



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

SECRETARY
Stuart Anderson
(06) 357-3420

TEASURER
Murray Bold
(06) 355-7000

EDITOR
Doug Chambers
(06) 354-9379

October 2007
No 328

PNMEC Home Page www.pnmeec.org.nz
Email:- 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 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.

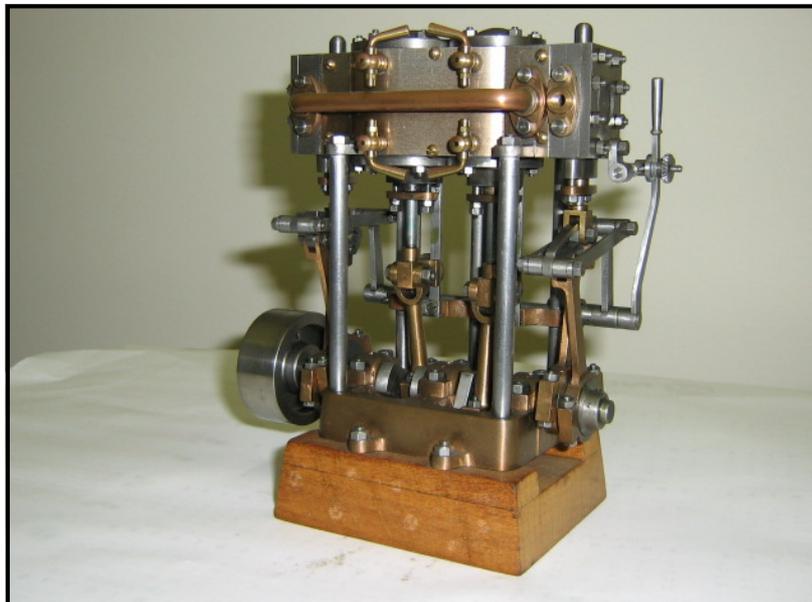
Sender:- PNMEC
22b Haydon St,
Palmerston North

Place
stamp
here

**T
H
E

G
E
N
E
R
A
T
O
R**

This Months Featured Model



REPORT on the SEPTEMBER MEETING.

I have read a lot about Africa, about the people, the country and the politics. But to hear Hugo Montieth's description of the three months he spent in Zambia brought home the extreme difference in way of life to which we are accustomed here in NZ. Hugo's description of the huge dams built on the Zambesi River by the British in the 1920's surprised me. The second greatest income for Zambia after mining is the export of electricity generated by these dams. The lakes behind the dams are some 450 kilometres long and in places about two hundred kilometres wide.

The photos he had taken of the Victoria Falls where the Zambesi River plunges into a ravine could not fail to impress. The water plunging into the ravine forces water laden air upwards to where the onlookers are drenched with spray falling and droplets rising.

The hazards of poisonous snakes and other wildlife were made clear. The Zambian Government is very protective of the wild animals as tourism is also a vital part of the country's income. The Park Rangers are well armed and anyone caught with animal trophies that they have taken, are treated in such a way to prevent any possibility of further offending.

Hugo's prime purpose was to overhaul the three jet boats, the Nissan Patrols and a Mercedes Benz truck for a team of NZ missionaries. Although of course primarily a religious group, much of their work is in helping the Zambians to grow good crops and to assist with teaching them animal husbandry.

The lack of spare parts for anything means that vehicle repairs must be achieved with

patience and a good helping of 'Kiwi' ingenuity.

I have talked to several members since our meeting and all of them had been fascinated by the talk. Thanks very much Hugo for giving up your time.

OCTOBER MEETING.

This will be held on the 25th October at 7.30pm in the Hearing Association Rooms, Church Street, Palmerston North.

It is to be a '**Bits and Pieces**' evening, so bring along your current project and share your triumphs and frustrations. Perhaps someone will be able to offer useful suggestions.

Ian Stephens will have his newly completed traction engine on display. The first of the 22 sets of castings that has been finished and run.

COMING EVENTS

Mid Week Run at Marriner Reserve Railway

30th October between 10.00 am and 2 pm
27th November between 10.00 am and 2 pm
Please contact Doug Chambers beforehand.

Track running at Marriner Reserve Railway

4th November 1 - 4 pm
18th November 1 - 4 pm

Open Weekends

20 - 22 October Labour Weekend
Havelock North Live Steamers

20 - 22 October Labour Weekend
New Plymouth

21st October.
Ted Barnes welcomes visitors to his 7 1/4" gauge track at 790 Durham Road, just South of Inglewood

10 - 11 November Tauranga MEC

8 - 9 December Rotorua MEC

3 - 7 January 08 Manakau LS - NZ Convention.

The closing date for the next issue of The Generator is Friday 9th November

LETTER FROM ENGLAND

By Stan Compton

Sometime ago one of the Hereford Club Members put in a bid for a set of sheet metal rolls at a local sale, donating the set of three feet by sixteen gauge steel capacity to the club. Very useful, few of our members have used such a machine and they crowd around to watch when I put it to use. Recently one of our members brought in the cab roof of a heavy 7 ¼" gauge locomotive he is building called "Anna".. The fancy ornamental edging had been produced by laser cutting, leaving sharp points. A tricky job to roll to fit the laser cut ends with tongues to fit into slots. The first job is to work the ends round with a hammer, unfortunately a lead one was not available, then start rolling. Strange, this steel seems to be tough to work, the pinch roll was bending.!!! It never occurred to me that anyone would specify stainless steel for a cab roof. It needed a brick-layers 'lump' hammer to get that roof to the shape desired, dents to be filled in later.!!

At the latest Bristol Model Exhibition there was a ¼ scale Austin Seven racing car, a model based on three built by Austin Motors. The workmanship was superb, the builder told me that the prototype had a straight eight engine, but this was reduced to a four cylinder of 750cc, double overhead cam and supercharged. The engine of the model does run, but un-supercharged due to lack of suitable bearings. The body panels were made from copper sheet obtained from redundant hot water cylinders. The builder had a prolific display of models, locomotives, aircraft engines etc, actually over twenty in number. One that caught my eye was a ¼ scale Morgan three wheeler of 1924 vintage. The builder told me that there is no information available on the construction of the original V twin engine built by the old London based firm of J.A. Prestwich, known as J.A.P. engines. The builder made a trip to the National Motorcycle Museum near Birmingham where he found a suitable engine to copy. The engine for the ¼ scale Morgan had been removed because the builder was not happy with the way it ran. The rest of the model was complete but as yet unpainted, showing the copper panels, I assume from the same source as those for the Austin.

I chatted to Brian Perkins about difficulties when building his 14 cylinder Bristol "Hydra" radial aircraft engine. He said that tapping the hundreds of 12 BA threads in the components was not a problem, breaking only one tap, but the final assembly of the engine nearly made him give up!! Brian had spare

cylinders that could be handled and he pointed out that with no detachable head this had to be threaded to accept a sleeve for the valve assembly, the full-size engine allowed the valves to be assembled from inside the cylinder bore.

All the fins were machined with a slitting saw, one slit below an overhanging cam-box gave particular trouble, but now the complete engine is a work of art.

I heard that the builder of the Napier "Deltic" locomotive engine model was asked to display it in the USA. He boarded the plane for the flight and the securely boxed engine was placed in the hold. On arrival the builder found an empty box, a thief had thought it contained something of value and had disgustedly dumped the engine unharmed, in the terminal building.!!!

Talking to Derek Goddard about the Victorian system of supplying hydraulic power to customers in the London area, 180 miles of cast-iron pipes delivered the power from an accumulator to the city for lifts and the docks for cranes. On display were castings to build a model of a water hydraulic winding engine built in 1847 for a lead mine, to an Armstrong design utilising a 200 foot head of water giving 90 psi as a source of free power. One of the Hereford Club members told me that Telecom bought the redundant pipes to carry their fibre optic cables.

The high quality of some of the locomotives on display are what I expect at this show in the West Country, too many to list for you, but on the Bristol stand the 5" gauge Star class engine "Knight of the Black Eagle", also the Horwich "Crab" a Don Young design stood out amongst a very large display.

Much interest was shown by schoolboys at the stand of the Meccano Modellers Association but one item held the interest of everyone. Visualise an Archimedean Screw made of washers, mounted vertically, motor driven lifting a number of 25mm glass marbles to the top of a column. Each marble in turn dropped off a chute onto a series of round rubber covered discs, so spaced that it was a bouncing bomb effect only a lot higher, finally bouncing into a collecting chute returning back to the start. My camera finger was too slow to catch the marble high up !!!!

You will have seen pictures on the TV recently of the extensive flooding in the Midlands, luckily Hereford track site and equipment were hardly affected unlike some we heard of. We had a collection to send to one group who lost everything in the floods.

FOR SALE

On behalf of the family of Graeme Harris, we have been asked to advertise and sell the collection of Stuart Turner steam engines that Graeme had bought from Chris Rogers. There are four engines mounted on a display board, all machined and finished to a very high standard.

The first is a 'Williamson' steam engine, originally drawn up by 'Tubal Cain' and is a replica of a vertical engine made in the 1800s by Williamson Brothers of Kendal.

The second is an H 10. This is the horizontal steam engine with a $\frac{3}{4}$ " bore x $\frac{3}{4}$ " stroke.

The third is a V 10 which is a vertical steam engine having the same bore and stroke as the H 10.

The fourth is a D 10 with reversing gear. This is a twin cylinder with the cranks at 90 degrees and thus avoiding being stuck on centres making it ideal for use in a radio-controlled boat. Bore and stroke the same as the V 10.

For further details contact Dave Brownlow on 04 235 9985.

FOR SALE

Whitworth taps and split dies from 1/8" to 1/4"

UNF taps and split dies from 1/4" to 1/2"

BA taps and split dies from 2, 3, 4,5,6,8.

40 piece metric tap and die set.

1/2" to 1" pipe die set.

Myford ML7 3 jaw, two four jaw chucks, face plate, angle plate. Usual extras. \$1500 ono.

Heavy duty drill press 3/16" to 3/4" Jacobs

Chuck, Power hacksaw, and a

tapping machine . All home made

Various drill vices, LPG torch and 9kg gas bottle (needs retesting).

Contact Clem Parker 06 376 8353.

THIS MONTH'S FEATURED MODEL.

by John Couchman

In October 1984 Couchman's were agents for Stuart Turner casting sets. We wanted the compound marine engine to be built rather quickly for display in the shop.

Tim Humphreys who was an engineering instructor at the local Poly Technical College and President of the Palmerston North Engineers undertook the task.

Those of us fortunate to know Tim found that he was a highly skilled engineer and an outstanding instructor.

Tim completed the engine in just one month and it was displayed in our showroom resulting in lots of admiring customers and sales to as far away as Oamaru.

The Stuart Turner catalogue describes the compound engine as $\frac{3}{4}$ " and 1 $\frac{1}{4}$ " bore x $\frac{7}{8}$ " stroke. @ 80psi it would produce 1/16th of a bhp at 1500 rpm.

Steam consumption was 3.47 lbs per hour.

The Stuart Turner twin simple engine had the following specifications. 1" x 1" bore x $\frac{7}{8}$ " stroke

@ 80psi it would produce 1/10th of a bhp at 1500 rpm.

Steam consumption was 12.28 lb per hour.

Note the difference in bhp and steam consumption.

Both engines had similar dimensions of height 5.5", width 2.5", length 5" and weight 2.3 kgs.

Both engines were capable of powering boats up to six feet long. No doubt the simple engine would produce more speed than the compound

Lubricator Trouble

My little Allchin Traction Engine which is now seventeen years old hasn't been running to well of late.

It has only been steamed once or twice each year; its main outing each year is the Hawkes Bay Model Engineers mid winter do.

The 2006 event saw the engine lose the ability to

raise steam once off the electric blower and have to be pushed back across the park, not a good look. It just seemed to lose its chuff.

The previous trip down south to Rangiora with Bruce Geange's Burrell for the big full size Traction Engine meeting also saw the Allchin give trouble with the slide valve coming off the valve face bringing a instant halt to proceedings. Time for a bit of thought and investigations as to what the problem may with three areas needing looking into, the blast nozzle alignment with the chimney, the piston O ring and the slide valve. OK checked alignment of blast nozzle with the chimney sweet as, removed piston and replaced O ring not that their was anything wrong with the one I removed. Next off with the steam chest cover to examine the slide valve, all looked to be ok just a bit of scoring on the valve face.

A bronze cylinder block and a bronze valve although not the same bronze, the cylinder block supplied from Reeves in England and the valve made from leaded gunmetal bar from the Milson Foundry. At this stage I was getting a bit worried, as all seemed well and that I had explored all my options as to a possible cause.

I noticed a bit of water in the lubricator reservoir which is a sign that the non return valve is letting steam/water back through the pump and that no oil is getting out to the cylinder block.

This can be a common problem with lubricators, which is why we use a design with two O rings for our railway loco's, which don't give trouble. So I stripped the pump and valve apart, cleaned it and reassembled, filled with oil and manually spun the pump over to see that the oil flowed from the pump, which it did.

Next fit the delivery pipe to the pump and check that the oil flowed through ok, the pipe being only 1/16 dia. Next connect the pipe to the cylinder block and pump the oil through into the valve chest which after a lot of pumping, it didn't. Hello we have a problem, I kept on pumping although the pump had loaded up and was hard to turn over oil did start to ooze from around the flange of the governor flange but none into the valve chest. On removal of the governor oil flowed freely into the steam chest and that got the brain ticking over although slowly at first. Way back in 2000 the convention in Blenheim a little accident occurred to the Allchin, which damaged the governor, no more

said.

Some time later I built a new governor but didn't try to make it a working one as they don't work any way, you can't scale mass. This meant not putting the internal workings into the governor, which included a 4mm dia hole which at the time I couldn't figure out what it did but I do now, it lets the oil flow through the governor and into the steam chest. So for about the last three or four years its been running with little or no steam oil. July this year the Hawkes Bay Model Engineers mid winter meet the Allchin was back to its old self running sweet with a good bark (chuff chuff) to it and making steam easy.

Club Christmas Dinner

This year's end of year dinner will be at the
RSA
200 Broadway Avenue
Palmerston North

Thursday 22 November 2007

Drinks 6pm
Dinner 7pm

The cost is **\$20** per person for a full carvery meal including desert. Tickets must be purchased in advance from the Treasurer or Vice President no later than Sunday 18 November. (For those of you coming from out of town we will have to make special arrangements.)

Everyone will be given a meal ticket which they will hand to the cashier when they wish to eat. To avoid the delays associated with everyone signing in, we have arranged for individual passes which you will show at the door when you arrive.

If you haven't prepaid and have a door pass you cannot be admitted to the RSA

Our tables will be set up in the Cabaret Room which is all the way through the dinner room at the back of the building.

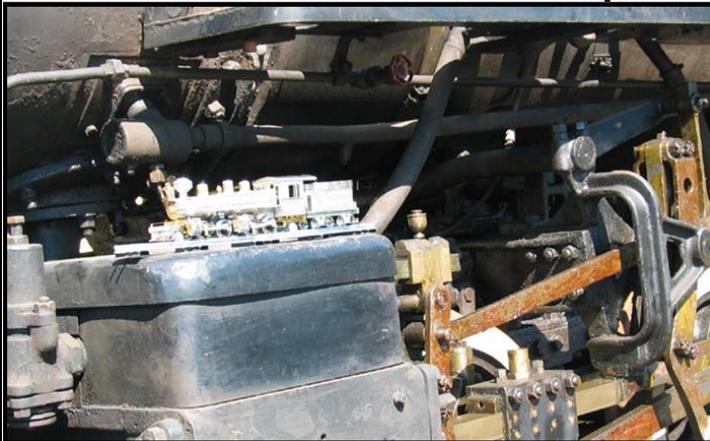
Our club was founded thirty years ago and we thought it fitting that we should acknowledge some of our accomplishments over that time. To that end the club secretary has put together a visual history which will be playing throughout the evening.

GLENBROOK WORKSHOP VISIT

I am building an '0' gauge model of the mallet locomotive at Glenbrook from tinplate and brass. I was short of information and a time was arranged to meet at Glenbrook Vintage Railway Workshop to look at the T.T.T. Co No 7 Mallet loco. On arrival the engine had been pulled out of the shed looking great in the sunshine. The engine is waiting another complete overhaul due to start late next year hopefully. Walking around the engine with my host and asking questions much was learnt about it and the new tender that was built to replace the original. A new smoke stack is also evident and the



The mallet loco sitting outside the engine shed



The '0' gauge tinplate model sitting on the low pressure cylinder cover



The makers plate on each side of the smokebox

front cowcatcher has been altered for easy coupling and one fitted at the rear of the tender. Some fittings in the cab have been shifted and westinghouse brake control fitted. The cab sides and roof are



Photo taken near Lichfield in 1947



Place unknown taken about 1939

lined with timber, the roof being varnished. This was a very worth while visit that will help with the building of this model. The next day we travelled to Rotorua and set up a large '0' gauge display and ran trains for two days, the mallet running for 1½ days with no problems. **BAG**