51L Etched Brass Brake Assembly Instructions

Standard Brake Gear Types A-F

S1: Identify the parts

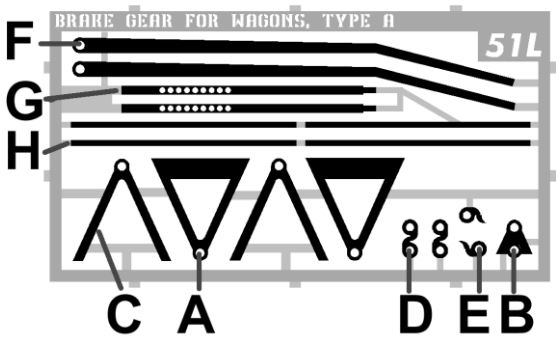


Fig S1: layout of type A brake gear, for illustration only.

A: Rear support “V” (2 off)
B: Cam support plate (1 off)
C: Front “V” with raised boss & bolt detail. (2 off)
D: Optional Cam blocks (2 off)
E: Optional ‘half’ Cam block
F: Brake lever (2 off)
G: Brake lever guide (2 off)
H: Brake shoe safety strap (4 off)

Note: The precise appearance and location of the parts varies within the panel. This drawing is for Type A brake gear suitable for wagons with angled “V” e.g. Cambrian railways, Gloucester, NSR and Ince private owner types.

Please note: Not all parts supplied are used, there will always be some parts left over.

- Morton Cam brake gear will use parts B, D, E but one set of V’s, A.
- Wagons using single sided brake gear will use only one each of A, C, F, G & H, all other parts are surplus. Each fret will supply parts for 2 single sided braked wagons.
- We have included some “spares” for the very small components (D & E).

If you are building a 51L kit please refer to those instructions to confirm which components you need.

S2: Fit rear support “v”, non-cam brake gear only.
Carefully measure the centre of the solebar, fix the rear support “v” (A) to the back of the solebar such that the boss is on the centre of the solebar. (Where the brake gear is attached to the solebar e.g. via a slide bar it may be necessary to prepare a slot to surround the “V”.)
Note if your wagon requires cam brake gear follow steps C1 to C3, otherwise skip to S3.

Cam Brake ONLY

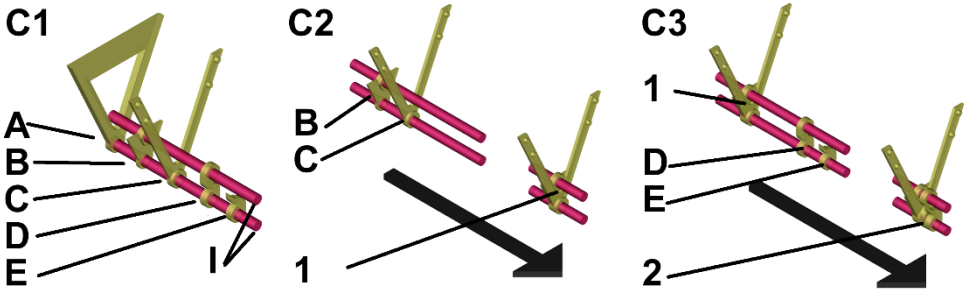


Fig C1: Assembling the ‘V’

C1 – identify the parts
Refer to S1 above

C2 - Fit cam mounting plate
Fit cam support plate (B) behind front “V” (C). Use suitable brass wire in the lower hole of the “Vee” to act as a former and solder or glue. This forms assembly 1.

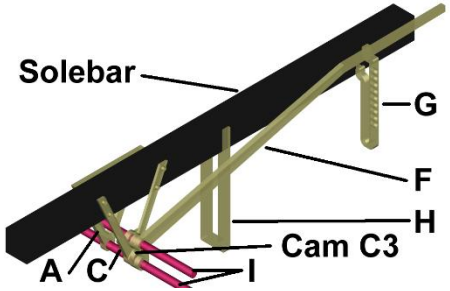
C3 - Fit remainder of cam gear
Using an additional piece of brass wire in the upper hole of assembly 1 to act as a former, solder or glue D followed by E to form assembly 2.You may elect to fit the optional half cam assembly (E) when you are ready to fit the brake lever as part of final assembly. Fit Assembly 2 as per part C in S3 next. 2 is either fitted to the exterior or interior of the solebar depending on the wagon. Note the upper wire should be trimmed to length adjacent to the inner face of the V.

S3: Fit Front “vee”
Fix the front “vee” (C) to the front of the solebar such that the boss is on the centre of the solebar, AND in line with the rear support “v” fitted as part of S2. You may choose to use brass wire as an alignment jig for the purpose. Fit brass wire to form cross rod 30mm approximately in length for Morton cam brakes and 5mm for either side or single sided brakes.

S4: Form brake safety strap(s)
There is a strap for each brake shoe (i.e. for either side brakes with 2 shoes per side you will require 4 straps). You may elect to form the safety strap/loop using fine piano wire. This should be placed adjacent to the brake shoe.

S5: Form the brake lever guide.
We suggest the folding sequence as identified in Fig S5. Take care as the component is very delicate and prone to breakage if over or misfolded. All folds are 90º except fold 1 which is 180º. Before making fold 1, widen the half-etched slot with the edge of a needle file. To make the fold, place the deep end of part A vertically in the widened slot and carefully raise the two sides of the guide with the end of a scalpel blade. Do not put any pressure around the bottom etched hole, as this may cause the guide to fracture. Drill a 0.65mm hole approximately 3mm from the top of the solebar where the guide is to be placed.

S6: Form the brake lever.
Using a pair of fine nosed pliers, or similar, bend to match the prototypical shape of the lever. Each railway had their own house ‘style(s)’ and the modeller should refer to photographs or illustrations for reference. Thread lever end into guide and attach lever to cross shaft.



A: Rear support “VEE”
C: Front “VEE”, with raised boss & bolt detail.
OR
Cam C3 – assembly 2 from diagram C3 below
F: Brake lever
G: Brake lever guide
H: Brake shoe safety strap

Fig F1 – finished assembly, for plain brake assembly

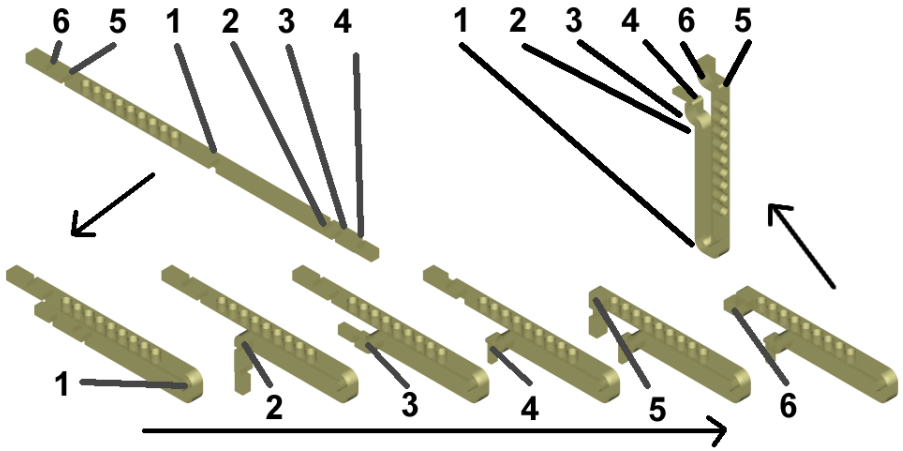


Fig S5: suggested fold sequence to form the brake lever guide

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