

## NEWSLETTER December 2024

**Hello everyone** and as John Lennon sang: "*another year over and a new one just begun*". I hope you all had a good rest and enjoyed some good company. This year will be a bit different as regards the Club's admin, so I will apologise now in the event of something getting missed, probably an email! I find I am having to check my Junk mailbox folder because what were trusted sender's messages sometimes go in there. This is even after I have told it (ticked the box) not to. I don't suppose there are any email experts who could help me .....?

I would like to thank Richard Llewellyn for volunteering to take on the Membership Secretary's job. It is a great help and much appreciated. Like-wise Andy Wilson has accepted the Treasurer's job, so thanks to both of them. The future is looking better organised than it was a couple of months back.

Half a dozen of us attended Ron Baier's funeral, and despite it being a bitterly cold day, it was heartening to hear about his interesting life.

After mentioning about my lathe VFD expiring last month, I have fitted another one, and learnt a bit along the way. Like a lot of things, once you get stuck in, it is not so daunting. I noted the old, (maybe 25 years old) inverter failed the day after a cold snap, when the air temperature suddenly rose about 10°C and caused condensation to form on cold metal and the consequent damp atmosphere. My garage is also my workshop and not practical to keep warm, so I fitted the new VFD in a weatherproof box, with a transparent lid. If it lasts another 25 years, I will be happy.

I love music, and enjoyed reading Colin Bainbridge's article on page 7 of this newsletter. I have speakers in my garage connected to the hi fi in the house, but my hearing isn't as sharp as it was, so as long as it's loud enough, I am happy! It would be interesting to know if streamed music sounds a lot better through a valve amp.

Thank you all who have renewed your membership. I only heard of one person finding it difficult to use the bank transfer, but we overcame the problem.

Don't forget, we asked you all to renew in December, to assist in streamlining our admin. We hope to issue an up-to-date members contact list soon, and if you have not paid you will not be on the list!

The Members' List is a paper copy, and does not include home addresses, only phone numbers and email addresses for contacting each other. If you have changed any contact numbers, or changed your mind about being on the list, please let me know. Would you like more information on the list, i.e. own interests or location? Let me know. Thank you.

*Wishing you all a happy and prosperous New Year. Jonathan.*

### □ **Forthcoming Events.**

#### **No Club Meeting In January.**

- **Tuesday 21<sup>st</sup> January. Workshop Morning.**
- **Wednesday February 5<sup>th</sup> Rob Davey. Overhauling a *Velocette* Motorcycle Crankshaft.**
- **Tuesday 18<sup>th</sup> February. Workshop Morning.**

## Club Meeting On The 4<sup>th</sup> December. Christmas Social and Mini 'Bring and Brag'.

Jonathan began the meeting by giving out apologies for those members who could not attend due to illness. Brian Stephenson would have liked to have displayed some of his models, but couldn't.

PEEMS wishes all those members a speedy recovery. In spite of these absences there was a decent turnout.

Before the meeting and social, Jonathan gave out some announcements:

- **Treasurer:** Andy Wilson has kindly agreed to take on the Treasurer's post, because no one else had shown an interest. Jonathan asked the members present if there were any objections to Andy taking this post, and there were none.

**David:** It should be pointed out that Andy has taken on this task providing it is a "reduced" role.

**Jonathan:** Yes, the committee is looking at reducing the number of administration tasks overall. The Treasurer will administer more of a 'housekeeping' account rather than a 'business' account. Tony Leeming has already set up the PEEMS accounting spreadsheet, so the task should be a lot easier going forward with this template.

- **Secretary:** The Club still doesn't have a permanent Secretary going forward. Jonathan asked the members present what they wanted from the Club, so that the organisational needs can be assessed.

Basically, PEEMS meetings are an opportunity to meet people, and to have a chat over coffee, biscuits and magazines. Occasionally we have speakers. Is that what we want from the Club? If we carry on as we are, there will be a lot of organising to be done. It should be noted however, that all the organising, is spread over the eleven months of the PEEMS year. For instance, the organisation of Model Shows usually occurs once a year. Does the Club still want to exhibit at Model Shows? There's a lot of paper work to be done if we want to attend. It maybe in this instance, members step forward to help the Secretary with Model Show paperwork. That would be good.

If someone said they would take on a limited Secretarial role that will be good as well, as we may have to have more than one Secretary. We could have a "General" Secretary and a "Membership" Secretary, who deals with day-to-day tasks such as sending e-mails. The "Membership" Secretary would need to keep the membership forms up to date because of GDPR. We don't really want everyone sending e-mails out, we really require a single source for that.

It may be that if any member had an idea for a visit, speaker or event, they could organise it and let the "General" Secretary know. The "General" Secretary will then send out the e-mail informing everyone. This will all help in expediting the Secretary's actions.

If PEEMS reorganises, we will have to revisit the *Articles of Association* which were written 20 years ago. The Club has changed since then. The question then is: "do we need a formal AGM and all the paperwork involved with that?"

*The Articles of Association* state that we have to have a formal AGM every year, but if they are rewritten, we wouldn't need to do that.

The other question is: "Could we get away with an abbreviated *Articles of Association*?"

What we have been doing in Committee is going through all the organisational tasks we do, in order to simplify them. For example, booking the Hungate Centre for the year, is an easy task. It takes about 30 minutes to one hour, to arrange, once invoices have been received and paid. Currently the rent isn't expensive. It's what we do with the facility that's important.

For the Calendar of Events, the Committee picks the dates available, and then the members say what they want to do on those dates. The Committee thinks that the way forward is for the members themselves to decide what they want for those dates.

**Richard Llewelyn:** Would it be appropriate for a non-Committee member, such as myself, to come along to a committee meeting, and say "I'm here, and I'm happy to take a task away". I don't think I can fully commit my time to the Committee, but I can come along, and take tasks away. Just as a way of being a help

**Jonathan:** Yes, that's the kind of help we're looking for.

**Paul Hayward:** One of the enriching parts of the Club, is the speakers we have, for example Graham Sykes and his Rocket Bike. He was very interesting and brilliant to listen to. I would be personally disappointed if that didn't continue in some form. We have eleven meetings a year, one of which is "*The Mike Sayers Trophy*" evening, and I think there should be an AGM of some sort, truncated or whatever, just to report back to the members. If we have four or five speakers that is something to aim at. I have been thinking about the person who is going to come from the *Yorkshire Wolds Railway* (Fimber). I have been in contact with them about the person who gives the talks. I am quite happy to liaise on that event for next year.

**Jonathan:** The Trophy evening, Bring and Brags, Speakers, and other events are why we need to keep booking the Hungate Centre.

**David:** We need more members like Paul who can arrange speakers and visits. The easy bit is telling the members what dates are available for bookings. Then the members decide what events they want.

**Mike:** It would be good if a member who thinks of a visit or speaker, could organise that event themselves. It would save the Committee having to think up these events.

**Jonathan:** If this is the way the Club goes forward, the Club may even grow stronger as well.

- **Subscriptions:** The subscriptions are now due. Members who have already paid have mentioned that paying subscriptions by Bank Transfer “works a treat and presents no problems”. The Club will accept cash.
- **New Members and Club Organisation:** Richard Gretton mentioned that some older members live away from Pickering, and at their age don't like driving at night, himself included. This brought him to the question: “how many new members do we have”?

Jonathan mentioned that a new member had signed up a few days earlier.

Richard said that he had previously brought along people who were interested in the Club, and would continue to do so when he gets the chance. He suggested that other members should try and do the same.

Jonathan said the “new members” currently tended to be retired people.

Richard mentioned that on that night in the village Hall in Ganton, a group of ladies called *The Ganton Girls*, were meeting. They don't have any formal organisation, but they have chats, organised speakers, and go for a meal. Their Club is run on an ad-hoc basis. The monies are dealt with on the night as is the renting of the village hall.

**David:** What you are describing is what we are trying to get to, a Social Club.

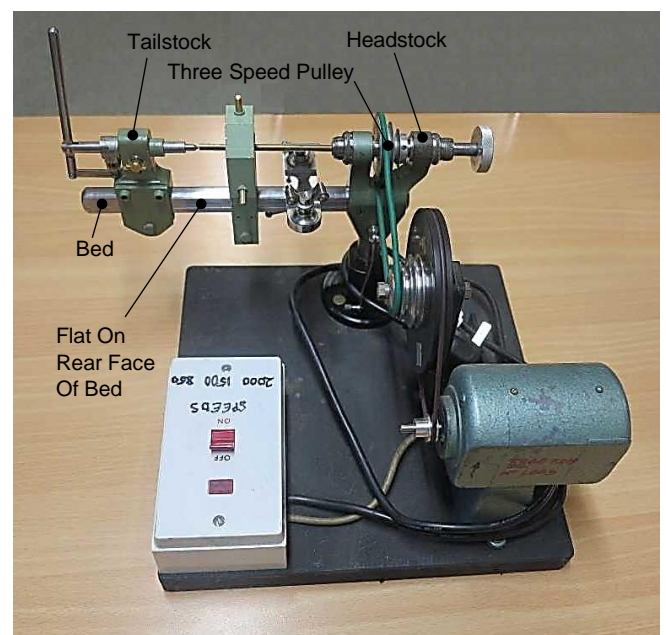
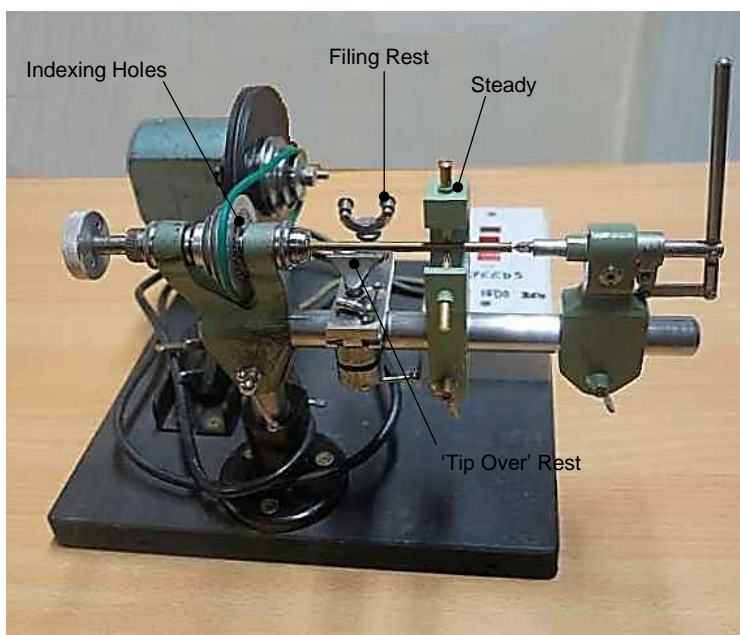
Because of the “Model Engineering” aspect of the Club, and because of our activities, we spend a lot of money on “Third Party” Insurance. If we divested ourselves of the “Engineering”, the workshop and the boiler testing, we could very quickly become what you describe. There is nothing wrong with that, if that is what members want. It would be a group of people who get together informally, but under a certain level of organisation. That could be the next state of PEEMS.

**Richard:** The other outcome is that closure becomes imminent, and the Club folds. Then someone comes along and says that can't happen, and brings in new blood to keep it going.

**David:** The Club will not stop meeting, but will adapt to the kind of organisation it can get. Imminent closure is very unlikely, but the Club will have to adapt to its new circumstances. Membership numbers have been dropping off over the last few years. Numbers are down to the 30s, and it could go lower. David Hampshire, one of our previous Treasurers reckoned that the minimum membership for viability was around 40. We are still going, but because I'm moving away, other PEEMS members will need to take on the organisational aspect of the Club. The Club has to ask: “What can we do, what is it that we want to do?”.

- **Mini ‘Bring and Brag’.**

#### i) Watchmaker's Lathe ~ Richard Gretton



Richard introduced his watchmaker's lathe. It was made by a company called *Pultra*. These types of lathe were usually either Swiss or German. *Pultra* though was a British company, which was established in Manchester just before the Second World War. It was founded by Jews from the German machine tool industry getting away from the Nazi regime. They started making lathes like this. This is their smallest lathe. They did make one a bit bigger, with a different sort of bed. This lathe is a *Geneva* type, Geneva being a centre of watchmaking. *Pultra* made thousands of these lathes during the war, which were used by the military for repairing instruments etc.

After the war *Pultra* were taken over by *Smart and Brown* in Biggleswade.

A few years ago, Richard bought a *Pultra* lathe in a box, with all its collets and chucks. It was without a motor, so Richard got a motor and made it work. In the box was a headstock. Richard thought he could make another lathe out of that. He made a new bed, a new tailstock, steady, most of the rest, and a stand for it. So Richard now has two working *Pultra* watchmaker's lathes.

It is surprising how accurately you can work with one of these watchmaker's lathes. On this lathe you would turn with a "*graver*". A *graver* is a hardened steel pointed tool. You can accurately turn with a graver and it is remarkable how little material you can remove with it. You can take off about 0.25 to 0.5 thou if the *graver* is sharp enough.

Brian Stephenson gave Richard the motor which looks about a hundred years old. It had to be slowed down as the motor is high speed and single phase. There is a three-speed pulley on it so Richard can get 850 rpm, 1500 rpm and 2000 rpm. The lathe can be put into reverse by taking the belt and putting it back in a figure of eight.

The bed has a flat face on one side, which gives the lathe the accuracy needed for operations. When tooling such as a tailstock, steady, rest etc. go on the bed, they always register positively because of the flat face.

Richard made the tailstock and the fixed steady. Why would you want a fixed steady on a lathe like this? The answer is: when you are repairing a clock which has an arbor with a gear wheel fixed to it. The ends of the arbors are called pivots. Sometimes the end of pivot can snap off because they are hard. You may want to put a new pivot on it. If you didn't have a fixed steady on the lathe, it would be difficult.

To effect the repair, Richard softens up the pivot first so he can saw off what is left of the old pivot. These pivots are about 1.0mm to 1.5mm in diameter. Once softened, the arbor can be drilled as a location for the new hardened pivot. Richard would take a 1.0mm drill, tap off the end of the flute, then cut the shank down to the length required. He would then *Loctite* the end of the new pivot into the drilled arbor.

## Questions And Answers.

**Q:** Did it take a lot of filing out to get the flat on the rear face of the lathe bed?

**Richard:** Not really. I try and machine everything these days. The steady is machined from an aluminium block. Inside the circular hole there is a steel "feather key" held in with two screws. The hole in the steady was bored first, and then metal was taken out using the milling machine. The hole is then finished into the corners with a file. The steel key is then inserted,

The forward rest is similar to the one on a wood turning lathe. It is pulled by hand towards the work. It is called a '*tip-over*' rest. It can be tipped out of the way, so I can put my micrometer on the spigot to check its diameter. The other rest is called a '*filing*' rest. This consists of two free running rollers. It has an elevating screw, so the file can be raised. If you want to file a flat on your work, a file can be laid across the rollers and you can file away. You can file a square.

All watchmaker's lathes have an indexing on the pulley. There are 24 holes in the large pulley wheel, and a little peg goes through the dividing plate, so the headstock can be fixed. This allows a square or hexagonal to be filed on the work. The file can be raised up and down with the elevating screw, so you can get the size and shape you want.

**Q:** Do you use this lathe a lot?

**Richard:** Yes, and I also use the other watchmaker's lathe. With clock and watch making, the pivots are usually turned down to a nominal size, with a very highly polished finish. Then a special tapered broach is used to open any bushes out so the pivots can fit in.

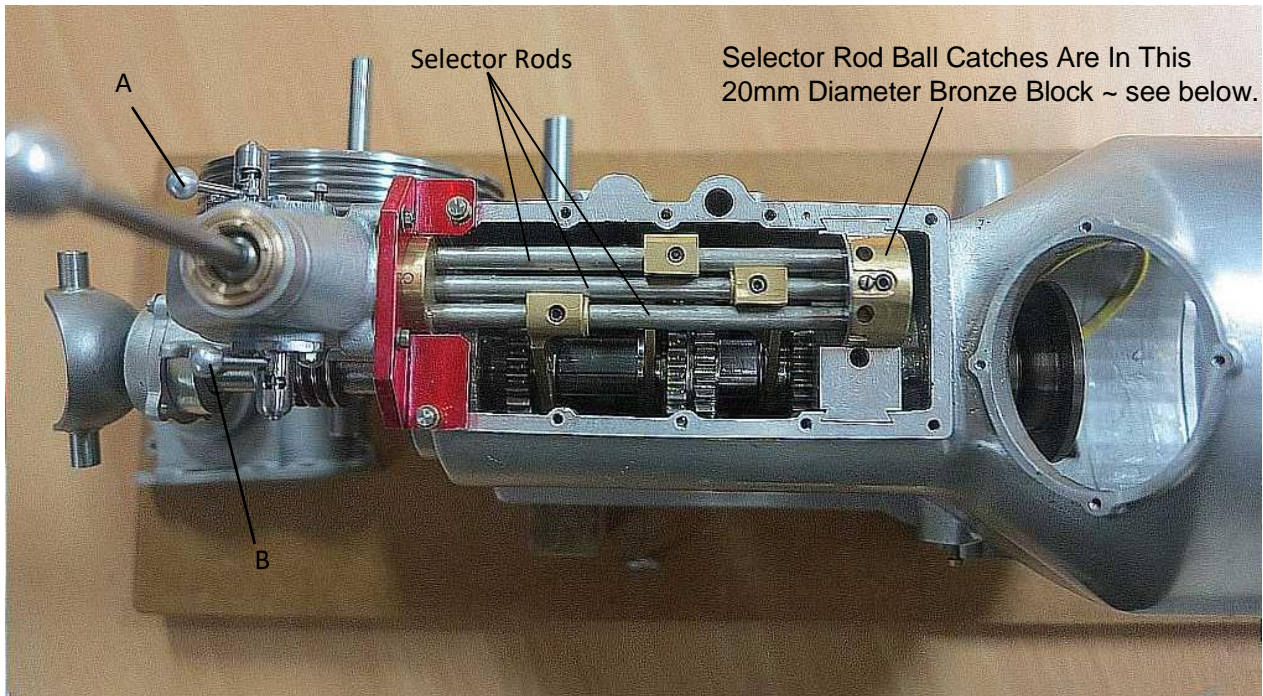
**Comment:** The plates in the clock will be quite thin.

**Richard:** Yes, you are looking at 1mm to 2mm thick.

**Q:** When you start graving from the tailstock do you use your graver to create a centre.

**Richard:** Yes, you can use a graver as a centring drill. You can pick out a centre with a graver. The only thing is, a graver has to be really sharp and very finely finished. It needs to be finished on an *Arkansas stone*. Especially when used for picking centres. A graver is like a square piece of high spec tool steel or sapphire. It is ground away at 45° angles so it has a point on it. That point is used to find the centre.

ii) Progress With The *Delage* Gear Box Model ~ Mike Sayers.



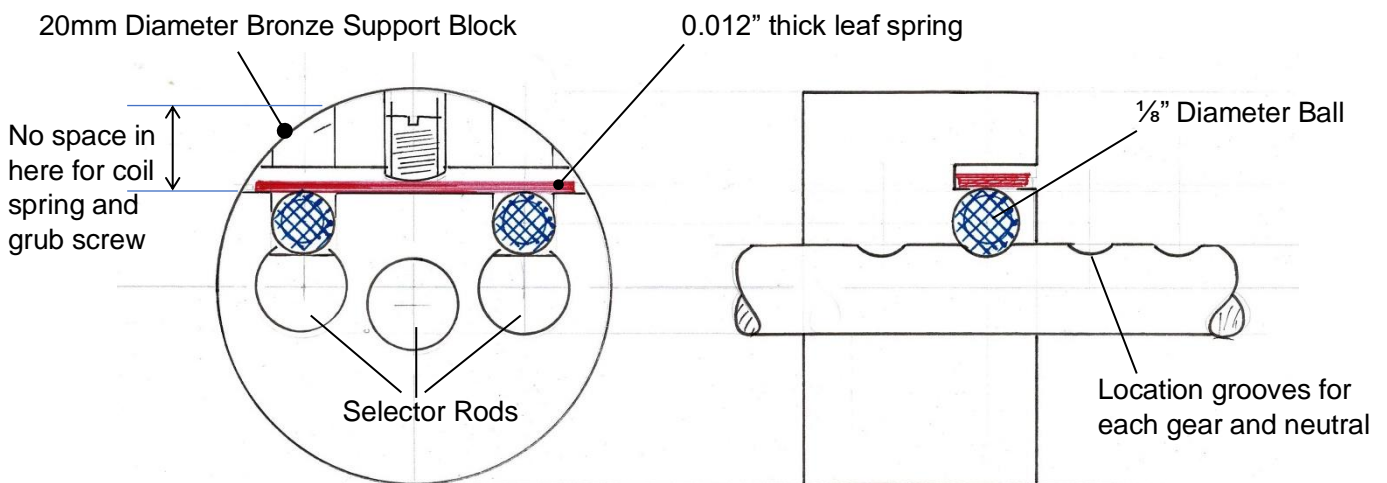
Mike brought along the *Delage* gearbox model to show the progress that had been made since its last appearance at the 'Bring and Brag' in October. He wanted to show the brake servo worm drive and acknowledge Richard Gretton's help in achieving success with that component. Mike said he had now got all the gears in, and all the selectors and the worm drive for the brake servo are now working.

After reading the report on the short presentation he gave at the meeting, Mike thinks that without the benefit of an on-screen diagram, it was difficult for him to correctly describe how things worked. He has now offered what he hopes is a much clearer description and sketch, to help clear up any confusion.

Now that the gears can be shifted into position by the completed gear lever and selector mechanism, the detent arrangement that retains the selected gear could now be thought about. The retention is accomplished by spring loaded ball latches that drop into transverse grooves machined in the top of the selector rods. These latches are housed in the 20mm diameter bronze support block at the forward end of the gearbox.

While there is sufficient depth above the centre rod to accommodate the ball, coil spring and adjusting screw, this copy of the full-size arrangement just cannot be managed on the other two rods. It is hoped that the accompanying sketch will explain the problem.

The dilemma was eventually solved by utilising a leaf spring arrangement to load the balls above both left and right hand rods together. Again, the sketch should explain this better than words.



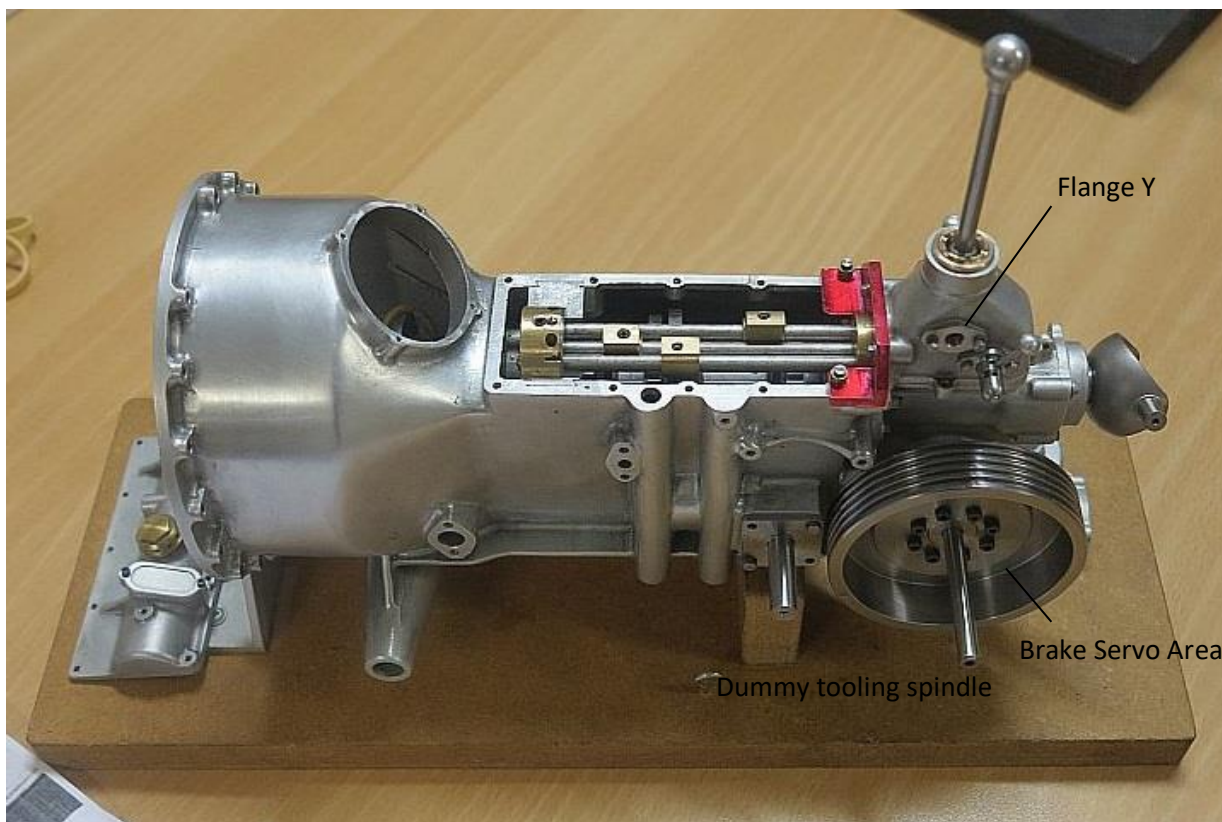
This solved the locating problem, but the positioning of the locating grooves in the selector rods brought another difficulty, especially on the left-hand rod. Because of the strange position of reverse gear in this gearbox, this left-hand rod has to serve to select first, second and reverse gear, and a neutral position. The gear lever movement is only just able to provide enough forward motion to reach all the way from second gear through neutral and first, to reach the reverse position. This means that the gear positions on the lay-shaft have to be as close to each other as possible to prevent wasted movement, and consequently the position of neutral where all the gears clear each

other, is very restricted. There must be no slack in the mechanism, and the locating groove for neutral is very carefully positioned for everything to clear. Once this position is found and machined on the shaft, all others follow more easily.

The centre rod serves third, fourth and a neutral position, so fore and aft movement is only two thirds of the left-hand rod, therefore spacing is easier. The right-hand rod serves only fifth gear which needs only one third of the available lever movement, so this is easier still to position. All this replicates the similar problem found in the full-size gearbox. It took three attempts to make a satisfactory set of rods.

The small levers A and B either side of the gear lever tower, lockout the inadvertent selection of reverse gear and 5<sup>th</sup> gear, leaving a standard H pattern four speed selection available.

The unoccupied flange Y, is thought to position another spring arrangement that will bias the lever to the third and fourth gear position, so it does not flop about when driving.



### Questions and Answers:

**Q:** Are there just rear wheel brakes on the car?

**Mike:** No, there are brakes on all the wheels of the car operated by a combination of rod and cable.

**Q:** Is the servo drum run off the input shaft?

**Mike:** No, it's run off the output shaft.

**Q:** So, if the gearbox is in neutral the servo drum won't work?

**Mike:** Yes it does. In neutral, the output shaft is still driven by the rear axle. The drive can't be disconnected. As long as the car is moving forwards, the brakes can be applied. The only time the servo doesn't work, is when the car is going backwards because the servo acts in the wrong direction. I am told that both Delage and Hispano Suiza saloon cars used the same servo arrangement, There would be some braking in reverse, but not servo braking.

**Q:** Last time you showed the shafts within the gearbox, you mentioned the main shaft had to have splines. Have those been sorted yet?

**Mike:** Yes. Cutting those long splines was something I was trying to avoid. I made the gears and worked out how everything went together, and what the spacings were, using plain shafts. I thought it was a pity to remove this plain "slave" main shaft and have to make another complete splined shaft. Instead, I thought it might be possible to insert splines into the existing shaft and save a lot of work.

I used a 2mm side cutter to cut the grooves accurately along the existing shaft. Sawn strips of gauge plate were surface ground to a dead 2mm square, and press fitted into the grooves with a little *Loctite*. It has worked perfectly. The sliding gears were internally splined to match the shaft, and they each slide smoothly and without shake. To let the gears slide with as little friction as possible only four splines instead of eight were fitted.

**Q:** Is there still a lot to do?

**Mike:** Yes. There is all the pedal system to put in, the hand brake assembly, and the controls for the oil pressure and throttle regulation.

• **Can Hi-Fi Ruin Your Life; Will A Thermionic Valve Bring Happiness? Colin Bainbridge.**

An account of one person's desire to improve the sonic performance of a vital piece of workshop equipment.

**Part 1.**

This being the time of year when we can all devote a greater portion of each day (if only) to the workshop, and all there-in, I decided recently that it was time to address an issue that had been troubling me for a while. And having found a degree of pleasure and satisfaction in resolving my own issue, I started to wonder if others may be interested to know of my journey.

Then the doubts started; for in reality I knew I just wanted an excuse to tell others about my new found interest. I felt in the circumstances I should seek guidance; and funnily enough after a glass or two I did indeed feel sufficiently confident to commit digit to keyboard to try and tell my story. Anyway, I reassured myself even if I was the only person to have ever undertaken such a quest, it would still be something different for members to read over Christmas with the morning coffee and digestive biscuit, or when they tuck themselves up on a cold night with a hot toddy in front of the blazing hot radiator.

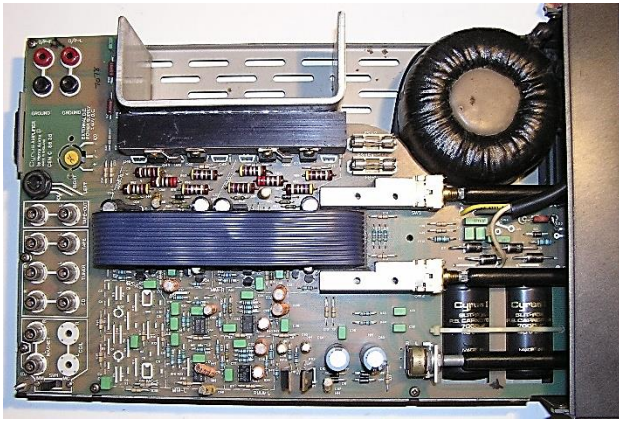
The next issue to address was how I was going to sell the idea to our worthy Newsletter Editor so he would feel comfortable enough to want to include it in this quality journal. So, I promised him that whilst on the surface, the subject may not appear much to do with model engineering, it will (I said) fit in with the broader scope of the PEEMS ethos of engineering subjects. Rest assured (I told him) it will be informative, entertaining and be about proper engineering with a bit of history thrown in, and if I can hold everyone's attention long enough for them to stagger through to the end, they may even be surprised to find that I hadn't ignored model engineering after all. If you are now reading this in the Newsletter, then I succeeded in persuading him. Thank you Nev (a little something is in the post to you for Christmas).

So then for me, a vital part of any workshop is to have something to play my music on. I don't like to have it loud enough to intrude, and in fact there are times when maximum concentration dictates no music at all, but when it is there, I do like it to have a bit of quality. Naturally we are not talking about having thousands of pounds worth of kit on the back of the bench, nor are we talking the humble 3" speaker in a cardboard box, but just something that pleases.

Up to press, this function has been carried out in my own workshop by an old second hand 1980s stereo 'ghetto-blasters' – to those of a nervous disposition I can reassure them that doesn't mean the workshop has had a permanent fug of interesting substances hanging in the air, nor that the sound of the bass could pin you to the shed door; in fact during the time of my ownership, it has never been pressed into tackling anything more challenging than playing straight forward middle of the road music like Nat King Cole on cassette or CD, or just occasionally if I am feeling in a reckless frame of mind and needing the energy to hacksaw my way through something particularly tough, the '*Moody Blues*' may make an appearance.

I had therefore thought up to this time that my auditory life was settled, but then recently I started to feel discontented. Nat King Cole was losing his savour and as far as the '*Moody Blues*' were concerned, that frisson of excitement first experienced in my youth was ebbing away. Was it because I was getting old, I immediately asked myself? Was I now letting those musicians down by not experiencing the '*real sound man*'? After all, they must have put a lot of effort into making those records.

I knew it was not a belated mid-life crisis, for I felt instinctively that it wasn't the lack of long hair, platform shoes nor the lack of 15" bass speakers that I was missing; after all I reasoned, had I not already gone through all the natural stages of maturing and growing older, was I not the man that had taken effortlessly to wearing a tweed jacket and smoking a hooked pipe and listening to Mahler when he turned 40? Had I not also joined the modern age when I finally gave up buying the *Readers Digest* LP boxed sets in favour of Andrew Lloyd Webber's "*Classics from the Shows*" CDs? No, it had to be something else.



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Whilst turning this over in my mind, I started to think about how the sound of records and CDs has changed over the years, and with it the electronics used to recreate it. Maybe that's where I should be looking, for I hadn't really given it proper thought since the integrated circuited solid-state amplifier had been invented, and electronics had largely left me behind. For being a late baby-boomer I was a child of transition, when 'modern' transistors were in vogue, when the surface of circuit boards was still measured in square inches and not millimetres, and the components appeared in handfuls per inch and not dots per micrometre. A time when digital sound sources were unheard of, and if you were tracking more than 3.5 grams on your stylus you were seriously pushing your luck.

"Where is this taking us?", I hear you ask impatiently.

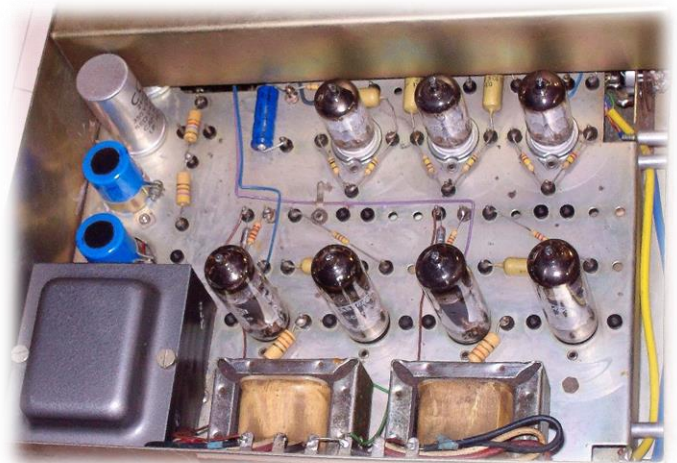
Well, I came to realise that you are never too old to try something different. I therefore felt that I should be changing something, and as the 15" bass bins had already given way to neat looking book-shelf speakers, that 'that something' probably should be the amplifier. I knew already to go any further into the sterile world of the big solid-state digital 'holy land' would be wrong for me. No, I had to go back, back the other way' perhaps even to consider thinking the unthinkable and to risk my green credentials by looking at those less efficient devices called *thermionic valves*.

I had read over the years about the fabled '*valve sound*' and even though I was but a child when they were in their final years, I had already encountered them, when I was growing up, in the form of our faithful old family *Mullard* valve radio and black and white television set. I had even seen them close up, when my father would from time to time rootle about in the radio's inner workings to fix something, if it was feeling poorly.

That then must be the direction I should go I told myself, even though I knew it would entail buying something old; but it maybe now or never. And once the idea took hold, I started to see all sorts of benefits that could come from such a move (one always feels like that when trying to justify buying something new). I would be doing my bit for recycling, even better it would be 'heritage'. It would also have engineering at its heart – albeit in this case electronic – and if I didn't spend all the pension in acquiring one, it would hopefully provide a lot of pleasure along the way; besides, from what I had also gleaned it would add much needed warmth to an otherwise cold workshop.

Decision made, from then on, I started to feel a kind of excited anticipation such as one feels when ordering something new from the menu in your favourite restaurant, like the dish you may have ignored in the past but now feel might be worth trying after all.

Taking courage in one hand and my plastic friend in the other, a purchase was made, but since this was to be a gentle introduction to this new land of '*thermionic emissions*', I felt it wise not to sell the birthright outright just yet, but to go for something relatively humble. I found myself eventually in possession of a very modest (by Hi-Fi standards) second-hand valve amplifier built by '*Rogers*' and made (I think) around 1969. At last, I had taken my first tentative steps towards what I hoped would be a warmer workshop, and this was done without threatening the long-term future of the roof over our heads.



Just an aside here, I am sure there will be those reading this that are wondering by now why on earth I would want such a thing in my workshop. A perfectly reasonable question that demands an answer...Because I want to...Next question. Then there will be those who are thinking why not have it in the house? Another good question for which I am sorry, I can only give you an answer from the heart; "*because my partner doesn't understand me ...*"



Back to the story; like any proud new owner of 'a bit of kit', heritage or otherwise, the first thing I did was to sit looking at it admiringly. There it was now in its nicely proportioned 1960's genuine light oak veneered box, a chunky but (as I thought), attractive sight. I hesitated a while before committing myself to switching it on for the first time, as I knew my consumer rights would be somewhat limited in the event of only smoke issuing forth from the attractive box in front of me, it having been bought from the "It worked the last time it was plugged in" carefree world of the second-hand market. I therefore felt, it would be wise to peek under the bonnet with the power off (see safety notice on the next page), before risking my nerves and my garage wiring; for even though it may well have worked when last plugged in, how was I to know that 'last time' wasn't in fact 1970. A fifty-year hibernation might be alright for a hedgehog that had lost all track of time, but with even my limited knowledge of such things (*Thunderbirds* comic hadn't been big on electronics), I was aware that circuits of this vintage could well contain components that may be past their sell by date and should have been replaced by now. I was also aware that these old-timers were not full of microelectronics barely sipping at electrons, but instead liked to draw their power in hearty draughts, and given the chance would happily head straight for satiation.

### Queue Safety Warning Notice:

Should you plan to lift the lid, or to undertake the construction or the repair of valve amplifiers:

**BE AWARE THAT POTENTIALLY LETHAL VOLTAGES WILL BE PRESENT** inside, and that valve circuits operate across **LIVE, NEUTRAL AND EARTH**, and that means **METALWORK** within the box that you might think will be at **EARTH POTENTIAL** may in fact become **LIVE!** All large capacitors **SHOULD NOT** be approached with the set **ON**, and **SHOULD BE DISCHARGED BEFORE** touching them or nearby circuitry with the set **OFF**.

I am pleased to report that all was well, for the items I would have expected to have been changed had in fact been replaced. However, I was also reassured to have in the back of my mind the knowledge that I did also have RCB and MCB protected fuse boxes in the workshop. These act as a second line of defence in the event of something going wayward. But I would caution those still using wired fuses, and who live with the quaint belief that the blowing of any fuse can be fixed by making the fuse ever bigger, or worst of all use a nail (I had a guy come to do a job for me that had done just that in his plug top), **BEWARE!**

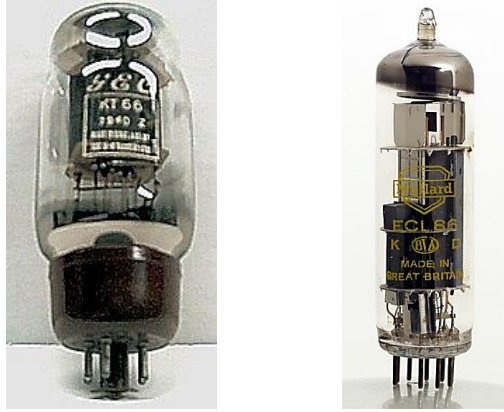
Naturally at this point in the story you will all want to know just what I thought of the sound coming from my new purchase, so I'll tell you....in Part 2. I can say though it was different, though why valves should have made Nat King Cole sound like Cleo Lane I not sure at this stage. But I hope I can also let you know more about that as well in Part 2 when we eventually get to looking inside.

For those still scratching their heads as to why anyone would willingly go down this path, I can only assume they can't have looked recently at the more industrial silhouette of a decent valve amp like the seductive shape of a *Leak TL12* or a pair of *Quad 2* mono-blocks (in the jargon), and that's before they look inside! One look under the lid will probably be all it will for take for them to want to know more about it, and how it will sound. I promise you will not look at your *Amstrad* Hi-Fi tower in the same way again after seeing one of these.



The lucky (?) ones will know if they are developing feelings for this technology, when they find themselves being drawn to look at those little glass valves glowing (there's just something mysteriously primitive looking about them). They will definitely know, if they start looking up the grid bias for a *KT88* audio valve from behind the Christmas edition of the *Radio Times*, whilst their best beloved is sitting watching her favourite film on Christmas day. These then will be the definitive signs they are experiencing the early pangs of a new distraction.

KT66 and ECL86 Audio Valves:



Writing as one only just managing to hold these feelings at arm's length himself, I say enjoy this period when it happens, but do so with caution and with eyes wide open, and don't rush headlong into it. For Hi-Fi, valves and valve circuits can be a heady mix and all absorbing if not checked, and can easily lead effortlessly into it becoming an expensive obsession.

However once safely on board I have been told the true believer won't take long to next see the benefits of throwing away those nasty wooden speaker cabinets, and to instead build the drivers into bespoke brick-built enclosures in the corners of their lounge, and to use only gold-plated mains plugs in the wall sockets (always assuming they have access to gold plated mains electricity that is). But thankfully I haven't reached this point yet myself.

I may just have a little look into it over Christmas...

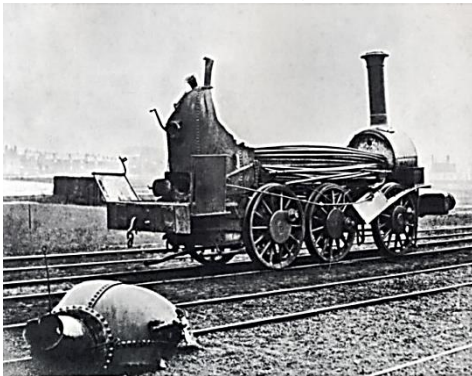
Next Month: I lift the lid on the inside story of the valve amp and how model engineering and Hi-Fi come together - available February.

*"I am dreaming of an ECC807 for Christmas, just like to ones I used to know..."*

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## 2024 PEEMS Roundup

**February**



*Boiler Testing and Codes ~ A talk by George Gibbs*

**March**



*3D Printing ~ A talk by Tom Allis*

**April**



*Normanton Loco Shed ~ A Talk By Allan Dawson*

## May



*Annual Dinner and Spring 'Bring and Brag'*

## June



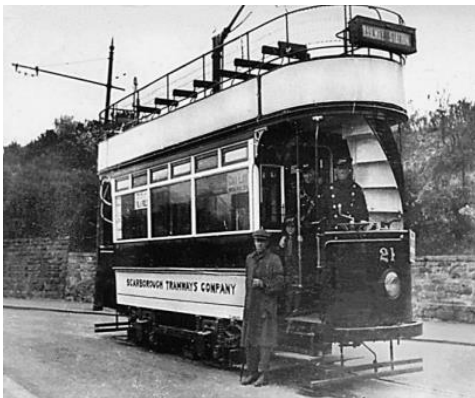
*Bradford Challenge, 'Pickering Flyer' and Winner's Trophy*

## July



*Club Auction and Scarborough Garden Party*

## August



*Scarborough Trams ~ A Talk By Brian Mulvana*

## September



*North Sea Helicopter ~ A Talk By Ray Smith.*

## October



*Mike Sayers' Trophy, Autumn 'Bring and Brag' and Club Visit to Leeds Industrial Museum*

## November



*AGM, Pie and Peas Lunch and Chairman's Award.*

**Contact:** If you would like to contribute to the Newsletter, the contact is:  
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