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STEAM IN THE GARDEN

Vol. 11, Nº 5 Issue Nº 59

with Steam on the Pond

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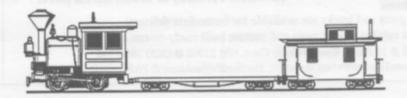
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FRONT COVER:

Excelsior Ditch Company's hard working Cricket returns a string of empty ore cars from Excelsior Quay to the mine on Charley Lix's 16mm gauge 0 line in Nevada. Charley scratchbuilt the ore cars, and the Cricket, which was acquired unpainted, has been tastefully and appropriately weathered and detailed.

photo by Charley Lix



Publisher/Editor Ron Brown

Priceless Assistant Marie Brown

CAD & Other Drawings in This Issue Keith Bucklitch

Regular Contributors

and Burne and	
Larry Bangham	California
Keith Bucklitch	
Jim Crabb	Texas
Crankpin	The South
Joe Lecesse	Massachussetts
Kevin O'Connor	California
Ken Parkinson	Florida
John Thomson	Texas
Harry Wade	Tennessee

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2001 CALENDAR OF EVENTS

(H)ouston (S)mall (S)cale (L)ive (S)teamers meet the third weekend of every month when there isn't a National Meeting held. If there is no other venue, the HSSLS meets on rotating Saturdays and Sundays at the home of Jim Crabb in Seabrook (Houston), Texas. Please call 281-474-5654 or email <saltycrabb@aol.com> for specifics and directions.

April 21, 2001 - West Side Reunion/Logging Modeler's Convention. Sonora Elks Lodge, 100 Elks Drive, Sonora, California. Modeling, technical and history clinics, logging model contest, swap meet and dealer sales, railfan activities. For more info, contact WSR, PO Box 117, Fish Camp CA 93623-0117 ● phone (559) 683-7764 ● fax (559) 658-5097 ● www.sierratel.com/shayman/loggingconv

May 4-6, 2001 - Midwest Small Scale Steamup, to be held at the Holiday Inn Select Holidome, St. Peters, Missouri. For information contact Diana Eaton, 504 Coldstream Ct., St. Peters, MO 63376 - Phone: 636-978-0725 - E-mail: <deaton02@mail.win.org>

May 25-27, 2001 - Pennsylania Live Steamers Memorial Day Steamup. Rt 29, 1/2 mile north of Rt. 133, Rahns, PA. Come run with us on one of the northeast's finest Gauge 1 tracks. Larger scales are also operating on our new extension. Food is available on site, lodging nearby. For info contact Harry or Paul Quirk, PO Box 215, Springtown, PA 18081 or phone 610-346-8073.

June 16 & 17, 2001 - 2nd Annual Powder Puff Steam-up. This is ladies day all day each day. Come watch Bob P., Ernie N., Erv M. & Pete O. cook for the ladies. Location; DeSoto, Missouri (50 miles south of St.Louis off of Hy 55) Dawn to dusk both days. For map / hotel / information call Carol Herget at 636-586-2483 after 5pm central time or E-MAIL <ozmin@jcnl.com> or FAX 636-586-2480.

July 7 & 8, 2001 - Garden Railway Weekend in Syracuse, New York, presented by the Central New York Large-Scale Railway Society. Garden layout tours, live steam clinics & demonstrations, modular layout, dealers, custom builders, manufacturers and lots more. For information packet contact CNY Large-Scale Railway Society, 315 Viking Place, Liverpool NY 13008 ● e-mail <gdavis4@twcny.rr.com>

July 27-29, 2001 - Pacific Coast Live Steamers Small-Scale \$49'er Steamup in Sacramento, California. 45mm & 32mm tracks available around the clock. Air conditioned comfort of the Canterbury Inn & Convention Center. Daily workshops, souvenirs, poolside barbecue dinner. For registration forms or more info: PCLS, PO Box 161631, Sacramento, CA 95816 - e-mail <49ER@P-C-L-S.COM> - web site WWW.P-C-L-S.COM - Event General Superintendent: Kevin O'Connor (916) 447-5433

August 31 thru September 2, 2001 - Pennsylvania Live Steamers Labor Day Steamup. Rt. 29, 1/2 mile north of Rt. 113, Rahns, PA. Celebrate the 5th anniversary of our Gauge 1 track and ride the larger scales. Food is available on site, lodging nearby. For more info contact Harry or Paul Quirk, PO Box 215, Springtown, PA 18081 or call 610-346-8073.

Sept 14 thru 16, 2001 - 2nd Annual fall steam up at The Herget's, DeSoto, MO. (50 miles south of St.Louis off of Hy 55) Dawn to dusk and later all days. There are two circuits of track, 172' long and elevated to waist height. One is Gauge 1 and the other is dual gauge, O and 1. There may be a 2nd dual gauge elevated track. For map / hotel / information call Carol Herget at 636-586-2483 after 5pm Central time, E-Mail
 cozmin@jcn1.com> or FAX 636-586-2480.

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

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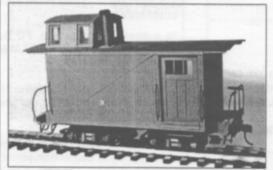


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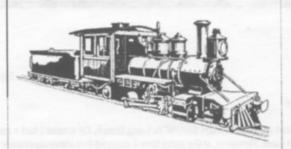
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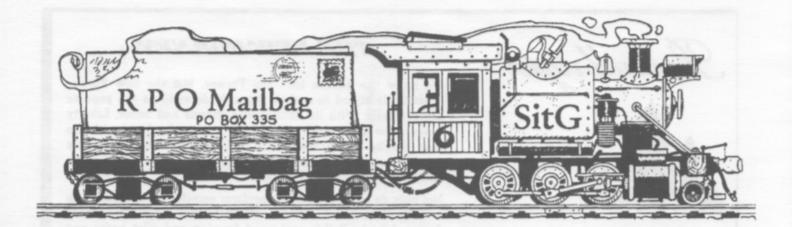
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Letters from readers are welcomed and encouraged. Offer advice, encouragement, suggestions or constructive criticism. Tell us about your current project (and don't forget the photos!) or just share live steam experiences. But please keep your letters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

Albuquerque, New Mexico via e-mail

Dear Ron,

I really enjoyed Larry Bangham's article on train dynamics in SitG Na 58. Once again, Larry is on the cutting edge of making our little steamers look, sound and act like real railroad equipment. His article caused me to remember something interesting I saw at Diamondhead this year. A driver with a long train of 1:32 scale cars actually backed up his loco a tiny bit to push the cars together before starting off.

The purpose of that move, for those who didn't say 'aha!' during the last paragraph, is to put slack into the train by taking tension off all the couplers. It's a prototype practice that insures that the locomotive only has to start one car at a time from a dead stop. The slack is taken up on the first coupler and the loco starts the first car rolling, then the loco and the momentum of the first car start the second car, and so on down the train.

With realistically weighted cars as Larry suggests, and a train consist that is calculated to have realistic inertia/momentum characteristics, putting slack into your couplers is a way to get optimum performance on a long train, as well as duplicating another nuance of real locomotive driving. In fact, with a train like that, it may be the *only* way!

Regards, Vance Bass

> La Mirada, California via e-mail

Hi Ron,

It was great seeing and conversing with everybody at Diamondhead this year. It seems to get better and better. I even got to run a train.

I wish to offer an apology to the more technically astute readers for a gaffe in my article on train dynamics. I should have used the term "drawbar force" instead of "tractive effort" when referring to the pulling force of a locomotive. Tractive force or effort is used to describe the theoretical force that a locomotive develops at the driving wheels, not necessarily the force that is imparted to the rails. The engine weight on the drivers and its factor of adhesion normally determine the maximum force that is developed at the drawbar.

Thank you, Larry Bangham Hello Ron!

I visited the BIG TRAIN SHOW in Long Beach. Of course I had a good experience there. However, at the same time I enjoyed live steam operation by Bob Starr and other friends held next to the show. I chatted with him awhile about technical problems of my small engine and got some ideas from him. At that time I didn't know his name, but when I saw the photo on pg. 15 of SitG issue Nº 55 I recognized him.

Japan

On pg. 7 in the same issue, Clark Lord was talking about no live steamers at the BIG TRAIN SHOW and was looking for the green oval track. I believe the track where Bob was running his steamers was the very track you are looking for, Clark! (joking of course) Although it was not inside the BTS, it was very impressive in the sunny weather in Long Beach (we are having our rainy season in JAPAN). And my answer to your other question..."Do I have to come from Nevada?"...is, "Yes, of course! I was there from JAPAN." (just joking again)

By the way, Ron, as a beginner live steamer I think we need more articles about how to operate steamers. Like appropriate amounts of water and fuel, how to use steam oil, useful tools and accessories, and instructions on taking care of our steamers after the run.

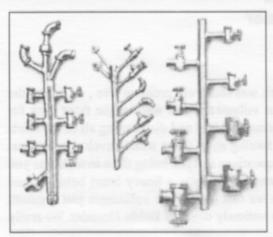
Yukio Nakagawa

Thanks for the report and your good suggestions, Yukio. The photo below shows Yukio with Bob Starr at the BTS in Southern California. - ed.

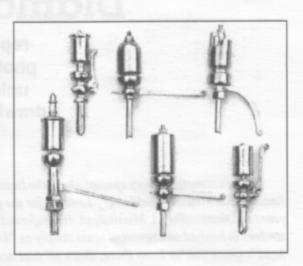


THE WAR SIEWS

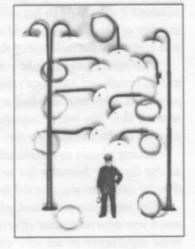
Valves and whistles in Brass - Oh my! Brassmaster Pete Thorp, Head Honcho at Trackside Details, 1331 Avalon St., San Luis Obispo CA 93405, has released some new brass eye candy for our locos. Looks like there's a whistle for every loco, and valves of ev-



ery size and shape for detailers, kitbashers and scratchbuilders. Send \$3.00 and a SASE for a catalog filled with illustrations useful for placement of details and a complete list of all the excellent brass detail castings.



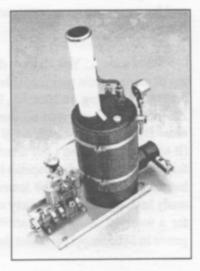
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Krick Alexandra at the left. This boat is powered by the Cheddar Models Ltd. PLO-VER marine steam plant, as seen in the photo on the right. Cheddar's marine steam plants are available as screwdriver kits, or factory assembled and ready to steam.



International Small-Scale Steamup Diamondhead 2001

report by Jerry Reshew photos by Carol Jobusch unless otherwise noted drawings by Chuck Kessler

There's something very special about the International Small-Scale Steamup, held every January for the past nine years in Diamondhead, Mississippi. It is referred to by attendees in hushed and reverent tones simply as "Diamondhead". Once you've been there, that's all that needs to be said.

This year's event was everything we have come to expect, and more. Steamup organizer and host, Jerry Reshew, summed it up neatly in his wrap-up, which, along with a number of excellent photos of the event by Carol Jobusch, will comprise the balance of this report.

I do need to mention how much Carol's contributions to Diamondhead Steamup reports over the years are appreciated. This year she had a new digital camera, and it seemed that she was everywhere at once, capturing the essence of the steamup on tiny electronic chips.

Taking photos at Diamondhead is never an easy task, as the lighting leaves a lot to be desired and the crowd density can pose unexpected problems in framing a shot.

So...when you see Carol, please be sure to tell her how much you appreciate her efforts in bringing the Diamondhead experience to all who couldn't be there in person, and for capturing permanent memories to savor until next January - ed.

What a week! You all have done it again, and the feeling of camaraderie was palpable. We may have uncaged a dragon by starting on Monday, but it seems that all of the 223 people who showed up during the week had a good time. By popular demand, we'll be doing it again in 2002 (It appears that I don't get a vote on this since the whole thing has definitely developed a life unto itself), again starting on Monday. You'll be interested to know that we already have 81 registrants (many who have paid good money for a week of sleep deprivation and general over indulgence in Mississippi) and that the Ramada is about full up.

The week was relatively problem free, all due to the efforts of our volunteers who were at the front desk for receipt of money, folding and distributing all of the shirts and aprons, issuing all of those white envelopes, answering loads of questions and just being there to welcome you to the Steamup. There was a heavy heart behind those smiles since we lost one of our volunteers just a month ago with the untimely death of Bobbi Dostaler. We really do miss her.

Next year we will again change the name (the fourth name change in ten years) of what has been referred to as "the happening" - it will henceforth be the "INTERNATIONAL SMALL SCALE STEAMUP AND ARTS FESTIVAL", a name which better represents our great variety of interests. From the Clack Valves and Cornets Steam Band, to the magical moments of our own Peter Papartis and John Bigelow playing accordion/tuba duets at poolside, to the ladies working at the crafts table making those lovely bear costumes, to Dan Rowe performing his juggling feats, to Bruce Davey acting as a steam mixicologist, to the classic film festival, to David Hamilton playing the shuttle pipes, etc., etc., etc. There is even a rumor being circulated that I will attempt to play a baritone horn with the band - this is probably a gross distortion.

Next year will find us using the same track configuration, but we will be adding a dual gauge feature to one oval on our new track. We'll also be replacing some segments of the big track, using some rail and ties donated by Ted Sharpe.

Carol Homuth ran the most successful steam flea market ever! He even kept some simple records and he found that about three quarters of the items found new homes, and that about \$23,000 changed hands. Amazing!

The Steam Seminars were well attended, and we all owe a tip of our hats to Andrew Pullen, Geoff Calver, Carl Malone, Kevin O'Connor, Soni Honneger and Harry Wade for educating and entertaining us.

Walt Swartz ran a hotly contested weight lifting competition using an improved measuring device, and the winners were all awarded their trophies at the closing meeting. Really a bit weird, but the hobby does require that one be a bit off center in order to get maximum enjoyment.

Our own Clack Valves and Cornets Steam Band was superb. Scott McDonald earned our applause for putting this all together and the new band members made great music along with the original bunch. The band has grown to almost marching band size with the virtuosi Pat Mueller, Charles Kessler, Chris Sortina and Karl Wallace. Wouldn't a marching band be a hoot?

The numbers are always of interest, so here is a rather simple compilation of information from our program and addendum:

Number of states represented	33
attendees from:	
Florida and Texas	18 each
California	16
Louisiana and Ohio	12 each
Illinois, Virginia and Washington	9 each
Michigan	8
Missouri, Mississippi and Pennsylvania	6 each
Remainder had 5 or less	

Number of foreign countries represented 8	
ittendees from:	
United Kingdom 14	4
Canada 14	4
Japan 5	
Netherlands Antilles 1	
Trinidad 1	
Mexico 1	
Australia 1	
Jamaica 1	

Our international registrants accounted for almost 20% of our total attendees.

We consumed 18 King Cakes, 300 sandwiches and 14 gallons of coffee in our hospitality suite - well done!

We used 175 pink cotton rags (I've recycled some of the less grungy ones), 84 gallons of distilled water, 72 large cans of butane (and that was before the official Friday start - we'll be selling this stuff to the Monday-Thursday bunch next year), 96 small cans of butane and 18 gallons of alcohol. Steam oil was provided but I have no idea how much we used. Richard Longley (Brandbright) and Darrel Manley (California & Oregon Coast Railway) contributed this stuff.

The Saturday buffet luncheon was exceptional, and the no speeches dinner at the Community Center was terrific (John Garrett won the trophy for his superb paper airplane flight - he also wins the privilege of being the referee next year).

That's about it, except I want to again thank all who attended for coming to Mississippi and giving me something to do on a chilly weekend.





Murray Wilson (r., Pennsylvania), a Diamondhead attendee since the early years, stands with his brother at the smallest of the DH tracks. Murray's interest is primarily devoted to classic toy steamers, which run on gauge 0 (32mm) track.





This page, clockwise from bottom - Paul Trevaskis (l., Australia) and Chip Rosenblum (Ohio) having a ball running their Rishon Locomotives Mason Bogies. Beautiful craftsmanship and a fine running loco.

Tom Rowe (Ohio) tweaks his Aster Mikado while Pat Dabler (Mississippi) looks on. Pat uploaded photos to the SitG website (www.steamup.com) every day during the steamup so that non-attendees could enjoy it vicariously.

Paul (l.) and Harry Quirk (both from Pennsylvania) can be found at steamups all over the east coast. They are both knowledgeable steamers and are always willing to help a newcomer or fellow steamer.

Page 22, clockwise from bottom: A birds eye view of the steaming area, showing all three tracks. The track in the foreground is the newest addition, purchased with contributions from many steamup attendees, and organized and assembled by Bob Simpson (Florida).

John Synnestvedt (Virginia), a veteran steamer and fine craftsman, uses an antique pitcher to fill the boilers on his locos. Seems most appropriate, doesn't it?

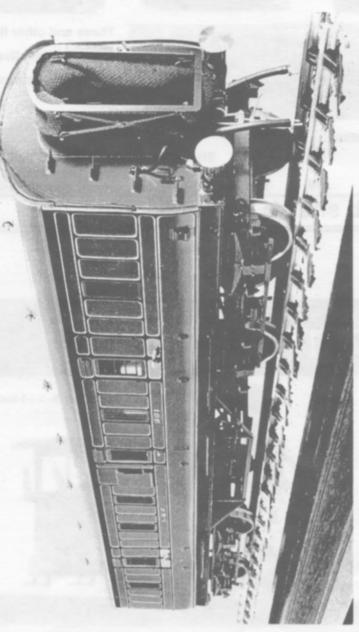
John Shawe (England), drives the real thing on the Ffestiniog Railway in Wales, and his coal-fired conversions of gauge 1 and gauge 0 locos are well known for their reliability and great performance.



(Diamondhead Report continues on page 22)

L. M. S. Period Piece...





design and construction practice down to the sumptuous Uilt in the 1920's by the London Midland Scottish Ry (LMS) the Corridor Full Brake built to plan D. 1778 was almost a pure extension of Midland Railway coach livery of Black, Gold, and Crimson Lake. Some cars LMS Period II (simplified lining), and B.R. maroon. If you need a parcels or luggage van of distinctive design this entered British Railways ownership in 1947. Our model is available in three paint schemes; LMS Period I (shown), Full Brake is for you.

At a glance specification summary: 510mm Length over buffers:

April 1997 · Availability:

· Material: · Weight: · Finish:

· Price:

Wheels: steel insulated finescale

hand painted and lined 95% brass, including roof £ 660 plus shipping

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1(45mm) and 0(32mm)(re-gaugeable)

Weight:

2.2kg

Length:

280mm 110mm

Width: Height:

135mm Radius needed: 600mm (2ft)

Boiler:

Capacity 100cc single flue

Cylinders:

2-7/16" x 1/2"

Valve Gear:

Slip Eccentric

Fittings:

Safety valve, Regulator

Firing:

Butane Gas

Lubricator:

Displacement type

Materials:

Bronze cylinders, brass platework, copper

boiler (silver soldered), steel frames,

stainless steel motion.



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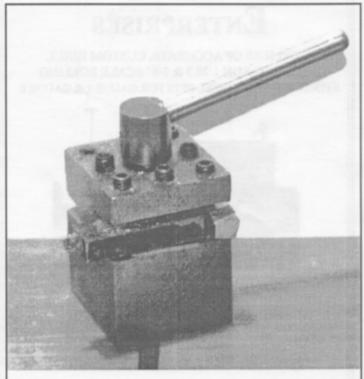
Useful Tools for the Taig Microlathe

article, drawings and photos by Keith Bucklitch

We are going to construct two simple tools which add considerable satisfaction to the use of the Peatol (Taig in the USA) lathe. By modifying appropriate dimensions such as centre height it is possible to modify these items for use with other makes of lathes, such as the Sherline, Unimat, etc. Most of these and future tools can be made on the Peatol lathe itself, although where large pieces of metal are being machined, access to a larger lathe can be useful. Otherwise, simply take light cuts and the job will be achieved just as well, albeit more slowly.

1. 4-way Toolpost

There are frequent occasions when one wishes to change the cutting tool shape - say from a knife to a round nose tool.



Author's 4-way toolpost mounted on his Peatol Microlathe.

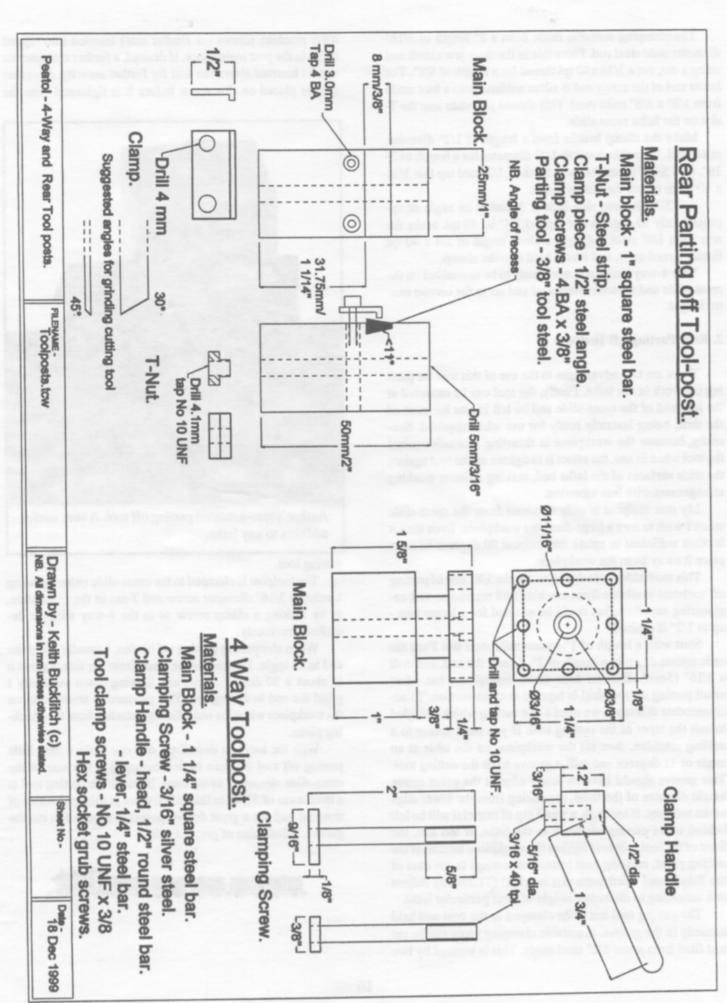
With a single toolholder, this necessitates taking care and time to reset the tool at the correct centre height. This then has to be repeated when returning to the use of the original tool. By making this toolpost, up to four tools can be mounted, each one set correctly to the centre height, and any one brought into play by simply slackening the retaining clamp and rotating the toolpost to the desired position.

For the main block you need a piece of 1.1/4" square mild steel bar about 1.3/4" long. Mount this in the four-jaw chuck and lightly machine one end. Turn over and machine the other end square to the sides. Turn over once more, pushing the block hard against the chuck body to ensure it is as square as possible and machine down to the final length of 1.5/8". Centre the end and drill a 3/16" (5mm) diameter hole through the length of the block. Open this out at the top end to 1/4" diameter for 3/16" depth.

You now need to turn a groove in the block where the tools will be mounted. This groove should be 3/8" wide and at least 1/4" deep, or preferably a little deeper - say 9/32". The lower edge of the groove must not be more than 1" from the bottom edge of the block if you intend to use 1/4" wide tools. If less than 1", suitable packing can be used to raise the tool to the correct height, so err on the side of less rather than more.

Because you are initially making an interrupted cut by machining a square bar, set the lathe to a slow speed and take very light cuts until you are turning a constant diameter. I would use a parting tool to make the groove, but you could achieve it by using knife tools, initially left-handed, then right-handed tools. (A left-handed knife tool has the cutting edge on the left and normally is advanced towards the chuck, whilst a right-handed tool is advanced away from the chuck.) Take your time because you are just about working the lathe to its limit.

When you have turned the groove to your satisfaction, remove the block from the chuck and mark out the top for the tool retaining screws as per the drawing. Drill 9 holes 4.5mm diameter and tap these Nº 10 UNF. Use Nº 10 UNF socket head screws to secure the tool. (If you can only obtain a different size of screw, then drill and tap your holes to suit.)



The clamping screw is made from a 2" length of 3/16" diameter mild steel rod. Place this in the three jaw chuck and using a die, cut a 3/16 x40 tpi thread for a length of 5/8". The lower end of the screw rod is silver soldered into a foot made from 1/8" x 3/8" mild steel. This should just slide into the T-slot on the lathe cross slide.

Make the clamp handle from a length of 1/2" diameter mild steel. Turn this down to 1/4" diameter for a length of 3/16", drill 5/32" diameter for a depth of 1/2" and tap this 3/16 x 40 tpi to match the clamp screw.

A 7/32" diameter side hole is drilled at an angle of approximately 30 degrees and tapped 1/4" by 40 tpi. Make the arm from 1/4" steel rod, with a short length of 1/4 x 40 tpi thread turned on it, and screw hard into the clamp.

Your 4-way toolpost is now ready to be assembled on the cross-slide and the tools emplaced and set to the correct centre height.

2. Rear Parting-off Toolpost

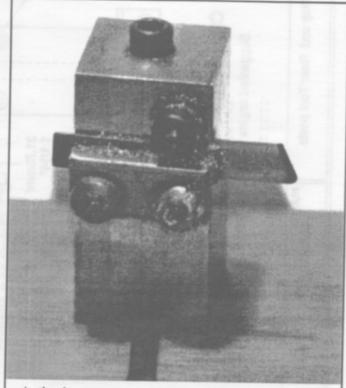
There are two advantages to the use of this tool for parting off work in the lathe. Firstly, the tool can be mounted at the rear end of the cross-slide and be left in situ for most of the time, being instantly ready for use when required. Secondly, because the workpiece is thrusting upwards against the tool when in use, the effect is to tighten up the tool against the slide surfaces of the lathe bed, making a firmer working arrangement with less vibration.

My rear toolpost is only removed from the cross-slide when I wish to turn a large diameter workpiece. Even then it is often sufficient to rotate the toolpost 90 degrees so as to place it away from the workpiece.

This toolholder is designed to use the 3/8" size of parting off toolsteel available from machine tool merchants and engineering suppliers, but could be adapted for a larger size - up to 1/2" if desired.

Start with a length of 1" square mild steel bar. Face the ends square down to a length of 2". Centre the end, and drill a 3/16" (5mm) diameter hole down through the bar. Most small parting off toolsteel is tapered in cross-section. To accommodate this taper, we need a slot cutting which is angled to suit the taper of the cutting tool. If you have access to a milling machine, then set the workpiece on the table at an angle of 11 degrees and mill a groove to fit the cutting tool. This groove should have its lower edge at the exact centre height distance of the lathe, measuring from the lower edge of the toolpost. If too high, a small pip of material will be left behind when parting off work in the lathe. If too low, the front of the tool will bear against the workpiece instead of the cutting point, creating heat instead of cutting! In the case of the Taig/Peatol Microlathe this is 1.1/4" (31.75mm). Adjust this according to the centre height of your particular lathe.

The cutting tool has to be clamped to the post and held securely in the groove. A suitable clamping piece can be cut and filed from some 1/2" steel angle. This is secured by two 4BA machine screws (or similar size) inserted into tapped holes in the post main block. If desired, a further clampscrew can be inserted above the tool for further security. A washer can be placed on this screw before it is tightened onto the



Author's rear-mounted parting off tool. A very useful addition to any lathe.

cutting tool.

The toolpost is clamped to the cross-slide either by using a suitable 3/16" diameter screw and T-nut in the cross-slide, or by making a clamp screw as in the 4-way toolpost described previously.

When sharpening parting off blades, I usually grind the end to an angle. Looking at the blade from the side, I grind it to about a 30 degree angle, and looking down vertically I grind the end to 45 degrees. This produces a smaller pip on the workpiece when the work finally detaches from the chucking piece.

With the toolpost described, one can make a neat little parting off tool that can be left mounted at the rear of the cross-slide almost all of the time. Because the cutting tool is a maximum of 1/16" in thickness, there is minimal waste of material and not a great deal of power is required to cut the groove. I find mine of great benefit.



Model Boat Kits & Steam Power Plants

At the turn of the century the steam boat became popular. It was fashionable to own a steam boat, either as a private yacht, working boat or for passenger transportation. The model Victoria (circa 1905) has been created for the true friend of old steam engines. As was the case around the turn of the century, engine and boiler are fully visible. The hull of the Victoria is from ABS. The plywood parts have been laser cut for precision. Decking strips are Mahogany and teak. Puffin engine can be easily controlled by R/C 2 channel (R/C & fittings not included)





The Alexandra is a typical steam launch from the beginning of the century (circa 1900). All wooden parts are laser cut. Hull constructed from ABS. Shaft,

PRITAIL VERTICAL propeller and accessory pack included in kit. Boat powered by Cheddar Pintail Vertical Steam Engine that has powerful Vee Twin engine. Copper boiler equipped w/water gauge, pressure gauge and gas burner. Pintail engine can be easily controlled by R/C 2 channel (R/C & fittings not included).

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BORKUM TECHNICAL DATA: Scale: 1:10 Length: 35 1/2 " (904 mm) Beam: 13" (330 mm)

- ☐ BORKUM Steam Boat Kit without steam engine \$369.95
- ☐ BORKUM Accessory Pack \$149.95
- Puffin Deluxe Vertical Machined Kit with Refillable Gas Tank \$789.90

& PUFFIN VERTICAL ENGINE \$1178.82 (Accessory Pack for BORKUM Contains: 3 pair of side fenders, 1 bow fender, 1 storm lantern & stand, 1 bell & stand, 2 safety belts & accessories, 6 double bollards, 2 flags, masts & accessories, 1 doll operator)

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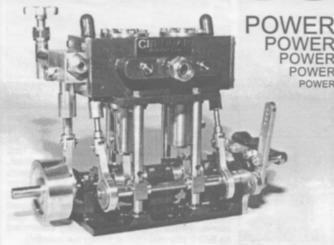
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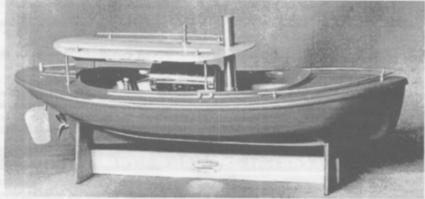


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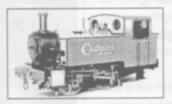
Krick Boats

You'll need a boat for that new Cheddar steam plant, and Krick features a wide range of boat kits...there's something for every taste and skill level. The Krick ANNA, shown below, is broad-beamed and stable, even in rough waters.

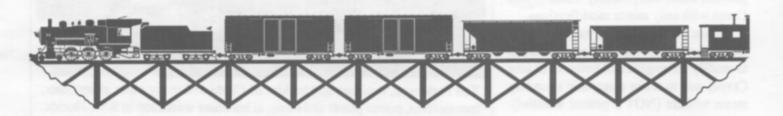


Maxitrak

SSSM is now the North American agent for Maxitrak locomotives and accessories! Available in steam, electric and gas mechanical, as kits or factory built, and in all the popular ride-on gauges. Maxitrak kits can be purchased in sections, making them affordable for just about every budget. Shown below are SWALLOW and Li'L JO, just two of the beautiful and exciting locomotives in the Maxitrak catalog. Contact SSSM for your copy, and see how easy it can be to own a steam loco in 3.1/2", 4.3/4" or 7.1/2" (7.1/4") gauge.

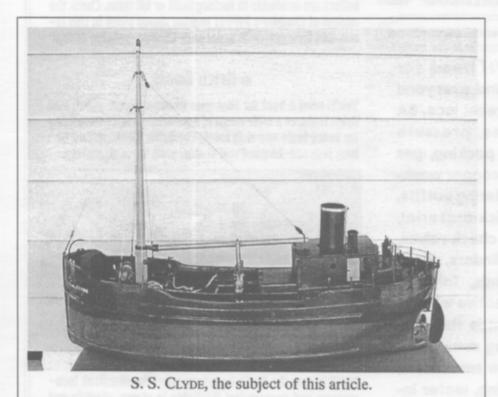






S. S. CLYDE

article & photos by Clyde Metzler



Ken did his usual fine work and CLYDE became an operating steamboat.

Because single cylinder steam engines are notorious for stopping in midstream, I was fortunate to have the space to install an electric motor and additional propeller for auxiliary power. I used a small hobby motor with a flexible shaft to attach a small propeller directly under the main propeller, giving just enough propulsion to travel a short distance. R/C is fitted for the rudder, whistle and auxiliary power.

Although CLYDE may never sail on the River Clyde in Scotland, I am having many hours of fun sailing on the pools, ponds and lakes of Southwest Florida.

It is said that is is better to give than to receive, but I am very happy to have received two wonderful gifts. The first is an exact replica scale model of the 1904 coastal steamer Ailsa, 36 inches in length with a 10 inch beam, built and given to me by Ken Parkinson, and aptly named Clyde. The second is a single cylinder steam engine and boiler give to me by Bob Nowell.

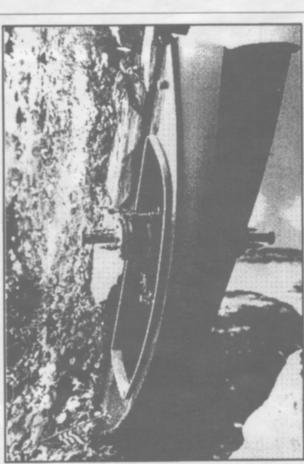
For about a year CLYDE was on a display shelf, anxiously awaiting a marine steam plant. Then Bob Nowell remembered that he had scratchbuilt steam engine and boiler that probably would fit into CLYDE with only minor modifications.

Since I have no metal working experience, I again called on Ken Parkinson to modify the engine and boiler to fit into CLYDE, and to make a realistic sounding steam whistle (NOT a peanut whistle!).



Ken Parkinson, designer and builder of Clyde and many other steamboats, locomotives, power plants and more, at his home workshop in S.W. Florida.

Diana Steam Launch



Famed marine architect Weston Farmer designed this graceful and beautiful steamboat in the style of the Gay '90s. Diana is impecably modelled in fiberglass-reinforced polyester resin. The hull is gloss white, and the deck is Boston Buff. The planking, boot-top and deck seams are clearly incised. Supplied are hull, deck, complete drawings and material for the shaft alley and rudder tube. We guarantee its safe delivery to your home. \$276.00 plus \$24.00 shipping and handling.

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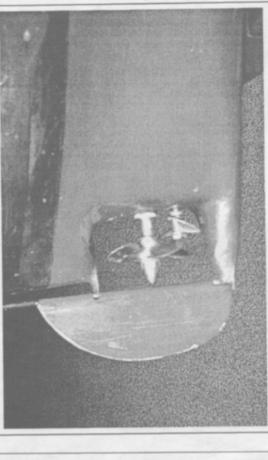
featured on the cover of Live Steam magazine in 1981. The canopy is also Boston Buff

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Diana's canopy has been designed by Tom Lexow, whose radio-controlled Diana was

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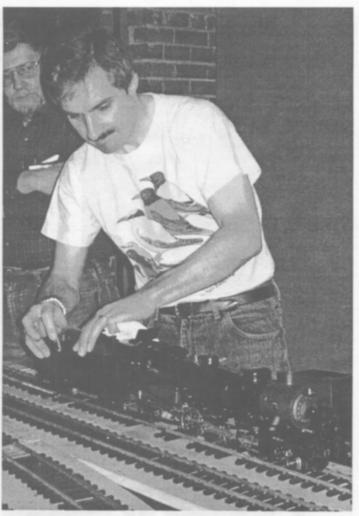
A view of the twin propulsion system used on CLYDE (see text for details).



Author and happy steamboat owner Clyde Metzler (I.), and Bob Nowell, who contributed the marine steam plant for this project.

Diamondhead Report continues...

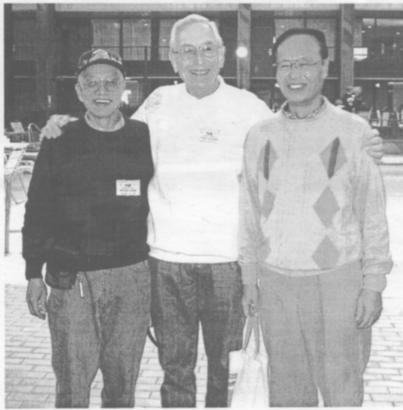


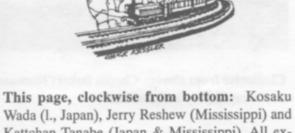










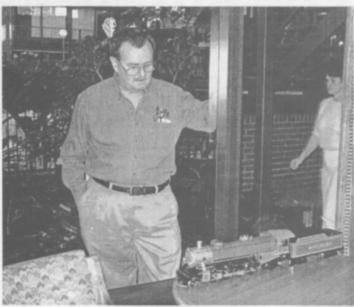


Wada (l., Japan), Jerry Reshew (Mississippi) and Kattchan Tanabe (Japan & Mississippi). All excellent modelers and steamers, and obviously enjoying themselves at Diamondhead.

Mr. Aster himself, Toyoki Inoue (l. Japan) and Yves Guillaume (Trinidad, West Indies) discuss Aster's new Allegheny, which received a great deal of attention from steamup attendees.

Bob Moser (New Jersey) checks out the new Aster Lion, which also generated a lot of interest and enthusiasm.





Clockwise from above: Charlie Baker (Tennessee) admires a loco on display in the atrium.

Left to right - Jim Curry (Maine), an unidentified steamer, and Tom Rowe (Ohio) discuss possible solutions to some problems with Tom's Aster Daylight, inverted on the table before them.

Marty Maloy (New Jersey) prepares for a run on the main track.

George Werner (Texas) and Paul Kenney (Louisiana) with a train-on-a-train, pulled by a Maxwell Hemmens Porter.









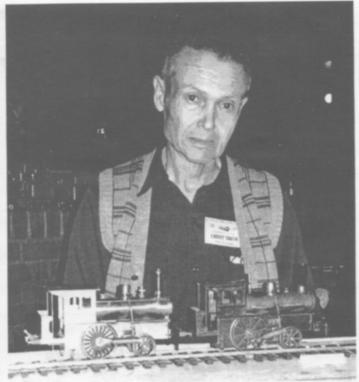
Clockwise from above: Kosaku Wada (Japan), and Atsushi Katsumata (Japan) discuss details and operation of Charlie Mynhier's magnificent and very powerful scratchbuilt 0-10-0, which now belongs to Mr. Katsumata.

Larry Smith (Florida) with an antique toy steamer on the right and his scratchbuilt reproduction of it on the left. Larry's loco has not yet been painted, but is otherwise complete. It put on a fine show, effortlessly pulling a hefty consist for a long run.

Josh Curry (Maine) with his Aster Grasshopper. Josh helped out with the door prizes and had a good time steaming and swimming.

Peter Oelschlaeger (Louisiana) had an interesting train of O'Doul's beer cars.







(Diamondhead Report continues on page 38)



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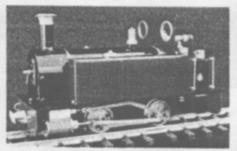
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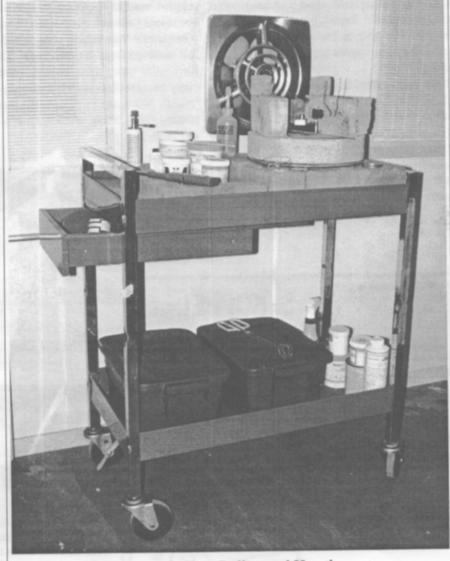
text and photos by Kevin O'Connor

Part one of a series...

Yesterday, while I was working on a fuel gas tank for a friend of mine, it occurred to me that I had a pretty neat setup in my shop dedicated to the 'hot wrench' work required in building, modifying and repairing small-scale live steamers. This setup could be duplicated in any small shop, and so I decided to share my ideas and some of my experiences with others in the smallscale live steam fraternity.

First off I must thank my esteemed colleague Mike O'Rourke, of CRICKET fame, for getting me off on the right track in the areas of hot work in general and silver brazing in particular. Mike had a portable (as in roll-around) hearth set up in his

shop in Berkeley back in 1995 that I had the good fortune to work on, at his direction, in making some of the first



The Unit Shop Rollaround Hearth.

CRICKET boilers. I had recently retired and so I had the spare time to hang around his shop in my effort to learn about the new (to me) hobby of small scale live steam locomotives and rolling stock. My shop hearth is patterned after his, with only minimal differences to accommodate my preferences, as in I like to sit, not stand, while working.

Photograph #1 depicts the hearth as it appears most of the time when not in use. The platform for the hearth is a fourrollered utility cart of the kind that you can find in one of the better tool discount catalogues (Rutland and MSC come to mind), or in one of the Asian import tool purveyors, such as Harbor Tool or Post Tool. The watch word here is rugged construc-

tion, the more the better, as the cement (yes cement) bricks that top off the hearth are heavy. Starting from the top you

will notice that the working surface of the hearth is completely covered with bricks. I used a double course of bricks in order to elevate the base working surface above the lip of the cart's upper tray. If I had to do it over again I would substitute a plenum (box) made from 1/2" thick plywood for the first course of bricks in order to save weight.

If you opt for this approach please use at least two cross braces, as well as the two end pieces, to support the plenum. Plywood is a very flexible medium of construction when it is not properly supported and is bearing a dead load. I know that all of the literature calls out for the use of refractory (fire) bricks, such as those found in furnaces and fireboxes, in hot work situations. My experience proves otherwise. I have some major background, good and bad, with refractory materials that I gained during my naval engineering career and I never would consider the use of cement or clay bricks in any constant high heat application - but in this light duty, home shop use, they are just fine.

Yes, I know, if one would impinge an oxy-acetylene torch flame on a concrete brick the water of crystallization contained in the brick would off gas in a spectacular display, but when was the last time that you observed this phenomena except when someone was being cute and doing it on purpose to prove a point. Besides, the object is to solder/braze metals together, not bricks, and the only purpose that the brick serves is to provide a non-combustible surface on which to work. And to 'backstop' larger work pieces to prevent heat loss while being worked on. Trust me, concrete bricks work just fine in this hobby application.

Back in my CRICKET days in Mike's shop in Berkeley, his hearth had a concrete birdbath bowl in the place where I have the round 8" diameter paver on my hearth's working surface. I wanted to have a birdbath bowl too, but at the time I was setting

up my hearth I could not find one small enough and so I compromised with the paver. The advantage of the birdbath bowl is that you can use the concave inner surface to pre-position your work to take advantage of gravity, and to provide flexibility in 'seeing' just what joint that you are working on. Also the bowl can contain dry sand, which sometimes is useful in 'jigging' an assembly to be joined together; a third hand if you will. I added a hardware store 'lazy Susan' ball bearing ring under the paver so that it will rotate easily. This feature comes in handy when you have to pre-heat a larger sized object, all around, prior to the actual joining operation. It is so easy just to spin the paver and keep the torch in place. I'm still looking for a 12" diameter, or less, concrete birdbath bowl.

My utility cart came equipped with a single pull out drawer. I would say that this item is a must because this is where I keep and store my solders, fluxes, scratch awls and small tools used only with hot wrench operations. The cart's lower shelf holds two 3.1/2 gallon Rubbermaid™ totes: one is filled with an acid solution used to 'pickle' non-ferrous items following brazing operations (more to come later), while the other contains fresh water with a little baking soda mixed in to rinse off those items just removed from the acid bath. The remainder of the lower shelf holds water spray bottles, extra bath chemicals and specialty items such as high temperature fluxes and heat shielding 'muds'. Next issue I will share my thoughts on hot wrench tools, brazing filler metals, solders, fluxes, work holders, heat dams and torches.





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Mason Bogie

Live Steam Model by Rishon Locomotives



Basic features:

Scale 1:20.3

Gauge 1 (45mm)

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Electronic water level gauge drives a blinking LED on the tender tank

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Radio control is standard

Condon & Nesmith stacks optional

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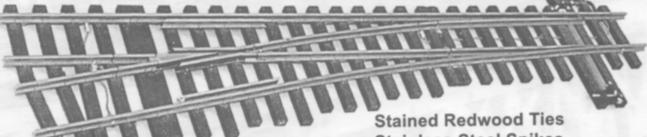
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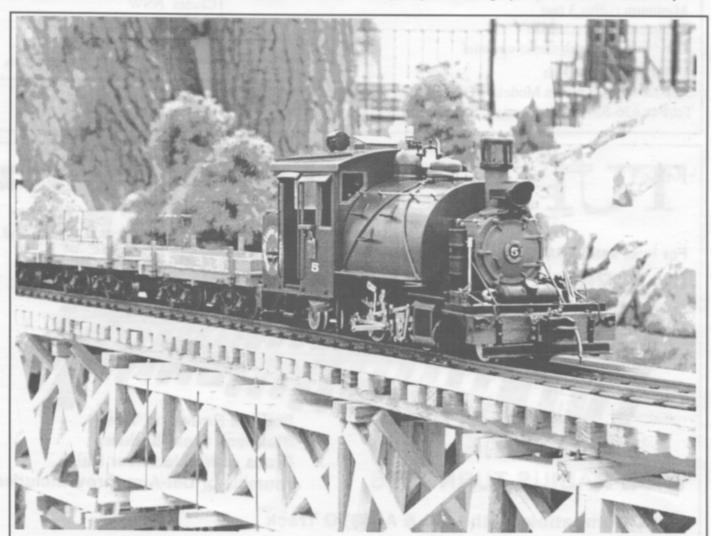
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Kitbashing The Aster (LGB) Frank S.

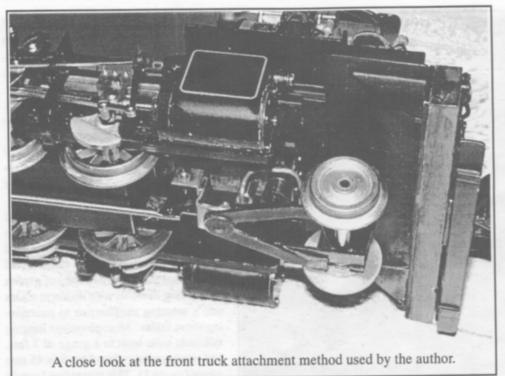
text and photos by Frank Krutzke

Huatolla Lumber and Mining Company's first locomotive...

Seventeen years ago I took an early 1920's era Bing locomotive to one of the first steamups hosted by Marc Horowitz and Sidestreet Bannerworks. This steamup was held in Denver, Colorado at the Apolo Crane Service's warehouse. Most of the attendees present were running locomotives of the Mamod variety; very nice running toys, but not much to look at. My model



Huatolla Mining & Lumber Co. № 5 rolls over a trestle on the Denver Garden Railway Society's line at the Colorado Railroad Museum in Denver.



engineering experience is by way of larger gauge live steam and museum caliber replicas, where scale and detail are very important considerations. This background, together with limited exposure to garden railroading and the possibilities of "steam in the garden", resulted in my interests remaining with 7.1/2" gauge live steam. Over the years, I saw various advertisements in model magazines for G scale engines by Pierce, Roundhouse and others.

The locomotives in these ads looked attractive, but again, I payed little attention; perceiving LGB style layouts in a basement or garage as not very appealing.

All this changed in September of 2000, when, by way of the internet, I came across a live steam site that prompted me to contact Gale Graham in Albuquerque, New Mexico. Gale is a machinist of the first order, and produces a line of small, live steam engines, mostly stationary in nature. What I saw on the internet was a Shay locomotive for use with one of his stationary designs produced as a Shay engine for this purpose. I called Gale about his engines and he mentioned he was going be in Denver for a steamup at the Colorado Railroad Museum.

Wanting to meet Gale, in October of 2000 my wife and I attended this steamup. Arriving at the Museum, we were surprised to find this gathering, like that of 17 years earlier, also hosted by Marc and Barbara Horowitz and their Sidestreet Bannerworks. This, then, was our second introduction to garden scale live steam. (See the Sidestreet Bannerworks website for photo coverage, www.sidestreetbannerworks.com)

What a change has come over live steam, garden scale railroading in 17 years. The layouts, locomotives and rolling stock now rival some of the best of the larger gauges. One look at Dick Schafer's Galena

Railway & Navigation 2-6-2, Alan Olson's Acoma No. 8 or Jim Hadden's C&S Mogul pushing his live steam rotary snowplow and I was hooked.

My wife and I were instantly in agreement that here was a new hobby we could share. Since it was winter time and the weather not conducive to gardening, we made the decision to begin with accumulating locomotives and rolling stock.

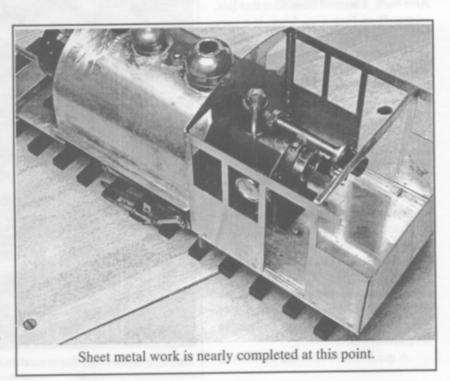
Over the years we have both shared an interest in railroads that served the timber and mining industries of Colorado, the Pacific coast and the California woods. With this interest in mind, we agreed that a simulated logging/mining railroad would be our focus.

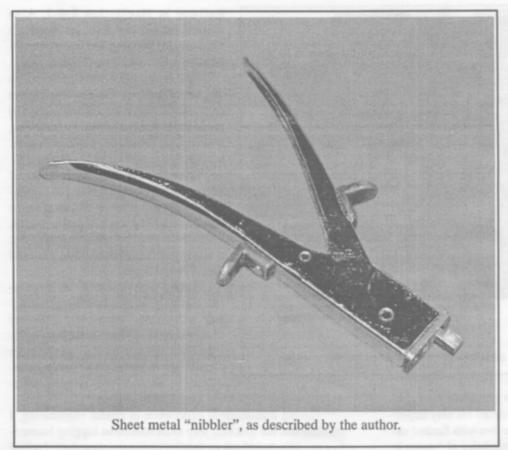
Asking questions of those in attendance quickly led to my realizing that very little is available commercially in the way of American style, live steam logging locomotives. Most live steam, garden scale engines are modeled after European locomotives, which have a distinctly differ-

ent appearance from their American brethren.

Having considerable experience in model engineering, I realized that the quickest way to an American logging locomotive would be to kitbash an existing commercial product. I talked with Alan Olson at the steamup about how he modified a Roundhouse Engineering Lady Anne to obtain his Acoma No. 8, but still was undecided the exact route I would take. A call to Alan the following week provided additional wealths of information on the hobby and what was available to kitbash.

He also led me to the website of Steam in The Garden (www.steamup.com), where I saw some pictures of other





kitbashings and scratchbuildings. Contained on this webpage were photographs of a logging style tank locomotive by Jim Hadden. (See the website www.steamup.com [go to FORUM]

for pictures of Jim's work.) Having seen Jim's rotary snowplow at the steamup, as well as his scratchbuilt Heisler, I called Alan back. I learned from Alan that Jim, who is from Park City, Utah, is a very experienced kitbasher. Jim has commercially converted a series of the Aster Frank S. locomotives into a logging tank locomotive, which he calls Frank The Tank.

This made the direction to take an easy decision, since I had seen a standard FRANK S. run at the steamup, and was very impressed with the performance.

A quick internet search for 'Aster Frank S' and I found a used locomotive for sale at the right price. I immediately contacted Jim to ask if he would object to my being a copycat, and was delighted to hear that he would be more than pleased to help out. A day or two later the mail arrived from Jim with some drawings, basic dimensions and a list of materials and detail parts he had used in his conversions.

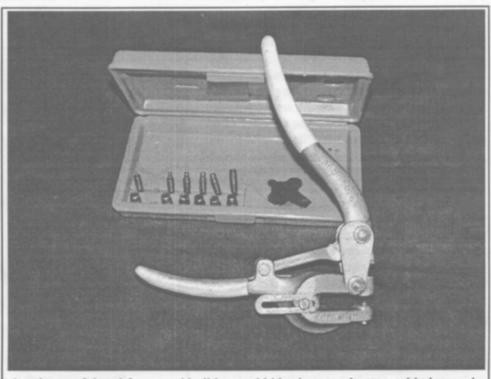
A quick trip to Caboose Hobbies in

Denver, to raid the Trackside Details™ display and buy sheet brass, and I was off and running. All the brass for the tank, cab, running boards, etc. is 6 X 12 inch sheet in .032 and .040 thickness, manufactured by Special Shapes Company. The remaining brass is K&S brand. I also purchased several 1/2 and 3/4 inch copper pipe couplings for the domes and a 1/2 inch pipe cap to make the spark arrestor, and some 3/8 X 3/4 walnut strips for the buffers.

Prior to beginning the conversion of my Frank S. several decisions needed to be made. As mentioned earlier, I find scale and detail important elements of model engineering. The hobby of garden railroading abounds with different scales and a seeming indifference to intermixing these scales. Most prototype logging railroads were built to a gauge of 3 feet, and most garden railroad track is 45 mm gauge (gauge 1). This meant that I would be modeling everything in a scale of 1:20.3.

In my discussions with Jim about what he would change if he did it again, he stated that he felt his engine was a little small to fit with 1:20.3 rolling stock. With

this in mind, I decided to scale up his engine approximately 3/4 inch in length, 1/2 inch in height and 7/16 inch in width. This would not only better fit my chosen scale, but would give more



Another useful tool for scratchbuilders and kitbashers...a sheet metal hole punch.

room in the cab for radio control equipment.

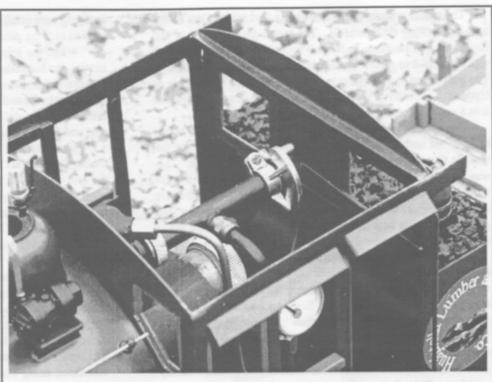
The second decision was to detail the locomotive as much as possible, given that I was building it up to be run on a track and not sit on a mantel. This led to redesigning lead and trailing trucks to be more prototypical, reworking the steam gauge location and adding a plethora of detail parts.

I found myself relatively inexperienced at working with thin sheet brass and very small detail castings. Discussing this with Jim led to my decision to use a resistance soldering tool, in this case one made by P-B-L in Ukiah, California. Resistance soldering tools offer several distinct advantages; not the least of which is, they do not drag a smear of solder around with their tip. They also provide a great deal of control over the heat applied and the ability to localize that heat.

All soldering was done using Stay Bright[™] brand silver bearing material and their flux. I have used Stay Bright

solder and flux for many years in model engineering. It has good strength, flows easily and the flux is easy to clean up; P-B-L also recommends this product.

The project began with completely disassembling the Frank S. Modification started with the frame, which needed to have small pieces cut off of the front and back. This was done to



Relocated pressure gauge and cab controls.

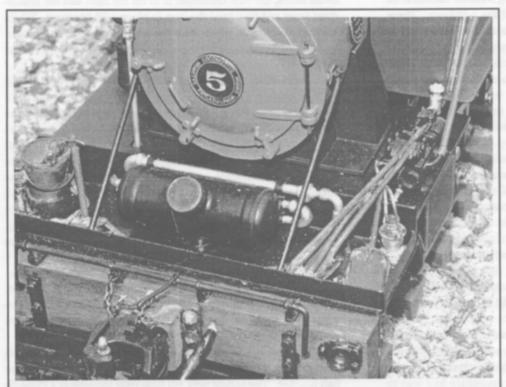
accommodate a redesigned pilot and an extended cab floor and rear buffer.

Sadly, the Frank S. frame is made of a zinc based alloy, and will not take to soldering; this necessitated that all additions be screwed on. When stripping the Frank S. down, there were enough left over screws to accomplish the attachment of all the

added parts. The screws Aster uses are 2mm for the most part, and I used a tap obtained from Caboose Hobbies to cut threads, where needed, for these screws. There are also several small parts spotwelded onto the Frank S. that I removed to save for later use in the conversion. These included the cab steps, reversing lever detent bracket and the hangers for the valve gear lifting rod located behind the Walschaerts link. They were removed by using a small screwdriver to break the spot-weld.

The boiler wrapper also has several small holes in the smokebox area where the air pump is attached. I filled these holes with scraps of brass sheet and silver solder. Hard solder needs to be used for this because a lead or tin based solder might melt with the heat of the smokebox.

I also turned down the decorative radiuses on the smokestack, and replaced the Frank S. safety valve with an Aster valve as used on the American Mogul.



New location of the displacement lubricator. Realistic detailing adds visual interest.

The tender wheels were removed and set aside to use as the lead and trailing truck wheels. The steam gauge on top of the functioning steam dome in the cab was removed and an adapter was fabricated to mount a relocated gauge using a syphon tube. The gauge and syphon tube were obtained from Jerry Hyde at Hydeout Locomotive Works. Relocating the gauge now places it in a cab window for better visibility.

The existing Aster butane tank was next on the list. It needs to have the outlet/control valve face towards the center of the tank so that the tank can be moved into the coal bunker. This was done by first removing the fill valve and the gas control valve stem to protect them from heat damage. I then liberally coated the silver soldered gas outlet tube joint with borax flux prior to applying heat to liquify the joint and turned the outlet tube 180 degrees.

Work then commenced on the new cab, saddle tank, frame extensions and buffers. The layout of dimensions on the brass was lightly done using a scribe to mark the inside, or some other nonvisible portions of the sheet. Scribe marks need to be made with a sharp scribe so that the surface has a single, well defined line. Lines need to be on the inside surfaces if possible, as they can be hard to remove on visible areas prior to painting. If you need to mark outside surfaces, the brass can be coated with layout bluing. This allows scribing a light mark into the bluing which reduces the damage and distortion of the metal surface.

The cutting of all exterior edges was accomplished on a sheet metal shear, while the cab roof and the inner and outer tank wrappers had their curves formed on a set of sheet metal rolls. I have these tools in my shop, but for those who do not, most sheet metal shops will provide assistance by doing this for a nominal charge.

All cutouts for the windows and doors, etc. were made using a hand nibbler. I also cut out matching window frames to be soldered on the inside of the cab around the windows. These had a narrow edge that would have been almost impossible to cut without the nibbler. Nibblers are inexpensively available from Radio Shack™ and most tool specialists, and will easily cut .032 to .040 brass sheet. The use of a nibbler allows you to cut to within several thousandths of an inch of your line and then clean up the cut with only a pass or two of a file.

To start the nibbler in a window, a hole is needed; I used a sheet metal hole punch, manufactured by Roper Whitney Co., but could just as easily have drilled the hole. The advantage to punches and the nibbler is that they cut clean, accurate holes and do not distort the sheet. The cutting of all the windows and doors in a given sheet took only 15 minutes or so, and a like amount of time was needed to clean up the cut to the lines. The best way to clean up the cutout in an item is to hold the piece in a two screw wooden clamp, like those available at Home Depot, Lowes or other building supply stores. Place the edge to be cleaned out as close to the nose of the clamp as possible and use a fine cut file; two or three passes with the file and it is done.

Soldering all of these pieces together came next. At this point the wooden clamps became very handy. They are ideal for holding pieces square to your work table and clamping them in alignment; freeing both hands for the soldering task.

I found that the best way to use the resistance tool was to heat the backside of the joint. I did this in several places while applying very small amounts of the solder to the front side of the joint to tack the pieces together.

When the joint was fully tacked, I then came back, still heating the backside, and filled in the joint between tacks. It is also possible to move the resistance tool down the joint and feed in the solder ahead of the tool, all from the same side. This method, for me, did not leave as nice a joint as heating the backside and feeding the solder in from the front.

One caution in the use of the resistance tool is to keep the tool in firm contact with the brass sheet. Without firm contact, the tool will create an electrical arc and blemish the brass surface. Also, when soldering small parts, attempt to apply all heat to the larger brass surface. This sinks the excess heat and protects the detail part from being melted.

Most of this soldering work was accomplished in three or four long evenings. When the structure was complete, I applied the detail parts. The roof vent, air compressor, generator, head and backup light, coal bunker handrails, boiler steps, etc. are all brass castings from Trackside Details™. Cab door hand rails, coupler release rods, pipes and tank handrails are brass wire soldered in drilled holes or glued into stanchions. The window and door awnings are fabricated items. The domes were also fabricated using Trackside Details dome tops and copper pipe couplings in 3/4 and 1/2 inch sizes, and are soldered to the tank.

The rear steam dome has a tube that passes through the dome and tank to allow the boiler safety valve to vent to the outside. Also, the tank has similar pass throughs for the boiler fill tube and the tank hold down screw. These pass throughs are necessary because the tank is designed to hold water, and an axle pump, for boiler feed, will be fitted at a later date.

All of the detail items and domes were also soldered on using the resistance soldering tool. I found that for most small detail items, the best technique is to tin the item and the attachment point and then hold the item in place with tweezers. While holding the item in place, heat the area as close to the attachment point as possible with the resistance tool until the solder melts.

Fabricating the lead and trailing trucks came next. This was done using the existing Aster tender wheel sets and 1/16 thick K&S brass stock. The trucks are fully sprung off of center bolster pins, which are 6-32 brass machine bolts. These bolts have their head soldered to the bottom of the locomotive front buffer frame and cab floor. This pin rides in a radial slot in the top of the truck bolster, with a spring and washer between the bolster and frame. The trucks pivot on similar pins which attach to brackets screwed to the cab floor and soldered to the steam supply manifold between the cylinders. The trucks, being sprung, provide a significant download on their wheels, which ensures that they will track properly.

When it came time for assembly, it was necessary to replace some of the insulation between the boiler and the jacket. This was done using ceramic fiberfax obtained from a ceramics supply store that has repair parts for kilns. The balance of the parts went together without problems.

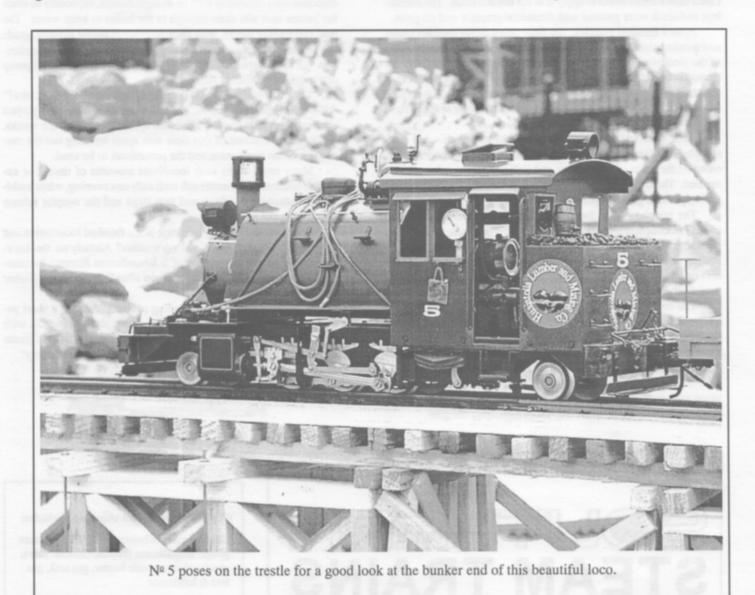
The tank is held on to the boiler by the fill tube cap, in this case a Goodall-type valve, and a 3mm bolt silver soldered to the bell bracket. The saddle tank fill tube pass through is a close fit on, and slightly longer (approximately 1/64 inch) than the fill

tube, and the cap and washer press on the tube when they are snugged up tight.

The displacement lubricator I relocated to the pilot using the existing plumbing. As a point of caution, the lubricator tubing is very small diameter copper and should be annealed before bending to its new path. Small diameter copper tubing has a tendency to work harden in use, and while being un-bent the tubing wall can kink.

ate the throttle and reverse lever.

When all items had been fitted and the mechanical operation and clearances had been checked out, the locomotive was disassembled for painting. The few small areas having solder runs were scraped using the back edge of an X-acto™ knife. Corners that needed to be cleaned out were scraped using small jewelers screwdrivers. Sharp, square cornered scrapers will remove the solder without cutting into and marring the surface of



The reversing rod, underneath the frame, also needed to be shortened and its actuating arm bent forward to allow space for the trailing truck pivot. The throttle knob I modified by removing the bakelite to reveal the brass bushing, which was then soldered to a brass lever that can be reached through the cab door.

The gas valve was also similarly modified, but in this case, instead of a lever, an Ozark Miniatures™ barrel was epoxied onto the brass bushing. This barrel sticks up through a hole in the coal bunker, and appears to be a drinking water barrel riding on top of the bunker.

At a later date radio control servos will be installed to actu-

the brass.

Further surface preparation was accomplished by sanding all the areas to be painted using foamboard fingernail files obtained at Walgreens. I found that the black emery kind performed the best. Brass does not take paint well, and needs to be thoroughly scuffed up prior to applying the primer. It also needs to be scrupulously cleaned. Everything was washed with soap and water and completely rinsed. After washing, because oil from the skin will re-impregnate the brass, all handling was done using paper towels or clean rags. Prior to spraying, the surfaces were again wiped down with Acryli-Clean to further insure an

oil free surface.

I did all painting using spray cans of Krylon Epoxy Satin Enamel over a prime coat of Krylon Epoxy Grey Primer. I have also used Zynolite brand epoxy paints; either are excellent products and easy to apply. Epoxy paints have good adhesion and hold up well against chipping. They are also less likely to run when applied. For trim and touch up I sprayed some of the paint into a small cup or a shot glass and let stand for 30 minutes to thicken up. I then used a small brush to apply it to the needed areas. The smokebox and stack were painted with Scalecoat graphite and oil paint.

After I finished painting, the final detail items (builder plates and number plate) were applied to the smokebox front and the sides of the smokebox using J-B Weld epoxy. This epoxy, which is very strong, is rated for 600 degrees and will easily hold up to the heat of the smokebox. J-B Weld epoxy is also available in a Quick style 5-Minute formula, which is not capable of withstanding as much heat, but has similar strength properties.

After all the painted items were dry, the locomotive was reassembled and the balance of the detail items added. Wood was epoxied to the front of the buffers and link and pin coupler pockets applied. The front and rear steps were fabricated and bolted on and poling pockets glued in place.

The couplers were then fitted; together with coupler release rods. The couplers are modified Accucraft™ products. The shanks were shortened to fit the Trackside Details link and pin coupler pockets and drilled to accept the link pin. The ends of the knuckles are also drilled vertically for a link pin and a slot cut in them to accommodate the link.

The coal in the bunker is simulated using real coal bought at Caboose Hobbies. Dams around the cutouts in the bunker top for the butane filler and burner valve, and a dam on the outside edge were made using masking tape. A thin layer of coal, one or two grains thick, was set in place and then thin cyanoacrylate glue applied and set up using Insta-Set. The final layers were then put in place and similarly glued. The coal was finally painted using flat black epoxy enamel to cover any gloss caused by the glue.

Decals for the logo I made using an ink jet printer and Super Cal. I first tried using the clear decal paper, but the printing is not opaque enough to show up well over the underlying green paint. I redid them in a red background using the white decal paper. The numbering is a commercial decal product. All decals are overcoated by airbrush using Poly Scale water based satin overcoat.

The first run took place December 29, 2000, at the Denver Garden Railway track at the Colorado Railroad Museum. The locomotive runs extremely well on straight butane, especially so since the butane tank sits close enough to the boiler to keep warm. The lead and trailing trucks, with their downward spring loading, guide the locomotive very nicely through switches and track irregularities. All that is now lacking is radio control and the axle feed pump drawing water from the tank.

I have been asked several times, "How much time did it take?" Although some time was not logged, most of it was. The project consumed something over 120 hours spaced out over 6 1/2 weeks. A significant amount of this time was spent working out the mechanics of the conversion and the procedures to be used.

Many small items took inordinate amounts of time. For example, fabricating the entire cab took only one evening, while building and attaching the front and rear steps and the coupler release rods took twice as long.

Was it worth it? Only one look at the finished locomotive and you have the answer. Will I kitbash another? Already on the drawing boards are the conversion of 2 Roundhouse Russell locomotives into a tank style Mallet patterned after Weyerhaeuser Timber Co. Nº 9.

This has been a very rewarding project, which in a short period of time has provided Huajatolla Lumber and Mining Co. with their first locomotive. For those who have thought of live steam kitbashing, but have put it off, I can only say, dig in and enjoy!



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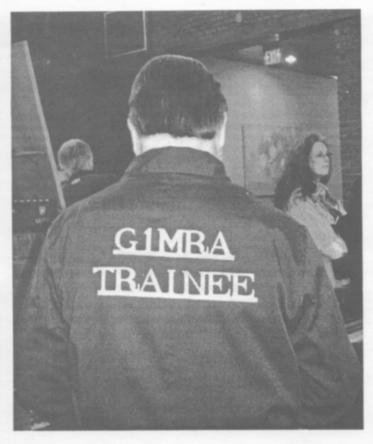


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Diamondhead Report continues.....





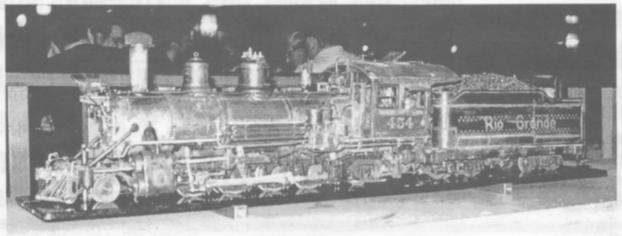


This page, clockwise from bottom: Soni Honegger's (New Mexico) amazingly realistic model of a K-27. Soni has one of those dream jobs, working as engineer on the full sized loco at Chama.

Don Keller's (Louisiana) Krick Воккним is always a crowd pleaser. In this photo Don's son is taking a turn at the wheel.

John Thomson (Texas), SitG contributor (21 Improvements to the BAGRS Project Loco and other articles), demonstrates the impressive pulling power of his modified Project Loco.

Larry Bangham (California), SitG contributor (Harmonic Steam Whistles and lots more), brought out the smiles with this message on his shop coat.















Clockwise from bottom left: Aster Mikados in Southern green livery sure do look good!

Jim Montgomery (Washington) with his H. B. Models Taff Vale 4-4-0.

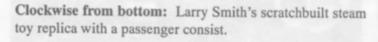
Dave Young (Texas) prepares his Krick steamboat for a run as Ginny Morris (Pennsylvania) looks on.

Tom Reinhardt (Illinois) discusses his loco's performance with a fellow steamer.

Chris Sortina (Louisiana) added the great sound of drums to the band this year. Chris and Alan Walker (England) appear to be well pleased with the Diamondhead experience.







Paul Quirk (Pennsylvania) fine tunes his loco in a double header. Getting both locos to work together requires skill and experience!

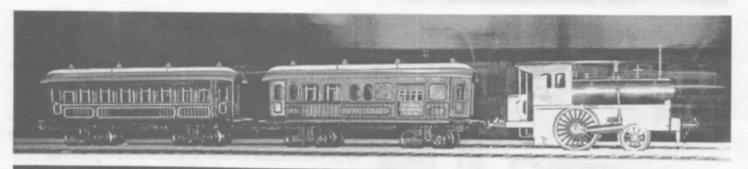
Larry Herget (Missouri) with one of his scratchbuilt gems. Larry can always be counted on to have something new and interesting up his sleeve at a steamup!

The dealer room was chock full of goodies again this year, as can be seen in these photos of the Doubleheader Productions stand (top) and the I E & W Railway Supply stands.



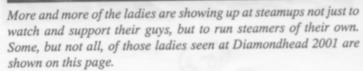












Clockwise from above: Frances Ingham (Illinois) has been coming to DH with her significant other, Tom, for several years.

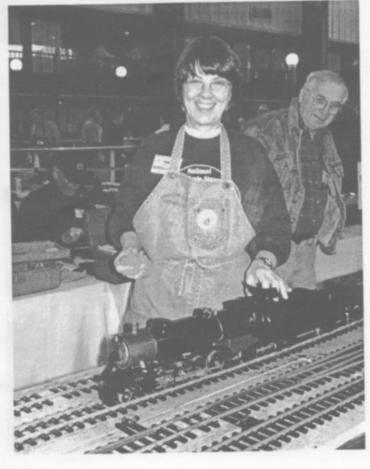
Left to right: Ginny Morris (Pennsylvania), Sharon Ricketts (Washington), Pat Mueller (Illinois), Carol Paule (Missouri), Morgan Jennings (Colorado) and Diana Eaton (Missouri).

Vickie-Marie Parker (California) has personalized her locos and rolling stock with details and her own logo.

Morgan Jennings (Colorado) is proud of her new Aster Mikado, and delighted with the great sounding harmonic steam whistle built for her by Larry Bangham.



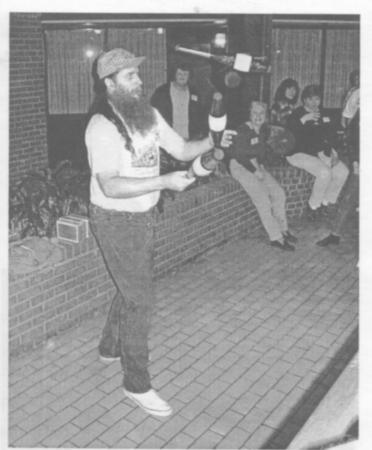






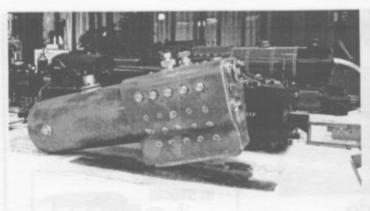


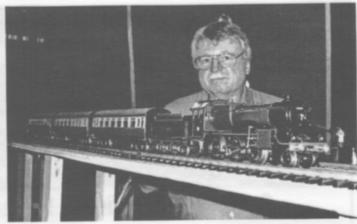














Opposite page, clockwise from lower left: Ruth & Norm Saley (Florida), chat with Bill Ford (Florida) Norm comes up with some very innovative and ingenious modifications and additions to enhance the looks and performance of our little steamers.

David Hamilton (Canada) entertained us by playing the pipes.

Dan Rowe (Texas) is well known for his love of Shays, and for the museum quality job he's doing on a 7/8n2 scratchbuilt Shay. Much to everyone's surprise, he is also an accomplished juggler!

Geoff Calver (England) moves a loco out onto the mainline while John Shawe (England) and Mike Moore (Maryland) observe.

This page, clockwise from above: A venerable steamer built and recently upgraded by Kosaku Wada (Japan), complete with digital sound system. A beautiful loco, and a fine performer. Mr. Wada is writing about this loco and his enhancements to it for an upcoming issue.

Harry Wade (Tennessee) showed this beautiful handcrafted boiler.

Bill Payne (Kansas) admires a passing loco.





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Some Thoughts on Toolboxes and Their Contents for Small Scale Live Steamers

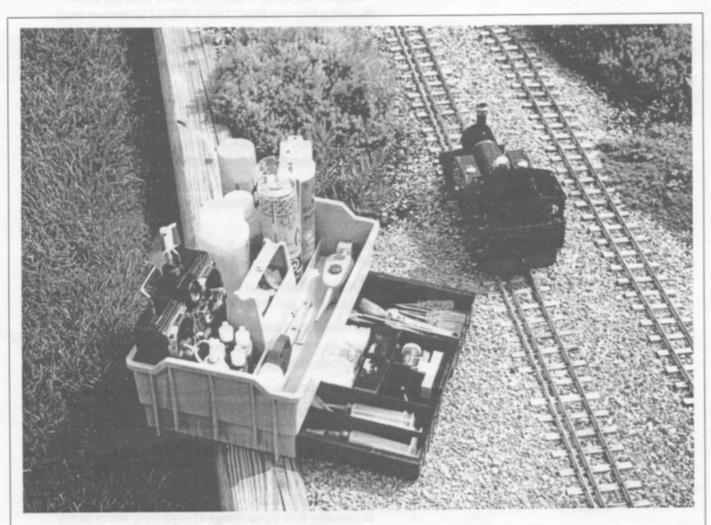
text and photos by Jeff Young

There is no doubt about it, it takes a lot of tools and materials to get a live steamer ready for a run. There is a lot of stuff to cart out to the steaming bay - distilled water, fuel, oil, and a variety of tools. It is quite similar to what our friends in the R/C model plane hobby have to lug out to the airfield to get a plane airborne.

If you have ever looked through a model aircraft magazine,

you will see that our flying friends in the R/C plane hobby are fortunate, they have a number of custom designed tool cases available to them. However, us poor small scale live steamers do not fare so well. As far as I know, there are no toolboxes specially designed for small scale live steamers on the market.

I have seen a wide variety of tool boxes for small scale live steamers, ranging from nice custom built, highly varnished



The Author's personal toolbox in use on his home railway in Ontario, Canada.

wooden boxes to old cardboard shoe boxes, metal power tool cases and even an old lunch box (the distilled water was kept warm in the Thermos!).

Years ago, I used an old fishing tackle box. The problem with it was that everything ended in a jumble in the bottom because the top trays were too small to hold most of the tools. To add to the mess, the steam oil bottle always leaked when laid on its side. The fact that the box still had the faint aura of fish bait wasn't too appealing either!

After awhile, I decided to think about a new tool box. My requirements were quite straight forward - it had to be quite compact, well organized, easily carried, robust, water and oil repellant and, most importantly, hold everything needed to keep live steamers running well.

I toyed with the idea of building my own, but the thought of spending a lot of time scratch building something that was not a piece of rolling stock or a structure for the garden railway did not appeal to me.

One day as I was browsing through the tool section of the hardware store (that itself is a hobby) and spotted a toolbox that

looks like it was designed especially for small scale live steamers. It has two large and two small bins on top, a handle, and a large sliding drawer underneath divided into a number of compartments of various sizes and shapes. The price was reasonable about \$10. It was just the ticket. As can be seen in the photograph, the toolbox is easily able to hold the radio transmitter, fuel and water, wiping cloths, a butane lighter and oil in the top bins. The smaller bins in the pull-out drawer have places for small tools, syringes, and spare parts.

Since I purchased it a few years ago, I have noticed that there are a number of similar ones available in both Canada and the U.S., from a variety of manufacturers. It is worthwhile to check the auto parts stores as well as the large building supply outlets in the search for your ideal toolbox.

Once you have found a toolbox to your liking, you have to decide what to put in it. Here is my biased view of what a well equipped small scale live steam toolbox should contain, based on a recent look through mine. (No doubt, you can probably think of a few things I forgot or that may be needed for a particular locomotive.)

Distilled	water	I figure a bottle that fits in the toolbox and gives me enough water to fill a couple of boiler fulls out at the steaming bay was ideal. I use a 500 ml laboratory wash bottle with a long spout, a souvenir from chemistry lab classes long ago (the large reusable "megaslurp" drink ing bottles with straws from the convenience store also work nicely).
Fuel		Alcohol, butane or coal - I carry enough for a couple of runs. I have a smaller lab bottle (250 ml) for alcohol, with a drop of food colouring, of course, to distinguish it from distilled water (a Marc Horovitz trick).
Steam of	1	I use light steam oil for oscillators and heavy steam oil for displacement lubricators. Both are kept in small applicator bottles.
Machine	e oil	A small can filled with 3-in-1™ or equivalent, for oiling the running gear, wheel bearings, etc.
Pledge fi	urniture polish	This stuff works great for keeping British live steamers looking nice and shiny. A little bit goes a long way.
Wiping	rags	The small shoe shine cloths they give you in hotels are great, as well as those disposable blue shop towels or thick paper towels.
Screws, 1	bolts and nuts	. An assortment to replace those most commonly found (or lost!) on live steamers. Do not forget that BA threads are used on Mamods and other British locomotives.
Spare wi	ck material	The fiberglass yarn sold as caulking for use around fireplace inserts works great, lasts forever and is cheap.
Spare 0-	rings, washers	One of each kind for every locomotive in the roster. It is amazing how these things always wear out or break at the most inappropriate time.
Butane li	ighter	I like the long snout disposable version sold for lighting barbecues or camp stoves.

Dental mirror	This tool is essential for checking the condition of wicks. At one time, you could only get them from dental supply stores. Now they can be found at larger auto parts stores, with all sorts of nifty flexible handles, etc.
Small adjustable wrench	Essential to have for loosening and tightening safety valves, filler plugs, etc.
Small screwdriver set	I recommend a good precision set. Cheap ones or ones of the wrong size tend to chew up soft brass screw heads.
Small Allen wrench set	I like the kind which have the keys attached together on a ring (so I lose the whole set and not just one key).
Needle nose pliers	These are great for hooking or unhooking those *@%&\$ British 3-link couplings.
Assortment of syringes	These are very useful for filling boilers and fuel tanks. Craft supply stores tend to carry smaller ones for glue application. The big ones can be found at a veterinary supply house.
Scissors	Always handy to have for trimming wicks, cutting back the foliage near the steaming bay, trimming bandages, etc.
Homemade pointy tools	Diagram of the years I have made a variety of these from K&S brass tube and piano wire for pricking wicks, cleaning foliage out of the valve gear, and of course for cleaning your fingernails while waiting for steam to raise.
Swiss Army knife	The tool of last resort. If any of the above won't fix it, this probably will.





Les lecteurs francophones peuvent contacter Guy Ozanne pour obtenir, gratuitement, une traduction sur un élément de texte paru dans SitG .41 rue Jeanne d'Arc, 94.500 Champigny, France; tél (33) 01-48-83-62-86; e-mail <Guy.0zanne@wanadoo.fr>



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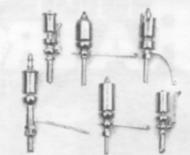
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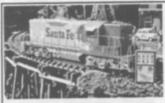
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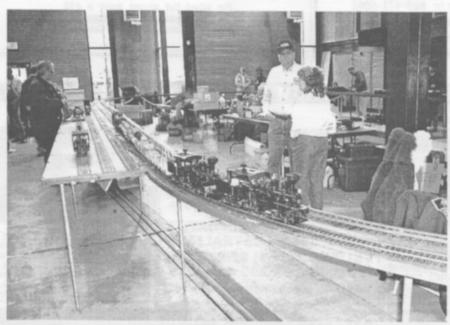
A train show in the northeast, started just a couple of years ago by Clem O'Jevitch, is gaining momentum. The venue is perfect for steam enthusiasts - Steamtown National Historic Site in Scranton, Pennsylvania, where the National Park Service has brought a once thriving steam railroad operation back to life.

We've had reports from several sources indicating that miniature live steamers are turning out for this event in good numbers, and the photo below, showing two Catatonk 24-ton Shays doubleheading on Mike Moore's excellent PETS track and sent in by Noel Crawford, gives us just a glimpse of this year's activity.

If you live in the northeast, why not plan to attend this event in February 2002? Contact Clem for more info at 570-735-5570.

Happy Steaming!

Ron



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Above: Catatonk 14-ton Shay, detailed and weathered by Allyn Merris to head up his crack passenger varnish, Evergreen Forest Bullet. All moved the fuel tank to the bunker and filled in wooded areas of the cab with appropriately stained and varnished scribed siding. He added lenses and reflectors to the headlights, and the requisite wooden toolbox and barrel of bear grease to the running boards. He is now looking for a set of 1:20 deer antlers to adorn the headlight.

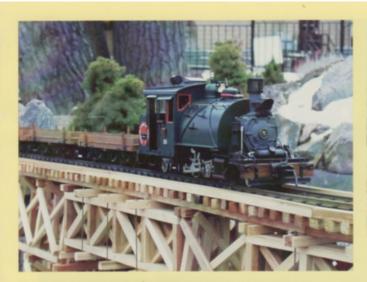
photo by Al Merris

**photo by Al

Below: Busy summer afternoon activity on Jeff Young's 16mm scale Algonquin Light Railway in Mississauga, Ontario, Canada. The alcohol fired Archangel locomotive Marmaduke waits on the main line with a passenger train, as the gas fired Roundhouse Lady Anne enters the passing loop with a goods train in front of the Wisteria Halt signal box.

photo by Jeff Young









Clockwise from above:

A venerable Lindsay Shay hauls a load of logs to the pond.

photo by Bob Nowell

Frank Krutzke's modified Frank S. (see article in this issue) rumbles over a trestle on the Denver Garden Railway Society's club track at the Colorado Railroad Museum.

photo by Frank Krutzke

Noel Crawford's Climax (built by Keith Manison) on his home track in Maryland. photo by Noel Crawford

Cheddar powered steamboat seen at the Cheddar Models Steamboat Regatta in England (see issue Nº 58)

photo by James Slater

