

The MICROMETER

THE AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED

Peterson Rd Reserve, Panmure, Auckland

PO Box 14570, Panmure, Auckland 1741, NEW ZEALAND

Club House Telephone (9) 570 5286

Club Web Site www.asme.org.nz

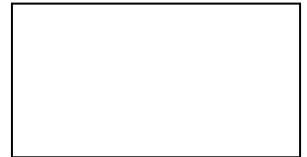
**Number 546
May 2010**

President Grant Anderson 576 8330
E-mail address president@asme.org.nz

Secretary David Russell 446 0957
E-mail address info@asme.org.nz

Editor Dave Russell 446 0957
E-mail address editor@asme.org.nz

REGISTERED NEW ZEALAND PUBLICATION

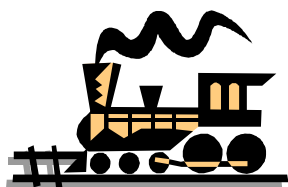


EMEX

This year ASME will have a stand
at the EMEX trade show
Stand Number 4102, visit
www.emex.co.nz to register



Union Pacific # 4019, 4-8-8-4 "Big Boy" Locomotive
The pinnacle of steam locomotive traction



Train Roster

Date	Electric	Electric	Steam	Steam	Station	Station	Station	Extra Guard
2-May-10	P Eaton	M Granger	<u>A Pritchard</u>		D Hamp	R Hannah*	G Healy	I Hansen
9-May-10	J Harrison	D Housley	<u>M Orange</u>	Changed	M Hollis*	P Jones	G Kemp	
16-May-10	M Lane	T Lawrence	<u>M Jack</u>	Changed	J Lankow	D Leybourne	J Olsen*	M Luxton
23-May-10	J McManus	T Robinson	<u>G Wills</u>		I Lyons	H Martin*	S Meikle	P Dowdeswell
30-May-10	J W-Buys	P Woodford	<u>D Russell</u>	Changed	A Murley	G Murray*	E North	
6-Jun-10	J Yearn	D Black	<u>G Anderson</u>		B Parker*	G Quayle	R Reichardt	
13-Jun-10	D Booth	T Boyd	<u>G Bell</u>		M Richardson	K Ryan*	B Sanford	J Reavley
20-Jun-10	B Cotton	R Craig	<u>S Day</u>		A Shirley	R Stratton	R Street*	
27-Jun-10	T Crake	P Eaton	<u>L Farquhar</u>		T Taylor*	P Tomkies	S Weston	

Bold and Underlined name – is the designated **Train Controller**, i.e. the person in overall control of all operations for the day. If you are the **Train Controller** you should phone around the others rostered for that day to make sure they remember to turn up.

Bold with Asterisked* name – is the designated **Stationmaster**, i.e. the person responsible for activities in the station area for the day. The Stationmaster is also responsible to account for the day's takings. **Please Note**, there is no expiry period or date on train ride tickets previously sold.

Please Note, You will notice from the above roster that new members to the club have been rostered on as the Extra Guard. The committee has decided to do this so that the new member has a chance to learn the ropes at the station without being under undue pressure. Please note on your rostered day you should arrive by 12.45pm to get prepared for the days running.

Club Calendar May 2010 ->

May 4 th	General Meeting, Ian Langley from Seco Tools will give a talk on "Carbide Tips - higher performance" will also include a 12 minute video.
May 4 th – 6 th	EMEX, ASB Showgrounds, Greenlane. Members manning ASME display stand.
May 11 th	Committee Meeting.
May 18 th	Workshop Night for May will be held at The Clubrooms
May 22 nd	Open day for like minded groups also family and friends at Glenbrook Vintage Railway, entry by donation. Including track extensions now completed to Waiuku. See the flier on the back page.
June 1 st	General Meeting, Trevor Taylor will give a talk on his experiences as an apprentice on the Western Australian Railways.
July 24 th	ASME Mid Year Social Event, exact details to be finalised.
Sep 25 th & 26 th	ASME Annual Exhibition at clubrooms, judging of displayed items.
Dec 11 th	ASME Christmas Dinner and Annual Exhibition Awards presentation.

Presidents Report April 2010

By the time you receive this issue of the Micrometer, the preparations for the EMEX exhibition (4th-6th May) will be well advanced under the guidance of Hugh Martin. Please take time to study Hugh's article elsewhere in this issue and if you can be of help in anyway, give Hugh or myself a call.

Our entertainment for the March meeting was adversely impacted due to apparent interference of the media electronic aid equipment which has been installed at the Clubhouse over recent years. This meant the advertised video could not be played, nor could our sound loop be

operated. As a result, the committee has asked that a lockable door be fitted to the cabinet to help avoid a reoccurrence of this type of disruption in the future.

The latest on the new property arrangements with Auckland City Council is that the redrafting of the sub-licence is now with ACC's lawyers, having been confirmed as received from Transpower. I have been advised by ACC that we should receive the new sub-licence document for review by 23 April. Hopefully there will not be any new issues and we can proceed to execution of both the license and sub-license without further delay.

We have renewed ASME's insurance policies with effect from March 2010 and have advised the broker concerned that in future ASME requires two months notice to enable a proper and timely review to be undertaken prior to expiry of the policy. The annual insurance premium is our single biggest one-off cost.

On the membership front, we welcome new member Mark Luxton and trust he will enjoy the ASME involvement – I ask that all members go the extra mile to make our new members (of which we have had quite a few in recent times) feel very welcome. You may have noticed that the members' photo board has been removed from the Clubhouse. At present, Graeme Murray is giving it an update, which should allow our newer members photos to be added and past members removed. It is intended that we will have a separate "past members" section so that those who have moved on (as appropriate) may be better remembered. Members who have not paid their subscriptions for the current year have been deleted from the circulation list of the Micrometer and will not receive this or future issues; approximately five members are affected.

Recently, Tony Lawrence, Tim Robinson and I met with a civil engineer Roger Thorburn at the ASME site to discuss the requirements of a suitable design for a safety wall/fence at the smoke box corner and along the ski club straight. Roger has undertaken to come up with a suitably practical, yet economical, design for these areas, which will be aesthetically acceptable.

The Committee is looking to line up and book a caterer for the mid-year luncheon at the Clubhouse in July – if you can recommend a suitable "mobile or off-site type" caterer, please let me know. We are also trying to identify painting contractors to undertake the work at the clubhouse, which is proving a little more difficult than envisaged. If any member knows of a painting contractor whom they know would produce a good result for the Club, could you please give me a call. While on this theme, we are also looking to give the ASME notice board at the Reserve a freshen-up – anyone know of a good sign writer/screen printer?

Thanks to all those who continue to front up and undertake their duty on the Sunday running roster. We have an increasing public awareness of the ASME facility especially after the 50th Jubilee Exhibition and it is important that we give our "customers" a good experience. While acknowledging that we are all volunteers, we nevertheless need to ensure we turn up on our allocated day ahead of time, so we are ready to give rides from the advertised time of 1 pm. As has always been the case, if you can't make it on the rostered day, please organise well ahead of time for a swap with another member; and if you have some last minute emergency reason meaning you are going to be avoidably late, make a call to the Clubhouse so that the other members who are rostered on, can organise to cover for your lateness. It can be very embarrassing to have a line of customers waiting for ride after 1 pm because someone hasn't turned up on time – we will likely lose customer goodwill in these circumstances. Without any doubt, the income from track running helps to keep members club costs at a low level.

Please note that the Thames Small Gauge Railway is having an open weekend on 15th & 16th May; I have registration forms available if anyone would like to take part in the run or to just come along to enjoy the occasion as a spectator.

Well that's all for now, make the most of your model engineering hobby.....
Grant Anderson (19 April 2010).

Grant Anderson

ASME goes to EMEX: Stand Number 4102

The club has been invited to attend EMEX as a guest exhibitor from 4-6 May, during which time we will be exhibiting on our own stand a selection of members' models.

EMEX is a bi-annual event for the engineering and electronics industry. It is open for trade visitors only and is recognised as the largest event of its type in our part of the world.

The club has now received confirmation that our guest exhibitor space has been increased to 14m X 4.5m that's more than twice the size we were originally contemplating. If you were a exhibitor at our 50th Jubilee exhibition we again would like to be hearing from you to resubmit your models. The Tuesday Club will be assembling the exhibition display equipment and models on Tuesday 27 April and will hold them in the club basement ready for transfer to site on Monday 3 April, which is set-up day starting at 10 am. The exhibition closes off at 6 pm.

If you would care to email your response by return to h.c.martin@xtra.co.nz or to Grant Anderson at enfo@vodafone.co.nz it would be greatly appreciated.

Club members have volunteered their time and we have a roster for manning the stand.

EMEX is held at the ASB Showgrounds, Greenlane, Auckland, 4-6 May 2010.

Exhibition opening times are: Tuesday 4 May 10 am–6 pm, Wednesday 5 May 10 am–7pm, Thursday 6 May 10 am – 5 pm. Break down will start at 5.15 pm after which models can be collected.

Entry is free but by registration only, no children, no pets, no guests. Please go online to register and declare yourself under the company heading column as, ASME. Alternatively you can register at point of entry. Please note that car parking is \$6 for non exhibitors. For full details and registration please simply Google EMEX and follow the links.

Hope to see you there.

Hugh Martin, Exhibition Convenor

To Register go to - **www.emex.co.nz**

Bits & Pieces, General meeting 6th April 2010

Conducted by John Olsen, reported by Roger van Ryn.

Some LARGE cast-iron feed spur-gears for the big lathe at MOTAT are being repaired by Murray Lane. There are a few teeth broken off, and Murray has been rebuilding them by first drilling and tapping some holes and inserting threaded studs. Then Murray has been building up the profile of the teeth with bronze welding by pre-heating the whole gear and adding bronze with a torch. I believe Murray is finishing off to size by hand. Some more pictures and details are in the Auckland Steam Engine Society magazine "Steam Torque". **Photo A**

Murray also showed and explained how to disassemble a Jacobs type chuck, and do some refurbishing. Knocking the ring gear down from the top will remove the barrel and all the other bits are free. **Photo B**

Murray's third item for tonight was a gadget to hold a piece of tape measure tape that feeds out as he moves the main slide on his Myford along the bed of the lathe. The tape measure acts as a retracting cover to deflect swarf away from the lead screw. **Photo C**

The spectacle plate for the rebuild of "Kathleen" by Trevor Taylor was "on table" showing the progress on getting "Kathleen" back "on track". **Photo D**

Bill Parkers LARGE Foster Traction Engine is taking shape with Bill displaying the well built horn plates and various gear and drive shafts in place, running in bronze bushings. The steering worm, gear and steering wheel are also in place. All very fine work and solid! Bill mentions the model will probably weigh about 10 cwt! Might need some help to get it up the stairs at that point? **Photo E**

John showed a welding kit that he was fortunate to be in the right place at the right time to buy at Machinery House. The all inclusive kit was obtained "for a song", rumour has it that there was one left. It pays to "pop-in" to the engineering supply shops when passing!

A newly revived member, Scott Meikle, is making a wonderful job of refurbishing a vintage model loco. The cylinder, drain cocks and linkages all look very good. Scott is using stainless screws where he can. The model is a 3 ½ inch A1 Pacific built in 1947 by "J.C.". Any clues who "J.C." might be? **Photo F**

John Olsen bought a casting for a triple expansion engine which led to John making some more parts and producing a nice model. **Photo G**

Dave Russell has some white-stone grinding wheels for which he made the bushes and flanges, for the grinding set-up he is constructing. **Photo H**

Dave also brought in the nice little horizontal engine with rotary valves that his son George is making under his tutelage. It's coming on nicely! **Photo I**

I put in a pair of left and right hand wood carving palm-chisels that I made from a small file. I softened the file by heating it red and allowing it to cool gently. This allowed me to hand saw and file them to the correct shapes, then rough grinding. I hardened them by heating to cherry-red heat and quenching. They were tempered then by "drawing" the blue colour a bit to make the tangs softer so they won't snap too easily. They hold an edge well enough. The handles with brass ferrules are turned from a NZ wood that is bright yellow when fresh sawn. **Photo J**

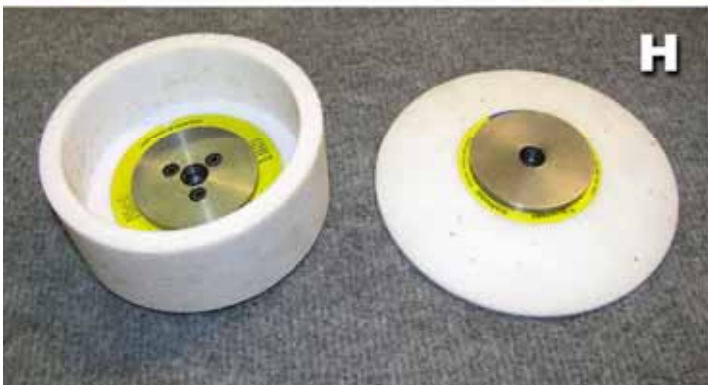
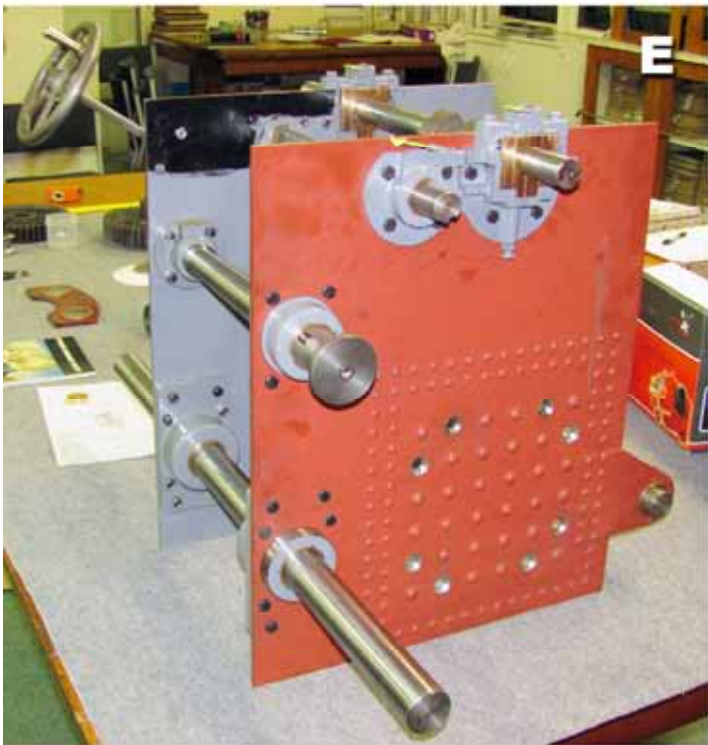
The kauri wooden chain has been an on-going caravan-holiday activity for the past few years. The Kauri museum near Bryderwyn has some 12 foot long wooden chains of some complexity. Whittling lends itself to making your own chisels and knives and is quite rewarding when away from your workshop.

Mike Jacks immaculate CNC smoke-stack and pettycote for Mike Banks 5" "King" were on the table looking very good! The compound curves come out beautifully and the parts fit extremely accurately.

Photo K

A pair of lovely 7 ¼ inch A4 connecting rods Mike made for a customer, were also on show. Mike used a "P20" metal which he got from Fletchers EZ Steel in plate form. The webs go down to a scale 1.6mm so the strength of the steel is important. "P20 is a pre hardened high tensile nitriding tool steel which offers ready machineability in the hardened and tempered condition." - Wiki. **Photo L**

Roger van Ryn





The Latest in Engineering

Extracts from *The Model Engineer and Electrician* of April 21, 1910

(The construction of this charming little workshop was serialised over several issues of the "M. E. & E." One imagines that the writer was able to produce some beautiful pieces of work from within this comparatively tiny space).

A Design for a Small Workshop,

By C. BLAZDELL.

Many model engineers find that, in order to conveniently carry on their work, they need a small workshop. Those who are fortunate enough to be able to have a room in the family mansion set apart specially for their use, will get on well enough ; but those who have to work in the ordinary living-rooms have many difficulties to contend with. The absence of a well-found and properly fitted-up workshop, however, should not deter anyone who wishes to take up model engineering as a hobby. Using the kitchen table as a workbench and stowing the lathe (if you have one) in a corner of the scullery or under the stairs, one can get on very well; it is merely a question of convenience, more especially of the other members of the household than of the model engineer himself. For some years the writer used a vice clamped to the corner of the kitchen table. Some of the filings used to get into the food at supper time (I never used to stop for supper), some of the things were shaken off the table by the vibration, and the "horrid scraping noise" set the feminine teeth on edge; but, on the whole, the work proceeded very well. There is, however, a great deal of time wasted in packing up the tools after each night's work, and unless everything is carefully collected and put away, it is very liable to be lost. Some of the difficulties may be avoided by making one's bedroom the workshop, but then, if you are enthusiastic and keep going much after midnight, you are sure to disturb the slumbers of the rest of the house hold in one way or another. While working under these conditions

about 1 o'clock one morning, the writer received a visit from the nervous occupant of a neighbouring bedroom, anxiously enquiring as to what "that dreadful smell of burning" was, after an hour's effort had been made in the "works" to raise steam in a small boiler on a mixture of charcoal and candle-grease.

The ultimate result of the many little troubles with which the model-maker meets in his work, coupled with the pressure of his friends, generally decides him to migrate to the garden, as being the best place to carry on his labours with the maximum of comfort to himself and the minimum of annoyance to the rest of the family. The accompanying drawings and description may therefore, be of assistance to those who are confronted with the problem of providing themselves with a small outdoor workshop. The whole of the building is constructed of wood, as



being the cheapest and easiest worked material which can be employed for the purpose. The first consideration with most amateurs will probably be the cost, and after that the size of the proposed building. The two items of size and cost are, of course, intimately connected, a small workshop naturally costing less for materials than a larger one.

Another point to be considered in the same connection is the heating of the shop when completed. As the greater part of the model engineering would probably be done during the winter months, it is very necessary to have some means of cheaply and rapidly warming up, as even the ardour of a model engineer would fail to keep him warm on a winter's night, with the temperature outside much below freezing point. Whatever means we adopt for heating, the amount of fuel used and its cost will be considerably more for even a small increase in the size of the building, besides having to wait longer when warming up on a cold night before the shop assumes a reasonable temperature for working in.

From the foregoing considerations we see that for cheapness and convenience it is advisable to keep the size of the proposed shop down to the smallest limits which will accommodate the tools, bench, etc., and allow sufficient room for working about in. As regards the shape of the building-the ordinary square black shed which is often employed is very unsightly, and has been avoided in the present design, as, with only a little extra trouble the workshop can be given a pleasing appearance externally, and be made more or less of an ornament to the garden or ground in which it stands. The shop about to be described is 6 ft. long, 4 ft. wide, and 6 ft. to the eaves-the height to the ridge of the roof being 8 ft. It contains a Drummond 3½-in. lathe, a bench carrying vice, small drilling machine and grindstone, and shelves and racks, in which are stowed the usual collection of small tools as used by model engineers, together with a supply of "raw material." The writer finds that a workshop of this size is sufficient to nicely accommodate these tools, etc., and allow the requisite amount of freedom for working in. Only simple carpentry is needed in the construction, no special skill in woodworking being necessary, other than that possessed by most amateur mechanics. If the outlay is of primary importance, the material might be purchased in small quantities as the work proceeds: the expenditure when spread out in this way does not appear so heavy.

Before starting work on the actual building it will be well to consider the foundation it will require. This will vary according to circumstances, depending on the nature of the ground on which the building is to stand. If on a paved or asphalted surface, logs of wood or bricks-upon

which the frame of the building may rest-will be sufficient; but, in any case, an air-space of at least 3 ins. must be left between the underside of the floor and the ground. In the writer's case the shop was built over the soft clay soil of a garden and, after levelling the ground, stakes or piles of 2-in. by 3-in. wood were driven in, in two rows of four in each row, so spaced that the bottom member of the front frame would rest on one row, and the bottom of the back frame on the other. Previous to driving in they were charred and soaked in a mixture of boiling pitch and tar, as a protection against rotting, and were driven so as to leave about 3 ins. of their tops above ground. The tops of the whole eight must be on the same level, so as to ensure that each one will carry its fair share of the weight-a piece of straight board laid across them and a spirit level will enable this to be done.

Brian Cotton

Around the Clubs, reviewed by Alan Emerson

Durban Society of Model Engineers, March 2010

Club and local news. Big rise in the cost of electricity, water, rates and insurance. A couple of photos of Train Mountain, all manner of loaded goods wagons. More on www.trainmountain.org

Blowdown, Kapiti, Autumn 2010

The open weekend a great success with good weather and plenty of customers. Sad to note the loss of Trevor Amos, a long serving and valued member. A write up on the Nelson Convention and the after Convention Runs organised by Dave Giles.

Mailship, Scale Model Marine, Feb and March 2010

Change of postal address to:- The Secretary, Scale Model Marine Inc, 34 Waterview Road East, Papakura, Auckland 2112. All you wanted to know about Electronic speed controllers. A number of boat and steam bits for sale. Great article on building a model cruise ship.

Melbourne Society of Model & Experimental Engineers Inc 9/3/10

A letter from them inviting members to exhibit at their Model Engineering Exhibition to be held on Oct 2 and 3. More on www.msme.org.au The letter and an application form are on the Club notice board.

Southern Rails and Sails, Invercargill, April/May 2010

Good Club news and photos from all the sections. Several websites mentioned for the model rail enthusiasts.

The Adelaide Miniature Steam Railway Society Inc. April/May/June 2010

Good articles on their models and on the track work, some of the sleepers being replaced with plastic ones. Photos too of some Japanese locos.

Model Torque, Hawke's Bay, March 2010

Track running seems to be going well. Members visit Palmerston North Open weekend. Good article on the Titanic engines.

Blast Pipe, Hutt Valley and Maidstone, April 2010

Good photos of Club activities, visit to Palmerston North. Mana Ariki gathering to be held on Jan 2011, more info from Dave Giles.

Engine Booster, Los Angeles, March 2010

Story and pictures of Gordon Sherwood who is a founding member of the Los Angeles Live Steamers Railroad Museum. At 99 he is still very active and visits the Museum most Sundays. Proposed train trip using the private car Overland Trail. Also a proposal to rebuild the existing Sherwood Logging Village.

Northern Views, Whangarei, April 2010

Rules for the 2012 Les Moore challenge. Photos of the Wednesday Club in action. The story of the Weems Electric Railway and some good funnies.

Alan E

Thanks to Alan for his brief of the other clubs newsletters. If you are interested in reading any of the full articles they are filed in binders at the clubrooms, below the notice board.

Classifieds

Wanted

We have received this email from the editor of the Shed Magazine...

I am just wondering whether, for a future issue of the Shed Magazine any member of ASME has in the past created a model Stirling engine, is in the process of creating a model Stirling engine or might be willing to make one and let us follow the construction in steps.

We are looking at the principles behind the Stirling engine and, sitting beside that, would be keen to have an article to let our readers see how one comes together, possibly to inspire them to make one. This would also apply to schools (I might have mentioned we are in 150 schools) where their technology classes are keen on these kind of projects.

If you are willing and could help with this please contact Gary Farquhar 09 576 7025

For Sale

Tom Senior horizontal mill with extra long milling table 800MM long, with vertical head and slotting attachment, in very good condition. contact Alan Gasteen 09 449 1383

Contact Update

Please note the correct email address for Bob Fosberry is robertfosberry@clear.net.nz and not as printed in the recent phone list.

From The Web

Thanks to Graeme Quayle for this link to a truly wonderful collection of models, this is a must visit website.

www.craftsmanshipmuseum.com

A few of you have asked me where on the web I got the details for my Milling Machine table power feed motor unit. See the link below.

<http://home.swiftdsl.com.au/~thetinkerer/projects/powerfeed/index.html>

Thanks Greville, A definition of some common Tools

*DRILL PRESS: *

A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, denting the freshly-painted project which you had carefully set in the corner where nothing could get to it.

*WIRE WHEEL: *

Cleans paint off bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprints and hard-earned calluses from fingers in about the time it takes you to say, "Oh, shit!"

*SKILL SAW: *

A portable cutting tool used to make studs too short.

*PLIERS: *

Used to round off bolt heads. Sometimes used in the creation of blood-blisters.

***BELT SANDER: ***

An electric sanding tool commonly used to convert minor touch-up jobs into major refinishing jobs.

***HACKSAW: ***

One of a family of cutting tools built on the Ouija board principle... It transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

***VISE-GRIPS: ***

Generally used after pliers to completely round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

***OXYACETYLENE TORCH: ***

Used almost entirely for lighting various flammable objects in your shop on fire. Also handy for igniting the grease inside the wheel hub out of which you want to remove a bearing race.

***TABLE SAW: ***

A large stationary power tool commonly used to launch wood projectiles for testing wall integrity.

***HYDRAULIC FLOOR JACK: ***

Used for lowering an automobile to the ground after you have installed your new brake shoes, trapping the jack handle firmly under the bumper.

***BAND SAW: ***

A large stationary power saw primarily used by most shops to cut good aluminum sheet into smaller pieces that more easily fit into the trash can after you cut on the inside of the line instead of the outside edge.

***PHILLIPS SCREWDRIVER: ***

Normally used to stab the vacuum seals under lids or for opening old-style paper-and-tin oil cans and splashing oil on your shirt; but can also be used, as the name implies, to strip out Phillips screw heads.

***STRAIGHT SCREWDRIVER: ***

A tool for opening paint cans. Sometimes used to convert common slotted screws into non-removable screws and butchering your palms.

***PRY BAR: ***

A tool used to crumple the metal surrounding that clip or bracket you needed to remove in order to replace a 50 cent part.

***HAMMER: ***

Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate the most expensive parts adjacent the object we are trying to hit.

***UTILITY KNIFE: ***

Used to open and slice through the contents of cardboard cartons delivered to your front door; works particularly well on contents such as seats, vinyl records, liquids in plastic bottles, collector magazines, refund checks, and rubber or plastic parts. Especially useful for slicing work clothes, but only while in use.

***HOSE CUTTER: ***

A tool used to make hoses too short.

***TWO-TON ENGINE HOIST: ***

A tool for testing the maximum tensile strength of everything you forgot to disconnect.

ASME visit to the GVR

**Members of model engineering, railway, steam
& mechanical societies are cordially invited to
spend an afternoon with us at the GVR on**

**Saturday 22nd May
Starting from midday**

Special trains running for the occasion 1pm & 3-30pm

- **Rides on the branch including the new extension right into Waiuku (From Glenbrook to Victoria Avenue)**
- **Photo stops and runs coming up the hill**
- **A full tour of Pukeoware locomotive workshop and car & wagon shops**

Family and friends very welcome

No set fares, there will be a collection of voluntary donations

