



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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Palmerston North

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This Months Featured Model



REPORT on the FEBRUARY MEETING.

The topic for the evening was what in the way of engineering did you do over the Christmas period.

Brian Wiffin led off with a knurling tool that he had made. The tool was made because he had to knurl two one metre lengths of bar. Brian bought two knurling wheels from Trade Tools and then built up the rest of the device.

Bruce Geange showed us the J class sheep wagons he has built in O gauge. He also showed us his current project which is a 1" to the foot scale McCormack-Deering 15/30 tractor of the period 1921-36. The tractor is being modelled in copper, brass and tinplate.

Merv George showed us the gas cutting torch and a device he made to make the cutting out of sheet metal circles easier.

Fred Kent showed us an experimental blue LED light. Apparently blue, red and green lights combine to give a white light. However it is believed that different shades of light can be of help to calm the mind, and Fred is experimenting in this field. He also had the now complete rotary engine for the Fokker tri-plane he is building.

Doug Chambers showed photos of the two large 'Dolgoch' boilers he has now nearly finished. Also a 1 1/2" Burrell traction engine boiler now completed and in the owner's hands.

Richard Lockett showed us the steam dome cover he has made for the NZR W class. He elaborated on the various problems encountered with forming the curves and flares. He also had a scale whistle, a standard NZR pattern from drawings by the late Ron Harris and published in the Australian Model Engineering magazine.

Stuart Anderson had the cylinder for his 7 1/4" Mogul now bored to size. He also had the between centres boring bar that he made so he could do the job.

John Tweedie has nearly completed the drive shaft for his Shay. However he has had to take time out to make repairs to his lathe.

Chris Morton had a rev counter that he had undertaken the repair of a Smith's unit from a fire engine. The drive in the unit itself had rusted up and stuck and once that was repaired a new face was made as the original had badly faded.

MARCH MEETING.

This will be held in the Hearing Association Room, Church Street, Palmerston North, on the 22nd February at 7.30pm. There will be 'Bits and Pieces on the table' and a DVD on the Feilding based Wab 794's trip down South.

COMING EVENTS

The **Annual General Meeting** will be held on **26th April 2007** in the **Hearing Association Rooms, Church Street, Palmerston North at 7.30pm.**

Please consider who you wish to be the recipient of the Compton Shield.

Mid Week Run at Marriner Reserve Railway

27th March between 10.00 am and 2 pm
24th April between 10.00 am and 2 pm
Please contact Doug Chambers beforehand.

Track running at Marriner Reserve Railway

1st April 1 - 4 pm
15th April 1 - 4 pm

FOR SALE

The family of the late Graeme Harris has asked us to advertise the 'Intercity' for sale. This is a streamlined 7 1/4" gauge model of an English high-speed passenger locomotive. Built by Steve James, it is powered by a 10 hp engine with a hydraulic drive. The total length of the power unit and driving trolley is close to three metres, but they can be separated for transport.

The 'Intercity' has been test run recently and is in top condition.

If you are interested a test drive can be arranged.

For price and further information contact Dave Brownlow 04 235 9985 or 021 709 312

The closing date for the next issue of The Generator is Friday 13th April

LETTER FROM ENGLAND

From Stan Compton

I had a friend at Massey College who had a saying, "You've got to win sometimes" when something went right. Recently I met a man of retired age who decided three years ago, to build a 'Maid of Kent' as a first attempt. He has since admitted that it was a bit ambitious. Luckily he has a son who has had mechanical training and is a loco – builder who can help with the tricky items, like the crankshaft and valve gear.

Progress looks good with the tender completed, painted and lined, always the best idea to tackle this first.

The engine frames are complete with all wheels mounted and the inside cylinder block in place.

I was told that "I only expect to get it running on air, a boiler is a distant dream."

Now one of our Hereford members started to build the boiler for an American design of locomotive for 7 ¼" gauge. Time slips by and he has realised that he is not getting any younger so he decided to scrap the formed boiler material, all 1/8" plate, bought years ago. Luckily I was able to intervene and offer the copper to our builder of the "Maid of Kent" at the scrap price. I have some 2.5mm copper bought years ago that can be used for the firebox wrapper.

(I have a contact who brazes copper boilers so I am hoping to see a boiler completed before the end of the year. The surplus copper can be kept to help out someone else now that the price of copper is so expensive.

A new Commercially made boiler for a 'Maid of Kent' would cost 1200 pounds (\$3600 NZ).

Did I read that someone in New Zealand was starting construction of the Don Young design of loco called 'Marie Estelle', a pretty little Yankee engine ?

Remember Don admitted he got the valve gear wrong and as drawn putting the reversing lever forwards lifted the expansion links so that the engine runs in reverse. One could live with this but it should really be corrected.

Now you will not believe this !! I recently had a visitor in my workshop, a dealer in small locomotives etc., he also builds and repairs them. His first locomotive was a 'Tich' built while still a schoolboy. He spotted a photograph on the wall of a 5" gauge 2 – 6 – 2 tank loco painted blue and named 'Edward', that I had sold to a member of the Tauranga MES who I believe sold it on to Jackson's Museum.

I was astonished when my visitor exclaimed, "I know that engine. I bought it as it arrived in a crate from

New Zealand as it was too heavy for the importer. It made plenty of steam and was a pleasure to drive, so I kept it for a year or two."

I had often wondered what happened to it, I really should have kept it. My visitor thinks it went to someone in St Albans, near London.

He confirmed that my 'George the Fifth' 7 ¼" gauge 4 – 4 – 0 locomotive would require a new boiler to suit modern regulations now it is back in England.

The boiler was originally built in England by commercial builders but of 4mm steel plate, acceptable thirty-five years ago.

Do you recall the item I told you about the man who wanted to build a drum sander so he cut off part of his wife's rolling pin? Well I forgot to mention that he offered to buy her a new one. Guess what? She went out and bought the most expensive one she could find !!

The new station canopy is now completed at the Hereford track site, it just remains to erect the ticket office and replace the tracks ready for the first public running in April. You can guess it was the same few workers who stuck at the job even during our rare snowfall. Spring is on the way quite early this year.

I saw an item in the local newspaper about a sixty year old couple who have acquired a 1930 Austin Seven tourer, they propose to overhaul it then take it on a trip, in aid of a charity, from Peking to Paris. Some of you may recall that this was a highlight in the early days of motoring, but they were wealthy owners of big cars with massive engines. I recall a book written about a trip around Australia in the early thirties with the same age of Austin Seven and the drivers coped well because of good ground clearance and its lightweight.

The car was nearly new, but what about fatigue applying to such an old car? Even if you carry enough fuel it will still be a huge challenge.

I learned to drive in such a car, the clutch pedal movement is about 5mm, and the steering is terrible, as are the brakes. They were simple to service and filled a need at the time. However due to their narrow track it will be difficult to cope with an unmade road cut-up by big trucks.

To finish, A man found he had won the lottery so he said to his wife, "I can now buy you whatever you want." She replied that she wanted something that would go from 0 to 100 in 2 seconds. He thought about it for a while and then went out and bought her a new bathroom scale!!!

QUARTERING WHEELS

By Doug Chambers

I have just completed the rebuilding of the chassis for a 7 ¼" gauge diesel shunting locomotive. It has a wheel arrangement of 0-6-0 driven by coupling rods from a jackshaft. The loco had apparently been a bit of a disaster. To get the wheels to turn had obviously been a real difficulty. The axleboxes had been machined down to give a 1/8" (3mm) clearance in the horns. Even this was not enough to provide smooth running. My instructions from the new owner were to get the chassis running right.

I removed the axles and checked the measurement axle centre to crankpin centre. Fortunately this was found to be correct and no variations from wheel to wheel. Next I set up the lathe for checking the quartering of the wheels and the jackshaft. This showed where all the problems originated. The rear axle and the jackshaft were a long way from being compatible with the other two axle sets.

There was another small problem. The builder had put a chain drive between a sprocket on a right angle box driven by an Eaton hydraulic unit and a sprocket on the third axle. The problem with doing this is that when the chain comes under load it tries to pull the two sprockets closer together. As the driving axle is sprung, the chain lifts the axle up against the springs and thus for a short time the loco became an 0-4-0. In an effort to overcome this, the builder had removed the springs and fitted solid blocks and this in turn created further problems.

Another fault was that the axles didn't run through the centre of the axleboxes and the front axle had too much side travel.

To correct the problems.

The axleboxes were machined to centralise the axle and the horns had a 3mm x 16mm steel strip welded to each face.

The driving sprocket was removed from the rear axle and mounted on the jackshaft. The jackshaft is mounted on heavy bearings in the frames.

A spacer was made and fitted to remove the excessive side play of the front axle.

The third axle and the jackshaft were re-quartered and fitted with Scotch Keys.

New springs were found and fitted to all three axles.

The coupling rods were refitted and the wheels could then be rotated without the use of water pump pliers or stillsons on the axles as in the past.

Perhaps a few notes on quartering wheels may save some other model engineer from grief and disappointment. I do not claim originality for this method. I believe it was published in 'Model Engineer'.

- 1: Put a dead centre in the three-jaw chuck or the four-jaw and check and see that it runs true.
- 2: Put another dead centre in the tailstock. Loctite one wheel to the axle and fit the axleboxes.
- 3: Slide on the other wheel but don't apply any Loctite at this time.
- 4: Mount the assembly between the centres. Rotate the chuck holding the crankpin against the chuck adjuster until the crankpin is vertical. Now lock the chuck so it cannot move at all. If you simply put the lathe in back-gear there will still be backlash.
- 5: In your toolpost mount a piece of steel and set it half the diameter of the crankpin below centre height.
- 6: Remove the axle set, apply Loctite to the axle and wheel and remount between the centres.
- 7: Hold the one wheel crankpin against the chuck adjuster and rotate the other wheel until the crankpin touches the stop mounted in the tool post.
- 8: Allow Loctite to set and then repeat with each wheel set. When the Loctite is dry, I strongly recommend that the wheels be Scotch keyed to the axles.

It is very difficult to get the wheel sets at exactly 90 degrees, however using this method each wheel set will be exactly the same as the others and there will be no difficulty with the coupling rods binding. Remember to allow for a bit of extra clearance in the coupling rod bushes, otherwise there will be a tendency for the wheel sets to bind-up on uneven track.

FOR SALE

EC 09 7 ¼" gauge Electric Locomotive.

Length 1.840mm

Height 660mm

Width 400mm and estimated weight 300kg.

Battery powered

(4 six volt 210 AH deep cycle batteries.).

Two EMD 24volt 40 amp motors driving axles via a worm drive.

Manual Braking on rear bogie of engine, Vacuum braking of both engine bogies and ride cars with vacuum supplied by 24 volt Thomson vacuum pump.

Price \$12,500

Contact owner and builder Stephen James

Phone (07) 544 7177 Tauranga

This Months Featured Model

The James line railway was officially opened on the 16th of December 2006, on my Mothers 85th birthday after some 12 years of construction.

To assist with the building of the line and to have something to take passengers around we decided to build a petrol powered freelance “jigger” type machine.

A solid welded chassis was constructed from angle steel, wheels were cast, axles turned and slowly things came together. Standard bearings in housings used for conveyor belt axle drums were adapted as they negate the need to make axle blocks.



With the need for reverse I set out to find an original Albion jigger gear box, and with the help of some club members I was eventually referred to a person who had several for sale. The second real find was a when a visitor to our workshop offered an original 8hp JAP jigger motor. We were now able to bring things together fairly quickly.

Our first trial runs were rather exciting as we quickly realized our jigger wanted to achieve similar speeds as the original machines, which was a little alarming in 7 and ¼ gauge, with the inherent tight curves. I knew we needed to at least half the ratio, so set about working out how to achieve same. Another gearbox would work, but I’d donated my spare to the Feilding lads for their jigger. Again we got lucky and secured another gearbox at the annual vintage swap meet.

We now have a reliable working jigger which can readily



pull two loaded wagons. It still rarely gets out of first gear and fairly low revs, I’m sure it could break some speed records!

There are a few improvements we will need to add at some stage, including better brakes, with hand brake, and a quieter exhaust. These are design as you go items, as has the entire machine, which has been a great learning experience for my sons and I.

J Mason

STEAM & VINTAGE FESTIVAL at the GLENBROOK VINTAGE RAILWAY

This event was held from the 9th to 11th February with the main attraction being the Showman’s Engine ‘Quo Vadis’ and the ‘Three Abreast Gallopers’ all from the UK. There were also Steam Trains, Traction Engines, Steam Boats, Steam Cars, Veteran Cars, Vintage Tractors and Aircraft, Stationary Engines, Models and many more displays of the bygone years.

Five model traction engines were running around the grounds during the three days of the event. The Friday was a school day with children everywhere and asking lots of questions about the Burrell while steam was being raised.



On Saturday when all the model engines were in steam they were lined up beside Quo Vadis for a photo session. From here we drove around the grounds giving rides to the public as asked. Train rides were running the three days. Many of us had dinner at the station on Saturday evening using the carriages to eat in. Following this we were given a ride on the train to the end of the line near Waiuku stopping at the workshops on the return trip followed by a ride on the carousel to finish the day.



Sunday was another busy day with people everywhere again. The model traction engines were busy all day again with more rides given. This was a good weekend.

B Geange

LOCOMOTION 2007

Perhaps one of the best yet. Perfect weather, a wide variety of visiting engines of all shapes and sizes. Steam, petrol and battery-powered. Old friends, new friends a truly great time.

On the Saturday night Murray Bold made a brief speech pointing out that this was the 21st Locomotion Weekend and to my surprise he indicated a very flash looking chocolate cake and suggested that as I was the only one who had attended all 21 Locomotion events (I may have missed one), I should cut the cake.

Later in the evening I had time to reflect on the past 21 years and the members of our club and other clubs who are no longer with us to enjoy these days.

Another highlight for me personally was when Jean Curtis was one of my passengers behind the EMD F7 Santa Fe that her husband Jim, had started to build several years ago.

On behalf of the Committee, I would like to thank all the members, wives, partners and children who had a part in putting this event on and making it such a wonderful weekend for all of us to enjoy.



More photos available on the club website

Photos from the camera of Chris Saunders