



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 4414

PRESIDENT

Robert Edwards
(06) 280-3057
pnmec-president@trains.net.nz

SECRETARY

Fin Mason
(06) 356-7849
pnmec-secretary@trains.net.nz

TREASURER

John Tweedie
(06) 358-0150
pnmec-treasurer@trains.net.nz

EDITOR

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

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PNMEC Home Page www.pnmec.org.nz
Email:- pnmec@trains.net.nz

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TRACK RUNNING

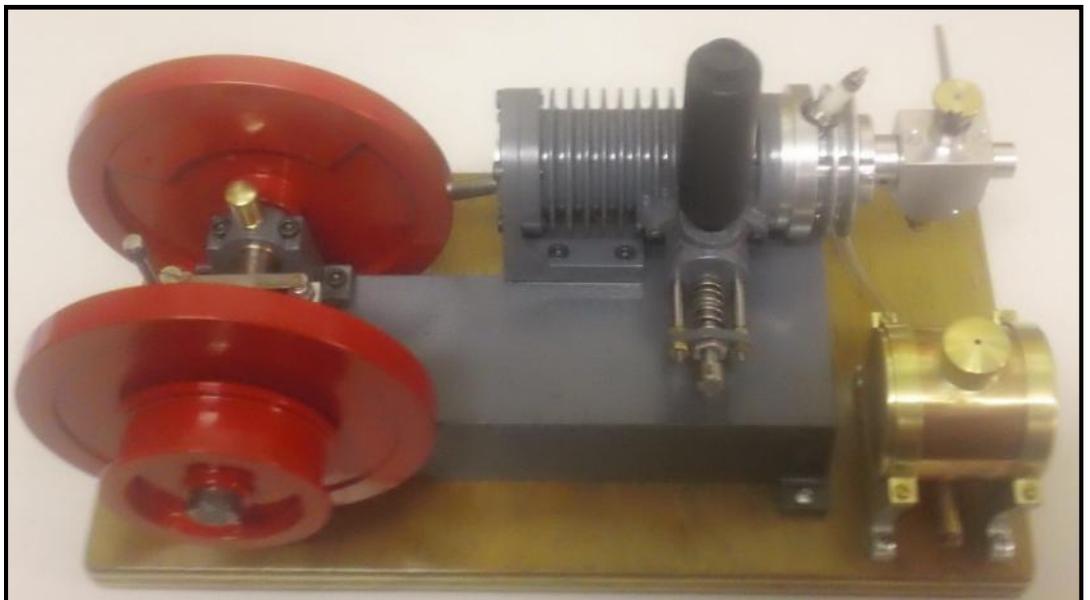
This is held on the FIRST and THIRD Sunday of each month, from 1 pm to 4 pm Summer and 1 pm to 3 pm during the Winter. All club members are welcome to attend and help out with loco coaling, watering and passenger marshalling - none of the tasks being at all difficult. We may even offer you a cuppa.

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.

Sender:- PNMEC
22b Haydon St,
Palmerston North 4414

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This Months Featured Model



Report on the June Meeting.

Once again we were entertained by **Richard Lockett** and further photos of the Albert Percy Godber collection. The photos were taken during the 1900-1920 period of the Railway workshops at Petone, buildings, railway structures, ships. Not all the photos were captioned and our members struggled to place and name the items photographed. It is rather wonderful that such a collection of photos has survived and is kept for further generations to see at the Alexander Turnbull Library. The photos certainly give an insight to life in New Zealand 100 years ago.

Phillip Bealing brought along his hot air engine complete with a fan for us to see. With the aid of a hot air gun the hot air engine was brought to life. A bit reluctant to start at first, isn't it always the way, they run alright at home but when asked to run in front of a crowd they don't perform. However an increase in temperature from the heat gun and it ran beautifully.



Graeme and Janice Hall are off to the UK soon and Graeme had been asked to make something for a grandson. After a lot of thought he made a small treadle type engine. Operated by a thumb or finger it should



provide hours of delight for the five year old grandson. It certainly intrigued a lot of our members who are in the sixties and seventies. Most members had a try to make it run continuously using various methods.

July Club Night

7:30pm, Thursday 28 July 2016
Hearing Association Rooms
Church Street, Palmerston North

Bruce Geange is going to give us a talk on **Meccano**.

He has had some of his designs published in the English Meccano magazine so this will be a meeting that you should not miss.

COMING EVENTS

Track running at Marriner Reserve Railway

August 7th from 1pm to 3pm
August 20st from 1pm to 3pm

Not to be Missed

Rail-X at the Barber Hall July 23—24.

The show is open to the public from 10am to 4pm both days. We need help outside in the car park, running the train, selling tickets, assisting with loading. We also need help inside manning our static display and talking to the public. Any help you can give during each day would be great and if you are able to give us assistance with set-up and pack-up that would also be appreciated.

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

For Sale

A TMU3 universal D bit grinder \$800.
also a
10" Elliot shaper with swivel vice \$750
Contact Philip at 0274789004

THIS MONTH'S FEATURED MODEL

By Graeme Hall

From the Unusual File - 'System Loyal'
French patent from 1870-1880. Open crank
2-stroke, no crankcase charging. Similar
small gas engines were built in Britain by
Hardy & Padmore in the 1900 era.

These engines differ from conventional
two strokes as having inlet and exhaust
valves which operate automatically and do
not need cams or other mechanisms. This
engine has a light spring-loaded induction
valve and a port in the cylinder which is
uncovered by the piston.

The exhaust valve is lifted against its spring
loading to allow exhaust gas to escape.
As soon as the pressure is released it closes
and for the rest of the outward stroke a
partial vacuum is produced so that the lightly
loaded inlet valve opens to admit a fresh
charge from the carburettor. The charge is
compressed and ignited by the spark and
the resulting expansion produces motive
force.

The model engine was built from Patent
Drawings and a description of an engine
built in the 1960's and scaled down to suite
materials on hand – no castings were used.
There was some delicate milling to produce
the cylinder and valve housing, mounting
base and connecting rod. The cylinder liner
is steel, aluminium piston, cast iron piston
rings and the flywheels were made from
4" brass rod.

A barrel carburettor was built with the aim of
controlling engine speed. A simple ignition
contact breaker, spark plug and ignition
wiring to coil box.

On assembly, I found that the compression
ratio was too high, so metal was machined
from combustion chamber making rotation

easier.

Early attempts to start resulted in a back-fire
breaking the fabricated cylinder mounting
bracket. A new stronger bracket was made
from solid aluminium!!

A model aeroplane spinner was fitted to the
flywheel which enabled the use of a friction
drive electric starter resulting in more pops,
bangs and back-fires - back to the drawing
board!!

A new smaller bore carburettor was built,
adjustments to valve springs and ignition
timing made. Perseverance finally paid off
with easier starting and consistent runs.

In all – a most unusual engine!!

Specifications:

Bore & Stroke: 7/8" x 2"

Fuel: Fuelite – 2 stroke oil 80-1 mix

Lube: Crankshaft grease lube

RPM: 7-800

LETTER FROM ENGLAND

By Stan Compton

I have just read an interesting book about
the history of a small airfield located on an
escarpment near Hythe and the Romney
Marsh on the South Coast of England.
Being so close to France it proved to be
very useful of the RFC and the RAF during
two World Wars. A flying club was founded
there in 1907 such was the interest in flying
in those early days but unfortunately
Lympne Airfield does not exist now or
anything to record its history other than the
title of this book which is 'Lympne Airfield
in War and Peace' by Antony J Moore
published by Fonthill 2014. Many record
breaking flights were conducted from there
after 1918 by fliers such as Amy Johnson
and Jim Mollison who later married.
Incidentally, Lympne is pronounced 'Linm'
Airfield which became well known in the
flying world particularly to holiday makers
who wished to fly to France and take their
cars with them in the 'Bristol Freighters'
operated by 'Silver City Airways' from the
1950s.

It was a grass airfield until 1968 and had
been used by aircraft as heavy as Douglas
DC3s during WW2. An example of what a

useful airfield it was proved by a pilot of a DC3 'Dakota' that had been converted to an air ambulance when he became lost in fog over the English Channel with a load of twenty seven injured servicemen. Running short of fuel he desperately flew up and down the coast and just before he committed to landing on a golf course he spotted the airfield and after a circuit he was able to make a safe landing. I can confirm the amount of fog that occurs in winter in this area as I lived on Romney Marsh in the winter of 1955. On my way to work in Ashford I used to pass a house that had a telescope mounted in the front garden at the top of a rise out of the Marsh. I could see no reason for the telescope until one morning in the spring the fog had cleared and you could see all the ships passing up the Channel!!!

An interesting item from wartime at Lympne Airfield, one day a Hawker 'Typhoon' approached the landing strip and it did not appear to have a pilot. It landed safely and taxied in and a lady pilot of small stature alighted to report delivery. She was a member of the ATS, one of a team of pilots who delivered aircraft from the factories to the Squadrons. This particular young lady tied wooden blocks to her shoes so she could operate the rudder pedals!!!

I have read about a woman from the ATS who delivered a 'Blenheim' bomber and who on climbing up to the control tower to have the delivery chit signed was asked what she was doing there and her claim to being the pilot was not believed!!

The RAF had taken over the airfield early in the war, and one day an American B17 Flying Fortress with an engine problem declared an emergency and requested permission to land. The skipper pleased the commanding officer by bringing in his heavy plane close to the edge of the grass runway instead of out in the middle. The crew were found rooms for the night but just before they went off to bed, a WAAF asked what time they wanted to be 'knocked up' next morning. Now this caused some confusion because the expression has a

totally different meaning in the USA. However the girl dutifully appeared a 6.00am the next morning with a bacon and egg breakfast for the crew!

We have been watching a programme on TV about farming in Scotland, one farmer and his wife moved to the Isle of Lewis off the north east coast facing the Atlantic Ocean. They had been barristers in London and wanted to get away from the rat race.

They were able to take over a croft and built a new house. It was a pity he didn't specify a galvanised roof with lead head nails as we saw a patch of tiles that got blown off in a Force 11 gale. They raised Highland cattle and the sheep traditional to the Hebrides; these are free-grazing as is the tradition on these islands. The sheep-meat and the meat from the cattle beasts has a distinctive flavour and the man has built up a business to supply customers with frozen meat delivered personally as far away as London, contact is made on his web-site. We saw him load up his 4 by 4 car with packaged meat, freezer-packs and insulation and then head for the ferry to deliver to his regular customers. What a far cry from the days of the Highland clearances in Victorian times when poverty was rife.

Twenty years ago when I was on the lookout for a metal working lathe I discovered a dealer who had been clearing lathes out of High Schools due to the attitude taken that pupils might hurt themselves. So it was quite a surprise recently to see on TV pupils at a school in Eastbourne learning to smelt bronze by mixing copper and tin over an open fire using a bellows to raise the temperature. Then the molten bronze was poured into a mould, great care has to be taken at this stage but what a treat to see school pupils learning about the 'bronze age' in a practice form. They even learnt to use a 'flint and tinder' to light the fire so full marks to a teacher with imagination.

This reminded me of the gas-fired furnace I made to melt bronze of known quality for the boiler mountings of a four inch scale traction engine I built many years ago.

Bill Frazer NZR Driver, Mountaineer and Photographer.

By Doug Chambers

A lot of Otira residents spent their spare time looking for gold and some found small pockets. Bill was one and after his wife died in 1956 Bill had a trip to Australia followed by a World tour and that was followed by another World tour that included travelling across Russia by the Trans Siberian Railway. On this trip the Finnish led tour party visited Tchaikovsky's home. Bill had stayed outside taking some photographs and when he entered the house the rest of the party had already gone upstairs. In a room off the hall was a piano and Bill could not resist lifting the lid and playing a few chords. Immediately an old woman came out and waving her arms screamed at him in Russian. Bill beat a hasty retreat back to the tour bus. When the rest of the party returned to the bus one of the tour party said that it was great to see Tchaikovsky's piano and that it only got played on the great man's birthday. Bill commented that it had been played twice this year and he hoped he wouldn't finish up in the Siberian salt mines.

In 1906 Bill started with the NZR. He was to start at the Greymouth Roundhouse as a cleaner. In those days each crew had their 'own' engine and crews made sure that their engine was immaculately turned out and the servicing was top class. On Sunday nights the cleaners would start by lighting up between twelve and fifteen locomotives. The firewood was always green slabs and the 'birds were still cheeping in the branches'. The smoke rolled over the edge of the funnels and filled the shed. The shed was fitted with chimney extensions and the funnels were always lined up, but until the boilers got some pressure up and the blowers could be turned on, there was insufficient draught to raise the smoke up the funnel and through the extension. In the meantime the cleaners had to continue to prepare the engines putting up with stinging

eyes from the wood smoke for about four hours at which time there was enough steam to run the blowers. Cleaning, oiling, tending the fires, polishing brass and cleaning paintwork continued through the night until the crews booked on and then each crew closely inspected the state of their engine. If it wasn't up to 'scratch' then it was likely that the cleaner would receive a clip on the ear. The crew would then top up the tender or side tanks ready to start the day's work. Bill told me that he recalled one occasion while he was still a cleaner that a crew who had finished for the day left their engine in front of the roundhouse and departed for home. The driver called at the pub to 'wet his whistle' and then proceeded home on his bicycle. He was very annoyed to see 'his' locomotive departing from the station and being driven at considerable speed. He turned around and by the time he had found the shed driver he had worked himself into a rage. The shed driver explained that there had been a derailment and it was believed that the crew of the derailed engine had suffered serious injuries and that there was no choice but to send his engine as it was the only one spare. The news of the accident calmed the driver especially when the shed driver explained that a boy had been sent to his home to ask him to drive the engine but he couldn't be located. Later when 'pooling' of engines came into force the standard of cleanliness and maintenance dropped off markedly.

Bill did his time as a cleaner and was promoted to fireman. For a while he was transferred to Southland where he fired the NZR Rogers 'K' class locomotives. Bill didn't realise that nearly 70 years later he would attend the re-commissioning of K 88 at Ashburton. After returning to Greymouth it was not long before Bill was promoted to the other side of the cab. By now the pooling of engines had come in and the standard of cleanliness had slipped badly. One of the first jobs he had was taking out a work train to where a bridge was being replaced. The engine was very old but it was only required for some shunting to get the

crane in position to lift bridge timbers into place. The job went on for several months and it wasn't long before Bill and his fireman were bored stiff. They couldn't help with the bridge so they started cleaning up the engine. The brasswork was polished and the inside of the cab was cleaned and re-painted. Then the outside of the engine was cleaned and re-painted. The rods and valve motion were polished but there were some severe leaks from the glands of the piston and valve rods. A couple of fitters were 'bribed' to repack the glands and set the valve timing during their Saturday turn when they had time to attend to the engine. The coupling rods and connecting rods had their bearing brasses adjusted thus eliminating the clanking noise that followed the engines progress along the track. One day towards the end of the bridge job Bill and his fireman brought the work train into the station at Greymouth and on down to where the train was left, the engine was uncoupled and left down at the roundhouse. Bill had noticed a lot of men in their best suits on the station platform but took no notice as they were no business of his. A few weeks later he received a letter from the General Manager of New Zealand Railways saying that he had been on a tour of inspection of the West Coast and had seen the engine Bill was in charge of arriving at Greymouth. He knew the engine to be very old but was very pleased in the way it was turned out, cleaned, painted and shining. Of course Bill said that the manager did not realise that it was all done to fend off boredom.

In 1918 at the end of World War 1, Bill was driving We375 on coal trains around Rewanui. When the news reached Greymouth that the War was over Bill was rostered on to bring the miners down from Rewanui and he was asked to hurray along as it was expected that the Greymouth pubs would be drunk 'dry' before the night was over. Bill said that he made the fastest ascent and descent to the mine ever. The train was only the two passenger cars for the miners. The coal wagons were

notorious for derailing and on this trip no delays would be tolerated. I remember Bill telling me that although there was a lot of laughter and singing in Greymouth that night, there were a lot of tears too for the men who would not be coming home.

Bill continued on working from Greymouth until he went to Otira after the tunnel was put through. He was one of the few NZR drivers to have studied electric traction and he had to train the other drivers who came to Otira to drive the electrics through the tunnel. Here his interests in mountaineering and photography started to take up all his spare time. To be continued

In the Newsletters from other Clubs

Blastpipe - Petone

Poor weather conditions meant that three Sunday runs in June were cancelled.

Hawkes Bay Model Engineers.

The falling Autumn leaves have caused a lot of extra work for members.

Havelock North Live Steamers

The cover has an excellent picture of the late John Romane's twentieth and last locomotive. A very good report of the Easter gathering at Keirunga.

Thames Model Railway

Need for new members has seen the current membership busy producing a list of ideas that may help to attract new people.



Eddie's Britannia Tender - Completed

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