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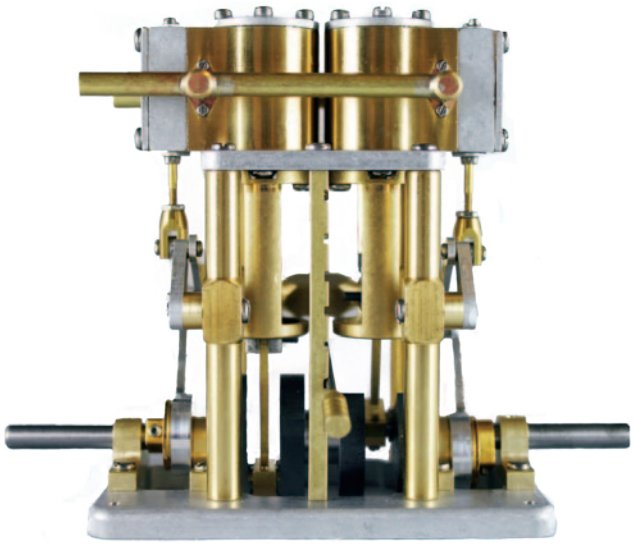
STEAM IN THE GARDEN

Accucraft 7/8ths Forney

Also in this issue: Blue Comet Build, Ferry Steam Boat, Workshop Projects, Locomotive Review... and lots more!

Fully Machined Steam Engine Kits



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Double acting, twin cylinder
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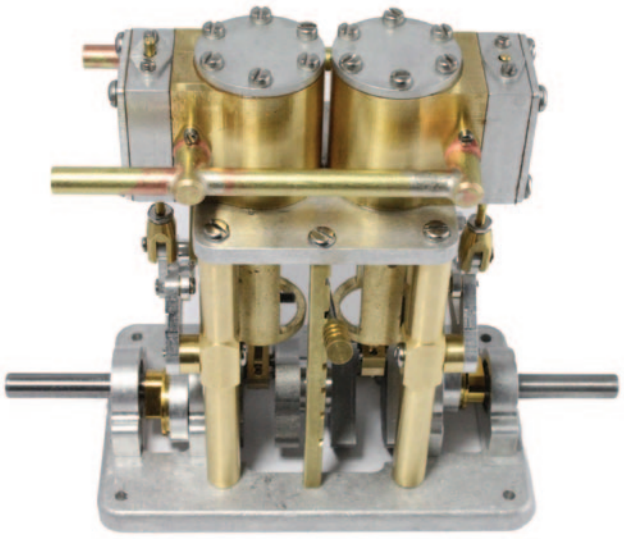
Base: 3.000" x 1.844"
Crankshaft end-to-end: 4.344"
Height: 3.375"
Weight: 327 g



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Ready to assemble steam engine kit: $295
Fully assembled and tested: $400
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SAME AS TVR1A but with shielded ball bearings
Includes full-color assembly manual
Dimensions: Same as TVR1A
Weight: 323 g

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1 3/4" DIA (5 Spoke)

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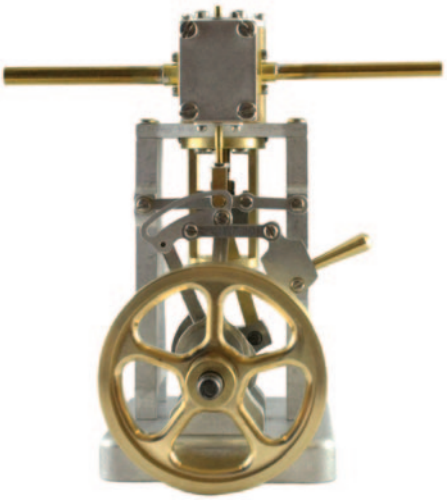

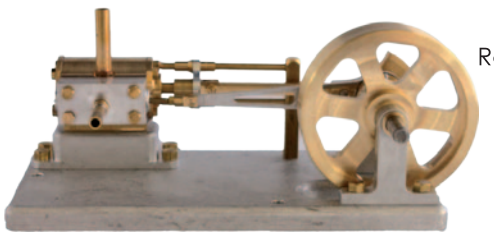

HM1

Ready to assemble steam engine kit: $95
Fully Assembled and Tested: $145
Kit includes all hardware
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Includes full-color assembly manual

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STEAM IN THE GARDEN

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

Editor ..... **Scott E. McDonald**
sitgeditor@gmail.com
(703) 490-9867

Associate Editor.....**Gary Woolard**
garishw2@earthlink.net

Advertising Manager ..... **Sonny Wizelman**
sonnyw04@gmail.com
(310) 558-4872

Circulation Manager ..... **Marie Brown**
circ@steamup.com
(607) 642-8119

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Marie Brown, Scott McDonald, Paul Scheasley, Sonny Wizelman

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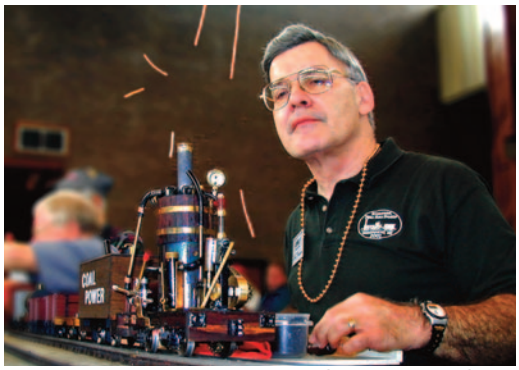
Cover: Accucraft's 7/8ths Forney sits next to its full size sister at the Wiscasset Waterville and Farmington RR. - **Photo by Eric Schade**

Also inside:

LATEST WAYBILL

In Memoriams:
John Thomson (1943-2020)

The "Live Steam" community lost a great resource when John Thomson died Feb 12, 2020. He was 77 years old having lived a full life of designing, creating, music (both singing and playing), electronics, astronomy, teaching, flying and of course, live steam model railroading.



Mike Martin Photo

I first met John at a Diamondhead Steamup in early 2001 or 2002. Because he was one of the "steamers" in Texas he became part of our group which held regular (monthly or more often) steamups in Houston, Dripping Springs and Dallas. For a while it was a close matchup who brought more steamers to Diamondhead — Texas, Florida or the UK. John never met an engine he couldn't improve. When the BAGRS kit first made an appearance from California, he saw the possibilities for yet another magnitude of expansion. John engineered and built his kit to be a coal-fired "Donkey."

Not only did he publish this and many other articles in *Steam in the Garden*, he published a pamphlet that included more than 27 modifications and improvements to the BAGRS kit. I am still the proud owner of No. 2 and I believe there may have been a total of six built. In order to have a platform to test his creations and share this hobby with others he built a wonderful double main, elevated 80-foot oval track in his backyard in Mesquite TX. His wife Carolyn supported John throughout his hobby. She also prepared many lunches for hungry steamers as we gathered several times a year.

Work caused John and Carolyn to relocate to South Dakota in 2004. There are a lot of good things to be said about the wide open spaces in that state but sadly John was a lone ranger when it came to live steam model trains. In all the years

they lived there they only made one local steamup and that was somewhere in Nebraska. They did continue to make appearances at Diamondhead occasionally and once to the summer steamup in Sacramento.

Respectfully submitted,
Jim Crabb, Lockhart, TX

Terry Smelser (1955-2020)


ISSS Photo

On March 2, 2020 the small scale live steam hobby lost one of its most enthusiastic members and ardent supporters. Terry Smelser passed at age 65 at his home in Edinburg, Va. Terry was a lifelong model railroader who was first into HO and N scale. Along the way Terry found time for a stint in the US Air Force and began his career in the petro chemical industry. In 2000 Terry attended his first Diamondhead Steam Up, and after a couple of visits to Pat Darby's track, he was hooked on live steam. After buying his first locomotive, a used Aster K4, he was "off to the races" and became a confirmed collector and trader of steam power. He enjoyed the "art of negotiation" in every sale, purchase, or trade of a new piece of equipment. Terry continued to attend Diamondhead each year, but as a "Night Runner"; most of the participants never met him until later years. Eventually he built an outdoor track at his home in Louisiana. The regular group of runners there became a loosely knit group; The Bayou Live Steamers. In 2012 Jerry Reshew asked three members; Terry, Pat Darby, and Richard Jacobs, to take responsibility for continuing the Diamondhead event. Terry was ever after the great promotor and ambassador for live steam. Until the end he worked tirelessly with his team mates to make Diamondhead a continuing success. He was quiet and shy, but always making things happen in the background. After he moved to Virginia he became very active there and participated in most of the live steam events in the Northeast. Terry was always good company at these meets. Newcomers found his advice and guidance engaging and helpful. We will all miss him and his infectious enthusiasm for our hobby. Our condolences to his wife Cindy and his family.

Submitted by Jim Stapleton

Accucraft 7/8ths Forney

Text & Photos by Eric Schade

I first heard about Accucraft's plans to build a 7/8ths scale (1:13.7) model of a Portland Company Forney several years ago, when I was asked to look over the plans drawn up for it by David Fletcher. I have firsthand knowledge of the prototype, being a volunteer helping with its restoration and operation, and I was able to make some suggestions. As soon as pre-orders were announced I had my name in. It took surprisingly long to see the model arrive at my doorstep, but I am really pleased that it has.

The model was delivered directly from the manufacturer in China as the COVID-19 epidemic was becoming news. It was very thoroughly packaged in a big heavy cardboard box with foam protecting an inner wooden box. Inside the wood box, the locomotive was firmly strapped down to a base which was itself bolted into the box (**Photo 1**). There was no sign of damage anywhere until I got my hands on it.

This is a very impressive model of a small locomotive. 7/8th-inches to the foot scale takes some getting used to. The model is very heavy at something like 26 pounds. She is 22 inches long, nine inches tall and six inches wide. The details are big and nicely made, and the model looks very good. Mine is numbered, lettered and detailed for Wiscasset Waterville and Farmington No.9. The details vary somewhat from No. 9's current configuration, and more closely resemble her during the Sandy River and Rangeley Lakes RR and Kennebec Central RR days, but they are close enough for me. The model is also available detailed and painted to represent her SR&RL days before the addition of the generator and electric headlight, as she was around 1917. The paint is a nice satin black with crisp white lettering.

Photo 1

History of the Two Foot Gauge Forney

The prototype for Accucraft's 7/8ths scale Forney was built for the two-foot gauge Sandy River Railroad which operated in rural Franklin County, Maine from the 1880's until the 1930's. Sandy River Number Five was built by the Portland Company on the waterfront in Portland Maine in 1891, one of several built for service on the Maine two-foot gauge railways.

The basic design was based on Mattias Forney's design for a small compact locomotive which had the tender tank on the same frame as the boiler and cylinders. He intended for the engine to run tank first. The Sandy River guys were a conservative lot, however, and felt that their engine should run boiler first. They were happy enough with the design that they ordered more Forneys from the Portland Company, The Baldwin Locomotive Works and others over the years. The design was simple and easily maintained.

Our engine went into service in May 1891. It was used to haul work trains, plow trains, freight trains, mixed trains and the occasional crack "Flying Fisherman" passenger train with the parlor car "Rangeley" taking up the rear.

In 1908. the Sandy River RR formally merged with several other Franklin County two footers to become the Sandy River and Rangeley Lakes RR. Our engine was renumbered as Number Six with the merger. Accucraft's SR&RL No.6 version of this model represents the prototype as she looked around this time in 1917. Change was a constant during her life. She started with a long, pointed pilot, link and pin couplers and a Russia Iron boiler jacket. Later, a steel pilot was used as was a pony plow. She received automatic Janey couplers and a short pilot in the 'teens. The SR&RL was purchased by the Maine Central RR which added a generator and headlight in the early 1920's as represented by my model. The Maine Central continued to modernize the SR&RL fleet adding air brakes in the mid 1920's, but our engine was past its prime and didn't get that upgrade. It had vacuum brakes throughout its career

After many years of hard work on the SR&RL, she was sold to the Kennebec Central RR which served the Old Soldiers Home at Togus, near Augusta Maine. This little six mile long railway hauled heating coal for the Soldiers Home. Special trains were often run on fine summer weekends to bring the public to band concerts put on by war veterans at the bandstand on the campus. But early in the depression, a trucking outfit won the coal contract and the railway closed.

The Wiscasset Waterville and Farmington RR purchased two Forneys from the K.C., including No.6.,and modified them to replace their totally worn out stable of engines. Numbered as WW&F No.9, she only served for a few months on the WW&F before a broken frame dating from a wreck back in the Sandy River days was her undoing. Number 9 was left for dead in the Wiscasset shops during the great depression, but was saved by a collector from Connecticut who stashed her in his barn. In 1993 his estate sent her back to the Wiscasset Waterville and Farmington Railway Museum. In a ten-year restoration, she received a new boiler, new frame and lots of TLC. During that time, Eric Schade was one of the volunteers assisting in the restoration. She ran under her own steam for the first time in 80-plus years in 2015. Schade is currently a fireman aboard and is learning to drive. This engine is one of two surviving locomotives built by the Portland Company. She is also one of five original Maine two-foot gauge locomotives remaining.

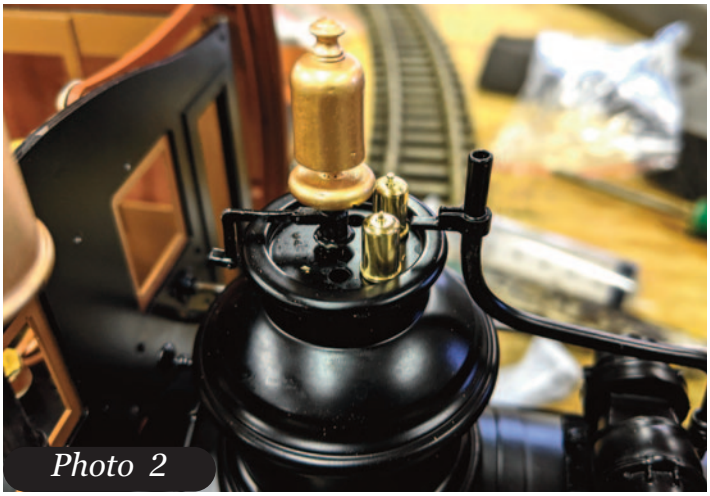


Photo 2

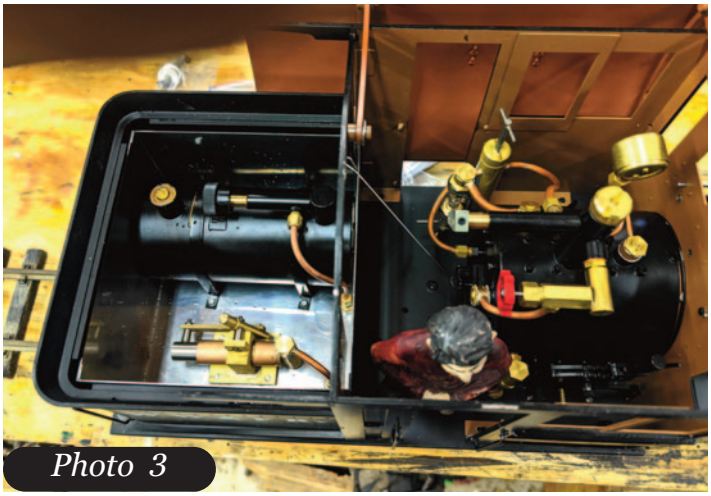


Photo 3

Some bits had to be installed after unpacking the engine. These include the truck mounted coupler pocket and the whistle and safety valve details. The truck mounted coupler pocket is optional; there is a nice casting bolted to the rear buffer. The whistle and safety valves screw into the top of the steam dome. The whistle has a cast-in lever which interferes with screwing it all the way in. I bent mine slightly so the whistle would screw all the way in and then bent it back. The safety valves just screw in (**Photo 2**).

This engine is fired with a ceramic burner. The butane tank is in the rear water tank (**Photo 3**). The model includes a hand operated pump to inject water into the boiler when in operation. The boiler is of the multi-flue variety, and has a firebox with the ceramic burner in it, appearing much like a prototype locomotive boiler. It has two safety valves set for around 60 psi. It has full Stephenson valve gear with a reverse lever (Johnson Bar) with a latching lever like on the real deal. The pistons are said to be 5/8th-inches diameter; I haven't checked. The cylinders have Accucraft's standard cylinder drains. The main drive wheels and rear truck wheels are sprung, though with very little movement possible.

The cab is entirely made of metal and is quite heavy and robust. The brown painted roof, which is also very heavy, lifts off and hinges to the side. The rear tank has within it a stainless-steel water tank with the hand pump, and the fuel tank with its control valve. A cover, painted brown, lifts off to give access. It also has a water fill hatch detail. The rear deck which supports the cab and water tank is a piece of steel about 2.5mm thick.

A single truck under the rear tank supports its weight. The truck is well detailed, including nice cast brake details which turn out to be very delicate. The truck is attached to the locomotive's rear frame by a steel bolt with a spring to keep the truck up against the loco when you lift it. A slot in the truck allows it to slide laterally while traversing switches and curves. Two bolt holes on the truck frame can be used to secure the included truck

Some details are very delicate, and I found them bent almost any time I handled the locomotive to carry it to my railway or move it around in the shop. The most delicate parts are the rear truck brake details and the front steps on the pilot beam.

Operation

Operation of the locomotive will be basically familiar to those who have operated live steamers in the past. The boiler can be filled using the fill cap in the cab. You can see the water level in the waterglass. I filled the boiler to about three quarters up the glass for my test runs. Oiling around is a little hard as the model is so large and heavy with lots of detail, I lay mine down on some of that foam rubber packaging to access the bottom (**Photo 4**). I oiled all the axles, eccentrics, pins and bearings I could see. The lubricator is Accucraft's standard with a drain. I filled that with steam oil. I filled the fuel tank with a butane/propane blend generally sold as camp stove fuel. Finally, I filled the rear tank with water, and I gave the hand pump a few strokes to prime it and test its function. I set the locomotive on a set of rollers for my first tests. I opened the cylinder cocks to drain condensate from the cylinders once I got going.

To light the fire, rather than open the smoke box door as we are used to doing, you light the fire through the firebox door (**Photo 5**). It is in the back

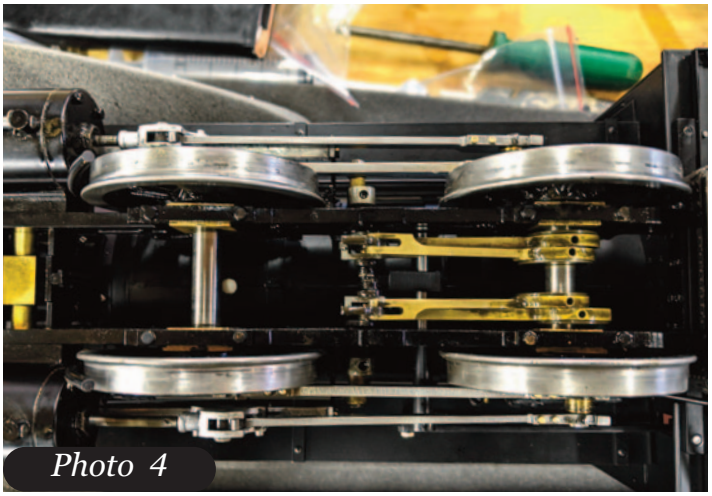


Photo 4

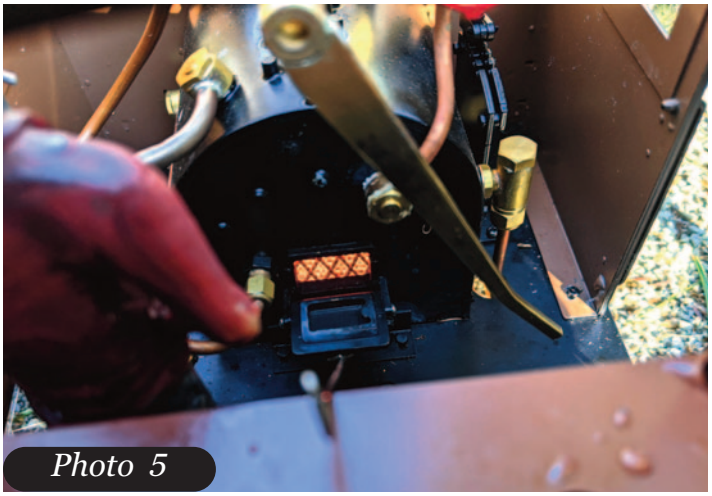


Photo 5


Photo 6

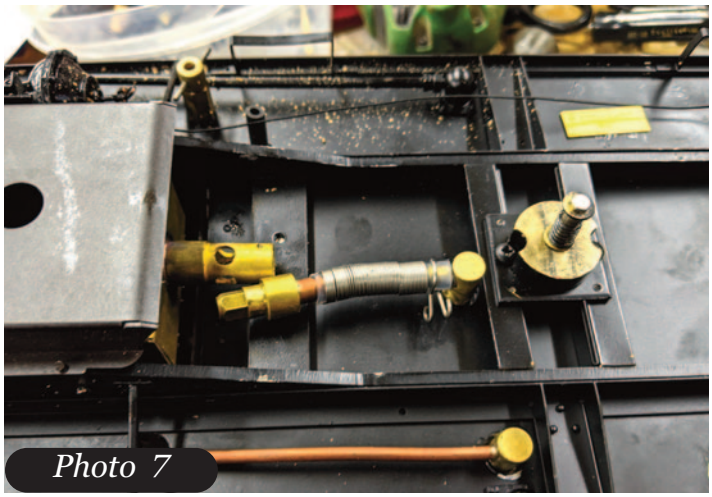


Photo 7

head and has a wire handle that makes opening and closing it somewhat easier. Before lighting off, I got out my old Accucraft draft fan which I had purchased some time back for another engine. You will need one of these. The fan fits onto the top of the smokestack and draws air through the boiler (**Photo 6**). With the fan on, the flame from my lighter was drawn into the firebox. Turning on the gas resulted in a puff and the fire lit on the surface of the ceramic which is visible through the door. In about three minutes, the pressure gauge showed some pressure, so I opened the steam blower which is controlled by a red-handled valve in the cab. I could hear the hiss of steam, so I removed the fan. The blower took over by forcing air up the smokestack as the fan had done. Just a little blower is needed. I started with a quarter turn of the handle. In about two more minutes I was up to 27psi on the gauge, so I turned down the blower a little. About seven minutes after lighting off, the safety valve popped, and the gauge read about 70psi.

I opened the throttle at this point. Water spit out the cylinder cocks, alternating as the wheels rotated. After a few revolutions, the water cleared and I could close the cylinder cocks and the engine ran smoothly. Within a very short time running, the engine slowed down. A quick check of the pressure gauge showed the pressure had dropped. I closed the throttle a bit and the pressure came back up. I had kept the blower open slightly all this time and recommend doing so during any run. After a few runs I found that I could hold about 50psi with the engine running at a nice steady speed.

Every few minutes, water must be added to the boiler. With this engine you must keep and eye on the water in the glass. I try to keep it showing about halfway up. Because of the way we work our models we cannot constantly pump in water by hand, so the water level can drop to around one-quarter glass and be pumped up to near three-quarters glass. Pumping in cool water does lower the steam pressure, which then takes some time to bring back up.

I felt that there should be more fire to maintain the pressure better during a run. I suspected a partially clogged jet, so I removed the gas jet which is

under the locomotive. This requires removing the rear truck for access (**Photo 7**). The jet can be removed by manipulating it against the wire-wrapped hose connection. The jet can then be unscrewed for cleaning. This jet has a larger orifice than other Accucraft products. Forcing gas from my fuel canister backwards through the jet cleared any debris. Likewise, opening the gas valve on the loco should have blown any crud out of the hose and fittings. Re-assembly yielded better performance, but still not perfect. I tried warmed water, and that helped too. As fuel is used, the water temperature drops, and the fuel pressure drops too, so the fire dies down as the run progresses. Most of our engines will run down the line with a rake of cars blowing the safety valve – this one will not as far as I could tell.

Well, the real proof of the engine is how it does on the railway. My railway is a ground level line which is almost level, with some slight grades and a minimum radius of about seven and a half feet on the station siding, eight and a half on the reverse loops, and much more gradual curves on the main line. During the first test run, the air was in the 40's and the frost not yet out of the ground. Some of the track had pretty good frost heaves and some tilts. I cleared the debris from track and straightened things as well as I could.

I started the engine indoors, then brought it out once the blower was working. I cleared the cylinders and gave her some throttle once the safety popped. She rolled off quite nicely. I had to chase her a bit to keep her at a safe speed. I had made an extended throttle lever which is much easier to reach than the stock R/C horn style lever. I can open the throttle about one-third turn from closed which seemed more than sufficient, with a full head of steam. Most of the line wanted much less throttle. With the throttle closed down, she could keep up pressure pretty well at about 45-50psi. She ran at a pretty sedate but nice pace, slowing down on my uphill sections and rolling along down. Part of the line had pretty good frost heaves in places and I kept a hand on the engine there, but I missed one spot and off she went. The ground was soft so there was no lasting damage. I made it most of the way out and back on my 200-foot dog bone main line before needing to add water. That required a station stop of a few minutes to build pressure back up.

I added some cars on follow up runs. She seemed to do pretty well with them too, but maybe should have been able to pull more. She would slow or stop on my slight uphill sections.

As she didn't come with couplers, I had to work something out. The first trial runs, I used a steel wire link, pinned into the stock rear coupler pocket. Later I added a custom pocket which holds a Kadee coupler modified to fit. (**Photo 8**).

I never actually timed a run. You can run this engine continuously for as long as you want by keeping water pumped into the boiler, keeping the water and fuel tanks filled. Remember that this engine cannot be left to fend for itself for long though. You have to pump water every few minutes as the fuel lasts much longer than the water in the boiler lasts. The steam oil seems to last pretty well, but should be checked on extended runs. Adding new warmed water to the rear tank will help to keep the fire strong.

Some notes on modifications I felt were needed

The rear truck can use some slight modification to the details to improve the ability to handle tight curves. Two rods which represent the top of the prototype's swing link mechanism interfere slightly with full lateral motion. I cut those bars off after noticing one was bent when I removed the truck.

I also installed the included truck-mounted coupler bar, which allows the rear coupler to follow the curves of the track. I drilled a third hole in the extension bar to allow it to mount closer in against the rear buffer. The included link and pin coupler pocket for the rear does not seem to be compatible with most off the shelf couplers, so I made my own. The motion of the truck seems very sufficient for

Photo 8

my line with its minimum of about seven-foot radius.

One set of details that is very delicate is the brake detail on the rear truck. I unbolted the parts and snipped off the brake hanger links, which are very thin parts of the cast detail. To replace them I made working links from stiff wire, and inserted them into holes drilled where the cast bolts were on the brake shoe assembly. I made brackets from bent brass strips to attach my wire links to the truck. The brake beams were then quite floppy so they would just move out of the way when hit. The addition of a piece of rod connecting the middle of the two brake beams reduced the floppiness but retained plenty of strength and resiliency.

The next delicate details are the front pilot steps, which the brakeman would ride while switching cars. Each consists of a diamond plate step and two brackets which attach to the front buffer beam next to the pilot (cow catcher). The brackets are very thin and Accucraft decided they needed reinforcing, so they added a second bracket behind, which bolts to the bottom of the buffer beam. The problem is the bolt where the two connect near the step. The bolt hole leaves scarcely any metal to support the step. Every time I looked at these at least one was bent. Bending it back solves the problem once or twice, but the ease of doing so shows the problem. I will replace the entire foot-step assemblies with stronger brackets and a step bolted or riveted together. If you are not interested in making these replacement detail parts I suggest you remove the originals, they will break off anyhow. A suitable wrench is included in the packet of parts provided by Accucraft.

The vacuum brake details are less delicate and are not so much in the way. However the vacuum hose details, which would attach to a car being pulled, are at both ends of the locomotive. These details are cast brass and are very stiff. They are bent in such a way that they stick out a long way beyond the end of the locomotive. Bending them back in closer to the loco should fix that and prevent damage.

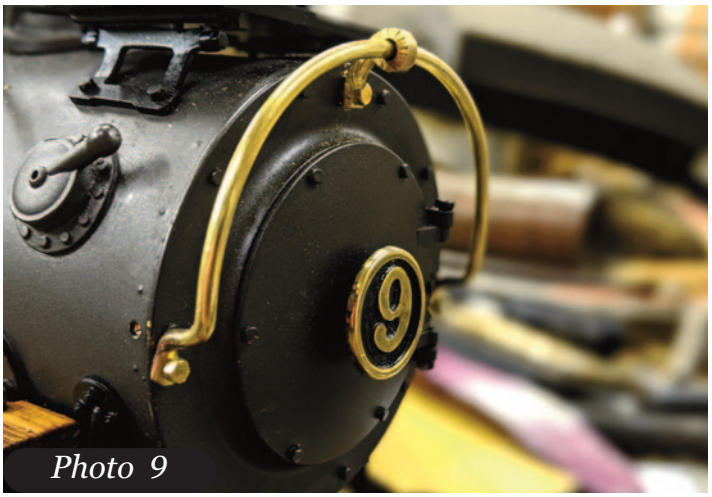


Photo 9

Another thing I felt needed attention right away was the suspension. Setting the new engine on the table I could not feel any motion in the suspension. My outdoor track is not perfect, and some motion will be needed to keep all the wheels in contact with the rails. I turned the engine over to investigate what was what. I found that in fact the main axle journals did have springs, but the keepers for the journal boxes prevented any motion. They have two bosses that stick down into the slot where the journal boxes ride in the engine frame. I simply reversed these keepers so that the bosses stick out instead. This gives the axles about 3/32-inches of motion. The springs seem to be of suitable stiffness and with this fix the engine tracks quite well. I would recommend this change to everyone. The same thing can be done to the rear truck, but I didn't feel this was as necessary.

I have done some detail modifications to make the model mine. First was a new number plate made from a brass turning with a sheet brass numeral 9, silver soldered in place (**Photo 9**). This more closely represents the current number plate. The stock plate is fictional for No.9, showing "Portland Locomotive Works, 1891" which looks fine but was never made. I also replaced the vacuum brake cylinder with a vacuum brake pot and diaphragm like the one I made for the prototype. A small project was polishing the stock whistle, which is a nice brass casting. These were just personal things.

I also replaced some of the metal details with wood where wood is on the prototype. This work includes making a new cab and rear deck. Later, I may make a new pilot too. I like working with wood, and most of my engines have varnished walnut cabs. This saves about five pounds of weight and should make the engine a bit steadier on the rails, and able to pull more weight in cars. If you want to do anything, I suggest you replace the weighty cab roof with wood. Use the original roof as a guide to saw out three to five rafters with the

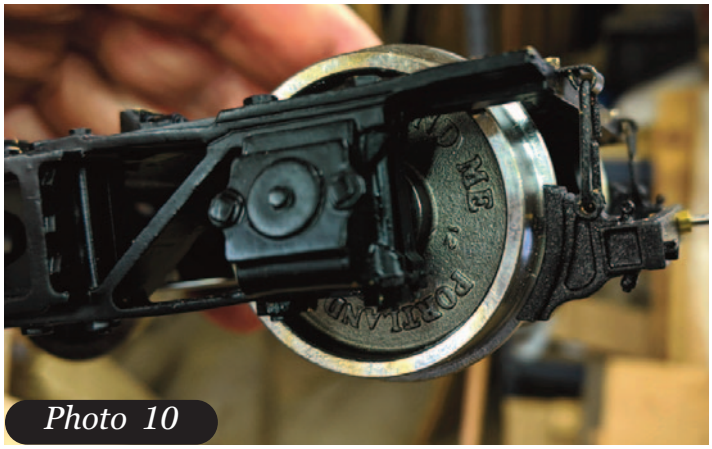


Photo 10

swooped shape, glue them onto a piece of 1/16-inch plywood to follow that shape, give it all a paint job and you are well on the way. Add some canvas roofing and trim for extra points.

I ordered two axles of the Train Department's very nice cast 7/8ths scale "Portland Company" 20-inch wheel sets. I replaced the stock wheels and these new wheels look very elegant just as they come (**Photo 10**). I didn't paint them, wanting to see the nice casting. Tell Jay that you want to use the wheels for this purpose, and he can supply nice ball bearing adapters to make the new wheels fit in the stock journal boxes.

I will probably also add the Train Department's axle pump when it is ready. It sounds like installation should be reasonably easy and not require removal of wheels.

Other things I am thinking of include a water tank heater run off of boiler steam. This might improve performance. A radio control set up on my railway is very handy. Perhaps a working whistle too, for fun.

Summary

This is a really nice model of an interesting and unique locomotive. It is well detailed and runs quite well. I do wish it had more steam power but am not dissatisfied. I am pleased to have a model of the locomotive I work with at the museum, and one which is fitting with my garden railway and the cars I have built over the years. I would recommend this engine to anyone who is a fan of the Maine two-foot gauge railways or unusual locomotives in general.

At home in the Maine woods on Eric's garden railway.

Specifications

Scale:	7/8ths Scale
Gauge:	45mm
Minimum Radius:	6 1/2 feet
Length:	22.1 in. (562 mm)
Width:	6.1 in. (155 mm)
Height:	8.7 in. (221 mm)
Fuel:	Butane/Ceramic burner

Features

Safety Valve,
Full working Stephenson valve gear
Forward/Reverse Johnson bar
Lubricator
Pressure gauge
Water level gauge
60 PSI working pressure
Hand operated water pump

Building the Blue Comet Part 3

Rick Parker Photo

Text & Construction Photos by Bill Allen

Boiler

The substantial boiler of the Blue Comet, with its large firebox, was the reason the engine could pull long loads of heavyweight cars at sustained high speeds. The boiler had a slight wagon top rise in the back as well as flared out firebox sides. My boilers were more conventionally shaped but with a prototypical looking wrap.

I started with copper pipe which has an inside diameter of two and one-half inches and an outside diameter of two and five-eighths inches. I measured the length of the firebox from my drawing and then on the table saw, I set the fence to 1-5/16-inches to the center of the blade and set a stop on the fence equal to the firebox length. I raised the blade to two inches so that it wouldn't hit the top of the pipe but would give a fairly square ending to the cut. I then cut the vertical slit. Then I set the blade height to one half the outside diameter (1-5/16-inches) and did the cross cut using the miter gauge. The cut end of the pipe was then annealed by heating it till it glowed red (**Photo 3-1**).

After annealing, the firebox was formed using a wood former cut on the band saw from a piece of four-by-four lumber. On the right of **Photo 3-2** you

Photo 3-1

can see where a cut-off-piece of the two and one-half inches pipe is set on the top to make sure the upper radius hasn't been distorted.

I then measured and drew out all of the hole positions. I center-popped them and then on the drill press, I started the holes with a centering drill bit (**Photo 3-3**). Then using a step drill I drilled them to size (**Photo 3-4**). The step drill I have drills out to about 0.020 inches undersize. This is actually good as when making my bushings, I can turn a step in them which makes it easier to solder them. **Photo 3-5** shows a bushing being cut from three-

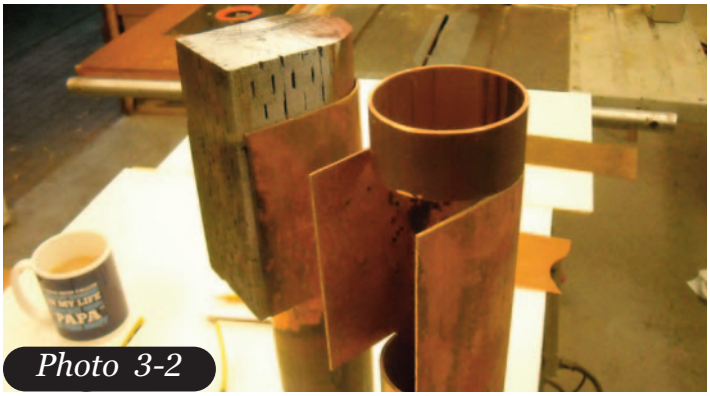


Photo 3-2


Photo 3-3

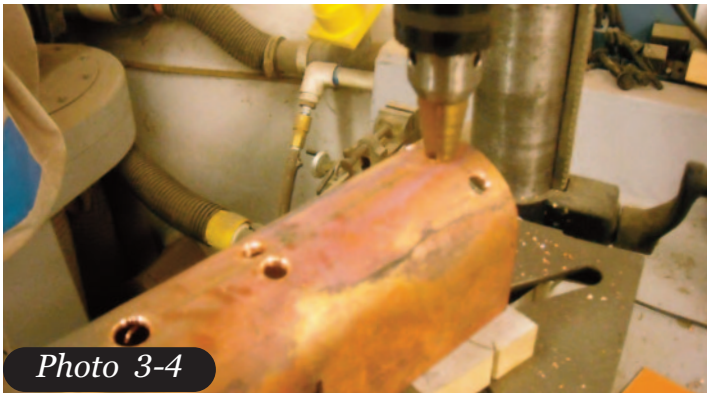


Photo 3-4

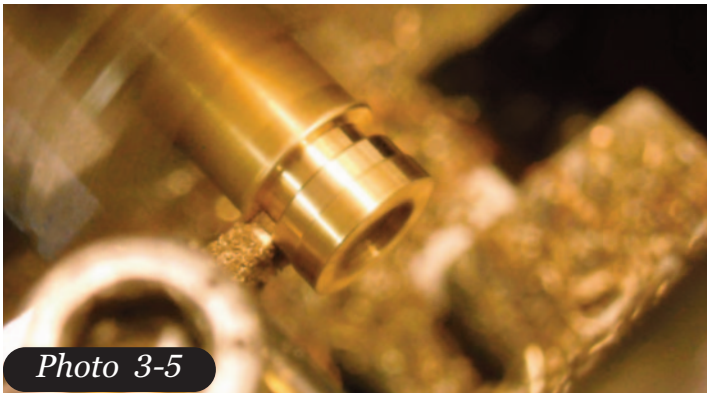


Photo 3-5

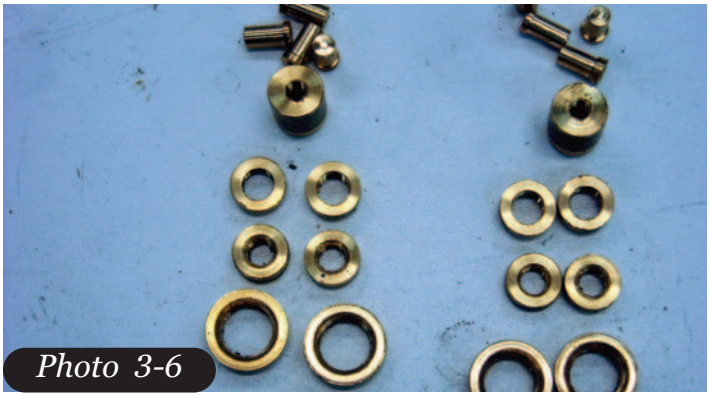


Photo 3-6


Photo 3-7

eighth inch stock with the step turned before parting it off. The bushings are needed because the copper gets very soft after being annealed from the heat of silver soldering, and the 1/16-inch thickness wouldn't be enough to hold tight threaded fittings.

Brass should not be used in a boiler as the zinc in the brass will leach out over time (like twenty years) and cause the fittings to weaken or crumble. I have no personal experience of that but it is better to be safe than sorry.

Photo 3-6 shows the bushings for two boilers. At the top of the photo are the well nuts. They are called this because like a well they have a bottom. Thus they are used for attachment and not for plumbing purposes. The four small ones will receive 2-56 screws for mounting the throttle to the backhead and the smokebox to the front tube sheet. The one large one is for the front boiler mounting and is tapped to 8-32. Of the four small bushings with through holes, two are tapped to M5x.5 for the safeties and two to M6x.5 for the banjo bolts. The large bushings at the bottom are tapped to 3/8-24 for the steam dome and filler plug.

Photo 3-7 shows the filler plug bushing which is chamfered to receive an o-ring, and the two bushings for the 6mm banjo bolt which are flat at the top to receive a special banjo fitting. The top of the two rear stays can also be seen here.

Each boiler has five half-inch tubes and one five-eighths inch tube (**Photo 3-8**). The larger tube is where the superheater tube goes from the backhead to the smokebox. They were all cut to length on the table saw.

Photo 3-8

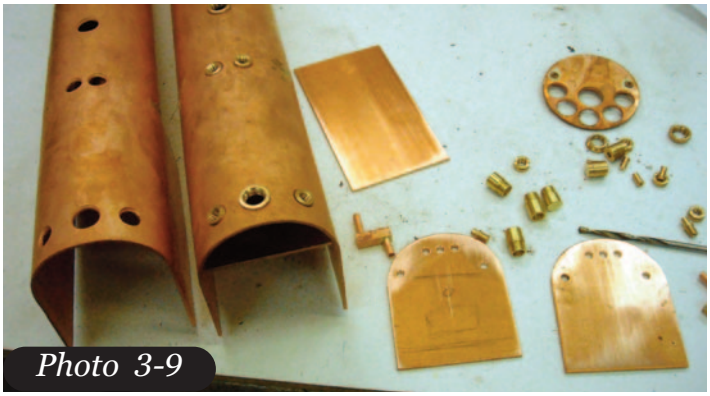


Photo 3-9

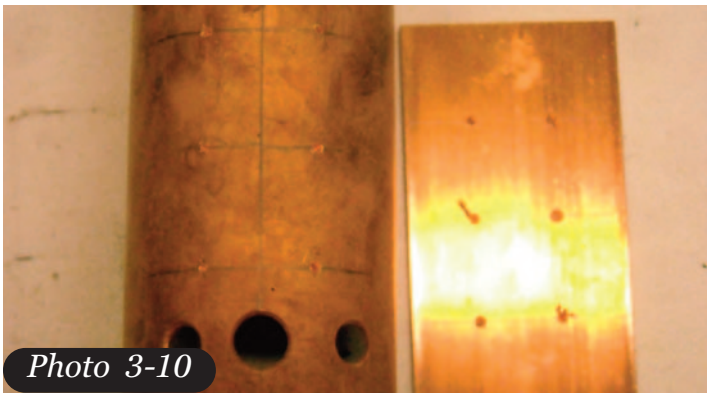


Photo 3-10

Photo 3-11

Photo 3-9 shows most of the boiler parts before soldering. On the left are two boiler shells, one with the bushings set in place. There is a rectangular crown sheet and the round front tube sheet as well as the horseshoe shaped backhead and several fittings.

Stays need to be used on any flat area over one square inch. I used 3/16-inch copper rod for this and spaced them at one-inch intervals. This crown sheet will have six stays. I measured and marked the position of the stay holes on the crown sheet and the boiler shell (**Photo 3-10**) and drilled them out to 3/16-inches

When soldering a boiler of this type, the hardest part is the crown sheet. Because it is in a confined space, a normal butane, MAP, or propane torch will go out from lack of oxygen. A Seivert or similar torch which draws the air near the handle and not at the tip will stay lit. I also use an acetylene/air torch for getting into tight spaces. I first set everything in place. The stays are flattened on the ends to keep them from slipping through. Small rings of 1/32-inch solder are wrapped around each stay and snippets of 1/16-inch solder are placed on the sides. Flux is brushed over the entire inside of the box and it is now ready for soldering (**Photo 3-11**). Silver solder flows very well at about 1100 degrees but both sides of the joint must be close to that temperature. If both sides of the copper are too cool, the solder will just bead up. If one side is hot but the other side is too cool, the solder will flow away from the cool side towards the hot side. To prevent this from happening, the heat should be directed towards the pieces with the highest mass first. Once two or more pieces have been silver soldered together, they are as one for heating purposes. Because of this much heat needs to be directed at the boiler shell, especially the end with all of the tubes soldered on. I heat the assembly from the outside till I see the flux start to melt. Then, I direct the heat into the firebox where the solder snippets along the sides start to melt and flow into all of the cracks. Then the stays get the heat till the solder rings melt and flow. I can then use solder from my roll to do the vertical seams and hit any areas which the snippets or rings didn't fully cover.

The last thing to be soldered on is the front tube sheet. It needs to be secured for soldering. I drilled three small holes (about 0.046-inches) equally around the boiler shell and ground or sanded some 1/16-inch copper rod to a taper. I then drove them into the holes for the front tube sheet to rest on. **Photo 3-12** shows this as well as the well nuts which will hold the smokebox on. While soldering, I hit the three copper pieces with solder.


Photo 3-12


Photo 3-13

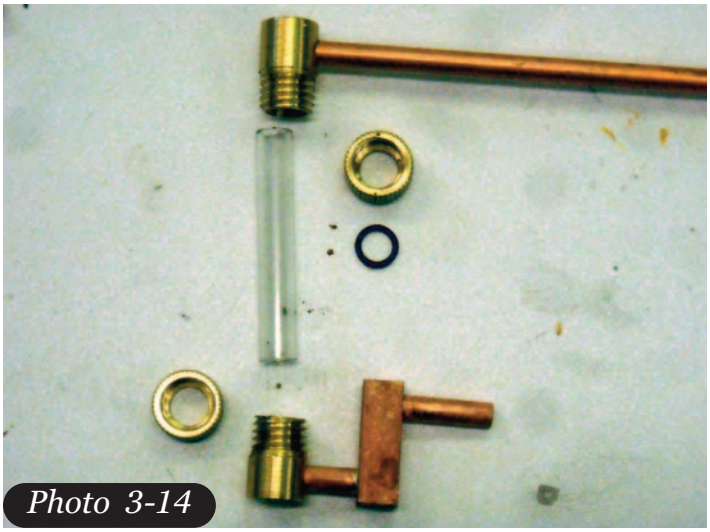


Photo 3-14

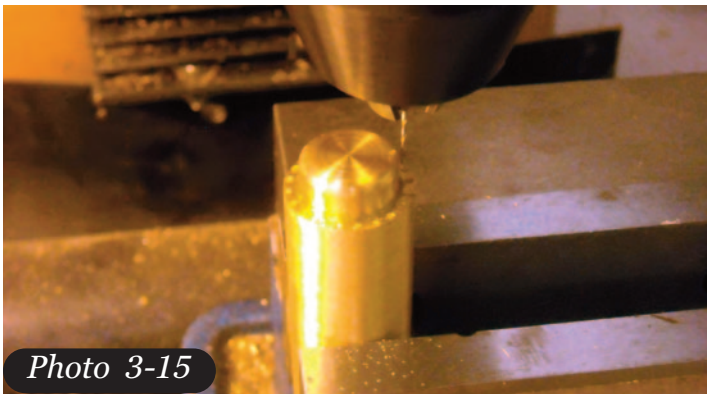


Photo 3-15

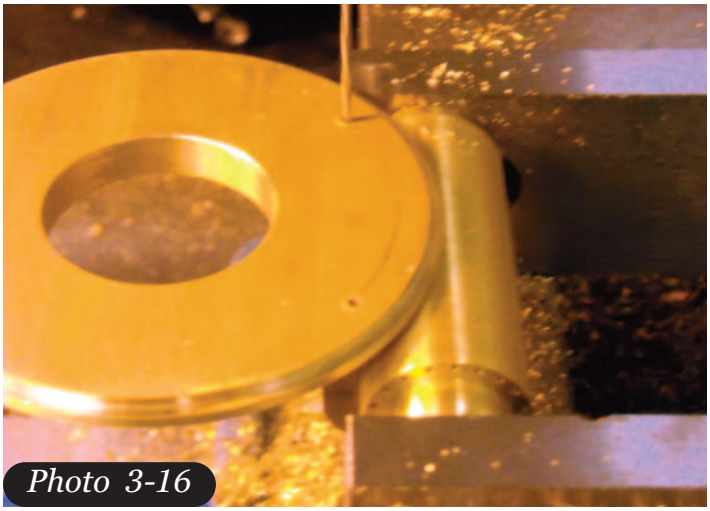


Photo 3-16

The boilers were then leak tested, any leaks were re-soldered, and they were soaked in citric acid overnight and then cleaned up (**Photo 3-13**).

Photo 3-14 shows the sight glass which goes onto the rear of the boiler. The glass is 6mm and the tubing is 5/32-inches. All holes are one-eighth inch or larger.

Smokebox

One of the distinguishing features of the Blue Comet was the Elesco feed water heater which was transversely mounted to the front of the smokebox. I started by turning the shape in the lathe from bar stock. Then on the mill, I drilled 20 holes in each side for rivets (**Photo 3-15**).

I made mounting brackets from one-eighth inch flat stock by cutting out the shape on my one-eighth blade band saw and finishing up with the one-inch belt sander and the one-inch drum sander. The brackets were bolted on to the water heater to hold them in place while they were soldered on. Then the brackets were drilled out and bolted to the smokebox front from the rear (inside) (**Photos 3-16** & **3-17**). The completed assemblies are shown in **Photo 3-18.**

One rivet hole on each side of the smokebox is left open and a 00-90 screw replaces the rivet to secure the smokebox front to tabs which are silver soldered on (**Photo 3-19**).

There are sixteen dogs on each smokebox door

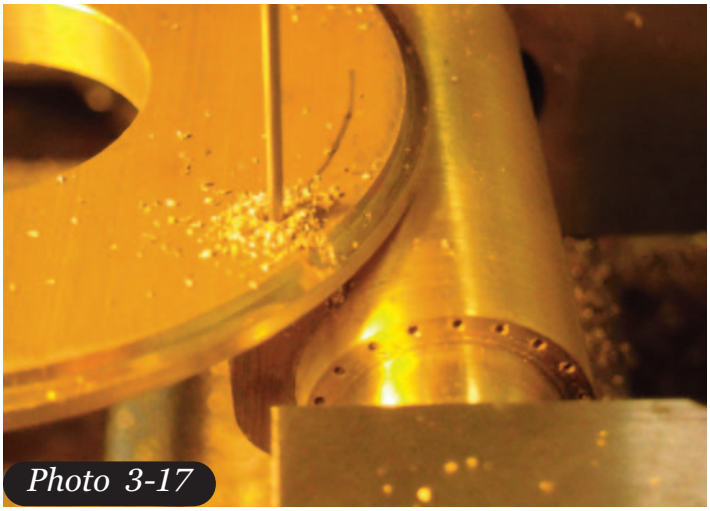


Photo 3-17

Photo 3-18

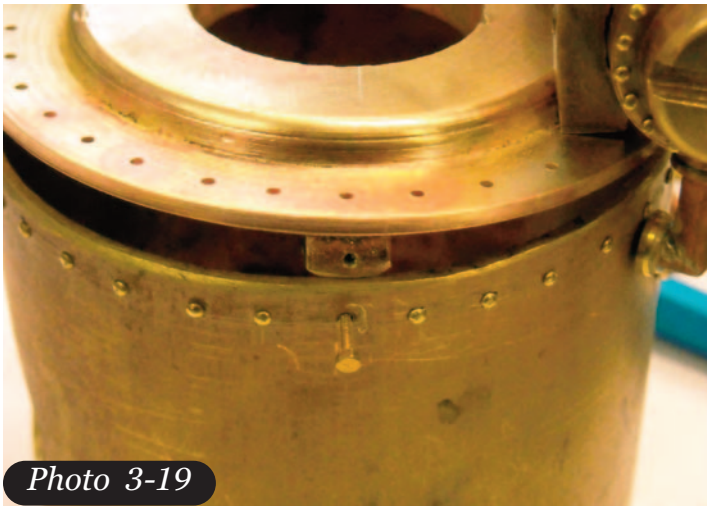


Photo 3-19

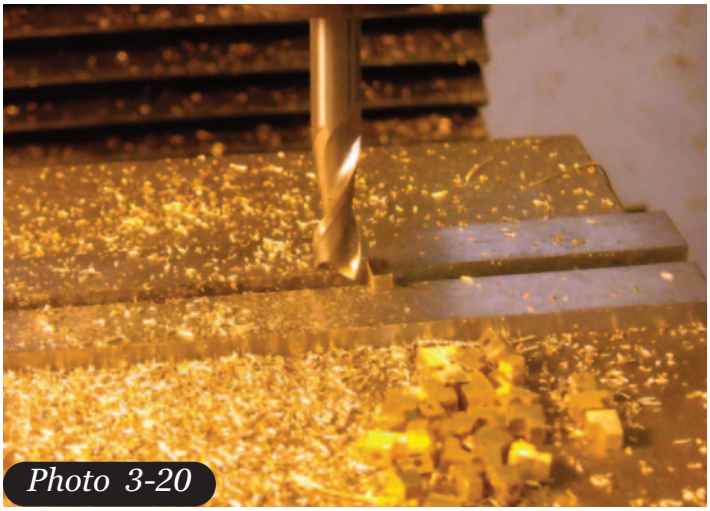


Photo 3-20

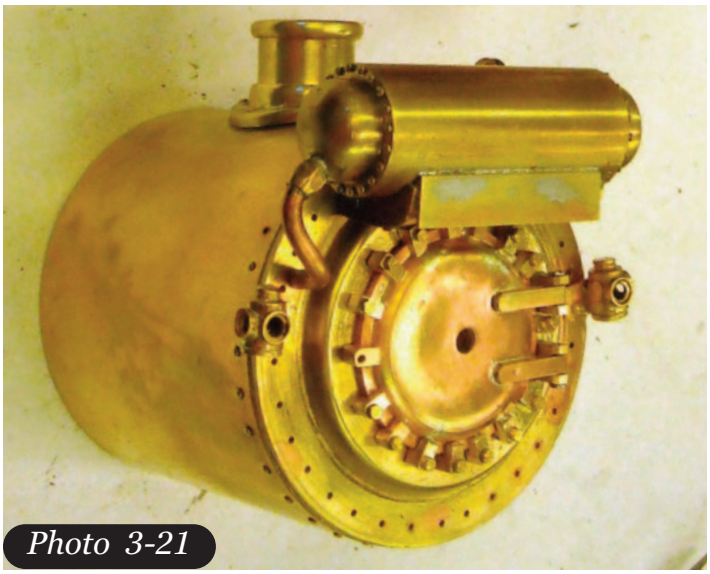


Photo 3-21

Photo 3-22

which had to be individually milled and drilled. (**Photo 3-20**). Unfortunately, after I had them mounted I didn't like the look. So I mounted them in the mill vice and cut 1/16-inch off the height of each one. A name plate board is added as well as piping (**Photo 3-21**).

The Trackside Detail marker lights and the stack finish off the two smokeboxes. **(Photo 3-22)**.

In the next issue, we will cover the wagon top boiler wrap, the ceramic burner, and the domes.

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Important contacts

Patrick Darby
Registration
15616 Hwy 1085
Covington, LA 70433
(985) 867-8695
k5pat@bellsouth.net

Richard Jacobs
Manager
(504) 343-8091
trainmax@yahoo.com

Terry Smelser
Activities Director
(985) 373-7593
onyx1955@aol.com

Diamondhead Inn and Suites
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Workshop Project - Live Diesel

7/8ths SCALE GAS POWERED DIESEL- ELECTRIC LOCOMOTIVE

Text and Photos by Dave Frediani

The first time that I saw a gas diesel-electric locomotive was in the 1995 September-October Issue 30 of *Steam in the Garden Magazine*. It was an ad for Potomac Steam Industries, advertising the Wada gas diesel-electric locomotive built by Kosaku Wada of Wada Works Company of Yokohama, Japan (**Photo 1**).

The Wada locomotives were announced using a custom brass 1/32nd scale GP7 diesel body, (production unit was a GP9), and were powered by a two-cycle gas model helicopter engine.

After a few more years Jerry Hyde of Hyde Out Mountain came out with a gas powered diesel-electric locomotive using a two-cycle model airplane engine in a Marklin Maxi F7 body (**Photo 2**).

The Wada and the Hyde Out Mountain engines both seemed very complicated to me and I thought there had to be an easier way, but I didn't give it much thought at the time.

After going to the International Small Scale Steamup at Diamondhead, Mississippi and seeing a Wada run I knew that I had to build one, but how? Being on a fixed income I didn't want to spend a lot of money not knowing if it would work out or not.

While I was looking around for what I may need to build this thing in 7/8ths-inch scale and as compactly as possible, my good friend, Art Busalacchi found just what I needed to start this project – a small four- cycle overhead cam engine with an electric starter. The engine is Toyan model FS-100, made in China. Total cost of the engine was $229.00 with free shipping. I was now off and running. After receiving the engine, I decided on the smallest dimensions that I could get away with; nine and three-quarter inches long by four and one-half inches wide by eight inches tall. The locomotive would be built in a box cab style and weigh no more than seven pounds.

As always, the cab would be built out of 1/16th-inch and one-eighth inch laser cut styrene. The base plate would be 3/16-inch aluminum cut to nine and three-quarter inches long by four and one-half inches wide.

I started the assembly by first mounting the engine as close to the front of the base plate as possible and centering the engine from side to side. The engine has four, 4mm mounting holes on the bottom of the engine. Using four quarter-inch diameter by half-inch long stand offs and four 4mm x 18mm countersunk socket cap bolts the engine was

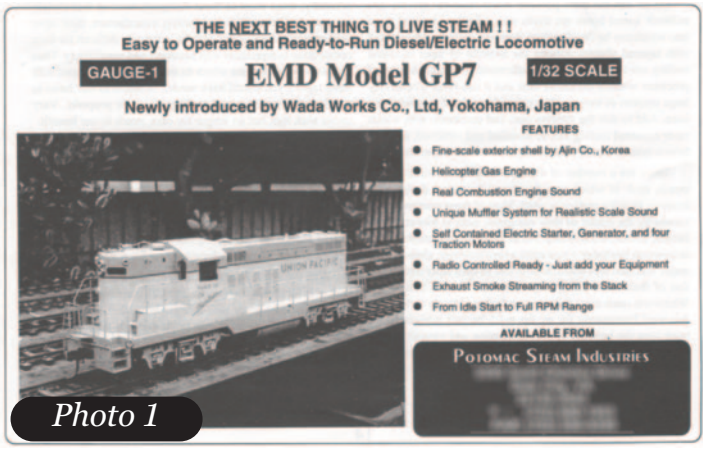


Photo 1

Photo 2

mounted (**Photo 3**).

Next I ordered a modified flywheel with a 5mm shaft to except a 19-tooth gear by Robinson Racing Products (R.R.P.) for my primary gear.

It's off to Art's house again to have him machine a bushing for the 50-tooth gear by R.R.P., part # 1250, that will fit the 8mm shaft on the electric motor that I'm using for a generator. The generator has a two-inch diameter body and is three and 5/16th inches long. It's also a 24 volt x 35 watt motor. Another friend of mine, Bart Cook, supplied the two gears and the electric motor.

I moved the generator around until I had the best meshing of the gears, and marked the spots for mounting plates (**Photo 4**). Please keep in mind that all mounting screws and bolts are drilled into the base plate and countersunk to make room for other things that will be mounted under the base plate. Almost all the mounting bolts are 6x32 or 4mm.

Again it's off to Art's house, this time it's to talk about speed controllers, and he had just what I needed – a Minicon Speed Control unit used on power boats. The speed controller was very easy to install.

I'm using an L.G.B. 0-6-0 motor block assembly (**Photo 5**). The only thing that needs to be done to the motor block is to remove the brushes from the wheels, remove the electric pick up shoes and solder two wires to the pickup terminals.

Now for the wiring. The positive and negative wires from the L.G.B. motor block go to the positive and negative wires on the speed controller, and the positive and negative wires from the generator go to the two remaining wires on the speed controller. Last of all the three 2.4 GHz radio control wires go to the servo marked throttle and then from the servo marked battery to the battery box. I used a battery box with four AAA batteries.

The starter motor has three wires which go to the starter relay. The starter motor is a three-phase motor, so if it doesn't turn over after hooking up your wires, just switch any two wires and it will start to turn over.

It takes an 11.1 volt battery to start the motor. I use a quick disconnect for my battery since it's only necessary for starting. I also installed a crankcase catch can, built out of half-inch copper pipe, that catches all the crankcase waste.

With the engine running at about 500rpm to 1000rpm the electric generator is putting out just under 13 volts, and your speed and direction are both controlled with the speed controller.

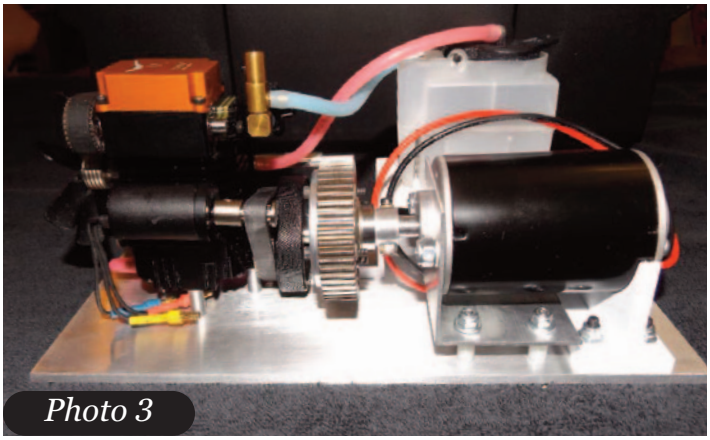


Photo 3

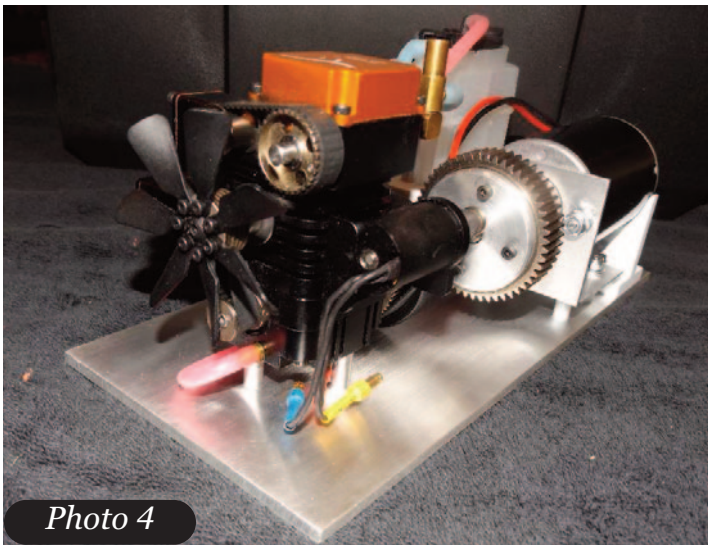


Photo 4

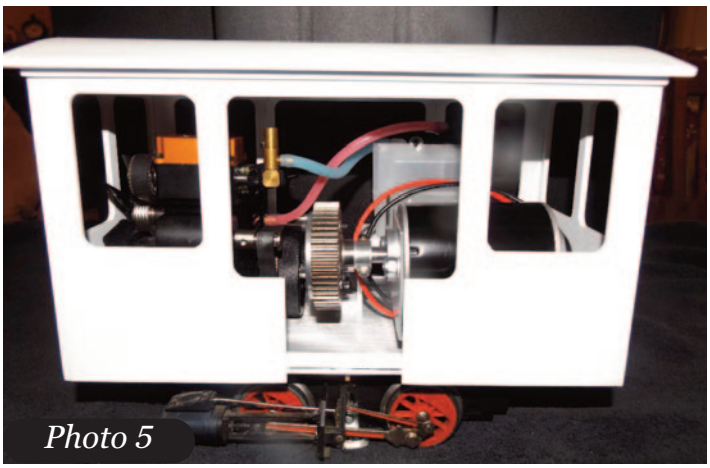
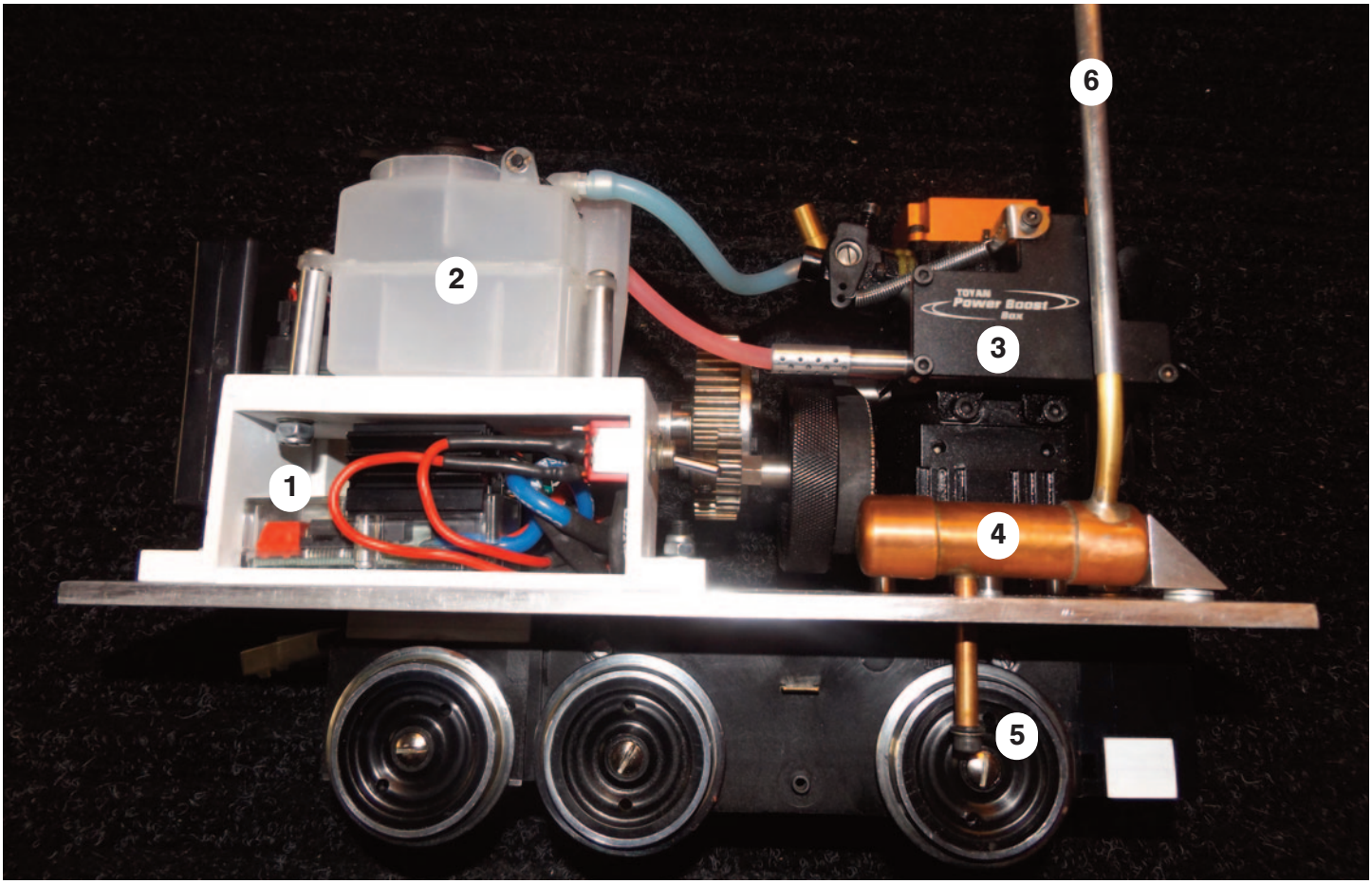


Photo 5

I would like to thank my friends that helped with this project.

- Art Busalacchi (research and development)
- Bart Cook (parts guy)
- Bill Bivings (research on electric motors)
- Richard Van Slyke (metal fabricator)

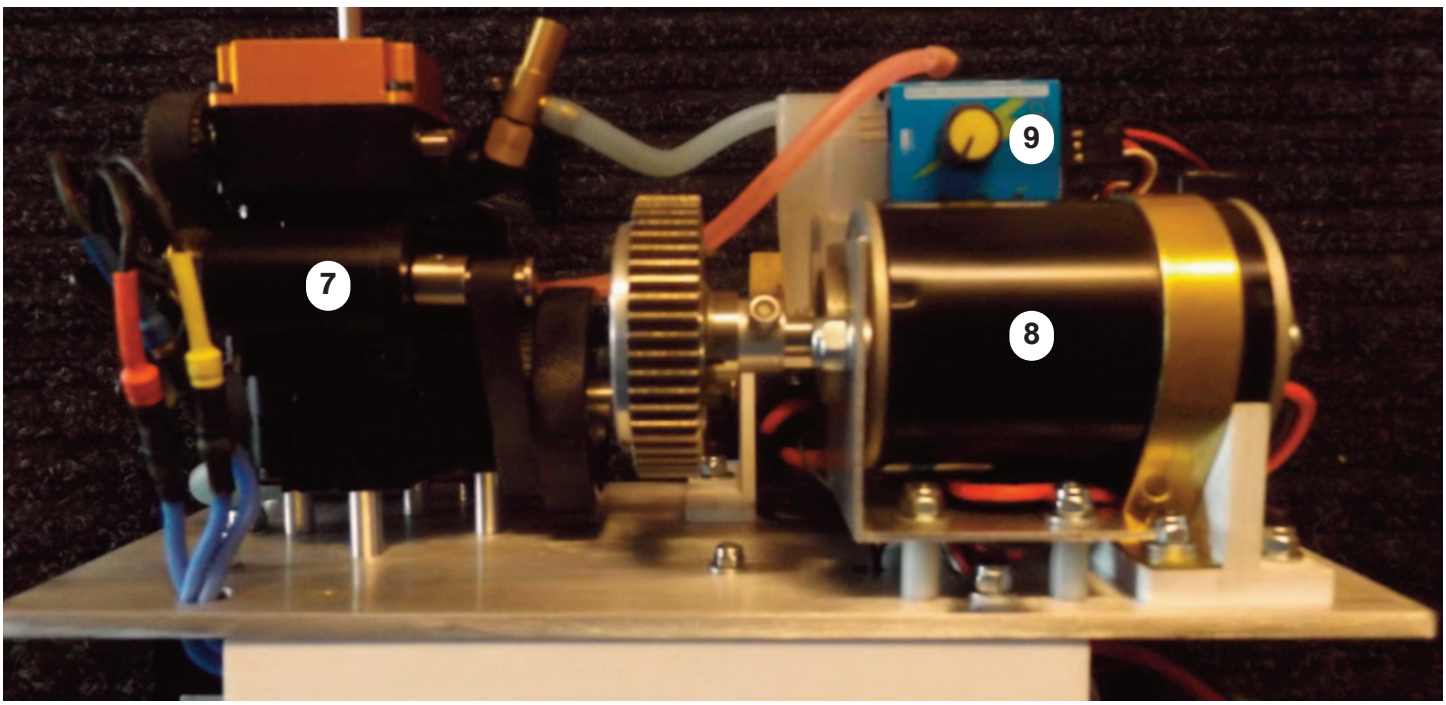


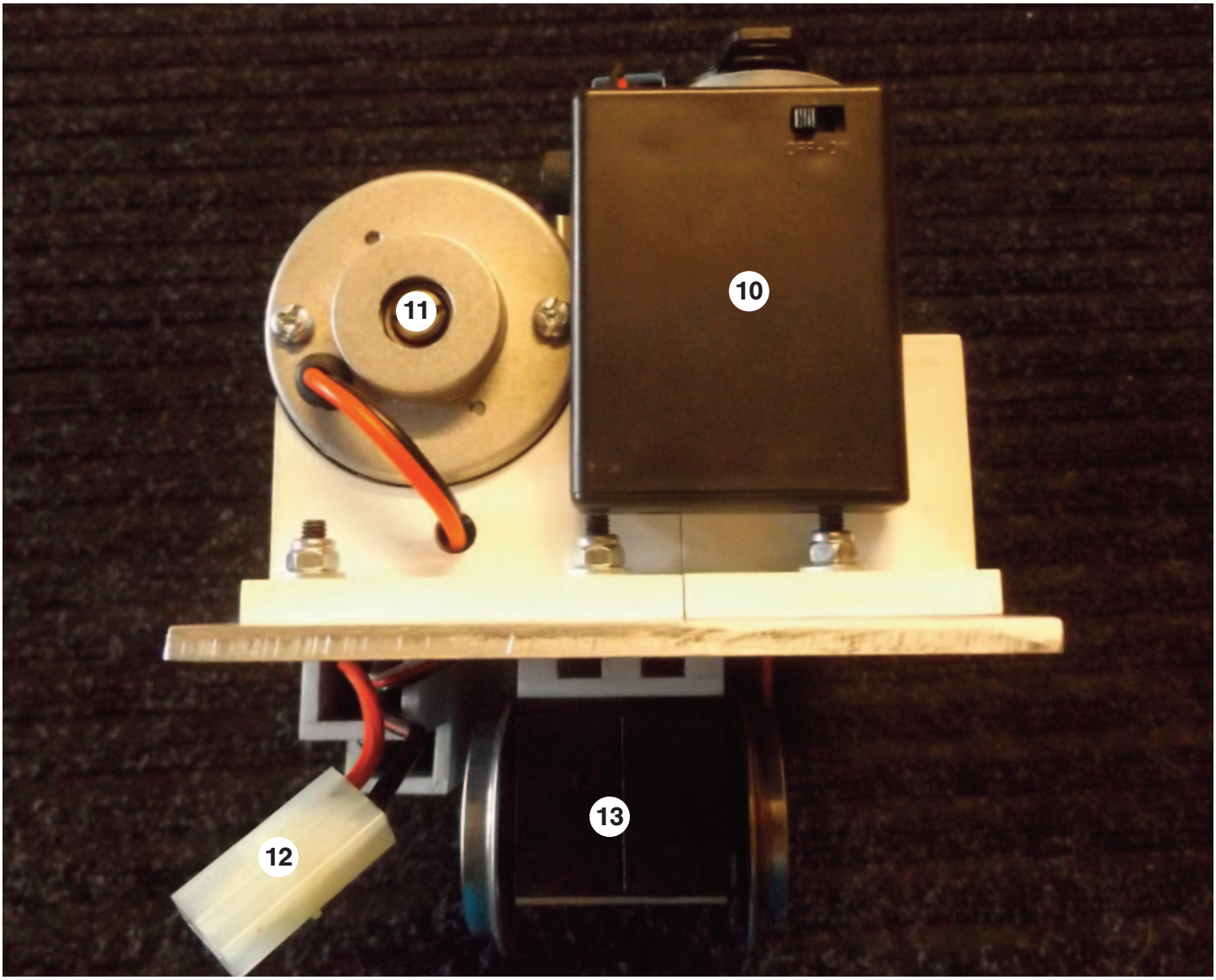
Above: Boxcab Diesel Components (Right Side)

1 Speed Controller
2 Fuel Tank
3 Power Boost Box (Muffler)
4 Crank Case Oil Collector
5 Collector Drain Plug
6 Exhaust

Below: Boxcab Diesel Components (Left Side)

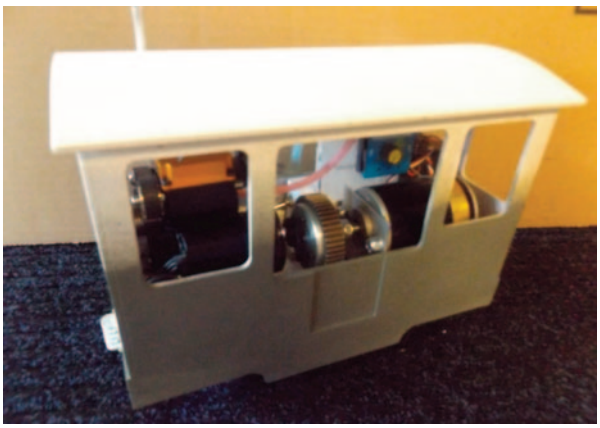
7 Engine
8 Generator
9 Starter Switch



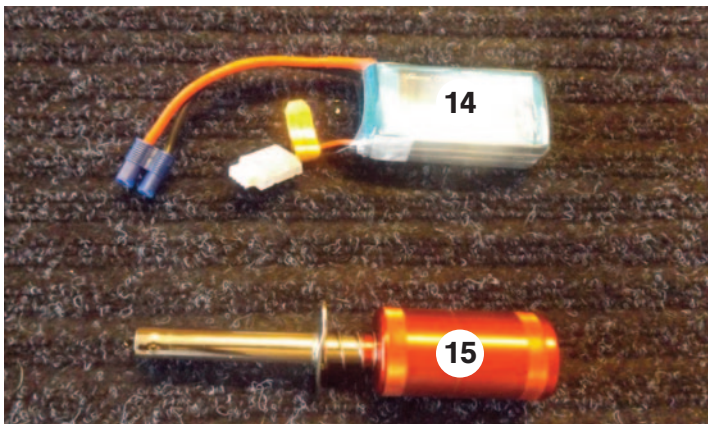


Above: Boxcab Diesel Components (End View)
10 Battery Box for R/C
11 Generator
12 Starter Battery Connector
13 LGB Motor Block

Below: Starter Accessories
14 11.5 volt Lipo Starter Battery
15 Glow Plug Heater



Boxcab Shell in place. Ready to roll!



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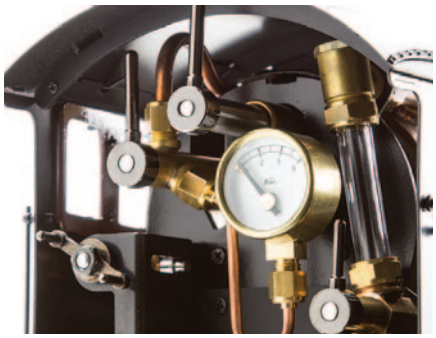

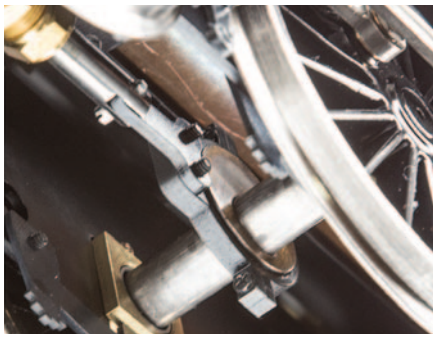

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Ball Bearing Trucks, Detailed Interior with Battery Lighting
$950.00 each, Trucks $200/pair

‘TALYLLYN’ 0-4-2ST

Production Sample Shown

1:19 Scale, 32 / 45 mm Gauge, Butane Fired
Available in TR Green, Indian Red, Black
Taking Reservations, Delivery Summer 2020
$1,700.00 each

Price is FOB Union City, California. Items subject to change in price, color, specification design and availability without notice.

ACCUCRAFT COMPANY, 33260 CENTRAL AVE, UNION CITY, CA 94587, USA TEL: (510) 324-3399, WWW.ACCUCRAFT.COM

ACCUCRAFT TRAINS
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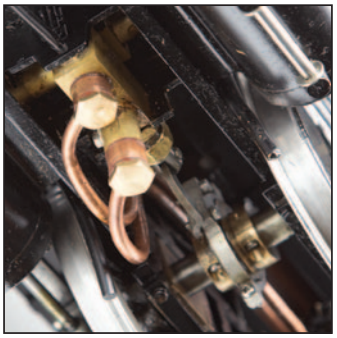
SR & RL FORNEY #6 AND WW&F FORNEY #9

Delivery Now

Coal Fired Model Shown



Axle Pump Shown
(Only For Coal Fired Version)

1:13.7 (7/8ths) Scale, 45mm Gauge
$3,200.00 / Butane Ceramic Fired, $4,200.00 / Coal Fired

SOUTHERN PACIFIC P-8 CLASS 4-6-2

Production In Progress

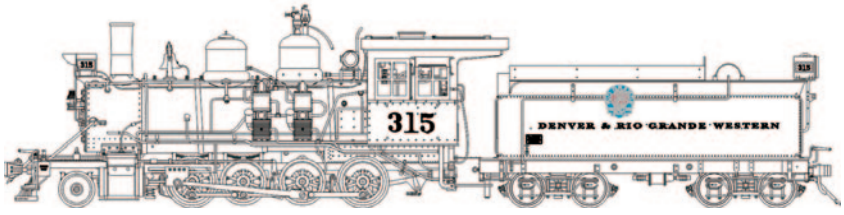
1:32 Scale, 45mm Gauge
Alcohol Fired, Butane Ceramic Fired, Electric
Available in #2467 and #2472
$3,995.00 each

ADAMS RADIAL TANK 4-4-2T

Delivery Now

1:32 Scale, 45mm Gauge
Butane Fired
$1,945.00 / Kit, $2,160.00 / RTR

D&RGW C-18 2-8-0



1:20.3 Scale, 45mm Gauge, Brass & Stainless Steel Constructions
Available in Black Unlettered, #315 Moffat Logo, #318 Flying Rio Grande
$2,495.00 Electric, $2,595.00 Live Steam
$2,895.00 w/ Axle Pump and Water Pump Installed

QUARRY HUNSLET 0-4-0ST

32mm Gauge

7/8ths Sacle Model Shown

1:19 Scale, 32mm Gauge
Butane Fired
Availablie in Red, Black, Blue, Penrhyn Lined Black
$1,600.00 each

Price is FOB Union City, California. Items subject to change in price, color, specification design and availability without notice.

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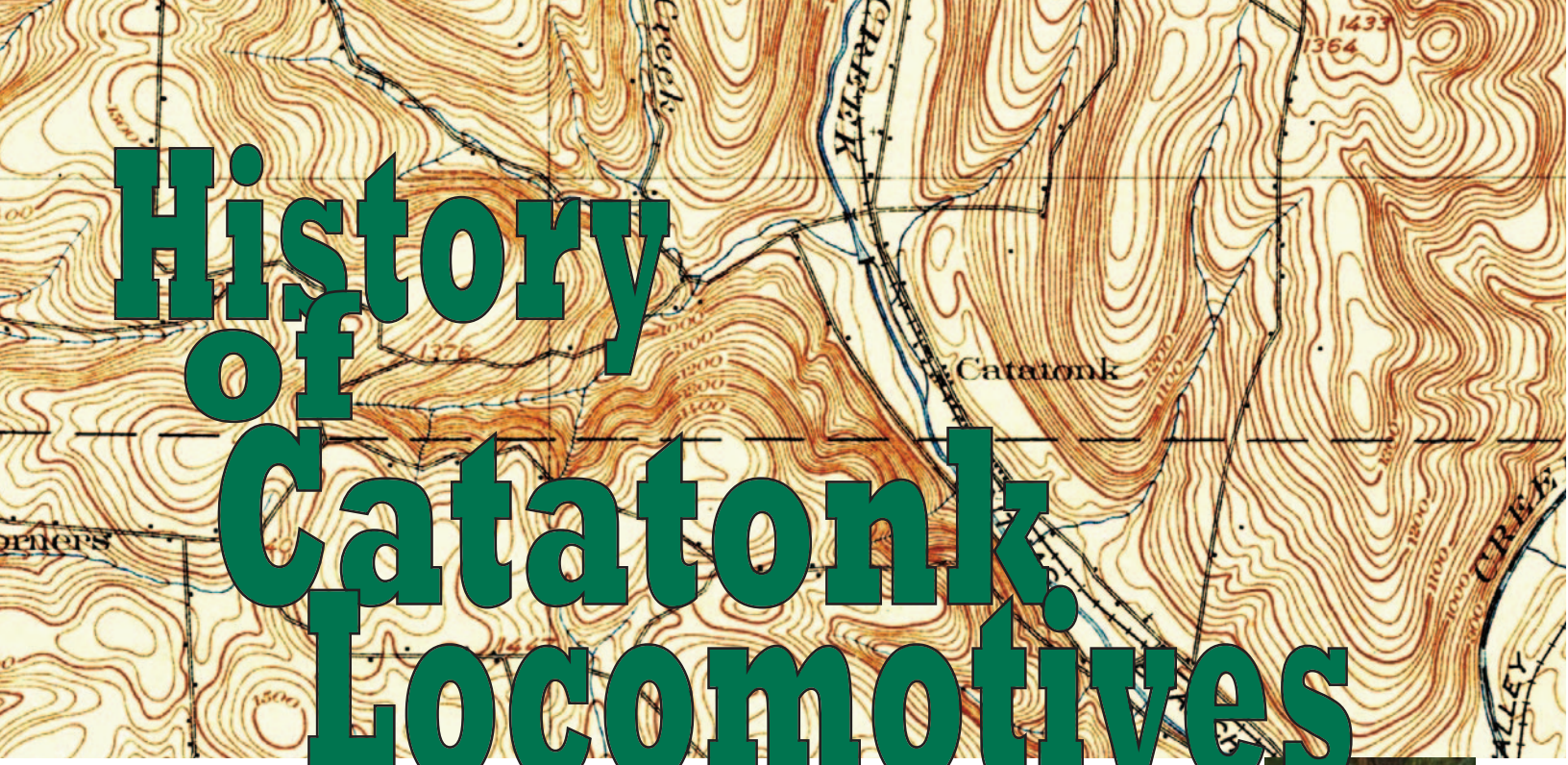


History of Catatonk Locomotives

By Kendrick Bisset

Photos from the Steam in the Garden Archives and as noted.

Introduction

At the 2020 International Small Scale Steamup at Diamondhead, Mississippi, I prepared a discussion on Catatonk Locomotive Works. A surprising number of people participated. Eight examples of Catatonk production were on display, brought by several attendees.

Over the years, the Catatonk Locomotive Works had four (or five, depending on how you count) designs of live steam locomotives manufactured. In roughly chronological order: 14-ton (small) Shay, Heisler, 24-ton (large) Shay, 24-ton Shay Mark II (if you want to count this as a separate design), and Climax. This is an attempt to tell their story, locomotive by locomotive, in the order listed here. This means that the discussion will not be in strict chronological order, because production of several of the locomotives overlapped in time.

The start: the Catatonk name

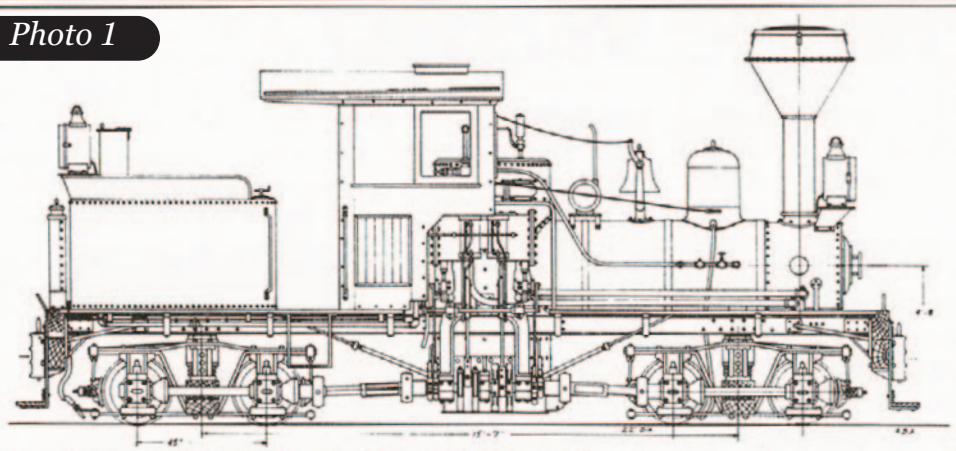
Well before there was any thought of making steam locomotives, Ron and Marie Brown were driving around the area near Owego, New York. Passing the small hamlet of Catatonk, Marie commented that she liked the name.

Fast forward a few years, Ron was wanting some US-style geared live steam locomotives. Approaching several manufacturers, Ron was unable to garner any interest. The common response was that it would not sell, so they were not interested. Ron decided to commission the manufacture of a small Shay, and contacted Gordon Watson of Argyle Loco Works, Australia. Ron needed to set up a company to handle the project, and Catatonk Locomotive Works was born.

14-ton Shay

The first ad for the small Shay was in the March/April 1994 issue of *Steam in the Garden* (SitG-21) magazine (**Photo 1**). This ad stated that this was to be a limited run of 25, but Gordon Watson indicated that there was one contract for 50 Shays. For this discussion, this will be divided into two groups of 25 each. The pilot model of the 14-ton Shay was shown at Diamondhead in January 1995. An early production model was on the cover of the July-August 1995, SitG-29, showing a green cab **(Photo 2)**. In the "What's New" section, it is described as the first production model, but Gordon Watson has said that it was serial number 06. Some models were modified by owner request, including paint schemes. Ron Brown kept the first Shay. It is in Marie's home, displayed on a trestle in a display

Photo 1



A 14-TON
LIVE STEAM
NARROW GAUGE
CLASS A SHAY
IN 1:20 SCALE

Drawn by Al Armitage

Now accepting reservations for our limited run of 25 locomotives. Even if you already gave us a verbal order for this engine, you still need to call or write to confirm your reservation. Standard features will include: Serial numbered, factory painted, 2-truck, T-Boilered Shay with 2 fixed cylinders (no oscillators), gas-firing, gearing for slow, realistic speeds, displacement lubricator, blowdown valve and water injection.

There are only a few guaranteed delivery slots still open, but we will keep a waiting list in case of cancellation. First come, first served! Please do not send any money now. Once your name is on the reservation list, we will notify you when your locomotive is next up to be built. At that time we will ask for a deposit. When your locomotive is complete, steam tested and ready for delivery we will ask for the balance. Our target price is around $1500. Customs, shipping and insurance charges are additional. Deliveries are expected to begin in the summer of '94.

If there is enough interest to warrant it, we will build a second run, made up of post-1900 locomotives, once the run of pre-1900 locos is complete. Please let us know your preference. Pre-1900 locos (1st run) will differ from the drawing in that they will have no generator or electric headlamp, but will have an acetylene cylinder on the running board and a larger, old-fashioned gas headlamp.

Catatonk Locomotive Works, PO Box 335, Newark Valley, NY 13811 -- phone 607-642-8119 - Fax 607-642-8978

case (**Photo 3**). The ad mentions the possibility of a second "post-1900" run with an electrical lamp and generator rather than acetylene headlights and tank. Perhaps four more were sold as Argyle locomotives using some extra parts. At least some of these latter had a cab design with a round side opening similar to an actual Shay used in Australia.

The small Shay has two cylinders, slide valves and Stephenson valve gear. Options included a working whistle, boiler fill valve, pressure gauge, and R/C mounting and linkage kit. The one example I have seen has the whistle, as does Jim McDavid's loco pictured in July/August 1996, SitG-34, showing a relocated gas tank.

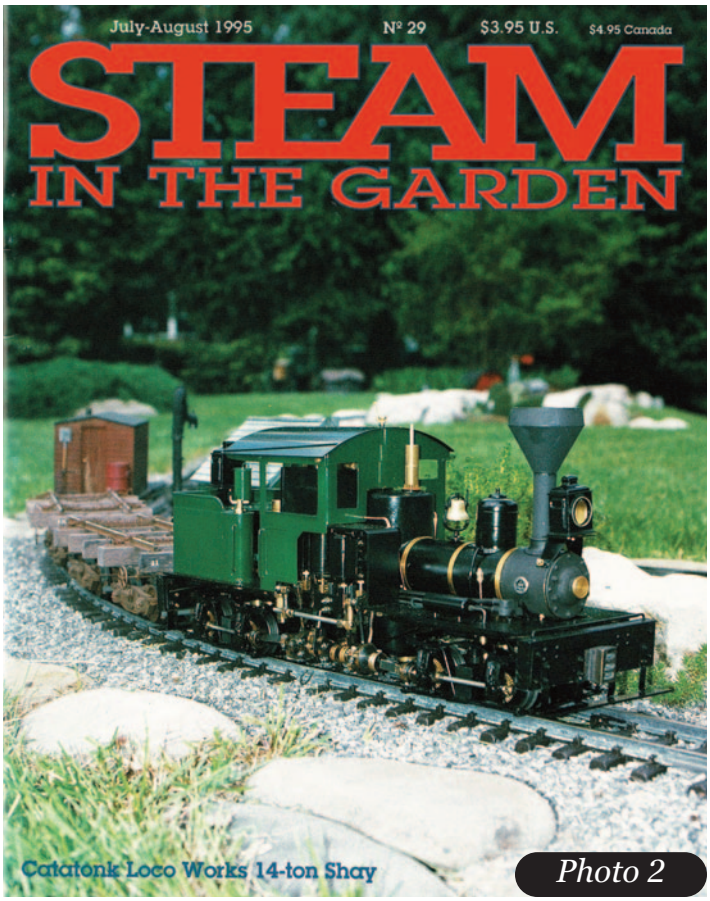


Photo 2

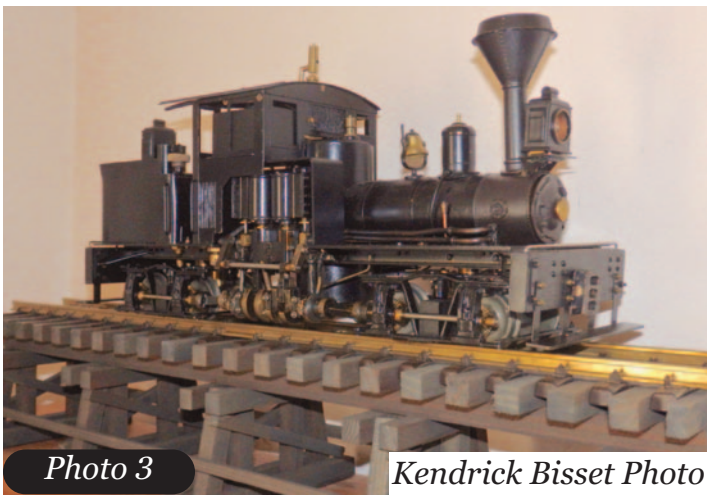


Photo 3 *Kendrick Bisset Photo*

Richard Finlayson reviewed the small Shay in the May-June 1996 SitG-33. That article mentions a few issues, which Ron Brown indicated had been addressed in later production. One should therefore not expect that all locos are the same. In Issue 34, in the "Steam Scene", Jim McDavid wrote that he had moved the gas tank in his Catatonk Shay from the cab into the bunker, and included a water tank. This arrangement was used in all later Catatonk locomotives.

14-ton Heisler

The next Catatonk locomotive was a 14-ton Heisler. Mike Chaney in England had been advertising in SitG. For this new locomotive, he became the contractor. It was announced in the January-February 1997, SitG-37. The initial offering was limited to 25 locomotives, and apparently made in 1997. The model was introduced at Diamondhead in January, and featured on the cover of the May-June 1998 SitG-45 (**Photo 4**). The issue had a review of the Heisler by Kevin O'Connor. The July-August 1998 , SitG-46,carried an ad indicating that the Heisler was sold out. A second run, probably of 25, was made but not announced. Based on known serial numbers, this second run was made in 2000. Photos of one locomotive from each run show that in the first run the throttle shaft is horizontal, and in the second run, it is vertical.

It should be pointed out that Mike Chaney stamped serial numbers on the boilers (**Photo 5**) and, in some cases, also on a plaque. The number includes two or four digits for the year, a letter indicating the model (Shay, Heisler or Climax), and a two- or three-digit serial number. The serial numbers of the second batch seem to have followed on from the first batch.

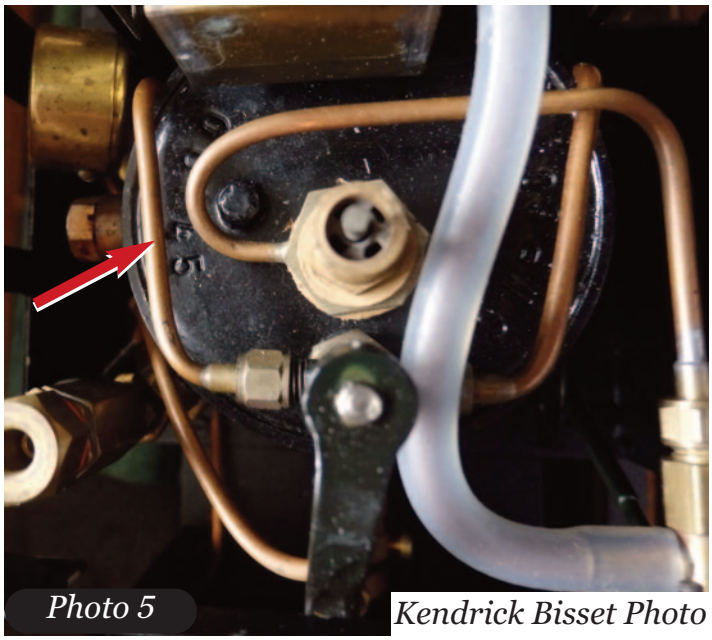


Photo 5 *Kendrick Bisset Photo*

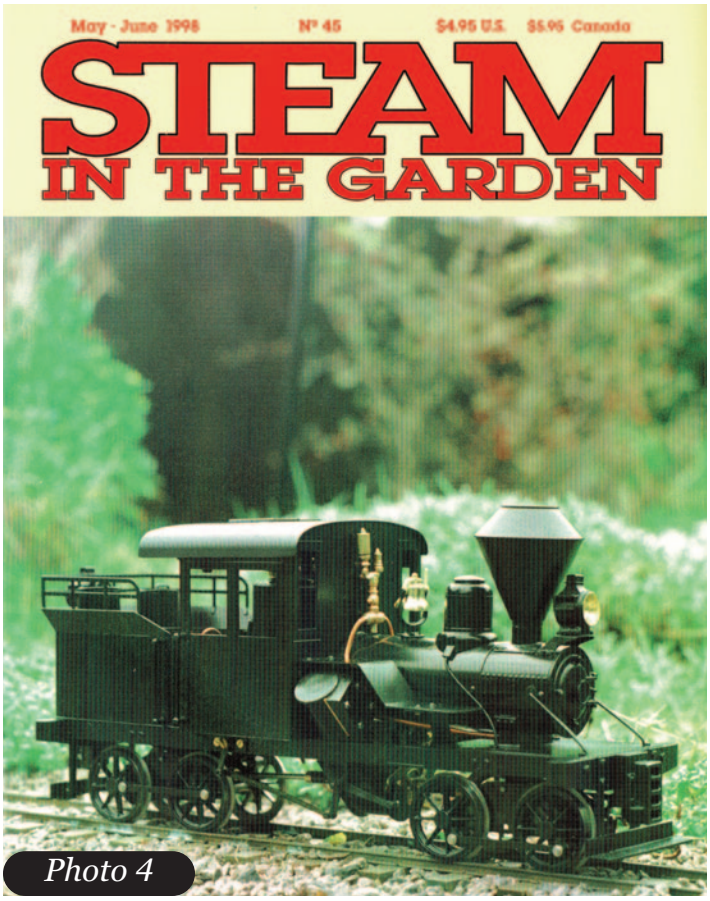


Photo 4

24-ton Shay (two versions)

Near the end of 1997, a new 24-ton Shay was announced, again made by Mike Chaney. SitG-42, November-December 1997 carried the ad. SitG-43, January-February 1998, carried a color ad for the two Shays and the Heisler. This same ad also appeared in SitG-44 and 45 (**Photo 6**).

Ken Brown (Ron and Marie's son) made wood cases for Ron to sell with Catatonk locomotives.

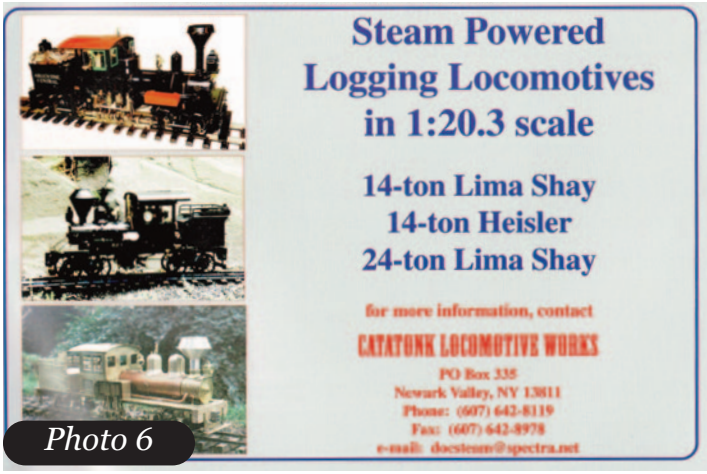


Photo 6

Photo 7 *Kendrick Bisset Photo*

Photo 8

Ken used solid oak, blind dovetails, and curved joint detail in the top corners (**Photo 7**).

SitG 46, July-August 1998 again carried the color ad of the three locomotives, but with "Sold Out" banners across the large Shay and the Heisler (**Photo 8**). The same ad was also in SitG-47. Those ads also mentioned a proposed vertical boiler Shay. Some parts of the vertical boiler Shay were made, but no locomotives were completed.

SitG-53, November-December 1999, carried a review by Carl Malone of the large Shay; the first version was pictured. SitG-62 (undated, but probably late 2001) advertised "Only a few reservations still available for our final run ... the Mk II version" with upgrades listed, including air pump and mechanical improvements. The same ad was in SitG-63. In SitG-65 (undated, but probably summer 2002) was an ad stating that the second run was sold out. Torry Krutzke reviewed the Mark II version iSitG-71, July-August 2003. Based on known serial numbers, the first batch was made in 1998, and the second in 2002.

The Mk II large Shay can be identified by the toolbox and air tank on the "good" side running board; but because many engines were modified by their owners, this may not be reliable.

Climax

The 18-ton Climax was announced in SitG-73, November-December 2003, again made by Mike Chaney. SitG-74, January-February 2004 has a picture of Ron Brown at Diamondhead with the pilot model Climax (**Photo 9**). The first 25 locos were made in 2004, based on known serial numbers.

SitG-85, January-February 2006 had an ad announcing the "final run" of the Climax. The same ad appeared in SitG- 86 and 87. SitG-87, May-June 2006 also included a review of the Climax by Peter Jobusch.

Apparently, based on serial numbers, this second batch had 30 models, for a total of 55 Climaxes. This second batch was made in 2007.

Overview

There were apparently a total of 205 Catatonk locomotives made; seven batches of 25 and one batch of 30. Production spanned 1995 (25 years ago) through 2007. Many engines were modified, some extensively. Presence or absence of toolboxes, air tanks, and other details should not be used to identify which group a particular locomotive belongs to. Ron Brown himself modified at least an early Climax, a second run large Shay, and his Heisler. Modifications could run from paint (window frames and other details), to a whistle, working headlights, and even more extensive changes.

Some Stories

My first steamup at "Paradise East" (otherwise known as the home of Ron and Marie Brown in

Photo 9

Your flinty hearted, steely eyed editor seems well pleased with the pilot model of the latest offering from Catatonk Loco Works...an 18-ton Climax in 1:20 scale.

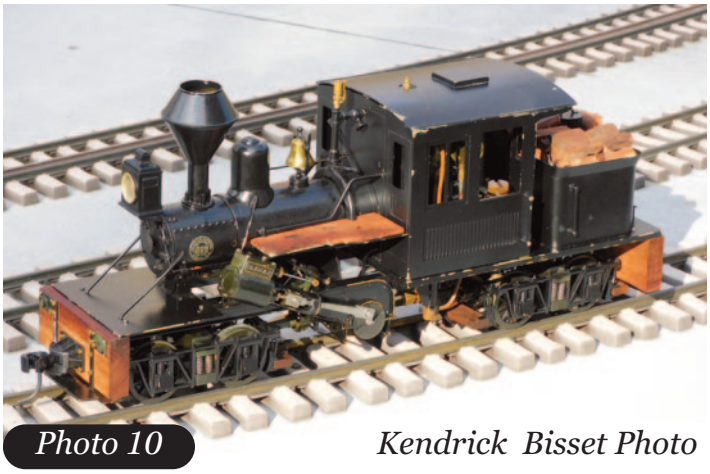


Photo 10 *Kendrick Bisset Photo*

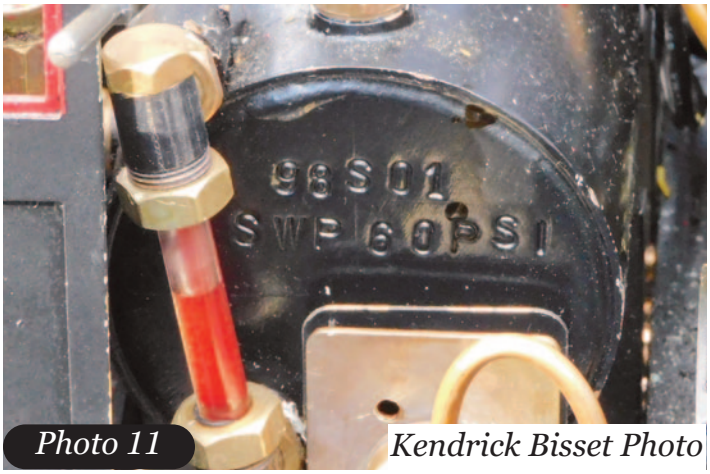


Photo 11 *Kendrick Bisset Photo*

Newark Valley, NY) was in 2008. Ron let it be known at that gathering that he was selling a Catatonk Climax. Peter Jobusch demonstrated his Climax for me, and with that demonstration and Peter's encouragement, I purchased the loco on August 24, 2008 (Sunday) at the end of the steamup (**Photo 10**). Upon arriving home and examining the engine, I called Ron because it is serial number 2004 C001, and I wanted to be sure he meant to sell it. He assured me he did mean to sell it, as he needed to reduce his collection. He told me that he had the first Catatonk loco, a small Shay, as well as the last, another Climax. Ron had modified the engine he sold, adding larger wood end beams, wood overlays for the running boards and wood 'fuel' in the bunker, electrifying the headlights, and adding a low water indicator. The original end beams, and a few other parts, are in the case he sold with the engine. Ron passed away on October 3, 2010.

I bought a second Catatonk loco, a large Shay, from the estate of Bill Crane, through Mike Moore, in February 2013. Much work had to be done on both the box and the loco. Several joints on the box had pulled apart, and the foam lining had disintegrated and become oil soaked. The foam was removed, and the joints re-glued, clamped, and reinforced. The removable floor was modified to allow small bungee cords to be used to hold the locomotive to the floor, and latches added to hold the floor down within the case. Donna, my wife, refinished the repaired case. The locomotive had a tar - like substance around the burner holder and dribbled on the cab floor. With much work, the tar was removed and the burner area cleaned up. The Climax has a small hole next to the burner to allow inspection of the flame; a similar hole was added to the Shay. The loco came with the manual, personalized to Bill Crane, with serial number 04 noted, with a date of August 1999. In November, 2019, I wanted to check the exact form of the serial number, to see if it followed the form I had seen on other Mike Chaney locomotives. Imagine the surprise when I found 98 S 01 stamped on the end of the boiler (**Photo 11**).

Ron Brown seems to have been quite the salesman. More than one owner reports that they examined a sample locomotive, but made no firm commitment to purchase. Many months later, Ron called them to say that their locomotive was ready to be shipped. At least two owners did not decline to make the purchase.

Two questions arose at the meeting in Diamondhead. It seems that few of the manuals for the Catatonk locomotives have survived with the locos. Ron Brown did email a Climax manual to me after I bought the engine, but there are no covers with the file. My first run 24-ton Shay came with the manual, and Chris Sortina allowed me to photograph his Mark II Shay manual. Does anyone else have a manual they can scan or let me borrow to scan?

Another question is availability of spare or replacement parts. Does anyone know of sources?

Primarily for my own information, I have been collecting serial number information. The only example I have seen of an Argyle (Gordon Watson) 14-ton Shay is serial number 01, which is engraved on a plaque under the frame. The Mike Chaney serial numbers are stamped on the boiler; on the back for cylindrical boilers, and on the top of "T" boilers. If you would, please send the full serial number, including the year and letter indicating the model, to me through *Steam in the Garden*.

To end: At Marie's in August 2019, I had been

allowed to take pictures of the Catatonk locos at her house. This discussion began with the first Catatonk loco, serial 01. A Heisler and a large Shay also were recorded at Marie's. But I was a bit uncomfortable that I had not seen a Climax; the more so because I had bought one from Ron, and he assured me that he had a Climax. On Sunday, the last day of the gathering, people were packing up for the drive home, and Ken Brown came out of the house saying "look what I found." It turned out to be the last Catatonk locomotive, a Climax serial 2007 C 055 (**Photo 12**).

Photo 12 *Kendrick Bisset Photo*

Above: ISSS 2020 Steamup attendees admire and discuss their Catatonk locomotives after Kendrick's talk.
Below: Author Kendrick Bisset sits with the collection of Catatonk Locomotives present at the 2020 International Small Scale Steamup, Diamondhead, Mississippi.

Daniel Tilden Photos

Workshop Project

Building the Nellie G. Part 2

Text & Photos by Joe Rothwell

Squirrel Island was a very popular place to summer in the 1920's. The lots were never owned, but leased from the island association, and the lots came with many covenants and restrictions — no winter living, no vehicles, only foot traffic on established roads, etcetera.

So in the summer months, the Nellie G was busy! The passengers rode on the outside decks of the boat, sitting on benches, folding chairs and elsewhere. The only overhead cover was on the rear fantail; it had a full awning that would be most welcomed on a foggy, rainy day. (She may have had a canvas awning for the main cabin roof-deck for wet weather, but I haven't seen any evidence for this yet.)

A small, barred skylight box was centered on the main cabin roof, making a convenient seat for passengers riding outside on the cabin roof-deck. Seating also included a single lifeboat that was stored on the cabin roof-deck and left un-covered for this purpose. If there was an emergency, about a dozen people, at best, could fit in the lifeboat, far short of the maximum carrying capacity of the Nellie G. herself. This was before the Titanic disaster, so optimism ruled supreme here.

Clearly, my Nellie G would need some passengers, so I went on Ebay to see what's what. I found some really nice period-correct figures made by Preiser, which are very close in scale — 1/22.5 scale to be exact. Some were ordered and when they arrived, they were placed onboard to evaluate the overall appearance. Well, they look fantastic but they're too big! The Nellie G. is already a small ferry and these figures made it even smaller.

The best thing to do, I decided, was to make a slightly bigger boat to match the scale of the figures. Since a Freedom Song Boatworks (FSB) kit is very close to scratch-building anyway, all that was needed was some more wood to make another. I enlarged the plans on my home printer, but the fly in the ointment was that I hadn't saved the paper frame-templates when the frames were finished on the kit hull. Only a top view and side view are on the plan sheet and no front view. Hmm, I could use a pair of calipers to measure the width at the chine at each frame station on the finished kit hull, and the plan sheet would furnish the remaining measurements. So that's what I did : drawing the new frames, then repeating the above building sequence once more. Interestingly, the second vessel measures 22.5 inches long at 1/22.5 scale. (**Photo 1**). Now the figures will fit the boat beautifully, and an added benefit of increasing the hull size will be to allow it to carry a little more weight.

The hull will be repeatedly picked up and set down during the next phase of construction, so a cradle is made to minimize damage. No two cradles are alike, but a quick search of the web will give some ideas if necessary. Mine tends toward what

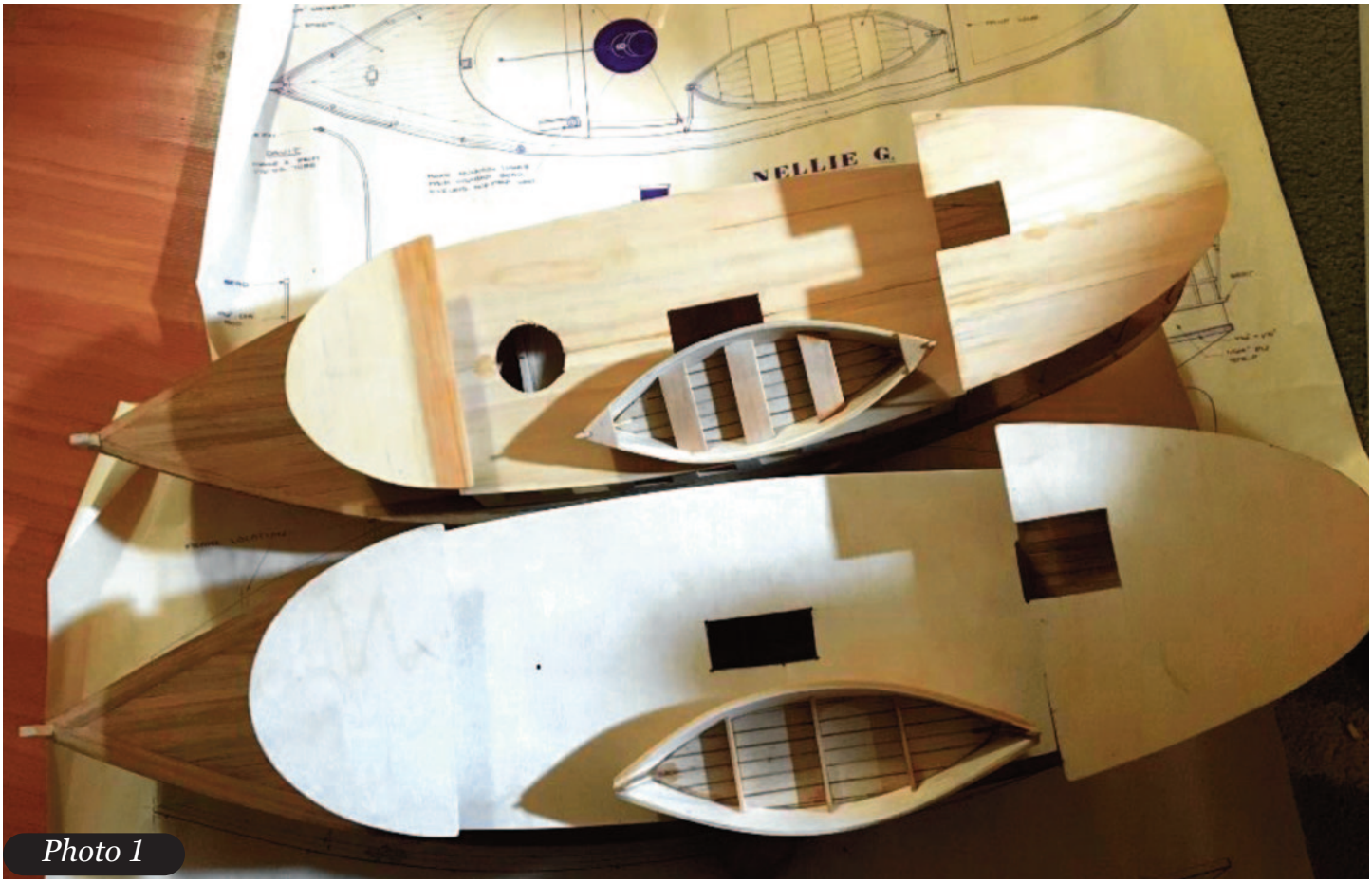


Photo 1

they would do on the full-size boat, with bed logs laid out the full length of the boat and perpendicular to the keel. The pieces were milled out of a piece of tight grained Douglas Fir two-by-four. The cradle will also help when the waterline needs to be struck, holding the hull level and securely (**Photo 2)**.

The hull and most of the structures are balsa wood, which is not the best kind of wood to get wet, so everything gets sealed with two coats of epoxy including the planked main deck. A high-quality epoxy will work best here, like a 'finishing' resin with a long working time. This type of resin has excellent leveling properties and will help with final sanding. To increase penetration, the first resin coat is thinned a bit with denatured alcohol, which can also be used for clean-up. After curing, sand and then apply the second coat of epoxy full strength.

Only the hull bottom and sides were glassed (but not the main deck) after sanding the first thinned resin coat. Apply the second coat of resin full strength and then lay the glass cloth onto this fresh resin coat. Gently push and tap the cloth here and there with the brush that was used to apply the resin, making sure all air pockets are eliminated and the cloth gets fully saturated with epoxy. I cut the glass cloth over-sized, and after the epoxy cured, I trimmed the edges down flush using a sanding board. Only one side at a time was glassed to ease the effort. The whole hull could be glassed in one session, but success is more tenuous. Sand the hull fair once more and apply a final coat (third coat for the hull) of epoxy over the fully glassed hull.

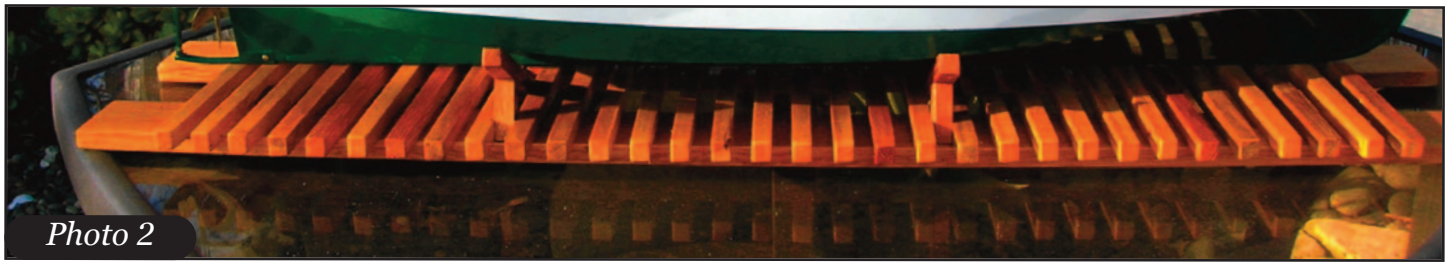


Photo 2

Photo 3

Photo 4

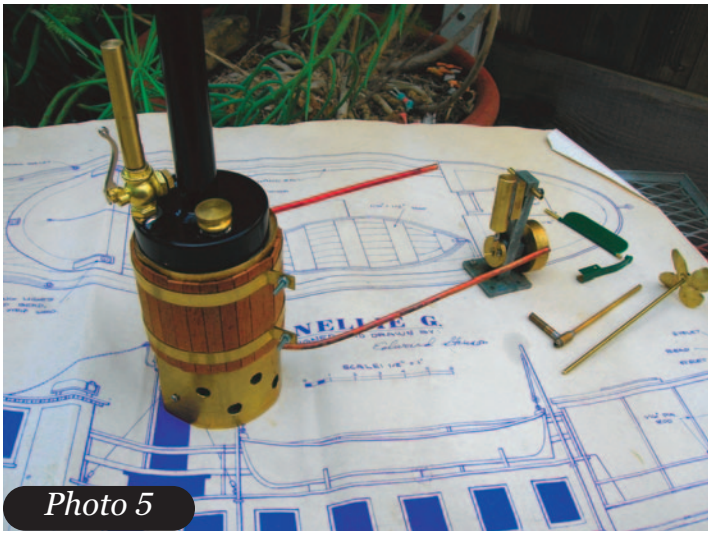


Photo 5

Photo 6

Final sand the hull and mask off the black walnut main deck with low-tack tape. A good quality rattle-can of primer gets sprayed on the hull next. Before sanding the primer coat, fill any flaws with putty and when cured, sand the hull fair once more. A second primer coat goes on and it too will need a little filler after it dries. Repeat this procedure, sanding each primer coat really thin, letting it act as a filler too, until the hull is smooth. After final sanding, the color coat is sprayed on and it too can be filled, sanded and sprayed until satisfaction is achieved (**Photo 3**). The waterline is marked, taped and sprayed. The tape on the main deck is removed and a flat clear sealer is sprayed on the epoxy-coated black walnut deck (**Photo 4**). The main cabin, awning and pilot house get the same treatment, but these items were not glassed.

The engine and boiler should go in next, before the handrails and fantail awning are installed, as these would get in the way and be susceptible to damage when handling the hull. It's also a nice change of pace from building with wood, fillers and paint, and sanding. The Model VI engine boiler kit has been reviewed in past issues of *Steam in the Garden*, with an article in the September/October 1999 Issue #52 that included recommended improvements to the stock design (**Photo 5**). Some of these suggestions were used on my build and some were not — their set-up had to haul itself and a bunch of cars down a track and mine just has to spin a two-inch prop.

The boiler gets silver bearing solder and the engine received soft solder. I went with the slightly harder solder for the boiler because the burner now uses alcohol and not the recommended lower temperature fuel such as Sterno or tablets. The supplied copper solid-fuel cup, being the perfect diameter, was used to make a dual-wick burner (**Photo 6**). This was silver soldered together and uses two copper reducers for wick holders and a sheet of 0.025-inch copper for a 'cap'. An air hole was drilled into the shoulder of the reducer on each


Photo 7

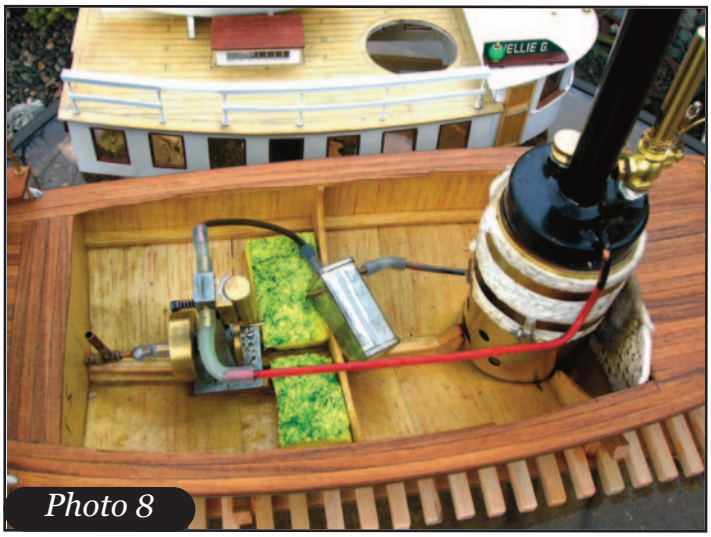


Photo 8

wick holder. A steam whistle from eBay was added in the same area on top of the boiler as the original, and though it's not in scale with the boat, the compromise here is acceptable. The top of the boiler and smoke stack was sprayed with black heat-resistant paint.

The boiler jacket was modified with an extra set of air holes drilled into the base, per the SitG-52 article. Some wood chocks at the base of the boiler hold it in place inside the hull and allow easy removal to water and re-fuel for the next run. Steam plants are messy, so it's a good idea to glass the interior bottom where the engine and boiler sits. The interior bottom is already sealed with epoxy, but it may not be enough when exposed to hot oil and water repeatedly.

The prop shaft housing was installed next, which included a small stuffing box on the 'inside' end of the shaft housing (**Photo 7**). It needs one because the inside end of the housing sits below the waterline and a leak would develop where the prop shaft exits the housing. The box is made with concentric rings of brass tubing and has a short fill-tube soldered about midpoint of the box. The stuffing box is stuffed with grease using the fill-tube, creating a barrier against water intrusion —old school for sure as O-rings are the norm today.

The engine was a joy to build and though I took my time so as not to use the experience up too quickly, it was still completed in a couple of hours. The crankshaft was soldered together as per the SitG-52 article. It spun like a maniac on the first test without one complaint, and sits on two wood rails that are epoxied to the bottom of the hull. Screws hold it onto the rails and the flywheel lines up with the prop shaft.

A silicon tube for a u-joint on one end of the prop shaft and a hand-cut brass prop soldered to a wheel collar on the other end of the shaft completes the power package. The rudder is all brass and since this will be a pond boat, no provisions for a steering servo are needed. This can be changed in the future with a little bit of extra work, so no foul. Once everything is mounted and runs freely, testing can be started without the cabin top in place (**Photo 8**).

After a few test steam-ups, the wood cladding around the boiler jacket caught fire a couple of times, not so good on a wood boat. The extra row of air holes leaked a little fire so this required a change to the boiler jacket design. A new piece of 0.005-inch sheet brass was laid out and cut with air holes on one side (the rear side) instead of a couple of rings of holes encircling the base. The boiler wood cladding was also replaced with ceramic blanket material. One of the wicks on the burner was capped so as to decrease fuel consumption. Now the tests are much better and the fire risk is somewhat abated, allowing the cabin to be placed onto the deck . I cut a hole in the main cabin roof-deck for the boiler top to protrude as per the original and now it looks like a steam boat! More ceramic fiber sheets were used to shield the cabin interior around the area of the boiler, mostly on the cabin ceiling, just for insurance.

On the home stretch now, but there's still a small handful of detail parts to be made.

Photo 9

Photo 10

Final Fitting Out

The largest item is the lifeboat, which I modified a bit with interior ribs, a handrail that run down the inside gunwales on both sides and a rub rail on the outside (**Photo 9**).

The brass wire work includes a railing on the bow and on the main cabin roof-deck, and davits for the lifeboat. The fantail railing incorporates the curved bench seat, stanchions and awning all in one piece, which simplifies installation. Some half-round brass rods were annealed and bent for back rests on the curved fantail bench and then soldered onto the stanchions. A rear coaming was laminated into the proper shape to fit the graceful curve at the stern. A lot of the changes that were made were not on the plan sheets, but taken from the historic photos (**Photos 10 &11**) which I considered to be gospel for the project.

The kit supplied the brass eyelets of various sizes and some colored glass beads to make up the different lamps found here and there on the boat, but mostly on the pilot house. The eyelets could be stacked with the beads in many different ways, and when you felt like the lamp was presentable, a cotter pin was slipped down through the holes, pinning the works together and making it very easy to glue it on to the boat. Brass eyelets were also used throughout the build performing other duties, such as handrail stanchion bases, flagpole socket and davit pivot bases. An interesting item was the ship's wheel, made from 'designer' toothpicks and wood hoops made from pine wood strips that were soaked in water, then wrapped around a mandrel, and cut free after they were dried.

Photo 11

Photo 12

Doors, hatches, skylight box, a ladder and the pilot house running-light boards are some of the things to complete. These items were sealed with epoxy also and painted if necessary, then CA'd into place (**Photo 12**).

Nellie G. is getting closer to be ready for her maiden voyage!

Details and passengers in place. the Nelie G. is ready for her maiden voyage.

Steaming the Nellie G.

Editor's Note:

We had planned with Joe to have some nice pictures of him running the boat out in a local pond that Joe frequents for his boating. Unfortunately with the "stay at home" orders, the pond, a public space, is closed and Joe was unable to finish his task of getting some "beauty" shots out on the water.

We'll revisit Joe's final creation in action in a later issue.

Frasier Valley & Pacific Railway Steamup

Text & Photos by John Shortreid

The Frasier Valley & Pacific Railway invited some Greater Vanvouver Garden Railway Club members to a running on March 15th and 21st, prior to updated government recommendations to not hold such gatherings of individuals. The Government had during this time only recommended that groups be restricted to no more than ten individuals.

The FV&PR is a raised backyard 'G' gauge layout of about 400 feet of track (minimum five foot radius curves), which includes two mainlines of about 125 feet each. With winter and early spring weather conditions, the FV&PR runs did not include the display of buildings and the detailing normally present during the summer months. The railway operates both electric and live steam.

Above: Foreground - Aristocraft 2-8-8-2 belonging to GVGRC member Jon Csincsik running track power, with Aristocraft Train Engineer for control on March 21st.

Above: Randy Reinsch's live steam Accucraft 0-6-0 Switcher on outside mainline.

Left: One of our younger GVGRC members watching the 2-8-8-2 and Brian Dodge's Accucraft live steam K4 Pacific running on the outer main line loop steam track. Brian Dodge is the GVGRC's Sectional Team Leader for portable event layouts.

Ken Lear and his son firing up their Aristocraft live steam radio controlled 0-4-0 Switcher.

Joe Appleton running his Accucraft live steam CN 0-6-0 switcher (hidden behind the consist on the inner electric mainline track).

GVGRC members watching and running trains on March 15th. Left to right — Ken Lear. Steve Granholm, Ute Lear, Peter Szolga, Jason Scarrotts and Jason's son in the distance on the North side of the layout. Note the recommended 2 metre COVID-19 social distancing.

The FV&PR Consolidation running on the inner mainline, with White Pass & Yukon Railway diesels on a siding in the background .

Garry Warner with two of his North Cascades diesels on a FV&PR siding waiting for their run.

Project: HOW I DID IT

Author: Tito Porfiri

Project: Throttle Extensions

1. Observation

I have been playing with trains for over forty years. The last thirteen years have been dedicated to large scale, and last year, I finally made the leap into live steam. When I watched live steam locos being operated, I often wondered why the roof of some of the locos were open while they were running? When I bought an Accucraft Open Cab Shay, I found out why. To access the controls, the roof needed to be removed. Now, being an aesthetically minded person, this bugged me because it took away from the loco's appearance. So I came up with a simple way to lengthen the throttle and gas controls so the roof could stay on while running. This article will focus on the Accucraft C-19 that only needs the throttle extended (**Photo 1**), but the process is the same if you need to lengthen a gas control or controls on other types of locomotives.

Photo 1

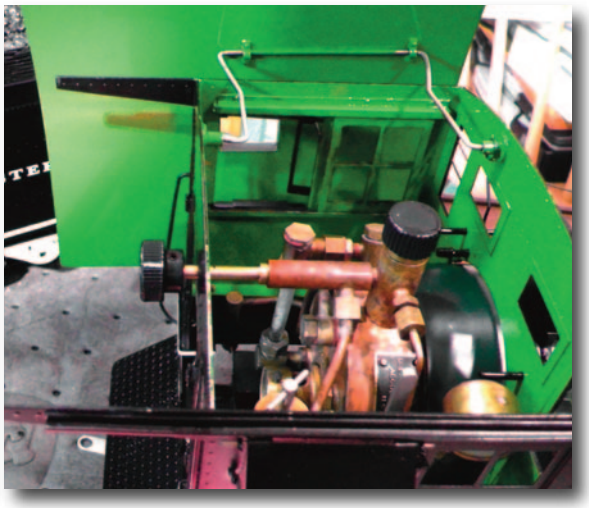
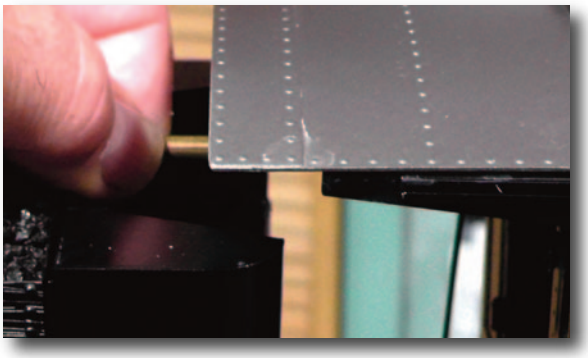


Photo 2



2. Materials

The parts list for this project is short & you may have these items on your workbench. If you don't, what you will need is:

- K&S Brass #8165, 3.97 mm brass rod
- K&S #8129, 4.76 mm brass tube.
- One of each in brass: 00-90 by quarter-inch round head bolt, 00-90 washer, 00-90 nut.
- One and three-quarter hairpin cotter pin.

The brass tube & rod fit both of my Accucraft locos. Other manufacturers may require different sizes.

Do you have a simple tip or quick afternoon project that you want to share? Send it in to us via e-mail at sitg@steamup.com. Make sure to mention it's for "How I Did It" - editor

3. Construction

The way that I determined the length of the extension was to remove the plastic knob from the throttle, slide a longer than needed length of brass tube onto the throttle shaft, then reinstall the roof onto the loco. Now, I eyeballed what I thought would be a good length and marked the spot (**Photo 2**). This will be fine tuned as we continue. I use a tubing cutter but any method you choose to cut the tube is fine.

After the cut is made, you may need to clean up the cut for the rod to be able to fit inside. The length of the tube measured two and a half inches. For the rod length, I cut mine to one and a half inches but you can make it longer or shorter if you wish. I feel that a little longer adds more strength to the whole piece. Because the rod is what the knob will be attached to, I chose to notch it out for the set screw to seat in. I did this by lining the new piece with the throttle valve to mark the location then, using a rotary tool with a cut off wheel, made the notch (**Photo 3**).

The next step is to insert the tube onto the throttle valve and drill a hole through them at the same time. I used a #55 drill bit (**Photo 4**). This can be a little challenging but, if you use a hobby knife to create a small flat spot where you need to drill, that will help to get it started. I drilled them together so the holes will line up for the hair pin cotter pin that will be used to hold it in place (**Photo 5**).

I chose a hair pin instead of a bolt on the valve side for ease of removal for servicing the loco. Use the same process to drill the hole on the knob side. Here is where you can fine tune the position. With the tube attached on the valve side and the knob attached to the rod piece, insert the rod into the tube, install the roof onto the loco and position the knob where you feel is the best spot and mark it.

Now, remove the tube and rod and drill a hole through both as mentioned before. After the hole is made, using the 00-90 bolt, washer and nut, bolt together the rod and tube. The extension is now complete and ready to be installed (**Photo 6**). Refer to **Photos 7**& **8** to see the extension installed on the loco and with the roof on.

Photo 3

Photo 4

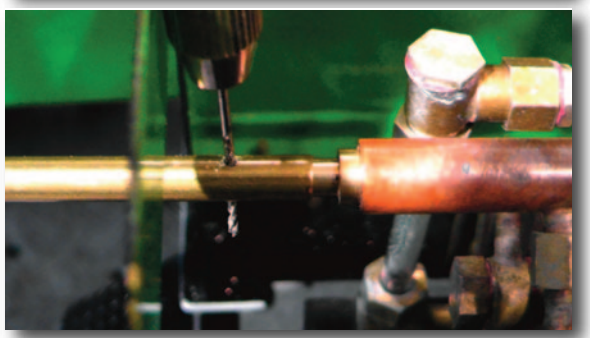


Photo 5

Photo 6

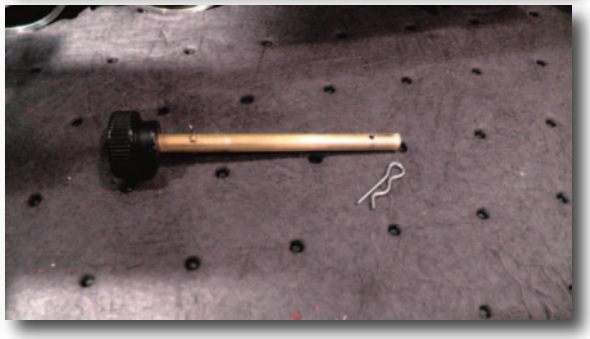


Photo 7

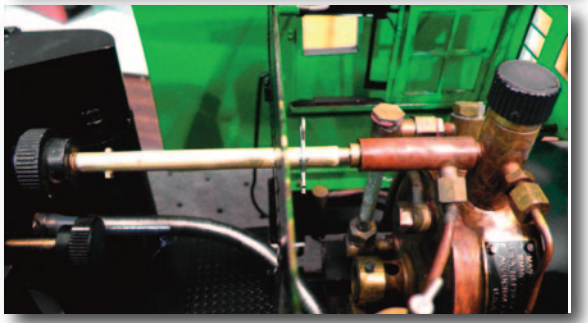


Photo 8

THE CUPOLA VIEW

COVID-19 Impacts on the Hobby

As 'Social Distancing' becomes the buzz word of the day, the effects of this pandemic includes the cancellation of social gatherings. Many planned steamups have already been cancelled or rescheduled.

Social media has been abuzz with photos and videos of how steamers are handling the pandemic situation. Virtual steamups are cropping up on YouTube, and many more have turned their isolation into fruition by working on models, tuning up neglected locomotives, and still trying to be social, but from a safe distance via the internet.

I too have been using the time to get out into the backyard and work on my small neglected garden railway. We have a pergola between the house and garage where in 2013 I built a mini-garden railway. It was put together in a couple of weekends for my little "Cricket" and "Dora" locomotives just before I hosted a Garden Railway Society meeting. Remember those? Social gatherings of like-minded friends in the hobby.

When Spring arrives onto the scene here in Virginia, the Silver Maples burst forth with very small blooms just before the leaves develop. These only last a couple of weeks and then drop everywhere. As time went by my mini-garden railway, which is supposed to represent the deserts of Southern California, collected these tiny spent blooms amongst the lava rock that I used in an attempt to create a barren desert landscape. This terrain was supposed to be maintenance free, or at least require minimal maintenance. Ha!

Over the years, these droppings created a topsoil on top of the weedblock and in-between the rocks. It became a perfect environment for weeds to take hold and bury their roots into the weedblock fabric from the top down. Pulling just caused the weed to break off at the weedblock, and then the process repeated.

So with my isolation I decided to attack the railway, pulling up the weedblock and clearing out the "donated" topsoil. The plan for the next phase for the railway was always to turn the railway into a desert garden with a variety of cacti- looking succulents. So what better time than to get this all accomplished than while I'm stuck at home. Of course the real challenge will be to purchase plants without going out. Online shopping for plantings. Yup. Its all out there and available. Let the ordering begin!

Happy Steaming!

Scott

'Cupola view' is written by Editor Scott E. McDonald: you can contact him at sitgeditor@gmail.com or P.O. Box 1539, Lorton, VA 22199.

Believe it or not, there is a railway under all of those weeds!

Weeds all cleared, rock has been washed and cleared of errant detritus, just need the plants.

ERRATA

We incorrectly identified a couple of the steamers in the ISSS 2020 article in Issue #167. On page 24, the bottom most picture is Allen Reams. On page 26, the top most picture is Allen's brother, Jason Reams, both from Liberty, Missouri. Our apologies to Allen and Jason for the mis-identification

TIMETABLE

Special or Annual Meets

The Denver Garden Railway Society Colorado Railroad Museum Steamup - August 1-2, 2020, from 9:00 am - 5:00 pm. Steamup will be held at the DGRS Garden Railway at the Museum and the garden railway will only be open to those registered for the event. Fuel, water, lunch and entry to Museum grounds is included with the registration fees.

Registration Fees :

DGRS Member Steamers:	Sat $20.00	Sat/Sun= $30.00
DGRS Member Non Steamers:	Sat $15.00	Sat/Sun= $20.00
Non DGRS Steamers:	Sat $25.00	Sat/Sun= $40.00
Non DGRS Guests/Family:	Sat $20.00	Sat/Sun= $35.00

Checks should be made out to : Denver Garden Railway Society and sent to: Mike Harris,12457 E.Amherst Cir.Aurora, Co.80014. Contact Mike Harris: dgrssteam@q.com or call @ 303-750-4423.

Staver Locomotive Fall Steamup - September 17-20, 2020. Staver Locomotive, Portland, Oregon. Visit *www.staverlocomotive.com* for latest information.

Fourth Annual Gathering of North American Members of the Association of 16mm Narrow Gauge Modellers - September 25-27, 2020. Hazlet, NJ. Visit *www.northamerican16mmmodellers.org* for registrations and venue information.

Cabin Fever Model Engineering Show January 15-17, 2021 - Lebanon Valley Expo Center & Fairgrounds, Lebanon, PA. Gauge One Tracks available for steaming. Visit *www.cabinfeverexpo.com* for more information.

International Small Scale Steam Steamup. January 16-24, 2021. 103 Live Oak Drive, Diamondhead, Mississippi. Visit *www.diamondhead.org* for more information.

National Summer Steamup 2021 - July, Lodi Grape Festival and Events Center, Lodi, California. Visit *www.steam-events.org* for more information.

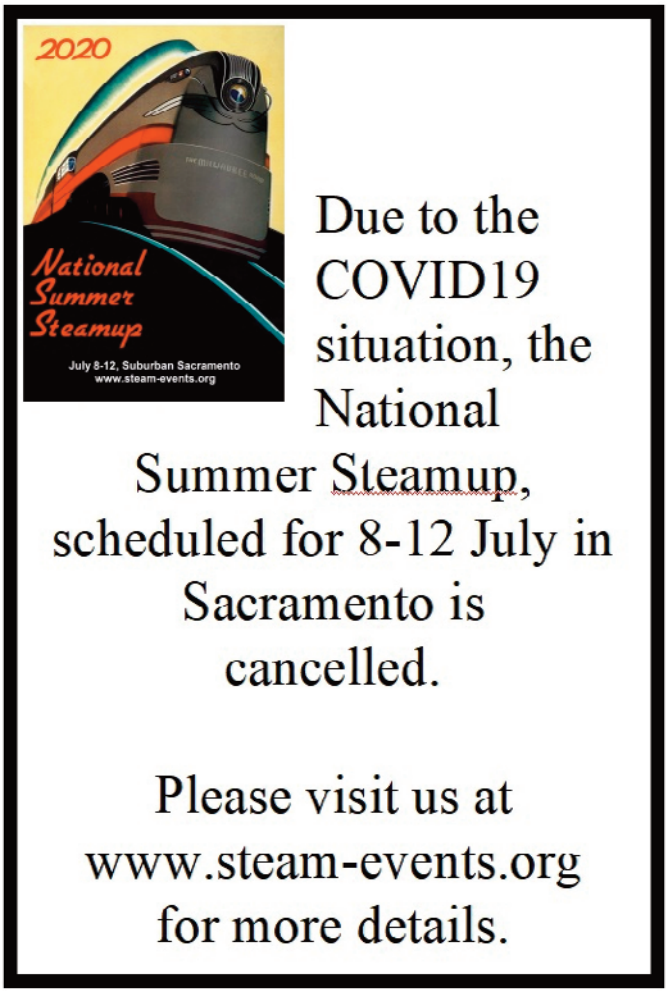
Regular steamups

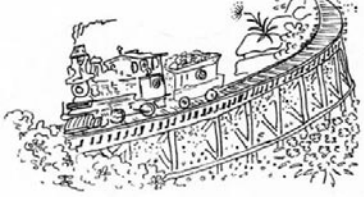
Crescent City High Iron. Steamups as necessary on an elevated backyard layout on Northern California's upper coast. Info: Don Cure, diamondd1947@msn.com.

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.*

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 Comley at (253) 862-6748.

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





CONTRIBUTOR BIOS

The magazine couldn't exist if it were not for the dedicated individuals who take time from the hobby to chronicle their endeavors, interests, and joy of live steam. If you get a chance to meet any of our contributors at a steamup, please thank them for their contribution.

Bill Allen - Bill lives in Woodside, California and first became interested in live steam in 2008 when he saw Richard Murray's layout at a BAGRS open house. He proceeded to buy a Ruby, C16 and Forney before deciding to start building his own. He bought a mill and lathe and with the help of some BAGRS members learned to use them and was soon making chips. Since then he has completed 20 projects, some of which have been featured in Steam in the Garden, and currently has a multi-part article running in Live Steam. All of his builds are one-of-a-kind as he only builds those which have never been done before and probably will never be done again in G gauge live steam. Bill's prior hobby was building fine furniture and he uses some of those skills and tools in his engine building.

Kendrick Bisset - Kendrick is a retired railroad signal engineer. His love of railroads started by age four with his first American Flyer train set (even though he was in England at the time). HO trains came at age 10. School, girls (and one in particular), and entering the railroad industry followed in seemingly quick succession – and then children, too. Kendrick feels very fortunate that his life work and his hobby have been so closely related. He got into live steam around 2006, and has been enjoying the companionship of the small scale live steam community since then.

Dave Frediani - Dave started with L.G.B. trains about thirty five years ago. Shorty after that he received a used Mamod locomotive from a friend and fooled around with it for a year or so but soon lost interest in it. About eighteen years ago he bought a Accucraft two-truck Shay and that started it all. He never looked back. He really enjoys the hands on of live steam and all the people he's met along the way. Dave never grew up with model trains, it was always motorcycles that he grew up with. He first retired from his motorcycle dealership in the late eighties, and then from his bicycle dealership two years ago.

Eric Schade - Eric is a resident of Phippsburg, Maine. He has been into models from an early age with ships and trains as his prime interests. Eric started with steam in high school with a steam tugboat based on a Mamod toy engine. Eric started with HO trains in high school, eventually moving into Gauge One steam with an Aster Climax kit. In 2004, on a family camping visit to Maine he visited the Boothbay Railway museum and the Wiscasset Waterville and Farmington Museum. Eric eventually became a member at the WW&F and really got into Maine Two foot modeling!

Joe Rothwell - Joe started building models as far back as he can remember, mostly due to having an older brother. He would simply follow his brother's lead. Plastic kits gave way to balsa/tissue planes. U-control planes gave way to R/C planes. The family always had a train set, O scale at first (both wind-up and electric), then HO and ending with N scale. Joe now has a 4-foot x 6-foot table top N scale layout, running mostly NYC equipment. Steam interest was rather late; he purchased his first engine in 2006. Joe finds the hobby very satisfying still looks forward to working on the various projects he has lined up. In real life Joe is a Land Surveyor in order to foot the bills.

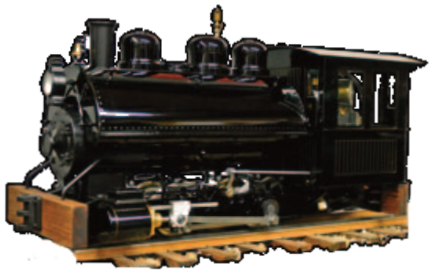
***Your Name Can be on this Page!* -** The whole world is waiting to hear from you! We are always looking for Live Steamers to share their thoughts, experiences, projects, latest acquisition... The list goes on!

We need Locomotive Reviews, Tips & Hints, Steamup Reports, etc. All contributors are compensated for their submissions. Submitting is easy. Just e-mail your idea to sitgeditor@gmail.com and we'll work with you to bring your article to our pages. Visit www.steamup.com to view our Contributor Guidelines to see how easy it is to show the world your small scale live steam interests!

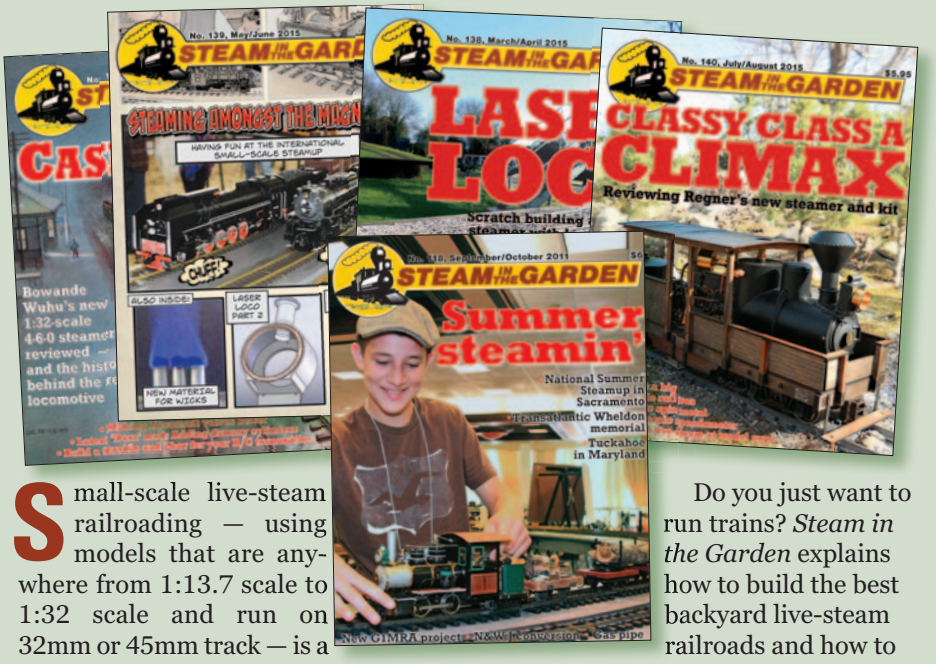
Advertiser Index

Coming Soon!
Issue #169
September/October 2020

Roundhouse Davenport Review



Steam ... it's the real thing!



Small-scale live-steam railroading — using models that are anywhere from 1:13.7 scale to 1:32 scale and run on 32mm or 45mm track — is a fun hobby that has room for rivet counters and freelancers, prototype purists and lovers of whimsy.

Steam in the Garden is the only magazine devoted entirely to covering the small-scale live-steam hobby. Since 1990 the magazine has taken readers inside the railroads and inside the workshops of the leading modelers and shown how fun and easy live steam model railroading can be. Six times a year, *Steam in the Garden* gives subscribers a look at the current trends in the hobby and reviews the latest products available.

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What's on Your Workbench?

Thank goodness we have a hobby to keep us busy while we're socially distancing ourselves during these difficult times with COVID-19. So what have you been working on? We would love to share your projects here in *Steam in the Garden*.

Visit our web presence at www.steamup.com and review our Contibutor Guidelines, (follow link at the bottom of the page menu bar), and send in your submissions. All contributors are compensated for their articles that are published.

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- A1 'Tornado'
- 61XX GWR 2-6-2T
- L&B Baldwin 2-4-2T
- Ragleth 0-4-0T
- Mortimer 0-4-0ST
- WD Hunslet 4-6-0

Bowande-Wuhu
- Britannia G1

Roundhouse
- Lilla
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- Clarence

Aster
- British Railways BR9F "Evening Star"

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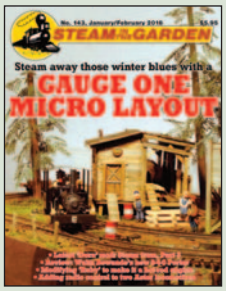


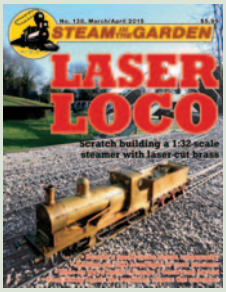
Vol. 26, No. 1; Issue 143; Jan./Feb. 2016
Micro layout: Building an indoor Gauge One track • Review of Wuhu Bowande Porter • Hot-rod 'Ruby': Hopping up a 1:20.3-scale engine • Rolex Asters: Adding radio control • Learning to model in tinplate with a 'Dora' modification, Part III • Latest waybill: Llagas Creek Railways sold, U.K. distributors merge.

Vol. 25, No. 6; Issue 142; Nov/Dec 2015
In memoriam: Andre Anderson, Wuhu G5: Locomotive review — 1:32-scale, 4-6-0 , Topaz: Alchemy, building an Accucraft 'Ruby' kit, Tram: Learn to model in tinplate, Sacramento stationaries: NSS 2015 highlights miniature machinery. WWI car: Creating a 7/8ths-scale Fort Benning railroad observation car.

Vol. 25, No. 5; Issue 141; Sept./Oct. 2015
Mamod's latest: 'Brunel' • Learning to model in tinplate with a 'Dora' modification, Part I • Live-steam group makes sixth appearance at Maker Faire • Adding mesh to Accucraft burner • Salute to Tom King • New products: Aster 0-4-0, Wuhu Bowande German 2-6-2T, Train Dept. with two 7/8ths-scale.

Vol. 25, No. 4; Issue 140; July/August 2015
Classy Class A Climax — Regner steamer and kit review • Big 'Dora' — Making it a 1:13.7-scale rail bus • 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: Diamondhead 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 2015
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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 rolling stock; end of boiler detection; new wheels..

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143	142	141	140	139	138	137	136	135	134	133	132
131	130	129	128	127	126	125	124	123	122	121	120
119	118	117	116	115	114	113	112	111	110	109	108
107	106	105	104	103	102	101	100	99	98	97	96
95	94	93	92	91	90	89	88	87	86	85	84
83	82	81	80	79	78	77	76	75	74	73	72
71	70	69	68	67	66	65	64	63	62	61	60
59	58	57	56	55	54	53	52	51	50	49	48
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