



## Newsletter of **THE PALMERSTON NORTH MODEL ENGINEERING CLUB INC**

Managers of the "MARRINER RESERVE RAILWAY"

Please address all correspondence to :- 22b Haydon St, Palmerston North.

**PRESIDENT**

Richard Lockett  
(06) 323-0948  
pnmec\_president@trains.net.nz

**SECRETARY**

Stuart Anderson  
(06) 357-7794  
pnmec\_secretary@trains.net.nz

**TREASURER**

Murray Bold  
(06) 355-7000  
pnmec\_treasurer@trains.net.nz

**EDITOR**

Doug Chambers  
(06) 354-9379  
pnmec\_editor@trains.net.nz

January 2010

No 352

**PNMEC Home Page** [www.pnmeec.org.nz](http://www.pnmeec.org.nz)

**Email:-** [pnmeec@trains.net.nz](mailto:pnmeec@trains.net.nz)

**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

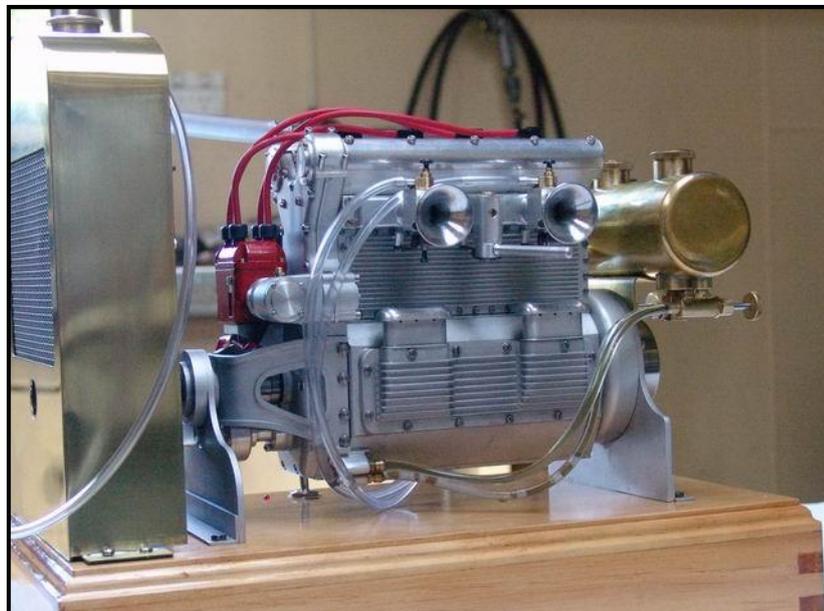
Visiting club members are always welcome at the track, at the monthly meeting, or if just visiting and wishing to make contact with members, please phone one of the above office bearers.

Sender:- PNMEC  
22b Haydon St,  
Palmerston North

Place  
stamp  
here

**T  
H  
E  
  
G  
E  
N  
E  
R  
A  
T  
O  
R**

**This Months Featured Model**



## REPORT on the November Meeting.

Members attending the Annual Dinner at the RSA were happy with the venue, and the Chef's efforts to provide us with a really nice meal.

Thank You Very Much to the committee members who selected the venue and organised the evening.

### January Club Night

#### President's (BYO) B-B-Q

The club's annual club BBQ will be held at the Vice-President's home:

**119 Ruapehu Drive  
Palmerston North  
06-354-7100**

Starting at 6pm  
on

Thursday 28 January 2010

All family members welcome

Please bring whatever you would like to cook for yourselves, plus a salad or dessert to share.

#### Bernard Coyne

I am sorry to have to pass on the news that Bernard Coyne of New Plymouth passed away 16 December 2009. Bernard was a member of our club as well as New Plymouth Model Engineers. Bernard had built a Durham and North Yorkshire Traction Engine, A 5" gauge 'Springbok' and a 5" 'Enterprise'. His pride and joy was the 5" gauge NZR Wab that he must have steamed for hundreds of miles on the New Plymouth track, giving rides to hundreds of children.

Bernard and the Wab had travelled down to run on our track on a couple of occasions but health problems prevented him returning during the last few years.

Bernard will be sadly missed by the model engineering fraternity and particularly the New Plymouth club members.

Doug

#### Bob McCready

I am sorry to have to tell the members that Bob McCready passed away (suddenly) on the morning of 20 December 2009.

When Bob joined the Palmerston North Model Engineers he had a 5" gauge 'Springbok' tank locomotive. Later he bought 'Mr Sandman' from Murray Bold.

Bob had had an interesting life in aviation, involved in servicing topdressing and light aircraft. In his younger days he had been a member of the New Plymouth Model Engineers.

Doug

### February Meeting

A visit has been arranged to Feilding Steam Rail.

A good opportunity to view the Wab, F163, and the X class steam locomotives.

There is a Dsa diesel shunter and a number of carriages that are being overhauled.

Further details will be in the February issue of the 'Generator'.

### COMING EVENTS

#### Mid Week Run at Marriner Reserve Railway

26<sup>th</sup> January between 10.00 am and 2 pm  
Please contact Doug Chambers beforehand.

#### Track running at Marriner Reserve Railway

February 7<sup>th</sup> from 1pm to 4pm  
February 21<sup>st</sup> from 1pm to 4pm

#### Open Weekends

.Kapiti Miniature Railway  
20<sup>th</sup> - 21<sup>st</sup> February

Palmerston North Model Engineers  
**Locomotion Weekend**, 6<sup>th</sup> - 7<sup>th</sup> March

The closing date for the next issue of The Generator is Friday 12th February

## THIS MONTH'S FEATURED MODEL.

By Graeme Hall

### 1/4" scale Offenhauser (Offy) Engine

I have had a long interest in IC engines and a chance finding in a friend's library of a copy of Ron Colona's 'Manual-Building a 1/4" scale 270 cu inch Offy' which took my interest.

I realised that it would be a very challenging project, but with my suitable workshop equipment and a lot of patience- it could be possible.

The project has no castings, so 2 blocks of 6061-T6 aluminium were obtained and machining was started.

The engine is of rather complicated construction- 4 cylinders, 4 valves per cylinder, twin overhead camshafts driven by a train of gears, 5 bearing crankshaft and dry sump lubrication with pressure and scavenge pumps (dry sump lubrication) water cooling with a circulating pump.

Large mounts of swarf were produced and eventually the engine was assembled. Spark plugs, magneto, four carburettors and ignition system, radiator and fuel and oil tanks were made.

Obtaining materials, bearings, fastenings and ignition components took a considerable amount of time !!!!

Eventually after 3½ years build time, and with much appreciation to the help given me from friends and club members, the engine fired up at the first attempt, with a very pleasing exhaust note!!!!

### Editor's Note.

The Offenhauser engine was used to power American dirt track racers for over fifty years. During that time the design evolved and the last examples had little in common with the engine that was first produced in the late twenties.

The engine was used to power the cars at the Indianapolis Speedway. In the 40's through to the 50's the cars were basically dirt track cars altered to run on the 'brickyard' surface. With ever increasing speeds the cars had to be designed specifically for the 'Indy 500'. In 1952 Ferrari entered a Formula 1 car. It was a V 12 of 4.2 litres and was driven by Alberto

Ascari who became the World Champion that year. The Ferrari had similar top speed to the 'Offy' powered cars and superior handling. But in the race it was found that the Ferrari V 12 didn't have anything like the torque of the 'Offy's) and as the cars came out of the



corners on to the long straights, the Ferrari got 'blown away' by the 4 cylinder Offenhauser. The picture is of the Belond Special built by George Salih for the 1957 'Indy 500' which it won. The same car won the 1958 race as well. It was powered by an Offenhauser laid over at an angle of 18 degrees. This was to lower the centre of gravity and give the car a smaller frontal area.

## LETTER FROM ENGLAND

by Stan Compton

Hereford MES put on a display at the Midlands Exhibition again this year, lead as usual by Gordon Wood who had built a scale model of the Ledbury Market House and old Grammar School, complete with livestock models depicting a market scene of years ago. He told me I was modelled as an elderly resident, sitting on a bench watching the activities!!!!

Those two models created a lot of interest, as did the "Maid of Kent" locomotive based on the L1 4-4-0 with inside cylinders built as a first attempt by Brian Collis who commenced building after he retired. I can confirm that this engine performs very well with good clear exhaust beats. We now have three of these designs by LBSC, two with outside cylinders, one is the one built by Richard Donovan's late uncle when practising as a G.P. in Birmingham in the fifties. The second was my version fitted with the correct Midland Railway cab that did not warrant a second glance by a visiting Editor

of "Model Engineer", now owned by a club member Terry Jackson. Third, the new one painted in Southern Railway Maunsell Green. It would be nice to see all three engines at the next Exhibition.

I can report that Gordon's display won a well deserved third prize with something for everyone on display. Photographs of my clock dial mounted on an outside wall attracted a comment from one lady visitor to her husband, "You can make me one of those", his reply was just a grunt !!!!

Two of my locomotives were on display, my 0-6-0 "Bridget" called 'Alex' was on a dealers stand and my 'Terrier Tank' called "Waddon" was on a club stand with the new owners name on the card. The last time I saw it was at a local auction, this was a surprise because I had been told by the club member I had disposed of it to, that his son thought the engine was like a work of art.

What really was a work of art on the Competition Stand was a model of a 1909 Wilkinson (of Wilkinson Sword fame) 4 cylinder, in line, air cooled engined motorcycle. It had a three speed gearbox and shaft-drive and was way in advance of other products of that era. The model won a well deserved first prize.

At the other extreme was a model of a Board of Trade rescue cart, what an unusual subject. A small display yet so much thought to depict the rocket-firing line aimed at the vessel in distress before the rescue lifeboats were invented. Obviously the first light line was used to haul in a heavy line to be attached to a sheer-leg, this being retained with a simple ground anchor, a heavy board buried in the sand. We learnt that the volunteer crew were paid two shillings for each person saved, with beer at a penny a pint in those days, a useful sum.

I have told you about one of our junior members who found a job in a works that are producing small rail-cars, to gain experience. He brought his boiler, built to steam his 'O' gauge locomotive, for a hydraulic test, not essential being very small, but such tidy work passed with not a weep. Just for a record for him to keep, IO made up a simple document stating the date and test pressure. At his age I lived for my 1928, 350cc OHV 'Royal Enfield' motor cycle, steam was for Old

Men !!!!!

You may have noticed in our technical press an advertisement for a 5" gauge Hunslet Quarry Tank locomotive, the cab-less one. The price looks very reasonable at about 3,500 pounds for the completely assembled engine. Now I know why, it is the size of a 3 1/2" gauge engine, a kitset imported from China. Length 24", width 10 1/2", and height 14 1/2". It may suit some but I would not accept the safety valves as fitted. The easing lever actually holds the valves in place and there is nothing to prevent the lever being knocked out of position.

When we fly to New Zealand it can take about 27 hours from leaving home. Recently we were visiting the Welsh Border town of Ludlow.

I noticed a plaque on the wall of a building stating that "The 'Aurora' coach left the Angel Hotel (built 1555) in 1822 to arrive in London in 27 hours. Just think of what that meant, one overnight stop, just changing the horses and away again, dust in the summer, mud in the winter. As to the passengers on top, nothing romantic there when it snowed, I may be cramped in economy class but I am dry.

This town has a flea market twice a month, I bought some diamond files from a tool specialist, and usually it is just interesting to see what is for sale. A historic town with a castle overlooking the market square and car park.

Our daughter from Auckland visited us recently and she brought me a book "On the Buses in New Zealand" by John McCrystal. It is very interesting to read about the early days when a driver had to be a mechanic as well to ensure that his bus got home. Early in WW2 some of the bus operators joined the armed forces leaving their wives to carry on. Pixie Bell used to drive the Khandallah bus, one day a little boy got on the bus with his mother, "Look Mum, a lady driver!". "That's not a lady, That's Mrs Bell" retorted the mother.

## **The DUESENBERG W 24**

By Doug Chambers

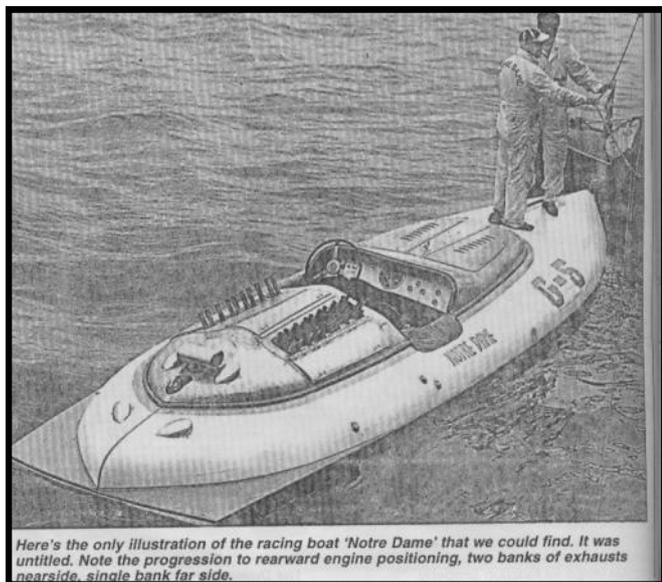
In 1925 Horace Dodge contacted the Duesenberg brothers and asked them to build him an engine for boat racing. Money was not to be a problem as Horace Dodge was heir to the Dodge car fortune. The Duesenberg brothers Fred and August, had been building racing engines since 1918 and had been supplying double overhead cam engines for cars

entered in the Indianapolis 500 races. The order was for two engines and a third supplied as parts.

The price per engine was \$32,500 US.

The engine arrangement chosen by the Duesenberg brothers was for a W 24 . Three banks of 8 cylinders, one vertical and the other two inclined at about 45 degrees all driving a common crankshaft. It is likely that the brothers drew on the design of the Napier Lion engine a W 12 cylinder used in WW 1 aircraft and in both Malcom Campbell's original 'Bluebird' land speed car in 1927, and John Cobb's Napier Railton which used two Napier Lion engines to set the World Land Speed record at 369.7mph in 1939.

The Duesenberg W 24 had twin overhead camshafts and four valves per cylinder. It was initially fitted with updraft carburettors but these were replaced with 12 downdraft double-barrelled Holleys to get the engine running smoothly on all 24 cylinders. Power output was disappointing, only 475 hp. Horace Dodge the asked J. Paul Miller to refine the engine and the partnership continued from 1929 to 1935. In 1934 one of the engines was bought by Herb Mendleson, for his racing boat 'Notre Dame', but before taking delivery Miller fitted a supercharger. Herb Mendleson won the 1937 Gold



Cup and the President's Cup in 'Notre Dame' powered with the now 'blown' Duesenberg. Miller had felt that the engines lack of power was due to poor fuel distribution and the supercharger and new inlet manifold saw the W 24 now producing 845hp at only 5000rpm. The engine proved reliable and never let Mendleson down. Dan Arena who designed 'Notre Dame's' hull and was the race driver said the engine sounded like a field of Offenhauser-powered midgets starting a race!!!!!!

## Kerr Stuart 'Wren' class

By Doug Chambers

Being the original builder of the 'Wren' commonly known as 'Robyn', named after my wife, I have watched Richard's overhaul and repaint of the engine with great interest. On Saturday the 28<sup>th</sup> of November the steam accumulation test was done and on the following day the 'Wren' was taken to the Marriner Reserve Track for a trial run before being handed over to the new owners, Jonathon Mason and his sons. The photo shows Daniel Mason undertaking 'acceptance trials' on behalf of the family and I



am sure they will enjoy running the 'Wren' on their own and other tracks over the years to come.

## Labour Weekend at New Plymouth

Arriving at New Plymouth about mid afternoon on Saturday there were some locos on the track and a traction engine or two in steam. There did not seem to be a lot of passengers waiting for rides at the station. The afternoon passed quickly and we all enjoyed a good meal in the evening.

On Sunday the Burrell was unloaded and steamed. While raising steam a 30 key organ played to us. Three traction engines were in steam and there was plenty of activity on the track including members from our club with their engines. Peter George's Foster was driving the hay baler with two young ladies assisting. I had an enjoyable day with the traction engine. Thanks to the New Plymouth club for a good weekend.

B Geange



