August 2011
No 370

THE GENERATOR

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

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,
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Place stamp here

This Months Featured Model

REPORT on the July Meeting.

Bruce Geange gave a very good talk on the use of small electric motors, power packs and batteries used to power small models.
He demonstrated with some Meccano models and covered the wiring diagrams for circuits where the electric motor was required to reverse. Bruce has become rather adept at fitting small electric motors into models he has made, particularly small crawler tractors which are driven via two electric motors, one powering each track. Variations in speed, or stopping one motor altogether allows the tractor to be steered via the steering clutches which are actually small switches.

Dave Robinson showed us an electric motor and reduction box that is used on an Agricultural Direct Drilling Machine.
Very robust and as Dave says has potential for use on a larger electric locomotive.

Graeme Hall showed us a cross-helical gear that he had made as a replacement for a friend's lawnmower. The gear drives off the Briggs and Stratton's camshaft and is used to power the roto-sythe instead of it having to be pushed along by the operator. Not the easiest gear form to produce.
Graeme also had a hot-air engine that ran very well and a flame-sucker engine that he had found to be a bit temperamental. It did run long enough to give us an idea of its unusual sound in contrast to the silent hot-air engine.

Also at the meeting the **Trade Tools** vouchers raffle was drawn.
The **$70** first prize was won by **Terry Jowett**, ticket No 85
The **$50** second prize was won by **Murray Bold**, ticket No 04
The **$30** third prize was won by **Merv George**, ticket No 27

Subscriptions are now overdue.

They are $30 Full members and
$15 for Junior or Country Members
Please pay the treasurer ASAP if you haven't already paid.

August Club Night

7:30pm, Thursday 25 August 2011
Hearing Association Rooms
Church Street, Palmerston North

Richard Lockett will talk about the various accessories used on milling machines and how to get the best out of them.
As normal 'Bits and Pieces' can be shown.

COMING EVENTS

Track running at Marriner Reserve Railway

September 4th from 1pm to 3pm
September 18th from 1pm to 3pm

Open Weekends

Havelock North Live Steamers
22-24th October

New Plymouth Model Engineers
22-24th October

"Steam up North" International Convention
5-9th January 2012

Hawke's Bay Model Engineers 50th Anniversary
Waitangi Weekend 4-6th February 2012

MODEL MEE EXHIBITION

We are having a Model Engineering Exhibition in the Leisure Centre, Fergusson Street, Palmerston North over the weekend of October 29th-30th

All members are invited to put something on show and remember it doesn't have to be finished.

Works in progress remind the public that the models are not bought at the 'Warehouse', and that they are made from 'scratch.

A raffle will be run for the public and members

The closing date for the next issue of The Generator is Friday 9th September

THIS MONTH'S FEATURED MODEL.

The Sensitive Drill Project

I have always enjoyed making small tools for the workshop and when Graeme Hall indicated that he had for sale a set of castings for the sensitive drill I jumped at the offer.
Never having worked with cast iron before I was pleasantly surprised with the ease of machining but the dirt & dust was not so welcome. The job went surprisingly well apart from a small glitch when I discovered that the centre of the round worktable was out of alignment with the spindle. Not sure why as I fitted everything to the column and machined in place. Luckily Doug Chambers had a small piece of cast iron, with which I was able to fill the miss-aligned hole and re-machine. (Thanks Doug.) My original intention was to fit an old washing machine motor that I had, but in the end I bought a small motor from a local supplier. The plans for the machine call for the spindle vertical movement to be controlled by a thrust washer at the top of the spindle that the control handle bears on. I found that this arrangement was not satisfactory, as even very slight pressure on the handle would slow the motor considerably. I fitted a ball thrust bearing in place of the washer and this solved the problem.
I obtained an offcut of Formica bench top from a joiner friend and asked my partner Kathryn's father (John Stowell) to make me a wooden base for the drill. I thought he would make butt joints or at the most mitre joints at the corners. One afternoon, however I arrived at his workshop to find him making some beautiful hidden dovetails in the wood I had provided. The base now looks as though it has nice tight mitres at the corners but actually has these very nice dovetails that are completely hidden! When I asked John why he had gone to the trouble he said that he had not made any for about 15 years and wanted to know if he still knew how.
The drill works well. I only use it to drill smaller than about 2.5-3 mm and have bought a set of small drills that I only use with the sensitive drill. I purchased a nice keyless chuck that holds drills down to 0.1 mm. As the circular table now aligns with the spindle I have put some divisions round its edge so I can do a pretty good job of drilling radially spaced holes in small work pieces. All in all a satisfying project. John Tweedie

LETTER from ENGLAND

By Stan Compton.

Some of our more recently joined members of the PNME club may not have known Stan Compton when he was living in Palmerston North so here is a brief resume of his working life. Stan wrote this up for the Hereford Model Engineering Society and they published it in their May 2011 'Whistle Stop'.

MY LIFE IN ENGINEERING

I spent most of my life involved in engineering work of various occupations.
I worked at J. Lucas Ltd until joining (during wartime) the Royal Navy, engine room branch.

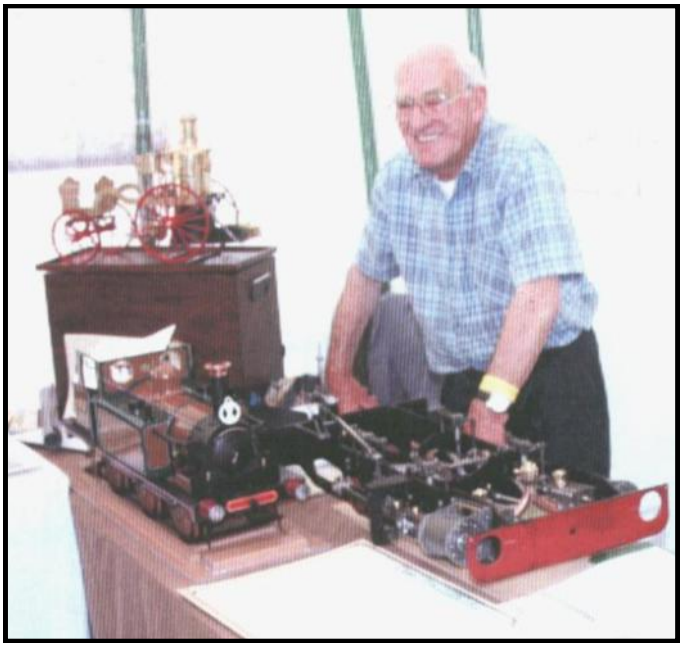
After a return to civilian life I was married and Anne and I have just celebrated sixty years together by taking a coach trip to Scotland to visit the Royal Yacht 'Britainia'.

As you are probably aware Britain was completely broke at the end of WW2 so we immigrated to Ontario, Canada, and we were able to buy our own home after twelve months. Work for me was at the Canadian Locomotive Company on diesel and locomotive construction until lay-off occurred with no chance of any more work in Kingston, Ontario.

We sold our home and returned to England and this move gave us the funds to buy an agricultural business in Suffolk. This gave us a complete change of lifestyle, but it was not to last so we went back to Canada but this time to Vancouver on the West Coast.
Here I worked in general engineering for three years but there was high unemployment again so this time we moved to New Zealand.
Maybe the salaries were not very high there but Anne could now find work and it was not long before we were able to buy our own home again.
After a spell in industry, I found work as a technician in an Agricultural College, progressing in time to Technical Officer.
As Massey grew into a University, I was now in sole charge of the establishment workshop which was a new building. My only complaint was that it had no windows, only skylights. Besides building research equipment it was

interesting to teach degree students and the cadets who would become useful members of staff.
The variety of work was so interesting that time simply flew by but after twenty-seven years we moved back to the UK again. Why you may ask? We had a good life there, but it was not home and we both felt it was time to return to our family roots.

I forgot to mention that I had started building model locomotives about 1966 and later helped to form a new model engineering society in Palmerston North where we lived all those years. It was after returning to Britain that I realised that many of the New Zealand model engineers took trips to the UK and missed so much over here. So I began writing these 'Letters from England' every month for the last fifteen years or so, and gathering by the favourable comments made, I feel it has been worthwhile.
Incidentally, some time ago our daughter visited us on a trip from New Zealand. Before returning home she said "Dad, I know why you are living back here. There is so much for you to see."
My last locomotive, completed in 2009, was a 5" gauge 'Hunslet' quarry locomotive which was the second one I had built. This was sent to our son in New Zealand who put it on display in his office!!! This was the last of about fifteen 7¼" gauge steam, petrol and electric and various 5" gauge locomotives, two steam fire engines and a 4" scale Allchin traction engine with a hay baler. Now I am building clocks, a different challenge.



Stan with his Hunslet Chassis, Terrier class loco and La France Fire engine in the background.

TRACK RUNNING in JULY.

Running on the first Sunday of the month went well but Doug Chambers was unable to attend as his back problem decided to flare up. This meant that he was not able to bring down the afternoon tea and coffee.
Running on the third Sunday of July also saw some difficulties. This time Doug was able to attend and he brought the Hunslet down as well as the afternoon tea supplies. But Richard who had arrived first told a tale of woe. We had no electric power. Therefore the zip would not boil water and the hydraulic hoist powered by an oil pump driven by an electric motor would not work either, so large engines could not be got down to the ground level track from the raised steaming bays.
We were able to lift Doug's 'Hunslet' down onto the track where it was steamed up and soon running got under way. But even then, things were not as good as they could be. The pipe between the axle pump and the check valve started to leak badly just above the pump.
It gradually got worse and water was spraying from the leak onto the rails causing some slipping on the grade. Fortunately the injector worked and after each lap it had to be brought into action. During the afternoon several PNME club members turned up and were dismayed to hear that once again there would be no afternoon tea !!!!!!!!
We believed that there must have been a local power outage, but a check later in the week found that there was still no electric power.
On the Thursday a Line Company faults man was summoned and when the problem was explained and the fact that the working gang of PNME club members could not have morning tea until the power was restored, he quickly got into action. A pole fuse and some wiring up the pole was found to be the trouble and soon power was restored, the zip boiled and tea and or coffee were again available. Phew !!

FOR SALE

An injector, brand new, commercially made. The pipe fittings are all for ¼" pipe. The size of the injector indicates that it would deliver 3-4 pints per minute. Suitable for a large 7¼" gauge locomotive or perhaps a 4" scale traction engine.

Phone Laurie Perkins at 06 357 4623 or contact the Editor 06 354 9379.

Bridge 94 - NIMT

Richard Lockett

Often when driving down Church Street in Feilding and crossing the Makino Stream road bridge, I would glance across at the rail bridge and think to myself, “That must be past its use by date by now”. As money is being invested into our rail infrastructure again after a twenty year hiatus, Kiwi Rail engineers must have come to the same conclusion because over the last couple of months, Bridge 94 has been replaced. The Feilding based members of the PNMEC were keen to follow the construction process and to see how the replacement would proceed without disrupting rail services. The job started with Richardson’s Drilling Ltd of Palmerston North arriving on site with cranes, pile drivers and specialised equipment for driving down and excavating out steel casings. These were placed well outside of the existing structure and it became obvious that the four existing spans were to be replaced by two on the new structure. A large steel girder and mesh screen was erected along the side of the bridge so no contact could be made with the 25,000 volts carried in the overhead catenary. This structure was shifted as piling operations moved to the other side of the bridge. When the casings were filled with concrete and steel Richardson’s departed, leaving Morris and Bailey Ltd of Dannevirke, who build a lot of bridge’s locally, to erect formwork for the centre pier underneath the existing bridge. A week of rotten weather saw the Makino’s waters rise up to meet the staff tying in the copious amount of reinforcing steel needed within these structures. The next fine day the concrete was pumped in. After a period of time to let the concrete harden up components to complete the job began turning up. The fabricated steel spans complete with sleepers attached, heavy looking concrete shapes, abutment blocks and aprons for each end arrived. Word of mouth said that the 31st of July and the 1st of August was when it was all to happen. With lighting equipment set up, I assumed that they would be working around the clock and the track being out of service during this time. **Wrong!!** The track was kept open each night for freight with work starting at around 5am and finishing late afternoon.

Sunday 31st the track was lifted on each side of the bridge and the soil was excavated behind the existing abutments and new pile’s and a new sub base prepared. The new abutment blocks lifted and positioned into place and secured to the new piles using McIntosh’s 100 ton Terex Demag crane. The tracks were then replaced for the evening’s rail traffic. Early Monday and three of McIntosh’s cranes on site, the large Terex Demag, a large Kato one on each bank and a smaller 25ton Terex Demag in the stream bed on a pad excavated on the Saturday beforehand. With track lifted and bolts cut the old bridge spans were lifted off before daylight and the first of the new spans was dropped in place before I arrived at 9am. The second span

was lifted and placed on top of the first and then lifted by all three cranes across to its resting place, a long reach for the big Terex Demag. The Kato and smaller Demag then

retracted their booms so as to allow the Demag to reposition up on the bank where it was able to lift and position the second apron block on top of the abutment in front of the steel span. These apron blocks are used to contain the

ballast on each end of the bridge. After this was completed the Kiwi Rail arrived to relay and ballast the tracks ready for the evening freight traffic.
Photos Brian Leslie and Richard Lockett.

A THURSDAY at MARRINER RESERVE

Weather permitting, Thursday mornings are a work day at Marriner Reserve. Grass is mown, maintenance is carried out, and frequently there are locomotives in steam. Sometimes being test run or sometimes just for pleasure.
As it is mid-week the engine owners are generally retired and on the occasion pictured below the members consisted of Doug Chambers, Ken Neilsen and Ian McLellan.
The locomotives are Doug's 'Hunslet', Ken's 'Lion' and Ian's 'Maisie'.
This particular Thursday was fine and sunny. Barry Parker joined us at lunch-time but he had to leave just

before 1pm to return to work. The three of us have taken great care to point out to Barry that we appreciate his efforts at work, continuing to pay the tax that keeps our super coming in and allowing us to really enjoy our retirement days steaming engines.!!!!!!!

STUART TURNER 10V TENDER RESULT.
This was won by Merv George.
Merv was delighted to win this and also 3rd prize in the Trade Tools Raffle.

Steam Up North

If you wish to go to the "Steam Up North" International Convention then you have until 31 October to qualify for reduced costs.

Contact the PNMEC Treasurer for details and registration forms.

You can also register on line at
http://www.wmec.org.nz/convention_2012/front.htm