

WHERE THERE'S MUCK...

The second of three studies of single inside cylinder brass locos

By Nicholas Oddy

Pictures by author unless stated



Fig 1. (Bearnese, Hampton & Littlewood)

In a moment of madness, I bought a three-axle dribbler for rather more than I should have. I was in the USA at the time and was working only from a single picture on a laptop. What attracted me to it was that it was inside cylinder and 'broad gauge' in pattern with fence-like siderails running its length. Both these features register high on the brass loco desirability stakes. Moreover, I suspected I had a suitable tender for it. The condition looked 'untouched back-of-a-shed', also hugely attractive **Fig 1**. Experience has shewn me that when looking at 19th century locos like this, the old Yorkshire adage of 'where there's muck, there's brass' is apt. Under thick grime like this often lurks a good original finish (notice the gleam of original lacquer on the dome – a good sign). Looking as sorry for itself as it

did, I thought I should get it fairly cheaply; unfortunately, someone else had had exactly the same idea and, just to make sure, had put a hefty commission bid on it; so much for thought.

On receiving it, it was a middle-sized loco, some ten inches long with a nominal 2¾ inch gauge, but designed as a floor runner, with 'gripped' flanges on its driving wheels. The fore and aft wheels could be set to run in a straight line, or describe a circle, the right-hand axle hangers having two axle positions. We might note that the gauge is smaller than the loco we looked at in *TC 74*, yet the loco is larger, mainly because this loco has its wheels set under its running plates, rather than outside of them. Nevertheless, it was narrower and a good bit more underwhelming than I had imagined and I wondered at my folly; but, if there is one thing that overpayment inspires me to do, it is to prioritise the item to tweak as much of the price back into it as I can.

This one did not disappoint. For a start, although the tender I thought would fit was far too wide, in the inheritance of brass loco components from Peter Dunk was another that was the right pattern with identical fittings. It is clearly the loco's (or another exactly the same size's) mate, save for being fitted with slightly different wheel castings with larger hubs. This is a real win, as the loco is clearly designed to draw a tender, given its siderails go right back to the rear beam, which has a drawbar eye and no rear wall or bunker. Dribblers *designed* to draw tenders are fairly rare, but those *with* tenders moreso, not least because many makers and retailers offered locos singly with the tenders as optional (fairly costly) extras. The tenders, particularly at this level, are rarely up to the quality of the locos, crude tinplate coal trucks mounted on simple brass outside axle hangers and crudely painted plain green. This one is typical, but has more substantial underframes with inside axle hangers matching the loco, even with the same two-position setting on one of them.

Second, as I had anticipated, under the filth on the loco lay a nicely untouched finish, patinated to a complex mix of

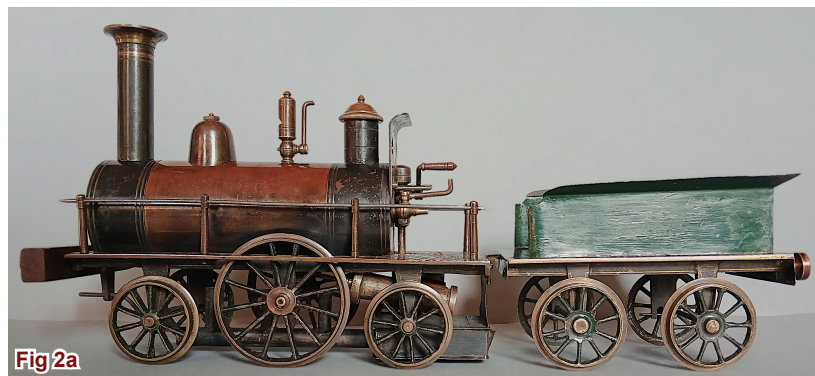


Fig 2a

bright and oxidised brass. **Figs 2a-e** show the loco and tender at the other end of the cleaning and fettling process.

Luckily, the boiler was one of those where the ends were lacquered, rather than being chemically blackened, lucky because it is much easier to par-relacquer than par-darken an otherwise good boiler.

Why was re-lacquering an issue? Not obvious in the picture, or even after I had received it and started to clean it, was that the boiler front had been replaced. I should

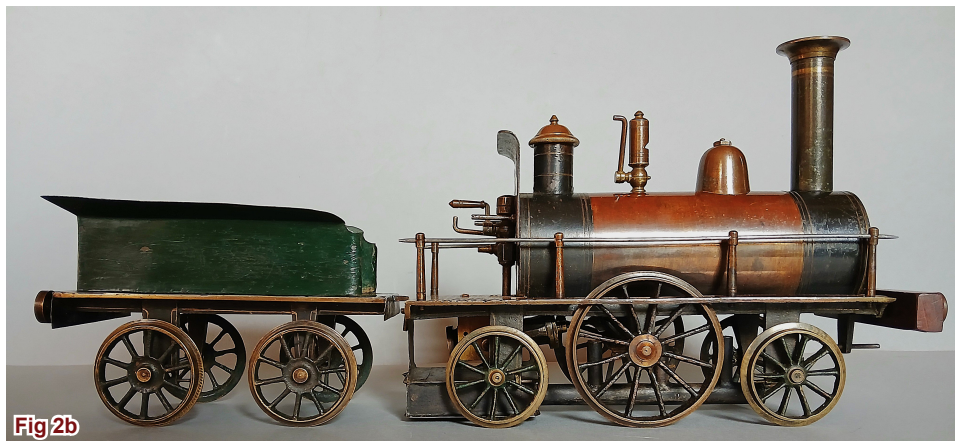


Fig 2b



Fig 2c



Fig 2d



Fig 2e



Fig 3

have thought it was odd in not having anything in its centre, usually there is a screw bung or a water check cock. However, it was only after I had worked close to it did it transpire that there was a lot of solder and no lacquer, then it was clear the boiler front was not lacquered brass but raw copper. Copper is very ductile and it was probably chosen because it could be easily beaten over the boiler barrel to form a lip, whereas brass is far harder **Fig 3**. There were obvious file marks to boot. It seemed inexplicable, the rest of the loco was very good, untouched, why would it need a new front? The answer was to become clear.

I finished cleaning the boiler, then took a pencil-flame blow torch to the front. In this way the front is brought up to solder melt temperature with minimum heat transfer to the boiler barrel. As soon as the solder melted, I pushed off the front with a wide screwdriver. The remaining solder is simply removed by aiming the flame at it until it melts and then, while still liquid, it is easily wiped off with a dry cloth. It's a process

that requires practice, but it is one that I have had a lot of experience of. The original front had been inset and soldered, as at the rear. I could make one, but I wanted an original. I dug through my stock of write-off dribbler boilers, to my delight I had one with a slightly oversize front, still in black lacquer with turned rings and, better still, soldered over the barrel. Here I do the reverse, heat the barrel to melt temperature to avoid overheating the front and push off the front, as far as possible retaining the lacquer and rings. Once off, it was a simple matter to spin the front in a lathe to take its diameter down to snug fit in the barrel. Then an easy soldering job and, hey presto, the boiler as first made.

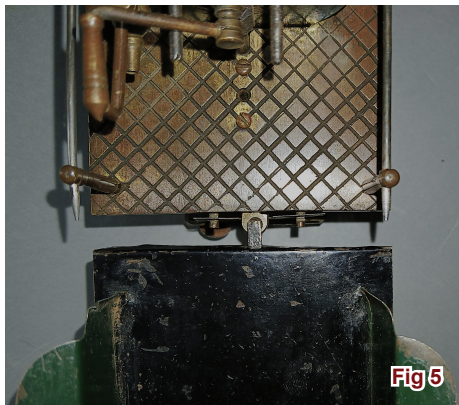
However, no matter how careful, there was considerable loss of lacquer at the front of the boiler, particularly where the solder had been, where I had had to remove file marks and where I had cleaned up the joint between front and barrel. It would be nightmare to match up chemical blackening in such a situation, but lacquer is a different matter, it is microscopically thin; so, does not show tide and 'cliff' marks like normal paint. It is much more easily controlled than chemical finishes that require careful preparation of the metal below, which has to be consistent. Lacquer was applied where required, stoved and then the whole boiler spun in the lathe to re-establish the banding. Then a coat of clear 'gold' instrument lacquer, a second stoving, and, finally, bit of weathering. I'd defy anyone to ever think such a heavyweight job had been done to it **Fig 4**. The reward of years of practice.

Of course, all this work on an already expensive loco would make it even more expensive; but, hey, I'm doing it to keep, while the loco is rare enough to justify it. Moreover, looking at the whole now, united with tender, it looks worth the price.

So, now I can see it for what it is meant to be, I can make some observations. It's not a loco that seems to appear in any of the (few) catalogues that survive which list such things; so, I suspect it is quite early, from the 'dark age' of the 1860s and 1870s. It has a weatherboard; so, perhaps more '70s than '60s, even early '80s. Its details are also of the early period. It is quite finely made for what is a

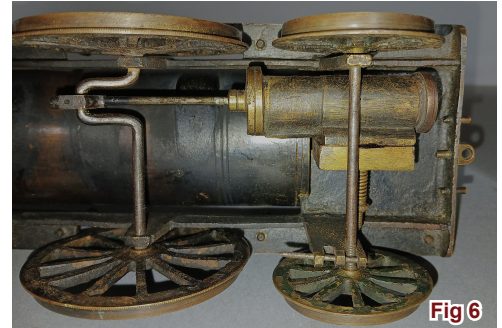


Fig 4



fairly basic loco, it has a regulator (not just a steam tap) and a nice, broad, tube whistle (not a bell type). Its wheels can be set to describe a circle or go straight. The burner is also of an early pattern, hooked over a couple of screws in the drawbar beam. Later brass locos tend to have screw-fixed or slide-in burners. The finish has a detail that also strikes me as unusual, in that the axle hangers and underframe are darkened then lined out with a scribe, the sort of nicety overlooked later on. A curiosity is the drawbar is offset towards the 'inner' side of the loco, presumably to allow an element of close-coupling were it set to describe a circle **Fig 5**.

Meanwhile, underneath is a large, double-acting, single, oscillating cylinder **Fig 6**. This is 'one-sided' with the cylinder held



to its block by a threaded rod and spring, the thread is pleasingly coarse, typical of earlier locos. The block is internally ported to transfer steam from one side of the piston to the other. Unlike a single-acting block of this type, a double-acting one has port holes both sides of the pivot, aligning with the rocking of the cylinder, but it does not require the milled channels we saw in TC 74 and is cheaper and less space consuming than the traditional rockers both sides of the cylinder. This allows the



cylinder to be off-set to one side, giving space for burner wicks beside the motion. It is here we see the difference between a fully commercial approach to inside single cylinder drive from that of the conversion in TC 74. In this loco, the cranked axle is literally that, bent into a crank, rather than the far more elaborate (and engineering-like) constructed crank of the loco in TC 74. Reflecting its relatively basic nature, it has no piped exhaust to the chimney, but exhausts straight out of the block.

Who made it? Well, in many ways it has close similarity to *Pilot* **Fig 7**, a loco that may well be early Stevens, although we have seen in previous issues that ascribing makers to locos like this is very uncertain in all but a few cases. It shares an identical style of weatherboard. The wheels are identical pattern if different diameters. The regulator and handle are identical save for its steam pipe fixing **Fig 8**. The whistle is identical and on the same thread, as are the check cocks. The side rail supports are identical pattern, if slightly different heights. So, without better provenance, but given the similarities of its build and components, it may well share the same maker. I suspect it is London built, belongs to the late 1870s or early 1880s and was likely sold through Stevens' and Bell's model dockyards and other retailers. Who actually built it might remain forever uncertain, it *could* be Stevens, but equally it *could* be Bell, or equally a maker who supplied both. At this stage I'm *minded* to say Stevens and that is as far as I'll go.



As for why the front was replaced. It is typical of early brass locos to have their boilers fixed in place by a screw acting on the boiler front. With the boiler front only held by a line of solder round its

edge, the screw is very easily over-tightened, pushing the front in and breaking the solder...as I found! Oops! So, now a period looking example of heavy resoldering lurks below the running plates. Presumably the same happened some time many years ago, but the weakness was seen to be too much of a problem to patch up and live with. The copper front, placed over, rather than inside the boiler barrel, was far more structurally sound in such an application...but wrong.

In the end, the loco remains a rather costly purchase, but it has tried my skills and repaid the effort. In spite of the price and the oncost of time, I'm rather pleased with it. 🍷

