

**Reading Society  
of Model  
Engineers  
Charity Number  
1163244**

# The Prospectus

**January 2024**



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Jerry has a special passenger visiting RSME on  
9th December 2023. Photo Andy Midwinter

**MAGNETIC ATTRACTION  
THURSDAY TALKS  
SEEN AT THE CHRISTMAS LUNCH  
SPIRITED LOCO  
SANTA SPECIALS  
FIXING A BALDWIN  
SOMETHING DIFFERENT?**

# THE VIEW FROM THE CHAIR

John Billard

Welcome to the New Year at RSME.

2023 ended on a great note with our highly successful Santa weekends and a special Christmas Lunch in between. Both reported in these pages. And then finally Stephen’s quiz night with four teams all smacking their heads for answers they should have known.

There was not a trustees meeting in December but I can report that our ten year lease with the council is edging ever closer. At least we won’t have to worry about that again for a long time after it is signed up.

The trustees meet again on 15th January when we will welcome newly elected Donald Pickett. Jim Brown will continue his treasurer duties until April when, after a rearrangement, Stephen Millward will take over. That makes a momentous 50 years in the job for Jim an achievement that is unlikely ever to be emulated. More of that in a further issue.

## THURSDAY NIGHT TALKS 2024

Commencing at 8 pm in the club house

18th January	The Parsons Turbine	Bill Richardson
22 February	Crofton	Jon Willis
21 March	The Narrow Gauge Railway Society	Simon Guppy
25th April	The Desk	Peter Venn

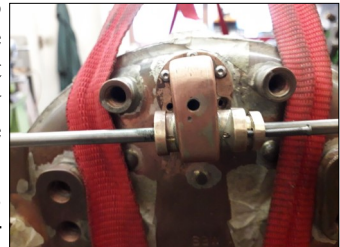
Please attend promptly.

### A word to the wise.....

from David Wilkinson

Every so often an insurmountable problem rears its head and leads to real doubt as to whether it’s worth proceeding with my 7 1/4 B17. In my case, just recently, having struggled with trying to complete a complex regulator valve block, see right, I had the misfortune, if not the downright stupidity, of dropping a small, 4mm Allen key into the abyss of the boiler through the dome hole.

The heavy mob were summoned to lift, rotate, and shake said boiler to no affect-the key ap-



peared to have dropped and stuck somewhere between the copper tubes. Fellow model engineer consultants advised acquisition of powerful magnets to be suspended between the tubes. Some hours were spent trying to drop the florin-sized magnet between the tubes, but there was no way to get it below the first row of super-heater flues, never mind between them.

What to do? Perhaps the magnet was not strong enough and I decided to check its strength and found it could attract and support the weight of a small engineer's square, see picture right **provided** said objects were less than half an inch apart.



A possible solution came to mind and in desperation I found that by moving the magnet on the **outside** bottom surface of the boiler I came across a faint scraping noise. I moved the magnet up the sides of the boiler, near the noise, and 'eureka' the key became visible through the dome hole, with mutual attraction between key and magnet holding them both against the side of the boiler. It was then so simple to get a 'magnet-on-a-string' inside the boiler to retrieve the key.

Problem solved! I'm naturally just waiting for a fellow member consultant to confirm that 'everyone knows that's the way to do it', but just maybe 'not many other people know that'.



## RSME CHRISTMAS LUNCH

Some happy faces at the RSME Christmas Lunch held at the Southcote Beefeater on 16 December. 24 members sat down to a convivial meal, the first held for six years.

All our thanks go to Val and Richard Coleman, seen on the opposite picture, left corner, for their splendid arrangements that went so smoothly.



Photos John Billard

## A SPIRITED LOCO Part 1

by Terry Wood

Its always tricky trying to build a steam loco that is very successful as a toy but when it is increased in size does not necessarily mean that it would be just as good or indeed as powerful after all if it was why isn't it seen more often. I have always been keen on Mamod steam toys and have built up quite a collection over the years mostly stationary and I've even built a O gauge loco based on one that I built from scratch that runs on a track very successfully but building a five-inch gauge loco especially one powerful enough to pull a trolley and a driver now that's a different proposition altogether.

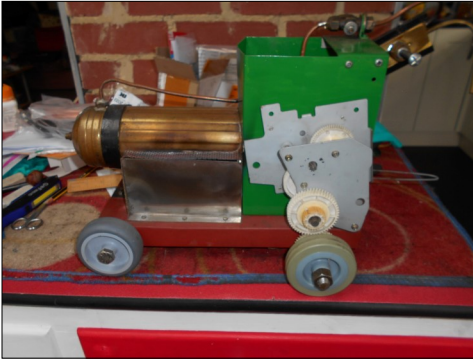
For a start you need a safe way to heat the water using methylated spirits which tends to burst into flames as soon as you light it and if you make the burner that much bigger that hazard is increased ten fold and if you are not careful the whole thing could go up in flames with disastrous consequences. I know because as I was designing the burner and running it down the garden large flames would shoot out of the gap between the burner and the boiler.

At first I thought it would be better to use a coal fire controlled by an electrical fan as a blower but I dismissed this Idea because there was not enough room between the base and the bottom of the boiler plus you would have to find room for a battery as well, then I thought about powering it by gas but again you would have to find somewhere to put the gas canister. That's what happens with a design that you have already built to do something else in this case a loco that had rubber wheels on it so it could trundle down the garden just to prove that it worked.



So the first thing I had to do was purchase some 5 inch gauge locomotive wheels and axles from 17D Miniatures in order that it would run on rails instead of down the garden path I then bought some pillow bearings on eBay which wasn't easy because the axles are 1/2 inch diameter and nearly all the sellers were only selling 12mm bearings. When the bearings arrived they

were really big and heavy and I had a job to figure out how I was going to fit them especially when they had massive 12mm mounting holes but I had to make some large spacers on the lathe in order that the wheels would clear the base of the loco so I allowed for some locating lugs so that I could mount the bearings using M8 nuts and bolts. I never had any aluminium bar to make the spacers but I did have some bright yellow nylon bar so I used that instead and seeing as its underneath the loco it wouldn't matter too much, one advantage with having such big heavy bearings was that the centre of gravity is now much lower which will make the loco less likely to topple over.



Although an oscillating piston engine is very simple not having any valves or cross head like in a standard engine it is not very powerful especially in single acting form but it is capable of running at very high speeds so if you gear it down by quite a margin it will hopefully give enough torque to pull a heavy load, as such I built a gearbox on the side of it that came out of a large printer to give a reduction ratio of 14:1 this is just a

guide and may have to be changed to make the loco run any distance because the faster the engine runs the quicker it uses the steam and the fire may not be big enough to replace it in order for the loco to keep running on the track.

Unlike a standard loco which has a fire tube boiler this one has a water tube boiler made from an old brass fire extinguisher as fitted in many old cars back in the day except this has been modified to have a steam outlet which is connected to a gas tap that is used as the regulator. It has also had all of its pump removed so that it is now completely hollow inside. There is also an old brass pressure gauge that I had from the same place as the fire extinguisher that looks like it was originally fitted to an old foot pump. The spirit burner is an old thinners tin laid flat on its side with holes drilled down both sides and filled with



cotton wicks and one extra hole for filling up with spirit from a small funnel this gives two rows of flame running down each side of the boiler and soon heats the water up.

At first the engine was running the wrong way because originally I had an extra gear going from the gearbox to the driving wheels but because I am now using a toothed belt from the gearbox to the driving wheels the loco was running backwards, this was easily corrected by reversing the steam inlet and exhausts connections on the sliding valve plate. The connections to this plate were originally connected to the back but I then real-



ised that this meant the inlet and exhaust steam had to travel at right angle thus inhibiting the flow and performance so I blocked those off using grub screws and Loctite and drilled the ports straight through and fitted the steam pipe at the rear just like on a Mamod so that the steam would flow straight into to cylinder thus increasing performance so much so that the engine now runs with as little as 5 PSI in the boiler admittedly with the wheels off the ground.

*To be continued.*

## **Rapid Maintenance**

**by Mike Manners**

The Baldwin "Helen" has been one of those engines that reliably turns up at every public running session and just gets on with hauling endless streams of enthusiastic passengers around the track. This reliability does not happen without a lot of behind the scenes work. Earlier in the year there were problems with blowing superheater tubes and blocked water glass feeds. They both had to be sorted out in the relatively short periods between public running sessions. Repairing superheater elements is not an easy or quick job.

The period just before Christmas is particularly intense with two days of Santa Specials continuous running then only a five day break before doing it all over again and then another public running day on the 7<sup>th</sup> January. It can be a worrying time when the last thing you need is a locomotive failure.

During the past year there has been a noticeable tick from the motion on "Helen". Not immediately noticeable when the loco is first fired up and cold but definitely there and gets more pronounced during the day. During the first two days of this year's Santa Specials the ticking noise was getting significantly worse to the point where it was not just the engine driver that was aware of it but others standing by the track. The thought of two more days of Santa Specials and then the soon to follow public running session prompted some swift action. The motion work on both sides of the engine was removed and checked and the problem soon located. There was significant wear in the knuckle joints of the connecting rods.

After consulting with a couple of club members it was decided that the wear was most significant in the joint pin rather than the rods themselves. Time to try making a pair of new joint pins. Luckily the correct die was available to cut the threads and new pins produced. It turned out to be a mornings work and the motion work was all reassembled by the end of the day.

Just a couple of other little problems to sort out. A partly blocked water glass blowdown and a look at the loose tender brake lever. The latter, a problem not helped by the desperate braking trying to avoid a crash on the level crossing (see later). These are problems either sorted out (the water glass blowdown) or enough done to be able to come back to them in the long rest time in January (the loose tender brake lever).

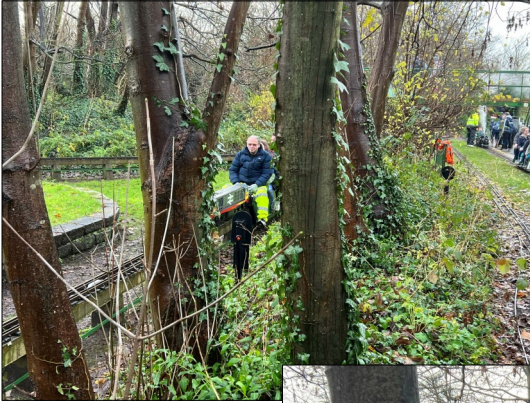
With any luck, that's it for now and things will go smoothly at the second Santa Specials weekend. Keeping our fingers crossed. (They did, Ed)

## SANTA SPECIALS 2023

**The President says....**You have heard some of the story above but what a good two weekends. And despite the weather which brought heavy rain the first days and even some sunshine the others.

How can I thank everyone particularly all those who attended for all the days? All led by Peter C; Peter Harrison (all the way down from Derbyshire), John and Chris for pretending to be Father Christmas, all his helpers including Hollie and Charlotte, Jackie in the tea bar, Michael feeding the workers, engine drivers, carriage examiners, car park attendants, station staff? The getter outers and the putter awayers? I'm afraid to leave someone out there if I name names there. All to make it a time to be remembered by nearly 650 children and their parents and guardians. It was all marvellous. Thank you.





## A SANTA DAY

9 December 2023

Andy Midwinter was there  
with his camera.

*Left* Jerry with the Class 58  
through the trees.

*Right* The morning  
was very wet but  
after that the editor  
braved the dry and is  
taking up his posi-  
tion with his  
4-6-0 *Cookham*  
*Manor*



*Left* Bill is right  
away with a  
good load be-  
hind the club  
Baldwin.



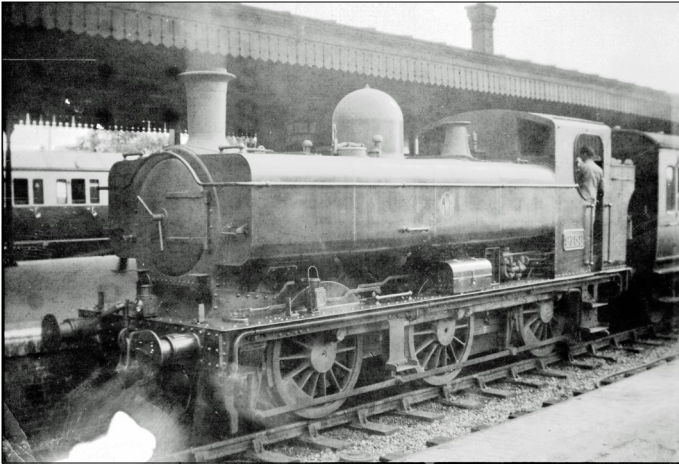


*Left* Well, the Golden Arrow did run on the third rail! Here is the Jones Bros 70004 *William Shakespeare* storming up the hill

*Right* Jerry has now exchanged footplates with the club Class 37



*Left* Away from station duties Rob enjoys a Hymek powered run



*Left*, A few yards from where this PROSPECTUS is being edited, but perhaps 75 years earlier, pannier tank 9758 rests at the bay platform 5 at Twyford, on the branch from Henley. Photo Jack Crawley courtesy Andy Midwinter.

Engine repairs. Left the taken down coupling rods of Helen. Right the old pins compared with the new. On Page 11, the repaired superheater elements  
Photos Mike Manners



## And Now For Something Different

### Mike Manners' first day of Santa Specials.

It started with one car stuck in the waterlogged field. I ended up spattered from head to foot with mud from the spinning driving wheels. It was even in my hat.

It was then a “Help” from Peter. The signal in front of the clubhouse was stuck at red and Santa was getting ready to do his train ride. I quickly discovered that someone had closed the swing out track in front of the clubhouse without fully raising it and had knocked the top off the microswitch. It could not be repaired so I decided to wire it out of circuit. This involved un-bolting the access panel on the side of the raised track and doing a quick bit of re-wiring before bolting the panel back in place. Literally, just completed as Santa came around out of the cutting. Phew!

It was then another “Help” from Peter. All the lights had gone out in Santa’s Grotto. A dead extension lead was the problem so a replacement was quickly found. The problem was later discovered to be a plug not fully pushed into the socket! Grrrrr.

The next event was a little more serious. I was driving Nigel’s Baldwin “Helen” with a full load of passengers and coming up to the crossing when a silver BMW decided to drive across regardless of the flashing red lights and people trying to warn him. I managed to stop about six inches before ramming the side of the moving BMW. I think this may account for the loose brake lever on the Baldwin tender and the shower of ballast from my feet trying to stop the train. A bit of a heart stopping moment there. It was lucky I was going relatively slowly. If this had happened in front of the double headed train that was going much faster across the crossing I dread to think what would have happened.

By this time the wind was get up and causing problems. I had a branch fall off a tree directly in front of me but the Baldwin just threw it off the track.



We had one of the station platform parasols take off and blow across both of the tracks. Must remember to fit the safety locking pins if it looks windy.

We had the gazebo in front of the club house trying to blow away so I brought a very heavy concrete block up to hold it down and Donald went home for sand bags to add even more weight to the problem.

And on top off all this Terry fell over by the station and fractured his arm so had to take a trip to A&E and I had to take over Baldwin driving as Nigel got called away to sort out a blocked gents toilet!

Interestingly, the second day went off with no problems.

## DIARY

### JANUARY 2024

Sunday	7th	Public running	Setting up from 09.30 onwards
<b>Thursday</b>	<b>11th</b>	<b>On the Bench Night</b>	<b>19.30</b>
Saturday	13th	Club running	10.30 onwards
Monday	15th	Trustees meeting	19.30
<b>Thursday</b>	<b>18th</b>	<b>The Parsons Turbine by Bill Richardson</b>	<b>20.00</b>
Tuesday	23rd	Club running	10.30 onwards

### FEBRUARY 2024

Sunday	4th	Public running	Setting up from 09.30 onwards
Saturday	10th	Club running	10.30 onwards
Monday	12th	Trustees meeting	19.30
<b>Thursday</b>	<b>15th</b>	<b>On the Bench Night</b>	<b>19.30</b>
Tuesday	20th	Club running	10.30 onwards
<b>Thursday</b>	<b>22nd</b>	<b>Crofton, a Talk by Jon Willis</b>	<b>20.00</b>

**Note from the Editor. Please provide photographs as separate files and not embedded into the text. No pdf files please.**

Opinions expressed in PROSPECTUS are the personal views of the contributor and cannot be taken as reflecting the views of the trustees or editor.

**The deadline for the February issue is 20 January**

Contributions may be submitted in hard or soft copy to the editor.

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