

Canterbury Tales

From the President's Desk

Vol. 57 October 2020



Engine Shed extension

Well, this interesting year continues to throw up challenges, changes, and opportunities. As we plan for our annual Show Weekend, we do so in the knowledge that the A and P show is not going to go ahead, for the first time in a very long period.

How this will impact our weekend is anybody's guess – we may be quiet, we may be extremely busy – nothing like a surprise!! If you are planning to be in Christchurch over Show Weekend then it would be fantastic if you could spare a few hours on any of the days to come down to the track and help us operate the railway. It is our primary source of revenue and if it is busy we would certainly appreciate the help.

On other matters, things have been progressing very well in the engine shed; it is not far off completion now, and the extra storage is already making a much appreciated difference.

However, this being said, if you do have any equipment in the shed it is important to note that there is an expectation that it will be actually used, on a regular basis. Members who have items that are in there under long-term storage, but have not operated regularly, may well be asked to remove them in the future, as space creeps towards the limits. Please ensure that you adhere to the allocated track as shown on the boards on the entry doors.

Finally, a big thank you, both to the Wednesday workers who look after all our maintenance and capital projects, and to those members who present every Sunday to help us run the railway. Without your combined efforts we would not be where we are today.

Thanks
Alex

Awards Night, 2020



Winner takes (nearly) all!
Graeme Chisnall's 7¼" "Shay" earned him the **Canterbury Railway Award, The Curry Cup, The Moody Cup and the Edsall Award**, - not bad for a First Entry!

(Photo: Editor)



Harrison Cup.

John Hamilton's steam launch,
Sasha-Leigh

(Photo: John Begg)



Kevin Welsh Cup.

Rex Walker's "Ransomes" Hay Baler

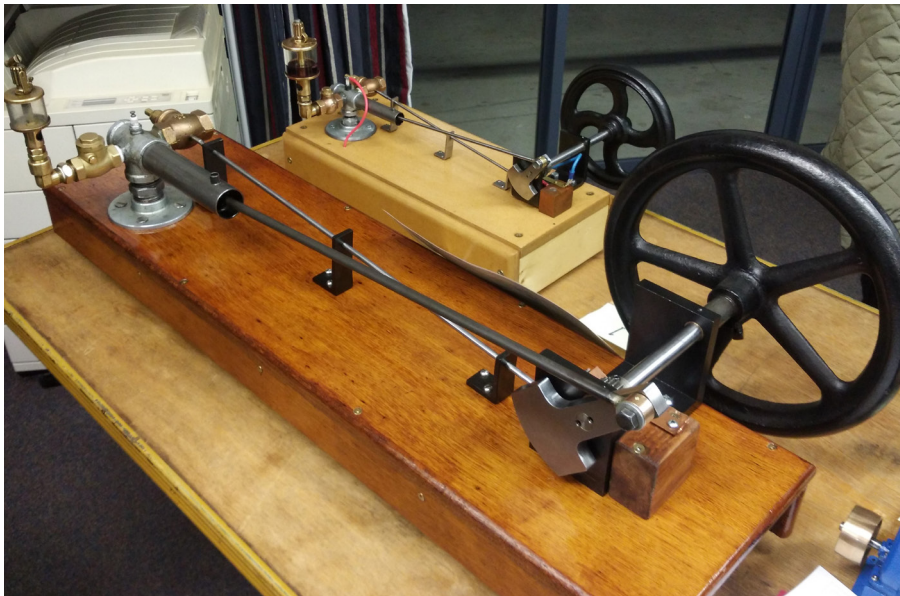
(Photo: John Begg)



Powell Shield.

Matt Agnew's Tapping Stand

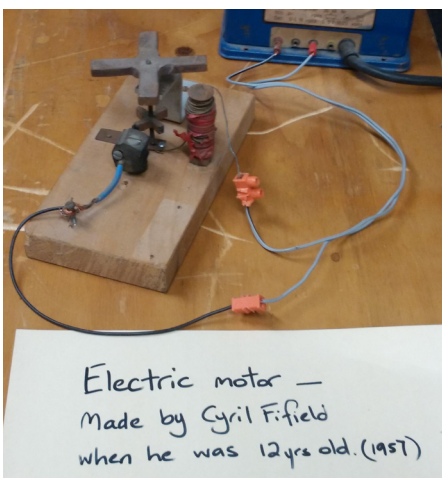
(Photo: John Begg)



President's Cup

A brace of Henry Ford
"single-banger" petrol
engines

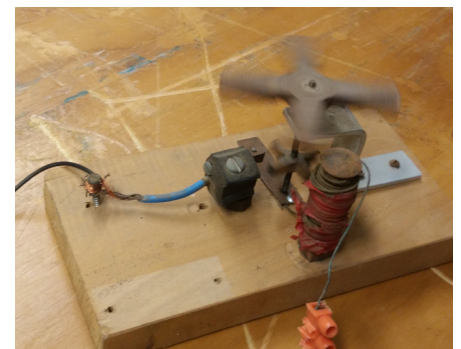
(Photo: Editor)



Electric motor —
Made by Cyril F. Field
when he was 12 yrs old. (1951)



Not an entry, - nor a pretty sight, - but it really goes!
(Photos: Editor)



TALE OF TWO LOCOS – “MOTHER AND BLANCHE”.

Robin Wilson



About a year and a half ago I thought that I would like to build a 5" gauge, battery powered loco for use at the Halswell track and any other track around Aotearoa that I might travel to with my loco in the back of my car.

So I thought, what to build? Now being a fan of the unusual I searched the Interweb and found what looked a simple-bodied electric loco made for many of the smaller Swiss rail companies (MOB, MVR, TPC, TPF, AB and NStCM) some of which are rack railways, usually running on 1metre gauge track. The full-sized locos are 8.314m over the buffers.

So, what makes this particular version of what is a popular 700kw base model loco that I built unusual? Well it is a Hybrid loco made by Stadler. Model H Gem 2/2, having a 400kw diesel motor additionally installed in the loco body to allow “end of line” service for customers who don’t have the

overhead catenary on their site. The driver, when picking up or delivering wagons, simply drops the pantograph and uses the auxiliary diesel motor to shunt the customers track. On returning to the main line, up goes the pantograph and the electric traction is re-engaged.

The 5" model has a single 450 watt Chinese e-scooter motor running on 24v. I have used (with some success) a very cheap (Chinese mosfet type) controller requiring a dpdt switch for reversing, and a couple of Warehouse car batteries. The loco body is identical end for end with slight differences of vents on the side panels. It does have a single pantograph at the “A” end with various roof boxes for electrical systems and of course a muffler for the diesel. The Loco is painted “Delicious Red” and I had a couple of “Blanche” nameplates that I have installed. The loco is a

good hauler able to pull two of the club raised track wagons.

The other loco, or “Mother” is a similar Hybrid 7 ¼" gauge loco I made after I finished the RhB Krocodile loco over lockdown.

Fellow club member Barrie Doublesin wanted his #6 Goose converted to electric drive, so sensing a good deal, I used two motors I had spare for this drive. I think that Barrie is well pleased with his electric Goose. Barrie then had spare an electric start 5.5hp petrol motor and Eaton drive from his Goose, so.....

I had 4 decent size wheels already machined and sitting waiting for a project. These were fitted to new axles, sprockets machined and keyed, chains connected, frames welded and very soon (4 months) I had the new loco built. Again, due to level 2 issues I ended up cutting all my own body panels, window openings etc.

Painted again in the “Delicious Red” which seems to be the colour of choice for most of the locos in service for various railway companies. Three sides the paint went on beautifully then on the fourth it all turned to custard. In the end I took all that side paint off and re-painted. Still not 100% but stands up to the “ten foot test”. Again several different roof boxes with an additional one for petrol access to the motor. Lots of fun making both the pantographs as they have to maintain the contact strips on top, horizontal yet all the legs are different lengths. Both locos have glazed windows with smoky coloured Perspex screwed inside of window frames of rubber U section glued around the window opening. On Mother I have put LED headlights and redlights at both ends whereas Blanche only has headlights at the “front” end.

Both locos have snowploughs under the buffer beams, (untried yet!)

Mother runs in permanent “diesel” mode and is very powerful and can easily haul four of the club ride on cars.

Now, what next?????



“Mother” on display at Awards Night



**Preparations for Show Weekend.
Laying track for static display in
clubrooms.**

(Photos: John Howie)



New L.E.D. lights.

For those who may not have been to the club lately there are some additional light systems around the tracks. These have been installed at eye level, for additional safety.

In the station departure tracks there are 4 tracks with LEDs

Tracks 1 & 3 have RED & GREEN lights.

Tracks 2 & 4 have RED, GREEN & YELLOW (indicating the track is set to go home to the steaming bay)



You will also find some FLASHING YELLOW lights when someone opens up the 'Banana', (the movable section of the raised track that allows the smaller locomotives leaving the steaming bay to cross over the 'Ground level track' to get to the 'Raised track').



These FLASHING lights are also on the over bridge at the station, with a further two each side of the raised track, before the 'Banana opening'.

We have also put RED & GREEN lights each side of the signal box. These are controlled by the person who is on duty in the signal box



The 'Light team' (Dave Markham, Tony Roydhouse & Don Ellis) have a few more to go around the track, and are open to suggestions (safety ones...) We will keep you up to date..



Inside the new loco shed extension. New air-compressor nearest the l.h. door.



Andrew Hawke arranging boat storage.

3-D Models Gain Traction - John Lewis

Otago Daily Times, 18 December 2018 (re-printed by permission)

Bob Newbury never was a man to play with dolls.

But that all changed when the 84-year-old discovered you could have miniatures of yourself made on a 3-D printer.

Mr Newbury is a member of the Otago Model Engineering Society and has a 3-inch-scale 1906 Burrell traction engine. Everything about it has been built perfectly to scale. The only thing it is missing is a driver. Initially, he wanted a model of English television and mechanical engineering personality Fred Dibnah for a driver, but following a worldwide search, he failed to find one. "I also looked through all the toy shops here, but I don't think Superman or Spiderman or those sort of things would look right." After years of searching for anything that would resemble an engine driver, he was forced to consider a Ken doll. However, wife Pat Newbury (79) said Barbie's boyfriend would never have worked on the traction engine. "He didn't look like an engineer. He was too pretty - his slicked-back hair and grin and everything."



Pat and Bob Newbury with new 3-D models of themselves that go with Mr Newbury's 3-inch-scale 1906 Burrell traction engine. Photos: Peter McIntosh

After seeing a recent Otago Daily Times article about 3-D printing, he thought, "even I'd be better than Barbie's boyfriend", and he had a 3-D model of himself made at The Lab, in Dunedin. Mr Newbury was very impressed by the detail. "The job they did was absolutely magnificent because the detail on the overalls - there's a wee badge on the front saying Otago Model Engineering Society - you can read that. I've got a cap on that has Burrell on it," Mr Newbury said.

As a tribute to the countless hours of support Mrs Newbury contributes to his engineering passion, it was decided to have a model of her made too. "It's unbelievable the detail. When we both saw them for the first time, we were both gobsmacked." Mrs Newbury said it was "surreal" looking down on herself. "It's better than a photograph."

Asked if they thought the pint-sized models were better than the originals, Mr Newbury said it did not matter. "What matters is, the model is now complete."

John Begg's 3" Fowler A7: progress report

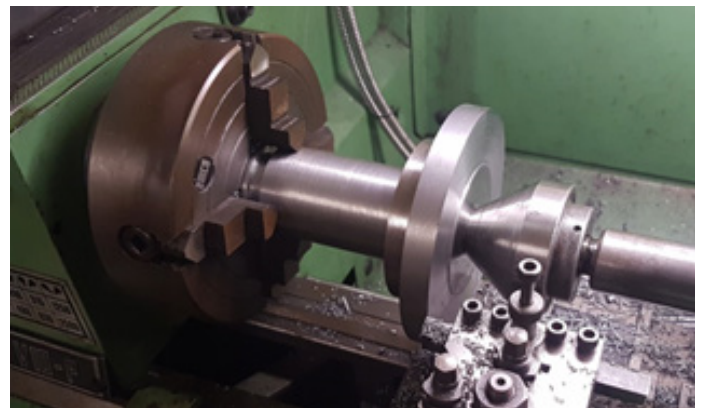
As, I guess, might have applied to a few others, lockdown provided an opportunity for real progress on the Fowler.

After completing all the dummy rivets on the horn-plates I set to on the steering. I admit to buying the steering gears but there is still quite a bit of work in the various shafts, brackets, bearings. Looked good when all in place though. Half lockdown gone!



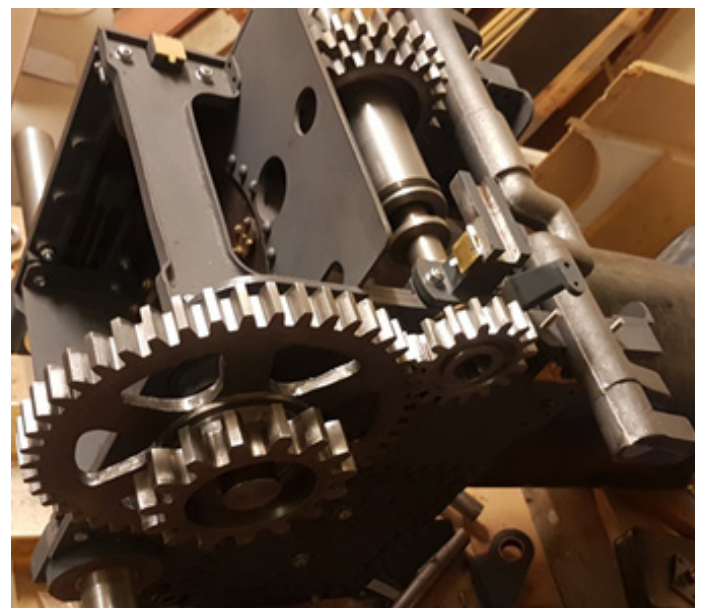
For a bit of a change I decided to tackle some of the gears. I had no idea there were so many gears in a traction engine! I don't have facilities (or expertise) to do the gear cutting so I turned up the blanks and had the teeth cut by Gear Cutting and Engineering in Treffers Rd. Excellent service and great job by these guys.

For some of the smaller gears I turned the blank out of steel; for a larger one I did a 3D print and had it cast.

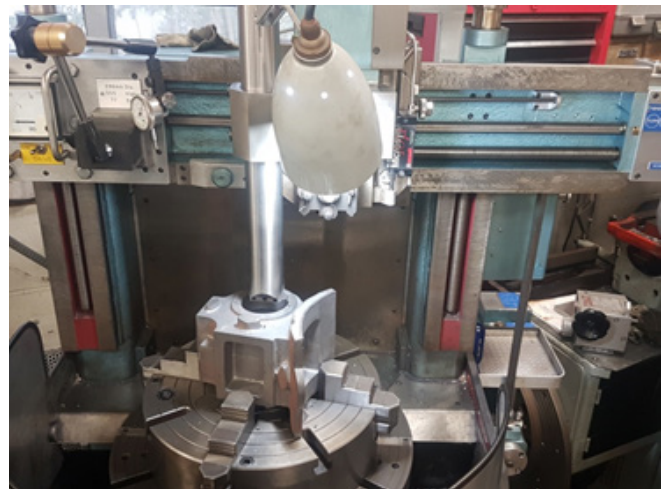
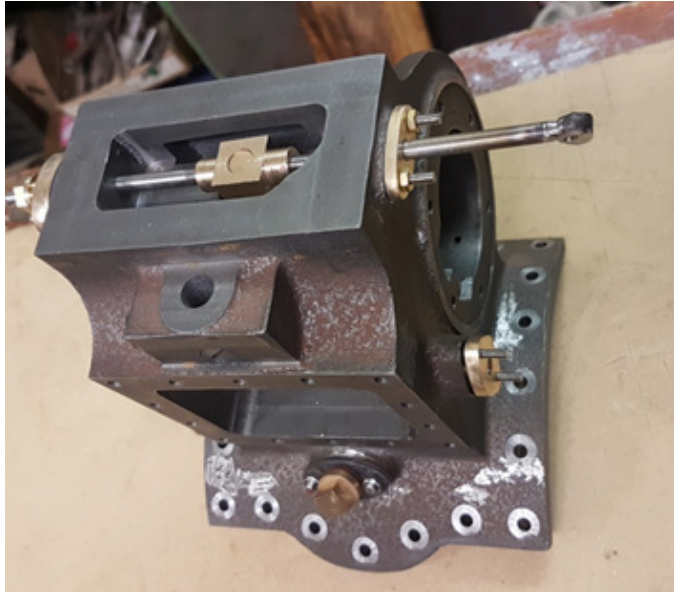


The gears made so far are sitting in position (along with the cast crankshaft which is waiting on machining). There are still several more gears to go including the bevel gears in the differential and final drive gear.

My order of doing things does jump around a bit and, for no particular reason, the cylinder was next.



The casting for this is quite complex so I purchased it from the suppliers in UK. Note to self: don't stuff it up as it's hard to get a replacement. First stage was to machine some reference surfaces and the bore. Many thanks to Jock Miller for helping me with this and for doing the work on his vertical lathe. This made a tricky job reasonably straightforward. Having got the reference surfaces sorted it was then easier to machine other parts of the cylinder, make and fit the liner and bore the various steam passages. With the regulator made and various glands sorted, the cylinder is looking good.



Currently working on the whistle, drain cocks, governor and safety valves, all of which are mounted on the cylinder. Then of course, there is the issue of bolting the cylinder to the boiler. Another note to self – don't stuff that up either. That would be hard to fix! There is a huge amount of work in and around the cylinder and I will be on that for a while yet – maybe finished by Christmas? Who knows?

Peter Grounds

There have been several things happening with the Berkshire. **Photo 1** shows the part-built slide bars. They are of the “multiple bearing” type. Two strips of steel, each with two grooves milled into them, then bolted back to back, holding the crosshead (still to be made) captive. Slots need to be cut under the slide bar pair for the body of the crosshead to fit into. The slide bars are made from P20 die steel, which is very hard and tough to machine, but carbide cutters leave a mirror like finish. I don't expect them to ever wear out!

Photo 2 shows the engine frame stretching down the workshop. The tender frame, an alloy casting, is positioned behind the main engine frame. The boiler, still awaiting its tubes, is in the background. **Photo 3** shows the engine frame looking forward.

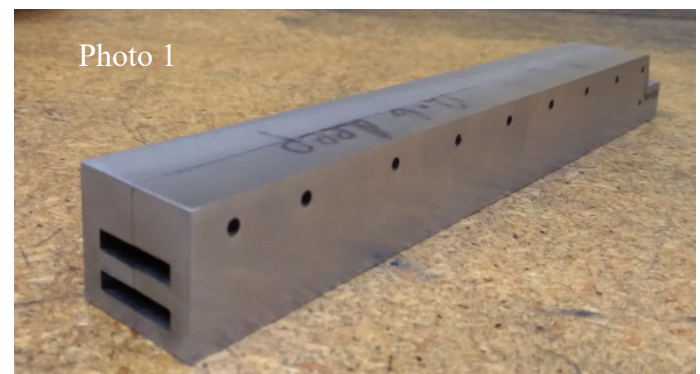
Photo 4 shows one of the valve guides, made from bronze castings. A pair of these were my “lockdown” project. The P20 slide bars bolt to the cylinder

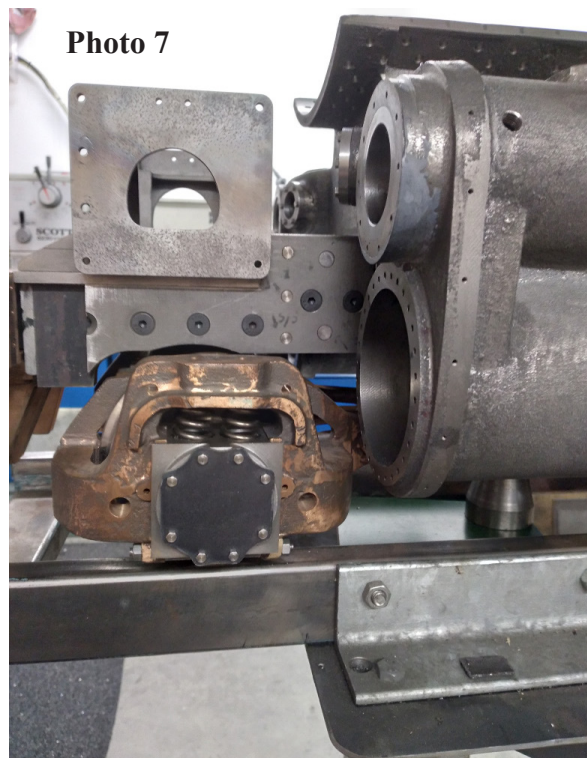
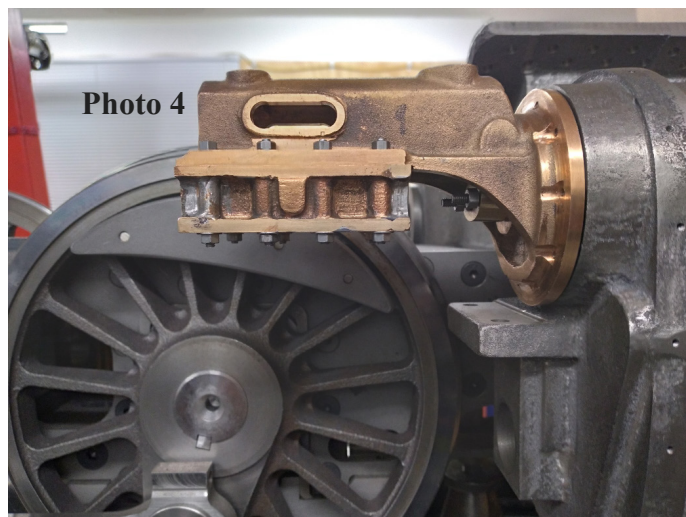
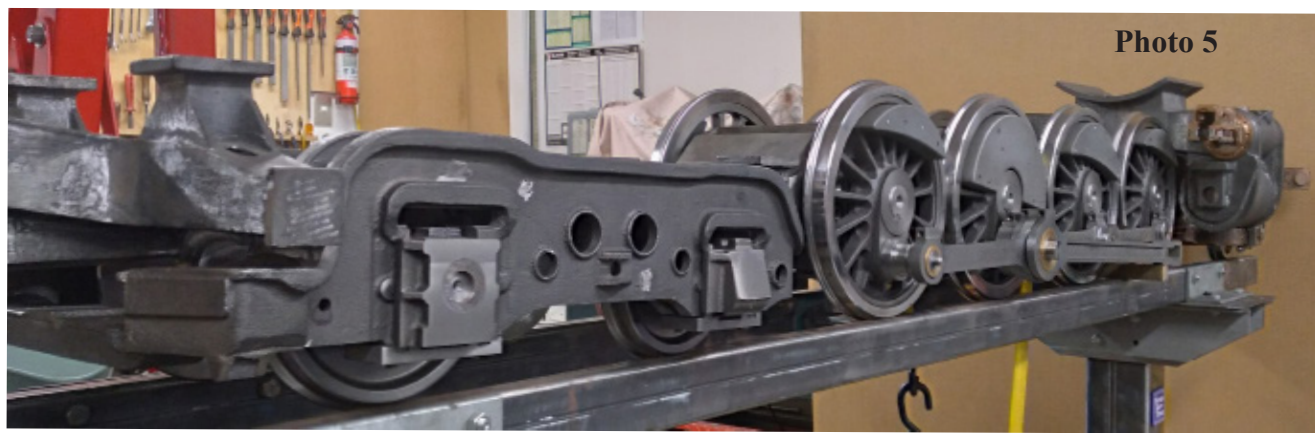
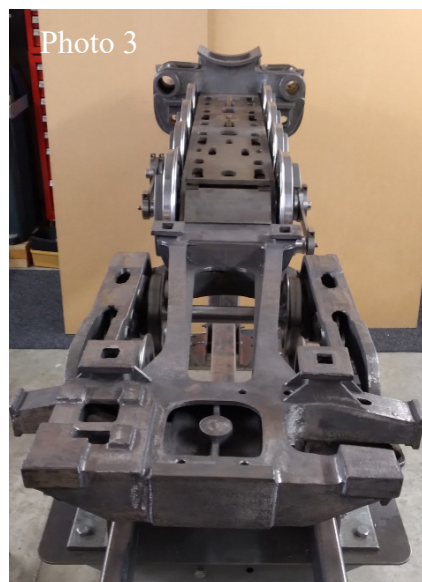
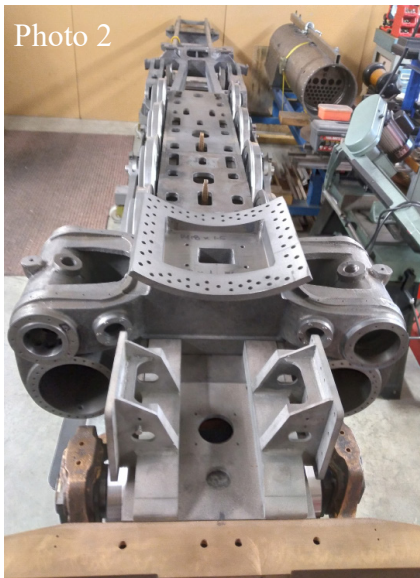
Progress on “The Berkshire” (Part 6)

casting just under the valve guide. **Photos 5 and 6** show the four-wheel trailing truck and how it fits under the cast iron frame extension.

Photo 7 shows the front two-wheel “pilot” truck. Above the pilot truck axle box is the bracket for one of the cross compound air pumps. There are two of these, one each side.

I suppose, one day, I should paint that lot. Black of course!





From the Dockside

What an interesting time we have had at the dockside! The year had started off really well with a few new boats coming onto the water, and sailing conditions were great. Suddenly Covid-19 hit, and we were dead in the water. Although there was to be no action on the pond for some time, that didn't stop our members building in their workshops. We had some new power boats, steamers and some yachts built during this time and they work very well.

I would like to say we have solved our leaky pond problem, but unfortunately we have not; the ground is too narrow where the weir is at the moment. We have a plan in place to move the weir around to the southern side and have engaged contractors to do this for us. However, we are having difficulties over negotiations with the council, which has halted progress. We are still able to sail but the long-keel yachts can't get into the harbour as its too shallow. With the pond being out of use, due to Covid-19, it appears we have got rid of the weed problem. I would like to congratulate John Hamilton on winning the Harrison Cup, awarded for best boat, which was a steam launch, *Sasha-Leigh*.

We have Show Weekend coming up and that's always a good time to show off our boats. Let's the wind stays away this time. That's all from me. I hope the rest of this year works out better than it started..

Andrew Willis

Commodore



A Light Head of Steam

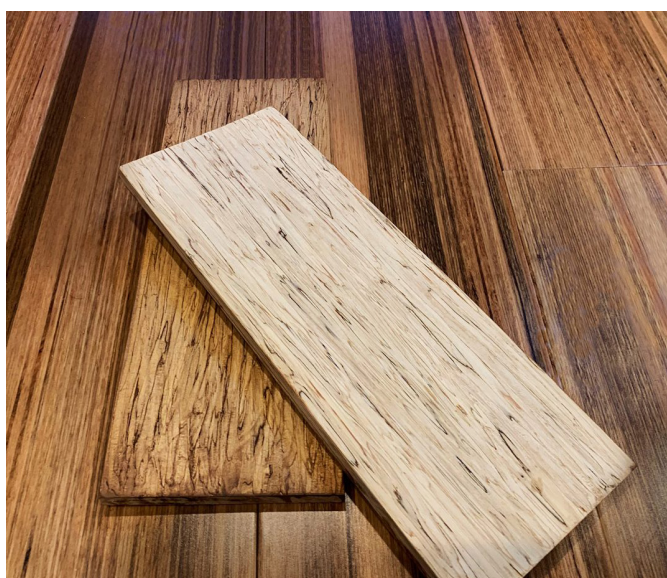
Article from **Boating New Zealand**, May 2020, re-printed by permission



Steam spawned the Industrial Revolution and with it, powered vessels. Some 230 years on, only the relics remain – a few surviving ships maintained and operated by dedicated enthusiasts. But the magic also lives on in small, working replicas crafted by perfectionists.

Now enjoying his retirement, Christchurch's David Pringle began building balsa wood ships at about 12 years old – and after years of fine-tuning turned his delicate skills to steam models. Intricate, detailed creations powered by miniature, fully-operational steam engines.

I caught up with him at the Lake Rotoiti Classic Boat Show in March, where his exhibit presented a fascinating cross-section of his handiwork. The vessels are all about a metre LOA and built from plans accessed from the UK or the USA – replicas of recreational boats built in the 1900s era.



Hemp wood

Vessels that were used on the Thames and places like Lake Windermere in UK, owned by the upper classes. The names of Pringle's boats, though, have a more local flavour – among them *Time Lass*, *Kathryn* and *Just Ticking Over*. The latter's name is a reference to her unusual engine – more on that in a moment.

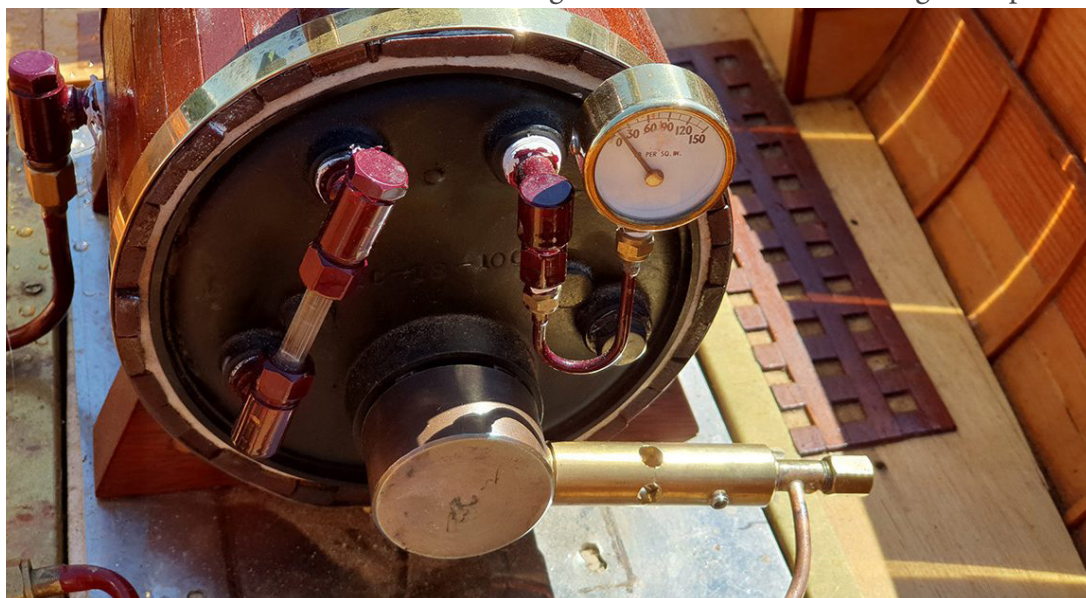
Balsa wood has long since been supplanted as the timber of choice. Today Pringle uses a variety of species, but mostly hemp wood and Oregon, with mahogany for the trims. Working with mahogany demands a special technique: it's cut into very thin sections which are soaked in hot water before being moulded around the hull form. Epoxy glue holds it all together. Each model has a build time of around two years.

Engines

As with the plans for the models, the miniature steam engines are also sourced from the UK and/or the USA. Most are single-cylinder Stuart Turner engines – which again are models of real working powerplants from the golden age of steam. One of Pringle's model engines was a gift that had never run. "It was completely rusted – so I disassembled and cleaned it – and because some of the parts were beyond repair I had to make new ones. I have a small metalwork lathe for this – most of the parts are fabricated from bronze, brass or mild steel." He has also built an engine from freshly-cast components – "finicky, drudge work – I spent hours removing all the burr

But *Just Ticking Over* – a fantail launch – is powered by a more exotic beast. A V-twin unit known by steam cognoscenti as an 'oscillating' engine, it's manufactured in the USA. Twin-cylinder engines, Pringle explains, are more reliable for stopping and starting.

"When you stop a single-cylinder engine the piston sometimes ends up in an awkward position – a bit like bottom-dead-centre in an internal combustion engine – where the steam can't get the piston moving.



You don't have that problem with a twin-cylinder engine. One piston will always be in the right position." Oscillating engines are also faster-revving and because steam engines are typically direct-drive, *Just Ticking Over* is the fastest of Pringle's boats – it doesn't need much more than 'ticking over' to move along at a decent clip. And because the drive-train ends in a variable-pitch propeller it's also easier to switch between forward and reverse. He manufactured the prop himself – using heat to bend the blades to the right pitch.

The steam for the engines is created in boilers running at 30-40 PSI. New Zealand regulations require the boilers to be certified (they operate in public places) with a healthy, built-in safety margin: they are actually certified to 100 PSI. Pressure is displayed on the boiler's tiny gauge. Boilers are fired by butane or propane gas – typically the small canisters used by campers – though Pringle builds the burners from scratch. "They're ceramic and mounted on the cylinder. The burner's equipped with a little valve and is lit with a match." Water is hand-pumped to the boiler before the boat is launched – just enough for a single run. "You have to keep an eye on the sight-glass and top up the boiler if the water level falls a bit, but I typically get about a 20-25 minute run from a single 'charge' of water."

Control

As scale-models, says Pringle, the boats achieve their design speed (3–4 knots) as per their waterline length. Rudder and throttle are operated via radio control – and in the case of *Just Ticking Over* – it also adjusts the variable-pitch prop.

And the mannequins piloting the vessels?

“They’re Ken and Barbie dolls – which I sheepishly confess I acquired by raiding my daughter’s collection over the years. She wasn’t very pleased at the time, but I think she’s eventually accepted that it was all for a good cause.”



[See also YouTube video at <https://youtu.be/dW8oSdhyAC8>

REMINDER! **SHOW WEEKEND 2020**

Friday, 13 November
Saturday, 14 November
Sunday, 15 November

10.00am - 4.00pm

WANTED!
EXHIBITS, DRIVERS, HELPERS

CSMEE Officers for 2020 - 21

President	Alex Cowdell	03 3181908
Vice President	Jonathan Grueber	03 3135070
Past President	John Howie	328 7459
Secretary	Rob Wilson	960 4305
Treasurer	Mike James	321 7051
Loco Foreman	Rob Wilson	960 4305
Commodore	Andrew Willis	0274 509334
Clerk of Works	John Howie	328 7459
Librarian	Dave Markham	322 7524
Boiler Committee Chair	John Hamilton	322 4574

Committee Members

Robin Shand	021 217 3601
Howard Shears	382 0761
Barrie Doublesin	383 3827
Eddie Clarke	359 9615
Mike Harrison	349 6946

Boiler Committee

Jock Miller	332 1614
Ian Fanshawe	942 2937
Mike James	321 7051
John Hamilton	322 4574
George Hodges	323 5019
Dave Campbell	326 5585

Constitution & By-laws Chair: John Howie 328 7459

Volunteer Positions

Awards Night Convener	Dave Campbell	326 5585	Visiting Speakers	John Begg	339 8448
Asst. Loco Foremen	Barry Doublesin	383 3827	Wagons /WOF	Phil Bellaney	03 312 5659
	Dave Markham	322 7524	Membership	John Blanchard	359 4053
	Peter Grounds	324 3662	Canterbury Tales	John Pattinson	329 4441
Asst. Clerk of Works	John Hamilton	322 4574	Shed Foreman	Alan Barlow	344 0244
Projects Manager	John Hamilton	322 4574	Asst. Shed Foreman	Ben Sewell	322 4219
Webmaster	John Begg	339 8448	Mech. Maintenance	Peter Grounds	343 1443
Publicity	Ben Sewell	322 4219	Roster Reminder	George Maylam	324 3469
Facebook	Nicky Tily	03 318 4785	Ticket Box	Jim Rosanowski	332 1370
	Patrick Whillis	382 6452	Archivist		
	Jayden Randall	322 7292	Asst. Librarian		
	Ben Sewell	322 4219			