56/66xx Instructions

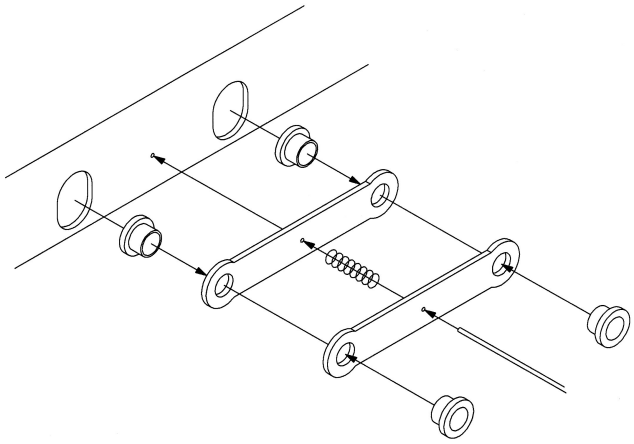
Fig. 1.

Chassis Assembly

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 axle holes.

Fold the main chassis frames (1) up and solder the rear frame spacer (2), centre spacer (3) and front spacer (4) in place making sure everything is square.

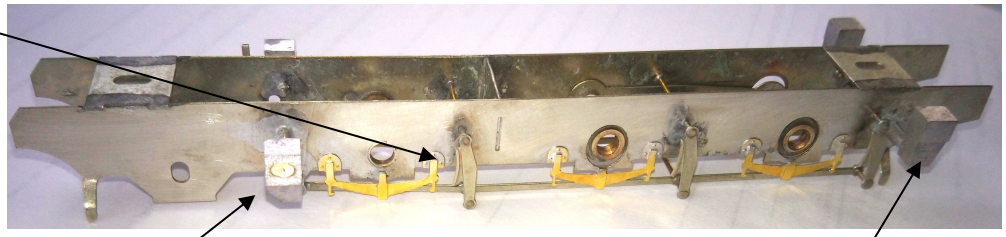
Compensated Chassis - Solder the axle bearings (6) into the compensating beams (5). Fit the compensating beams by passing brass wire through the frames, through one of the beams, then the spring, then the next beam and finally out the other side of the chassis. Hold the beams away from the chassis side 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 (6) into the axle holes in the chassis (1).

Solder three lengths of the .7mm brass wire (7) into the holes in the chassis to form the brake mountings. Take the brakes (8). Solder the brakes to the wire **2mm** from the frames. Pass more brass wire through the bottom of the brakes and then through the pull rods (9). Solder all the joints. Refer to the inset drawing and assemble the brake actuating rods and levers (10 & 11).

Solder the springs (12) in position under the axle holes. If you've used the compensating mechanism you will have to shorten the centre lug.



Solder the rear sandboxes (13) into their holes behind the rear wheels and the front sandboxes (14) at the front of the chassis. Glue or solder the sandbox fillers (16) to the rear sandboxes. Make up the sandpipes with brass wire and fit into the bottom of the sandboxes.

The chassis can be painted and the wheels and motor fitted.

Coupling Rods

With the chassis painted and the wheels fitted permanently. Fit the crank pins and assemble the coupling rods (15) as shown. Take care in this as the rods need to move freely, both for side play and compensation.

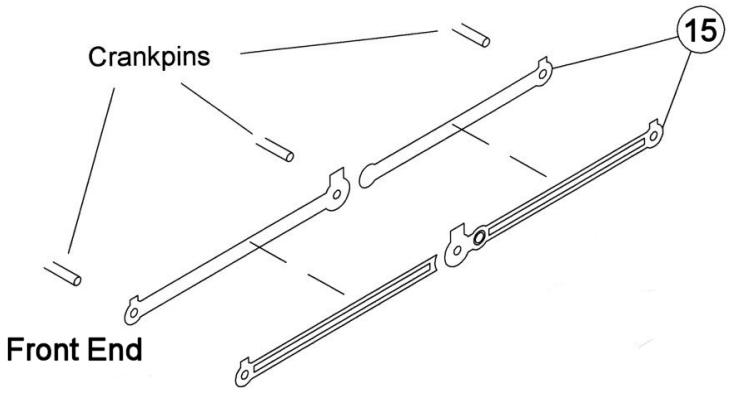


Fig. 2.

Cut out the main running plate section (1), the valances (2 & 3) and the front and rear bufferbeams (4 & 5), note that the front beam has a recess at the top for the centre lamp bracket. Drill the two half etched marks on the splasher sides with a .5mm drill. These are for the sand operating rods. Solder the bufferbeams into their recesses in the running plate. Check the fit of the valances under the running plate and then solder in place. Solder two 8BA screws (6) into the two holes in the running plate. Solder the smokebox saddle front (7) into the forward slots and the saddle sides (8) into their slots, angling them in to meet the saddle front. Form the saddle rear and fit it into its recesses and between the sides. Fold the splasher sides up.

Take the two main body sides (10 & 11), curve the front ends round a 2mm bar. Check that the front curves match the curved mark on the running plate and tack them in place. Fit the cab front (12) and rear (13) between the sides and tack in place. Tack the tank tops (14 & 15) into the recesses in the sides. Once sure everything is square solder around all the seams. Shape the bunker rear [plain or with cut out] (16 or 17) to match the rear profile of the sides and solder in place. Fold down the sides of the cab floor (18) and solder into the cab.

Curve the splasher tops (19) and solder to the splasher sides.

Leave the cab roof until the cab interior is done and move to figure 3.

Fig. 3.

Cut out the side overlays (24 & 25) carefully. Clean off all the tabs and curve the front end to match the main sides. When a good fit is achieved cut out the support piece in the cab door opening very carefully. Tack the overlays in position making sure they stay flat. When satisfied that all is ok solder around the edges. Form the bunker rear overlay (26 or 27) and solder in place. Use a fine file to put a radius on the edge where the sides and rear meet. Solder the rear door (28) and rear window guards (29) in place.

Solder the front and rear bufferbeam overlays (30 & 31) in place. Solder the saddle front casting (32) to the saddle front.

Now turn to the boiler (33). Solder along the bottom seam and then solder the smokebox overlay (34) to the boiler. Take the firebox top casting (35) and the tapered boiler top (36) and clean off any mould lines. Position the firebox top, tapered boiler and front boiler/smokebox to check that they all line up correctly, make any alterations and line up again. Tack the firebox in place, check the positioning again and then tack the tapered boiler section in place. Once again check the position. Now tack the boiler/smokebox to the saddle and to the tapered boiler, checking that it is level. When you are happy all is lined up correctly solder all three firmly in place. Solder the boiler band (37) around the boiler on the join between the parallel and tapered boiler sections. Fold up the step on the smokebox front (38). Solder this to the smokebox.

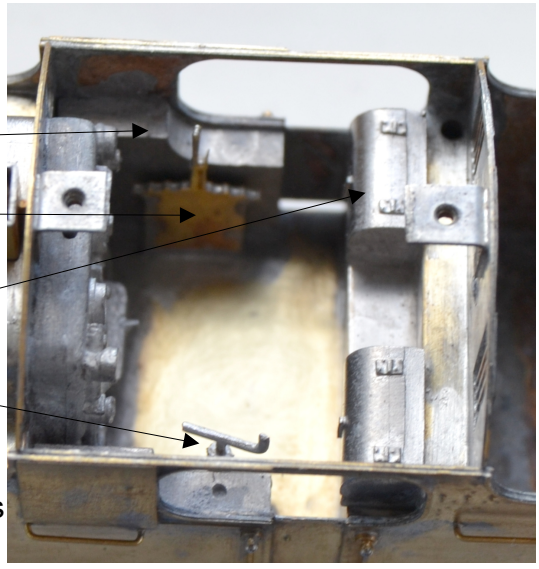
Check the fit of the valance overlays (39 & 40) and solder in position.

Cut out the front running plate steps and overlays (41), cab steps and overlays (42) and form the bottom steps on each one. Solder the step overlays to the steps. Fold up the centre steps for both and solder them in their slots. Now solder all the steps in position.

Solder the rivet strips (43) around the bottom of the tanks and bunker.

Solder the frame top pieces (46) either side of the smokebox saddle.

Fold the bunker front (45) and solder the coal shute (44) into the recess in the coal hole. Check the fit of the bunker front in position, making sure that it sits vertically. When happy solder it in position.



Fit the inner tanks (47) against the cab sides and then fit the backhead (48). Take the etched reversing lever (49) and fold the two halves together. Clean off the fold tabs and solder it in place. Solder the toolboxes (50) in place. Drill a hole for the brake standard (51) and solder it in position.

Curve the cab roof (20) and tack in position. When satisfied that it is positioned centrally solder around the seams. Fit the front and rear strips (21), the two rainstrips (22) and the cab roof shutter (23).

If you are doing a loco with the bunker recess form the recess part (52). Check the fit and when you are happy with it, solder it in place.

Fit the buffer shanks (53) [leave the heads until after painting].

Solder the bunker rear steps (54) into their slots.

Solder a vac pipe (55) to the bufferbeam.

Clean out the handrail holes and fit the handrails from the .45mm wire.

Glue or solder the tank balance pipes (56) behind the cab steps.

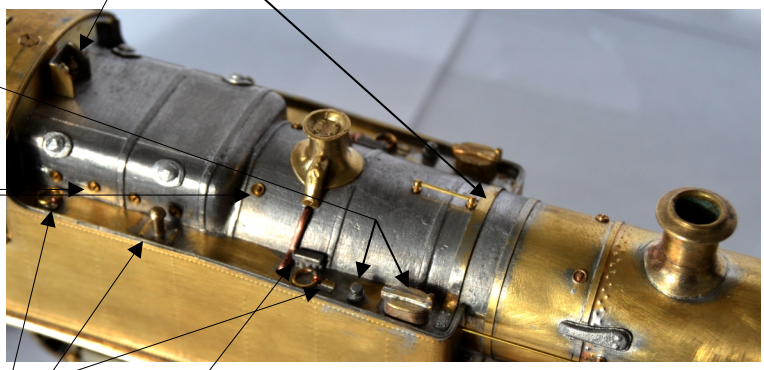
Solder the Injectors (57) to the rear of the steps

Drill out the two holes for the whistles (58). Fold the whistle guard (59) and glue or solder in place around the whistle holes. The whistles are best fitted after painting.

Shape the boiler strapping (60) and solder to the front of the tank tops

Solder the tank fillers (61) and oil breathers (62) in place.

Drill the holes for the washout plugs (63) and glue in place.



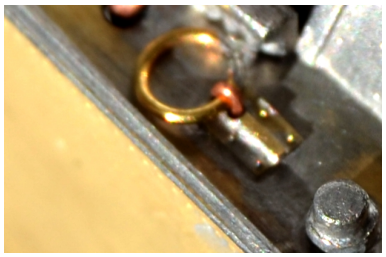
With the lifting ring mountings (64) still in the fret drill through the holes from the back with a .4mm drill. Do the same with the corresponding holes in the tank tops. Line up the mountings with the holes on the tank top and solder in position. Clear out the holes with the .4mm drill.

Solder the tank vent bases (65) into the square recess on the tank tops and solder the tank vents (66) into their holes. Solder the lubricators (67) in place.

Fit the tall safety valve bonnet (68) in position. Make up the pipework from copper wire.

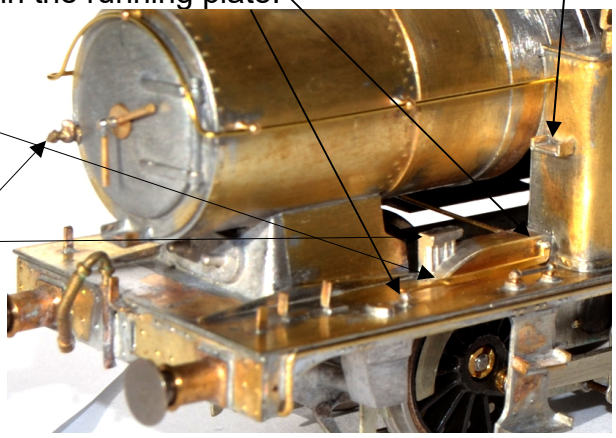
Solder the chimney (69) in place. Drill out the holes for the mudhole covers (70) and glue them in place. Also solder the superheater cover (71) in position.

Form the lifting rings using a piece of .45mm brass wire. Wrap the wire around something about 2mm in diameter, such as a needle file handle. Coil it as if you are making a spring. Cut through two coils and bend the two ends together. Put a dab of solder on the join. Use a piece of the fine copper wire and bend it like a split pin. Loop the lifting ring onto this and put the two ends of the copper wire through the holes in the lifting ring mounting. Twist the ends together inside the tanks.



Drill a hole at the front of each tank 11.5mm up from the running plate and solder the tank front steps (72) in place.

Solder a piece of .45mm wire through the holes in the splasher sides. Leave about 2mm at either end. Solder a piece of wire through the holes in the running plate.



Take the sand operating rods (73) and twist them through 90° about 1/3rd of the way from the right angled end. Solder them, with about .5mm gap to the splasher and running plate, in position.

Fit the lubricators (74) on top of the splashers.

Drill a small hole and fit the lancecock (75).

Glue the smokebox door handle (76) base into the door and glue the handles to it. (The rear handle always points down, not like the one in the photo!).

Take the front sandbox fillers (77) and fold the two halves together, with the dimple on the outside. Touch with a dab of solder to hold the halves together. File away the tabs and glue or solder them over the holes in the running plate.

Bend up the lamp brackets (78) and fit into the slots from underneath and into the slots for the rear and the one on the bufferbeam. Solder a vac pipe (55) to the bufferbeam.

Using the .7mm wire make up the pipework along the running plate.

Fit all the handrails.

Chassis Parts List

1. Main Frames.
2. Rear Frame Spacer.
3. Centre Spacer.
4. Front Frame Spacer.
5. Compensating Beams.
6. 1/8th Chassis Bearings.
7. 0.7mm Brass Wire.
8. Brakes.
9. Brake Rodding.
10. Brake Actuating Lever.
11. 0.9mm Brass Wire.
12. Dummy Springs.
13. Rear Sandboxes.
14. Front Sandboxes.
15. Coupling Rods.
16. Sandbox Fillers.
17. Compensating Spring.

Superstructure Parts List

1. Main Running Plate.
2. L/H Valance.
3. R/H Valance.
4. Front Bufferbeam
5. Rear Bufferbeam.
6. 8BA Screws & Nuts.
7. Smokebox Saddle Front.
8. Smokebox Saddle Sides.
9. Smokebox Saddle Rear.
10. L/H Tank Side.
11. R/H Tank Side.
12. Cab Front.
13. Cab Rear.
14. R/H Tank Top.
15. L/H Tank Top.
16. Plain Bunker Rear.
17. Bunker Rear With Cut Out.
18. Cab Floor.
19. Splasher Tops.
20. Cab Roof.
21. Cab Roof Detail Strips.
22. Rainstrips.
23. Cab Roof Shutter.
24. R/H Side Overlay.
25. L/H Side Overlay.
26. Plain Bunker rear Overlay.
27. Cut Out Bunker Rear Overlay.
28. Cab rear Door.
29. Rear Window Coal Guards.
30. Front Bufferbeam Overlay.
31. Rear Bufferbeam Overlay.
32. Saddle/Cylinder Front.
33. Parallel Boiler Section.
34. Smokebox Overlay.
35. Firebox Top casting.
36. Taper Boiler Top Section.
37. Boilerband.
38. Smokebox Front.
39. R/H Valance Overlay.
40. L/H Valance Overlay.
41. Front Running Plate Steps.
42. Cab Steps & Overlays.
43. Rivet Strips.
44. Coal Shute.
45. Bunker front.
46. Bunker Rear Steps.
47. Inner tanks.
48. Backhead.
49. Reversing Lever.
50. Toolboxes.
51. Brake Standard.
52. Bunker Recess.
53. Buffers.
54. Bunker Rear Steps.
55. Vacuum Pipes.
56. Tank balance pipes.
57. Injectors.
58. Whistles.
59. Whistle Guards.
60. Boiler Strapping.
61. Tank Fillers.
62. Oil Breathers?.
63. Washout Plugs.
64. Lifting ring Mountings.
65. Mudhole Covers.
66. Tank vent Bases.
67. Tank Top Lubricators.
68. Safety Valve & Bonnet.
69. Chimney.
70. Mudhole Covers.
71. Superheater Cover.
72. Tank Front Steps.
73. Sand Operating Rods.
74. Front Lubricators.
75. Lancecock.
76. Smokebox Door handle.
77. Front Sandbox Fillers.
78. Lamp Brackets.
79. Handrail Knobs.
80. 0.45mm Brass Wire.
81. 0.7mm Brass Wire.

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Fig. 1. Chassis Construction.

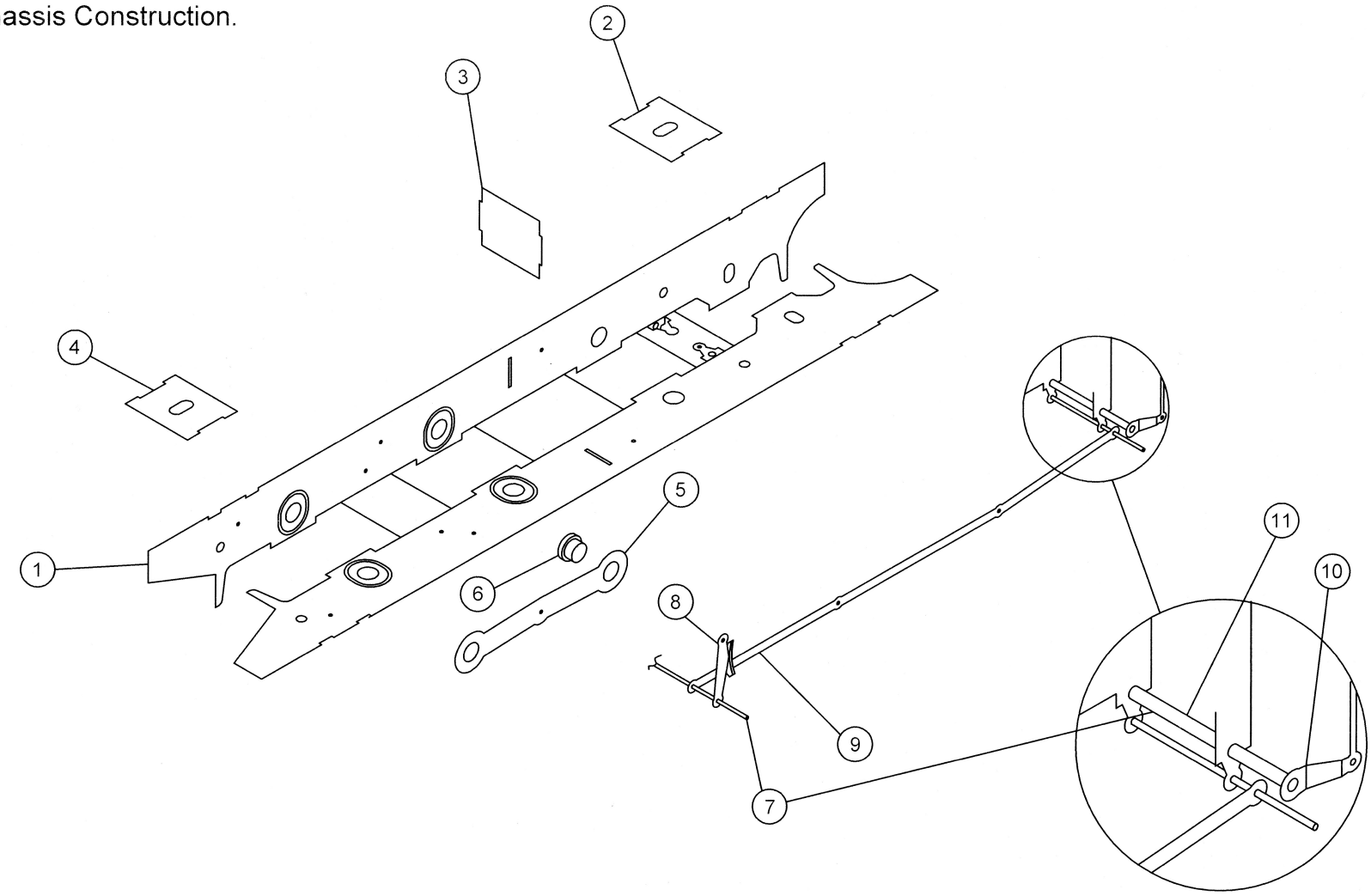

Fig. 2. Body Construction.

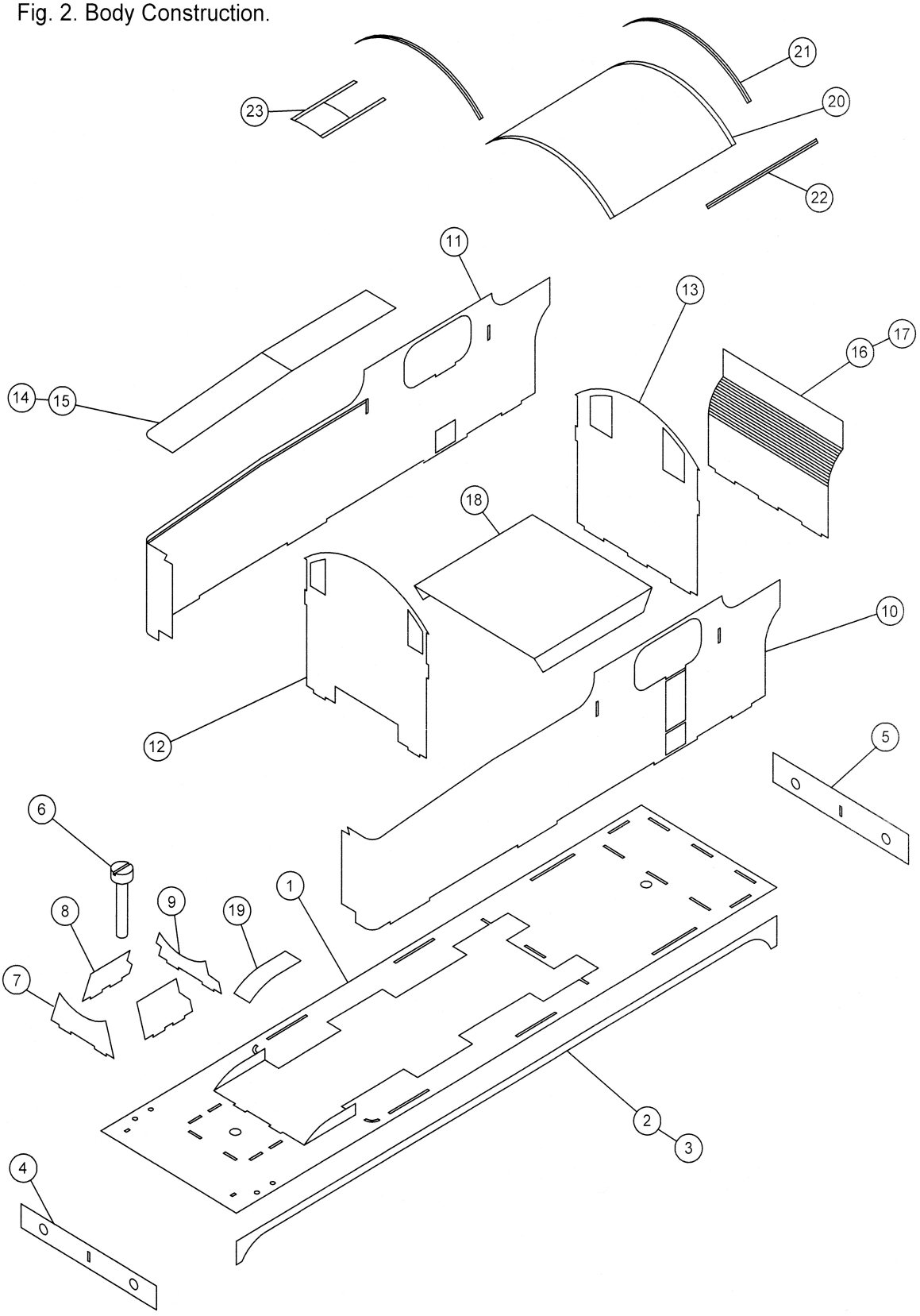

Fig. 3. Secondary Body Construction.