



Newsletter of **THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC**

Managers of the "MARRINER RESERVE RAILWAY"

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**June 2014
No 401**

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TRACK RUNNING

This is held on the FIRST and THIRD Sunday of each month, from 1 pm to 4 pm Summer and 1 pm to 3 pm during the Winter. All club members are welcome to attend and help out with loco coaling, watering and passenger marshalling - none of the tasks being at all difficult. We may even offer you a cuppa.

Visiting club members are always welcome at the track, at the monthly meeting, or if just visiting and wishing to make contact with members, please phone one of the above office bearers.

Sender:- PNMEC
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This Months Featured Model



Report on the May Meeting.

Two short films

Dave Newstead showed a 15 minute 1930's documentary of repair and maintenance of LMS engine Cyprus, number 5605, at the Crew workshop in England. Over seven days, 6000 men, through 19 shops, worked on dismantling, cleaning, repairing, refurbishing, and reassembling the engine. It then spent five days being repainted.

Robert Edwards showed us nine minute film of the gas powered HP Snow 400 stationary engine that Graeme Hall is building.

Demonstration

Murray Bold demonstrated his 3D printer. Using his laptop computer and showing this on the big screen, he ran through how the program works, explaining (among many other things) the X, Y and Z axis.

He displayed the computer code and after some suggestions from the membership, entered new data in order to make a key-fob. He set everything up and started the printer working. The 27 layers needed to make this item took 19 minutes, during which time Murray went into more details and answered questions. Half way through he changed the colour, so that on the finished item, the letters are in a different colour to the background.

He also handled round some examples of items he had previously made.

Bits & Pieces

Fred Kent: Electric Compressor for his O-gauge Flying Scotsman.

Ian Stephens: A set of wooden wheels (made in part from particle board) for a model horse drawn dray he is making.

Apology

Sorry I missed out **Chris Morton** from the list of Committee Members. I think it was because I was trying to get the spelling of **Stewart Neal's** name correct. I most humbly admit my mistake and I have assured Chris that he is expected at the Committee Meetings. Chris did attend the last committee meeting. ED

June Club Night

7:30pm, Thursday 26 June 2014
Hearing Association Rooms
Church Street, Palmerston North

There will be a brief talk on Operation and Safety at Marriner Reserve followed by Bits and Pieces on the table.

All users of the railway are requested to attend.

Subscriptions

Subscriptions are now due and remain at the previous years amounts.

Full Membership	\$30
Country Membership	\$15
Junior Member	\$15

Please note there is a joining fee of \$10 for all new members.

COMING EVENTS

Track running at Marriner Reserve Railway

July 6 th	from 1pm to 3pm
July 20 th	from 1pm to 3pm

Rail Ex 2014 We will have a stand in the Barber Hall and our portable track will be in operation over the two days of July 12th and 13th. If any members can spare some time to man the stand or to help outside would they let one of the committee members know so that we can plan ahead.

Open Weekends

Eastern Bay of Plenty Model Engineers
Open Weekend 12th -13th July

Labour Weekend at

Keirunga Park Railway	24 th to 27 th October
New Plymouth	25 th to 27 th October

The closing date for the next issue of The Generator is Friday 11th July

THIS MONTH'S FEATURED MODEL

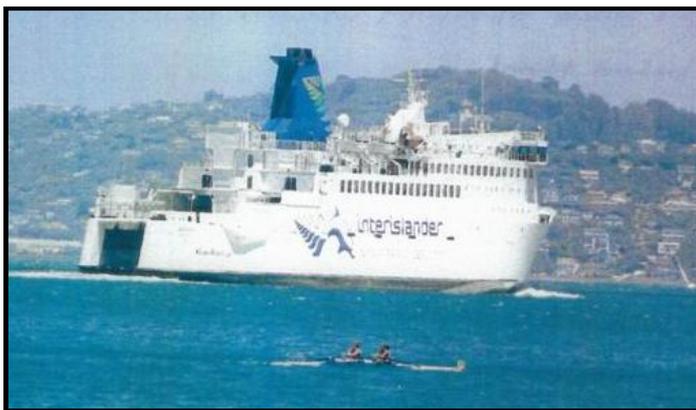
The bronze and weathered looking plough was not made by one of our members, but when I was shown it I felt that it was a very good effort by an artist with an understanding of the appearance of aged farm implements. It was made by Roddy McMillan who after leaving Southland Boys High School started wood carving for a local joinery and antique shops reproducing and repairing antique furniture. He travelled overseas to London where he carved ornate picture frames, restoring historic buildings and for a time worked on the Isle of Arran working for a plumber slating roofs and restoring stonework. In 2007 he began bronze casting working with Colin Webster-Watson before casting a series from the past. The hardships of the early pioneers had inspired him to this end.

LETTER from ENGLAND

By Stan Compton

What is the difference between a ship and a boat? The British and German Navies referred to a submarine as a boat, the old Railway Companies referred to the 'Boat Train' that carried passengers for the regular sailings to the USA by Cunard Line on the 85000 ton 'Queen Mary' which was obviously a ship and not a boat.

The photograph of one of the Cook Strait ferries



leaving Wellington is referred to as a ferry boat and it displaces over 5000 tons.

Note the twin oared skiff in the foreground, one of our grand-daughters with a friend were crossing the harbour to take part in a regatta, unaware of the ferry. The officers on watch had been informed of the two girls at sea in the harbour. Of interest is the fact that one of these ferries recently lost part of a propeller shaft and propeller in Cook Strait. The ferry had been

lengthened in Singapore, against opposition, who have now been proved correct.

Editor's Note, The replacement ferry has now lost part of its propeller blade.

Last month I told you about being involved with ship repairs when we lived in Vancouver in the 1960s. A regular job was to repair the cargo ships that carried about 5000 tons of raw sugar from Fiji. Hence the term 'Sugar Boats'.

One would arrive every two weeks and would be unloaded in twenty four hours using a conveyor system, fed by cranes on the dockside that lifted a device that is used for dredging, called in the USA a 'Bull-Clam'. Most of the vessels were old 'Liberty Ships' from WW2; previously the cargo arrived in sacks and was very labour intensive to handle. We had to contend with raw sugar simply dumped into the cargo holds that were filled to the top. Unlike a cargo of bulk grain that moves in a big sea and has to be divided up into sections with timber and jute sacking to prevent movement, the raw sugar did not move. Unloading the sugar was relatively straight-forward. The crane driver would lift out what he could reach through the hatches and then small bulldozers were lowered into the hold on top of the sugar where they shifted the sugar until it was under the hatches where the crane could reach it. However the small bulldozers damaged the internal hull and fittings and this is where our team came in.

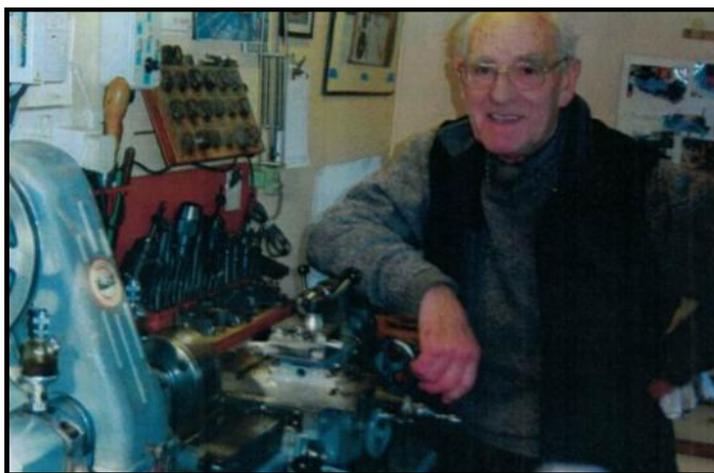
I would remove items like valve spindles, to repair back in our workshop but any job was tackled. Regularly the steel rungs welded to the casing got bent or broken off and they had to be repaired to allow access to the hull.

Our blacksmith would straighten them and I had to hang on with one arm and weld the broken rung with the other. The sounding pipes also got damaged; all ships have these leading from the deck to the bilges so the 'bosun' can check on water-ballast content. You can probably visualise how sticky the residue of the sugar was getting on us and our equipment but in a dry corner 50lbs of raw sugar could be shovelled into a sack to take home. It was pure sugar plus a few bits of rust, and to this day our children remember having to pick out those bits of rust from their porridge!!

I have always found that if a worker shows his skills, he is always kept on the tools, a promotion will only be to a working foreman with very little extra in wages but a lot of responsibility.

This happened to me when I took my family to New Zealand; Canada was all hard work but now I was in charge of the manufacture of air compressors that were of British design and were being built under licence. Now I was to learn that reject material gets exported. An example was the crankshafts that had been ground undersize and that meant that the flywheels had to be bored to obtain the correct 'push fit' making a matched pair, typical of sloppy standards in the UK years ago. The public are never aware of this sort of thing; the motor trade was well known for this, British cars were exported that were unsuitable for North-American conditions. Imagine the owner of a 'Hillman' car finding the throttle cable frozen leaving him stranded!!!! It is no wonder Far-Eastern cars having taken over with better reliability.

In the model engineering world we have time savers now such as laser-cut frames etc but there is still a lot of handwork if someone wants to build from 'scratch'. It is a case of getting into a routine of working ten hours a week or else the chosen project will drag on for years with little progress and finally interest is lost and the project is abandoned. I am aware we live in a changing times allowing men to purchase an engine or even buying a share in one but they never get the thrill and satisfaction gained by driving one that they have built from their own efforts.



Stan in his workshop.

To end with an item about cars, a true story. A man was driving his old Austin A40 when the engine cut out. Luckily he was able to pull into a 'lay-by'. He lifted the bonnet and after a while he heard a voice say, "You can have the battery. I only want the wheels".

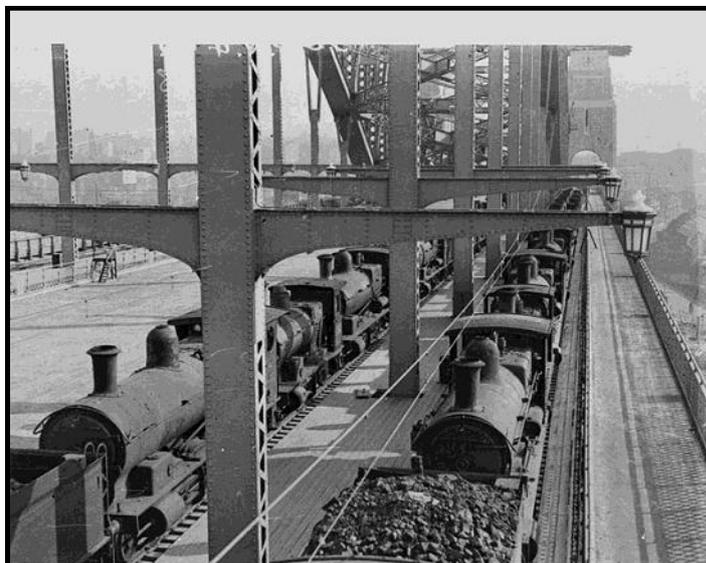
Stan Compton's 2-4-0 Caledonian



In Stan's latest letter to me was a cutting from and advertisement in 'Model Engineer'. The advert features a photo of the Caledonian 2-4-0 that he completed over thirty years ago while living in New Zealand. I remember him telling me that it was not an easy engine to build but that it performed very well. The photo shows the 'Caley' with safety valves lifting and racing along.

Load Testing Sydney Harbour Bridge

When the Sydney Harbour Bridge was completed it was deemed necessary to test the bridge. The first test carried out saw fifty locomotives pushed out on the dual tracks on the western side and I expect deflection tests would have been carried out. The photo shows this test being done.



Later the tram lines on the eastern side were removed temporarily while standard gauge rails were laid. A further test was then carried out using ninety-six locomotives. All must have been well as the bridge is still standing.

In the Newsletters from other Clubs

Blastpipe Petone

John Antcliff has been trying out the Welsh anthracite coal and has found it very good. No clinker, better than char and it gave a fire bed temperature of 670C . Murray McKenzie gave the Petone club's 'Speedy a test run on the Welsh coal and found that though he had some trouble getting it to start burning, once the fire came bright all was well, very little ash, no clinker and no smoke. David Turner's Case traction engine has been a regular at the running days.

Maidstone

They have had some visiting engines, John Antcliff's 'Phantom' and Bill Phillips' 5" gauge 4-6-0 'Gazelle'. Peter Carr has stood down after many years as Maidstone club president and long time member Nathan Reynolds has been elected to take over as president.

EBoP Model Engineers

Dave Fitton's Fa 9 had some minor troubles. The left hand lift arm on the weigh shaft came loose due to the Allen Key grub screws coming loose. One proved easy to get at but the other meant bending up another key especially for the job.

Whangarei Model Engineers

Some of the Whangarei members went out on the steam pinnace 'Clansman' around the harbour.

A week earlier their editor had a trip out to Kawau Island on the old Auckland tug 'William Daldy'. The trip had been organised by the Railway Enthusiasts Society.

Otago Miniature Road and Rail Society

A sealed envelope, silent auction is being run to assist the son of a past member to dispose of his father's workshop equipment. Chris is off to Australia with his tethered car to try and beat the record he holds 178.508kph. The building of a new World Class tethered track has been discussed and if it eventuates it may bring cars from Australia, Europe and the USA.

Marlborough Model Engineers

Murray Brown is building a clock. Ken McIntyre is having some problems sorting out ignition timing with the Gnome rotary engine. A decision is to be made about the large pine trees that are now becoming a problem. They are close to the track and falling branches may

cause damage. Pine needles are a fire hazard and they are finding there way into the pond.

Building my First Locomotive

By Doug Chambers

In the last 'Generator' I mentioned starting my first locomotive in 1979 and that it was Martin Evans 'Simplex' design. Now the following is not intended in any way to be seen as a criticism of Martin Evans work although the original 'Simplex' drawn in 1967 was followed by a 'Super Simplex' design in 1984. The only difference of importance was that the boiler design was greatly improved and perhaps this was an acknowledgement by Martin that his original boiler wasn't capable of producing as much steam as needed.

I had a second-hand Boxford lathe and a small drill press; when the 'Simplex' was nearly finished a Taiwanese mill-drill was purchased. I started off with the frames and progressed through to axles and wheels. The centre set of driving wheels have larger balance weights and here I made my first error. I made two wheel patterns, one with a small balance weight and one with a larger balance weight. The head moulder at the foundry had a chuckle when he saw them and then he explained that I should have just made one pattern and that the one for the wheel with the small balance weight. I should then have used some plasticine to build up the balance weight to the larger size. The moulder would then cast two off that and then remove the plasticine and cast off four more wheels with the smaller balance weight. Here endeth the first lesson and it was the first of many.

Perhaps I should point out that my trade is a motor mechanic specialising in tractors and I never had any formal training in machining metal either with a lathe or a mill.

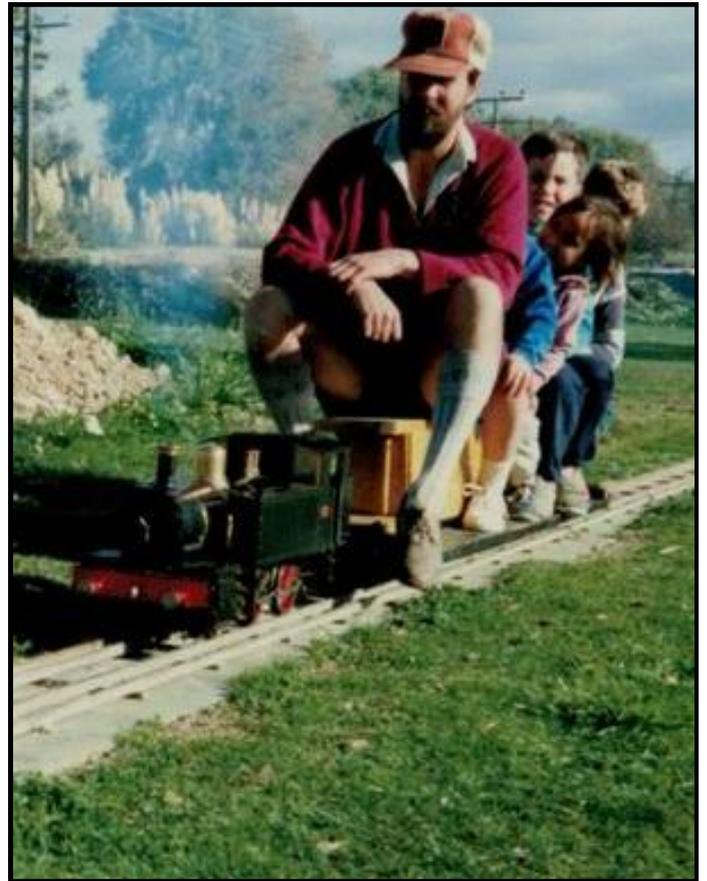
I was fortunate in being loaned a cylinder pattern and the local foundry cast them in iron for me. The pistons were iron and they were fitted with cast iron rings that I purchased, not being game enough to make my own at this early stage. Connecting rods and coupling rods were made the hard way. Remember I had no milling machine so they were cut out with a hand hacksaw and filed. I would like to point out that I was 35 years old and a lot fitter than I am now. The valve gear was made (good old hacksaw and files again) and to my great delight the chassis ran on compressed air. Valve events

were not perfect; it was a little lame in reverse but fair enough in forward. I subsequently learned how to set the valve gear up and get it right, another lesson learned the hard way. Now for the boiler, copper and bronze was obtained and an attempt was made to silver solder it together. During my days as a mechanic I had silver soldered copper pipes together but boiler plate work obviously required a different technique. An approach to Stan Compton led to a couple of hours at his home one afternoon where he demonstrated on my boiler how to go about it. I could see the problem straight away, I didn't have anywhere near enough heat. From then on I was away and soon the boiler was passed its hydraulic test by the boiler inspectors, Stan Compton and Rex Toms. At this point I would like to acknowledge the help and encouragement given to me by those two. Rex had a 'Simplex' which he had modified to represent an NZR 'Y' class tank. I had no experience of working from drawings and I had trouble trying to visualise the part I was trying to make. Rex was very patient and several times he and I turned his engine upside down as once I had seen the component I could then follow the drawing and make the part. I think it was Stan who advised me to make the tanks separate to the cab. As drawn the side tanks and cab were all one piece and to remove any one component meant all three having to be removed as a unit. I had called several times in the future to be thankful I had followed that advice.

In late 1981 the engine passed its steam test and once the painting was finished and allowed time to harden, it was off down to the track to see if it would perform well enough to pull me and perhaps a passenger along. At this time the track at Marriner Reserve was 250 metres long, kidney shaped and virtually flat.

The first run at the track was a sort of triumph, but also there were signs of dismal failure. That may sound a bit odd but this is what happened. The 'Simplex' pulled me along for about 50 metres and then ran out of steam. By the end of the afternoon I was able to complete a circuit without stopping for a 'blow up'. Because of my inexperience I did not really expect a better performance but I was a bit disappointed and resolved to do better with my second engine. I immediately started another locomotive and three years later 'Ashford' was tried out on the Marriner Reserve Railway. Plenty of steam and

I was able to complete several laps without problems. Three years later and 'Princess of Wales' joined the first two in the running shed. A very free steaming boiler on this engine. Next came a Kerr Stuart 'Wren' class and it too was easy to steam. The 'Simplex' had been taken to New Plymouth, Maidstone, Raumati and Wanganui. It was a poor performer at all those venues. I found that on the Marriner Reserve track the best I could manage was to start off with a full glass of water and the safety valves just lifting and after 1 circuit the water would be down to half a glass and the pressure would be down to about 50psi meaning a 'blow up' was required before another lap could be



attempted. Over the years I watched closely the performance of other 'Simplexes' and noted that some performed worse than mine and some were a little better.

If we are not meant to have midnight snacks , why is there a light in the fridge ??

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