

## BROAD GAUGE IN 7mm

Problems encountered and solved

Bob has kindly provided the following notes to accompany our photos taken at Chatham.

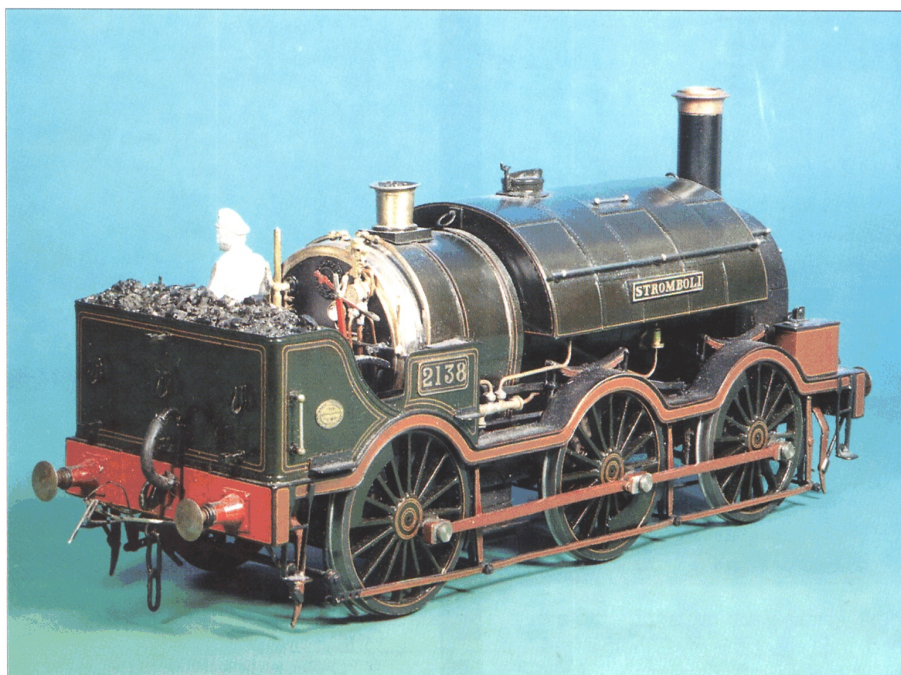
Moving back in time from the previous era of *Maristow* (see RM December 1992) has brought a totally new and unexpected set of technical problems to solve, which have been overcome in unconventional ways.

### **Stromboli, No.2138**

Originally named *Juno* and built in 1852 as one of four 'Banking' class engines, she was a saddle tank version of Gooch's 'Standard Goods.' She was renamed *Stromboli* in 1872 on being sold to the South Devon Railway which already had a *Juno* in service. After the SDR and the other West Country railways were absorbed into the GWR in 1876, she came back into GW ownership and gained the number 2138 in the process. Little is known of her, although it is documented that she was rebuilt in 1869 and gained, among other things, cast-iron brake blocks and a cab (!) before she was withdrawn in 1889. Not much help here, especially as the broad gauge locos had a bewildering variety of cabs, some of which were of most curious design. Only one known photo exists of a loco that may possibly be *Stromboli* but, as it is actually a view of Redruth viaduct taken from a mile or so away, the visible detail on the loco is rather small!

Working from views of other similar locos in the well known photos of the Swindon 'Dump' in 1892, I added a typical Ivatt/Great Northern style cab, but then drove the loco off the end of a baseboard onto the floor! Fortunately the cab was the only real casualty, so the bent cab came off and *Stromboli* reverted to earlier condition! I'll get round to rebuilding the cab some day, and also painting the driver and fireman.

Built from a set of etchings for the Standard Goods, available from the Broad Gauge Society, *Stromboli* has been modernised (!) as much as possible (i.e. with chimney, buffers and other fittings suitable for the 1885-1890 period) and features full springing of the Alan Harris Scale 7 wheels, with split-axle pick-up and an RG7 motor. The superb



Above: rear view of Stromboli.

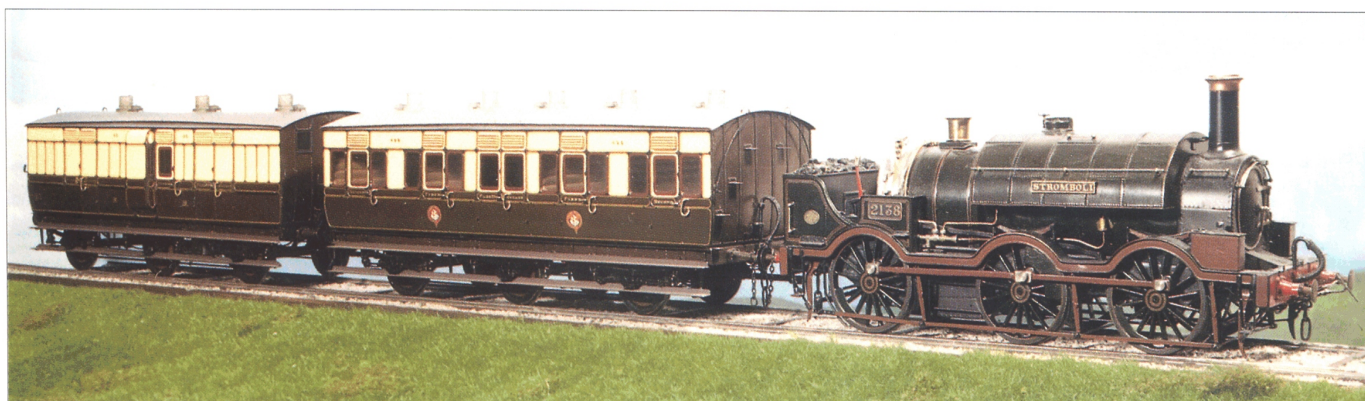
painting by Alan Brackenborough features the pre-1887 pattern of green wheels and Indian red coupling rods together with the Indian red lower works generally in use before 1906. Semi-working inside motion added to the complication of fitting split frames to a loco that has no footplate and easily separable chassis and superstructure in a conventional sense. Moving into broad gauge has certainly proved a challenge in many unexpected directions!

### **No.498, 1st/2nd Luggage Composite, Diagram U21**

This shows how wide a *proper* coach looks! Now that I have built some broad coaches and wagons, the narrow (i.e. standard) gauge wagons look very thin and quite out of proportion in contrast! Fortunately these vehicles were converted to narrow gauge after 1892 and given the narrow gauge diagram U21,

Below: Stromboli with U21 and V8 broad bodied coaches.

and as such are available as a complete kit from IKB Models. The BGS and IKB have produced etchings for the full width ends, so along with a new wider roof, it's a fairly easy task to produce genuine broad gauge coaches of this diagram. Obviously the underframe has to be widened as well, and I take the opportunity of fitting a fully sprung Cleminson arrangement that enables my broad gauge long-wheelbase 6-wheel coaches running on Scale 7 wheelsets to go round 4'6" radius curves with no difficulty. Wheels for these and later pattern wagons are simply produced by taking the standard Slaters S7 GW Mansell coach or spoked wagon wheels and sawing the axle in half, fit-





Right: rear view of Europa.

Below right: close-up view of the interiors of the tilt wagons.

Foot of page: Europa with Gregory horse box and 6-wheel goods brake/ex-passenger luggage van.

Photographs by the Peco Micro Studio.

ting a close fitting spacer of brass tube cut roughly to the right back-to-back width, and glueing up with superglue while pressing the wheel up against a back-to-back gauge.

### No.130 6-wheel Passenger Brake, Diagram V8

Produced from an IKB kit in the same way as the U21. An extra complication is that as the IKB kit is for a V13, which is two panels longer than a V8, the sides had to be carefully sawn down the middle of the beading in four places and rejoined with a panel taken out at each end. The underframe isn't strictly right, as I shortened the V13 etches, whereas the genuine V8s ran on a variety of old wooden underframes salvaged from earlier 6-wheel coaches. Painting for both vehicles is by Alan Brackenborough to his customary high standard.

### Europa

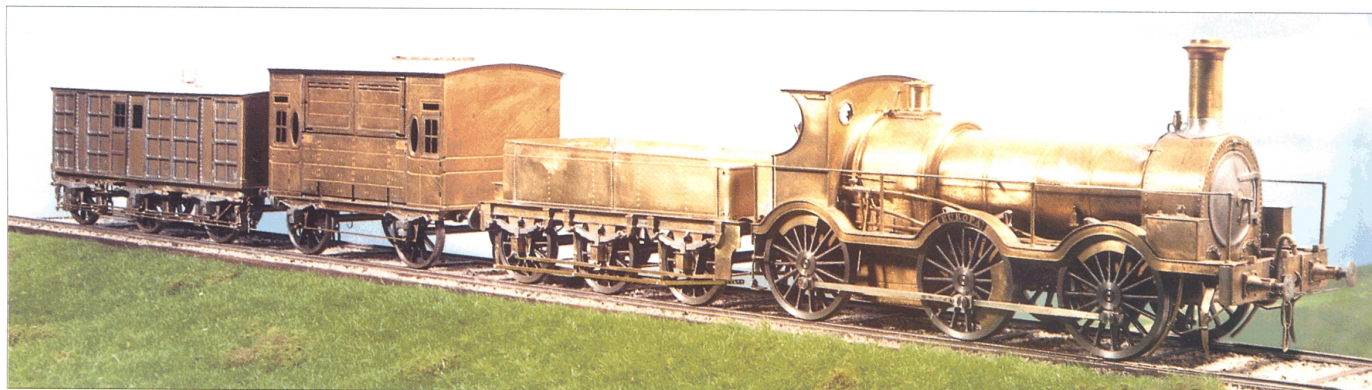
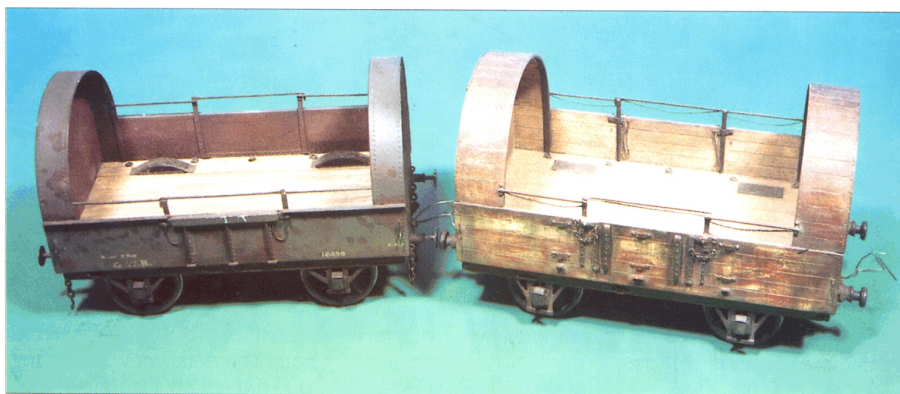
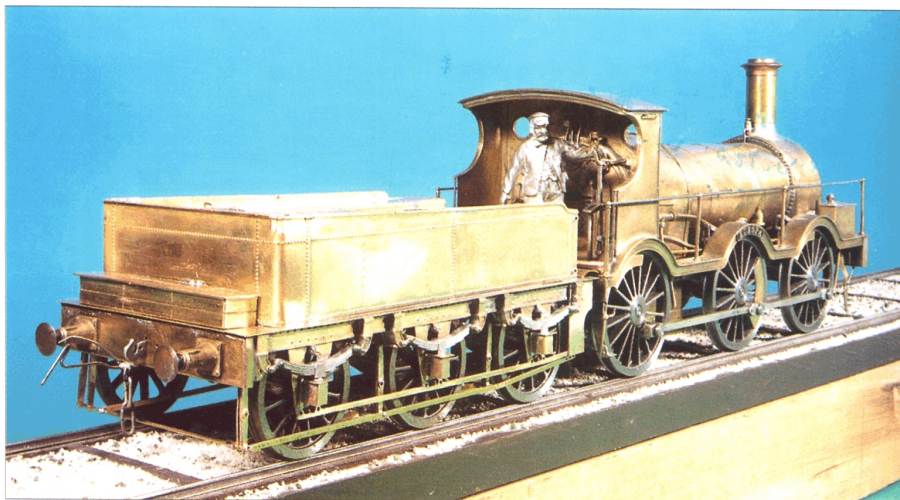
One of Gooch's Standard Goods of 1853, and constructed from the same etches as *Stromboli*, together with the new BGS etch for the *Iron Duke* 'express' tender created by that fount of BG knowledge, Mike Jolly. The lack of a number tells us that *Europa* was a genuine GWR built and owned broad gauge loco, as opposed to an ex South Devon, Bristol & Exeter, West Cornwall, or GWR 'convertible' loco. Obviously there is still some work to do, mostly on the tender, but there is enough done to catch the flavour of the original loco; the only one of her class to last (with new boiler and rebuilt cab and fittings) right until the end in 1892.

The great open spaces between the boiler and the minimal running plate together with even more spaces in the frames meant that full working inside motion was needed to fill the void. As with *Stromboli*, she is fully sprung with split telescopic axles and an RC7 motor. The photos of the two chassis emphasise the difficulties involved. The main frames are sandwiches of brass etches soldered on to either side of double sided fibreglass pcb

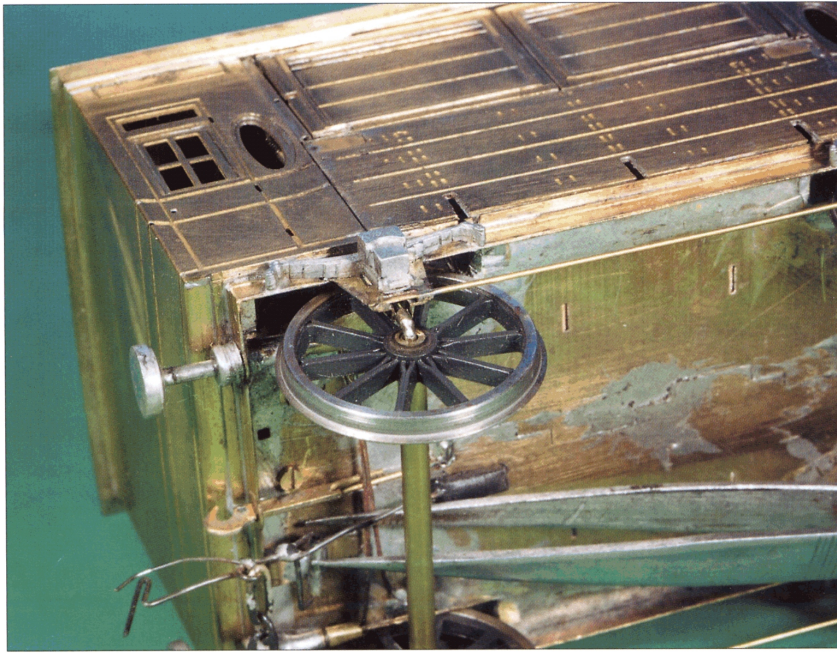
(rather than the oak of the real thing!), and this is used to create the insulation needed for the split-axle pick-up. The areas of brass around each axle box are insulated from the rest of the frames by cutting through to the fibreglass inside and then filling in the saw cut with Araldite. The tie-rods between the horn blocks fulfil a vital function here, in that they are the electrical connections from the axleboxes to the motor! Brass etching has been of immense help to minority interest modellers like me, in that it is possible to produce parts for obscure models in small numbers, but it does mean that many of the intricate parts such as spring hangers and brake gear are built up from four or five layers of etchings, so construction is far from quick! For example, each axlebox/spring assembly on the tender involves 17 separate components, all soldered together!

### Four-wheel 'Tilt' Wagons

Scratchbuilt by Peter Totman, with superb weathering to depict these vehicles near the end of their lives in the early 1890s. Wagons with rounded ends were common on the roads in the early 19th century; railway builders copied the style so as to produce general purpose open wagons, which could also be used as vans by sheeting over the 'roof' between the raised ends with tarpaulins. They often had a chain with turnbuckles for tightening stretched across the top so as to stop the tarpaulins sagging. The few photos of broad gauge goods trains usually show large numbers of these vehicles. The earlier, wooden vehicle (still lingering on in the remnants of the earlier red painting style) is a model of the vehicle featuring in the well-known photo of Wootton Bassett in the 1870s, whilst the later grey wagon is of steel con-







Left: detail view of bearings and couplings on the horse box.

Below left and right: underside views of Europa and Stromboli.

Foot of page: Stromboli with tilt wagons and ex Cornwall Railway brake van.

struction. Note the raised side rails so as to allow possible use as cattle wagons, and the raised wheel splashers protruding inside the body of the vehicles, so as to accommodate the large 4' diameter wheels fitted to these genuine broad gauge vehicles.

#### 4-wheel 'Gregory' Horse Box

This is still under construction from a BGS etched kit. As there are no known photos of these vehicles, it is not known whether the lovely oval windowed grooms' compartments were actually fitted to the real things: and, if they were, whether to only one end or both (the evidence for them comes in an extra

drawing added to the original plans, labelled 'for Mr. Gregory'). Mike Jolly is really very dubious about the likelihood of both ends being fitted, but I think that they make it into such a lovely characterful vehicle that I'm sticking with both! The detail view shows my very simple delayed-action automatic coupler, and also my deadly cunning use of hollow axles and internal bearings for the large 4' diameter wheels. As full springing is essential for Scale 7 operation, and clearance between the wheels and solebars on BG vehicles frighteningly small, there was no space left to fit springing in anywhere near the axle journal itself. These internal bear-

ings turn through 90 degrees and pass up through tube guides into the body of the vehicle, where there is plenty of room for coil springs to do their work. How I will deal with the next vehicle to be built - an open carriage truck I'm not sure yet!

#### 6-wheel Luggage Van

One of the original iron luggage vans of 1848, these were down-graded to goods brakes in their later years. Built from a BGS kit again, it is four etches thick on the sides, in order to build up the depth of the side framing. In 0 scale, this means a lot of heat! Fortunately a friend has access to a sand blasting machine, which speeded up the cleaning-up after all the soldering! Fully sprung again, and using the same 4' wheels and internal bearings as the horse box.

#### 4-wheel Brake Van

Beautifully scratchbuilt by Peter Totman, this is a model of an ex Cornwall Railway brake van, with outside framing and verandahs at both ends. The short length of the vehicle means that the enclosed central portion is far wider than it is long! This vehicle also features at the front of the goods train in the photo of Redruth viaduct.

**These models and more may be seen on Coldrennick Road (RM Sept. '94) at Croydon, October 9 & 10, and on Teign House Sidings at Colchester, October 30 & 31. Teign House Sidings is also booked to appear at Wakefield, November 26-28.**

