



Newsletter of THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC

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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 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
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This Months Featured Model



JUNE MEETING.

A very cold night did not deter a good turnout of members. Mind you the heating system in the Hearing Association Rooms is very good and had to be turned off well before the end of the meeting.

Members were invited to display their current project and a favourite tool.

Bruce Geange showed us a Hornby-Dublo 0-4-0 clockwork engine that he is converting to run on Hornby electric rail. The clockwork part of the loco had reached a stage where it was beyond repair. Also Bruce showed us the machine he built for producing rivet head effect in thin plate.

Chris Rogers had a centre –finder and a knurling tool that through its design doesn't put any pressure on the headstock bearings or the compound slide. Chris also had the frames for one of the two "Dolgoch" narrow gauge locomotives that he is building in 7 ¼" gauge. The prototype engine is one of those used on the Tallylyn Railway in Wales.

Cynthia Cooper showed us her 'soft-sided toolbox'. This was found to contain screwdrivers, pliers, tape measure etc. The tools Cynthia has found it wise to have with her at electric tabletop displays for emergency repairs

Stuart Anderson had a set of crimping pliers, which he has found to be invaluable during assembly of air-conditioning ducting. He also showed us a small right-angled drive with a ¼" Jacobs chuck. This he uses a lot in confined spaces during his work.

Graeme Hall had a broaching tool he had made when faced with producing a keyway in a flywheel hub.

Chris Morton explained that his favourite tools were his digital read-out callipers' and a metric-imperial thread gauge.

John Tweedie is just beginning the 'Shay' logging locomotive as drawn by Kozo Hiraoka. John showed us the spoked wheels he is making all fabricated to the design. John is setting a very high standard.

Murray Bold had his now completed lighthouse complete with a light that appears to rotate but doesn't really.

Merv George has been making a ball turning attachment for his lathe. He admitted it didn't quite work as expected but after a little more work it will produce ball shapes.

Fred Kent had a four-post tool holder and a part-

ing-off tool post that he had made for his lathe.

Laurie Gudsell showed the tools he had made to allow him to time the camshafts and dual ignition circuits on his Allison V12 aircraft engine. Also a device for setting the spark on the coils for the starting ignition system.

Allan Morris had brought in the splendid O. S. "Rocket" kitset live steam locomotive that he had purchased in Japan towards the end of May. This kit has built up into a very nice model. It is coal-fired and in 5" gauge it would look good in anyone's lounge.

Allan was taken to the O. S. factory in Japan, although not allowed in the factory itself. He was able to see the very nice track outside the factory where prospective locomotive kit buyers are able at certain times, to run completed versions of the loco they intend to buy. I imagine that would be a very useful selling tool!!!!

JULY MEETING.

This will be held on the 27th August at 7.30pm in the Hearing Association rooms, Church Street, Palmerston North. Our own Simon Power, (not the M.P.) has recently returned from a school trip to Vietnam, and he will endeavour to describe all that he saw to us.

COMING EVENTS

Mid Week Run at Marriner Reserve Railway

25th July between 10.00am and 2:00pm
22nd August between 10.00am and 2:00pm
Please contact Doug Chambers beforehand.

Track running at Marriner Reserve Railway

6th August 1:00 - 3:00 pm
20th August 1:00 - 3:00pm

The closing date for the next issue of The Generator is Friday 11th August

FOR SALE

A 5" gauge driving trolley for ground level track. It has eight wheels, (two bogies) and mechanical brakes.

Price \$200. Bernard Coyne Phone 06 753 4528

FOR SALE

PETROL- HYDRAULIC 'Hunslet' (7 14" gauge)

This is the NZR Dsa built by the late Jim Curtis. Fully detailed the Dsa looks good and runs superbly. This is a classic example of model engineering. It featured in the Australian Model Engineering magazine (September-October 2002) and comes complete with a purpose built driver's car built to the same standard.

Enquiries to Jean Curtis, 115 Guy Street, Dannevirke. Or phone 06 374 7151.

FOR SALE

0-4-0 NZR Tr. In 7 1/4" gauge.

Powered by a Briggs and Stratton via an Albion gearbox. Including a driver's truck. Asking Price \$3,200 Apply Dennis McConkey
Phone 04 904 6195

SUBSCRIPTIONS

After many years of holding the subscription rate at the same level, it has been decided to make a small increase. (Inflation adjustment).

Member	\$30. 00
Country Member or Junior Member	\$15. 00

Please make payment to
The Treasurer (Barry Parker)
C/o 22 B Haydon Street,
Palmerston North.

MODEL MEE

The Palmerston North Model Engineers are going to have a Model Engineering Exhibition in the Leisure Centre, 26th - 27th August with set up on Friday 25th. Bruce Geange and Chris Rogers may give you a call and request you start polishing the nominated models.

Bruce Geange and Chris Rogers are the coordinators.

MODEL of the MONTH

On the 2nd July Allan Morris brought his newly completed O.S. kitset 'Locomotion' to the Marriner Reserve Railway. Steam was raised and the rather small engine set off around the track.

Brass gleaming and coal smoke issuing from the unusual topped chimney, the model looked a real treat !!!!

THOUGHT for the MONTH

From the NZIG Plant Operators handbook (Feb 1977)

Never do cutting or welding work while on staging suspended by a hemp rope. You may burn the rope and then come down in the world !!!!!

LETTER FROM ENGLAND

By Stan Compton

You may remember some time ago I told you about a small business located near Ross-on -Wye, Alan Keef Ltd. They rebuild narrow gauge locomotives and also construct new ones to order. Well I have been watching the construction of a replica in standard gauge of a historic engine of 1818 "Puffing Billy", originally built by William Hedley for Wylam Colliery to haul coal wagons to the unloading point into vessels on the River Tyne. Recently, after one year to design and two years to construct, the replica with a boiler built to modern standards, was fully tested in steam before delivery to the Industrial Museum at Beamish in the North-East where it will join two more replica engines, the "Steam Elephant" and "Locomotion". The site has much of interest including a rebuilt village street, which was being used to film a scene for a TV film when we visited some time ago.

Lately I have been able to visit the National Motor Cycle Museum near Birmingham on Junction 6 on the M 42. Even though we knew the location we ended up near Coventry before we were able to turn around and go left for the motorway south, the Museum entrance is on the traffic island just before the motorway entrance. What a wonderful job of rebuilding and restoration of so many of the exhibits. By coincidence when we were in Port Erin on the Isle of Man last year I found a small shop that sold second-hand goods and also displayed vintage motorcycles. I counted about seven bikes of the fifties in the shop, four were Vincent HRDs, three V twins and a 500cc 'Comet' single painted red. From new I believe that they were always black but in the Museum near Birmingham there was a red Vincent 'Comet' single on display with other Vincents', all

black as usual.

As I was moving around trying to take in over seven hundred exhibits, a man of retired age asked me if I had seen a 150cc Coventry Eagle. "Yes" I told him. "Good. That was my first bike" he replied. I met him later and he was delighted to find one to examine and bring back some memories. So nice to see the whole family having a day out.

I remember those early Villiers engined bikes, if the crankshaft bushes were worn, they were a pig to get started.

Actually Coventry Eagle also built 1000cc J.A.P. engined V twins pre-war. One was on display, a handsome bike and valuable like Brough Superior machines. I counted over a dozen Brough Superiors on display including the opposed flat four "Golden



Dream", far too expensive to produce in the late thirties.

It was difficult to choose what to photograph but a B.S.A. V twin sidecar outfit that had been part of a small fleet of taxis caught my eye in the foyer.

We have just returned from a trip to North Wales by coach, only nineteen people on a fortynine seater. It was good value, based in Llanberis in a first class hotel next to the Snowden Mountain Rack Railway. There were plenty of visitors are prepared to pay twenty-one pounds for the two hour trip. A pity the weather was poor with high winds, it was not safe to go right to the top, but we could still see the old quarry workings on the mountainside opposite. The Welsh Quarry Museum nearby was worth visiting, based on the original workshops for the quarry, the original 50 foot diameter water wheel could develop 8 horsepower and it still drove the shafting's that powered the old machinery. It must have been hard work operating those old lathes. The old foundry had a selection of large gear patterns on the wall, a pity we missed the slate splitting demonstration.

I had hoped to meet Mike Crawford from New Zealand who had written to me when he was working in charge of locomotive maintenance on the

Ffestiniog Railway, but I found he had returned home to New Zealand. All their rolling stock and locomotives are in fine order and the "Double Fairlie" kept up a cracking pace up to the terminus. Wales is interesting but the climate can be very wet. In fact we had a lot of rain and it is early summer here. The driver and fireman, oil fired because of the forestry fire risk, must have got wet in that skimpy cab with a side wind.

The Talylyn Railway is in fine order with a new museum that is well worth a visit.



Back home again and into our Sunday running at Hereford. We have been invited to put on a display at the Bristol Exhibition, same as last year, so it means preparing models for the show.



Stan and Anne had a day out at Carriage Driving Trials. Notice the team are in step.

ROAD ROLLERS

By Doug Chambers

Who actually designed the first road roller is not known. The Romans used a device having cylindrical stones on an extended axle drawn by oxen, sometimes the oxen were replaced by slaves. For over 1000 years after the Romans left Britain there was no further development in rollers or improvements in roads.

Road traffic increased during the Industrial Revolu-

tion. Coaches and private carriages and wagons hauled by horses were struggling to handle the poor quality and rough surfaces of the road.

Thomas Aveling set up the company that later was to be known as Aveling and Porter and later Aveling and Barford. His first rollers were towed by a traction engine, but by 1880 the rollers were taking the form that they were to retain for fifty years.

The standard layout had a casting extended over the smokebox with the front roll carried in a fork and the steering was operated by chains as on a traction engine. The rear driving wheels were smooth and were able mostly to provide sufficient traction. I say mostly as on a corner on the open road having super-elevation, it was common for the roller to slide off the road and the require assistance from a grader or tractor to be recovered. Care had to be taken that the towing rope or chain was not attached to the saddle or steering fork as the leverage could result in breaking the cast saddle or fork.

When asphalt came into favour the rollers were used to roll in the hot seal. However a serious problem arose, one that proved difficult to overcome. When the roller was reversed, there was a short delay to allow the flywheel to stop before reversing the valve gear and opening the throttle. While the roller was stationary the rolls left indentations in the soft asphalt. These hollows could be felt by travellers in their cars as they sped by.

The designers of rollers tried several different ways of overcoming this problem. Tandem rollers driven by steam engines that had a very small flywheel or no flywheel at all were tried with some degree of success.

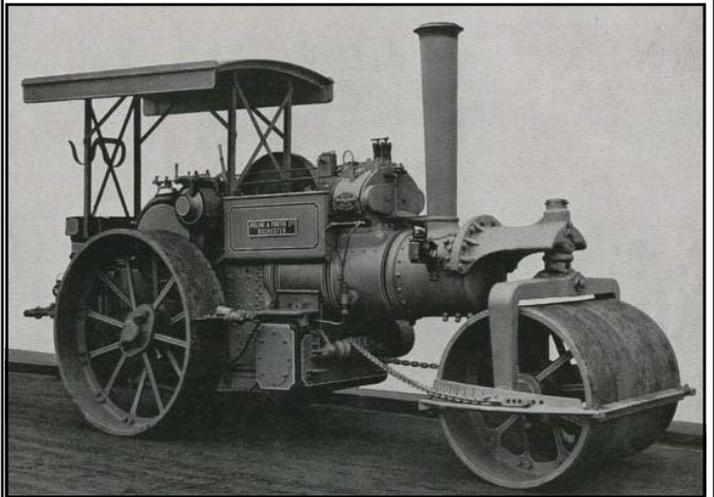
Then the day of the steam roller was past, and the internal combustion engine took over. Two common reasons for this were the shortage of drivers with boiler tickets and the fact that an early start had to be made to get the boiler in steam ready for work.

The early I.C. engines were often single cylinder kerosene or diesel fuelled. With these the problem of quick reversing came back with a vengeance. The engine had to be slowed, the clutch disengaged, reverse selected and then the clutch released. These early single-cylinder and indeed the two and four cylinder engines that replaced them vibrated severely and while reverse gear was being selected the asphalt under the rolls was being hammered by a crude vibrating roller. The indentation problem was back, worse than ever.

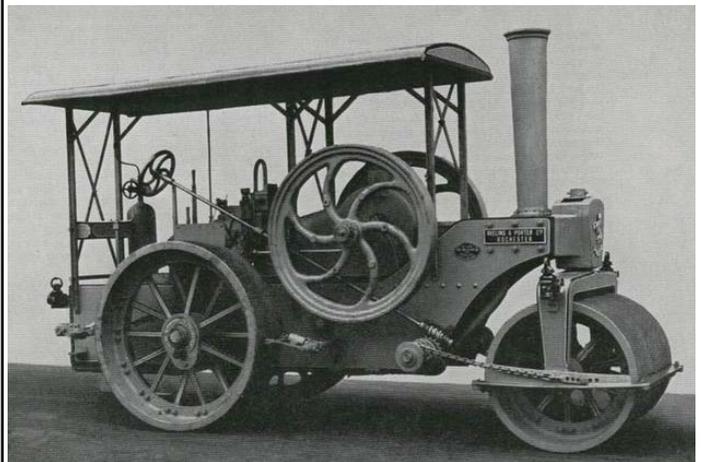
It was not until the reliable fluid flywheel (torque converter) became available that the problem was overcome, although certain manufacturers came up with some strange and unreliable quick-reversing gearboxes that came close to solving the problem.

Several manufacturers of road rollers supplied Convertible steam road rollers. A Convertible roller was supplied with a set of traction engine rear wheels and a traction engine front axle and wheels. The saddle casting was made in two sections. If the front of the boiler was supported on a jack, the bolts holding the two saddle castings could be removed allowing the front roll and fork to be wheeled away. Then the traction engine front axle and wheels were rolled in and fitted to the perch bracket. Again using the jack each rear roll was removed and replaced with a traction engine wheel.

This meant that the roller, now converted to a traction engine, could be used for other purposes. Often they were used for hauling wagons of crushed stone, which was stockpiled, near the next section of road to be reformed. When sufficient material was in place, the traction engine was reconverted to a roller and as such it was put to work rolling in the crushed stone.

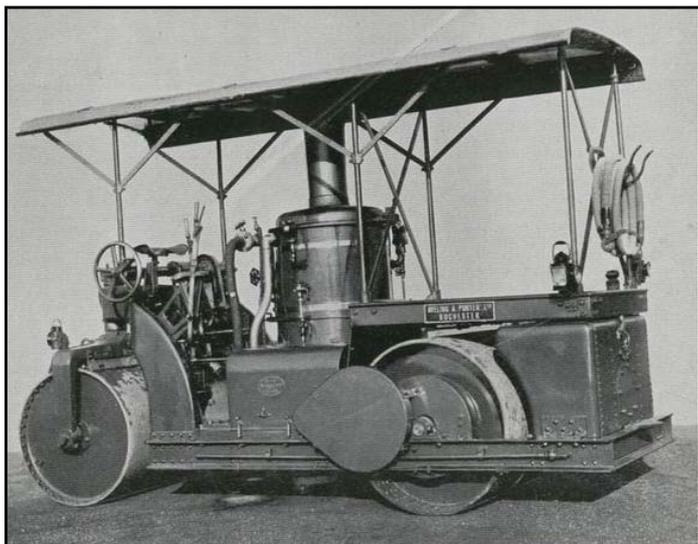


The photo above is of Aveling and Porter No. 11158 , a convertible.



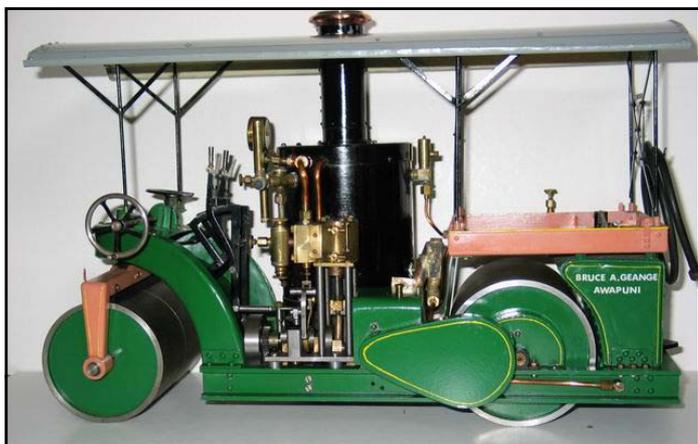
This photo shows an Aveling and Porter crude oil roller. Single cylinder. The early ones were started by heating a hot bulb with a blowlamp. Later models were started by compressed air, leading to the advent of the diesel.

This photo shows an Aveling and Porter tandem



roller with a vertical boiler. The quick reverse is effected by the use of Klug valve gear controlling the steam admission to the twin cylinder (high-pressure) engine.

The steering was power assisted, a first at this time. Unfortunately the steamroller is not often modelled. Graeme Hall is busy making a I.C. engined roller. It is the one described by Edgar Westbury in "Model Engineer" many years ago.



This is the tandem roller with a vertical boiler that Bruce Geange made many years ago. I remember him telling me to note how close to the ground the ashpan was. Apparently the test running included a lot of running around the lawn. Next morning there was a black track (burnt grass) following the path the little roller had taken. The heat from the ashpan had singed the grass.

VIDEOS in the CLUB LIBRARY

Two Foot Gauge Tramway - Waitakare dam construction line Auckland

Railways of the Isle of Man - United Kingdom

'Red Devil' - South Africa

Diesel Years - New Zealand Railways

The Longest Thousand Miles - Australia 'Flying Scotsman' and 'Pendennis Castle' reunion

French Expresses - France

A Day Away 'Puffing Billy' - Melbourne Australia

Great Steam Locomotives 'Clan Line' a 'Merchant Navy' class. - United Kingdom

Steam on the Midland Line - New Zealand

There are many other videos available as well as an extensive collection of books. With the cold weather restricting outdoor activities it is perhaps timely to remind you of alternatives to the 'TV'.

If you want to view the club's library ring Doug Chambers (06)354 9379.

You are very welcome to make your selection and take your choice home to view in your own time.