



## Newsletter of THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC

Managers of the "MARRINER RESERVE RAILWAY"  
Please address all correspondence to :- 22b Haydon St, Palmerston North.

**PRESIDENT**  
Richard Lockett  
(06) 323-0948

**SECRETARY**  
Stuart Anderson  
(06) 357-3420

**TEASURER**  
Murray Bold  
(06) 355-7000

**EDITOR**  
Doug Chambers  
(06) 354-9379

November  
2007  
No 329

**PNMEC Home Page** [www.pnmeec.org.nz](http://www.pnmeec.org.nz)  
**Email:-** [pnmeec@trains.net.nz](mailto:pnmeec@trains.net.nz)

### 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 onerous.

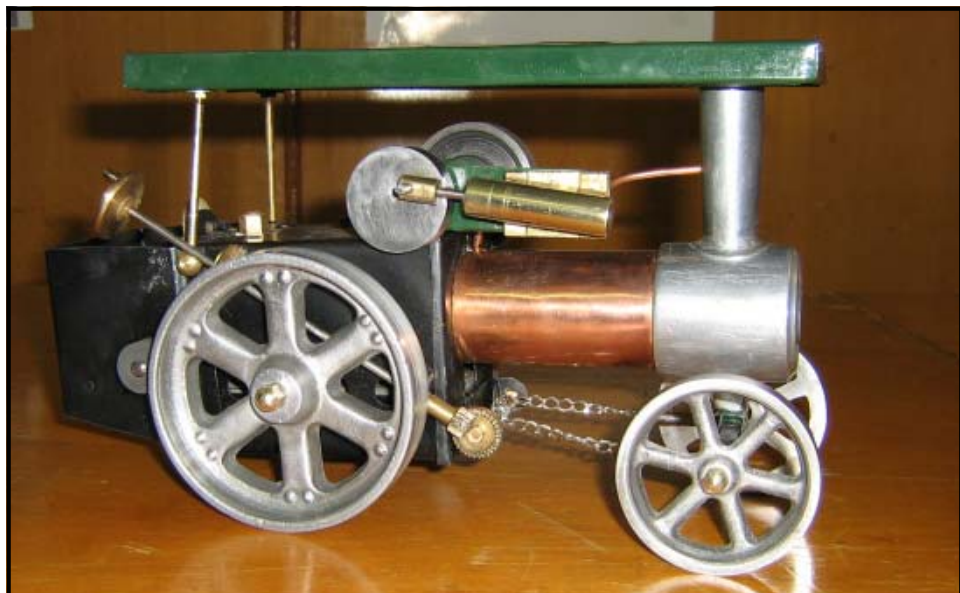
Visiting club members are always welcome at the track, at the monthly meeting, or if just visiting and wishing to make contact with members, please phone one of the above office bearers.

Sender:- PNMEC  
22b Haydon St,  
Palmerston North

Place  
stamp  
here

**T  
H  
E  
  
G  
E  
N  
E  
R  
A  
T  
O  
R**

### This Months Featured Model



## REPORT on the OCTOBER MEETING.

One of the results of a 'Bits and Pieces' evening, is that you get to see the wide variety of projects our members have undertaken.

**Bruce Geange** showed us the McCormack Deering 15/30 tractor he has nearly completed. Also was the Gauge 1 model of the Taupo Totara Timber Company Mallett. As with all of Bruce's models, beautifully detailed and accurate to the prototype design. Both models nearly ready for painting.

**Richard Lockett** had one of the coupling rods for his NZR 'W' class loco. Usually the coupling rods are made earlier in construction, but Richard has nearly completed the loco with painting underway.

**Doug Chambers** had the finished 'Chub' locomotive on display. It is now ready for delivery. He also showed us the two cylinder marine engine he is working on at present.

**Graeme Hall** had the Offenhauser crankcase and two timing case plates to show us. Very delicate and accurate work. He reported that he had had the Mastiff engine recently donated to the PNME running after curing some faults with the ignition system.

**Ian Stephens** had his version of the little traction engine for us to see. Ian is the first to complete one of the recent batch of 22 casting sets made. He obviously greatly enjoyed the time he had taken building it.

**Mike Barnes** had a spider gear from a 12" to the foot Garrett tractor that he has been making new bushes for. The spindle and gears had become well worn over the years since 1911 when the Garrett was new.

**Ken Neilsen** brought along the Stuart Turner 5a that he has completed. This engine was started by the late Cliff Ax of Motor Machinists Ltd. Time and eyesight prevented Cliff from completing the engine and Ken bought the engine and completed it. Ken admits that he would like to have built a boat to put it in, but he says there aren't enough years left for him to complete all his projects.

A modification Ken has done is to fit a mechanical lubricator instead of the usual displacement type.

**Fred Kent** demonstrated a generator that he has been working on. It has the potential to finish up on a small wind turbine.

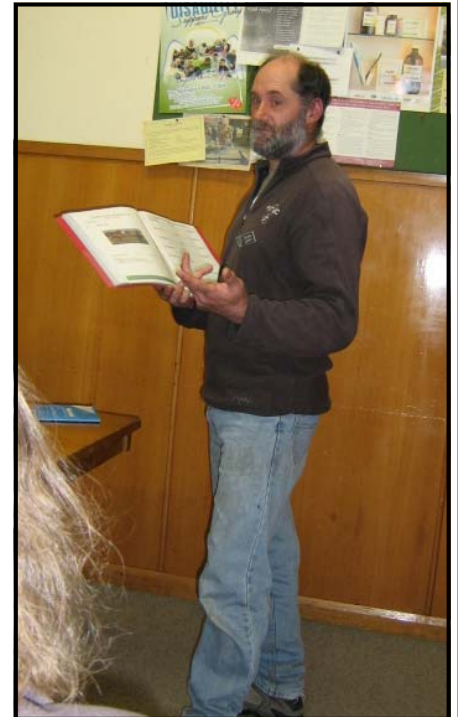
**Fin Mason** had come across a competitor of

Meccano, a device known as Jeneero. Jeneero apparently was produced in the late 1940s. Instead of having pre made components as in Meccano, Jeneero supplied a punching device and you made your own components as you went.

**Ian McLellan** showed us the 'Maisie' that is making steady progress. Details like running boards and steps are not very easy to construct for this model.

**Ian Stephens** has acquired Clem Parkers stationary boiler and after being displayed it was handed over to Doug Chambers for retesting.

**Richard Lockett** spoke on the progress made on the production of a log book for the recording of inspections of vehicles, structures and the identification of hazards. This is all part of the systems we are working through in preparation for a safety audit.



## COMING EVENTS

### Mid Week Run at Marriner Reserve Railway

27<sup>th</sup> November between 10.00 am and 2 pm  
Please contact Doug Chambers beforehand.

### Track running at Marriner Reserve Railway

1<sup>st</sup> December 1 - 4 pm  
15<sup>th</sup> December 1 - 4 pm

### Open Weekends

8 - 9 December Rotorua MEC  
3 - 7 January Manakau LS - NZ Convention.  
23 - 24 February Hawkes Bay Model Engineers  
at Anderson Park, Taradale.

The closing date for the next issue of The Generator is Friday 12th January 2008

## LETTER FROM ENGLAND

By Stan Compton

Recently the Hereford Society had a locomotive chassis donated to them from a local High School, a GWR 5" gauge 'Prairie' tank completed to the running on air stage. Only I suspect it would not run as under close examination there was some good work but lack of experience left a lot of backlash in the valve gear resulting in 5mm play at the valves. This could be rectified also the sloppy fits to the chromium plated coupling rod bushes which point to poor quartering or incorrect throws of the crankpins. I once overhauled a GWR 1366 Pannier tank and found the throw of these pins varied by 20 thou, probably due to drilling the holes in the wheels using the usual jig. A better method is to bore the wheels mounted on a faceplate in the lathe with a stub to mount the wheel on, or the same method under a milling machine.

One of our members made an offer for the chassis and I hope we see it completed one day.

I find a lot of part built engines are being bought off the Internet, a good start can be gained this way if the workmanship is good but I find it very frustrating when I am asked to help, which I do on the understanding that the engine will be completed. What often happens is some men tire of a project and start another one thinking a new project will be easier, however none of our engines are easy.!!!

My wife and I have just returned from a short holiday in Norfolk on the East Coast. We were able to visit the 'Thursford Collection of Showmans and Traction Engines' plus the large collection of fairground organs and rides. One man George Cushing, a contractor on farm work, realised in the fifties that these engines etc were being scrapped so he started buying up all he could and brought them back to store on his farm. All the locals thought he was mad, now many years later are restored. I counted five Showmans, six traction engines, one roller, two steam wagons, eight fairground organs plus a mighty Wurlitzer organ that had 1339 pipes from 1/2" to sixteen feet long, all concealed from sight.!! All this beautifully restored and displayed in a purpose built building that included seating for 1300 in front of the stage with the Wurlitzer Organ Console on it. The Wurlitzer had come from a cinema in Leeds, removed when the cinema was being modernised. The organ provides the music for Christmas Concerts entertaining 80,000 people each year. They are so popular we learned that the tickets are sold out by the end of February !!!!

A new building was being constructed on site to house the remaining traction engines presently stored outside. Because of this construction we were unable

to take a ride on the two foot gauge track with the ex- Dinorwic Quarry locomotive 'Cackler' named after a racehorse.

The next day was a trip to the Royal residence at Sandringham, not a large building but a lot of interest for the ladies with fine furniture, china etc. It was a surprise to find in one of the rooms, a pair of neopolitan cannon of 1/3 scale, built in France in the late 1800s as a gift for the young Prince of Wales. They were complete with limbers, exact replicas of the original and of about a 50mm bore. The barrel was about 800mm long and capable of being fired we were told. Just imagine those boys firing blanks playing at war games, I hope someone was about to supervise.!!!!

My main interest was found in the old stables, now a museum containing many cars from a 1911 fully restored 'Daimler' to a modern Roll Royce. The 'Merryweather' fire engine based on a pre-war Morris chassis gave me a clue as to the details of the suction pipe. This item I have yet to make to complete my little 'Merryweather' fire engine.

A number of model cars built for the Royal Children caught my eye, a Renault built in the 1920s as a gift, as they all were, had been modified in 1932 to have a Dainler radiator.!! But the Aston Martin DB8 miniature presented to Prince Charles was battery powered, as the Renault was. It was complete in every detail as the original used in the film by James Bond. Imagine having revolving number plates, hidden guns that I guess squirted water.

I am told that by Stewart Read our Chairman, that he met Prince Charles when an adult driving his favourite Aston Martin ; Stewart was a young policeman directing traffic.

On a table in the Museum was a display of some of the gifts presented to the Royal Family on their travels, such a variety made me wonder why they were offered. For example when a new factory in South Wales was opened the Queen was presented with a silver model of a box folding machine in miniature. About the size of a matchbox, of interest to me but not to many visitors I imagine.!!

Back to Hereford; one of our members bought a 7 1/4" gauge 0-4-0 . It runs well but developed a list to starboard. The owner found an axlebox with a blocked oil hole resulting in an elongated bearing of 6mm.!! The axle cleaned up easily and was re-used.

## OBITUARY

Today we mourn the passing of a beloved old friend Common Sense, who has been with us for many years. No one knows for sure, how old he was since his birth records were long ago lost in bureaucratic red tape. He will be remembered as having cultivated



such valuable lessons as knowing when to come in out of the rain, why the early bird gets the worm, why life isn't always fair, and maybe it was my fault.

Common Sense lived by simple sound financial policies (don't spend more than you earn) and reliable parenting strategies (adults, not children are in charge) .

His health began to deteriorate rapidly when well intentioned but overbearing regulations were set in place.

Reports of a six year old boy charged with sexual harassment for kissing a classmate; teens suspended from school for using mouthwash after lunch; and a teacher fired for reprimanding an unruly student, only worsened his condition.

Common Sense lost ground when parents attacked teachers for doing the job they themselves failed to do in disciplining their unruly children. It declined even further when schools were required to get parental consent to administer Panadol, sun lotion, or a band aid to a student but could not inform the parents when a student became pregnant or wanted to have an abortion.

Common Sense lost the will to live as churches became businesses and criminals received better treatment than their victims.

Common Sense took a real beating when you can't defend yourself from a burglar in your own home and the burglar could sue you for assault.

Common Sense was preceded in death by his parents, Truth and Trust, his wife Discretion, his daughter Responsibility, and his son Reason.

He is survived by three step-brothers, I Know My Rights, Someone Else Is To Blame, and I'm a Victim. Not many attended the funeral because so few realised he was gone.

I expect that someone will read this and say to themselves and others that the Editor of the 'Generator' is not very PC. I can assure you that he is not at all PC!!!!

I have learnt to take responsibility for my own mistakes and failures. I learnt to respect my teachers and that if on occasion I didn't give them the respect they deserved, the problem was instantly corrected with a cane applied to the seat on the problem!!

This basic instruction led me to respect those with superior skills to mine and to realise that when two teams go out to play, there is only one winner, the other team loses.

The thought that you play the game for the sake of the game is rubbish!!! The great thing about model engineering is that the model you have created reflects the effort, skills learnt, (the hard way) .

Editor (& others)

## **THIS MONTH'S FEATURED MODEL.**

By Ian Stephens

Richard Lockett had castings done for the little oscillating traction engine five or six months ago. They were cast in aluminium smokebox, front and rear wheels. I purchased a set complete with a well instructed plan. I studied the plan for sometime, then took the plunge. I have never read one or made anything from plans before. With help from friend Richard Stevens, I made slow progress. Finally I got the hang of things and made good progress. As the project advanced and started to look like something, my lathe and engineering ability made me realise there was no such word as can't. Finally the machine was finished and I felt quite proud of my achievement and more proud when I was asked to show it off at the Palmerston North Model Engineering Club meeting. I have had very little experience turning on the lathe so it just goes to show that we are never too old to learn.

Waiting for the next project!!

## **RIVETING**

The following has been taken from the 'Model Torque' the Hawkes Bay Model Engineers Newsletter. Evidently written by Graeme Learbourne and I trust that he will not object to me reprinting it in the 'Generator'.

In the days of old 'riveting' was as common in engineering as welding in today, but riveting is an act now almost lost in this day and age. However at my place of work, Napier Engineering, I have been in charge of extensive repairs to a Fowler locomotive boiler of 1926 vintage, that included a new front tube plate, major firebox repairs and fitting foundation ring etc. all this had to be done by hot riveting, but we no longer have staff with the necessary rivet experience. We were able to engage a retired boilermaker with the necessary equipment which he brought to our works. The equipment included an electric resistance rivet heater, requiring such heavy current that it was wired directly into our main board. The rivets were all 7/8" diameter and this heater would bring the rivet to 'white' hot in thirty seconds, ( a most impressive sight), the rivet was then placed into the hole very quickly with tongs and 'closed up' by a pneumatic riveter that could exert 60 tons pressure in one hit. The rivet machine was pneumatic having a 250mm cylinder, a throat depth of 1200mm and weighs almost 1 1/2 tonnes so is swung from a crane, but its point of balance is so precise it can be operated easily by one man, with another man heating and placing the rivet. The 66 rivets in the foundation ring were done

in less than four hours, and the whole process attracted much interest.

### PHOTOS FROM THE PAST

The late Barry Percival and his 'Juliet' just starting the long climb up the bank around the extension. This would have been taken in 1990 before any shrubs and trees had been planted. On the day the extension was joined up Barry steamed up the 'Juliet' and drove around the newly completed track ( the last welds were still cooling)



The late Ron Walker on his 5" gauge 'Jubilee' at about the same place as the previous photo was taken and probably on the same day.



### FOR SALE

On behalf of the family of Graeme Harris, we have been asked to advertise and sell the collection of Stuart Turner steam engines that Graeme had bought from Chris Rogers.

There are four engines mounted on a display board, all machined and finished to a very high standard. The first is a 'Williamson' steam engine, originally drawn up by 'Tubal Cain' and is a replica of a vertical engine made in the 1800s by Williamson Brothers of Kendal.

The second is an H 10. This is the horizontal steam engine with a 3/4" bore x 3/4" stroke.

The third is a V 10 which is a vertical steam engine having the same bore and stroke as the H 10.

The fourth is a D 10 with reversing gear. This is a twin cylinder with the cranks at 90 degrees and thus

avoiding being stuck on centres making it ideal for use in a radio-controlled boat. Bore and stroke the same as the V 10. For further details contact Dave Brownlow on 04 235 9985.

### FOR SALE

Whitworth taps and split dies from 1/8" to 1/4"

UNF taps and split dies from 1/4" to 1/2"

BA taps and split dies from 2, 3, 4,5,6,8.

40 piece metric tap and die set. 1/2" to 1" pipe die set.

Myford ML7 3 jaw, two four jaw chucks, face plate, angle plate. Usual extras. \$1500 ono. Heavy duty drill press 3/16" to 3/4" Jacobs Chuck, Power hacksaw, and a tapping machine.

All home made Various drill vices, LPG torch and 9kg bottle ( needs retesting).

Contact Clem Parker 06 376 8353.



This year's end of year dinner will be at the RSA

200 Broadway Avenue  
Palmerston North

Thursday 22 November 2007

Drinks starting at 6pm with dinner at 7pm.

So far, thirty-three people have signed up. (If you are one of these, that's great and please disregard this message.)

If you have not yet had a chance to talk to your wife, partner, significant other, date for the evening, or other important person in your life, then please do so and let one of us know if you will be joining us for the evening.

The RSA requires firm numbers, so we need to know if you are coming no later than Sunday 18 November.

The RSA also requires all visitors to be hosted and ushered in by an RSA member, therefore someone from our club will be at the main door to meet you between 6-7pm. If you are unable to arrive by seven o'clock please let us know.

The members indicating they are attending as at 18 November are final and the Treasurer will pay the RSA for that number.

If you are an out of town member we will accept payment on the night, but please keep in mind that there are no cancellations or refunds after 18 November.

We are looking forward to a happy, interesting and enjoyable evening and hope to see you there.

Cynthia Cooper  
06-354-7100

[Cynthia@trains.net.nz](mailto:Cynthia@trains.net.nz)

Murray Bold  
06-355-7000

[engineer@inspire.net.nz](mailto:engineer@inspire.net.nz)



## THE FALKIRK WHEEL



Not really a wheel as such, but a lift to raise or lower canal boats instead of using eleven locks. Sure lifts of different types have been used in the past to raise or lower canal boats but they were built over 100 years ago and the Falkirk Wheel was opened by the Queen in May, 2002.

Canals preceded the first railways by more than fifty years. In Scotland the Forth and Clyde Canal was opened in 1790 and allowed the passage of vessels to travel the 35 miles between the Clyde at Glasgow to the Forth at Grangemouth. The trip involved passing through 40 locks and 32 swing bridges.

The other important canal in Scotland was the Union Canal and this was opened in 1822. This went from Edinburgh to Falkirk passing by coalfields that would use the canal for transport of coal. The canal was designed to follow a contour of 73 metres above sea level and thus the thirty miles were lock free. At Falkirk there was a major problem, 11 locks were needed to allow boats to change from the Forth and Clyde Canal to the Union Canal.

The canals were closed in 1965 and they were soon encroached upon by roads and housing development. By the late 1990s it was realised that canals were a

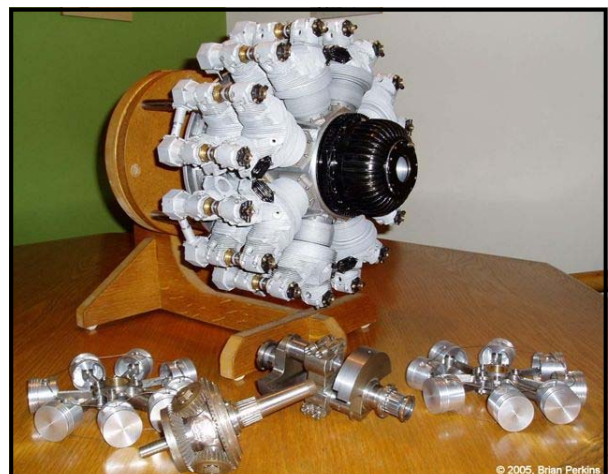
greatly popular recreation and developers realised that the presence of a canal system would be very attractive to people interested in moving to the area. The idea of the 'Millennium Link' came into being. This was the rebuilding of the entire system. Locks had to be repaired and in place the old canal bed had been filled in. The M8 motorway had to be raised to provide clearance where it passed over the canal. The budget, 84 million pounds, 32 million coming from lottery grants. The largest single part was for the Falkirk Wheel which replaced the 11 locks at Falkirk. This very impressive construction provided a solution to the problem the original designers had in 1820.

Canal boats on the Union Canal approach the Falkirk Wheel on the higher level, through a 168 metre tunnel, then a 104 metre aqueduct which then opens into the upper of the two gondolas. The wheel then rotates 180 degrees and the upper gondala has now become the lower gondala which opens out into a 100 metre circular basin (once an open cast pit). The Falkirk Wheel is 35 metres high and each gondala contains 300 tonnes of water. Because the two gondalas are always in balance it requires very little power to move the wheel. Each gondala can carry four boats at one time.

Visitors to the site can go through the Visitor Centre or take a short boat trip of one hour duration which includes being lifted up the wheel before returning and descending down the wheel.

### CORRECTION

In last months 'Letter from England' Stan Compton told of seeing Brian Perkins Bristol Hydra radial aircraft engine. Stan had written that the engine was a 16 cylinder but your editor thought that it might have been a double row 14 cylinder, (two rows of seven cylinders). Radial engines with an even number of cylinders in each row are quite rare. Once again I have been found to be incorrect. The Bristol Hydra was an experimental engine and had two rows of eight cylinders.



The Generator