



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
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Palmerston North 4414

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This Months Featured Model



Report on the September Meeting.

We met at Manawatu Hydraulics facility where the owner Paul Burr showed us through explaining the widely ranged jobs that are taken by them. Paul showed us parts they made for a 1902 vintage car and also engines for a later vintage car. Last time we visited he had just set up a vertical machining centre, and this machine has been complemented with another, this time a horizontal machining centre. We saw a spark eroding machine making splined connectors for the Australian track grinding machine described in a previous 'Generator' by Mike Barnes. There was a huge car crushing machine that had been built from scratch with the design work being done 'in house'. One ram applied 200 tons of force to turn the car body into an oblong block of steel. The differential, engine, gearbox and any high tensile steel components such as springs are removed first. I have known Paul for many years and visited his works on many occasions and I am still astounded by the wide variety of machines he has, all needed to enable them to undertake such a wide variety of work.

Not all the work is for local people. They have a steady demand from the USA for specialist hydraulic jacks used to lift houses so they can be taken away to another site.

A very interesting evening and the astonished model engineers were grateful to Paul for coming out in the evening to show us through his establishment.

COMING EVENTS

Track running at Marriner Reserve Railway

November 3rd from 1pm to 4pm

November 17th from 1pm to 4pm

Open Weekends

Havelock North Live Steamers

Labour Weekend

New Plymouth Model Engineers

Labour Weekend

Thames Model Engineers

3rd weekend February 2014.

October Club Night

7:30pm, Thursday 24 October 2013
Hearing Association Rooms
Church Street, Palmerston North

We will be having guest speakers from Steel Pencil Limited an award winning Australasian Company. They are dedicated to documenting engineering solutions for the Construction Industry. The speakers will talk on their business of design, feasibility studies, steel detailing, lifting studies, etc.

Below is an example of their work.
The New Christchurch Cathedral



Club End of Year Dinner

Cosmopolitan Club

22 Linton Street
Palmerston North

Thursday 28 November 2013

Drinks 6pm Dinner 7pm

The cost is \$25 per person. (Pay as you arrive.)
They also have a licensed bar for you to purchase innervating liquids.

Bring the family and join us for a relaxing lead into the summer. We look forward to seeing you there.

We need to give the restaurant an idea of numbers.
Please let us know if you plan to attend and how many there will be in your party.

Dave, 027-457-6175, newstead@clear.net.nz
Murray 326-9665, engineer@inspire.net.nz
Cynthia, 354-7100, cynthia@trains.net.nz

The closing date for the next issue of The Generator is Friday 15th November

THIS MONTH'S FEATURED MODEL

Electric Solenoid Motor - Murray Bold

A few years ago I saw an article in the AME about an electric solenoid motor. I thought to myself, I could build one of these. I noticed it used a Picaxe microcontroller to do the timing. I have used 40-50 Picaxe microcontrollers for various projects. This should be easy. I had some faulty parts from ATMs and looked at what I could use. The card reader has a solenoid, shafts, tiny ball races, a large heavy drive wheel and other parts I could use. I also found a photo interrupter in the junk box to use for timing the motor.

I mounted the flywheel and the ball races on the shaft and made mounts for it to turn on. I made a plastic disc and cut 2 slots in it for timing the motor. The solenoid was mounted and a crank pin was made with one of the shouldered screws. A Picaxe 08M2 microprocessor was selected and the program from the magazine was downloaded into it. I rotated the timing disk so it would turn on the solenoid at BDC plus about 10 degrees.

12 Volts was connected, the motor given a flick and off it went. The pot adjusts the length of time that power is applied to the solenoid so has a small influence in the speed the motor runs at. The next model may have to be a 2 or 3 solenoid motor. This will require a microcontroller with more I/O pins but that won't be a problem as I have many other devices that will be suitable. At the Model Mee exhibition the engine ran most of the weekend without getting hot at all.

LETTER FROM ENGLAND

By Stan Compton

Recently we saw a program on TV interviewing American passengers off a cruise liner with a 3500 capacity, docked in North Wales. They had one day to see the country !! Forty five coaches had been booked to carry these people to various sites of interest. Distances are not great but it would take all day to get to Cardiff for men with a sporting interest, and return. One group visited Conwy Castle and they were astonished to see that the walls were two metres thick. One man asked "Where did they get the rock from?". He had no idea that Wales is nearly all rock with very little arable land hence the grazing of sheep is a primary source of income. Maybe some of the passengers could visit the Welsh National Museum of Wool, we visited there when on holiday and found the whole

process of wool spinning and weaving was demonstrated daily. The Museum is located in the Teifi Valley and well worth visiting. Also is the National Museum of Slate Mining at Llanberis where the 'Snowdon Mountain Railway' operates and it is always packed with visitors. Of course 'The Little Railways of Wales' are a great tourist attraction, yet were started by volunteers after slate mining almost ceased. Slate from Spain is a lot cheaper, but Welsh slate is of high quality, we were told once when visiting a Welsh slate mine that they had just received an order for replacement slates for the roof of a Cathedral in Europe. The Church had found the original invoice that had been filed away in Victorian Times!!!

We get a lot of repeats on TV these days but I never object to seeing "The Antiques Roadshow" to examine tin plate locomotives and toys that fetch a small fortune or military hardware that is not very expensive but is always interesting. Plenty of clocks and I have seen examples that are quite rare, how those early clockmakers worked with simple machinery and cast brass for frames and wheels compared to modern materials is beyond me. I get clocks brought to me to put in order so they can be sold in two local charity shops, I have a lot to learn, a 400 day clock with rotating pendulum with four brass balls needed a new suspension strip. Now each one is different but my local clock repairer found me the correct replacement. With my clumsy efforts to fit it I managed to break a piece off it!!! With a bit of luck I managed to fit and adjust the fork and got it to run at the correct rate. Another clock, a battery powered job with a radial pendulum only needed some clock oil and a new plastic cover for the dial, both clocks sold for a good price which was satisfying.

The owner of a local shop told me he met a New Zealander over here on holiday. He had brought one of his Morgan cars over with him to take to the Morgan Works, not far from here in Malvern, for servicing!! Now any decent garage could have done the work in New Zealand but maybe it was an excuse to go to the factory, which can accommodate visitors who book a tour previously. He would of course have his own car to travel in while over here to see some of the Old Country. Morgan owners are very enthusiastic.

Do you remember a film called 'Teenage Mutant Ninja Turtles'? It caused a craze for children to

own a baby turtle of a snapping variety; these grow up and get dumped in local lakes and rivers.

Recently I read about a woman who phoned up a local wildlife sanctuary to ask if the one-legged ducks she had found in a local pond were special!!! On investigation three turtles the size of dinner plates were found and removed, but how many more are out there? You may have read of the snake that escaped from a pet-shop in the USA that crushed two small boys while asleep.

All the Western World now find a lack of proper apprenticeships for school leavers, the exception is Germany who are leading Europe in engineering. I saw an item on TV showing a smart looking boy starting an apprenticeship at laying artificial turf!!

We heard a news item about the new earthquakes in Wellington, luckily being deep there was no serious damage done according to our son Chris, a Wellingtonian. I do feel for those people in Christchurch who have lost their homes.

Recently I was able to borrow a book called 'Ruth Belville, The Greenwich Time Lady' by Daved Rooney isbn 978-0-948065-97-2. It describes the story of one family, the Belvilles, who from the 1830s to the 1940s provided a weekly dose of Greenwich Time for those prepared to pay for the privilege. This was achieved by taking a single pocket watch, a silver cased chronometer by top maker John Arnold of 1794 to the makers of chronometers who wished to check their workmanship against Greenwich Mean Time.

PLOUGHING ENGINES

By Doug Chambers

I remember my late father, Jack Chambers, telling me of his experiences as a boy living in Norfolk, England where there were large numbers of 'pairs' of ploughing engines working. This would have been in the mid 1920s. My father would come home to the village of Colkirk for school holidays from the Felsted boarding school he attended to stay with his mother and an aunt. After breakfast he would climb a tree at the back of the house and scan the horizon. That part of Norfolk is very flat and most mornings he would be able to see the two columns of smoke indicating a pair of ploughing engines at work. He would then descend from

his perch in the tree and hike cross-country to where the engines were working. He knew better than to walk straight up to one of the engines and would keep well out of the way. Of course the plough was pulled by each engine alternately, the one not pulling would move forward and the driver would 'oil-up'. The oil being used was very thick and the large can was hung on a hook so that the can lay against the hot smokebox. When the drivers oil can needed refilling my father would lift the can off the hook and take it to where the driver could reach down for it. This small service usually resulted in an invite on to the manstand of the engine or if the driver was in ill-temper a clout behind the ear was the reward.

Once he had established himself as being a useful lad he would stay with the men for the rest of the day. There would be a driver on each engine, another man to steer the plough, and another man to drive the horse and water cart needed to keep the water supply up to the engines. Sometimes there would be a living van nearby where a cook plied his vital trade. One of his uncles had a pair of ploughing engines but he was not always able to locate them as the engine owners took contracts all over the County.

I remember Dad telling me of being back at boarding school and seeing a pair of engines working nearby. It was a crew that he knew and he was able to spend some time riding on the plough.

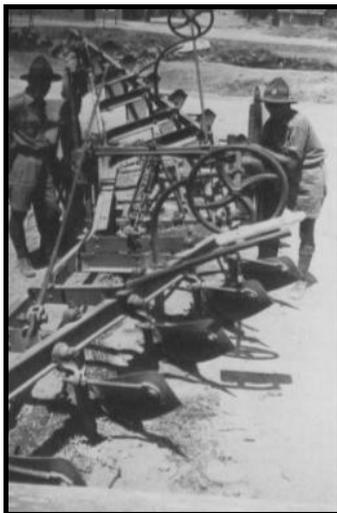
Unfortunately he was seen by the headmaster's wife and this led to a painful interview with the headmaster and his cane.

My father explained to me that it was a strange experience riding on the plough. The two engines were often up to 1000 yards apart so you couldn't hear them until the plough got near the pulling engine. Riding on the plough meant that you could hear the 'hissing' as the



moleblades cut through and turned the soil. The first two photos were taken by my father in Egypt in 1941. They were taken at

Gianaclis where there was intensive farming on the river silt brought down the Nile. The first shows the two ploughing engines and behind them is a multi-tined cultivator. In the left



foreground are grape vines. Most of the farms in this area were owned by Greeks. The second shows the balance plough. As shown the plough would be travelling away from the photographer towards the engine pulling it. When the engine at this end starts pulling the plough will counter

balance raising this end of the plough and lowering the other to the ground.

For many years my father corresponded with Fred Dyer who had spent his life working for Ransomes, Sims and Jefferies. He retired from the position of Works Engineer. In 1973 a friend of his who owned two Fowler BB1 class ploughing engines was asked to clean out a lake at Branches Park, Newmarket in Suffolk. The plan was to use the two engines and a large scoop to clear 20,000 cubic yards of mud from the 31/2 acre lake. In June the two engines were delivered to the site and work began. In the first



photo showing the pulling engine, the other engine is just pulling the scoop back for another load, and of interest is the driver. The driver is Sarah Dyer aged 17, Fred's daughter.



The second photo shows the mud laden scoop nearing the pulling engine.

In the Newsletters from other Clubs

Blastpipe Petone Wet and windy weather causing running days to be cancelled. Ross Johnson has taken the ex Bob Walters, Trevor Watt 'Virginia' to Maidstone for a run. The Maidstone track was the 'Virginia's' home track for many years and Ross noted that it still knew its way around.

Whangarei Model Engineers Improving weather has seen busier running days. Article on the magnetic levitation test facility in Japan.

Manakau Live Steamers A 'Phantom' built by Mike Orange for Lloyd Cross of Whangarei has a run at Manakau before being handed over to the new owner.

Hawkes Bay Model Engineers Their editor assists his father-in-law acting as steersman on a Ruston Proctor steam roller. High light of the day was cooking to perfection steaks in tinfoil which as steak sandwiches formed their lunch. Another of their members was on the recent Ka 942 trip to the West Coast. He found the trip was a great experience although a photographer died of injuries when hit by the locomotive.

Invercargill Model Engineers Interesting article on some of the smaller Viking boats. Murray Vince has a small model of a Viking fishing boat powered with a 'rower' from a Tamiya Kitset.

Havelock North Live Steamers Photos and story on the series of floods at Nambour, Queensland. Ten years of great weather then in 2010,2011 and 2012 there were severe floods. During the last one the lower track level had some six metres of water over it and when the water receded there was the mud!

Preparations in hand for their Labour Weekend Open Weekend

New Plymouth Model Engineers Flyer giving details of their Labour Weekend Event.

Thames Model Railway Thames Open Weekend 3rd weekend of February. Photos of an A&G Price 'bush lokey', an 0-4-0 NZR 'A' class, and a new NZR 'A' class compound leaving A&G Price's works in Thames.

Marlborough Model Engineers They have a leak in their pond and a suitable repair is being sought. The packing strips under the rails on the raised track steaming bays are being replaced after 30 years service.

Marriner Reserve Railway

An 18 metre long section of track has been replaced. This was because during the 33 years the track has been in use there has been considerable ground movement. Part of the track bed had sunk about 100mm so it was time to do something about it. Track bed movement is due to our site being reclaimed swamp that was found to be too unstable to build houses on and thus became a PNCC park.

On Thursday the 19th of September John Tweedie, Ian McLellan and Doug Chambers lifted the rails and after a scrub with a rotary wire brush the rails were repainted with cold galvanising paint. It was interesting to see how much of the original paint still remained, and that there was no real sign of rusting.



The next day the team size increased with Brian and Warick Leslie, Richard Lockett, Graham Toms and Chris Morton joining in. The old concrete bed was cut with a concrete saw, heaved aside and boxing pegged in place.



Monday 16th September saw the concrete truck on site and in a very short time the concrete was placed, screeded and edged by much the same team. Friday 27th the track was re-laid after the boxing was removed and the ground along the



edges reinstated.

On Thursday the 3rd October the first loco over the newly relaid track was the "W" carefully driven by Richard Lockett to prove the grade was correct.



Mark the Calendar

Keep 16 January 2014 free for
The Presidents BBQ
at his home.
More details next month.

If you would like an email when this newsletter is published, send us an email with **"Generator Please"** in the subject line with your **Name, Club** and **Email** address to pnmec@trains.org.nz