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LNER 22T Plate Wagon

This document was produced by 'The Wagon Man' and was written for the FMES on line readership. 'The Wagon Man' is a Committee Member of FMES and has as his speciality producing scratch-built models of Railway Wagons in 5-inch gauge. This series of Articles includes his personal perspective on this fascinating branch of the hobby.

Part 14.

1. The Model, and its Exhibition Description Card of July 2022



A large number of wagons were constructed by both the LMS and LNER for the transport of steel plates, primarily to shipbuilders. They were of similar design, and initially were of fabricated (rivetted) construction, but later batches were welded. They were initially rated at 20T load, but later this was increased to 22T.

The model represents a later LNER design from a batch built in 1940, and based largely in the North East. Though of conventional construction, they had two special features. The first was the transverse timber bolsters, which enabled crane hooks to go under the plates for lifting. A second feature was the arrangement of the drop sides. Either (half) side could be dropped in a conventional manner, or both. However, the centre post could also be dropped to give uninterrupted access over the whole length of the wagon bed.

As shipbuilding decreased, they were used for other purposes, and did their fair share of wandering. One was photographed at Hoo Junction (Kent) in 1970.

The model was built from a 4mm scale 3 view drawing, plus as many photos as could be found, but, as ever, detailed information was thin on the ground. I would welcome anything that others may have to help fill out the story.

2. Supplementary Information

I was aware that I had shortchanged the LNER in my choice of subjects, and following the vintage HM Dockyard wagon I redressed the balance by a more modern example produced post WWII.

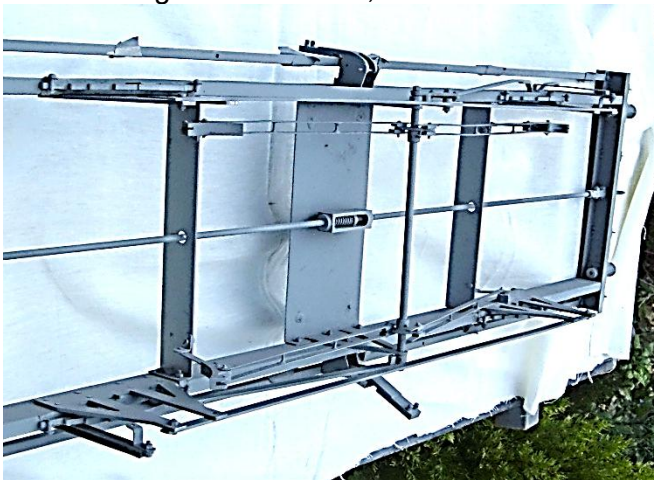
Like the full size, the model is of entirely conventional construction – bought out items included the usual laser cut W Irons and Vee Hangers, Wheelsets and Buffers. The remainder is from steel sheet (including most of an old central heating boiler case). The T and L sections are fabricated from steel strips.

Base Data

For such a relatively recent design, information was difficult to obtain, and in some cases was in conflict. Though the model itself is of a later, LNER variant, the LNER and LMS versions had many similar design features. Photographs of the LNER version were taken as the definitive source of information, but with gaps filled from the LMS.

The Underframes.

Little can be said about the underframes, and the following photographs show the main details. Note the hinged Centre Post, of which more later.



The Brakes.

In full size there were fitted and unfitted versions of this wagon built, and this model was one of the unfitted variants. It is not known if any unfitted variants were retrospectively modified to be vacuum braked later in their life.

It is another example of a wagon using a lift link rather than a Morton Clutch to effect the required reversal of weighshaft direction on opposite sides. The photograph shows the brakes to be applied (“pinned down”).



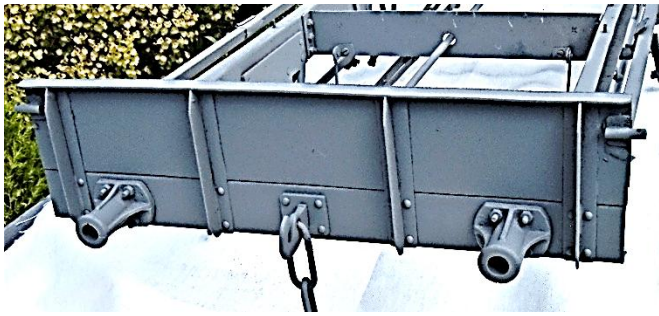
The Body.

The body was produced from sheet steel, and consists entirely of flat plates. These have overlays and steel sections added to represent the bracing metalwork.

There are three basic items in the body – drop half-length sides (which can be dropped independently), ends, and, centrally, a post which can also be dropped if required to produce an unobstructed flat floor.

Half Length Drop Sides and the Ends.

These items require no explanation. They also carry the fittings which secure the doors when in their normal position.



The Centre Post

The Centre Post proved to be the trickiest item in the project, having several functions. When upright it had to be locked firmly in place, as it supported and retained the inboard ends of the sides. When dropped it had to be locked downwards in order to keep it inside the loading gauge and ensure avoidance of lineside obstructions. The change of use had to be quick, easy and self-contained (ie did not require separate tools which could get lost or damaged). A considerable number of trials were necessary to produce the complex shape of this item at the bottom end, as shown in the following photographs and others scattered throughout this article. The Post is locked in either position by Pins.

The result is a reasonable representation of the full-size arrangement, albeit with concessions to produce a more rugged assembly.



Post Upright.
(Sorry about the Glasspaper)



Dropped Post, showing Support Trunnion

Comment.

This model was built as a fill in project whilst deciding and researching the next project. and was relatively simple, other than the Central Pillar configuration.

I hope that you will forgive this lapse, which will be rectified with the next wagon – an altogether more challenging project!

Principal Reference Sources.

- **LNER**
 - A Pictorial Record of LNER Wagons. Author: Peter Taplow.
- **LMS**
 - Official Drawings of LMS Wagons (Volumes 1 & 2). Author: R J Essery.
 - The LMS Wagon. Authors: R J Essery and K R Morgan.
- **Paul Bartlett Photographs** (via Internet)

3. Wider Participation

This Section is for your feedback, experiences, what gave you the most satisfaction and anything else to help and encourage the next generation of model engineers of whatever discipline.

We would be extremely interested to receive your reactions and suggestions – these will be of great interest and most useful. And don't forget your suggestions for topics for the occasional Supplement.

Please send them via info@fmes.org.uk There is no closing date for submissions.

Many thanks in advance.

The Wagon Man

November 2025.