

Number 615

August
2016

The MICROMETER

AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED

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REGISTERED NEW ZEALAND PUBLICATION

Pratt and Whitney R-4360

Massive piston engine displayed at
the Boeing Museum of Flight,
Seattle.

(Picture by Ron Copeland)





Train Roster

	Electric	Electric	Steam	Train	Station /	Station /	Station /
Date	Driver	Driver	Driver	Controller	Guard	Guard	Guard
7-Aug-16	G Beazley	D Booth	Voluntary	<u>S Meikle</u>	R Crook*	G Healy	Voluntary
14-Aug-16	P Dowdeswell	M Granger	Voluntary	<u>T Robinson</u>	P Jones	M Luxton*	Voluntary
21-Aug-16	M Hollis	D Housley	Voluntary	<u>G Anderson</u>	Voluntary	B Matchett*	Voluntary
28-Aug-16	J Lankow	D Moffat	Voluntary	<u>D Russell</u>	G Murray*	M Richardson	Voluntary
4-Sep-16	M Moore	P Moy	Voluntary	<u>G Wills</u>	K Ryan*	A Shirley	Voluntary
11-Sep-16	M Plant	R Reichardt	Voluntary	<u>D Black</u>	A Stratton	P Tomkies*	Voluntary
18-Sep-16	P Woodford	B Aickin	Voluntary	<u>T Lawrence</u>	R Stratton*	R Copeland	Voluntary
25-Sep-16	I Ashley	A Bailey	Voluntary	<u>S Meikle</u>	R Crook*	G Healy	Voluntary

Bold and Underlined Name:

This is the designated **Train Controller**, i.e. the person in overall control of all operations for the day

Bold with Asterisk* Name:

This is the designated Stationmaster, i.e. the person responsible for activities in the station area. The Stationmaster is also responsible to account for the day's takings.

Drivers: Please keep your eyes open for unusual or suspicious behaviour around the track which may affect the safety and/or smooth operation of our trains. Report such activity to the Train Controller.

Please Note:

If for some reason you are unable to attend on your rostered date, you are respectfully reminded that it is **your** responsibility to find a replacement member to fill the gap – please don't let the rest of the team for the day be left short-handed.

Also, please ensure the member you arrange a swap with is one who is rostered to undertake the same role to ensure we always have members with the appropriate training and experience on the day.

Update on fundraising subsidy scheme

Of the persistent "no shows" (i.e. 3 or more consecutive no shows) it appears that 2 members may be returning to active participation. 27 members have earned a rebate, 3 members should get a rebate and 5 members may or may not receive a rebate.

There is 1 member who runs a steam engine and has thereby earned 1 rebate.

Bob Aickin.

AUGUST CALENDAR

Tuesday August 2nd, 7.30pm - General Meeting , ASME clubrooms. Tonight's speakers will be Mark Richardson and Graeme Healey who will show us some antique horological tools.

Tuesday August 16th, 7.30pm - Committee Meeting.

President's Report

As winter draws breath for its last gasp the club approaches the end of our financial year in good shape and good heart. Running on the track has been a bit patchy, mostly due to weather but there have been some exceptionally good days and my impression from looking at the running patterns is that the customers are there provided we have the right weather, enough volunteers and motive power. We can't do much about the weather at this time of the year but the consistency of volunteers arriving for duty has definitely been improving and I'm grateful for that. The occasional steamers are greatly enjoyed by our public and once the works are over it should be easier to attract more of these. There have been some recent problems with batteries in the Ec locomotive which should be resolved soon.

Recent general meetings have enjoyed presentations by members returning from overseas trips; meetings of this type seem to have been well accepted. Next month and again in November we return to horology, thanks to Mark Richardson and Michael Cryns, always popular and an area of increasing interest to model engineers worldwide.

This committee and my Presidency has another four months to go, so it's been the right time to have raised some ideas for changes which might improve the club. Any which are adopted by the committee can then go forward to the AGM, either as a change of rules, if required, or as a platform for incoming members. I outlined a couple of these in the last Micrometer and they have since been discussed thoroughly by the committee.

The suggestion of altering our membership structure to allow a class of membership for people who wish to join but not participate as voting members or in running the railway has not been recommended to go forward. The committee's opinion, by a wide margin, is that it is too soon after the introduction, in fact before the implementation, of our rebate scheme, to make another change to the membership structure of the club. There will therefore be no further work on this matter before the AGM.

The idea of altering the governance and management structure of the club has also been discussed and by a narrow margin the committee have agreed to continue discussing this with the members. There has been quite a bit of good feedback on this idea since the last Micrometer, particularly regarding the idea of appointing long-term trustees for the club. One member, who took the trouble to write to us from Europe suggested that the trustees should not necessarily be life members as that imposes something of a bias on age of those selected. Others have said that perhaps trustee is the wrong word, perhaps they should be patrons. More thought needs to be given and more work done on this and there is no real hurry as the current system is not entirely broken. Or at least, it won't be as long as we get enough members coming forward to serve on the committee and provide some relief to the existing and rather long-standing, or should I say long-suffering, officers.

On the subject of helpers, the committee has been discussing for some time the possibility of recruiting additional people, such as residents from local rest homes to come in on Sunday afternoons and help on the station. This does raise a few challenges, including additional rostering and the unarguable requirement that such people must understand and obey the rules of the club. At the last meeting, committee member Graeme Healy agreed to lead this project and has undertaken to start making some enquiries. I have undertaken to provide draft documentation to allow non-members with appropriate training and approval to assist in off track activities so we might be able to give this a trial quite soon. In the meantime, the committee has also agreed to place an article in the local newspapers in an attempt to recruit more helpers for the summer and hopefully some new members as well.

As for existing members, the group we are particularly short of at present is Train Controllers which are now down to an almost monthly roster. This is not an arduous task; the paperwork seems a bit daunting and irritating initially but it is straightforward and in many ways makes the job easier because the systematic checklist approach means that you don't have to worry about whether you forgotten anything, something which, speaking for myself, is becoming increasingly important as the years go by. Anybody who has worked on the track, particularly in the capacity of a driver could be eligible for promotion to train controller-it's really a very pleasant way to spend a Sunday afternoon. If you are interested, please contact Greville.

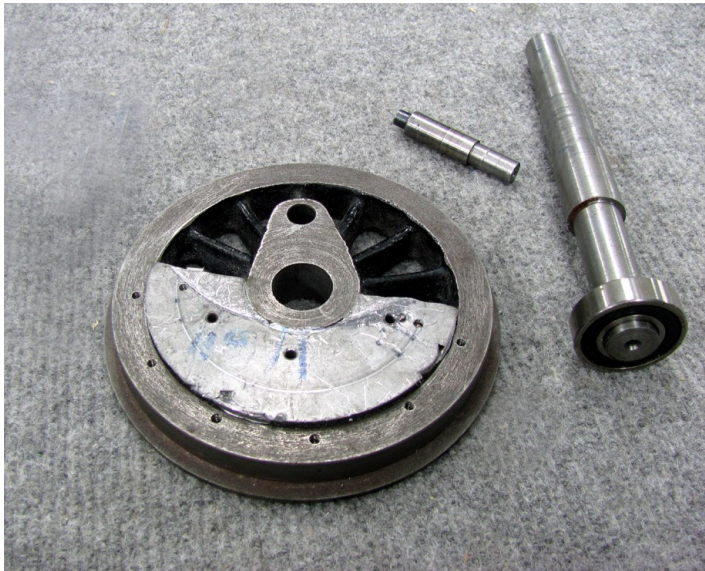
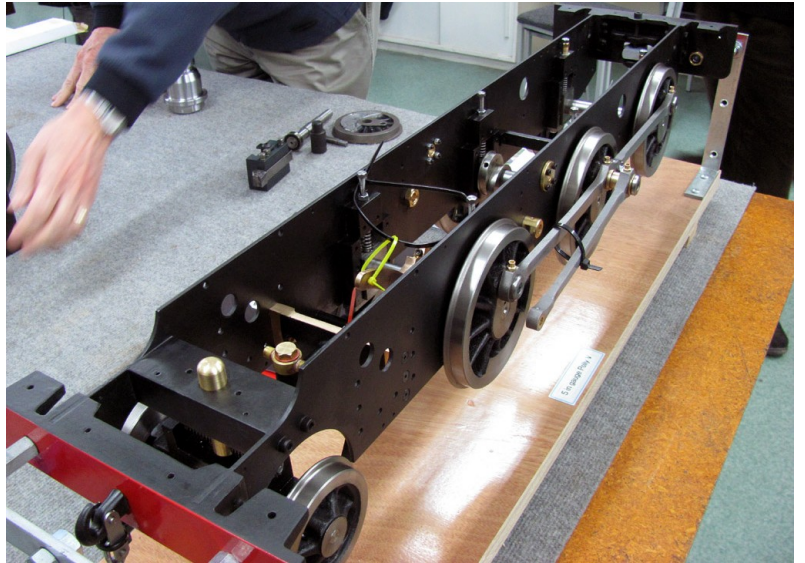
I'm going to be away on vacation throughout August, so I won't get to the meetings. As the old song says "see you in the springtime".

David Black, President.

Bits and Pieces July 5th 2016

Conducted by Bill Parker, with photos and report by Dave Russell.

Alan Bailey is coming along nicely with his 2-6-0 Polly locomotive and it's starting to take shape with wheels, connecting and coupling rods now added, and still an excellent standard of finish.



This driving wheel off a Beejax was Grant Anderson's test piece when he was figuring out where and how much lead to add to the wheels on his Hot Pot. Grant was also testing different ways to attach the lead. The crank pin was also nitrided.

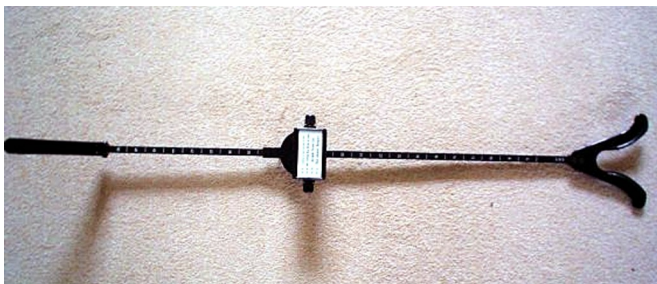
Mark Luxton has done a very nice job of making this quick change tool holder for his lathe.





Dave Housley brought along this CNC test piece made to show the capabilities of a machine at a recent trade exhibition.

I had this job to do for a friend and it needed an internal thread of $\frac{1}{2}$ inch x 28 tpi. I didn't want to screw cut an internal thread of that size and the pitch was an odd one to me. I had a search on Aliexpress and there were a few traders selling these, anyway it cost US\$7.34, free shipping, did the job nicely.



David Black brought in an interesting item called an RAF Rule, it was used for testing for some eyesight problems in RAF trainee pilots, the V shaped end is placed against the head and the target reading piece is slid along the measured rule.

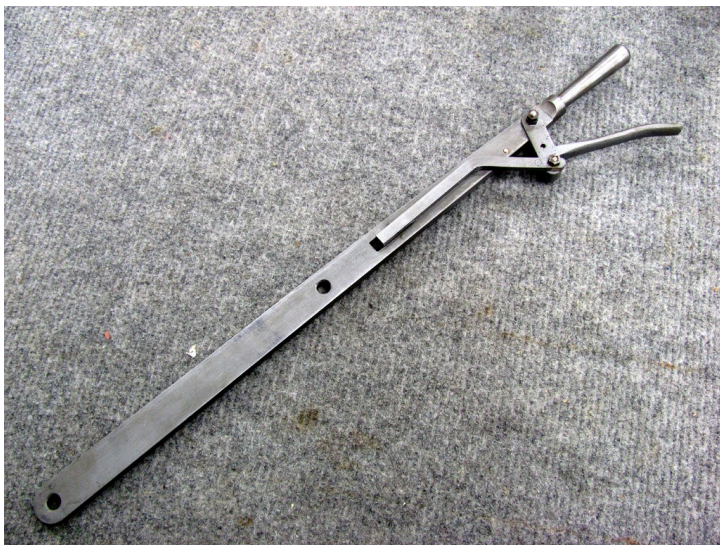
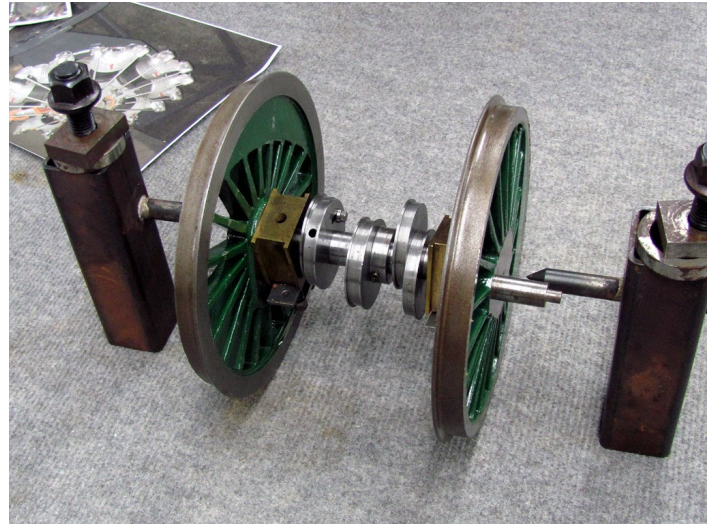
Mike Moore recently bought this LED soft light from PB Tech at a reasonable price: he is going to use it in his workshop.





Greg Burrows also likes buying things from Aliexpress and got hold of this nifty electric car scissor jack.

This main driving axle is out of my Maid of Kent 4-4-0 locomotive. The treads need machining as they have some small facets worn onto them. I made the dummy centres so that I could measure how much would need to be machined, the dial gauge showed that the worst was about 0.5mm out of true.



Bill Parker is building a 4" scale Foster Traction Engine and this is the reversing lever for the engine.

Bill also brought in this small tube bender he had obtained, the bent tube shown in the photo was a piece of 3/16 thin wall copper.



Excerpts from Ron Copeland's trip to Hawaii, Seattle, Canada, The Rockies and Alaska.

At the ASME general meeting on July 5th, member Ron Copeland entertained us with a talk and slide show on his recent trip to North America. For those who were not present at the meeting (or were present and would like a closer look at some of his pictures), Ron has thoughtfully provided the Micrometer with a selection of his slides and commentary:

We had arranged to be picked up in a limousine for an all-day tour of the Boeing Factory at Everett Seattle. This is the biggest freestanding building in the world on a 98.3 acre site and has its own airport. There is a freeway running through the property, so the planes are transported across a bridge over it at night to where they are painted in the graphics of the purchaser.

The 747 has 6 million parts.

In the Boeing Museum the Rolls Royce and General Electric jets are on display. The G.E. fan blades have a titanium leading edge with 170 layers of carbon fibre hand laid and are worth US\$150,000 each.

Parts of the 787 fuselage on display are all made from carbon fibre. I am told there are no hydraulics and all mechanisms are electric ball screws. Parts of the planes come from all over the world and are then assembled at Boeing Seattle.

There was an experimental small electric plane powered by a hydrogen cell hanging from the ceiling.

The first two commercial planes Boeing sold (in 1916) were sent to N.Z. for the Walsh Flying School.



After the Boeing Factory Tour we were taken to the Museum of Flight which is close to Boeing and has some association, but is run by volunteers and has some very interesting projects under restoration.

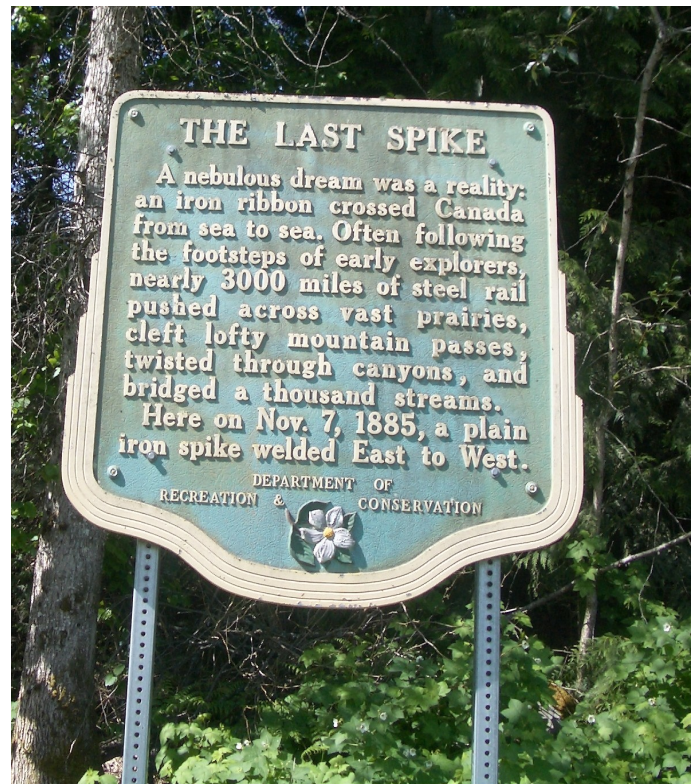
Displayed in the front window was a massive 28 cylinder Pratt & Whitney Wasp engine. I was blown away by its size. It was sectioned 2.5 ltrs/cyl which is 70ltrs per engine and produced 3500 hp. The cylinders were helixed with 4 banks of 7 with hemispherical no attachable divers hat cylinder heads.

Howard Hughes Spruce Goose had 8 of these engines, 4 on each wing = 560ltr producing 28,000 hp.



There was also a Comet being restored, helicopters and a bunch of W.W.2 planes. There was an experimental Boeing drop-nose supersonic jet to match the Concorde but it was never completed or flown.

One of the stops on the bus tour was where the last spike was driven to complete the Canadian Pacific Railway at Craigellachie.



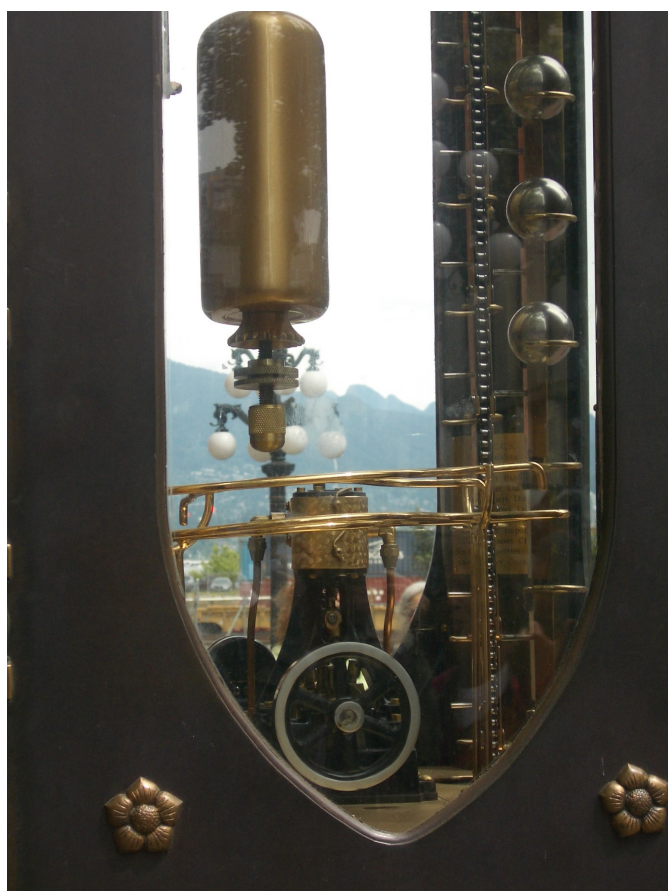
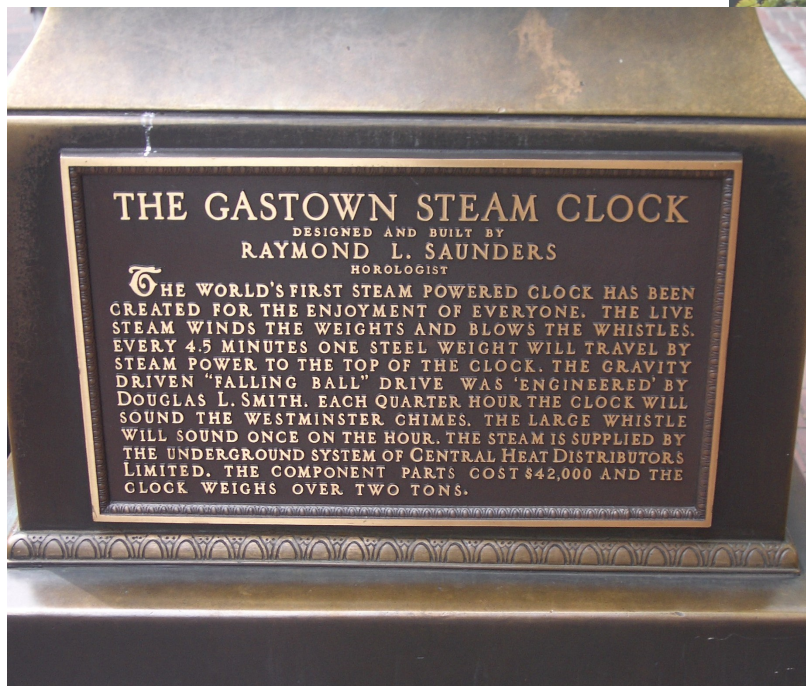
Whilst building the railway many Chinese people were employed and 5,000 were killed but it took some investigating before they realised what the biggest problem was. The rugged terrain and huge mountains required a lot of rock blasting. Dynamite was only just being used and at sea level a 15inch fuse gave a 20 second time delay but due to atmospheric pressure changes at 2,000ft above sea level it burned twice as fast.



Freight trains are not allowed on the main trunk line unless they have at least 80 rolling stock. Most have up to 200 and are double-stacked with recessed carriages to lower their height in the tunnels.

We stopped at Kicking Horse Lookout where we watched a 200 carriage train with 2 engines pulling and another half way along going up a spiral through 2 mountains. You could see the leading trains coming out of the second mountain as the tail end was going into the first mountain tunnel.

We visited a steam clock in Gas Town in Vancouver which was a real tourist attraction.



FOR SALE

Castings, frame/buffer steel and drawings for "Jubilee" 2-6-4T locomotive 3 1/2" gauge.

Designed by Martin Evans.

Castings by Reeves.

\$600.00. Offers considered.

Contact Ian Davis

Phone 09 2389796

Mob. 027 4839008

e-mail ian.hazel.davis@xtra.co.nz

FOR SALE

The committee have decided that it is time we thought about disposing of the surplus (raised track) passenger trolleys which are taking up valuable space in the engine shed.

Expressions of interested are invited (from ASME members initially) for the purchase of one or more of these trolleys. Contact Greville or any member of the Track and Trolley team.

WORK AVAILABLE

I would be keen to talk to any of your members who might be interested in some very part time machining/turning work.

The work in question is all small scale which could be carried out either off site by anyone with their own suitable lathe, or on our East Tamaki premises.

The work, being of a very part-time nature, would suit either a retired person or someone wishing to work evenings or weekends for supplementary income.

To find out more, contact
Simon Oakley
0274 867 676
simon.d.oakley@gmail.com

Around The Clubs

August 2016

Reviewed By Tony Lawrence

Please accept my apology for the absence of this article in recent issues of our newsletter. This was mostly due to work commitments, and to myself being invalidated for the last 3 months after having a serious accident on a construction site.

We are receiving very few written copies of other Clubs' newsletters nowadays, so not many are filed in the Clubrooms as of late. Most of them are now posted online and available to interested members of the public.

Conrod, Otago M.E.S., July 2016

Their recent MEANZ Audit passed with flying colours. The annual auction event was well attended and raised a good commission for the Club coffers. Some great photos and a link to the Tokomaru Steam Museum, near Palmerston North, which is currently for sale on TradeMe. A member of the OMES tethered car group recently took his car to a meet at the Gold Coast, and achieved First place with a speed run of an astonishing 270km/hr. Their Monthly Bits and Pieces table was laden with some well made projects as well. The boating group has been busy with several scale models progressing well, including the paddle steamer "Golden Age", the first ferry on Otago harbour. The prototype was built in Melbourne with two masts, was sailed to Dunedin, whereupon the masts were removed and steam service began. Some members are now resorting to rapid prototyping 3D printers to make small detailed parts and deck fittings for their models.

Mailship, Scale Marine Modellers, Auckland, July 2016

A near miss with a member of the public involving a car at the pond area was recently reported to the Panmure Basin Advisory committee. The outcome is that pedestrians have absolute right of way over cars on the path to the pool and in the parking area. We need to keep this in mind, especially at working bees when we use this access to get equipment and materials into the inner track and station areas. At their recent monthly meeting, the display table was well covered with Members' recent efforts, including a "Bismarck", a nice paddle steamer, a runabout and a lovely 3 masted sailing ship.

E.B.O.P. Society of model engineers, Whakatane, July 2016.

Recent bad weather has affected public turnouts on running days (as we well know in Auckland) but on Sunday 5th June an exceptional turnout of 350 tickets sold restored some faith in the weather gods. Two nice locomotives are advertised for sale. The first is a beautifully crafted model of a French SNCF BB 15020 plus 3 ride-on carriages. Recently completed by John Romanes, it is battery powered and in excellent condition. The second is a 5" gauge Baldwin 2-6-0. with a ride-on tender and 6' Briggs type steel boiler.

Model Torque, Hawkes Bay M.E.S., Napier, June 2016.

Unlike the rest of us, the Hawkes Bay region has had a very dry winter so that track attendances have been good. A major problem on the track and in the boat pond has been copious amounts of fallen leaves. The 7.25" track conversion is going well. Second hand bogies have been sourced from other clubs, and members are surprised with the variations in flange shape and dimensions encountered. These are all being corrected to the M.L.S. standard before being fitted to the ride cars. The model boat group is having problems with boats getting stuck on clods of floating leaves in the pond. There is a good article describing the casting of substantial (24Kg) traction engine cylinders by two members, using styrene foam patterns. This has turned out to be a quicker and more cost-effective solution for a one-off item in both cases.

Blowdown, Kapiti Miniature Railway &M.E.S., Winter 2016

It is now 3 years since the club completed their track extension. It is of a similar design to ours but differed in that their steel sleepers were fixed to wooden sleepers that were fixed to the concrete base at about 3 metre centres. The track was then ballasted with decorative stone chip to look more "realistic". However, problems arose with weather induced expansion and contraction and the rails tended to buckle in the vertical direction. This resulted in pieces of ballast migrating and getting stuck under the rails thus causing a very bumpy ride. After a lot of effort by members, the ballast has been removed and the track has now been refixed to the base at closer intervals. Everyone is now happy with the smooth safe ride.

OBITUARY

(The following message was copied from the July edition of Model Torque, the newsletter of Hawke's Bay MES Inc:)

Our Society records with regret the passing of John Romanes whose funeral was held on Thursday 15 July at Hastings. John was a foundation member of Havelock North Live Steamers, he was well known to members of our Society and to many other model engineers throughout New Zealand, on account of having built no less than 20 locomotives of 7¼" gauge. He was also prominent in 'MEANZ' and the work done by that organisation in discussions with Government, on matters such as Amusement Device Regulations, in looking after the interests of all New Zealand model engineering societies.

A large attendance of family, friends and model engineering personalities from throughout New Zealand were on hand to farewell John and to pay tribute to his lifetime achievements, his friendship, wise counsel and undoubted model engineering skills.

To his wife Nola, and family, our Society extends our sympathy at this time of sadness among you.
R.I.P. John.