

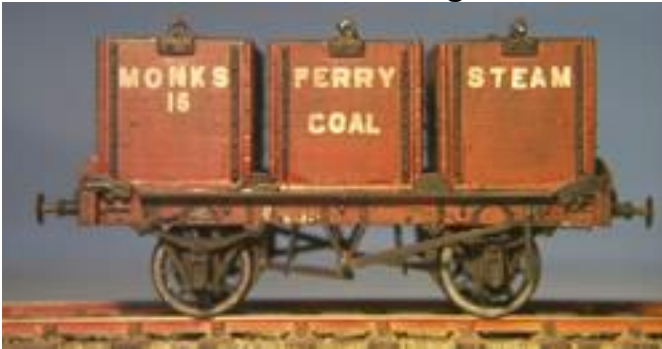


The 4mm wagon and van kit

POW3BOX

## Ince Waggon & Ironworks Company Private Owners

### Three box coal wagon



From c1890-1950s

For 00, EM, P4 and S4

**Features:** whitmetal body, white metal buffers with steel heads, etched W-irons and brake levers.

**Required to complete:**

12mm split spoke wheels, bearings, paint, couplings and transfers

### The Prototype

Developed with the encouragement of the LYR, the three box wagon became popular for bunker coal traffic to the ports of Liverpool and Fleetwood. The Ince Waggon & Ironworks Company appear to have been the principal builder for private owners, although some built their own fleets with minor differences to the boxes.

The boxes were lifted off wagons by the hooks with the door chains taut, and brought over a ship's bunker. The door chains were then released, emptying the coal into the bunker beneath. Some nine companies are known to have used such wagons around the time of the Great War. With the change in ship's fuel from coal to oil these wagons gradually became surplus to requirements. Some were converted or broken up. However it is known

that many survived and joined the National Coal Board fleet, running into the 1950s.

This model is based on Ince Waggon practice although with modifications other examples could be built.

### References

British Goods Wagons from 1887 to the present day, R Essery, D Rowland & W Steel  
Box coal wagons in the North West, A J Watts, Premier Business, December 1996, LYRS/LNWRA  
Conclusions of the 3 box coal wagon series, A J Watts, p4, Platform 11, LYRS  
Some further reflections on the South Lancashire Private Owner Wagons, A J Watts, p8, Platform 13, LYRS  
The box coal wagons of the South Lancashire coalfield, A J Watts, Platform 50, Autumn 2000, LYRS  
Private owner wagons from the Ince Waggon Works Co, A J Watts, HMRS, 1998  
The 4mm Wagon Part Three, Geoff Kent, pp3-9

### Acknowledgements

51L thanks Tony Watts for his assistance in preparing this model.

### Assembly

The wagon consists of a chassis on which three boxes are placed, there being no conventional floor. There are several routes to assemble this model including:

- 1) Assemble chassis and boxes separately; paint, attach boxes to chassis, followed by running gear.
- 2) Assemble chassis, running gear and end boxes, and paint. Assemble, paint and add middle box.
- 3) Assemble chassis with box floors, box side and ends separately, running gear, paint, followed by final assembly.

We suggest option 2.

Examine all the parts and familiarise yourself with their assembly. Remove any moulding flash and ensure all parts fit correctly. Wet fine emery paper (1200 grit) may be useful to clean up flash marks. Carry out a dummy run before assembly. Assembly is best carried out using

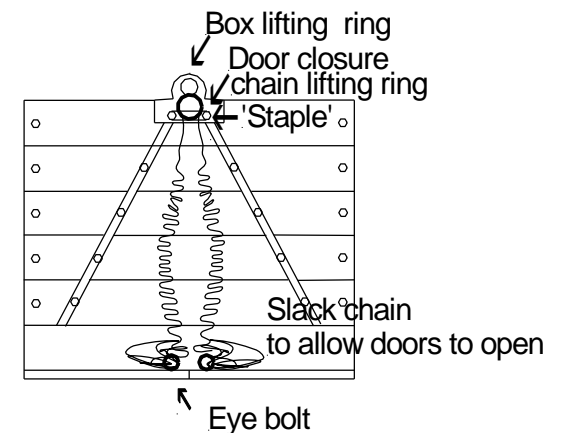
low melt solder, an epoxy resin such as Araldite or superglue. For small parts use superglue. To obtain the best results a combination of several techniques will be needed.

### The chassis

Check the buffer holes in the headstocks will accept the buffers. If not, broach them out (nominal 2mm bore). Bore holes for the horse hooks which are pip-marked on the left hand side of the solebars. Prepare horse hooks from 0.3mm brass wire. With the solebars and headstocks upside down on a flat surface such as a glass sheet, bring together and when satisfied all is square secure in place.

Turn the chassis over and attach the L-shaped box retaining posts at each corner. These come as two left- and right-handed pairs, with the narrower leg fitting over the headstock and the deeper one along the solebar. Attach the four retainer pieces onto the headstocks, their positions being marked with a vertical line. Next, attach the two internal box separation bars across the chassis. These support the boxes and should be 9mm from the chassis centre line, approximately in line with the inner spring carriers. Check the three box floors will all fit before finally fixing the bars in place. Fit the buffers with the bolt heads at the 2, 4, 8, and 10 o'clock positions.

### The boxes



These consist of a floor, two sides and two ends. The side includes the loop at the top, the sides fit inside the ends and both fit on top of the floor (the part with four holes is the floor). Following the interior view sketch

above, prepare small staples from supplied 0.3mm wire and attach to the side interior. The pip-marked positions will require boring out very slightly.

Bore out the four pip-marked holes in the floor to 0.4mm. The door chains will be attached here. Very slightly countersink the holes on the underside of the floor and fix a small loop of 0.3mm wire inside so that the 'chains' can eventually be threaded through this. Clean up, ensuring that the bottom of the box is flat. Fit one end (hinges at the bottom) to a side, ensure the parts are square and fix. Fix the second side to the second end. Bring both assemblies together; when satisfied the assembly is square solder or glue the joints. The assembly may now be attached to the floor or alternatively may be painted.

### **Detailing the boxes**

The box door closure chains should now be formed from fine wire. Take the fine copper wire supplied and loop it double. Twist it carefully; hold one end of the loop in a vice and the other end in either a pin vice or a mini drill and turn carefully until the wire is finely twisted. Then cut off pieces approximately 58mm long. The chains are fastened to the eyebolts in the floor, four per box, threaded through the staple at the box top and then joined to the crane ring. This ring should be just too large to pass through the staple, and is prepared from the 0.3mm wire supplied.

Finally carefully push the 'chains' down inside the box to give the impression of two loose chains hanging on the crane loop. It is thought that full boxes would have the chains dangling outside, but no photographic confirmation has been found.

### **The running gear**

Prepare the etched brass W-iron units following the enclosed instructions, using the straight bridle bars. The W-irons may be made up as rocking or non-rocking. Having fixed at least the two outer boxes to the chassis, place both W-iron units against the box floors using the crown plate coach bolts for positioning. Check the rail to buffer centre height and add packing as required, to achieve a height of 14mm. Ensure the packing will not be in the way of the brake shoes. When satisfied attach the packing to the chassis with superglue. Glue the W-irons in place. If the wagon is gently pushed along a flat

surface it should run in a straight line. If not one or both of the W-irons are out of line and should be adjusted.

Bore out the cross-shaft hole in the brake shoe assembly to 0.9mm. Bore out the holes in the V hangers and brake levers to the same size. Check that you have the brake shoes the right way round; when looking from the outside of the wagon the right hand push rod is above the left one. Fit the brake shoes under the chassis ensuring that they just clear the wheels. Use the 0.9mm wire to line them up. Add the inside brake hangers (the ones with the joining piece at the top) to inside of the solebar, followed by the exterior V hangers to the solebar. Again, use the 0.9mm wire to line everything up; this may be fixed in place when finished.

Following the attached instruction sheet prepare the brake levers and lever guides. The finished assemblies should be fixed in place with the guide approximately 2mm to the left of the right hand spring carrier. It will be found easiest to attach lever and guide at the same time. Fold up and attach the brake safety loops, about 2mm from the brake shoes. Once all the brake gear is secure, remove the centre section of the 0.7mm wire to leave two sets of independent brake gear.

### **Finishing**

Clean and degrease the model, using white spirit before painting. For white metal parts use an etching primer, such as Precision Paints PS1. The model should be painted using the livery of your choice (see over). After painting clean the model using a tissue soaked in white spirit. This is especially important if you are using dry lettering such as Powsides rather than waterslide or 'Methfix' transfers. After painting and lettering fit three link couplings. You may find it useful to blacken the chain using a chemical blackening agent.

A more recent version of these assembly instructions may be available on the Wizard Models website. For further help or information please email:

[andrew@modelsignals.com](mailto:andrew@modelsignals.com)

### **51L**

51L has a wide range of locomotive, carriage and wagon kits for the following railway companies  
GWR and constituents: Cambrian Railways  
LMS and constituents: Caledonian Railway, Glasgow & South Western Railway, Highland Railway, Lancashire & Yorkshire Railway, North Staffordshire Railway  
LNER and constituents: Great Central Railway, Hull & Barnsley Railway, North British Railway, North Eastern Railway

### **Wizard Models**

Wizard Models stocks a wide range of components and other necessities for the modeller in 00, EM and P4.

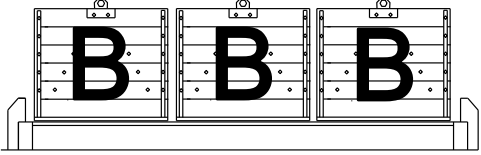
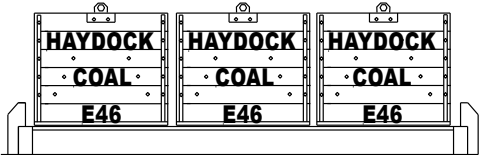
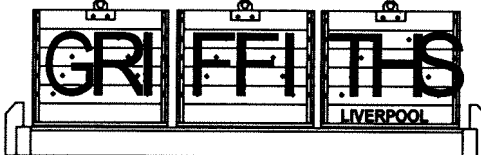
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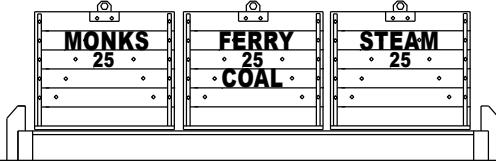
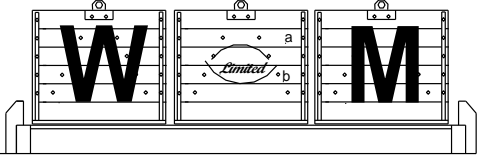
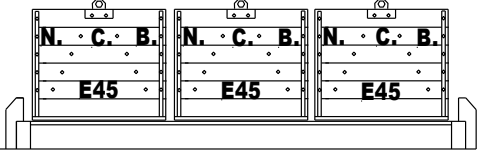
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# Livery

Company	Comments	Livery	Sketch based on photographic evidence
Blundells	<p>Fleet of around 200 in regular use 1870/1880s, mainly built by Blundells</p> <p>Transfers available from 51L.</p>	Black, white lettering, 28" high, 24" wide, stroke width 6" thick	
Blainscough Colliery Co, Coppull	<p>All constructed by Ince Wagon 1896: 20 wagons</p> <p>Total of at least 25</p>	<p>No photographic evidence - assumed to be the same as ordinary wagons. Red oxide, lettering white</p> <p>Blainscough assumed to be evenly spaced</p>	
Ellerbeek Colliery Co	<p>All constructed by Ince Wagon 1895 1902: 691-704 1904: 706-745 At least 80 and probably others built by Ince Wagon Broken up 1932</p>	<p>No photographic evidence - assumed to be the same as ordinary wagons. Red oxide, white lettering</p> <p>Ellerbeek assumed to be evenly spaced.</p>	
Richard Evans' Haydock Collieries	<p>Similar to Ince Wagon, built in house.</p> <p>Numbers preceded by an E extending to the 140's Transfers available from 51L</p>	<p>1) Bright red oxide to 1918 2) Black post-1918</p> <p>Lettering white</p>	
Garswood Hall Colliery	At least 15 in service in 1915	Assumed to be the same as ordinary wagons with evenly spaced lettering. Red oxide, lettering white, shaded black	
John Griffiths & Sons	Some of the fleet was similar to the Ince Wagon design, but boxes with box corner plates. Fleet may have totalled around 300	Grey, white lettering shaded red. Griffiths evenly spaced.	

<p>Monks Ferry Steam Coal Co</p>	<p>80 purchased from Ince Wagon Company, 1893</p> <p>Transfers available from 51L</p>	<p>1) Red oxide, white lettering, black ironwork. Box ends are numbered with the wagon number</p> <p>2) In later years black overall, white lettering</p>	
<p>Preston Liverpool, Distillery Co</p>	<p>Wigan Wagon Company 1899: 14 in total including 13, 14, 15,</p>	<p>No information available.</p>	
<p>White Moss Coal Company Skelmersdale</p>	<p>All constructed by Ince Wagon 1898: 159, 455, 407, 530, 676, 845-869, 1903: 469, 497, 530, 532, 679</p> <p>Total fleet around 200 Colliery closed in 1928</p> <p>Transfers available from 51L</p>	<p>Red oxide with white lettering</p>	 <p>Note: a= WHITE MOSS COAL CO b= SKELMERSDALE</p>
<p>National Coal Board</p>	<p>Ex Private owner wagons include some ex-Haydock, and Monks Ferry fleet</p> <p>Transfers available from 51L</p>	<p>Black or bare timber, white lettering, original numbers used</p>	

**Source of transfers:**

51L: see [www.wizardmodels.ltd](http://www.wizardmodels.ltd)

HMRS: sheet 3 and/or sheet 4 either Methfix or Pressfix  
Powsides: Blundells only