

## Hook and Eye Couplings

The Farish 16T mineral wagons pictured below are excellent models, accurate and with beautifully detailed underframe and brakes. But, like many N wagons, they are let down by the enormous coupling, the pocket that holds it, and huge gap between the buffers.



On many layouts rakes of mineral (and other) wagons will always run together, so automatic couplings are not needed and we can substitute a much smaller permanent coupling. This article shows how easy and cheap it is to make these couplings out of a couple of inches of wire, and have wagons that look like this:



What you need: brass wire (blackened top and original below); blackening liquid; pin vice with 0.5 mm drill; round and straight nosed pliers and cutters.

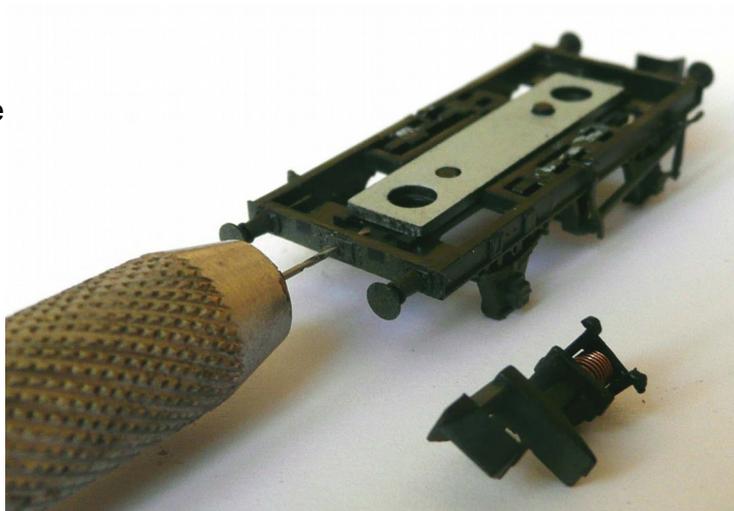
You are likely to have all the tools needed except perhaps the round nosed pliers: mine are about 1 mm diameter at the tip, and make it easier to form the “eye” loop, though you could manage without.

The wire is 0.45 mm brass wire - many model suppliers such as BH Enterprises or Eileen's Emporium sell packs. Chemical blackening fluid is desirable as it is easier than paint and better wearing; I use Birchwood Casey Super Blue, available from many model suppliers (and gun shops!).



To blacken the wire first clean it by rubbing with a Garryflex block, or steel wool, or very fine wet and dry paper. Then coat with the blackening using a cotton bud, until suitably darkened. Wash excess off and let dry. Wipe with a bit of tissue moistened with ordinary mineral oil like 3 in 1 – this helps the coating harden. Leave overnight to harden.

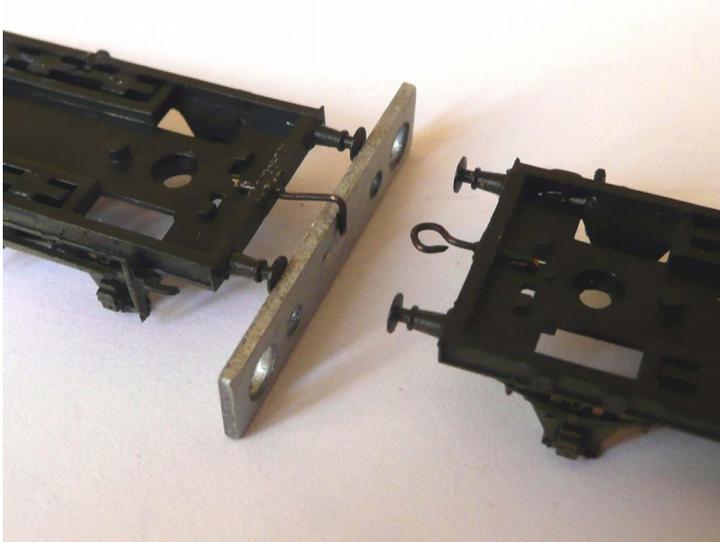
The existing coupling and pocket needs to be removed. This is easy on these wagons: remove the wheels and undo the two screws holding body and chassis together then unclip the coupling pocket by pushing the clips holding it down and towards the centre. On other types of wagon you might need to cut the pocket off (or you could just remove the coupling if you don't want to cut the wagon).



Drill a 0.5 mm hole through the centre of where the hook would be; if there is a representation of the hook as on this wagon cut it off first, flush with the buffer beam. Make a dent with a sharp point where you want the hole to guide the drill. To form the “eye” part of the coupling bend a small loop in the end of the wire using the round nosed pliers and bend the remaining wire so it goes straight back as below. Cut off leaving about 1 cm of wire: you will need less but you can cut any excess off later.



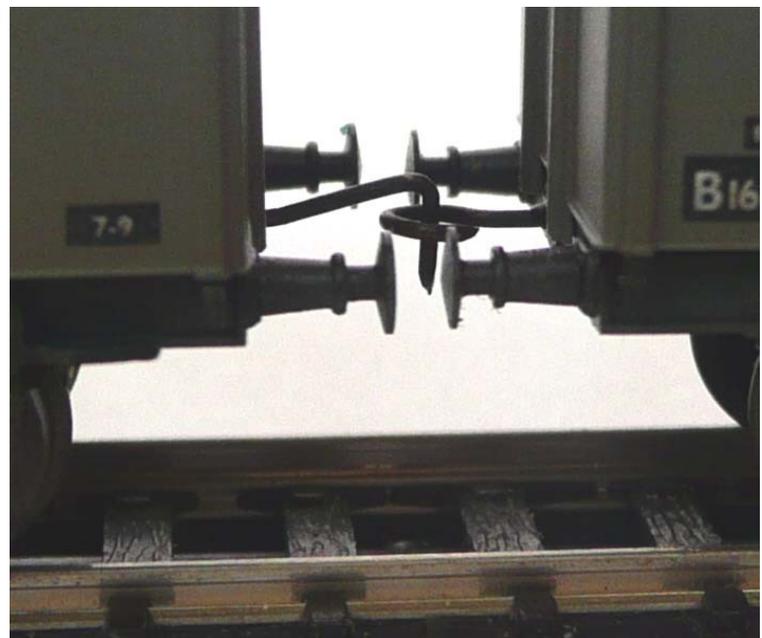
Make the hook part of the coupling by bending about 3mm at the end of the wire to rather more than 90 degrees, and then another slight bend about 4mm further down so the wire is at right angles to the end of the wire, as shown in the picture. After a few this is very easy to do by eye.



Push the new couplings into the holes in the wagon and secure with superglue or epoxy. The "eye" should be so the centre of the hole is in line with the buffer heads. The hook should be slightly in front of the buffer heads: use the ballast weight across the buffers as a spacer.

Reassemble the wagon, remembering that on these mineral wagons if you are looking at the side with the brake blocks the end door and stripe are on the left. When on track the eye should be well below the top of the hook and have at least 1mm of hook below it; if not bend the hook or eye.

The wagons will go round 9" curves and reverse curves; I've been using this type of coupling for several years now without any problems. If a wagon in the middle of the rake derails you need a delicate touch re-railing it, else you can drag the rest of the wagons off the track. With longer wheelbase wagons you might need to make the eye wider, more an oval shape.



Cost is almost nothing, except that with closer coupling you may need more wagons as 13 will fit in the space 12 occupied before!