

**MAIDSTONE MODEL
ENGINEERING SOCIETY
SPRING/SUMMER NEWSLETTER
2015**

Maidstone Model Engineering Society

Spring/Summer Newsletter 2015

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MMES members at the January Club dinner at the Granger Moor Hotel, can you spot anything unusual in this picture...?

Editor's Spot

Well 2015 is now well underway, and it seems to have brought mixed fortunes for the club. As many of you already know and will see from the following pages, we have experienced some sadness, with the passing of Reg Holdstock and Spike Collins. Despite these losses the society continues on as it has always done, and already this year there have been some events of note with a few more to come during the year.

Probably the most significant event was the relaying of the new track, which was completed in good time before the start of the running season. With sterling effort by all those who willingly volunteered their time, and with thanks to a spell of good weather it only remains for some final fettling in places, but on the whole our shiny new track is ready for what will hopefully be a busy season.

On the Saturday before our first public running day (which unfortunately was a wash-out), several of our members and their locos—and bits of locos, attended the Heritage Transport Show at Detling. I have included a few photos from the day, and as you may agree I think we put on a pretty good display.



With a grand centrepiece including our newly completed signal gantry and two separate tables packed with models it was quite amazing to think that with everything on display this was only a small selection of what our club has to offer.

Despite the cold and windy weather outside, it was a very enjoyable day with lots of interest from members of the public who found something a little bit different after wandering among all of the vintage and some not so vintage cars and buses.

As mentioned, the signal gantry has now been completed and has already been in use at the park. As a matter of course this should now see regular use, and as a reminder to anyone who might forget to put it out on a Sunday morning, mind your head if you go to get yourself some coal...

We had a very successful Easter weekend, with all money raised on the Sunday going to the Kent, Surrey and Sussex Air Ambulance in memory of Spike—more on that later. A big thank you to all who attended and donated. It was very nice to see and meet members of Spikes family who attended along with his loco.



Sue giving sterling service as tea lady at the Detling show, much appreciated by all...

By the time you read this, we will have played host to the 1st Snodland Scout Group, who will be paying their 3rd visit to the railway for a day of instruction in the preparation and operation of miniature steam locos.

Other events of note will be our first hosting of the Polly rally in September—more on this later. Our usual annual runs for the Maidstone Mencap children in August, and our belated anniversary run on the RHDR—again a bit more on that in a bit. You will find a complete list of events at the back of this newsletter, and please check the noticeboard in the clubhouse for regular updates for any previously unknown events.

Speaking of lists, one that seems to go largely unnoticed or forgotten about is the list for passenger duties, and so far this year it does look a little empty. I know that usually on the day all duties can normally be filled, but if you are able to spare an afternoon fare collecting, passenger loading or traffic controlling (or even making a round of teas), please put your name down, otherwise I may have to come and do a bit of arm twisting... I seem to recall Sue can be quite good at that, so please don't make me set her ☺ on you...

One last thing to mention before I sign off, is another little event that has happened, and that is the arrival of a new member in the form of Francesca Parham. I'm sure all of you will join me in congratulating Tom, Nicola and Emily.

Please don't forget that I am always on the lookout for articles to go in our newsletter, so if you fancy putting pen to paper, or fingers to keyboards, and writing about your latest project, have memories to share, or just have a joke or two, please let me know. You can email me at andrewmmes@hotmail.co.uk or just grab me at the park on a Sunday.

Andrew





For anyone still interested in joining the club for our anniversary run on the Romney, Hythe & Dymchurch Railway, there is still time.

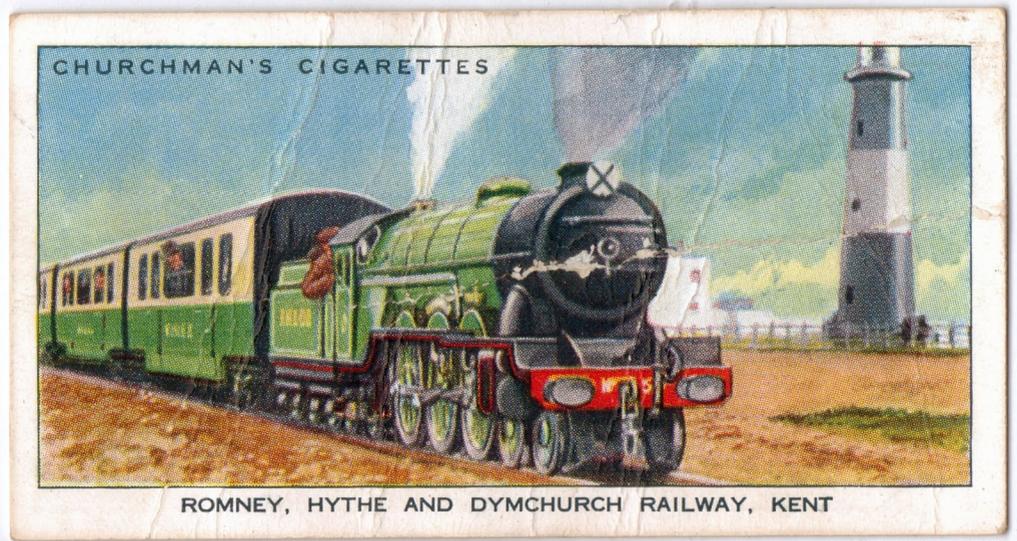
At the moment, there are about 25 places still available for what should be a very enjoyable evening among friends, on our trip from New Romney to Dungeness for a fish n chip supper on Saturday 1st August.

The trip, including meal costs £25 each, and our train is due to depart New Romney at around 6.30pm. I am waiting to hear from the railway if it would be possible to arrange a tour of the engine shed before departure, as a few members have expressed an interest, so I will let those joining us know of details of this nearer the time if it is possible.

For the meal at Dungeness, drinks are included, and we have a choice of fish and chips, chicken and mushroom pie, or steak and kidney pie, with chips, followed by apple pie for pudding.

I have included a return slip with this newsletter with the menu choices, so anyone interested in joining us please complete and return along with your payment. And for those who have already put their name down, can you please also let me know your menu choices either by completing the form or by grabbing me at the park one Sunday along with any outstanding payment.

We need to pay the RHDR for the trip by the 1st July, so if I could have all attendees money before the end of June that would be great.



Chairman's Report for 2014

As I sit here trying to think of what to write in my report, so many ideas are flashing through my mind and I need to collate them into some sort of logical order. As I do so I feel a little ghostly... firstly the ghost of MMES past...

2014 kicked off by being asked whether we could display a club stand at the Heritage Transport Show at the Detling showground. It was agreed to give it a go, and in typical MMES fashion we gave it our all. An incredible effort went into organising this, and on the day we had eleven 5" locos (including two chassis), four 3½" locos, three gauge 1 locos, two traction engines, a steam lorry and a steam roller complete with road working equipment. I think you'll agree, quite a formidable display.

The running season was a good one, with continued great support from the public, as always. Along with the public, we were also looked upon fortunately by someone up above, with minimal running days being disrupted by poor weather. I feel it most important that I first thank those of you who give up your time to help with traffic controller, money taking and loading duties. Without your help we would not be able to open to the public at all. This said, those who run their engines also deserve great credit, as I have heard it said that an hour on the track also commits three in the workshop at some point. How true this ratio is I could not say, however it should not be forgotten that passenger hauling with your own loco is not just the 'playing trains' that is seen in the afternoon, therefore a big thanks to the loco owners and drivers too. And of most importance, none of these duties would be fulfilled for long if it wasn't for the refreshments provided primarily by the ladies, (even though there is no reason that us men shouldn't be making a round of tea!!!) whose efforts largely go unnoticed, and for this reason they deserve a huge thanks from us all.

It must not be forgotten that we have our dedicated unsung team of previously employed men who gather on Wednesdays, to keep up to date with all the little jobs (not to mention the not so little jobs) that help to keep the club running smoothly, rather than stay at home relaxing with their feet up... not to mention put the world to rights (usually over a pot of MAN made tea)! A massive thank you, to all of you, for all you do.

It feels like the grim reaper never gives us a break sometimes, with June seeing him take Mike Wallace (73) from us far too early. This was followed at the end of the year by the passing of our vice president Reg Holdstock (102), not long after his wife Lou had passed away. Finally, only a few weeks ago we also lost a regular in Spike Collins. On a far happier note, associate member Elsie Gurr (Adrian's mum) celebrated her 99th birthday in November, I for one look forward to helping her celebrate her century this year.

This was of course our 85th year as a club, and we did not intend to let that pass quietly... August saw an Open Day which celebrated this, and once again we don't do these things small. On display in a small marquee were eleven locos, along with four gauge one locos and a beautiful model sailing barge. Outside the tent, on the carriage bay was one from each of the big four, as well as a large American Lucky 7. We were fortunate enough to be able to welcome approximately twenty visiting locos. Even with all of this I am extremely proud to say that the event passed with no dramas, we even managed to give the impression that we knew what we were doing.

As ever, we were able to make a good showing of ourselves at various clubs around, with several of us travelling to clubs such as Romney, Welling, Gravesend, Canvey, North London and even as far afield as Llanelli. We are always greeted with open arms, and whispers I hear indicate that we are held in high regard far and wide. Long may this opinion continue!

As we entered winter, work started on the replacement of the rail. Excellent commitment was made by a dedicated group of members, who managed to complete about a quarter of the track before reconnecting the circuit ready for Boxing Day. By this stage we were just starting to hit a rhythm, and as such progress seemed to accelerate to an incredible rate... I extend the thanks of the club to every single person who has been available to help, even if it was only to make a round of tea. It is all appreciated.

Which leads me to the ghost of MMES Present... as I type, all of the rail has been replaced, although there is still a little 'fettling' to be done before we are ready to run trains, however, I can't see this taking long. It is also looks certain that the new signal gantry will be ready to be used this season, with cable laying currently in progress, and all of the components ready to be installed.

I expect that we will soon see an influx of boiler tests being required, and if you are one that needs a test, I would ask that you give the testers the courtesy of requesting one in advance, so that they are ready for you.

And the ghost of MMES Future? Well, we have already committed to exhibiting at the Detling show once again, on the 28th March; it would be great to have an even better display than last year, showing the variety of interests and skills within the club. If you have anything to offer then please let me know.

We have booked an evening train from new Romney to Dungeness for a fish and chip dinner, followed by return journey in August. This is intended as a belated 85th celebration and should be a great evening. Anyone interested in coming should make their intention known to Andrew.

After a break last year we will once again be hosting a group of scouts who wish to learn a little about the model engineering world, and experience driving a steam locomotive.

We are doing something new this year by hosting the autumn Polly Rally, which may be of interest to some to see how well these can perform, and also demonstrate how much they can differ depending on the individual builder.

Don't forget that without all of you then there is no club, so I must thank you all for your continued support. If you have any suggestions as to how things could be, or run better, then make a committee member aware, anything will be discussed. This includes any trips that you think may be of interest to the club that we might be able to organise for you.

That's enough from me for now. All that's left to say is: Have a great 2015 and we look forward to seeing you and your creations throughout the year.

Tom Parham
Your Chairman.

Reg Holdstock

(Uncle Reg)

9th October 1912 – 15th December 2014

Reginald Percy Holstock was born in Hastings, the eldest of four children. His Father was an engineman on the South Eastern and Chatham and Southern Railways and this probably started Reg's interest. When Reg left school he wanted to go into Ashford Railway Works, but the General Strike prevented this so, being good at art and drawing, he became an apprentice signwriter, working for his Uncle. Some of his jobs were for the GPO Telephone Engineering Department and he was asked to join as a signwriter. He met Louie (Louisa) and they married in 1935. He then became an engineer with the GPO and when war broke out in 1939, being in a reserved occupation, he continued with telephone engineering. Among other things he worked on the telephone systems for Biggin Hill, including the installation of the back-up switchboard in the village, which helped keep the airfield in action when it was heavily bombed. He also worked on Churchill's secret communications at Chartwell and the underground command centre at Dover Castle. In addition he was a member of the GPO Home Guard.



Reg and Louie had moved into 171, Lower Glen Road in St. Leonards which was their home for most of their married life. In due course sons Reggie and David arrived. He was a wonderful father to the boys, and when money was short, would make toys out of odds and ends, particularly at Christmas. One of these, a traffic light, was passed on to our family. It worked and had a switch on the base to select each aspect. The head was soldered from tinfoil with three pea bulbs and GPO pattern coloured bezels. It still works after 70 years!

In his younger days Reg was quite a sportsman, he played roller hockey in the National League and table-tennis.

Reg was able to set up a workshop after the war, which became his 2nd home and sanctuary. He built some stationary engines, then Rainhill to LBSCs design, a 3½" gauge 0-2-2. Despite its diminutive size it managed to pull Reg and his sons on a friends track. It was illustrated in LBSCs lobby chat in the "Model Engineer" of 6th May 1954 and was named *Ellen* after his mother.



Reg's Rainhill and Tich

Reg joined the Hastings society which had an elevated track on land near Bo-peep tunnel. We visited this track once. To my eyes (as a small boy) the track was about 6' off the ground at one point and this made having a ride a scary experience, especially as the land fell away into the main line railway cutting; it certainly was a long way down. Unfortunately the society had to vacate the land and the club closed.

Reg's next model was a 3½" gauge *Schools* class to LBSC's Rodean design. He sent a picture of the chassis to LBSC and this was illustrated in the ME of the 27th May 1954. LBSC was very complimentary about the work and observed that great concentration, and a vast amount of patience and perseverance was required to achieve the quality of work that Reg had put into the chassis. At that time Reg had no brazing facilities and was wondering if a riveted and soft soldered boiler would be satisfactory. LBSC encouraged him to build a brazed boiler as "it would be a pity to spoil such an excellent piece of work by putting an inferior boiler on it". Reg therefore obtained a blowlamp (no propane in those days) and proceeded to braze up the boiler in the dining room fire back. How he got away with this I do not know because Louie was a rather fearsome lady when roused, although with a heart of gold. Anyway the result was worthwhile and the loco was duly completed. The full size locos at that time were painted black but Reg did not approve of this so his was blue and named *Louisa*; perhaps this was a peace offering after the boiler brazing episode. Reg entered the engine into the 1957 ME exhibition and won a silver medal.

My father, Ken was also building a *Schools* at this time and entered it in the 1958 ME exhibition. After this Reg rang my Father, who also worked for the GPO, and their friendship started. They were in regular touch, no doubt helped by the low cost telephone calls available between telephone exchanges. We made visits to Reg and Louie's house and went on outings together.

Reg joined MMES in 1962 and built several fine steam locomotives in 3½", 5" and 7¼" gauges. He and Lou regularly drove to Maidstone from Hastings to give rides to the public over the next three decades. He did the signwriting for many of the signs used around the club premises, and some of them are still in use today. He also put in a lot of work on the track and the club facilities.

His next model was a 3½" gauge 4-8-2. LBSC started to describe this as *Duchess of Swindon*, but the series stopped after a couple of articles. Reg built his as an LNER loco with a *Cock of the North* style casing and named it *Cock of the South*, painted in his usual immaculate manner. It had had twin whistles which gave lovely chime when operated together. It ran very fast and this caught me out on the Southampton track when it galloped away and I ran into the back of another train. I was really upset but Reg could not have been kinder and made no fuss at all.

Reg then built a 5" gauge 0-4-0T named *Sally* after his granddaughter; this was made in parallel with my Father's *Joan* and they helped each other with the construction.



Reg was a founder member of the East Sussex Model Engineering Society and ran his locos regularly on their track in Alexandra Park. He retired from the Post Office in 1976 and was awarded the Imperial Service Medal. Reg and Louie used to enjoy travelling around and visiting other clubs. He continued to build models, adding a 5" gauge 2-4-2T which took the name *Louisa* from the Schools. The latter was overhauled, repainted in Southern livery and renamed *Eton*. The painting and lining was magnificent and it is now in Hastings museum. He completed a 5" gauge 0-4-0+0-4-0 Beyer Garratt, similar to the full size one at Bressingham museum, which he named *Fifty* to commemorate his and Louie's Golden Wedding in 1985. A surprise celebration of this anniversary was held for them by members at Mote Park; when they left they had a ride in the back of a steam lorry. In 1996 Reg became a Vice President of the Club.



Reg and *Fifty*

In 2003 Reg and Louie were finding it difficult to manage at home so they moved to Bethune Court. He and Louie had grown to love Mote Park and in their latter years often looked back fondly on their days there. They were able to come to the Park for a Sunday a couple more times after this, thanks to Pat and Geoff Riddles. Their final trip to the track was in June 2008, quite some feat as Reg was finding it difficult to move around by then; Reg even managed a train ride round the track. When Sue last visited Reg in October, he really enjoyed seeing pictures of the locomotives and hearing the up to date news of the Society. When they talked about Mote Park, he told Sue with confidence that he would be there soon, and in spirit we know he is. Reg passed away peacefully on the 15th December 2014 at Bethune Court.



Reg and Louie

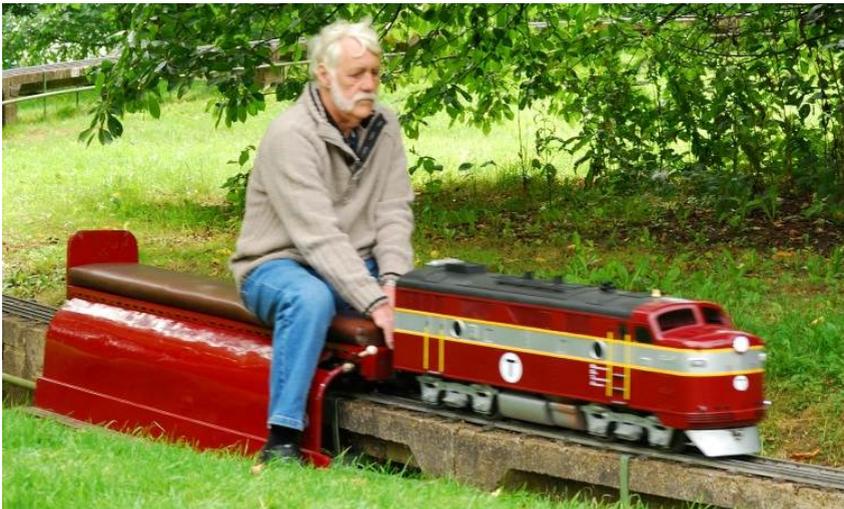
With thanks to Sue Parham and Reggie Holstock for copies of their tributes which I have incorporated. Also to my Mother and Father, Joan and Ken Linkins, for their memories.

Richard Linkins

“Daddy Fix It” – Patrick Arthur Collins (Spike) 22/8/36 – 18/2/15

Spike started life in Sidcup and his first job was with Richard Klingers, engineering parts manufacturers. After eighteen months he joined the RAF and trained as an airframe fitter. He travelled all over the world, Honolulu, Greenland and Cyprus, worked for the Queens Flight but never got posted to the country he really wanted to visit, Germany. He left the RAF after thirteen years and in his next job met the love of his life, Sandie. After a few dates she dumped him, but undeterred he persevered until she took him back and they were married on 19th September 1970. Spike only wanted one child but was thwarted in this wish as Sandie gave birth to twin girls. As they also had two female cats, he found himself well outnumbered by women.

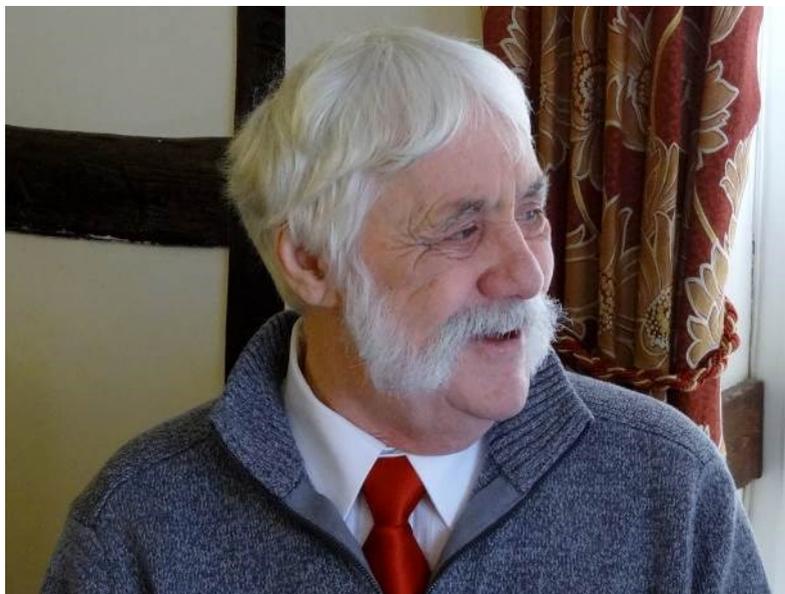
To his daughters he was “Daddy Fix It?” as he loved mending things and making things, and would repair anything, broken dolls and toys included. He always shared his knowledge and skills, teaching his daughters practical things as they grew including car repairs. He was sociable and loved steam rallies and they camped at these all around the country, and had a little boat on the River Medway. He joined the kit car club and constructed a supercharged car. He built model boats, cabinets, bookcases, cars and his 5” gauge locomotive. His shed in the garden was his sanctuary, somewhere to de-stress. He loved his family, which grew to include five grandchildren and two great-grandchildren, with a third great-grandchild due this July. He also loved his music, especially Irish Country music, Weetabix and butter, war films, and Maltesers, and making people laugh, he had a good sense of humour.



Spike joined MMES in June 2012, and grew to love running his engine at the Park and giving rides to the public. He had recently started constructing a Polly, and was so looking forward to the start of public running this year. Alas he never made it, as his body could not take the cancer treatment. He never liked a fuss and so his coffin was a cardboard box and he arrived in a van, not a hearse. He didn't want anyone to wear black but be casually dressed, including the funeral cortege, and many people attending the funeral wore red, his favourite colour. Ideally, he would have liked to be laid to rest beneath his beloved shed. Public running on Easter Sunday was in aid of his favourite charity, the Air Ambulance, and some MMES members were wearing red as a mark of respect.

Sue Parham

March 2015.



I am pleased to report that with donations from the public and also our members, we were able to raise the great sum of £470 on Easter Sunday, with a further £20 donated directly to the Air Ambulance on our behalf by an individual member of the public who could not attend during our run. *Ed*

POLLY'S COMING TO MAIDSTONE

The Polly Owners Group (POG) is a group whose members have built or who are building one or more of Polly Model Engineering's ten locos, have bought one second hand or are building one of the fine scale models.

We meet up twice a year around May and September, at rallies that clubs and societies kindly host. The members come from various parts of the country, so the rallies are held at clubs from Bristol to Sheppey and Bournemouth to Derby.

On Saturday 26th September Maidstone MES are hosting the Polly Rally.

At the time of writing this article, one Polly loco (Marjorie Evelyn) has been running at Maidstone for four years, and four more locos are being built by members, two O & Ks, another Polly VI and Trojan.

It will be good to see them running around our track with quite a long climb from the start at the bottom corner to the top at pneumonia corner. Being 1825 feet long it is also one of the longest, if not the longest POG have visited. Hopefully the weather will be good and we can show what a good visiting club day we can put on, as we are so good at doing so. Some helping hands on the day will make sure we keep up our tradition of a very enjoyable day. If the entrance bollard is working we will need to man this with 2 members at a time on a one hour rota to let POG members in. Hopefully names and numbers to expect will be known beforehand. Someone is needed to be traffic controller and someone is needed to check boiler certificates and sign them in. Also a few more members will be needed to lend a hand wherever needed on the day.

We will be doing a buffet lunch so help will be appreciated on the day and beforehand if possible.

Hopefully this will be a very enjoyable day.

Below are a few pictures of POG members at other Rally's.

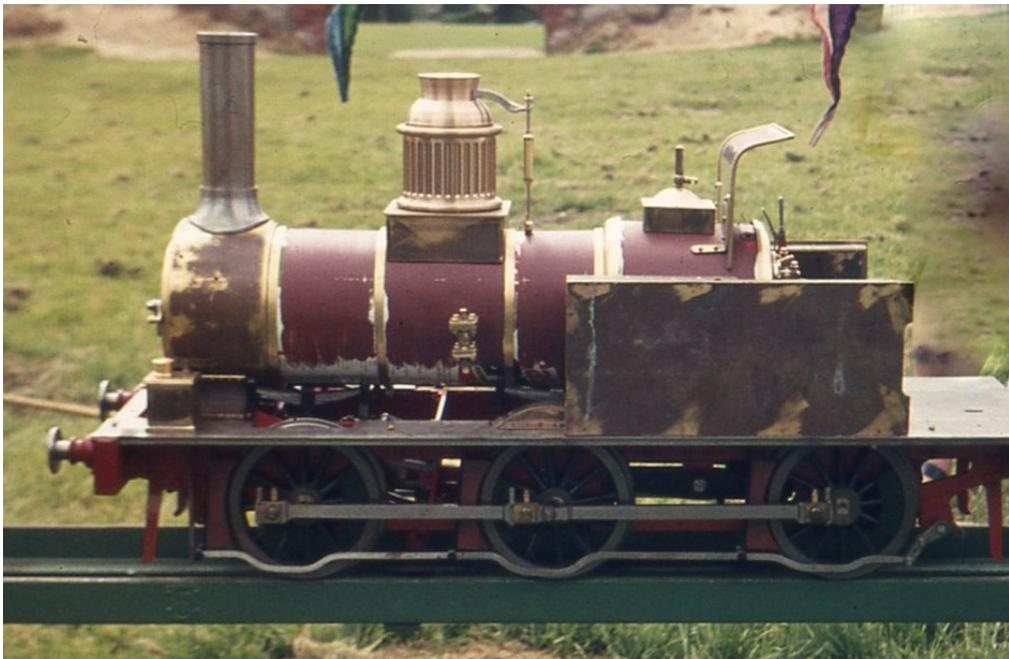


A 19th Century Leeds Built Locomotive

By Richard Linkins

Last year my son John and I were discussing the 150th anniversary of the Hunslet Engine Company completing their first locomotive. He is on the events committee at the Middleton Railway in Leeds and they are planning a gala to celebrate this milestone. The Middleton Railway is in the parish of Hunslet and has a collection of 18 Leeds built locomotives, both steam and diesel. John then said that he thought it was a good idea if someone wrote an article on Hunslet locos and models to help raise awareness, and since I had retired he thought perhaps I would like to take this on. So I started work with a small sigh (this is the same son that ticks me off for taking on work for other people).

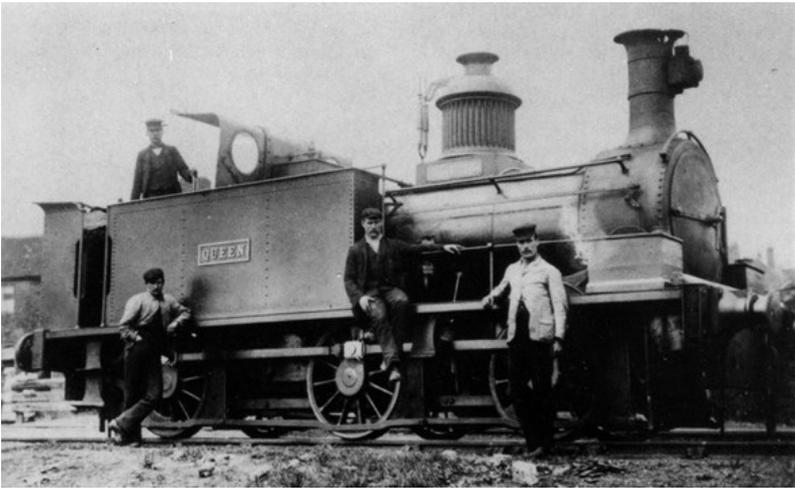
On the basis that a picture is worth a thousand words I started to look through my collection of photographs. Hunslet built their first locomotive, *Linden*, in 1865; it was a standard gauge 0-6-0ST. Many years ago our late president, Joe Liversage, built a 5" gauge 0-6-0T for his wife, which was a change from his normal output of large narrow gauge locomotives. He told me that it was a model of the first Hunslet loco, so I searched through my slides and eventually found a picture of it.



Joe Liversage's Model

I then dug out my copy of Don Townsley's book on the Hunslet Engine Works and compared it to Joe's model. To my disappointment they were not the same. Certainly the engines were the same size and wheel arrangement but the details were quite different. So I gave up on using the picture in the article but my curiosity was aroused.

I was browsing through another book about railways around Dudley when I came across a picture of a similar loco. This was *Queen* built for John Bradley and Co in 1868 and running later on the earl of Dudley's Railway.



Queen

I then realized that Joe's loco was very similar and had been built by Manning Wardle, whose works were next door to Hunslet's in Jack Lane. The fluted dome is the clue. This originated with E B Wilson's Railway Foundry locomotives, such as the famous *Jenny Lind* class. E B Wilson closed down in 1858 and Manning Wardle took over their goodwill and no doubt many of their designs. The fluted dome is the most obvious feature but another clue is the raised firebox. This was very early locomotive practice but died out as the 19th century moved on. However Manning Wardle continued to use it until they closed in 1926. If you visit Bridgnorth station the old boiler from the last engine they built, no. 2047 *Warwickshire* is in the yard and still has the raised firebox. The Middleton Railway has the old boiler from *Sir Berkeley*, another Manning Wardle, in their museum. It has been sectioned and clearly shows these design features. I used the Leeds Engine Builders website (<http://www.leedsengine.info/>) for the history of Manning Wardle and E B Wilson. It has a lot of information about Leeds engine builders, their locomotives and related items.

So was Joe mistaken or is my memory at fault? We will never know but I would dearly like to know where the model is. There are few really accurate models of industrial locos about and it seems a shame that it has disappeared from view. The Middleton Railway gala will be held on the 18th and 19th July 2015. The railway is hoping to have visiting standard and narrow gauge locomotives, together with models of Hunslet locos. It should be a worthy celebration of the Hunslet Engine Company, who built over 6000 locos between 1865 and 1995.



A simple edge finder

I just happened to be browsing the Model Engineer website one day and spotted an item about laser edge finders which I looked at as locating the edge correctly is important for a large number of milling operations. The 'discussion' progressed from the very expensive to the cheap and cheerful, and I gleaned the following information which other Club members may be interested in.

As far as the following is concerned I take no credit for originality.

The idea is based on rotating a spindle with a ball race on the end. The edge finder can be held in an accurate chuck or collet, and it works on the principle that once contact is made the bearing will stop, whilst the spindle carries on rotating.

It was also suggested that if the ball race has rubber seals then a degree of drag will mean that as contact is only just made with the edge then the bearing will rotate much more slowly rather than stop completely.

This effect is quite pronounced and the edge finder is very sensitive in operation, although it's almost impossible to detect the drop in the rotational speed.

To overcome this I found that the bearing needs to be marked on the edge of the outer race to see the effect. I put four marks on with a marking pen and the effect is very much like a strobe and very apparent when contact is just made and before the bearing stops with firmer contact.

Once contact has been established all you need to do is move the table half the bearing diameter and you have accurately aligned the edge with the centre line of the machine spindle.

Making the edge finder is very straightforward - just turn a seating on the end of the spindle so that the bearing is a press fit - this is best done in an accurate collet or clocked in a 4-jaw chuck to maintain concentricity.

For information, my spindle is 3/8" dia x 3" long and I used a bearing 1/2" od x 1/4" bore x 3/16" wide - code R1882RS . I obtained my bearing from a company called 'Simply Bearings' who can be found on the web at www.simplybearings.co.uk or by phoning 01942 269 837. Price for one bearing is currently £3.56 and postage is free.

Cheap and cheerful maybe - but very effective.

RV



Maidstone Model Engineering Society

MEMBERS' SPECIAL NOTICE

**Members are reminded of the
insurance scheme arranged by
Walker Midgley Insurance Brokers**

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3D Printing

by Charles Darley

Back in 2008 I decided I wished I wished to learn how to draw in a 3D CAD program. I am sorry to say that without a purpose I gave up the effort after a few days.

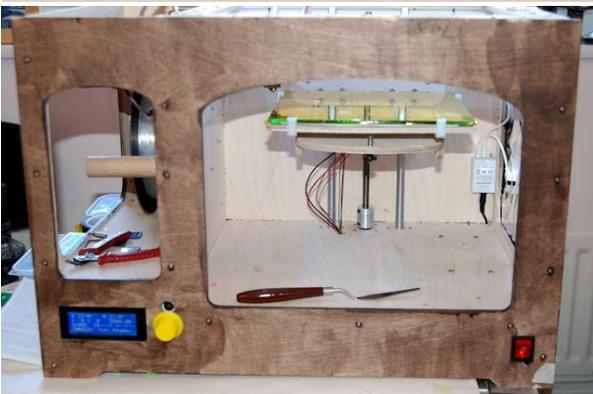
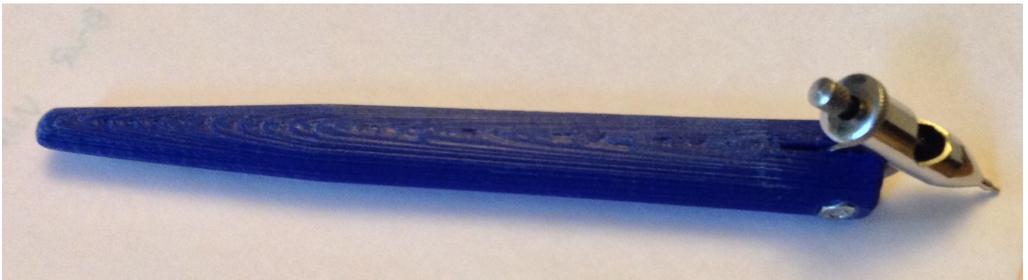
Then in 2012 I visited the Model Engineering Exhibition and noticed a 3D printer and thought that is interesting. I visited a similar exhibition with my granddaughter in 2014 and then another with my wife and granddaughter and on both occasion I saw 3D printing again and my granddaughter was also much attracted to 3D printing. I bought a book 3D-Printers A Beginner's Guide by Oliver Bothmann ISBN 978 185486 274 7 First Published in 2014.

I soon realised that to be able to achieve 3D printing I needed to master 3D drawing in a suitable package.

My son in law was able to load my computer with a suitable program and I set about learning 3D drawing and 10 days later I had had it confirmed that the drawing I had submitted to a 3D Printer supplier would be fine. I have to confess that I had actually ordered a 3D Printer from Threedy Printers web site www.threedyprinters.com in kit form as I had seen at Model Engineering Exhibition Alexandra Palace in 2015. They are a UK company and review indicated I had chosen a reasonable printer.

The printer arrived on Sunday 8th February which I unpacked and I decided to set up my time lapse camera to record the build.

The total build time was estimated at 10 to 20 hours and it took me 18 hours to build and a further 5 hours to debug how the printer worked.



The first thing I found out is that one needs to set where the centre of the heated plate is.

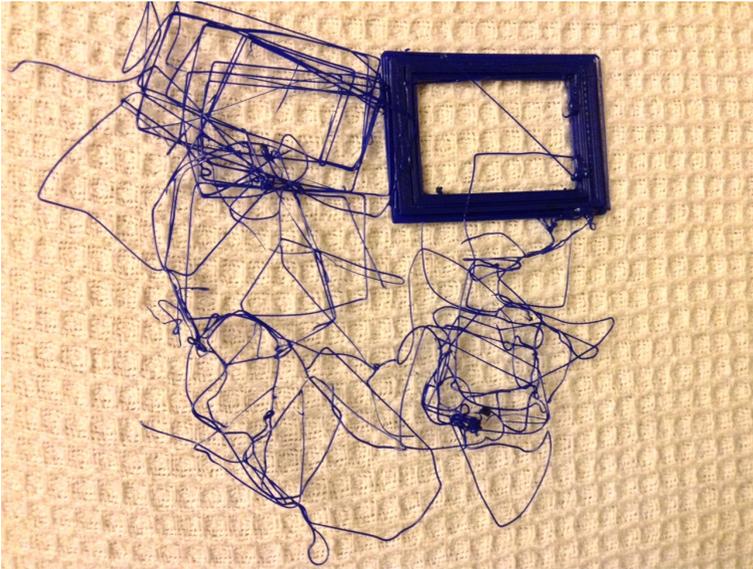
To do this I had to move the X and Y axis to their home position and move 1mm at a time until they were over the centre position and then noted down the figure.

The figures were then used in a program called Slic3r, where there are many pages of set up to complete.

So having drawn my first effort it was a matter of learning what to do with it. That is where the book came in as lecture notes and I used the program called Netfabb. This is used to check out the integrity of the item and then one uses Slic3r program to make the G-code file.

You need to be prepared for failure as there will be many of them, whether it is too complex a design one must think how the item will be built up slice by slice.

At one stage items were being knocked off the bed by the head and ending up with a load of filament which tried in vain to set down on air and ended up as a scrambled mess. There must be a reason for each failure but it took me a while to think to check the bed height had not changed. As one is only dealing with the thickness of a sheet of paper between the end of the Nozzle and the bed any slight change can cause the nozzle to be too close to a previous layer and thus knock one of a set of parts being laid down out of the way especially if one is only using a layer thickness of 0.15mm.



In the picture the part has been removed from the bed to photograph more easily.

Sometimes the extruding nozzle leaves a line of a thin web like strand between parts and that is due to the nozzle set at too high a temperature so one needs to reduce the temperature by 5 degrees at a time.

Sometimes the item being printed releases from the bed which can be from a number of problems, such as too much shrinkage due to the bed being at too low a temperature, or may be the first layer did not stick to the bed properly. When using ABS the plastic needs (I have found) to be laid on an adhesive backing called KAPTON tape but even this after a while will need to be replaced.

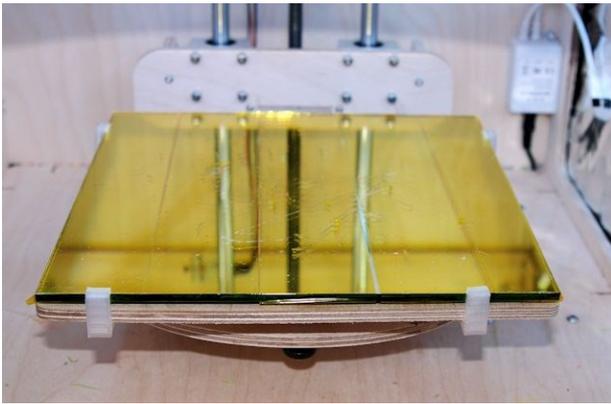
The 3D printer should be able to print a perfect circle and if it does not then it is likely to be the problem I had which was that the X axis was driven by a toothed belt and not direct from the stepper motors. With the X axis the toothed belt was a little slack and I had to move the stepper motor out a little by the thickness of a thin sheet of ply about 0.97mm and now it prints round wheels!

After any adjustment one must check that the bed is still in good adjustment as we are dealing with fractions of a mm between the bed and the nozzle, the thickness of a sheet of paper.

When anything goes wrong only change one thing at a time, otherwise you will never know what change caused any improvement.

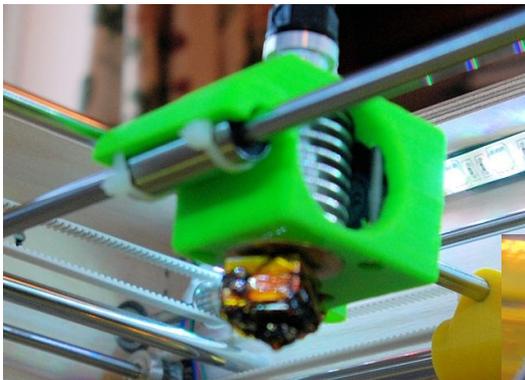
The printer works on the principle that the item has been sliced in to layers between 150 microns and 300 microns, and of course the 150 microns take twice as long to make.

So the question is what to design now?



The heated bed

As I am about to line out my new locomotive I decided to make up some templates to line around. These were first designed on the 3D CAD program then saved as an STL file, out into Netfabb for checking and then into Slic3r and finally loaded on to an SD card for my printer. After that I thought why not make up some location templates to position the lining templates without further measurement. Now I can get on with the lining. There is one problem I have discovered. The glass bed which I had supplied was 0.5mm at the centre curved downwards relative to the edge but in only one direction. So I decided to buy a piece of mirror glass which needs to be flat to be usable as a mirror, so far success with all pieces of 3D printing since.



The printhead



3D printing in action

A few funnies.....

When chemists die, they barium.

Jokes about German sausage are the wurst.

I know a guy who's addicted to brake fluid. He says he can stop any time.

How does Moses make his tea? Hebrews it.

I stayed up all night to see where the sun went. Then it dawned on me.

This girl said she recognized me from the vegetarian club, but I'd never met herbivore.

I'm reading a book about anti-gravity. I just can't put it down.

I did a theatrical performance about puns. It was a play on words.

They told me I had type-A blood, but it was a Type-O.

PMS jokes aren't funny; period.

Why were the Indians here first? They had reservations.

We are going on a class trip to the Coca-Cola factory. I hope there's no pop quiz.

I didn't like my beard at first. Then it grew on me.

Did you hear about the cross-eyed teacher who lost her job because she couldn't control her pupils?

When you get a bladder infection urine trouble.



Did anyone spot something slightly odd in a couple of this issues photos? Well, look carefully... were they really there or not? You decide...

MMES DIARY DATES 2015

(65 years of public running in Mote Park 1950-2015)

Friday 01 May:	Guest Speaker—Andy Hardy (P2 and life on the KESR)
Saturday 02 May:	MMES special invite to Sutton Club (via the pub for lunch)
Wednesday 20 May:	Members Playtime Run
Sunday 24 May:	Charity Run: Donations to the Stroke Association
Friday 05 June:	Evening Run & Fish n' Chips
Wednesday 17 June:	Members Playtime Run
Friday 03 July:	Evening Run & Barbecue (bring own food, maybe a barbecue too)
Saturday 04 July:	The Peter Roots Family & Friends Day
Wednesday 15 July:	Members Playtime Run
Saturday 01 August:	MMES Anniversary Trip on RH&DR + Fish & Chips at Dungeness
Wednesday 05 August:	MENCAP Run giving ride 2pm—4pm
Friday 07 August:	Evening Run & Pizza night
Wednesday 19 August:	Members Playtime Run
Wednesday August 26:	MENCAP run giving rides 2pm – 4pm.
Friday 04 September:	Evening Run & Barbecue (bring own food, maybe a barbecue too)
Saturday 12 September:	Visit to Beech Hurst Club
Wednesday 16 September:	Members Playtime Run
Saturday 26 September:	Polly Rally hosted by M.M.E.S.
Friday 02 October:	Bring & Buy Evening (with toasted tea cakes)
Wednesday 21 October:	Members Playtime Run (last one)
Sunday 25 October:	Last Public Running Day
Friday 06 November:	Club Night TBA
Friday 04 December:	Club Night TBA
Saturday 26 December:	Boxing Day Run – Free Rides

Friday Nights start around 7-30pm at the Clubhouse, evening runs a bit earlier.

Donation minimum £1 per person for Friday evening meetings, feel free to be more generous.

Friday Evening Meetings are for members and associate members (their families), occasionally for members' friends, and for those who intend to join the society.

Wednesday Playtime Runs now start around 10-30am and generally finish early afternoons.

Events will only alter if an unforeseen situation means change is essential.

The Club's website is at www.maidstonemes.co.uk

Some other dates that may interest you for your diaries in 2015:

26 April: National 3 ½" Gauge Rally at Leyland SME

8 – 10 May: Harrogate Model Engineering Show

16 May: Romney Marsh Open Day and Welling 70th Anniversary Open Day

16-17 May: Southern Federation Spring Rally at Hereford

7 June: Narrow Gauge IMLEC at Birmingham SME

12-14 June: Sweet Pea Rally at Northampton SME

13-14 June: Harrow & Wembley ME Open Weekend 1

27 June: Gravesend Open Day

27-28 June: LittleLEC at Fareham & DSME

17-19 July: IMLEC at Nottingham SMEE

24-25 July: Canvey Open Weekend

8 August: North London Society of Model Engineers (invitation) at Colney Heath

22 August: Single Wheeled Loco Day at Southampton MES

22-24 August: Harrow & Wembley ME Open Weekend 2

5 September: Canvey Pre 1900s Loco Rally – only locos of pre 1900 prototypes

26-27 September: Llanelli DME Autumn Rally

3 October: Welling Autumn Open Day

15-18 October: Midlands Model Engineering Exhibition at Leamington Spa