



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,
Palmerston North

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This Months Featured Model



Report on the August Meeting.

Richard Lockett spoke on the various attachments used on milling or drill-mill machines. Among those mentioned were, dividing heads, rotary tables, boring heads, fly cutters, stub arbours for holding slitting saws and multi-tip facing tools.

Richard spoke on the uses of each attachment and the hazards that are inherent with them. Some of the multi-tip facing tools are not suited to the mill-drill as play in the spindle will produce 'chatter' on the work face. Boring heads due to their design are not balanced and care should be taken when used at highspeed.

There were some interesting 'bits and pieces' on the table and this part of the evening was started off by

Richard Lockett who showed us a hub with about ten spokes, each about 15" long. He asked if anyone new what it was but nobody had any idea. He then relented and we were told it was the belt-drive wheel that drove the rear wheel of a 'New Hudson' motorcycle. Richard pointed out that the rear belt-drive pulley hub had a strange arrangement and that he hadn't been able to work out just what it did. Editor's Note. On returning home after the meeting I looked up about New Hudson motorcycles in a book on Vintage motorcycles and found that the New Hudson of 1913 had a free-wheeling device.

Bruce Manning showed us the two Burrell Showman's traction engines that he had bought. Each in 1/24 scale and purchased from Mid Summer Models.

These are produced in limited editions and are exquisitely finished and very detailed.

Ian Stephens showed us the very nicely made half beam engine he has just completed. Although following plans during construction, Ian said that he was very grateful to John Tweedie for the loan of his half-beam engine to copy off. Ian pointed out that his lathe was not big enough to swing the flywheel and Richard Stevens had done that bit for him having a lathe just big enough for the job.

Fred Kent had one of the cylinders for his 'Flying Scotsman'. So small it is just like watch-making.

Graham Hall reminded us of the Atkinson Differential Engine that he had made. He said that Atkinson had made another engine called the Atkinson Cycle Engine. Both designs were made in an attempt to get around Otto's Patents for four stroke engines. The Atkinson Cycle Engine was designed to run on Town Gas and the power and exhaust strokes were longer than the inlet and compression strokes. About 1000 of them were made but only two exist today, one in England, and the other in the Henry Ford Museum in America. Graham has set about making a model of the Cycle engine to go along with the Differential engine he has already made, and he showed us the pattern for the flywheel.

Doug Chambers had the model of the tug 'Imara'. Built from a very detailed kit it will be radio-controlled. Very typical of tugs built in the early 1930's 'Imara' was built by Fergusson and Fleming for the Tanganyika Railway Company to assist ships trying to berth at Dar-es-Salam.

September Club Night

7:30pm, Thursday 22 September 2011
Hearing Association Rooms
Church Street, Palmerston North

Bring along your aluminium tube creation for judging.

John Tweedie will talk about some of the Prehistoric stone artefacts and Victorian Age Industrial relics he saw on his visit to Cornwall, England in May this year.

COMING EVENTS

Track running at Marriner Reserve Railway

October 2nd from 1pm to 4pm
October 16th from 1pm to 4pm

Open Weekends

Havelock North Live Steamers	21-24 th October
New Plymouth Model Engineers	22-24 th October
International Convention	5-9 th January 2012
Hawkes Bay Model Engineers	50 th Anniversary
Waitangi Weekend 2012	

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

Off Road Bike Trip

November 26-27. The old logging tramway at Ongarue is being developed as a cycle trail much like the Central Otago Rail Trail and your President is leading a trip which will be based at Piropiro Flats, halfway along the trail. Good fitness, camping equipment and an off-road push bike required. You can contact Richard Lockett for further details (06) 323 0948

There are still 6 members who have not yet paid their Subscriptions.

They are :-

\$30 for Full members and

\$15 for Junior or Country Members.

You should know who you are. If you have not paid by 1 November you will be removed from the club records.

Editor's Apology.

The photos used in the article about the Rail Bridge replacement in Feilding should have been credited to Mike Barnes.

OCTOBER MEETING

On the 27th October Chris Saunders will give a presentation on the development and operation of the Marlborough Timber Company's sawmilling and tramway at Port Craig in Southland. This will be an evening you will not want to miss !!!!

LETTER FROM ENGLAND

By Stan Compton

English village life can be very active; our local paper announced a "Steam Weekend" in 'Bosbury' just a few miles away which is the location of a spinning group that my wife Anne attends regularly, so I offered to take her knowing she would meet other spinners in the 'Crafts Display' in the village hall beside the old church. A local railway group had set up a screen in this ancient church and were projecting clips of steam locomotive activity near to their display of Railway Memorabilia. This included tape recordings of the late 'George Formby' with his ukulele entertaining us with his style of songs of the forties. He was very popular entertaining the Forces during World War 2 but I never expected to hear his "When I am cleaning windows" so many years later in a village church!!!!

Outside the children were so excited watching the plastic ducks having a race in the stream nearby. I sympathised with the local photographer standing in the stream in his gumboots that had got filled with water by accident. An English stream is not like a creek, we have a dry spell and the flow becomes very slow, unlike a few years ago when the village was flooded from this same stream after weeks of rain. Also on display was a restored 'Donkey



Cart' that had been used to raise funds during World War 1 for medical purposes, judging by the two nurses sitting in the cart in an old photograph which was on display.

The restored cider-press with its two heavy screws reminded us of what hard work life was in

the old days, the rough cider, made on the farm was welcome on a hot day. Incidentally, the U.S. Forces over here during W.W.2, discovered cider for the first time, they thought it was 'lolly water' until they tried to stand up after drinking too much!!!!

Someone had put an unrestored stationary engine, with an item of farm machinery for it to drive in the display outside. It was gone the next day but the pole-lathe was still there.

Now just by chance I met a man of retired age who told me he would like to build one of these very basic lathes because he has plenty of trees on his country property. The house had been derelict for twenty-five years and very old but he restored it. Can you imagine trees growing out through the windows; the glass had already been broken by vandals who love to destroy things. Now the man has plenty of photographs to work from and we shall see later if he succeeds. I told him I knew of a 'Colchester Student' lathe in good condition, fitted with a single-phase motor for sale very cheap. "No thanks. I want a pole lathe".

The one he saw at the church had no centre, only two short lengths of 8mm screwed rod, cut off with a hacksaw, in place to revolve the work piece on with a cord wrapped around it. The old principle of a treadle action, the work

has the cut applied one way only. The timber used should be 'green' and a skilled worker would produce chair legs from beech-wood to supply the furniture trade. I once read that old car springs were used for chisels; a gouge is the correct shape and with a long handle tucked under the armpit and a strong right leg, a good job can be achieved. The description 'Pole Lathe' tells us that a springy bough from a tree will give the return action after every cut.

In the same village lives a farmer who is a shearer. Anne went to him for a fleece to spin. His young son loves life on the farm and runs his few sheep with his father's flock. The boy saved up and bought a ram lamb and now wants to buy some hens for the fresh eggs. For an eight year old he should go far. His father who had sheared in New Zealand, told me that the lad has no time for video games and would rather be out on the farm which is good to hear.

I forgot to mention all the cakes on display for sale to raise funds for the church. One lady tried to get me to have a go at decorating cup-cakes she had made, I felt it was a better idea to let two little girls have a go and they really enjoyed it.

In the early days of Railways signals were operated with a strong arm on a lever in the signal box, nothing to steal, but now we live in another age of electric lights controlling traffic. The copper cables needed are regularly stolen for scrap value, which is high today due to the demand from China. Our Railway operators have tried spraying the new cables with a substance that is only visible under an ultra-violet light to warn scrap dealers the copper is stolen. Good idea if all scrap dealers were honest but the cables keep getting stolen delaying many passengers on our congested railway system. A plumber told me he had just replaced some of the lead on a church roof and on his return home he found a message telling him the lead had been stolen again !!!!! When he got back he found the new lead had been ripped off the roof; something very difficult to do.

Even a bit of flashing was stolen off our club-house, it might have been worth £1.80c, was it worth it?

The same with spare galvanised roofing sheets that disappeared recently.

PNME club's Ride-On Mower

by Doug Chambers

After the track at Marriner Reserve had been

extended in 1990 and the passing loop had been put in by 1998, it became obvious that we needed something better than the human being propelled rotary mower. We found that if we mowed a strip around the track on either side there was less likely a chance of the Palmerston North City Council's tractor mower getting too close and damaging the rails. However, once the extension and the passing loop were completed, it was taking about four or five hours to complete the job.

Richard and I being the usual operators of the mower, Ken Neilsen and others sharing the load, it was realised that we really needed something bigger.

Bob Owen was up visiting from Masterton and I mentioned to him our plight and that we were looking for an old ride-on mower. The following weekend Bob rang saying that he had found an old King Kat ride-on at his sister's place.

However the 10hp Briggs and Stratton had snapped the connecting rod and the mower had been replaced with a new model.

The late Jim Curtis had been a motor mechanic all his life and in his retirement had set up a little business repairing mowers. We appealed to Jim for advice and he said that the only damage the broken rod might have caused to the engine was to bend in the camshaft which would mean the engine would not 'idle'. However the camshaft could be straightened quite easily. Jim said get the motor to me and I will fix it.

The club paid for the new connecting rod, a set of piston rings and some gaskets. The valves were ground and the engine reassembled. In the mean time I checked over the gearbox (adding more of the special grease that it is lubricated with), and wiring. Richard Lockett supplied a second-hand wheel chair battery.

I picked the engine up from Jim and fitted it in place.

For over ten years the mower has given good service. During that time it has only required a new ignition coil and oil changes. The cutting blades had become very worn and over the last two years there appeared a 'Mohawk' of uncut grass between the two cutting blades. Richard and I agreed that perhaps it was time to purchase replacement blades and I got some quotes. Between \$38 and \$53 per blade, plus freight. As they are flat blades made from spring steel 17" long, 2 1/2" wide and 1/4" thick I felt that surely as model engineers we could do better making them ourselves.

Richard and I discussed materials and it was felt that a steel known as Bisalloy would do the trick. Next morning saw Richard and fellow PNME member Merv George hunting through the scrap bin and on finding some Bisalloy quickly set about producing the two blades. I picked up the blades and on returning home drilled the centring hole and the two mounting plate holes in each blade. The blades are bent downwards by about 3/8", four inches from the tips and that entailed a visit to another PNME member Laurie Gudsell in Ashhurst, where the bending was carried out in his hydraulic press. The blades were then sharpened, refitted to the mower and the ride-on was found to do a very tidy job.

So a special 'Thank You' to Richard, Merv, and Laurie for your help and advice and in saving the PNME club money that can be spent a better way.

PROFILE

The following article was written by the late Jim Curtis after being requested to do so by his local newspaper.

As it is still the way things should be done, I felt it was worth putting in the 'Generator' as Jim writes of the determination, joining a ME Club and the final reward in driving your own engine for the first time.

What does one of our retired residents do in his spare time? Well, I think that the 27th August 1992, would be as good a time as any to start, when 17 pages of 'Plans', and a couple of very heavy parcels of 'Wheels and cylinder castings' arrived by courier. Thus began the fulfilment of 'A Vision', "Nothing happens Unless First a Dream" (Carl Sandberg).

With a life-long passion for Modelling, and Building Things, I surveyed this little lot and thought "Oh Boy!! I have really done it this time. What have I let myself in for? My wife will kill me if after spending all that money on plans and castings, I don't build the ruddy thing." With the help of a well equipped workshop and the desire to fulfil 'A Vision', I started construction almost immediately. By March 1994, stage 1 had been completed, being what is known in 'Live Steam' modelling circles as a 'rolling chassis'. This being the chassis, cylinders, coupling rod, connecting rods and wheels completed so that it could be pushed backwards and forwards along a short length of

rail to check for 'free running'.

At this point I think that I should bore you with some specifications; it is a 2-6-0 wheel arrangement, two wheels on a pony truck and six coupled driving wheels. It is in 5" gauge which is approximately 1/12 scale.

It is 'coal-fired', two double-acting cylinders, boiler pressure of 80psi and Walscharets valve gear.

Another essential ingredient in a project like this is to join a 'Club' and I joined both the Palmerston North Model Engineers and the Havelock North Live Steamers as Dannevirke is half way between the two. The help and encouragement I received from fellow model engineers was invaluable and deeply appreciated.

The 'Working parts', that is cylinders, pistons, valve gear were duly constructed, including making the piston rings and on the 7th July 1995 at 11am it was run on compressed air and 'Yes' it worked perfectly in both forward and reverse. On the 2nd August 1995 the 'Hot Part', the boiler was started. The boiler is of copper and has 14 fire tubes and 3 superheater flues. Construction was carried out under the watchful eyes of the Palmerston North Model Engineers' boiler committee, culminating with the hydraulic test and followed by the steam test and finally I received a 'Boiler Certificate'. In the following months, (of spare time) the rest of the locomotive was built, as was the tender and a driving trolley, until finally the 'Big Day' arrived when all this work would be put to the ultimate test. On Saturday 16th November 1996 friend and mentor Doug Chambers arrived from Palmerston North and steam was raised. The engine was running at 2pm. What a thrill when the boiler pressure built up and the reversing lever was eased into forward gear and the throttle was cracked open, and behold away it went. I must say that at this point the locomotive was up on blocks so that everything could be observed without having to chase it down the track. Doug, being satisfied with these tests suggested that I bring it over to the club track on Monday and give it a 'Run'. Monday, 18th November 1996 at about 1.30pm we assembled at Marriner Reserve and the locomotive was duly 'fired up' and then eased down onto the track. When Doug was satisfied all was well he announced, "Right, you are on your way". I eased into forward gear and opened the throttle and for the first time after

four years work here I was driving my own Steam Engine. After the first lap (nearly ½ a kilometre) I stopped for a further inspection, but all was well, so on my way again, everything working as planned. I ran the locomotive for over 2 hours, in spite of some light rain (which I didn't notice) and Doug calculated that I had completed about 8 kilometres. One very Happy Boy!!!!!!!.

After I had packed up and was on my way home to Dannevirke, Doug rang Jean and told her the good news, and suggested that she have a bottle of 'bubbly' ready to 'Celebrate' and it was there when I arrived home.

I will conclude with this quotation; "The only difference between men and boys, is the price of their toys".



THIS MONTH'S FEATURED MODEL

By "Wilson Wilson"

I was asked to build a live centre for a woodworking lathe. It had to have a No 2 Morse taper and an assortment of ends. The bearing used was a double row and is usually for camshaft belt tensioners'. The part No is NTN 6005 LUA. The spindle is 10mm diameter and there is a 10mm flat washer inside the access hole. The access hole has to be big enough to allow the ring spanner room for tightening the nut on the spindle. The body length is 150mm and there is no reason why it could not be used on a metal-working lathe as well.

END OF YEAR DINNER

This is to be held at the **PN RSA** again this year. **\$28.50** per head payable to the treasurer on or before the night.
6:30pm Drinks - 7:30pm Dinner
Contact Dave Newstead or Murray Bold
027 457 6175 or 06 326 9665

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. Please let John Tweedie know what you have. (06) 358 0150

WETA CURVE

By Doug Chambers

On the uphill bank there is a curve with manuka trees either side. These have grown so high that the tops meet above the track forming a natural tunnel. Wetas like to live in manukas and I have often seen them sitting on the branches. I take delight in telling lady passengers to look carefully on the branches and that they might see a weta sitting there as the train passes below. I expected that one day a lady passenger would scream and leap off the wagon, but no, wetas just don't seem to frighten them. One grandmother said that if I didn't mind she wouldn't look and others have said that they hoped that the wetas would stay sitting on the branches and not fall down on them. I hope that they don't fall down on me !!!!!

The photo shows a weta that we found sheltering in our storage shed.



The weta checking out the back of a shovel.