June 2013
No 390

THE GENERATOR

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 difficult. We may even offer you a cuppa.

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.

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Place stamp here

This Months Featured Model

Report on the May Meeting.

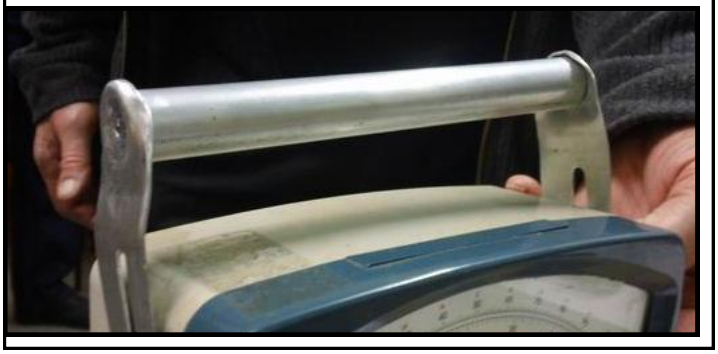
We had a guest speaker, Ken Mercer from Massey University whose specialty is Mechanical / Electronic Interface Engineering and Advanced Technology. This seemed a big step ahead of what we are used to but Ken was able to explain it to us in a way that most of us could understand. He spoke of the application of the technology in a practical way where it was used to help grade and weigh asparagus for market.
A second example was the camera microscope used to examine core samples taken from the bottom of a lake. Different pollen samples at different levels give an indication of what was growing thousands of years ago.

Doug Chambers had the smokebox and spark arrestor for the American 4-4-0 and he explained that producing the cones for the spark arrestor was not easy.

Ian Stephens had the two cylinder, horizontal Tangye steam engine on the table for us to see. He told us that he felt the governor was too difficult for him to make and Graeme Hall made one for him.

The Aluminium Challenge

Four members took on the challenge.
Fred Kent had made a carrying handle for a heavy duty volt meter.



Murray Bold made a wind powered generator which lit up a couple of 10mm LEDs.

Chris Morton made a version of the ‘Spud gun’ and demonstrated it.

Bruce Geange made three hand operated garden rollers in approximately “O” gauge.

A show of hands resulted in Bruce Geange taking home a bottle of wine

June Club Night

7:30pm, Thursday 27 June 2013
Hearing Association Rooms
Church Street, Palmerston North

Tonight **John Tweedie** will tell us about his latest overseas trip.
What he saw and what he did.
Up in the Swiss Alps there are railways, lots of them.
See you there on Thursday

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

COMING EVENTS

Track running at Marriner Reserve Railway

July 7th from 1pm to 3pm
July 21st from 1pm to 3pm
August 4th from 1pm to 3pm

Open Weekends

Kapiti Miniature Railway
Official Opening of their 7¼" gauge extension.
28 - 29 September 2013

Whakatane Model Engineers
Open Weekend 20 - 21 July 2013

MODEL MEE 2013

This will be held on 24 – 25 August 2013. All members are asked to dust off their models, and be prepared to bring along the current project completed or not.

THIS MONTH'S FEATURED MODEL

By Roger Corlett

The engine came about from my desire to build a steam boat. I chose this engine as it could be built from flat and round stock and didn't need any castings, (I thought this would make it easier). The cylinder liner was to be from a Renault Dauphine car! Not having one of these laying under the bench I bought a billet of cast iron and bored it out. It has a bore and stroke 58mm X 75mm with sealed bearing for the big end and mains but due to the price for the

eccentric bearings I used bronze bushes here. The piston rings are from an Austin 7.
The rest of it has been built from scraps found while I've been out and about. As can be seen it's still under construction and modification but the basics follow plans bought from Ray Hasbrouck in the United States. I've altered the valve gear to suit my own idea of what it should have and added drip lubricators to oil the cross head slippers. At the same time I bought these, I also bought the plans for his twin cylinder engine (perhaps for boat No 2 !!!!

I've since bought an unfinished fantail launch hull of 17 feet that this engine should push along nicely. This is an on-going project but due to having other projects started, and having to earn a living, this one is on the back burner. I'm yet to decide what to do in regards to a boiler.

LETTER FROM ENGLAND

By Stan Compton

In 1941 I acquired a ½" capacity, two speed breast drill, it had come from the USA under the 'Lend-Lease" scheme. I was sixteen then, the war time conditions created a shortage of everything. Now I could repair my old 150cc motorcycle. The drill was lent to a fitter at work who gave it a hard life while I was overseas in the Royal Navy. It came back to me and was in use all the time. When we went to Canada in 1952 I took all my tools. On our return to the UK I bought a business in Suffolk dealing in hay and straw. Those heavy 16 foot high loads meant

that my Dennis lorry needed a set of helper springs that I had made up. I had to fit the brackets to the chassis with the ½" bolts supplied. I was pretty fit then but it nearly killed me drilling the chassis with that Stanley breast drill. Our next move was back to Canada, the West Coast this time but there was little future there so we came on to New Zealand where we did well. Our eldest son got a degree and left home taking a selection of tools that I gave him in a strong tool box including the Stanley electric drill. These all came back to me when he left for the United Kingdom where he met a lady, bought a house and settled there.

Although I now have several electric drills, the old Stanley still hangs in my garage although rarely used until recently when I needed the slow speed to effect a repair on an item of furniture.

I am helping a friend with the assembly of a "Polly Kitset" to build a 5" gauge 'Koppel' 0-4-0 locomotive. The piston ring grooves needed a ten thou cut to allow easy movement of the piston fitted with the O ring supplied. I also machined a radius eliminating the sharp corners on the grooves which could shred the O rings.

The next problem was the coupling rod bushes which had no allowance for each wheel to lift. A large taper reamer sorted this and gave more freedom to allow the wheels to revolve.

A very odd thing is that the reversing lever operates the opposite way to normal practice so I wonder if the original locomotive was the same.

Interesting to note is the fact that the firm of 'Orenstein and Koppel' of Berlin, Germany, now design and produce the conveyor systems used in Airports to move people at a fast walking pace.

If any of you have been caught on camera in your car, like I was, and fined for being just over the speed limit, spare a thought for the car driver in one part of London. The traffic density is such that when the lights change he moves forward but becomes trapped in the middle of the intersection and can't move out of a no go area. Caught on camera and fined $260, it is most unfair but it earned nearly $3,000,000 last year!!!

Due to concern by nature lovers about Global Warming with diminishing ice floes where Polar Bears catch their prey a group of scientists were filmed recently for TV following a female bear with two cubs. One clip showed a man inside a cage made of 'Perspex' while the female bear tried to tear it apart for the free meal inside it. Knowing bears can rip a car-door open, no wonder he looked worried. I suspect there was a man with a rifle out of sight!!

My No 5 clock is known as a 'Castle Clock' and it has a brass framed glass cover that needed a half inch hole for the winding handle. Every attempt to drill one with a brass tube at slow speed using sand and water retained by 'plastercine' failed as it broke through. I think that the picture frame glass could be the reason but I have been advised to use a 'mini drill' with an abrasive point to make a small hole moving in a circular motion to achieve the size of hole required and success was achieved at the first attempt.

This weight driven clock by John Wilding see (www.ritetimepublishing.com) is of simple design, but my home made silver steel gear cutters left a poor shape of tooth and some work with a small needle file was needed to ease tight spots and now the clock runs keeping good time. The gears are made of engraving brass CZ 120 or round brass bar that machines with a chip, not a curl.

We have a retired doctor in the club and he told us of an experience as a junior doctor when working in a hospital in Yorkshire. An elderly patient, a farmer had a problem common in older men, we all know about the pain if our feet slip off the pedals while riding a bike. Well the patient needed removal of those two lumps down below, "Ee lad, thas not taking my manhood away" was his plaintive comment. The problem was solved by replacing them with two lumps of sterilized rubber!!!!!

In the Newsletters from other Clubs

Blastpipe Maidstone starting to get good patronage now that the Park is opened for business as usual.

Petone too has been having busy days at their track. There is a photo of a neat little ‘Bobcat’ IC engine ,twin cylinder, inline, being built by Peter Targett

EBoP Model Engineers Looking at the possibility of extending their track.

Whangarei Model Engineers A report on the finding of two locomotives found at a depth of 90 feet off Long Beach, New Jersey. The locomotives are Planet class 2-2-2s dating back to 1850. They only weighed 15 tons.

It is believed that they were being shipped, possibly on a barge, to Boston when overtaken by bad weather and they were jettisoned to prevent the barge or ship sinking.

'Steamers and Dreamers' Report on Dave and Lynne Giles trip to Brisbane to attend the 57th Australian Association of Live steamers convention over Easter.

Tauranga Model Engineers have accepted both financial and physical assistance from the Tauranga lions Club to complete their track extension. Brian Kincaid has an update on his foundry project.

Clem Parker turns 100

Clem Parker has turned 100. To celebrate this grand achievement a party was put on for him in St. Peters' Church Hall in Pahiatua.
The picture shows the Palmerston North Model Engineers who travelled over to help Clem celebrate. One not appearing in the picture was your editor Doug Chambers who had to deal with some other commitments before travelling over to Pahiatua. He did make it in time to hear Clem's speech which was well worth hearing.

Modern Methods

By Doug Chambers

From 1983 to 1985 I worked for Graeme Blackley Ltd, (now Blackley Contractors).
I was employed as a mechanic-engineer but Graeme warned me that I would not know what work I would be doing from one day to the next. This proved to be correct and as well as workshop repairs, I would be out driving, bulldozers, trenchers, excavators and occasionally on the end of a hand operated spade digging a hole on the side of the road to expose sewer pipes, water reticulation pipes, stormwater pipes, gas lines, power cables and telephone cables. Of all the jobs I did that was the one I didn't look forward to. The ground was usually heavy clay with plenty of stones.
Hard digging that often led to a sharp spade cutting a telephone cable.
Recently Graeme invited a group of past staff members to come out for the day to see the advances made with new machines.
The machine that really impressed us 'old fellows' was the 'Super Sucker'.
The 'Super Sucker' is a large truck with a large vacuum pump and a water blaster type pressure pump. The turf is removed from the site of the hole and placed to one side. Then one of the two men team starts the water blaster which has a head on it like that of a shower rose. This turns the dirt and stones in the hole to slurry and then the second member of the team lowers a 125mm diameter suction hose into the hole and all the slurry is sucked up and deposited into a tank on the truck. Larger stones have to be lifted out of the hole by hand but it only took four or five minutes to create a hole over a metre deep. In the bottom of the hole we could see all the service pipes and power and telephone cabling. None of which could be damaged by the not very high pressure water blaster or the vacuum pipe. After measuring the depth of the various pipes and cables and plotting them on a plan the hole is back-filled with sand and the turf replaced.
Today most new services are laid using trenchless methods. It is vital that the operators of Grundomat air driven torpedos and the Directional drilling machines know exactly where the existing services are laid. Good plans are available for recent subdivisions but the parts of the city that are over twenty years old are not so well mapped.
The 'Super Sucker truck' is not a cheap piece of equipment, but it is not cheap to repair water and gas pipes or electric cables especially if the severing of the utility has brought a factory or a commercial business to a halt.

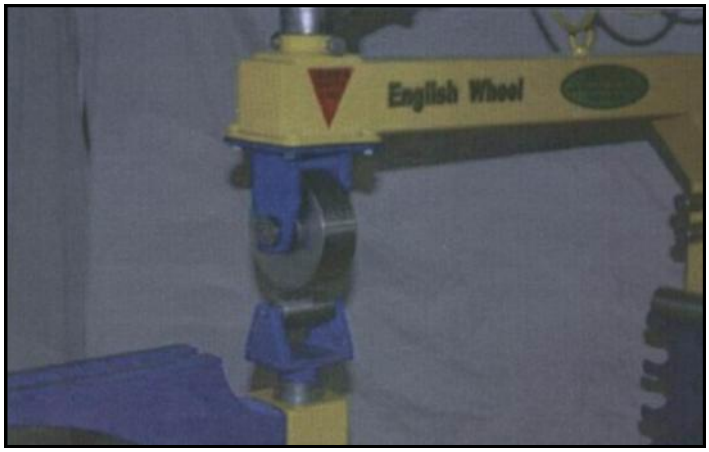
The following is from the
Hereford Model Engineers Newsletter
'Whistlestop'.

An ENGLISH WHEEL

By Wally Sykes

Many years ago I had the unique opportunity of working in a custom body shop. This is where I first set eyes on the English Wheel.
It was made of cast iron and towered over me by two feet, it must have weighed a ton. Just beside the English Wheel was the bead roller, yes cast in a U shape on its side and a hand wheel operated by a second person.
The blemishing hammer looked like it belonged in a Victorian water mill, cast iron and cam operated via a three phase motor.
All this was in a 60 foot tin shed, with the odd

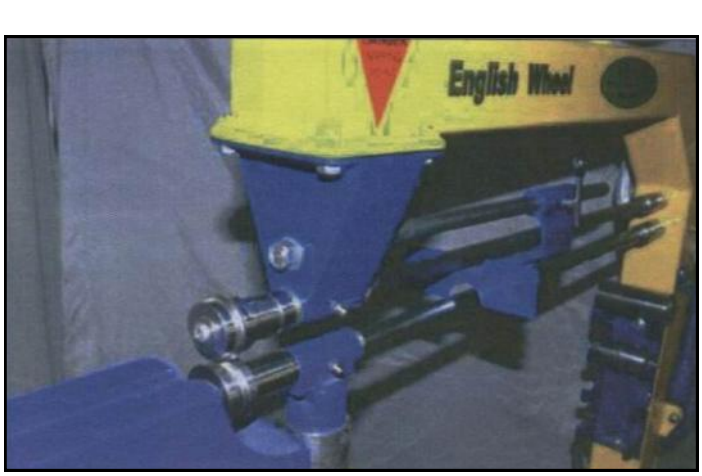
light bulb glimmering here and there, you must get the picture by now.
After many years without a 'fix' I decided to cure my addiction to bash the hell out of steel and set about designing a modern machine which has it all, and could be tucked away in a small workshop. It looks like a toy when compared with the one described above.
The English Wheel didn't start out as a large machine. It all started in the 1700s, a group of



This is the English Wheel.
Used to dome and curve metal.

jewellery workers visiting a water driven rolling mill in Central Europe thought it would be a good idea to have a machine with two wheels one over the other, to thin out their silver and gold.
I think the machine started out being about the size of a Singer sewing machine.
It wasn't until the 1900s that two English men looked at the idea of scaling it up for use in the automobile industry. This is where the name English Wheel comes from and I hope that the descendents of these two men will allow me to carry on the tradition and call my machine the English Wheel.
As you all know every year I like to keep my hand in by building something.
This year I have built the English Wheel, a slot mortise, a small break press and a gas bottle furnace all made from scrap yard junk.
The English Wheel was no exception apart from the bronze bushes I used from my stock and the electric drill I use to drive the machine. The drill has everything I need as a motor,
forward and reverse, fast and slow speed,
but the main thing is that it cost nothing.
The drill will clip on and off if I need to use it as a drill.
The machine has a backbone from which all the tools are attached. The machine has four functions. The first is as a wheeling machine. This will roll sheet steel to such shapes as mudguards and parts of a car that need a slight dome. The second function is the air operated blemishing hammer used to hammer out dents, curve, shape, and thin out steel. The third function is the bead roller driven via the drill. This has many shaped tools and is used to roll different shapes in floor panels and around mudguards. Finally the bead roller and the extended arm can be used to sheer thin steel and cut circles and who knows, I might add a louver press to this machine at a later date.

This is what the machine looks like with the blemishing hammer fitted



Here the wheel has been removed and the bead roller fitted.

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