Reading Society of
Model Engineers
Charity Number
1163244

The Prospectus

July 2026

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[Vacant]

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Free to members

Editorial

Our thoughts are with the all the loved ones and family of Shaun Burton and with the families and friends of all those injured in the recent East Midlands Railway collision near Bedford.

"PROSPECTUS" is an interesting name. It is US at the Bath Road end of PROSPECT Park. But "PROSPECT" offers the possibility that something, usually something good, might happen in the future. There are some interesting articles promised for upcoming editions of your favourite newsletter, and one starts this month. Recreating in miniature the retrieval and restoration of locomotives from Dai Woodham's yard at Barry, Richard Mullard has set about working on a 'Speedy'. Even so, please, please, if you have any ideas, drawings, artwork, pictures, descriptions or discussions about model or experimental engineering, or about something that interests you in the world of engineering, please let PROSPECTUS have them. By the way, the post of **Editor** of PROSPECTUS is still vacant: someone MUST be interested!

DIARY

JULY 2026

5	Public Running	
	Setting up from	*09:30*
11	Club Running	*10:30*
13	Trustees Meeting	*19:30*
24	'0' Gauge Group	*19:30*
25	Club Running	*10:30*
25	'0' Gauge Group	*09:30*

AUGUST 2026

2	Public Running	
	Setting up from	*09:30*
8	Club Running	*10:30*
10	Trustees Meeting	*19:30*
22	Club Running	*10:30*
28	'0' Gauge Group	*19:30*
29	'0' Gauge Group	*09:30*

SEPTEMBER 2026

Advance Notice

6	Public Running	
	Setting up from	*09:30*
12	Club Running	*10:30*
13	Curly Bowl (LBSC Memorial Bowl)	
14	Trustees Meeting	*19:30*
19	Federation Annual Rally	
26	Club Running	*10:30*

Weekly Meetings

Tuesdays	'00' Gauge Group meeting - Club House	*19:30*
Wednesdays	Wednesday Warriors - club grounds (unless notified)	*09:30*
Thursdays	General Meeting- Club House	*19:30*

The View from the Chair

John Billard


The Curly Bowl

The start of the meteorological summer has brought plenty of activity at RSME.

On Wednesdays this includes grass cutting, painting, track sleeper renewal, and concrete edging the ground level track. There is also more going on at the office where plans are being made for events in September including the Curly Bowl on 13 September and the Federation annual rally on 19 September.

This will follow public running on the 6 September so that will be a busy month. (On that basis it has been decided not to hold an open day this year.)

Looking back on recent events, there has been a re-awakening of the '0' gauge group and while this has not been seen for nearly a decade, it appeared to work splendidly. See Prospectus for further events.

The trustees met on the 15 June and there was plenty to discuss. We have now moved to a club treasurer program which improves access and takes some load away from the Treasurer. "Thank you" to Peter Jennings, who is now our bookkeeper to help us keep things straight. It was also pleasing to note that we had a very solid return from the last public running.

Current membership is about 100 and this does not include those who have not paid their subscription from 1 April. Regrettably there will have to be a final call for these and as a last resort they will have to be removed from our membership list.

Apart from the work referred to above, Donald Pickett is overhauling the 08 shunter, which is also being rewired and needs other work by Donald Pickett.

We have been planning for some time to improve the loading arrangements for the raised level track. This work has caused a number of complications to arise and it will now be included in the programme for next year. The next item was storage of members' locomotives in the carriage shed. This has reached the stage where action must be taken because we cannot offer this as a general facility for members. This is for reasons of fairness, space and other factors such as insurance. A suitable policy is being considered and will be circulated.

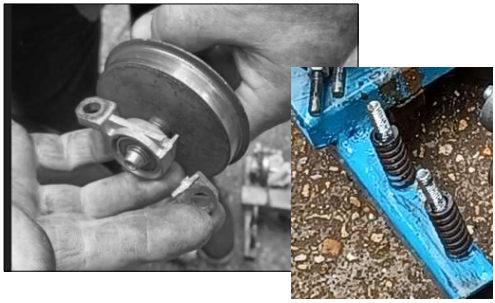
Public running on 7 June was very successful and busy. The platforms were crowded and members were fully occupied with loading and unloading as well as dealing with tickets. The car park was full and overflowing and a big task for Charles Benham at the gate. This day coincided with a private party which was again successful, but it had to include the additional erection of covered facilities during the morning. For the nearer future we hope to arrange a charity public running on 6 September with the Air Ambulance.

Looking further ahead, we have been asked if we could run a Sweet Pea rally in June 2027. This looks feasible but on a weekend which will not coincide with the Stoke Row rally. And we hope that members appreciate the return of Prospectus at the instigation of Alec Bray for which we are very grateful. Contributions from members are vital for its continuance.

Charles Benham, who observed at the meeting (any member can do this), has asked for more help with the parks and gardening. This is important so if this is for you, please respond. The next meeting will be on 13 July.

Trustees			
John Billard	Nigel Penford	Peter Culham	Mick Chalmers
Jim Brown	Donald Pickett	Daniel Rees	Stuart Kidd

A special thanks to all those members who assisted at the June public running. This turned out to be an exceptionally busy day with trains on both tracks fully occupied. So we must not forget the workers on the stations who had crowd control to contend with as well as dealing with tickets and loading the carriages.



One truck (Number 6) on the raised track derailed three times on one circuit and was taken off with the 37 running with one truck for a short time. It was later found (by the Wednesday Warriors) that one wheel bearing had fractured and the mounting bolt had been bent.

Two older trucks were run onto the track with the Atlantic now hauling three coaches - it did sterling work all the time, but struggled a bit when there were too many big-built dads loaded on the trucks! (Something for the station staff to watch out for!) The four-coupled steam locomotives on both the ground-level and raised track slipped at times.

The car park never had seemed so full, and at least £1100 was taken for the rides alone. Our thanks, too, to the drivers, and those behind the scenes. (Please note that the ***September*** public running day monies will be donated to the Air Ambulance service.)

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Boiler water gauge complete and unused with blow down valve. M6 x 0.75.

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Boiler water gauge complete and unused 3/16” x 40.

£10.00

Please contact:

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FOR SALE

STOP for a SMILE

Those things underneath and at right angles to the rails are called SLEEPERS because they LIE on the track BED

'0' Gauge Project Report

Daniel Rees

On Friday 5 June 2026, after a rather spontaneous decision and little organisation, over a dozen club members came to help or watch the assembly of one of our two '0' gauge layouts. This event marks the end of a hiatus spanning over a decade of the '0' gauge layout which had been confined to the storage cupboard.

It was quite an exciting experience as many members have not seen the layout before. We had the assistance of Jim Brown and Mike Sinclair, who scoured their memories to help piece together the boards and wiring of the layout. Everyone there chipped in to help, producing quite a spectacle. It was Marcus, Quinn, Lawrence and Charlie who, after a bit of tinkering, awoke the board and we saw the first movements take place. After a short test of the track, we moved on to checking the locomotives, many performing splendidly, considering the lack of attention they had received and time that had passed, since they last ran.

From then on, the excitement got the better of us, and with the original plan being to set up on Friday and run on Saturday, we quickly ended up running nearly everything we could at the same time. Counting five locomotives on the track and not including the full fiddle yard, it was messy but thoroughly good fun.

The Saturday came and play went on. We ended up putting the layout away safe in the knowledge it will be out again in several weeks' time. So please, if you have an interest and you can make some time, do come to the Club on Friday 24 July at 19:30 or club running on Saturday 25 July. The more, the merrier!

Future meetings planned for:

AUGUST 2026

28	'0' Gauge Group	*19:30*
29	'0' Gauge Group	*09:30*

OCTOBER 2026

9	'0' Gauge Group	*19:30*
10	'0' Gauge Group	*09:30*

I was there ... *David Wilkinson*

Whilst reading an account of a Great Western "Saint" locomotive attaining a speed of about 120mph in 1906, I mused about an incident that I was involved with in 1967.

At the time the 750 volt DC electrification of the South Western main line to Southampton was almost complete, and the authorities were being pressed to install the Automatic Warning System (AWS) that was already in use on other railways. This system has 'balises' in the track (transponders placed between the rails) near each signal that repeats the signal indication on a receiver in the train's cab. This sounds a bell ringing for 'clear' and strident horn-blow for 'caution'. In the event of a caution signal, the driver can acknowledge the warning by pressing a reset button. Failure to do so results in an automatic brake application that halts the train. The system was designed to assist the driver, particularly in conditions of limited visibility, and helps to prevent signals being overrun at danger (SPADS). Now the Southern had resisted this system because of the frequent need to reset in very dense suburban operation because trains ran under caution 'most of the time', so that re-setting would tend to become an automatic reaction that would not prevent overruns. There was also concern that the effects of high train speed and possible interference from the third rail current might adversely affect system reliability.

So what had this to do with me? At the time I was a Rolling Stock Technical Assistant and assigned to riding with a test train to assess the performance of the AWS system - we were particularly interested to discover if a balise signal was missed with train at speed.

Now the route included a twenty-mile section down a 1 in 250 gradient between Basingstoke (Litchfield) and Northam Junction (Southampton) and was judged to be suitable for our test. Our test train comprised a 2-HAP electric unit propelled by a new 'JB' electro diesel locomotive. The crew comprised driver, traction inspector, Westinghouse brake rep. and myself as observer. At the time I was not made aware of any special operating instructions and

An Electro-diesel coupled to an Electric Multiple Unit (EMU).

This is NOT the locomotive nor the combination as described by David, but illustrates an electro-diesel locomotive in multiple with an EMU.

assumed that we would run at up to the normal line speed of 90 mph. It also meant that the driver would only take instruction from the traction inspector.

We set off from Woking and proceeded with a clear road to Basingstoke without incident and went over the hump at Litchfield tunnel with the train gently accelerating and the driver remarking that the speedometer in the HAP wouldn't be much good as it didn't register more than 60 mph. He had the power controller in 'notch 4', the habitual normal setting for these electric units, and the speed appeared to be increasing… and then kept doing so. It seemed to be going really fast, with our 'little electric unit' driven by the loco behind seeming to 'float' above the track. The driver seemed to relish the occasion, but the Westinghouse rep, an older man, became very agitated and suddenly yelled 'for God's sake slow down' and we all realised that acceleration had continued way beyond our normal maximum speed. In a frightful moment I realised what had been happening - both driver and inspector hadn't appreciated that the controller position being used on the electric unit sent a signal down the connecting jumper cable to the locomotive. This had been setting the loco to weak field, the 'full power setting', and this caused uncontrolled acceleration without any speedometer indication.

The driver slammed the brakes fully on, cut off the power and we held our breath expecting the train to slow down. But it didn't appear to do so and we later learned that cast iron brake blocks don't have enough friction at speed. We hurtled through Winchester with brakes still hard on. After what seemed several more miles the train eventually slowed to normal speed under clear signals and we crept into Southampton, where an irate station inspector stood yelling at us. He said that the brakes had been on fire at Winchester and that the train was being withdrawn forthwith!

I left the scene to arrange for inspection of the train and I was roundly 'chastised' to say the least by my boss the following day even though I was only classed as an observer. I was relieved to overhear his telephone call to the station manager when he also chastised him in equal terms for making such a fuss. Those were the days.

Afterword: A very rough calculation would suggest that if starting at 60 mph, by the time the train passed Litchfield, down the gradient past Winchester, the speed would have been about 100 mph due to gravity alone. It is anybody's guess what our maximum speed would have been as the locomotive would have been under full power - we thought at least 120 mph.

As it was, the brake blocks were completely worn out, and we were very lucky not to have burst the traction motors on both the HAP unit and the locomotive. I learned later that the blocks had been changed during the night and the train was back in service undamaged the following day.

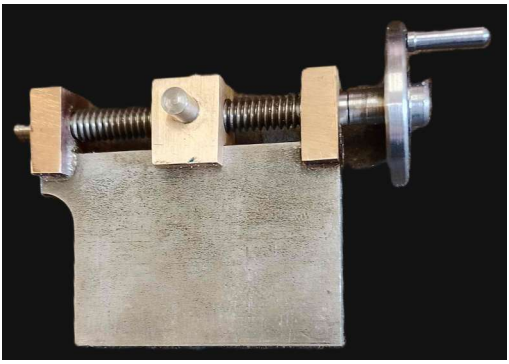
At least we could show that the AWS worked satisfactorily!

Building a Claud - Part 21

John Billard

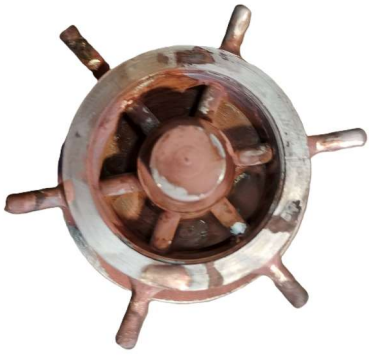
The Cab Reverser

Having satisfied myself that the engine ran on air, the next stage was to complete the cab reverser. Reference to the Martin Evans drawings shows something workable and fairly straightforward, although I preferred to replace the two handles with an operating wheel as per GER practice.



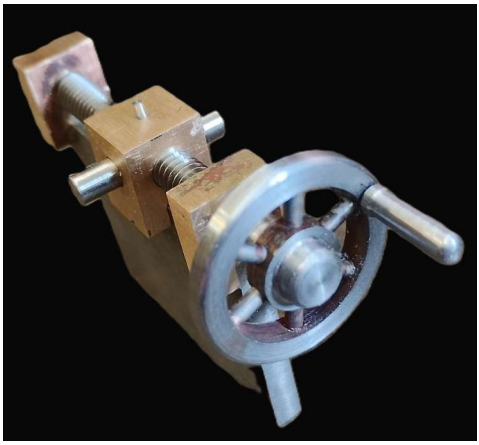
The screw was made from ¼" silver steel, left hand thread. This was cut with a die in the lathe, in lowest back gear, one pass with plenty of cutting oil. Two bearings were made from gun metal and silver soldered to the frame. These had to be drilled in line. To make sure of this, a piece of quarter steel was then placed through the bearings as the job was soldered.

Making the six-spoked wheel took some thought. I turned a piece of steel down to 1 1/8" diameter and then cut an annular ring, taking account of the rim thickness and the hub diameter. The next stage was to transfer the job to the milling machine with the rotary table attached and six holes were drilled through the rim and into the hub. The spokes were inserted and soldered, then it was back to the lathe.



The spokes were trimmed back and up on reversal the back of the embryo wheel was then cut to thickness. The operating handle was made over-size to facilitate use and then screwed into the rim.

I was pleased with this result which will give a scaled look to the cab fittings.



FOR SALE

Electric motor 240V 1 RPH. New, unused, 6 mm shaft. .

£5.00

Please contact: **John Billard**
07834 998971
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Wednesday Warriors

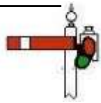
You don't need to know that 20 quires makes a ream to be an editor of PROSPECTUS.

RSME aims to provide all our visitors, particularly those who come for birthday parties or for the public running, with a friendly, safe and attractive environment that everyone can enjoy. It is the "Wednesday Warriors" who keep the grounds well tended, the track in good condition, and the rolling stock safe, fully functional and available.

The gardeners have been busy, planting a third apple tree in the Southwest area of the site: together with the flowering cherry tree, it is becoming quite an orchard.

Charles will point out the Indian (or Himalayan) horse-chestnut tree (*Aesculus indica*). This non-native tree has plentiful pinky-white flowers, pollinated by the bees, which bloom in May and June – and which brightens up the

STOP for a SMILE



I don't know what's costing me more - spending too many late nights in the shed working on my locomotive or not spending nearly enough late nights in the shed working on my locomotive!

view from the “Newbury curve.”

Like all horse chestnuts, the conkers are harmful to humans and pets (such as dogs), and the gardeners need to take care when dealing with this tree!

One constant task is grass-mowing: this keeps much of the site in trim, but we also have conservation areas where nature takes over! Another constant is the need to keep the

trackwork in good condition, replacing time-expired sleepers, for example, and ensuring that the signalling system is working well. The ground-level track edging is progressing well: this will keep the track well drained and stable in position.

One very important "Wednesday Warrior" job is the care and maintenance of the Society’s rolling stock and locomotives. Here maintenance work is being undertaken on one of the raised track passenger trolleys which suffered damage on the last public running day.

The “Wednesday Warriors” have an important social function, too – they offer an environment which provides conversation and connection with others, and encourages people to come together to make, repair and repurpose: in many ways it acts as a “Men’s Shed” and, as such, coming to the “Wednesday Warriors” can improve wellbeing, reduce loneliness and combat any social isolation. It is a space for members to chat over practical activities and get to know one another – and drink tea!

It started with an email from the RSME Secretary on 31 May 2026: the frames of an LBSC ‘Speedy’ were up for grabs.

Available

LBSC 5" "Speedy" chassis, frames, cylinders, wheels, motion, all complete.
Well made. Some rust.
Free to any club member.

A friend of a friend of John Billard was clearing out a workshop. The ‘Speedy’ frames were made by a very skilled model

Frames as collected *photo: John Billard*

engineer a long time ago, but they were then involved in a disastrous fire which not only consumed the workshop but an extensive collection of rare ex-BMC cars as well. As it stood, the frames were destined for the skip, but were offered to RSME in case there was someone interested in having a go. The locomotive really needed complete dismantling and de rusting – and some perseverance!

Richard Mullard expressed an interest, so John collected the frames from West Sussex and delivered them to Richard - who has by now already made a start!

Richard writes: “… I have had a "major milestone". I have managed to remove one of the cylinders, albeit not the one I first started on! I am trying not to break any bolts (I had forgotten that the fire had annealed everything). The fixings I am treating as scrap with the exception of the fitted bolts: they will be used as patterns for the new ones.

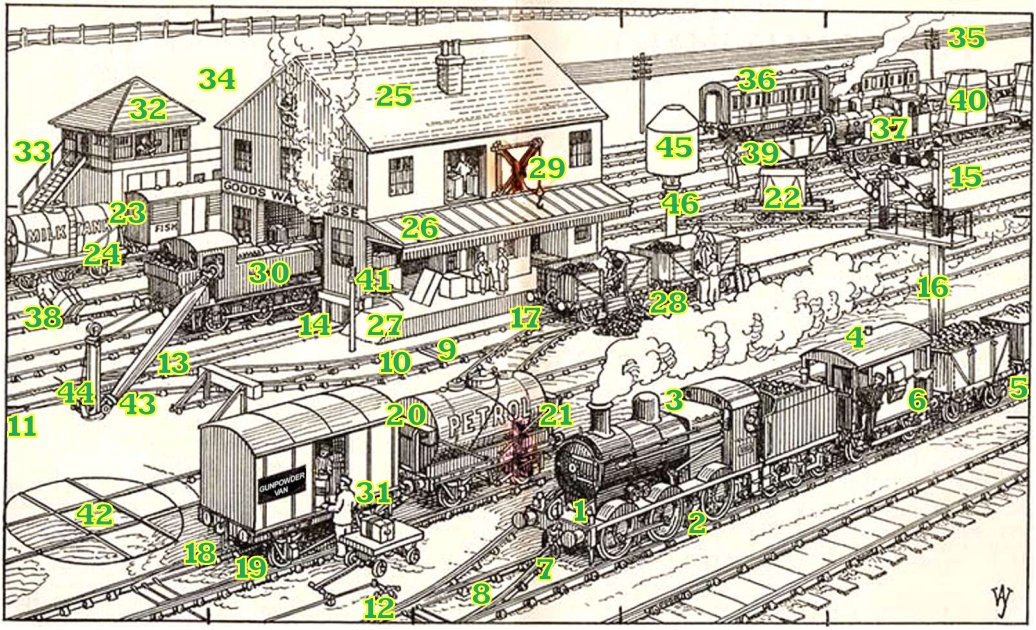
The buffer beams have been welded to the frames, so that will be the last things I will look at. The welds will need dressing out once everything is off: there will be some broken studs/ bolts that will need drilling out where they have sheared off. Some are conveniently positioned but others not so!...”

to be continued ....

STOP for a SMILE

There’s a chap I know who has been a big fan of monorails since he was a little boy. I guess he’s just really into one-liners..

An Impossible Picture - The errors



Goods Train

The locomotive is carrying express passenger headcode (lamps) (**1**) and only the two leading driving wheels are coupled (**2**). (If it were an 0-4-2 (B1 (UIC)) the trailing wheel would be a smaller diameter.)

The locomotive has no safety valve or whistle (**3**). The brake van (or guard's van) is at the front of the train (**4**) (although sometimes there ***was*** an additional guard's van at the front of a goods train). The coal wagons on the train have no brakes or brake handles (**5**). The guard is giving "right away" although train is already moving (**6**) but running on the wrong line (**7**) (although this sometimes happened for operational reasons).

Track

The Down main has the chair keys ***inside*** the rails (**8**) – and there are no sleepers shown anywhere in the yard! The pointwork is incorrect (**9**), including the lack of point rodding (**10**) and point operating levers in the yard (**11**). The facing points from the Up main into the sidings is open to the sidings (**12**). Two problems with the narrow gauge – there is a direct connection with standard gauge track (**13**) and the buffer stop is right up against the warehouse (Goods Shed) wall (**14**).

Signals

The main and branch distances are both "off" and the home is "on" at the same time (**15**). There is no ladder on the signal post (**16**).

If you like following a TRAIN of thought, you could be an editor of PROSPECTUS.

Wagons

The coal wagon has vacuum brake pipes. (17) – open wagons were not vacuum fitted. The gunpowder van has only two coupling links (should have three) (18) – and it has no buffers or brakes (19).

The gunpowder van is marshalled next to petrol tank wagon (20) and in a train both these types of wagon would have barrier wagons between them and the locomotive. These trucks are standing on open tracks, not in a loading bay (21).

The Container flat wagon is fouling the crossover (22).

Another strange pairing is the milk tank wagon marshalled with the fish van (23). Both these typically ran in a "block" train of all milk tanks and all fish vans, often as fast fitted freight, but neither the milk tank nor fish van have vacuum brake connections (24).

Goods Warehouse (Shed)

The warehouse has no road access (25) – where will the goods go? If they don't get wet! The canopy of loading deck would drip rain onto the goods on the platform (26) and the ramp of the loading deck is too steep (27). Two open coal wagons are being unloaded, not onto the loading deck but onto the trackside (28) – coal wagons unload at the coal staithes. Perhaps because the wall crane is in a useless position (29), the shunting engine is pushing vans and is entering the goods shed (30) – never allowed! A porter is unloading parcels from the gunpowder van alongside the main line (and fouling the points) (31).

Signal Box

The signal box is very badly sited (32) and badly sighted - it does not have a clear, unobstructed view of the line. Its staircase has only one handrail (33). Signal boxes communicate via the telegraph – but the telegraph wires vanish before reaching the signal box (34), and there are four crossbars on one telegraph pole but five on the other (35).

In the Goods Yard

The are a pair of four-wheel corridor passenger stock in one siding (36), and one locomotive is stuck in another siding (37).

A porter is wheeling a barrow across the tracks (38), and the shunter is standing in the four-foot (39)!

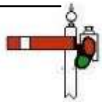
The case loads on the flat wagons (behind the trapped locomotive) are clearly out-of-gauge (40) – and in any case the loading gauge is set too low (41).

Two items are in a useless position – the wagon turntable (42) and the yard crane (43), which also has no hoisting tackle (44).

Finally, the water tower is in a bad position for allowing access to locomotive water tanks (45), and in any case it does not have a hose to fill up the locomotives (46).

STOP for a SMILE

I had a friend who quit his job as a newspaper reporter on "The Reading Chronicle" and caight the next train out of town. It was an ex-press train.



Look to the Future – Some answers

Firstly, all steam locomotives have gone. The last official steam-hauled passenger train on British Railways was **1T57** (The "Fifteen Guinea Special") on 11 August 1968 – and so there is no need for the water tower or water cranes.

With the introduction of colour light signalling and new signalling techniques, the semaphore signals have gone, together with the local signal boxes, telegraph poles and telegraph wires: now it's cab radio and in-cab display, the communication cables now in lineside trenches. In the 1960s, the railway was still very much a mechanical system, both the steam locomotives and the signalling system dependent on the physical strength of the workforce.

The local goods shed has gone – the building perhaps being reused for community hubs or an art gallery, farmers' market or restaurant. All the surrounding tracks have been lifted, leaving just the main line – the rails no longer keyed into chairs but now laid with continuously welded rails secured to concrete sleepers with Pandrol clips (or similar).

The railway is no longer a common carrier (abolished in Great Britain under the Transport Act 1962 for British Railways) – so there is no need for special wagons. No milk tanks, oil tanks, petrol tank wagons, chemical tank wagons, no tar wagons, salt wagons, sand wagons, no horse boxes, cattle wagons, no gunpowder vans, milk churn carriers (siphons), no fruit vans, no …The term "wagon load" used to be part of everyday speech, as it gave a rough indication of volume.

Freight is now moved in fully-fitted block trains, no guard's van – just a red light at the end of the train.

And of course there is no four-wheeled coaching stock – and few locomotive-hauled passenger trains.

1T57 (The "Fifteen Guinea Special") on 11 August 1968 approaching Ribblehead Viaduct

The A, Bo, Co, Do of Steam (Part 2)

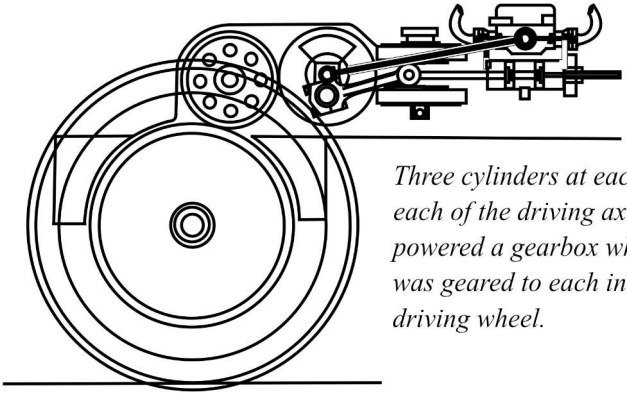
Alec Bray

Uncoupled driving axles allow each axle its own relative movement, with at least three degrees of freedom: forward and back, up and down, and side to side. Uncoupled driving axles can adapt to the track curvature and uneven track, and can reduce wheel flange wear and wear on the track. Also, higher speeds on a conventional coupled-wheel locomotive required larger driving wheels which then restricted boiler size as this had to be squeezed between the wheels.

Railway engineers began to consider a "steam motor" for use on the railway. The steam motor used several small cylinders geared to run at high speeds: the faster the piston speed, the more power was produced, and overall efficiency increased. The driving wheels could be smaller, so the boiler size would no longer be constrained by the distance between the wheels – and so could produce more steam.

The French Chemins de Fer du Nord ran a competition for the design of a powerful express steam locomotive that would not use coupling rods. The idea was to even out the torque, particularly on starting, and to remove the hammer-blow caused by the coupling rod balance weights on each wheel: hammer blow causes track and infrastructure damage. The order was placed on 9 March 1936.

The locomotive – a 4-2-2-2-4 (2'Co2' (UIC)) - had components supplied by three of France's locomotive factories (including the Société Alsacienne de Constructions Mécaniques), but the design, and the delivery of the steam motors and boilers was by the Schneider Electric Swiss Locomotive and Machine Works at Graffenstaden – and was delivered to the French state railway system SNCF early in 1939. Tests started immediately. Each driving axle was powered by two high-speed three-cylinder double-acting Uniflow steam engines – a locomotive total of 18 (yes, eighteen) small cylinders with cam-driven poppet valves.



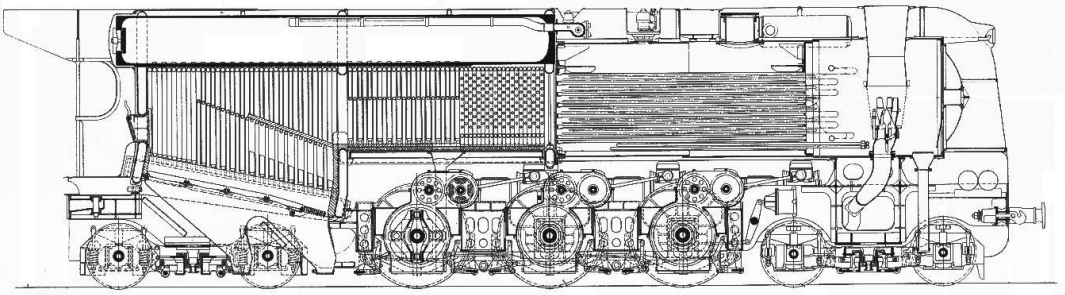
Three cylinders at each end of each of the driving axles powered a gearbox which in turn was geared to each individual driving wheel.

Each three-cylinder steam motor drove a gearbox which allowed for some vertical movement of the wheels. The inlet valve cams of each were coupled together by an hydraulic servo system, but other than this there was no physical coupling of the drive wheels.

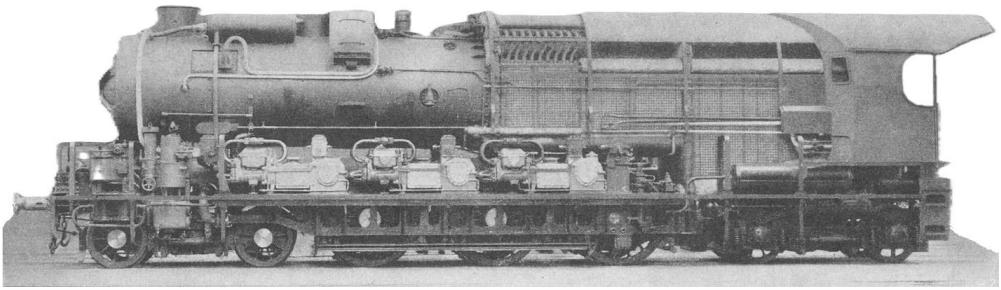
If that in itself was not a complication enough, the boiler was a two-part high-pressure water-tube/low pressure normal boiler affair with a feed water heater. Water from the tender passed through an ACFI feedwater heater, being raised to about 102 degrees Centigrade (there was a Thermix injector to by-pass the feed water heater). The front low-pressure boiler worked at approximately 280 psi (**not** low pressure compared with the majority of steam locomotives!) and its hot water was pumped (using two Knorr pumps in a special tandem-compound design) to the high-pressure water tube boiler at the rear, which worked at approximately 840 psi.

It was hoped that scale would be deposited in the feed water heater or the low-pressure boiler, keeping it out of the high-pressure water tubes where it would be highly dangerous.

At the start of World War 2 the locomotive was put in storage. Some testing took place in 1943 and 1946, and in 1947 it was run on the Vitry-sur-Seine test plant, went back into store and was “retired” in 1949.

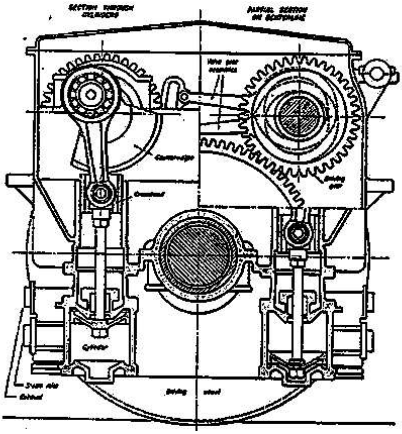


General Arrangement French SNCF 2-3-2-P-1 (2'Co2' (UIC))



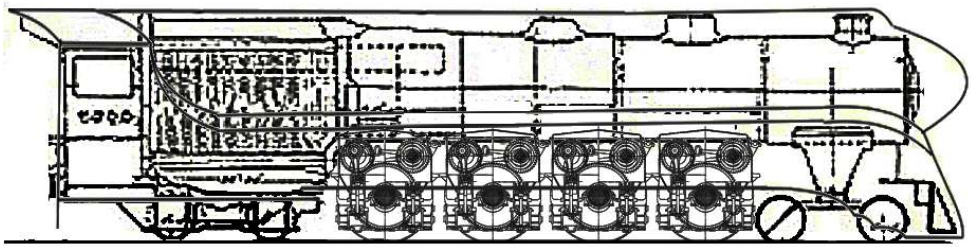
SNCF 2-3-2- P-1 unshrouded

Meanwhile, in the United States, the Baltimore and Ohio Railroad (B&O) rather prematurely issued a press release on 22nd September 1937, to announce that they had designed an engine that rivalled the tractive effort of the best engines ever built. This was another high-pressure steam locomotive with individual axle drives – a 4-2-2-2-2-4 (or 2'Do2' in UIC) - the 5800 or W-1 class.



Each driving axle would have its own "Besler" steam motor, each one constructed with four steam cylinders driving a set of gears with 19 teeth on the Besler motor crankshaft and 55 teeth on the driving axle gear - these gears and other parts of the steam motors were designed to operate in a continuous oil bath and oil was pumped to all the bearing and wearing parts. As a result, each axle would have something like 46 power strokes for each revolution of the axle, giving each driving wheel a virtually continuous power stroke almost the same as an electric motor on a diesel-electric - a much smoother power transition to the axle. In comparison to the "Northern" 4-8-4 design with 80-inch diameter drivers, the W-1 would have **245** power strokes to the Northern **four** power strokes to cover the same distance. Another advantage would be that with no connecting rod, there would be no need for the balance weights – and so no "hammer blow" to cause damage to the tracks.

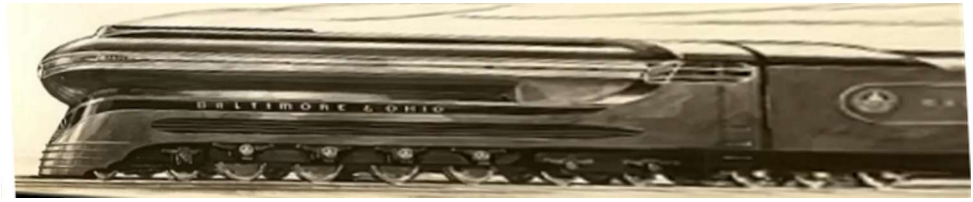
The cut-off and forward/reverse positions of the steam motors' valve gear were to be regulated from the locomotive cab by means of an electro-pneumatic control. Similar to the French locomotive, the boiler was to be an Emerson water tube firebox type boiler with an operating pressure of 350 psi.



Outline Baltimore and Ohio projected locomotive type W-1 with suggested shrouding and Besler steam motors

In theory, this locomotive would have been 15% better than any other locomotive, and it was rated at 5000 hp - that's equivalent to 1.5 Deltics! There was a **but**: it was calculated that the locomotive could operate at full output – at 100 mph - for less than two and a half hours before the tender ran out of water.

The locomotive was to be streamlined for looks and wind resistance, sketched out by Otto Kuehler, who had designed other B&O streamliners.



Unfortunately, the B&O struggled financially and could not afford experimentation. The boiler was apparently constructed, and one motor set was bought and ran on test for a while – and that was it.

(to be continued….

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The deadline for the August PROSPECTUS is 20 July.
This is the final date.

Contributions from all members are greatly welcomed.
They may be submitted in hard or soft copy to the editor.

If you like keeping TRACK of sections, you could be an editor of PROSPECTUS.