

STEPHEN JOHNSON MODELS

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NSWGR 5 ton fixed hand crane

Assembly instructions

This model represents a generic NSWGR 5 ton fixed hand crane mounted on a concrete base. It is similar to the drawing of the c.1890 crane at Bungendore on Data Sheet G6*. This style of crane was common on lines built in the 'Whitton era' with typical examples found at Hay, Orange, Molong, Walcha Road, Tarana and many other locations.

The kit consists of brass etchings; brass, polyurethane and epoxy castings, and wire. Brass pieces must be soldered together while brass parts should be superglued to plastic castings (Green label ZAP-A-GAP is recommended).

Assembling the boom

1. The various etched and cast parts making up the boom are identified in Figure 1.
2. Separate the individual parts from the etched sheet by cutting through the tabs with a sharp knife. Remove the tab remnants and tidy up the edges of the etched parts with a fine file.
3. Fit the I beam webs into the etched slots and grooves in the top and bottom flange plates. Solder this sub-assembly together then file back the tabs where they protrude through the top and bottom plates.
4. Insert the top pulley bracket between the I beam flanges at the tip of the boom and solder in place. Solder the top brace to the top flange plate so that the notches where the brace changes direction are visible. Solder the bottom brace to the bottom flange plate so that the bracing forms a criss-cross pattern when the boom is viewed from above. Clean any excess solder and flux residue from the assembly.

* <http://grapevine.com.au/~datashet/>

Assembling the pillar

5. Trim the casting sprue at the base of the pillar to a length of about 6 mm to form a pin to secure the pillar in the octagonal base. Drill a 3 mm diameter hole in the top of the base. Dress the pin with a file to ensure it is round and a neat fit in the hole in the base. If done correctly, the crane will be able to rotate but will not fall out. Alternatively, the pillar can be glued to the base in a fixed position.
6. Cut two pieces of .018" wire exactly 69.5 mm long, making sure each end is filed square. These pieces of wire fit from the top pulley bracket to the mounting lugs at the top of the pillar and determine the slope of the boom in relation to the pillar. Adjust the boom to the correct angle and glue it to the two flat surfaces at the base of the pillar. Solder one end of each piece of .018" wire to the top pulley bracket and glue the other end to the mounting lug on the pillar (Figure 2).
7. Cut the remaining brass castings from the sprue and file off any dags. Glue the three larger gear wheels and one of the small gears to the pillar as per Figure 3. Bend a winding handle from .010" brass wire and solder it into the hole in the end of one of the small gears. Glue this and the other small gear to their mounting as shown in Figure 4.
8. Make a 90° bend in the etched brake handle about .5 mm from the square end. Glue this to the brake bracket as per Figure 4.
9. The cable which raises and lowers the block and hook is made from three pieces of straight .008" brass wire. One piece is glued to the top of the drum on the pillar and soldered onto the top pulley. The second piece is soldered to the front of the top pulley and to the pulley on the block while the third piece runs from the other side of the

block pulley to the small etched hole in the bottom flange plate below the top pulley.

10. Prepare the finished structure for painting and paint it a grey colour. Apply the decal to the web of one of the I beams about 15 mm from the bottom of the boom.

Figure 1.

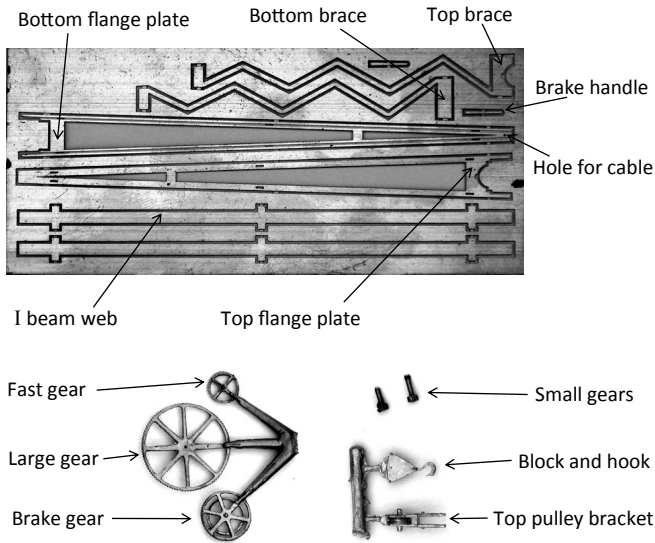


Figure 2.

0.018" wire butts to the round projections on the side of the top pulley bracket

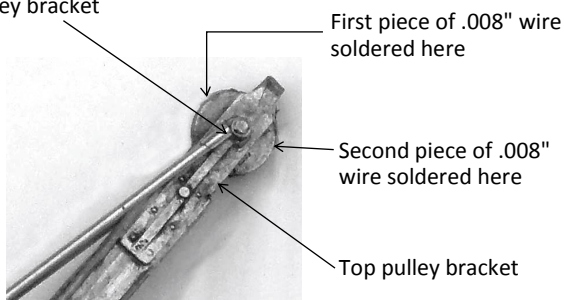


Figure 3.

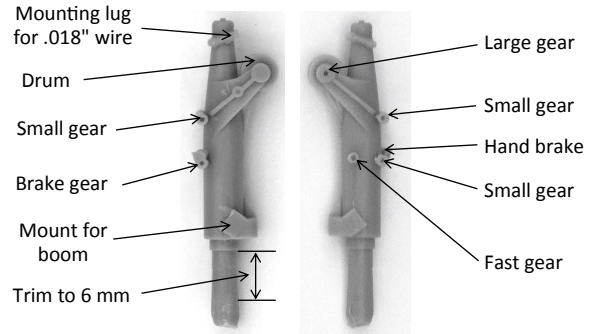


Figure 4.

