



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

Managers of the "MARRINER RESERVE RAILWAY"

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TRACK RUNNING

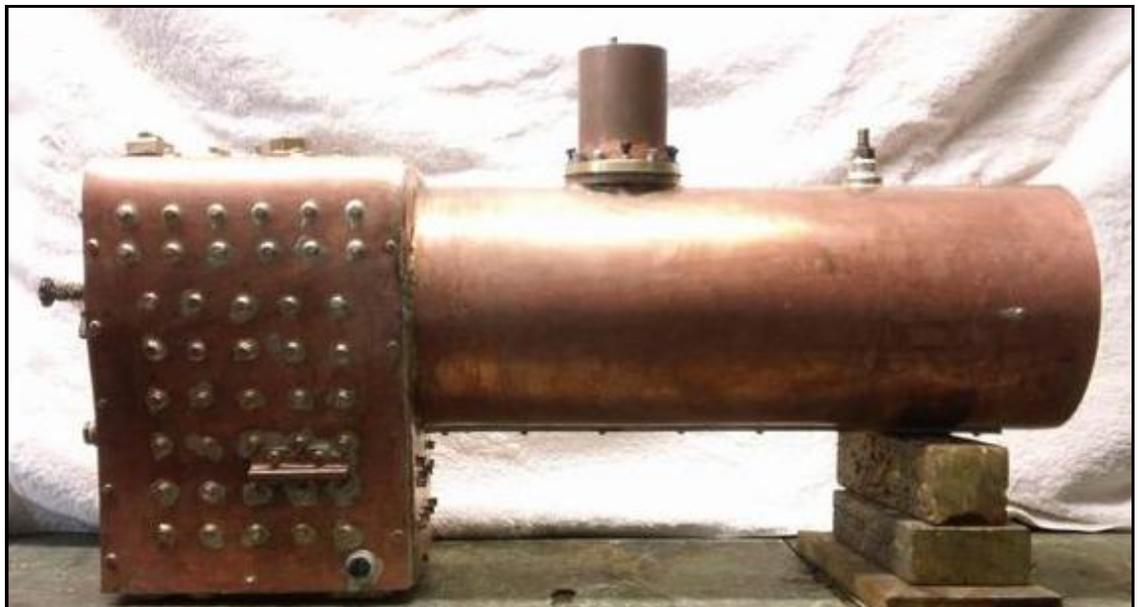
This is held on the FIRST and THIRD Sunday of each month, from 1 pm to 4 pm Summer and 1 pm to 3 pm during the Winter. All club members are welcome to attend and help out with loco coaling, watering and passenger marshalling - none of the tasks being at all difficult. We may even offer you a cuppa.

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
22b Haydon St,
Palmerston North 4414

Place
stamp
here

This Months Featured Model



Report on the June Meeting.

Richard Lockett told us he was making axles for the NZR 'U' class locomotive he is building. They run on needle roller bearings so they have to be made of steel suitable for case hardening. Richard had obtained the steel and then found that high speed tool steel was not able to machine the axles. Richard bought a set of carbide tip tools and their holders and that proved to be the answer. He also found that the hot swarf chips were attracted to the vinyl seat cover on his driving truck and various other items in the line of flight of the swarf. After repositioning certain items turning continued.

Bruce Manning showed us the latest Mid Somer model 'Showmans Traction Engine'. A Burrell painted green named 'Lightning 2' and on a recent holiday in the United Kingdom Bruce attended the Dorset Steam Rally where he saw the full-size 'Lightning 2' displayed in steam. Bruce had purchased a book on Cherry Hinds and her models. He also showed us a magnificent model of a Mercedes Benz 540K sports car that he had purchased. Accurately detailed and very well finished. The prototype was of 1934-6 vintage.

Graeme Hall Showed us the progress he has made on the 7 cylinder radial aircraft engine. The crankcases are finished and so is the crankshaft, master rod and the six connecting rods. Next comes the steel cylinders and the cam rings.

Bruce Geange demonstrated the Craven 40 ton crane that he has scratch built to suit O gauge. The crane is fully operational (electric not steam) and Bruce demonstrated its ability to lift, slew and luff the jib. It is yet to be painted but already it looks superb.

Ian McLellan brought along the boiler for the 3½" gauge 'Virginia' that he is building. The outer shell and firebox are now complete.

Dave Newstead reported that the Annual Dinner will again be at the Cosmopolitan Club in November. Date, Time and Price will be confirmed later.

July Club Night

7:30pm, Thursday 23 July 2015
Hearing Association Rooms
Church Street, Palmerston North

Murray Bold and John Tweedie will tell us about their recent overseas trips.

Bob Owen's request for photocopies of the article on a 'One Year Clock' that appeared in Engineering in Miniature was answered by a Christchurch member and Bob is very grateful for his help.

COMING EVENTS

Track Running at Marriner Reserve Railway

August 2nd from 1pm to 3pm
August 16th from 1pm to 3pm

Open Weekends

None have been advised

Model Mee

is on 28 & 29 August.
Time to start polishing those models for the display.

There are still a large number of members who have not paid their 2015 Subs

Subs are now Overdue

Please bring to the Treasurer on club night or by internet banking.

PNMEC Bank Acct No is
06-0996-0831663-00

Full	\$30
Junior	\$15 - Under 16
Country	\$15

The closing date for the next issue of The Generator is Friday 14th August

This Month's Featured Model

By Doug Chambers

The boiler on the front page has been built by me for Peter Targett of Wellington. Peter has been restoring a 7¼" gauge GWR 14xx class locomotive, (he has just about built a new locomotive). Drawn by the late Martin Evans who named it 'Dart'; it was serialised in the 'Model Engineer' magazine. Because the 'Dart' has fairly small cylinder bores Martin Evans had designed the boiler to have a working pressure of 125psi. The Australian Model Boiler Code that we operate under only allows a maximum boiler pressure of 100psi, so, I redrew the boiler design reducing the thickness of the copper from 4mm to 3mm which would reduce the initial cost of the copper, make flanging easier and the job would require less heating before brazing could begin. As the photo shows, the barrel (6" diameter) is attached to a Belpaire firebox. There are 23 fire tubes and 3 super heater flues combined with a deep firebox which should see a very free steaming boiler easily capable of keeping up with the engine.

The GWR 14xx class were a small locomotive with a 0-4-2 side tank arrangement. They pulled just one carriage that was fitted up with controls at the rear so that the locomotive driver could run the train backwards. The fireman remained on the locomotive footplate. The arrangement was known as a 'Railmotor', the predecessor to the Railcar.

LETTER from ENGLAND

By Stan Compton

The first job I found in New Zealand was with J. Niven and Co in Church Street, Palmerston North. The manager had been a ships engineer on the China Sea. One vessel he served on in the early twenties had a rectangular boiler fed with sea water. The boiler was seen to flex when in steam (I expect that the crew were a bit concerned about this). Later he set up a foundry making bronze castings of boiler fittings using scrap brass and adding tin and lead to improve the quality of the finished product. He invited me to visit him at his home where he showed me a model of a steam tug that he had built. It was used to tow him in a dingy on the Hokowhitu Lagoon. I have no idea what happened to it when he died. In his early days as manager, he supplied his apprentices with casting to build a

small stationary steam engine.

He showed me examples of 'magic mirrors' that he saved out of the scrap that he bought when running his foundry in China. These looked the same shape as a ladies mirror, made of cast brass with a polished reflective surface. In China he was shown how each mirror had been made to reflect a flower pattern onto a sheet of plain paper. This was demonstrated to me on a dull day, the mirrors were not very bright being kept in his workshop but each one reflected a different flower pattern!!! Yet they could still be used as a mirror.

I have been given an American clock made by the 'Waterbury Clock Co'. Thousands of these were made for the new immigrant population of the USA. The pine case appears to be carved but it is actually pressed in. The drive and strike springs are not retained in a drum and after stripping down for rebushing it took me hours to reassemble. The arbours (spindles) would flop about in the worn holes in the frames needing small wooden wedges to stabilise them. I have made clips to retain the springs when wound up but these got in the way so I had to use copper wire to hold the springs wound up. Later I was told that you don't strip down a 'Yankee clock' if you can help it. It is running well now but the strike train was not meshed correctly, it was too noisy anyway. I was lucky to be given a book describing repairs on American clocks so I can say that I have learnt my limitations the hard way.

The small lake steamer hull I was given is almost complete. The over scale V twin steam engine needs an over scale boiler, however I don't intend to steam it so we shall see what happens to it.



A club member brought me the wheels off a 5" gauge driving trolley to machine the wheel

flanges to a better form. It was one of the type with free rotating wheels, popular years ago. Why anyone would leave thick parallel flanges and no root radius I don't know.

When I started at Massey College (as it was known then) in Palmerston North, I found the engineering workshop equipped with all German machine tools. I found that they were all part of the 'War reparations', leaving Germany to recover without their machinery. The USA stepped in with supplies of new equipment. What interested me was a 'Plaurt' lathe, built pre-war. It had a leadscrew of an imperial pitch and the screw-cutting chart started with British thread pitches. This meant I could set up to cut a pipe-thread, for example, by tripping open the half nuts, wind the saddle back to restart the cut, just the same as you would when using a British lathe. To cut metric threads meant leaving the half nuts closed and reversing the lathe at high speed by lifting the feed clutch lever after retracting the cross slide. Restart the lathe for the next cut by pushing the lever down to take a cut at slow speed. It sounds complex but it was a clever design.

I did hear stories of lathes from Germany where the mandrel had been nearly cut through with a power hacksaw close to the chuck!!! You can't blame them losing machinery being sold for 'song' on the wharf in Wellington.

There is a private school in the Malvern area (www.thedowns Malvern.org.uk) that takes pupils aged between 3 and 11 years old. The only school in the country that has a steam loco running on a 9 ½" gauge track. "Duck your head in the tunnel" the pupils are told when learning to drive the loco!!

In the Newsletters from other Clubs

Blastpipe

Petone The new DC locomotive built by Dave Brownlow and Alan Spinks for the Cross creek Railway in Featherston has had a couple of trial runs at Petone and is being detailed and prepared for painting.

Maidstone Although the park was blasted by high winds and soaked with heavy rain they were lucky to avoid any damage. Their local MP Chris Hipkins visited their site on the 3rd

May and he was invited to drive one of the engines (with an experienced driver riding with him). Chris and the Maidstone members enjoyed their time together.

Whangarei Model Engineers

One of their members is building an LNER A3 and at Christmas time he received a present (from me to me as he put it). It was a 300mm digital calliper which has proved an invaluable asset in the workshop. Their new locomotive DC444 has had its trial runs and will by now be shifting its loads of passengers.

Manakau Live Steamers

They are trying to entice members to come along on Running Days and help out. Greg Burrows has completed the 'Mogul' designed by Keith Watson and started by Justin Parker many years ago. The 'Briggs' boiler has been converted to a locomotive boiler with a wet-leg firebox. A mistake in the drawings for the valve gear meant that some parts had to be re-made. The result looks good and apparently runs well.

Hawkes Bay Model Engineers.

The boating pond has had some attention. The rapid growth of the lily pads meant that there was little room for boat sailing operations. The Napier City Council supplied a large excavator and trucks and cleaned the pond out. Progress has slowed on the laying of the 7¼" gauge rail.

New Plymouth Model Engineers

Ben's DH is now running well as is the club's new hydraulic locomotive.

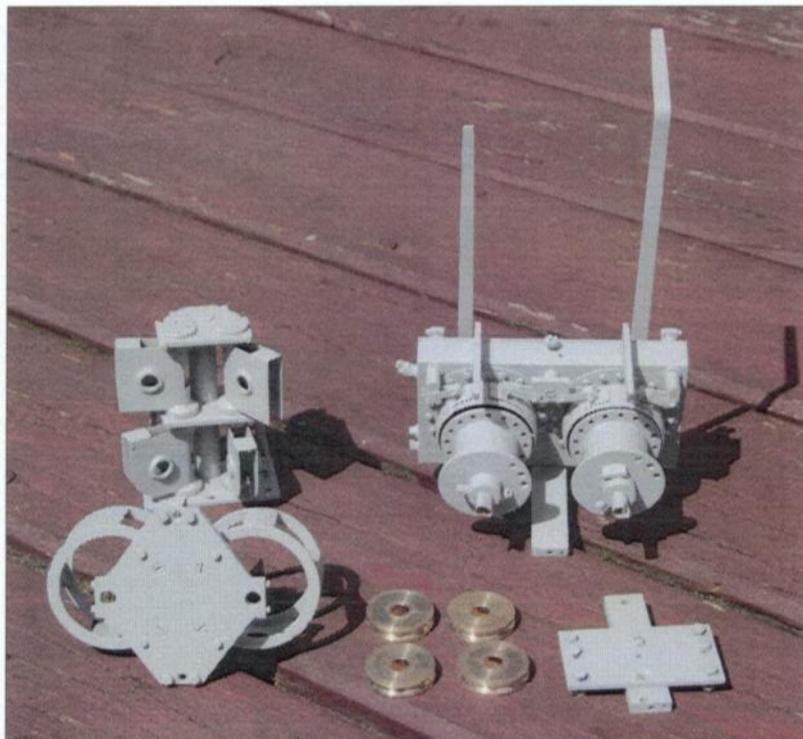
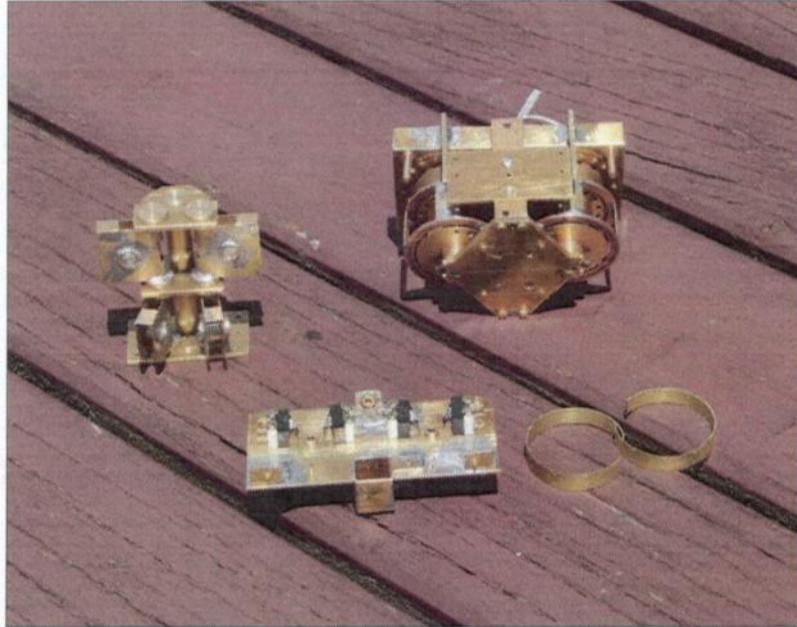
Nelson Model Engineers

Are having pond problems too with the Club working with the Nelson City Council to sort out a long term plan. A report on a mid-week 'Working Bee' complete with photos one of which depicts a 'Stop Work Meeting' with members of the work gang leaning on shovels in the manner of 'navvies' in the distant past and up to today.

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Building a twin drum LeTourneau Winch

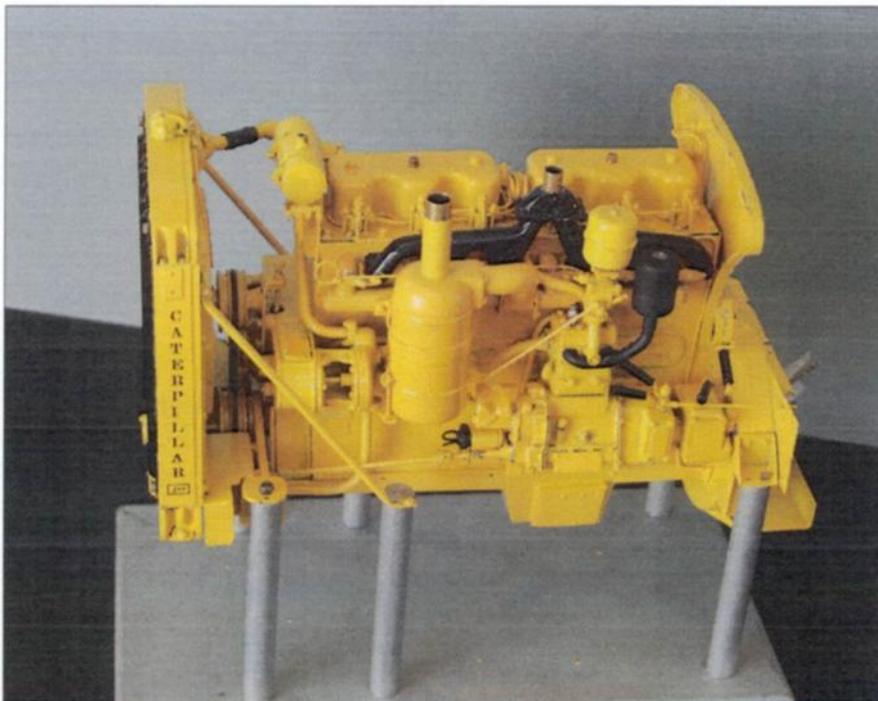
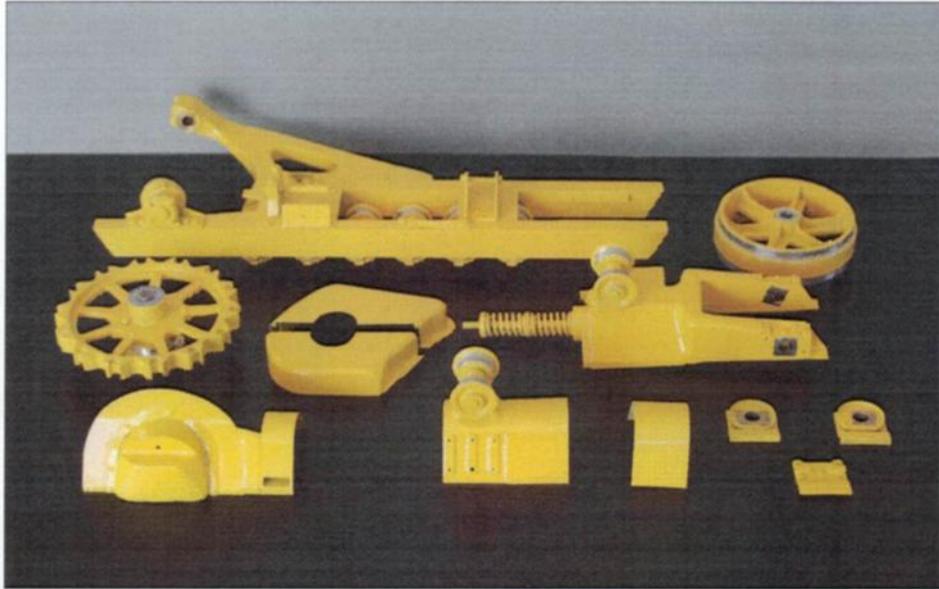
A lot of research went into the making of this winch with trips to Taihape and Masterton. The complete winch is built from brass and has a motor inside each winch drum. Each lever operates two micro switches that give a forward and reverse on each drum. One bolt and a screw secure the winch to the tractor. Built Jan/Feb 2014



More of the D8 Construction

Painting the Tractor

During February 2014 the tractor was dismantled and parts washed ready for painting. Parts were sprayed with a primer and then a top coat of yellow. After a few days assembly gradually took place. Photos on the next few pages show some of the components before final assembly.



To be continued