



INSIDE MOTION

News and Views from the
TYNESIDE SOCIETY of MODEL and EXPERIMENTAL ENGINEERS
No. 42 March 2024

Preamble

By the time you read this, one sixth of the calendar year will already have passed, as, hopefully, will be the worst of what seems to have been a very long and very wet winter. Things can only improve now ...

Club matters

Projects in Progress



The first event of the year brought together an interesting and varied mix of model engineering excellence. There was a lot to admire and discuss, all helped along by a fine day, tea and coffee aplenty and Linda Nicholl's famous Broth 'n Bread at lunchtime.

Container

Things are moving along steadily – the internal partition wall is all but complete and lighting and other electrical fittings are being installed. The ex-BMEG guillotine and rollers have been restored to working order.

Public Running

A reminder that Public Running starts again on Sunday 7th April, and that anyone wanting to use the raised track should be on site and vehicles clear of the loading area by 10:30am.

For your diaries ...

Urban Green has announced that the Newcastle Food Festival will take place in Exhibition Park on Saturday 4th, Sunday 5th & Monday 6th May. It's likely, though not yet confirmed, that vehicular access through the Park may be restricted.

Strathaven Model Society is holding its 75th Anniversary celebration with an Open-track Day on Tuesday 14th May. See the Clubhouse notice board for full details.

Member's Musings

The Ffestiniog Railway and its Double Fairlie Engines

Gwion Clark

The Ffestiniog Railway opened in 1836 to connect the coastal town of Porthmadog with the slate quarries of Blaenau Ffestiniog. Thirteen and a half miles long, the line climbs almost continuously to "the town that roofed the world", passing through Snowdonia National Park and the ancient oak woodland surrounding Tan y Bwlch along the way.

Amongst enthusiasts, the railway is perhaps best known for its Double Fairlie locomotives. The design was patented in 1864 by Robert Francis Fairlie and overcame the need to double-head the heaviest trains by combining two engines into one. A Double Fairlie boiler contains two barrels, two fireboxes, and two domes, and is slung on a pair of power bogies which allow the locomotive to navigate sharp curves. The driver and fireman stand either side of the boiler which passes through the cab positioned at the centre of the loco. On the driver's side are two regulator handles (one for each end), the reverser and vacuum ejector, whilst on the fireman's side are two fireholes, two coal bunkers and a handbrake.

Seven double engines to Fairlie's patent have been built for the Ffestiniog Railway in total, with five in existence today. In 2023, the seventh was outshopped from the railway's Boston Lodge Works. The new locomotive "James Spooner" features a boiler with tapered barrels to an updated design, a cab with a removable roof section, and a brass bell mounted behind the chimney at either end.

The author was fortunate enough to have been given the opportunity to fire "James Spooner" for its naming ceremony which took place on October 20th at Blaenau Ffestiniog. As expected with a new boiler, it steamed freely, and the locomotive hauled ten carriages with ease despite leaking steam from a few places ! We were treated to liquid sunshine throughout the day, however this did not detract much from a very enjoyable occasion.



"James Spooner" posed for photographs at Boston Lodge with Snowdonia providing a fine backdrop



Left – “James Spooner” firehole door

Right – “James Spooner” & “Merddin Emrys” at Blaenau

George Thomas Universal Pillar Tool and Drill

Peter Newby

At the clearance of John Bolter’s workshop, his GHT Pillar Tool and Drill (PT&D) found its way to the Clubhouse looking for a home. It looked very sad, being covered in surface rust and requiring a good clean-up and a bit of TLC. Now, I already had a pillar tool that I got from Roy Chipchase’s workshop but it did not have the sensitive drive section which I thought would be very useful. Any how, long story short, I bought Johns machine, stripped it down and did a thorough de-rust and reassembly. The complete machine is superbly made and you can see the design it follows the tradition and quality of the finest European horology tools.



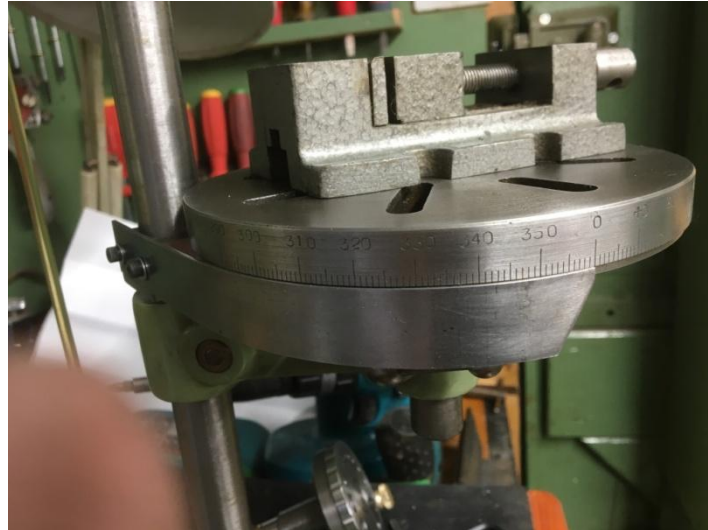
To get everything together I made a single-drawer cabinet to mount the PT&D on, the drawer providing storage for all the many accessories. The nice thing about this is that it is replacing an existing tool so no more bench space is lost but at the same time additional functions are

provided. Another nice thing is that some of John's work is being kept locally within the Club membership.

I have written on the underside of the cabinet a short history and dates for future reference.

Extras for the GHT Universal Pillar Tool and Drill

On Johns Bolter's pillar tool the table edge is calibrated and marked 360°, but there was no Fiducial Marker (zero Line) to set the degrees to. George Thomas described making a vernier scale so that each degree could be further split into 25 parts - this seemed an overkill for my use and 360° seems to be sufficient.



Another accessory that seemed useful was a rotatable staking anvil - again a very well designed tool by George Thomas. I already had a casting for the body, only requiring the various small parts to complete.



The final item I am addressing is the motor for the drill - with the current arrangement the spindle speed is only 2000 rpm and that is too slow. I have a 4000rpm Parvalux motor that I intend to fit, together with a 3 inch pulley. The spindle speed should then go up to 8000 rpm - far more suitable for the small bits that the sensitive drill was designed for.

Postamble

Thanks to Gwion and Peter for their contributions to this issue – proof, if needed, that articles don't have to be heroically epic, just a simple record of what you've been up to.

Of which, the editorial cupboard is presently bare again, so do consider sending something along.

See you in April ...

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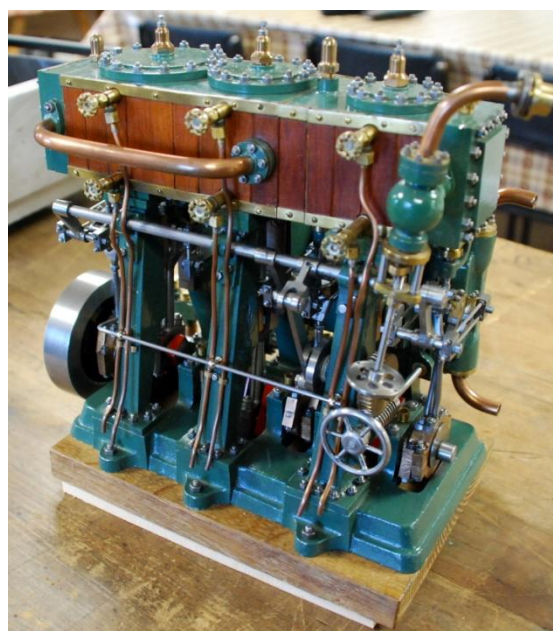
Website – www.tsme.co.uk Webmaster – John Rowley – johnrowley@btinternet.com

Headquarters and Multi-gauge Track – Exhibition Park, Newcastle upon Tyne NE2 4PZ

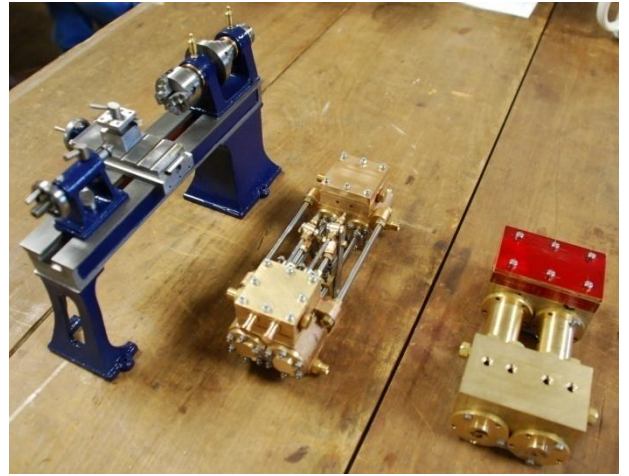
Gallery – Projects in Progress Day



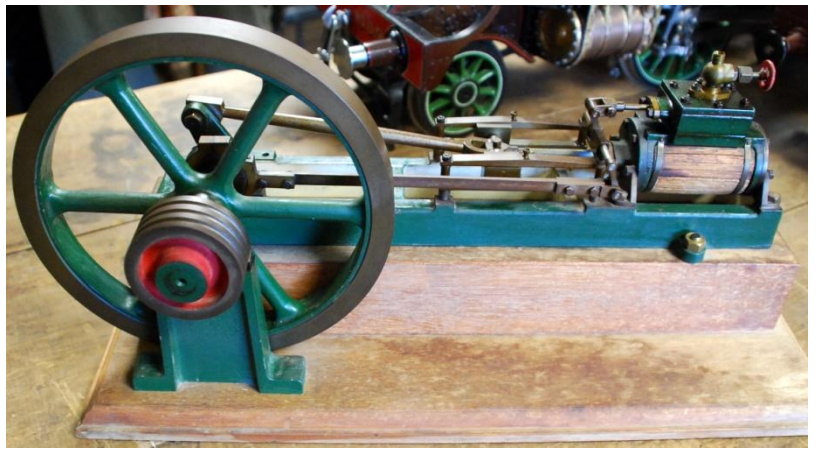
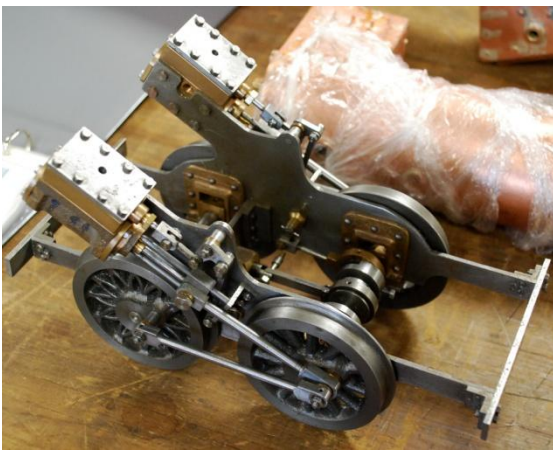
John Bolter's splendid 5" gauge NER Mainline Electric Locomotive, now in the care of Norman Blackburn



Left – Mick Jordison's Belgian Tram Loco Right – Alan Young's 3-cylinder Compound Marine Engine



Left – Eddie & Joe Gibbons' 5" gauge GNR Fruit Van Right – Simon Walker's Koppel pumps & mini-lathe



Left – Michael Saint's "Invicta" chassis & boiler Right – My Stuart "Victoria" mill engine



Dave Nesbitt's "Princess Victoria" making the most of a lovely sunny morning