

# EXPANSION LINK

## NEWSLETTER OF THE B&DMES

EDITOR JOHN TAVINER-VOLUME TWO-ISSUE THREE

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### *Editorial*

Here we are with another three months of 2008 gone by already. Another three months of mixed fortunes for the club. The July public running was abandoned due to rain. The vandals have been busy again with roofing felt ripped off, the station sign, made by stalwart member Fred Pheby, destroyed but repairable, breakages to some of the seating and removal of some slates from the roof of the picture framing unit next door. Terry Hobbs has had a meeting, on site, with the police. They tell us that their patrols do check the site on a regular basis but unless they can actually catch the offenders red handed that's about all they can do. The trouble is that as soon as the police approach the scene the vandals just hide amongst the trees and bushes. It seems the only solution is to erect a high fence around the whole site but the cost of this would be prohibitive. Club Treasurer Graham Blissett is to contact the Council, who own the site, to see if they can help in any way. We will keep you informed.

On a more positive note we have a few new members to the club including a couple that have rejoined after an absence of several years. Welcome to you all.

In this issue we have the continuation of Graham's series of articles under the title of Apprentice Swarf Making. Ian Roberts and Dave Mattingly give us a couple of tips on how to get over some of the problems we all suffer from time to time and our youngest member (my grandson James) relates a day out with a group of members

to Minehead. Another regular contributor, Ken Jones, gives us a new take on an item that we are all familiar with. Once again not strictly speaking a model engineering topic but interesting. If any members object to me using these articles then perhaps they would like to make a contribution. As I have said on numerous occasions in the past it can be on any aspect of our hobby including sales and wants

*John Taviner. Editor.*

### *Forthcoming Events.*

#### October

5<sup>th</sup> Public running

7<sup>th</sup> Meeting night

19<sup>th</sup> Members running day (Sunday)

21<sup>st</sup> Bits and pieces evening

25<sup>th</sup> Halloween public running (Sat evening)

#### November

4<sup>th</sup> Meeting night.

??? Viables Craft Fair ???

18<sup>th</sup> Bring and buy evening

23<sup>rd</sup> Members running day (Sunday)

AGM Date to be verified.

#### December

2<sup>nd</sup> Meeting night

7<sup>th</sup> Public running (Santa Special)

16<sup>th</sup> Meeting night

30<sup>th</sup> Members Christmas run (Tuesday)

### ***Chairman's Chat***

Dear members. Most, if not all of you, will be aware of the vandalism we are receiving at our Viables site. Several of us have reported this to the police on each occurrence and at the time of writing this a meeting has been arranged between the police and all the tenants at Viables.

The best way for members to hear the outcome of this meeting is to turn up to the Tuesday club nights and generally speaking it would be nice to see a few more of you turning up to these meetings. It would also be good to see a few more of you turning up to help on public running days. Whilst we can run with a skeleton crew it is much better if there is plenty of help, and although the weather has seen to it that we have had some poor public running days this year, it remains that public running is still our main source of income.

The club loco Class 66 is now up and running properly and has been revenue earning on our behalf. Graham Blisset, aided by Nick Taviner and their wives for the whole day plus James Taviner in the afternoon, did a public running session on our behalf at The Fleet Fete where the council allow part of the High Street to be cordoned off for the day.

Graham took his own portable track and trolleys and used his own Electric Loco until his batteries ran flat at midday. Whereupon arrangements were made with myself and Andy to meet Nick at Viables. Nick came from Fleet to Viables and Andy and me helped load the Class 66 and they continued to run until close at 4pm, earning a sum of money to help partially cover the losses we have incurred by having to abandon two of our public running days due to the inclement

weather. Incidentally for those of you who are interested it rained the whole day. I am sure you will all join me in saying a very BIG "THANKYOU and well done Lads and Lasses."

*Terry Hobbs. Chairman.*

### ***Secretary's Notes.***

Perhaps it's just me, but we seem to have had quite a quiet summer, club-wise. It could be something to do with the awful weather we've had. Anyway, as I write we have two running Sundays coming up, in connection with events at Viables run by the Lions and the Cats Protection League. These are good opportunities to boost our funds since the club gets to keep the fare income. As ever, for all public running days, volunteers will be most welcome to assist. You will read elsewhere about the very successful passenger carrying efforts at the Fleet event in early August. A big round of applause is due to Graham and all his helpers. Whilst writing about applause for efforts above and beyond, I feel we should all recognise and congratulate Mick Lowe and Fred Pheby, the former for organising and conducting the raffle, meeting after meeting, often in the face of ribaldry and barracking, and Fred for supplying Mick with some wonderful books as prizes. The raffle gives us a modest but steady income, compensating for this year's disappointing numbers, and both Mick and Fred deserve a big vote of thanks from us all. To round off the congratulations, I must also

mention those members who regularly come to the club on weekdays to keep the place tidy, cut the grass, clear up the litter, and latterly make good the best efforts of the local vandals. It's always a pleasure to see how tidy and well maintained the railway and grounds look. Thanks and well done to all of you.

Through the summer I have received a number of notices from other clubs advising us of their open days, exhibitions etc. These are displayed on one or other of the notice-boards in the clubhouse, so don't forget to have a quick look-see every once in a while. Finally, I am occasionally asked about the status of the Garden Railway. Other commitments have prevented the core garden members getting together to move things forward. We haven't given up, but realistically I don't expect any major progress before the winter.

*Brian Hogg. Secretary.*

### *Apprentice Swarf making: Part 2*

The first item to make on the Q1 was the tender frames, which I cut to length and clamped together using the three brake hanging points. As the tender frames were longer than what I could mill, I used these three points for positional references. I then used the mill as a manual CNC machine and milled out around the bottom edge of the tender frames.



Unfortunately, my first learning experience was that by only machining one edge, both chassis frames warped and twisted, so my first effort was consigned to the scrap bin. This problem is partly due to the stresses induced during manufacture.



After taking some advice, I started again, but this time I clamped the bar differently, and moved the frame outline in 100thou from the edge. Next I drilled holes all around the chassis frame outline, and then used the mill to machine to the chassis frame outline. This time everything worked. So purchasing 12ft of steel was worth it !! Once the frame outline was finished, I machined out the locations for the suspension and the positions of the axles in preparation for the horn blocks.



Next I machined all the frame stretchers. These all had to be milled to the same length, which I was able to do after some careful arrangement in the vice. As I was trying to build a semi-scale Q1, the outlines of the stretchers were along similar lines to those found on the real thing.



The most complex item was the buffer beam block, which I decided to machine from a solid 1.5" square bar, most of which was hollowed out. I believed that this block needed to be solid as, it supported the actual buffer beam, on which the sprung buffers and coupling hook were mounted, and a functional mount to hold the draw bar.

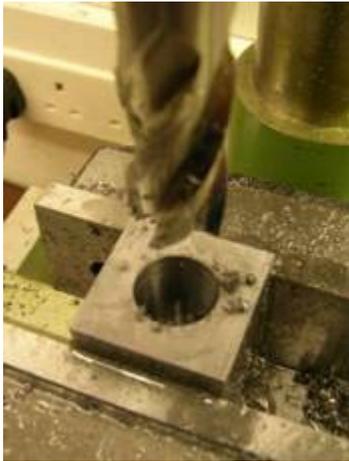


This buffer beam block was a particular challenge, as I used a fly cutter for the first time to reduce the thickness of the block down to 1.5" x 1.25". After this I proceeded to hollow out the block using slot and round nose mills.

The actual buffer beam, which was mounted onto the block, had thin protrusions under the buffers and coupling hook. For this I decided to thin down the 1/4" buffer beam by 1/16" using a magnetic chuck to hold the beam down.



The final stage was to manufacture the buffers, the housing's of which had a square mounting base. I started off by taking 1.25" square bar, and boring a hole most of the way through it using a range of increasingly larger sized slot and end mills, finishing up with a boring head for the last 75thou on the diameter.



The next stage was to convert most of the square bar to round. Again this was a challenge, as it required me to use a four jaw independent chuck for the first time. The first difficulty came centring the square bar in the chuck. For this I placed a live centre in the tailstock and then placed a 3MT dead centre between it and the hold in the square bar. Using a dial gauge I adjusted each pair of jaws, which were opposite each other, until the run out on the dead centre was less than 4thou. I don't know whether this is the correct way to centre an item in a four jaw chuck, but it worked for me.



After finishing both buffer housings I swapped the chucks over and proceeded to turn the ends of the buffers from a 1.5" round bar and a 3/4" round bar, which I used as the arm protruding from the buffer housing. Once the buffers were completed I assembled my "kit" of parts to produce the completed tender chassis.



So far the only "Commercial" items I have purchased are the springs for the buffers, the decorative coupling hook and the hex head bolts to hold it all together.

To be continued...

*Apprentice ME*

### *Steam Fittings*

I was browsing through the internet, a couple of weeks ago, and came across a website that supplies a large range of steam fittings. It appears that, although a long established company, they have recently started to produce a large range of steam fittings for model engineers. The range covers such things as: pressure gauges, globe valves, lubricators, water gauges, injectors, whistles and a whole list of various items. The point that may be of particular interest is that they sell directly to the public cutting out the middle man and

therefore keeping prices lower. I have not tried them but if you are building a new model it may be worth having a talk to them. They can be found at [www.steamfittings.co.uk](http://www.steamfittings.co.uk) or for those not yet into modern communication methods their telephone number is 01341 280637.

*John Taviner Editor.*

### *Hints and tips for live steamers:*

Last year I decided to replace the gauge glass on my pannier because the original clear glass was difficult to read. I purchased a selection of diameters of 'red stripe' glass from Polly Models on the basis that one diameter might fit (a rather agricultural approach I admit). I had previously seen this glass in operation on a 5" gauge Britannia down at Bournemouth. The refraction of the water against the redline magnifies it and you get a vivid contrast at the steam/water interface; red 'blood' where the water is and a faint red line above. 'Schelbach' gauge glass with the blue line which works in a similar way has become unobtainable in recent years.

It is standard boro-silicate glass tube which is easy to chop off to length. A scratch round the O/D with a three square needle file and 'Bob's your uncle'. The tricky bit was getting it to seal. The discarded clear glass was truly circular and it was easy to get it water/steamtight with plaited strands of PTFE tape. This approach failed miserably with the red glass which I discovered by 'miking it up' was very slightly flatted. Endless attempts with persistent drips was all I 'achieved'.

At this point John Hutson came to my rescue (and should be credited with the idea). He suggested using a 1/16" section 'O' ring at each end carefully ground to fit inside the gauge glass nuts. This worked perfectly at the first try and the gauge glass has behaved impeccably ever since. The thicker rubber section nipped by the nuts gives a resilient seal; the glass itself is ideally supported in the rather 'clattery' environment which is a locomotive footplate (but less clattery on GW engines I'm sure!).

My second point is obvious when I stop to think about it but as I've survived all

these years on half a brain I hadn't twigged what was going on. Last year, on a longish run with the pannier at the Guildford track, both the injectors had stopped feeding despite water being visible in the 'catering size baked bean tin' water container. I returned to the steaming bays blaming unreliable water feed.

When the same thing happened at our recent BLEC competition I topped up the tank and the boiler water level was able to be restored. It wasn't until I had returned home that the penny dropped. GW panniers have the injectors a good distance above footplate level and all that was happening was that the level in the bean tin had dropped to the level of the injectors and the supply stopped; gravity behaving as it always does. It was nothing to do with the injectors at all – no head of water – no flow to the suction. A slight mitigating circumstance is that this is the first locomotive where I've not had a pump. Pumps are usually set down low and will feed the boiler to the point where the tank is completely drained.

One final thing and nothing whatever to do with locomotive maintenance or operation is the mass of railway based video clips on 'You Tube' (on the internet). I discovered, amongst probably dozens of others, a ten minute footplate ride on 6024 (King Edward I) up Whiteball bank. The quality was surprisingly good. I chanced across them whilst viewing a 5" gauge Merchant Navy demo-run put there by one of the secondhand locomotive dealers. This was a very curious piece of film; the cameraman was sitting behind the driver and all you could see was the driver's bottom! The engine was completely hidden; unless you knew beforehand what the film was about you could not determine what was for sale

– presumably not what was filling the screen!! A word of warning to the easily offended; 'You Tube' contains material ranging from downright sordid to very entertaining. What you click on might not be what the title suggests. Caveat emptor!

*Ian C Roberts*

### **Workshop Tip**

I needed to turn a 1/8" diameter on a short length of 1/8" x 1/8" square section brass bar. How to hold it was the problem. Not having a square section collet (or any come to that) holding it in the 4 jaw chuck was the immediate thought that came to mind. Bit 'tiddly' I thought. Then the grey matter started to stir. How about a pin chuck. These have 4 jaws, adjustable and size wise a better bet than the 4 jaw. Into the tool box and there was one that fitted the bill. I popped the pin chuck into a 3 but the square section was running too far out. Put it in the 4 jaw and tried it up, lovely. Turning the diameter was now a doddle. The down side of the exercise was that having turned the diameter I then needed to drill a 1/32" hole through the piece. Yes you've guessed it, the drill broke just as it was breaking through and I've got to start all over again. At least now holding the second one will be easy. What is it they say 'One step forward and two back!'

Hope this will be of interest.

*David Mattingly.*

### **A day out with "The Duchess"**

Although not an official club day out this is a report of a rail journey taken by several members of the club to Minehead on Wednesday 20<sup>th</sup> August hauled by preserved LMS locomotive "Duchess Of Sutherland". In the event the steam hauled trip ended at Westbury and continued under diesel power

to Taunton. Apparently the change of plan was due to the difficulty of turning the loco at Minehead for the return journey. It was turned at Westbury and travelled tender first to Exeter where it was coupled up to its train for the return to London Victoria. The party, consisting of Steve Newell (organiser of the tickets etc.), Bob Lovett, John Hutson, John's son Russell, Eric Widdowson, Dave Andrews and myself, James Taviner, met up at Basingstoke station at 06.30 hrs to travel by service train to Clapham Junction where the steam trip was scheduled to start. We caught the 06.52 to Clapham where we arrived at about 07.30. On arrival we crossed over to platform five to await the arrival of "The Duchess". After a short wait



she pulled in and we joined our train for the day. An on time departure led to a good run out of London, after which we were checked with yellow signals all the way until being stopped by a red just outside Staines. After a short wait we pulled into the station to pick up more passengers. We made good time to Ascot for another pick up. Our final pick up was at Reading West. A half hour stop at Newbury for water then led to a 50 minute high speed run to Westbury. Here the "Duchess" left the train for a servicing and turning. After attaching the diesel the

journey continued to Taunton where there were coaches waiting to take us to Bishops Lydeard where we were to catch our connecting train to Minehead. On arrival at Bishops Lydeard we had a 30 minute wait for the WSR train which gave us time to look around the shop and the small museum. Our loco. for the afternoon would be ex SDJR '7F' 2-8-0 No 88, and heavily loaded with 9 coaches we left for Minehead. As we made our way it became apparent we were down on time and by the time we got to Minehead we only had ten minutes to enjoy it!! Two of us made a hot footed dash to the chippy, while the others stayed with the train. Whilst at Minehead the opportunity was taken to make an already heavy train even heavier by adding an extra 2 coaches and more passengers, which led to an impressive display by the locomotive on the return trip to Bishops Lydeard. The coaches then transported us to Taunton where the "Duchess" awaited us for the return journey back to Victoria.

All of our group, with the exception of Steve, decided to leave the steam special at Reading due to the late hour. Even so it was well after 22.00 before we got back to Basingstoke.

On behalf of all those that made the trip I would like to say thank you to Steve for organising a most enjoyable, though tiring, day out.

*James Taviner*

### *Viabes goes to Fleet High Street*

From a tentative enquiry made at the Milestones Model Engineering Show last April, B&DMES went and played trains in Fleet on Saturday 9<sup>th</sup> August during "Fun in the Street" organised by Fleet Business Partnership.

With 50m (164ft) of straight track, my 0-4-0

Saddle tank and rolling stock, B&DMES did chargeable passenger hauling for more than 6 hours, hauling over 450 passengers. The Saddle tank was worked so hard that the batteries were run down lower than they have ever been. Unfortunately, by early afternoon it was clear that the batteries on the Saddle tank would not last much longer, so re-enforcements were sent for. Nick and Erica Taviner came to the rescue by going back to Viabes and collecting the Class 66 club loco from its storage siding and transporting it back to Fleet.

The Class 66, on its second passenger hauling outing since its rewire, performed well for the remainder of the afternoon until we finished running at 4pm. We even had a number of passengers who returned when they saw we were running a different loco. All of this was achieved despite regular rain showers, interspersed with the occasional glimpse of sunshine. Unfortunately, when we closed at 4pm the sky's opened and all of those involved got soaked !!

None of this could have been achieved without the help of my wife Lois and John, Nick, Erica and James Taviner.

Graham Blissett

### *Has anyone seen my spanner?*

During a slack moment on the internet web chat group one of the members mused about the derivation of some of the words that we use in engineering, and a member offered this explanation for the word spanner.

In days of old a man's means of defending himself (and catching his Sunday dinner) was to use a bow and arrow. Obviously, given the thousands of years that this weapon existed there was considerable development, the English Long Bow being probably the ultimate version as a weapon

but some of the sports bows now used are very elaborate. There is also the Cross Bow which appears to have been invented in China some 5000 years ago and both types of weapon were in existence at the Battle of Agincourt in 1415. The English used the long bow and numbered about 5000 men and the French comprised 4000 'archers' and about 1500 cross bow men. It is said that the English Longbow men routed the French with their superior bowman ship. The act of pulling the string of a bow is referred to as 'drawing' the bow but apparently when applied to the crossbow it is called 'spanning'.

Early crossbows were spanned by placing the bow with the stock upwards and the centre of the bow on the ground. (Aiming at the floor, so to speak).

With his feet on either side of the body of the bow, or later by using a fitted stirrup, the bowman then used a hook which was around his waist to pull the string up to the latch. This was done by bending forwards, attaching the hook, and then straightening up. This was fine until (in order to obtain greater range) the pull required was increased.

So later crossbows were fitted with a sort of winch arrangement which required the use of a winding handle which engaged with a squared shaft. This handle would be used to wind the winch and via a series of cables and pulleys the bow would be spanned. The handle that was used on the squared shaft became known as a 'spanner'.

If this isn't true, then it's such a good story that it ought to be!

I can imagine that the presence of a handle with a squared hole would become a useful accessory for a number of purposes and one can imagine the comment 'hey, we can use

the spanner for that' would get used more and more. So there you are, next time you pick up a spanner think of the cross bow men who started it all and think of the pickle he would be in if he lost his spanner!.

*Ken Jones*

*6233*

Further to my report of our day out with "The Duchess" I think a few details of the history of this locomotive may be of interest. Designed by William Stannier she was built at Crewe and painted in LMS Crimson Lake



livery and entered service in the middle of 1938. A total of 38 of the class were built and were known as the

"Princess Coronation Class". Several modifications were made during her years in service including being fitted with a double chimney in 1941 and smoke deflectors in 1945. At sometime during this period she was repainted in LMS Black. On the formation of British Railways, in 1948, she was re-numbered 46233 and during the days of BR. she underwent yet another colour change, this time to BR Brunswick Green.

On withdrawal from BR in 1964 the locomotive was bought by Butlins, for display at one of their holiday camps. Later moved to Bressingham Steam Museum she was finally acquired by The Princess Royal Class Locomotive Trust and restored to mainline order at The Midland Railway Butterly and first steamed in 2001. The Crowns were added above her nameplates when she hauled the Royal train to mark Queen Elizabeth 11s Golden Jubilee.

*James Taviner. Picture by Steve Newell.*

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### **Email Addresses**

If you have received a copy of the newsletter by post, it is because we don't have your Email address. Each newsletter costs us about 60p to print and post, where as Email is effectively free. Currently, we do not have an Email address for nearly half the membership. If you do have an Email address, which we can use, could you please Email me with your details.

*Graham Blissett*

*Treasurer*

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Vice Chairman

John Croker

Secretary

Brian Hogg

Treasurer

Graham Blissett

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Bob Lovett

Member

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Fred Pheby

Electrical Work

Simon Hutson

Library

Ken Jones

Painting/Decorating

Vacant

Publicity

John Dixon/  
Assistant

required

Signalling

Graham Blissett

Station Building/Contents

Vacant

Track/Site/Ground Maint.

Dave Blaza/  
Mick Lowe

Traction Engine Track

Vacant

Webmaster

Stephen Newell

Newsletter

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