

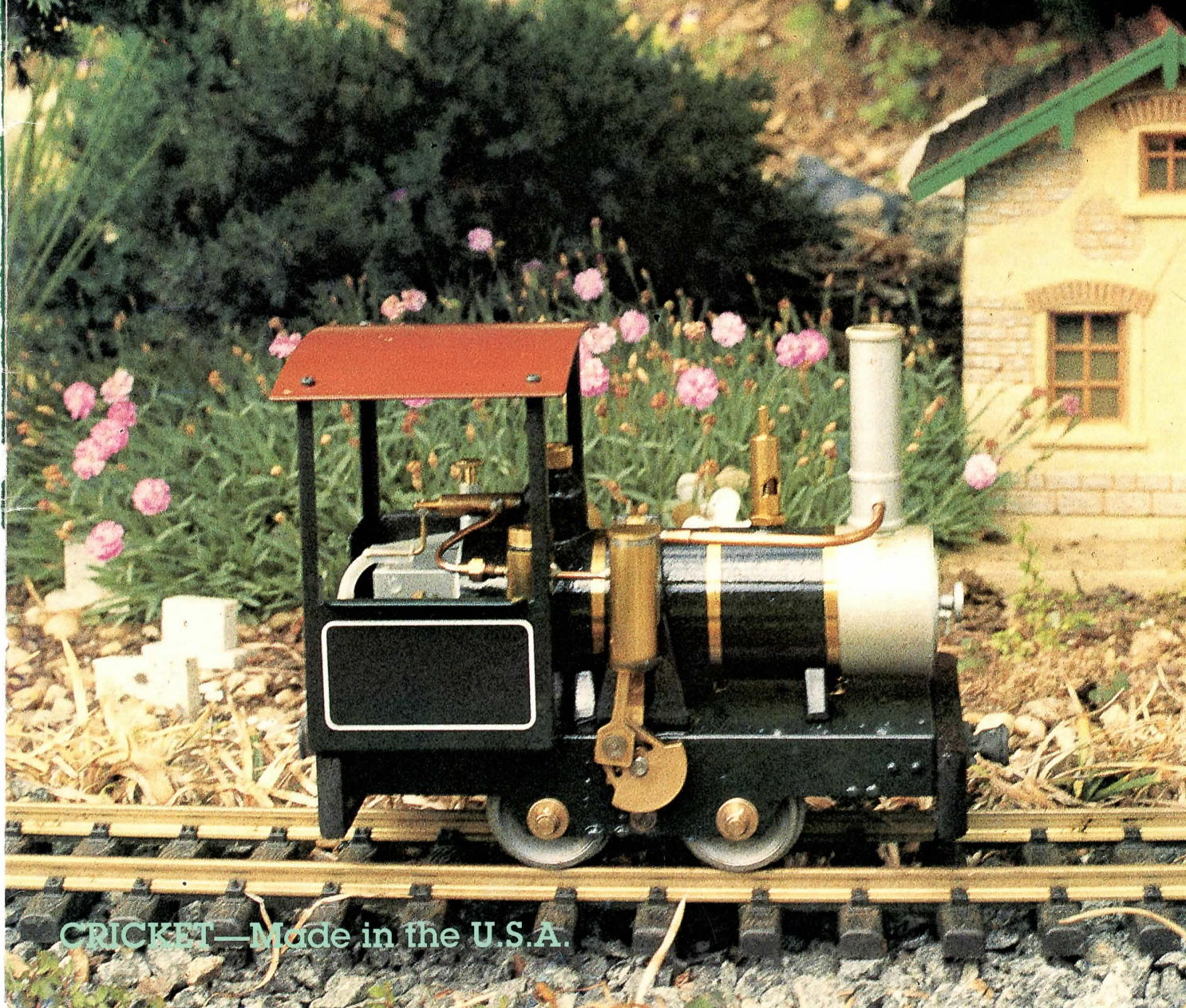
September-October 1994

N° 24

\$3.95 U.S.

\$4.95 Canada

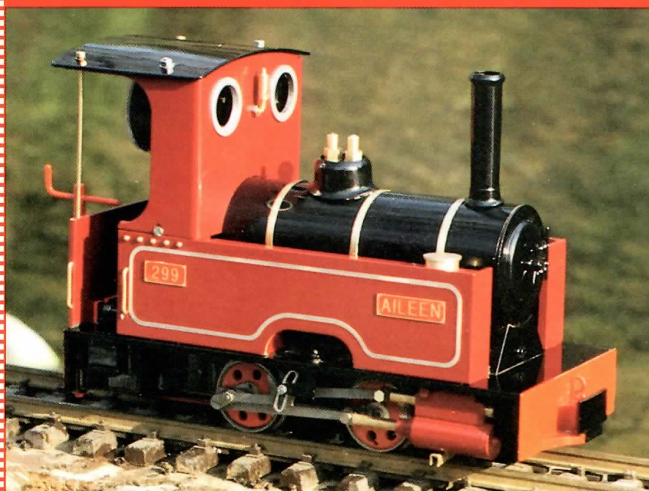
# STEAM IN THE GARDEN



CRICKET—Made in the U.S.A.



# ANNOUNCING... GIANT LITTLE RAILWAYS LIVE STEAM LOCOS... LITTLE GIANT & THE NEW! DIXIE



**Little Giant**



**Dixie**

Yesteryear Toys & Books Inc. has been appointed the exclusive North American distributor for 'Giant Little Railways.' 'Giant Little Railways' are manufactured by The American Steam Locomotive Co. Ltd. of the UK (formerly Steamlines Publications & Models).

## A NEW GARDEN RAILWAY CONCEPT!

• AFFORDABLE EASY-TO-BUILD LIVE STEAMER KITS AND READY-TO-RUN MODELS (45mm – GAUGE 1) •  $\frac{3}{4}$ " SCALE, A THIRD LARGER THAN LGB • TOUGH ENOUGH FOR THE WORST OUTDOOR CONDITIONS • TAME ENOUGH TO RUN INDOORS  
This new and exciting line consists of the high quality and powerful models, the 'Little Giant' and 'Dixie.' Both are available in kit or assembled form.

## LITTLE GIANT and DIXIE SPECIFICATIONS:

Kit supplied as an assembled chassis boiler, track tested to pull 30 lbs. before despatch. You fit superstructure, detail parts (all components are unpainted). No problems for the first time builder. Ready-to-run models are supplied with a two-year parts and labor warranty.

Immensely strong construction. A loco is only as safe as its safety valve. Twin safety valves set at 55/60 PSI. The reversing valve also provides an extra margin of safety. Free-steaming copper boiler, internally gas fired, 2" dia.  $\times$  6" long, 1.6mm thick, will not dent, double stayed, all joints silver soldered and tested to 150 PSI, working pressure 40 PSI. Tubular copper gas tank, 1.2mm thick, shielded from the burner. Exhaust gases ducted under the smokebox to warm the cylinder block, prevents priming.

Cylinders are 13mm bore (fitted "O" rings), 16mm stroke, double-acting cylinders w/piston valves. Monoblock chassis machined from HE30 aluminum, no frame stretchers. 1.25" dia. wheels, insulated steel tires,  $\frac{1}{4}$ " steel axles run in brass bearing blocks.

A regulator you can get your hands on provides fine control in either direction. Radio operation optional.

Dimensions: 8.25" long, 3.75" wide, 6.75" high, weight 2.65 kg. (5.8 lbs.), will run 2 foot (60 cm) radius curves.

**LITTLE GIANT** Special features: Steel cab 1.2mm thick high tensile steel.  $1\frac{5}{8}$ " dia. pressure gauge. Ready-to-run colors: buffer beams, red; chassis, black; cab roof, black; side tanks and cab, maroon, green, or dark blue.

**DIXIE** Special features: All-wood cab, dummy sand dome, headlamp, tool box, air tank, bell.  $\frac{3}{4}$ " pressure gauge, black livery.

Size enhances simplicity to achieve more power at a minimal cost. The extra material and machining is more than offset by quicker assembly. But nothing costs more than demand – 'Giant Little Railways' are rapidly making friends around the world.

☐ **Little Giant Kit** .....\$599.95

☐ **Dixie Kit** .....\$795.95

Prices are retail, US\$. Please specify color: Maroon, Green, or Dark Blue.

☐ **Little Giant RTR** .....\$895.95

☐ **Dixie RTR** .....\$999.95

RTR= Ready to Run (Assembled)

☐ **Z90 NEW!** Stunning 34-page full color STEAM CATALOG on STATIONARY ENGINES, STEAM TRACTORS, TRAINS, CARS, TRUCKS, FIRE ENGINES, ROLLERS and a complete line of ACCESSORIES, complete with specifications. \$6.95 (refundable with first order)

SATISFACTION GUARANTEED

Please add \$5.00 for shipping

**In a Hurry? Phone: (613) 475-1771 FAX: (613) 475-3748**

☐ Here's my check payable for \_\_\_\_\_

☐ Please ship C.O.D. (add \$4.00)

☐ VISA ☐ MasterCard Credit Card No. \_\_\_\_\_

Expiration Date \_\_\_\_\_

Phone No. \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

**DIAMOND ENTERPRISES  
AND BOOK PUBLISHERS**

**DIVISION OF YESTERDAY TOYS & BOOKS INC.**  
Dept. SitG, Box 537, Alexandria Bay, NY 13607  
PHONE (613) 475-1771 FAX: (613) 475-3748





# Welcome to the Fascinating World of STEAM



**Attention  
Collectors**

## Steam Locomobile D 430

The locomobile was used in farming for threshing and ploughing, at the turn of the century. It was pulled by horses or could be driven under its own steam.

11" Long

7½" Wide

8" High

Weight 6½ pounds

Heavily built – assembled and ready to run. This model will also run a full line of accessories from Flywheel, available from our company.

**STEAM LOCOMOBILE D 430** A fully developed steam model with good technical detail, and an attractive finish in black and brass. Boiler, Flywheel, Piston, Wheels are brass. This engine has a partitioned smoke chamber at the front for the condensation and to allow the smoke to escape through the chimney, which is hinged in the middle. The sight glass acts as a water gauge. Reversible double acting cylinder with two flywheels 3 inches in diameter which can be operated in forward and reverse. Exact indicating pressure gauge, spring loaded safety valve, whistle with chain, governor (just for show), steam regulator, steam jet oiler, water drain tap, black varnished boiler house with gangways and ladder. The Locomobile is driven by a chain and the front axle can be steered. DOUBLE-ACTING BRASS CYLINDER. Engine will run for 15 minutes. Fired by solid fuel supplied. This superb model also makes an attractive showpiece for cupboard, glass-case or desk.

- ☐ **STEAM LOCOMOBILE D 430** Regularly \$399.95 **SPECIAL! \$319.96**
- ☐ **NEW! Z431 TEAM OF HORSES** for locomobile, both horses have a set of harness, complete with bridle cheek, collar, and shafts. Horses are 11 inches long & 5 inches high. These horse look great with LOCOMOBILE. **\$49.95** for both horses.
- ☐ **Z81 EXTRA FUEL FOR LOCOMOBILE** or any other WILESCO STEAM MODEL (20 – Tablets Box) enough for 5-runs. **\$5.95**
- ☐ **Z83 STEAM ENGINE OIL.** **\$3.95**
- ☐ **Z90 NEW!** Stunning 34 page full color WILESCO Catalog on all Steam products, Stationary Engines, Fire Engine, Steam Rollers, Tractors, plus a full line of ACCESSORIES complete with specifications. **\$6.95** (FREE WITH ORDERS OVER \$100.00)

SATISFACTION GUARANTEED  
Please add \$5.00 for shipping.

**☎ In a hurry? Phone: (613) 475-1771 FAX: (613) 475-3748**

☐ Here's my check payable for \_\_\_\_\_ ☐ Please ship C.O.D. (add \$4.00)

☐ VISA ☐ MASTERCARD CREDIT CARD NO. \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_

PHONE NO. \_\_\_\_\_ NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

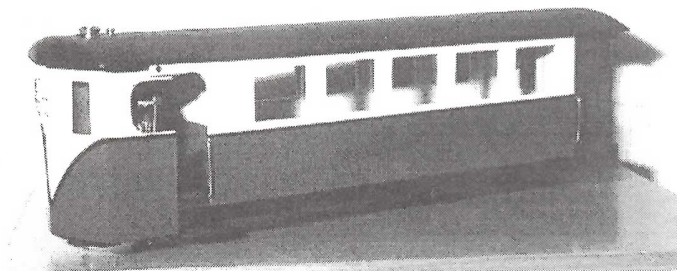
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**DIAMOND ENTERPRISES  
AND BOOK PUBLISHERS**

**DIVISION OF YESTERYEAR TOYS & BOOKS INC.**  
Dept. SitG, Box 537, Alexandria Bay, NY 13607  
**PHONE: (613) 475-1771 FAX: (613) 475-3748**







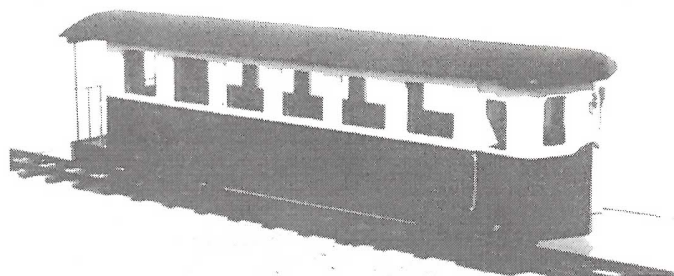
### ***STEAM POWERED RAILBUS***

Vertical boiler with gas burner mounted on power unit supplying twin oscillating cylinders driving front axle.

+Fitted with regulator, forward/reverse control, water gauge and filling system (Goodall type). Can be supplied with alternative system (Enots) at extra cost ..... £19.50

Painted to your own colour scheme and available in two different styles.

Gauge 1 or gauge 0 ..... £260.00



### ***DRIVING TRAILER***

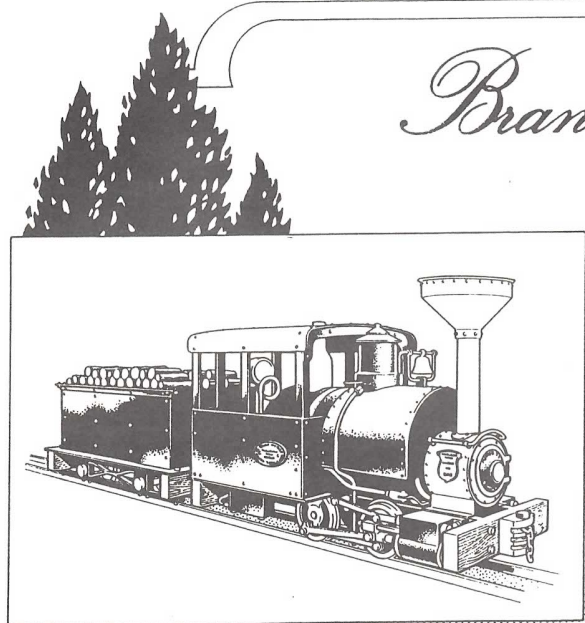
Non powered driving trailer styled to match the Railbus and mounted on bogies each end, supplied with semi permanent coupling to allow running in either direction ..... £95.00

For details of these and other products please send two \$1.00 bills to:

### ***LOCOMOTION***

**88 Berrington Road, Nuneaton, Warwickshire  
CV10 0LE, England**

**Phone 011-44-203-392277**



# *Brandbright*



### **PORTERS FROM STOCK!**

One of a vast range of live steam locos available from Brandbright, the new Maxwell Hemmens Porter represents real value. The loco has plenty of power, is tough and reliable and manufactured to a remarkable quality.

The Brandbright/Berkeley Loco Works of California partnership is designed to give the best prices and service, calling on the World's largest stockholding of 16mm scale items. Situated in the U.K. and distributed as professionals. Our combined experience in steam power reflects in advising the best loco to suit your needs. Our range includes Roundhouse, Finescale, Mike Chaney, Maxwell Hemmens, Wrightscale, Pearse, American Steam Locomotive Co., Shawe and, of course, Brandbright Specials - that's just the live steam locos! - There is a whole lot more.

To make sure you have the latest 80 page Catalogue, send \$4 to the U.S. address below:-

### **Brandbright Limited**

#### **U.S.A.**

2821 Hillegass Avenue No. 22  
Berkeley, CA 94705  
Phone or FAX (510) 849-9284

#### **U.K.**

The Old School, Cromer Rd,  
Bodham, Holt, Norfolk, NR25 6QG.  
Phone 0263 588 755 FAX 0263 588 424





### ON THE COVER:

**CRICKET**, a small utility locomotive just acquired from the John F. Byers Co., is running light to Unicorn Junction for a load of finished lumber. With a full boiler and steam pressure up, the spunky little loco sizzles in the sun on a clear, beautiful morning in the summer of 1897 -- patiently waiting while the engineer sits down to a stack of flapjacks and a cup of java in the conveniently located Mom's Cafe.

*Photo by Scott E. McDonald*

### Safety First, Last and Always

There is one thing we cannot stress enough in this hobby -- safety. Any time you are working with hand tools or power tools or with a torch, there is always the potential for an accident.

Eye protection is a must! And if you value your hands, fingers and other irreplaceable body parts, you will work safely to protect yourself and to reduce the possibility of injury.

To the best of my knowledge there have been no boiler explosions or injuries from same in small-scale live steam in the last few decades. But we must remember that any pressure vessel is a potential hazard. I read recently about the damage done by soda bottles pressurized far beyond their safe rating. It seems that model aircraft builders have been putting pressurized soda bottles into their aircraft as a lightweight source of air to actuate their retractable landing gear. Great idea, but when the bottles are pressurized to well beyond their safe rating, they can explode with devastating results.

Airplanes that took hundreds of hours to build have been demolished, and the potential for human injury has been clearly demonstrated.

I mention this only because the very heart of our little locomotives is a pressure vessel -- the boiler. Commercially built boilers are generally tremendously overbuilt, but there is always the possibility of a sticking safety valve -- or worse yet, the dimbulb who removes his safety valve and plugs the hole. **DON'T EVEN THINK ABOUT IT!**

Home-built boilers are as safe -- or as dangerous -- as the builder. Build from materials rated for the application, follow the advice of experienced, qualified experts and all will be well. Use a little common sense and you will be around -- intact -- to enjoy this wonderful hobby for a long time.

Happy Steaming!



## Vol. 4 No. 6 Issue No. 24 September/October 1994

### Articles

- 18... Loco Review--Berkeley Loco Works "CRICKET"  
*Scott E. McDonald*
- 22... Build Your Own Boiler  
*Charlie Mynhier*
- 26... Loco Impressions -- Russian Iron  
*Ron Brown*
- 29... Product Review --  
Sierra Valley Enterprises Flatcar  
*Ron Brown*
- 30... Product Review -- Darex M5  
*Ricky Morningstar*
- 31... Planning a Steamup Area  
*Bob Nowell*
- 32... Loco Review -- Geoffbilt Shay  
*Carol E. Homuth*
- 34... Construction of the  
Pelahatchie Bay Scenic Railroad  
*Harold A. Dunsford, M.D.*

### Departments

- 6..... RPO - Letters
- 10... What's New?
- 12... Gazing Into the Fire  
*Peter Jones*
- 14... The Fitter's Bench  
*Crankpin*
- 28... Letters From  
The Old Curmudgeon  
*Gene Rutkowski*
- 43... Bubble...Out of Plumb  
*Anonymous*
- 44... Book Review -- Zephyr  
*Chip Rosenblum*
- 46... Swap Shop
- 47... Steam Scene...Along the Rails
- 49... Calendar of Events
- 49... End of the Line  
*Ron Brown*
- 49... Advertiser Index

## Steam in the Garden

**Publisher/Editor**  
Ron Brown

**Faithful Assistant/Ad Layout**  
Marie Brown

**Graphics Director**  
Harry Wade

**CAD drawings in this issue by:**  
Hank Bloch  
Harry Wade  
John D. Cone Jr.

**Contributing Editors**  
Crankpin ..... The South  
Rick Drescher ..... Washington  
Tag Gorton ..... England  
Marc Horovitz ..... Colorado  
Peter Jones ..... Wales, U.K.  
Randall Sauter ..... Oklahoma  
Gene Rutkowski ..... Washington

**Steam in the Garden** magazine is published bimonthly for \$21.00 (\$27.50 Canadian, \$28.50 foreign) per year (6 issues) by Steamchest Publications, 6629 SR 38, Newark Valley NY 13811. Direct correspondence to PO Box 335, Newark Valley NY 13811. Application to mail at Second-Class postage rates is pending at Newark Valley, NY, and at additional mailing offices.

**POSTMASTER:** send form 3579 to Steamchest Publications, PO Box 335, Newark Valley, NY 13811. Printed in USA. Copyright 1994 Steamchest Publications. All rights reserved. The contents of this publication may not be reproduced in whole or in part by any means without the express written consent of the publisher.

USA, Canadian and foreign (except U.K.) subscriptions should be sent to **Steam in the Garden** magazine, P.O. Box 335, Newark Valley, NY 13811.

U.K. subscriptions should be sent to one of our agents in the U.K.

**Salem Steam Models, Brynglas, Salem, Llandeilo, Dyfed SA19 7HD**  
or

**Brandbright Ltd., The Old School, Cromer Road, Bodham, Near Holt, Norfolk NR25 6QG - phone 026-370-755, FAX 026-370-424**

Items for review may be mailed to P.O. Box 335, Newark Valley, NY 13811 or sent via UPS or Federal Express to 6629 SR 38, Newark Valley, NY 13811.

Questions or comments? Call us at 607-642-8119 before 9:00 p.m. Eastern time, please - or FAX us at 607-642-8978.



# R P O Mailbag

Letters from all over

---

*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. 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.*

\* \* \* \* \*

San Francisco, California

Dear Ron,

Last Saturday I saw Gary Broeder (Llagas Creek Railways) at the NMRA meet in Santa Clara. It looks like I'm going to build a loop of gauge 0 track with code 215 aluminum rail.

I also saw my first Argyle 4-4-0. Now all I've got to do is win the lottery.....

One little peculiarity of my Roundhouse BILLY is that the butane tank gets warm during operation and consequently is reluctant to take more butane until it cools off. This doesn't bother me, but it might bother someone who wants easy continuous running.

Cheers!

Reg Stocking

---

Somewhere in Asia

Hi Ron!

Greetings from Asia. Wow, it's great to be back here. I'm in Tokyo now; I'll be in Hong Kong tomorrow. I was down in Yokohama at the Yokohama Live Steamers track this weekend and had a ball. I won the "Flying Aster" award. They didn't bother to tell me that they had removed a bridge that spans a walkway...they assumed I was using the interior loop. It really flew! It was an 8550 and all it suffered was a scratched roof. That Aster stuff is really built well, and if you can just keep sharp objects from bunging up the paint.....

Wada-san is up to his usual innovations; he's built an aircraft engine powered "diesel electric". The engine drives a DC generator, then through an electronic speed control to two DC traction motors. Pretty spiffy. It's mounted in an F-B body shell similar to his steam turbine. Wada-san and another YLS club member are coming to Diamondhead in '95,

so it should be an interesting event.

Later!

Richard Finlayson

---

Cornwall, England

Dear Ron,

Currently four of the Longlands & Western locomotive roster are gas fired, and I therefore read with interest Marc's excellent overview of gas firing in the SitG May/June '94 issue.

Like Marc, I've had my fair share of gas jet problems. I am, however, very loathe to go poking my pricker about (if you will forgive the indelicacy) because I have never found gas jets to be particularly easy to obtain in this part of the world, and, as Marc says, the jet is easily damaged.

The quickest and most effective method I have found to clear an obstruction is to remove the jet from the burner and up-end it *point first* onto the filler valve of ones fuel can. The obstruction was blown in by gas and will be blown out by the higher pressure from the fuel can. I haven't had to change a gas jet in the last five years using this technique.

On another subject altogether, a recent discussion with a manufacturer of steam locomotives on this side of the pond brought forth the opinion that the American market for steam locomotives was "flat". Our esteemed Editor strongly, and I think rightly, disagreed with this assessment.

When I first became interested in the possibility of live steam in the garden, prototype mattered very little -- the main point being that the train was drawn by "a real, honest-to-goodness steam locomotive". Nowadays, while not greatly interested in an absolutely scale model, I *do* want to run locomotives of recognisably British origin which will be at home on my bucolic Cornish narrow gauge railway. It therefore seems to me that, were I a native of Colorado, I would wish to run locomotives of American lineage and therefore British prototypes would not be ideal.

I know that gentlemen such as the late Grover Devine made the best of what was available on the locomotive front and in fact his strongly colloquial and decidedly American SPC line was very much part of the inspiration for my own Longlands & Western. Like Grover, I didn't want a "NATO Standard" railway, I hankered after a line that would reflect the character and individuality of my corner of the globe.

It seems to me that with the emergence of more specifi-



cally American motive power, the attractions of a restyled British example begins to look less appealing and perhaps UK manufacturers would do well to look at the more arcane examples of American ferroequinology if they wish to stay in this particular market.

This letter is, of course, very much a basis for discussion and I would have to say that, despite the above, my perception is that the majority of garden railways in the United States are electrically driven. Is this because people regard steam as difficult to run - a sort of black art? I have heard the opinion (excuse?) in this country that LGB is used because the modeler wishes to run straight away without fiddling with a complicated steam engine. This baffles me for I know that I can have an engine in steam within five minutes *without* the hassle of track cleaning or worrying about electrical contact.

Perhaps its worthwhile to try and increase the market size by showing the exponents of electrically powered mass manufactured "steam" locomotives that our real steam models do not just belt around plain trackwork on bare boards, but can reproduce the actions of the full size prototype, running through living scenery in a way that cannot be reproduced by electronics. To this end local members of the 16mm Association have been attending various shows with a small but scenic portable layout which has attracted a lot of attention and resulted in several new members. This weekend we are attending a "Classic Car" show in Devon and expect to generate a lot of interest amongst mechanically minded people.

One last point. There has recently been an excellent series of articles in "16mm Today" by our own Don Mason, who models under the Stars and Stripes banner with his Beaver Creek & Stony River Railroad. Part of this series consisted of an overview of all the live steam locomotives available to modellers of the American scene in the United Kingdom. Brief notes on price, specification and characteristics were given to assist newcomers with the selection of the most suitable loco. I don't recall seeing anything like this in the American garden railway press so perhaps SitG would be a suitable forum for conducting a similar exercise for US modellers.

Yours Aye,

Tag Gorton

Lakewood, Ohio

Dear Ron,

Here's my \$21 subscription renewal. Would not miss an issue for anything. It's the only live steam inspiration available!

I had a Roundhouse 0-6-0 chassis on order since January, finally gave up and ordered a Maxwell Hemmens Porter after seeing your review. Seems they're not so readily available either. It's been a month already. Oh, maybe by Fall those Wellsburg & Franklin ni-cad'ers will be replaced by some real fire and water action.

Mike Gray

*Thanks for your early renewal and words of support, Mike. Sorry to hear that you're having a problem getting a steam engine for your W&F roster. What about it, builders & dealers? Is business so good that you can't keep 'em in stock? -- ed.*

Hampton, New Hampshire

Ron,

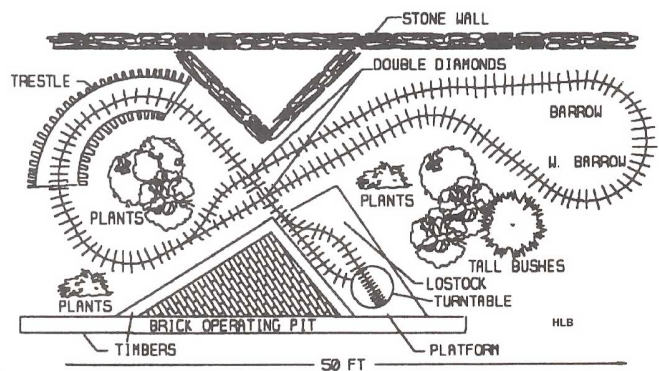
This may be of interest to you. The Catskill Mountain Lines, Garden Railway Division, is undergoing major reconstruction. Over the past two years I have raised the roadbed an effective 18" above datum. An excellent compromise between *just right on the ground* vs. *on stilts* look.

I have also simplified the track plan for (to me) an excellent mix of running trains vs. railroading. Bricks are 18" below the top of the timbers, forming an operating pit.

The terminal is built on a board platform. The train leaves the terminal, travels out to West Barrow and back to Lostock. At Lostock the locomotive is turned on the turntable....GREAT!!

Yes, I scratch built the double diamonds at the terminus of Lostock!

Rich Chiodo



Elbridge, New York

Dear Ron,

I take this opportunity to thank you, plus offer a very special debt of gratitude to a fellow garden steamer in Singapore.

As a result of our telephone conversation concerning a missing issue of SitG that I was looking for, you ran an ad in Swap Shop in the May/June issue. A very generous fellow hobbyist from Singapore responded immediately with the magazine, but he never gave me his name or address. Please extend my appreciation to this individual through RPO Mail Bag.

I am planning to attend the Tenth Annual Garden Railway Convention in Denver this August, and if by chance he is also in attendance, by all means look me up. Thanks again -- what a wonderful organization.

Sincerely,  
John L. Spencer



Ron,

How about a big hand for Larry Cromwell, Richard Chiodo and Anthony Chiodo? Their demonstration, "Live Steam and the Frank S." at the 16th LGB Model RR Club in Hyannis, Cape Cod, Massachusetts recently was new the top of my list! I gathered from the crowd on hand at the clinic that a lot of these fine machines were wasting away in their boxes -- until now. Watch out for the rush...I was wearing the right shirt (Rick Drescher's SitG t-shirt), so they know who to call. YOU!

Dan Long

Lakewood, Ohio

Dear Ron,

That Maxwell Hemmens Porter with the dent now has a fine home...mine! Thanks very much for the timely information. We've boiled over two gallons of water through her already. As you discussed in the article (*Maxwell Hemmens Porter review, March/April '94 SitG*), the Porter runs very well. Hope to have her broken in for the Noblesville steamup. Bob at Rio Pecos has been very helpful since I've got a lot to learn about garden steamers.

I believe it was Peter Jones who said that garden steamers are very demanding of track conditions. He certainly was correct. The gandy dancers have been working steadily to fine tune a turnout here and there and regauge an occasional spot. However, the Porter now travels the entire railroad quite nicely.

Sincerely,  
Mike Gray

Easton, Pennsylvania

Dear Ron,

Thanks for sending the July/August issue so promptly. I have read it through -- twice! Very informative articles.

As a lifelong train enthusiast, I grew up in the 30's and still have fond memories of steam. I started in 3-rail trains, progressed to HO scale modeling, and in 1989 began acquiring "G". I recently acquired an Aster British Southern Schools Class 4-4-0 kit and am about to start construction of same. The article in the current issue regarding alcohol burners was most helpful. This loco will afford me an opportunity to run "Steam in the Garden". No long distance travel, plus conveniences of home. I was recently at a meet at Jacktown (near Bangor, PA) and picked up several pointers from exhibitors operating 45mm gauge live steam.

Regards,  
Stan Price

Dear Ron,

Issue No. 23 arrived on Monday, and it merits the four-bit increase.

In particular the Argyle 4-4-0 report with historical supplement is first-rate. One point about this engine needs to be made. In the 1870's and '80's Baldwin issued narrow gauge locomotive catalogues; the 1877 edition lists standard engines with the 4-4-0 available in four sizes. The purchaser could specify wood or coal grates, type of smokestack and pilot, optional Westinghouse air or Eames vacuum brakes, driver diameter, etc., but the engines were assembled from standard parts to standard configurations.

Your Florsheims might be 8-1/2 D black calf and the man next door might have cordovan 11 EE's, but they are still five-eyelet Florsheim wingtips. The same pretty much applies to Baldwin narrow gauge 4-4-0's. Just in northern California and Nevada, the North Pacific Coast, Santa Cruz Railroad, San Joaquin & Sierra Nevada, Nevada County Narrow Gauge, Colusa & Lake, Lake Tahoe Railway & Transportation, Sonoma Valley, Carson & Colorado, Nevada Central, Eureka & Palisades (and these are just the ones I'm sure about) had them.

When we add Denver & Rio Grande, Utah & Northern and the myriad narrow gauge lines in Ohio, Pennsylvania, Virginia, etc., the list is almost endless. Find a copy of George Hilton's *American Narrow Gauge Railroads* (Stanford: Stanford University Press, 1990). Would you believe a Potomac, Fredericksburg & Piedmont catalogue Baldwin 4-4-0?

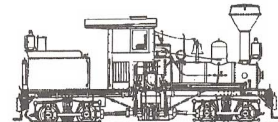
Last year Gordon Watson (*Argyle Locomotive Works*) assured me that he is happy to custom paint and letter his engines. Perhaps he could even produce a capped straight stack for a modest extra charge if your intended prototype burned coal.

I've seen Gary Broeder's engine, and it really is lovely. If I win the lottery, mine will be dark olive green and lettered for the Barbary Coast Railway. You won't find it in Hilton.

Cheers!  
Reg Stocking

*You brought up some excellent and interesting points, Reg. Not the least of which points out the value of Hilton's American Narrow Gauge Railroads as a valuable research tool which should be in the library of anyone seriously interested in accurately modeling American narrow gauge railroading.*

*Of course the Baldwin 4-4-0 was used by many railroads besides the South Pacific Coast, and modelers of other pre-1900 narrow gauge lines would be well advised to take advantage of the availability of Argyle's fine locomotive while it is still in production. And Reg -- I really hope you win the lottery and get that dark olive 4-4-0 for your Barbary Coast Railroad. Perhaps we'll see it running at Diamondhead in a year or two? -- ed.*





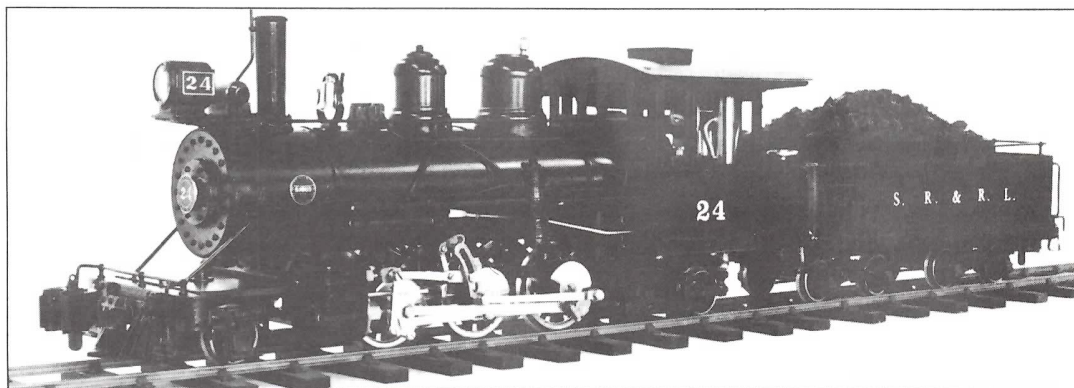
# ROUNDHOUSE



Available from  
the dealers  
listed below.  
Further dealer  
inquiries  
welcome.

## Living Steam Railways

for G Scale & SM32



The latest addition to our range of  
live steam locomotives features—

- \* Working outside valve gear
- \* Two-channel radio control
- \* Water-carrying tender with pump
- \* Boiler water gauge
- \* High level of detail

**Brandbright Ltd.**  
2821 Hillegass Ave. No. 22  
Berkeley, CA 94705  
Phone/FAX 510-849-9284

**Rio Pecos Garden Railroad Co.**  
27136 Edenbridge Court  
Bonita Springs, FL 33923  
Phone 813-495-0491  
FAX 813-495-7264

**Rail Goods Ltd.**  
5850 Anderson Road  
Forestville, CA 95436  
Phone 707-887-7969  
FAX 707-887-7407

**Roundhouse Engineering Co.**  
Unit 6, Churchill Business Park  
Churchill Road, Wheatley  
Doncaster DN1 2TF ENGLAND  
Phone 011-44-302-328-035  
FAX 011-44-302-761-313

# GardenRail

*The world of outdoor model railways*

*GardenRail* is a new and exciting  
quality magazine devoted to all  
aspects of garden railways



**Bi-monthly**  
Ensure your copies with an  
annual subscription.  
Overseas rate: £25.00

Or from selected model shops

*In case of difficulty  
write to:*

**GardenRail**  
P.O. Box 42, Skipton,  
N. Yorks. BD23 5UZ,  
United Kingdom

## When they outgrow the garden



be ready for it  
with a subscription to **MODELTEC Magazine**  
live steam locomotives • large-scale railroading  
shop tips and techniques • prototype info • and more  
12 full issues a year, only \$32.00  
(International subscriptions, \$39.00 per year, US Funds)  
Visa and MasterCard accepted

# MODELTEC

P. O. Box 1226 • Dep't SG • St. Cloud, MN 56302  
(612) 654-0815





# WHAT'S NEW?



**Aster Hobby West, PO Box 1226, Vista Del Mar, Cypress, California -- 714-828-1537** has announced three new Aster dealers in the USA. Hyde-Out Mountain, 89060 New Rumley Road, Jewett, Ohio 43986 -- 614-946-6611; Rio Pecos Garden Railroad Co., 27136 Edenbridge Ct., Bonita Springs, Florida 33923 -- 813-495-0491; J.M.G. Hobbies, PO Box 975, Lithonia, GA 30058 -- phone 404-736-9167 or 24 hr. FAX 404-736-9566.

**.Samson Engineering, 14 Fairfield Ave., Ruislip, Middlesex HA4 7PH, U.K., phone 011-44-895-634-738,** has obtained the rights to produce the old Steamlines range of live steam locomotives and accessories, including the well known "Osmotor". Mike O'Neill of Samson Engineering has informed us that the Moody River Class A Shay has been totally re-engineered and should be available in Autumn '95. The "new" Moody River Shay will have the original outline and proportions, which were quite pleasing to the eye, and will feature changes such as lower gearing for slower running, a stronger chassis, more robust bogies (trucks), water filling via hand spray bottle, steam regulator/whistle valve in line with the steam engine's reversing valve, and more. Gas firing will be standard, but meths firing will be available as an option. The price is anticipated to be in the area of £850, plus shipping, insurance and customs fees.

**Samson Engineering** is also building a hybrid 2 foot gauge Shay in 16mm scale, based on the Shays used on the Gilpin RR. Innovations on this engine will include grafting a gear pump onto the Osmotor for boiler filling on the run. It will be meths fired and will have a water gauge and a bunker fitted out to hold water and fuel. Write or call Mike O'Neill of Samson Engineering at the address or phone shown above, and please tell him you read about it in SitG.

**Joe Macaluso of J.M.G. Hobbies, 2721 Spring Ridge Circle, Lithonia, GA 30058 -- 914-338-0817** sent in the following press release: *Moving to Georgia effective August 15th, 1994! -- "B&O Grasshopper Locomotive and Coach by Aster is available through us. Early reservations are requested due to the limited quantity being built. The locomotive and coach set is available built or in kit form. Call for price."*

**Larry Larsen Graphics has also relocated -- to the heart of narrow gauge steam country at 104 Conejo Place, Durango, CO 81301 -- 303-259-3863.** Larry has added some new products to his line of excellent dry transfer lettering and herald sets, including several for both narrow gauge and standard gauge cars and locomotives. We received samples of some of the LLG line, including a set for a South Pacific Coast boxcar (particularly appropriate since we just received a new SPC No. 3 loco from Argyle at about the same time). The herald for this car is enormous! SPC fans everywhere should be pleased to find lettering sets for the SPC boxcar, coach and combine listed on LLG's new menu of goodies. These quality dry transfers come with well written instructions for application, and they are easy to use. Send a #10 SASE for a new catalog and price list.

**Sulphur Springs Steam Models, Ltd., P.O. Box 6165, Chesterfield, MO 63006-6165, phone/fax 314-527-8326** has added a line of quality books and videos for the aspiring home shop machinist. Authors such as Dave Gingery and Guy Lautard are highly regarded, and the information they offer on subjects such as building your own shop machinery, tooling, jigs and more can be very useful to novice and expert alike. Videos on casting techniques could be very useful to anyone wanting to scratchbuild their own locomotive, and other videos on basic metal lathe and milling machine use can get you up and going much more quickly than reading about it or tinkering on your own. I've read and can personally recommend the series of books by Canadian author Guy Lautard. They inform and entertain and are a worthy addition to our library. SSSM has also added Viton O-rings to their expanding line of hardware for the scratchbuilder, kitbasher, or anyone who works on or maintains small-scale live steamers. Send a SASE for the list of all their new additions.

**Hey! All you scratchbuilders, kitbashers, hobby machinists or wannabees out there -- here are some material sources just for you!→→→ next page.....**

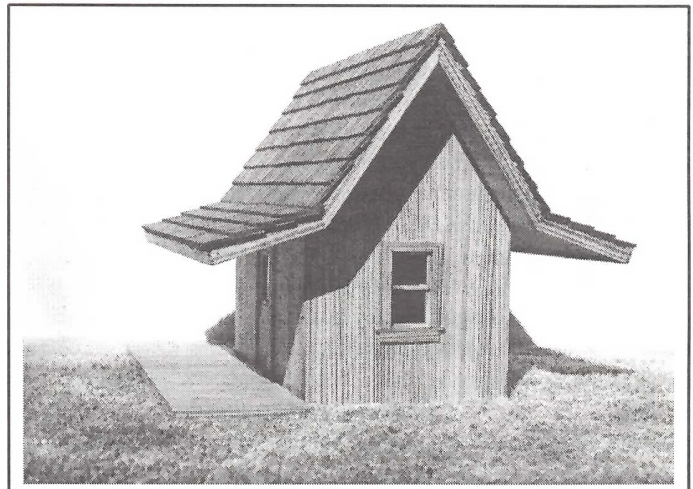


**Incremental Material & Supply**, 100 Rolling Ridge Road, Bellefonte, PA 16823 -- 814-353-8729 or 814-237-1367 has expanded their line of free machining products to include Ledloy and Stressproof steel, aluminum, brass, bearing bronze and phos-bronze spring stock. Please write or call for FREE literature.

**Micro Fasteners**, 110 Hillcrest Road, Flemington, NJ 08822 -- phone 800-892-6917/FAX 908-788-2607 has those hard to find screws, nuts and washers in sizes from 0-80 thru 10-32 in brass, alloy, aluminum and stainless. You don't have to buy them by the ton, and you don't have to pay those ripoff prices. How about socket head cap screws, 4-40 x 3/4 at \$4.75/100 for alloy or \$6.95/100 for stainless? And they have those lovely little brass hex head screws that are so hard to find and usually so expensive. Write, call or fax for a FREE CATALOG.

**Bob from Rio Pecos**, 27136 Edenbridge Ct., Bonita Springs, FL 33923 -- phone 813-495-0491 or FAX 813-495-7264, announces he now has available refillable fuel tanks for the Maxwell Hemmens Porter. The standard Porter uses EPI Gas Micro 100 throwaway cannisters, but some buyers have a problem locating a source for these cannisters and wanted a refillable fuel tank. The new tank is made of heavy gauge copper, is painted red and fits into the tender well. It holds 3 oz., plenty of fuel for several lengthy runs. It includes a short screw-on adapter for refilling, and is made to the same highest standard of quality as all the Maxwell Hemmens products. Price is \$95.00 including shipping. Contact Rio Pecos for more information about their entire line of products for the live steamer and garden railroader.

**Rio Pecos** has been adding to their line of excellent quality structures with plans and completely built-up buildings, water tanks and more for your garden railway. We received a sample of the Mountain Station, #114 in the Rio Pecos catalog. Built to a scale of 1:20, it fits in perfectly here on the Silo Falls Scenic RR. Plans (5 sheets) sell for \$7.95, and include front and side elevations and full sized patterns for all parts. Instructions include a bill of materials and two full pages of construction tips -- more than enough information to put this structure together, even if you've had little or no experience. All built-up structures are built by with tender loving care by Rob Osterhoudt, and his skill is evident in every structure we've seen. No assembly line slop-jobs here!



The completed structure is bursting with charm and charisma, and sturdy enough to withstand just about anything short of a direct nuclear hit -- even an attack by your neighbor's kids or dogs. This structure would look just right as a Mountain Station -- or in any number of other personalities, such as a cabin in the mountains or a small shop in town. We are well pleased with the unique designs and quality craftsmanship we've seen in the Rio Pecos line of REAL WOOD structures, and we suggest you call or write them for more info on their plan sets and built-up structures.

**Wrightscale Engineering of Scotland**, whose line of live steam locos are available in the USA through **Sulphur Springs Steam Models Ltd.**, PO Box 6165, Dept. RB, Chesterfield, MO 63006 -- phone/FAX 314-527-8326, is well known for their live steam model of an 8-ton Porter in 1:20 scale. A new version of this locomotive is now offered with full reversing Stephenson's valve gear and radio control of speed and direction. The new Porter features many improvements and enhancements. The pilot model will be displayed in steam at the ITM Steamup in Noblesville, Indiana and the National Gauge One Steamup in Diamondhead, Mississippi (check the calendar of events in this issue for dates). SitG will have an in-depth review of this locomotive for our readers in an upcoming issue. For more information, including price and availability, contact Sulphur Springs Steam Models, Ltd.



# Gazing Into the Fire

by Peter Jones

## Chasing the Dragon

---

By its very nature, the small scale steam engine tends towards low torque and high speed; the very opposite of its full size counterpart. The cause boils down to not being able to scale nature at an equal rate throughout the design of the model. The actual details of the cause may make fascinating reading to some but, of far more practical use are ways of stopping the locos hurtling around their track at suicidal speed. Fortunately, there are some low-tech ways of obtaining docile running; some of which may be applicable in your particular case.

So let's run through some of the features that make a difference. And the first of these is wheel diameter. Yes, I know it's obvious but it is worth pointing out that most commercial model steam engines that are based on slow running prototypes have small wheels. The rough and tumble of a narrow gauge backwoods line calls for more docility - in both prototype and model. An Aster biggie will swish elegantly round mainline curves of well laid track, hauling a rake of cars behind. But it isn't so good at switching cars on a lumber spur...it isn't supposed to be.

Less obvious is boiler pressure. The old Archangel engines would blow off at 70 or 80 psi and they would be hopeless at slowly running a few cars up and down. The instant cure was to cut down the safety valve spring a little at a time until 35psi was the working pressure. The engine would no longer pull me or ten bogey coaches but it was never asked to. Given a really tiny layout, I would go down to 25psi.

But, I hear you cry, what of the Mamods? Here is a low pressure beast that will outdrag a Navy fighter off a flattop. Here, paradoxically, the answer is to increase the pressure a little. This gives slightly smoother power curves up and down hill. But it still likes a bit of throttling.

Part of the trouble with small engines is the crude throttle that is used. A Mamod uses a couple of semicircular chambers that are cut into a rotating block. The chambers have blunt ends and the dodge of filing them to a point for more gradual steam admission has already been described. Even so, the regulator still needs a very gentle hand. You know how it was when you first learned to drive an automobile. You just touched the pedals on a manual car and the thing shot off. The clutch seemed incapable of being gently put in. But a year down the road, you can control the car smoothly without thinking about it. So it is with Mamods. You kinda develop a Mamod "feel" with time. An auxiliary throttle makes the job easier. This is just another valve to admit steam. And this leads us on to one basic principle. If you have a coarse valve which is too harsh in operation, put another one in the steam line. Between the two you will get much more delicate control.

Perhaps it is worth repeating the concept of the needle

valve. This is often used in live steam operation, and is often blunt ended and can sometimes have a coarse thread. This is done for ease of production in small-time workshops. If you get a chance, take a look at a needle valve on a model aero engine or two. Note how fine it is because it has to be. In the past I have made a steam valve using the needle from this source.

Another device for slow speed control is the exhaust regulator. This is a second regulator stuck into the steam exhaust pipe - often the handle is disguised as a smokebox door handle. This works magnificently. You can make an engine creep up or down a steep grade. But there is a price to be paid. It strangles the magic chuff. You lose that lovely exhaust beat. If you can live with it, though, it has much to commend it.

What it does do is prove that, if you choke the exhaust, you slow the engine but still retain a decent proportion of power. So if you are stuck with a loco that needs taming quickly, on a wet Sunday afternoon miles from a workshop, you can sometimes get away with putting a pair of fine nose pliers down the chimney and nipping the exhaust pipe shut slightly. Better still, if you can fit a small nozzle on the end of the pipe, this will restrict the flow but maintain a good sharp exhaust jet.

I won't go into gearing down of engines. It is hardly something that you can normally bolt on. It has to be designed into the beast in the first place. If you are into building your own, gearing produces marvellous docile power, but you have to be scrupulous in avoiding the slightest misalignment of gears. Sticky cogs can soak up power at a frightening rate. I once built an 0-6-0 steam chassis that had a single oscillating cylinder in the cab and a three-stage gear reduction down to the wheels. No matter what I did, the damn thing wouldn't budge an inch. There was just too much friction. Building a loco that fails to move has little to recommend it. Life is too short for learning lessons the hard way.

Sometimes, poor control in R/C locos is due to poor linkage. Given modern clevis arrangements there is usually no slop in the linkages, but it is well to check.

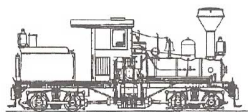
What can make a difference is the length of arm on the servo and the regulator. If the arms are very short, any free play is a higher proportion of the actual travel. If you have commercial arms on the linkage, they are often drilled with a series of holes along their length to provide a different degree of throw. It is worthwhile experimenting with these.

One option I did pursue one time was to use an electric motor instead of a servo. This simply screwed a pole in and out with an off position in the centre. This gave very precise control once I had mastered the gadget. It is by no means an original idea and I only used a very simple application, without overrun stops. But it worked well. For the indoor mar-



ket these days, you can get slow speed switch control motors. I have wondered about their application to radio control of live steam. But I am not the person to experiment further. As you know by now, I'm rather stuck with this personal hang-up that my steam engines should be free spirits, devoid of electronics. Thus I must leave experiments to others. But I can't help thinking that there is some more elegant arrangement screaming to get out from under our present crude arms and linkages.

Finally I come back to the most useful add-ons for fine control...those pink, pudgy things at the ends of our hands. It is worth repeating that a new model steam loco isn't an electric car. Even the simplest model has a personality of its own. As with steam driven machinery that has a gauge of 4'-8½", it calls for the human input to get the best output; a mixture of intuition and experience. Tinkering with the metal bits can make life easier sometimes, but the best accessory is a good driver. He comes free -- but be prepared to wait a while for delivery.



## MIKE CHANEY

### We've got.....

KITTEN locomotives with oscillating cylinders  
 HERO locomotives with piston valve (fixed) cylinders  
 Blower valves, check valves, gas valves and safety valves  
 Cylinders, reversers and manifolds  
 Regulators for manual or radio control  
 Steam oil, syringes, "O" rings and glassfibre wick  
 Boiler bushes, union nuts and liners  
 Single pipe unions, double pipe unions and bronze tees  
 Burners, regulators, safety valves, lubricators, "O" ring kits  
 and replacement boilers for your Mamod locomotive

### and we'll make.....

anything you need for a small steam locomotive -- or the complete loco if you don't mind waiting for it -- to your specification or drawing at a sensible price.



**WORLDWIDE MAIL ORDER**



**MIKE CHANEY**

116, Vicarage Road, Chelmsford, Essex CM2 9BT, England  
 Tel: 011 44 245 260 096

## HARD TO FIND

small fasteners for the live steam hobbyist at reasonable prices.

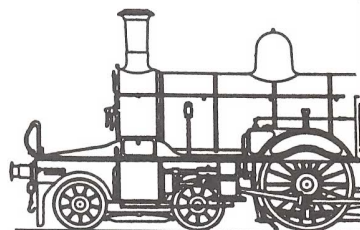
**Examples: Socket head cap screws, 4-40 x 3/4 alloy - \$4.75/100, stainless \$6.95/100. Hex head machine screws, 2-56 x 3/8 stainless \$7.25/100, 2-56 x 1/2 brass \$5.75/100.**

**Sizes 0-80 thru 10-32 in brass, alloy, aluminum & stainless. Call, fax or write for FREE CATALOG.**

## MICRO FASTENERS

**110 Hillcrest Road  
 Flemington, NJ 08822**

**Phone (800) 892-6917  
 FAX (908) 788-2607**



## STEAM OIL

NO ADDITIVES  
 NO PERFUMES  
 NO SCENTS  
 JUST GOOD

## STEAM OIL

8 OZ./\$4.50...16 OZ./\$6.50...32 OZ./\$8.50

ALL PRICES POSTPAID FROM

## THE WILLOW WORKS

P.O. BOX 150581 NASHVILLE, TN 37215

**NOTE:** Due to present commitments, no additional custom work can be accepted until November 1994. Thanks to all of those who have placed orders for custom work this year.



# The Fitter's Bench

by Crankpin

The design of the metal lathe has evolved as a response to two basic mechanical requirements which are necessary for it to do its intended job. The first of these is that the machine must be able to hold or rotate the workpiece rigidly and truly. This is the job of the headstock and spindle, which we touched upon last time, and the particular holding attachment that is mounted on it, such as a chuck or faceplate. The second requirement is that the machine must provide a support and guide for conveying a cutting tool along a line which is both straight and precisely parallel to the surface being worked. This is the job of the Ways. To be of much use to anyone a lathe must satisfy both of the above conditions to within very fine limits of accuracy while resisting the sometimes considerable forces of the cut.

An essential consideration in this design is that the sliding components be made from materials which can be made to fit closely together yet which allow movement to occur with the least possible friction and wear on the mating parts. The bedways, carriage, cross slide, and top slide (or compound slide) assemblies are linear (sliding) bearing conditions and must hug their mating surfaces tightly, usually with a clearance of .001" or less, and must glide effortlessly back and forth with only the twist of a knob.

To do this the bearing surfaces of these sliding components must not only possess a relatively low coefficient of friction (remember that we talked about that last episode) and be resistant to wear, but since they comprise the structure of the lathe itself they must also have great structural strength and stiffness. For this application the material that has over the years proven itself to be superior to all others is cast iron. Now amongst the uninitiated popular belief might hold that some sort of steel is a better material for such applications, but this is in fact not the case; cast iron is the best choice.

The characteristics of cast iron are such that it is a superb material for making machines; it can be molded (cast) into very complex shapes, it is easily machined and it can be finished to precise limits of accuracy, it is quite dimensionally stable, and it has great compressive structural strength. Cast iron can also be recycled indefinitely, as long as it remains as iron and is not converted into a steel. Finally, cast iron contains graphite in molecular suspension which gives it superior sliding and bearing characteristics while being highly resistant to wear; just the thing for lathe beds or for that matter any machine with tightly fitted sliding parts.

Of course not just any cast iron will do as there are specific alloys whose relative strengths and wearing properties lend themselves better to making machine tools than others. The iron which has been most widely used for machinery of all sorts is called gray iron and is characterized by the silvery gray color that appears when it is machined. Gray iron con-

tains a relatively high percentage of carbon in flake graphite form which as I mentioned above gives it its excellent bearing and wear resisting qualities.

A few manufacturers of larger industrial quality machine tools now cast their machine components in any one of several advanced iron alloys which are stronger and longer wearing than gray iron and are known as semi-steels. Good stuff that, most chucks are now made of it. (There I go, jumping ahead of myself again.) This an iron that has some nickel, silicone, and other trace elements added to it to endow it with the best qualities of both iron and steel.

However, the machines that we will hunt after (and surely find) will most likely be of gray iron and they will provide us with more than sufficient strength and service life for our humble needs. Now let's get on to our discussion of bed and way types.

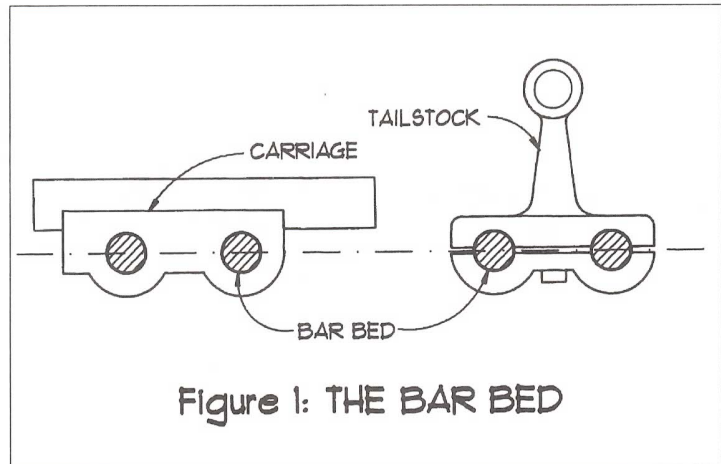


Figure 1: THE BAR BED

## Round Ways

The Bar bed (Figure 1) consists of two steel bars, usually solid with a ground finish, which are bolted parallel to each other to a pair of end supports or cradles. The Saddle, or Carriage, and Tailstock are then bored to match the bar diameters and centers. The round bar construction lends itself to manufacturing economy thereby holding down consumer cost, but a problem arises in that they will be supported only at their ends, resulting in a considerable loss of stiffness, and ultimately accuracy.

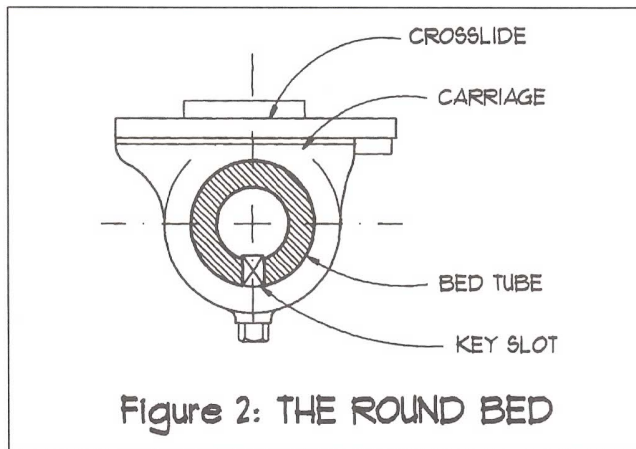
The best known lathe of this type in the world is no doubt the original Unimat, first made almost 40 years ago by the American Edelstaal Co., and featured a typical bar bed as I have just described above. This was a successful attempt to deliver a small, affordable multipurpose (lathe/mill/drill) machine into the hands of as many small-scale modelers as possible. A similar machine is still being produced, albeit in a slightly modernized version, by the Emco Corp.



Although many thousands of the Unimat machines have been sold over the years (and I must admit that Yours Truly was once a Unimat owner), I was never able to coax very good results from my machine. No doubt there are many satisfied owners of the original Unimat, but my own experience with them is that the bars lack support and rigidity and they deflect noticeably when called upon to withstand anything other than very light cutting pressures. Although there are many of these to be had on the market these days, I believe you would ultimately be dissatisfied with one and for that reason I cannot recommend the purchase of this particular machine or one with any similar type of bar bed.

The true Round Bed (Figure 2), has been used in several machines over the years with some success. The best known of these was a 3.5" lathe made by the Drummond Brothers (Surrey UK) which featured a cast iron tubular bed 3" in diameter.

The Drummond Round-Bed, although originally treadle driven and rather rudimentary by today's standards, was accurate and reliable and extremely popular during its time,



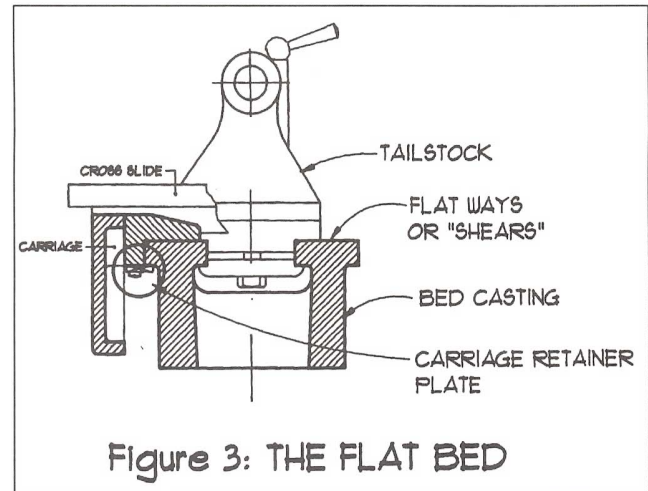
and it eventually achieved almost legendary status in the model engineering world. The production of the Round-Bed ceased before the 2nd World War and afterwards Drummond was absorbed by Myford Machine Tools. Many Round-Beds are still in everyday use and can still be found popping up here and there in the UK marketplace.

#### Flat Ways

The Flat Bed is illustrated in Figure 3, and as you can see is comprised of a pair of rectangular bar shapes, sometimes referred to as the "shears". This profile is probably to be found on more amateur machines, purely in terms of numbers bought and in use, than any other way profile due to the relatively low cost of manufacture and finish. Flat ways are reasonably accurate and long wearing, and will serve the model engineer well enough under most any circumstances. The flat bed, unlike the tubular or bar bed, is normally supported along its entire length thus reducing to almost nil any tendency to deflect under load.

The arrangement which is preferred in any lathe is one in which the carriage and tailstock are each guided by separate surfaces of the ways. In the case of the flat ways, the tailstock (shown in place in the illustrations) will normally be guided

by the top and inner faces of the ways, whilst the carriage is guided by the outer edges and faces. In addition, the carriage is held down by flat retainer plates that bear upon the underside of at least one of the shears. Thus portions of all four



edges of each rectangular shear are put to use in providing guidance for the carriage and tailstock. In lathes where the headstock and bed are separate castings, very often the headstock base is notched so that when it is bolted down to the tops and inner sides of the shears, dead-on axial alignment is insured.

#### Dovetail Ways

The Dovetail Bed illustrated in Figure 4 is actually a variation of the flat way in that the bearing face, the surface upon which the carriage, slides, and tailstock are supported, is also flat. The dovetails serve as guides to retain the carriage and other sliding parts on the bed.

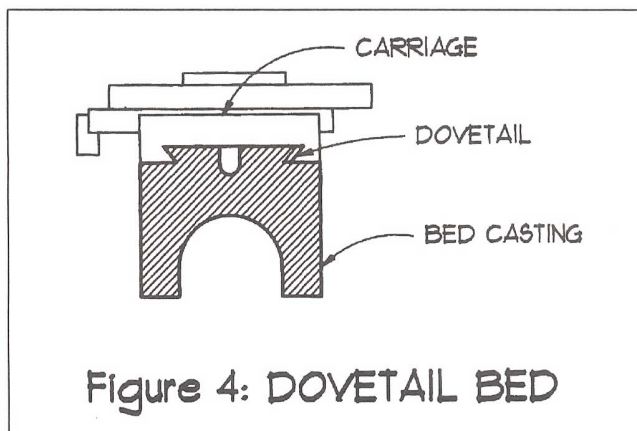
The dovetail can be made to very fine limits of accuracy and has been the bed profile of choice for several lathes of which each is an acknowledged premier machine in its category. The Cowells range of lathes, which are some of the best made of the mini-lathes, use dovetail ways, as does the Myford Speed 10, which is the smallest of the Myford lathes. On the other end of the spectrum, some of the very best of the world's precision watchmaker's lathes, such as the Levin and Pultra, use the dovetail as does the full size US-made Hardinge precision toolroom lathe.

Departing from a description of "ways" for a moment, I should tell you that the single most favoured method of fixing the other "slides" to a lathe, that is the Crossslide and the Topslide or the Compound slide, is by the dovetail slide configuration. It is almost universally used because it is simple and relatively easy to manufacture in the sizes acceptable for slides and, as I stated earlier, it can easily be made to very accurate limits.

#### Vee Ways

The VEE BED (Figure 5) is made with ways that are a combination of inverted vee-shaped ribs, the number of which can range from one to four, and flats. The profile usually extends the entire length of the bed and provides a more positive guide for the headstock, carriage, and tailstock. The Vee





bed is considered by many to be more accurate than other profiles and machines with this type of bed are usually more expensive because the Vee ways are more expensive to manufacture.

In the U.S. the most inexpensive and readily available lathe for the amateur was for many years the Atlas/Craftsman (produced as The Acorn in the UK). These machines were available in three sizes and were always manufactured with flat ways, and as the least expensive of the "real" lathes were no doubt the most popular. The most respected machine in the US was the South Bend which always had vee ways and as a crossover machine equally at home in both the industrial and amateur setting, was considerably more expensive than the Atlas. The result of this was that for the several generations the choice for the American model engineer was usually based upon end cost, not of way profile.

In the UK the most popular lathe for the model engineer has always been the Myford 7 range, all of which have flat ways and are much sought after and respected machines. Other British lathes, such as the Boxford, Colchester, Portass, Holbrook, and Harrison, which like the South Bend would be equally at home in both the industrial and amateur shop, were made with vee ways. It is interesting to note that the inexpensive Atlas/Craftsman/Acorn machines, although still very visible on the secondhand market, are no longer made while South Bend, Myford, and Boxford, et al. go on their merry way.

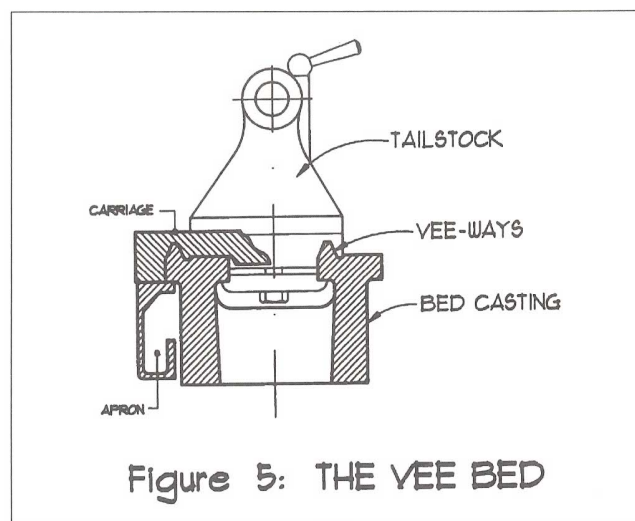
For some years there has been some occasional correspondence and no small amount of disagreement in the model engineering press over which is the preferred way profile, flat or vee, and relative accuracy is always the point of the discussion. It could be said that the population is divided in a sense into two camps, the Flatbedders and the Vee-bedders, each convinced that their profile is best, considering the type of work that we do.

Although this question remains unresolved at this time (and will remain so), let me say here that at our level of working, which is normally less demanding than in industry, the results you obtain are going to be primarily a function of your own abilities and a desire to do good work, not upon the profile of your ways. A ham-fisted dolt, no matter what the cost of his machine, will not be able to match the work of a careful craftsman equipped with but a handful of files. Therefore, I would not let the tail wag the dog, so to speak, and be swayed away from a good buy on a machine because

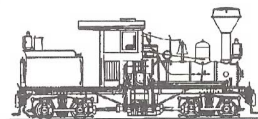
of the presence or absence of a particular bed configuration as any of them will do for our purposes. I would however continue to caution you away from a machine with an unsupported bed as described earlier, although in a pinch even these can be made to do if used carefully.

With this installment we have nearly arrived at the conclusion of our discussions on the basic construction of lathes for the amateur's workshop, but we are far from done. A good deal more important and interesting material remains to be investigated and we will push on ahead in upcoming issues.

It is possible that a few of you have been eagerly awaiting this stage in our journey, quite patiently I must say, in hopes that I will publish a recommendation or make some sort of declaration as to which is the best lathe to find. If that is the case, then I am afraid that you are going to be disappointed because "best" will be a different animal for each one of us. Even though I am able to demonstrate a passing acquaintance with a number of lathes suitable for the amateur, there are many new machines on the market these days and it is not possible for me to have seen, much less be intimately familiar with, all of them, nor recommend one over the other. From this point forward you will have to make your own way.



In our next issue I will make one small addendum to our discussion of lathe beds, that would be on the use of "Gibs", a device for adjusting sliding bearings. With that concluded we will begin to look at lathe tooling, beginning with the basic package that has been traditionally supplied with new lathes, and from there we will make as much progress as we are able towards describing the other fittings and accessories with which the well equipped amateur will want to arm him or herself. In closing for this time I offer my usual disclaimer in that I have no interest or association with any of the aforementioned companies or products other than as an owner or occasional user.





## NEW FROM RIO-PECOS!

New! Refillable fuel tank for the Maxwell Hemmens Porter. If you are having trouble locating the fuel cannisters normally used on this engine -- or if you are "bashing" your own engine and are in need of a fuel tank -- we've got just what you're looking for. Constructed of heavy gauge copper, this tank holds 3 oz. of fuel and comes with a screw-on adapter for filling. Made to the usual high standard of all Maxwell Hemmens products and priced at \$95.00 incl. shipping.



Yes, we do have the following Gauge "1" live steam locomotives in stock and available now.....

**MAXWELL HEMMENS PORTER**

**ROUNDHOUSE SR&RL #24**

**ASLC "LITTLE GIANT" RTR & KITS**

Call today for a price quote on these fine quality locomotives!

**RIO PECOS**  
GARDEN RAILROAD CO.

27136 Edenbridge Ct., Bonita Springs, FL 33923 -- Phone (813) 495-0491 -- FAX (813) 495-7264

**LOOK!** Here's a **DIFFERENT** Model Railway Group Dedicated to Having **FUN** with Railroading...

**A.W. N.U.T.S.**

*(Always Whimsical & Not Usually To Scale)*

**Garden Railway Society**

**Lifetime Membership** includes a One-Year Subscription to our Whimsical **PENTAMEROUS Newsletter** (5 Pentacles/Issues per year with lots of neat stuff to read and look at) and a Nifty **Certificate** -- just **Ten Bucks!**



**Bucky Sez:**  
See us at the 10th Annual Garden Railway Convention  
Denver, CO, Aug. 11-14

**Special Introductory Offer!**

Please send check or money order payable to A.W. N.U.T.S. G.R.S.

European:

**£7**

U.S.:

**\$10**

**A.W. N.U.T.S. G.R.S.**

c/o Graham McAlister -- GR  
60 School Road  
Wales Village, Nr. Sheffield, U.K. S318QJ

**A.W. N.U.T.S. G.R.S.**

5473 N. University Dr., #219-GR  
Lauderhill, FL 33351



# Locomotive Review

## Berkeley Loco Works "CRICKET"

by Scott E. McDonald

### Technical Specifications

Description:	0-4-0 Single Vertical Cylinder Locomotive, based on the John F. Byers Machinery Co. prototype of 1898
Scale:	1:20
Gauge:	<u>Adjustable</u> - Gauge 1 or Gauge 0
Length:	6 5/8"
Width:	4"
Height:	5 5/8"
Weight:	2.5 lbs.
Min. Radius:	2.5 ft.
Cylinder:	Fixed single acting, 7/16" bore x 5/8" stroke (oscillating cylinder version also available)
Valve Gear:	Piston valve, made of Teflon
Wheels:	Steel 1.250" diameter, non-insulated -- optional insulated wheels available for Gauge 1 only
Gear Ratio:	1:5.79
Boiler:	1 5/8" x 5", working pressure 25psi
Duration:	18 - 20 minutes
Firing:	Internally gas fired butane
Lubricator:	Displacement-type (lubricator not supplied with oscillating cylinder model)
Couplings:	Comes equipped with Ozark Miniatures link & pin white metal castings and LGB-type loop
Construction:	Steel
Price:	Basic Engine -- \$450
Options:	Throttle -- \$18 Insulated Wheels -- Gauge 1 only -- no charge Pressure Gauge -- \$40

Available from: Berkeley Locomotive Works, 2821 Hillegass Avenue No. 22, Berkeley, CA 94705 (510) 849-9284

Entry level live steam used to be a somewhat simple matter. If you weren't sure about what was a good, simple and dependable live steam locomotive, the seasoned Live Steamer would usually recommend the Mamod (manufactured in England), or any oscillating cylinder engine. Unfortunately those days have passed. Finding a new Mamod is difficult (they have not been in production for years), and if you do find one the quality could be questionable, as quality control slipped as the company changed owners many times.

At the National Gauge One Steamup in Diamondhead, Mississippi this year a new little engine appeared on the scene. Although it is more sophisticated than the li'l ol' Mamod, it maintains the simplicity of operation that makes it a perfect entry level steam engine -- and the price is the best in town for a brand new engine.

Manufactured by **Berkeley Locomotive Works**, "Cricket" is a single cylinder, piston valved (not oscillating, although that option is available), geared locomotive. The piston valve and cylinder piston are both made out of teflon. This not only creates a better steam seal, but in theory, they

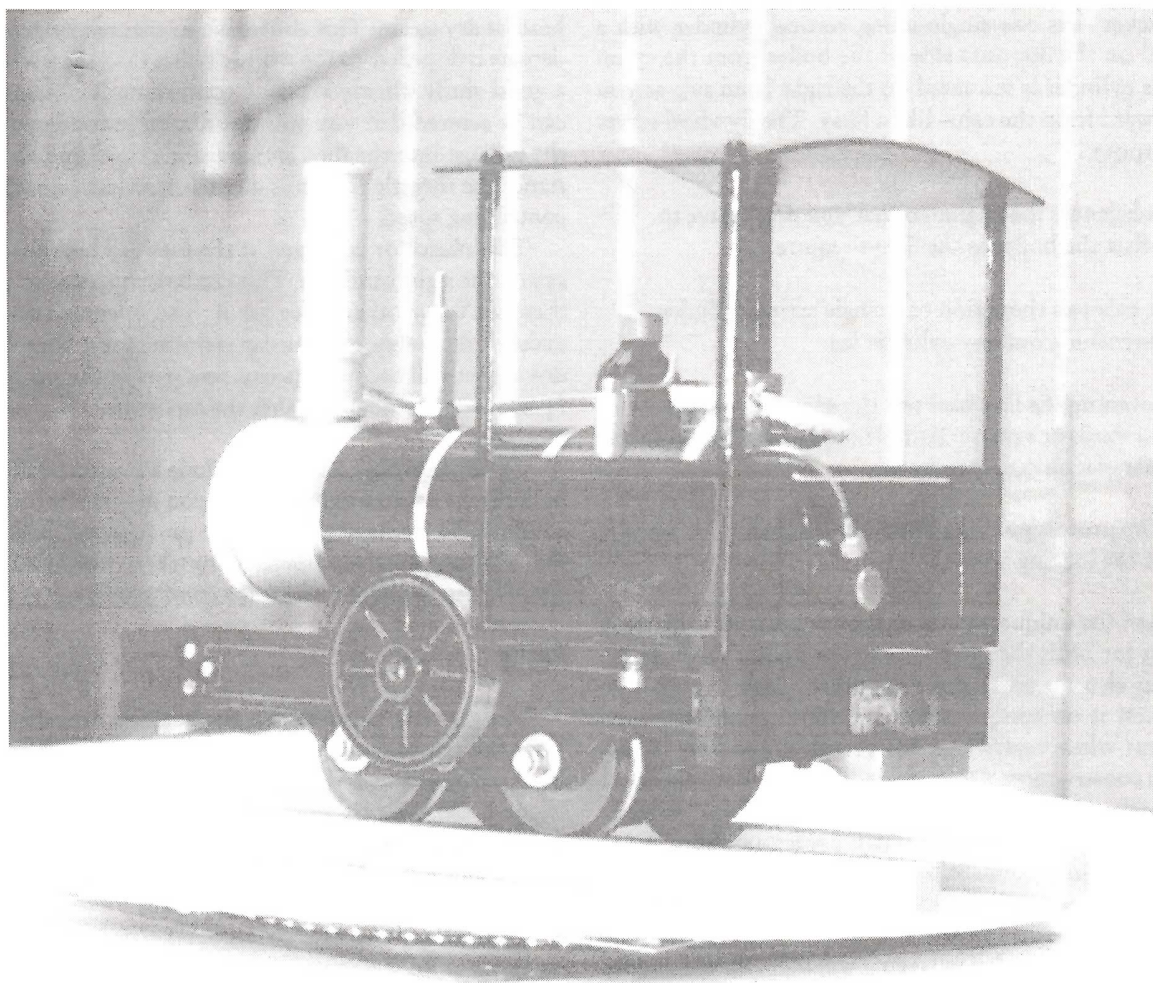
should never wear out.

It is a hard worker, fueled by butane, which may be appealing to someone who feels that alcohol or coal are too messy to work with. In appearance, "Cricket" has clean lines, and is begging to be given that personality adjustment by its owner. At first sight you may think, "What kind of weird, non-prototype contraption is this?". But look again, and then hit the books for it has a proud family lineage in logging and industry.

### Prototype

"Cricket" is based on a single cylinder locomotive manufactured around 1898 by the John F. Byers Machinery Co. of Ravenna, Ohio. There was a writeup on the real locomotive in the January 6, 1898 issue of *Engineering News*. Based on the advertising line drawing shown in that publication, the prototype was a T-Boiler with a small tank forward of the cylinder. Berkeley Locomotive Works has done an excellent job of capturing the original, and with a few additional





Chip Rosenblum's CRICKET, fresh from the paint shop, shows off an attractive custom lining job on flywheel and cab. The short wheelbase, chunky good looks and eye-pleasing proportions make this loco a natural for garden railway use on any size pike.

*Photo by Michael O'Rourke*

details, you would have a very impressive model of what J. F. Byers intended. According to John H. White in his book *American Locomotive Builders*, only four prototypes were built by Byers. It is unknown if any photos of the prototype actually exist or where the four were shipped to. The chunky little style gives the 0-4-0 the appearance of the hard working, robust locomotive that it is.

For those who are concerned with scale, the engine is basically a free scale locomotive since no technical drawings exist of the prototype. BLW extrapolated scale from the advertising line drawing by applying known standard sizes of the time to various parts of the engine. BLW states that it is "...visually compatible with "G" scale (1:22.5), what we at BLW call "G15" (1:20, or 15mm = 1 foot), and 16mm scale (1:19)."

The gauge of the locomotive is adjustable between Gauge 1 and 0. This was a feature I found to be enticing. I have many friends who are either installing or have established '0' gauge lines, and operate very narrow gauge lines. Interest in

16mm Welsh slate railways in this country is growing and now I will be able to become an active participant at steamups in the narrower gauge.

### Description

Since "Cricket" is a geared locomotive, it is not the type of engine that because of steam efficiency will take off like a jackrabbit. It is designed to ensure that the novice will have ample time to be able to respond to the movement of the engine. Because of the gearing, a throttle is not essential, but one is available at additional cost. If you don't like the operating speed of the basic model, just add a heavier load. The gearing also enables this little engine to pull an incredible consist for it's size, although operating time will be reduced as the load increases. A consist of 4-8 small disjointed log cars with cut timber from the trimmings of a tree in your backyard will be a prototypical load that will not reduce total boiler time too drastically.



"Cricket" has one single-acting vertical cylinder with a flywheel on the opposite side of the boiler from the cylinder. The cylinder is mounted on the right hand side as you face forward from the cab -- like a Shay. The flywheel serves four purposes.

- (1) It balances the engine so that you don't have to offset the boiler as the Shays require.
- (2) It balances the action of a single acting cylinder, smoothing out any cylinder lag.
- (3) Spinning the flywheel sets the engine in either forward, or reverse. (Simple mechanism's help keep manufacturing costs down).
- (4) The prototype had a flywheel. (Probably for a belt to the logging winch).

One of the unique aspects of the cricket is its utilization of teflon for both the cylinder and the piston valve. However, this also means that unlike other steam engines you cannot test it on compressed air. Teflon has an expansion coefficient when heated that has been factored into the design and construction. Once steam hits the teflon, the valve and cylinder expand to create a good seal and you're ready for running. In this way your steam needs to be very dry.

A minor improvement to ensure the integrity of a dry steam is to insulate the steam line from the steam dome to the lubricator. A good quality cotton twine wrapped around the steam line for insulating lagging will help. BLW included a small skein with my Cricket along with instructions for accomplishing the task.

### Valve Gear

The valve gearing consists of an eccentric made of bearing grade Polyetherketone, or as it is known in simple terms, PEEK. This not only acts as the eccentric but as an axle bushing that is very resistant to friction wear. It is located on the axle inside the flycrank, at the end of the piston valve drive rod next to the cylinder drive rod. There is a pin in the eccentric that is set in a slot on the flycrank. Positioning of the pin at the extreme end of the slot in the flycrank sets the valve for either forward or reverse.

If you desire to change direction during a run you have to do this manually by either spinning the flywheel in the opposite direction or with a gentle push. This makes radio control out of the question.

### Fittings

A standard Cricket has straight plumbing from the steam dome through the lubricator to the cylinder. Since the gear ratio is low (1:5.79), a throttle is not really necessary as the high end speed is a slow comfortable pace. This engine is not going to get away from you!! I opted for a throttle only to ensure steam integrity until I was comfortable with a good

head of dry steam. This allows me to ensure any excess condensate is dispelled via the whistle rather than the stack. When a good shrill whistle without condensate is obtained, you can be assured that you will not discharge condensate from the exhaust into the flue, extinguishing the flame. In this instance the throttle is used as an off/on switch in addition to controlling speed.

The lubricator is located at the forward bulkhead of the cab on the right hand side. This can be a challenge to get to as there isn't any other place for it. The openness of the cab makes it accessible, and the cap is slotted for a "dime" screwdriver that will become a permanent part of the steamup kit. I personally would prefer that the cap was knurled for easier removal.

Optional fittings available include a pressure gauge. The boiler lacks a water sight glass, so you may feel a little more comfortable by having a pressure gauge, but I have found that after a normal run there is anywhere from 10-20 ml of water left in the boiler which is a comfortable safety margin.

### Firing

The gas tank is located on the left side deck of the cab. Since this places the fuel filler valve under the cab roof, filling is accomplished via a "spigot" supplied by BLW. The spigot is designed to work with standard butane canisters and you may experience some minor loss of butane around the canister nozzle. This can be corrected by using a small 'O' ring around the canister nozzle base.

An alternative to butane is a butane/propane mix called Iso Butane. Iso Butane contains a small percentage of propane which raises the operating pressure only slightly which keeps it in the realm of the butane gas jet installed. Iso Butane is available in larger canisters for around the same price as cigarette lighter butane. Iso Butane can be found in the camping department of most major department and discount store. The Iso Butane camping canisters will require an adapter spigot, an optional accessory available from BLW.

### Running

Once steam is raised you have two options to get the locomotive in motion. Spin the flywheel in the direction of your desired movement, or give it a little push. Since the cylinder is single acting (steam input and cylinder drive from one end only) the action of the flywheel and locomotive momentum gets the cylinder back into position for the next burst of steam.

On an average, depending on the weather, running time is around 18-20 minutes. Steam can be raised from a cold start in about 5 minutes using regular lighter butane.

### Accessories

BLW provides a few accessories that will get a beginner up and running in short order. You just need to provide water and fuel.

I've already mentioned the fuel spigot, a necessity to ac-



commodate fueling. Also included is a syringe for filling the boiler, which is accomplished by removing the whistle or the safety valve. I have found that 85cc of water is just right for raising steam with the least amount of condensate after pressure is up. Any more and you will waste butane cooking off excess water. Any less and you run the risk of running out of water before you run out of butane.

A curved brass tube is provided which I mistakenly used as a syringe extension to put water in via the steam dome under the cab roof. Since the safety valve is a Mike Chaney button valve, it is knurled and easy to unscrew. In talking to Mike O'Rourke of BLW, he explained that it was to place over the exhaust piping in the stack to ensure any condensate was discharged to the side, away from the smokebox and boiler, to keep the engine from developing a dirty baked on oil look. This is a very thoughtful addition, and a bit of a safety device to direct discharge away from yourself and any onlookers.

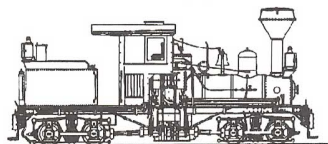
A couple of allen wrenches are provided to tighten any set screws that may come loose through normal operational vibration.

The only accessory not provided, but which has become a standard addition to my steamup kit, is a small brush. Depending on the environment of your railway, a small stiff bristle brush is a post operating necessity. The main gears are lubricated at the factory, but will require routine maintenance and lubrication. A soldering paste brush is perfect for cleaning the gears after a run to remove any debris that the lube grease may pick up. If your railway is extremely rural, the possibility exists that the gears could become jammed with botanical debris or loose ballast. You will know immediately if this problem arises as the locomotive will come to a sudden stop. Simply turn off the gas, brush the gears, refire and you're off and running.

### Summary

"Cricket" is unique, fun, and a simple engine to operate. At the going price it is a great deal for entry level steamers. With today's prices going up and up, we would probably spend twice as much to start a simple stable of steam engines. For those who like to add goodies for personality, this is the engine. I have so many ideas for details that I will probably have to get a couple more Crickets to play with.

The service and support after the sales is great. Mike O'Rourke of BLW is very friendly and conscientious about ensuring that the customer is pleased with the product. Whether you are a beginner or a seasoned live steamer, a Cricket is a great addition to your steam roundhouse.



# LIVE STEAM LOCOS



Authorized Dealer

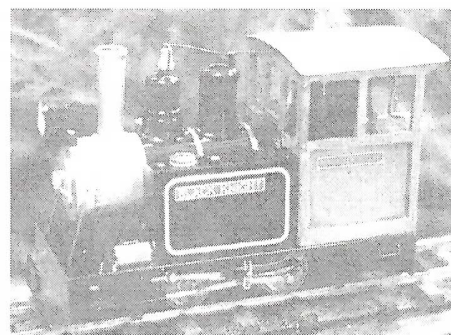
## Lowest Prices On Aster Call Us!

ASLC 0-4-0's

Kits or RTR

\$599 to \$995

**FREE RADIO CONTROL INSTALLED IN ALL ASLC's**



**AMERICAN OR EUROPEAN PROTOTYPE**

Kits  
Unpainted

RTR's specify color  
Maroon, Green or Blue

**STEAM CHUFF/WHISTLE/BELL  
SOUND SYSTEM**

- ♦ Realistic Sound
- ♦ Lifetime Warranty
- ♦ Refund if not Delighted
- ♦ W&B Only For LS
- ♦ Large 3" Speaker
- ♦ For All Trains

**READY TO OPERATE**

**5 OR MORE BULK PACKED -- 10% OFF!**

(Specify smaller 2" speaker for cab and tight installations, such as LGB 0-4-0)

**\$59**

SEND OR CALL  
FOR FURTHER  
INFORMATION

**WE PAY  
SHIPPING**



CHECK,  
MONEY  
ORDER,  
COD

Ohio res. add  
6% sales tax

89060 New Rumley Road, Jewett, OH 43986 614-946-6611



# Build Your Own Boiler

## Part III of a series

by Charlie Mynhier  
drawings by John D. Cone, Jr.  
(drawings not to scale)

The boiler shell is made from a 1-1/2" X 1-1/2" x 3/4" copper "T". Remember the wooden plug trick? We need to face the "T" so that the ends are square and the "T" is 3-7/16" long, then we will face off the 3/4" branch so that it is 5/32" long. The front extension is a piece of 1-1/2" type "L" copper pipe. This pipe is 1-5/8" O.D. and it slips inside the "T" so it may be sweat soldered. Cut and face this pipe 2-5/8" long, insert and solder it into the "T" with 45% silver solder. Use the wooden plug, or the steady rest, to face the shell assembly 4-7/8" long, end to end.

The back head is made from brass flat bar, 3/4" thick, 2" wide X 2-1/4" long.

The front plate is made from 1-9/16" O.D. X 1/4" long brass. Notice the 1/16" X 45° chamfer and the .005" gap. These will facilitate the application of flux and allow the solder to flow and penetrate for a good joint.

The flue is made from 3/4" type "L" copper pipe. This pipe is 7/8" O.D. and 3/4" I.D. Cut and face this pipe 5-3/4" long. Use 45% silver solder to solder the flue into the back-head so that 5/16" protrudes from the back. Take care that

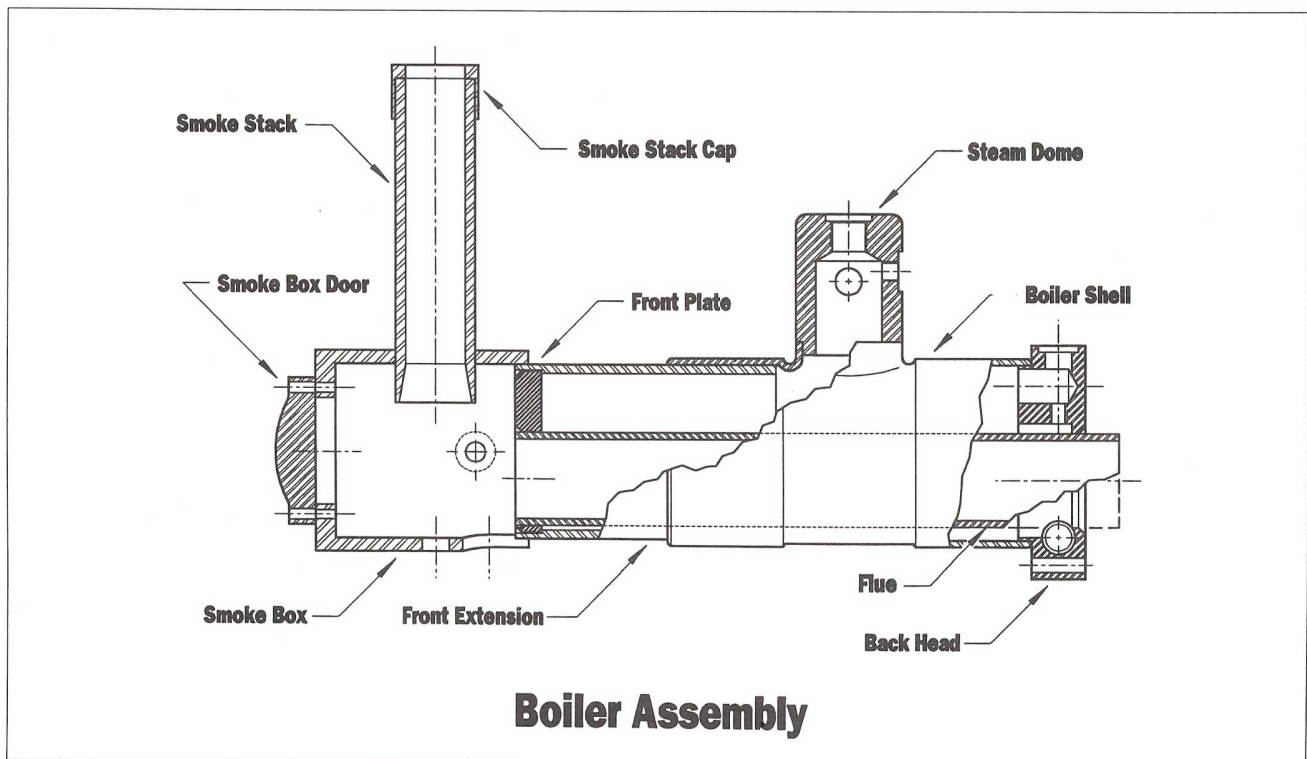
the flue is perpendicular to the back head. Insert the back head with flue into the boiler shell assembly, put the front plate into place, and solder everything together with 45% silver solder. After soldering, face off the 1/16" extension of the flue at the smoke box end of the boiler.

When soldering brass with silver solder, great care must be taken with the heat because the melting point of brass is very near the melting point of the solder. You can get the brass "red hot" and that will be hot enough for the silver solder. If you get it "yellow hot", the brass will start to melt.

Remember all the beautiful machine work on the back head? If you have never done soldering like this before, now is a good time to get some scrap brass and copper and practice. I would not put a torch to my beautiful back head until I had mastered the soldering technique.

The steam dome is made from 1" diameter brass bar and soldered to the boiler with 5% silver solder. This solder is plenty strong enough for this job, and it does not require as much heat.

The smoke box is made from 2" diameter stainless steel



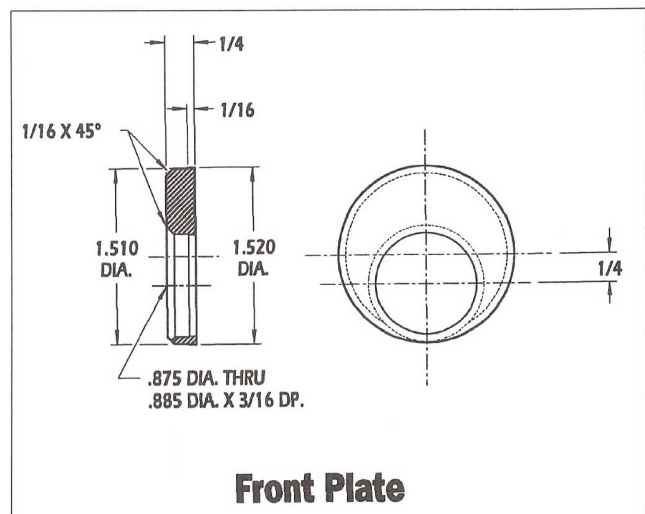
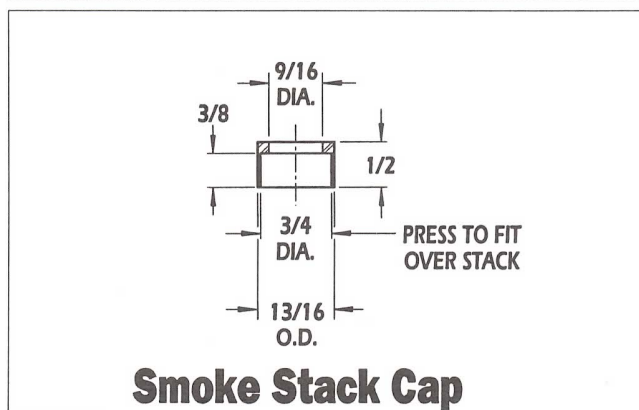
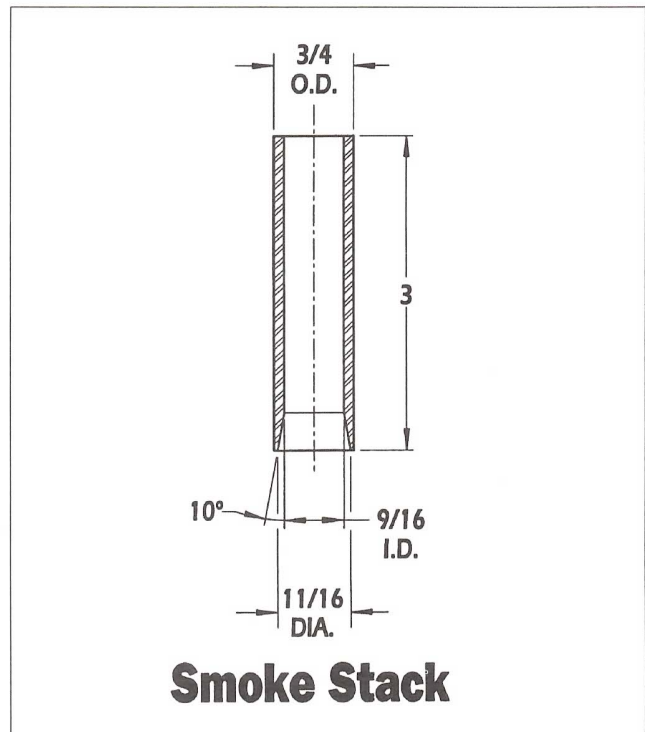
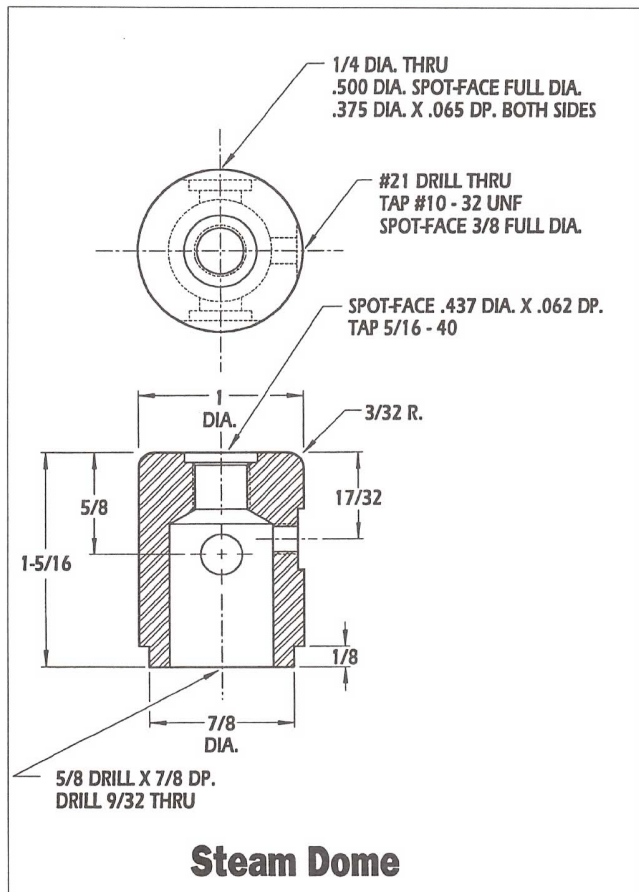
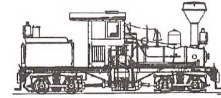


bar machined per the drawing. If you have a tiny lathe, this will be a very long and difficult job, so I recommend that you use brass. I made the smoke stack from a piece of heavy wall stainless steel tube, 3/4" O.D. 9/16" I.D. X 3" long. If you cannot find a piece of tube like this, thin wall stuff will work just as well. Of course, 3/4" diameter bar could be drilled with a 9/16" drill.

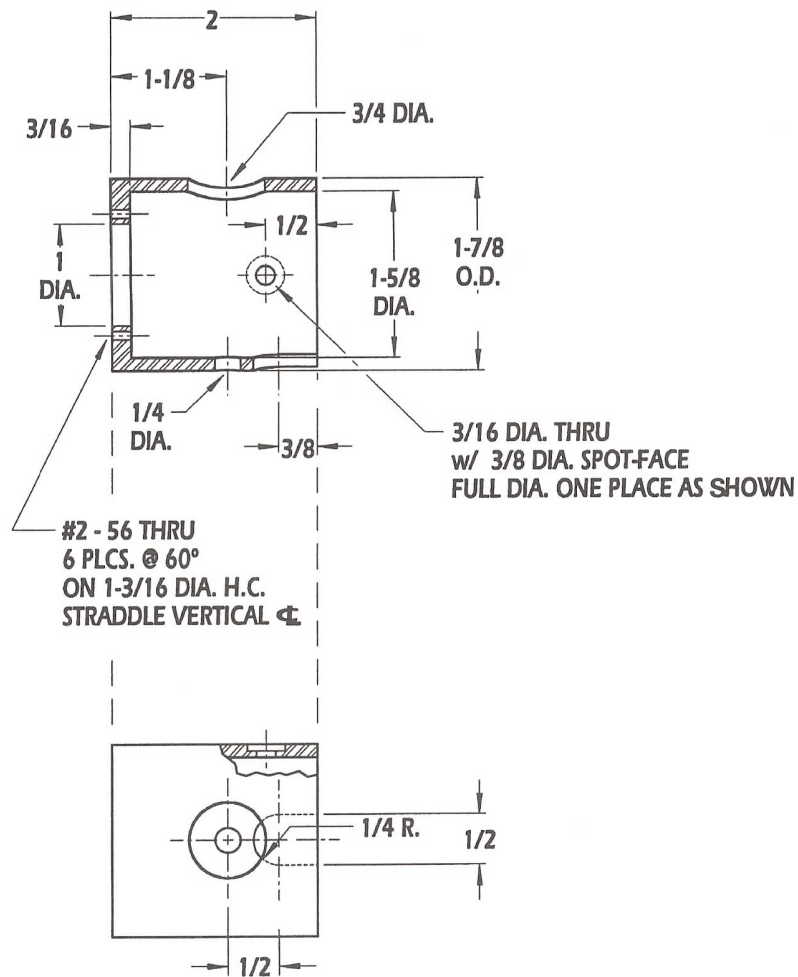
If you made your smoke box from brass, then the smoke stack should be made from brass also. I made the smoke stack cap from mild steel, then bead blasted and blackened it before pressing it onto the smoke stack. Remember that .002" or .003" interference is a good press fit. The smoke stack was press fitted into the smoke box also. The smoke box door was made from mild steel, bead blasted and blackened like the smoke stack cap.

The smoke box saddle and the back head support were made from mild steel bar, 1/2" thick X 1" wide X 3" long. They were milled out, bead blasted and blackened like the rest of the steel parts already made. The base (*if you are going to use the boiler as a stationary or marine unit, rather than installing it in a locomotive, you will probably want to mount it on a base*) was made from 1/4" thick X 4" wide X 10" long steel plate, and blackened to match the other steel parts. Of course you could make this base out of wood if you wish.

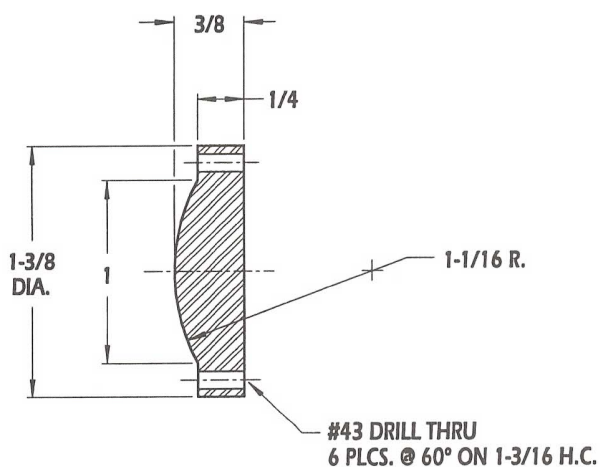
Next time we will put a jacket and some fittings on this boiler, and finish it up.







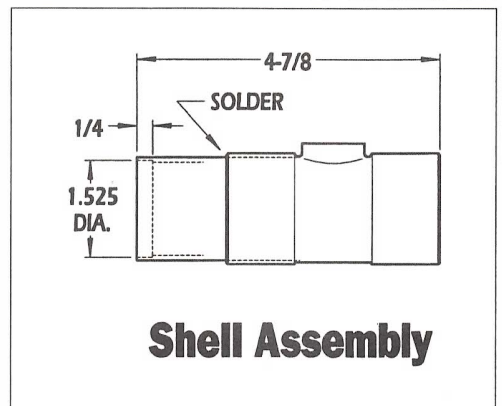
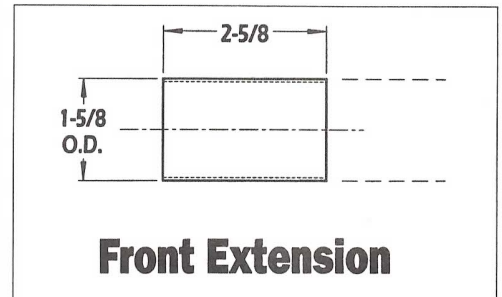
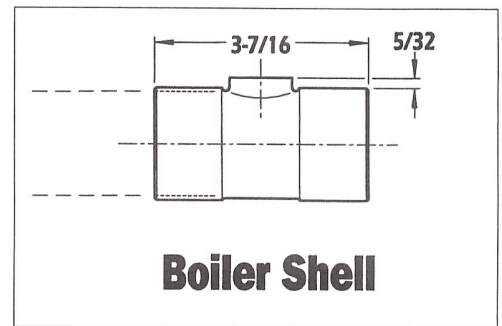
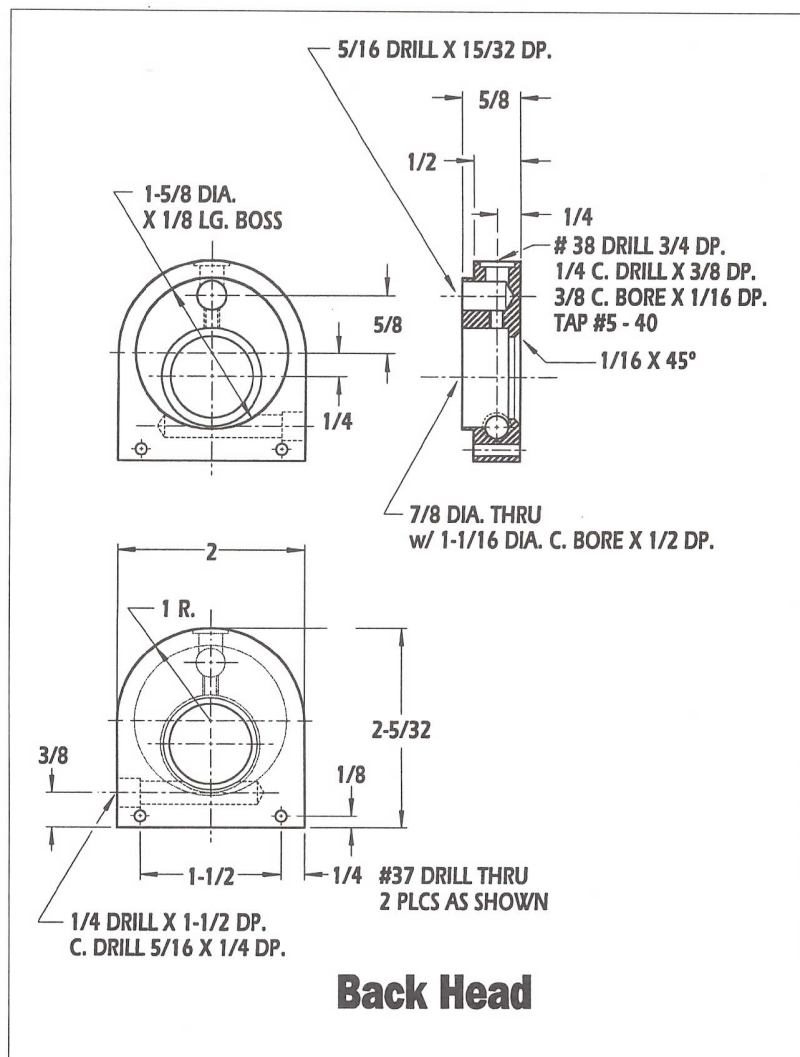
## Smoke Box



## Smoke Box Door

Think Safe...  
Work Safe...  
Be Safe...  
Don't Take Chances  
With Non-replaceable  
Body Parts!





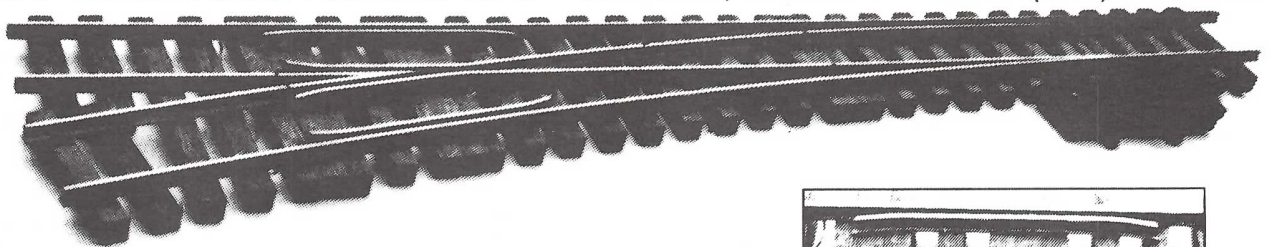
# TURNOUTS

## CODE 332

### BRASS \* NICKEL SILVER

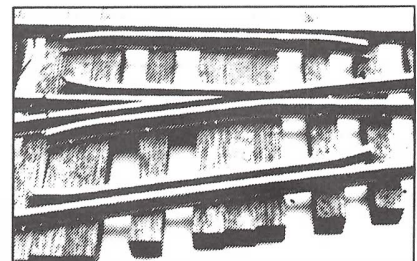
For info, send LSASE to:

the **PARKER** Co. P.O. Box 1546 \* Camarillo, CA 93011 \* FAX: (805) 987-6432



MAHOGANY TIES  
DOUBLE SPIKED STRAIGHT AND  
CURVED 8" & 10" RADIUS

We accept M/C & VISA





# From Russia With.....STEAM?

by Ron Brown

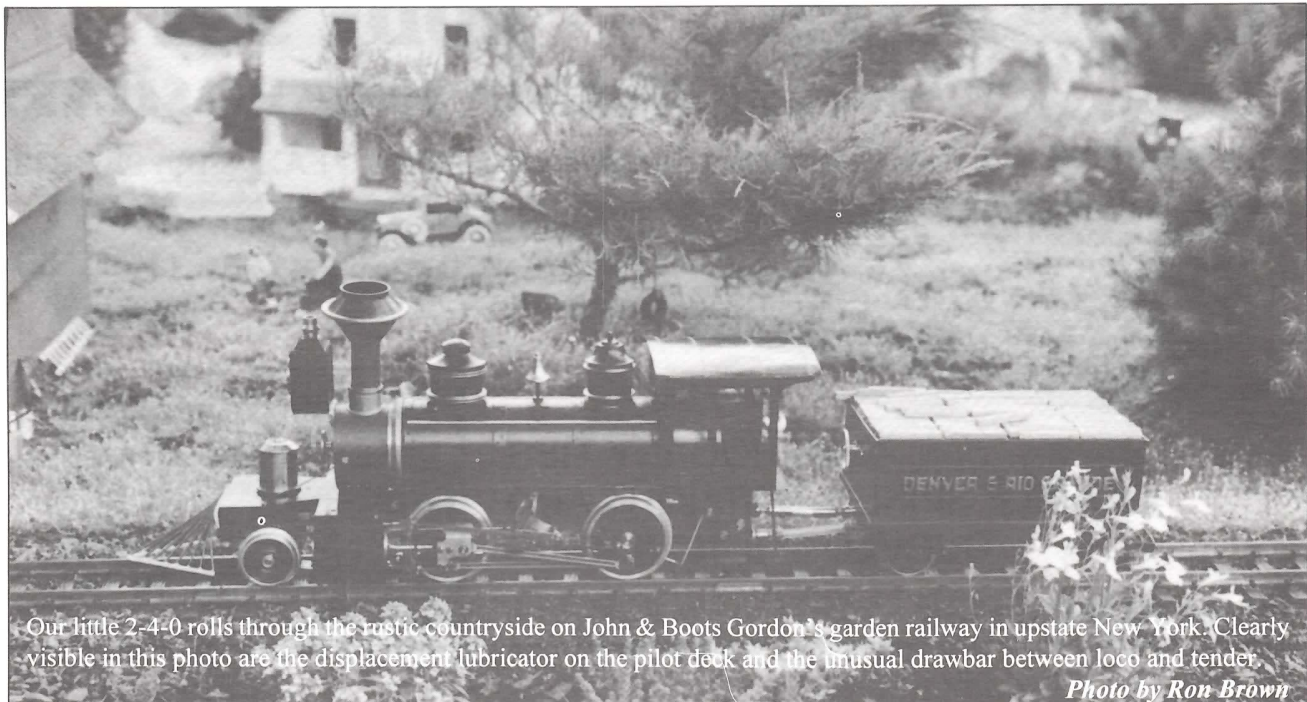
## Technical Specifications

Description:	Generic model of a narrow gauge 2-4-0 woodburning tender locomotive in the style of the early D&RGW
Scale:	Not determined, but it would fit in well with 1:20 or 1:22.5
Gauge:	#1 (45mm)
Length:	24" OAL, including tender
Width:	3-3/4" over cylinders
Height:	7" to top of stack
Weight:	6.5 lbs. (approximate)
Min. Radius:	Not specified
Cylinders:	2 with piston valves, 11mm (.433") bore X 25.5mm (1.0") stroke
Valve gear:	Walschaerts type
Wheels:	Machined aluminum
Boiler:	Welded stainless steel with single flue tube, 5-3/4" long X 1-3/4" diameter
Firing:	Blowtorch type fed by butane gas tank in tender
Lubricator:	Displacement type with drain, located on front pilot deck
Price:	Estimated at approximately \$800
Available from:	West Lawn Locomotive Works, P.O. Box 570, Madison, WI 53701 -- 608-231-2521

This interesting pilot model was first introduced to the small-scale live steam community at the 1994 National Gauge One Steamup in Diamondhead, Mississippi last January. Pete Olson of West Lawn Loco Works had it on his table, and it aroused quite a bit of interest. Pete brought it to a steamup at Noblesville, Indiana in April of this year, and offered to let me bring it back to the posh, luxurious SitG editorial offices to review it for our readers.

This engine has a number of unique features, probably the most interesting being that it is built in Russia by Russian aerospace engineers. It is a mixture of space-age technology and blacksmith technology -- which isn't necessarily a bad mix.

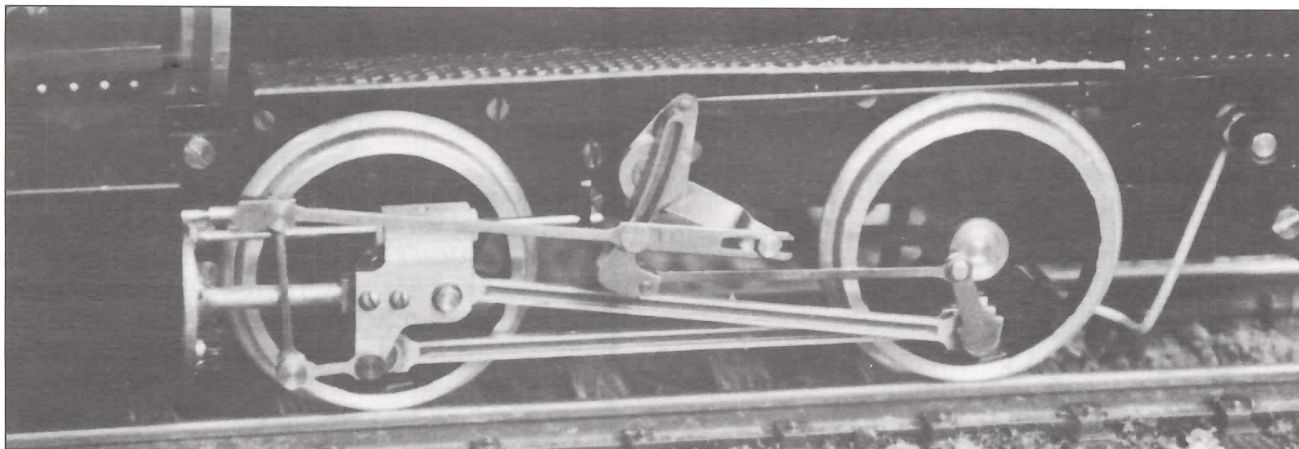
Bearing in mind that this is only a pilot model, there are a couple of things I found unacceptable, so let's get those out of the way first. The biggest complaint I have is that there is



Our little 2-4-0 rolls through the rustic countryside on John & Boots Gordon's garden railway in upstate New York. Clearly visible in this photo are the displacement lubricator on the pilot deck and the unusual drawbar between loco and tender.

*Photo by Ron Brown*





This closeup shows the neatly machined side rods and valve gear. The wire bale behind the rear driver at right is the reversing mechanism, designed for automatic operation on a point-to-point railroad.

*Photo by Ron Brown*

no steam valve -- none. Speed is controlled by opening or closing the tender-mounted gas control valve (which is the nicest, most controllable gas valve I've had the pleasure of using, by the way), or "notching up" the Walschaerts valve gear. The valve gear is not connected to the typical Johnson bar control in the cab, but is attached to a wire bale that pivots on the loco frame and is suspended under the cab.

The bale is formed so as to contact a peg located between the rails, reversing the direction of the locomotive and making operation somewhat automatic on a point-to-point track.

Locomotive operation is smooth when the valve gear is thrown to the limits of its travel, but when notching up to control the speed it becomes very jerky and erratic as the valve timing is changed. Because of this, I did not find this to be an acceptable method for controlling loco speed, and would hope that the production models will incorporate a steam throttle/valve for speed control.

The boiler has two domes that unscrew for access to the filler plug and the safety valve. Unfortunately, there is no true steam dome or turret, and the loco primed badly on our test runs, putting out the fire with mind-numbing regularity until the water level in the boiler dropped to about the half-way point. A steam dome or turret is another item that we hope will be incorporated in production locomotives.

If the builders take care of these items, even if it means raising the price a bit, this locomotive should be an excellent performer and a very good buy. It looks good, is well built and very powerful. We were not able to conduct a haulage test as it was impossible to keep rolling stock coupled up to the locomotive because of the violent jerking that occurred when notching back the valve gear to keep the speed within reasonable bounds, but everyone involved in the testing agreed that this locomotive is capable of hauling a heavy load.

I'm not built for speed, so special thanks go to Chris Hall for his assistance as a locomotive chaser during our tests!

The engineering on the pilot truck is simple, yet the most effective we've seen on a small-scale live steamer. It actually performs its intended function of bearing a portion of the locomotive weight and steering the engine gently into curves, rather than having been tacked on as a cosmetic afterthought

that derails constantly and creates more problems than it's worth.

Visually, this engine is nicely proportioned and has the quaint look of the early Colorado narrow gauge locomotives. Nearly everyone who saw it found it appealing, particularly when the estimated selling price was mentioned. It's a lot of engine for the money.

Quality craftsmanship is obvious in things like the large, old-fashioned headlamp and domes, neatly milled siderods and valve gear, laser-cut frame and attractive paint.

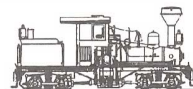
It's obvious, though, that the builders are not familiar with American locomotive construction details. The drawbar between loco and tender is a neatly machined, complex piece of hardware consisting of a double ball and socket. Nifty, but nothing like the prototype -- and long enough so that you could throw a wombat between the engine and tender.

The bell is okay, but the supporting frame is missing, having been replaced by a single post support. The cowcatcher looks okay, but is extremely fragile. Cab steps are also very fragile and get bent every time the loco is laid on its side or packed up for transportation.

The tender is a very sturdy 4-wheel unit with a bullet-proof butane tank inside. As mentioned in an earlier paragraph, the gas control valve is the best we've ever used. The dummy wood load is a nice touch, and it snaps into place on top of the tender -- but it shows once again the builder's lack of knowledge about American steam locomotives, as the wood load consists of neatly stacked finished lumber!

Finally, the D&RGW name is applied to the tender with a heavily embossed cast nameplate, rather than decals or paint.

To sum it all up, this pilot model is unacceptable as is, but it has great potential if the builders will correct its shortcomings and do a bit of homework on American locomotives. If the Russians can sell such a nicely crafted locomotive for such a low price, they may well become a real force in the small-scale live steam market.





# LETTERS FROM THE OLD CURMUDGEON

*Since we cannot know all that is to be known of everything, we ought to know a little of everything.*

Blaise Pascal



The Old Curmudgeon

Dear Gene -

So you're having a problem seeing the details on an inaccessible area such as a steam passage in a cylinder casting? Well, I almost put a 2-4-0 through the nearest window a few days ago when I was trying to check on whether there was something plugging a flue tube in its boiler. When I put my eye to the boiler my head cut off the light so all I saw was Stygian darkness. If I moved my head to let light down the tube, then I couldn't see into it.

After some thought, and at least one pale ale, I rummaged through 'The Inexhaustible Scrap Box' and found a two foot length of 1/8 inch diameter flexible fiber optic cable that I picked up somewhere. Using a piece of aluminum from the ISB, I machined a cap to fit over the end of a small flashlight to hold the fiber optic cable near the focus of the bulb. My cable was of plastic fibers, so I held each end in a flame to melt it into a sort of lens. Then I epoxied the cable into this cap. (I've enclosed a drawing of the arrangement.)

With this aid I can thread a light source into some pretty tight places so that I can see what's going on. It's especially useful when I'm wearing my magnifier or using a loupe where my head normally gets in the way of the light.

If you don't have any fiber optic cable in your ISB, Edmund Scientific of Barrington, New Jersey carries a number of different kinds that would be suitable. I recommend the 0.119 inch diameter plastic cable with 48 fibers which can accommodate a bending radius of 1/2 inch.

By the way, I discovered a handy thing to know, kind of by accident, and I'm passing it on to you. If you accidentally magnetize a screw driver and it begins to grow metal hair every time you put it down on your bench try sticking it through the loop of a soldering gun, turning the gun on, and then withdrawing the tool slowly from the loop. Voila! Demagnetized.

Keep turning -  
Marv



BERKELEY LOCOMOTIVE WORKS is pleased to announce that we have been appointed U.S. agents for **BRANDBRIGHT Ltd.** of England. Through direct sales and prompt service, we will represent this outstanding line of American and British outline live steam locomotives, battery•electric locomotives, structure and rolling stock kits and accessories in G and 16mm scales to our U.S. customers. Watch for our upcoming ads featuring exciting and interesting items from the superb **BRANDBRIGHT** range!

**CRICKET CUSTOMERS:** CRICKETS will be in full production by August 31st. Customers on reservation list will be notified as to when they can expect delivery. Unpainted CRICKETS will be available on special order. Write or phone for prices.

**BERKELEY LOCOMOTIVE WORKS**  
**BRANDBRIGHT Ltd. (Berkeley)**  
2021 Hillegass Ave. No. 22  
Berkeley, CA 94705  
Phone/FAX • 510.849.9284

## MAXITRAK

FOR FULLY MACHINED KITS



**CATALOG (\$10 CASH or CREDIT CARD)**  
**TO MAXITRAK LTD**  
**12 THE CURVE LOVEDEAN**  
**NEAR PORTSMOUTH**  
**HANTS PO8 9SE U.K**



## Product Review -- Sierra Valley Enterprises Flatcar by Ron Brown

**Description:** 1:20.3 scale model of a 28', 10-ton flatcar built by Carter Brothers for the South Pacific Coast Railroad, purchased by the Southern Pacific and later sold to the Nevada County Narrow Gauge.

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

While the steam locomotive is the main focus of our hobby, a locomotive racing along a track without a train just doesn't look or feel right. There's no doubt in my mind that a great deal of satisfaction and pleasure is added to the model railroading experience when a string of coaches or freight cars is coupled up and a whole train pulls out of the yard or away from the station.

When our steam locomotive is an accurate model of a full-sized locomotive that once hauled the varnish (or the freight), so much the better. And the same goes for rolling stock. Are you going to be really happy coupling up a string of plastic toys to your scale model locomotive? Probably not for long.

But where, in this day of plastic models that meet the 10' rule, are we to find accurately built, finely crafted models of rolling stock that once hauled the goods that helped build this nation?

Well, if you are a narrow gauger modeling in a scale of 1:20.3 (the correct scale for 3' narrow gauge models on gauge 1 track), I suggest you take a look at the excellent models rolling out of the car shops at Sierra Valley Enterprises in California.

We had heard good things about Sierra Valley models before we ever had a chance to lay eyes on one, so when the opportunity came to acquire a flatcar for review, we were quick to accept.

As mentioned in the description at the beginning of this article, this flat was built by Carter Brothers car shops for the South Pacific Coast narrow gauge railroad in California, and was later sold to the NCNG. Gary Watkins at Sierra Valley is modeling the flat as it appeared after it was sold to the Nevada County Narrow Gauge RR, but since we recently received a 1:20.3 scale model of the SPC Baldwin No. 3 (reviewed in the July/August issue), we asked Gary to letter our sample for the SPC. As far as can be determined, the

NCNG didn't even change the number on this car from its SPC days!

Hardware used on this flat is extensive, and it comes from several sources, including Russ Simpson, Little Railways, Hartford Products, Ozark Miniatures, and Sierra Valley Enterprises.

Amazing things are being done with plastic, but I like to see real wood used on a model where real wood was used on the prototype. This car is built using real wood, and built accurately to scale from a plan by Herman Darr.

Okay...so we've all seen lots of models built with real wood and quality hardware. So what? The other factor in building a really great model is the skill of the builder, and this is where Gary Watkins really shines.

The trucks are worked over by Gary, and details added so that they are accurate representations of Carter Brothers freight trucks - right down to the star on the journal box covers. Hardware is added in the right places, wood parts have the grain enhanced and are stained and painted and lettered accurately, and the whole model really comes to life. It's not a toy - it's a real Carter Brothers flatcar in miniature!

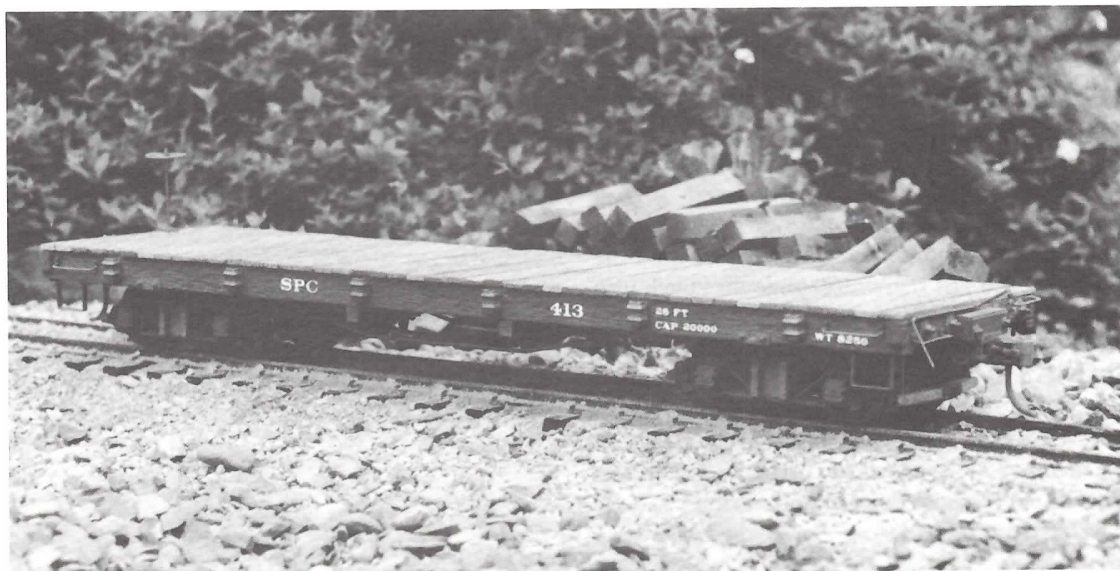
Details not often found on "garden scale" model railroads are abundant, such as underbody detail and outside hung brake beams.

All this for just a little more than you would pay for a quality plastic model - \$99.95 plus \$5.00 shipping (shipping a bit higher for out-of-country customers). You couldn't find a better model at any price! Californians should add 7.25% sales tax.

Some options are available, such as Gary Raymond metal wheels, Kadee couplers (#820, 830 or 835), and outside hung brake beams for a stunningly realistic appearance.

Sierra Valley Enterprises has some other models available, including a log car that we'll be reviewing in a future issue, and additions to the line are planned in the near future. Gary tells us that a 24' Nevada Central boxcar (also from Carter Brothers - and suitable for our South Pacific Coast freight) is next on the list.

You can probably tell from the tone of this review that we're really impressed with everything about this model (not a single complaint - not even a nit to pick!), and we think that you will be, too. Give Gary Watkins of Sierra Valley Enterprises a call, or drop him a note and ask about his affordable, high quality models. You could show up at the next steamup with a really nice train to go with your favorite steam loco!





# Product Review --

## Darex M5 Precision Drill Sharpener

by Ricky Morningstar

This unit is a 1/3 HP, 3450 RPM grinder with a 6" diamond grit wheel on the left side and a 6" fine grit wheel on the right side. The motor sits on a 9" X 12" die cast platform supported by a very stable pedestal base.

The sharpener provided for this review came with 2 chucks for holding the drill bits. The first chuck holds bits from 1/16" to 1/2", and the second is for bits up to 3/4" in diameter. Optional chucks are available for sharpening larger and smaller drill bits.

Attached to the top of the motor is a die cast cradle with an indexed set of fingers and a lever to be set to the size of the bit you wish to sharpen. Then, by following simple arrow marks on the chuck that line up with graduated degree marks on the cradle, insert the drill bit into the chuck and tighten.

Next, remove the chuck and place it in the movable spring loaded cradle on the left side of the DAREX PDS. Adjust the cradle so it is set to the desired angle of sharpening. Slide the chuck in the cradle until it meets the slides in the cradle. Make sure the cradle is backed off enough for the bit to clear the diamond wheel. Start the grinder and adjust the feed knob until the bit just sparks. Rotate the chuck by hand in a clockwise fashion. Turn the feed knob in 2 notches (the excellent owner's manual calls for 3, but being cautious I used 2), repeat the rotation until your bit is sharp.

Your bit will have a perfect cutting edge and relief. Do not run your finger over it as a test or you will cut it. I know from experience.

You now have a perfectly ground bit, both sides even. The fun does not end here, though.

Most drill bits, after being sharpened a couple hundred times, are getting quite thick on the web, or the end of the bit. To get better cutting you should thin the web, so guess what? The DAREX M5 PDS allows you to do just that. They have incorporated a bracket on the right side and devised an adjustable, tiltable spring loaded cradle/clamp to hold the chuck with the bit you just sharpened. Slide the chuck into the cradle. Again mate the chuck arrow to the graduations on the cradle for web thinning. Adjust the cradle until the chisel point of the drill bit is parallel with the right corner of the wheel. Adjust the feed knob in until you are just touching the wheel, then keep feeding until you are pleased with the web. I then loosened the chuck and rotated it 180 degrees (arrow) and, without moving the feed knob, carefully ground the second web to match the first. If you set the bit up accu-

rately you will have a truly cut bit with evenly thinned webs.

Have we tired you out yet, or are you ready for more? I hope so, because the Darex M5 has some pleasant surprises left.

All machinists, hobbyists, welders, or anyone who drills holes would like to drill with ease and have a nice round hole when they are finished. A split point drill bit will aid you greatly in the round-hole department, and will eliminate a lot of center drilling.

You guessed it -- the DAREX M5 PDS will grind your drill bits and give you a split point finish. Just follow the instructions stated above for web thinning and position the chuck with the split point graduations on the right side cradle. Believe it or not, it took me longer to write this review than it did to sharpen 12 drill bits, thin 2 webs, and split point 3 bits. I sharpened 1/4", 1/2", 3/32", 1/8", and 1/16" bits. Yes, I had to use a magnifying glass on the 1/16" bits, but the edges were both even and splits were exactly equal.

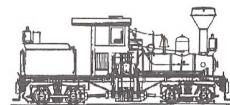
When I studied my welding and machining course, there was a 5 week session on sharpening and care of drill bits. This gave me a reasonable knowledge of sharpening bits, and over the years I have purchased numerous drill sharpening devises, only to give them away or put them into file 13. When I was asked to use the DAREX M5 PDS, I said sure, but I knew that this was just another expensive toy that would be put on the shelf, and I would continue to buy all my small bits as they are too small to sharpen.

What a pleasant surprise! I read the manual first, then inspected the different pieces and, following the directions from the manual, I set up my first bit and went to work.

I then dressed the fine wheel with the supplied diamond wheel dresser and cut a web, then cut a split point. Easy!

After only a couple of hours use, I can say that I am impressed with what this sharpener is capable of doing, and it does the job consistently well. It is well thought out and designed so the operator is comfortable, too. A great piece of equipment for every shop, large or small -- and affordable for the home workshop as well.

For more information, or for a free 30 day trial, contact DAREX CORPORATION, Box 277, Ashland, OR 97520. Phone 800-547-0222, FAX 503-488-2229.





# Planning a Steamup Area

by Bob Nowell

On of the things that has given me a lot of pleasure over the last five years has been sharing the Coalport Railroad's trackage with friends who operate small scale live steam engines. Toward this end I have built, rebuilt, and relocated our steaming bay and steam-up area three times. I'll be the first to admit that it still is not perfect, but we all have limits on time, money and space.

I would like to pass on to the readers of SitG the ideas that I have put into use to increase everyone's enjoyment while visiting the Coalport RR. Of course, if you do not have or are not planning a garden railway, or if you only need something to fire up one locomotive, what I have to say will be of little or no interest to you.

First, any steaming area should have as much storage track as your space and budget will allow. You will never have enough space for all the engines and cars that will be brought to a formal steam-up. I have 30' of track on three sidings and it was not nearly enough for our last get together. (See track plan of the engine terminal on the Coalport RR.)

The next most important item is a steaming bay for firing engines that use alcohol as fuel. Even locomotives that were built to be lit from the side are easier to fire if you can get under them.

The steaming bay can be anything that will hold two rails in place at least 8 inches high, but 14 to 20 inches is a much better height. Our steaming bay is nothing but a trestle. For four years I used two steel angle irons, bolted 45mm apart and cemented between two large rocks 12 inches high. Looked like hell, but it worked! There is a picture of this crude steaming bay in SitG Volume One No. 5, on page 10.

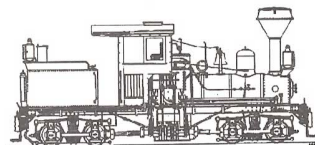
With the growing popularity of gas fired locos, the steam-

ing area should have one long track where these can be fired up. This track should be able to handle at least two engines, but three is better if you want to keep a steady flow of trains operating. Track "A" on the track plan is set aside for these gas fired loco's. The higher this track is above ground level, the better it is for the operators. Track "A" is 16" high near the steaming bay, and only 12" high at the far end. The contour of your ground will determine how high you can make it. Trackage should be planned so that all turnouts can be operated without reaching around or over hot locomotives.

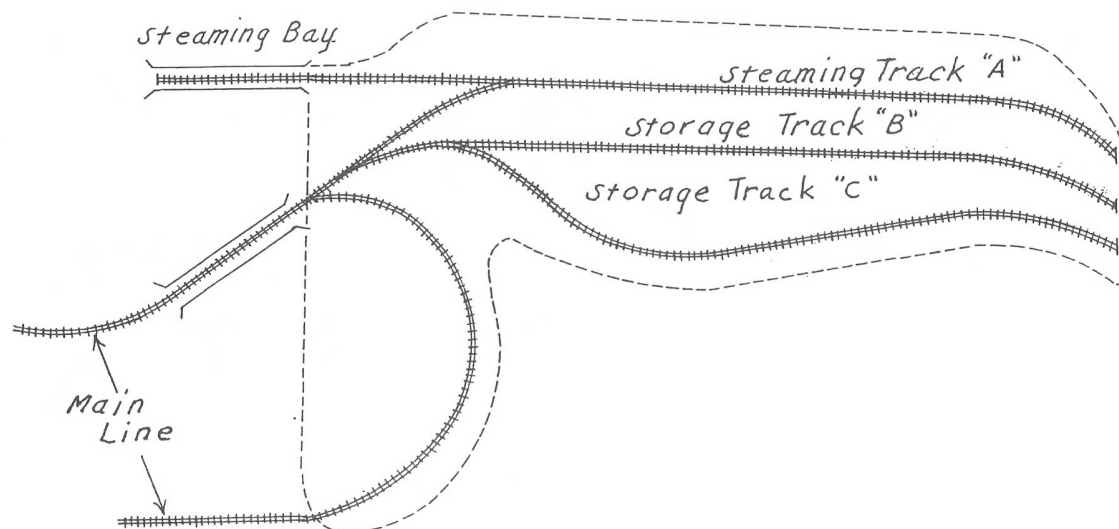
No prototype RR would have one, but there is another item that helps to make a steam-up a success, even a small one. It is a work table, placed close enough to the steaming area to be practical, but not so close that people are falling over it – and not so close that it shows up in every picture.

Though it has nothing to do with a steam up area, another item that will make your garden railway more user friendly for steam is to have at least ONE passing track (and preferably two) midway on the RR. Geared locos move pretty slow, other engines do have problems, and unless you have a way for the fast mail express to pass the logging train you will have a BOTTLENECK, with the result that your steaming area will have engines burning up fuel and water waiting to go out on the main line.

I hope these suggestions will help someone in planning their steaming bay area.



COALPORT RAILROAD STEAM AREA  
Not to scale



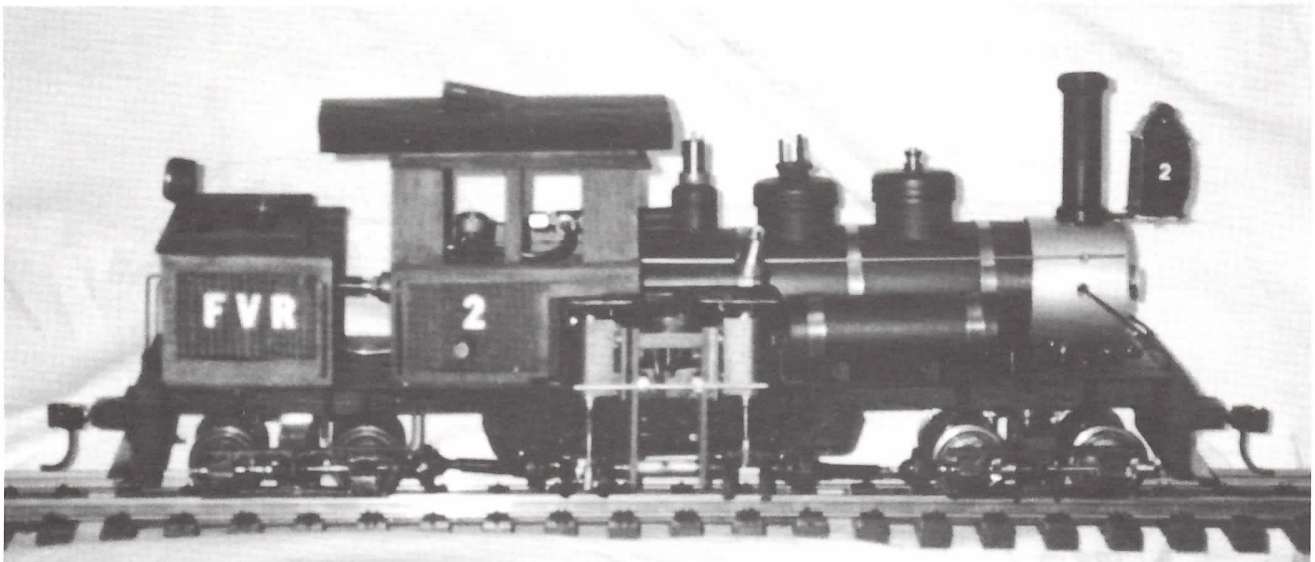


# Locomotive Review -- Geoffbilt Shay

article & photos by Carol E. Homuth

## Technical Specifications

Description:	Model of a generic 2-truck Shay
Scale:	1:20 (the correct scale for representing 3 foot narrow gauge railroading on gauge 1 track)
Gauge:	Gauge 1
Length:	16.5 inches
Width:	4 inches
Height:	5 inches
Weight:	8.6 lbs
Min. Radius	3 feet
Cylinders:	Two double-acting oscillating cylinders with O-ringed pistons
Valve Gear:	N/A
Wheels:	Gary Raymond steel wheels
Boiler:	2" x 7" centre flue, silver soldered brass -- tested to 3x working pressure of 40 psi -- bushing for blowdown valve on backhead
Water Capacity:	200cc -- (maximum steaming capacity)
Firing:	Butane gas fired
Lubricator:	Displacement type
Materials:	Chassis -- 1/16" steel plate Cab -- hardwood (steel cab optional) Gears -- brass crown & pinion, 2:1 ratio
Couplers:	Hook-type standard
Controls:	Steam regulator in cab, reversing valve between cylinders
Options:	Pressure gauge and blowdown valve
Price:	\$1000 + \$25 shipping
Available from:	Geoff Coldrick, Box 277, Salisbury, New Brunswick E0A 3E0 CANADA -- phone 506-372-4364



The author's Geoffbilt 2-truck live steam Shay, lettered for his Fern Valley Railroad. The Kadee couplers, clearly visible in this photo, were added by the author and are mentioned in the article.



It steams and it steams and it steams -- that's the story of the Geoffbilt 2-cylinder Shay -- for 20 to 25 minutes on a single tank of butane gas. I was fortunate in acquiring the first Shay built by Geoff on a commercial basis, and, like all new models, it had a few growing pains.

Some of the wood trim on the cab came loose, and the cab roof, which is of course removable, was too tight a fit. Incidentally, the engine is available with either a wood or a metal cab.

After a few butane fillings the needle valve on the gas tank (which is a commercial fitting) failed and had to be replaced. We also had to raise the body about 1/16" with washers placed between the trucks and the bolsters, as the crankshaft throws were too close to the rail and would occasionally hit it. This simple change eliminated the problem. *(using a slightly larger wheel would resolve this problem without changing the driveline alignment -- ed.)*

We still have not had the engine pulling a full load of cars, but it pulls 10 - 12 cars with ease and looks beautiful at the head of a log train.

The speed range is about right for a Shay.....maybe just a mite fast. The single control for both direction and speed is located just above the cylinders *(according to the builder, this rotary valve is meant to be used only as a reverser...the steam*

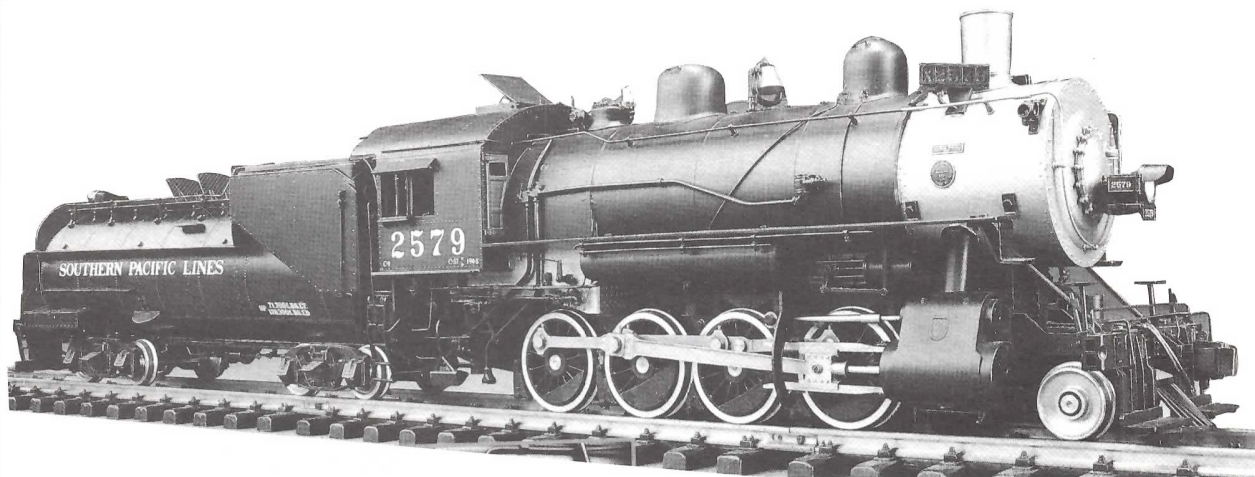
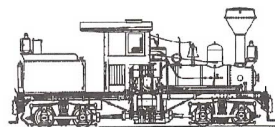
*throttle valve in the cab should be used in conjunction with the gas control valve for speed control -- ed.).* It's very touchy, so it's fun trying to couple up to a string of cars. However, since radio control has been installed it operates superbly.

With the fuel and water tanks full, and from a cold start, steam was up and ready to operate in 3 to 4 minutes. Though the boiler will hold 200cc of water, 180cc will allow steam to be generated a little more quickly, and will still outlast a tank of fuel. A pressure gauge would be a nice added feature, and is available as an extra cost option.

The lubricator works well to keep sufficient quantities of steam oil in the system -- but all added gears, universals and fittings also require considerable oiling.

I added Kadee couplers to both front and rear buffers in place of the original hooks. They just screw onto the wooden beams.

The Shay runs like a jewel, and you can almost hear the whistle echoing in the woods. All in all a super model, at a price many can afford.



The beautiful Southern Pacific 2-8-0 C-9 Consolidation running on fire and water! Plenty of detail and pulse-pounding live steam performance in a 1:32 scale package. This will be a limited production run, so get your reservation in now.

### Featuring

- ✱ 1:32 Scale
- ✱ Opening Hatch Doors
- ✱ Operating Headlight and Tender Backup Light

### Available In

Live Steam RTR... \$3250  
Live Steam Kit ..... \$2700

Plus shipping & Insurance

### J.M.G. Hobbies

P.O. Box 975  
Lithonia, GA 30058

Phone (404) 736-9167  
24 hr. FAX (404) 736-9566



# CONSTRUCTION OF THE PELAHATCHIE BAY SCENIC RAILROAD

by Harold A. Dunsford, M.D.

I imagine that at least some readers of Steam in the Garden may have purchased their first steam locomotive, and now need to figure out how to build a track to run it on. The methods used to build outdoor railroads are as varied as prototype railroad construction methods used throughout the world. I have built one garden railroad, ground level, with plants, weeds, and sore knees. Frequent derailments while attempting to demonstrate the operation of the garden railroad to guests led to more sore knees and a sore back (what is the fun of building a garden railroad if not to show it off?). Our recent move to Mississippi provided the opportunity to start over. However, with a large, absolutely flat back yard it was difficult to plan a garden railroad.

While pondering this problem I was introduced to live steam at the National Gauge One Steamup, held in Diamondhead, Mississippi. Gary Broeder gave a seminar on construction of trackwork for live steam locomotive operation, which included brief mention of methods used in England. Mississippi has 55 inches of rain a year. In a flat yard, a totally elevated steam loop seemed an obvious answer. From reading everything I could get my hands on, including Peter Jones' book on English outdoor railway construction, I came away with the following guidelines:

Avoid plywood, as it delaminates. Use treated wood at the ground level. Use roofing tar and shingle material as waterproofing for flat surfaces. Keep it level. Waist height is ideal. Access to the entire circumference of the loop is also ideal, as it allows us to chase the locomotive around, and adjust controls while under way. Gentle curves are essential for large engines -- 10 foot radius as a minimum, with 15 foot radius being ideal for large engines such as the Aster Pacific K-4.

## Materials

180' Steam Loop, Single Track (with room for second track)

2" x 8" x 16" cement blocks ..... 32

Treated 2 x 4 by 8 foot lumber ..... 40

Treated 1 x 4 by 12 foot lumber ..... 32

Untreated 1 x 6 by 12 foot lumber ..... 40

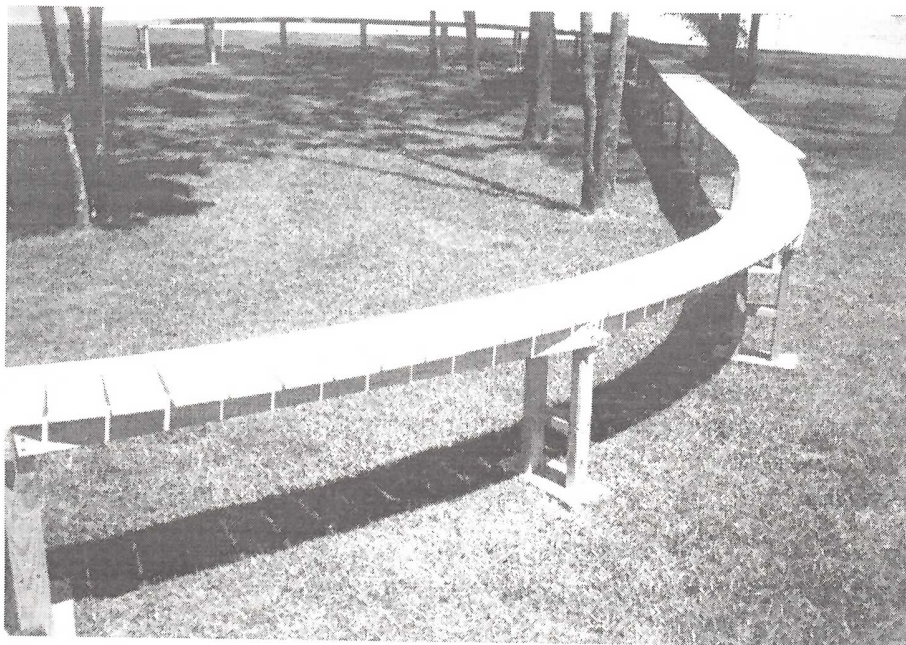
(or more if you wish to make a yard area)

Sheet rock screws.....10 pounds of 1-5/16"

Sheet rock screws..... 3 pounds of 3-1/2"

7 Gallons cold roof pitch

4 rolls roll roofing



A view of the author's railway under construction, showing some of the techniques described in the article. Note the graceful, sweeping 16' radius curves -- a delight to railroaders in any scale or gauge.

*Photo by Harold A. Dunsford*



Trowel

Utility knife and several dozen new blades

Steel straight edge

Use the best track you can afford. I used code 250 Llagas

Creek aluminum rail in 6 foot lengths ..... 60 pieces

Llagas Creek tie strips ..... 180'

stainless steel rail joiners ..... 4 packs

Lindsay rail bender

Power drill and bits and some form of power screw driver

### Footings and Piers

Layout of loop: I joined two 10', 1" x 4" boards with sheet rock screws into a 17 foot board, with a 1" hole drilled 16 feet from one end (or whatever radius you have room for). Pound a stake through the hole, and use as a compass to place the cement stones 6 feet apart along the curves. Continue straights on 6 foot centers, and complete other sections similar to beginning. I added a few straight sections at one end, which gives a lopsided oval with a slight S curve to complete the loop. Due to the Yazoo clay in Mississippi it is a good idea not to dig and disturb the soil. It is also easier to just lay out the cement stones, although if your soil will support it, by all means level or pour solid footings (especially if concerned about freezing, not a problem in Mississippi). Find a level stone, and start there. I chose 36 inches for the first pier at an average location by eye sight. Cut the two 36 inch 2 x 4's, and cut two 6 inch braces. Use the 3 1/2 inch sheet rock screws to fasten the first base flush with the top, and the second brace about 12 inches from the bottom. If all is square this will stand by itself. Measure to the center of the next pier, fasten rough cut 6 foot 1 x 4's with sheet rock screws to the standing pier and support with two 4 foot up-rights temporarily clamped together to the next pier to get the height for the pier using a carpenter's level. Make the next pier, clamp pier to 1 x 4's, measure, cut and attach with screws. Each 6 foot 1 x 4 is fastened to one half of the 2 by 4 pier, allowing the next 6 foot 1 x 4 to be butted, and screwed to the other half of the pier. In the curves, this means placing the screws in at an angle, as the 1 x 4 will be tangential to the pier. I chose to make the pier square with one end, and let the other half take up the entire angle required by the curve. This places the 2 by 4 legs at an angle on the stone, but seems to have worked well. Leave one or two 6 foot spaces free of supports and construct a removable bridge, so you can mow the lawn inside the loop. Care to keep everything level is important, but this is not cabinet work. I used the new one hand clamps, available in most hardware stores, to do this job by my self. A helper would speed things up but is not essential. I built this loop in about 2 months of weekends.

### Decking

The next step is facilitated by a radial arm saw, which can be adjusted to cut repeated 14" lengths of the 1 x 6 lumber. For a 180' or larger loop, do not cut all the lumber at once. I would cut about three wheel barrow loads, which is about

all I could mount in one session, including coverage with the roll roofing. Lay the 14 inch boards starting with a straight section, evenly spaced from side to side. Then lay them smoothly through the curve. Usually at the beginning of each pier the outside edge was about flush with the outside 1 x 4 support, and by the center of the pier, the inside edge was about flush with the inside 1 x 4 support. Drill pilot holes and screw down each board with 4 sheet rock screws, one per corner. Do not worry about the spaces between the boards, as this will be covered.

### Covering

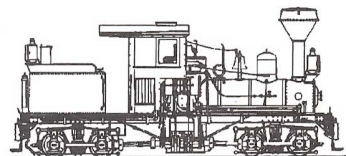
Apply the cold roof tar with a trowel, covering all the surface wood. Cut strips of roll roofing larger than the width to be covered, 18" for straights, 26" for curves. Lay the first piece, smooth into the tar and trim the edges with the utility knife. In the curves overlap the inside corner and use a straight edge to cut along the overlapping seam, then lift and remove the under material and press the new seam into the tar (this step is similar to the technique used with wall paper).

### Laying the track

Compared to a ground level outdoor railroad, tracklaying is easy. Add tie strips to the track and tack down assembled track as you go. I used a Lindsay rail bender to bend the rail, and I staggered the rails, which is harder to build but makes for beautiful smooth curves.

I finished the edges of the boards, underside and 1 x 4 supports with an exterior stain to protect the wood. I added a long straight area 24" wide, with piers also widened by using 9" braces. This is to allow for passing sidings. I plan to add an inner loop of track with cross over switches, passing siding and two steam up bays. This method of construction is fairly simple to do, and should hold up for a number of years. Some built in England by similar methods are still in service 25 years later.

A major disadvantage of the outdoor loop showed itself recently. I scheduled a Steamup for Oct. 30, usually good weather in Mississippi. We had an Arctic blast that gave us 30° F temperatures and 25 mile per hour winds. We set up a small loop of track (Bachmann sectional track) on the garage floor and ran the small engines inside. I relay this information so that if you don't have a large yard, just set up a small loop and enjoy the smaller engines and rolling stock. The important thing is to get started and run your engines.





# Your Cutting Tools will...

## give BETTER FINISHES...

Accu-Finish gives beautiful burr-free unfractured cutting surfaces that machine nicer parts.

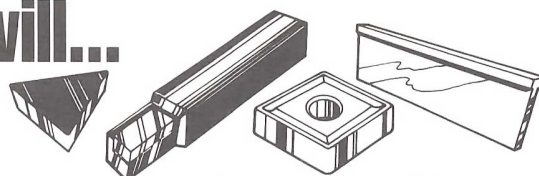
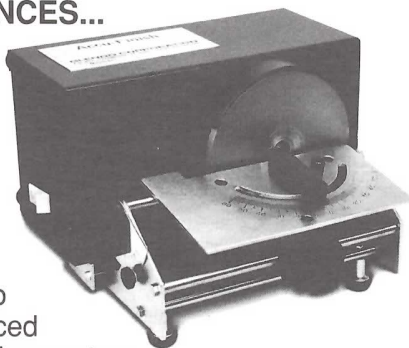
## hold CLOSER TOLERANCES...

Better cutting edges from Accu-Finish mean your tools behave more consistently and predictably. These tools cut where others only rub!

## LAST LONGER...

Case histories confirm up to 400% longer tool life produced by the Accu-Finish sharpening system.

## With Accu-Finish Series I



Large and small shops benefit from the patented Accu-Finish Sharpening System. Low speed diamond wheels are specially designed for carbides, ceramics, and yes, even tool steels! Pays back quickly through increased machining time and tool savings.

**GLENDOW CORPORATION**

900 Overlander  
P.O. Box 1153 / Dept. SITG  
Emporia, KS 66801  
316-343-1084  
FAX: 316-343-9640



**TOLL FREE 1-800-835-3519**



## BG DIAMOND WHEELS

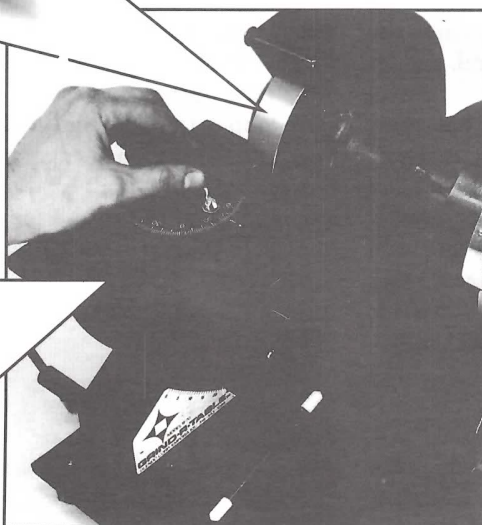
...are specifically designed to sharpen carbide tools using a bench grinder. These wheels sharpen carbide quickly, stay flat and true without dressing, grind cooler, and let you control tool finish. Available from 60 to 600 grit in most arbor sizes. Prices start under \$125.



Order from this ad or request a Free brochure

Grind-R-Table removes the inaccurate guess-work and frustration of hand tool sharpening.

**NOW You can reuse the Carbide Tools others throw away!**



## PRECISION CARBIDE SHARPENING IN YOUR SMALL SHOP.

Now you can precisely sharpen carbide tools using an ordinary bench grinder. First, add a heavy-duty Grind-R-Table, for fast and accurate tool geometry. Then, a BG Diamond Wheel to grind consistent, sharp cutting edges that rival new tools. Together, they let you make better use of modern, long-lasting carbide tools at an affordable price.

## GRIND-R-TABLE

This heavy steel assembly controls compound tool angles using two separate scales. One scale for clearance angle, the other for cutting/lead angle. Add one (or two) to your bench grinder.

Order #01-696 Grind-R-Table \$119.00

## SPECIAL OFFER

Get a Grind-R-Table for ONLY \$98 when you buy any BG Diamond Wheel! (Just mention this ad.)

**GLENDOW CORPORATION**

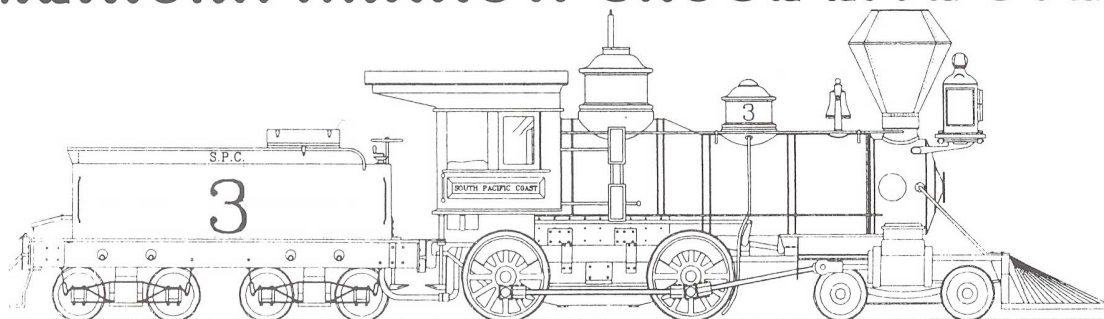
900 Overlander  
P.O. Box 1153 / Dept. SITG  
Emporia, KS 66801  
316-343-1084 FAX: 316-343-9640

Note: Guards removed for photograph only. Use all guards!

**TOLL FREE 1-800-835-3519** 8-5 Central Time



# AMERICAN NARROW GAUGE LIVE STEAM



1876 BALDWIN 4-4-0 -- South Pacific Coast No. 3 -- 3 ft. Gauge -- SCALE 1:20 -- US\$2620

1892 BALDWIN 2-6-0 Sandy River "OLD STAR" -- 2 ft. Gauge -- SCALE 1:22 -- US\$2560

1899 BALDWIN 2-6-2T Victorian Railways -- SCALE 1:22 -- US\$2340

1907 BALDWIN 0-4-4T SR&RL #20 -- 2 ft. Gauge -- SCALE 1:22 -- US\$1650

*Gas or Alcohol Fired, Stephenson Valve Gear, Feed Pump, Water Gauge,  
Pressure Gauge, Choice of Couplings & paint, Sprung Axles, Whistle*

Reservations Now for October/November Delivery with our new U.S. Agent

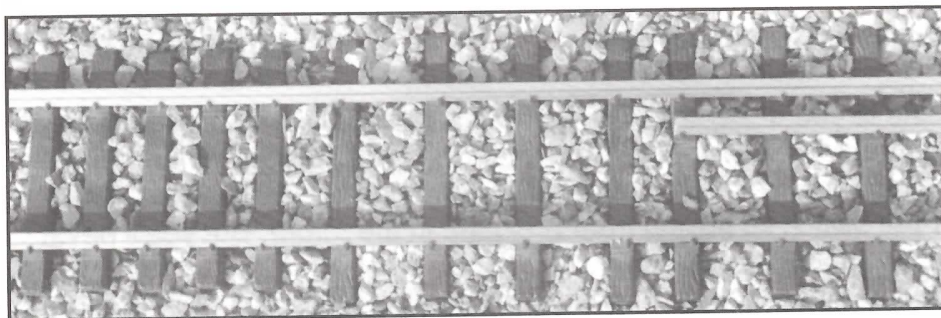
Sulphur Springs Steam Models, P.O. Box 6165, Dept. RB, Chesterfield, MO 63006 FAX/Phone 314-527-8326

*or contact us direct*

Argyle Locomotive Works, 72 Garland Road, Bundanoon 2578, AUSTRALIA

FAX/Phone 011-61-48-836-787

# GARICH LIGHT TRANSPORT



**Planting  
TRACK This  
Spring??**

**Experience design FREEDOM with a Complete Code 250 Rail System**

**I Rail Choices:** Aluminum, Brass, Pre-Weathered Nickel-Silver

**I Tie Style Choices:** Mainline, Branchline, Dual Gauge

**I Turnout Choices:** Numbers 3, 4, 6, 8, 10, Small Wye, Large Wye, 3 Way

• Distributor for Sherline Lathes & Milling Machines •

AND, as you should expect, a complete line of fasteners and accessories to compliment your installation.



Available NOW, from stock OR at your Dealer  
52¢ LSSAE for Information and Sample

**Co Design  
SV RR**

**GARICH LIGHT TRANSPORT** 14582 Aspen Circle, Huntington Beach, CA 92647  
Phone/Fax (714) 893-6540





G Scale, Gauge 1  
Gauge 0, On16 Narrow Gauge  
\$2 per Track-Foot

***HALF-PRICE SALE!***  
***PERFORAIL @ \$2 / TRACK-FOOT***

THE MOST REALISTIC IS NOW THE CHEAPEST AT JUST \$2 PER TRACK FOOT -- but not for long. We must shortly close our Indianapolis outlet, and move BLW's North American operations back to home base in Australia, where we're concentrating all business.

To thank you, an established Perforail user, we're offering you first go at the stock in Indianapolis at less than its direct warehouse cost.

***YES, ONLY 50% OF U.S. LIST PRICE,  
PLUS \$20 PER ORDER!***

Discounted prices are:

only

#0301	Rail, with joints and terminals (49.2 track feet)	\$51.00 for 15m
#0321	G Scale/G1 ties with clips, per pack	\$12.00
#0322	On16 ties with clips	buy 4 per rail pack,
#0323	G.0 ties with clips	2 for skeleton track
#0324	G.0 3-rail ties with clips	
All	Switch Kits, in 'makes 4' packs	\$61.50
Packing Charge - (plus usual UPS shipment charges)		per order \$20.00

Future ex-works, Australia costs to you depend on the exchange rate. At \$A1 = 72 cents US they're about the same as the never-to-be-repeated 50% offer from Indianapolis. While freight from Australia costs you more and duty is 7-10%, you'll still outlay a lot less than our previous US retail list of \$4/ft. and \$31 per switch kit buying from Brisbane in the future. But you'll never match the 50% discount offer from Indianapolis. So --

***TO GET YOUR STOCK AT 50% LIST, PLEASE MOVE NOW***

\$2 PER  
TRACK  
FOOT

Call Indianapolis toll free 1-800-999-2266  
or fax Tony Hughes on (317) 876-5559  
or, airmail Tony -- PO Box 68666 Indianapolis IN 46268  
Checks, Visa, Mastercard OK. Phoned charge card orders OK.  
Sorry, no lay-bys or reservations at this price!

***BRISBANE LOCOMOTIVE WORKS PTY LTD***

(ACN 050 412 872)

PO Box 535, Wynnum Qld 4178 AUSTRALIA

When call us please check time zones. Your late afternoons, evenings are usually best. Call the office 011 (617) 893 0455, or Ian Macfarlane's house 011 (617) 396 4954. 24-hr Fax # is 011 (617) 893-0466.



## SitG Back Issues NOW AVAILABLE

The prices shown include postage and handling for North American subscribers - all others please add .50 per copy for overseas surface mail.

#8 ..... 4.00	#16 ..... 5.00
#9/sold out	#17 ..... 5.00
#10 ..... 4.00	#18 ..... 5.00
#11/sold out	#19 ..... 5.00
#12/sold out	#20 ..... 5.00
#13 ..... 5.00	#21 ..... 5.00
#14 ..... 5.00	#22 ..... 5.00
#15/sold out	#23 ..... 5.25

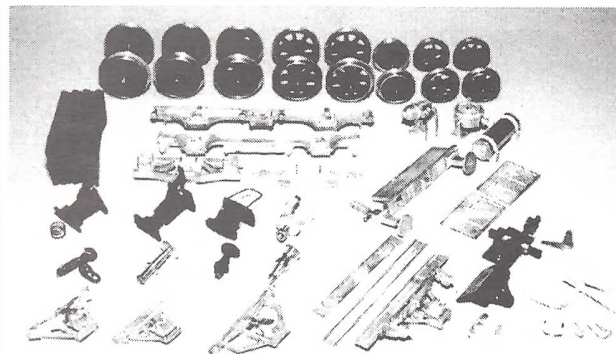
Send a list of issues requested with your check or money order to:

*Steam in the Garden Magazine*  
P.O. Box 335  
Newark Valley, NY 13811

## British Prototype Kits by

# Tennille

Products



In addition to coach and wagon kits, many parts are available for the scratch builder. Steel tire wheels, axle guards, buffers, couplings, bogie (truck) kits, undercar details, and coach and wagon fittings.

KITS, PARTS, TRACK: 10mm (3/8") Scale Gauge 1; 16mm Scale (NG) Gauge 1 or 0. PRICE LIST, with illustrated leaflet, \$2.00 postpaid.



HARPER MODEL RAILWAYS

P.O. Box 24728 LYNDHURST OH 44124 TEL. (216) 464-8126

# FREE 30 DAY TRIAL?

## NEW DAREX DRILL SHARPENERS!

This free new color brochure has some time and money saving answers. Darex drill sharpeners are simple, accurate and they'll save you money. This new informative brochure also shows and describes other Darex cutting tool sharpeners. Sharpener prices range from \$249 to \$2298. We're so sure you'll like these quality sharpeners, we offer you a free thirty day trial with any Darex sharpener. 1000 dealers world-wide. Demonstration video available.

# DAREX

☐ Free 30 day trial upon request ☐ For free brochure (Call, fax, write or use reader service number below)

1-800-547-0222 FAX 503-488-2229 Box 277 Ashland, OR 97520

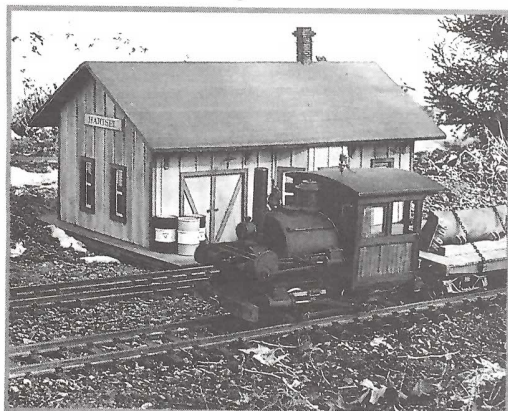
What are the  
best alternatives  
to constantly  
buying new drills?





# Garden Railways

The premier magazine for the outdoor modeler since 1984



Alan Olson's G-scale Acama Central Garden Railway

Garden railroading can be everything from finescale modeling to just plain fun in the garden. Get it all with **Garden Railways**.

Scratchbuilding  
Kitbashing • Operation  
Track and roadbed  
Locomotives, rolling stock,  
and structures • Realistic  
use of plant materials

A year's subscription (6 issues) \$21 (US) • Foreign (including Canada): \$28 via surface, \$55 via air  
Sample copy: \$4.95 (US) or \$8.00 (foreign via air) • VISA & MasterCard welcome

**Garden Railways Magazine**

Box 61461 Dept. SitG • Denver CO 80206 USA • 303-733-4779

## GARY RAYMOND METAL WHEELS™



**Nickel Plated RAIL-GLIDE™**

with Stainless Steel Axle **3.95 PER AXLE**  
UNPLATED STEEL **2.95 PER AXLE**

\$5/50 axles s&h. CA residents +7.25% sales tax.

For 1:20.3, G, 1/2", 1:29, #1.

P.O. Box 1722-S

Thousand Oaks, CA 91358

**805-492-5858** ©1992 - G.R.M.W.

## SUBSCRIBE TODAY!

Don't miss a single exciting issue with news, photos and more from the worldwide small-scale live steam community. Send \$21.00 for a one-year subscription (\$27.50 Canada, \$28.50 foreign) to: **Steam in the Garden, P.O. Box 335, Newark Valley, NY 13811**



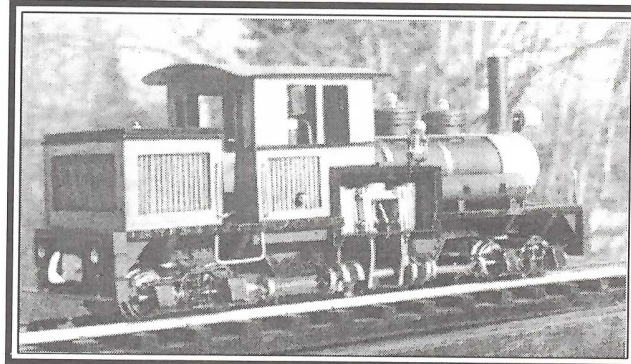
**"G" Size Railroad & Logging Supply**  
Detail Castings, Kits & Parts

Dept. RB, PO Box 22, Linn Creek MO 65052

We got horses. We got cows. We got pigs? **JUST FOOLIN' FOLKS!** But we do have N.B.W.s, stake pockets, strap steps, turnbuckles, queenposts, truck journals, K-brake parts, couplers, grabs, tank vents, brake wheels, push pole pockets, truck bushings, box car door guides, reefer hinges and latch bar, pass. car vents, loco tools, lube set, marker lights, conductor stool, spittoons, lanterns, station benches, switchstands, harp stands, baggage carts, wheel stops, order boards, bridge feet, cemetery stones, coffins, water pump, shop crane, scales, pump hand car, winches, typewriter, misc. gears, pipe fittings, wheel barrow, garden tools, picnic table, fire hydrants, people, dog, mail boxes, likker jugs, coffee pot & cups, telephones, door pulls, lock on hasp, door knob, barn hinge, door hinge, electric meter, electric insulators, fire extinguishers, diesel horns, rerail, smoke stack, pop valves, whistles, loco L&P coupler, 12 pounder cannon. **LOGGING SUPPLIES & PARTS:** Crosscut saws, limbing saws, mauls, sledge, axes, cant hooks, peavey, log pike, bow saw, shackles & pins, rigger's blocks, loading jack, 12" logging block, 16" logging block, tree shoe, fall block, 24" logging block, slackline carriage, chokers & hooks, logging tongs, sheaves & bearings, steam winch engine (KIT), overhead line shafting, sawmill parts **AND A BRAND NEW CATALOG THAT SHOWS IT ALL!**

**CATALOG:\$2.00**

## Geoffbuilt



**SHAY**

Live Steam • Butane Fired  
Easy to Fire, Operate & Maintain  
Realistic Running Speeds

No. 1 Gauge

**\$1000.00 U.S. + S/H \$25**

Direct All Inquiries to:

**Geoff Coldrick**

Box 277 • Salisbury N.B. E0A 3E0  
CANADA

Phone: 506-372-4364



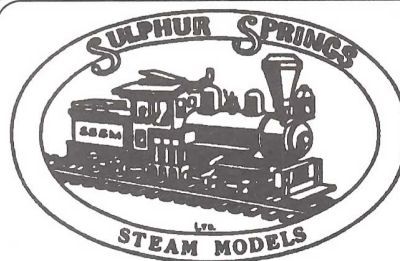
# G WALLS MODULAR BRICK WALL SYSTEMS

- Modular Components in UV Stabilized Plastics
- LGB/POLA Compatible
- 1:24 scale parts
- Kits also available

WRITE FOR DETAILS TO:

## C & S MODELS

350 Columbia Street  
New Westminster, B.C.  
Canada V3L 1A6



**STEAM  
STUFF  
CATALOG  
JUST  
\$2.00  
ppd.!**

*We are the USA agent for Argyle Steam Locomotives!*

We've got those *gottahavitt* items for scratchbuilders, kitbashers and everyone that owns a small-scale live steam loco. BA fasteners, taps, dies, valves, pressure gauges, wick packing, teflon packing, gas filler adapters, fibre washers, copper washers, Sievert propane silver soldering outfits, silver soldering supplies, and much more. Garich Light Transport track products are now in stock!

**Sulphur Springs Steam Models, Ltd.**



P.O. Box 6165

Dept. RB

Chesterfield, MO 63006

Phone/FAX 314-52STEAM (314-527-8326)

MASTERCARD/VISA ACCEPTED

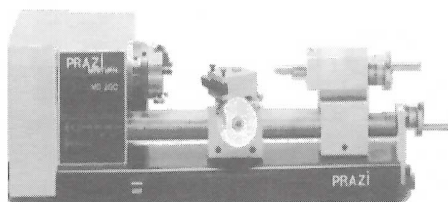


## PRAZI'S AMAZING MINITURN 200

A Precision Engineer's Lathe in Compact Form

Miniturn 200 is ideal for those working on small formats or in confined spaces, who regard a screw-cutting facility as an unnecessary extra.

Quiet Operation • Accurate Due to Welded Steel Base  
Robust Construction • 3-Speed Motor  
Accepts Watchmaker's Collets



MADE IN  
GERMANY

1 FULL YEAR  
WARRANTY

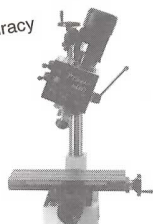
CALL FOR FREE  
VHS DEMO TAPE

### SPECIFICATIONS

Turning Diameter Over Bed	4.00"	Spindle Speeds	560/1000/2000 rpm
Turning Diameter Over Saddle	1.57"	TAILSTOCK	Morse Taper 1
Distance Between Centres	8.00"	Advance	1.60"
Cross-Slide Travel	2.17"	MOTOR	1100-1/8HP
increments of 0.025mm/division		Spindle Speed	2820 rpm
Maximum Traverse	7.87"	Electrical Safety Standard	IP44
MAIN SPINDLE		Footprint	22.50" x 10.50"
Spindle Capacity	0.31"	Height	7.00"
Max. Capacity for bar	0.28"	Weight	55 lbs
Nose fitting: External Thread	M14x1		

## PRAZI MILLING MACHINE

.0002  
Spindle Accuracy



Made In  
Germany

Spindle  
Speeds  
375-670  
1080-1900

## PRAZI 5" X 12" PRECISION LATHE

### SPECIFICATIONS

Center Height	2 1/2"	Spindle Capacity	7/16"
Distance Between Center	11 7/8"	Spindle Speeds	250,500,1000,2000 rpm
Swing	5"	Automatic Feed	.003 - .0063
Cross Slide Travel	3"	Sleeve Diameter	7/8"
Tool Rest Travel	2"	Sleeve Travel	1 1/2"
Space Requirement	31 1/3" x 11"	Motor	110V 1/3 HP
Height	8 3/4"	Rated Speed	2850 rpm
Spindle Nose	2 M. T.	Weight	100 lbs
		Spindle Accuracy	.0002"

**High Accuracy For the Serious Machinist**

INTERNATIONAL SALES  
& MARKETING GROUP

5151 Oceanus Suite 109  
Huntington Beach, CA 92649

TEL: (714) 379-1380  
FAX: (714) 379-1385



# THE PORTERS

The good news for the customer is that our Agents have Porters (as reviewed in the March/April issue of SitG) in stock, ready for shipment on receipt of your telephone order. If, due to an overwhelming response, the unforeseen happens and our Agents run out of stock, we have more stock on hand in England which can be shipped immediately to our agents.

We are receiving a great response from customers who have bought the 1994 New Model Porter, saying that not only is the quality first class, it steams and steams along.

The radio controlled whistle works very well, and is now fitted to the engine as standard equipment. It's great fun to whistle your arrivals and departures -- and even grade crossings if you have them!

The price of the Porter is \$1675.00 delivered to your door, excluding local taxes.

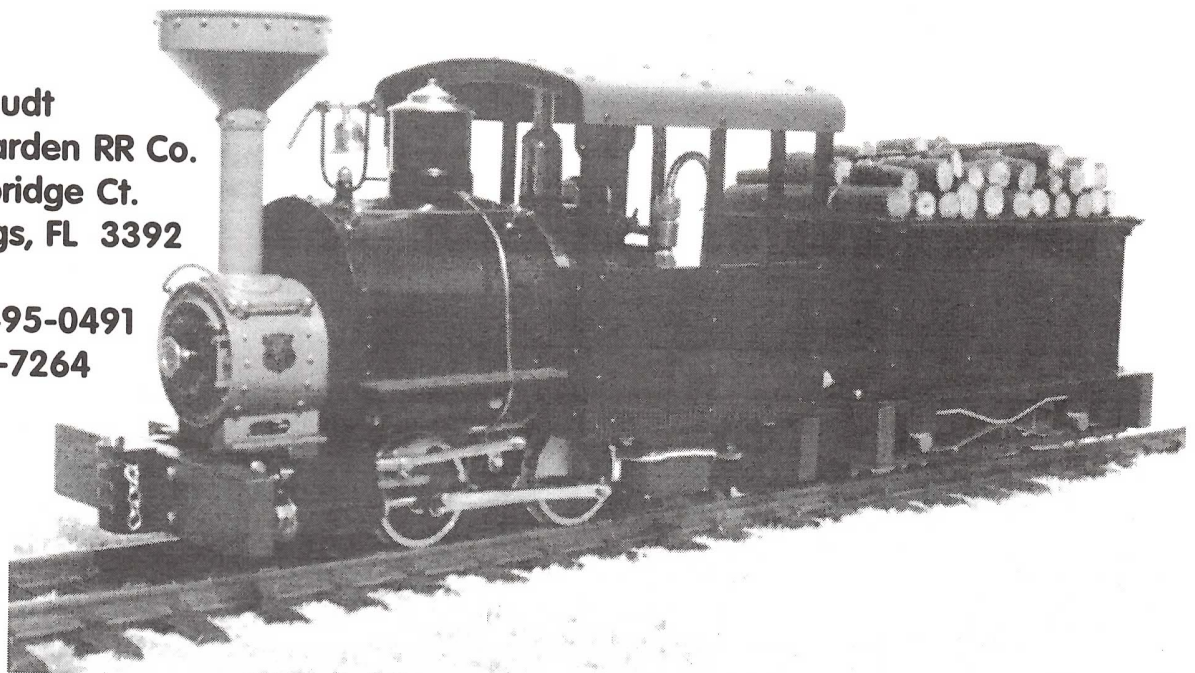
OGWEN is now available in Gauge 1 -- \$1485.00 delivered to your door, excluding local taxes.

## U.S Agent:

Bob Osterhoudt  
Rio Pecos Garden RR Co.  
27136 Edenbridge Ct.  
Bonita Springs, FL 3392

Phone 813-495-0491  
Fax 813-495-7264

Photo by  
Bob Osterhoudt

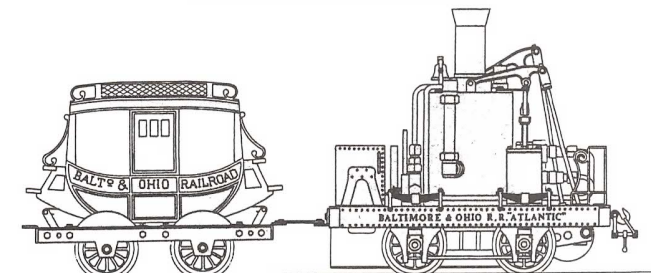


Maxwell Hemmens International Ltd., Thorganby, York, North Yorkshire YO4 6DA  
Phone 011-44-904-448-331 --- Fax 011-44-904-448-841



## J.M.G. Hobbies

"Catering to the large scale model railroader  
and live steam enthusiast"



### ASTER B&O "GRASSHOPPER" -- circa 1830's

Our commitment to our customers is to provide quality equipment,  
service and competitive prices. Call or write for our free price list.

Some of the lines carried at JMG:

Roundhouse Engineering  
American Model Builders  
Hartford Products  
Llagas Creek Railways  
Gary Raymond Wheels  
Quality Mobil Steam Oil



ASTER  
Shortline Car & Foundry  
Pearse Locomotives  
Scratch Builder's Supplies  
Service & Repairs  
Del-Aire Products

J.M.G. Hobbies  
is proud to stand  
behind what we sell!

## J.M.G. Hobbies

P.O. Box 975 Lithonia, GA 30058

NEW LOCATION!

Phone (404) 736-9167 • 24 hr. FAX (404) 736-9566

Hours: M-F 5:30PM to 9:30PM / Sat. 10:00AM to 5:30PM / Closed Sunday

## RETRACTION

Aster Hobby West and  
J.J. Enterprises are not  
the same company as  
was indicated in our ad  
in the July/August 1994  
issue of Steam in the  
Garden. We are sorry  
for the misunderstand-  
ing.

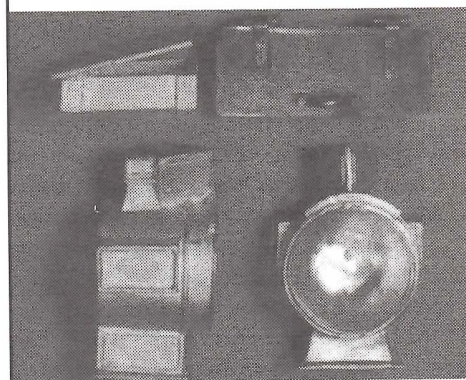
## J.J. Enterprises

### Steam...

Just Half-a-Bubble-Out-of-Plumb  
by Anonymous

Old George was quite a character in the town. He divided his time between driving the logging engine in the shunt yard and running the best barbeque restaurant in the five counties. He never would give out his recipe, and no one knew just where he did his cooking. Until, that is, the day that Uncle Charlie opened the smokebox door on Ol' No. 4....

Send LSSAE For Catalog Sheet



## TRACKSIDE DETAILS G-1/2" Scale Parts

1331 Avalon Street  
San Luis Obispo, CA 93405

# OUTDOOR RAILROADER

REALISTIC LARGE SCALE MODELING

### IMAGINE A GAZETTE FOR LARGE SCALE

A ONE YEAR SUBSCRIPTION (6 ISSUES) IS  
\$24.00 U.S., \$34.00 FOREIGN AND  
CANADA.

WESTLAKE PUBLISHING COMPANY  
1574 KERRYGLLEN STREET  
WESTLAKE VILLAGE, CA 91361  
(805)379-0904



## BOOK REVIEW

by Chip Rosenblum

### ZEPHYR

Tracking a Dream Across America  
by Henry Kisor

Published by Times Books, Random House; 1994

This is a book not to be missed! Rarely have I had a better time reading about both trains and people, and some insightful comments into many personalities I've encountered in our steam fraternity (more on that in a later quote).

I have read many books on the mechanical operation of both locomotives and railroads, and many books on cultural interactions of the people of our world. I have seldom been fortunate enough to encounter, however, a book that truly tells how a train works. Not runs. Not operates. Not schedules. But actually works. And only works as well as the people who staff and ride it. What corporate machinations must occur for the cook to actually have the food on board that he needs for the dining car. How does the engineer really cope with that purported schedule. What happens to the paying customer when the private car hooked to the end of the train suddenly stops functioning as planned. How a train really works.

The description of the travel of the Zephyr, from Chicago to Oakland, is fascinating in its own right. Coupled with the intimate details of the interactions of the train's staff with the passengers, materials, and beautiful scenery made me feel as if I had made the trip. And certainly made me want to. Henry Kisor has an obvious, long-standing love of trains and, even more important, an equally deep respect for the various components of our fellow humans. The interaction of the two brings a fresh perspective to the whole concept of travel by rail.

Of course, the out-of-context quote that caught my eye in the introduction was in reference to a passenger who knew, and sadly, shared, his entire range of knowledge of railroading at the slightest, or no, provocation. The fellow was a 'foamer', a species you'll find everywhere flanged wheel encounters steel rail. A foamer -- who bubbles at the lips when discussing his favorite subject -- is what a professional railroader calls the hyperenthusiastic railfan, often with a touch of irritation and sometimes contempt. None of us, of course, would remotely match that description. But in case there's just a bit of that lurking in the fringes of our steamy minds, there's an eloquent method of obtaining yet more arcane lore. Read and enjoy Zephyr!

## SALEM STEAM MODELS

U.S. and U.K. outline live steam locos at budget prices. Gas fired, oscillating cylinders, detailed bodywork.

Also our large range of Mamod improvement accessories, including meths & gas burners, Goodall boiler filler valves, safety valves, lubricator, regulator, bunkers, tank sides & tender with rivet detail, brass chimney, handrail kits, Mamod spares and much more!

For those times when steaming up isn't possible but you want something running for that "railroad flavor", don't forget our line of battery powered locomotives, with 4 different models and a SUPER version with lots of detailing. We've added some new, more powerful models that will really haul your freight - or bring a dead steamer back to the roundhouse.

Visa/Access/Mastercard accepted -- \$2.00 for lists.

### SALEM STEAM MODELS

Brynglas, Salem, Llandeilo, Dyfed SA 19 7HD, U.K.  
Phone 011-44-558-822-530

## FREE CUTTING TOOL SHARPENING VIDEO

This new 40 minute video demonstrates Darex cutting tool sharpeners. The informative video has three short segments that show the fast, accurate, simple, affordable M-5 drill sharpeners, the SP Super Precision drill sharpeners and the E90 endmill sharpeners.

**Call Toll-Free 800-547-0222**

**Darex Corporation  
Box 277  
Ashland, OR 97520**

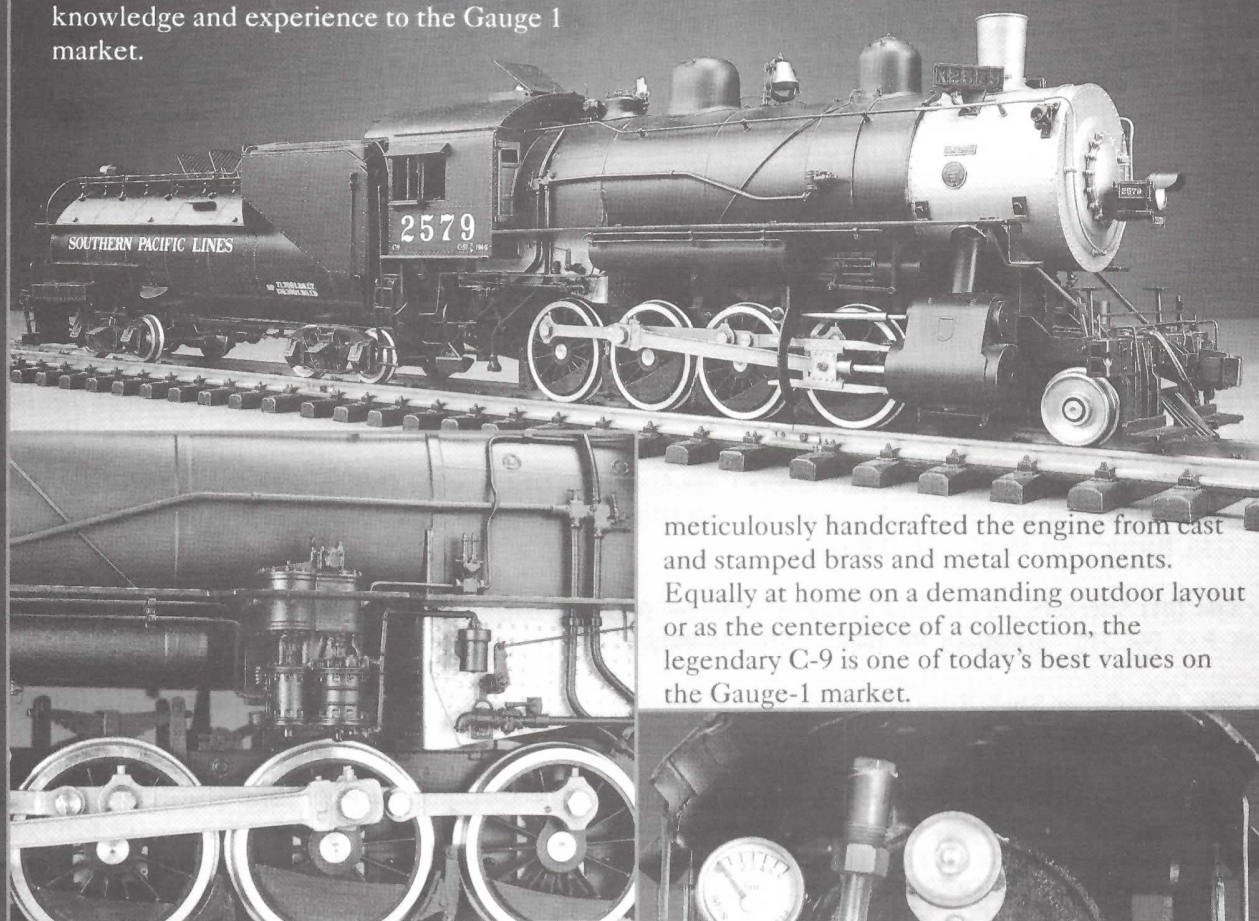




## *Quality American Locomotives At Affordable Prices* **VALUE COMES TO GAUGE-1**

For over ten years, MTH Electric Trains has earned a reputation for building the finest quality trains at attractive, affordable prices. Now for the first time, we are bringing our extensive manufacturing knowledge and experience to the Gauge 1 market.

Our first release, the Southern Pacific 2-8-0 C-9 Consolidation is a stunning 1:32 scale recreation of the famous S.P. workhorse. From its distinctive Vandy tender to its highly detailed boiler and chassis, we have



meticulously handcrafted the engine from cast and stamped brass and metal components. Equally at home on a demanding outdoor layout or as the centerpiece of a collection, the legendary C-9 is one of today's best values on the Gauge-1 market.

### **Featuring**

- \*1:32 Scale Production
- \*Available In 3 Versions
- \*Limited Production Run
- \*Opening Hatch Doors
- \*Operating Headlight and Tender Backup Light
- \*Electric Versions Feature Quality Pittman® Motor
- Operating Marker Lights and Lighted Number Boards
- \*1-Year Limited Warranty

### **Available In**

No. 5001 Electric Ready-to-Run	\$3250.00
No. 5002 Live Steam Ready-to-Run	\$3295.00
No. 5003 Live Steam Kit	\$2795.00
\$250.00 Deposit Required, Delivery Spring 1995	

### **M.T.H. ELECTRIC TRAINS**

9693 Gerwig Lane, Columbia, MD 21046

**410-381-2580 410-381-6122(FAX)**

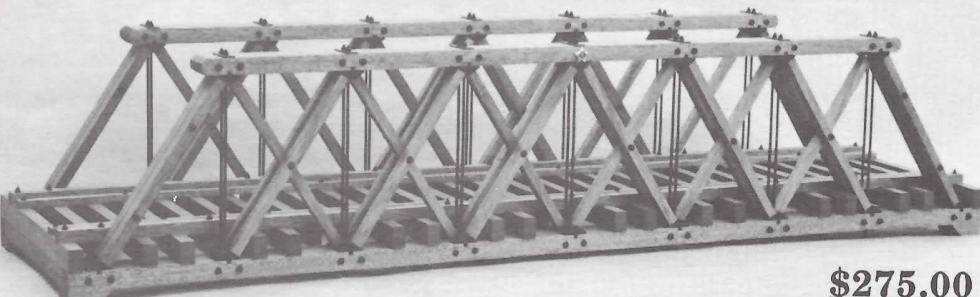






Fully assembled 1/2" scale hand-crafted mahogany with blackened brass hardware and numerous detail castings. Deck timbers spaced for drop-in installation of LGB sectional track. 31-1/2" long, 8" wide, 7" tall. \$3 catalog with photos.

## HERMOSA CREEK PONY TRUSS



**\$275.00**  
shipped to lower 48

1218 A-8 COLORADO LN. ★ (817) 548-5656 ★ ARLINGTON, TEXAS 76015

## SWAP SHOP

**FREE!** Used Code 332 aluminum rail -- approximately 250 feet weathered (Micro Engineering). Contact Phil Kubiak 201-595-5322.

**For Sale:** Argyle Loco Works 0-4-4 Forney. Gauge 1, gas-fired, radio control, water glass, pressure gauge, blowdown valve, displacement lubricator and radius truck. Engine has about 10 hours running time. \$1300 (will consider trade). Dan Long, RR1 Box 1140, Berwick, PA 18603 -- 717-759-0753.

**For Sale:** (#1) Aster K4S, s/n 120. Built from a kit. \$4000.00. (#2) Aster Baldwin 0-4-2 Plantation engine with water car. Harry Quirk, P.O. Box 215, Springtown, PA 18081 -- 610-346-8073.

**For Sale:** Roundhouse Sandy River #24, new in box, \$2995.00 includes duty and shipping. Call Mike after 7 pm eastern time (Florida) 407-333-4179.

**For Sale:** TRACK: 66 feet of Lionel code 332, 10 large radius curves, 31 small radius curves; 60 feet of Llagas Creek code 250; one right hand manual LGB turnout. ENGINES: Bachmann 4-6-0, REA 2-4-2, Lionel 0-4-0 -- all R/C equipped. ROLLING STOCK: 4 coaches, 2 coal cars, 1 Pepsi boxcar. Also 2 channel radio and charger, plus other miscellaneous items. \$950 plus shipping takes all. Call 607-589-6939, ask for Dave.

**For Sale:** (#1) Mike Chaney double acting oscillating cylinder "KITTEN" kit. All options including chassis, boiler, level gauge, pressure gauge, lubricator, side tanks, cab, and all the fittings. List \$680, asking \$500. (#2) Roundhouse "JACK" with matching Roundhouse tender. Blue with nice, matched deep rivet detail. Includes AM 2-channel R/C in tender. Equipped with Brandbright slotted buffers for UK 3-link chain or US link & pin. Knuckle couplers can also be used. Tender/locomotive coupling has been carefully constructed to allow for nearly flawless operation while backing through tight radius LGB turnouts. No wear and tear, just a smooth, good looking, nicely run-in steamer. Blowdown and vacuum tap can be fitted. \$1200.00. Contact Richard Finlayson at 2601 Pennsylvania Ave. #626, Philadelphia, PA 19130 after September 10th.

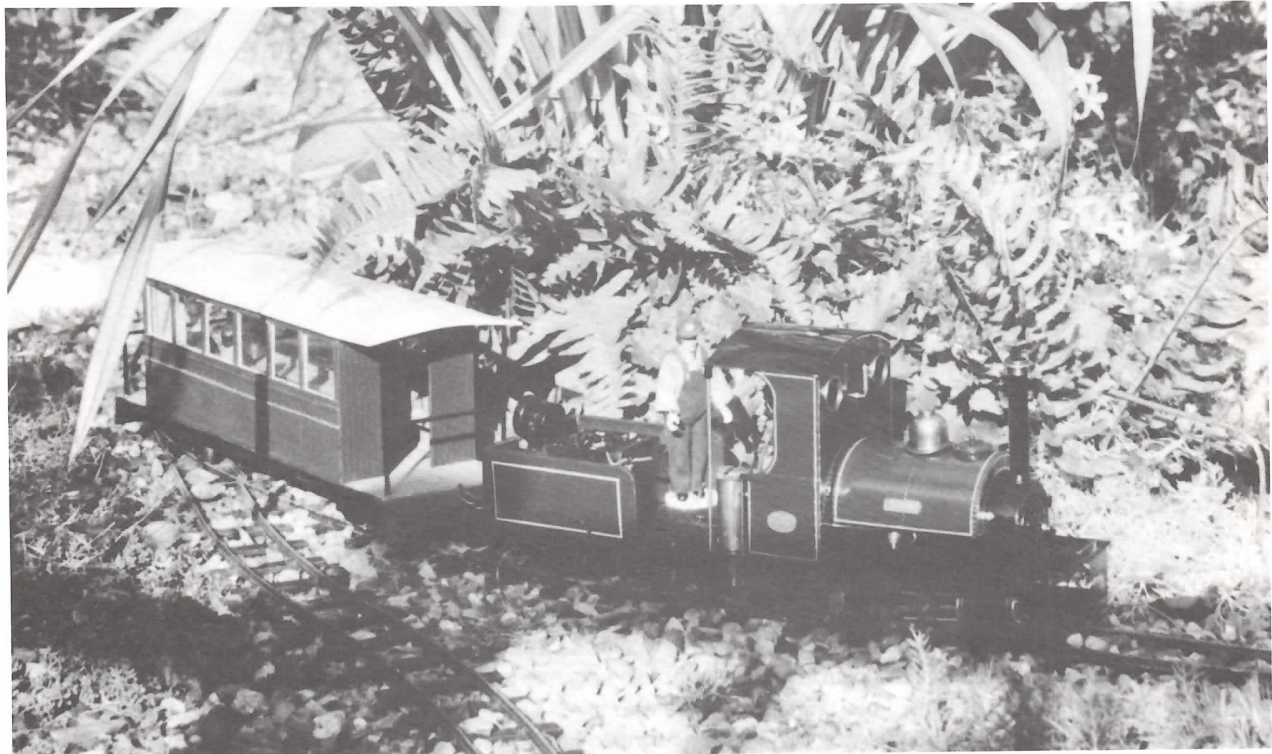
**For Sale:** O.S. Mogul kit, 3-1/2" gauge. Includes blower and a small 2-axle wagon. Kit is intended for coal firing. O.S. kits are like Aster kits, but larger. Everything machined and painted (blue). Complete instructions including a review article from *LIVE STEAM* magazine. \$3500.00. Don Kroeger, 9325 Lugary, Houston, TX 77074 -- 713-774-4668.

*Listings in Swap Shop are offered at no charge as space permits. Send a letter, card or FAX containing your ad, clearly printed or typewritten (no phone-in ads, please!), to SitG, P.O. Box 335, Newark Valley NY 13811. Ads must contain sellers name and address - phone number recommended. Please keep your listings to a reasonable length. Non-commercial ads only, please.*

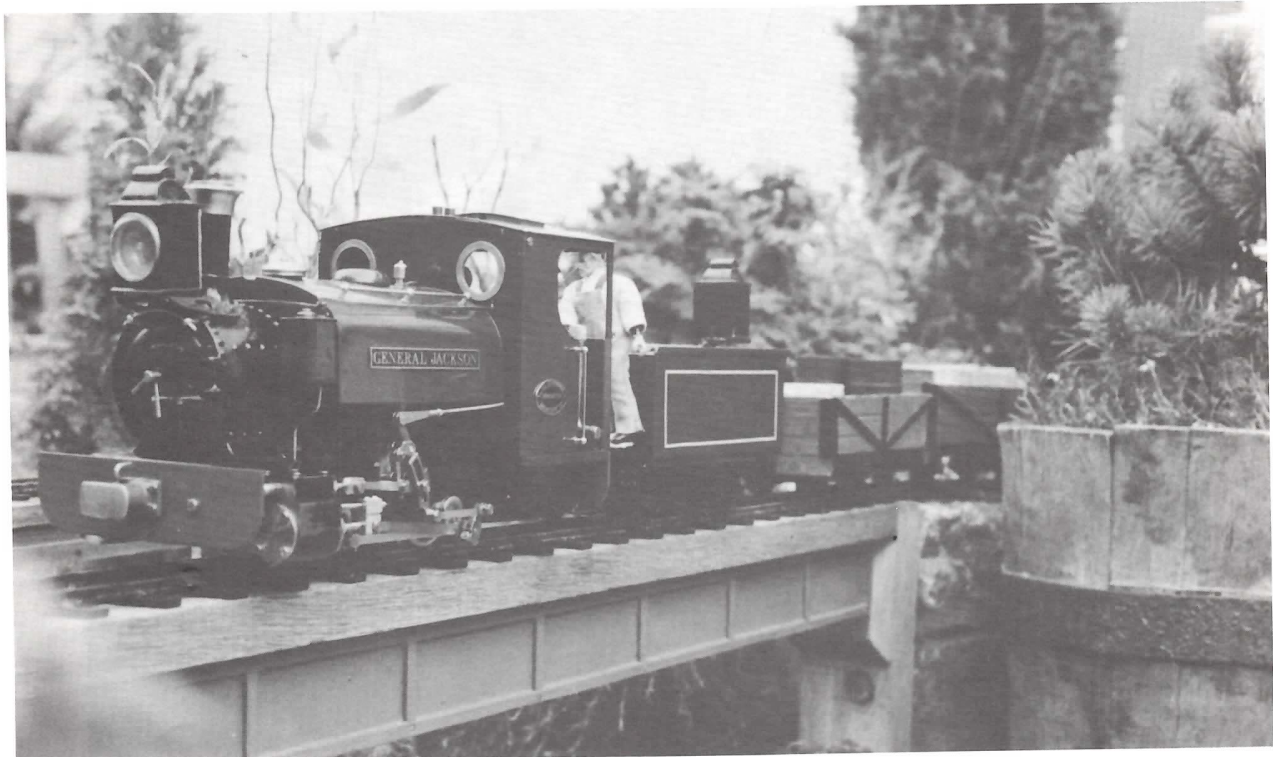


# Steam Scene.....Along the Rails

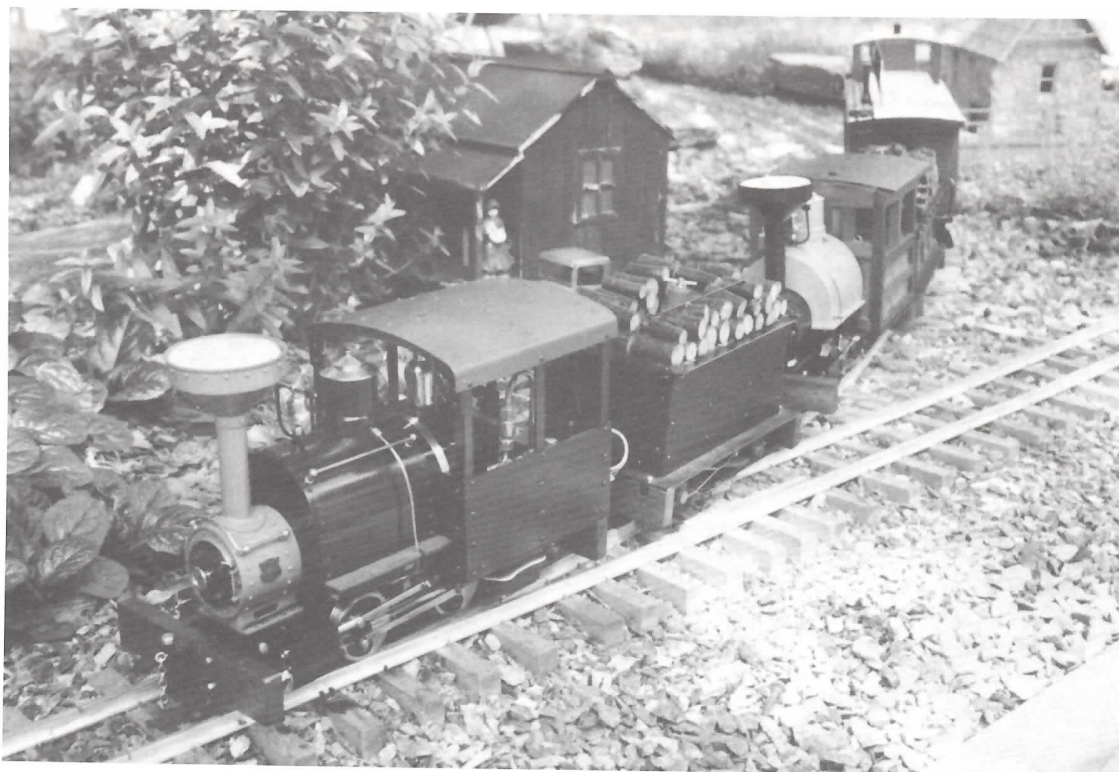
*We invite you to send in your favorite photos for this feature, always labeled with vital information like photographer, subject, where, when and why. Mail them in to SitG, P.O. Box 335, Newark Valley NY 13811. Please include a SASE with sufficient postage if you'd like your photos returned.*



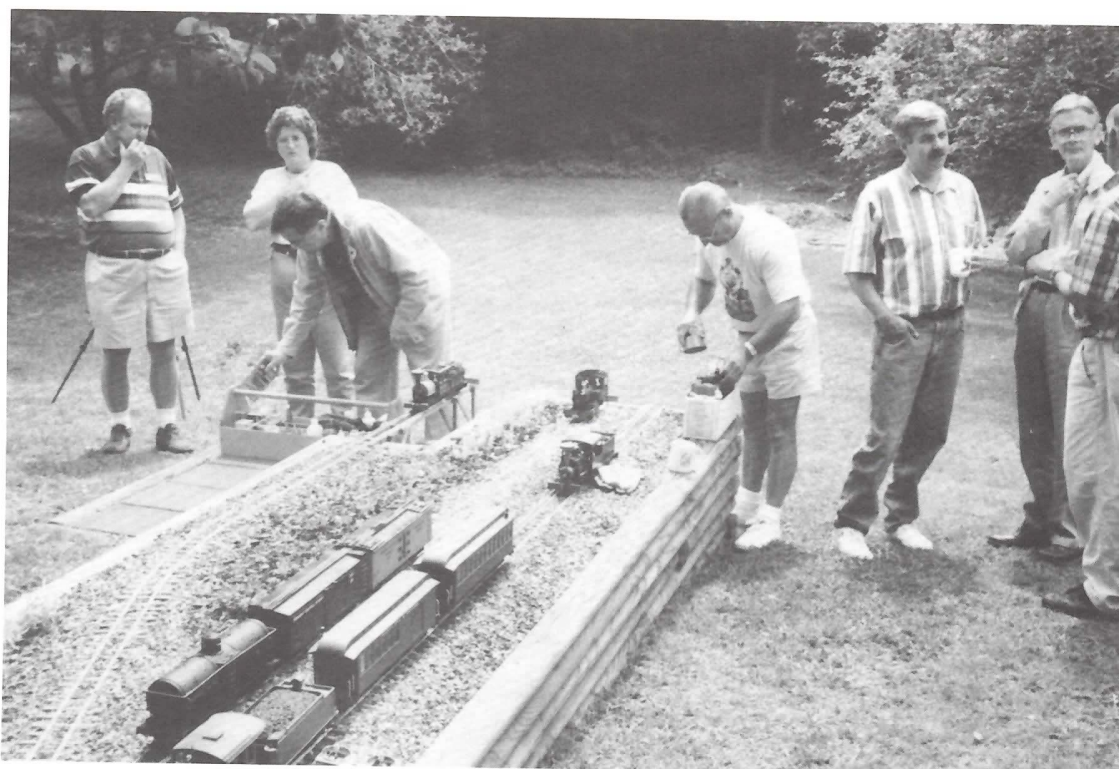
Both these photos were taken by Jim Slater on his Budleigh Bumblebahn 16mm garden railway in Devon, England. The Finescale Cranmore Peckett above is shown with tender and coach – both scratchbuilt. In the photo below, GENERAL JACKSON, a Roundhouse JACK, rolls over a plate girder bridge with a string of scratchbuilt 4-wheel rolling stock.







STEAMUP IN THE CAROLINAS -- A small, but highly enthusiastic group of live steamers, from as far away as Alabama and Florida, gathered at the home of Malcolm Schaeffer in Charlotte, North Carolina this spring for the 1st Annual Piedmont Central Railway Steamup and Open House. Ten steam locos of various manufacture made appearances during the course of the day, and at least one, generally two, and sometimes three locos were running at any given time. Bob Simpson ran his new Maxwell Hemmens Porter for the first time at this steamup, and it performed beautifully. Hans Salheiser's Roundhouse BILLY put in numerous good runs, and looked super pulling a string of European cars. A highlight of the steamup was a double header, with Jim Pitt's "old" MH Porter and Bob's "new" MH Porter overpowering a single car. From all accounts this steamup was a great success, and all concerned (even the host) are looking forward to doing it again next year. *Photos by Malcolm Schaeffer*





## 1994 Calendar of Events

**September 16-18** -- Second Annual Indiana Transportation Museum small scale steamup will be held on the museum grounds in Noblesville, Indiana, a suburb of Indianapolis. Five elevated 380 foot loops plus steaming tracks and storage tracks will be operating. Water and fuel will be provided. For further information contact: John W. Bloxdorf, M.D., 2540 North Ninth Street, Terre Haute, IN 47804. Phone 812-466-1007.

**September 24** -- First East Alabama Steamup at Hans & Elsie Salheiser's Mill Valley Railway. Ground level gauge one, 230 foot mainline, 7 foot minimum radius, 1.9% maximum grade. Send SASE to 520, Lee County Rd. 646, Salem, AL 36874 -- or call 205-291-0318.

**October 14-16** -- Associazione Modellisti Foligno Citta' Ferroviana organizes STEAM MODELLING INTERNATIONAL MEETING. Location: Central Italy, Foligno -- Valtopina (PG). Steam locomotive exhibition and demonstration -- Scales 1:32 to 1:11. We speak English -- French Languages. Contact: Dr. Guido Mattoli, Via Roncalli 11, I-06034 Foligno,

Italy. Telephone 0039-342-212485 (8 p.m.)  
Fax 0039-742-358449 (24 hr.)

**January 13-15, 1995** -- National Gauge 1 Steamup in Diamondhead, Mississippi. This is the BIG event for small-scale live steamers in North America, so don't miss it! Gauge 1 and Gauge 0, 1:32 scale through 1:19 scale, mainline through logging -- a wide variety of steam locomotives in many different sizes and types will be running during this event. The venue will be the same as previous years - the indoor Atrium at the Days Inn in Diamondhead, Mississippi, just a one hour drive from New Orleans. For more information or to register, contact Jerry Reshew, National Gauge One Steamup, 5411 Diamondhead Drive East, Diamondhead, Mississippi 39525. Phone or fax 601-255-1747.

*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.).*

## END OF THE LINE

A few miscellaneous notes: Please do not write on the back of any photos you send us...the ink doesn't dry properly on photographic paper, and it transfers to the face of any other photos you might have enclosed. Use a mailing label or sticky note for photo information.

We need your photos now more than ever! B&W prints are fine, but not necessary. Color prints of good quality (sharp focus, well composed, good contrast) work just fine now, and we need high quality color transparencies (slides) for the cover and *Steam Scene*. It is best to use lower speeds on the slide film to avoid a grainy look when the slide is blown up to cover size. Cover shots must be vertical format.

Interest and enthusiasm continues to expand for technical articles. Charlie Mynhier's construction series has been very well received, and we have several other technical articles in various stages of preparation.

If you are qualified to write a technical article on the subject of small-scale live steam -- and if you have the time and

interest in doing so -- please give us a call or drop us a line. We'd really like to hear from you...and so would our readers.

We've been working on a construction project of our own here at Paradise East -- an Aster C&S Mogul kit. Great stuff! We will have it done soon, and will bring you a report on the project.

How can you get even more enjoyment from your hobby? That's easy...attend a steamup! Check the calendar above for location and date, then give the organizer a call to let them know you're coming.

There's no better place to see a variety of steam locomotives on display and operating in steam. Often you will see new engines just being introduced -- and some not even on the market yet.

And -- best of all -- you'll meet the nicest people to be found in any hobby. Men and women from all walks of life brought together as kindred spirits with a common interest -- small-scale live steam trains. Check it out, you won't regret it.



We were saddened to hear of the death of George Boycott of Australia, who passed away on March 21 of this year at the age of 85. George was an active model railroader for most of his life, converting to small-scale live steam in his late 70's. His articles and photos have appeared in many model railroading publications, including SitG.

I recall the phone call I got from George a few years back, when he was in this country visiting his stepson, David Brooke of Massachusetts. George informed me that my review of the Lindsay Shay had convinced him to place an order for one, and he was coming down to our place to see ours run to see for himself if I spoke the truth. He was a delightful guest, and we spent a very pleasant afternoon running steamers and talking on many topics. He was as delighted with the Shay as I was with his personality.

George was one of the good people, and he will certainly be missed.

## INDEX TO ADVERTISERS

Argyle Loco Works .....	37
Aster Hobby Co., Inc. ....	51
AWNUTS GRS .....	17
Berkeley Locomotive Works .....	28
BLW Perforail .....	38
Brandbright .....	4
C & S Models .....	41
Darex Corporation .....	39, 44
Diamond Enterprises .....	2, 3
GardenRail Magazine .....	9
Garden Railways Magazine .....	40
Garich Light Transport .....	37
Gary Raymond Wheels .....	40
Geoffbuilt .....	40
Glendo Corporation .....	36
Harper Model Railways .....	39
Hyde-Out Mountain .....	21
International Sales & Mktg. ....	41
J. J. Enterprises .....	43, 50
J.M.G. Hobbies .....	33, 43
Llagas Creek Railways .....	52
Locomotion .....	4
Lone Star Bridge & Abutment .....	46
M. T. H. ....	45
Maxitrak .....	28
Maxwell Hemmens .....	42
Micro Fasteners .....	13
Mike Chaney .....	13
ModelTec .....	9
Outdoor Railroader .....	43
Ozark Miniatures .....	40
the Parker Co .....	25
Rio Pecos .....	17
Roundhouse Engineering .....	9
Salem Steam Models .....	44
SitG Back Issues .....	39
Sulphur Springs Steam Models .....	41
Trackside Details .....	43
Willow Works .....	13

*Please tell our advertisers,  
"I saw it in SitG!"*



# J.J. ENTERPRISES

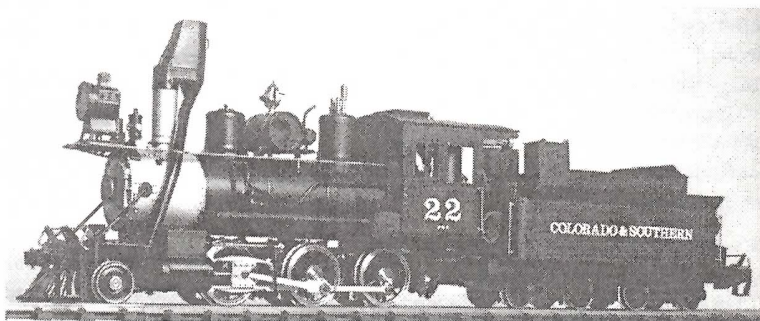
## NEWS

New item from Aster  
-- the B&O Atlantic  
Grasshopper 0-4-0.  
Kits are \$999.00, Built  
and RTR \$1190.00.

Shipping & Sales Tax not included.

### The JNR C11

The most overlooked Aster locomotive is the JNR C11, which we think is twice as much loco as the Pannier. It's a very good runner and can be Americanized. It is alcohol fired, with a Smithies-type boiler. Wheel arrangement is 2-6-4T, and valve gear is Walschaerts. Kit price is \$2450.00 plus shipping.



**FOR SALE:** Aster's C&S Mogul. You won't find a better price than at J.J. Enterprises. Buy a factory built version, or have the fun of building one yourself.

### **ALSO AVAILABLE FROM ASTER !!!**

Pannier Kits	Glaskasten Kits
SNCF 232U1 Kits	BR 96 Kits
PRR K4 Factory Built	
All of the above are now in stock.	

## IF YOU CAN'T FIND IT CALL US !

ASTER: ● New and Used ● Authorized repair agent ● Rolling stock of 1:32 scale  
Radio controls installed ● Locating service for hard to find items in 1:32

Now LGB authorized  
repair for Frank S.  
locomo

GARICH LIGHT TRANSPORT TRACK ● Mamod conversions  
● Featuring #1 Selling J.J.'s STEAM OIL

PLUS:  
**STEAM**  
THROUGH THE GARDEN  
The first gauge 1 Video



VISA and MASTERCARD WELCOME



J.J. ENTERPRISES ● PHONE & FAX: 714-828-1537  
5348 Vista Del Mar Cypress, CA 90630



# REAL LOCOMOTIVES RUN ON STEAM!



Join the switch from toy plastic trains to the value and fun of running one of Aster's 1 gauge real steam Pannier tank model locomotives. Aster's Pannier locomotives run and sound like the real thing with that wonderful feeling that comes only from live steam.

The Pannier tank locomotives were everywhere. Panniers pulled every kind of train on Great Western, British Rail and even on the London transport (the subway). In fact, Panniers are still running today. The Pannier's close cousin even ran in America at Railfair in California a



few years ago. Now Aster, builders of fine model steam locomotives for 20 years, offers six different 1 gauge real steam Pannier tank engine models. The same prototypes as the real locomotives.

Call now about these great models and Aster's new color brochure with Everything You Wanted to Know About Live Steam Models and How They Work. These Pannier all metal models are available now in built-up or kit. Start collecting and enjoying the value of one of the 15 Aster models available now! Call an Aster dealer today.

## SPECIFICATIONS OF THE PANNIER 0-6-0 TANK, CLASS 5700

Scale/Gauge: 1/32, No. 1 Gauge (45 mm), Total Weight: 2.7 kg, Length O.B.: 308 mm, Width: 82 mm, Height: 127 mm, Wheel Arrangement: 0-6-0, Driving Wheels: Dia. 44 mm made of stainless steel, Engine Cylinders: 2 Cylinders with a drain valve, Bore 10 mm x Stroke 20 mm, Steam port 1.5 mm, Lap 1.2 mm, Travel 5.4 mm, Valve Gear: Slip Eccentrics, Boiler type: Type "C" with 1 large fire tube + 4 small fire tubes, Water Capacity: 165 cc at 80% full, Pressure: 2 kg/cm<sup>2</sup> at normal working, Fittings: Safety Valve, Pressure Gauge, Water Gauge, Regulator, Blower Valve, Check Valve for a feed water pump, Lubricator: Roscoe displacement type, Fuel: Methylated alcohol, Fuel tank capacity: 75 cc., Minimum radius: 1.5 meter

### J&J TRAINS

5348 Vista Del Mar  
Cypress, CA 90630  
714-828-1537 Phone/Fax

### GAUGE ONE LINES

277 Elgin Street  
Ottawa, Ontario K2P1M1  
613-238-2644

### EASTERN RAILWAYS

RD1 Box 254  
Beech Creek, PA 16822  
717-387-8602

### RIO PECOS

27136 Edenbridge Court  
Bonita Springs, FL 33923  
813-495-0491  
813-495-7264 Fax

### ALLAN CAPERTON

8202 Wolf Pen Road  
Louisville, KY 40059  
502-228-1235

### SAN VAL TRAINS

744 Valjean Avenue  
Van Nuys, CA 91406  
800-423-3281 (natl.)  
800-924-9658 (CA)  
818-786-9072

### HYDE OUT MOUNTAIN

89060 New Rumley Road  
Jewett, OH 43986  
614-946-6611

### GARDEN RAILWAY COMPANY

2008 Madison Road  
Cincinnati, OH 45208-3219  
800-321-6115  
531-321-9954 Fax

### NORTH JERSEY GAUGE ONE

8 Spring Valley Road  
Park Ridge, NJ 07656

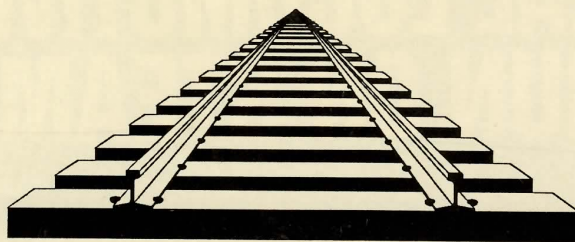
### J.M.G HOBBIES

P.O. Box 975  
Lithonia, GA 30058  
404-736-9167



ASTER HOBBY WEST, INC. P.O. Box 1226 Cypress, CA 90630 714-828-1537 24-Hour Phone / Fax





## **LLAGAS CREEK RAILWAYS**

**OUR NEW "NARROW GAUGE" TRACK IS NOW AVAILABLE**



**For the latest information on our selection of Gauge 1 track supplies,  
please send LSASE with .52 postage.**

**For a sample of our new "Narrow gauge look" track and information send \$2.00.**

**Llagas Creek Railways Dept. SG**

**2200 Llagas Road, Morgan Hill, CA 95037-9429**

**Phone/FAX 408-779-4391**