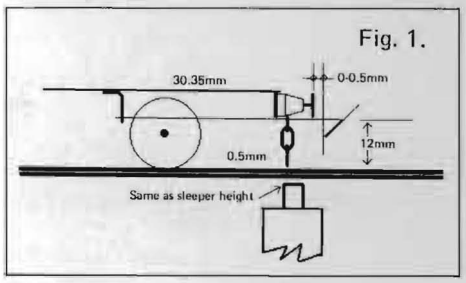
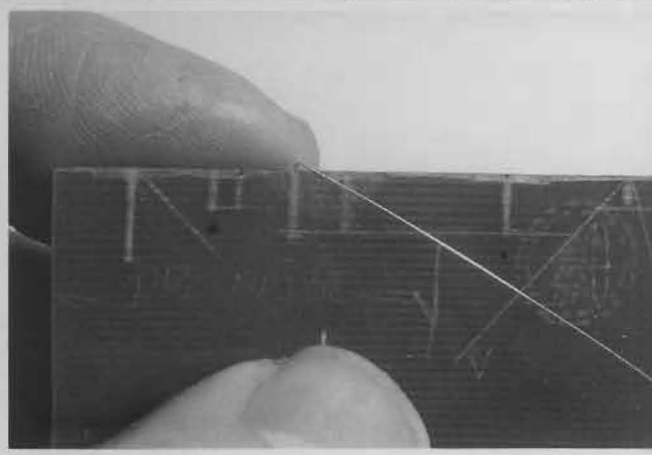
Altered Alex Jacksons

VINCENT DE BODE has been experimenting with Alex Jackson couplings for some time in the hope of making them more prototypical in appearance and more reliable in operation:

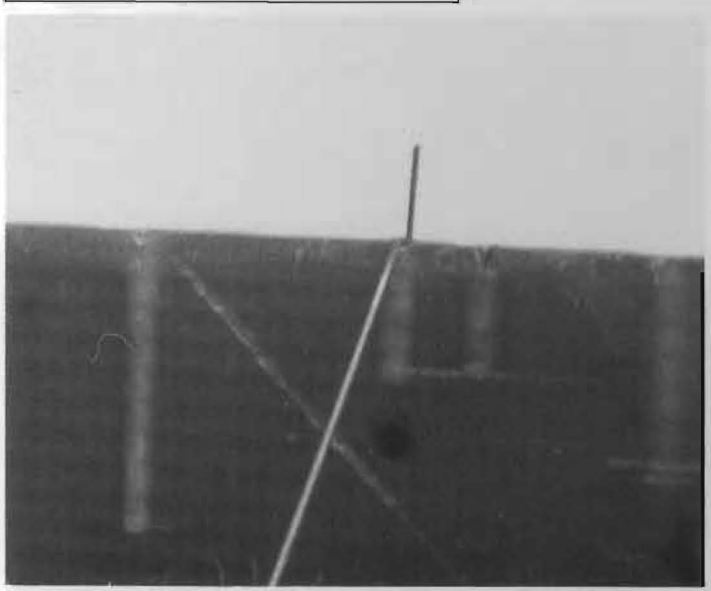
For a couple of years now, I have been using Alex Jackson couplings on my layout 'Flintfield', and you can call me a satisfied customer. But I always like to improve things and no matter how thin AJ couplings are, you can still see them – and the bufferbeams look a bit bare – and some people miss the dangling three links – and there are funny things around the axles. So I kept wondering, meanwhile keeping my eyes open.

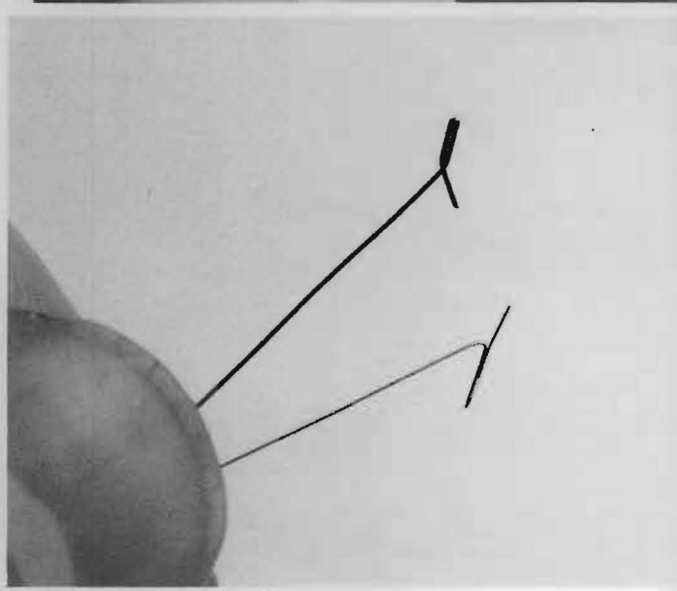
In MRJ 79, I read two articles about Jacksons, one by Chris Lamacraft, and one by Jim Watt – the latter working in 2mm scale. Jim used 0.006in phosphor-bronze wire, and stated, in the end, that the coupling was virtually invisible. I liked that. Some time before, I had queried something I could not understand on the original Jackson, namely why the double-folded part was used as the nose and not as the tail. I bent some couplings, they worked, and being much less prone to 'opening up', were basically stronger, which allowed for making couplings out of much thinner wire. I ordered some 0.006in phosphor-bronze wire from Ultima Models and bought some 0.008in steel wire (thinnest guitar wire). The 0.008in coupling with the doubled tail, or AAJ (*Fig. 1*) proved to be a bit stronger than the original AJs of 0.011in





The jig is made from PCB, two holes of 0.5mm, one 5mm deep and the other 2.75mm deep.

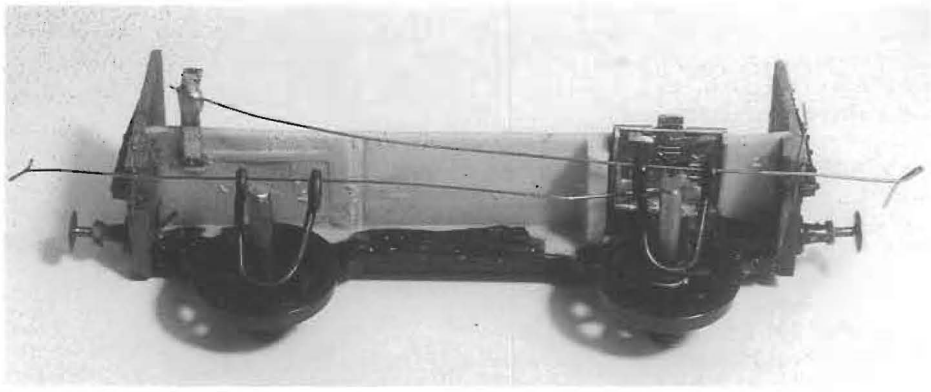


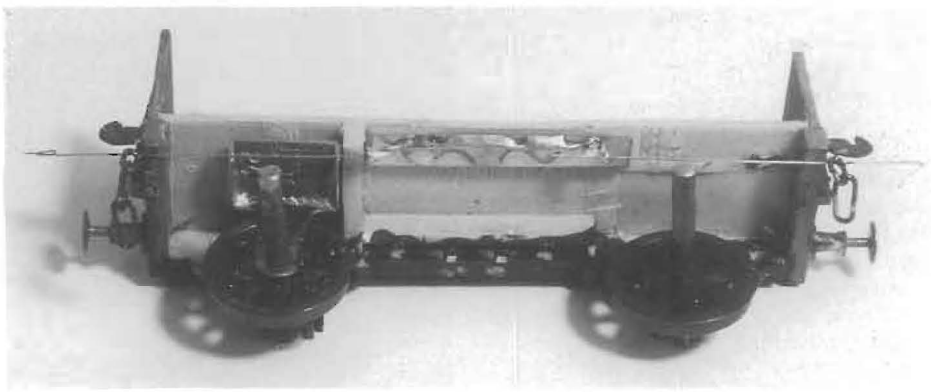


Left: *Bending is with bare fingers – the doubling part is tricky and I close it with tweezers.* Right: *The AJ and AAJ.*

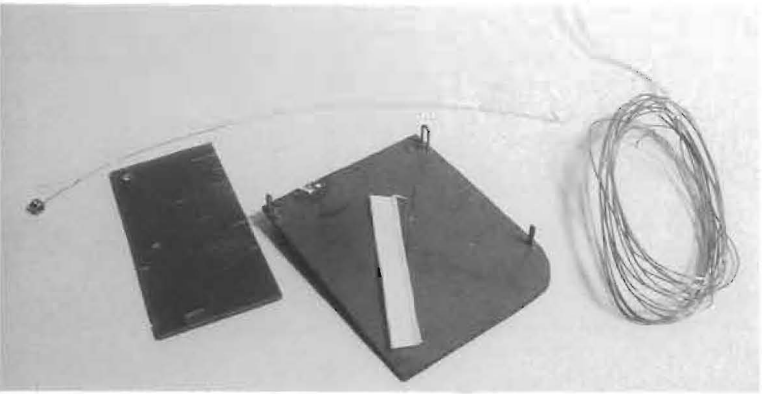
steel wire from Martin Brent. However, the 0.006in phosphor-bronze wire was weaker than the Jackson, and testing it with long, double-headed trains proved the 0.006in p/b could do the work, but in my view was too weak for normal use and certainly for exhibition purposes. So a 0.008in steel wire AAJ was a realistic option although other things had to be changed as well, such as the lengths. I made a simple torque measuring device to compare the force necessary to deflect an AJ and an AAJ. A length of about 30 to 35mm generated an equal force to the 60 to 65mm of a 0.011 wire.

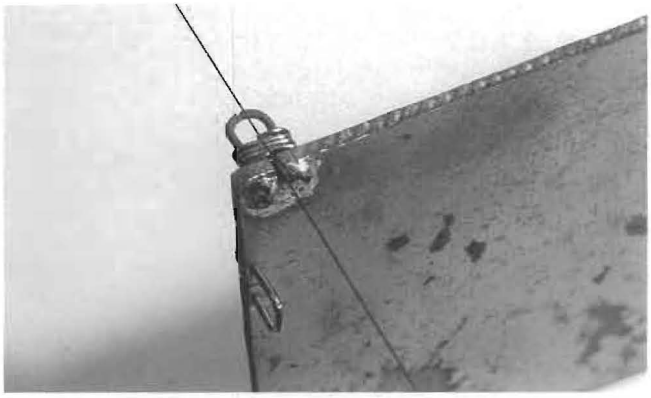
Next problem to solve was the mounting of the couplings since, being so minute, they are more difficult to handle. Now I had adopted a clever solution which John Watson showed me at the Chatham show, where he was showing his layout 'Kenton'. He used long handrail knobs fastened underneath the vehicle in such a way that a straight (i.e. with no bends) AJ was simply stuck through the hole in the knob and soldered. So much easier than soldering a bent piece of wire in a good position under a wagon, so using this technique I made a couple of wagons with the new couplings. They worked fine but where to put a dropper to uncouple? The couplings were too



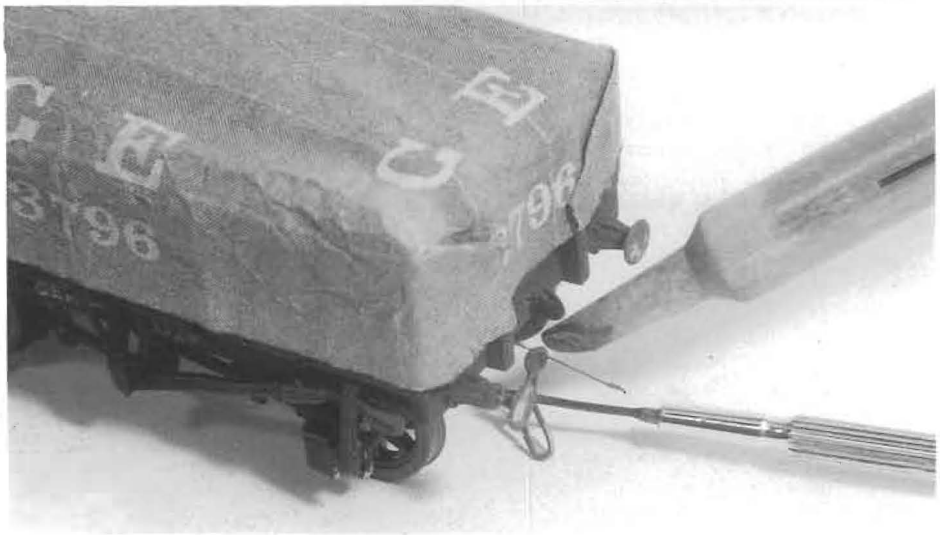


This cut-away picture clearly shows the changes. Soldering the AAJ under the floor, first the angle (front view) and then in small steps, the length. Don't make them too long or they can become tangled in the three links of the other coupling.





Above: *Jigs for three links, two U-shapes bent from 0.9 hard brass (Alan Gibson) – outside width 2.2mm and 4.5mm. I wrap up a coil, flatten it with pliers and, with a fine jeweller's saw, part them. The small one is for the upper shackle (here we are cheating a little, because this shackle is around the shaft of the AAJ and not around the hook). The 4.5mm dimension is for the other two shackles, the bottom one being steel. I use 0.6 soft copper wire for the links and for the bottom one, 0.6 soft steel (from bread bag closers). Using these dimensions, the bottom link is about 0.5mm above rail level. With screw couplings I do basically the same thing, using Exactoscale ones which have steel loops.*



Right: *Soldering the three links is a bit tricky. I hold them straight with a screwdriver and solder with a tiny drop of solder & flux. Superglue or white glue is also a possibility.*

short for droppers situated around the axle. Now the article of Chris Lamacraft came in very useful, for he used three-link couplings soldered to AJs. The last link was made out of soft steel and worked as a dropper. I used that idea on my new AAJs and I could uncouple them now with my old magnets.

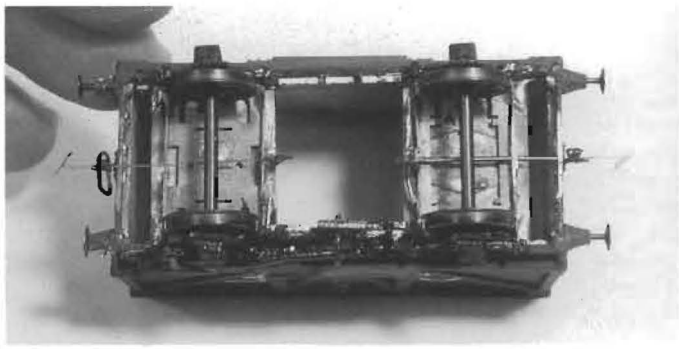
Chris also changed the coupling height from 10 to 12mm, so the coupling would rest against the underside of the buffer-beam. This is an important step because if you change the height of the couplings, they are not compatible with the original AJ any more. However, the three-link dropper looks very realistic, you don't need a height bar, and, besides, it is much less visible because the buffers act as view-blockers.

So the alterations can be summarised as follows:

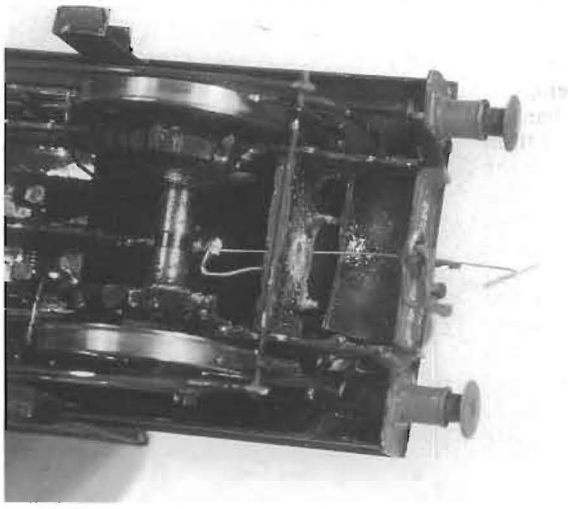
1. Altered hook, upside down, 0.008in, much less visible.
2. Three-link as dropper, close to the hook, looks prototypical.
3. Altered height from 10 to 12mm.
4. Shorter shank, giving better riding and easier mounting.

I showed my stock at a meeting and most people liked the alterations, but one old salt said "You never see coupled wagons with both couplings dangling!" Grrr . . . , never good enough! Now the only option I could find was to fit one coupling with a dangling three-link and the other with a hooked-up three-link. This meant that the couplings would become one-sided (for uncoupling only) so either the stock couldn't be turned around, or *all* the stock must be turned. In the spring, I stayed a couple of days with Iain Rice and discussed this matter with him. Neither of us could conjure up many objections, except the engines needed an uncoupler too.

Back in Holland, I started to change all my stock (about 35 wagons and six engines). Basically, I had to take off some material behind the bufferbeam that could obstruct the AAJ, and sometimes I had to file bits from the rocking W-irons. All was quite straightforward and I enjoyed the tidiness under the wagon floors due to the shorter shaft . . . then I ran out of handrail knobs. Because I don't like to stop when I'm in the mood, I started to use a 0.4in copper wire with a loop in one end and the other soldered to the floor as an ersatz handrail knob. Apart from being a lot cheaper, you can very easily tweak the wires to adjust the couplings.



Another view of a wagon, showing the coupling to the right side of the hook.



I also had to make working couplings on engines. Mostly I drilled a 2 or 2.5mm hole in the frame spacer, soldered a piece of 0.6 copper as long as needed for coupling length, bent a loop, and soldered up the coupling. Sometimes this calls for creativity!

VULNERABILITY

To my surprise, it looks as if, in normal use, it might be less prone to getting out of alignment. It appears you need to bend the thin wire over at a greater angle than the thicker one to get a permanent deformation, but the only problem I had with the shorter coupling (on the non-working side of an engine) was that it opened up when hitting a bufferstop. I had to make a functional stop to prevent this, but if this is not an option you can always use a normal length coupling on the non-working side of the engine.

For uncoupling, I use the Spratt & Winkle type magnets, or home-made clones which work fine. I use three, activated simultaneously via solid state relays, and push buttons on hand-held controllers (no searching for buttons on a control panel).

CONCLUSION

In my view this AAJ is an improvement in several ways:

1. It looks more prototypical.
2. You see less of the model coupling.
3. You see no droppers.
4. Easier to mount.
5. Less prone to getting out of alignment.
6. The pulling force is all on the right-hand side.

We attended four exhibitions (one of five days in Germany), with lots of shunting, and had less adjustments to make, and I'm happy with them.