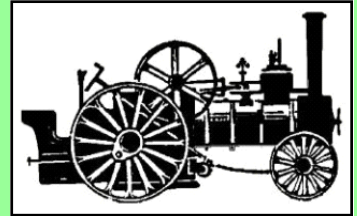


Issue 633 Oct 2023

# A Wisp of STEAM SUPREME



Extracs from the Melbourne Steam Traction Engine Club Newsletter

## A New Toy for the Boys



Neil Meyers and Brenton Gogerly excitedly inspecting the newly donated miniature Alchin traction engine

Also  
In this  
Issue

Old Steam  
Photos



Rusty Iron Rally



Mt Magnet Ruston Helped



Lets Make It Show



Bill McRobb writes - *I attended the Rusty Iron Rally at Macksville returning from our 4 month trip around Oz, and there were some fantastic exhibits. They have missed the last 2 years, one due to Covid, and the 2<sup>nd</sup> to floods, so this year they had a huge attendance.*

**Setting the Scene** We do not get to hear much about Macksville down here apart from the floods which puts a new meaning on a Rusty Iron rally . It is on the NSW coast about 2/3 of the way between Sydney and Brisbane which puts it just South of Coffs harbour . It's population is about 3,000 and kicked off in the 1880's when 2 Scott men , both Mac's , started the local pub so not surprising Bill McRobb got sidetracked. Ed.

*The first bit of rust to catch Bill's eye was this Chev, a bit more complete than Warwick's which gives more parts to rust and led Bill to comment The Chev Ute with the axe, hammer and toolboxes didn't waste any paint.*



*This rare large Rider hot air engine got plenty of attention .*

Popular for pumping domestic and stock water in the days before electricity or stationary engines . It gets its power from the alternating expansion and contraction of trapped air . This is displaced between the hot cylinder ( on the right ) heated by a wood fire and cold cylinders ( on the left ) cooled by the water it is pumping . Found in 2009 on a property near Wee Waa lying rusty and with a broken flywheel .



*An interesting display was a cutaway rear end from a Little Grey Fergy revealing how the hydraulic linkage and gearbox operated. An amazing tractor many still going after 70 years and I have never heard of any with gearbox troubles*





◀ *This immaculate 10 hp IHC Famous engine looked like it had been just recently restored , certainly all trace of rust removed* Built by the International Harvester of America the accompanying information sheet for their gasoline engines advise the Tank cooled portable engines ranged from 4 to 25 hp and came fully equipped ready to run . They furnish efficient economical power that that can be easily transported from place to place to operate threshers , huskers , pumps , saws and other farm machines . In addition

Contractors find them excellent for driving stone crushers , pumping out low lands and even operating temporary electric light plants . A useful Feature is a variable speed control and belt pulley incorporating a friction clutch . Built from 1905 to 1918

Acknowledgement to C.H.Wendel

Another stand that caught Bill’s eye was this vendor selling a huge range of those hard to get jewellery for stationary engines such as oilers and greasers of all type . The prices look attractive, it would be nice to know who he is for future restorations . Photos and Story Bill McRobb



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# Some Nice Minatures for our Museum

## *It all started with this kind email .*

*I have two small scale traction engines that my grandfather built. These have been in my possession for many years and have fallen into a state of dilapidation. Instead of further deterioration I would much rather that these were in the hand of someone able to restore and enjoy them and maybe, display them for others to see.*

*If you think that these could have a home at the club and be cared for, I would be more than happy to donate them.*

*One is a scale model of an Alchin. The other, smaller one, is somewhat generic and not based on a particular traction engine make .*

*Regards Paul*

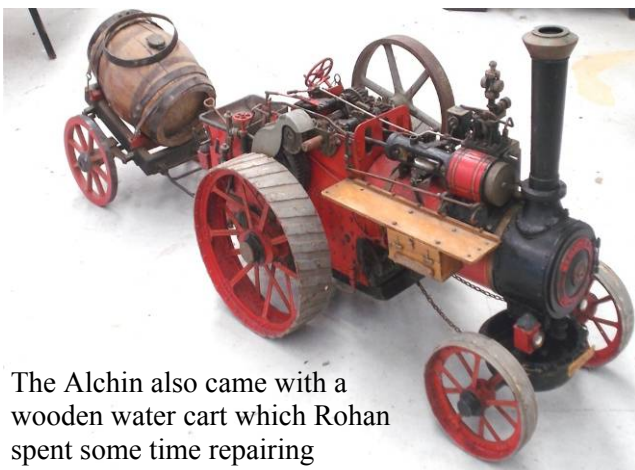
**Well yes we would very much like them for our museum.**

True to his word they duly arrived with some notes on their construction made by Paul’s Grandfather GeorgeHarper who



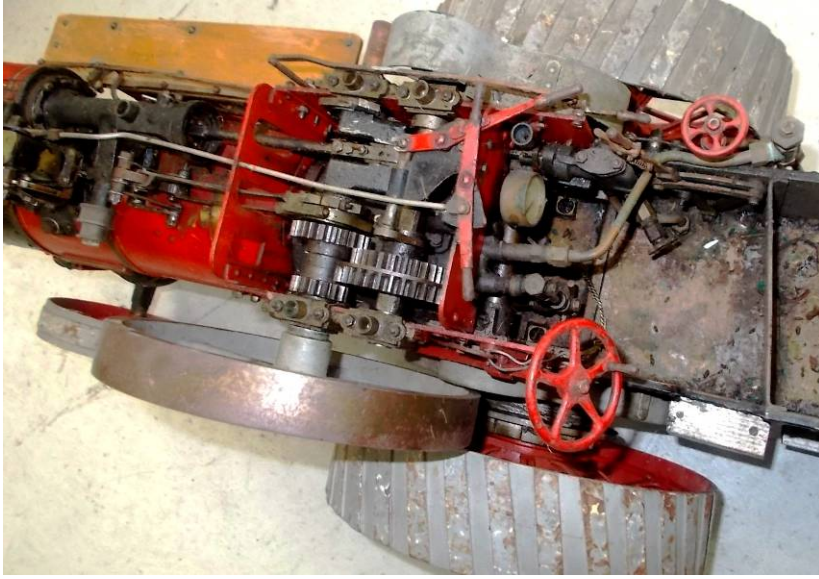
was living in Banwell UK at the time **Neil and Brenton , like excited children, immediately began pawing over them** ▲

The largest was a fine 1 1/2 “ to the foot ( 1/8 ) scale model of an Alchin agricultural engine built to a high standard and in good order but rather grubby . I remember when I joined the Model Engineers in mid 1970’s it seemed everyone was building an Alchin . A bit of research showed Model Engineer magazine was running a blow by blow construction series by W. J. Hughes and plans and castings were readily available as well as completed models ( they still are ) . Prior to that most working models were smaller and cruder charactures of the real thing . Curious because I knew nothing of Alchin’s history google know-it-all was consulted . It Appears *William Achin Founded the Globe Work iron works in 1847. Located by the river Nene in Northampton the firm built its first steam engine in 1872. The traction*



The Alchin also came with a wooden water cart which Rohan spent some time repairing

engines of the firm were of high quality and much admired. However, production was low and there are only circa 20 preserved examples known to have survived, with this representing around 10% of the total output over a 50 year period. The last Alchin steam engine was built in 1925 due to the looming post World War Depression. It's appeal to modellers seemed to be the desire to build a rare prestigious engine from readily available parts and fully detailed instructions. I read the construction series in M.E. with awe as this was my first exposure to miniature live steam.

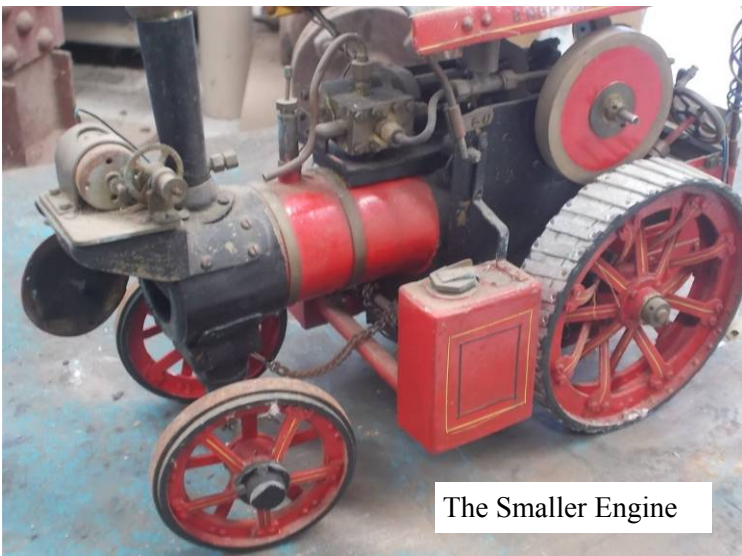


◀ **Birds eye view of the Alchin. Just look at the detail of the model with it's working 2 speed gearbox, full compliment of backhead fittings and controls.**

Alchin stuck in my mind and I was lucky enough for Barry Clapham to give me a drive of his full size engine during Steaming Under the Southern Cross at Jondaryan Woolshed about 12 years ago. It is good to see our members doing the same thing now on RunDays.

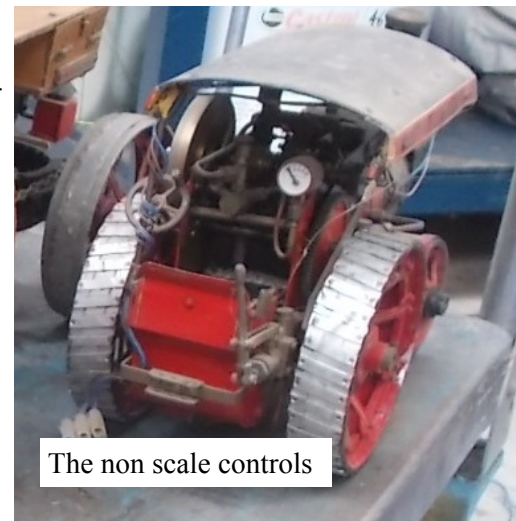
**Barry's Alchin that year at Jondaryan. A impressive engine I believe he purchased it at an Echuca rally.**

The Smaller engine is more of a generic model of an 8 NHP Road Locomotive circa 1917 characterised by the disc flywheel and saddle water tanks. Set up with a crude generator and canopy light (possibly working) along the lines of a travelling amusements folk's engine but not a showman's.



The Smaller Engine

Hand written notes with the engine advise it is 3/4 " scale ( 1/16 full size ) with 18 SWG copper boiler silver soldered and designed for a working pressure of 30 psi. It is fitted with a 1/2" dia bronze cylinder, hand feed pump pressure gauge and sight glass so obviously designed as a working model. Built 1983 to 1984. Taking a closer look at the small engine shows non scale controls such as the hand feed pump,



The non scale controls

pressure gauge m lubricater and steering wheel which are clearly a compromise to allow the engine to be operated on live steam.

Casting an eye on the Australia Model Boiler requirements suggest engines under 30 psi and 2 inch dia boiler falls into the toy class so do not need a ticket. That said we should be able to steam it if we are satisfied that it is safe.



The Show case

On the other hand the Alchin, built between 1966 to 1971, with its 14 SWG copper barrel and silvered soldered boiler operating at 100 psi clearly falls into the category that if steamed in public it needs to have been constructed to the AMBSC code for Model Copper Boilers under 8 inch. We would need supporting documentation generated during it's construction to be able to prove this which is unlikely since it was built in the UK

All the same we have 2 very nice models now cleaned up and placed in the glass show cases in the bay 2 Steam section for all to admire and enjoy.

Thanks to Paul Hann and his Grandfather George Harper.

# The POWER of the Old ENGINE NETWORK

*This little story just shows the Power of the Old Engine network and what can be achieved when groups help each other .*

It started with the plea received by our MSTEC Secretary Will - wondering if anyone can help with a picture of the position of the copper head gasket on a Ruston 8HRF 210hp please. (Any measurements, thickness and diameters would help as we have an engine that was dismantled 25 years ago and the head gaskets are long gone. The engine is currently being reassembled and re housed in Mt Magnet Historical Museum, Western Australia. The engine was originally installed in GPO Perth WA during WW11.

## Just a bit of Background

Firstly Mount Magnet is a very old gold mining and pastoral area in the Murchison region of Western Australia . Looking at the map this puts it about 320 km inland from the Geraldton coast making it 560 km North East of Perth on the way to the Kimberleys.

Their Mining and Pastoral Museum exhibits a vast collection of artefacts and photographs from the town's rich past. Countless voluntary hours and more than thirty years have been dedicated, by members of the Mount Magnet Historical Society to collect, restore and preserve these unique artefacts which now includes their Ruston Engine. (internet info .)



Rohan Lamb is now pleased to report :-

We've had positive feedback from Mt Magnet Historical Society regarding restoration of their 8HRF engine.

*Hi Rohan, A quick note of appreciation. As you may have seen we have successfully started and run our Ruston 8HRF engine.... The information you provided was essential to a successful outcome in helping us preserve this magnificent machinery. ... may we express our thanks and appreciation to both yourself and your organisation for all the help and assistance that you have kindly given . I Remain Yours Sincerely K. Brand M.M.H.S*

Rohan continues . Back in February 2022 they were seeking information. I sent them a copy of our operating manual, and realised we didn't have a spare parts book so was able to source one from the UK and passed this on as well. Also sent photos of MSTEC's engine as it was being installed. More recently they required specific details about the gaskets used on the cylinder heads as theirs were missing. Fortunately, in the west storage area were the spare heads off cont →



Mount Magnet engine getting assembled

Obviously they had been doing a bit of homework and knew we had a similar engine in our Steam Museum colloquially know as the BP Engine **Our Ruston and Hornsby 8 HRF coupled to it's Guinard variable displacement pump used for bunkering ships from the British Petroleum tank farm at Port Melbourne .**

On closure of the facility the unit was donated to MSTEC in 1987 by BP . It lay in our woodpile on the arena for many years before Frank Gough's team worked their magic on it and returned it to working order .

Talking of our BP engine your Editor was working at GMH Fishermans bend in those days and used to drive to work along Beaconsfield parade which ended in a 180 deg turn, around the end of the tank farm and our engine's pump house, to get onto Williamstown road.

This was a particularly nasty corner being rather sharp with a pronounced reverse camber . ( the road leaned away from the corner rather than into it) so taking it at anything over 35 MPH was likely to result in a loss of control as many found out to their expense .

So notorious was this corner that Holden Engineering built an exact replica at the Proving Ground on their Ride and Handling circuit. I am not sure of the exact reason but , being at the start , it had the effect that any inexperienced driver who thought they could handle a car was likely to come off on the first corner at an embarrassing 60 km/h . Much better

than a high speed excursion into the scrub around the fast side of the track . That said the BP engine still lives today now at our National Steam Museum and it's BP Corner can still be found at the now VINFAST Lang Lang Proving Ground.



**Seconds from disaster pre radial tuned suspension Torana about to depart BP turn . Acknowledgements to Andrew Freemantle**

our engine which still had the copper gasket present. Measurements and photos helped them finish off the engine.

Given the rarity of this configuration of engine, information was unavailable from any other source, so it's satisfying to see documentation held in our archives being of assistance to another organisation, and an impressive achievement for them given their limited resources.

Also as a case in point I remember when the Ruston parts were being relocated from behind bay 3 considerable convincing was required to stop newer members from throwing them in the scrap bin. It appears to be a case of if they do not know what they are for no one else will either so they are no use . Please ask first Ed.

*Retaining these parts saved the Mt Magnet engine*



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# Around the Club



Photo Rohan Lamb

## Helicopter Talk Rohan Lamb Reports

The August social meeting had an informative talk given by Jeff Sussman, President of the Melbourne Radio Controlled Helicopter Club. Jeff brought along three of his helicopter models and here Jeff is explaining the finer points of the Kamov helicopter design, and in the foreground is Chinook helicopter. MSTEC member, Ben Klaster has worked with Jeff over many years solving many of problems of making the complex rotor drives at a miniature size, and Jeff's talk discussed some of these challenges.

## Junkers Diesel Engines for the Club

Although of a unique German design these 3 engines have a long association with the state of Victoria being teaching engines in Tech School's Thermo labs for many years then passing through the hands of a number of local collectors before coming to MSTEC for our National Steam Museum . The engines are presently in bay 4 with thanks going to Nathan Morris for transporting them back to the club from the Ballarat area , free of charge. By the way Junkers is the German inventors family name pronounced more like younkerr not junker as no doubt they have been referred to many times. *Our pair of single cylinder engines . The lighter coloured engines is not as complete which might give us the opportunity to display it partially dismantled to reveal it's unique configuration while retaining the black one as a goer .*





◀ *The twin cylinder is based on a larger series of engines and is simply the works of 2 single cylinder engines in a combined casting . Photos Warwick*

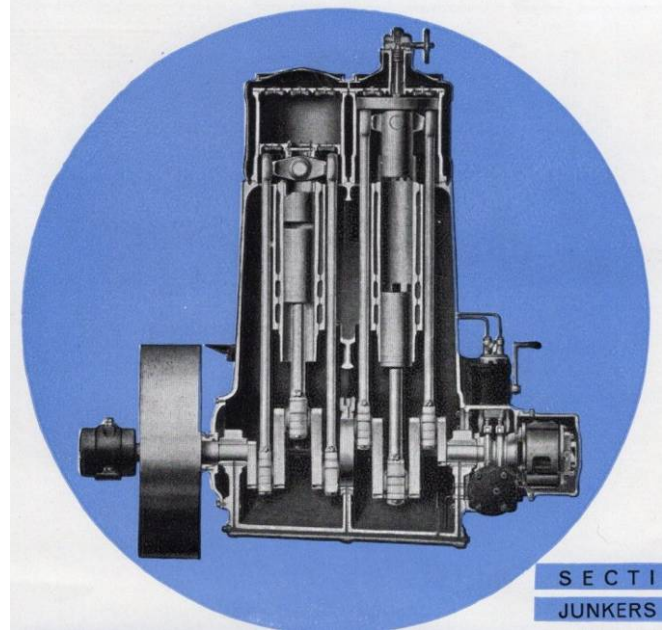
For the moment Rohan Lamb gives us a bit of their background and local significance

*The club has recently purchased three Junkers opposed-piston two-stroke diesel engines for the collection. They were made by Junkers Motorenbau GMBH, Dassau, Germany, most likely in the late 1920s, and are different to other engines in the collection because they are vertical opposed-piston two-stroke diesel engines. The large two-cylinder engine was at Swinburne University in the thermodynamics laboratory. When the club secured the rest of the machinery in the early 1990s, the Junkers was promised to an engine collector. It has since passed through the hands of three collectors and is still in the same condition as when removed from Swinburne as it has not run since. The engine turns and is complete so should be relatively easy to return to operation. The Swinburne engine was offered as a package with two other smaller single-cylinder Junkers engines by former*

*member, Steve Kelly. The smaller engines also came from teaching institutions, with the black engine from RMIT, and the light blue engine from Ballarat School of Mines. Their history is the subject of ongoing research. Rohan .*

*A sectional drawing of the twin cylinder engine . Each cylinder actually has 3 pistons one above the other. The bottom one with the extra long skirt works off the center crank throw . The stubby top piston is driven by 2 extra long side conrods so as the crank turns the pistons come together and move apart in unison ( as in Doxfords ship engines only very much smaller ). The disc piston at the very top provides the scavenging air.*

*A more in depth story on their development , operating principle and merits will be the subject of a future article. Ed.*



## Old Steamer Photos

A number of old black and white photographs were dropped off at the club by someone thinking they may be pictures of our early days so be of interest to us . There are no captions just a label with Bendigo Rally 9-11 June 1990 and visit to Echuca Steam Rally written on it . Hopefully some members can recognize some of the engines , their location and anyone who may

be in the photo. I will speculate a bit but I am sure you will tell me if I am wrong.

I will start with the easiest. A large Fowler ploughing engine with Suzie Jane painted on the smoke box . Yes Peter Jackman's ploughing engine . Obviously at a rally probably Echuca judging by the tractor line up on the arena in the background . This fits as it was previously owned by Sam Marshall who was based near by at Lockington .

As for the date it was at Scoresby by April 1990 so must have been before that .

**Continued page 11**



# THE MELBOURNE SOCIETY OF MODEL AND EXPERIMENTAL ENGINEERS



## 'LET'S MAKE IT!'

The strength this year was the great diversity of exhibits , much more than just models . In fact just about anything anybody would want to make was on display . Here is a rundown on just a few .

Melbourne PC Users group Australia's largest computer club where members help members learn and explore all aspects of the current technology. Particularly relevant were their special interest groups demonstrating CAD , and CNC machining .

3-D printers at work also had visitors of all ages transfixed



Fabulous eye catching sculptures humbly billed as Things Made From old bits such as Cutlery , old wood , Bike bits , Scrap Metal . ANT



## EXHIBITION REPORT

*Held in the superb sports pavilion of the newly refurbished Oakleigh Secondary College it was by all accounts a great success .*



Our SteamFest organ grinder John Wolf was also at the Exhibition though not everyone would have recognized him out of costume. He had one of his organs opened up so visitors could see the miniature leather bellows and valves which direct air to the various reeds to produce the required notes in response to the pattern of the holes on the paper roll.

John worked in electronics at Holden



Greg Olijnyk the Cardboard Artist was another demonstrating a skill most of us had not see before. Creating amazing 3D modern art sculptures out of nothing more than precisely cut pieces of cardboard.





PROPS FROM THE TV SERIES 'AUSSIE INVENTIONS THAT CHANGED THE WORLD'

Being a great fan of this ever popular 2019 series their display of some of the props used certainly caught my attention. These included a set up demonstrating the first X Ray machine and a mock up of the first Black Box flight recorder.

**Model of the first "Black Box". Ironically they are not black but Orange so they can be found easier**

Also catching my attention was the bell jar and vacuum pump used to convey the principle of cooling



by evaporation for the segment on Harrison's refrigeration developments at Geelong. Not thinking much about it I returned to my model of Harrison's first commercial refrigeration machine. I had left it

chugging away making real "artificial" ice only to find it surrounded by an excited group from the Aussie Inventions display. It seemed I had inadvertently one upped them by having a working model of the real thing. In what seemed to be an effort to gain some ground I was asked when did you build yours. The reply about 25 years before yours seemed to be not what they were expecting to hear.

**Noel Gellert from Model Engineers telling our visitors all about Warwicks Ice Making machine.**



Jean McInerney of the Spinners and Weavers thought why not bring along her loom as husband John is bringing along his windmill. (on the bench behind.)

John had on display all the special tooling he made for its various castings and pressing so the miniature parts could be made in the exact same way as the prototype which is the one he has subsequently donated to us.



Rodney Martin brought along his impressive steam boat I. K. Brunel. No doubt named in respect for England's greatest steam ship Engineer. It is powered by a boiler and single cylinder engine of Rodney's own design and manufacture. Spare engine components are on display on the table in front.



**Our John Mills lusting over the Engineering tools on sale**





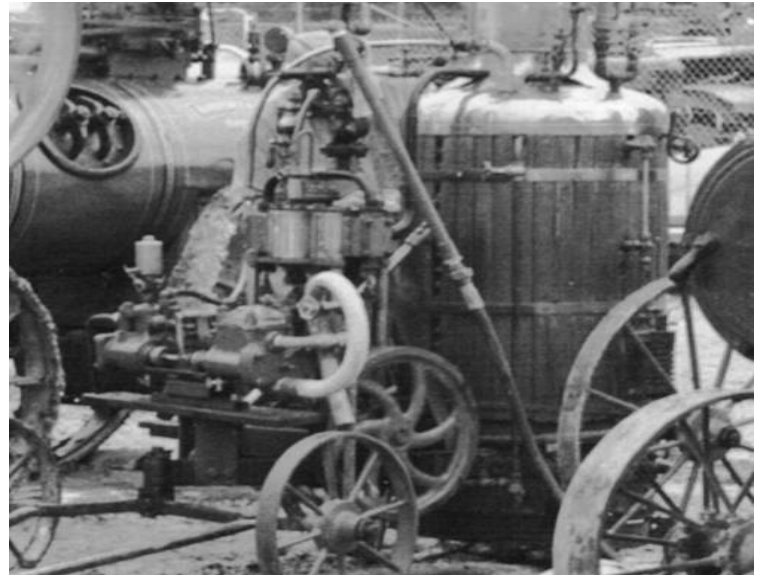
Working Internal combustion engines were in force this year . Those that were not going to be run were displayed in the main hall where visitors could safely get up close and marvel at the detail. **One example was this tiny model of a V8 hot rod engine complete with supercharger and extractor exhaust system .** Running Engines were provided with a well ventilated paved area out the front of the Hall where they could be readily cordoned off when running . The Radial engine was out the back of the Hall in a compound set up on the edge of the oval . In this way during starting demonstration spectators could be as close or far away as they liked . Also on display was the usual clocks , meccano , model trains and boats as well as vendors for books tools and model supplies . Broadening the theme of the exhibition from Model Engineering to Let's Make It certainly has done the trick in ensuring a great show with something for every one .

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### Old Steam Photos continued

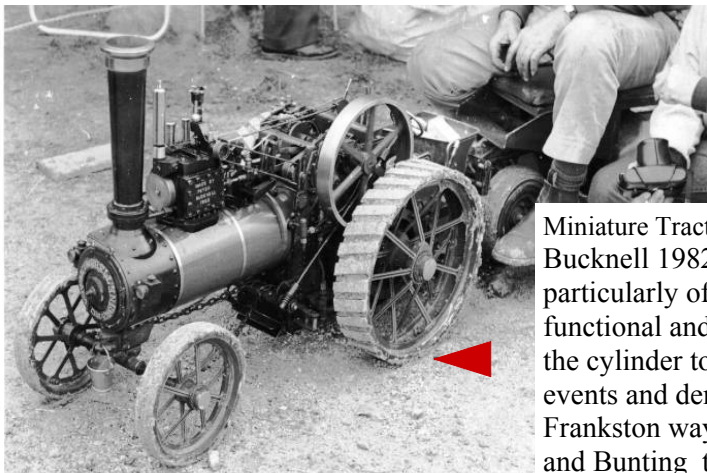


At first this photo did not seem much just a very tidy Case portable . I remember one at Echuca , was it Stan Hazelmans? But wait what is that nestling behind it ?  
 Stapmanns Merri -Go -Round engine.



I first became aware of it when John Davies purchased it at an auction after a fierce bidding war with Jo Lloyd . Lets have some info on it's background . Also Old Glory magazine is interested in some more details after seeing it on the cover of our Aug Steam Supreme .

Obviously a Ransome steam wagon at the same rally. Having been converted to pneumatic tyres narrows it down a fair bit and rules out Andrew Reynolds . According to the interweb only 34 were ever made with 8 coming to Australia and now only 2 remain both being in the Echuca district . A bit more searching revealed this one is currently on display in the Lockington Heritage Complex and was restored by the late Sam Marshall. P.J. and Des will know about it for sure.



Miniature Traction Engine. Blowing up the photo reveals "Burrell made by Peter Bucknell 1982 ". This one I do know . Peter was a prolific Model Engineer particularly of miniature traction engines . They were rough as guts but functional and capable. This one had an extra row of Allen bolts added to hold the cylinder to the barrel to stop it leaking at the corners. He loved taking it to events and demonstrating it winching his car ( very slowly ) He lived down Frankston way and wrote a book on building his model of the Australian Cliff and Bunting traction engine with its Ackerman steering .