COLORADO"

MAMOD LIVE STEAM LOCOMOTIVES



Mamod Model Locomotives

The design of the Mamod locomotive models is based on an old side-tank locomotive. All metal and heavily built throughout, these models feature: solid brass fittings; forward or reverse through variable speed control; twin double-acting cylinders which provide smooth power transmission; combined safety valve and filler cap; a whistle which is operable from inside the cab; brass buffers; rear panel of cab removable for access to burner and sight glass. Dimensions: Length: 8"; Width: 3.5"; Height: 4.75". Weight: 2 lb., 2 oz. Each model is supplied with steam oil, burner tray, filler funnel and one box of fuel. Available in '0'- and 1-Gauge.

❑ 1322	Single Locomotive ('0' Gauge - Green)	$479.95	❑ 1505	(1 Gauge - Green)	$479.95
❑ 1324	Single Locomotive ('0' Gauge - Maroon)	$479.95	❑ 1506	(1 Gauge - Maroon)	$479.95

1402 Mamod Steam Locomotive Kit SLK1

A classic example of an early 040 Welsh side tank engine. This kit is available in either '0' or gauge 1. Its twin double acting arrangement provides a powerful unit. An excellent introduction to the garden railway. Forward and reverse control with functional whistle. Comes complete with fuel, steam oil and assembly instructions.

❑ 1402	Steam Locomotive Kit SLK1 ('0' Gauge)	(Specify Black or Green)	$395.95
❑ 1402-1	Steam Locomotive Kit (1 Gauge)	(Specify Black or Green)	$395.95

Mamod 1320 Freight Railway System RS1A

'0' gauge (32mm) narrow gauge system, based on the old time saddle-tank type locomotive. Scale 16mm to 1 ft (305mm). Consists of green locomotive, goods van box car, guard's van caboose and twenty pieces of all-metal track (16 curves and 4 straights)—enough to make up a large oval. Complete with solid fuel tablets, steam oil, a filler funnel and a coupling hook, together with full operating instructions.

❑ 1320	Freight Railway System RS1a ('0' Gauge)	(Green Locomotive with Box Car & Caboose)	$695.95

❑ **Z90 NEW!** Stunning 34-page full color WILESCO Catalog on all Steam products: Trains, Stationary Engines, Fire Engines, Steam Rollers, Tractors, plus a full line of ACCESSORIES complete with specifications. **$6.95** (REFUNDABLE WITH FIRST ORDER)
ALSO AVAILABLE-Complete list of rolling stock for Mamod Locomotives plus PARTS list.

❑ PLEASE ADD $10.00 FOR SHIPPING.

❑ Here's my CERTIFIED CHECK for $ _____ ❑ Please ship C.O.D. (add $4.50)

❑ VISA ❑ MasterCard Credit Card No. _____ Expiration Date _____

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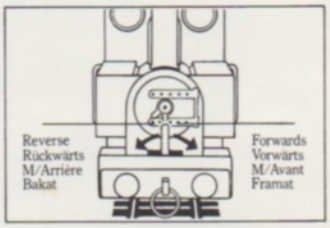
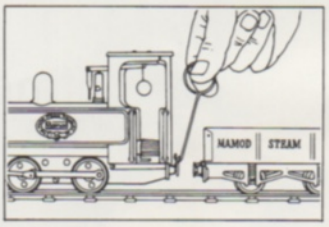
LIVE STEAM CONSTRUCTION SERIES
Mamod





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STEAM IN THE GARDEN

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Issue No. 32
January/February 1996

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ON THE COVER: Pearse "COLORADO" on test. The line is Ian Baker's large and very scenic Silverton and Western Railroad in Ottery St. Mary, England. Tag Gorton tells us that COLORADO romped away with a 72 axle consist of weighted box and passenger cars. A very good showing, indeed.

Photo by Tag Gorton

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Harry Wade

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Crankpin	The South
Tag Gorton	England
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Kevin O'Connor	California
Chip Rosenblum	Ohio
Gene Rutkowski	Washington
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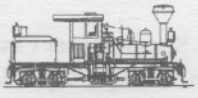
Questions or comments? Call us at 607-642-8119 before 9:00 p.m. Eastern time, please -- or FAX us any time at 607-642-8978. e-mail address: docsteam@servtech.com



1996 Calendar of Events

February 17, 1996 -- Spring "96" Trainfest, sponsored by the Hagerstown Model Railroad Museum, Inc. Mason/Dixon Auto Auction, Exit 2 off I-81 at the Route 11 Interchange. 9:00 am to 3:00 pm. Admission $3.00 adults, under 13 free. Trains -- Railroadiana -- Railroad Collectables. All gauges, brass, Lionel & American Flyer, Hobby Tools, White Elephant Table. For information, contact: Mike Stephens 301-824-2464 or Bob Morningstar 301-842-0081.

March 22-24, 1996 -- H&R Trains Spring Train Show, 6901 U.S. 19 North, Pinellas Park, Florida. A Great Family Event -- a 3-day weekend dedicated to the love of trains. From the smallest child to grandparents, there is something for everyone to enjoy. Under big tents, the Original Train Show, the only show of its kind. Layout Competition with more than 70 entries will include all sizes of model trains, individual layouts to huge modular club layouts, young children to master crafstmen. The host's garden railway will be running throughout the show. For more information call (813) 526-4682.

May 4-5, 1996 -- Jim & Jo AnneStapleton's IE&W Railway 1st Annual Spring Steamup. Elevated double track gauge 1 main line of 526' length, minimum radius 19', maximum grade 1%. Pedestrian bridge crossover. Beautiful park-like setting, great track for running. Contact the hosts at 38200 Charles Town Pike, Purcellville VA 22132-9618 -- phone (540) 882-3886 for more information and directions.

May 11, 1996 -- 3rd Annual Piedmont Central Railway Steamup and Open House, Charlotte, North Carolina. Saturday, 10:00 AM to 6:00 PM. Gauge 1 railway with 6' minimum radius main line, 5.25' sidings. Main loop approximately 90', ground level, with yard and steaming bay. Contact Malcolm Schaeffer, 704-552-2869 between 6 pm and 8 pm eastern time -- or write 6521 Highwood Place, Charlotte NC 28210. Please enclose SSAE for directions and info on lodging if needed, etc.

May 24-26, 1996 -- Pennsylvania Live Steamers 50th Anniversary Memorial Day Weekend Steamup -- Rt 29, 1 mile north of Rt 113, Rahns PA (25 mi NW of Philadelphia). Elevated gauge 1 double track mainline with steaming bay, turntable and storage yards will be in operation. Also available -- ground level tracks for 1/2" - 3/4" - 1" - 1-1/2" scale trains. Food available on site, lodging available nearby. For more information, contact Harry or Paul Quirk, PO Box 215, Springtown PA 18081 -- phone 610-346-8073.

June 2, 1996 -- Steam Boats Only Fun Float at South Orange, NJ, Meadowlands Park Pond. For information contact Charles Roth, 212 Rt. 513, Glen Gardner NJ 08826 -- phone 908-638-8341.

July 7, 1996 -- Steam Boats Only Fun Float, hosted by Valley Forge Model Ship Society at Gotwalls Pond in Kimperton 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 RD 4, Box 82, Spring City Rd., Phoenixville PA 19460.

July 19-21 -- Blue Mountain Gas & Steam Engine Association 25th Annual "Show in the Grove", Bangor, PA. Harry & Paul Quirk will have their gauge 1 track in operation and you are invited to come and run. Other activities include a flea market, antique gas & steam engines, sawmill and country music. Good home cooked food is available. For more information contact Harry or Paul Quirk, PO Box 215, Springtown PA 18081 -- phone 610-346-8073.

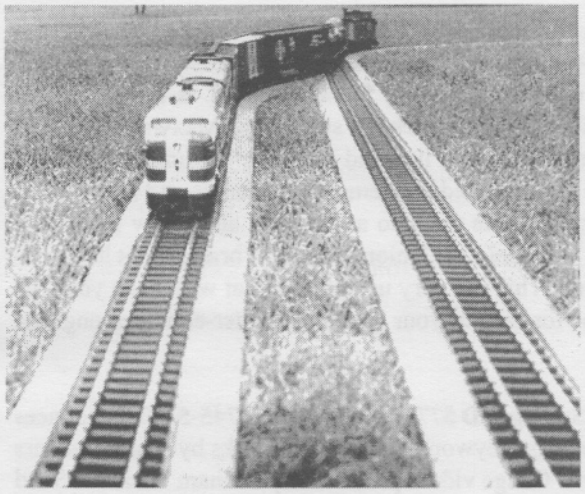
August 29-31, Sept. 1-2, Pennsylvania Live Steamers 5-day, 50th Anniversary meet -- Rt 29, 1 mile north of Rt 113, Rahns PA (25 mi NW of Philadelphia). Elevated gauge 1 double track mainline with steaming bay, turntable and storage yards will be in operation. Also available -- ground level tracks for 1/2" - 3/4" - 1" - 1-1/2" scale trains. Food available on site, lodging available nearby. For more information, contact Harry or Paul Quirk, PO Box 215, Springtown PA 18081 -- phone 610-346-8073.

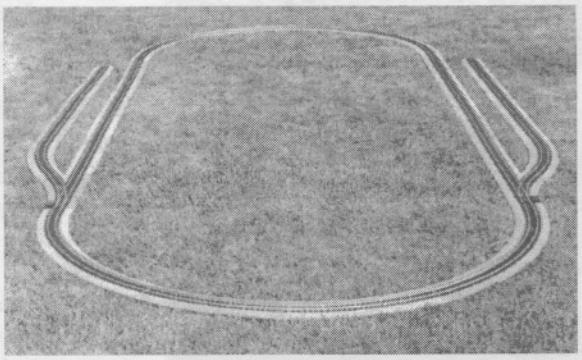
Because of publication lead time, please send info for Calendar of Events well in advance. Include name of host and location of event, with address and/or phone number to contact for complete information. Some basic info about the site is also useful (ie. ground level or elevated, minimum curve radius,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

WHAT'S NEW?

Gary Raymond Metal Wheels, PO Box 1722-0, 1000 Oaks CA 91358, proudly announces the first commercially available 3/8n3 wheelsets with EXACT scale flanges, the 1 24 US. These AAR 32 24" wheelsets are produced in #1 scale (1:32) for 1-1/8" gauge track (representing 3-foot narrow gauge in 1:32 scale). Gary tells us that the wheel is designed after full size Griffin wheel drawings, and has a new, never before offered, one inch high scale flange, which is an exact copy of a full size wheel. Various wheelset details including: correct hub offset and diameter, tire width, tread taper angle, axle diameter and length, and front dish contour are all exactly to scale. This 1 24 US wheelset now allows builders to create 1:32 narrow gauge models with correctly scaled and gauged wheelsets. These wheelsets fit currently available O scale trucks designed for shouldered axles. It is expected that prototypical trucks in 1:32n3 will be available in the future. The most typical rail sizes to use with these wheelsets are Code 80, 100 and 125. At present track must be handlaid, but exact AAR scale assembed turnouts in Code 125 are available from Llagas Creek Railways. The wheelsets are currently available in unplated steel, and can be ordered from your dealer or direct from Gary Raymond at the address above. The samples we received are neatly and accurately machined. Since we don't have any track or rolling stock to test them on, we were unable to conduct any but the most basic tests of observation and rolling them across a sheet of glass. They look great and roll smoothly, so how about if you closet 3/8n3 guys order some and give us a real consumer report.

Isabel Central Enterprises, PO Box 771407, Wichita KS 67277-1407, FAX 316-942-3413, has just introduced a unique new product -- Modular Roadbed. Made in sections of molded fiberglass, and designed to be compatible with Aristo Craft™ Extra Wide Radius track or most G gauge flex track, this modular roadbed is perfect for the outdoor railroader who is still negotiating for yard space. It would also be great for apartment dwellers, renters, or just about anyone who wants a place to run their trains, but isn't ready to make the commitment to a permanent railway in their yard. Quick setup and teardown is a major feature of this roadbed, so you can have your railroad up and running in minutes, whenever the urge strikes. Isabel Central says, "If you want to have a garden railway but not the back-breaking work that goes with it, then you need to order your Isabel Central Enterprises roadbed today!"





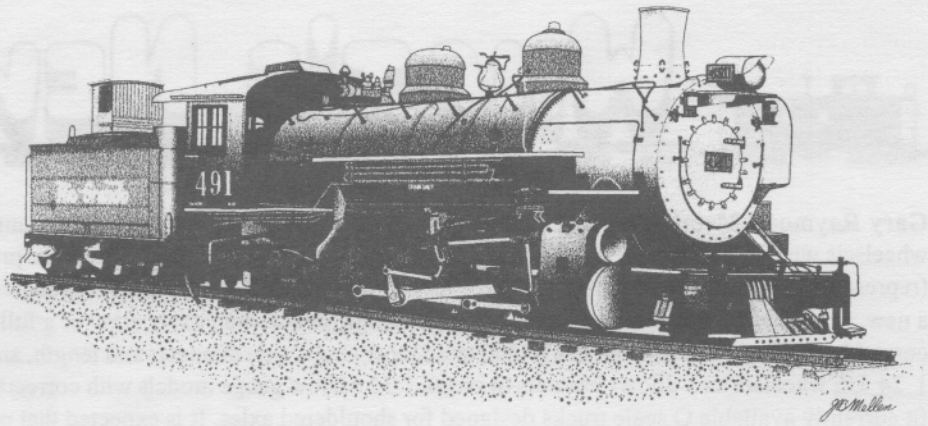
A U.S. Bankruptcy Court has rejected the $6,000,000 libel claim raised by Polk's Model Craft Hobbies, the marketer of Aristo-Craft trains, against Ernst Paul Lehmann Patentwerk, the maker of LGB trains. "We are pleased that we have successfully defended ourselves agains these senseless lawsuits," said Wolfgang Richter, Lehmann's Managing Director. "Our competitors must face us in the marketplace, where we offer our customers an unmatched program of products with proven quality, advanced technology and lasting value." Lehmann's legal counsel is now evaluating further action to protect Lehmann's intellectual property rights.

LGB Telegram, 1573 Landvater Road, Hummelstown PA 17036 -- phone (717) 566-9413 or e-mail: 73670.3673@compuserve.com, has been named Exclusive LGB Factory Tour Outfitter. The latest LBG Telegram tour, "A Visit with St. Nikolaus", recently returned from Germany. The next LGB Telegram tour, "Bier & Bahn Fest", will be held in September 1996. In addition to the factory visit, the 1996 tour will feature railroad travels in Germany and Switzerland plus a visit to Munich's famous Oktoberfest. A limited number of spaces are available on the 1996 LGB Telegram tour. Form more information, contact LGB Telegram at the numbers show above.

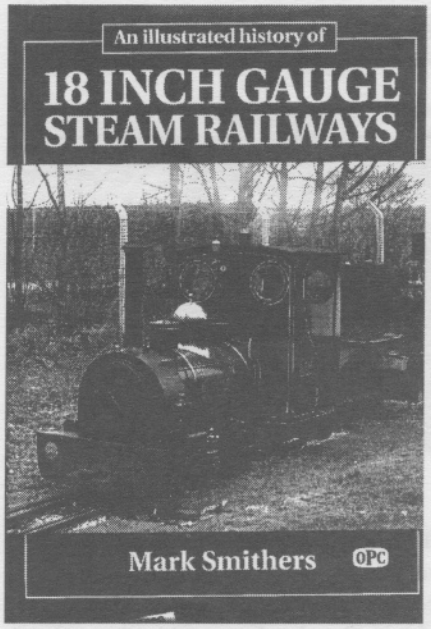
Llagas Creek Railways, 2200 Llagas Road, Morgan Hill CA 95037-9429, phone/fax 408-779-4391, announces that they have received many requests for Gauge 3 track. As a result, they will be introducing a tie strip for Gauge 3 using their code 250 rail. The ties will have all the detail that Llagas Creek is known for.

Toltec Images, Dept. SG, 1202 Kennedy Ave., Louisville CO 80027, has announced the first in a series of black & white renderings of narrow gauge locomotives. The first print is an image of Denver & Rio Grande Western locomotive number 491 -- the largest of the

D&RGW narrow gauge locomotives. The print depicts the locomotive generally as it looked at the Colorado Railroad Museum in late 1995. This bold and impressive print reveals intricate detail that will be appreciated by railfans and modelers everywhere. Prints are on eggshell heavy stock paper and each is individually signed by the artist, Joe Mellen. Prints are offered in 8 x 12 for $15 and 11 x 17 for $25 each. Prices include shipping and handling. To order send a check or money order. Satisfaction is guaranteed. Return with your sales receipt within 15 days for a full refund (less actual shipping charges.) Write for a free brochure.



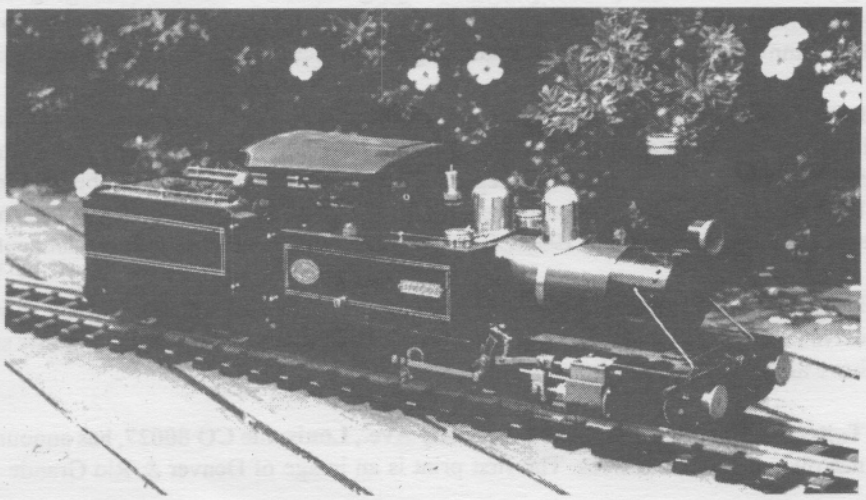
Woodland Books, PO Box 1268, Hillsboro OR 97123 has some great books on logging and steam railroading. One of the newest of these is Encyclopedia of Western Railroad History: Vol. III -- OREGON & WASHINGTON. This book catalogs virtually every steam railroad that owned or operated ten or more miles of track as a common carrier in Oregon and Washington. That's nearly 500 companies! The author's emphasis is on the beginnings of the railroads, complete with loco rosters. He has distilled tens of thousands o fprinted pages from historic sources to create this concise encyclopedia. The text, maps, charts and historic photos create an invaluable resource for railroad history students and enthusiasts. You get over 100 photographs and 250 maps in this triple indexed treasure trove. 8-1/2 x 11, 338 pages, hardbound. Priced at $34.95 with free shipping in the USA. Ask for Woodland's flyer, showing the many other books they have available.



Rio Pecos Garden Railroad Co., 27136 Edenbridge Court, Bonita Springs FL 33923 -- phone (941) 495-0491 or fax (941) 495-7264, has just added a new and very useful item to their line of quality products. PK-1 Fuel Line Union @ $15.00 ea. ppd. is a real boon to owners of steam locomotives with the fuel supply in a tender, such as the Maxwell Hemmens Porter. It is very easily installed by cutting the fuel line and inserting the union in the line between the tender and the locomotive. No more tedious removal of clamps and hard-to-get-at fittings! Simply unscrew the union to separate the loco and tender, and screw it back together when they are coupled up again. The Fuel Line Union is made of brass, and it has an O-ring seal to ensure a leak-free connection. This is a very useful item that will make your life much easier. You will want to order one for each of your gas fired, tender-equipped engines.

Decker's Trains, Rt. 1 Box 102E, Hot Springs SD 57747 -- phone 605-745-5487, announces that they now have in stock and ready to ship Heywood &18" gauge books by Mark Smithers *(see cover shot at left)* and British Narrow Gauge videos produced by Graham Whistler. Send SSAE for list.

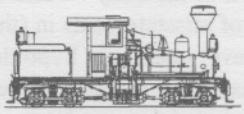
Geoffbilt, Box 277, Salisbury, N.B., Canada E0A 3E0 -- phone (506) 372-4364, has a new catalog. Geoff has added several new items to his already extensive list of steam locomotives and rolling stock, including a fine new 2-6-0 tender loco he calls HELEN. Send $2.00 for a copy of the new catalog, and tell Geoff that SitG sent you.

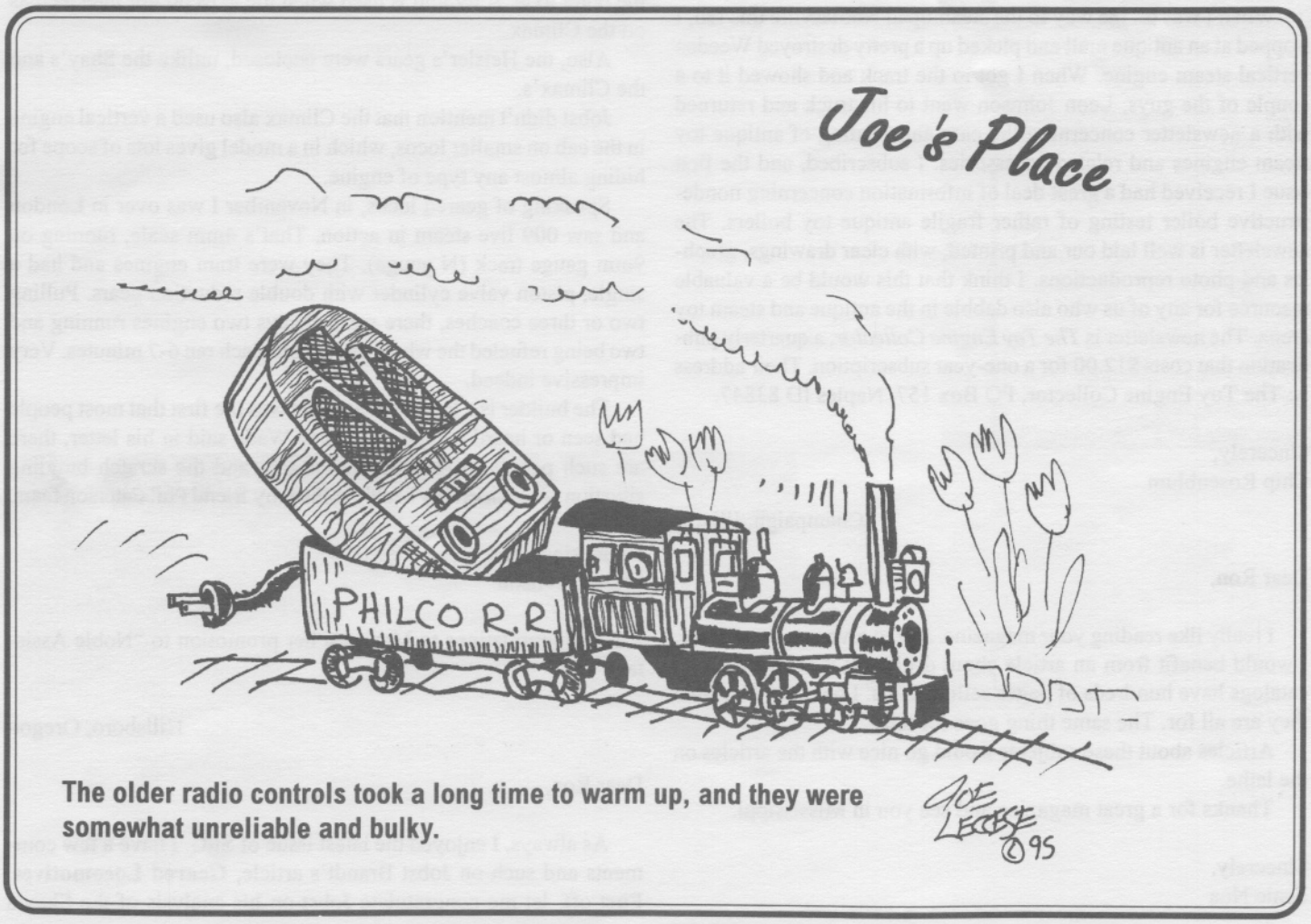


Right: HELEN, a new 2-6-0 steamer from Geoffbilt.

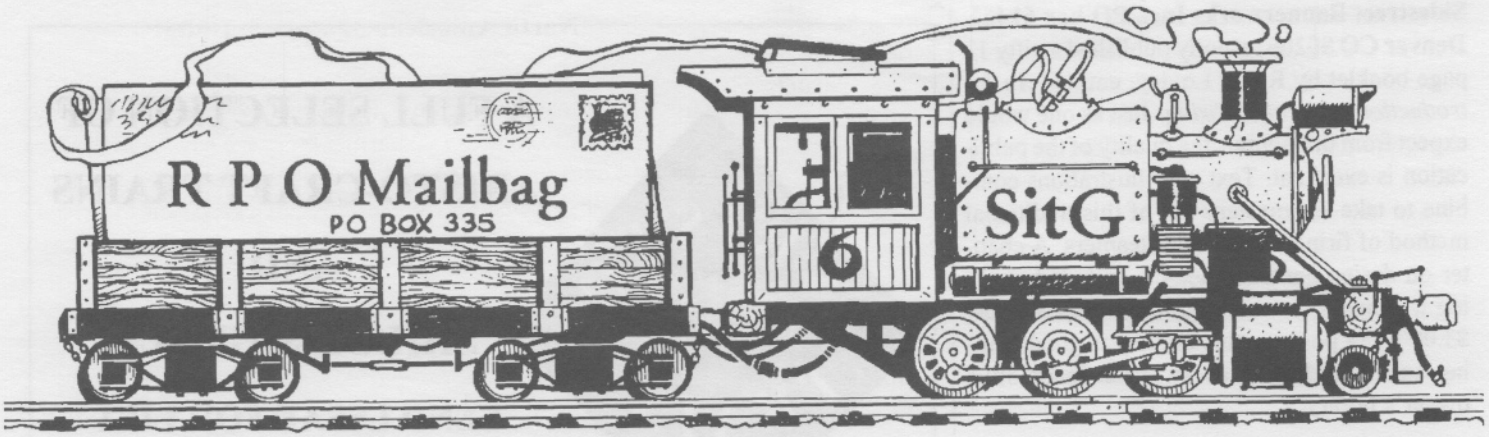
Sidestreet Bannerworks Inc., PO box 61461, Denver CO 80206 recently published a nifty 12 page booklet by Roger Loxley, entitled *An Introduction to Alcohol Firing*. Just as one would expect from this source, the quality of the publication is excellent. Text and illustrations combine to take the mystery out of this traditional method of firing small-scale steamers. A chapter on design considerations is included, making it a must for scratch builders. Priced at just $3.00 + .55 postage, this booklet is good reading and should be in every steam locomotive owner's library.

Remote Control Systems, PO Box 1118, Bayswater, Victoria 3153 Australia (for voice or fax enquiries from within North America, call 1-800-490-6945), announces their R.C.S "TITAN" Modular Add On Throttle System for track-powered railroads. Probably of more interest to the steam community is a "Mini-Titan" R/C Battery Throttle for Large Scales.





The older radio controls took a long time to warm up, and they were somewhat unreliable and bulky.



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. Some letters may be edited for length or clarity. Send your contributions to: SitG, Dept. RPO, P.O. Box 335, Newark Valley, NY 13811, USA. Letters may be edited for clarity and space considerations.

* * * * *

Columbus, Ohio

Dear Editor,

When I was on the way to the steamup at Noblesville this fall, I stopped at an antique mall and picked up a pretty destroyed Weeden vertical steam engine. When I got to the track and showed it to a couple of the guys, Leon Johnson went to his truck and returned with a newsletter concerning the care and feeding of antique toy steam engines and related accessories. I subscribed, and the first issue I received had a great deal of information concerning nondestructive boiler testing of rather fragile antique toy boilers. The newsletter is well laid our and printed, with clear drawings, graphics and photo reproductions. I think that this would be a valuable resource for any of us who also dabble in the antique and steam toy arena. The newsletter is *The Toy Engine Collector*, a quarterly publication that costs $12.00 for a one-year subscription. Their address is: The Toy Engine Collector, PO Box 157, Naples ID 83847.

Sincerely,
Chip Rosenblum

Champaign, Illinois

Dear Ron,

I really like reading your magazine. Just to give you some ideas, I would benefit from an article about drills and taps. All the tool catalogs have hundreds of pages selling drills. I have no idea what they are all for. The same thing goes for taps.

Articles about these subjects would go nice with the articles on the lathe.

Thanks for a great magazine and see you in Mississippi.

Sincerely,
Ernie Noa

Geared Loco Article Draws Comment

Swarthmore, Pennsylvania

Dear Ron,

The article by Jobst Brandt on **Geared Locomotives** *(SitG #31)* was interesting. I had not known of the Shay derailment problem, but I think there were a couple of misstatements in (the article).

The Heisler used normal bevel gears, not hypoids. The drive was always to the outermost axle of a truck, and the drive shaft came in over the inner axle and angled down to intersect the axis of the outer axle. A hypoid is used when the axes do not intersect, as on the Climax.

Also, the Heisler's gears were enclosed, unlike the Shay's and the Climax's.

Jobst didn't mention that the Climax also used a vertical engine in the cab on smaller locos, which in a model gives lots of scope for hiding almost any type of engine.

Speaking of geared locos, in November I was over in London and saw 009 live steam in action. That's 4mm scale, running on 9mm gauge track (N gauge). They were tram engines and had a single, piston valve cylinder with double reduction gears. Pulling two or three coaches, there were always two engines running and two being refueled the whole afternoon. Each ran 6-7 minutes. Very impressive indeed.

The builder is a lone wolf and this was the first that most people had seen or heard of him. As Harry Wade said in his letter, there are such people in North America too, and the scratch building situation is considerably healthier than my friend Phil Peterson fears.

Yours sincerely,
Murray Wilson

P.S. Congratulations to Marie on her promotion to "Noble Assistant" .

Hillsboro, Oregon

Dear Ron,

As always, I enjoyed the latest issue of SitG. I have a few comments and such on Jobst Brandt's article, **Geared Locomotives**. First off, let me congratulate Jobst on his analysis of the Shay's

track spreading tendency and its occasional failure to straighten out after a curve. From my experiences as first a Millwright, then a Machinist and later a Mechanical Engineer (almost 10 years of each), I know he's right. I had wondered about that slip joint some myself, but had been told that the rattling of the whole thing kept it from binding (wrong). Jobst's description of why it fails or works makes perfect sense.

Jobst is in error on one point, however. All three geared locomotives did not have exposed gears. The Heisler had the gears inside a casing, much like a car's rear end, where they were bathed in oil. This was a part of Charles Heisler's first patent of 1892, applied for in 1891 while the first locomotive was still under construction. This feature was a big selling point for the Heisler, particularly in quarry and mining operations where grit could destroy gears in short order, but also in Southern swamp logging where it was seasonally likely to be running in muddy water. With the higher fire boxes on the Climaxes and Heislers (to clear the central drive shaft) they were preferred over the Shay for deep swamp logging because they could run in much deeper water.

A note of interest: because of the higher fire boxes on the other two geared locomotives, the Shay was easier to fire. I was first told this by John T. Labbe, who has been a fireman on all three types of geared locos. Also, with the firebox being higher inside the boiler on the Heisler and Climax, it was much easier to keep water over the crown sheet on the Shay, and not blow water out of the stack, while climbing a steep grade.

Best regards,
Steven Gatke

Essex, England

Dear Ron,

Many thanks for the information on ***SitG Online*** at www.steamup.com. By happy coincidence, I have only recently installed a fax modem in my computer and when my some came home from university this weekend he couldn't wait to show me how to use it!

So I've visited the site and, even though it was still in the construction stage, I was much impressed. Up until then I didn't really believe that the "World Wide Web" actually existed other than as a figure of speech, and had no idea how easy and inexpensive it could be to access all that information at such a great distance. What would my onetime employer, Signor Guglielmo Marconi, have thought?

I also welcome the opportunity it brings to advertise my wares electronically, although at present my catalogue is configured for postal transmission. I shall have to think seriously about how to make it suitable for insertion in ***SitG Online*** and also suitable for faxing. Although it is now entirely electronic in nature, it occupies a lot of memory and takes an age to fax due to its (relatively) high resolution graphics. No doubt my computer literate son will have a few ideas to help.

And so, as yet another year draws to a close, may I wish you and Marie a peaceful Christmas and prosperous new year.

Kindest regards,
Mike Chaney

North American 32mm'ers Unite!

I've been considering expansion of my tiny 32mm (gauge 0) garden line for some time now. However, I've been in a quandary about whether to abandon 32mm and make the change to the more popular 45mm (gauge 1) so others can run on my line -- or to expand in 32mm because I prefer the diminutive gauge and the friendly little lokies that run on it more than the "wide gauge" equipment of 45mm.

Ongoing discussions with Fred Kuehl and Ron Brown convinced me not only to stay with the 32mm gauge and equipment, but also encouraged me to initiate some form of contact and discourse among other 32 millers in North America. I think we can all benefit from one another's enthusiasm and expertise and, to that end, I'd like to send to other 32 millers a survey questionnaire for them to fill out and return. I intend to distribute the compiled results to all respondents. So...if you're a full-time 32mm'er, a part-timer, or are just wistfully considering 32mm, please send me a stamped, self-addressed envelope and I'll see that you get a copy of the survey questionnaire.

Rob Kuhlman
1226 Linwood Avenue
Norristown, PA 19401-4211
USA

Hampton, New Hampshire

Dear Ron,

I have a question for the Wizard of Water Vapor, Poobah of Pressure, King of the Koal Fire, Messiah of Meths and general know-it-all of things Small Scale Live Steam.....or for any of your readers who may have some knowledge. The question is this:

I recently acquired an Aster JNR Mogul partially built kit. Since it has been languishing in places unknown for these past 20 or so years, it has acquired a light patina of rust on most exposed metal parts. Nothing that appears bad enough to stop the intended function, just a light haze of iron oxide.

Before I embark on a complete strip and rebuild of this early Aster, I would like to know what is the safest and most effective way of removing said rust? Any and all suggestions through your letters column, or posted directly to me at this address would be helpful.

It is shaping up to be an ol' fashioned New England Winter up heah in New Hampshire. The recently reformed Isle of Shoals Light Railway and Navigation Company, ex Catskill Mountain Lines, has had a tough season so far battling snows with their converted 1962 Sunbeam Tiger. Clutch slip continues to be excessive when ramming drifts unless the vehicle is doing over 60 kph (rough on the crew).

See ya in Diamond Head.

Rich Chiodo
9 Janvrin Road
Hampton, NH 03842

Rich, you should have addressed this to The Ombudsman of Oxide!

Readers, this man obviously needs help. If you have any experience with rust removers, you can send your comments to the magazine, or direct to Rich at the address above. But if he offers you a ride in the IoSLRwy snow removal vehicle -- run for your life! -- Ed

Cookham, Berkshire, U.K.

A tribute to Jack Wheldon -- a postscript

Jerry Reshew made an excellent job of conveying the flavour of Jack's contribution to the hobby in his piece in SitG No 31. However, I must apologise to Jerry and your readers because, due to a combination of my poor eyesight, bad handwriting and muddled brain, a few mistakes crept in which should be rectified to keep the record straight.

1. The caption for the photo at the top of page 24 is for another picture entirely, the locomotive which Jack is driving is his "Superbrick" and not an Alco. The gentleman at his side is certainly not Geoff Calver, but is, I think, one of Jack's Burbage neighbours with his small son. I enclose a picture of the real Geoff Calver with his Hugh Saunder's-built, coal fired Alco, which ran so well that it certainly changed Jack's opinion (and mine) about the practicality of 16mm coal firing. I also enclose a shot of the Alco at work on the elevated plank section of Jack's Border Counties Railway.

2. "Superbrick" is an 0-6-0T, but started life as an Archangel 0-4-0T. It is happily still in the Wheldon family and run by Jack's son-in-law, Bernard.

3. The station on the Border Counties Railway was unofficially named "Mutely Standing". This was a personal joke between Jack and his friend Peter Dobson.

4. The engine "Jocelyn" was named after Jack's wife, who we all know and love as Jo. This engine, like "Superbrick", is also in Bernard's safe keeping.

5. "Lupin" on page 23 is an 0-4-0T, as were all the "Pooter" class. Jack only built 8 "Pooters" and not 14 as stated in the article. Roger Loxley of Roundhouse Engineering took over responsibility for all the unbuilt engines in the order book when Jack got bogged down in 1983, and Roger built all the remaining "Pooters" to his own modified design with Hackworth valve gear.

I am fortunate enough to be the owner of "Lupin", which gets a regular run on the Ambledown Valley and other local lines. One day when I get the time and when I have a picture of each engine, I intend to write the definitive history of Jack's "Pooters".

David Pinniger

Hampton, New Hampshire

Dear Ron,

Diamondhead '96 was again the Mecca for small-scale live steam in North America. Jerry Reshew had the formula pretty well worked out for three, going on four, days of continuous action; be it running, seminars, good conversation, vendor sales, good eats, good fun and interesting people.

Anthony (the Steam Kid) and I arrived midday Friday with the event well underway. The usual parade of Asters and other hot metal objects of great value were in operation on the two-track, wide radius mainline. The inner two-track "branch line" was appropriately busy with Wrens, Pooters, Jacks, Catatonk Shays, Janes, and Crickets (two of which we brought) and some very neat scratch builts. Murray Wilson again captivated many with his running of several antique gauge 1 steamers. Charming does not capture the look, sound and feel of these tinplate jewels.

I won't attempt to give you a play-by-play roster list with driver. Hopefully someone was recording engine numbers at the end of the platform. The interesting thing this year was the greater diversity (I think) of engines. People are finding their "sweet spot", and the rush to have that Aster C&S Mogul or Roundhouse SR&RL #24 has abated. I must say, however, that the Berkeley Cricket is the '59 VW Bug of the hobby. Cute, affordable, runs well and is embraced in cult fashion. The Steam Kid has mastered these as he has mastered the Creekside Baldwin, Aster Old Faithful, Frank S., etc.

To this point we (he) claims the "Axle Record" for an unmodified Cricket running indoors. During a lull Saturday evening, while most were eating dinner, we proceeded to load up one of our orbiting Crickets on the 4' radius branch line with Aristo (or USA?) boxcars...plastic wheels and all. (We added) one boxcar at a time until the TWENTIETH (20th, XX, 1010) freight car stalled the beast. So, that's 76 axles by my count. We would welcome any challenges.

Did we have fun? What do you think?

Rich & Anthony Chiodo

Below: *Anthony Chiodo (Steam Kid) in the foreground and Richard Finlayson at one of the Diamondhead workbenches.*

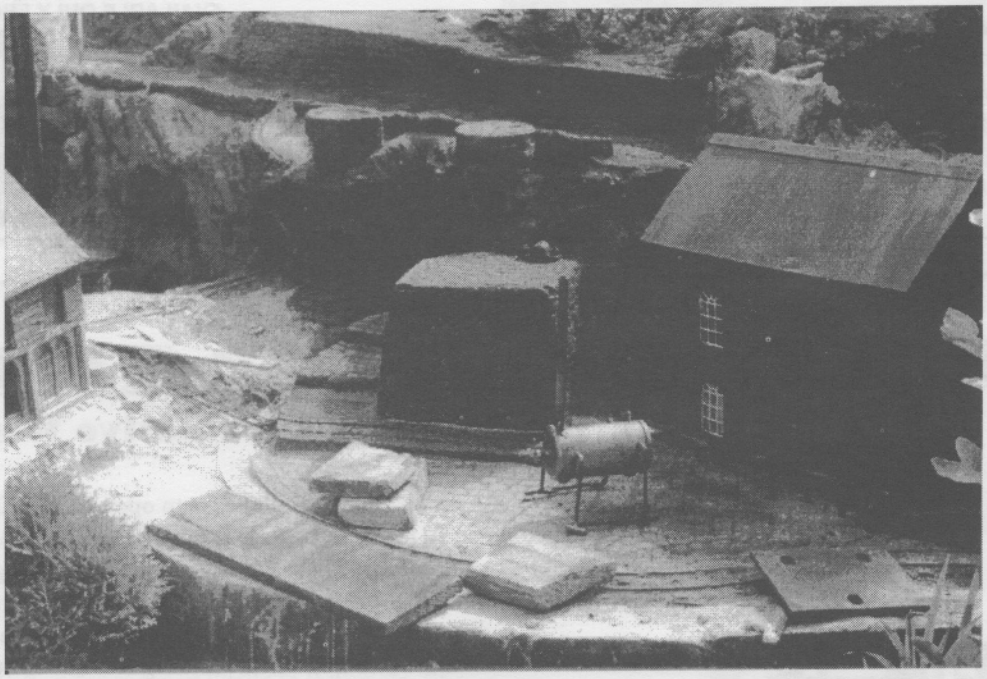
GAZING INTO THE FIRE

article & photos by Peter Jones

Steam in the garden...but not necessarily in the loco

The title of this magazine is Steam In The Garden. It isn't called Steam Railroad Engines In The Garden. On that flimsy pretext, I'm going to diverge from usual meanderings this time, to talk about interesting non- railway applications of the magic white clouds.

Some previous issues of this august periodical have not been entirely innocent of references to model steam boats. After all; there is much overlap of technology and interest. However, this subject is well catered for elsewhere. I must not waste valuable space by going over well known ground. But what I will do is to use the subject to introduce one of my odder concepts: the non-working, scenic, live steam model. Let me explain...



Above: The boiler unit in place, before a boiler house was cast around it. Note the blast furnace behind the boiler.

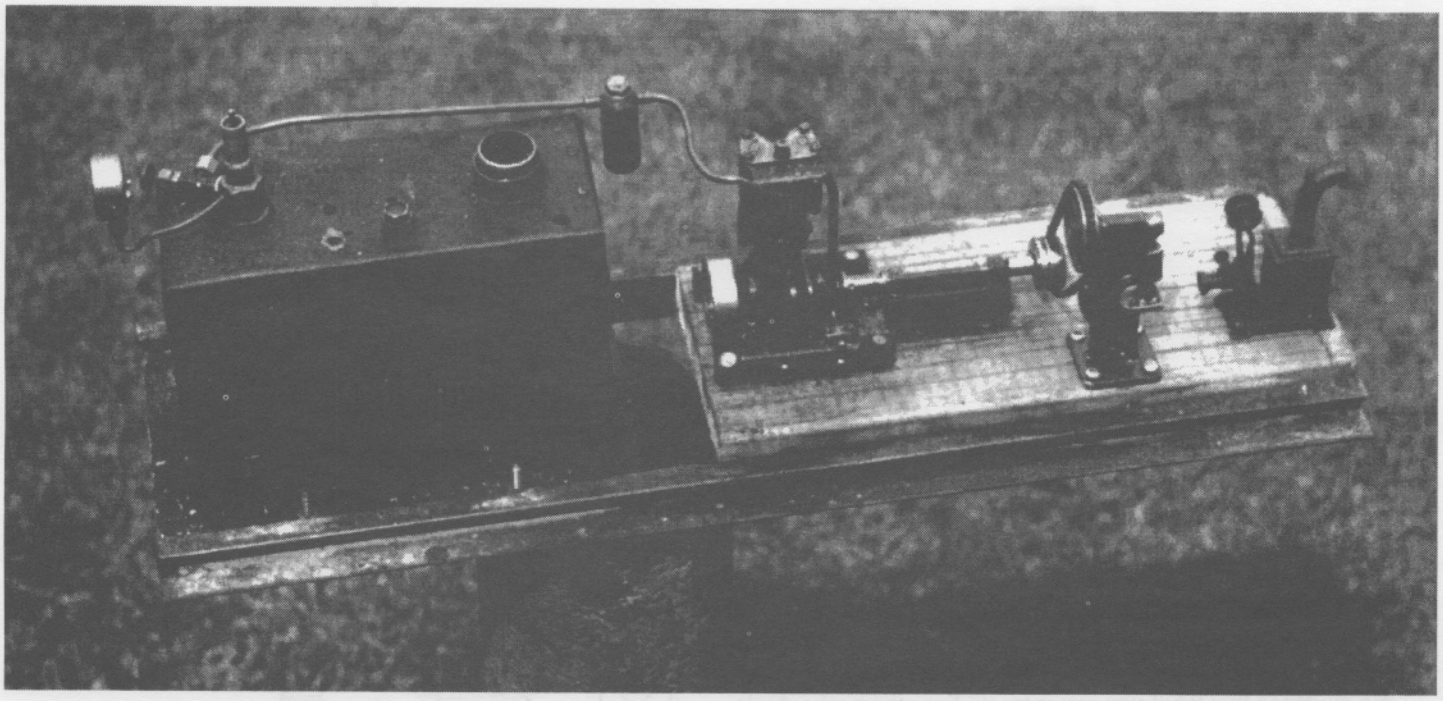
The Compton Down Railway includes a canal basin, made in fiberglass. Boats sit in the water but have nowhere to go. So it is pointless building them as fully working models, just for the sake of this little puddle of water. But what is nice is to have a steamboat bravely issuing steam from the stack. If this is the only aim, then the ambition is much simpler. All we need is a steam producer. This consists of a non-pressure boiler with a burner underneath. The fact that the boiler pressure is nil means that it can be made to a much lower specification. No fittings are needed, other than a means of filling it and a hole for the steam to come out - and these can sometimes be the same.

In such applications, I have sometimes made use of old clapped out model boilers that I wouldn't otherwise dare to use. In one case, I used the miniature boiler found in an old shower unit, with the electrics disconnected and a burner shoved underneath: as simple and as crude as that.

This principle of a steam generator boiler can be extended into model buildings. My garden railway features a Victorian iron works which includes several such features. There is a Boiler House, with walls cast and worked in concrete, into which is incorporated a boiler unit. It does nothing but issue steam from its stack for an hour at one filling, and just adds life and jollity to the scene.

The alternative to the steam generator is the smoke generator. We can dispense with the boiler altogether and just make up a large burner. A tobacco tin filled with asbestos wadding and topped with a bit of mesh will burn for an amazingly long time. Instead of using clean burning spirit, we use kerosene -- it will smoke away very nicely. If we don't want a large conflagration, laying a piece of steel plate part way across the burner cuts down the size of the fire and increases the length of burn. Such a burner can be inserted into the base of a concrete building with a suitable adjacent stack, and that chimney will smoke away nicely, cheaply, and with a lo-tech basis.

If the building is open fronted, the baccy tin can be incorporated into the building permanently. One of my buildings is a simple blacksmith's shop I sketched as a youth. The hearth is hollowed out and contains the wick material. This is topped with something like a grate as found on a coal fired model loco. Above it, the canopy and stone-built chimney perform their



Above: Basic working unit, intended to be slid into a concrete engine house.

correct functions. On top of the grate is a scattering of small pieces of coal. When lit, the fire burns merrily, casting pleasant flickering shadows onto the walls of the shop, whilst the black smoke wafts up the chimney.

I have carried the principle to further extremes in my brick kiln structures, where I not only have smoky chimneys, but can actually fire miniature bricks. The miniature technology of this is still the subject of experiment -- I still have some way to go in this direction. Another example is a model of a blast furnace, where the baccy tin is abandoned altogether. Instead, pockets have been cast into the structure for the basic wick reservoir -- again, covered with coal. To get a melting effect, I lay little strips of lead on top and this slowly trickles out as a silver stream.

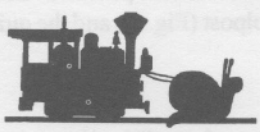
I experimented long and hard to get an air blast effect without success. I fiddled about with air blown in but, although results were encouraging, the complication of the technology seemed out of all proportion to the simple and rugged nature of the model. In the end, for demonstration purposes, I settled on just adding a fiercely burning compound to the fire (using a very long spoon!).

Mention of the working brick kiln brings me to the final category of structures: buildings which have fully working interiors, driven by steam. Now we have already mentioned the boiler house. Suppose we take that idea a stage further. How about an engine house that does a proper job? Under construction right now is a factory-like building, with sections cast in concrete. Into the large end doors will slide a boiler, which supplies a two cylinder vertical engine, which turns a selection of power tools. In this case, I have concentrated on it driving a power press. The entire working guts sit on their own sub-frame which slides in as one unit. The steam exhaust will locate under a collector funnel which leads into an outside chimney stack.

As well as the main end door, the working bits can be seen through windows and open doors. Indeed, the aim is that the power press can be demonstrated to bend strips of soft metal into rings. I decided that the best thing to do was to tackle the tricky bit first and build the working unit. This you see in the accompanying photograph. The technology is unremarkable. Any live steamer in the garden would be familiar with what is going on here.

I have to confess that, although the model is not much to look at as a free standing unit (after all, it is only designed to look good inside a building), it is a tempting lot of fun to play with as a model in its own right. The amount of alleged 'testing' it has received has, in my view, been somewhat excessive....

So welcome to the nutty world of this offbeat form of steam in the garden. It is cheap to experiment with and the modelling skills are hardly demanding. I'm sure that you could come up with your own variations. It has an appeal all of its own, which some people have found interesting. It adds life to the garden railway...to see a haze of smoke drifting from various outlets over the landscape adds an extra dimension to the scene when the mood takes, and some of the night effects are rather nice. But then, I always was a sucker for such things....



The Fitter's Bench

by Crankpin

Drawings by Harry Wade

Lathe Essentials: The Toolpost

I hope this finds all of you in the best of post-holiday season spirits and, as is the case here at Crankpin Hall, well on your way to a very prosperous new year. For Yours Truly the recent months have brought requests for my services that even at my advanced age are at levels not experienced in some years, much to my amusement and financial betterment. Consequently I find that contrary to my usual practice, the sermon for the next few issues must be as short and to the point as is possible, yet still deal fairly with the material at hand. This may come as a welcome relief for some of you who now say, "Pray do show me evidence that what you say is true!" For others who don't mind so much that I can be a bit windy, let me allay your fears, as I will no doubt make up for lost words at some point in the near future. For the moment we will continue to look at more tooling for the lathe, the center of our attention this month being the TOOLPOST.

In the conventional lathe the toolpost mounts atop the compound slide and is the holding device for cutting tools or bits. An exception to this is that in the so-called mini- lathes, and others not equipped with compound slides, the toolpost is mounted directly on the cross slide. The tool post has two principle roles, the first being to provide the structural connection which transmits the reaction forces of the cutting tool to the lathe bed. This role is satisfied when the toolpost is properly mounted on the machine and requires little more attention from you. The second function is to provide a means for adjusting to fine limits the height of the cutting tool point and its angle to the work. This is the one which does require your attention every time the position of the toolholder or bit is changed.

There are four principal styles of toolposts in general use today and all of them perform essentially the same task. The two most common styles are the Clamp (Fig. 1) which has been a favorite in Britain, and the Lantern or American style toolpost (Fig. 2). Both of these styles have been in common use in their respective countries for a great many years although I must emphasize not exclusively. In addition to these old standbys, two additional styles which have their origins in the postwar industrial world have begun to appear with increasing frequency in amateur workshops. These newcomers are the 4-way or indexing toolpost (Fig. 3), and the quick-change toolpost system (Fig. 4).

Clamp type

The Clamp style toolpost (Fig. 1) consists of a cast or forged steel bridge, roughly triangular in shape, drilled through for a drawbolt at its central point. The broad edge of the clamp nearest

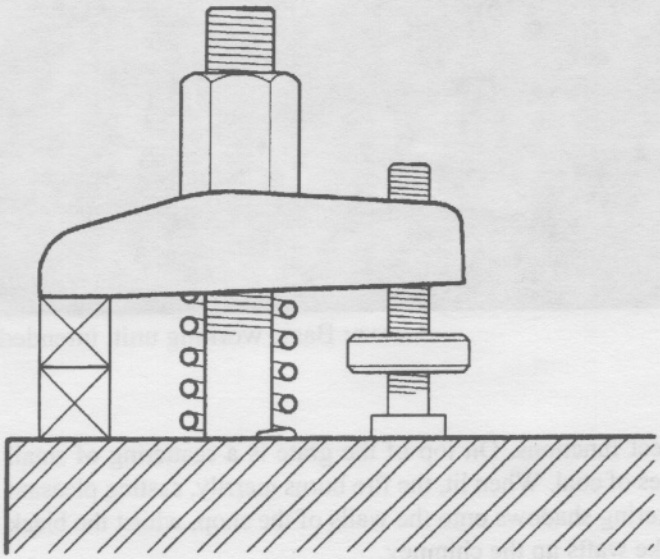


FIG. 1 CLAMP TOOLPOST

the lathe axis rests upon the tool bit or toolbit holder with some sort of adjustable packing under the bits to bring the toolpoint up to the lathe center line. The outside corner, away from the tool bit, is drilled and tapped for a jackscrew which is adjusted to equal the total height of the toolbit assembly, packing and all. When the tool point is at the correct position the drawbolt is tightened down and the toolpost is ready for action. Its primary claim is superior rigidity with average flexibility and speed of adjustment.

American style

The lantern or American style toolpost (Fig. 2) consists of the lantern which is turned from forged steel and has a central vertical slot milled clear through, an adjustable rocker or "boat", and a base ring with the upper face dished. The toolbit or holder shank is inserted through the vertical slot and rests upon the boat which in turn is nested in the ring. The tool point height is adjusted by "rocking the boat", and after the proper height and angle of the tool has been set, the screw in the top of the lantern is tightened down upon the top of the shank. Slacking the lantern screw loosens all parts for resetting or changing tool holders.

This toolpost has only average rigidity, but it has been supplied as standard equipment on most American and continental lathes for many years due to its speed and flexibility of adjustment and minimal cost. I must mention in passing that the American style toolpost was originally designed to be used with separate toolbit holders, sometimes called "Armstrong"

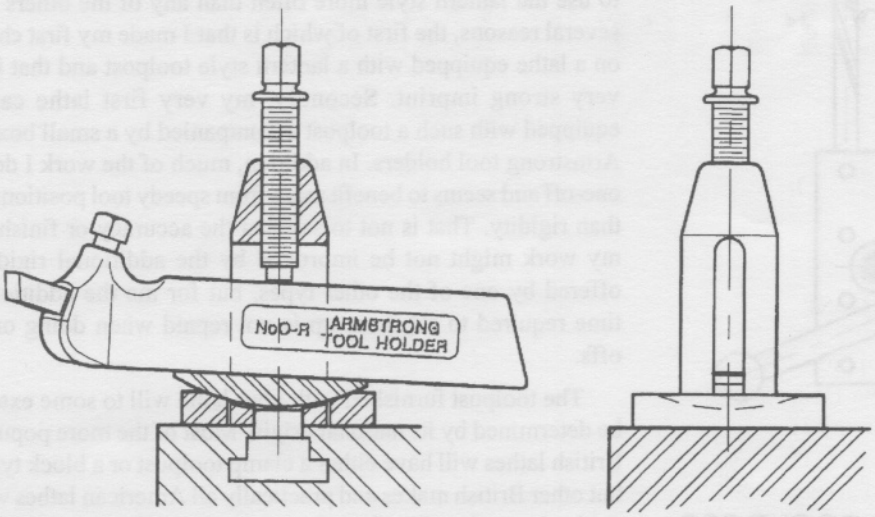


FIG. 2 LANTERN TOOLPOST

holders (Fig. 6) after one of the several toolmakers in the U.S. and the U.K. who produce these holders. They are typically drop-forged from steel and are designed to hold various shapes of tool bits at predetermined angles to the workpiece. As I mentioned in a previous paragraph, a toolpost is always

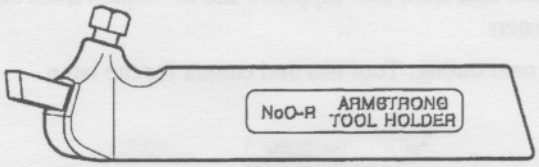


FIG. 6 "ARMSTONG" TOOLHOLDER

furnished with a new lathe but the toolbit holders are not and must be bought separately. These are never cheap when new but can usually be had used at reasonable prices. In our next episode with a description of toolbits for the lathe, I will examine these holders in a bit more detail.

4-Way

The 4-way or indexing toolpost is an attempt to combine the ability to hold multiple toolbits or holders (as many as eight) with a rapid and precise indexing feature. Indexing, for those of you who are unfamiliar with the term in the context of machine work, means the ability to stop or hold a moving component (usually revolving) at predetermined intervals to a very high degree of accuracy. The few 4-way toolposts that are familiar to me are made with a system of precisely located detent stops built into a swivelling base. When the clamping handle is slacked a spring lifts the turret off the detents, allowing it to be indexed (rotated) 360 degrees in increments of 15 to 30 degrees and allowing the machinist the ability to present up to four different tool bits to the workpiece at from 12 to 24 different precisely controlled angles.

The 4-way has superior rigidity and average flexibility but alas has poor adjustment characteristics. The reason for this is that each toolbit or holder is individually mounted in the channels along the side of the tool post body and each one must be individually shimmed to the correct cutter height before being clamped in. However, once properly set up I find the 4-way to be indispensable for work which requires speedy, accurate, repetitive positioning of several differently shaped tool bits or cutters.

Quick-change

The quick-change toolpost (Fig. 4) is the next developmental step beyond the 4-way indexing toolpost. A relative newcomer in the home workshop, it is a product of industrial machine technology and is presently available only for lathes of around 5" center height or larger, although Myford (U.K.) offers a quick change toolpost in its range of tooling for the ML-7 and Super-7 lathes of 3.5" centers. Each system consists of a central toolpost column which has vertical ribs or dovetails machined into its sides and contains a clamping mechanism which is actuated by a lever on the top of the column. Separate adjustable toolholders slide down over the ribs on the column sides, either singly or in combination. This relationship can be seen in Fig. 4, which is the top view of a typical quick-change toolpost assembly.

These systems have a number of appealing features such as extreme accuracy, excellent rigidity and, as their name implies, can be changed from tool to tool very quickly. Although there are several different variations of design, in an uncharacteristic stroke of marketing genius the more established manufacturers standardized their interlocking components so that their toolholders are interchangeable. Early on, one of the negative aspects of the quick-change system was its cost, which could and still can be considerable depending upon the number

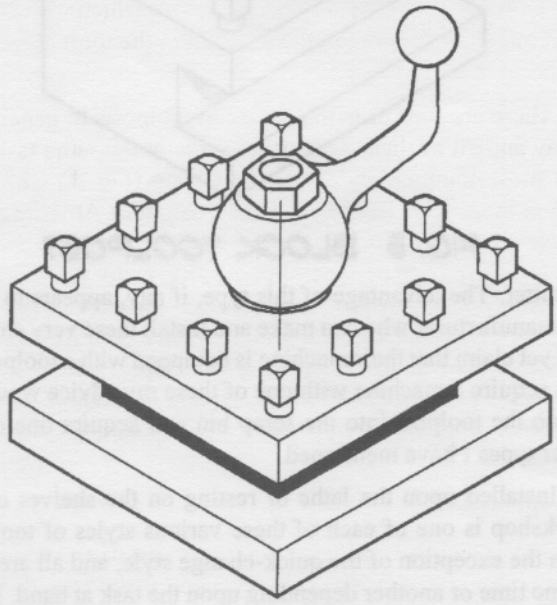


FIG. 3 4-WAY INDEXING

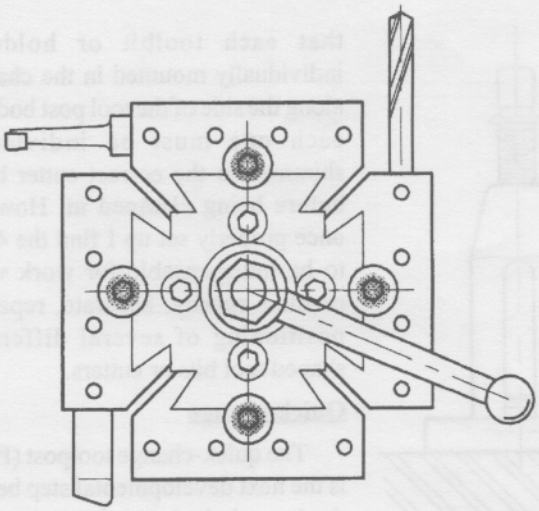


FIG. 4 QUICK CHANGE TOOLPOST

of tool holders and fittings one adds to the system. However, inexpensive quick change systems are now becoming available and in the future will no doubt appear with increased frequency in the home workshop.

Another toolpost that can be found furnished as standard equipment on many new lathes these days is the block style. (Fig. 5) It is, just as its name implies, a simple block, usually of steel, with one single toolholder channel milled along one side. The toolbits must be shimmed and clamped into this toolpost in the same way as the 4-way. Other than superior rigidity, this one has little to offer the average user since it has the same poor adjustability as the 4-way and is able to hold but one tool

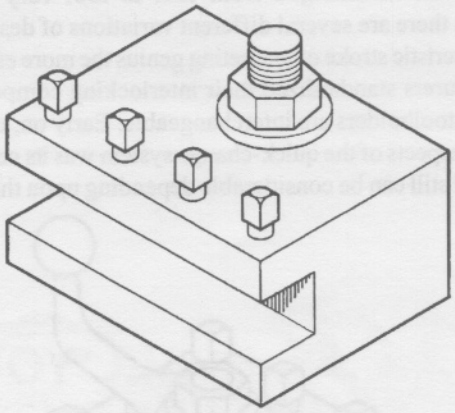


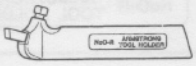
FIG. 5 BLOCK TOOLPOST

or cutter. The advantage of this type, if any, appears to be to the manufacturer who can make and install these very cheaply and yet claim that their machine is equipped with a toolpost. If you acquire a machine with one of these my advice would be to lob the toolpost into the scrap bin and acquire one of the other types I have mentioned.

Installed upon the lathe or resting on the shelves of my workshop is one of each of these various styles of toolpost, with the exception of the quick-change style, and all are used at one time or another depending upon the task at hand. I tend to use the lantern style more often than any of the others for several reasons, the first of which is that I made my first chips on a lathe equipped with a lantern style toolpost and that is a very strong imprint. Secondly, my very first lathe came equipped with such a toolpost accompanied by a small box of Armstrong tool holders. In addition, much of the work I do is one-off and seems to benefit more from speedy tool positioning than rigidity. That is not to say that the accuracy or finish of my work might not be improved by the additional rigidity offered by one of the other types, but for me the additional time required to set these up is not repaid when doing one-offs.

The toolpost furnished with your lathe will to some extent be determined by its national origin. Most of the more popular British lathes will have either a clamp toolpost or a block type, but other British makes and practically all American lathes will tend to be equipped with the lantern style. Lathes from Europe and the Far East lately appear to have adapted some form of the indexing or 4-way tool post as a part of their tooling packages, yet again there is no hard and fast rule and these may be found furnished with any one of the basic toolposts I have mentioned today. It is probable that whatever toolpost is furnished with your lathe will be adequate for most needs and you should not reject an otherwise good bargain in a used lathe if it is found to be without a toolpost as these can be had at reasonable cost from tool suppliers and as surplus from other lathe owners.

Our next outing: Tool bits and cutters for the lathe.



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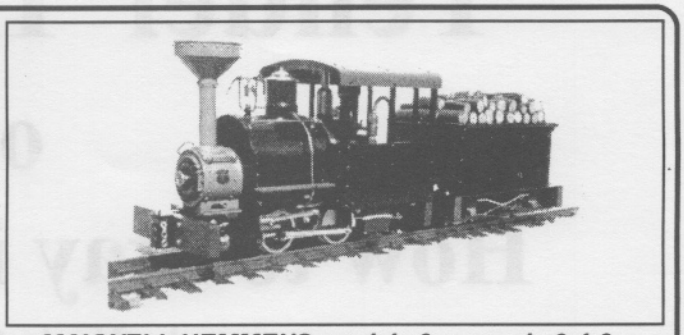

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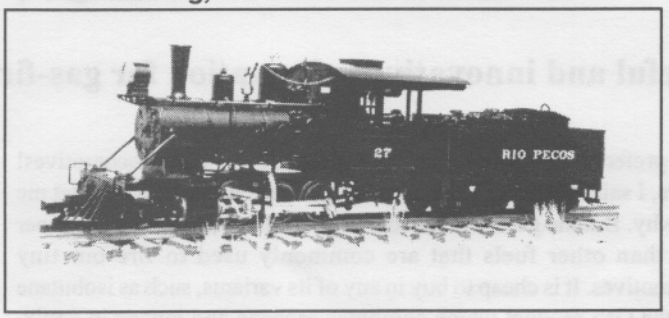

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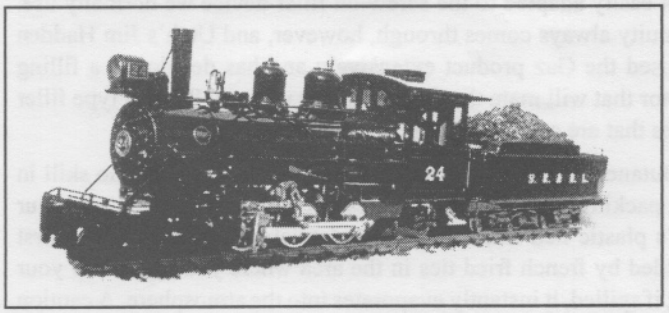

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Tender Treatment
or
How to Stay in Hot Water

by Kevin O'Connor
drawings by Harry Wade

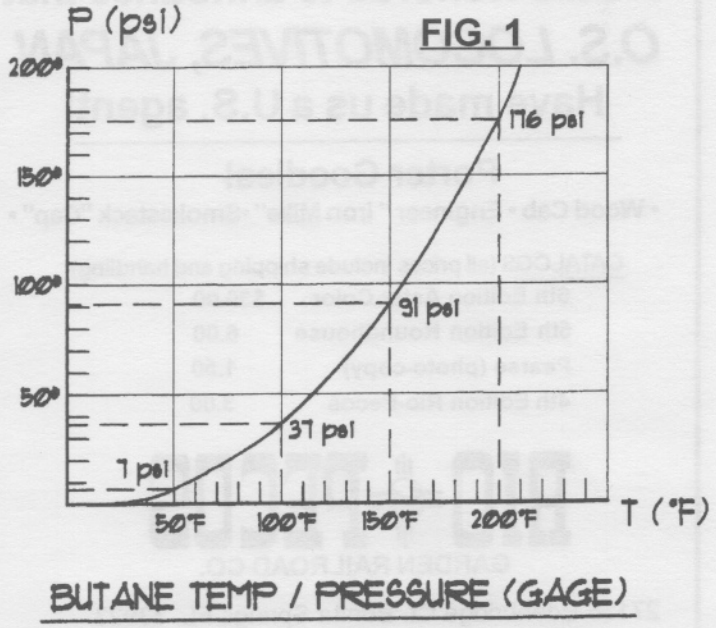
Useful and innovative information for gas-fired steamers

I prefer butane gas as a fuel for small scale live steam locomotives! There, I said it out loud, and before someone takes me to task, let me say why. Butane gas contains lots of potential heat energy; more per unit than other fuels that are commonly used to fire our tiny locomotives. It is cheap to buy in any of its variants, such as isobutane and the Gaz product which combines propane and butane in a mix. Most of the isobutane containers are made to order for our use, though the Gaz container does not have a threaded attachment point and thus is not easily adapted to the screw-on filler device we normally use. Ingenuity always comes through, however, and Utah's Jim Hadden has used the Gaz product extensively and has developed a filling adaptor that will mate the Gaz container with the Ronson type filler valves that are commonly used on our fuel tanks.

Butane is an excellent fuel for beginners. It requires no skill in wick packing and trimming. It does not leak as a fluid all over your host's plastic tied track with the potential of an invisible fire first heralded by french fried ties in the area where you topped up your tank; if spilled, it instantly evaporates into the atmosphere. A caution here: Marc Horowitz once said that he fueled a butane fired locomotive at ground level on a windless day in a slight depression while wearing shorts. As he lit the locomotive's burner, a vapor cloud that had formed in the depression from a slight liquid spill ignited and he was instantly relieved of the fur on his legs. He did not relate just how tall the vapor cloud was.

Butane beats out coal in my book too. Proper quality coal is hard to get (real railroads had the same problem). It is messy to crush into the bite sized pieces that are required in a tiny firebox, and the cleanup at the end of a steaming session is monumental. I have cleaned my share of fire tube boilers in a former life and I care not to inhale that dust again.

Aside from the "spill in the depression" issue, butane has a problem that affects its use as a year round fuel. It is a low vapor pressure liquid gas, and as such is very sensitive to changes in ambient temperature with regard to its pressure at the burner nozzle. I am including a chart (**FIG. 1**) that shows the relationship of butane gas vapor pressure to ambient temperature. One can easily see that as temperature varies through the ranges that we commonly operate in (45 to 100 degrees where I live), vapor pressure can change dramatically. This presents a real problem to the orifice in our butane burner.



This orifice is sized by the boiler designer to deliver so many British Thermal Units (BTUs) at say 68 to 72 degrees Fahrenheit. There is probably a performance factor of 50 to 100 percent built into the base BTU requirement, and this is modulated by the butane gas control valve. This is all Jim Dandy as long as the butane gas tank pressure stays near the design temperature, but there are two bugaboos that sneak into the equation. One is the seasonal change in the ambient temperature and the other has to do with the heat of vaporization required in order to boil off the butane gas from the butane liquid. We're not going to slip into rocket science here; suffice it to say that it takes energy to cause the butane liquid to change phase into butane gas, and that energy is absorbed from the atmosphere surrounding the butane liquid tank with the result that, be it air or water, it gets cold. Since water is denser than air it has more heat to give up to the butane gas tank so the process of the butane's vapor pressure dropping is slower than if air surrounded the butane gas tank.

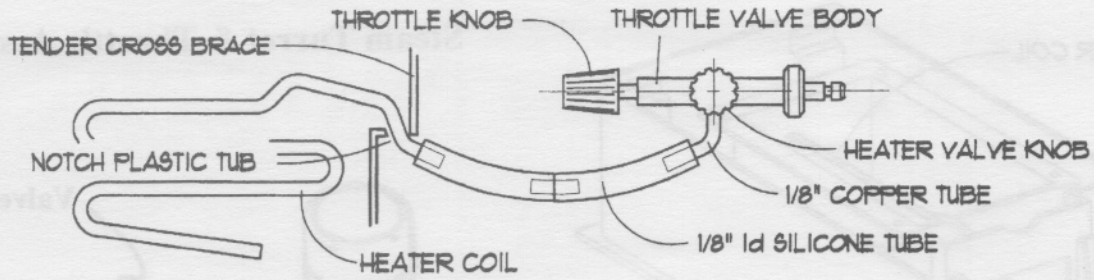
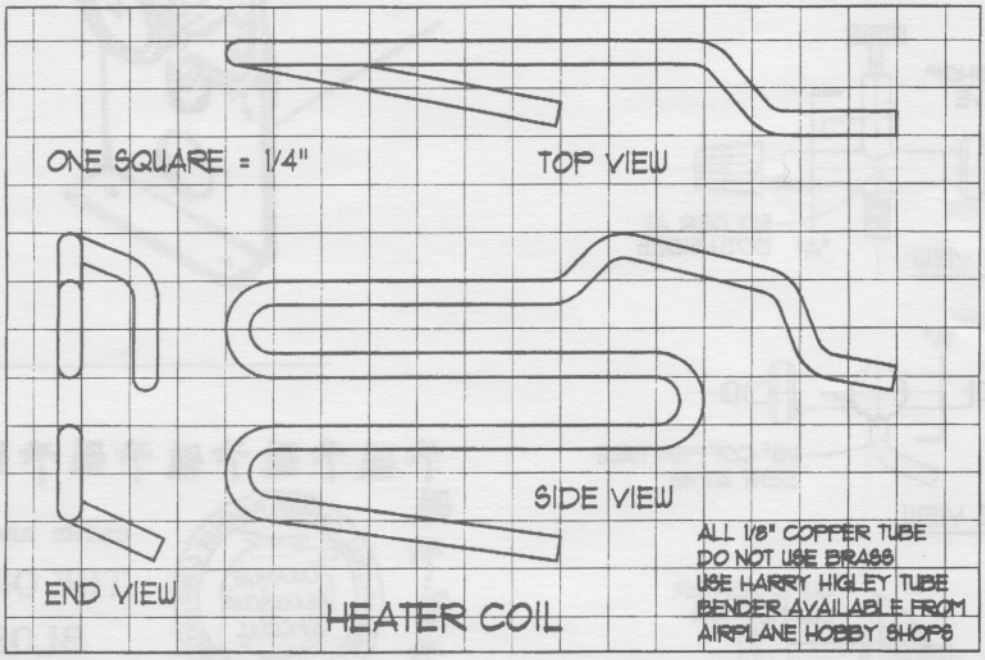


FIG. 2

There are all sorts of conditions that mitigate this phenomena. Tank engines with the butane gas tank near the burner/boiler don't have the problem of low butane gas pressure, but you have to wait till the whole locomotive assembly cools to refill the butane gas container. This is caused by the internal pressure of the locomotives butane gas tank being higher than that of the refilling container due to the fact that the butane gas tank has absorbed heat energy from the locomotive during the run. Locomotives that have axle pumps with bypass and check valves leak some heated boiler water back to the tender and this tends to keep necessary warmth in the boiler makeup water which surrounds the butane gas tank and the manual boiler feed water pump (Aster K4s).



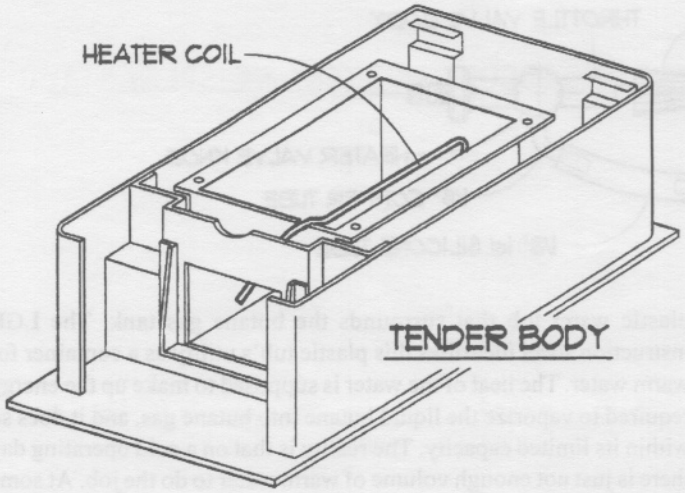
Having said all this, let us get to the point of this infoblurb. Frank S. is, in my opinion (green as it is) an excellent locomotive for rank beginners. It was my first introduction to small scale live steam and I still love it. It has, to my mind, two drawbacks. One is that there is no way to add makeup boiler water as designed. This can be alleviated by adding a Goodall-type boiler fill valve in place of the stock boiler water fill screw plug and, using the nifty plastic hand pump that is available from Bob Paule at Sulphur Springs Steam Models, to add water periodically during the run. My feeling is that the boiler flue tube should always be covered by water and this is an excellent way to do so. It is cheap boiler life insurance. My Frank S. has an axle pump, but that is too much of an expense when a Goodall-type valve will do the same thing for less than twenty bucks. I am currently fooling with another approach to supply boiler makeup water, and if it works out I'll write about it another time.

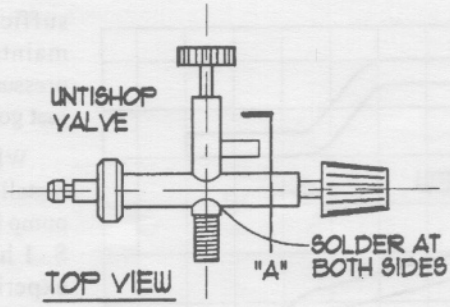
The other serious drawback to Frank S. is that its butane gas storage tank is located in the trailing tender where it is insulated from boiler/burner heat energy. Since Frank S. has no axle pump or bypass/check valves, there is no leakage of hot boiler water back to the little plastic water tub that surrounds the butane gas tank. The LGB instruction sheet identifies this plastic tub's utility as a container for warm water. The heat of the water is supposed to make up the energy required to vaporize the liquid butane into butane gas, and it does so within its limited capacity. The reality is that on a cold operating day there is just not enough volume of warm water to do the job. At some time during the run the butane gas pressure drops to the point where the fire is not sufficient to maintain boiler pressure or the fire just goes out.

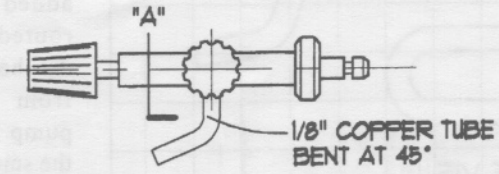
When I installed the axle pump in my Frank S. I had already experienced this problem and I added a fix. I routed the discharge line from the axle pump forward to the smokebox and then back to the aft tube sheet through the boiler flue. This preheated the boiler makeup water and insured that there would be a supply of warm water to the tub surrounding the tender butane gas tank via the leakoff valve. This system worked out OK, but it needed an axle pump to work; I wanted an easier, cheaper, way to heat the butane gas tank.

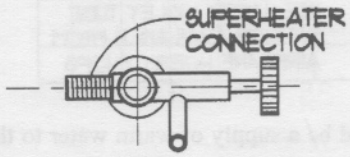
After thinking on the problem for a while I decided to take advantage of the configuration of the throttle valve assembly. The throttle assembly is constructed so that the steam pressure discharge to the superheater is midway along the valve body between the valve seat and the O-ring that seals the operating end of the valve stem. Steam, under boiler pressure, passes through the open valve seat, and through the clearance passage between the valve body and the valve spindle. If another valve was mated up with the valve body just across from the superheater outlet, a supply of steam would be available for use (FIG. 2). What this meant was that a steam source was available to supply heat energy to the water tub in the tender and that it would only operate when the steam throttle was open. From the point of view of steam and fuel economy this was an ideal setup.

I have included a set of drawings that show the nuts and bolts of the steam loop. For those who do not want to use a valve to meter the



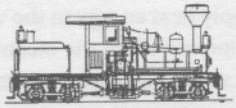




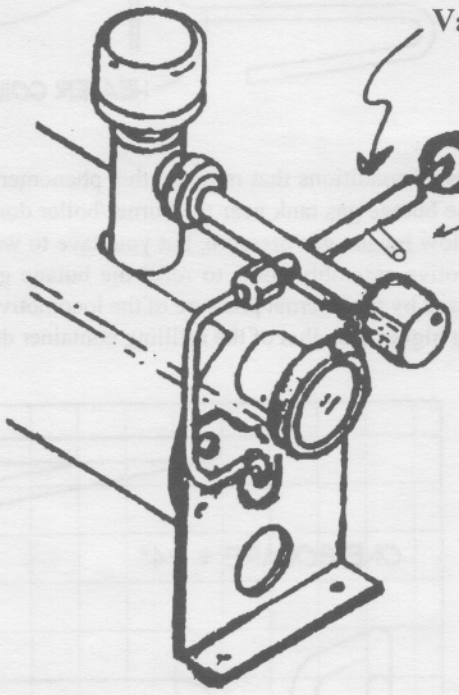


steam supply to the loop an .008 diameter orifice in a copper elbow will do the job just fine. I have a selfish motive in pushing the valve controlled approach as it is part of kit that I sell through "S" Street Unit Shop, but you can adapt any small valve to do the job. The drawback with the orifice is that you can't just twist the handle and blow it out; you have to poke it from the wrong side to clear it.

As always, if you have any questions, please feel free to drop me a line at PO Box 161631, Sacramento, CA 95816-1631.



Steam Turret & Throttle Assy. Detail



R/C Tips & Hints

Product Review: SAM-2 Servo Smoother
Size: 1.375" x 0.7" x .375"
Price: £29.95 standard model, £39.50 Autohold model
Available from: BRIAN JONES, Dept. SitG, Kingsley Lodge, School Lane, Raithby, Spilsby, Lincolnshire PE23 4DS, ENGLAND Phone/Fax 011-441-790-752042

What is a SAM-2? A special guided missile? No, it's an electronic de-glitcher for radio control. Oh boy, is this what we all have been hoping and waiting for to end our glitching problems? Yes.....and no. Read on!

The SAM-2 comes in a neat little package that connects between the radio receiver and servo. The wiring on our test sample is compatible with Futaba equipment, but the SAM-2 can be ordered with plugs for most popular brands.

Let's see what SAM-2 will do for us. We have had a particularly serious glitching problem with one of our locomotives. It was equipped with 27mhz AM radio, and we tried all the usual tricks, (i.e., insulating the drawbar, Deans base-loaded whip antenna, insulated bushings for the tender axles). This all helped a little, but the locomotive was still uncontrollable by R/C.

The next step was to install a 75mhz FM radio. Glitching problems disappeared, and the locomotive is now controllable by R/C, any place and any time.

So, going with the worst-case scenario, we put the 27mhz radio back in the loco and installed the SAM-2. Here are the results of our testing.

SAM-2 has three separate levels of suppression available, from low suppression to high suppression. Each level of suppression slows down the servo response further, to reduce or eliminate the wild oscillations of the servo from one extreme to the other as "glitches", or spurious signals, in our case usually generated by metal wheels on metal rails, confuse the receiver and cause it to send inaccurate information to the servo. The additional time gained by slowing down the servo response gives the receiver time to correct the information being sent to the servo.

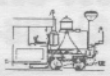
The first test was conducted with SAM-2 set on low suppression, and the locomotive was still uncontrollable.

We moved up to the second level of suppression (quickly and easily done by following the supplied instructions) and it helped some, but we noticed a slight lag in control response at this setting.

The last test was done in the high suppression setting, and the glitches are totally gone. Hallelujah! Is this the answer to our problems? Well...maybe. We found that, although the glitches were eliminated, we now had a slow servo response. Kind of like a "momentum" setting on the controller of an electric train. The slow response time, or "momentum effect", works fine when starting up, however, it can be somewhat alarming when you move the throttle to a slower speed setting and the locomotive does not respond immediately. This could take some getting used to!

Bottom line? SAM-2 is a neat little package *(A 2-channel version, of SAM, with Autohold and independent suppression setting for each channel, just became available as this issue goes to press. The size of the 2-channel module is exactly the same as the 1-channel unit tested, and the price is £49.50. -- ed)*, and is easily installed, easily set up, and it does remove the glitches. With regular use, one could get used to the slow response time.....and maybe even enjoy the "momentum effect". If you have glitching problems that you have not been able to solve, the SAM-2 is worth a try.

Bob Osterhoudt



Locomotive Review -- Brandbright Engineering's "Jane"

by Tag Gorton

Technical Specifications

Scale: 16mm/G scale

Gauge: 32mm (gauge 0) or 45mm (Gauge 1)

Dimensions: Length 202mm (excluding couplings) -- Width 91mm -- Height 123mm

Color: Green or Maroon -- boiler, smokebox and chassis are black, buffer beams red

Firing: Alcohol fired "potboiler" -- firebox within the tanks

Duration: 25 minutes (approx.) Fuel and water can be refilled whilst in steam

Mechanical Features: Proper sight glass, boiler fill valve, safety valve, displacement lubricator (draining below the sidetank) and backhead mounted regulator

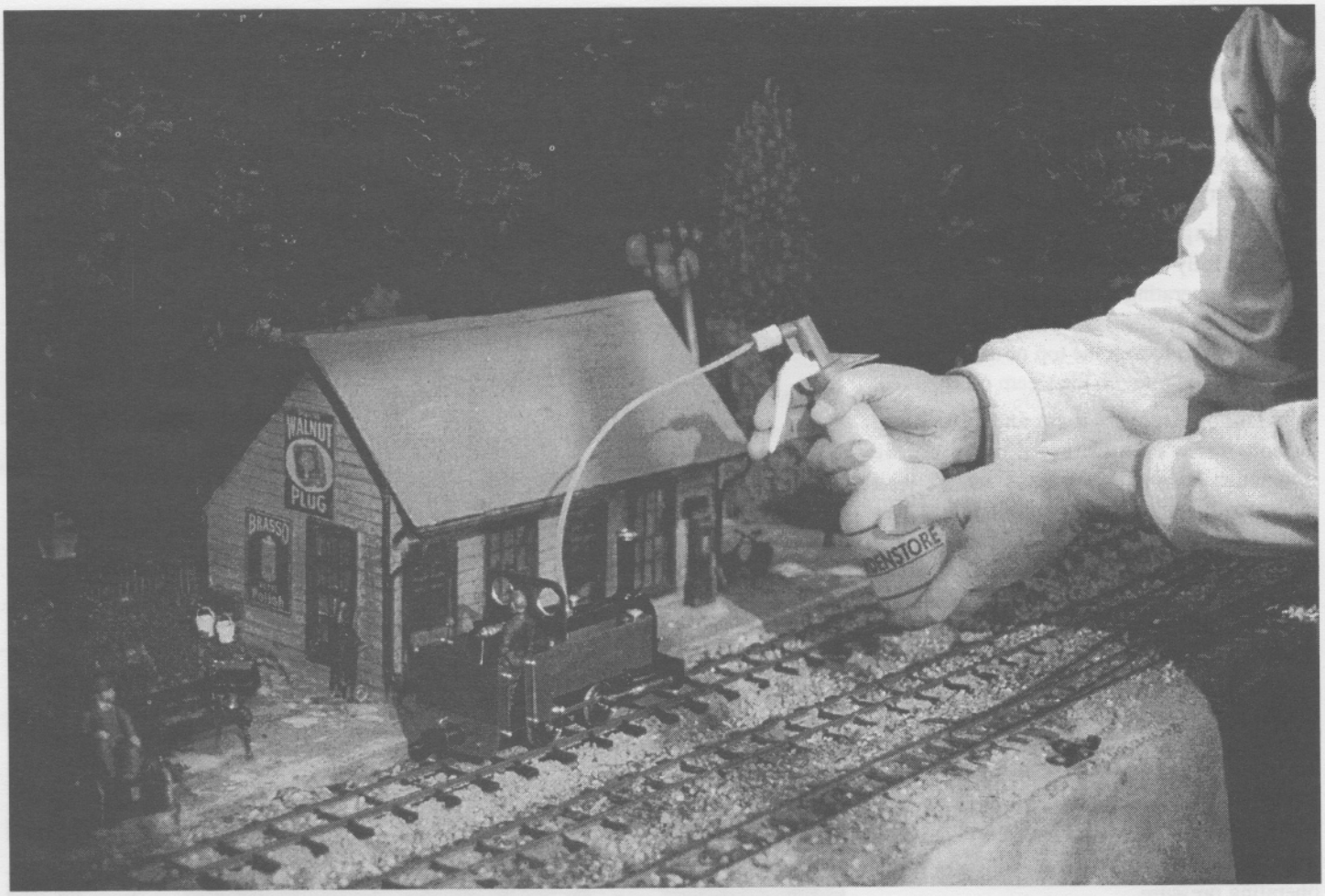
Cylinders: 10mm bore, 16mm stroke

Valve gear: Oscillating cylinders reversed by rotary valve

Couplings: Solid centre buffer or loop couplings

Control: Manual

Price: £199 in U.K., $299 in USA



Above: Pausing at Longlands station to replenish water whilst in steam. The "hoselock" bottle is far easier to use than the syringe supplied. The fuel tank below the cab floor is recharged with a small syringe. This docile locomotive is very responsive to the regulator and provides remarkably slow running.

Opposite page, bottom: "Jane" is ready for action with a full head of steam in Longlands Station.

Those amongst us with more than a passing interest in live steam will have heard of the Mamod. This is basically a steam toy, and has been for many years regarded as a cheap way into live steam. Unfortunately, even when improved the Mamod is generally a disappointment to those of us who wish to do more than run a steam engine round an oval of track for five minutes. Nevertheless, the engine could be regarded as a starting point, and a garden railway cottage industry supplied parts and fittings to improve and customise the basic product. With a bit of effort they can certainly be made to look very nice indeed, and run quite well.

I have one myself to which I have added a proper regulator, a meths burner, a displacement lubricator and various cosmetic improvements. I stopped improving when I realised that, over the months, I had spent well over two hundred pounds!

While this sum included the purchase price of my secondhand Mamod, at the end of the day I was still left with an unreliable, lightly engineered product having a soft soldered, low pressure boiler with a very narrow power band. The loco is currently in the shops awaiting replacement of the quickly worn out Mamod wheel-sets.

Lets see, then, why I am so impressed with this particular product. "Jane" is an attractive little 0-4-0 side tank with nicely finished platework having some rivet detail and shiny brass fittings. With its curve top spectacle plate one might expect to see this sort of loco beavering away in a quarry or being operated on early narrow gauge lines by a driver with a fierce Victorian beard! The general outline is recognisably similar to Mamod and the locomotive is powered by oscillating cylinders, but here the resemblance ends.

The silver soldered, high pressure boiler is externally meths fired with the burners protected in a firebox within the sidetanks. A steam turret rises in the cab, supporting the regulator and safety valve, there is a boiler fill valve and, very surprisingly, a proper sight glass. I have to say that there are locomotives approaching the $3000 price point that do not boast this particular fitting. This combination of boiler fill non-return valve and sight glass means that even the inexperienced engine driver may keep "Jane" in steam continuously - of which more anon.

The other fitting located in the cab and tucked neatly behind the side sheet is a proper displacement lubricator. This drains daintily below the sidetank, thereby keeping the footplate clean, which is

another feature generally found on more expensive engines. The alcohol burner is slung between the frames with a brass capped filling hole on the cab floor. The oscillating cylinders are fitted with "0" rings both on the pistons and the rods, and drive heavy, quality, turned steel drivers.

Steaming the loco is a fairly simple operation fully covered with text and drawings in the neat operating manual supplied. No tools are required, though one may need a screwdriver to loosen the top of the lubricator before charging it with the steam oil supplied.

Alcohol fired engines, and also those without radio control, are a rarity on the Longlands & Western Railway which, with gradients, tunnels and overhanging trees, was designed from the beginning with radio control in mind. It is perfectly possible to run manually controlled engines on the line, but a prerequisite of tractability is required. A low pressure locomotive with a narrow power band requires a level line with large radius curves and a twelve inches to the foot driver nearby! I am getting to the age when the thought of leaping nimbly across the 16mm landscape to chase an errant steam locomotive is beginning to lose its attraction, and it was therefore with some trepidation that I waited for "Jane" to reach operating pressure.

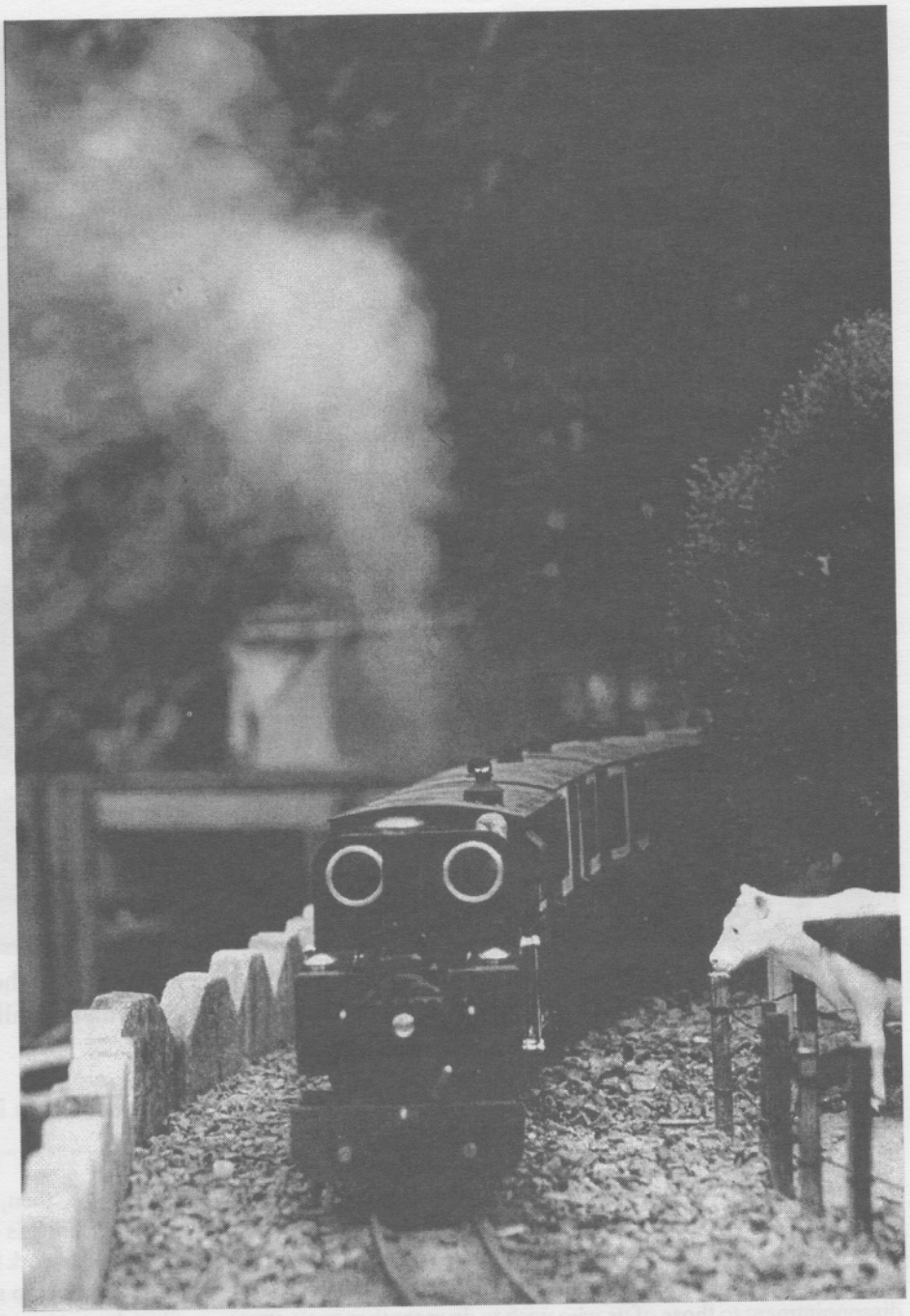
As the safety valve started to blow I put the engine into reverse gear, opened the regulator and stood ready to catch the engine if it showed any predilection to skittishness. I was agreeably surprised to find that this little locomotive was able to proceed sedately, neither running away or stalling, and I shut the regulator as "Jane" kissed the buffers of her train waiting in Longlands station.

The fuel tank was topped up and, after putting "Jane" into forward gear, the regulator was opened and the mixed train drew away. Setting the regulator to obtain a realistic speed, I did not expect this comparatively inexpensive motive power to negotiate Trematon bank with a heavy train, and therefore stationed myself beside the track to open the regulator as required. The little loco slowed as it felt the gradient, but then the exhaust sharpened and the train proceeded steadily up the bank at little more than a scale walking pace. I have to say that I was delighted, more particularly as "Jane" did not run away after cresting the summit, but trundled sedately down the grade through Trematon tunnel before tackling the reverse curves in the cutting.

I am very fond of my little railway! Nevertheless it has to be said that it is something of a test piece for locomotives. In the best tradition of narrow gauge lines built on the cheap, there are sharp, checkrailed curves and sections of fierce gradient. Radio control of course means that the regulator may be opened or closed from afar to traverse the line, but manual locomotives, particularly from the cheaper end of the market, are apt to require alterations of regulator setting from the lineside.

This tractable young lady experienced no trouble at all piloting a comparatively heavy train at a scale speed throughout, and I settled down to enjoy the sight and sound of a well fettled steam engine running through scale scenery.

"Jane" has an open cab and it was a simple matter to shut the regulator as the train plodded through the platform road at Trematon. The gauge glass was halfway down and I recharged the fuel tank



Above: "Jane" in full cry passing a herd of interested bovines on Graham Wilkins' South Hams Light Railway.

before injecting water into the boiler. As supplied the locomotive comes with a syringe for this operation. It is perfectly possible to fill the boiler against the pressure using the syringe, but a cheap optional extra is the "hoselock" bottle as used in garden sprays *(see photo)*, which makes this operation much more relaxing. With the water in the gauge near the top of the glass, a few seconds saw the safety valve blow, and after this brief station stop "Jane" was ready for action again.

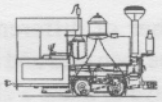
It is perfectly possible to leave this engine in steam all day. The displacement lubricator will need to be charged every forty five minutes or so but, again, this operation can be conducted while the loco is in steam. This is a very relaxing engine to run and I am hard put to find something to complain about. Perhaps my only gripe is that the brass cap over the meths filler is fiddlesome to replace when the engine is hot, although I understand that this will be changed on later models. If "Jane" were mine I would extend a filling tube from the tank to alongside the side sheet to make this operation easier.

I believe that at this price point the locomotive will see the start of a new "sub-hobby" with modified versions being produced by enthusiastic owners and perhaps competitions being held to find the most ingenious conversion. Certainly even now there are many cosmetic modifications produced for the Mamod which can be utilised. If, for instance, the oscillating cylinders offend, then cylinder covers from Salem Steam Models will serve to improve the look of "Jane" whilst running, and the same concern will also provide a suitable tender for under twenty pounds if required. I do know that parts are available to Americanise the Mamod loco and I'm sure many of these will be usable for "Jane".

There is also no reason why this little engine should not be radio controlled using the space available in a tender, but personally I think "Jane" is so tractable and the cab controls so accessible that to add radio would spoil some of the joy of driving!

For many years manufacturers have been trying to produce cheap steam motive power that functions well and is a pleasure to run. I have to say that I.P. Engineering/Brandbright (with whom of course I have no connection at all) have succeeded very well indeed.

If you want a budget steam locomotive that is reliable, a pleasure to run and can hold its own with far more expensive products - then buy this engine! I can put it no more clearly than that.



Americanizing the Lady

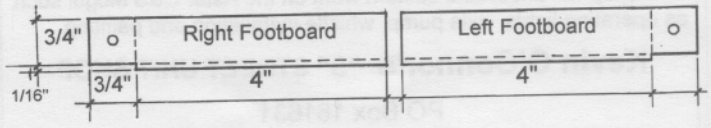
Part IV (conclusion) of a Series

by Don Beach

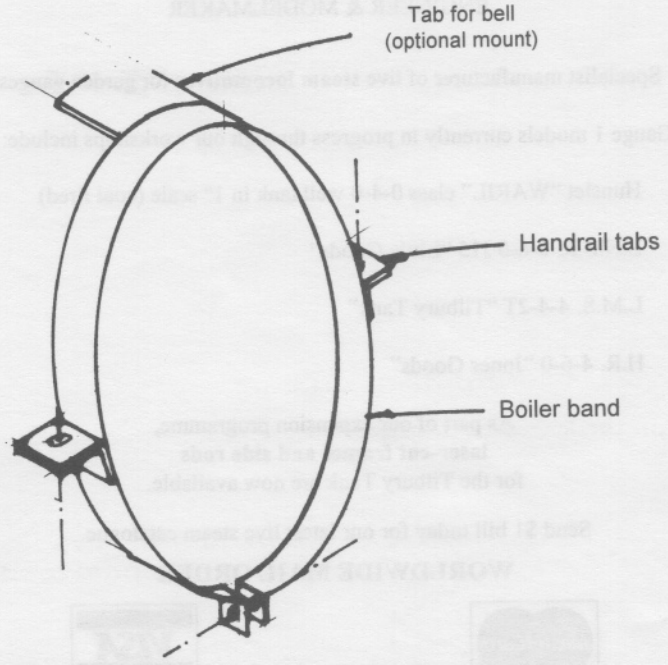
drawings from Don's original sketches by Harry Wade

Adding details, a tender and radio control

Detailing is a personal pursuit for most modelers. How much you add to your conversion depends on how fussy you are. I think that the bare minimum would be the addition of a sand dome, bell, headlight, handrails and footboards. I have listed those parts that were used on MARGARET, but of course each individual should make these decisions for him/herself.



Do not mount the footboards until you have done most of the detail work relating to the boiler. It is very hard to reach the little nuts and bolts that fasten the boiler bands under the boiler with the footboards in place. The locations of the bell, steam dome and the sand dome really are at your discretion. Most locos have the steam dome towards the cab and the sand dome mounted somewhere



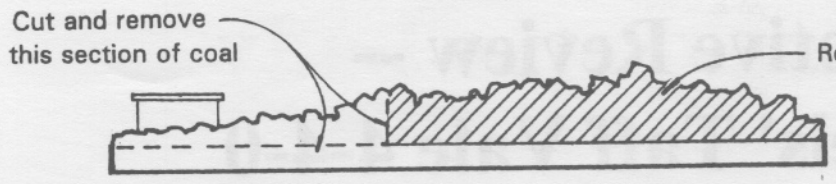
forward so that the sand can be routed to the driving wheels in a fairly direct route. The bell is put where there is space left over. I wanted to use the boiler bands to hold my handrails in place as well as for mounting the domes, so this determined the locations for everything. Reuse the hand rail mounts from the old cab and tank tops. There are enough of the mounts to put hand grabs on the cab and front of the tender as well as on the boiler. The steam dome is not fastened down so that I can remove it when I fill the boiler. The whistle is epoxied into a small hole in the side of the dome. Roundhouse domes are not all the same size or shape. I selected the smaller & shorter of my two domes for the sand dome. The sandpipes were routed to the wheels and then everything was epoxied in place. So far I have had very little trouble with things falling off. I chose to use epoxy because I plan to turn my own domes sometime, and then I will solder the pipes in place.

Brass brads make good pins for securing the headlight mount to the smokebox. I forced the brads through holes drilled in the headlight mount and smokebox. A little epoxy on the brads keeps them in place. The electric generator can be attached at the rear of the headlight. Cut and drill out the steam exhaust pipe so that a longer pipe can be made from wire. Route the new pipe up the front of the chimney.

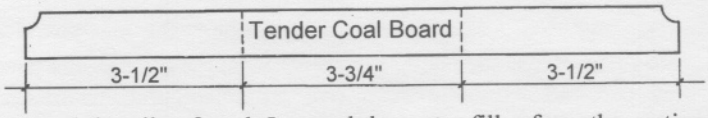
When you are happy with the boiler details it is time to cut out the footboards. Remember that they are bent to make two boards that are mirror images of themselves for right and left sides. Place the boards so that they just miss resting on the reverser arms. Drill out the holes that attach the boards to the sidetanks and the arms in the front that mount them to the frame. Carefully drill holes in the frame where the footboard front mount will be bolted on each side. Attach the footboards. At this point you should have a complete locomotive conversion! Now all we need to do is build a tender.

Tenders come in a number of different sizes and shapes, depending on the type of fuel the loco uses and the distances between water stops. Here again you have to make a choice. Will you build your tender to your own design, use a tender from some other loco or build a kit as I did? I used the Roundhouse kit for two reasons: 1) It was easy to build and 2) the kit is made of brass with the rivet detail already applied. This kit also comes complete with a realistic coal load and all the necessary parts to finish it.

Assemble the tender per the Roundhouse instruction sheet. Most of the conversion work on the tender kit is done to the resin cast coal load. I did not care for the lack of coal boards and deck in the rear portion of the tender. The resin casting is easy enough to cut with a hack saw, but the smell is not really to my liking! The depth of the cut along the deck was determined by the molded in coal pieces. Try to cut where the flat surface is indicated at the rear portion of the molding. I made the deck and coal boards of about



equal length. Make a cut straight down and across the coal pile where you want the rear coal board. Use a Dremel tool to make the recesses for the sides of the coal boards. These recesses will make it easier to remove the casting from the tender after the boards are added. Cut the coal boards from the brass sheet and bend it to fit



around the pile of coal. I reused the water filler from the casting after I cleaned it up. Epoxy the filler and coal boards to the casting.

The white metal frame casting also needs a few changes made to it. Cut off the square shaped buffer mount from the rear section of the frame. I used a Kadee "G" gauge coupler and had to cut a small portion of the frame above the coupler so that it would be at the proper height. Use both a screw and epoxy to mount the coupler or you might just lose a train sometime. The front coupler is a matter of choices again. The chain provided in the kit will work very well with this conversion, but it makes it hard to uncouple the tender for servicing the radio battery etc. A buffer also needs to be installed on the rear of the loco to keep the tender and loco apart when stopping. If you choose this method of coupling you can use one or both of the buffers from the old buffer plates. The buffers are mounted so that there is about 1/8 inch between the big round shaped protrusion and the buffers.

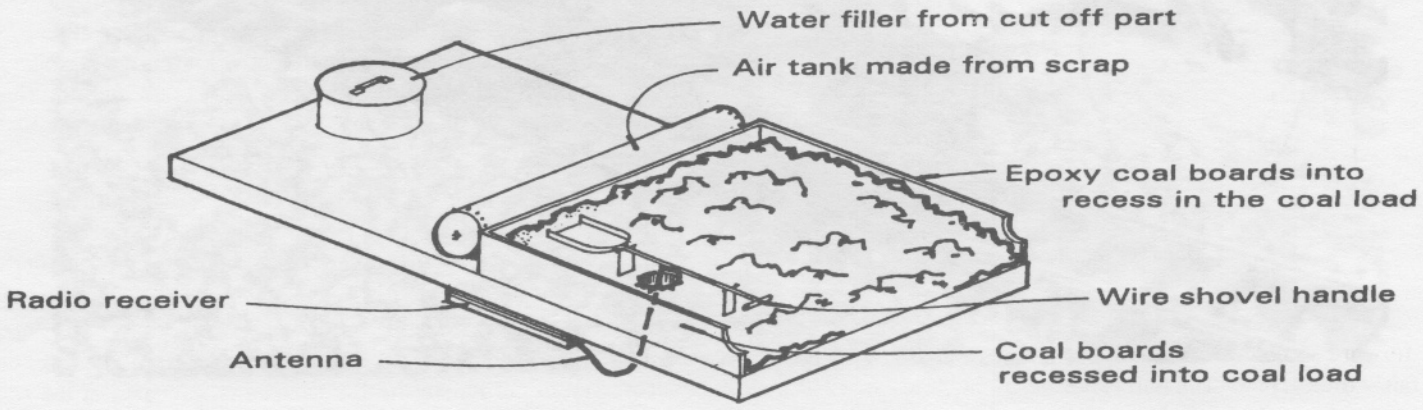
I said there were choices, right? The second choice is to use a hook and loop. A loop from an LGB style coupler can be mounted to the tender frame and a hook can be made to fit into a slot in the wooden cab support on the loco. This is the method I use and it has worked very well. You will have to cut off the round bumper piece from the tender frame to put the loop on.

Once you have fixed the tender and loco together the details can be added to complete this step. I used a piece of wood to make a toolbox for the rear. There is also a ladder made from the leftover bits from a USA boxcar. The air tank is from the ill-fated 2-4-2 that provided the pilot wheels. Included in the tender kit is a little brass light mount for the back edge of the tender. It might look nice to have a second light mounted on the tender.

The installation of the radio is pretty quick and simple. Mount the receiver with double-sided foam tape to the underside of the dummy coal load. Be careful that it is not in the way of the two little rods that hold the coal load up. Drill a small hole on the right side of the coal pile for the antenna to pass through. Construct a small shovel from a bit of rod and brass sheet to serve as an antenna and solder the antenna lead from the receiver to the shovel handle. Mounts for the shovel can be made from brass or wire. Make sure that the mounts will hold your antenna above the brass coalboards. Epoxy the mounts into two shallow holes drilled into the coal pile and glue the shovel to the mounts.

The leads from the two servos should pass through the hole in the front bottom of the tender and can be plugged into the receiver. Use velcro to mount the receiver battery to the inside rear tender wall. The switch from the old cab roof fits the switch hole in the tender. Install the switch and plug the battery lead into the switch and the switch wire into the receiver. This arrangement will make it easier to remove the dummy coal load and receiver for charging or servicing. Put the dummy coal load into place on the tender and you are in business!

I hope that this has made a pleasant project for you. If you have found that some of the details in actual construction vary from my instructions, I apologize in advance. I have tried to reconstruct the processes from memory and inspection of MARGARET, but as I've mentioned, this is all in retrospect. I'm sure though, that any problems anyone could encounter can be worked out while working hands-on with their own loco. Happy steaming!



Locomotive Review -- H. B. Models' Taff Vale 4-4-0

article & photos by Jerry Reshew

Technical Specifications

Description: Model of the Class 1 tank locomotives designed by Hurry-Riches. The prototype engine was erected in Cardiff in about 1880 and was used for passenger service on the Taff Vale branch lines. The model is built by H. B. Models in England.

Scale: 1:32

Gauge: 45mm -- will accomodate curves of 4 foot radius

Dimensions: Length between buffers, 12-1/2 inches -- Width, 3-1/2 inches -- Height, 5 inches

Color: Black

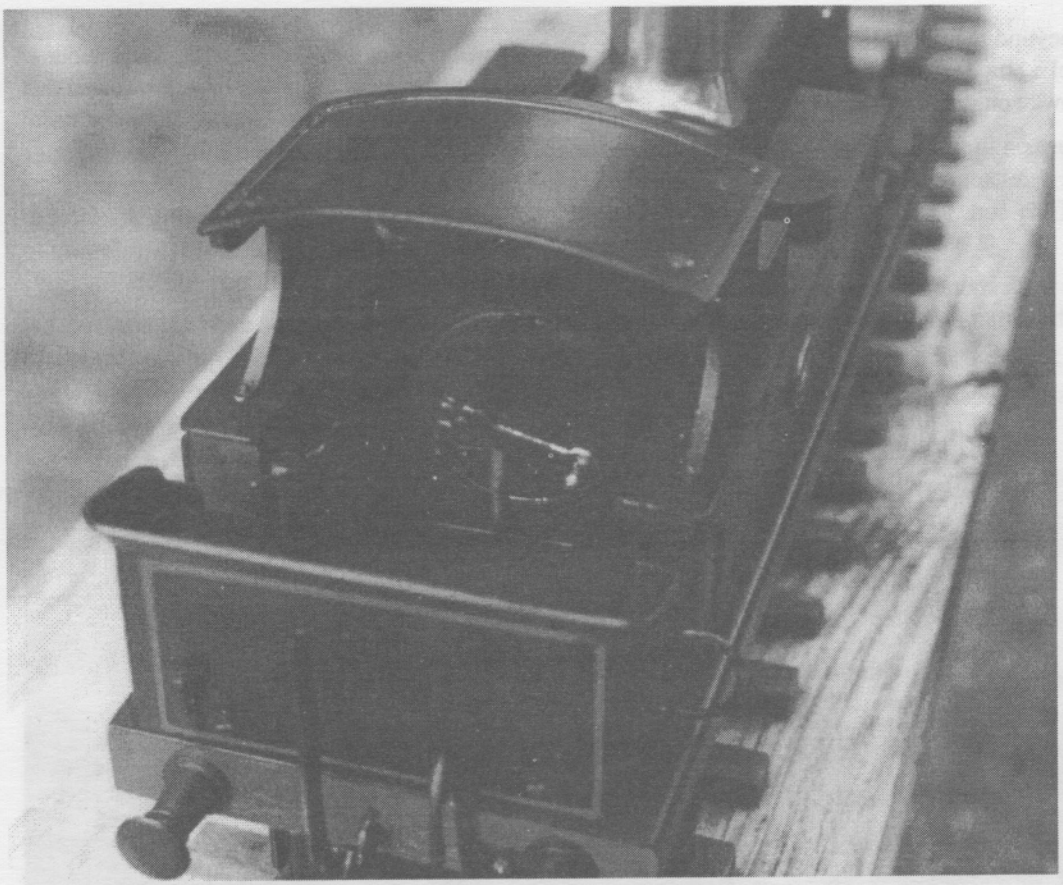
Boiler: Copper, silver soldered, with working pressure of 50 psi, tested at 120 psi. Fired by 3-wick alcohol burner

Cylinders: 2 internal cylinders of 12.7mm bore, 15mm stroke

Valve gear: slip eccentric

Price: $975 plus shipping

Availability: Sussex Model Centre Ltd., 1 & 2 Teville Gate, Worthing, West Sussex BN11 1UA, England. Phone 011 441 930 207 525, Fax 011 441 903 202 933.



Left: A peek inside the cab shows the simple, uncluttered backhead -- a regulator handle being the only visible control.

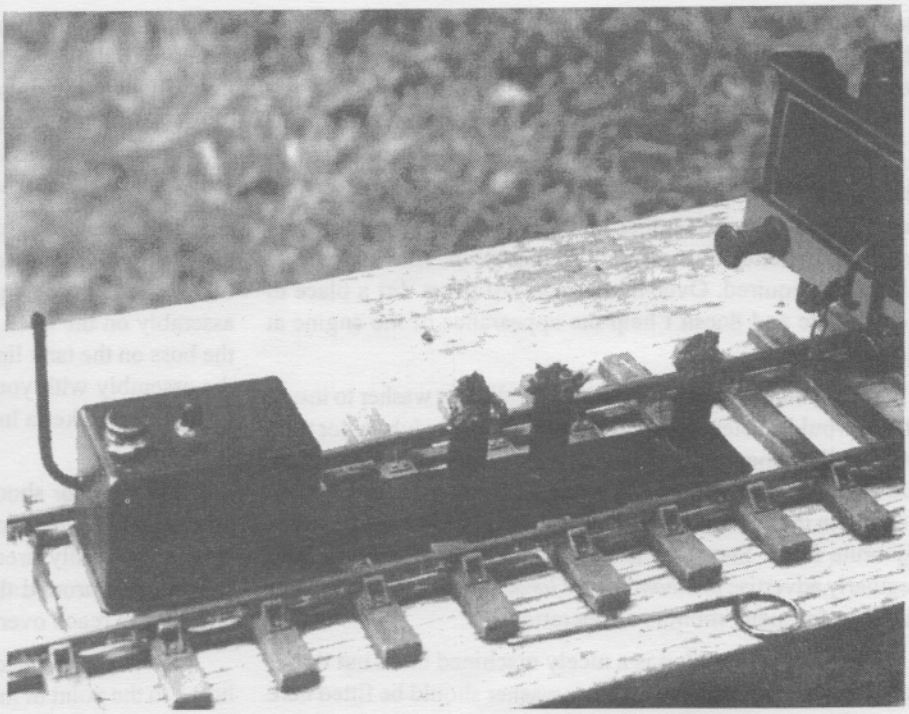
Much of the enjoyment of the live steam hobby is the camaraderie and chatting around the track as others run their trains. A topic that comes up with almost predictable regularity is the need for the hobby to have a simple engine to allow the new inductee to the fraternity to have some of those pleasures that the seasoned veterans seem to enjoy. The H. B. Models Taff Vale may be the locomotive to fill the bill.

The model as delivered is of the earliest Taff Vale, the later versions having a full cab and a rather unusual linkage fitted from the cab roof to the stack, allowing the locomotive to be controlled from a trailing car. A larger capacity boiler was also fitted on later production. Victorian elegance and simple lines were sacrificed with these modifications. The class became part of the Great Western Railway fleet and they were all withdrawn from regular service in 1926.

A characteristic of the first Taff Vale that is preserved in the model is the glistening brass steam dome and the gracefully slotted splashers of the pilot truck. The pilot is not compensated.

The locomotive arrives in a corrugated protective carton with a boiler test certificate and half page of instructions. One look at the new acquisition will convince even the neophyte that this is not going to be a daunting experience and might even be fun right out of the box. Exactly as it was meant to be, but there are surprises in store for the new owner.

The initial inspection of the Taff Vale left me with a rather puzzled look, I'm sure. I couldn't find a lubricator. This immediately pointed to the need to read the instructions, causing me to break a habit of many years, mainly only referring to



Right: Taff Vale's alcohol burner, shown here removed from the locomotive and ready for installation.

instructions when you are beyond the point of no return. The lubricator is behind the smoke box door, a location similar to that on Bing and Bassett Lowke engines of the past.

The most arresting feature on the engine backhead is that there are no features! Only a regulator control disturbs the cab, since there are no gauges of any sort. I was beginning to love this locomotive already.

Fuel is carried in a three wick container secured by a steel pin which passes through a boss that protrudes through a hole in the cab footplate.

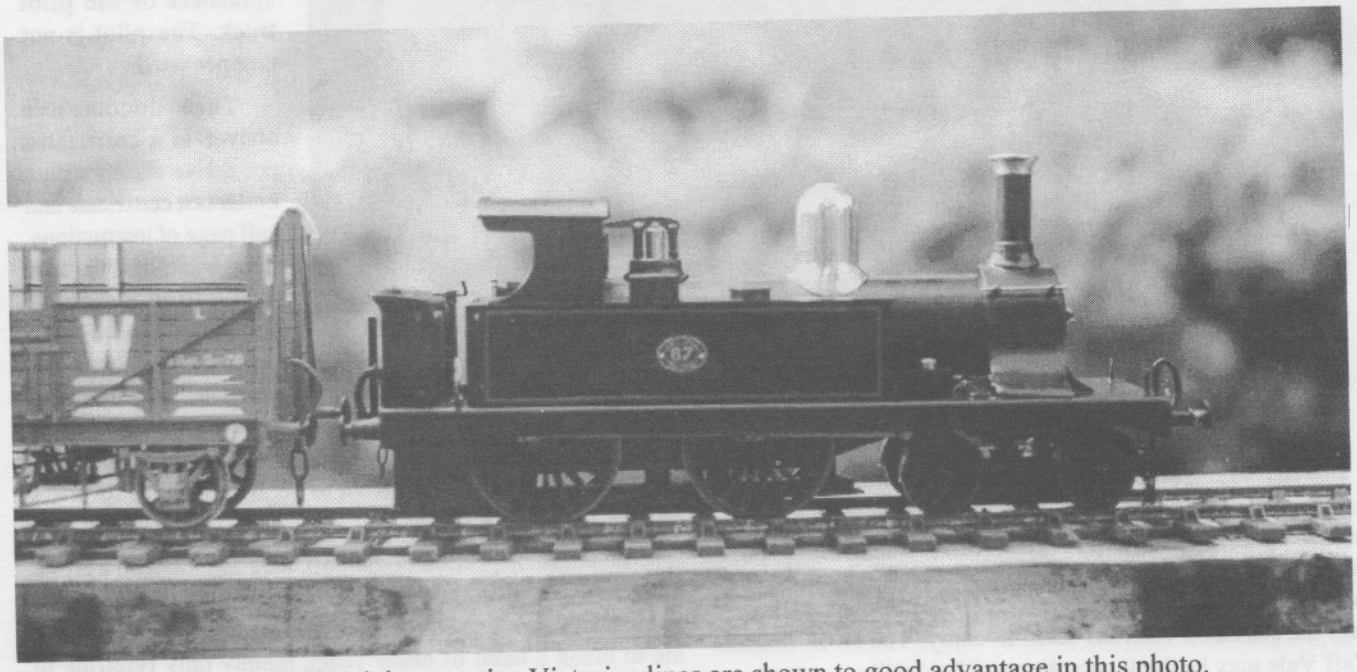
Every locomotive has its idiosyncrasies and the Taff Vale has a few which become apparent upon the first run. I'll go through the preparation and first run in order to give you a feel for what one might expect.

I first oiled all the bearings at the wheels and rods with a careful and not too lavish application of light machine oil. If this is your first experience with a steam locomotive, it probably would be wise to remember that this is a case of more is not necessarily better. Just a small drop at all the moving parts is all that is required. Over-lubrication just gives dirt a place to accumulate and doesn't help the appearance of the engine at all.

I fitted the lubricator plug with a small fiber washer to insure that it would be steam tight and then I filled the lubricator with steam oil. A medium viscosity steam oil should do the trick. Do not use regular motor oil since it will form a lacquer-like coating in the cylinders and eventually will have to be removed by brute force. Steam oil is available from the suppliers who regularly advertise in *Steam in the Garden*, and a small container will last for many months of operation.

The boiler filler plug is a nicely machined brass nut that is knurled for easy removal. A fiber washer should be fitted here as well. Distilled water is put into the boiler to a level about 1/2" from the top. Do not overfill the boiler or you will find that the water will get very hot but there will be no room for steam to be produced. When filling the boiler it is best to use a syringe in order to keep from having water run down the outside of the boiler and onto the wicks. I found that removing the alcohol burner assembly before filling the boiler is a fail-safe way to keep the wet wick problem from occurring.

The fuel is added to the alcohol tank and I recommend that you fill it to within 1/4" of the top. Make sure that the wicks are pushed down into the feeder tube in the event that they were loosened during shipping. I check the wick seating each time I use the locomotive. About 1/2" of wick should be exposed to the flame for proper operation. It may be a bit of overkill on my part, but I also fitted a fiber washer to the fuel tank cover to insure against leaks. Alcohol can build up quite a bit of pressure when heated and a leak in the fuel tank cover will result in a fire where you don't want it.



Above: Taff Vale's attractive Victorian lines are shown to good advantage in this photo.

Place the locomotive on the track and then add the fuel tank assembly, secured by the locking pin. The easy way to do this without lifting the locomotive is to place the fuel tank assembly on the track and then slide it under the engine until the boss on the tank lines up with the hole in the footplate. Lift the assembly with your finger and then slide the locking pin into place. It takes a lot longer to tell about this operation than to do it.

The regulator should be closed, and a flame is applied to the wicks by using a long match or other fire source. The Taff Vale is externally fired, and as with all pot boilers, the flames will be seen around the sides of the boiler. Be sure that you don't try to reach over the boiler once the locomotive is fired.

Pot boilers in tank engines will eventually heat the paint lining to the point of making the lining disappear on the engine

tank. The lining on Taff Vale can be restored by using a ruling pen against a straightedge, Testors High Gloss Red being a perfect match. I thinned the paint with a drop or two of mineral spirit and it took only a couple of minutes to restore the locomotive to as-delivered condition. I've relined the tanks (the upper lines are the only ones that need this treatment) a few times and it was fun, especially for those of us who are artistically challenged.

A word of caution here: pot boilered locomotives do not like windy conditions. Taff Vale should be run on days when the breezes are minimal.

Wisps of steam should come from the safety valve in around five minutes. It is at this point that the regulator should be opened slightly and the locomotive rolled back and forth about a foot in each direction to expel any water from the cylinders. Close the regulator, wait a minute or two, and then do the same cylinder clearing operation again. The instructions say that a rag should be place into the stack during the cylinder clearing operation, but the small amount of water that is pumped out doesn't seem to warrant this step. If the boiler has been overfilled, there will be a jet of hot water spurted out of the stack, but that will be the least of your problems.

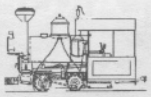
The Taff Vale is fitted with piston valves. This system is dependable and not prone to misadjustment, but it can lead to a wheel lock up if the water in the cylinders is not cleared. If the boiler has been overfilled, the water from the boiler will be transferred to the cylinders, and they will not be able to compress this water and therefore will be thoroughly confused and refuse to do anything. This situation is often called cylinder priming and there is but one solution. Blow out the flames, let the engine cool down, and then open the boiler and remove some of the water. DO NOT OPEN THE BOILER WHILE IT IS STILL HOT.

A mistake made by many steamers is to overcome a cylinder prime by forcing the locomotive to eject the excess water by moving the engine back and forth by brute force. In a slip eccentric engine with piston valves, the result can be misadjustment of the slip eccentric mechanism and then the locomotive will not run. I know this from experience because I did it to my Taff Vale. Fortunately the mechanism can be readjusted in a moment if you loosen two small screws and have a diagram available to show the correct setting of the slip eccentrics. Harold Denyer, designer and builder of the engine, includes a diagram with each locomotive. Do not leave home without it, or you may have to rely on your memory if you get the Taff Vale out of whack.

The locomotive should be run light for the first dozen times to give it adequate break-in. I find that setting the regulator at about a quarter turn will give a nice speed for light running. Don't be tempted to see how fast this engine will run without a proper load, as it will sail off the tracks. This is a powerful locomotive for it size and should be given an appropriate load to haul after the break-in period. Three or four small British outline vans makes up a nice train for the engine and it will run for about fourteen minutes with a fill of vital fluids.

After cooling down the engine, a good wipe down is in order. It is at this point that we normally drain the lubricator and refill for the next run. When I first attempted this operation I thought that there was something amiss, since there was almost no water to drain, and the oil had been used up. My curiosity was enough to invest in a call to England and a talk with the maker. Mr. Denyer told me that this is more properly referred to as gravity lubricator since it does not depend on the displacement of water to provide proper lubrication. The oil drips down into the mechanism since the location of the lubricator is above the cylinders and water is not necessarily introduced to the lubricator. Problem solved.

The Taff Vale is an elegant and simple locomotive that is a pleasure to run. It has a distinctive chuff and a character that is Victorian to the point of being somewhat whimsical. I find that the early evening hours, when the shadows are long and the sun is beginning to set, is the ideal time to run this locomotive. The rosy glow of the flames curling around the boiler and the nice steam display from the stack makes me feel happy that I've identified with the small scale live steam hobby.



Adventure at Cypress Loco Works

by John Wieland

It was a cool Southern California evening with the sun low in the sky when one of our good friends, Jim Hadden, came rocking and rolling down the track, right into our service yard. Jim was driving his new Catatonk Shay, fresh off the assembly line. Close coupled behind him was a Climax from High Noon Loco Works. Jim wanted to give the two engines a little shakedown in our yard.

Even though it was late and our crew was dirty, hungry and tired, they all decided to stay and watch the new locos go through their paces. The sight of the new locos with their fresh black paint jobs and the smile on Jim's face were just too hard to resist.

After Jim uncoupled the Climax, we started checking out his Shay. We backed it up to the water tower and topped it off with fresh water. I know you fellow loco fans are used to burning coal and fuel oil for fuel, but the two locos Jim just bought are fitted with butane tanks, and they run on butane. Really! What will they think of next -- running on alcohol?

Jim told us that most of the new locos now run on butane. The only problem I could see was that the butane tank was getting cold and the butane was slow getting to the firebox. Jim and I put a kettle of water on the stove and warmed it up, then poured it over the gas tank. That took the chill off the tank and all was fine. The fire was just right, and Jim could maintain a nice head of steam throughout his test run.

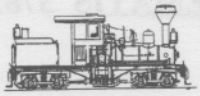
Our crew was very impressed with the slow, powerful engine. The train yard has a bit of a grade at the far end, and the loco slowed but never stopped. We also have some track in need of a little repair (one of those things we keep putting off), and the Shay just shook, rattled and rolled right on through without even one wheel dropping off the rails.

We knew that the Shay had power, but we wanted to give it a real test. We hooked up an empty flat car, a log car and a loaded flat car. The Shay had no problem pulling them. We could have pulled more, but the sun had gone down and dinner was getting cold.

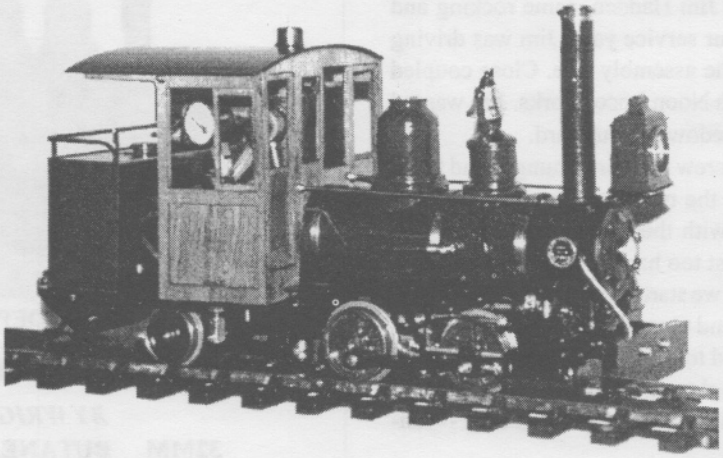
Because I am one of the shop's head pipe fitters, I told Jim that the plumbing on his new Shay was very clean and nicely laid out. We did have a question as to why the gas line from the tank to the burner was so small in diameter (1/16"). The importer tells us that gas will travel easily through very small piping, it looks better, and it makes it easier to relocate the tank to the fuel bunker if desired.

The crew went home and I talked Jim into parking his new workhorse long enough to come in and share a meal with my family. He was not able to stay the night, but he was anxious to show off his Climax, and so we went back to the yard and turned on a few lights. The Climax was also fired by butane (good thing Jim had thought to bring a good supply), and after filling the water tank and topping off the steam oil reservoir, we were ready to go. I found the appearance of the Climax to be very clean and smartly outfitted. The loco was very controllable, and after a little coaxing we were off down the track. I must say that for a loco with little running time, the Climax ran very well.

I hated to see Jim go, but he had a lot of track to cover that night before he got too tired. Speaking of tired, so am I.....until the next time we get a chance to visit, so long.



NEW BALDWIN STEAMER!



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Wheel Arrangement..... 0-4-2
Scale..... 1:20
Gauge..... 45 or 32 mm

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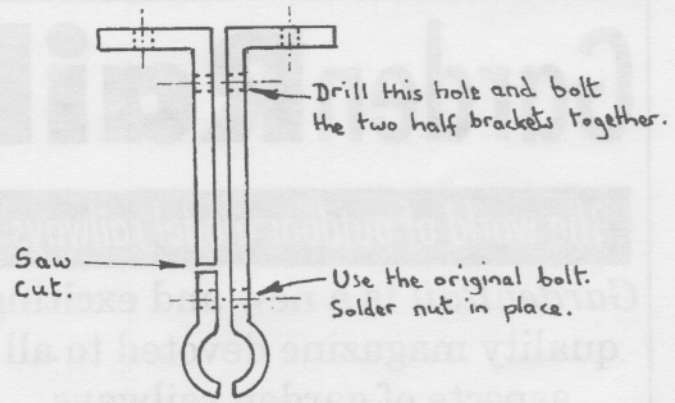
More Mods for the Aster Mogul

by Murray Wilson
drawings by the author

A modification to the fuel tank of the original and Americanised Aster Moguls was described in a recent issue of SitG. These are engines that can benefit from a few mods to improve performance or appearance, so here are a couple more.

After modifying the fuel tank vent as previously described my engine ran steadily, but without any real zip. With three big, fat wicks it certainly ought to make steam, so perhaps it wasn't getting enough air. Those two front wicks do take up a lot of room in their little firebox, and it seemed likely the centers of those wicks were isolated from the air. So with a pair of pliers all three wick holders were gently pinched in, front to back, to about 3/8". The copper is very soft, so gently is the operative word. The front to back direction was chosen because of clearance.

While the wick holder assembly is off the engine it is worthwhile modifying its rear support so that in future the holder can be removed without having to get at those rather inaccessible nuts and bolts presently securing it. The sketch shows how.

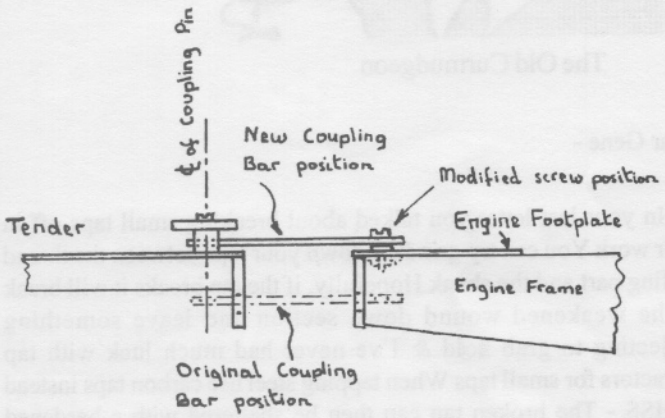


MODIFIED WICK HOLDER BRACKET

With the wick holders pinched in the wicks have better access to the air. The wicks themselves are also compacted and on my engine this cured a tendency they had to overflow when the engine was stationary. I think it is likely there is in fact too much air drawn in around the rear wick and I intend to try reducing the throat area.

This work only took about five minutes at trackside (my rear support was already modified) and the next run showed the engine's performance had a worthwhile improvement. If your engine's hasn't, and it still likes to have a bit of blower on when it is running, then check the exhaust blast nozzle's alignment with the chimney. It should be centered and vertical. Also, don't forget there's a second safety valve in the cab, make sure it is not secretly lifting at too low a pressure.

My engine, by the way, has had the boiler raised 5/16". This does several things: improves the appearance; improves the combustion; and by no means of least importance, makes the lubricator cap removable without first having to take off the smoke box front. Paul and Harry Quirk are the devisers of this modification.



TENDER COUPLING MODIFICATION

Another little change that makes life easier with the Mogul is to remove all but 3/16" of the-thread from the tender coupling pin and grind a blunt point on the pin to lead it into the threaded hole in the tender. Even better is to go a step further and bring the coupling bar up above the engine footplate. See the sketch. The hole in the coupling bar must then be enlarged to suit its new position on the coupling pin.

You may not realise that the toolbox on the tender is usable. The lid pulls off and it is secure storage for small tools, screws, universal couplers (paper clips) etc.. In fact, now I have at last cured my tender of the distressing habit of bursting into flames. I intend to hinge the lid and use the whole of the space behind the fuel tank for storage of the engine's small accoutrements. Some owners like to fit up a hand pump and water storage in that space, but I cannot see much advantage to that on an engine which does not have an axle pump. Much simpler is to connect up the clack valve that is already on the backhead so an external pump may be used. That's going to be my next modification.

LETTERS FROM THE OLD CURMUDGEON

An economist is an expert who will know tomorrow why the things he predicted yesterday didn't happen today..

Laurence J. Peter

The Old Curmudgeon

Dear Gene -

In your last letter you talked about breaking small taps off in your work You can try grinding down your taps between the thread cuffing part and the shank Hopefully, if the tap breaks it will break at the weakened wound down section and leave something projecting to grab hold & I've never had much luck with tap extractors for small taps When tapping steel use carbon taps instead of HSS - The broken tap can then be shattered with a hardened punch for extraction. Far and away the best solution is to always use a tapping machine with small taps.

The neat Autocad drawings you sent me inspired me to go out and buy a drafting package for my computer so I could put some of my projects on paper in an orderly, intelligible manner. Being cheap, I opted for the $30 Softkey "Keycad". I didn't expect much for the price but was very surprised. This is software as it should be written. No installation at all - it identifies what kind of system it is running on and adjusts itself accordingly. Drop down menus, auto-dimensioning, Bezier curves, and multiple overlays are all built in. More amazing, with no fiddling by me, it plotted perfectly the first time on my Epson printer at home and on my friends' HP Deskjet at work. Keep your eye open for more from this company.

Now that I can make drawings without having to go somewhere to have them reproduced I'll be sending you some things which need more than just words to explain.

By the way, If you have an old pair of slip-joint pliers do yourself a favor and glue some strips of leather over the jaw teeth using silicone bathtub caulk or something similar. Unlike epoxy, the silicone stuff remains resilient and won't allow the leather to come loose with extended use. You won't know how you got along without a pair of non-marring pliers.

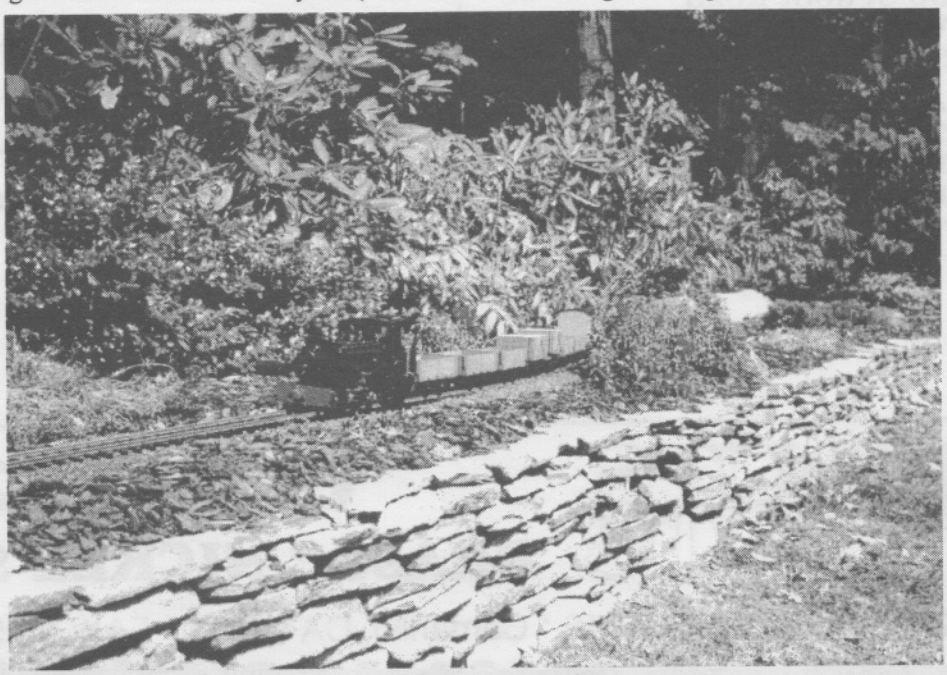
Keep turning - Marv

Steamup Report: Matthew Labine's West Clare Garden Railway

photos and text by Matthew Labine

We recently hosted the inaugural steamup on the optimistically named West Clare Garden Railway. (Don't get me started on my passion for the Irish narrow gauge...) The railway is in its first year of operations, and is a functional line but a long way from being a magazine-quality Garden Railway. My locos have been working the line quite happily since the spring, but I knew that hosting an event would be a trial by fire that would show up any previously hidden shortcomings. Little did I realize that the first trial would come from the insidious forces of nature, in the form of a pack of marauding squirrels.

Perhaps they were upset to have lost a nesting site when we took down the big old beech tree in our backyard. (How we got the remains of said tree down and out of the yard without harm to the railway is a story for another time). Perhaps it was hostility engendered by several years of my chasing the cheeky buggers away from our tulips and crocuses, of which they were inordinately fond. Whatever the cause, in the week before our steamup they decided to vent their destructive urges on my railway. Several lengths of flextrack were uprooted from the ballast by squirrels who claimed merely to be digging random holes. And the more paranoid amongst us think they were responsible for knocking over a portion of our wood pile onto the right-of-way. Fortunately, with a few choice words for the varmints on the side, the damage was quickly repaired, and the railway was ready for the big event.



Roundhouse "JACK" with the morning goods train on the author's West Clare garden railway. Stone walls and mature plantings add a lot of character to this very young railway.

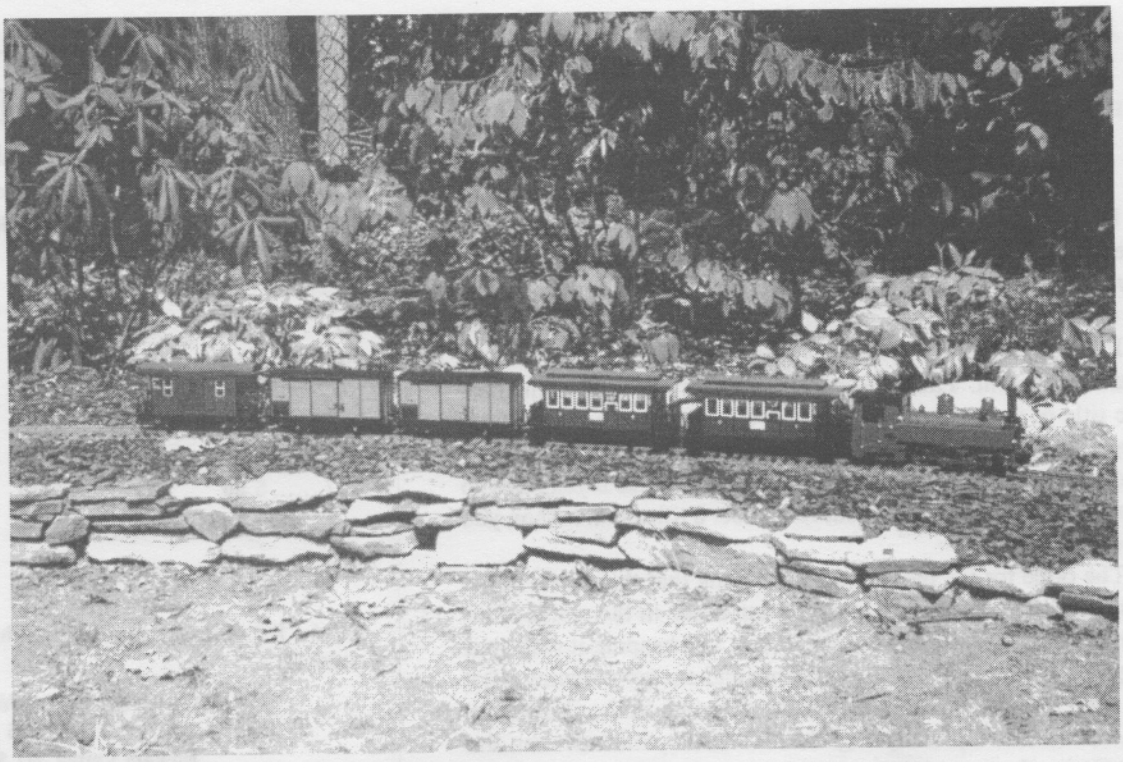
In attendance were Ron and Marie Brown (Editor and Noble Assistant, respectively, of this magazine), as well as Contributing Editor Hank Bloch and his wife Joanna. Representing the Connecticut G Scalers were John and Vera Henchar and George and Elaine Edgerton. My parents were also there; my father likes live steam, and my mother loves her grandchildren!

A variety of locos were on hand. Hank brought his Roundhouse "Lady Anne"; additionally, he brought for display a 2-1/2" gauge riding car designed for elevated track, as well as the boiler for the loco he intends to build to haul himself around. He also brought a scratchbuilt vertical boiler and a gas-fired boiler intended for a Mamod. Ron brought his new-version Maxwell Hemmens Porter; a "Lady Anne" that had come through his shops and needed track testing; and a Pearse "Colorado" that he had for review.

Also on hand from the local power pool were a Roundhouse "JACK," a Roundhouse/Beck "Helene", and a Merlin "Mayflower" that had been lined, rebuilt, and turned into a fabulous runner by Tag Gorton (thanks again, Tag!)

Happily, the event went very well, and lasted far into the evening. There were, of course, a few minor mishaps. Ron's Porter helpfully pointed out a spot where the rail joints had become misaligned by promptly derailing. Fortunately, a quick tweak with the pliers set things right. (Thanks, John!) Hank's "Lady Anne" derailed on the elevated portion of my line and demonstrated that a steam locomotive flies exactly the same way a brick doesn't. Fortunately, she landed in a bed of pine bark mulch, so the damage was minor.

After the lunch break, we eagerly anticipated a run with COLORADO. Ron swore it had performed brilliantly the



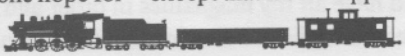
Right: Roundhouse "HELENE" on the West Clare's afternoon mixed train.

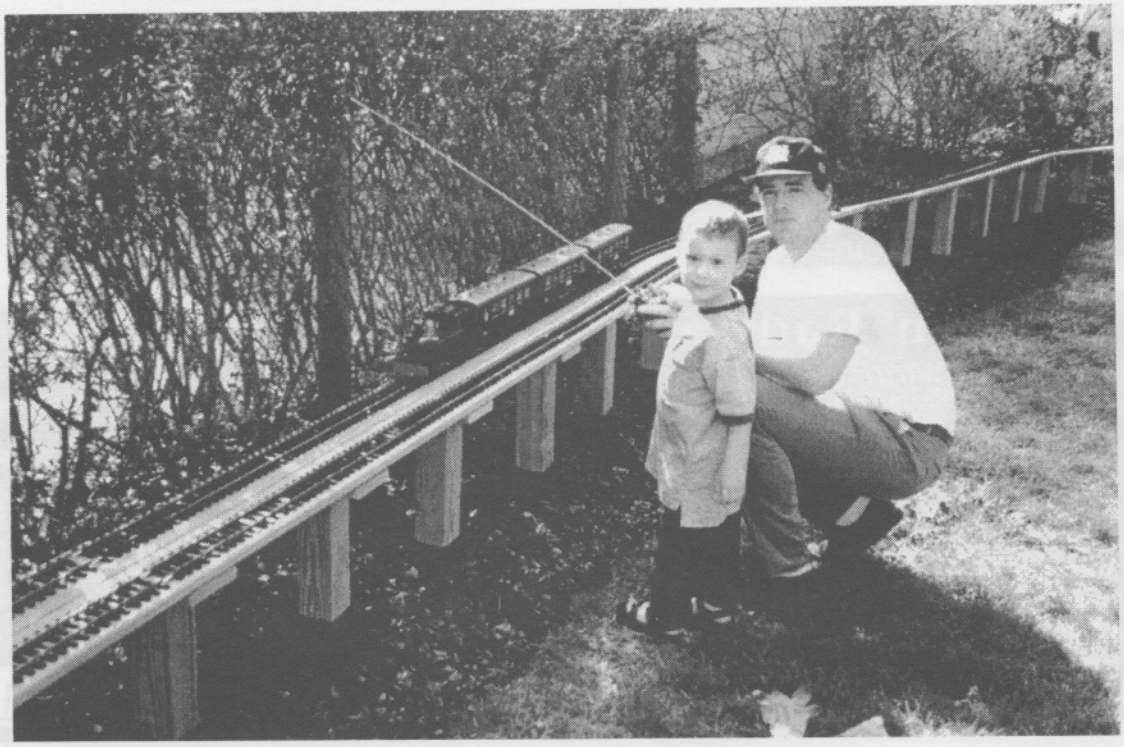
weekend previous, but sadly it fell afoul of vapor lock and refused to run for us. Ron subsequently swore that it ran brilliantly at a steamup the following weekend. It is in any event a very attractive loco, and brought a touch of class to the steamup track. The final snafu: my camera got finicky on me, and almost all photos of the event were grossly out of focus.

Aside from the running, there was a great deal of lively conversation on a wide range of subjects; so much so that at one point, the wives on the patio looked at each other, realized there were no trains running, and that the fellows standing around the steaming track were more interested in just talking!

I was pleased to see how well my line handled the group's number of locos. Not surprisingly, I found that I could use more yard trackage on which to park rolling stock—I confess that I had to call upon my battery-powered diesel to shuttle cars from the steaming bay to the other passing track on the far side of the railway. I was a bit embarrassed at having to resort to non-steam motive power, but the pundits were for the most part kind to me; at least, we all agreed, it wasn't a steam-outline battery loco (shudder!).

New friends were made, a fine time was had by all. What more could one hope for—except that it can happen again soon?





Left: The author with 3-year old Michael and the PM Express. This is part of the elevated section of the West Clare, where the mainline trackage parallels the steaming track.

Review --

Index to Steam in the Garden, issues 1-24

by Chip Rosenblum

I found the index to issues 1-24 of Steam in the Garden magazine to be quite helpful and well organized. The index is structured by year, in other words it is in four sections, the first section covering issues 1-6, the second section covering issues 7-12, and so on.

Each index section is divided into two parts. The first section is sorted by content. This is helpful if you don't remember the specific title of an article or an author, but wish to find that dimly remembered piece of information on a specific subject. The section of each index is sorted by article and author, so if you have no idea what you're looking up, but remember a title or an author, you can find it.

The price for the index is $5.00. I think that this is one of the most cost-effective investments you can make in the world of information systems. By having this index, and keeping it with your magazines, you will save a lot of time and energy pursuing what you wish to locate. Now that reprints of Steam in the Garden are available (from Sulphur Springs Steam Models), this index can also help those of you without a complete set to make a decision on which back issues to order.

The only changes that I could suggest in the format would be: First, while maintaining the annual index separations, to create a master list that would encompass all issues, as it is sometimes confusing when a series runs into the next year, or different authors in different years have provided information on the same or similar subject.

Second, and not the responsibility of either Ricky Morningstar or Steam in the Garden magazine, is to organize my environment such that I would have all my magazines in order and at hand!

All in all, the index is both a worthwhile investment and a valuable tool.

Since this review was written, the index has been expanded to include Volume 5. -- ed.

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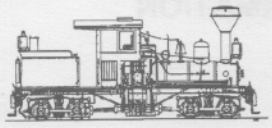

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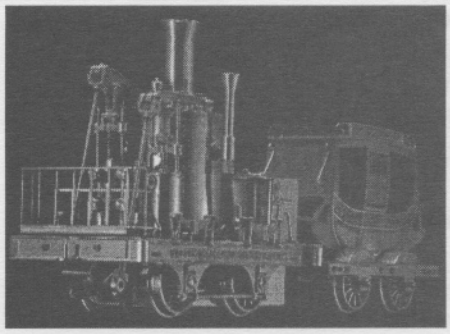

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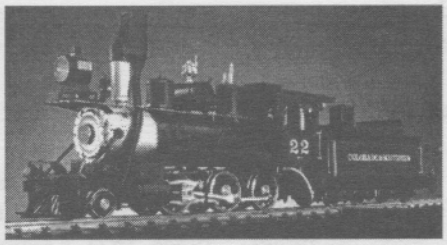

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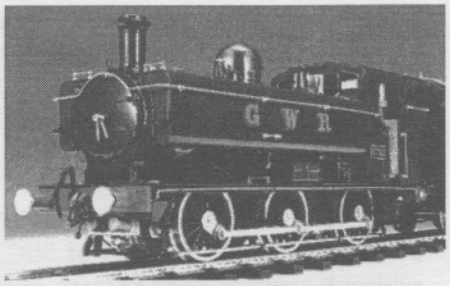

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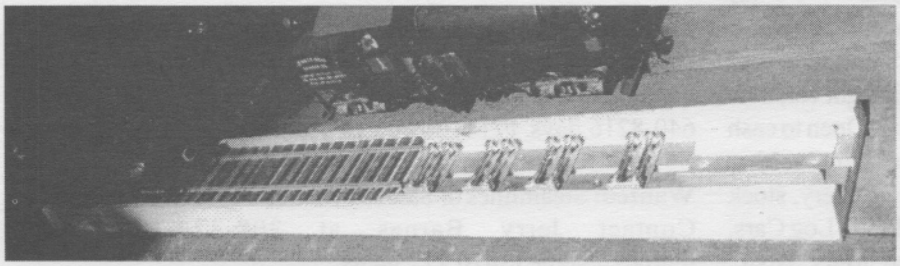

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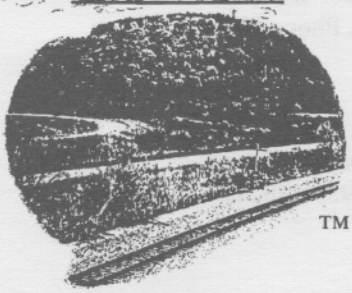

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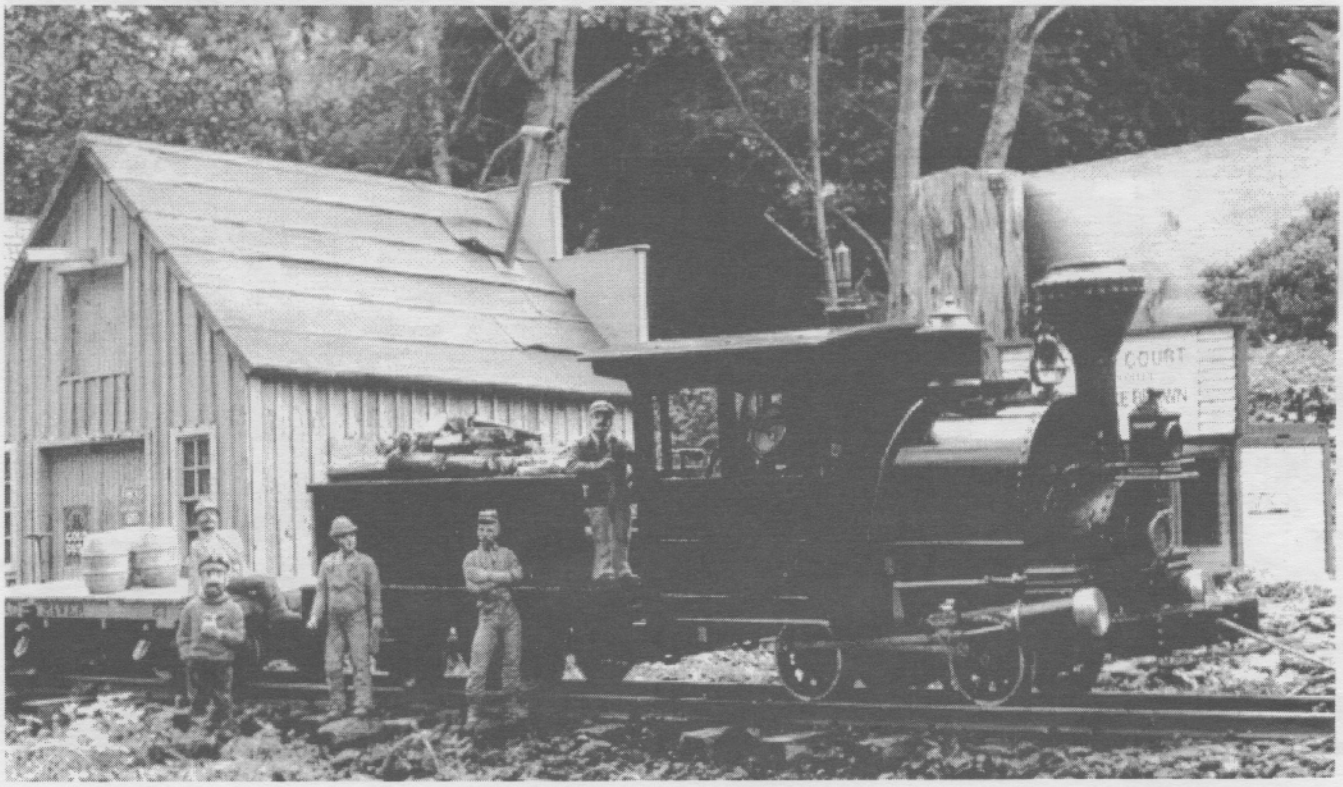
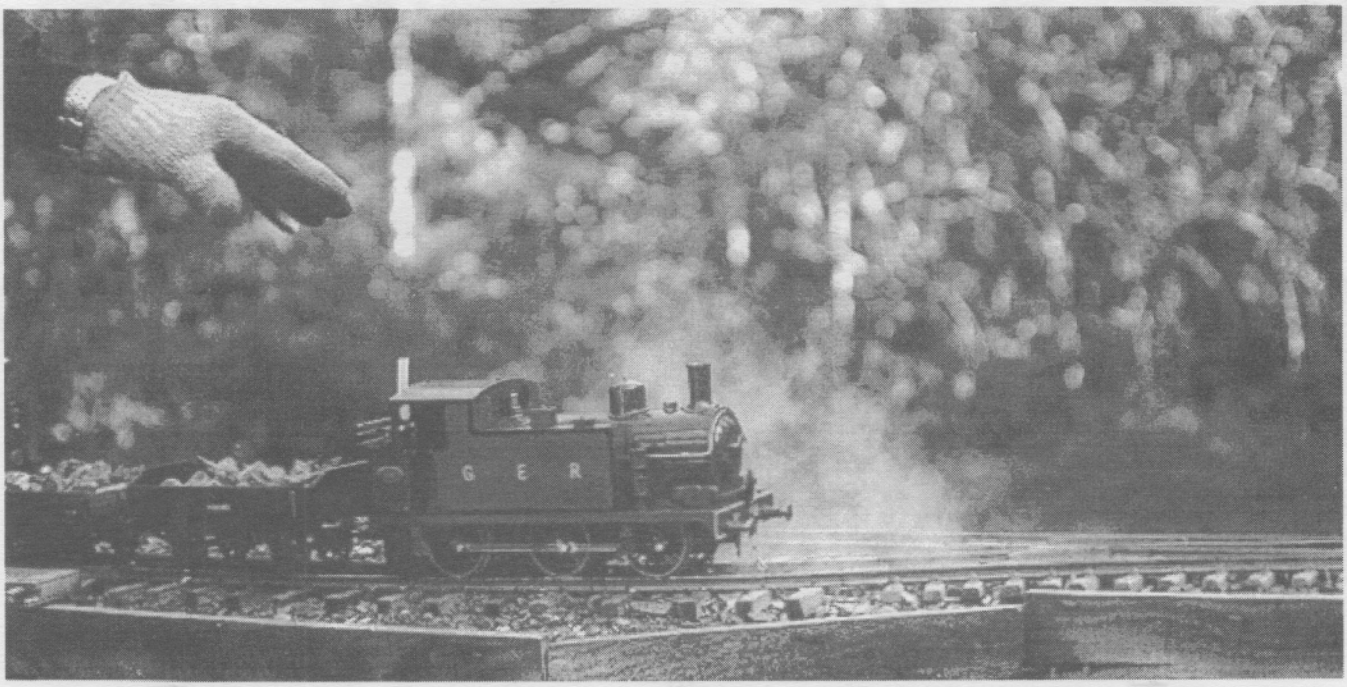


Richard Heisler sent in some excellent photos of steam activity in the Northern California redwoods. Richard has a real knack for setting up realistic scenes, and we appreciate his generosity in sharing the results of his skill and patience with us.

Above: Mad River Short Line #2 (Wrightscale Porter with R/C and scratchbuilt tender) poses with the crew in a recreation of a 19th century photo on the 45-1/4" gauge Arcata and Mad River RR.

Below: Off with a load from the qyarry! GER tank engine heads out for yet another derailment on the rough track of Richard Heisler's Mad River Short Line in Eureka, California Loco by Aster. Hand of God by Geoff Spenceley.

photos by Richard Heisler

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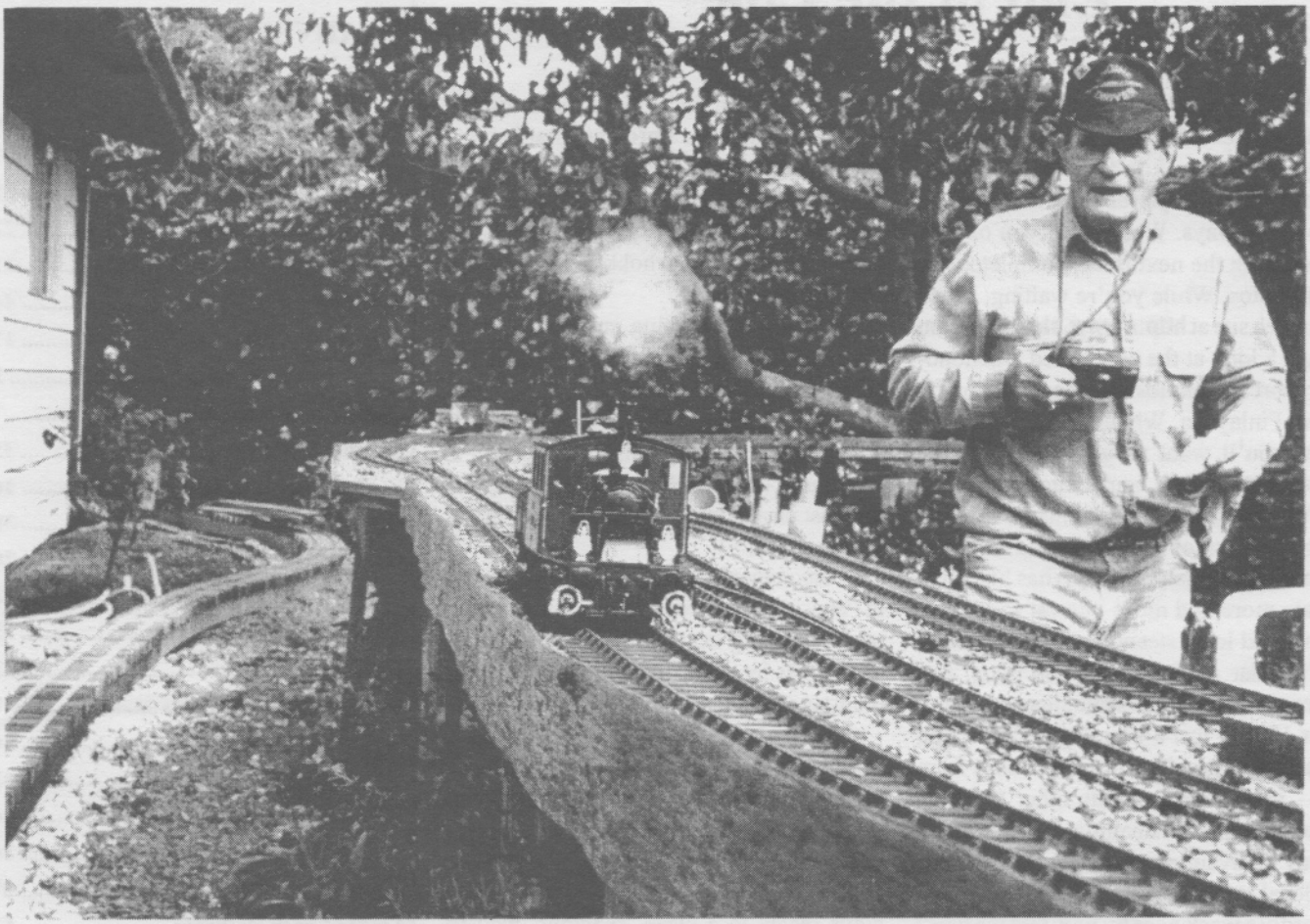
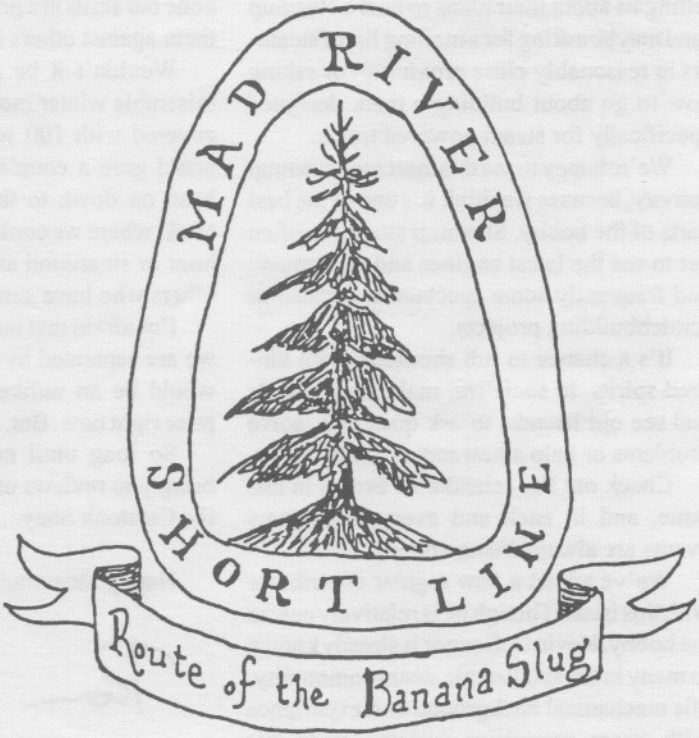


This page, above: Geoff Spenceley and friend underway on Geoff's railway in McKinleyville, California. At lower left is Geoff's 3-1/2" gauge track, at center is his elevated gauge 1 track with his Aster Glaskasten in Bavarian livery.

Opposite page, top: The crew of Mad River Short Line's 6-spot, with a nice load of redwood logs for the mill at Murphy's Flat, pause briefly to "...get their pitchers took." The Class A Shay is a hybrid. Originally built by Hyde, it now sports a boiler and cab by Geoff Coldrick due to an unfortunate meltdown.

Opposite page, bottom: Geoff Spenceley's Merlin Matterhorn (left) heads up the local passenger, while Mad River Short Line #2, the "Arcata" (Wrightscale Porter) waits for its engineer, "Swede" Ingebretsen, to head out with the freight for North Fork.

This page, right: If anyone has any doubt about the good times and good humor in the Northern California redwood country, just cast your peepers on the logo of Richard Heisler's Mad River Short Line. Of course, it does raise some doubts about the sanity of that bunch.....no pun intended, of course!



End of the Line

The 4th Annual National Steamup, held at Diamondhead, Mississippi in January, is history, but if you didn't make it in person this year you can experience it vicariously in a number of ways. We'll bring you our annual report in the next issue, complete with lots of photos. While you're waiting, check out our web site at **http://www.steamup.com** and take a look at the condensed Diamondhead report and photos in a special report by Richard Finlayson. Whether you were there or not, you'll want to get a copy of the professionally taped and edited video by ECO Works (see their ad in this issue).

The success of Diamondhead over the past four years (thanks, Jerry!) has helped to generate more and more interest in hosting regional and local steamups. Take a look at our Calendar of Events in this issue, and compare it with a small-scale steamup calendar for 1991 -- just 5 years ago. You'll find that there was precious little to choose from then -- no National events other than the traditional last-day steamup at the Garden Railway Convention, and only a few scattered local steamups around the country.

Hardly a week goes by now that we don't hear from a reader on the subject, either telling us about their plans to host a steamup (and maybe asking for a mailing list of steamers in reasonably close proximity) or asking how to go about building a track designed specifically for steam powered trains.

We're happy to see this increased steamup activity, because we think it's one of the best parts of the hobby. Steamup attendees often get to see the latest engines and equipment, and frequently some spectacular kitbash or scratchbuilding projects.

It's a chance to rub shoulders with kindred spirits, to socialize, make new friends and see old friends, to ask questions, solve problems or help a newcomer to the hobby.

Check out the calendar of events in this issue, and in each and every issue (new events are always being added)

We've added a new regular contributor with this issue. Though he is relatively new to the hobby, Kevin O'Connor is already known to many in the small-scale steam community. His mechanical background and experience with steam propulsion systems made this hobby a natural for Kevin. His recent article on valve design and improvements has already received high praise from many steamers, experienced and novice alike. In this issue Kevin tackles a problem that has annoyed nearly everyone who ever tried to operate a gas-fired loco in cool weather. Don't miss it! We look forward to his innovative approach to the hobby in the months and years to come.

As I write this, snug and warm in the posh, luxuriously appointed editorial offices situated in the penthouse suite at Paradise East, the view out our windows is much too white to suit me and the thermometer is on the user-unfriendly side of zero with the forecast promising more of the same in the weeks ahead.

Punxatawney Phil, the groundhog down in Pennsylvania who is apparently in charge of determining exactly how long winter is to last, has let us down again by opting for the long version.

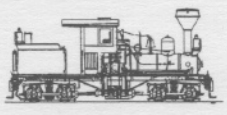
While daydreaming about a glorious Spring and all the time we're going to spend outdoors on the railroad during our alloted 6 months, I'm reminded of the slotcar racing fad that came and went all too quickly a few decades ago. We could take our precious racers to a clean, spacious, well-lit indoor facility and rent track time, either to hone our skills in a practice session or to test them against others in a race.

Wouldn't it be great if, during these miserable winter months when the track is covered with 100 scale feet of snow, we could grab a couple of our steamers and head on down to the commercial indoor track, where we could buy track time by the hour or sit around and swap tall tales with others who have similar interests?

I'm afraid that our hobby is so tiny, and we are separated by so many miles, that it would be an unlikely commercial enterprise right now. But, hey....it could happen!

So long until next time, when we'll bring you reviews of the Aster T-3 kit and the Catatonk Shay....and lots more.

Happy Steaming!



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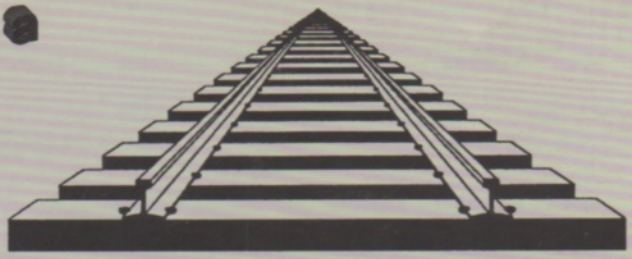

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