MAUNSELL S15 INSTRUCTIONS

Fig. 1.

Cut out parts 1 to 8 from the fret. Remove all tabs. Take the running plate (1) and, with the fold lines underneath, fold the rear boiler supports up.

Using the valances and their support frame (2) as a template gently form the front and rear running plate curves. When a reasonable fit is obtained solder the valance in place starting at the front and rear fold down points. Solder around the curves gradually holding firmly in place as you go. This way the curves will be formed exactly with the minimum of messing around. **DO NOT** remove the valance support frame yet!

Fold down the drag beam at the rear of the running plate. Solder the buffer beam (3) into its recess and fit the riveted overlay on top of it.

Solder the smokebox front (4) into its slots and along the back where it touches the top of the running plate. The front frames (5) can be soldered into their recesses. The rear edges must fit down the side of the smokebox front.

Fold up the front running plate and cab steps (6 or 6a, depending on the loco you are modelling) and fit the upper step into the main step. Fold the top over to give the correct distance from the running plate and solder these four in place. Solder the lamp brackets (8) into their respective slots. Solder two 8BA screws (60) into the holes in the running plate.

Fig. 2.

Cut out parts 10 and 17 to 20. Solder the cab front (17) into its slots. Solder the main cab sides (10) into their slots having first checked to see if they fit accurately. Shape the tops of the Maunsell cab overlays (18 & 19) to match the profile of the cab front and then solder them in place. Cut up two pieces of scrap fret approximately 17mm x 4mm and solder them inside the top edge of the cab sides with about 1½mm showing. These are for the roof (20) to sit on and this can now be fitted in place. Note that the roof overhangs the cab front.

Fig. 3.

Remove 5mm from the front of the boiler. Inspect the boiler (23) for any mould lines present and remove. The mould feeds at the back of the boiler will have to be filed away. Drill a hole under the smokebox for the front screw head to fit into. Also if you wish you can drill into the solid core of the smokebox and front boiler ring and add some weight.

Using something (broom handle, dowel etc) of suitable diameter roll the smokebox wrapper 24). Bend the bottom edges out to fit the smokebox saddle. When a close fit is obtained you can superglue the wrapper onto the smokebox. The front edge should overhang by 1mm.

At this point double check that the buffer beam and drag beam are correctly aligned (i.e. the running plate is not twisted). Make any adjustments necessary. Now offer the boiler up to the running plate. The firebox end should sit on the rear boiler supports and the fold out flap in the cab front. Once happy with the fit the boiler can be tacked in place with

superglue and then finally glued in place with an epoxy resin. Hold the boiler in place until the glue has gone off and then put it to one side for at least 24hrs.

The valance supports can now be removed. Using a pair of tin snips cut the supports into sections up to the valence. Now simply bend each section back and forth until it breaks away. File off the tabs.

Fig. 4.

Prepare parts 16 & 26 to 48.

When fitting the steam pipes (38) use the cut outs in the smoke deflectors (50) to position them. Prior to fitting the smoke deflectors solder the side steps into the small slot in the deflector. Fit the remaining parts in number order and consult photos if not sure of any position. Note that the reversing bar (47) is in two parts and must be soldered together. The front of the reversing bar locates in the top of the L/H reversing arm (41). The rear edge of the dome should be 39mm from the cab front.

Fig. 5.

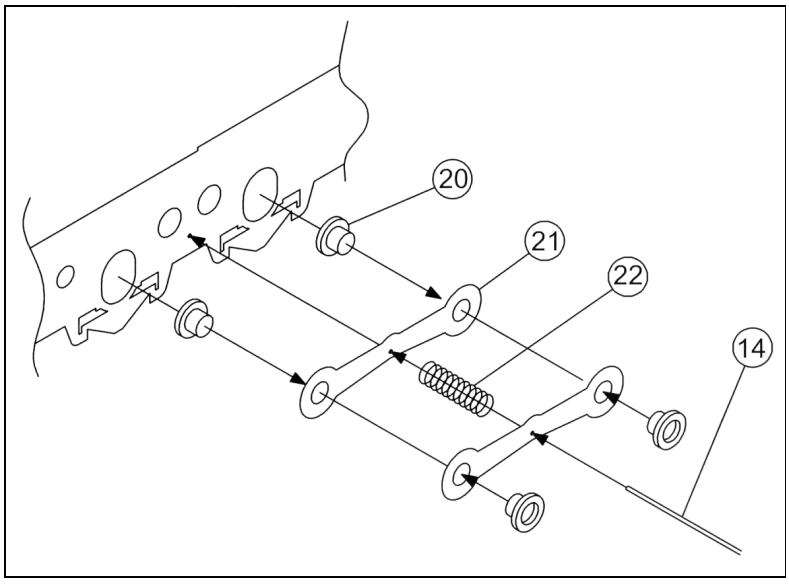
First drill out the hole in the backhead (51) for the regulator handle (54). Glue the handle in place and then the backhead inside the cab. Glue the pressure gauges (52 & 53) above the backhead but inside the front spectacles. The two toolboxes (58 & 59) can now be glued in place against the step in the cab floor.

Fig. 6.

The chassis can be built rigid or compensated so decide now which one you are going to make. If building a compensated chassis remove the sections from the middle and front axle holes.

Fold the main chassis frames (1) up and solder the frame spacers (2, 3, 4 & 5) in place making sure everything is square. Solder an 8BA screw (23) into the hole in the front spacer (5).

Compensated Chassis - Solder the axle bearings (20) into the compensating beams (21). Also solder bearings into the rear axle holes in the frames. Fit the compensating beams by passing brass wire through the frames, through one of the beams, then the spring (22), then the next beam and finally out the other side of the chassis. Hold the beams away from the chassis side while soldering the wire in place to prevent them being



soldered to the frames. Trim the excess wire flush with the chassis side. Fit the wheels so you can test the compensating mechanism and when satisfied that it works O.K. remove the wheels and put them to one side.

Rigid Chassis - Solder the axle bearings (20) into the axle holes in the frames (1).

Both Types - Fold the cylinders (8) into shape with the fold lines inside and solder into position (Note that the larger bottom hole goes to the rear. Shape the cylinder sides (9) to match the cylinders and solder them in place. Glue the rear valve covers (37), front valve covers (38) and piston end covers (39) in to the holes in the cylinders.

Fold the front motion bracket (6) and solder in place. Fold the outside sections of the main motion bracket (7) down. Fold down the front sections and then fold the pieces with the small hole back down behind the cut outs, Solder the bracket in place. Solder the running plate support brackets (10) into their slots.

Solder three lengths of the brass wire (14) into the holes in the chassis to form the brake mountings. Take the brake hangers (11) and the brake blocks (12) and solder the blocks to the hangers, making three **L/H** and three **R/H**. Solder the assembled brakes to the wire **2mm** from the frames. Pass more brass wire through the bottom of the brakes, and then through the pull rods (13).

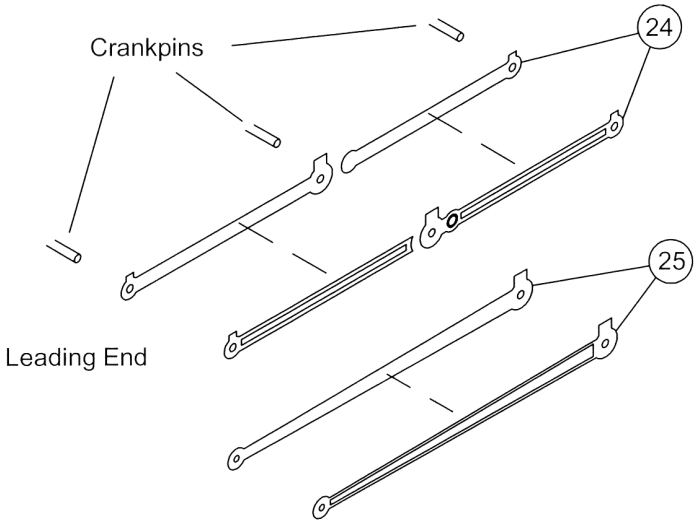
Fold the drawbar mount (15) and solder a 10BA screw into the central hole. Solder this under the rear spacer (2).

Fit 2mm bearings (18) into the bogie (19) and fold it up.

The chassis can now be painted prior to fitting the wheels.

Fig. 7.

The driving wheels can now be fitted permanently. (We recommend Markits specific S15 wheels which include crank pins). Assemble the coupling rods (24) as shown in the diagram. Take care in this operation as they must move freely for the compensation to work. The connecting rods (25) can also be assembled.



Remove the crossheads (26) and the slidebars (27) from their sprues. Clean up and drill out the slidebars with a 1.5mm drill. Drill out the lower link on the crossheads with 0.9mm drill.
Check that the crossheads run freely in the slidebars and adjust as necessary. When O.K fit the slidebars into the back of the cylinders.

Fit the coupling rods to the wheels. Attach the connecting rods to the crossheads with the 14BA screws and nuts. Rivet together parts 29, 30, 31, 32 and 33. Note that there is a specific order to work to. When this is done all the valve gear can be fitted to the relevant brackets using the 16BA screws and nuts.

FIG. 1. RUNNINGPLATE ASSEMBLY.

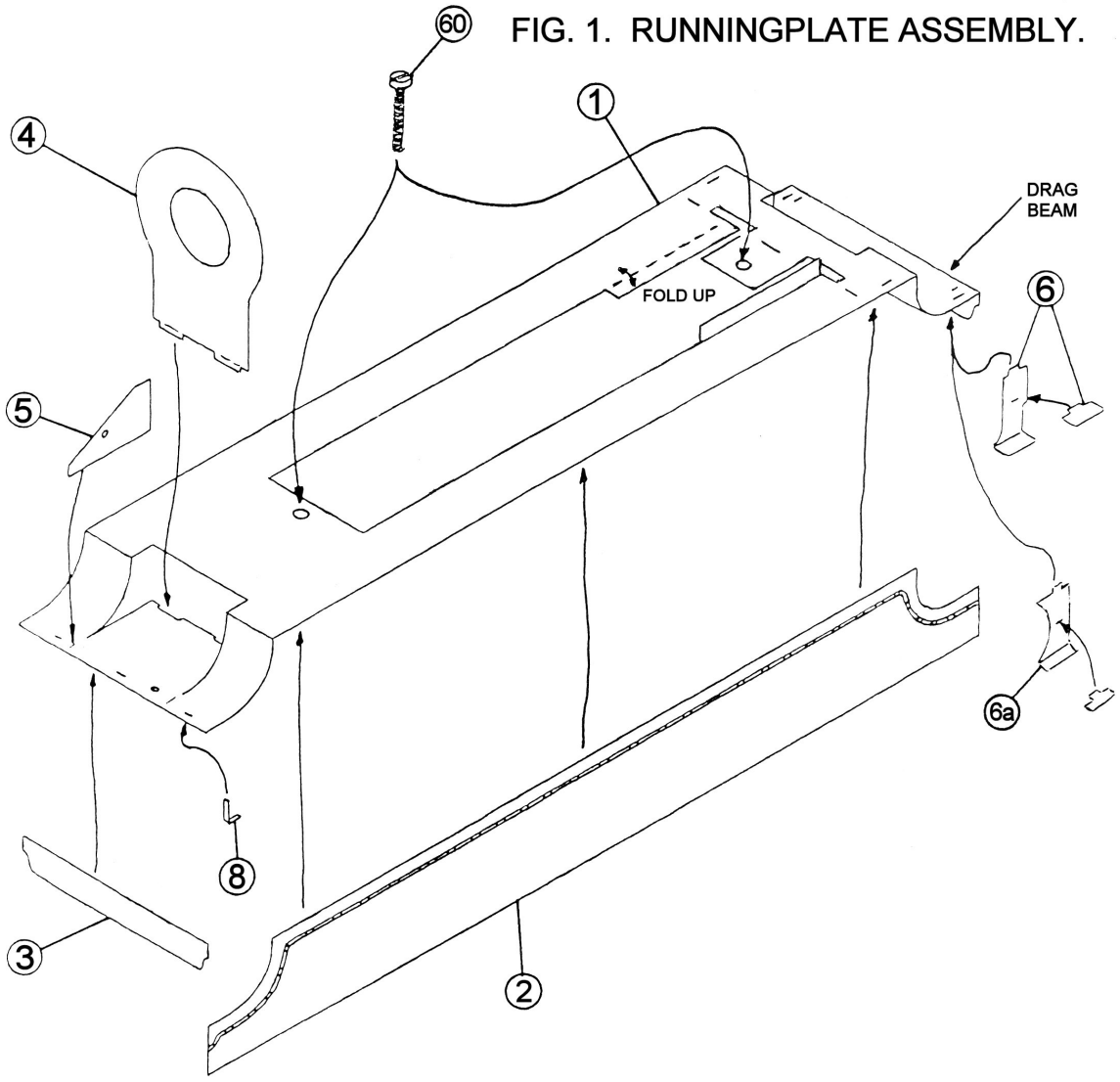


FIG. 2. CAB CONSTRUCTION.

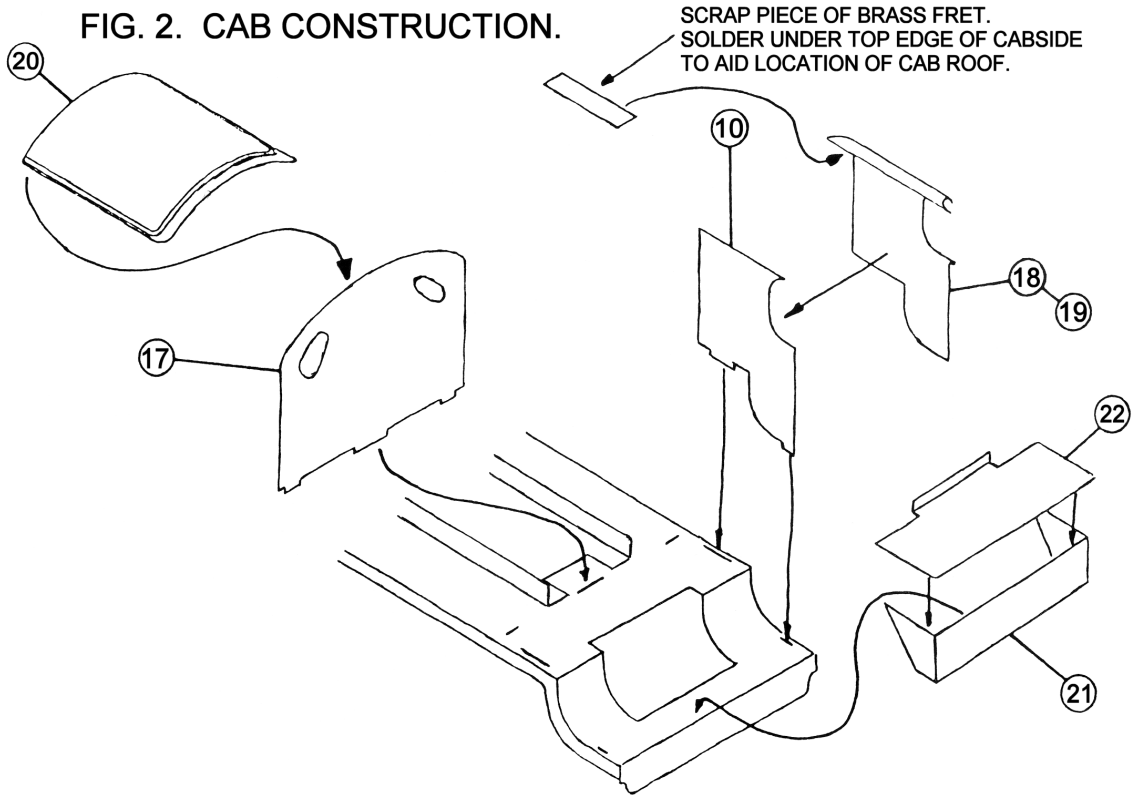


FIG. 3. ATTACHING THE BOILER TO THE RUNNING PLATE.

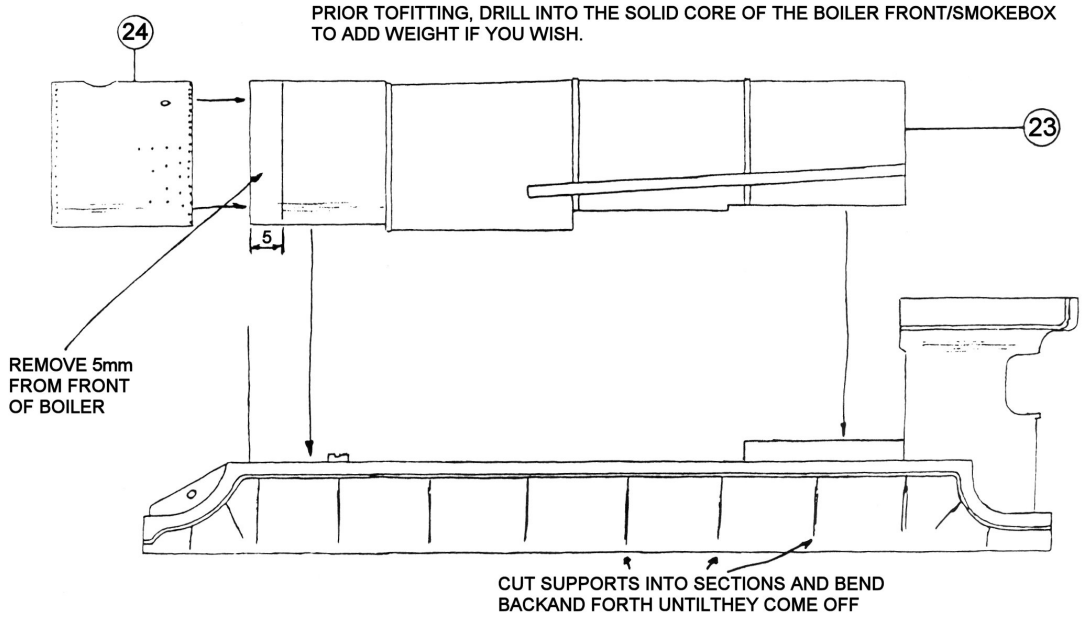


FIG. 4. DETAILING THE BODY.

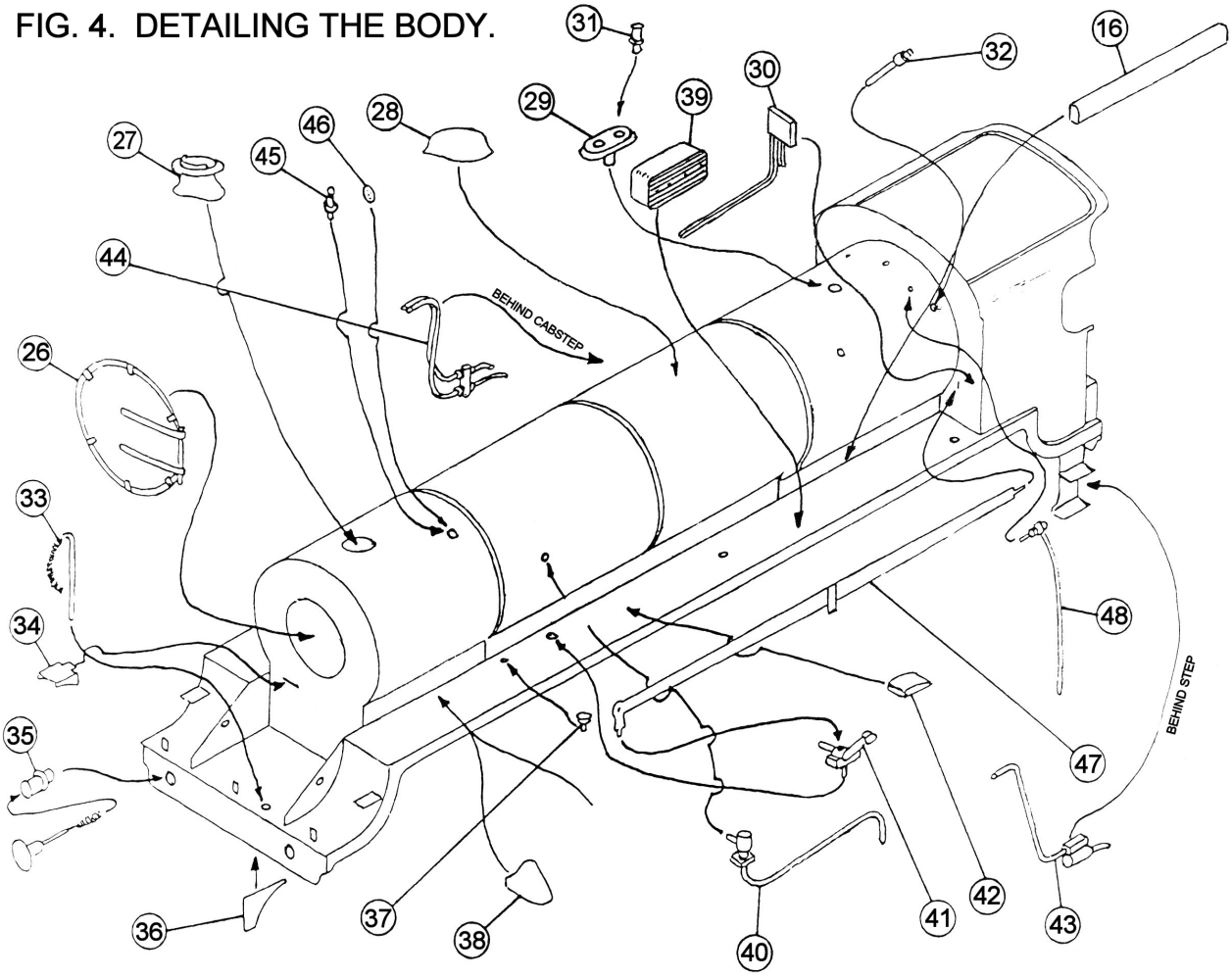


FIG. 5. CAB DETAIL.

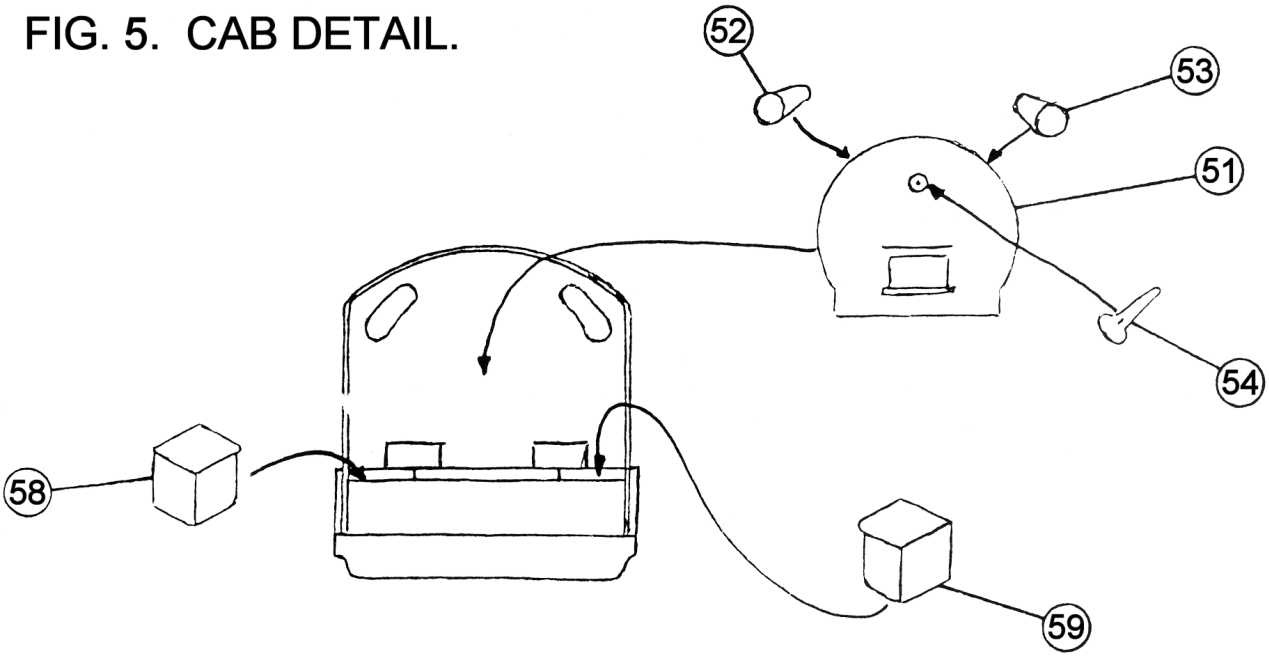


FIG. 7. VALVE GEAR ASSEMBLY.

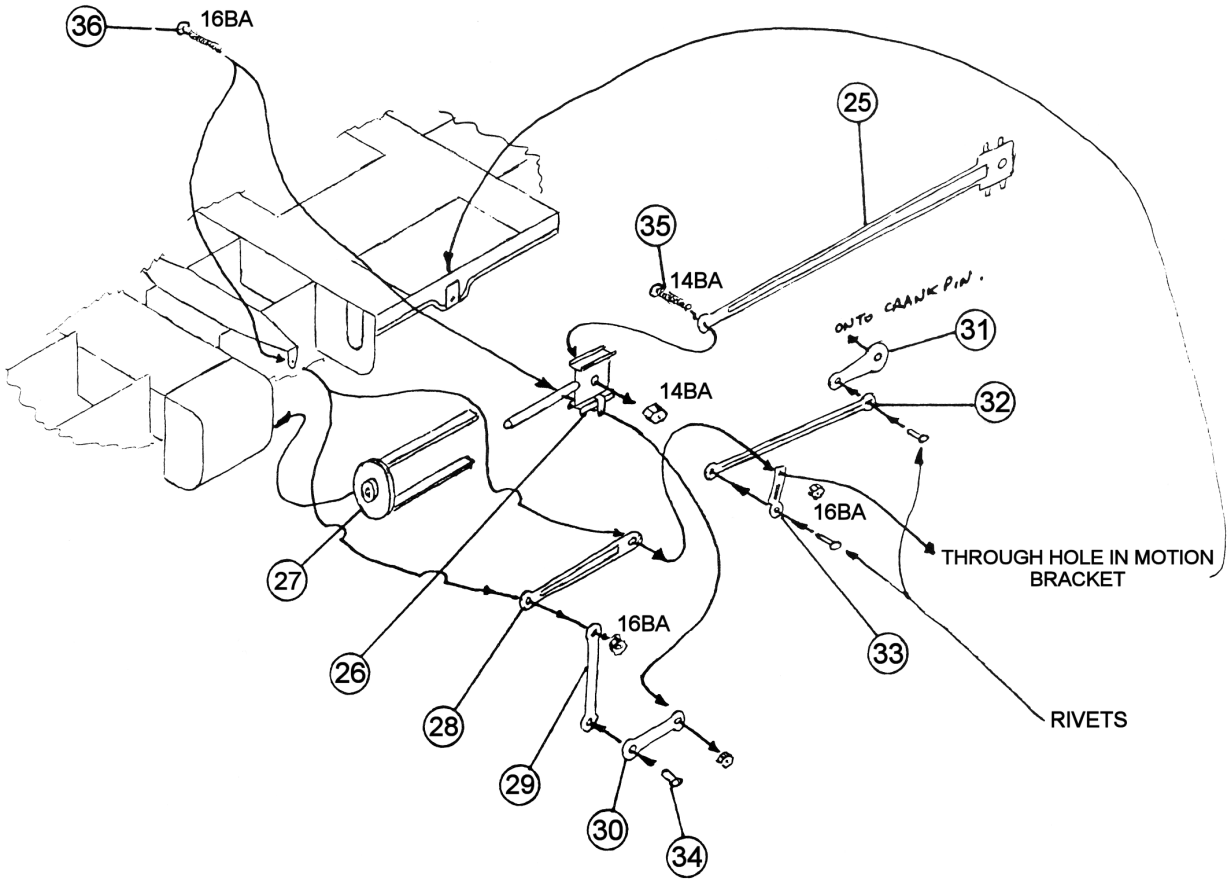
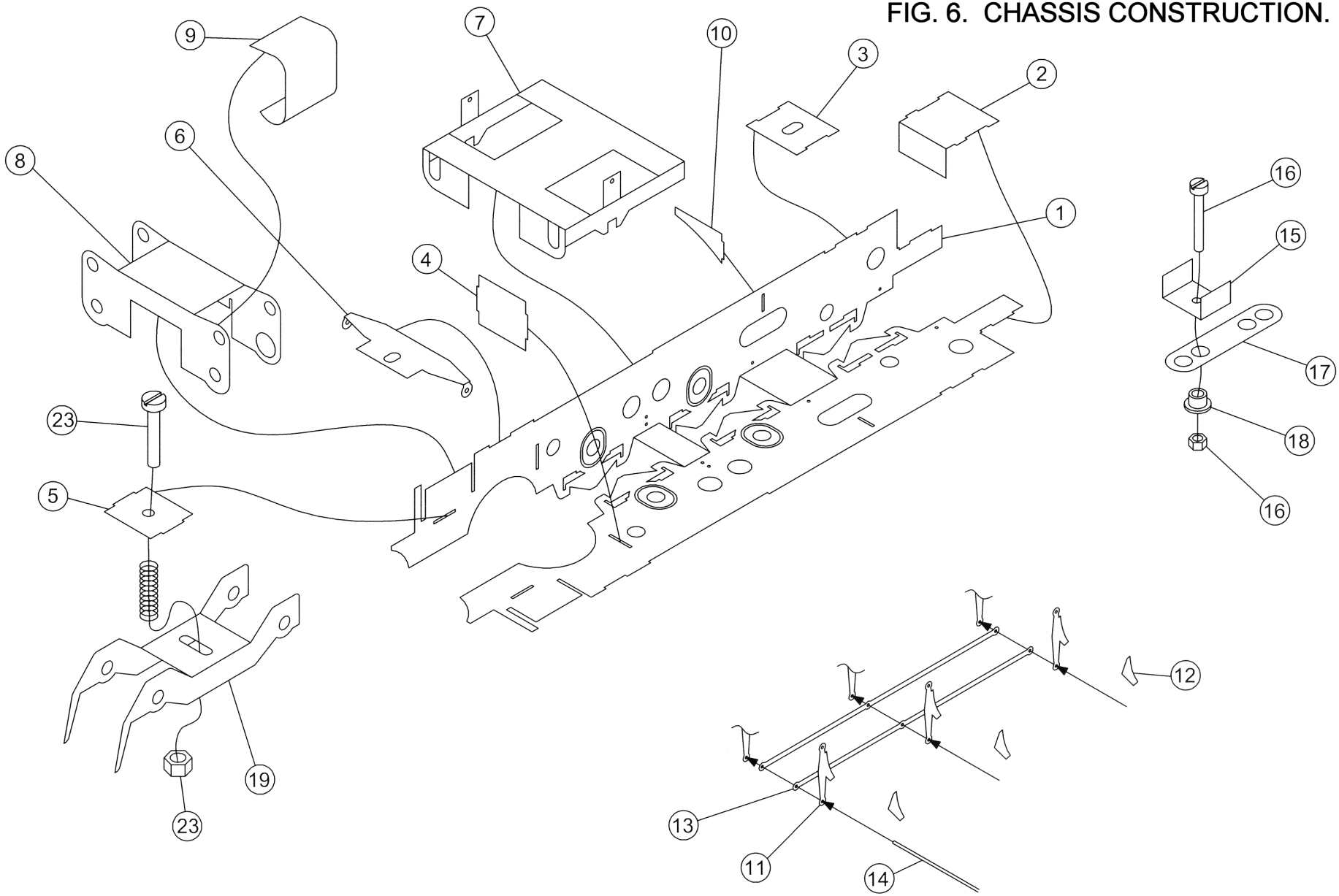


FIG. 6. CHASSIS CONSTRUCTION.



BODY PARTS LIST

1. Running Plate.
2. Valances.
3. Bufferbeam.
4. Smokebox Front.
5. Front Frames.
6. Cab Steps and Front Running Plate Steps.
7. Running Plate Curve Steps.
8. Lamp Brackets.
9.
10. Main Cab Sides.
11.
12.
13.
14.
15.
16. Boiler Support Sides.
17. Cab Front.
18. L/H Cab Overlay.
19. R/H Cab Overlay.
20. Cab Roof.
21. Cab Floor Support.
22. Cab Floor.
23. Resin Boiler.
24. Smokebox Wrapper.
25.
26. Smokebox Door.
27. Chimney.
28. Dome.
29. Safety Valve Base.
30. AWS Junction Box.
31. Safety Valves.
32. Washout Plugs.
33. Vacuum Pipe.
34. Smokebox Step.
35. Buffers.
36. Front Wheel Arches.
37. Sandbox Fillers.
38. Steam Pipes.
39. AWS Battery box.
40. Clack Valves and Piping.
41. Reversing Arms.
42. Valve Gear Pockets.
43. L/H Injector.
44. R/H Injector.
45. Snifting Valves.
46. Snifting Valve Blanks.
47. Reversing Bar.
48. Firebox Valves and Piping.
49.
50. Smoke Deflectors.
51. Backhead.
52. L/H Pressure Gauge.
53. R/H Pressure Gauge.
54. Regulator Handle.
55.
56.
57.
58. L/H Toolbox.
59. R/H Toolbox.
60. 8BA Nuts and Screws.
61. Handrail Knobs.
62. Handrail Wire.

CHASSIS PARTS LIST

1. Mainframes.
2. Rear Frame Spacer.
3. Frame Spacer (Oval Hole).
4. Frame Spacer (No Hole).
5. Front Frame Spacer.
6. Front Motion Bracket.
7. Main Motion Bracket.
8. Cylinders.
9. Cylinder overlays.
10. Running Plate Support Brackets.
11. Brake Hangers.
12. Brake Blocks.
13. Brake Pull Rods.
14. Brass wire.
15. Drawbar Mount.
16. 10BA Nut and Screw.
17. Drawbar.
18. 2mm Bearing.
19. Bogie.
20. ⅛ Bearings.
21. Compensating Beams.
22. Spring.
23. 8BA Screw and Nut.
24. Coupling Rods.
25. Connecting Rods.
26. Crossheads.
27. Slidebars.
28. Radius Rods.
29. Combination Levers.
30. Union Links.
31. Return Cranks.
32. Return Crank rods.
33. Expansion Links.
34. Rivets.
35. 14BA Nuts and Screws.
36. 16BA Nuts and Screws.
37. Rear Valve Covers.
38. Front Valve Covers.
39. Piston End Covers.
40. Inspection covers.

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