



SOUTHERN FEDERATION of MODEL ENGINEERING SOCIETIES

Formed from the Federation established in 1970

www.sfmesc.co.uk

The New Summer Season begins . . .

Oh, Dear!!!

And a winner



The mishap behind this is revealed on the back page!



Polly Model Engineering Prize
And
Southern Federation Trophy
Awarded to Edward Crabb at
AGM

In this issue we bring you . . .

Polly Model Engineering Prize awarded to Edward Crabb

Southern Federation Special Award for Jack Colby

Lots and lots of events coming along

Southern Federation Rallies News

The Strategic Reserve — History revealed

www.sfmesc.co.uk

Editor: David Goyder Tel: 023 8042 1201 newslettereditor@sfmes.co.uk

Views and comments expressed in this publication are not necessarily those of the Southern Federation of Model Engineering Societies

EDITORIAL

Sometimes I wonder at the pace at which life rushes by. It seems only a couple of months ago that we put everything away for the winter and started to attend exhibitions and shows. It is at the shows that we can see that Model Engineering is not just locomotives and rolling stock, but that the hobby provides a rich diversity for the modeller or model engineer. (I hope these are the same thing).

At Ally Pally it was fascinating to see a model howitzer alongside a beam engine. Just around the corner was the tram car layout which took me back to my childhood when my Dad used to take me on a tram that went into a tunnel, does Holborn sound the right place? Also we should not forget that technology changes as seen in the radio controlled creations, tipper trucks, cranes, diggers etc. And just as we get used to that along comes 3-D printing Whilst going down this road, take a moment to see what the Guild of Model Wheelwrights' do. Some superb model engineering there.

The work done by the marine interest is quite

exceptional. Some clubs have a thriving marine section as shown by Dick Elliot's 'Diorama with a Flower Class corvette' from the Ickenham and District Society whereas many others have their interest in a specialised boating club 'Phoenix' for example. I suppose we must accept that the hobby changes just as the seasons do. Our club in Southampton spent 50 years as a boating society and then in 1960-ish they built a track and rail has dominated ever since. Of course being located in a public park precludes a pond!

But as we rush on to summer, we have seen two young men recognised and rewarded for their work at the Southern Federation Annual General Meeting. They, tomorrow's model engineers, will keep the hobby thriving whatever changes may come about.

But whatever the changes, our hobby will still surprise. From Yorkshire we have a report hitherto not revealed to the public under the 50 year rule, and our hearts must go out to Bracknell who were surprised when a whopping great oak tree crushed their raised track just before Easter.

David Goyder, Newsletter Editor

CHAIRMAN'S CHAT

Well the AGM has come and gone and we are now on a new footing and have put the old Federation to bed. It was with sorrow that I closed the business of the old Federation as it had served the Hobby well for so many years. The past committee members gave freely of their time for that period and looked after the Federation's interests very well but times have changed and in this world of increased litigation I feel we have gone down the correct path as to enhance the security of our Committee Members. It has been a time consuming process for the committee and I thank them all for the freely given hours of work it has taken to lay the foundations for the next Century of service to our members.

Summer is almost here we have had another successful Boiler Seminar jointly held with the Northern Association. Boiler testing is well under way at a large number of clubs and the grass needs cutting. When I was passed out for driving by my inspector he left me with words of wisdom which I pass on to you. Visitors to any attraction expect a happy time out and do not expect to be exposed to any form of danger or accident and will go home with happy memories of a great time.

Please have a fabulous Summer and enjoy our great Hobby.

Brent Hudson Chairman

Southern Federation of Model Engineering Societies

EVENTS, EVENTS and more EVENTS 2015

25-Apr-15	IOW Annual Rally
25-Apr-15	Spalding Model Engineering & Hobby Show
26-Apr-15	Spalding Model Engineering & Hobby Show
08-May-15	Harrogate Show for 3 days
16-May-15	Welling & District Model Engin'g Society, Open day and Gauge 1 get together.
16-May-15	POG Rally day at Derby
17-May-15	Chicester Steam on Sunday Afternoon PO19 7FS
23-May-15	Southern Fed Spring Rally - Hereford
30-May-15	Guildford "Southern Railway Locomotive Rally (Steam, Diesel, Electric)
13-Jun-15	HWSME Open Day
14-Jun-15	HWSME Open Day
21-Jun-15	Chicester Steam on Sunday Afternoon PO19 7FS

Southern Federation Trophy & Polly Model Engineering Prize

Mike Crisp, a man who needs little introduction to the Model Engineering fraternity took the floor as Master of Ceremonies for the Southern Federation Trophy and Polly Model Engineering Prize giving.

“Good afternoon ladies and gentlemen, I’m Mike Crisp.

I’d like to begin by saying how much we appreciate the continuing and generous support of this award by Andy & Jayne Clarke of Polly Model Engineering Limited and regret that a prior commitment prevents them from being with us now. In their absence our Chairman, Brent Hudson, will make the presentations.

So, it’s with the greatest pleasure that today I’m able to introduce two fine young men who’ve been commended for their participation in our wonderful world of model engineering.



Chairman Brent Hudson (l) presents Edward Crabb with his award. Mike Crisp looks on.



Proposed by his Grandmother Ann Hatherill, Archivist for the Society of Model & Experimental Engineers and a model engineer in her own right, our winner of the 2014 Southern Federation Trophy & Polly Model Engineering Prize is fortunate in that he’s grown up with model engineering. As a young child he was always wanting to be making things. When a little older, he became Granddad’s Apprentice during school holidays, completed a stationary steam plant and started work on a steam crane.

We’re told he helps at exhibitions, participates in track events and attends Society meetings whenever he can.

Last June, at the age of just 15 years, he followed family tradition and joined the Society of Model & Experimental Engineers. His Mother Mary weaves intricate contemporary basketry, some in silver, and teaches her craft at West Dean College. His Father Trevor is a skilled toolmaker with a home workshop. His late Grandfather Gordon was a prolific and respected model engineer and his Great Grandfather Bill Carter was the winner of major awards for his fine locomotives.

The winner of the Southern Federation Trophy & Polly Model Engineering Ltd prize receives a £50 Polly Model Engineering voucher, a handsome engraved glass trophy and a £25 cash award. Ladies and gentlemen, please join with me in congratulating Edward Crabb.”

EVENTS, EVENTS and more EVENTS 2015

04-Jul-15	Guildford Show and Rally 2 days
01-Aug-15	3 1/2 " day at Southampton
01-Aug-15	Weald of Kent Steam Rally TN26 3QY 2 days
14-Aug-15	Bristol Show for 2 days
22-Aug-15	Singles (wheels) day At Southampton
29-Aug-15	Harrow and Wembley Society of Model Engineers Open Day
30-Aug-15	Harrow and Wembley Society of Model Engineers Open Day
31-Aug-15	Harrow and Wembley Society of Model Engineers Open Day

Southern Federation Special Award

Following the presentation of the Southern Federation Trophy and Polly Model Engineering prizes, Mike Crisp continued,

This year we're also presenting a Special Award.

Proposed by his Mentor, the Rev'd John Roberts, Secretary of Pimlico Light Railway, I'd like to tell you about a young man who is a much valued member of the railway. His methodical approach, analysis and determination have resulted in the successful restoration of an elderly and ailing 5 in. gauge Simplex locomotive to a condition that allowed him to use it to haul passengers during a recent public running day.

In order to improve the locomotive even further he's a regular attendee at the Pimlico Light Railway evening engineering sessions. We're told he can be relied upon to volunteer to help out at the railway whenever there's a staffing shortage and his contributions include work on passenger cars, track alignment, maintenance of signaling equipment and clearance of rampant undergrowth.

He helps the more junior members of the club and has just bought a second hand Polly IV locomotive in need of finishing and painting. He's also a valued member of the Northampton & Lamport Railway where he fires and helps to maintain the Peckett locomotive.

In view of his contribution to club activities, the committee of the Southern Federation of Model Engineering Societies is pleased to award a framed Certificate and a £25 cash prize. Ladies and gentlemen, please



*Jack Colby receiving his prize
from Southern Federation Chairman Brent Hudson*

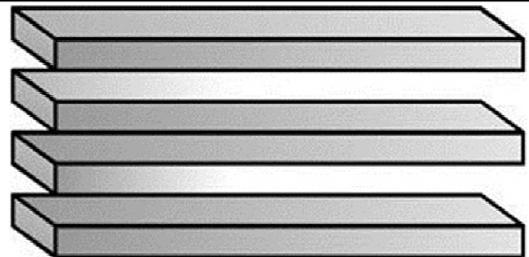
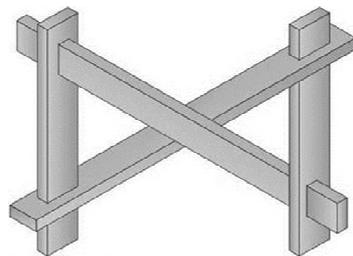
join with me in congratulating Jack Colby.

We wish both Edward and Jack much pleasure and satisfaction in the pursuit of their hobbies and every success in their studies. We're grateful to Ann Hatherill and John Roberts for bringing them to our attention.

Our thanks also to all of you here for joining with us to congratulate these two fine young men."

And here is a challenge
for the aspiring Model
Engineer.

Try your hand at making
one of these.



EVENTS, EVENTS and more EVENTS 2015

19-Sep-15	Southern Fed Autumn Rally - Southampton
20-Sep-15	Chicester Steam on Sunday Afternoon PO19 7FS
26-Sep-15	POG Rally day at Maidstone
3-Oct-15	Welling & District Model Engineer' Soc Open Day & Gauge 1 get together
15-Oct-15	Midlands MEEE for 4 Days
25-Oct-15	Roxbourne Railway Halloween Run
06-Dec-15	Chicester Santa Special Afternoon
13-Dec-15	Chicester Santa Special Afternoon

And do send us your events and celebrations as we can give you publicity and tell the world about your days and get them into the SFMES website!

A report on the Southern Federation Annual General Meeting Bursledon Brickworks on 14 March 2015

The Annual General Meeting (AGM) was held on Saturday 14th March at the Bursledon Brickworks Museum near Swanwick. The museum's display of tools, machinery and brick products were open to the delegates during the morning, as well as the Hampshire Narrow Gauge Railway Trust, whose site which is within the grounds of the brickworks. Lunch and light refreshments were provided throughout the day in the tea rooms of the museum.

46 delegates attended the meeting, representing 27 clubs and societies, a welcome increase to the representation at the previous AGM. The meeting heard reports from the Chairman, Treasurer, Safety Officer and Boiler Registrar on the business of the Southern Federation during the previous financial year and an update on insurance matters from Tony Wood of Walker Midgley Insurance Brokers.

Following endorsement by the delegates of the proposal to wind-up the 1970 established organisation, the Inaugural General Meeting (IGM) of the new Southern Federation of Model Engineering Societies, incorporated in April 2014 as a Company Limited by Guarantee was held. The focus of this meeting was the appointment of Officers, by the delegates, to run the Company for the next 12 months, followed by the presentation of the Southern Federation Trophy and Polly Model Engineering Ltd Prize.

Minutes of the proceedings of both the AGM and IGM will be made available in the members area of the website www.sfm.es.co.uk If you have any questions regarding the AGM or IGM, or about the changes with the incorporation of the Southern Federation, please do not hesitate to contact me using the contact details on the website.

Peter Squire, Secretary

It was not all work at the AGM. As Peter has mentioned above people at the Bursledon Brickworks Industrial Museum gave us a very warm welcome and showed us what brick making is all about.

Some of had had the privilege of hearing a talk given by Carolyne Haynes who looks after the Brickworks Museum so some of us knew a little about it. Carolyne starts her lecture with a description how the Egyptians made bricks using clay and straw. My quite religious grandfather used to have an expression of joy, "corn in Egypt", so that is where that expression comes from!!! The Southern Federation had arranged for the stationary steam plant to be run up and many watched the starting operation with some fascination.

Some time was spent warming through and just enough steam was allowed into the cylinder and then released through the drain cocks.

Then came the process to position the piston off 'dead centre' and ready to revolve in the right direction as apparently it can start in the wrong direction!

This is achieved by using a massive bar that is inserted into one of the gaps in the arced ratchet plate behind the flywheel



The racket arc on the right

(see picture, lower left) and levering the piston into the correct position. It appeared quite frightening as one could image what would happen if one did not get the bar out in time. But it all went very smoothly and the engine sprang into life.

The quietness of this massive piece of machinery working was, as the Americans would say, awesome!



And little did we know that the brick making machinery in the next room sprang into life as well, it was all direct coupled. Once this was enjoyed, lunch

beckoned and then time to get down to business, to be organised by the ladies helping and to start the AGM(s).



Simone Squire, Francis Mayall & Janie Goyder

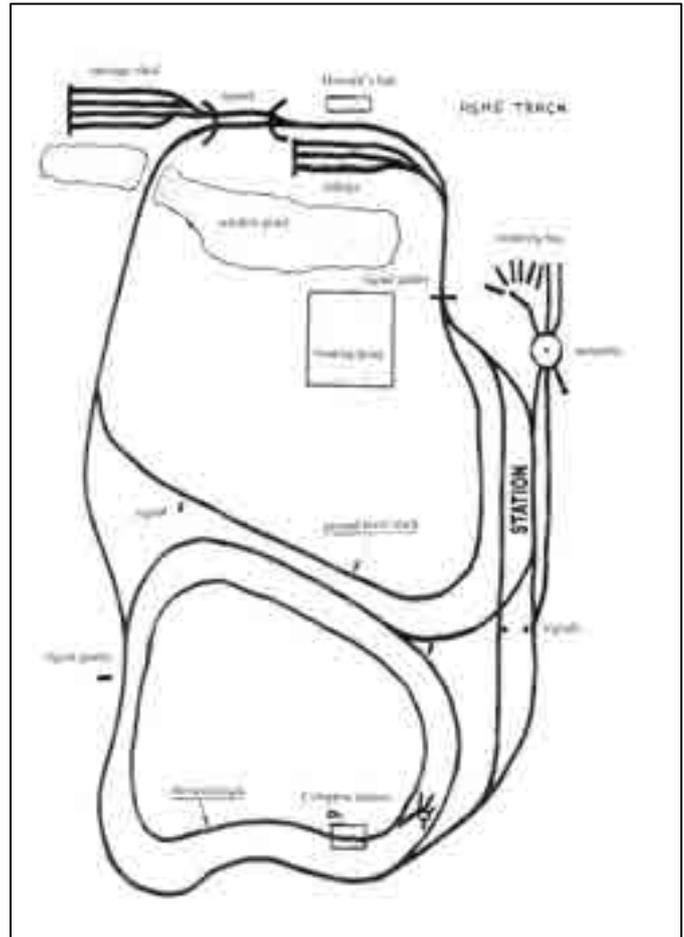
Southern Federation Spring Rally 2015—Hereford

This year the Hereford Society have kindly offered to host the Spring Rally. Details have already appeared in the Newsletter and on the Website, and the Rally takes place on the 23rd May. As a consequence, on the two following public running days they will only have space for a small number of caravans. It will not be possible to move caravans onto or off the site between 11 am and 5 pm on those days. There are of course some very good caravan sites within easy reach of Hereford for anybody they cannot accommodate. Can caravan owners please contact them as soon as possible to book a spot?

The Hereford railway sounds superb for a Rally so I am happy to un-ashamedly repeat their description from the last issue.

Our Broomy Hill site is owned and maintained by HSME members. It is situated about a 10 minute walk alongside the river Wye, from the centre of the City of Hereford on about 4 ½ acres of land. The ground level track, which is 7¼ inch 5 inch dual gauge, is mainly flat but has enough gradients to make driving interesting. The station has a 70 ft long canopy over 2 platforms with a ticket office and signal box from where the pneumatic signals and points are operated. Locos enter the station on platform 1 from 6 steaming bays via a turntable. As you leave the station on a slight incline from platform 1 you join the main track, taking you alongside the river, passing the elevated track on your right which is 5 inch 3½ inch dual gauge. A bend brings you to the first gantry with two semaphore signals where you will be guided into the river loop line running around the elevated track. Trains on the jubilee loop will be running on your left in the opposite direction.

After being given the signal to leave the river loop, you re-join the main line alongside the river. This time the semaphore signals send you up the back straight through the nut grove with a gradient leading up to the tunnel which is dug into the hill side. As you enter the tunnel across the bridge over the wild life pond you will see the carriage shed and main workshop on your left. Leaving the tunnel you will drive alongside an embankment with Howard's Halt station on your left and the wild life pond on your right. You continue around the willow tree bend where signals on a gantry



will offer you three tracks. There is the jubilee loop line back to the nut grove and tunnel or lines to platforms 1 and 2 at the station.

At the north end of the site on higher ground than the tracks there is the garden railway, young engineers workshops, projects building with '00' gauge layout, the club house with catering facilities, a toilet block and a maintenance area. Adjacent to our site is the Hereford Waterworks Museum. It is one of the finest small industrial museums in the country with a number of working steam engines and other fine exhibits. You should try to find time to visit the Museum. It is a must on your list, as well as the riverside walk from the site to the Hereford Cathedral and the Mappa Mundi.

Southern Federation Autumn Rally 2015 - Southampton

The date for your diary is September 19, a Saturday, for the Rally. Those who wish to may stay for passenger hauling on Sunday 1 to 4-ish pm.

Have a look at www.southamptonme.org for many of the details. We plan to put caravans in the middle of the track provided the ground is firm. If too soft, in the adjacent parking lot. We are equipped for most eventu-

alities and have good facilities. We have a raised 5" & 3 ½" and a ground level 7 ¼". Lots of space for a Traction engine utopia.

Lots to do in town away from the railway, West Quay Mall for retail therapy, maritime museums and we might even have a couple of Queens in town!

Details in the next newsletter.

Exhibition Variety

One of the joys of going to Model Exhibitions is to explore the variety of modelling. This is no less evident than at the Sandown Model Engineering exhibition. I was allowed to escape the Southern Federation stand (very smart it is with the new look!) to photograph some of the exhibits on display. Alas the light was poor, the camera not the top of or even middle of the range and the operator, well, even the camera was better. However the models shone through despite the foregoing with quite a lot of help from the fine photographic work of Mike Crisp.

The variety was inspiring. Trams, WWI howitzer, stationary engines, battle ships, carts, caravans all horse drawn, a flower class corvette, the only one left is HMCS Sackville in Canada, a French steam driven auto bus, articulated lorries, (semi trailers), steam launches for the very well to do, and yes a few steam locomotives. But what a variety. This is a little picture show. (Alas the Sandown Exhibition seems to be in a state of transition but I am sure it will reappear somewhere, far too good to disappear!)



Diorama including Flower Class Corvette by Derek Elliot, Ickenham & District Society of Model Engineers.



1:12 scale 15" WWI Howitzer by Admiral Sir Reginald Bacon. 12 were built for the Western Front. ME 7 Sept 1922 for article.



Land Rover discovery by Angus French (Aged 14). Note detailed transmission, suspension and steering



Left,
1/90 scale
French battle-
ship Richelieu
by Phoenix
member

Right,
From the
Tramway and
Light Railway
Society



Exhibition Variety, continued



The Hook Green Street Tramway by Ashley Best
A 1/16th model with many features seen in the tramway era
as a Bury tram emerges from underneath the bridge.



Close up showing detail of a working 1/3rd replica 7 cylinder Radial Armstrong-Siddeley Lynx IV aero engine. by Stephen Wessel.



5 HP New Holland "Hit and Miss" engine made by Alan Thatcher from scrap metal with the exception of the flywheels.

The name comes from the method of speed control that is implemented on these engines (as opposed to the "throttle governed" method of speed control). The sound made when the engine is running without a load is a distinctive "POP whoosh whoosh whoosh POP" as the engine fires and then coasts until the speed decreases and it needs to fire again to maintain its average speed. Source Wikipedia.



A radio controlled combination from the "midlandandsoutheastrctruckers" group.



Above
LSWR Beattie Clyde Class 2-4-0 Express Locomotive from 1859
by Peter Fagg. They worked on the London to Southampton line
and were handsome locomotives from the 1850s and 60s

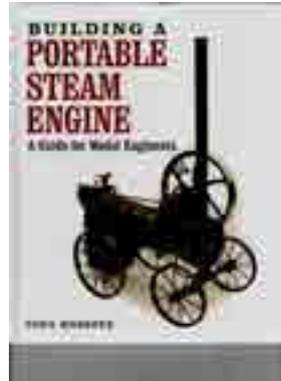
Left
5" gauge Midland Railway Motor Car van by Guy Harding

Book Review

Building a Portable Steam Engine—A Guide for Beginners

By Tony Webster The Crowood Press £19.99 pp112

In his introduction Tony Webster says, “This book details the construction of a portable steam engine and is written for the complete newcomer to model engineering.” This seemed promising as the hobby needs something to help newcomers to the hobby, both young people and keen retirees who are not apprentice trained tool makers.



Webster starts with a brief but interesting note on the origin of this sort of portable engine. A newcomer might have been interested in a little more.

His next eleven pages in the second chapter cover the workspace, tools and materials. Here he enters a minefield where he is probably damned if he does and damned if he doesn't give his newcomer a full and lengthy discourse of all the tools and gadgets that a model engineer needs. A couple of examples will suffice. He jumps from vices to three jaw chucks within a few words. His advice on fixing, using and sizing vices is excellent but then no word on how the newcomer fixes the three jaw? (The word lathe has not appeared yet.) In the next paragraph he tells his newcomer to use the soft jaws. He has never heard of 'soft jaws' and is left dangling. In contrast the discussion on taps and dies is illuminating even to someone who has broken a few. The section on riveting was un-riveting but then Webster redeems himself finally with an explanation of what compromise a soft jaw. The minefield has been negotiated successfully, just!

Webster's complete newcomer begins making the wheels and a thoroughly logical place to begin. The

metal bashing description is comparatively straight forward and our newcomer is starting to get a feel for the hobby. The wheels done, the author takes him within two short chapters to the frightening world of copper boilers. Here Webster excels.

The author's path through the adventure to build a copper boiler is clear, meaningful and full of confidence. It is well illustrated and comes over as an area he loves. This may not be a seven and a quarter pacific boiler but using a quarter of the book, he treats it with the same loving care. By the end of this section of the project his newcomer will be getting some confidence. He has been warned, of course, in a foreword by D A G Brown that model engineering is not as easy as it looks and this is wise counsel but when he has finished his boiler he may have a better understanding of this advice.

The remainder of the project almost feels as if the newcomer has crested the peak and can relax as his knowledge grows. He is guided through the boiler fittings and the engine itself. Here the drawings appear more plentiful and clearer and in a pleasant sort of way reflect the new confidence that our newcomer will be experiencing. There is still a lot of work to complete but it will be flowing better. This treatise concludes with a fun bit, the governor with its two balls flying around and other details. A useful appendix of suppliers and index conclude.

Does this book succeed? Yes it does, is the only verdict notwithstanding the opening minefield. Should Webster have introduced the tools as the newcomer needed them and embedded their use in the text? Perhaps, but not an issue to detract from a fine contribution to the changing world of model engineering. More please Mr Webster!

Boiler Testers Seminar in planning

Please let us know when Clubs and Societies have current or potential boiler testers and/or witnesses wishing to take training or refreshing so the Southern Fed can organise your next seminar. Location will be dictated by where the demand is located. Please contact Peter Squire or David Mayall or for that matter any committee members who will forward your needs on the proper person.

The Strategic Reserve, Fact or Fiction?

Discovered by Bob Lumb, West Riding Small Locomotive Society

The early 1960's were in retrospect dangerous times. The building of the Berlin Wall in 1961 followed by the Cuban missile crisis of 1962 are well documented examples of how close we came to becoming embroiled in another world war. Not so well known however is the intention by the Soviet Union in late 1962 to destabilise the UK by its attempt to paralyse our transport system. At that time prior to the extensive motorway network of today most goods were still being carried by the railways. Diesellisation of motive power on the railway is in full swing and the steam locomotive is rapidly becoming obsolete and consigned to the scrap heap. The Tory government of the day becomes alarmed by the unreliability of the new diesels and concludes that saboteurs under Soviet influence are responsible.

To counter this threat a security council of high ranking ministers is formed. Designated somewhat unkindly the Snake class their task is to introduce counter measures and safeguard the country. The initial group are known as "Adder", subsequent groups take the next name as "Boa" (For the IRA threat) and thence the name we are familiar with today "Cobra" (For the Islamic threat) A number of directives are issued by the "Adder" group to the Railway Executive one of which is to form a strategic reserve of steam locomotives as security for the future. These locomotives are to be selected for their useful merit on passenger and freight trains and to be stored securely out of sight from the public fully serviced and in good order.

Many years after this and long after successful diesellisation of the railways, I was idling away time in a local Mirfield hostelry, I had chance to strike up a conversation with an elderly gentleman sat alone alongside me, he was a retired loco fitter from the local engine sheds which until closure were quite extensive. It is not important what his name is although I will call him Harry although that is not his real name. This is a transcription of his story which he narrated with great clarity as if remembering something from only yesterday and not from over 50 years ago.

"It was in December 1962 just prior to the heavy snows and icy conditions of that awful winter we had that year when I was on a train travelling down the Calder Valley towards Mirfield. I recall the train being hauled by a Class 4 tank in place of the usual DMU which had yet again failed. I'd been seconded to some repair work at Sowerby Bridge loco for a few days where there was a shortage of fitters and returning to my home shed. Once we got to Mirfield I took the usual cinder path to the shed entrance and looked for the shed master to get my next job instructions. It wasn't long though before he found me and I'll never forget his words.

He had an agitated look on his face as he approached me rather suddenly from behind a loco and said "Nah then Harry, now that th's back I want you to prepare our three "A" class ready for movement. Make sure there'll sound and go wi' crew to Rishworth branch tunnel at So'by. Tha's to leave them inside there as part o' a new reserve. T'other "A" class from Low Moor an Sow'by are also gonna be put there. Am told that should give us half a dozen solid engines for future! Well I looked at him in amazement the "A" class were considered popular albeit a bit rough riding, but what would you expect with engines over 60 years old?

"Why "A" class boss, why don't we put our Scots away instead" I replied, the Royal Scots had only been with us a few months after transfer from Holbeck but we had little suitable work for them and they were a nightmare to maintain. "Don't argue with me" says the shed master, "you know that Richard Aspinall wants the "A" class looked after, it's him that makes the decisions"

Richard Aspinall was in those days the District Motive Power Superintendent and a direct descendant of John Aspinall the old Chief Engineer of The Lancashire and Yorkshire railway. "So it was, that a couple of days later I was travelling on the footplate of one of the three "A" class, with mates of mine on the other two, the loco's were not in steam, we were towed by one of our 8F's down the line to Sow'by. Once we arrived after some quick shunting the 8F propelled us onto the Rishworth branch and very soon we entered the tunnel close to the station. Almost immediately I sensed something was wrong, the far end of the tunnel where you would expect to see daylight was dark. No way out. I got off the engine and after a short walk down you could just about make out it had recently been bricked up. Well, after leaving the three "A" class there, mid gear, hand brake hard on as per the book, myself and my two mates left to get a lift on the 8F to the shed for a brew. Before we got clear of the station arriving behind us was a run down Austerity pulling a couple more "A" class, I recognised these two as the Low Moor ones."

Harry paused at this point had a sip of his beer and looked rather distant for a few minutes before he continued. "I can remember leaving the shed a bit later and we got held by the home starter on the station platform, the So'by pilot, I think it was their 4F was propelling another "A" class into the tunnel. It was 52121 the last one at their shed, always a bit of a pet. If that wasn't all a bit odd then the work gang around the tunnel mouth was all a bit stranger. A couple of blokes were unloading scaffolding poles from a open wagon in the head shunt and coupled to it were

two trucks full of bricks. They were wasting no time in getting that last portal sealed."

Harry paused again, had a look around him and finally said in a low voice "That night me and my mates who'd been riding the locos got a knock on the door from a Police Sergeant and a bloke in a suit, we were asked, no told, to sign some papers with some talk or other about official secrets with no uncertainty about what would happen if we spoke about it. None of us to my knowledge have ever mentioned this before, it was never spoken about on shed. The other's have all now passed on and I think I'm the last to know."

Harry left soon after and I never saw him again, he lived alone by then after losing his wife some years earlier, tragically he was a victim of a burglary just a few days later and although they didn't touch his telly or for that matter his watch and wallet, books and papers he had of his time on the railway had gone. He never recovered from that and passed away quietly shortly after. This then is Harry's story, I'd forgotten about it until recently, it had just layed at the back of my mind. Then I saw in the newspapers that under the

50 years rule government records relating to that time were being made available online. It didn't take all that long to discover the facts behind the "Adder" meetings with minutes of their meetings recorded clearly. It was then I began to think more and more about Harry and his story. Further digging around in official records revealed that in the mass withdrawal of steam locomotives in December '62 there were many Scottish Black 5's, Clans, and Jubilee's condemned, most of them to the surprise of local shed staff as they were left short of motive power. What happened to most of these? I could not find photographic evidence of the loco's being cut up. Nor for that matter any pictures of those six "A" class being cut. Records are sketchy and often missing for a lot of these '62 withdrawals. There is, however, no shortage of closed tunnels in Scotland, most of these when you talk to the locals being sealed in early '63. So, are there six "A" class locos entombed in the tunnel at Sowerby Bridge? Will we ever know?

Bob Lamb

Fire Hazard - John Briggs

(Reprinted from Goodwin Park News, Plymouth Miniature Steam)

There is a sad tale in issue 4498 of the Model Engineer that relates the complete destruction of a workshop, double garage and greenhouse from fire. The cause is attributed to a Stanley cordless drill's NiCad battery that was left on charge overnight on the bench and caught fire. That particular battery is apparently under investigation but nothing relevant is shown on the internet. Perhaps there is more of a risk to this practice than some of us have assumed?

Changes to Postage Charges means No Change

Our esteemed Boiler Register, David Mayall tells us that even though the postages rates have gone up on many cases, the effect will be minimal and there will not be any need to changes charges to member societies for the supply of boiler test registration or recording documentation.

EVENTS, EVENTS and more EVENTS 2015

The Peterborough Society of Model Engineers Ltd. 2015 Speakers Programme.

All Saints' Church, Park Road, Peterborough. PE12UJ (for Sat Nav Use/for the Church Hall)

Third Mondays In The Month, Meetings Start 7:30 PM to 9:30PM

April	Mr. Tim Cole, Talk on the Loco with the Jet Engine
May	Mr. Derek Brown, Drilling Accuracy
June	Mr Brian Fosh, Vintage Motor Cycles
July	Mr. Dale Thornburn, Running Gauge One Engines At Dales Home.
August.	Mr Rudi Michetschlager, Talk Model Eng and Life Story
September y	Mr Iain Smith, Drainage of the Fens Middle Level
October	Mr. Dean Rogers, Traction World Steam Traction World.
November	Mr Derek Brown, Accuracy in Model Engineering.

Steam Locomotive Development

by David Andrew, The Aylesbury Link Autumn 2014

Where would the development of the steam locomotive gone if it was not wiped out so quickly by the diesel engine?

As suggested previous articles, there are lots of flaws in the traditional design we are so familiar with so could, or would these have been eliminated? Well here is



Southern Region Leader Class locomotive.

some speculation on my part.

I think Bullied had the right idea with his Leader class locomotive even though

it never made it into service. A complete change in design concept for a steam engine

A multi-cylinder engine would be a much better prospect than a pair of large cylinders in terms of getting steam in and out, and with balanced poppet valves to control it. The compact Sentinel steam lorry engine had a lot going for it in its design.

Power to the wheels would be through gear transmission with an engine mounted on each power bogie with perhaps three powered axles.

The boiler would take on a more efficient design such as that in modern coal fired power station using powdered coal blown into the furnace. This could all be done remotely and automated with the fireman overseeing the process.

Both the fireman and the driver could now move to the

front of the loco. And certainly give the driver a better view of where he was going. I personally would be terrified at the thought of driving something like a Duchess at 100 + mph while sitting in a seat at the back.

The next logical step would be to compound the engine and add a condenser for more power and efficiency.

But, when you have done all this you might ask the question whether it is really practical to have all this steam generation plant, and fuel, and water hurtling round the countryside.

The thing is gradually looking more and more like the outline of a diesel locomotive and the general layout of the power plant is also morphing into a similar configuration.

It now becomes apparent that when comparing all that steam generation plant coal and water with just a big tank of diesel it's no contest in terms of a prime mover.

If you still want to use steam to generate power the obvious place to do so in a big (very big) power station and scrap the reciprocation engine for a turbine which is very much more efficient on a large scale and will turn out huge amounts of electrical power which you can send down a wire to a nice clean locomotive. The turbine was tried on a steam locomotive but never proved to be practical or successful.

It seems whichever way the development of the steam engine could have gone it would be trumped by a better alternative so sadly we are left with all those wonderful hot, smelly, oily, dirty, inefficient, hissing, monsters that we all love and enjoy but had nowhere to go economically.

GUIDANCE SHEETS

The following Guidance Sheets are currently available but are in the process of being reviewed and made a little more user friendly through the website. The content is written within the framework of the requirements indicated in the booklet *Passenger Carrying Miniature Railways, Guidance on Safe Practice (HSG 216)* issued by the Health and Safety Executive. A copy of this publication can now be downloaded from the Southern Federation Website for free.

The following Guidance Sheets can be downloaded from our website www.sfmes.co.uk:

No.	Description	Date of Publication
	Index	January 2014
1	An Inspector calls	October 2011
2	Passenger trolley gap covers	October 2011
3	Derailments: elevated track	October 2011
4	Derailments: ground level track	October 2013
5	Runaways and breakaways	January 2014
6	Safety Management Systems (SMS)	January 2014

Harry Brearley and the invention of Stainless Steel

One of eight siblings born into poverty near the Wicker, Sheffield, Harry Brearley (1871-1948) could be considered an unlikely individual to make a revolutionary metallurgic discovery. At the age of twelve he was taken on as a 'cellar boy' at Thomas Firth & Sons: the same crucible steel works that employed his father, whom Harry described as "an expert steel smelter and an expert ale super" (Sephton, 1999: 30).

In his own words, Harry was awarded this position simply due to the fact that his "face was cleaner than another's" (*ibid.*). Latterly Harry was promoted to the position of 'bottle washer' in the firm's chemical laboratories where he was greatly impressed by a chemist, James Taylor, who had become a night school student and won a Whitworth scholarship in the face of appalling poverty and difficulties. Harry also clearly impressed his employers, because soon after being transferred he was awarded the post of laboratory 'general assistant' and by his early twenties the firm had apprenticed him as a 'laboratory assistant'. For several years, in addition to his laboratory work, he studied at home and took evening classes in steel production and associated chemical analysis methods.

By his early thirties Harry had earned an independent reputation as an experienced professional, astute in the resolution of practical and industrial metallurgical problems. In 1901 he briefly left Thomas Firth & Sons to start a new laboratory at Kayser Ellison & Co. steel works, which was also based in Sheffield, but in 1903 he returned to the firm spending three years experimenting with different ideas for steel composition as the works manager of its steel plant in Riga, Russia.

In 1907 Harry returned to Sheffield to take charge of the newly established Firth & Brown Research Laboratories (following the merger Thomas Firth & Sons and John Brown & Co., which became 'Firth Brown Steels'). In 1912 the Firth & Brown Research Laboratories were commissioned to study rifle barrel metal erosion by a small arms manufacturer who wished to prolong the life of its guns, which were eroding too quickly due to the action of heating and discharge gasses. In response Harry set out to discover an erosion resistant steel, not a corrosion resistant one, and began experimenting with steel alloys containing chromium, because these were known to have a higher melting point than ordinary steels. He experimented with several variations of steel alloy, ranging from 6 per cent to 15 per cent chromium with different measures of carbon. In order to gauge the wear resistance of the alloy samples, he etched each with acid and examined the effect on the grain structure of the steel under microscope.



Harry Brearley being presented the Freedom of the City, Sheffield, 1939, source: Picture Sheffield

On the 13th August 1913 Harry created a steel alloy with 12.8% chromium and 0.24% carbon, which is argued to be the first ever batch of what became known as 'stainless steel'. The etching re-agents he used were based on nitric acid and he discovered that this new steel strongly resisted acid attack. However, his employers, Firth Brown Steels, were not interested in the armament potential of this new alloy, which Harry called 'rustless steel'. Therefore, he suggested alternative uses, in particular the utility of such an alloy to Sheffield's Cutlery Industry. Harry had exposed samples of his rustless steel to vinegar and other food acids such as lemon juice, and found that it resisted attack from all such substances.

At that time the majority of cutlery was either constructed of carbon steel, which had to be thoroughly washed and dried after use, and even then rust stains would have to be rubbed off regularly using carborundum stones. Or, it was plated with nickel or silver, which would eventually wear through to the base alloy. However, his suggestion that rustless steel would be an excellent material for cutlery production was publicly ignored, although privately Firth's are known to have sent two samples to Sheffield cutlers for their opinions.

They reported back that the alloy was useless due to difficulties in forging, grinding and hardening. However, these cutlers took no instruction from Harry regarding the correct temperatures or specifications to produce rustless steel wares and declared both batches a failure. The talk of the town was that Harry Brearley was "the man who invented knives that won't cut".

To be continued in the next edition

PUBLICATIONS AVAILABLE FROM SOUTHERN FEDERATION MES

The SFMES publications listed below are available from our stand at rallies and exhibitions or by post from David Mayall. Please make contact first by phone or email to get combined postage costs when ordering more than one item. (See note below). The figures shown here are for single items only. Please make cheques payable to 'Southern Federation MES'

Title	From Our Stand	By Post
Examination & Testing of Miniature Steam Boilers BTC 2012 - Green Book	£0.50	£1.25
Ditto - Pack of 5	£2.50	£3.25
Boiler Test Certificates - Pad of 50	£5.00	£7.50
Written Scheme of Examination - Pad of 50	£6.00	£8.50
Small Boiler Test Certificate - Pad of 50	£5.00	£8.00
Boiler History Record Card - Pack of 10	£3.50	£4.70
Plastic wallets to hold certificates size A5	£0.75	£1.50
Ditto - Pack of 5	£3.75	£5.25
HSG216 Passenger-carrying miniature railways 'Guidance on safe practice'	£3.00	£4.50

David Mayall
Tel: + 44 1252 684 688
Email: davidmayall@sfmes.co.uk

Or use <http://www.sfmes.co.uk/public/?action=publicpublications>

Postal Charges

In view of the hefty postal charges for packages in force currently, if you require more than one item please contact David Mayall first for advice concerning the postal charges

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INSURANCE CLAIMS AND INCIDENTS

All claims and reports of incidents should be notified in the first instance to Walker Midgley.

FEDERATION INSURANCE BUSINESS Managed by Walker Midgley Insurance Ltd

Committee members' contact details can be found on the Southern Federation MES web site

www.sfmes.co.uk

Southern Federation Insurance Scheme

We are delighted to recently have been appointed to arrange the Southern Federation's insurance scheme and we look forward to working with everyone. Clubs and Societies should by now have received an information pack detailing the transitional arrangements.

For the first year only it will be necessary for those clubs, societies and members who have their policy via the Southern Federation scheme, to complete a fresh proposal form. For miniature traction engines and other road vehicles up to 6in scale you need Model Road Steam Insurance. For locomotives, rolling stock, boats and other models you need Southern Federation Members Insurance. Both policies include the facility to insure Road Trailers, Personal Accident, Home Workshops, Products Liability and Garden Railways & Portable Tracks

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southernfed@walkermidgley.co.uk

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NEW BUFFER STOPS FOR BRACKNELL MINIATURE RAILWAY

Report from Paul Archer

Over the Easter Weekend Bracknell Railway society suffered a major incident at their Jock's Lane track causing the cancellation of public passenger hauling and the loss of significant income to the society. On the Thursday before Easter, a working party preparing the track for the opening of the new passenger hauling season noticed that two mature oak trees which previously had grown together had moved apart. The local authority was notified and they advised that remedial work would be undertaken but probably only after the Easter break.

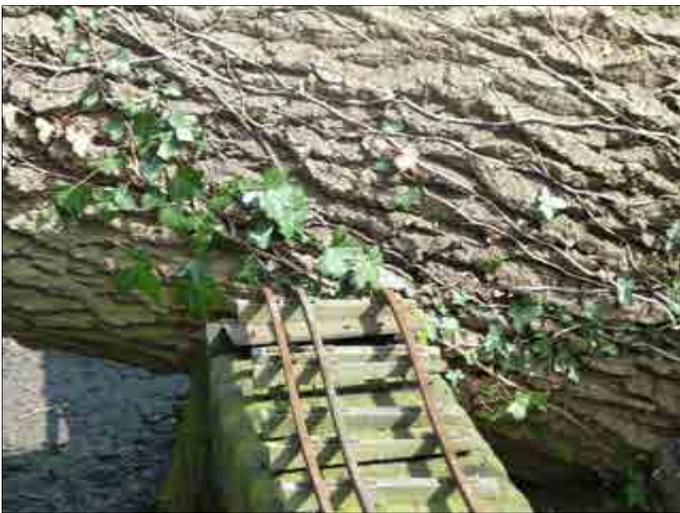
On Friday morning the Chief Engineer, Dave Mayall was notified by the local authority that the trees had fallen. One had fallen into the adjoining all weather playing field but the second had fallen across the track taking out two panels and the supporting piers.

The track is dual 3 ½ and 5 inch gauge and is located within Jock's Lane Centre which contains sports and play facilities. The railway operates on bank holidays and the second Sunday of each month and is a very popular venue particularly over Easter and other bank holidays.

Unfortunately removal of the tree cannot commence until Tuesday preventing any attempt to commence repairs. Public running will not therefore be possible in April. Hopefully once the tree is removed remedial work will commence with the aim of recommencing public running on Sunday 10th May.

The society recently obtained a lottery grant to install a removable section of track to aid access to the inner area. The removal of this section by a tree was not however part of the plan.

Paul Archer, Chairman



A different type of tree, some Symmetree

1 x 1 = 1
11 x 11 = 121
111 x 111 = 12321
1111 x 1111 = 1234321
11111 x 11111 = 123454321
111111 x 111111 = 12345654321
1111111 x 1111111 = 1234567654321
11111111 x 11111111 = 123456787654321
111111111 x 111111111 = 12345678987654321