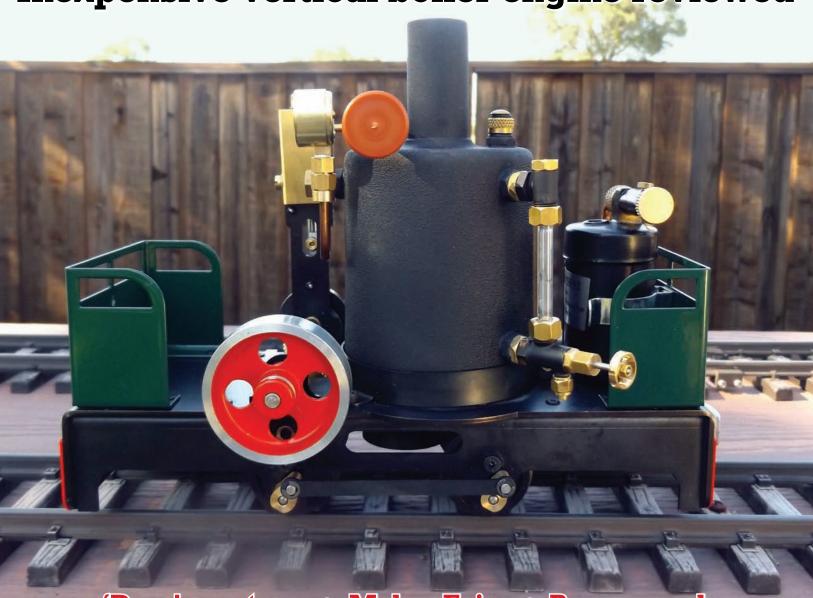
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Pennsylvania RR's G5

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— that
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could not. The

G5s were built between 1923–1925 at the railroad's Altoona shops in a batch of 50,

TWO VERSIONS — 3 NUMBERS

1:32 scale, Gauge 1 (45mm), butane fired with ceramic burner. Pennsy No. 5748 (left, bottom right), Pennsy No. 5741 (bottom left, center) and LIRR No. 28 (below).



numbered 5700–5749. Another batch of 31 were built for Pennsy's subsidiary, the Long Island Railroad (numbered 20–50).















NEW — AUSTRALIAN NEW SOUTH WALES GOVERNMENT RAILWAYS C38

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The British A4 — Streamlined 4-6-2 in three liveries



Designed by Nigel Gresley for the London and North Eastern Railway, the British A4 is a unique and beautiful locomo-This 1:32-scale, tive.



Gauge 1 (45mm) model is butane fired with a ceramic burner and has three working cylinders that drive six wheels via Walschaert valve gear. The A4 model has



axle and hand pumps and a working whistle. It is 30-inches long by five-inches tall by 31/2-inches tall (685mm x 126.5mm x 87mm).



1:32-scale, Gauge 1 (45mm) butane fired, ceramic burner

NEW — GERMAN BR64 1:32-scale, Gauge 1 (45mm), butane fired. Limited to 50 sets released world wide.



GERMAN BR41 — TWO VERSIONS

Big deflector (left) or small deflector (right). 2-8-2 locomotive, 1:32-scale, Gauge 1 (45mm), butane fired, ceramic burner. With R/C or R/Cready. Walschaert valve gear; fuly sprung axles, sprung buffers. 29½-inches long, 5½-inches tall, 33/4-inches wide (750mm x 142mm x 97mm). British pressure gauge, water gauge, orking whistle.



China's 'Big Boy' - steam model 'QianJin'

Limited to 50 sets released worldwide — accepting reservations

The 'QJ' was the first high-powered locomotive designed and built in Chi-

na. Engines were built between 1956 and 1988, with the last locomotive running in China in 2005. Five of the 2-10-2 engines were sold to U.S. railroads and three are still used

in excursions today. The 1:32scale model will come in both gasfired and coal-fired versions and the butane locomotive uses a ceramic burner. The boiler holds 22 oz. (650ml) of water and the engine runs 70 minutes. Available numbers include 6800, 6988, 7040, 7081, 7143 and 7207. Comes



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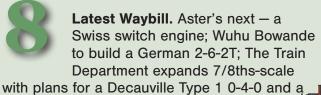
Canadian Pacific 2-10-4, Selkirk #5935



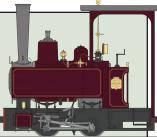


Vol. 25, No. 5; Issue No. 141; September/October 2015

Gather friends, while we inquire, into trains, propelled by fire ...



Forney 0-4-4T, the SR&RL No. 6.





'Brunel'. Mamod delivers a vertical-boiler 0-4-0 that is just the right size and just the right price for a 1:13.7-

scale live steamer. By Dave Frediani.



Tram. Learn to model in tinplate and make a small-scale "steam dummy" out of Accu-

craft's "Dora." Part 1 of three. By Marc Horovitz.



Faire. A live-steam group makes its sixth appearance at the Bay Area Maker Faire and shows our hobby to thousands. By Dave Cole.





GARDEN

Burner mesh. Here's a neat trick to add to your

Accucraft burner to make locomo-

tives run better (and quieter). By Carl Weaver.

Cupola View. Tom King, a whimsical small-scale live steamer who touched hobbyists worldwide and was ubiquitous at the Summer Steamup, succumbs to cancer.



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Also inside Advertiser index 45 Timetable 44

Cover photo by Dave Frediani.



Aster goes to Switzerland

ext up for Aster Hobby Inc. of Yokohama, Japan, will be a Swiss switch engine that was used regularly up through the mid-1960s.

The Swiss Federal Railways E 3/3 (which would be called a 0-6-0 in Whyte notation) was a standardgauge manufactured by the railroad between 1902 and 1915 and nicknamed "Tigerli" (or "tiger cub" in Swiss-German). The prototypes weighed about 76,900 pounds and were 28½-feet long, with a 103/4-foot wheel base. The two cylinders were 141/8inches in diameter with a 195/8-inch stroke and the boiler carried 174 psi; the engine reached a top speed of 29½ mph.

Swiss Federal, called SBB, built 83 locomotives for itself and four for other railroads. At least 28 of the original locomotives are preserved throughout Europe, with fewer than a dozen still operational.

Aster Hobby is creating a model on behalf of Aster Europa of Wohlenschwil, Switzerland. The companies have said the "Tigerli" will be an alcohol-fired



'Tigerli': A preserved Swiss Federal E 3/3 at Buchs, Switzerland. Photo by Bobo11, CC BY-SA 3.0.

engine with Walschaert valve gear. "The Aster concept represents the standard type E 3-3," the companies said, "with front platform and original coal bunker design."

Aster Hobby is on the Web at http://www.aster hobby.com/, while Aster Europa is at http://www. astereuropa.com/. The U.S. distributor, Aster Hobby USA LLC, is at http://asterhobbyusa.com/ and at (864) 587-7999.

Wuhu adds a German

In response to what it called "good sales" of its German BR41 locomotive, Wuhu Arts & Crafts Ltd. of Anhui, China, earlier this year said it would



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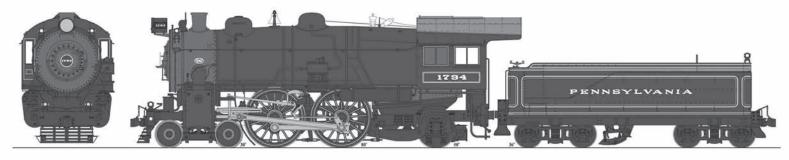
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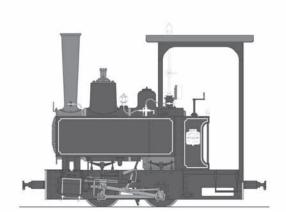
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Redux: Wuhu Bowande's second German live steam engine.

soon begin production of a 1:32-scale version of a live-steam BR46.

The BR46 is a 2-6-2T designed for use as a passenger engine. Five-hundred-twenty of them were built from 1928-1940 by a variety of German manufacturers. It had a length of 48-feet over the buffers and weighed in at 165,000 pounds.

The Wuhu Bowande model will be of brass and stainless construction, using a butane-fired ceramic burner. The locomotive will be 15%-inches long, 37/8-inches wide and 51/4-inches tall (402.3mm by 99.7mm by 132.6mm). The two cylinders on the engine will be 9/16-inches in diameter and have a 13/16-inch stroke, with Walschaert valve gear, while the boiler will operate at 60psi. The minimum operating radius will be 46½-inches.

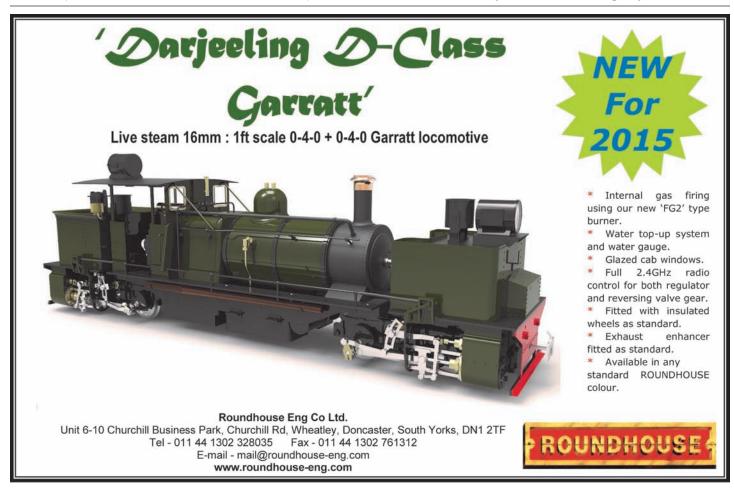
The copper boiler will have adjustable safety valves, an axle pump and a hand pump, and will have a visible water-level glass and a pressure gauge imported from the United Kingdom. The engine will also sport a lubricator and working whistle. Wuhu Bowande says it will be radio-control ready.

The maker says the locomotive was in pilot stage in late June and that only a limited number would be made and sold.

Wuhu Bowande is on the Web at http://www.bow andeusa.com/?l2/ and its U.S. dealer is Stoke 'M and Smoke 'M of Mount Airy, Md., whose phone number is (301) 467-3348.

More 7/8ths for Train Dept.

uilding upon the success of its "Fairymead," a 1:13.7-scale Australian locomotive, The Train Department of Hazlet, N.J., said last spring it will create two more models of two-foot-gauge locomotives, the Decauville Type 1, based on a restored locomotive that operates in excursion in South Africa, and the Sandy River and Rangeley Lakes Rail-





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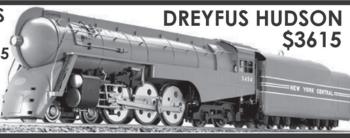


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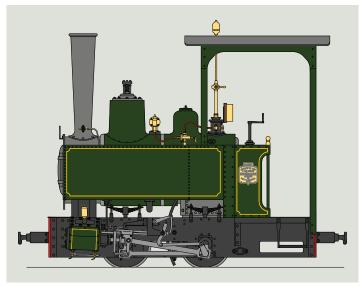
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Detailed drawing: David Fletcher rendered this Decauville for creation by The Train Department.

road Forney No. 6, which is preserved in Maine.

The French railroad manufacturing company Decauville built 600mm-610mm (two-foot-gauge) railroads for the French military, and for civilian uses worldwide. Decauville took over the manufacturing of a 23/4-ton two-foot locomotive and made it a bit larger, creating the three-ton Type 1.

Few of the Type 1 exist, but one is preserved at the

Sandstone Estates Heritage Railway in Free State, South Africa. A local train buff, Hannes Pailing, provided The Train Department with precise measurements and Australian David Fletcher then produced intricate drawings of the restored Decauville.

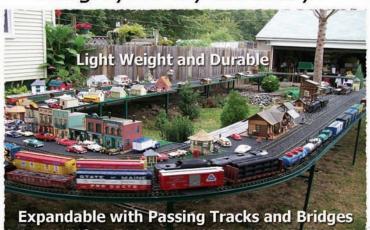
The model will be 81/8-inches long over the endbeams, 43/8-inches wide and 81/8-inches tall. The butane-fired boiler will have a sight glass and a detailed back head. Slide-valve cylinders will have a fixed cutoff and there will be a one-half-inch pressure gauge. The track gauge will be adjustable from 32mm to 45mm.

The Train Department says there will be a "larger gas tank mounted in the side tank with a hidden gas valve in the coal bunker." The locomotive will come in three colors, Victorian maroon, mid-Brunswick green and black. Lining will match the original Decauville design.

The small-scale live steam supplier also said it would soon offer a 1:13.7-scale live-steam model of the Sandy River and Rangeley Lakes Railroad No. 6, an 0-4-4T Forney built by Maine's Portland Co. in 1891. A Forney is remarkable for having its fuel and water weighted over the four-wheel trailing truck.

According to the web site of the Maine Narrow Gauge Railroad Co. & Museum, an 1870s visitor to Wales brought back the idea of two-foot railroads







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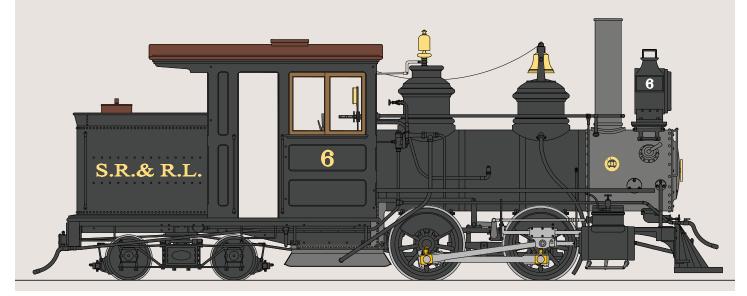
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Maine motor: Another Fletcher drawing for The Train Department: SR&RL No. 6 in 1:13.7 scale.

to Maine. The SR&RL and a predecessor company operated from 1879-1935, with about 112 miles of track serving Franklin County, Maine.

The original locomotive started life with the Sandy River Railroad and after the SR&RL, served the Kennebec Central Railroad as No. 4, and then the Wiscasset, Waterville and Farmington Railway as No. 9. It has been under restoration at the Wiscasset, Waterville & Farmington Railway Museum in Alna, Maine, for more than a decade. The engine had 10½-inch diameter cylinders with 14-inch stroke,

33-inch driving wheels, a total weight of 36,000 pounds and a tractive force of 5363 pounds.

The SR&RL No. 6 model will come with a butanefired boiler with a sight glass, three-quarter-inch cylinders with slide valves and Stephenson valve gear and a hand pump and fuel take in the bunker.

The company has not yet set a price for the Decauville Type 1 but has said that the SR&RL No. 6's price is estimated at \$3000. Reservations are being taken at http://www.thetraindepartment.com/ or by calling (732) 770-9625.







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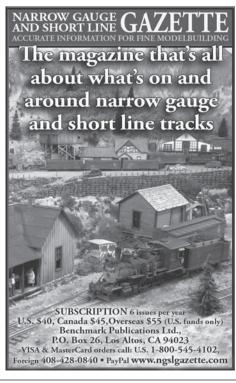
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Mamod's latest is an inexpensive vertical-boiler 0-4-0

Text and photos by Dave Frediani

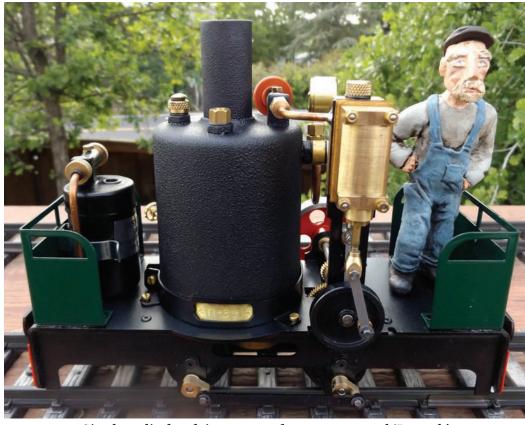
've been looking for a verticalboiler locomotive that would go well with my other 1:13.7scale locomotives and rolling stock. The Mamod "Brunel" was the best for my needs and price, and it also had room for a 7/8thsscale figure or two.

There isn't a U.S. dealer or importer, so you need to purchase the "Brunel" directly from Mamod Ltd., in West Midlands, England. It took a few emails back and forth before I was able to place the order. The cost of the Mamod was \$634 delivered, which at the time was £385 (pounds sterling) including "carriage" (shipping). It was a fair price and sent by Fed Ex overnight. A special thanks to Dave Terry at Mamod for his help in obtaining the "Brunel."

The "Brunel" is a 0-4-0 locomotive with a vertical boiler and a ceramic burner; it's gear driven with a single cylinder and flywheel

and weighs in at just under four pounds. When opening the box, I found it well packaged. It came with a funnel, plastic syringe, extra O-rings, steam and lubricating oil, and a gas filler adapter that fits most gas canisters, plus a good operating manual.

The first thing I did was check all nuts, bolts and set screws, lubing all moving parts. Next I filled the



Oscillator: Single-cylinder drives a set of gears to propel 'Brunel.'

fuel tank, which uses a Ronson-type butane valve. The filler adaptor supplied made filling the fuel tank easy.

The boiler is filled by removing the safety valve or using the already installed Goodall valve. The engine is equipped with a sight glass. When filling the boiler, the water level should be no higher than the top of the sight glass; don't overfill it. If the boiler is



Undercarriage: Backside of the ceramic burner in the middle, gear set to the right.



Forward: 'Brunel' runs down the author's track.

overfilled it can easily be drained off by opening the blow-down valve located just under the sight glass.

The lubricator is filled just below the steam pipe (once again, don't overfill it). The filler cap is located on top of the cylinder block. And just below the bottom of the cylinder block is the lubricator drain.

After checking all my steps and placing the "Brunel" on two wooden blocks, it was now time to light the boiler. Using the lighting slot on the side of the frame and opening the gas valve, slowly - no more than one-eighth of a turn — the burner should light.

It can be difficult to light the ceramic burner. There is only a small opening just above the lighting slot; you should see a blue flame when lit. It will take about 30-40 seconds for the ceramic burner to warm. After it warms, you should look down the stack to adjust the burner so that it glows as redishorange. This takes a lot of patience to get the proper burn. With each lighting, it becomes easier and easier. It will take about three to four minutes to pop the safety valve, which is set at 60psi.

With the "Brunel" on blocks, I opened the throttle valve about one-half a turn, then moved the flywheel back and forth to clear the cylinder. Then I tried starting the engine by rapidly turning the flywheel clockwise, manually. The engine began running, and it lasted about two or three minutes before shutting down.

I ran the "Brunel" about six or seven times, adjusting the burner each time. To reverse the locomotive, you turn the flywheel in the opposite direction. The — Continued on Page 20

Mamod 'Brunel'

- Loco type: Freelance interpretation of a fourwheeled, vertical-boiler locomotive similar to a DeWinton or a Class A Climax.
- Scale: 1:22.5, 45mm or 32mm gauge.
- Length: 613/16 inches (250mm).
- Width: 4½ inches (115mm).
- **Height**: 9¹³/₁₆ inches (250mm).
- Boiler: Vertical; silver-soldered; re-heating coil.
- Fuel: Butane (ceramic burner).
- Min. radius: Two feet.
- Cylinders: One oscillating.
- Fittings: Glass water-level gauge; pressure gauge; safety valve rated to 40psi; geared drive).
- Available models: Black.
- MSRP: \$US467 (€420).

Catching oil, water, gunk

- o build the catch can for the Mamod "Brunel," you will need the following items:
- A piece of three-quarterinch copper pipe cut to twoinches long.
- Two three-quarter-inch copper-pipe caps.
- About six inches of oneeighth-inch copper tubing.
 - A small magnet.
- A two-inch piece of plastic tubing (the kind used with Goodall-valve bottles).

I started by cutting the two inches of copper pipe and soldered a cap to the pipe; this will become the bottom of the catch can. I used a plumbers' torch, but even the smallest butane torch would work for this application. (Be sure to add plumbers' flux to the joint before soldering.)

Next I drilled two holes into the other cap — which will become the top of the catch can — and soldered that cap to the pipe too. After cutting off a three-inch piece of the oneeighth-inch copper tubing, I then soldered one piece of copper tubing to the top cap; this will become the new exhaust pipe.

A second piece of one-eighthinch by three-inch tubing will be cut to 11/2-inch long and pushed into the top cap three-quarters of an inch, leaving one-quarterinch above the cap.

I then installed the last piece of copper tubing into the exhaust port, and connected the can to the port with a piece of the plastic tubing about 21/2-inches long. Using an epoxy, I glued the magnet to the bottom of the catch can, which holds it in place during a run.

That's it.



Catch as catch can: *Items needed to built a 'Brunel' catch can.*







Steps: Solder end caps, then long tube, then short tube, then magnet.



-D.F. Clean 'Brunel': Plastic tubing out of exhaust to the catch can.

Homage Brunel

amod's "Brunel" is named in honor of Isambard Kingdom Brunel, a French-English mechanical and civil engineer who worked through the late 1850s. During his career, Brunel designed and built railroads, bridges, tunnels, viaducts, railroad stations, ships and docks, not to mention housing, schools and hospitals.

Starting as chief engineer at age 26 with the Great Western Railway, which connected London and the midlands, Brunel made "bold" decisions, including choosing broad gauge (841/2) inches wide) versus the standard gauge (56½ inches), according to a biography published by Brunel University London.

The university calls Brunel a genius and points out that many of his engineering marvels — including the Wharncliffe Viaduct over the Brent Valley in Hanwell, which was completed in 1839 to carry mainline traffic from Paddington Station are still in use in the 21st century. (Historians tend to agree about Brunel's impact on the modern world; the most recent





I.K. Brunel: Left, the engineer in an 1840s woodcut; right, 'Tiny,' a broad-gauge vertical. Right photo by Geof Sheppard, CC BY-SA 3.0.

biography of him, a 2013 book from Orion Publishing Group, is called, "Brunel: The Man Who Built the World.")

While Brunel didn't actually design any locomotives, he did produce specifications for a number that were built by others, including the "Star" class of 2-2-2 locomotives built from 1837-1841 by Robert Stephenson and Co. Ultimately, Brunel found a locomotive designer he could work with, Daniel Gooch, who in turned designed and built dozens of models of locomotives at

the GWR's Swindon shops.

Certainly a number of vertical boiler locomotives — in the De Winton style — were built in broad gauge in the 1800s, but only one remains: "Tiny," built in 1868 by Sara and Co., of Penryn, Cornwall, for the South Devon Railway. It was designed to be used around the docks at Plymouth, and was pulled from service in 1883. It was preserved to provide steam for workshops and is now on display at the Buckfastleigh Railway Museum in Devon.

-dmc

— Continued from Page 18

flywheel must be turned enough to produce at least one revolution at the drive wheel, in order to reverse the eccentrics attached to the cylinder. The Roundhouse "Sammie" and the Berkeley/Westminster "Cricket" use the same system.

Next, I placed the "Brunel" on rollers and ran it for five to seven minutes in each direction. With each run, it became easier to start in forward or reverse.

On day two, I took the "Brunel" to my friend Art Busalacchi's to run on his Sonora, Calif., backyard layout, which has several tight-radius turns. The first run lasted about two minutes, the second run five minutes. After refueling, watering and adjusting the ceramic burner, I had runs of up to 22 to 23 minutes. The "Brunel," with the burner set properly, loves to run between 40 and 50 psi.

The "Brunel" is different from any other locomo-

tive I've used, as no steam comes out of the smoke stack. The oil, water and steam blows out the back of the cylinder exhaust port at the rear of the locomotive. This exhaust causes a mess of oil and water over the rear of the engine and your rolling stock.

In order to prevent this, I first used a piece of brass tubing and bent it at a 90-degree angle, which fixed the problem but wasn't as elegant as I'd like. I then created a "catch can" (see "Catching oil, water, gunk" on Page 19), which solved the problem and looked great.

Aside from the exhaust problem, this is a greatrunning locomotive. Anytime you can get 20 or more minutes out of a small locomotive like this, that's great. Of all the vertical locomotives for sale out there, you can't beat the price and performance of this "Brunel" engine.

Knowing what I know of the "Brunel," I would be happy to purchase another one.

Mamod memories

runel" is not your father's Mamod — there are no solid pellets for fuel and it runs well out of the box.

Mamod, founded in 1937, specialized in toy stationary engines and later toy steam road vehicles like tractors and rollers. The company was started by Geoffrey Malins and named after him — "Ma"lins "Mod"els.

In the 1970s the company switched from using alcohol burners to Hexamine solid-fuel pellets and started making locomotives and train sets — at first in just o-gauge, but later in Gauge One as well.

The initial locomotives were sorely underpowered from the tablets and had poorly designed oscillating cylinders. As Rob Kuhlman wrote in Steam in the Garden, January/February 2011,



Mamod: Latest saddle tank.

No. 114, reminiscing about the old Mamods, "In all likelihood, you would have had to replace the burner, safety, wheels, cylinders, [and the like], so you were probably \$200 further in the hole before you ended up with a reliable runner."

A sub-culture of businesses sprung up to provide service and upgrade parts — including alcohol burners — to make a Mamod locomotive operate correctly.

The Malins' family business went bankrupt in 1980, and

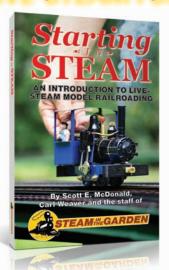
went through a succession of six owners over the next decade. The Terry family then took over what is now known as Mamod Ltd. of West Midlands, England, and has developed a broad range of live-steam toys that resemble a 1979 Mamod only in name.

With the 2009 release of the Mamod Mk II, the company had created a satisfactory locomotive. While the first versions of the "Brunel" had some problems when it was released in 2010 - aplastic pipe fed butane from the tank to the burner, among other items - Mamod Ltd. made the fixes and the locomotive has become one of the company's "biggest success stories," it says.

Last year Mamod Ltd., said it plans to make a kit out of the "Brunel," but so far nothing has been delivered.

– dmc

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Learn tinplate skills and bash Accucraft's 'Dora' into a

Text, illustrations and photos by Marc Horovitz

tram locomotive is basically a steam engine in a box — a standard locomotive encased in a full body that conceals the boiler, wheels, and running gear. Called "steam dummies" in the United States, these engines often resembled streetcars.

In other parts of the world, though, many had bodies that were distinctly purpose designed. In their simplest form, they could be regular locomotives with only side skirts to cover the works. Tram engines were in common use from the mid- to late-1800s well into the 20th century, and were often used on street railways. More sophisticated engines had condensing apparatus and noise-abatement equipment built into them.

I've often felt that the Accucraft "Dora" would pro-

vide an excellent basis for a tram engine, as the original body is easily removable, leaving a fully functional boiler and chassis that would require no further modification.

All that would be needed would be a new body to replace the old, and you've got a brand new engine. I chose to do this project in tinplate, so you might regard this article as an introduction to tinplate modeling, too.

Tinplate is a wonderful material — that's why toy and model trains were made from it for close to 100 years. It's just as good today as it ever was. However, it seems to have fallen out of favor for some obscure reason. I'd like to call your attention to a web site that is devoted to working with tinplate:

http://www.tinplategirl.com/

This site has several instructional videos that go through a lot of different aspects of working with this material. If you're interested in getting into tinplate work, check it out.

For material for this project, you can use old, flattened tin cans or brand-new stuff, which you can get from the Tinplate Girl web site. For this project, you'll need two nine-inch by 11½-inch sheets or the

equivalent.

Bashing 'Dora' into a tram

aster locomotive craftsman Marc Horovitz wanted to turn an Accucraft "Dora" into a steam tram. While the project has many steps, it is really quite easy.

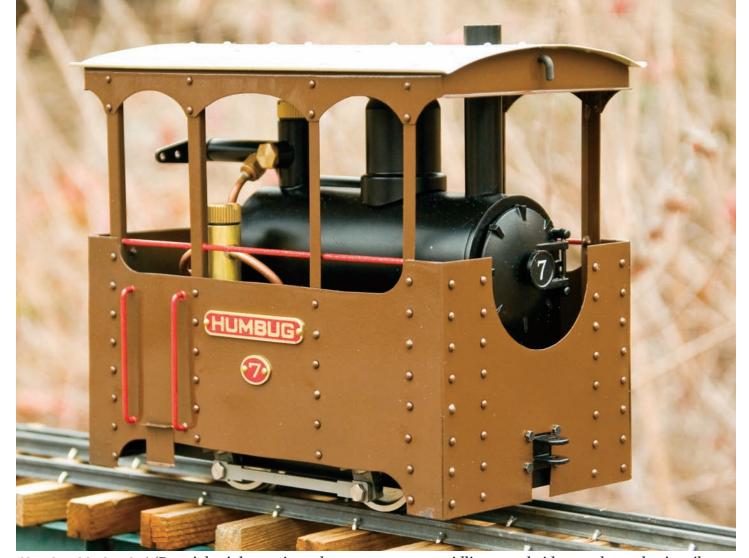
Part One: An introduction to the project, showing how to remove the "Dora" body, starting with part making.

- Part Two: Making the roof supports, the interior braces, the roof side valance and the sides.
- Part Three: Putting it all together soldering, pre-body assembly, rivets, final body assembly, roof connectors, steps and grab irons.

Getting started

The first thing to do is to remove "Dora's" body from the boiler/chassis by removing four hex screws, all of which can be accessed from below the foot plate. Two are at the front of the locomotive, under the side tanks; the other two are beneath the rear bunker, between the frames.

Once these screws



'Humbug' indeed: A 'Dora' that's been given the tram treatment, idling on a bridge on the author's railway.

have been removed, tip the body back (**Photo 1**) to clear the throttle lever, and it should slide off easily. Set the boiler/chassis aside (**Photo 2**). The body you can give away, throw away, or put on eBay — you won't need it any more.

Print out Plan Sheets 1 and 2, which are online at http://www.steamup.com/dora-tram/

There's a one-inch reference square on each sheet. Measure it to be sure the sheets printed out at 100 percent. Now glue the sheets to your tinplate (Photo **3**). I like using spray glue, specifically Krylon Easy-Tack No. 7020. The pattern will be held securely in place but will still be relatively easy to remove.

If you're using smaller sheets of tinplate acquired from tin cans, just cut the pattern pieces apart and fit them to whatever size material you have. Note: To cut tinplate up to 0.010-inch thick, all you need is a good pair of sewing scissors. The tinplate won't hurt the scissors and you'll get a nice, clean cut. (Watch the videos.) Scissors are much easier to work with than snips.

With your patterns firmly glued down, the next thing to do is to drill all of the holes on the entire sheet. It's probably best to start with the large (sev-



Photo 1

en-eighths-inch) holes that form the radii on the side pieces. For these holes you'll need a step drill that goes up to seven-eighths-inches.

Start by marking the hole on the tinplate with a prick punch. Just align the point of the punch with the intersecting lines that mark the center of the — Continued on Page 26

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Photo 2

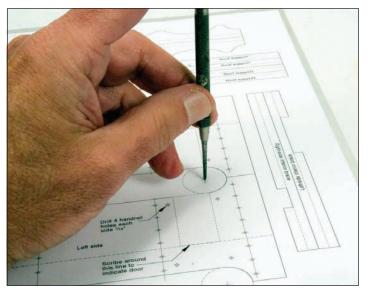


Photo 4

— Continued from Page 23

hole and press the point through the paper into the metal (**Photo 4**), leaving a small dimple. Then note the smallest step on your step drill. On mine, it's 3/16-inches. You'll need to make a pilot hole that the smallest step will just slip into (**Photo 5**). Start with a 1/16-inch drill and work up to the pilot-hole size in small increments. This will ensure that the hole remains centered.

Once you have made the pilot holes, you're ready for the step drill. On my little bench drill, the hole in the table was not large enough for the entire step drill to go through, so I had to rig up something else. I swung the table away so that the drill would clear the table edge. Then I took a piece of one-quarterinch plywood and cut a notch in it large enough for the step drill to pass through in its entirety. This I clamped to the table of the drill press, making sure

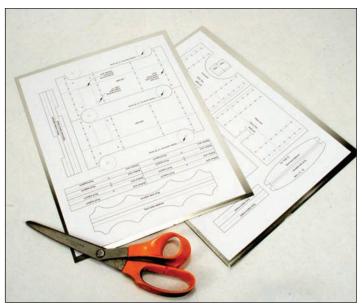


Photo 3

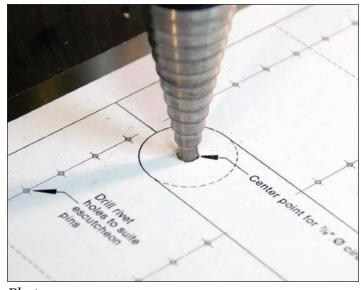


Photo 5

the clamps were set far enough back to clear the work (**Photo 6**). Once that was in place, I was ready to drill (**Photo 7**).

The cleanest way to make holes in sheet metal is to punch them. Most of us aren't equipped to punch big holes — I know I'm not. Most other methods are pretty messy. A step drill is probably the best. However, it will leave some nasty burrs on the backside (Photo 8).

Tinplate is a relatively soft, malleable metal. With a pair of pliers, peel as much of the burr that you can - all of the metal strings that are hanging off.Then, on a clean, flat, hard surface (like a Formica counter top), using a small tack hammer or (better) a flat planishing hammer, gently tap down the raised edges as well as you can (Photo 9). This will leave raggedy edges on the inside of the holes.

With the sheet face down, run the step drill



Photo 6



Photo 8



Photo 10

through the holes one last time. This will clean up the edges pretty well. We will worry about whatever's left later in the process.

Additional holes

With the large holes drilled, it's time to drill the other, functional holes. These include the following: 1/16-inch handrail holes in the sides; 1/16-inch holes in the roof-support pieces; one-quarter-inch hole in the roof (another step-drill job); 3/32-inch holes in the roof end valances; one-eighth-inch holes in the roof connectors, and the four No. 46 holes in each of the ends. Drill them as you did the others: mark with a prick punch, then drill through the paper. Clean the burrs on the backside with a flat file or a belt sander.

At this point you'll need to decide whether or not



Photo 7



Photo 9



Photo 11

you want to include rivets in your project. They are entirely cosmetic, which makes them completely optional. However, there's nothing like a lot of rivets to give an otherwise dull model some interest, and this model, being basically just a box on wheels, would certainly be dull otherwise.

A locomotive festooned with dozens of rivets has presence and authority. It knows who it is and isn't afraid to say so. Rivets are quite a bit of extra work, though, so if you decide against them, you can ignore this section.

For rivets, I use No. 18 brass escutcheon pins, soldered into pre-drilled holes. Scale-wise, the heads are probably the size of oranges, but I like 'em. These can be found at Jamestown Distributors

http://www.steamup.com/escutcheon

They're sold by the pound and are a little pricey. However, a pound will last you a long time. An alter-



Photo 12

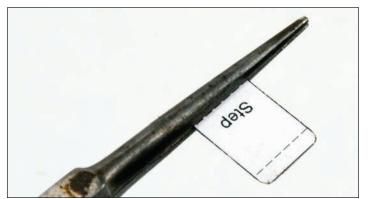


Photo 14

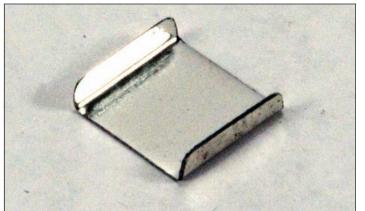


Photo 16

native is to emboss the rivets, if you happen to have a rivet embosser.

Mark all of the rivet holes the same way you did the others, then drill them all with whatever bit is suitable for your chosen rivets. Again, clean up the burrs on the backside with a flat file or a belt sander. Now it's time to make some parts.

Making parts

As I mentioned earlier, all you need to cut out the pieces is a good pair of sewing scissors. Here's a tip: When you cut tinplate with snips or scissors, one side is going to curl and one side will remain relatively flat, depending on how you use your scissors.

If you want the metal to the left of the scissors to remain flat, rest the metal against the lower blade (**Photo 10**). If you want the metal on the right to remain flat, rest the metal against the upper blade as

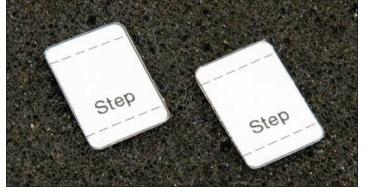


Photo 13



Photo 15

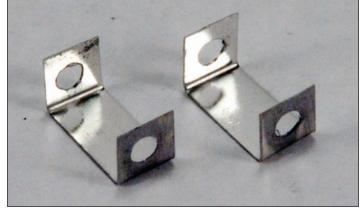


Photo 17

shown in **Photo 11**. (This is clearly explained in one of the Tinplate Girl videos.)

If you are cutting two parts apart, center the metal between the blades as you cut. This will evenly distribute the curl and make the parts easier to straighten (**Photo 12**). We'll start with the small parts so you can get the feel of the material. One of the beauties of working with tinplate is that, if you mess up a part, a new one is easily made.

• Steps. Cut out the steps with your scissors. Cut the rectangular overall shapes first, then round the corners, either with scissors or your belt sander. If they got a little curl in them from cutting, carefully tap them flat again on a hard, smooth surface.

They should look like **Photo 13** at this point. Holding a step by one end in a pair of smooth, straight-jaw pliers, carefully align the fold line with the edge of the jaws (**Photo 14**). Then bend the step



Photo 18



Photo 20



Photo 22

90-degrees (**Photo 15**). Now do the same with the other end. Remove the paper pattern. The finished step should look like Photo 16.

• Roof connectors. Cut out the roof connectors. Flatten them if need be, then bend them to shape in the same way you did the steps. Remove the paper. They should look like **Photo 17**. Cut two lengths of one-eighth-inch outside-diameter K&S brass tubing, each slightly longer than one-half-inch.

Slip these into place in the holes and carefully solder them in. One end of the tube should be flush with the outside of the connector. The finished roof connectors should look like **Photo 18**.

• End interior braces. Cut out and flatten the two pieces. Hold one in the vise, with the fold line even with the jaws (**Photo 19**). Using a block of wood, fold



Photo 19



Photo 21



Photo 23

the piece over 90-degrees (**Photo 20**). With your small hammer, tap the folded edge flat against the vise jaw to make a sharp corner (**Photo 21**). Remove the paper. The finished braces are shown in **Photo 22**.

• Roof-end valance. Cut out and flatten the two valances. Grip the bottom edge in the vise. Fold the piece down 90-degrees as you did with the end interior braces. Tap down the folded edge. With your pliers, grip the piece by one end tab, aligning the fold line with the jaws. Fold the tab 90-degrees in the opposite direction from the initial fold. Do the same with the other end. Remove the paper. The finished valance should look like **Photo 23**.

We've run out of room for this issue. Next time we'll pick up where we left off, making more tinplate parts.

Makers — including small-scale live steamers — gather at the

Text by Dave Cole. Photos by Mike Martin & Richard Murray.

It is difficult to gauge exactly how many people saw small-scale live steam running in San Mateo, Calif., over the May 15-17, weekend. More than 145,000 people attended an event where the Bay Area Garden Railway Society set up its live-steam layout, but whether all of those people actually saw trains is hard to say — if for no other reason than for many hours the crowd was almost 10-people deep. If you didn't elbow your way to the front, you couldn't see the trains.

The Bay Area group known as the BAGRS Live Steamers — has set up its layout at Bay Area Maker Faire each spring since 2010 and has

watched the crowds swell each year.

To meet the event's credo of "do it yourself," the group initially attempted to show just scratch- and kit-built locomotives operating on the layout, but neither the organizers nor the general public seemed to mind that manufactured engines are also displayed and run.

Faire organizers say that in 2015 more than 1200 projects or presentations were available at the event,



Sculpture: *50-feet tall, breathes fire.*

which ran Friday afternoon and all day Saturday and Sunday. More than 500 exhibits had "hands-on" activities. Fiftv-nine, the Faire said, were staffed by people from outside the United States.

The BAGRS group was awarded an "editor's choice" blue ribbon by Make magazine; only 50 of the ribbons were given out. The Bay Area group had also won a blue ribbon in

While more than one third of BAGRS' 270 members identify as steamers, fewer than two dozen staffed this event, under the guidance of member Rob Lenicheck of Palo Alto. The portable layout was set up by a dozen volunteers in less than

an hour on Thursday afternoon and the event was open for "VIPs" and the press on Friday afternoon.

Water was boiled each weekend morning at 10 a.m. and fires were dropped on Saturday at 8 p.m. and Sunday at 5 p.m. After Sunday's closure, the group loaded the layout into its trailer. (As serendipity would have it, the group stores its trailer in a lot adjacent to the county fair grounds where the event was held, making the return one of its shortest.)



Showing trains: BAGRS' Melinda Murray, right, explains the operation of a steam engine to Faire-goers.

"We always draw great crowds here" said Rob. "And because the Faire tends to attract science and tech 'nerds,' the crowd engages us all in rousing and knowledgeable conversations about how our engines work. Of course, most are amazed to see real steam engines in our scales."

Several of the BAGRS members ran their coal-fired engines, Rob said, "which always elicits gasps and admiration when we open the fire box door to add coal."

"People of all ages and manner of dress showed great interest in our display," said Mike Martin, a BAGRS steamer who lives in Santa Clara, who has participated in most of the Faires. "I was impressed by the quality of questions we were fielding from the onlookers."

Some of the most "insightful" questions, said Mike, came from the youngsters. "One young boy was particularly fascinated by the larger engines. His parents encouraged him to pose questions to satisfy his curiosity, but didn't take over the conversation."

The placement of the BAGRS Live Steam exhibit at the Faire has not been without its own minor controversies; Faire organizers put the layout in a relatively open space in 2010 and when the afternoon



Coal curriculum: Steve Heselton, right, gives a firing lecture.

wind kicked up, a rake of 1:32-scale boxcars owned by Joel Taylor of San Jose was tipped off the layout.

The following year the Faire moved BAGRS into an alcove inside a building, but neighboring exhibitors complained of the coal smoke. Finally in 2012 the Faire found an outdoor spot that had wind protection, and that's where it's been since.

For almost 15 years BAGRS Live Steamers had used a wooden-base, 20-foot by 40-foot portable





Waiting: *A 'Flying Scotsman'* is at the ready to run.



Steam fascination: *Left*, *watching as No. 461 is fired. Right*, *Rob Lenicheck with exhibit's blue ribbon.*



Broad appeal: *Kids, adults watch Gary Whaley's Climax pull cars.*

layout which was initially built for a local hobby store. The club eventually purchased and upgraded it with dual loops of nickel-silver 45mm track. But it was heavy and difficult to erect and break down.

In 2013-2014 the group designed and built a new 20-foot by 60-foot layout out of aluminum angle stock, aluminum-faced foam panels and steel legs. In addition to two loops of 45mm nickel-silver track, one of the loops has an "outrigger" single rail 32mm off from the inside rail, allowing o-gauge trains an opportunity to run. The new layout is designed to be broken down quickly, and fits onto purpose-built steel rolling carts that snug precisely into the group's trailer.

In addition to Maker Faire, the BAGRS Live Steam group usually makes more than a half-dozen appearances every year, including setting up at a "railroad days" event at an Alameda County park, a Father's Day celebration at the Roaring Camp and Big Trees Railroad in Santa Cruz County, and at

a history museum in Santa Clara County.

What is Maker Faire?

Founded in 2006, organizers call the event "the greatest show (and tell) on earth," but it is probably more meaningful to say that it is a combination of



Showing trains: Richard Murray, left, chats with the crowd as coal-fired No. 461 runs the loop.



Teaching moment: *Mother, child and trains.*

an old-fashioned county fair combined with performance art and a school science fair.

The Bay Area event is held at the San Mateo County Event Center, a 28-acre venue with seven indoor buildings, which range from 6500 square feet to 105,000 square feet. While in the first nine years the Faire kept itself confined to the Event Center proper, allowing visitors to use the adjacent 20-acre parking lot, in 2015 the event took over much of the lot as well, with large tents placed on the asphalt for more space protected from the sun and wind.

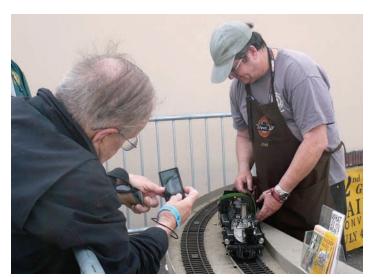
Maker Faire is Ground Zero for the "maker" movement, a loose affiliation of inventors and tinkerers who do arts, crafts, electronics, woodworking, metalworking, computers or robotics with little outside support - also known as "do it yourself" (DIY) or "do it with others" (DIWO). The movement is based around Make magazine, a publication started in 2005 by Tim O'Reilly, a longtime publisher of computer books, which also organizes the Faire.



Steam seen: Maker Faire visitors seem intrigued.



Fun for whole family: Maker Faire attendees watch Mike McKenna's Roundhouse 'Argyle' steam past.





Faire-weather friends: Left, Faire-goer snaps Joel Taylor. Right, couple finds Regner engine delightful.

In addition to the Bay Area extravaganza in May, the other "flagship" event is held in New York City in September. In 2014, 12 other "featured" Faires were produced around the world, from Barcelona, Spain, to Sydney, Australia, and from Anchorage, Alaska, to Orlando, Fla., as well as in Kansas City and Detroit. More than 100 "Mini Maker Faires" were licensed by the magazine around the world last year as well.

Supplementing non-profit and school-affiliated exhibitors, a number of commercial enterprises show at the event as well. Intel Inc., the microchip company, was the 2015 Bay Area "presenting" sponsor, while the computer-assisted design (CAD) software firm Autodesk Inc. and the search giant Google Inc. were "goldsmith" sponsors (all three are based in the Bay Area). Businesses such as Dremel (the rotary tool company) and Delta (shop tools) are sponsors

that have exhibits, as do NASA and Microsoft.

The performance-art aspect draws the attention of the TV news crews, with welded mechanical devices that crawl and belch smoke and fire, attended by young men and women dressed in so-called steam punk attire (top hats, vests and beards for the gentlemen: corsets, tall buttoned boots and long-sleeve gloves for the ladies). Electric cupcake cars - also known as muffineers — scoot around the event, with the drivers' heads showing out the top.

But from exhibit booth to exhibit booth, most showing at Maker Faire are just plain folks, excited about teaching people about their field of interest. One booth gives hands-on tutoring on using a soldering iron; another will show how to make a sodabottle rocket or a cigar-box guitar. There was a literal field of computer-numeric controlled (CNC) laser





Maker Faire favorites: Left, a circa 1900 steam tractor; right, a fire-breathing snail car.

cutters under a tent on some grass and what seemed like a room full of 3D printers.

There are many remote-controlled things - model tanks on a hilly terrain, model warships in a huge water tank and copterdrones flying both inside and out. Lapidaries show how they polish stones, quilters and weavers show how to make textiles, ceramicists and glass blowers demonstrate their skills.

The county-fair aspect is best illustrated by the food - hot dog on a stick, concessionaire hamburgers, french fries, pizza, popcorn and drinks — but a Bay Area county fair, nonetheless (paella, pulled-pork sandwiches, organic ice cream, smoothies, hibiscus coolers, Belgian waffles, crepes and "fancy fine sausages").

The Faire also plays host to speakers and panel discussions - there are nine different stages

(which are also shared with musical acts). From the start until 2014, an annual speech by Adam Savage has been one of the event's highlights. Savage, the co-host of the cable-TV show, "Mythbusters," is a big supporter of the DIY movement and the Faire in particular. Speakers this year included surgical roboticist Carol Reiley, Arduino Project co-founder Massimo Banzi and former Wired magazine editorin-chief Chris Anderson.

With all the variety of things to see at the Faire, BAGRS members frequently slip away from the livesteam layout and explore.



Power of the press: A platen printing press run with live steam.

"You can see a great variety here, from the very functional and purposeful to the totally eccentric, whimsical and peculiar," steamer Rob Lenicheck said. "It is particularly fun to see new technologies being invented and optimized which could be useful to our hobby."

Richard Murray, the BAGRS Live Steam coordinator, wrapped up the rationale for the group's participation: "Perhaps the Maker Faire will convince young people that making and playing with one's hand-built toys, like live steam trains, is more gratifying than commercial electronic toys."

Make your Accucraft locomotives run better with this trick

Burner mesh

Text and photos by Carl Weaver



Photo 1: Completed burner with the mesh attached; the slots are on the underside.

here has been much discussion over the years on whether you should wrap a butane-fired locomotive's poker burner and here is the general consensus — applying mesh often reduces or eliminates burner howl. Also, some claim that mesh makes the burner more efficient since the glowing burner heats the boiler better than a naked flame. This allows a lower gas-valve setting, which in turn may extend run time with a reduced rate of fuel use.

For the wrap, I recommend high-temperature nickel-chromium mesh and retaining wire. Other metal meshes including stainless steel have been tried, but they deteriorate over time, some very quickly. I have used nickel-chromium mesh in my Accucrafts — a Shay, a C-21, a K-27 and a K-28 with no issues. The original mesh has been in my Accucraft Shay and K-27 for many years and it is still completely intact.

The six-inch by six-inch mesh sheet I recommend

is enough for at least eight burners. The 12-inch by 12-inch sheets and larger are also available if several steamers want to go in together to wrap many burners. The spool of wire is more than enough for the eight burners and many other projects requiring strong, thin wire. One source for these items is McMaster and Carr:

http://www.mcmaster.com/

- Burner wrap: High-Temperature Nickel-Chromium Wire Cloth, 20 by 20 mesh size, .016 Wire Diameter, six-inch by six-inch sheet - Part No. 9229T33 (about \$40).
- Wire: High-Temperature Nickel-Chromium Wire with bright finish, 0.020-inch diameter, one-eighthpound spool, 110-feet long -- Part No. 8880K78 (about \$12).

Tools you will need:

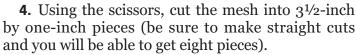
- A screwdriver.
- Either a very good file or a rotary tool (Dremel

or similar) with a grinder on it.

- A good pair of scissors.
- A wooden pencil.
- A wire cutter.
- Flat-nose pliers.

How to do it:

- 1. Using the screwdriver, remove the burner retention screw (both of them if you have two burners).
 - **2.** Remove the burner(s).
- **3.** With the burner that allows for passage of the super heater tube removed from the boiler, use the rotary tool or file to remove a small amount of material from the upper corner of the slot in the burner retention collar as shown in Photo 2. This removal will make installation of the wrapped burner past the super heater easier.



- **5.** Wrap a piece of mesh tightly around a wooden pencil to form a good fit for the burner.
- **6.** Test fit the curved piece to a burner (only the slots need to be covered, not the whole burner)
- **7.** Make the final cut, sized to cover the burner slots while leaving ample space on the top for the wire twists to fit into (see Photo 3 of wire in slot).

8. Again place the mesh on the burner, with the space on the solid side of the burner and the mesh covering the burner slots on the other side.

- **9.** Using the wire cutter, cut four three-inch lengths of wire.
- **10.** See **Photo 1** for wire placement. Starting with one of the inner wires, use the flat nosed pliers to twist four wires evenly spaced over the mesh, with the twists over the space between the mesh sides. Make sure each wire is not over a slot on the other side, but on a solid area.
- 11. Again using wire cutters, trim off excess wire, leaving about three-eighths-inch of twist.
- **12.** Press the twisted ends into the slot with each pointing forward away from the mounting collar end (see Photos 1 and 3). By pointing forward, you can guide the tabs when inserting the burner, but you don't want them to snag unseen upon removing it later.
- **13.** Place the burners back into the boiler holes making sure the twisted ends stay low in the slot (a little careful wiggling might be
 - **14.** Replace the burner retention screws and **Photo 3**: Wire twisted to hold mesh in place.



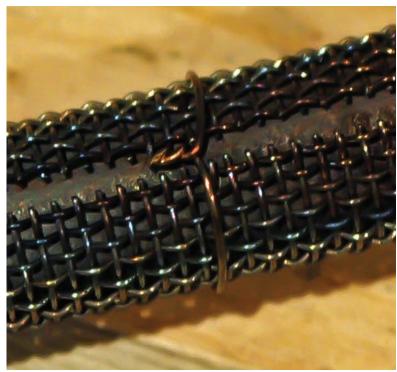
Photo 2: Corner of flange must be ground to clear the pipe.

do not over tighten them.

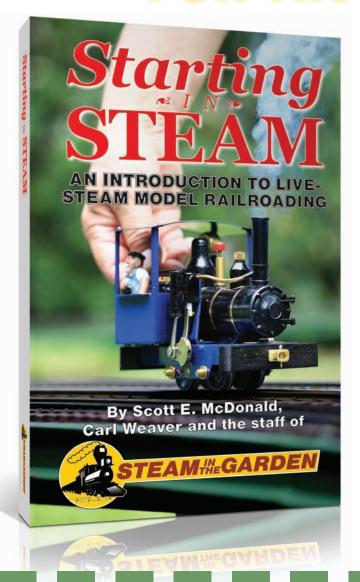
Burning with the mesh on

After lighting, look down the flue to see if the mesh is glowing red on the burner (or burners, as the case may be). This may take a few moments and once it is, adjust the flame down just enough to keep the mesh glowing red.

The glowing mesh, rather than the flame, heats the boiler, so a large flame may no longer be necessary. A lower fuel setting will support longer running. But be careful to keep your water up to a safe level.



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Vol. 25, No. 4; Issue 140; July/August 2015

Classy Class A Climax Regner steamer and kit review . Big 'Dora' Making it a 1:13.7scale railbus • Spinning metal • Cabin Fever • Speedometer • Latest waybill: Garratt from Roundhouse; in memoriam — Peter Jobusch; Accucraft UK goes with



an African steamer; Mamod saddle-tank loco.

Vol. 25, No. 3; Issue 139; May/June 2015

Steaming amongst the magnolias: Diamond-head 2015 • Laser Loco: Aspinall 0-6-0 (series Part Two) • Workshop: sample tools and equipment • Wicks: A new material • Open cab Dora' • Latest waybill: Swiss, U.S. locomotives on the way; a new version of Saxonian in 1:20.3 scale.



Vol. 25, No. 2; Issue 138; March/April 2015 Laser Loco: Scratch

building with laser-cut brass. Part 1 • How steamers in Seattle created a community • Getting an LED onto the front of Accucraft's C-19 Two former ride-on

live steamers decide to go to Gauge One . Romance, realism of coal

firing: factors to consider before taking the plunge.



Vol. 25, No. 1; Issue 137; January/February

Expand Accucraft cylinder ports • Casey Jones: a new 10wheeler from Wuhu and the engineer's history • R/C J-bar: adding steam controls to transmitter • Dummy cylinders: Give 'Dora' a more realistic look • Railroad librarian:

'Great American Railroad Stories'; 'The State Belt.'

Vol. 24, No. 6; Issue 136; November/ December 2014

Sacramento steams. The 2014 National Summer Steamup provides a fun time for more than 150 steamers • Replacing axles • Scratch-building the four-cylinder Heisler, Part Three • The backyard Rivendell & Midland Railroad, Part

Two • 'Dora' gets a snow plow (and a bell and a ...).



Vol. 24, No. 5; Issue 135; Sept./Oct. 2014

A big little locomotive: Accucraft's 7/8ths-scale 'Fairymead' • Scratch-building the four-cylinder Heisler, Part Two • The backyard Rivendell & Midland Railroad, Part One • Build a train barn · Review: Regner's

'Otto' • Latest Waybill: Accucraft 1:32-scale roll-

ing stock; end of boiler detection; new wheels...

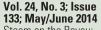


1:20.3-scale, four cylinder Heisler (Part Óne of a three-part series).

• Making Yankee-style

cross heads and guides Snowbound in Scranton — steamup almost canceled • Mysteries of abrasive water-jet

cutting explained . A



Steam on the Bayou: Diamondhead stéamers get a chance to operate a full-size locomotive . Reviews of two Accucraft locomotives: Quarry Hunslet, S.P. M-6. • Adding a pressure gauge to your 'Dora.' • Origami for passenger-car vestibules. • New products:

om three manufacturers





Review of the book 'The Angola Horror' • New products: wagons

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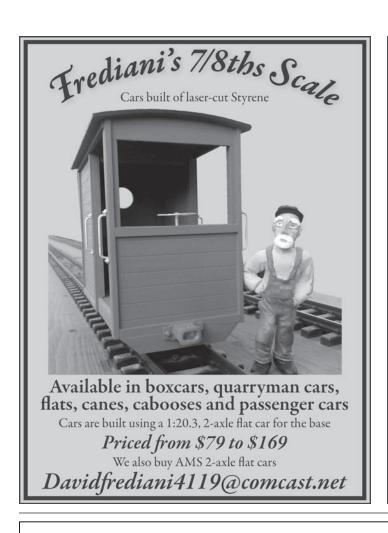
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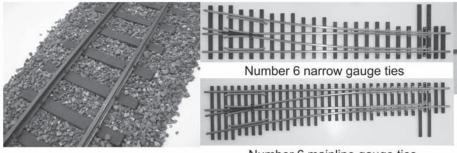
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In memoriam: Tom King — mystery man

or someone so ubiquitous in our hobby, we don't know much about Tom King. Here are some stories.

Gary Broeder, the founder of the Gauge One track maker Llagas Creek Railways, then of Morgan Hill, Calif., says he was at his local train store and told the owner he was looking for someone to help him build switches. The owner introduced him to Tom and the two launched a 20-year business relationship and friendship.

Gary introduced Tom to small-scale live steam and Tom built every switch Llagas Creek marketed over more than two decades (so, if you ever bought a Llagas switch, Tom touched you). Tom designed his own jigs and had a number of tricks that he was happy to share — but even if you watched him, you still probably couldn't make a switch as good as his.

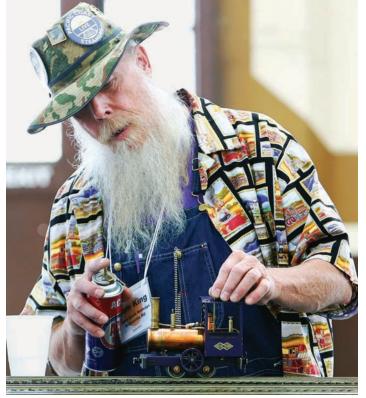
Over Mexican or Thai food (the hotter, the better, but no red meat) and a beer, Tom might reluctantly admit that he was a medic in the U.S. Army in the 1960s and did go to Vietnam, but he wouldn't recount any details of his service. He said he came to San Francisco during the Summer of Love, 1967, but quickly left for other parts.

For decades, Tom lived in a community called "Bachelor Hill" just outside the Morgan Hill city limits. A number of people live scattered over the hill, a group, the local newspaper once said, who wanted "to drop off the radar." Homes are spaced acres apart, with just grass and trees in between. In 2002, a fire on Bachelor Hill burned a number of homes, including the one Tom had built by hand. He lost most of his tools but not his locomotives, which he got into his car and off the hill before the fire swept in.

He lived on the couch of a neighbor for weeks waiting for permission to rebuild, but the county wouldn't let him. So Tom got two trailers (which the county would allow) and lived in one and used the second as a workshop.

Tom built a number of railroads for steamers in the Bay Area. When he was working on Jeff Williams' layout in Livermore, Calif., Jeff made some photos of the construction and showed them off at work. Referring to Tom's biblical-length beard, one of Jeff's co-

'Cupola View' is written by Editor Dave Cole; you can contact him at dmcole@steamup.com or P.O. Box 719, Pacifica, Calif. 94044-0719.



'Cricket' owner: Tom adjusts his Berkeley loco at Summer Steamup in 2012. Photo by Rick Parker.

workers asked (seriously or not), "How did you get a guy from ZZ Top to build you a railroad?"

The late Dr. Dan Liebowitz had a number of people work on his Woodside layout — the famed Jack Verducci of San Mateo as well as Mike Martin of Sunnyvale both spent hours on improving Dan's railroad. In the last few years of Dan's life, Tom - alongwith Paul Gamlin of Redwood City and Bill Baxley of Foster City — added a new loop to the elevated portion to make runs even longer.

Dan had many great locomotives that he didn't necessarily know how to operate; Tom spent hours showing Dan the intricacies of each and when all else failed, he ran them so Dan could watch.

From 2002-2013, Tom toiled as the official track maintenance crew for the National Summer Steamup, in addition to being the "late man," meaning he kept the steamup hall open until the last fire had been dropped, sometimes until two or three in the morning.

Tom also made sure that adult beverages were available at the summer event - a pot of strong coffee in the morning and early afternoon and cold. carbonated malt-flavored drinks later in the day.

During the fall, winter and spring, Tom would help out, arriving at wherever the steamup committee had set up a portable layout for maintenance - sometimes Gary's front yard, other times at Bob Trabucco's in Los Altos — gladly replacing burned ties and figuring out why switches wouldn't work. One winter he took up all the switches on one layout, took them home, completely reworked them and then put them back before the event.



Track work: Tom building Jeff Williams' layout in Livermore, Calif., in 2005. Photo by Jeff Williams.



Steamers: Tom with Jim McDavid (left) and Gary Broeder (right) at 2011's National Summer Steamup. Photo by Mike Martin.

An eclectic collector of live-steam engines, Tom had a Berkeley "Cricket," a coal-fired Aster JRN C62, a custom-built Garratt and a Roundhouse o-6-o "Argyle." More often than not he would install the plastic figures of the 1960s TV characters Gumby and Pokey in the locomotives, as engineers or passengers.

Mike Martin tells of the desserts Tom would make for Bay Area steamup, "I remember a particularly good crème de menthe cheesecake," Mike wrote in a recollection in the July Bay Area Garden Railway Society newsletter.

Shortly after the 2013 National Summer Steamup, Tom was diagnosed with brain tumor, and after surgery, the doctors thought they had caught it all. In 2014, he had good days and bad. At the 2014 summer steamup in Sacramento, the organizers gave Tom the Ron Brown Memorial Enthusiasm Award and hoped he would be well enough to receive the award in person. He wasn't.

Tom entered the Veterans Administration Hospital in Palo Alto last April and he lost his fight late in May. We think he was 70 (or maybe 71). There are some relatives, but he never gave us details.

One more Tom story: Your editor built a new backyard railroad in the early 2000s and after that success was convinced he could build his own switch out of Llagas Creek parts. He drew a No. 6 switch on his



Teaching: Tom fills a boiler for the late Dr. Dan Liebowitz in 2002. Photo by Mike Martin.



Shay man: Tom filling his Shay with butane at Jim McDavid's old layout in Fremont, Calif., in 2004.

computer — tracing the points, guard rail and frog printed out the result and glued it to a large plank. He laid out the ties, frog and points and carefully drilled holes in the ties, hammering down tiny spikes to hold the rails. It took days; he was quite proud of his effort and installed it on his layout. It worked.

Tom was one of the many guests who came to the first steamup. He cocked an eyebrow as a locomotive struggled through the editor's switch but didn't say a word. After all the other guests had left, Tom stayed behind and gently broke it to the editor: that switch really didn't work well. Perhaps the editor would allow Tom to take it off the layout and take it home to fix? Crestfallen, the editor said sure, asking if Tom thought it would take long to fix.

"It will take longer to take it apart to recycle the frog, points and guard rail than it will to build a new one." A few weeks later, Tom came by with the new switch, installed it and there it sits, more a decade later, a testament to Tom's skill, understanding and humanity.



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Sept. 17-20, 2015 — Fall Steamup, Staver Locomotive, Portland, Ore. Info: http://www.staverloco motive.com.

Jan. 10-17, 2016 — International Small Scale Steamup and Arts Festival, Diamondhead Inn and Suites, Diamondhead, Miss. Includes 24-hour steaming, a "flea market," seminars, dealer tables. Diamondhead Inn & Suites: (228) 255-1300. Info: Patrick Darby, k5pat@bellsouth.net, (985) 867-8695; http://www.diamondhead.org.

Jan. 15-17, 2016 — Cabin Fever Model Engineering Expo, Lebanon Valley Expo Center, Lebanon, Pa. Info: http://www.cabinfeverexpo.com.

Feb. 12-14, 2016 — 18th Annual Presidents' Day Steamup, Electric City Trolley Station & Museum (Steamtown), Scranton, Pa. Info: Clem O'Jevich Jr., (570) 735-5570 or wrunloco@aol.com.

March 26-27, 2016 — East Coast Large Scale Train Show, York Fairgrounds, York, Pa. Aikenback Live Steamers will set up. Info: http://www.eclsts. com and Mike Moore, mike@aikenback.net.

April 21-24, 2016 — Spring Steamup, Staver Locomotive, Portland, Ore. Info: http://www.staverloco motive.com.

July 4-10, 2016 — National Garden Railway Con-

vention, Santa Clara, Calif. Steam layouts. Info: http://ngrc2016.org.

July 13-17, 2016 — National Summer Steamup, Lions Gate Hotel, McClellan, Calif. Lions Gate room reservations: (916) 643-6222 (http://www.lionsgatehotel.com). Info: http://www.summersteamup.com or (650) 898-7878.

Regular steamups

Puget Sound Garden Railway Society. Two steamups per month, one at the Johnsons' on the second Saturday and a steamup at a member's track on the fourth Saturday. Info: http://psgrs.org/ or call Pete Comely at (253) 862-6748.

Michigan Small Scale Live Steamers (MSSLS). Info: http://www.mssls.info.

Greater Baton Rouge Model Railroad Club Open House and Gauge One Steamup. Info: Ted Powell. (225) 236-2718 (cell), (225) 654-3615 (home), powell876@hotmail.com.

Upstate N.Y. Steamers. Several steamups per vear in various locations around Western New York. Info: http://www.tinyurl.com/upstatesteamers.

Southern California Steamers. Contact Jim Gabelich for dates, places and other pertinent information. (310) 373-3096. jfgabelich@msn.com.

Crescent City High Iron. Steamups as necessary on an elevated backyard layout on Northern California's upper coast. Info: Don Cure, diamondd1947@msn.com.

On the Brink Live Steamers. Greater Sacramento, Calif., steamups on elevated backyard live-steam tracks at two locations and at special events. Info: Paul Brink, (916) 935-1559, paulbr@aol.com.

Pacific Coast Live Steamers. Irregularly scheduled backyard steamups, mostly in S.F. Bay Area. Info: http://www.p-c-l-s.org.

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Swiss Federal Railways SBB E 3/3

Now in the design phase, this standard-gauge 0-6-0 tank engine (called "Tigerli" in Swiss-German, which translates to "tiger cub") was widely used by the Swiss Federal Railways (SBB) in marshalling yards. It was also in service with a few private railroads in branch-line service and by several Swiss manufacturing companies as an industrial-yard switcher.

The Aster model will be in 1/32 scale, alcohol fired and available in prototypical colors such as black, green, blue and brown.

An optional "service box car" to carry extra water and fuel is also considered for production. No release date or price information has been announced. This locomotive is not sponsored by AH USA. Please check our web site for further details and updates.

Union Pacific FEF3 Nos. 837 & 844

By the time you read this, the UP FEF 3 production scheduled for release by late June may already have been sold out. Please contact us for the possibility of still-available units and check our web site for details. (Greyhound No. 837 pilot model shown in picture.)





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