

# Sussex Miniature Locomotive Society



## Wharfedale News. Issue 8

14<sup>th</sup> May 2020

Dear all

Here we are with the 8<sup>th</sup> edition, how time is flying. Hope you are all still coping well with the lockdown and keeping busy, We are still finding plenty to do and catching up still on those “we will do it when have time Jobs” The upside of this is that there should be no catch up jobs left to do at the end when we can freely move around and can go out without a conscience.

We listen to the news and hear that there is hope that the infection rate is slowing down but I cannot see it making much difference to the daily life for many of us who still do not want to get Covid -19. I will enjoy a little drive around now as it is without fear of being called over by the police as need to get to see a petrol station selling petrol at £0, 90 per litre!

Keep safe

Mike

### **Brief club house NEWS**

#### **The new security system installation**

This has now been installed and in operation. All key holders should have been contacted on the process of arranging the collection of their entry FOB.

If you have not been contacted then please call Andrew Strongitharm.

Thanks Andrew S for organising it.

The security team are still doing their rounds, thanks to Andrew S. Andrew B. and Tom.

Wharfedale Article 7   On tour.



On a visit to Maidstone August 2005

## Mike P.'s Musings No. 7

### Les Clarke

Looking at Les Clarke's locos in detail casts an interesting insight into the man himself and how eventually he came to produce the long lasting 5" gauge locos that played a major role in passenger hauling at Beech Hurst. There are no photos that we know of Les's earliest engines, but Steve has found a couple of pictures to give some idea of Les's choices.



Les's first engine was a 3 1/2" g. 0-6-0 P.V. Baker. This was one of LBSC's early designs in this gauge. At that time, these were large engines for the home workshop builder, 2 1/2" being very popular previously. P.V. stood for piston valve and Baker for the Baker valve gear which LBSC knew well from his time living in the USA in the 1920's. However, Les modified it, with "Heilan Lassie" cylinders with slide valves. (Heilan' Lassie was another of LBSC's designs, a 4-6-2 tender LNER loco. in 3 1/2" g.) . Les built this hybrid engine in just 8 months! He claimed it was a good loco, but that it was "a bit rough" and the valve gear was "hopeless". He used to run it on a steel track in his garden with a 1 in 70 bank. It seems his neighbour's 10 year old son ran it each weekend, but eventually Les dismantled it, shoved it under the bench and forgot about it, never rebuilding it. It was sold to a lad at the Malden Track for £2.50 . The lad was Gordon Smith. Gordon's parents were so pleased they gave Les £5 instead! The engine was last heard of changing hands in the Malden club with the boiler

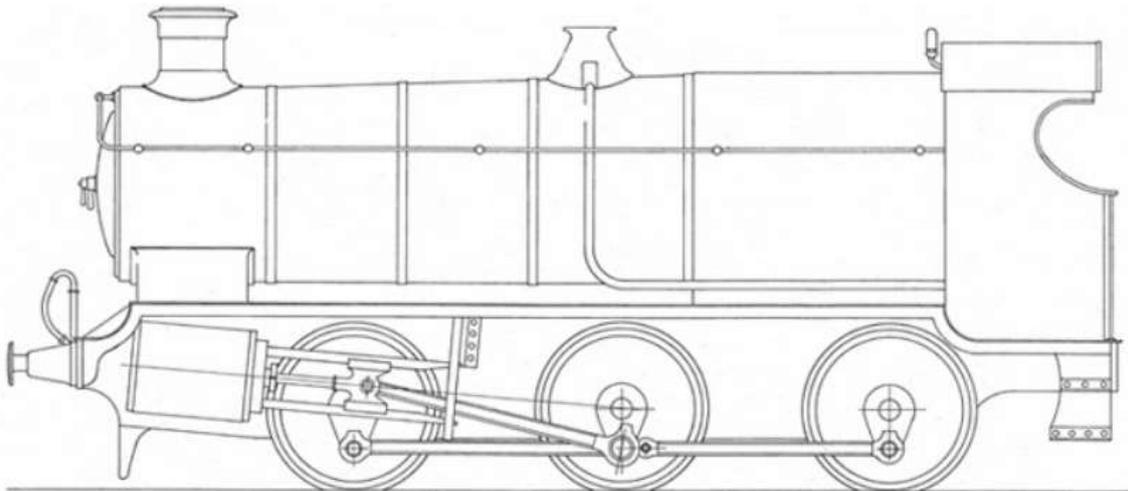
suffering leaking stays, which had been screwed and soft soldered, as was the practise back then in the days of paraffin blowlamps.

Talking of these semi lethal bits of kit, my father had one in his shed which I used to use to do all my soldering. My dad's was a "one pinter", in fact I used it to build my first boiler for a "Tich", supported considerably with the use of a "5 pint version" at my local club...now that WAS a beast! For those of you youngsters who haven't come across these( in the antique shop these days), you had to fill them with paraffin, then, with little bits of wood or wick, light a fire in a little pool on top of the tank to warm the vapourising tube thoroughly. After that, you started pumping a small plunger pump near the handle, meantime lighting the vapourised jet from the burner. Anyway, being young then and often in a hurry to complete work before doing my homework, I barely waited long enough to let the burner pipe get hot enough and started pumping. Of course, the burner started fine but within 5 seconds , not being properly prepared, it turned into a massive flame thrower. Luckily, the thing was pointing out of the door of my dad's shed, or the whole place would have gone up! Instead, the jet of burning liquid shot across the path and my mum's favourite dessert gooseberry bush went up in flames, like moses and the burning bush! Needless to say, I was not "flavour of the month", but in those days , nobody showed us how to do anything....we just found out the hard way. Health and safety would have a fit! Anyway,I lived to tell the tale, but I digress, ha,ha.

Engine No.2 was a 3 ½" g. straight LBSC's " Maisie". ( basically a GNR Atlantic 4-4-2). Les said it went well, but the valve gear was hopeless in reverse. He never painted this engine, but it seems it got sold on and later entered in the ME exhibition by the new owner in polished brass livery! Not much more is known about it , except he made a Curly's injector and fitted it to this loco. ("Curly" was another nickname for LBSC, supposedly because in his baby days he did have long golden curls. For you youngsters, LBSC was the pseudonym that "Curly" Lawrence used , and he wrote articles on building "small locomotives", as he liked them called. He was without doubt the inspiration for many in our hobby in the first half of the last century, and he wrote in the Model Engineer and in Practical Mechanic magazines almost without a break from the late 1920's until 1966 when he died, and designed dozens of the models we still

see today. Without his writings and clear drawings, I would never have built an engine and certainly would not be here typing this now!

But back to Les's work. When he built his first injector, it was one of a batch of 6. He said they were all "good feeders", and wondered why some people said Curly's injectors were no good. He gave three of them away, ( one apparently went onto John Seymour's Minx). He said he tried to sell some, but didn't get a single reply! No ebay in those days! Amazingly, he went on to make 28 injectors in all, even some for 7 ¼" gauge locos. It's interesting that Les claimed D.E. Lawrence (no relation to Curly Lawrence, and who also designed injectors) could not "make a go" of Curly's designs.



### "Iris" Drawings & Castings

0-6-0 GWR Tender Locomotive in 3.1/2"g by LBSC

*Two cylinders - Stephenson's valve gear - Slide Valve*

No.3 engine was even more of a hybrid...using "Iris" works and valve gear, "Molly" boiler and P.V.Baker upper.

(These are all Curly designs, and you will notice that most of his engines had popular female names of the day. Well, this was partly because Curly was a transvestite, almost unspoken of in those days, and I guess we always refer to engines as "she" ....the phrase of a driver saying "come on girl!" ring any bells?)

Les tried to make this engine as nice as possible, with good paintwork, and in fact won a "commended" at the M.E. exhibition. It too had a Curly injector and in those days (before SMLS) Les ran it on the Malden Track. It went well, but again the valve gear was lacking, especially in reverse. This one was sold to Kennions of Hertford (a model engineering supplies firm in the old days), and Les swapped it for copper tube and sheet for his next engine. He said he didn't do well by the deal, but this was to be the story of Les's life and engines. He blamed it on money problems and building his engines too fast! **To be contd.**

## News From Afar 6.



### A Mystery Object

On a visit to Paul Gugger's house I came upon this object. Do you know what it is, and in fact what it does?

**Weather.** Saturday the 9th May was again a day from hell, icy cold and strong westerly winds which has brought us showers of what looked like sleet, accompanied by rain and snow on the ranges again this morning. However the wind and the front have moved on and left us with a relatively beautiful day today, Sunday, after a somewhat cold start. I think I have said all this before, but it remains true.

**In the workshop.** I have been progressing with my new riding car, working on the truck ends and carpeting the roof, as on my first 'bum' truck, with boat carpet. The carpet was glued to the roof with 'liquid nails' a strong construction adhesive, I would imagine you have a similar if not the same over there. It was held down whilst setting as can be seen in the picture with battens and tie down straps overnight. Just the job. The result can also be seen in the picture, yet to have a final trim. That was overnight Friday into Saturday. I did some more on Saturday, but I have to admit in the end the weather got the better of me in my outside shop, and I retreated indoors. Brass nails, studs whatever handle you want to put on them have been used in many places mainly for effect. They are in fact a left over from my model paddler and are, as stated on the box, 'sequin and bead pins'. I started with just four to secure a couple of battens, thought they looked good and over around 200 later said a few words like 'That looks fine' and a few other not so fine type.

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This week I visited another workshop, that of one of our members, Paul Gugger. Paul is a very experienced modeller and as expected, a superb machinist. His background however is far different. Paul for over 25 years was a

research chemist here at the Australian National University, I believe researching Arsenic and Phosphorous. Paul is seen in the picture holding a driver from the 'Royal Scot'. His workshop is a challenge as is seen in the pictures, but what comes out of it is magnificent. As said previously, he has many projects on the go. Today, Sunday, he had the PB15 out on the track for another test run. It ran well but having been run, Paul wants to have another look at the lubricator. Always something. I will include picture of some of his 'gear' this week with his locos to follow later.





As I have said I am not sure how he manages to work in such a confined space, but he does and very well. I am always amazed at his collection of 'stuff'. Puts me to shame. The picture under is a club area panorama. Just me fiddling really. I have had the camera many years, the one you have seen me with when visiting ,the U.K.. I have just decided to see what it can do after many years of using it on it's 'Intelligent Auto' function. Just lazy really.



On the virus front. Australia has been very lucky with a total of 97 deaths recorded. A scratch on a scratch when compared to your side. The country is now starting to ease some of the restrictions. Will wait and see what happens next.

Until next time I would say 'Happy Steaming', but the only steam being raised at present is coming out of your ears due to the frustration of 'Lock Down'. Stay well. David - Canberra - 12 May.

## My Apologies to David for missing out these two photos off of his article 6.



*On site 27 April - 22C after the fog lifted. A terrible late autumn day as you can see.*

*The left hand picture shows the yards. They had been sprayed (Glyphosate - yes we still use it) to kill the grasses and weeds, but that doesn't remove the material, so when there is still a lot of dew on the ground I hit it with my rather large propane burner. The smoke is hidden by the fog.*

*The right and shows a garden next to the club house. A member wanted to plant it. Of course we said as long as you maintain it. We are still waiting for the maintenance input. A challenge as can be seen by the amount of weeds that I removed.*

## **Recipe Corner.**

### **This week it's Bachelor Bread by Andrew Strongitharm.**

If I was forced to only eat one food it would be Tiger Bread. Like the rest of the country, I've been stuck at home for a while now and so even I have turned to baking! Courtesy of the BBC Good Food website and a recipe by Paul Hollywood, I have successfully baked 4 loafs now.

Ingredients:

- 500g strong white bread flour - readily available from Cloughs in Lindfield
- 1 tea spoon fast action yeast - I use dried yeast as that was all I could buy from a popular internet auction website!
- 1 tea spoon caster sugar

- 1 tea spoon sea salt
- 350ml warm water

In a nut shell, combine all the ingredients above, leaving the water to last, in a mixing bowl (or straight onto a worktop to save on washing up). Add the water slowly until a stiff dough forms (you might not need all the water) and then beat the living daylight out of it for 10 minutes - this is called kneading.

I then turn the oven on for 30 seconds so that it's not stone cold before placing the dough on a tray or I use a sheet of oven liner and putting it in to rise for about an hour. After an hour has passed its time to beat it up again (no dough was harmed in the making of this loaf), mould it roughly to the finished shape and put it back in the lukewarm oven for a further hour.

Finally bake the dough at 200C / 180C fan / gas 8 for 35 minutes and allow to cool before eating. For my first attempt I baked it in an oven dish however I didn't grease it first so a lot of the dough stuck to the sides. You can also add a special topping which creates the tiger affect and I can send this to anyone who wants to give it a go. I have never baked bread before but I must say that I am very pleased with the end result.

Regards,  
Andrew



*Not yet tested by members but I am sure we will all look forward to a jam sandwich of high quality by the end of lockdown!*

## **Putting on the brakes, model engineering through lockdown:**

I've currently taken a break from the tender tank as I wasn't making much progress with final structural parts like the rear bulkhead plate and the tool tunnel. So, I thought I would turn my attention to the brake gear and other quick outstanding jobs on the chassis.

Now this tender is a really feral build! I have on a lot of occasions improvised and use a combination of drawings for similar tenders designs from Martin Evans, Don Young and Tony Alcock. The full-size tenders brake gear arrangement is compensated where by a series of plates and bars pull the brake shoes on evenly and apply equal pressure on each wheel. Unfortunately, I've found it not to be possible to model the prototype to the letter, but we don't have a problem we now have a solution opportunity. The answer was at my feet to be exact. My B1 tender happens to be also in my workshop at the moment and that is fitted with compensated gear to a very simple design.

So, notepad, rule, a smartphones camera and drawing number 12 from my B1 drawings now we can make a start. In the past I had already made a start on some parts of the brake gear like the brake shaft and the brake shaft levers, with the tender tank off for now I set out a vague set up of the rods and forks. Starting with the first wheel set I cable tied all the brake beams to the axle of the wheels to set the shoes so they were going to come into contact with the tread, my thoughts were that if I can clamp them in this way all the lengths of the rods will be correct regardless if the brakes are on or off, in theory.

Using 1/8" diameter mild steel rod threaded 5BA at each end and 1/4" square for the forks work commenced at a very brisk pace due to the simplicity of the way it went together. Using my mill to mill a 1/8" wide slot centrally in the square, the smaller forks to a depth of 3/8" and the longer forks to a depth of 7/8", now those measurements were at best a guess because guess what, even on the B1 drawings there's no clear dimensions so I had to leave it up to me to do some checks and adapt to what I've got. I think even if there would have been, I would have ended up having to modify these anyway because it's a different tender to the B1.

Once the first wheelset had its brake gear fitted it was clear that I got something right as everything lined up and the shoes applied to the wheels evenly. Now I knew what I was doing for the second set of gear it was a case of copying that but longer pull rods were needed because of the overall distance. The rear set was even easier as they're not fitted with the compensating links only a fork either side of the brake beam. Now with all the gear looking

together I wanted to test them out, luckily I had some 1/8" diameter cast iron rivets to act as pins which were perfect to test the functionality of the assembly of the gear. Whilst it looks very crude and basic in the photos, I was only looking at proving a point without investing too much time into making something nice where it's not essential it looks good. What will follow this now is finessing new and precise parts for the brake gear now that the principle has been proven followed by 18 steel pins and split pins to hold all the gear together. It may not be as per the full-size but I will argue the point that as the way in which my brake gear functions it's the same as the full-size in operation, just not as a model where it looks right. I'm not that talented sadly. In the words of Dame Vera Lynn "we shall meet again some sunny day" Stay safe and stay well.



## To round off:

I thought as well as a tender update I thought I would spoil you.

Whilst I worked part time during my college years at a local engineering company, I was taught a few ~~cheats~~, tricks of the trade. This one involves rounding off ends of bar/plate/fork ends and other components which you can apply this method to.

Firstly, you'll need to make up some buttons from silver steel of the diameter or turned to your desired radius (remember the radius is half your diameter). I drilled a 3.2mm hole in my ¼" diameter to allow a close fitting for a 5BA bolt to pass through. Finally, I case hardened them to prevent a file from cutting into them, this will become apparent towards the end why.

Sandwich the component with the buttons in a fashion which you can bolt them together and nut on the back to hold in place, make sure the nut and bolt are tight.

Now in the pictures these two components are for my tenders compensating brake gear and I also fitted a very short dowel pin in the opposite hole to just make sure that these two parts didn't separate during the machining operation.

With everything together, place at the very top of the machine vice jaws and take initial cuts to determine the depth at which you're comfortable, I recommend not touching the harden buttons as I think it might not agree with your cutter. Then, move the part incrementally in different angles and take your next cuts, the more increments of angle and cuts the better the radius will appear to form. Once you've set the Z axis to the desired depth you shouldn't have to move it again for repeatability.

Once, you've got right round from one side to the other, you can remove the component from the vice and dress the edges with a file and unbolt the buttons de-bur the parts and that's them rounded off.

Now, I will confess now that this is a quick get out not a precise science as I have found that you will need to finish the edges off with a file to blend all the flats to create an effective rounded edge. But I've found it to be a time saver of none precise parts that you can get away with.

Hope this helps anyone in anyway.



**NICK**

**Puzzle Corner.**       **Lorema's this week's Challenge.**

Prepared by Mike under my control. Spot the difference in the next two pictures? Recommended to increase pictures to 200%



## **Ray Parsons Quiz Suffixes.**

Clues to all words ending in “SION”

	Clue	Answer
1	Act of colliding	
2	An addition	
3	The end	
4	In a muddle	
5	Ownership	
6	Cut	
7	Act of deciding	
8	False hope	
9	A favour	
10	High blood pressure	

### **Solution to Lorema’s Challenge Last week**

**Hope You enjoyed last week’s challenge here are the Answers.**

1 Kingfisher. 2. Robin. 3 Coot. 4. Nightingale. 5. Gannet. 6. Swallow. 7. Chough.  
8. Rook. 9. Razorbill. 10. Eagle.

### **Tools Explained.**

#### **Adjustable spanner.**

Aka “another hammer” aka “the Swedish Nut Lathe”, aka “Crescent Wrench. Commonly used as a one size fits all wrench, usually results in rounding off nut heads before the use of pliers. Will randomly adjust size between bolts, resulting in busted knuckles, curse words and multiple threats to any inanimate objects within the immediate vicinity,

**John Richardson to be continued.**

**My thanks go to all who keep sending me the material.**

**If you have something for the NEWS please contact me**

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