



Before Construction: Please see photographs on pages 38 & 39 in British Railway Wagons No. 1 Opens & Hoppers

1. Cut out solebars, headstocks and inner chassis members from etch (1 – 8)
2. Push out the rivet details on solebars (1) and fold to U shape
3. First solder the solebars (1) to the headstocks (2) so that the solebars are flush with the end of the headstocks. Repeat with the other side and solder the two units together to form the outside of chassis (note solebars are handed top to bottom the extra rivets going on the bottom edge.
4. Now solder the 8 small members (3/4/5/6) to the inner solebar (7) aligning with the dashed lines. Repeat with other then align the centre crosspiece with the centre rivets on the outside solebar, then solder in place. Repeat with other side (note cut away section at end of inner solebar goes to bottom).
5. Now solder inner ends of cross members (8) to inner solebars (7) and also to outer solebars (1) making sure all is square (if you have sprung buffers then bend out the spring retaining tabs).
6. Take the two end platforms (9) and push out rivet detail then solder to chassis top so that the outside end of platform is flush with the headstock (1).
- 6A Add coupling hook overlays to headstocks (13)
7. Push out rivet detail on hopper sides (10) and remove
8. Fold top lip to 90 degrees around hopper top.
9. Fold hopper body and solder the 2 halves together. Bend the base tabs to 90 degrees across hopper bottom and solder.

10. Solder tack hopper base and when satisfied with positioning complete soldering. Then file off excess which sticks out of bottom of hopper.
11. Rivet Version: Take the four corner L plates (11) and solder to top of hopper. These go on the top of the lip.
12. Side/end stanchion rivet version: Cut out the vertical end stanchions (14) and the side stanchions (15) from etch. Next solder the side stanchions to the hopper side, centre on between rivets. The outside pair go on with the rivets on the inside side of the stanchion.
13. Now add the end stanchions which go inside the line of rivets. The bottom of the stanchions will need bending inward to match end body shape.
14. When fitting the body of hopper to chassis some adjustment of inner chassis members may be needed to allow hopper body to sit on chassis on bottom of side stanchions. Then solder under hopper to inner chassis member then go round and solder bottom of side stanchions to outer solebars any gaps. (There may be gaps upto 0.5mm) can be filled with solder.
15. Take hopper end supports (16) and cut 1mm to 1.5mm of the bottom of each etched support before bending into shape, this then allows them to fit into the ½ etched lines on platform ends and go up against the inside of the end stanchions, but trial fit them first.
16. Next, take the two cross braces (22), form and solder to bottom outside of discharge chutes.
17. Add handrail to platform ends made from 0.7mm wire.
18. Take three handrail brackets (23) and two small handrail brackets (24) and solder to hopper ends (see photos as they all vary). Add handrail wire repeat with other end (note on non rivet version use 2 x handrail supports (25) for upper handrail as well.

This now completes the top half of the wagon.

Add consignment clip (33) and makers plate (34) to solebars, they go at left hand side over W iron (see photos).

19. Now add W irons with wheel sets align W iron with rivet detail on solebar, solder or glue in place making sure there is little or no side play on wheel sets.
20. Next add steps (26) to solebars, they go at left hand ends only. Now add four buffers and coupling hooks. NB *Sometimes the DW3 hook & Instanter can be replaced with detail set DW16*
21. Take the brake etch (27) fold over and solder together bend top tabs these solder to solebar, get brake shoe assembly the right way round as it is handed. Add V hangers (28) the double hole one (29) goes to the opposite side of the brakes, and cross rod made from 1.2mm wire (not supplied). Also add brake retainers (29) which solder to short chassis members (5&6) and will need trimming to length to suit each side of brake shoe assembly.
22. Next take brake handles (30&31) and pin down bars (32) push out the four rivets on the pin bars (32) fold to shape and fit to wagon side, they go on and in line with the right hand end stanchion. When fitted add the brake handles the two hole one (30) goes to the side with no brake shoes, then add the other brake handle (see photos) the end 4mm of both brake handles require bending double.
23. “Now that the last” pieces of etch, the load discharge levers (handed) (31) and mounting plates (36) push out the rivet detail on parts (32) bend to shape and solder to solebars.

Also on the etch are two W iron tie strips (35) these are only fitted to the four shoe brake version but can be fitted if required.

To complete the model

3'1" wheel sets

(M&M can supply Slater's standard wagon wheel c/w bearings spoke ref no 7121, Slater's standard wagon wheel 3 hole disc c/w bearings ref no 7122) or the New Welcome Turned Steel Insulated Wheel c/w ball races.

If sprung buffers are required (M&M can supply RCH type Slater's, Ref No. 71565

Or Oleo Type Slater's Ref No 71572) or Welcome Sprung Buffers

Transfers (M&M can supply Transfers for this wagon Hop21 BR Type)

(M&M can supply all these if required, order online on the website
www.modelrailwaywagons.co.uk)

Reference Books

British Railways Wagons the First half million

By Don Rowland

ISBN 07529 03780

British railways Goods wagons in Colour

By Robert Hendry

ISBN 1 85780 03780

British Railway wagons, opens and hoppers

By G. Gamble

ISBN 1 1900298 06 6

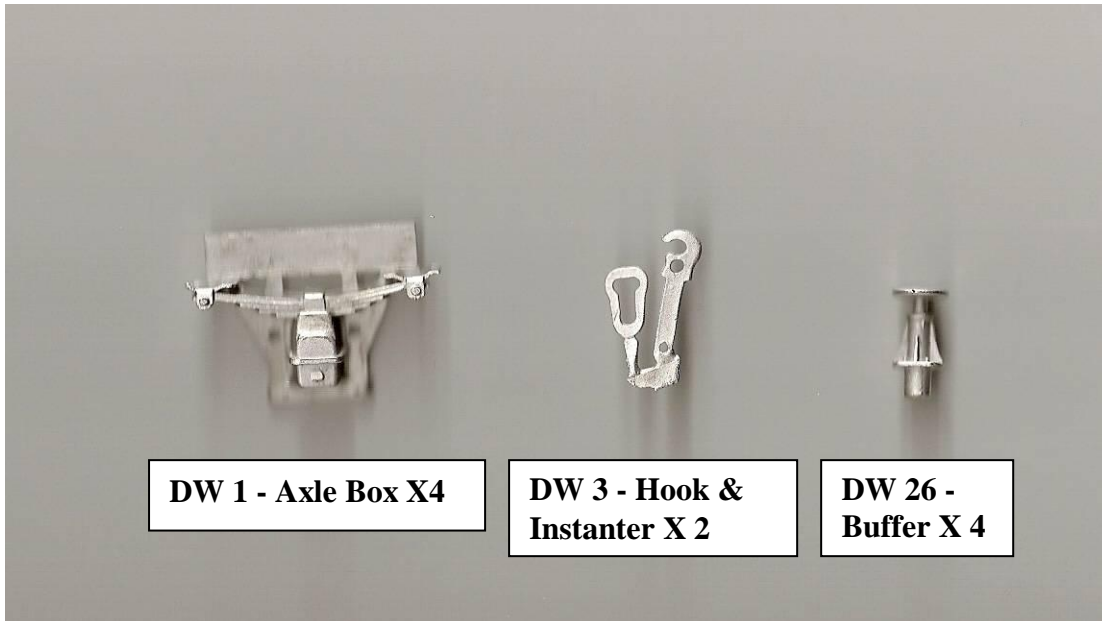
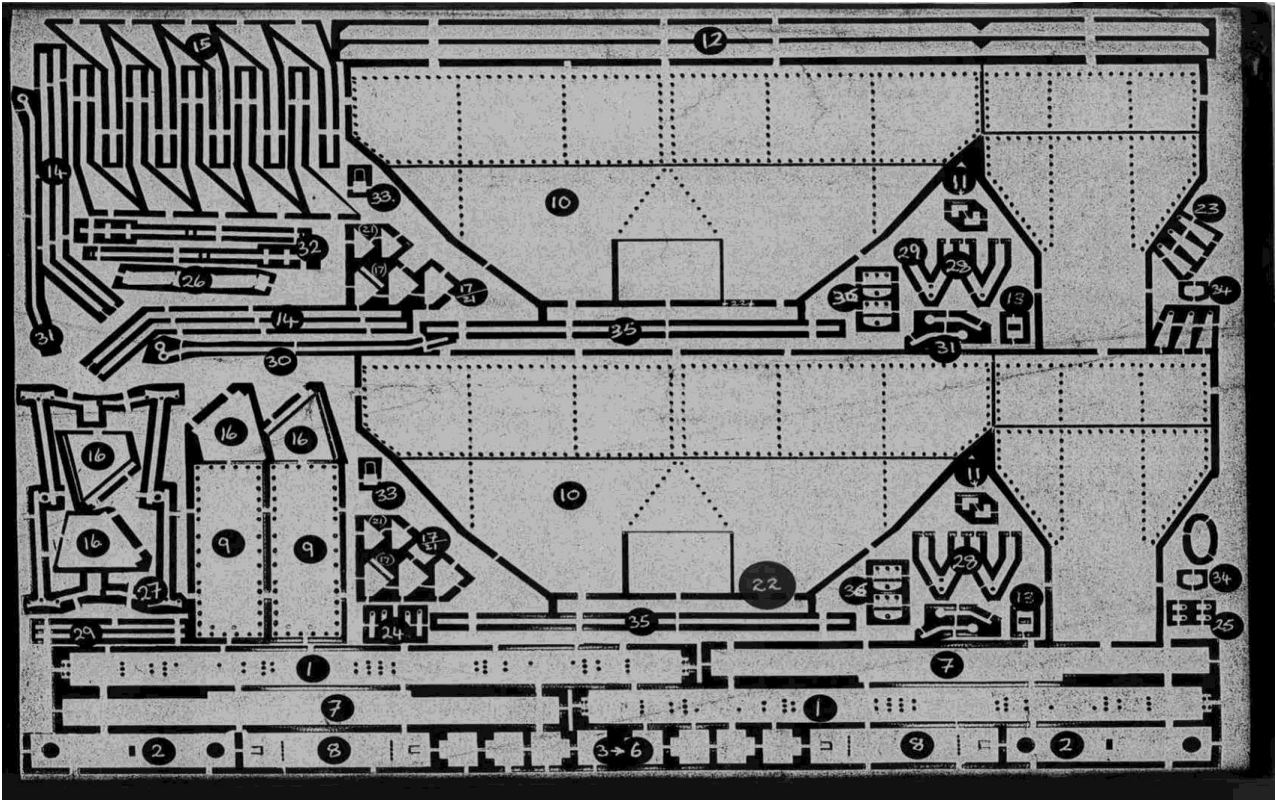
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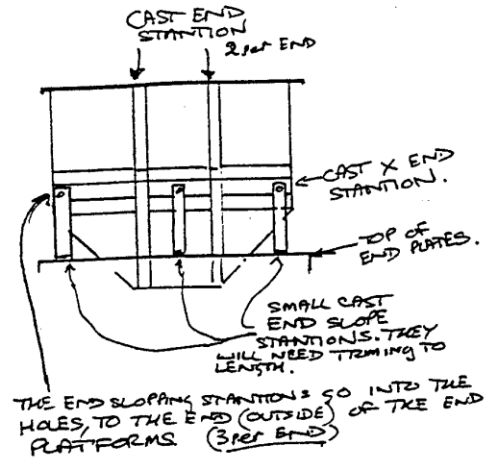
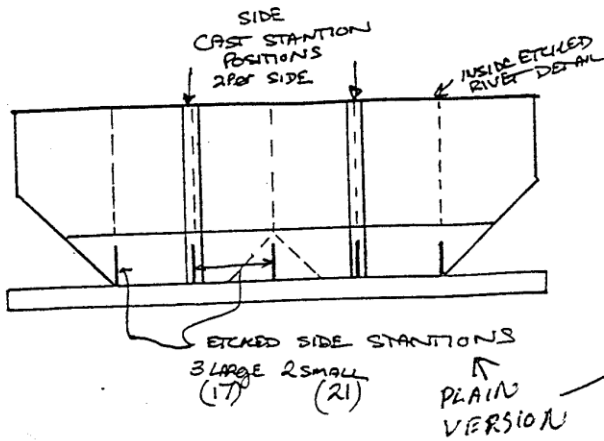
ISBN 1900298 015

Web Reference

<http://paulbartlett.zenfolio.com/br21thopperrivet/h2b9979ba#h20863d78>

NB:- The floor is now supplied as an etch part.





NOTE:- EXTRA RIVETS DETAIL ON SOLEBARS GO TO UNDERSIDE (BOTTOM) W/ IRON FINNS, REF PHOTOS. 1 SOLEBAR.

