



NORTHERN DISTRICTS MODEL ENGINEERING SOCIETY (PERTH) INC.

January—February 2009

Traction Engine Rally by Jim Clark

Inside this issue:

Meetings	2
President's Report	3
Early Days	5
"AGT" Boiler Progress	6
GLT Report	7
Burrell Progress	8

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The 20th Annual Miniature Traction Engine Rally was held at Clare in South Australia during October of last year. A contingent of West Australians made the relatively short trip across to Adelaide, including Ken and Pat Austin, Ron and Sally-Ann Collins, and also Andrew Manning and yours truly, Jim Clark.

Although the turnout was smaller than the previous year's rally at Timbertown in

Above: Several of the road steam models lined up for the Grand Parade.

Photo: Jim Clark

NSW, the venue was very pleasant and the event was well organised by Dean Manderson and the Clare Valley Model Engineers. We had plenty of time for some local sightseeing and wine tasting.

(Continued on page 4)

CALENDAR OF EVENTS

Public Run Day— Bushfire Appeal	Club Track Site Vasto PI, Balcatta	11:00 am—3:00 pm	Sunday 22 February
General Meeting	Club Meeting Room Vasto PI, Balcatta	8:00 pm	Friday 13 March
Public Run Day	Club Track Site Vasto PI, Balcatta	11:00 am—3:00 pm	Sunday 29 March
AALS Convention— Easter 2009	Castledare Miniature Railway	All day and evenings	10—13 April

January General Meeting

The January General Meeting was held on Friday 9 January 2009 at the Society's meeting room commencing at 8:00pm, chaired by Milton Smith.

The full Minutes of Meeting are enclosed with Steamlines as a separate Supplement for members. Some highlights of general interest are reproduced here.

Some members have not as yet paid their annual membership fees as yet. If you are one and have difficulty making the full payment at the moment, please discuss with Milton Smith to make monthly payments.

Model Engineering:

- **John Shugg** displayed an example of the 7¼" bogie wheels produced for CMR members by Kentin Engineering.
- **Ron Collins** and Paul Costall showed one of two partly completed tenders, built from stainless steel for their 4" traction engines.
- **George Palmer** showed fabricated steel cylinders for his 7¼" loco. A somewhat different approach, the one Ken Austin discussed last meeting. Very cunning porting arrangements are used.
- **Milton Smith** showed his progress on "Andrew G Trigg", the boiler assembly with the back head and front of firebox covers flanged up from thin copper. (see his report and photos on page 6).

The formal meeting closed at 8:50pm. Supper and discussion and fellowship followed for over an hour.

Milton Smith

February General Meeting

The February General Meeting was held on Friday 13 February 2009 at the Society's meeting room commencing at 8:00pm, chaired by Milton Smith.

General Business:

The double birthday run scheduled for 31 January was cancelled and will now take place on 21 February, the day before our Public Run Day.

The Committee decided that the February Public Run day would be used as a Victorian Bushfire appeal fund raiser. We hope for a good crowd, so members are asked to come and help out.

John Shugg suggested that we start to think about the design and construction of ground level passenger cars. We need to agree a design. John commends the design detailed in AME issues 132 and 133, by Morphetvale miniature railway.

Model Engineering:

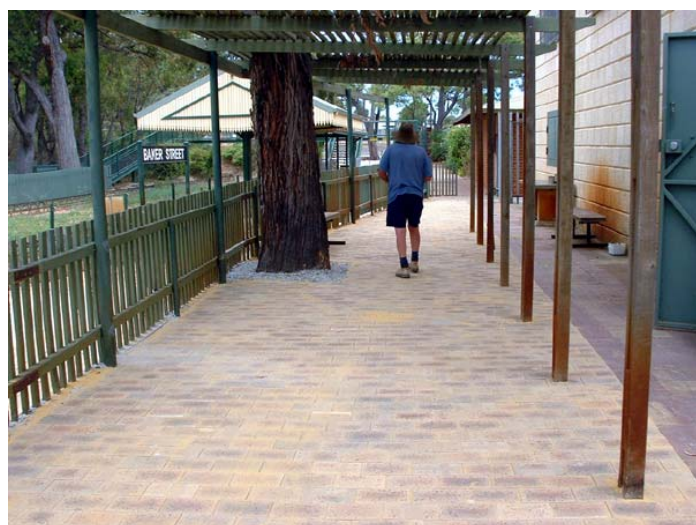
- **Paul Costall** displayed one of the 4 rear wheels he and Ron Collins are constructing for their 4" traction engines. Some 360 ³/₁₆" rivets to go.
- **Andrew Manning** showed the smokebox of Springbok he is rebuilding with the feed water elements fitted. Also on show were a set of tube benders constructed at different time over the years.

The formal meeting closed at 9:30pm.

Refreshments and discussion followed, finishing with a video of the 1940s in shop servicing and turnaround of a mainline British steam loco.

Andrew Manning

Work Around the Track Site



Above: The paving outside the club rooms having been completed, the table is now in position. With chairs placed there on Sunday (25th January) it was very pleasant sitting under the shade.

Photos: Milton Smith

President's Report for January 2009

by Milton Smith

I hope that all members and their families and friends had a joyous Christmas with family and friends. I wish for you a good 2009.

What has been happening since the last Steamlines? Saturday 17 January 2009 was the designated day to pave the grassed area in front of the Club House. The grass had been excavated by the contractor, Bob, and sand dumped in the area. Andrew did a ring-a-round, and a great gang of members fronted up ready to do the work.

If my memory serves me correctly the following members "rolled up their sleeves" and "put on their hats": Ron Collins, Paul Costall, Stephen Briggs, Ian Huxtable, Paul James, Andrew Manning, Nigel Sales, John Shugg, and myself. It was thought that this project would take all day, but the laying of the pavers was finished by approximately 1:00pm. The cutting of halves and other shapes was done on the following Tuesday.

While this laying was going on during Saturday, Tony Jones and Ken Cooper were raking up leaves around the track. Because of there not being a public run day in December, these had built up considerably, and on Saturday 24 January, Andrew and Ian raked up a trailer load, plus many cover-fulls. What is a "cover-full"? Ron Date made a large cover for his locos, probably a metre cube. This was placed on a riding car and was used to transfer the leaves to near the trailer and also to the tipping area.

Saturday 24 January was a busy day, as the grounds had to be made ready for the public run day on the 25th. There was much mowing and sweeping to do. The paved area leading to the steaming bay was covered with fine dust and sand spillage. A good rain will get rid of the fine dust and restore the pavers to a "pristine" condition.



Above: The vandalised machine abandoned after it was overturned on the BMX track.

Photo: Milton Smith

The run day on 25 January was not well patronised, due to the long weekend and the heat, but it was a very relaxed day. Thanks to Paul James and Steve Reeves and Clive Chapman for bringing their locos. As it happened, the traffic was very light and Steve's "Helen" did not get a run. Paul Costall did some work shifting the remaining small pavers to the rear of the site. Thanks to all who turned up on a quiet day, but as Ian Huxtable said, "We now have \$160 we did not have at 8:30am."

The reticulation system has had a few problems with the compression fittings failing under load after a few days. We think that we may have solved the problem by using a different type of fitting to join the pipes.

The Saint Augustine's School Fete was quite successful. Though the setting up was done in between some quite heavy showers, by the time the track had been set up, the rain had cleared and by 4:00pm when the fete was opened, everything was dry and a good time was had by all.

The Christmas function on Friday 12 December was quite successful with about 30 members with family and friends enjoying a relaxed time. This year, if we have a similar function for Christmas, it is proposed to have it on a Saturday.

As has already been intimated with the minutes recently circulated, there will be a similar function, now to be on Saturday 14 March, as February is too busy.

The next General Meeting of the club will be on Friday 13 March at 8:00pm.

There is a party booking proposed for Saturday 21 February, the day before Public Run Day.

There was a bit of excitement down the track on Thursday morning 22 January. When Bob arrived to start his earth moving machinery, he found that it had been vandalised. Then he realised that one of his machines was missing! He and Andrew went off on a search and found it on its side on the BMX track.

Whilst they were not able to start the other machines, the vandals had tried. So having started the "missing" machine, they drove it up to the back of the site and then through the gap in the fence. Some diesel was spilt on the BMX track, with some other minor damage. The police were called, but the chance of the culprits being caught is slim. The vandals gained entry over the palisade fence at the South East corner, using a wheelie-bin as a step, and an old child's football placed over the spikes.

Milton Smith, President

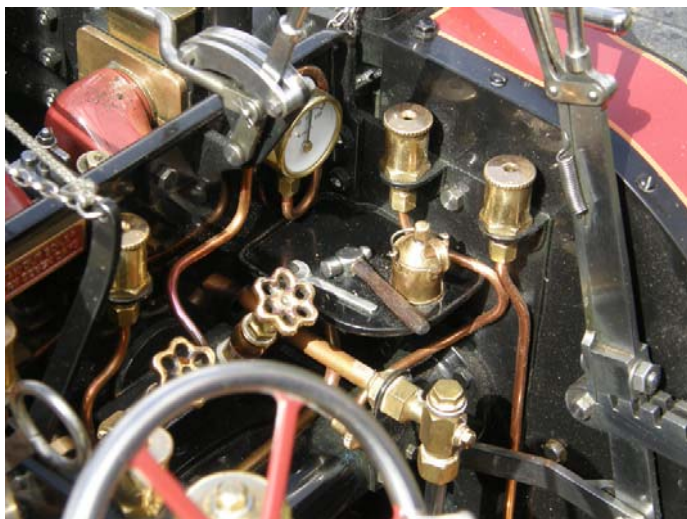
2008 Traction Engine Rally (cont)...

by Jim Clark

(Continued from page 1)

Those of you who subscribe to Australian Model Engineer will have seen David Proctor's article and photos in the last issue of AME. I have included a few more photos here for your further enjoyment.

My personal favourite in this rally was Glenn Roenfeldt's 3" Burrell, which is a superbly detailed model as you can see from the photo below.



Look closely and you can see a scale spanner, a hammer and an oilcan on a removable tray under the pressure gauge. A really beautiful piece of work.

Something that I think is very important, and which has got me into trouble before, is promoting the involvement of young people in the hobby — not just as passengers, but by giving them the opportunity for some real hands-on learning and experience by driving the engines.



Above: A very small Allchin driving a scale threshing machine fascinated the very small visitors. Photo: Jim Clark



So I enjoyed seeing many youngsters at Clare taking an interest in steam technology and also being encouraged by some of the older members. The young man in the photo above is obviously thoroughly enjoying himself at the controls of a 3" scale Allchin. For the pedantically-minded, of course he is under the direct supervision and watchful eye of owner John Weidenhofer.

The next rally in October of this year promises to be one of the biggest and best yet. It will be at Jondaryan Woolshed, which is a little to the west of Toowoomba, and about a two hour drive from Brisbane. Jondaryan is a historic park set up along similar lines to Timbertown, with many preserved and replica buildings and other items commemorating Queensland's extensive sheep and wool history. It should be an ideal venue for running and displaying miniature road steam vehicles.

Several of us are planning to attend, and some members are considering hiring a container for road transport of engines there and back, if there is sufficient interest. Please contact Ken Austin if you want to participate.

Jim Clark

NEWS ITEMS WANTED

As always, I need more items for Steamlines. Don't leave it all up to a few stalwart correspondents — I find it difficult to fill this newsletter. Haven't you done something of interest to other Model Engineers recently?

How about a few words and photos showing your current project? Or an article about somewhere you've been? Or a short article on how you solved some workshop problem? Please email your material to:

jimclark@hardwareandsoftware.com.au

or post c/o Secretary, PO Box 681, Balcatta, WA 6914

Early Days at Johnston and Wells by Andrew Manning

The visit to Yarloop railway workshops and in particular the foundry area, on the Sunday afternoon of the Sandgroppers Weekend last year, vividly reminded me of the place where I first worked.

From the age of 14 to 17, I worked most of my school holidays at Johnston and Wells engineering works in Battery Point Hobart. I first discovered the works when I came across the back door of the foundry which opened onto St David's Park. I poked my head in and saw the amazing sight of bright orange liquid being poured into smoking boxes. I went in through the door — no one seemed to mind, the workmen had seen me come in. Inside the air was full of smoke and a strange smell.

I watched for quite some time then a worker came over to the door to get some fresh air. He told me it was cast day: they were pouring cast iron into sand moulds. He took me over to the place where the molten iron was pouring into pots for the workers to carry to the moulds and explained simply how the furnace worked. Over the next few weeks, when I had time, on way home from school, I went in through the back door and explored beyond the foundry. I discovered a machine shop, then across the road a big blacksmiths/boiler makers shop.

School holidays were approaching. I asked the Foreman if I could have a job for the school holidays. He said I could and I would get first year apprentice wages.

Over the next few years I worked in the foundry, the pattern shop, machine shop, blacksmiths and boiler shop. I worked in engine rooms of ships, boiler houses at sawmills and visited, as an errand boy, other small machine shops and foundries around Hobart.

The experiences of those years were positive and useful through out my career. The foundry experience made the biggest impression on me. It may have been the men I worked with, the fumes, or the actual processes involved but I have very clear, warm memories of the many

weeks I spent in the foundry.

Operating the power hacksaw was my first job, cutting off lengths of bright or black round for the machinists. I had plenty of time to walk around and look at what various machinists were doing as the saw did its work. The machine shop comprised mainly lathes, from a Hercus to a big faceplate lathe that could turn a diameter of 6 feet. There were two milling machines and a shaper, a slotter and a radial arm drill. Some of the machines were still driven from overhead line-shafts.

The Foreman's office was a small wooden building in the front corner of the workshop, and you would go through the office to the store where portable tools, drills, bolts, key steel, etc. were kept.

My second job was to screw what seemed like hundreds of 1/4" rods, an inch of thread at each end using the Hercus lathe and tailstock die holder. I had my first work injury on that job. The forward/reverse switch was mounted adjacent to the top cone pulleys. I would watch the die cut up to the mark, reach up and reverse the lathe. Once I reached too far, and I have a miss-shaped little finger to this day.

I must have done a good job on the screwed rods as I graduated to the big screw cutting machine, making foundation bolts of various sizes. I hardly had the strength to close the Coventry die head. There were many days on that machine and I was taught how to change and set the cutters. On one batch of bolts I did the thread was tearing, so I changed the dies for a shape set, still no joy. The Foreman said someone had put dilute cutting oil in the machine, so I had to pump it all out and start again. I do not think the threads improved too much (perhaps poor quality steel?)

In the next Steamlines I will get to the foundry.

Andrew Manning

CORRECTION — What's The Point?

Due to an oversight by your over-worked Editor, the article by John Shugg entitled "What's the Point?" that appeared in the last issue of Steamlines contained some typographical errors. The article should have read:

"Why ever a 3mm wheel root radius was recommended (for black flat bar rails laid on edge) is not too clear, but if that wheel root radius, either through wear or deliberate manufacture, was made **0.8mm** a reduction to check rail width could be considered. For the scale profile rail users a radius rail edge and a 3mm wheel root radius may be fine.... As Jeff Clifton (SWMEA

Bunbury) said in his letter to AME, his tipped turning tool took care of that **0.8mm** root radius.

Let's call the 5 inch flange thickness $\approx 4\text{mm}$, reduce the common check rail clearances for both gauges to say 8mm and the 7¼ root radius to **0.8mm**, what then? Even a 6mm 7¼ inch G flange could still fit through pretty well (with a 3mm root radius)."

These errors were entirely my fault as John had provided me with the correct information. My apologies to John and to anyone who was confused by the information that was incorrectly printed.

Jim Clark

Boiler Work on "Andrew G. Trigg"

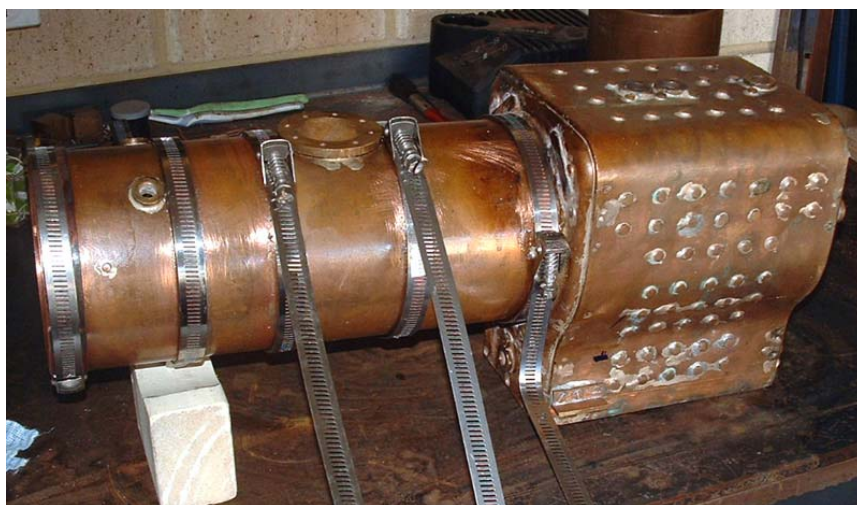
by Milton Smith

I don't need to tell you that the building time for this loco has been long, but there is light at the end of the tunnel and I think that it is a completed "Andrew G. Trigg" coming towards me.

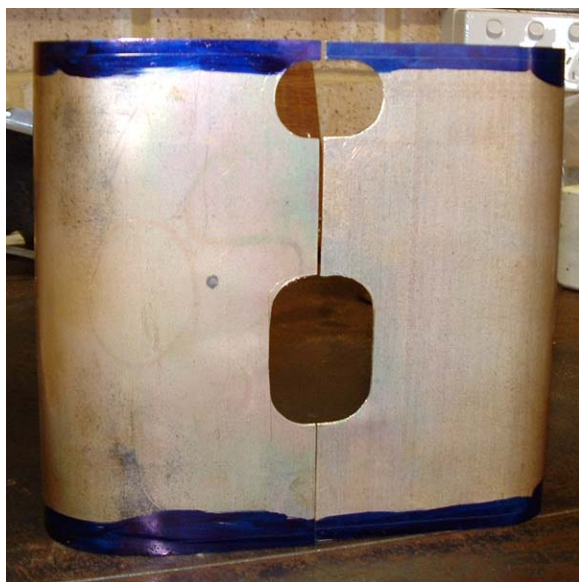
Over the past few weeks I have been working on the boiler cladding, and the photographs show the developments.

There is still a bit to do to finish the engine — oil pumps, whistle valve, whistle, driver's pedestal, exhaust system, vacuum brake system, and some valves and the piping, but the end is in sight.

Milton Smith

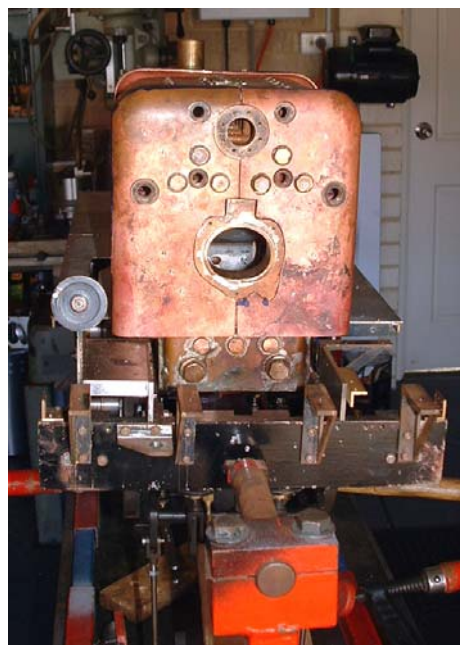


Above: Copper supporting bands held in place after being Araldited.



Left: The fire box cladding, made from 0.5mm brass.

Right: The back plate cladding made from copper. The "brick arch" can be seen through the firehole.



Photos: Milton Smith

MILLING MACHINE FOR SALE



Microcut Mill/Drill belonging to the late Lindsay Adams. It has a 1.5 hp single phase motor, with 450mm table, and is in excellent condition.

There are many extras which include:

Power feed, light, coolant system, rotary table, 3 dividing plates, tailstock, plus many other small attachments, tools and cutters as shown in the photo at right. Replacement cost of major items is around \$5,000.

Asking price \$3,500 including all extras.

If you are interested please contact Maxine Adams on 9447 4646.



7¹/₄" Rail Construction Report

by Tony Jones

Progress is being made on the last of 4 sets of points, like finishing the mechanisms of the moving blades. We are trying to improve as we go so now we have 2 Castledare type points and 2 Ernie Redford points, so members will have a chance soon to see which points they prefer, for comfort that is.

We the constructors don't like the Castledare type as there are 5 scarfs to machine. Whereas there are only two on the other type as most of the blades are square ended and short, so they are easier to make. All pivot points for the bell crank levers are now 8mm studs welded in place so now there is no lost movement. These 4 points are sufficient for a simple circuit and we can start laying track as soon as the hardcore is down and compacted. We will lay in logical order from the turntable outwards and use a flat car to carry the rails. Must respect the older fellows' backs!

We will make up single rail and ties to proved long radii and transitions, a water hose will be roughly laid to decide our path and the rail flexed to follow the curve of the hose and when all the single rail is in place then we can lay the other 2 rails and weld into place in situ. Is there a welder available with short legs or better still no legs? Not an easy job. We are looking for 12mm stainless rod 80 long for telescopic ends on some rails

An access ramp from the club house to the inside of the compound to save walking around the bollard has now been marked out and will be bricked up by our current skilled brickie. A ramp has been preferred as we can wheel trolleys down easier. Hope they can hang on to the big welder down the slope! Access to the ramp has to be controlled on run days to stop the public getting mixed up with staff. Maybe a plastic chain and a notice.

Further Update 16 February: A week last Tuesday was the last day of the Bobcat. He had to scamper to unload all the stone dust into place around the track. Most of it was scraped flat with a small stockpile left to go into the tunnel. We needed the compactor next. It was retrieved from the BMX club who said it could not be started. Andrew, with some help from their members,

WANTED

Back Issues of Model Engineer — I need to get hold of four back issues of ME magazine:

Vol. 187 July 2001 - Feb 2002. issue No 4162.

Vol. 194 Jan. - July 2005. issue No 4242.

Vol. 196 Jan - July 2006 issue's 4271, 4272.

I am prepared to buy the whole volumes if necessary.

Please contact Clive Jarman on 9344 3829
or email cmjeng@iinet.net.au

got it into a wheelbarrow and got it back to the clubhouse. I took a quick look at it as it was suggested that we take it for a check-up to the mower repairers. At smoko it was stated that the funds were getting low, which I took in, thinking if I was not so busy I would have a go at it. Then that evening before falling asleep I resolved to go down to the club in the morning and make a serious check of the systems. Next morning I checked my small toolbox to see what I had applicable to small petrol engines: yes, most small tools were there.

So when I got into the clubhouse, instead of removing the engine as planned I had a go at starting it. I checked all the vital signs: petrol (stale), oil in sump (enough). I took the plug out and gave it a good scrub with the wire brush. Putting my 14mm thumb over the plug hole I checked for compression—not good or was my thumb leaking? When I turned it over it was obvious that there was a lot of drag from the centrifugal clutch. I took the belt off as I thought it could be possible to get it to fire. I didn't mention it, but the engine was exactly the same as my mower engine so I felt at home with it.

The outcome was that it started and ran quite OK. The belt had a deep crack in it but it ran long enough the next day to compact down the side of the steaming bay and around to the turntable. We found the grit has to be damp for the compactor to travel easily. When it dried out it was a very hard surface. Last Saturday we filled the fuel tank and topped the oil up and compacted the area where the points will go and also along the straight. Guys—the rails are ready, all we need to do is to put them down.

In regard to the welding of curves, Marcus set up the jig for the 17m radius that goes around the south east corner. 5 are needed, he welded the best part of one, which Ken and I completed the following session. We immediately set up the next one and got that three-quarters finished. This last Saturday we erected our flat car which is 2m long and loaded up our first set of points and trundled that down the line and put it into position on bricks.

The plan is to get the two sets of curves to come together and finish neatly at the points. Once we get that completed it will be plain sailing to follow suit along the straight. All we need is some manpower for it to happen. In the meantime I have drawn up the next curve which is 22.9m radius, 5 of those are required. The unbelievable is happening the price of steel is dropping! Our best silent worker is in need of help, he has painted every section so far, I don't need to mention his name, you know who I mean, so give him some applause sometime.

I am grateful to all who helped with this last turnout. It gets tough sometimes when just the two of us are plodding on. See you there next time.

Tony Jones



Northern Districts Model
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Site phone: 9349 0693

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Balcatta
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Right: Ken Austin with his almost
completed Burrell, February 2009.

Below: Some details of the cylinder
and motion, showing the precision
workmanship and superb paint finish.

Photos: Jim Clark

Burrell Traction Engine Progress

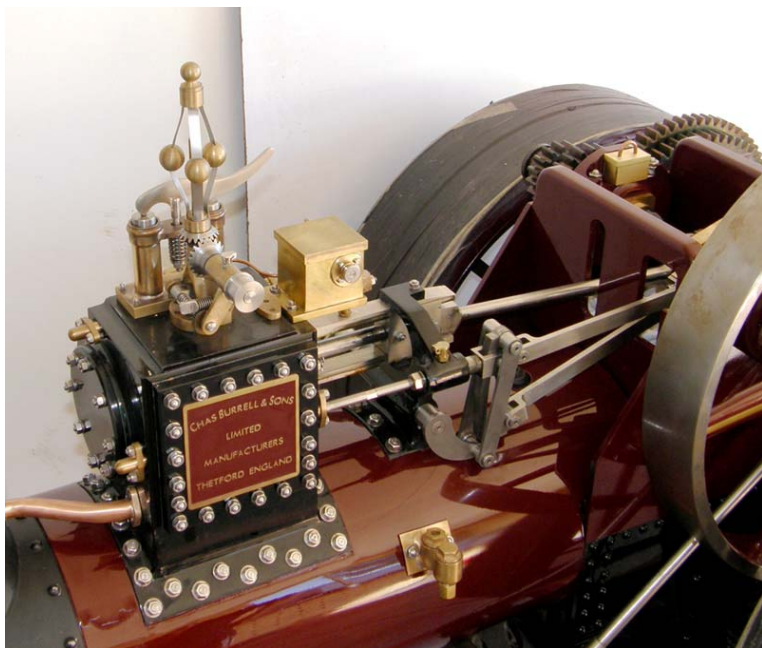


Ken Austin is progressing well with his 4½" scale Burrell traction engine, as you can see by the photos on this page. There is still quite a lot of finishing work yet to be done (isn't there always?) but Ken is hoping to be running his new engine at the AALS Convention at Easter.

Stripping, painting and re-assembly has taken a lot of time. Ken had considerable difficulties getting the boiler cleading and other parts fixed back onto the boiler without scratching the new paint, particularly as the boiler and cylinder block assembly are now permanently mated. The end result speaks for itself, as the photos show.

The question is — will Ken's Burrell be running before Ron Collins and Paul Costall have their two Fowlers steaming? How about an update from the Fowler men?

Jim Clark



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