The Generator

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Palmerston Model Engineering Club

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Managers of the Marriner Reserve Railway - Marriner Street - Palmerston North
PO Box 4132 - Manawatu Mail Centre - Palmerston North 4442

The Palmerston North Model Engineering Club

Upcoming Club Nights

23 May 2019

We are planning to have an **Electronics Evening**
Three of our members will give talks and demonstrations on how
"Electronics fits into Model Engineering"

27 June 2019

Richard will talk about some more photos he found when searching the
National Library Archives.

25 July 2019

Bring along your current project for
"Show and Tell"

Please note Subs are now due.

You should have received an invoice for these by email or in your posted newsletter. Please pay the Treasurer by Internet banking or by other means at the next club night. Thanks.

What's on this month and in the future
PNMEC Club Calendar

Track running at Marriner Reserve Railway

May	5th	1pm - 3pm
May	19th	1pm - 3pm
June	2nd	1pm - 3pm
June	16th	1pm - 3pm

Annual General Meeting - 2019

The meeting was opened by President Robert Edwards with a welcome to all. Minutes of the 2018 meeting were adopted followed by reports from the President, Treasurer, Boiler Committee Chairman and Track Convenor.

Most office bearers indicated their willingness to continue in their respective roles, as did committee members. John Tweedie did not seek re-election; after a lengthy period as Treasurer and for the last two years, mentor to the present Treasurer, Kerry Puklowski, John will now continue to support Club activities in a more informal manner. No nominations for committee or the executive had been received, nor were any received from the floor. Thus, the Committee and Executive for 2019 remain essentially the same as for 2018.

President: Robert Edwards — Vice President: Murray Bold
Secretary: Finley Mason — Treasurer: Kerry Puklowski

Committee: David Bell, Cynthia Cooper, Richard Locket and Chris Morton.

Track Custodian: Richard Lockett
Appointed Boiler Committee: Richard Lockett and Dave Spark.
Newsletter Editor: This position remains vacant.
Librarian: Merv George

Membership fees will remain unchanged at $30.00

The Compton Shield recognising service to the Club was awarded to Janice Hall.

Fin Mason then made a presentation on binding magazines into hard covered volumes; in his case, "Model Engineer", "Model Engineers' Workshop" and "Strictly IC". His method was in accordance with a detailed description contributed to "Model Engineer" by N D Bailey over the months December 1981 to April 1982. In turn, this article was based on one contributed to the magazine by A R Turpin in 1949!

A review of books and publications held in the Club library has been carried out and a selection of surplus items were available for members to select from, and add to their own library, or if only of passing interest, to return for recycling at a later Club night. It is intended that further books will be available from the library for display at subsequent meeting nights. Likewise, members seeking to downsize their collections were invited to share in the same manner. Fin Mason

Letter from England

By Stan Compton

Suicide doors is a new name to me, often expensive cars had rear-hinged doors, in my youth I never gave it a thought. I think the Citroen 2CV cars had a rear-hinged door to allow easy access for a tall person. I think the design called for seating for a six foot driver and the ability to cross a ploughed field with a dozen eggs on the passenger seat. The first one I saw was about 1955 owned by a farmer. He claimed it to be better than a Land Rover for use on his farm. Certainly as I watched him drive off flying down the farm track churned-up by tractors proved his point.

The first pre-war Rover I owned used to be called The Poor Man's Rolls-Royce having leather upholstery and rear hinged doors in the front I never gave it a thought. Also, the internal handles were mounted vertically. Later this was to prove a problem. We had been on holiday in Devon with a hired caravan driving across country back to the east coast. My wife was in the back seat holding our youngest child. His older sister was over active at four years of age. "Put her in the front please". This suited her as she could stand up looking out the front. She must have caught hold of the door handle. This released the catch and I caught a glimpse of her rolling out under the door. In busy holiday traffic and pulling the caravan my first thought was this problem. But luckily by the time I had stopped she was standing up with blood streaming down her face from a small cut on her nose, otherwise no harm done. We cleaned her up and headed for Bedford Hospital with a busy out-patients department. Once stitched-up we carried on home I know she should have stayed in her child seat in the rear but it had been a long hot day.

My wife always remembered going shopping in the local town with that car when she found a puncture while parked in the main street in Diss, Norfolk. Changing the wheel herself, as I had taught her, never expecting she could be watched by unemployed men who were waiting to collect payment, although pregnant with our second child.

Another time the two year old busy-body girl was sat in a light pushchair. On the rear was a useful bag intended for light goods, but loaded with our weekly shopping, quite OK if the child sat still, but she being nosy would stand up to have a look in the bag. Of course the pushchair tipped up resulting in a distraught wife saying she would never take that child shopping again. I bought a new pushchair, solving the problem.

On a different subject I have a photograph in my workshop of a young woman in a painting in the National Gallery by Dame Laura Knight, operating an industrial lathe with a twenty-four in face plate holding a jig containing a breech-block for a Bofors gun. She is cutting a multi-start thread. It is obvious she is a skilled worker at about twenty years of age, by her stance, all prepared to cease the cut taking place. A newspaper article gave the information that she was the prised student after training for war work during WWII.

I used to run lathe courses for degree students at Massey College as it was called then. One student I can always recall her name was a natural on a machine. She ended up the week by making herself a brass thimble.

My wife was at a handicraft show in Wales and discovered that women new to the knitting hobby were unaware the skein needs to wound into a ball.

Sub-editor's, or Subs, check the written text of newspapers, magazines or websites before it is published. They are responsible for ensuring the correct grammar, spelling, house style and tone of the published work. Subs will endeavour to make sure that the copy is factually correct and that it suits the target market.

Down at the Track -Thursday Work Crew

Thursday 11 March saw a number of the Thursday group regulars at the track. Most of the time was spent watching Richard and Doug operate a digger to remove some over mature flax plants from various places round the track.

This will make mowing much easier in these areas. It will also mean that we will not have to constantly cut the flaxes back so that small hands cannot reach them from the ride cars.

A great deal of thanks is due to Rua and Owen Mudgway for the use of their small digger. This made short work of what would otherwise be a rather arduous task.

John Tweedie

Drill Bits and More Drill Bits Not Sharp !!!!!!#

I have been sharpening drill bits in my workshop and on & off have had mixed results. Sometimes good and other time not so good, which means back to the wheel and do it again.

I have tried drill bit sharpeners and not found them much good, until a few days ago, when in a friends workshop I spotted a drill bit sharpener on a bench and asked about it. He showed it to me and sharpened a drill. It took a minute to do and it was sharp and true.

Unfortunately, it cost about $700.00 for one, but as I was looking I found a cheaper one at $119.00. It looked close to what I saw in my friend's workshop. After buying one and getting it home I started using it and it worked well. I have now sharpened a lot of drill bits and am very happy with the results.

I will bring it to the next meeting for a demonstration.

Voltage - 230v 50Hz	Power - 80w
Speed - 4200RPM	Stone - 80grit diamond
Drill Sizes - 3mm - 13mm	Min length - 85mm

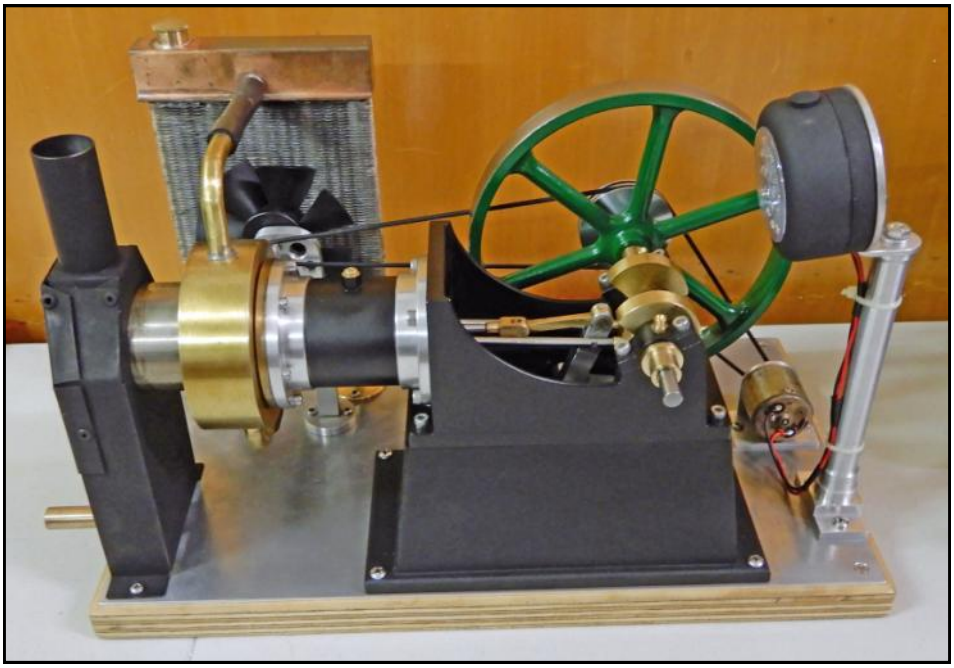
Robert Edwards

The Stirling 'Work Horse'

What next to build!!

A search through plans and books revealed a larger Stirling Cycle engine – big enough to drive something. Designed by James Rizzo of Malta, a well-known builder and writer of Heat Engine books.

With a suitable flywheel and materials on hand a start was made on construction.



The engine has horizontal concentric power and displacer cylinders with a 50mm bore. A fabricated base of aluminium plate, a complicated crankshaft with levers and links to power and displacer cylinders with moving parts made.

The next requirements were heating and cooling of the displacer cylinder.

A small gas burner with a venturi device and a connection to a gas container for heating and a burner canopy to concentrate the heat to the end of the displacer.

Next the cooling – a container from a 'Primus Blow Lamp' cut up to form a cooling jacket for the other end of the displacer and piped to a radiator, made from an air conditioner radiator with top and bottom tanks to carry coolant and a belt-driven fan.

When finished and assembled a test run was made – the result was too much heat input and too little power – back to the drawing board!

A check was made of timing of the power piston and displacer piston, air leaks and a reduction of friction. The speed improved and a radiator fan could be driven but not a generator. A new displacer piston was made with smaller radial clearance – an improvement.

A third piston made from solid 50mm x 80mm mild steel bar, 0.8mm thick with blind end and sealed aluminium cap – a 0.5mm radial clearance and 12mm end gap.

A lot of boring and swarf!!

A big improvement in power and speed – enough to power a 6-volt generator delivering useful power to a multi LED light. Efficiency also improved as lower heat input required.

This model has the advantage of being able to be run for long periods – without overheating!

Graeme Hall, Whanganui