

Furness Railway Wagon Co.

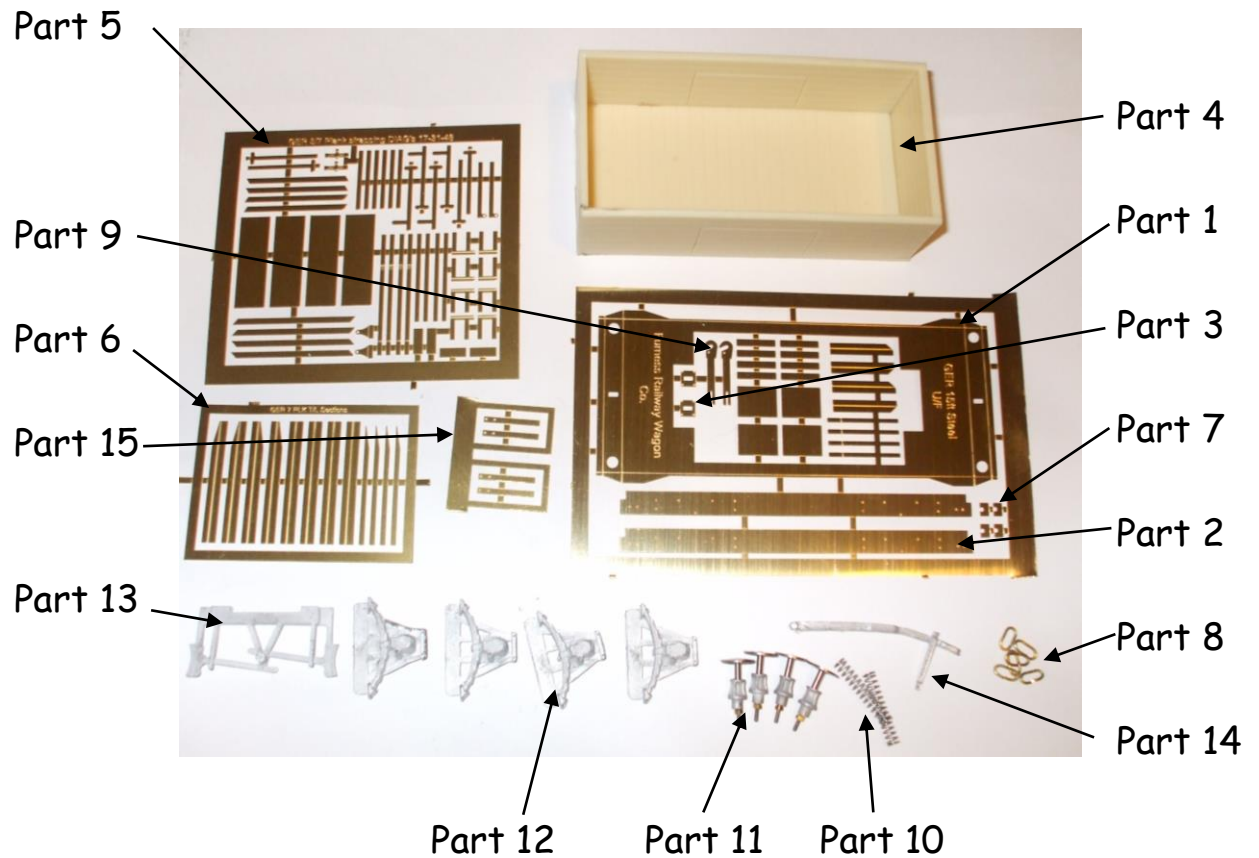
Great Eastern Railway/Lancashire Derbyshire and
East Coast Rly/Great Central Rly/LNER/BR

Diagram 31/48 10/12ton

5 Plank Coal and General Merchandise Wagon
Steel Under-Frame

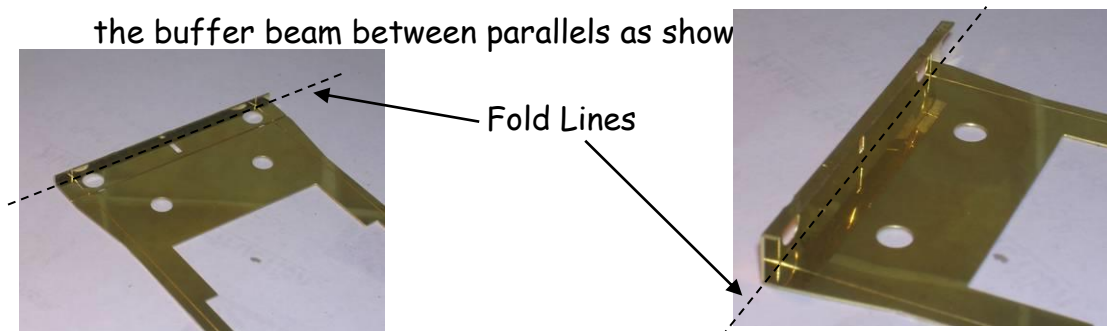
Wheels, paint and transfers required to complete.

The Parts.

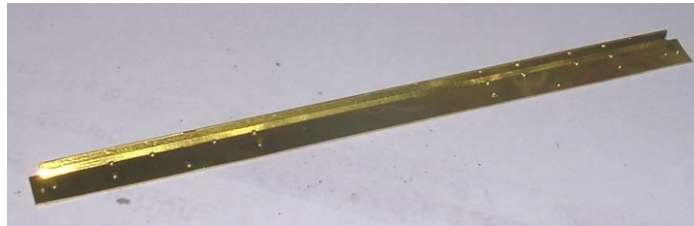


Chassis Construction.

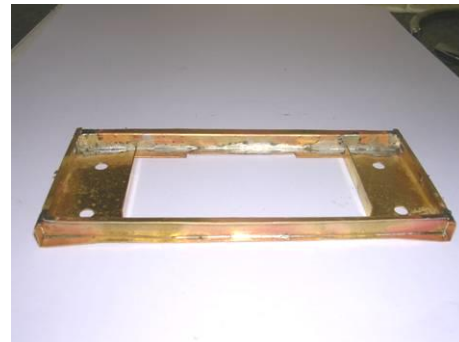
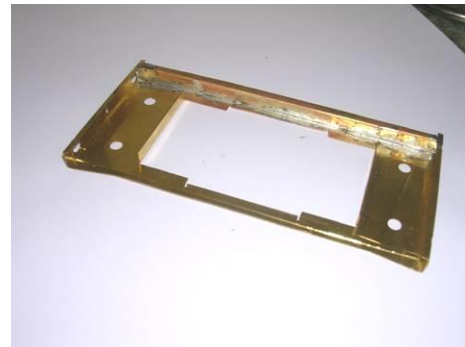
1. Remove chassis (part 1) from the etch and fold up the bottom of the buffer beam between parallels as show



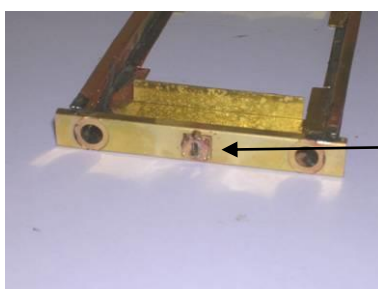
2. Next fold up the buffer beam completely as shown. Make sure that the resulting U shape is square so as to fit the sole bars. Repeat for the other end of the chassis.
3. Remove the sole-bars (part 2) and punch out the rivets. Next fold up the bottom of the sole-bars between two parallels. Make sure that the resulting shape is square.



4. Click one of the sole-bars in to the half etch slot that runs between the two buffer beams. Solder into position using 188C solder. Make sure that the sole-bars are actually soldered inside the buffer beam. Repeat for the other sole-bar.



5. Next remove the buffer beam reinforcing plates (part 3) and punch out the half etched rivets and tin the back of each piece with 188C solder. Now sweat the plates onto the half etched square in the front of the buffer beam.

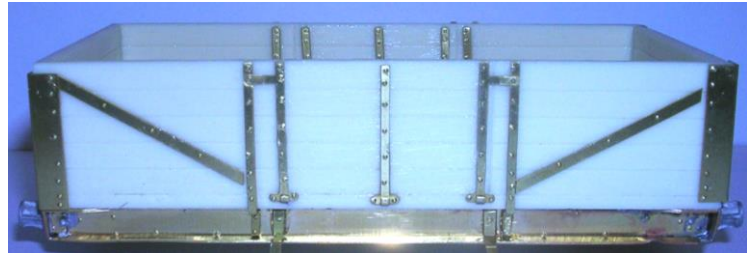


Buffer beam reinforcing plates

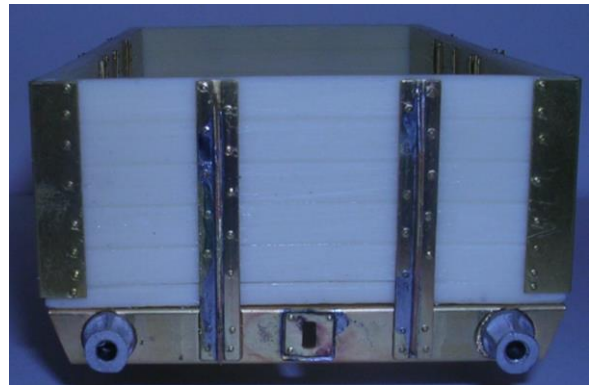
6. Next fit (part 6) sole-bar reinforcing plate at the ends of the sole-bars next to the buffer beam.

Final Assembly of soldered components.

1. Position the top of the wagon (part 4) in the middle of the chassis and glue the chassis to the top.



2. Next attach the strapping (part 5). Please consult a photograph before going any further. Punch out two the half etched reverts and solder the 'T' Sections (part 6) for the end of the wagon.



Note some GER wagons were fitted with door balancers these are formed by selecting the door strapping with the lug on it and the small triangular part on the strapping etch.

These need to be folded up and linked together with a short piece of wire as shown.



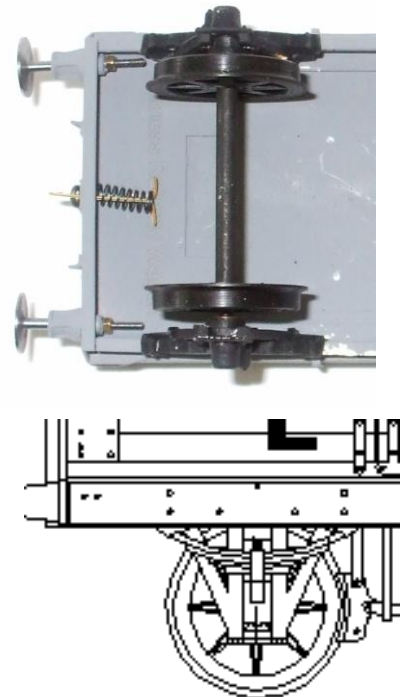
Alternatively some wagons were fitted with conventional door stops (part 15)

3. Next, assemble the links (part 8) on to the coupling hook (part 9) and push through the slot. Now



push the spring (part 10) over the back of the back of the coupling hook and bend the tags over to secure the spring in place. Then fix the four buffers (part 11) into the holes in the buffer beam using two part epoxy.

4. Drill out the w-iron castings to suit the bearings of your chosen wheels. Assemble a wheel set, 2 x W-iron's (part 12), 2 x bearing's and 1 x wheel/axle unit, do not glue the bearings into the W-irons at this stage. Again using two part epoxy resin, glue the assembled wheel set onto the sole-bars so that they are square and line up with the rivets as shown in the drawing. Note the GER used a mixture of spoked and solid disc wheels on it wagons so please refer to a photo.



5. Repeat for the other wheel set. Use a straight edge across the back of the wheels to aid getting these parallel and square to the chassis.



6. Next place the brake gear casting (part 13) against the inside of sole-bar and slide down into the chassis with the spigot pointing outward. You may require to chamfer the casting so that it clears the solder fillet between the chassis and the sole-bar. Glue the casting into position using two part epoxy resin; this will give you opportunity for adjustment. Position the casting with care centrally between the rivets on the sole-bar.



7. Next fix the brake lever and ratchet casting (part 14) to the sole-bar as shown below.



8. Later GER wagons and all of the LD&ECR wagon had brakes on both sides. If you are building one of these wagon repeat steps 7 and 8.
9. Finally paint the model in the livery of your choice.



History of the Wagon

Great Eastern Railway.

In 1886 the Great Eastern Railway company introduced a 10ton 5 plank coal wagon (Dia.17) for the movement of general goods and minerals. And by 1903, when building stopped, there were 12,050 of these wagons all of which had been built at the company's own wagon works at Stratford.

These wagons were built to a modern design with a steel channel under-frame. Later in life a number of these wagons were converted to Dia.48 with addition of two extra planks. The converted wagon can be built from our GER 7PLK kit (FRWC32).

Dia.17 wagons were mainly used to convey general merchandise and domestic coal to and from between East Anglia and London although some of the wagons were photographed as far away as northern Scotland and south west England. Some of these wagons were transferred to the engineering dept's stock by the LNER.

The wagons were issued the numbers by the Great Eastern Railway: 3175/330416301-19700/22000-24999/27001-30320

11,100 of these wagons were absorbed into the LNER. These would have been renumbered by adding 600,000. Wagons built to dia.17 started to be withdrawn in the late 1920's. However 287 wagons lasting to be taken over by British Railways, the last wagon being withdrawn in the late 1960's. A number of these wagons have now been preserved in various locations around the country.

In Great Eastern Railway days the wagons would have been painted mid grey which would not have changed through the wagons life.

Lancashire Derbyshire and East Cost Railway

Lancashire Derbyshire and East Cost Railway also bought 176 identical 5 plank mineral wagons, with a steel under-frame, as the GER in 1896.

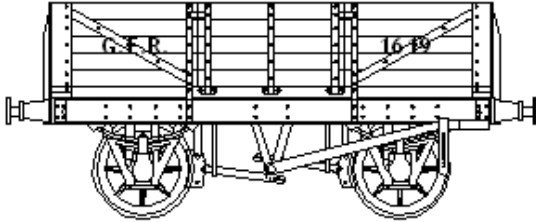
When the LD&ECR was founded in 1896 its wagon policy followed designs developed by the Great Eastern Railway of having their wagons built with wooden bodies on steel under frames. The company did not build its own wagons and subsequently relied on commercial wagon works for their supply.

These wagons were originally painted chocolate brown and there is some debate if the iron work, above the sole bar, was picked out in black as some photos show it highlighted and others don't.

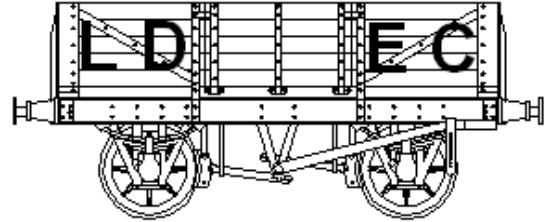
However these wagons did not stay in their chocolate livery for long as in 1907 the LD&ECR was taken over by the Great Central Railway and would have been repainted soon after into light grey. After 1923 these wagons would have followed the standard LNER paint scheme. Known LD&ECR numbers are 681-710/781-880/881-930 and Great Central 31983-32232. Only 125 of these wagons lasted long enough to have 500,000 added to their numbers by the LNER however all of these wagons had gone by 1936.

Liveries

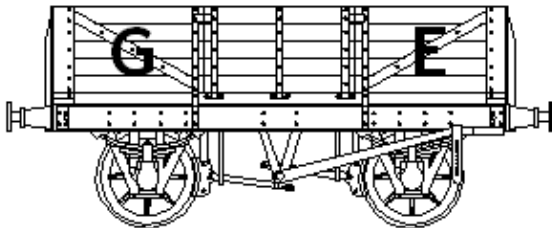
Great Eastern Railway
Early Livery Circ 1891



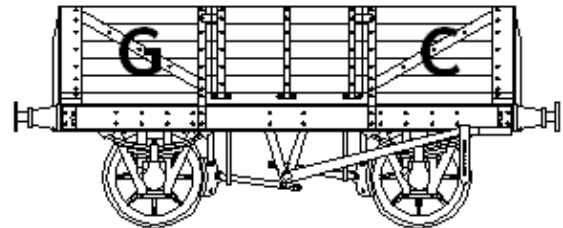
Lancashire Derbyshire
and East Coast Railway
Livery 1896



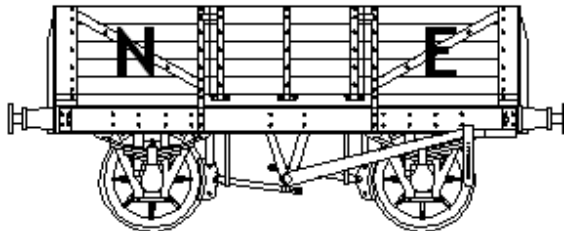
Great Eastern Railway
Livery 1910



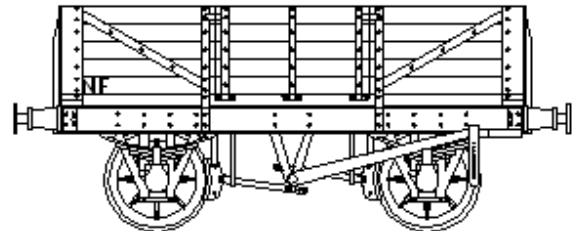
GCR Livery Circ
1907-23



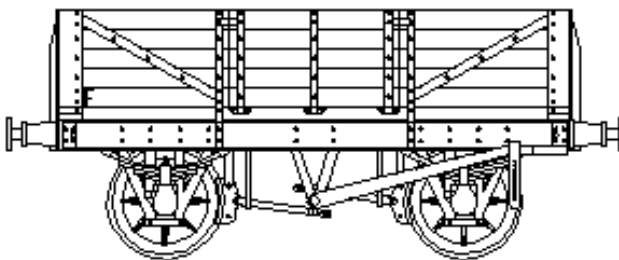
LNER Early Livery
Circ 1923-36



LNER Livery Circ 1936-1947



BR Livery Circ 1947-1960



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East Coast Rly/Great Central Rly/LNER/BR**

Diagram 31/48 10/12ton

**5 Plank Coal and General Merchandise Wagon
Steel Under-Frame**

1. Construction Manual,
2. One chassis etch,
3. One strapping etch,
4. One end support etch,
5. Two brake gear casting,
6. Two brake lever casting,
7. Four W-iron/axle box castings,
8. One wagon body casting (resin),
9. Four buffer assemblies,
10. Two coupling hook springs,
11. Six coupling hook links,
12. Two door stop etchs.

We recommend any of Haywood Railway's 3'1" wheels as the GER used any wheels at hand. For LD&ECR/GCR 3'1' open spoke wheels from Haywood Railway.

Transfers are available from POWsides.