Rumney Models - Alternative Ladders and Walkways Instructions

Notes

Try and read the instructions thoroughly before starting construction. I'm probably the worst person in the world for this but all of the components will be easier to build if you do this. There are several diagrams and photographs taken during the construction of the test etches to aid construction.

Everyone has their own soldering methods. I now use a temperature controlled soldering iron with predominantly 145 degree solder and La-Co paste flux. For a long time I used an Antex 18W soldering iron on virtually everything.

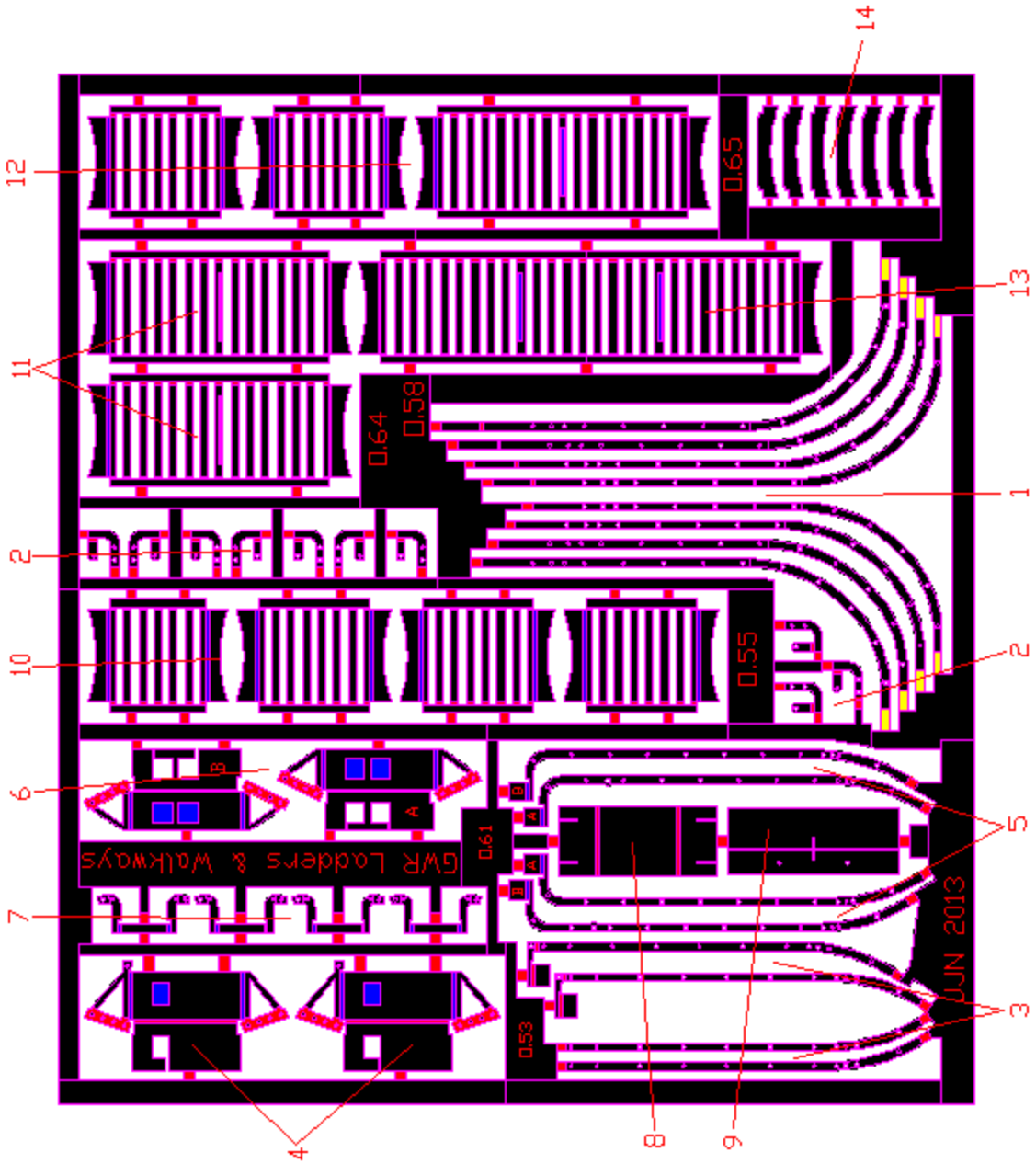
Check all holes before removing parts from the fret. The drawing process for etching if you use a CAD program as I do is extremely accurate but the actual etching process itself not an exact science. If the fret is slightly over etched then there is no problem but if they are under etched the holes will need enlarging. I find that this is easiest to do before removing parts from the fret. The hole sizes will be noted at the appropriate points.

All fold lines are through 90° with the fold lines on the inside unless otherwise stated in the instructions.

I have not given any instructions on cleaning up parts on removing from the fret. Needless to say that any connecting tabs should be cleaned up. I tend to clean up the cusp only after the item is constructed. There should be no need to clean up the cusp to provide a good fit of parts.

Component list

1 – GWR long ladders
2 – Solebar brackets for GWR long ladders
3 – GWR O.53 partial platform ladders
4 – GWR O.53 partial platform base
5 – GWR O.61 partial platform ladders
6 – GWR O.61 partial platform base
7 – Solebar brackets for GWR O.52 and O.61 partial platforms
8 – Ladder assembly jig
9 – Drilling jig for GWR long ladders
10 – Walkways for GWR O.55 milk tank
11 – Walkways for GWR O.64 milk tank
12 – Walkways for GWR O.65 milk tank
13 – Walkways for GWR O.58 milk tanks
14 – Walkway centre supports



Materials List

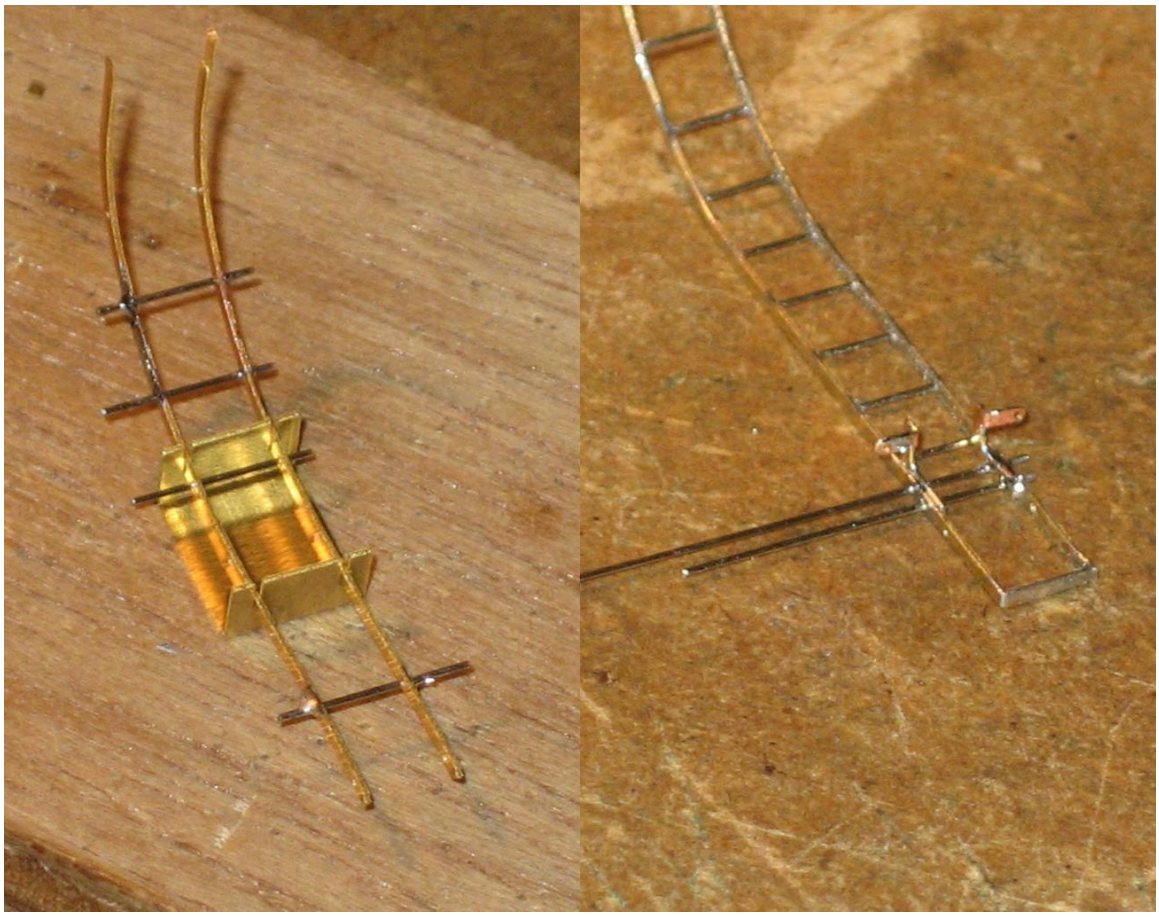
You will need the following:

0.31mm wire for the long ladders and partial platforms.
0.4mm wire for the handrails if making an O.61 partial platform

Long Ladders

These were fitted to the long wheelbase twin tank vehicles. There are two pairs of ladders included which are sufficient to make enough for one diagram O.41 or O.50. They were also fitted, along with a pair of standard ladders, to Diagram O.58.

The ladders are designed to be assembled as two sides with 0.31mm wire rungs. They are rather delicate until they have been soldered together. A jig is included to keep the sides parallel and square whilst they are assembled. I have designed them so that they are attached to the running plate of the milk tank using 0.31mm brass pins and there are tabs at the top that you can glue to the tank manhole. I dislike relying on simple glued joints with these things as they are vulnerable and the pins help provide a more positive location. A ladder drilling jig (9) is provided to aid drilling holes for the pins. It also helps to make things easily removable for painting. I strongly recommend leaving the final fixing to the milk tank until after everything has been painted.



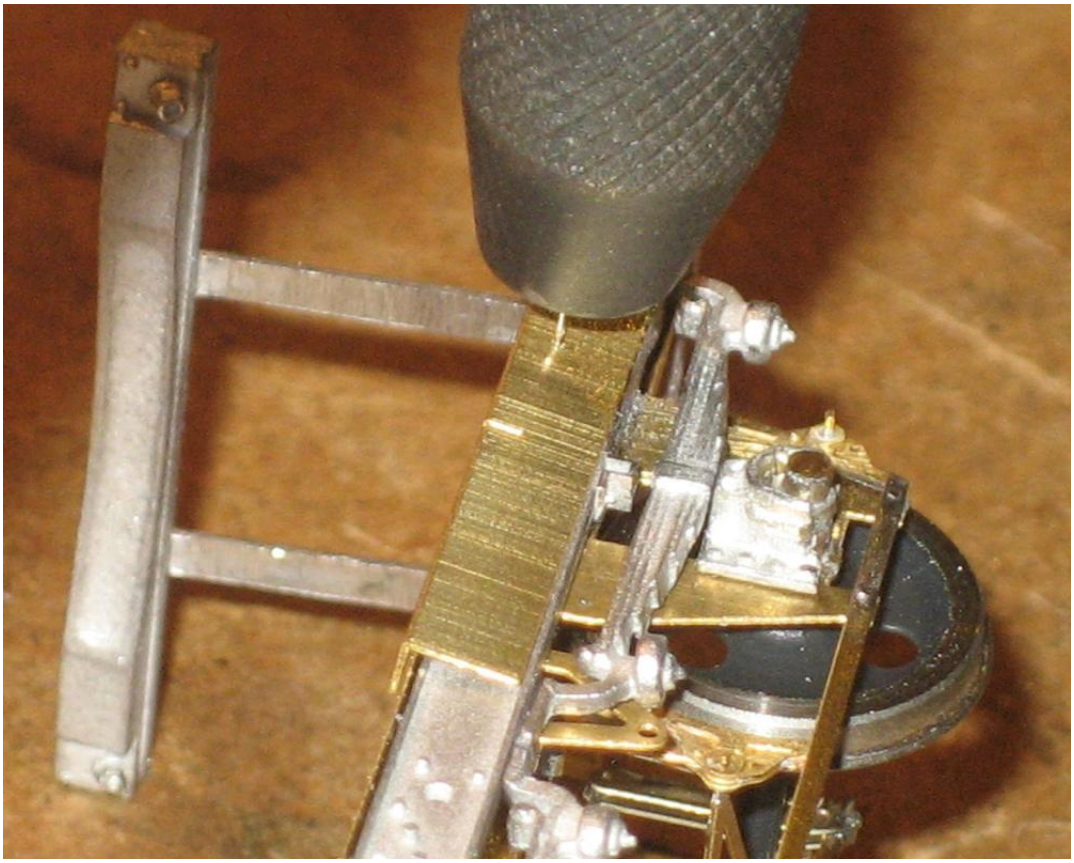
Long Ladders and solebar brackets during construction.

Remove the ladder assembly jig (8) from the fret and fold into a channel. Reinforce the folds with solder.

Ensure that the holes in the ladder sides (1) and solebar brackets (2) can accept 0.31mm wire. Remove the required number of sides from the fret ensuring that you leave as much of the connecting tab on the tops of the ladder sides as possible. These are marked in yellow on the parts diagram and also Fig.1. Note that the two sides are different and one side has a fold over section at the bottom. Also note the points where the solebar brackets are attached to the ladder sides (see Fig. 1). Leave these until last.

Place the ladder sides in pairs in the slots in the ladder jig arranged so that the half etched tabs at the top of the ladder are on the outside. Start with two lengths of 0.31mm wire that are threaded through the holes in the sides (not those for the solebar brackets). It is advantageous if these pieces of wire are overly long. They will be cleaned up later. If you clamp one of these pieces of wire to the vertical part of the jig whilst soldering the other this will ensure the rungs are square to the sides. Solder the rung to the outside of the etched sides. Solder the other piece of wire in place and then work through the remaining rungs (but not those for the solebar brackets) keeping the ladder in the jig. The solebar brackets can be added now. Note that they are handed. Remove from the fret and fold the fixing point through 90°. The part with two holes in attaches to the inside of the ladder with the fixing point going away from the ladder (see Fig. 1). Use short lengths of 0.31mm wire threaded through both ladder sides and both brackets and then solder in place. There is a fold over section at the bottom of one of the ladder sides. I have etched it so that it is square to the sides (see Fig. 1) though there was variation. As usual check you prototype and adjust if necessary. Fold this section up and solder in place. Once everything is in place any excess wire can be trimmed and the centre part of the wire between the solebar brackets also needs to be removed. File the outside of the rungs flush with the sides and the wire either side of the solebar brackets so that they resemble bolts.

Ensure that the holes in the ladder drilling jig (9) can accept 0.31mm wire, remove from the fret and fold into an L section. There is a slot etched in the jig that marks the centre. To drill the holes for the fixing pins on the milk tank place the jig on the top of the solebar aligning the slot with the centre of where the manholes would be on the tank. Hold it firmly against the solebar and drill through the holes. It is easiest to do this before fitting any tank supports but if they are already in place simply remove any part of the jig that comes into contact with the supports. Originally I soldered the fixing pins to the ladder but I have found it easier to glue them into the holes in the milk tank.



I seem to have managed not to take a photograph drilling out fixing holes for the ladders. In this I am using a similar jig to drill a locating hole for a brake lever guard. The idea is the same and the jig is located on the solebar in the same way. I'm sure you get the idea.

I would recommend painting the ladders separately from the rest of the milk tank and then glue them in place. The fixing pins will help locate them in the correct place and also ensure that they stand half a chance of remaining in place if accidentally knocked.

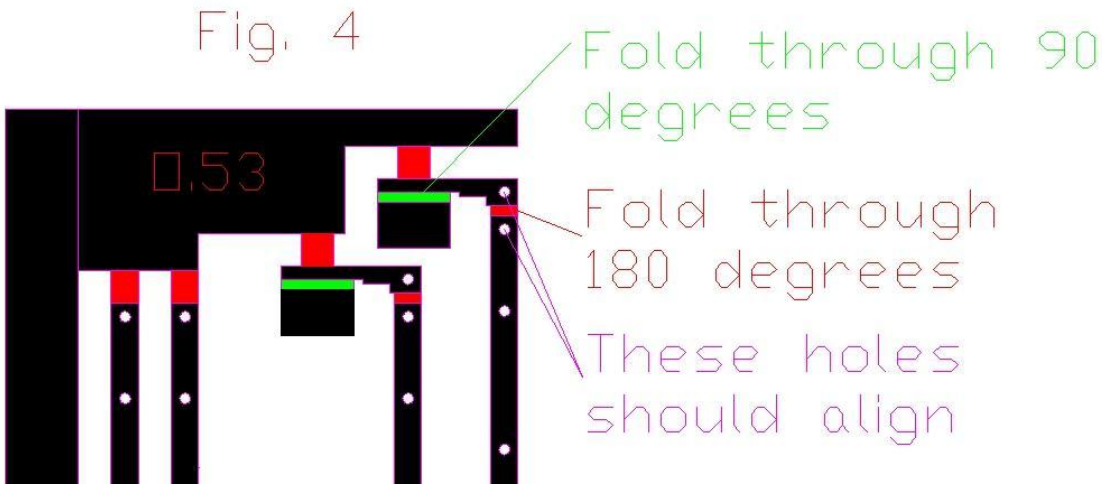
Partial Platforms

These were fitted to GWR Aplin and Barrett and C.W.S. Ltd O.53s and C.W.S. Ltd O.61s. The two types were different though they followed the same basic principal. They were essentially just ladders with standing areas at the top. The instructions are essentially the same for both types. Small variations between the two will be covered as we go along. Note that the O.53 partial platform is designed to fit a correct 24mm diameter tank. The O.61 platform is designed to fit the David Geen tank.

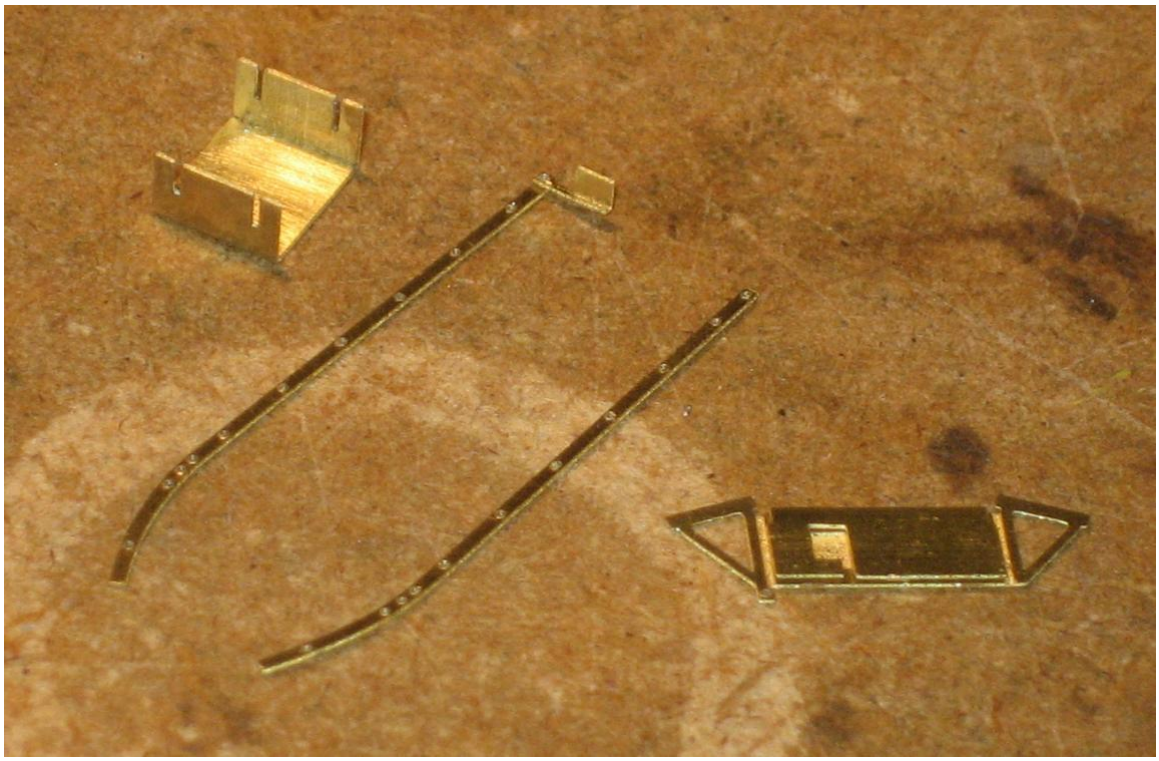
Identify which parts you need for your platforms and ensure that the etched holes will accept 0.31mm wire including the solebar brackets (7). Firstly make up the ladders. Remove the ladder assembly jig (8) from the fret and fold into a channel. Reinforce the folds with solder. Remove the appropriate ladders (3) or (5) depending on which platform you are making.

Note that the two sides are different for each type of platform. The O.53 platforms have a bracket at the top of one of the sides and the O.61 platforms have holes on one side for handrails that link to the tank manhole. The O.61 partial platforms are also handed. All those parts marked with an A should be assembled together and likewise with all those marked with a B. Also note the points where the solebar brackets (7) are attached to the ladder sides (see Fig. 1). The solebar brackets for the partial platforms are all the same. Leave these parts until last.

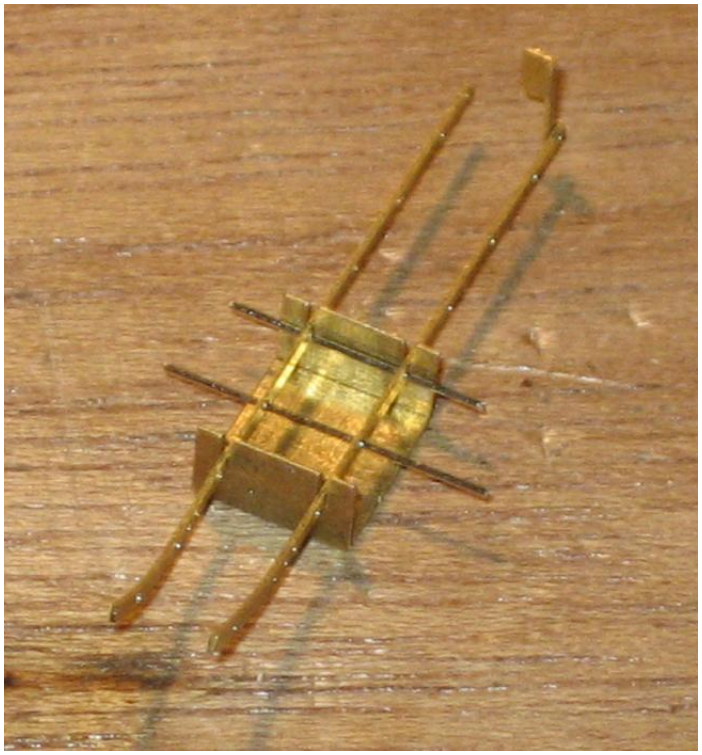
If making an O.53 partial platform fold up the bracket on the top of ladder sides. There are two fold lines, one on the top of the ladder side and another that is attached to a rectangular plate that will locate on the base. Using a vice or similar clamping tool fold the rectangular plate through 90° and then the fold at the top of the ladder side through 180° with the fold line on the outside. Use a 0.3mm drill bit to align the holes on the top of the ladder side and reinforce the fold lines with solder. See Fig. 4 below and the photographs.



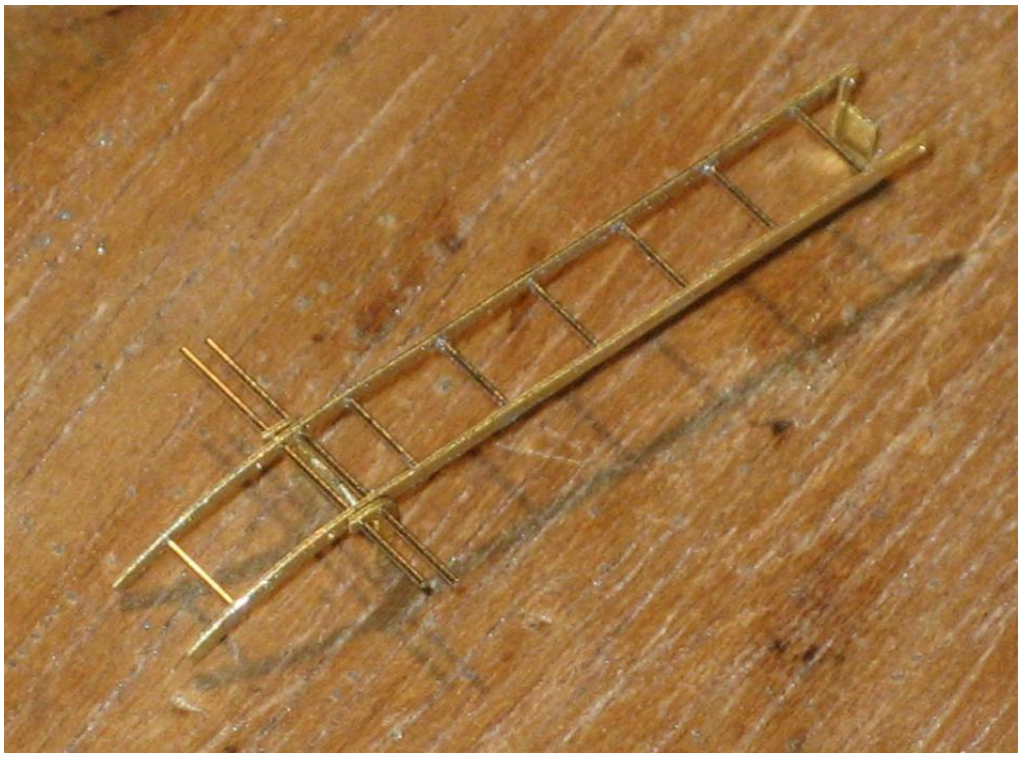
Place the ladder sides in pairs in the slots in the ladder jig. Start with two lengths of 0.31mm wire that are threaded through the holes in the sides (not those for the solebar brackets or the very top set of holes on the O.53). It is advantageous if these pieces of wire are overly long. They will be cleaned up later. If you clamp one of these pieces of wire to the vertical part of the jig whilst soldering the other this will ensure the rungs are square to the sides. Solder the rung to the outside of the etched sides. Solder the other piece of wire in place and then work through the remaining rungs (but not those for the solebar brackets or the very top set of holes on the O.53) keeping the ladder in the jig. The solebar brackets (7) can be added now. The sides of the brackets (with the holes in) need to be folded up. The sides of the solebar brackets attach to the ladders on the outside. The spacing of the bracket sides should make this obvious. Use short lengths of 0.31mm wire threaded through both ladder sides and bracket and then solder in place. Once everything is in place any excess wire can be trimmed and the centre part of the wire between the sides of the solebar bracket also needs to be removed. File the outside of the rungs flush with the sides and the wire locating the solebar bracket so that they resemble bolts.



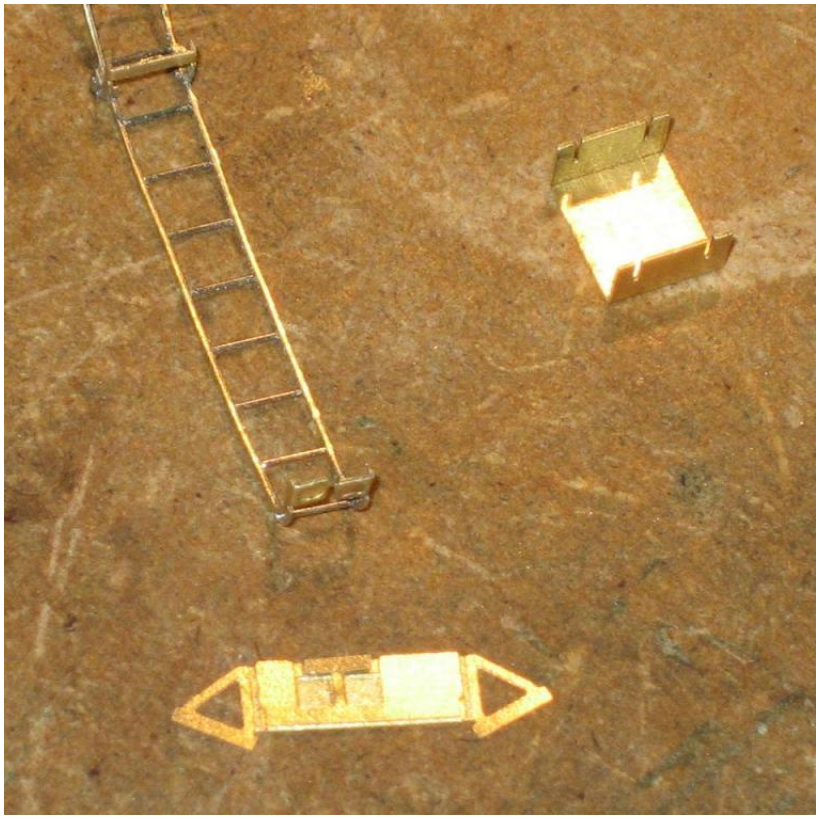
O.53 Sides, base and ladder jig.



Assembling an O.53 ladder



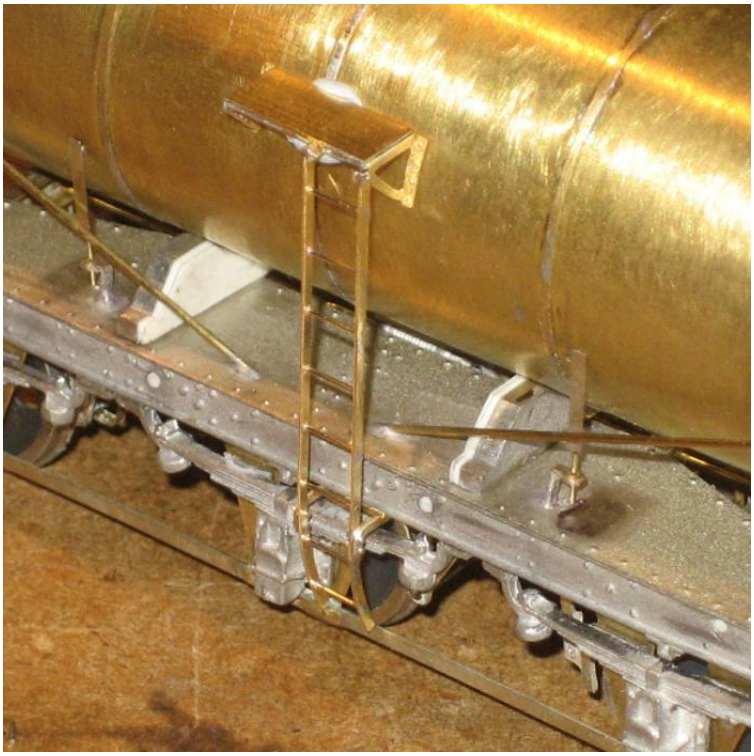
Assembling solebar brackets. Note no wire through the top set of holes.



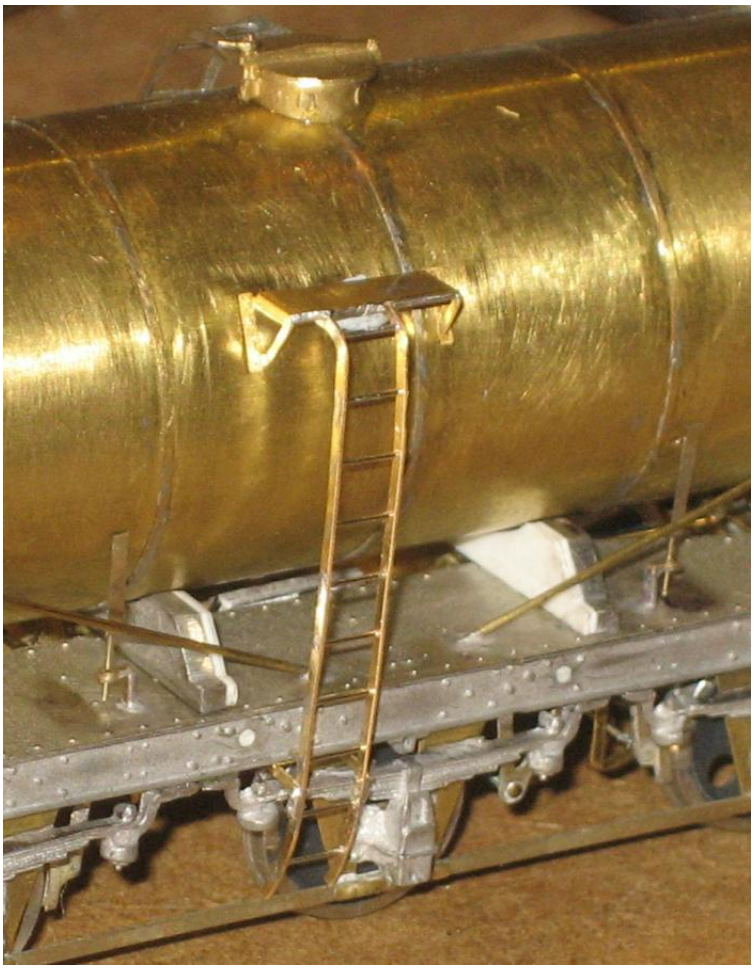
O.61 ladder, base and ladder jig.

The ladders can now be attached to the base. There are locating points etched in the bottom of the base to make this easier. If constructing an O.53 partial platform the holes at the top of the ladders and on the base side need to be aligned with 0.31mm wire. Note that the ladder side goes on the outside of the platform base side. Do this as you did the solebar brackets threading a piece of wire through all the holes, soldering in place, removing the centre section and then filing the wire back to represent bolts. If making an O.61 partial platform don't forget that they are handed and the ladders marked with an A should be attached to the base marked with an A etc. A hand rail will also need to be constructed for the O.61 partial platform. Use 0.4mm wire for this. There is a locating hole on one side of the ladder for this. Use a photograph of your prototype to bend the handrail to the correct shape.

I would recommend painting the platforms separately and then gluing them in place. There is no provision for pinning these partial platforms in place but there are large gluing areas which should ensure a strong joint. The 'feet' can be glued to the side of the tank and the top of the solebar bracket can be glued to the bottom of the solebar.



Completed O.53 partial platform.



An O.61 platform with handrail to be added. The handrail is aligned with the centre of the vehicle. Note that the ladders should be offset on the side where the main brake shaft is not as depicted here.

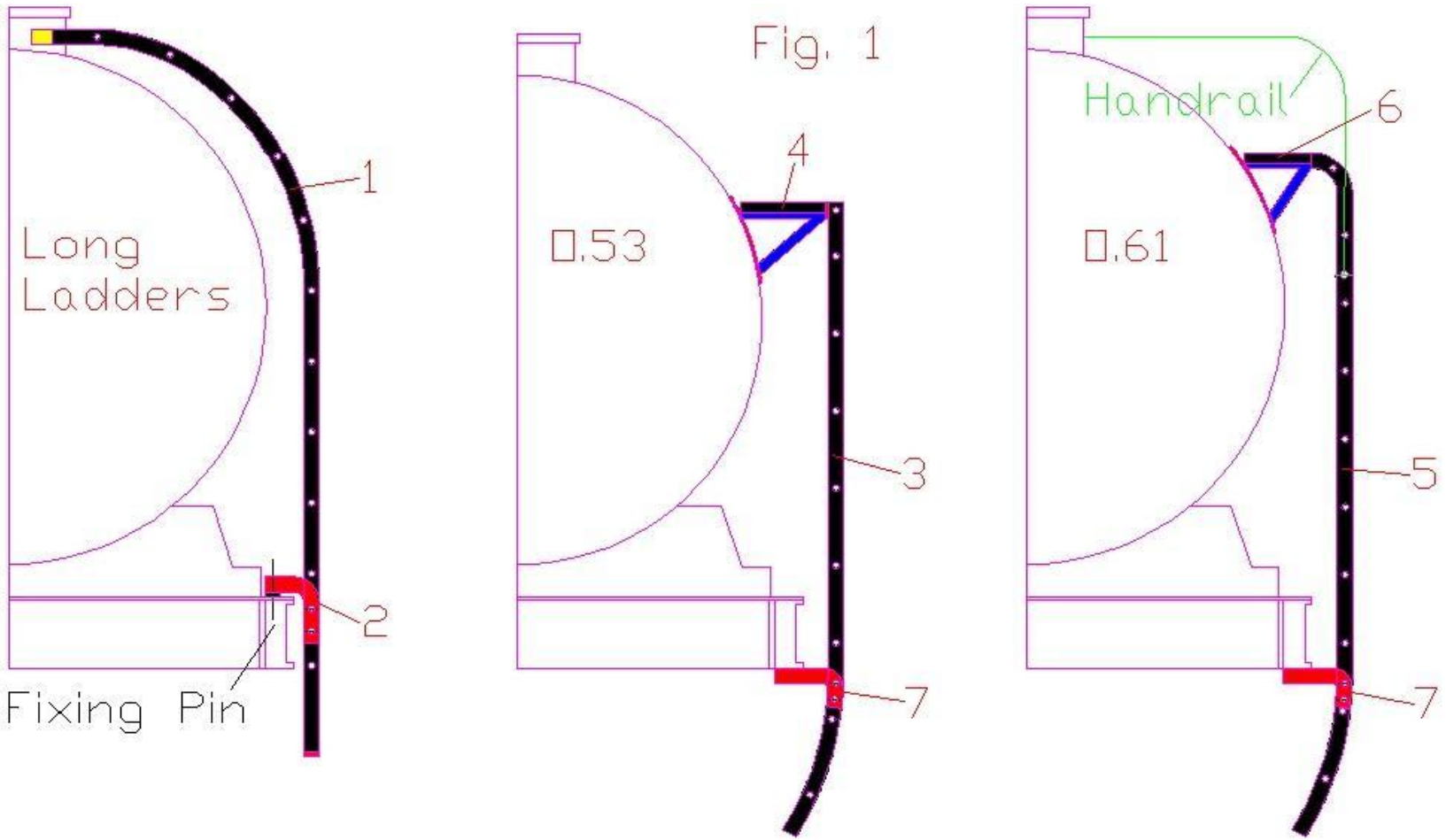


Fig. 1

Walkways

These represent the planked type as fitted to a number of GWR types. There were also meshed types fitted to other GWR diagrams and also diagrams built by the other railway companies. Hubert Carr of Model Railway Developments has talked about doing these. The planked types were all essentially the same they simply came in different lengths.

There are 10 walkways included on the fret which provide enough to build one of each of the following diagrams: Cow & Gate, Aplin & Barrett and Milk Marketing Board O.55 (10), Cow & Gate O.58 (13), Express Dairies O.64 (11), Milk Marketing Board O.65 (12)

The following gives a breakdown of the walkways fitted on each type:

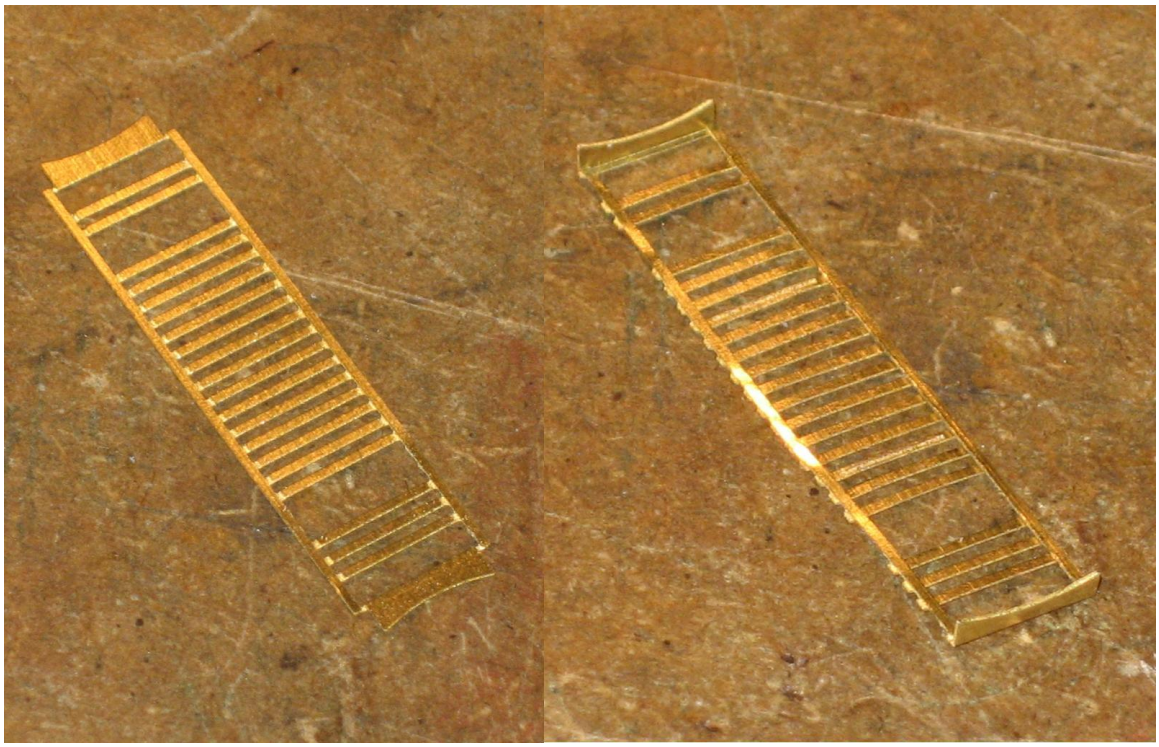
O.55 1 x 2'2" and 3 x 2'6"
O.58 1 x 9'2"
O.64 2 x 5'
O.65 2 x 2'6" and 1 x 5'6"

See Fig. 2 and Fig. 3 for fitting details.

Construction

There were fittings on top of some of the tanks which passed through the walkways. On the real thing there were planks missing in order to be able to facilitate this. If you need to remove the planks in order to be able to allow for the fittings now is the time to do so**.** Refer to Fig.2 and Fig.3 at the end of the instructions. Use a piercing saw to carefully remove the relevant plank(s). In their later days the fittings tended to disappear from the top of the milk tanks but on most the gaps in the planking remained. Planks also disappeared as they rotted. Indeed I've seen a picture of a milk tank walkway with just the frame remaining and no planks at all. Walkways were also removed completely from some milk tanks. As always check you prototype.

The walkways are quite delicate affairs and will require some care in order to fold them up. This is especially true of the longer types. It might be advisable to have a practise run on one of the unwanted types first to get a feel for things. Although it may seem the wrong way around you should start by folding the ends up. There isn't a lot of metal to the last plank and you will find it very difficult to do this after the sides. Make sure you hold the planked section of the walkway firmly in a vice when folding the ends. Once you are happy with the ends then you can fold the sides over. These need to be folded through 180° with the fold lines on the outside. With the longer walkways it may well be worth contriving something to hold the entire length of the side when starting the fold. This will help to keep everything straight. The longer walkways had centre supports (14) fitted to them. There is a half etched recess on the bottom of the relevant plank on the walkway and a tab on the centre support which can be used to locate them in the correct place and then solder.



An O.58 walkway during construction. The relevant planks have been removed (left) and then the ends and sides folded (right). The whole thing will next be soldered up and the sides cleaned up.

The finished walkway(s) can be glued or soldered to the top of the milk tank. See figures 2 and 3 below for positioning details.

Justin Newitt 2013

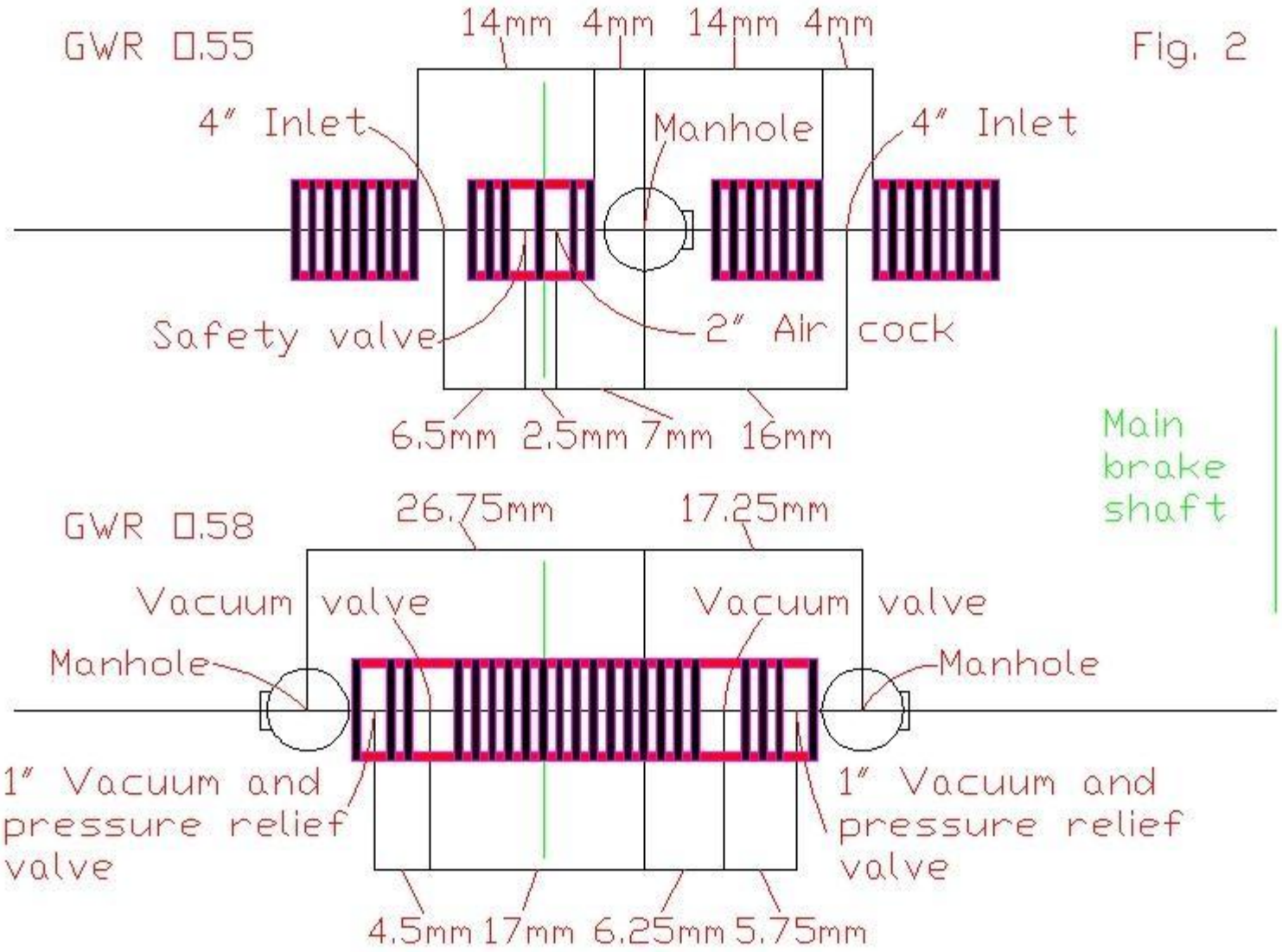

GWR 0.55
14mm 4mm 14mm 4mm
4" Inlet
Manhole
4" Inlet
Safety valve
2" Air cock
6.5mm 2.5mm 7mm 16mm
Main brake shaft
GWR 0.58
26.75mm
17.25mm
Vacuum valve
Vacuum valve
Manhole
Manhole
1" Vacuum and pressure relief valve
1" Vacuum and pressure relief valve
4.5mm 17mm 6.25mm 5.75mm

Fig. 2

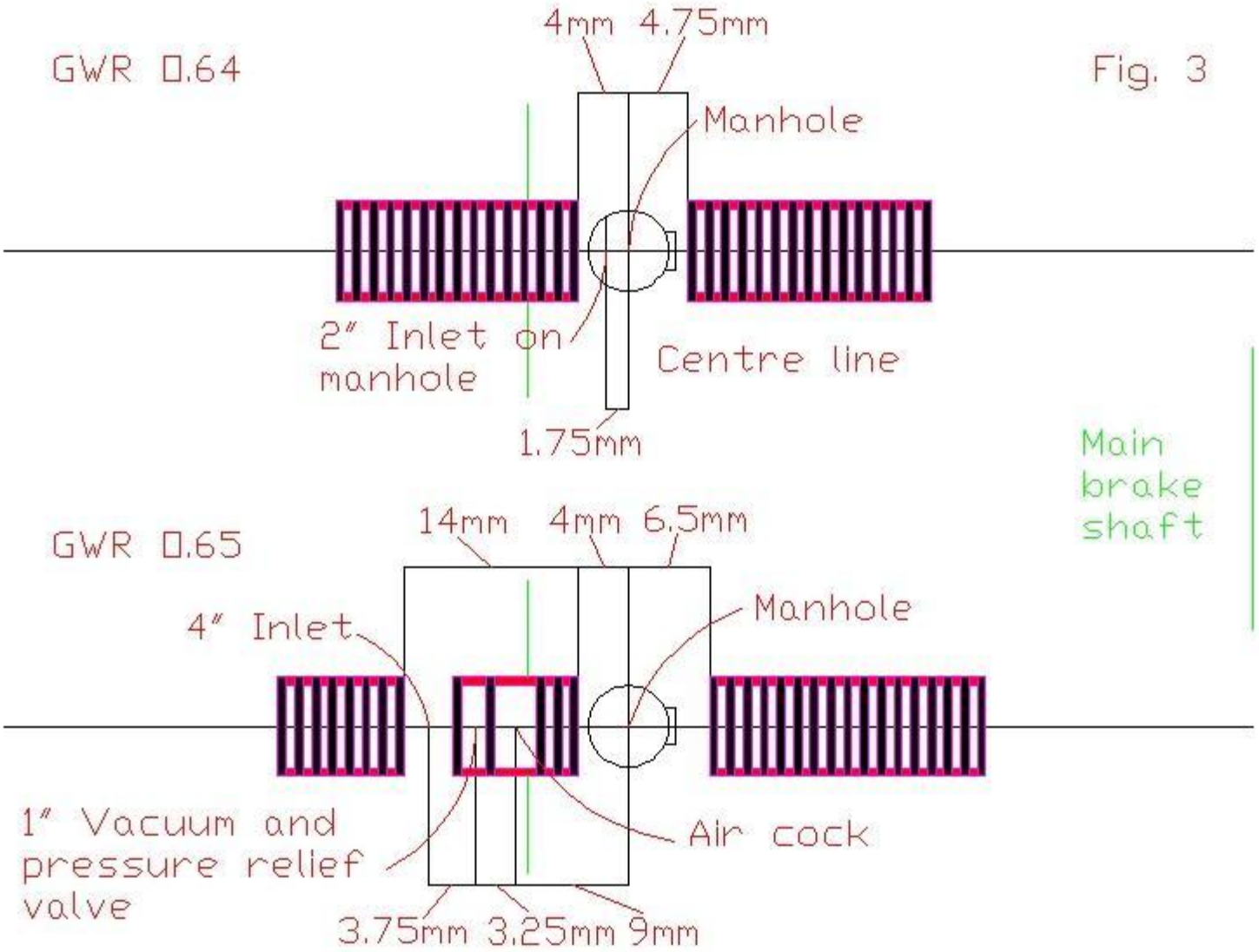

GWR 0.64
4mm
4.75mm
Manhole
2" Inlet on manhole
Centre line
1.75mm
Main brake shaft
GWR 0.65
14mm
4mm
6.5mm
4" Inlet
Manhole
1" Vacuum and pressure relief valve
Air cock
3.75mm
3.25mm
9mm

Fig. 3