# NEWSLETTER July 2025

**Good day everyone,** hoping you're all fit and well. I am a year older today and like to think I am a bit wiser than I was last year! I have been busy but not getting much done. I help out at an event at Scarborough, and find that after a busy weekend, I am ready for a rest. Don't mention gardening!

I have an old *BSA Bantam* motorcycle on the road this year, and I am enjoying pottering around on it (and tinkering). It is a different mode of biking for me, and although you still have to concentrate 100%, it is rewarding and relaxing, and puts a smile on my face after a ride out.

The July *'Bring and Brag'* was a very good evening, everyone had a good chat, and I received a couple of nice comments. It's a bit of "pot luck" regarding people bringing something to show, and the variety of the "entrants" is what made the night a success. Thank you.

When I mentioned the possibility of a visit to *The Land of Iron* at Skinningrove, it seemed a popular idea but the response I have had, asking for definite numbers, has been disappointing so far. There's still time but I need to book a tour by the 7th August, that's the day after the next meeting at the Hungate Centre.

I would like to welcome Peter Green as a new member. Peter had dropped into the Hungate Centre a few times and has now signed "on the dotted line".

I can't sign off without reminding you, we still require two more members to sit on the Committee. You will not be press-ganged into an Officer's job (yet!) but we would like you to join in the meeting and make your thoughts and ideas known. The General Secretary's position is still vacant. The future of the Club depends on you joining in.

*Take care, Jonathan.*

- **Forthcoming Events.**

- **Wednesday August 6th** — **The History and Operation Of The *Blacker* Power Hammer. A Talk by Chris Bramley.**
- **Tuesday August 19th** — **Workshop Morning.**
- **Wednesday September 3rd** — ***My Milling Machine*. A Talk By Peter Bramley.**
- **Tuesday September 9th** — **Visit To Skinningrove *'Land Of Iron'*. https://landofiron.org.uk** Click on link
- **Tuesday September 16th** — **Workshop Morning.**
- **Wednesday October 1st** — **Mike Sayers' Trophy Night and Autumn '*Bring and Brag'*.**
- **Tuesday October 21st** — **Workshop Morning.**
- **Friday November 7th** — **Annual General Meeting. (Friday Lunchtime).**
- **Tuesday November 18th** — **Workshop Morning.**

- **Club Evening On The 2nd July. Summer '*Bring and Brag'*.**

Jonathan welcomed everyone to the Club's Summer '*Bring and Brag'*. There was a good turnout with quite a few guests, a prospective new member Andrew, who has just moved to Pickering, and a visitor from The Netherlands, Peter.

The evening included a buffet after the first half.

Jonathan pointed out there were leaflets advertising PEEMS that members could take to distribute. Andrew said he had seen the advert and also the website.

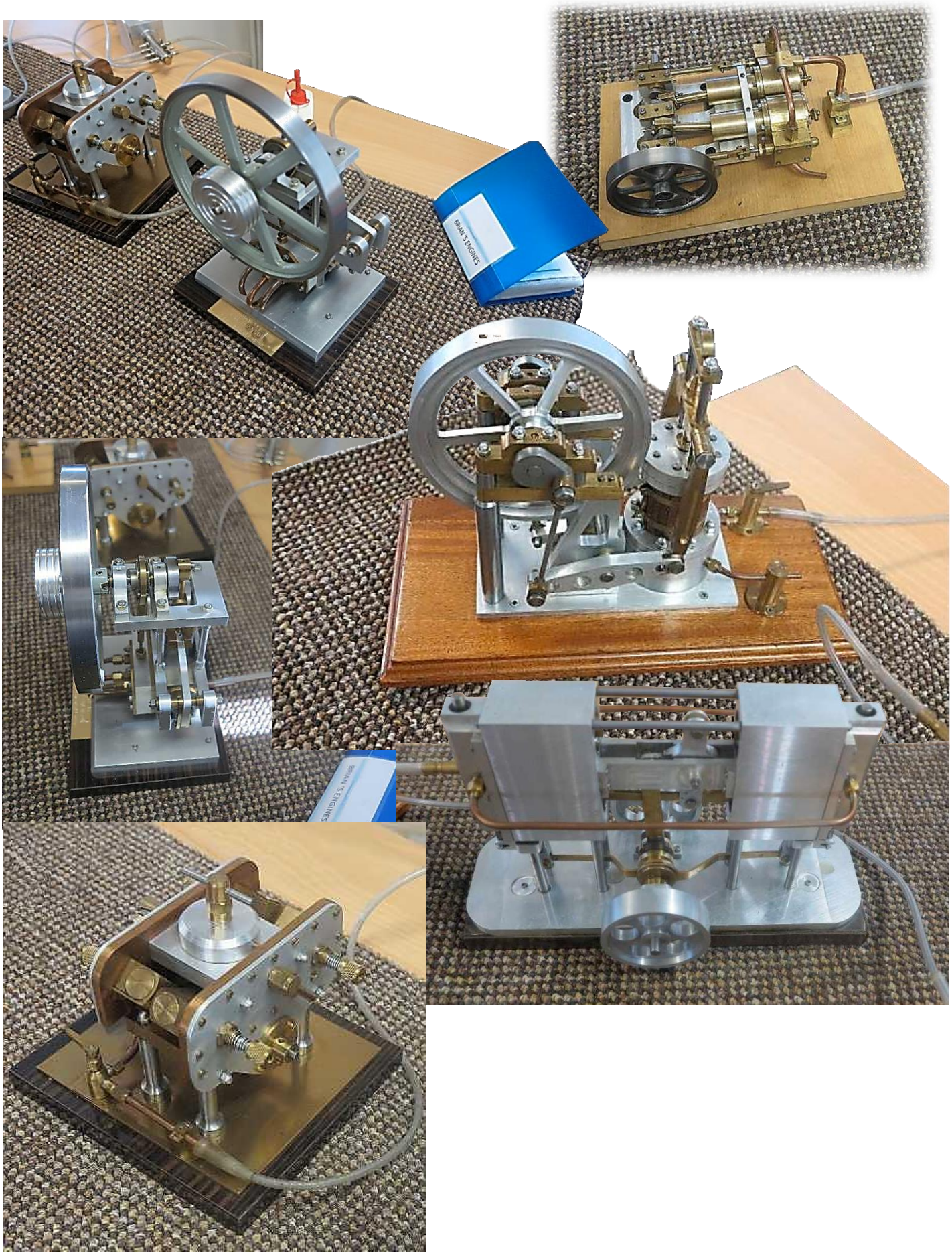
There were a few announcements:

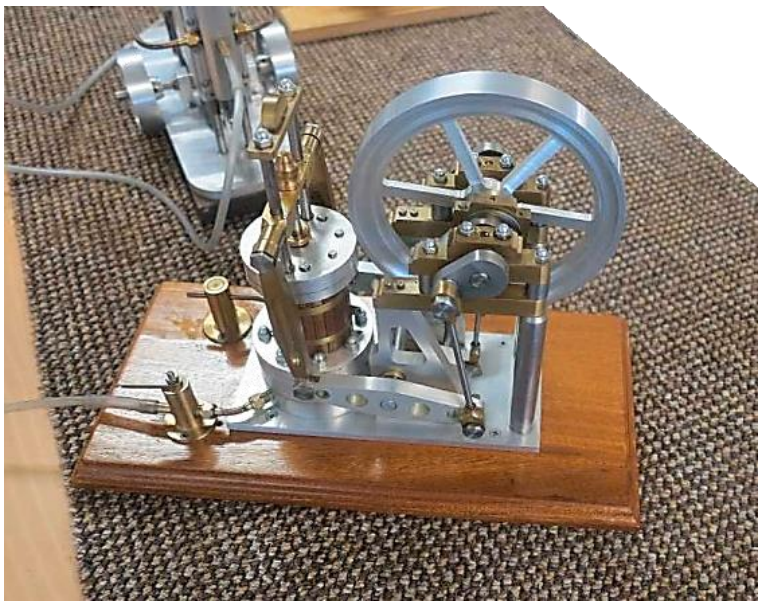
- Mike no longer has a landline, and his mobile number has been e-mailed to the members. If any member needs Mike's mobile number, and hasn't received it by e-mail, please contact Mike or Jonathan.
- **Annual General Meeting (AGM):** Although the AGM is not until November, Jonathan still wanted to put a formal notice out that PEEMS would like members to volunteer for the Committee. Although full-time Committee attendance would be good for continuity, it is not necessary. Committee meetings occur once a month, after the Workshop Morning, start at 1.00pm and usually finish at approximately 3.00pm.
- **David Proctor's 'Leaving Do':** David's 'leaving do' at *Namaste Bengal* was a good night out with over twenty attendees.
- **Inverter For The Recently Acquired Cutter/Grinder:** PEEMS is acquiring a cutter/grinder and could do with an inverter, because it currently has a 3-phase motor. Either the motor is changed to single phase or an inverter is required. Jonathan asked if anyone had a ½ HP inverter. Ted Fletcher commented that a 3-phase motor would be much smoother, which would be especially good when using an air-bearing.
- **Iain Hale: Taps, Dies and Silver Solder for Sale:** Iain Hale from Scarborough, a former PEEMS member has some taps and dies etc to dispose of. He also has some unmarked silver solder for sale. Please contact Iain on his *scotdancer* email address. Please contact Jonathan for Iain's e-mail if you need it.

- **Summer *'Bring and Brag'***

  - **Brian Stephenson. Various Working Models.**

    As usual, Brian came to the meeting with an impressive range of working models. Brian didn't have to talk; the models spoke for themselves.





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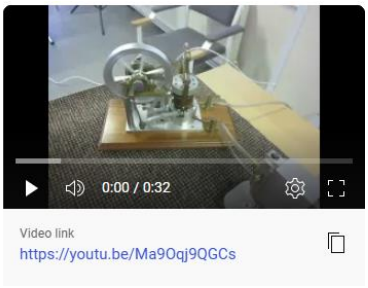


https://youtu.be/Ma9Oqj9QGCs

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- **Paul Gammon ~ An Air-Bearing For PEEMS's Recently Acquired Cutter/Grinder.**

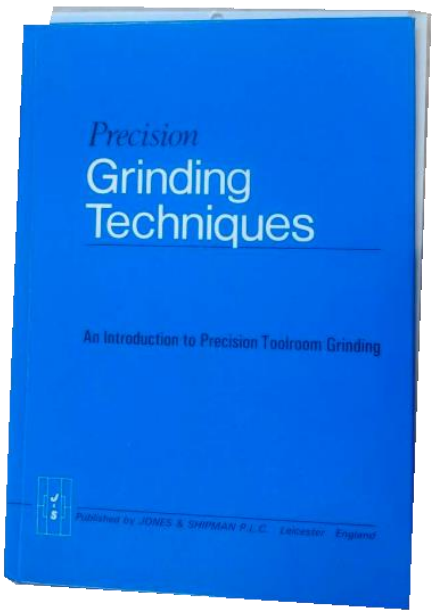
  Jonathan explained that PEEMS has acquired a cutter/grinder for the PEEMS workshop, for use by members who don't have their own machine. Paul and Doug have been refurbishing it.

  In the April 2025 edition of the Newsletter, there is a write up of a talk that Paul gave about cutter/grinders.

  Paul explained the operation of a typical cutter/grinder, and gave us tips on how to get the best results from the machine. When it came to the grinding of cutter flutes, an "air-bearing" is recommended for the best and quickest results.

  Paul explained at this meeting that a problem for years with grinding cutters, is that the cutter has to be moved backwards and forwards, and all the grinding dust that used to be generated (before CBN grinding wheels) tended to get between the spindle and the casing. Halfway grinding up the flute there would be a 'jolt', due to the dust accumulation, and there would be a 'dint' in the cutter. The job would then have to be started again.

  So cleanliness is very important. It's not so important, as mentioned above, with the new CBN (Cubic Boron Nitride) grinding wheels; but with the air-bearing which *Clarkson* used to use, the air blows out of the spindle so no dirt or dust can get in and accumulate. The air-bearing is just a tidy way to do cutter grinding.

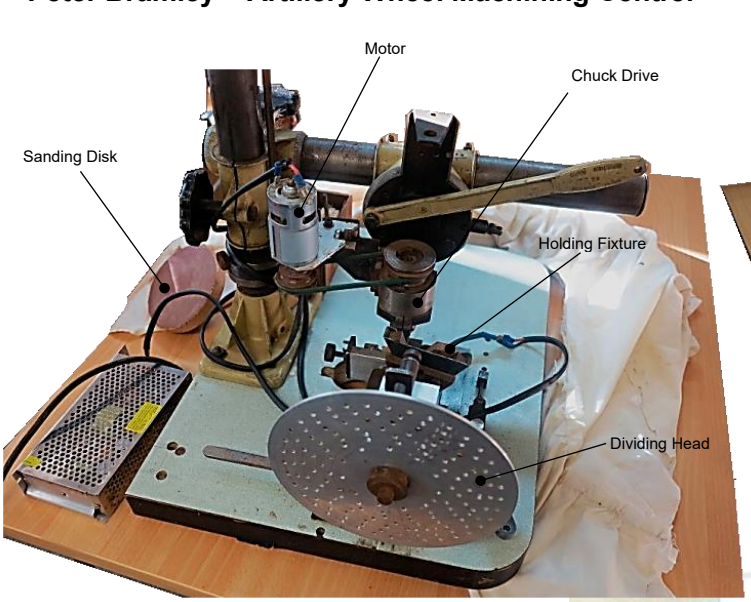


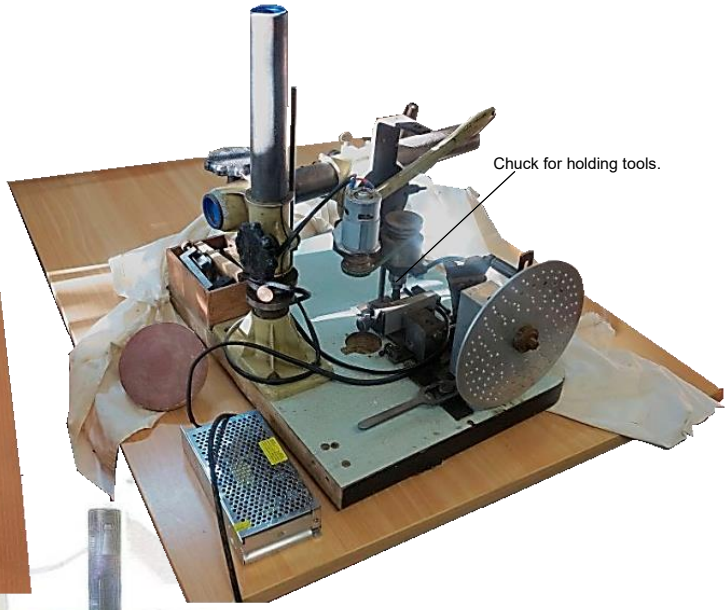
**Q:** So the spindle is a sliding fit in the air-bearing?

**Paul:** Yes, I bored out the bearing to about the size required, and the spindle shaft was ground down to size. About 0.7 thou was then taken off the shaft by lapping; if it is too tight in the bearing, it doesn't work because no air can get out of the bearing. That means that there should be a minimum ½ thou clearance in the bearing for air to get around it to keep it in the middle.

The air-bearing runs on about 80 psi. Surface grinders use air-bearings and they get a very good finish because there is no friction.

- **Peter Bramley ~ Artillery Wheel Machining Centre.**





Spoke Tool

This is a machining centre for making artillery (spoked) wheels. A few years ago, Peter was making a steam car with four wheels and twelve spokes in each. That was a hard job! Fortunately, a PEEMS member was emptying his workshop, and Peter acquired this machining centre, which turned out to be very useful.

Artillery wheels are made of three components, the hub, the spokes and the 'fellows' (rim sections). Elm is used for the hubs, ash for the spokes and oak for the 'fellows'.

The fellows are joined with glue and dowels, and there are holes in them for the spokes.

Spoke

Fellow

Making the 'fellows is fairly easy. There is a fixture on the machining centre which holds the fellow. Using a circular saw in the chuck, the fellows can be cut off at the right length, and with the correct angles on the ends. The column is lifted to bring the cutter up to the work, and the fixture can be moved horizontally to present the fellow to the saw. The plain dividing head is used to rotate the fellow to the required angle for the cutter.

The vertical column can lift up, and can also twist around in order to get the tool in the chuck in the correct orientation for the workpiece.

Making The Spokes: The tool (see previous page), cuts the spoke shape. Without the machining centre, that would take a long time. Peter can make a spoke in 5 minutes with the centre, and that includes the sanding operation. A lot of time is saved, especially with 48 spokes to do.

There are also stops on the machine, to ensure all the spokes and fellows are identical.

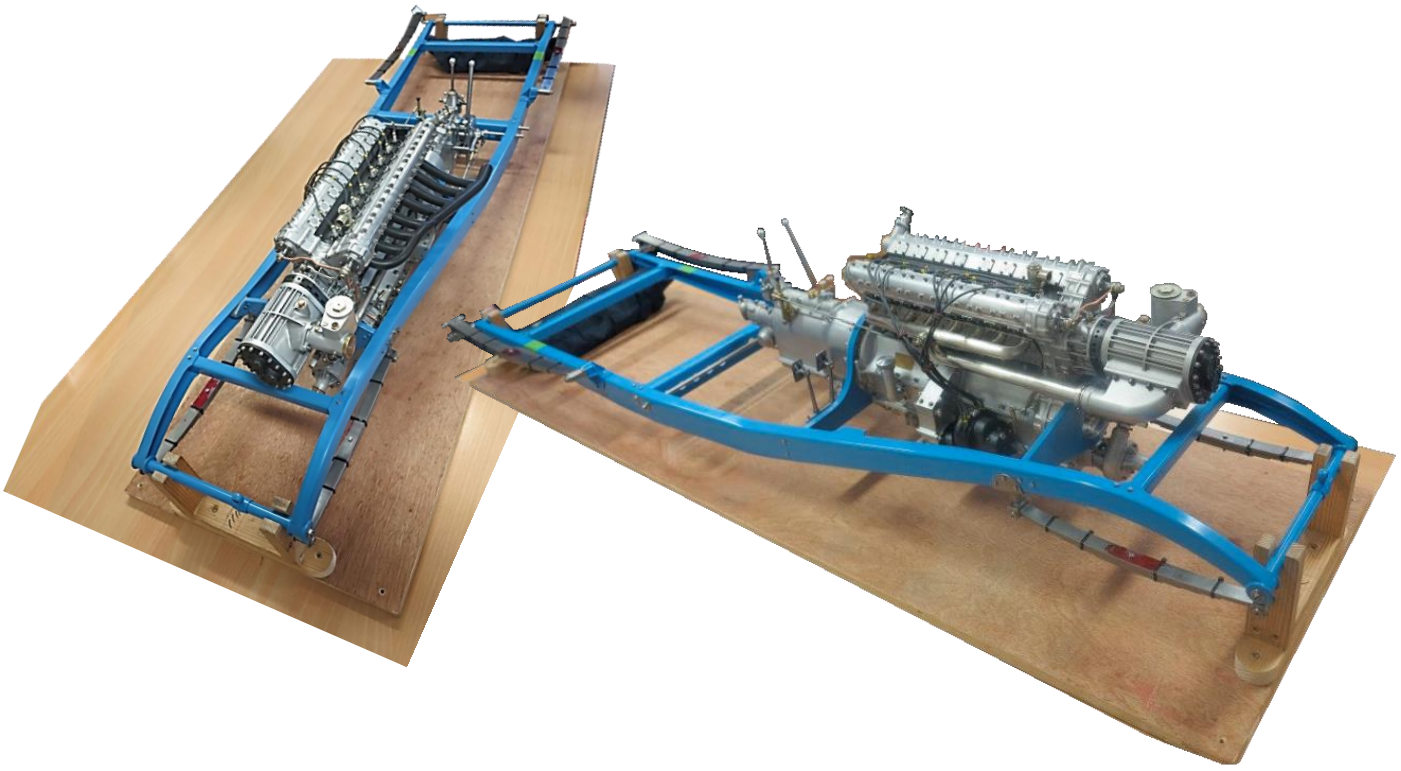
**Q:** How big a wheel can you make on the machine?

**Peter:** The wheels I make are 3½" radius, and the spokes are about 2½" long. I could make up to 6" radius on this machine.

**Q:** Is there a tyre around the rim?

**Peter:** Yes. I glue all the components together, and put a rubber tyre around to pull all the components tight while the glue goes off. In my models, I use rubber tyres which are held in place by two plates either side of the fellow and then bolted through. This is the way this particular wheel is built.

- **Mike Sayers: Model *Delage* Engine and Gearbox Now Mounted On The Chassis.**



Mike's *Delage* model has been displayed at PEEMS in its various stages of construction since the first component, the supercharger, was presented at the Club meeting in October 2019.

The last presentation was in May 2025 at the Spring '*Bring and Brag',* when Mike presented the completed engine and gearbox, mounted on a display stand. He said that he intended to mount the engine and gearbox on a scale model of the chassis, and explained the planning and construction methods.

At this the Summer *'Bring and Brag',* Mike presented the model engine and gear box on the completed chassis. Mike said that for the previous three months, he had been making the chassis and thought everyone would like to see the result. As there were some guests and new members, who may not have seen the model before, Mike gave a brief description of it.

The model represents the 1927 *Delage Grand Prix* car which won the first British Grand Prix. Mike wanted to create an absolutely detailed model which ran. Initially he only wanted to build the engine, and thought that would be enough. Then he was persuaded to build the gearbox and that was a real challenge. He decided he wanted to display it in the best way possible, so he thought he would mount it on a scale model chassis.

The chassis has progressed quite quickly, and has been an enjoyable experience. Eventually, axles and brakes will be added. Mike had been discussing the possibility of 3D printing suitable tyres, with an "expert at the meeting". There are endless ways to go on this.

Ultimately, the completed model is intended as an exhibit alongside the original car at the *Brooklands Transport Museum.* Mike was travelling down to Brooklands in the following days to get details about the front and rear axles. He didn't have enough detailed information to build them, mainly because he hadn't intended to go so far with the model in the first place.

As can be seen from the following photographs, Mike has finished making the suspension springs. The rear ones are finished and shaped, and the front ones are roughly cut. Mike is also making the clamps and other details. **Please Note:** The tie wraps around the springs are temporary!

**Q:** What material was used for the springs. Was it spring steel?

**Mike:** There was no point in going that far, it just makes construction more difficult, especially in procuring spring steel in the right sizes. The springs are mild steel, and once they are clamped, they will be rigid and support the weight of the model.

**Q:** Is there some spring in them?

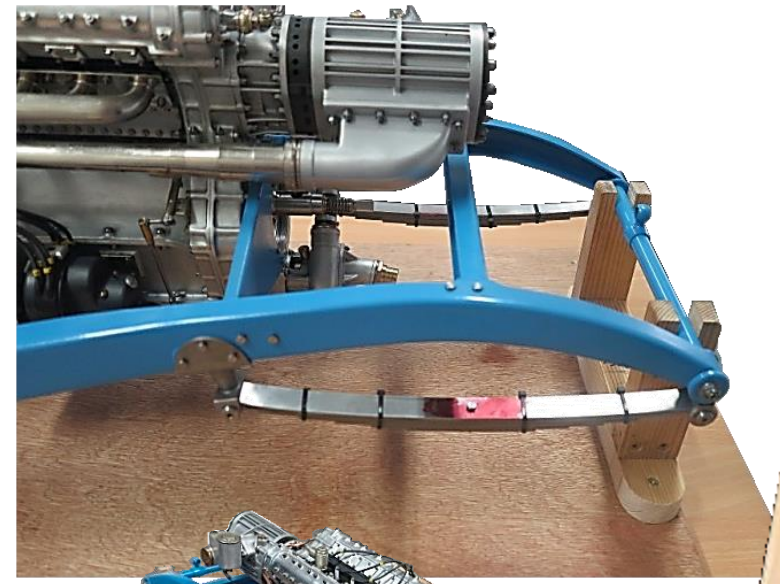
**Mike:** Yes.

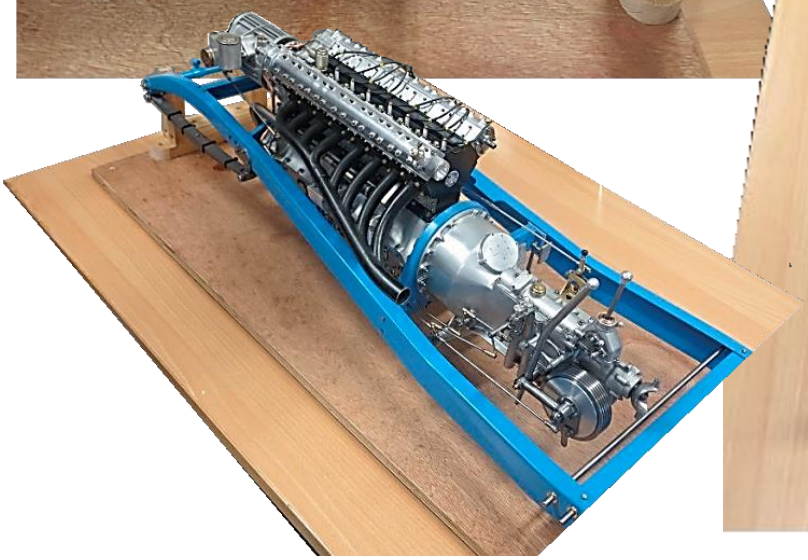
**Comment:** Some people in 5" gauge modelling use mild steel and mill a slot in the middle to get the required spring rate. As long as the material doesn't exceed the elastic limit, everything should be OK.

**Mike:** The original leaf springs featured clamps, so the tightness of the clamps determined the spring rate. In a car like this, they would have had stiff springs at the front, and the rear springs would have been relatively soft. The oversteer could then be controlled by stiffening the rear springs. You could basically tune the suspension by tightening or untightening the clamps.

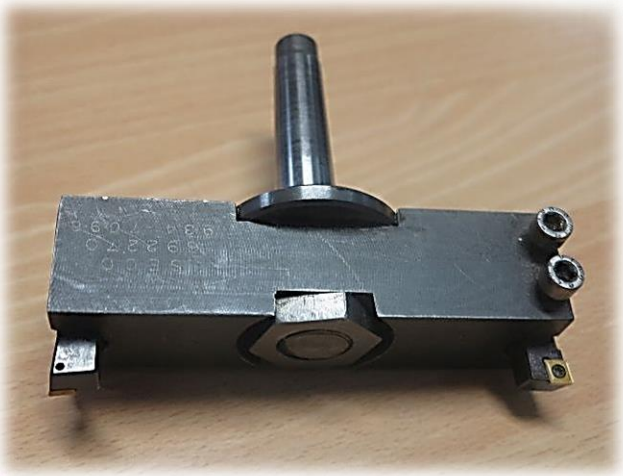
**Q:** Would the suspension be tuned to the characteristics of the various circuits?

**Mike:** The book I brought along about the car, had notes (in French) for all the records on all the circuits. The notes show the different gear ratios used, changes in gear ratios, spark plugs, tyre pressures and types of fuel etc. I didn't realise before, that they could tune the suspension.





**Mel Doran ~ Flat Surface Fly Cutter.**



Mel said that if anyone has a vertical mill, they will know that milling a flat surface is not that easy. In industry they use this type of fly cutter.

Mel made this himself, as he had decided he needed one. He was at the autojumble at Rufforth, and he found an axle stump with a 2 morse taper, and he thought he could use that as a spindle to go in his vertical mill. Wandering around he found a lathe tool, about 6" long and 1½" x 1½", with a throwaway tip on the end. Reducing the length gave him what he wanted.

First he decided to turn the spindle on his lathe. He turned what was on the end, and made a parallel diameter and thread. He cut the lathe tool down to size, and put it in a 4-jaw chuck. He centred and drilled it out to suit the spindle. He fitted the spindle in, made a nut and assembled it. The ends were then milled out to receive the cutters.

Mel bought a couple of replaceable tip lathe cutters and fitted them in.

This is how it works:  The shape of the cut in the block of bronze is seen above. The cutter had to be 'ploughed in' so far.

One of the cutters on the device is a 'roughing' cutter and the other is a fine cutter. The 'roughing' cutter is set out about 2mm from the radius. The fine cutter is set down about 3 or 4 thou to give the cut. So as the roughing cutter precedes the fine cutter, the difference in heights (the fine cutter is lower by 3 – 4 thou than the roughing cutter), means that the shape as seen in the bronze block, is the result.

**Q:** Was it hard work machining and boring the lathe tool?

**Mel:** No. Although it is tough material, it machines OK. Also, I was able to drill and bore it for the spindle.

**Q:** What speed are you running?

**Mel** 1600 rev/min. It depends on what you are cutting. You could slow it down for cast iron.

**Q:** How are the cutters attached to the lathe tool?

**Mel:** With two M6 cap head screws.

**Q:** Is the spindle Loctited in?

**Mel:** No, just tightened in with the nut. It doesn't slip either.

**David Hick: A Clock That David Built, And An Inlay Floor That David Made And Laid In Wykeham Abbey.**

David had all the parts to build the clock for twenty five years, and rather than letting it gather dust in a box, decided to finish the job two years ago.

He bought a *Westminster Chime* movement for the clock but found it didn't fit in the case. *Gray's Emporium* in Thornton Dale had a number of movements, so David bought one that fitted in. He's had to do some work on it.

David made the dial and used a rotary table to do all the numbering and other work on it. He then silvered and lacquered it. He made the brass bezel dial surround. He got the brass from Mike and used brass screws to attach it.

All the intricate inlay work on the cabinet was also done by David, with a rotary table used to do the curved inlay under the bezel.

**Inlay Floor At Wykeham Abbey**

When David worked at Taylors Joiners in Pickering, he had to make a wooden star which was 8 feet in diameter.

It had to be laid in a brand new elm floor in Wykeham Abbey, North Yorkshire for Viscount Downe.

Prior to the work at the Abbey, David spent two weeks in the workshop getting all the pieces prepared. The centre piece was mahogany, and the other pieces, American walnut and English beech

Going into a brand new floor with a router was a nerve wracking experience. It took three weeks to cut the floor with the router and then to put all the pieces in. There was a pattern that was cut out to the shape, and it was indexed around with a centre pin.

**Contact:** If you would like to contribute to the Newsletter, the contact is:
Nevile Foster Tel 01751 474137 or e-mail nevf123@outlook.com