

- 13) *Fix the axle nut covers (39 x 6) and balance weights (40 x 2), (41 x 4) in place with epoxy adhesive.*
- 14) *Fix together the brake pull rod halves (42 x 2). Fix the brake shaft (43) to the bottom of the keeper plate. Locate the front of the pull-rods in the brackets at the front of the keeper plate, and fix the rear to the brake shaft.*
- 15) *Solder the front (44 x 2) and centre/rear (45 x 4) brake shoes to the ends of the pull-rod cross-beams, locating the pins in the holes in the mainframes. The brake shoes can be eased apart to allow removal of the keeper plate for future maintenance etc.*
- 16) *If front steps (46 x 2) are to be fitted, drill two 0.8mm Ø holes into the etched front bufferbeam bracket (47), fold up, and then fix in place. Noting that the steps may be fixed above or below the bracket.*

DRAWING 2 (Chassis)

- 17) *Fit choice of coupling rods (48 x 2) (49 x 2), using the short crankpin screws (50 x 4) to retain them (front and rear wheels only). Test the chassis again, it should run smoothly, If not, check the pick ups are set correctly, axles are free in the bearings and the gears are free of swarf or foreign bodies.*
- 18) *Fit choice of connecting rods (51 x 2) (52 x 2) to the crossheads (53 x 2) using nuts (55 x 2) and screws (54 x 2). Now fit these to the slide bars (56 x 2), checking for free movement, If necessary clean the castings with a fine file or abrasive paper.*
- 19) *Fit the slidebar/crosshead assembly to the cylinder block (57) as shown, leaving them loose for the moment. Fit the cylinder block to the frames with the long M2 screw (58) and a nut. Solder the rear of the slidebar to the motion bracket, ensuring that the crossheads do not foul the screws retaining the coupling rods.*
- 20) *Fix in place the cylinder top covers (59 x 2) and front covers (60 x 2), also fix the relief valves (61 x 2) to the front of the cylinder block and the radius rod (62 x 2) onto the slidebar. Part of the radius rod may need filing for crosshead and valvegear clearance. See Drawing.*
- 21) *Fit the return crank valve gear assembly (63 x 2) to the return crank (64 x 2) along with parts (65 x 2) and (66 x 2) as shown. Put this assembly to one side along with parts (67 x 2), (68 x 2) and (69 x 2) as these are fitted at a later stage in the assembly process (Drawing 4).*
- 22) *Fit etched couplings (70 x 2) if required, folding up the tails after passing through slots at front and rear of the chassis. For strength these may be fixed with a little solder - if using scale couplings fix choice of early (71) or late (72) front frame detail plate level with the etching at the bottom. Alternatively if using Marklin couplings, cast coupling pockets (73 x 2) may be fitted to the front and rear, the raised strip locating in the groove in the frames. Screw (74) and (58) are used to fix the chassis to the loco body.*

DRAWING 3 (Loco Body)

- 1) *Remove feed from centre of footplate (75). Test the fit of the boiler/smokebox casting (76). Due to manufacturing variations, it may be necessary to file the edges where they interlock at the front. Note that a tight fit is required for strength when the model is completed. With the two castings assembled, drill through the bottom of the smokebox to clear the front fixing screw. Separate the parts, and open the hole in the bottom of the smokebox with a 3mm Ø drill to ensure that the screw will not foul the smokebox when tightened. Drill out the mounting holes for boiler fittings.*