

## Chains & Shackles

Using “proper” chains and shackles on 7mm models of God’s Wonderful goods wagons by Raymond Walley (Gauge 0 Guild)

In my experience, few models of wagons designed to carry heavy or awkward loads (Macaws and Loriots for instance) are provided with chains and shackles. In reality, so far as I have been able to establish from photographs, each such vehicle had an allocation of chains and shackles physically bolted to it. In the case of flat wagons for containers they were kept in special lockers when not in use.

I have now a number of vehicles needing the provision of proper chains and shackles to bring them to life. Even vehicles such as unloaded Macaws and Loriots had the chains and shackles stacked around the bolsters or lying on the bed of the wagon. A pair of Loriots were chosen to start and, having looked at a number of pictures, it became apparent that one end of each of four chains and shackles were fitted to eyes in the buffer beam and various cross chains and hooks were fitted as required. Retro fitting of parts to painted and lettered wagons is not a good idea and suggests that in future I should plan it a bit better.

The CPL (usual disclaimer) shackle set is designed for use with containers and provides enough parts to secure one container at the corners. The shackles were each connected to a very substantial spring to effect a tight fit.

In the packet are some excellent lost wax brass castings, a length of copper plated steel chain, some copper wire and instructions. The instructions, which are well written and backed up by an exploded diagram, suggest making each chain/shackle unit up in two parts and then glue the two elements of the spring together as each half is fitted to the wagon and container. This is to get some tautness in the set-up. However, since my chains would be lying in the well of the wagon I decided to solder the springs in. When I get around to adding some holding a load in place on the other Lorient, I shall do as suggested.

More chain was necessary since the nice copper-coated length provided is meant for the relatively short chains that hold containers. I used some fine steel chain bought from Omen at an exhibition. (However, I later discovered CPL will provide longer lengths of chain on request.)

One largely follows the instructions that come with the parts but to enable one end to be fitted into the buffer beams I fitted a split pin at one end. Later units were made with eyebolts obtained from Squires (usual disclaimer.) It is necessary to make loops from the copper wire provided by winding it round a 1.6mm drill and cutting across the windings at 90° however, Squires can also

provide ready made brass rings in a range of very small sizes. I also soldered the opening on these once connected to the various chains and hooks.



The first picture shews a completed chain and one laid out in the order of its component parts. The parts are small, naturally, but with care and a little patience they do make up into very

nice representations of the equipment used on Loriots, Mites, Macaws and similar vehicles. The next picture shews the whole set after being put together, chemically blackened and soaked in Electrofix over-night.

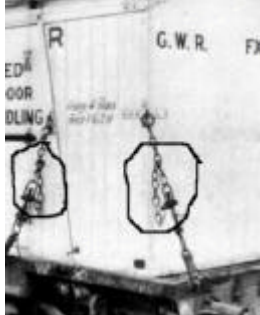


These scale shackles are an excellent addition to CPL's range of products. They fill an important niche in attaining a more prototypical depiction of goods wagon operation.

Here they are fitted to a Lorient after carefully drilling appropriate holes in the buffer beam to fit the split pins. So far this is the only permanent fixing for them, time will tell if they need to be glued down.



Rooting about in a cupboard for something else, I came across a box containing a Parkside GWR flat wagon and container, in need of proper shackles. On studying similar wagons in "GWR Goods Wagons" it was clear that a simple shackle and chain with a hook at each end was not the way it was done. This extract from one of the pictures will make it clear:



There are three hooks, one of which is fitted directly to the shackle via a single link. (I have drawn crude circles round them.) This is used to shorten the main chain, which is also attached to the same end of the shackle, so that the whole unit can then be tightened against the spring. A little experimentation and some careful counting of links in several pictures indicated that the long chain needed to be about 12

links long.

Here are examples of one completed and one set of parts laid out to shew how the components go together.



The hook that fits directly on to the shackle will need to be filed to shape a little to ensure that it will go through the

links in the chain or one will not be able to shorten the chain to fit as in the prototype.

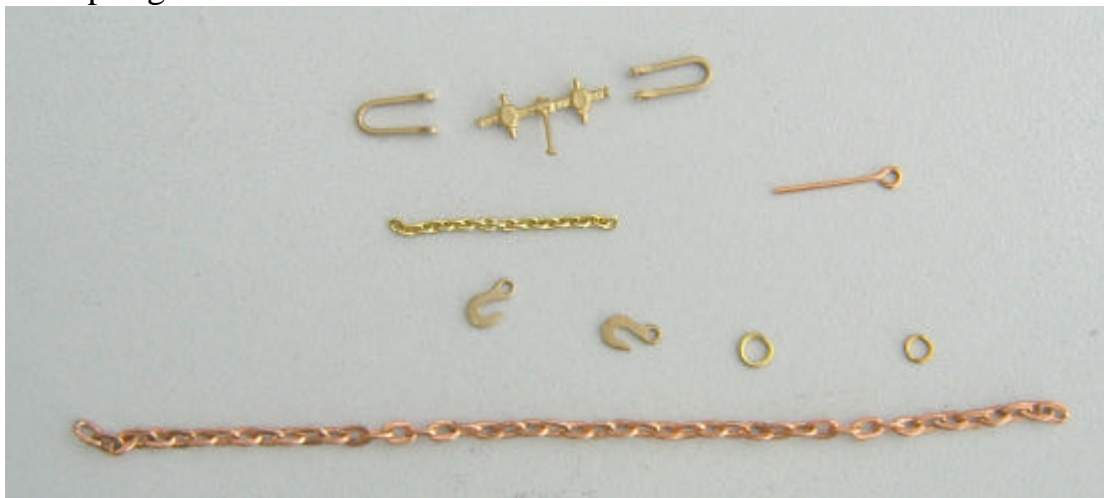


Here is the set fitted to a Parkside conflat. Getting them tight is a tad fiddly but by gluing the springs units together after shortening the chain by using the hook on the shackle it is possible to get them tight.

The next item in need of attention was to fit a whole set of chains and shackles to a Macaw, but without the spring units. I can find no pictures shewing them in use on Macaws or similar vehicles.

Study of pictures in Russell and Atkins, Beard & Turret suggest that long chains on each side with hooks at both ends alternated with short chains with hooks at both ends and a shackle at one. Each chain is also bolted to the side of the vehicle with a length of smaller link chain. A complete set of one long and one short is needed for each bolster.

For these I used some 0.3mm brass chain, 2 & 3mm brass rings and copper eyebolts from Squires with CPL chain, shackles and hooks as in this picture. The spring units are not used this time.



Here are four of each shewing how they were made up. Like the chains and shackles for containers, the ones here with a shackle have the two hooks to aid ease of tightening.



Once chemically blackened they were fitted to the vehicle by drilling 0.5mm holes in the side and cleaning the blacking off the eyebolt. The bolt was then shortened and glued in with Loctite480. Each side was fitted with one long and one short chain alternately.

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The finished Macaw.

