

Highway Miniatures

PARTS LIST & IDENTIFICATION SHEET

Kit 303 Erie Steam Shovel

GROUP ONE

1. REAR SPROCKET WHEELS (WITH AXLE)
2. CATERPILLAR SIDE FRAME - L.H.
3. CATERPILLAR SIDE FRAME - R.H.
4. FRONT SPROCKET WHEELS (WITH HOLE)
5. TRACK LINK ASSEMBLY
6. BOOM - R.H. SIDE
7. BOOM - L.H. SIDE
8. FRONT AXLE SPACER

GROUP TWO

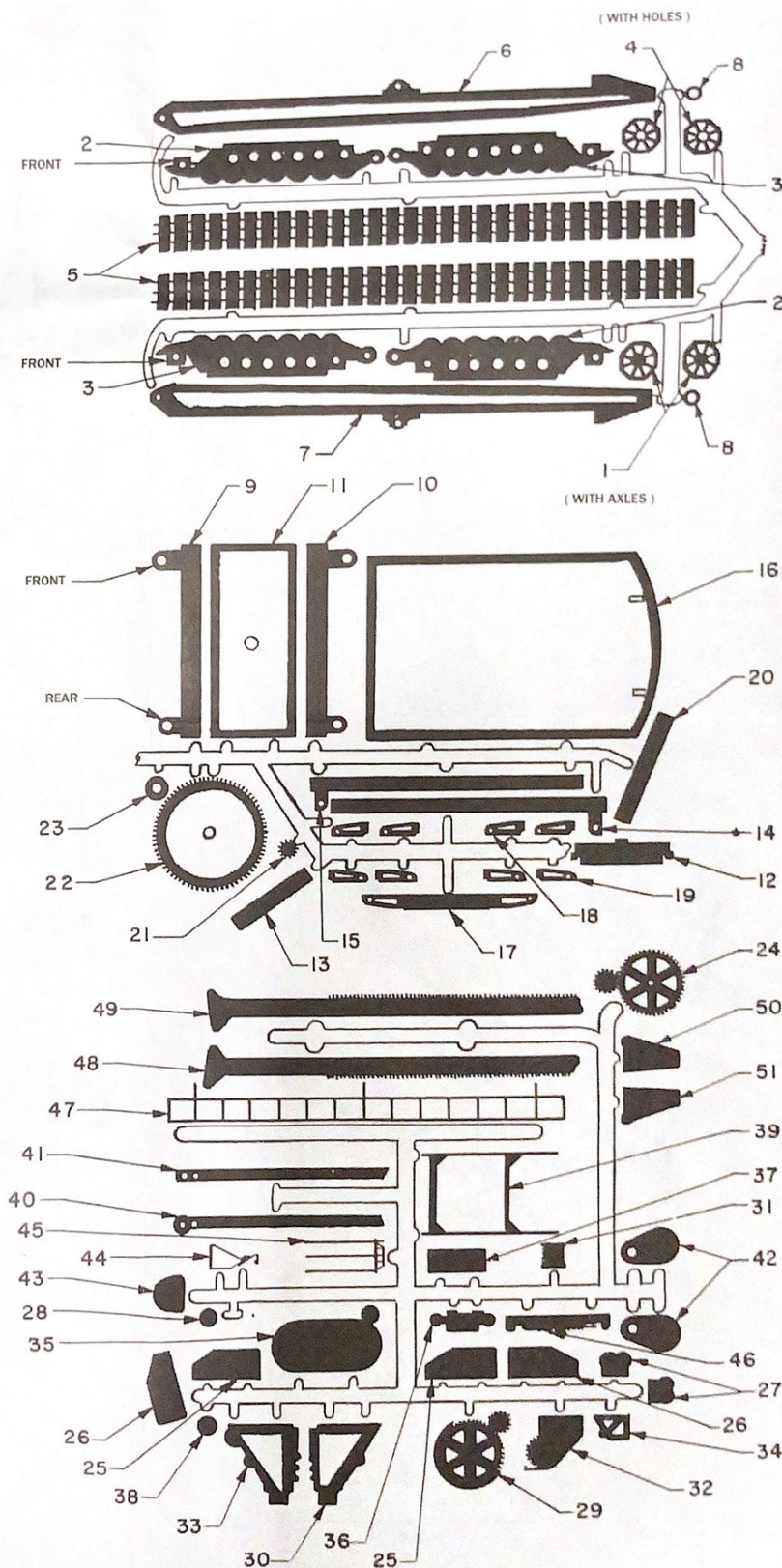
9. TRUCK FRAME SIDE - L.H.
10. TRUCK FRAME SIDE - R.H.
11. TRUCK FRAME TOP PLATE
12. TRUCK FRAME REAR CROSSMEMBER
13. TRUCK FRAME FRONT CROSSMEMBER
14. TURNTABLE FRAME RAIL - R.H.
15. TURNTABLE FRAME RAIL - L.H.
16. TURNTABLE
17. TURNTABLE FRONT FRAME CROSSMEMBER
18. TURNTABLE FRAME EXTENSIONS - L.H.
19. TURNTABLE FRAME EXTENSIONS - R.H.
20. TURNTABLE FRAME REAR CROSSMEMBER
21. SWING PINION GEAR
22. SWING MAIN GEAR
23. TRUCK MOUNTING RETAINER RING.

GROUP THREE

24. SHIPPER GEAR ASSEMBLY
25. AUXILIARY ENGINE R.H. HALF
26. AUXILIARY ENGINE L.H. HALF
27. AUXILIARY ENGINE CYLINDER UNIT
28. SWING ENGINE DRIVE GEAR
29. MAIN ENGINE HOIST GEAR
30. MAIN ENGINE L.H. CYLINDER BLOCK
31. MAIN ENGINE HOIST CABLE DRUM
32. MAIN ENGINE PROPELLING GEAR ASSEMBLY
33. MAIN ENGINE R.H. CYLINDER BLOCK
34. MAIN ENGINE PROPELLING GEAR BEARING SUPPORT
35. TURN TABLE FLOOR COVER PLATE
36. MAIN ENGINE CYLINDER BRIDGE
37. MAIN ENGINE REAR COVER PLATE
38. BOOM HOIST CABLE DRUM
39. GANTRY INNER FRAME
40. GANTRY LEG - L.H.
41. GANTRY LEG - R.H.
42. REAR SPROCKET WHEEL MUD GUARDS
43. OPERATORS SEAT
44. OPERATORS SEAT STAND
45. CONTROL LEVERS
46. STEERING CONTROL BARS ASSEMBLY
47. BOOM LADDER
48. DIPPER STICK - L.H. SIDE
49. DIPPER STICK - R.H. SIDE
50. BOOM END PLATE - L.H.
51. BOOM END PLATE - R.H.

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PARTS IN GROUP THREE HAVE BEEN SEPARATED FOR PACKAGING. PART (45) IS ALSO SEPARATE.



GROUP FOUR

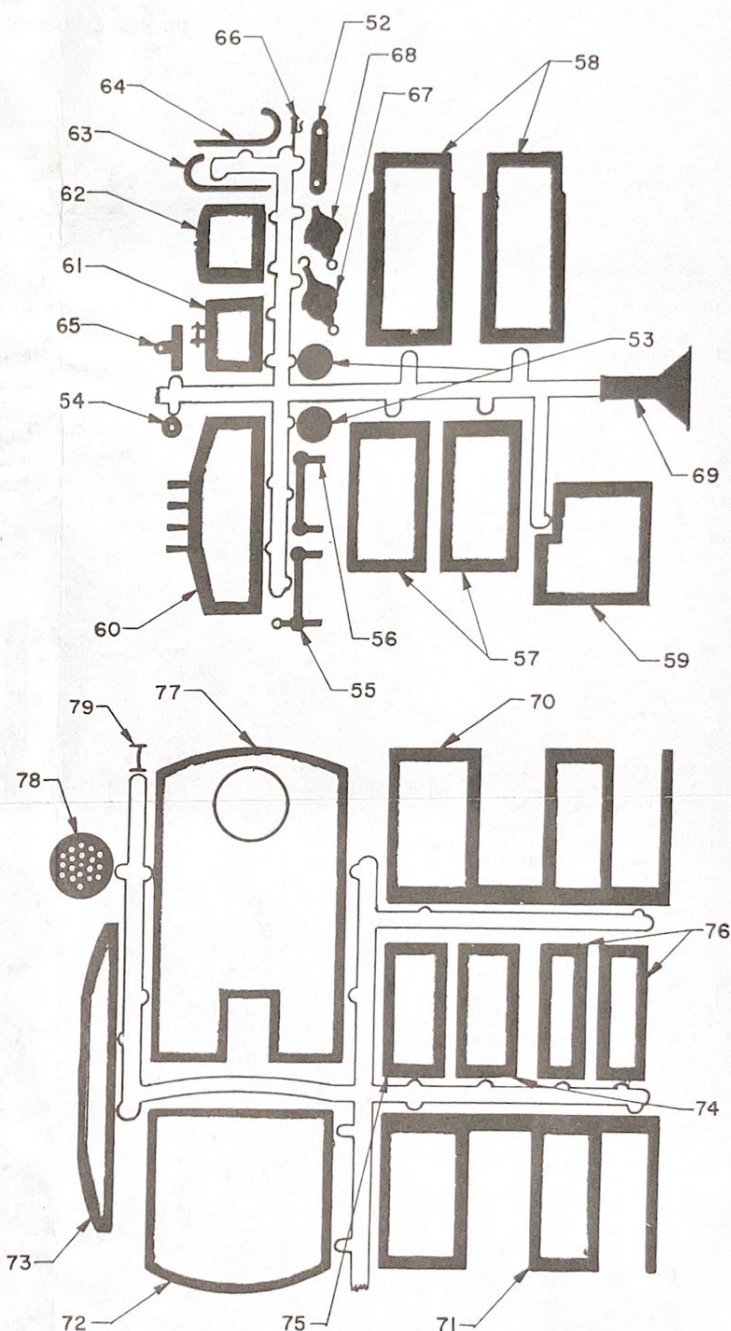
- 52. BOOM MOUNTING BRACKET
- 53. BOOM POINT SHEAVE
- 54. GANTRY SHEAVE DISC
- 55. GANTRY CABLE SHEAVE ASSEMBLY - UPPER HALF
- 56. GANTRY CABLE SHEAVE ASSEMBLY - LOWER HALF
- 57. WATER TANK
- 58. BOILER
- 59. COAL BIN
- 60. DIPPER FRONT & SIDES
- 61. DIPPER BACK PANEL
- 62. DIPPER DOOR PLATE
- 63. DIPPER DOOR HINGE - L.H.
- 64. DIPPER DOOR HINGE - R.H.
- 65. DIPPER STICK YOKE
- 66. WHISTLE
- 67. DIPPER SHEAVE - L.H. SIDE
- 68. DIPPER SHEAVE - R.H. SIDE
- 69. SMOKE STACK

GROUP FIVE

- 70. BODY SIDE - L.H.
- 71. BODY SIDE - R.H.
- 72. BODY REAR PANEL
- 73. BODY FRONT PANELS
- 74. REAR DOOR - R.H. SIDE
- 75. REAR DOOR - L.H. SIDE
- 76. BODY SIDE FRONT DOORS
- 77. BODY ROOF
- 78. BOILER FLUE PLATE
- 79. SMOKE STACK HINGE

LOOSE PARTS

- 80. TWO AXLES
- 81. FOUR STRAIGHT PINS
- 82. WIRE FOR GANTRY SUPPORTS
- 83. CABLE MATERIAL



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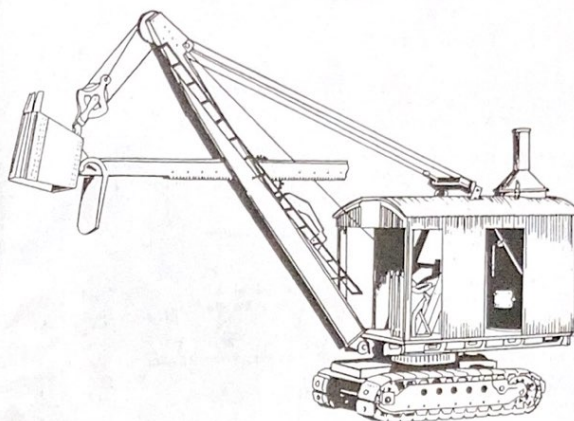
Check Proper Box : ☐ Missing from Kit ☐ Lost or Damaged
Not Properly Formed During Assembly

JORDAN Highway Miniatures

for HO Scale Model Railroads

KIT 303 ERIE B-2 STEAM SHOVEL

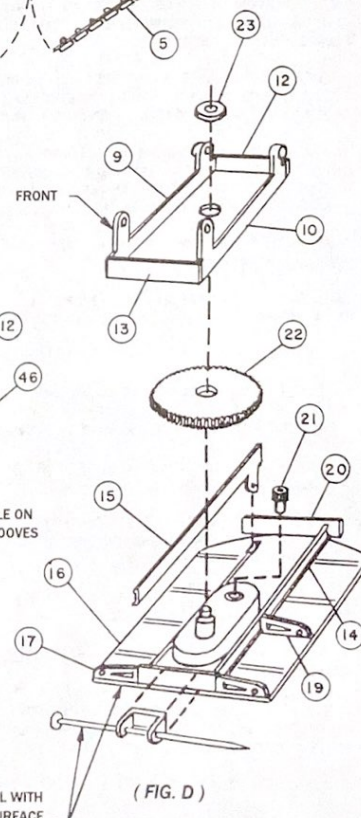
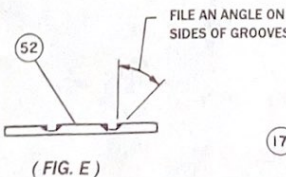
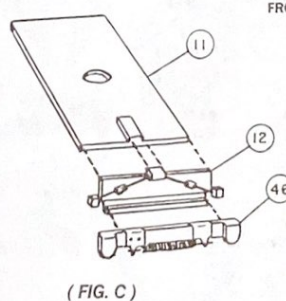
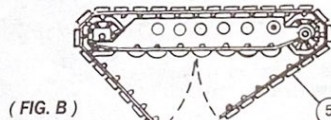
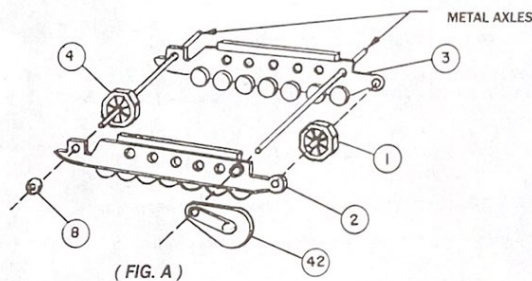
THIS KIT REPRESENTS AN ERIE TYPE B-2 STEAM SHOVEL. THE B TYPE WAS PRODUCED FROM 1915 TO THE MID-TWENTIES AND IS PROBABLY WHAT COMES TO MIND WHEN PEOPLE THINK OF "STEAM SHOVELS".



TOOLS USED TO BUILD THIS MODEL: VERY SHARP HOBBY KNIFE, TESTORS LIQUID CEMENT AND TESTORS PLASTIC CEMENT (APPLY THE LIQUID CEMENT WITH A NO. 1 ARTIST'S BRUSH, THINNING A DAB OF IT ON A PALLET WITH PLASTIC CEMENT. THE BRUSH IS RINSED IN PLASTIC CEMENT THEN THINNER AFTER USE.) TWEEZERS, SMALL FILE, FINE SANDPAPER,

CATERPILLAR TRUCK ASSEMBLY

1. ROUND OFF THE ENDS OF THE METAL AXLES.
2. SELECT A PAIR OF FRAME SIDES (2) (3), INSERT THE AXLE OF A REAR SPROCKET WHEEL (1) INTO THE REAR AXLE HOLE AND GLUE THE SIDE PANELS TOGETHER AT THE TOP RAIL AND BOTTOM ROLLER FACES (FIG. A).
3. INSERT A FRONT SPROCKET WHEEL (4) BETWEEN THE FRAME SIDES AT THE FRONT AXLE HOLE AND SLIDE AN AXLE THRU TO HOLD IT IN PLACE (FIG. A).
4. GLUE A TRACK LINK STRIP (5) CENTERED ACROSS THE TOP RAIL, AND WRAP EACH END AROUND THE WHEELS, LINING UP THE FLATS OF THE WHEELS WITH THE LINKS ON THE TRACK, GLUE TRACK ACROSS THE BOTTOM ROLLERS AND AT THE JOINT (FIG. B).
5. ASSEMBLE THE SECOND TRACK UNIT.
6. GLUE REAR CROSSMEMBER (12) TO TOP PLATE (11) (FIG. C).
7. GLUE TRUCK FRAME SIDE PANELS (9) (10) TO TOP PLATE AGAINST REAR CROSSMEMBER (FIG. D).
8. GLUE FRONT CROSSMEMBER (13) TO TOP AND SIDES (FIG. D).
9. GLUE STEERING CONTROL BARS (46) TO RAISED RIB ACROSS THE BOTTOM OF THE REAR CROSSMEMBER (FIG. C).
10. SLIDE AN AXLE THRU THE FRONT AXLE HOLE OF A TRACK ASSEMBLY AND PUT ON A SPACER (8). SLIDE THE OTHER AXLE THRU THE DRIVE AXLE HOLE AND PUT ON A MUD GUARD (42). GLUE MUD GUARD TO HUB OF REAR SPROCKET WHEEL (FIGS. A & D) TO NOTE FRONT AND REAR).
11. SLIDE AXLES THRU THE TRUCK FRAME HANGERS AND ASSEMBLE OPPOSITE SPACER, MUDGUARD, AND TRACK UNIT.



- ### TURNTABLE UNDERSIDE ASSEMBLY
12. INSERT THE GANTRY BRACKETS ON THE END OF THE FRAME RAILS, (14) (15) THRU THE SLOTS IN THE TURNTABLE (16) AND GLUE THE RAILS BETWEEN THE RAISED LINES ON THE UNDERSIDE OF TABLE (FIG. D).
 13. GLUE FRONT FRAME CROSSMEMBER (17) ACROSS FRONT END OF FRAME (FIG. D).
 14. GLUE THE EIGHT FRAME EXTENSION BRACKETS (18) (19) TO FRAME AND TABLE BETWEEN LOCATING LINES PROVIDED. DETAIL FACES TO THE FRONT (FIG. D)
 15. GLUE REAR FRAME CROSSMEMBER (20) ACROSS REAR FRAME ENDS.
 16. FILE AN ANGLE, AS SHOWN (FIG. E), ON THE SIDES OF THE GROOVES OF THE BOOM BRACKET (52). FOLD THE ENDS UP AND GLUE. SLIP A PIN THRU THE HOLES TO MAINTAIN ALIGNMENT. GLUE BRACKET TO CENTER OF FRONT FRAME CROSSMEMBER, KEEPING PIN PARALLEL TO TOP OF TABLE. (FIG. D)
 17. WITH THE TURNTABLE FRAME SIDE UP, GLUE THE SWING PINION GEAR (21) INTO HOLE. SLIP THE LARGE SWING GEAR (22), PLAIN SIDE UP, OVER PIVOT SHAFT, GLUING IT TO THE FRAME. (FIG. D)
 18. PLACE CATERPILLAR TRUCK UNIT OVER PIVOT SHAFT AND PRESS ON RETAINING RING (23). A LITTLE GLUE IN THE RING HOLE WILL FACILITATE ASSEMBLY. MAKE SURE TRUCK ROTATES. (FIG. D)

PIN TO BE PARALLEL WITH
TURN TABLE TOP SURFACE

(Continued from other side)

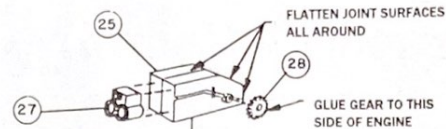
ENGINE ASSEMBLY

19. GLUE THE AUXILIARY ENGINE HALVES (25) (26) TOGETHER, SAND OR FILE FLAT, ALL THE SURFACES AROUND THE JOINT, (FIG. F) GLUE A CYLINDER UNIT (27) TO EACH ENGINE.
20. GLUE GEAR (28) TO ONE OF THE ENGINES AS SHOWN (FIG. F). THIS IS NOW THE "SWING" ENGINE. THE OTHER ENGINE WILL BE THE "CROWD" ENGINE, TO BE MOUNTED ON THE BOOM LATER.
21. GLUE MAIN HOIST ENGINE GEAR (29) TO INSIDE OF LEFT BANK OF ENGINE (30) (FIG. G) (SEE NOTE BELOW)
22. FILE FLAT THE ENDS OF THE HOIST CABLE DRUM (31) AND GLUE IT TO CENTER OF LARGE GEAR. (FIG. G) SEE CABLE DIAGRAM (FIG. FF)
23. GLUE RIGHT BANK OF ENGINE (33) TO FLOOR COVER PLATE (35) WITH GEAR ON ENGINE "IN MESH" WITH GEAR IN CENTER OF COVER PLATE (FIG. P).
24. GLUE LEFT BANK TO COVER PLATE AND THE HOIST DRUM TO THE RIGHT BANK OF ENGINE. (FIG. G)
25. GLUE GEAR TRAIN ASSEMBLY (32) TO OUTSIDE OF RIGHT BANK OF ENGINE. (FIG. G)
26. GLUE SUPPORT BRACKET (34) TO OUTSIDE OF GEAR TRAIN. (FIG. G)
27. GLUE CYLINDER CROSSHEAD (36) ACROSS THE TOP OF RIGHT AND LEFT ENGINE BANKS. (FIG. J)
28. GLUE BOTTOM COVER PLATE (37) ACROSS REAR OF ENGINE. (FIG. J)
29. GLUE BOOM HOIST CABLE DRUM (38) INTO THE "SOCKET" MOLDED ON THE LEFT SIDE OF ENGINE. (FIG. H) SEE CABLE DIAGRAM (FIG. FF)

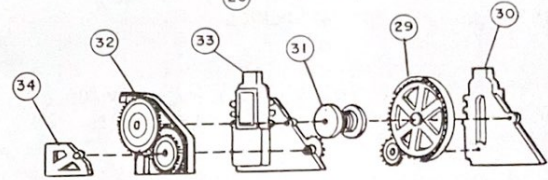
TURNTABLE - TOPSIDE

30. GLUE COVER PLATE WITH ENGINE, OVER THE TURNTABLE OPENING (FIG. P)
31. GLUE "SWING" ENGINE TO TURNTABLE, WITH GEAR IN MESH WITH GEAR ON FLOOR. (FIG. P)
32. REMOVE SOME OF THE DRAFT ANGLE FROM THE SIDES OF THE GANTRY INNER FRAME (39) BY SANDING (FIG. K).
33. GLUE INNER FRAME TO A GANTRY LEG (40) (41) WITHIN THE LINES MOLDED ON THE LEG. (FIG. L).
34. INSERT A PIN THRU THE TOP HOLE OF THE GANTRY LEGS WHEN YOU GLUE THE OTHER LEG TO THE INNER FRAME. PIN SHOULD BE SQUARE WITH LEGS. (FIG. M).
35. FORM GANTRY SUPPORT LEGS FROM WIRE (81) AS SHOWN (FIG. N). THE 1-5/16" BEND TO BEND, SHOULD BE AS EXACT AS POSSIBLE IN ORDER FOR THE GANTRY TO FIT THRU CUT-OUTS IN ROOF.
36. INSERT THE WIRE LEGS, FROM THE OUTSIDE, INTO THE LOWER OF THE TWO HOLES AT TOP OF GANTRY, AND BEND ENDS OVER (OR GLUE) TO RETAIN THEM, INSERT OPPOSITE END OF WIRE LEGS INTO BRACKET ON FLOOR AND BEND OVER. (FIG. N & P).
37. GLUE GANTRY LEGS TO TURNTABLE IN THE MARKED AREA ON EACH SIDE OF MAIN HOIST ENGINE. (FIG. P).
38. GLUE SEAT (43) TO SUPPORT (44). GLUE SUPPORT TO TURNTABLE IN THE SQUARE MARK JUST AHEAD OF THE GANTRY LEG. (FIG. P & DD).
39. GLUE CONTROL LEVERS (45) TO TURNTABLE IN MARK AHEAD OF SEAT. (FIG. P)
40. GLUE WATER TANK HALVES (57) AND BOILER HALVES (58) TOGETHER. BLEND OUT JOINTS WITH FILE OR SANDPAPER, FLATTEN TOP EDGE OF BOILER, INSERT FLUE PLATE (78) AND GLUE TO INSIDE LEDGE (FIG. P).
41. GLUE REAR BODY PANEL TO REAR EDGE OF TURNTABLE LEAVING AN EQUAL SPACE ON EACH SIDE FOR SIDE PANEL OVERLAP (FIG. P).
42. GLUE BOILER TO TURNTABLE BETWEEN GANTRY SUPPORTS AND AGAINST REAR PANEL. ANGLE THE FIRE DOOR SLIGHTLY TO THE LEFT TOWARD THE COAL BIN (FIG. P).
43. FOLD COAL BIN WALLS (59) AND GLUE TO TURNTABLE AND REAR PANEL, ON LEFT SIDE OF BOILER. (FIG. P)
44. GLUE WATER TANK TO TURNTABLE ON RIGHT SIDE OF BOILER AGAINST REAR PANEL (FIG. P).
45. GLUE L.H. BODY SIDE (70) TO TOP EDGE OF TURNTABLE, AND TO REAR PANEL. GLUE COAL BIN FRONT PANEL BEHIND THE STUD AT THE REAR OF DOOR OPENING. (FIG. P) (SEE NOTE AT RIGHT).
46. GLUE R.H. BODY SIDE (71) TO TURNTABLE AND REAR PANEL. (FIG. P)

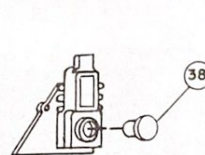
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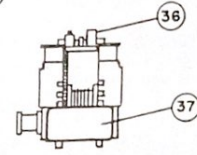
(FIG. F)



(FIG. G)

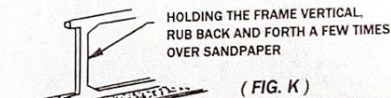


(FIG. H)

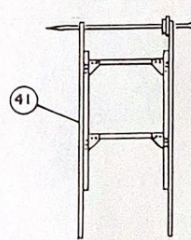


(FIG. J)

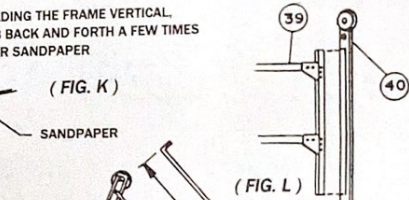
NOTE: ENGINE CAN BE ASSEMBLED INTO A COMPLETE UNIT AS IN FIG. G, H & J ABOVE, OR ASSEMBLED ONTO THE FLOOR COVER PLATE AS DESCRIBED IN THE STEP BY STEP INSTRUCTIONS.



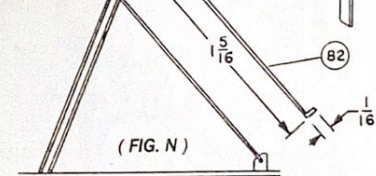
(FIG. K)



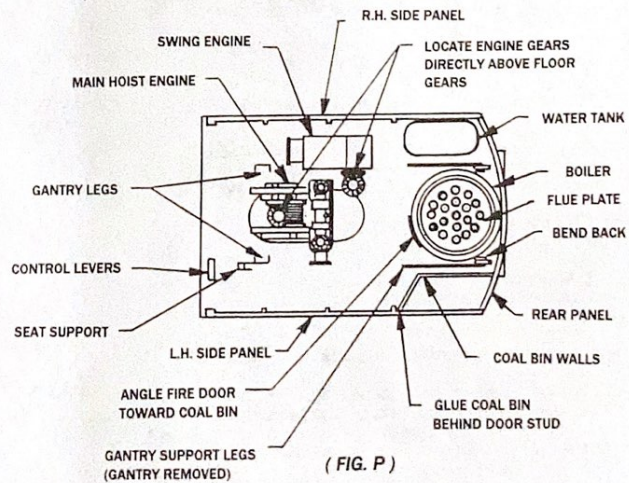
(FIG. M)



(FIG. L)



(FIG. N)



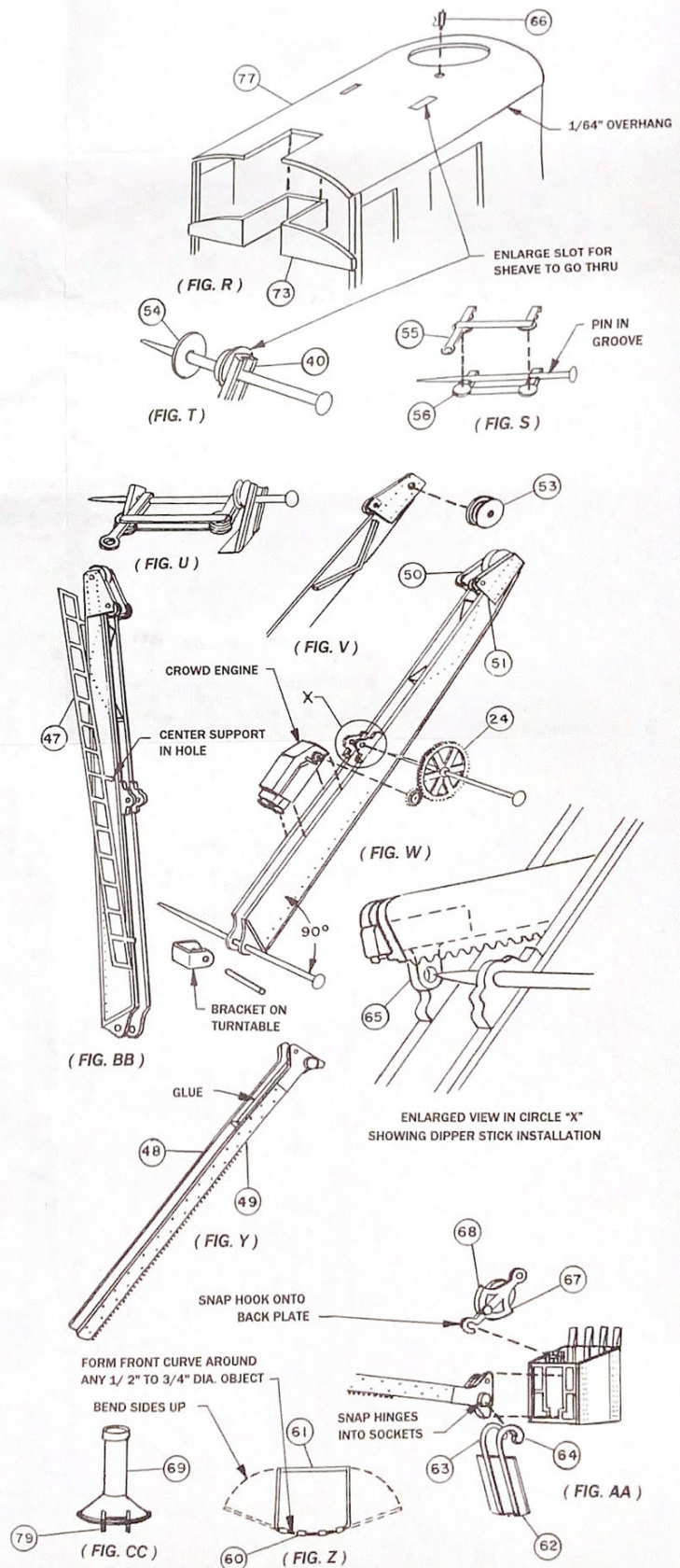
(FIG. P)

NOTE: THERE IS A RAISED LINE ON THE TURNTABLE SURFACE TO FACILITATE LOCATING AND GLUING BODY SIDE PANELS IN PLACE.

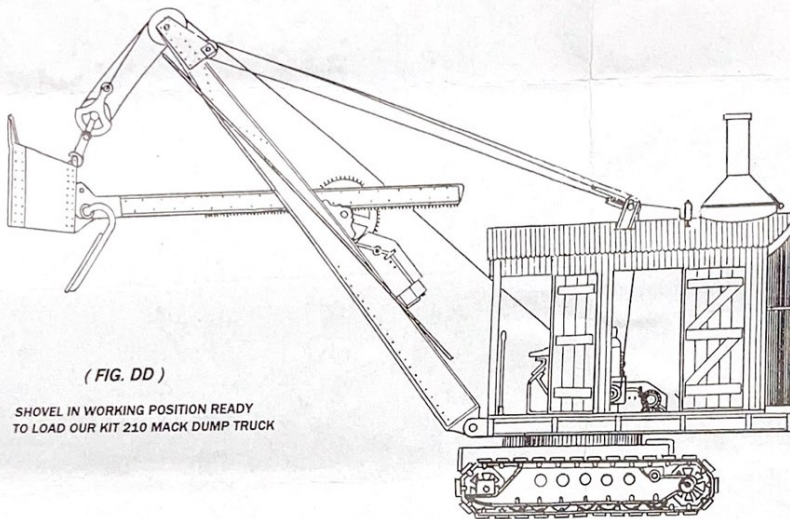
TURNTABLE - TOPSIDE (Continued)

47. ENLARGE THE L.H. GANTRY SLOT IN ROOF (77) FOR THE GANTRY SHEAVE TO GO THRU. (FIG. R)
48. SLIP ROOF OVER GANTRY AND BOILER AND GLUE IT TO ONE SIDE PANEL, WITH VERY LITTLE OVERHANG. (APPROX. 1/64") (FIG. R)
49. GLUE ROOF ACROSS REAR PANEL AND OPPOSITE SIDE.
50. FOLD FRONT BODY PANELS (73) TO FIT AROUND ROOF CUTOUT AND GLUE IN PLACE. (FIG. R)
51. GLUE GANTRY CABLE SHEAVES ASSEMBLY HALVES (55) (56) TOGETHER LINING THEM UP WITH A PIN (FIG. S)
52. GLUE SHEAVE DISC (54) TO SHEAVE AT TOP OF GANTRY LEG (FIG. T). LINE UP HOLES WITH A PIN. EXTRACT PIN FAR ENOUGH TO SLIP THE SHEAVE ASSEMBLY INTO PLACE. ARM WITH LOOP END IS ON THE R.H. SIDE (FIG. U) CLIP PIN ENDS.
53. GLUE BOOM POINT SHEAVE HALVES (53) TOGETHER. GLUE ASSEMBLED SHEAVE TO ONE SIDE OF BOOM IN HOLE PROVIDED (FIG. V).
54. MOUNT BOOM HALVES (6) (7) ON PINS THRU HOLES IN BOOM. GLUE TOGETHER USING PINS FOR ALIGNMENT. KEEP PINS SQUARE WITH BOOM. (FIG. W)
55. MOUNT GEAR ASSEMBLY (24) TO R.H. SIDE OF BOOM ON THE PIN THRU THE CENTER MOUNTING BLOCK. GLUE THE "CROWD" ENGINE TO BOOM. LINING IT UP WITH THE SMALL GEAR. GLUE SMALL GEAR TO ENGINE AND LARGE GEAR TO BOOM (FIG. W)
56. GLUE BOOM END PLATES (50) (51) TO END OF BOOM (FIG. W).
57. GLUE DIPPER STICK SIDES (48) (49) TOGETHER AT ONE END. (FIG. Y).
58. SLOWLY BEND A RADIUS ACROSS THE "TOOTH" AREA OF SCOOP PANEL (60), TO MATCH THAT ON THE DOOR (62). BEND SIDE PANELS UP AND GLUE TO REAR PANEL (61) (FIG. Z).
59. GLUE DIPPER STICK TO SCOOP IN POCKET ON REAR PANEL (FIG. AA).
60. GLUE HINGES (63) (64) TO DIPPER DOOR (62) OUTSIDE OF THE MOLDED LINES. THE ANGLE ON THE MOUNTING FACE OF THE HINGES MAKES PIVOT END LEAN IN. THIS PROVIDES TENSION TO RETAIN PIVOTS IN SOCKETS. (FIG. AA).
61. DOOR PIVOTS CAN BE SNAPPED INTO SOCKETS ON SIDES OF DIPPER STICK, ALLOWING DOOR TO SWING INTO OPEN OR CLOSED POSITION.
62. INSTALL DIPPER STICK IN BOOM BY INSERTING THE SLIDING SHOE (65) BETWEEN THE SIDES OF THE DIPPER STICK WITH THE PIVOT HOLE PROTRUDING FROM THE GEAR SIDE. INSERT A PIN THRU THE LARGE GEAR ON THE BOOM JUST ENOUGH TO PICK UP THE HOLE OF THE SHOE WHEN YOU SLIDE THE DIPPER STICK INTO THE BOOM. PUSH THE PIN THRU OPPOSITE SIDE OF BOOM AND CLIP OFF EXCESS. (FIG. W & X) DIPPER CAN NOW BE MOVED UP OR DOWN AS WELL AS IN AND OUT.
63. CUT A 1/4" LONG PIECE OF PIN AND INSTALL BOOM IN BRACKET ON FRONT OF TURNTABLE. AFTER DETERMINING DESIRED HEIGHT, BOOM SHOULD BE GLUED IN BRACKET. (FIG. W)
64. GLUE LADDER (47) TO LEFT SIDE OF BOOM, CENTER SUPPORT IN HOLE WITH LOWER SUPPORT ON TOP EDGE AND UPPER SUPPORT ON UNDERSIDE OF BOOM. (FIG. BB)
65. GLUE WHISTLE (66) TO ROOF IN HOLE AT FRONT OF BOILER (FIG. R)
66. TRIM EXCESS MATERIAL FROM TOP OF SMOKE STACK (69) DOWN TO THE RAISED RING. GLUE DUMMY HINGE (79) TO FLANGE OF STACK (FIG. CC).
67. GLUE STACK TO TOP OF BOILER FOR "IN USE" POSITION. FOR "TRANSPORTING" POSITION, GLUE STACK HANGING DOWN BACK (FIG. EE)
68. DOORS (74) (75) (76) CAN BE CEMENTED TO SIDES EITHER OPEN OR CLOSED (FIG. DD & EE)
69. GLUE DIPPER SHEAVE HALVES (67) (68) TOGETHER. HOOK END OF SHEAVE SNAPS OVER HANGER ON DIPPER BACK PLATE (FIG. AA).
70. SELECT FINAL POSITION FOR BOOM AND DIPPER AND GLUE THEM IN PLACE. STRING CABLES AS SHOWN (FIG. FF)
71. PAINT ROOF DULL SILVER, BODY ANY COLOR, AND EVERYTHING ELSE FLAT BLACK

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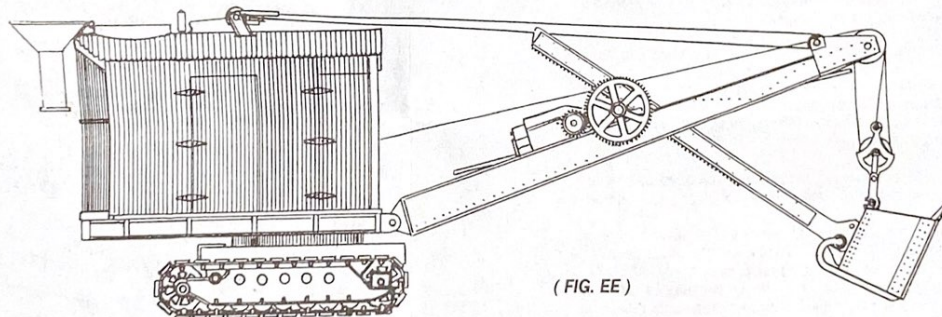
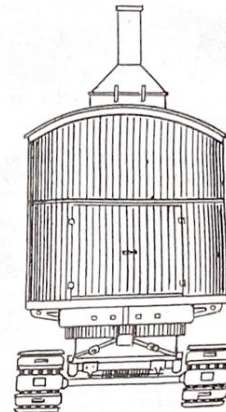


FINAL ASSEMBLY - (Continued from other side.)



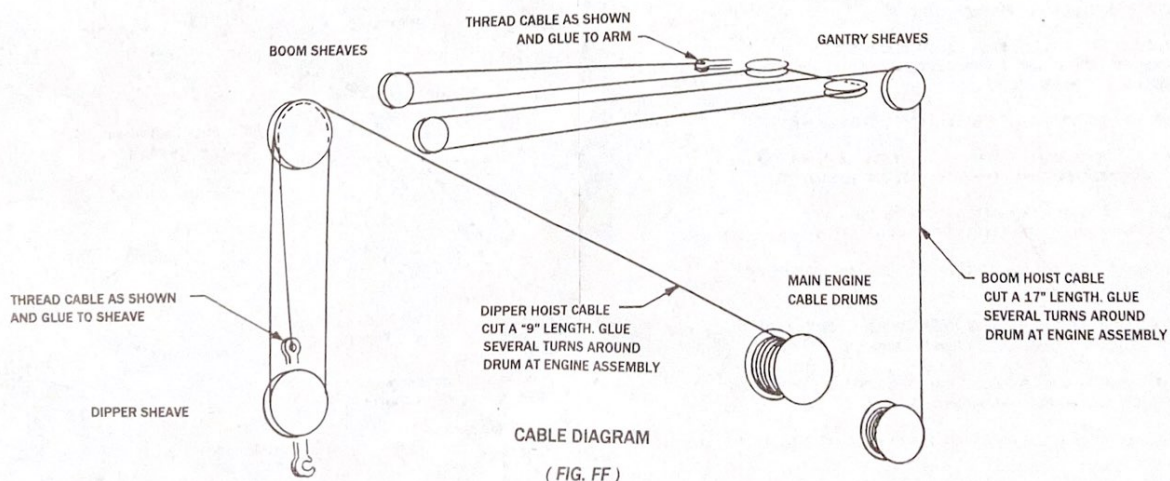
(FIG. DD)

SHOVEL IN WORKING POSITION READY
TO LOAD OUR KIT 210 MACK DUMP TRUCK



(FIG. EE)

SHOVEL ALL "BUTTONED UP"
READY FOR TRANSPORTING.
(A GREAT FLAT CAR LOAD)



(FIG. FF)

NOTE: IF STRINGING THE CABLE SEEMS A LITTLE TEDIOUS, STRAIGHTEN THE CABLE BY APPLYING THE TESTORS LIQUID CEMENT (THE HEAVIER BODIED LIQUID) TO THE THREAD WITH THE THUMB AND FOREFINGER. HANG THE THREAD WITH A WEIGHT ON ONE END AND LET IT DRY OVERNIGHT. CUT THE THREAD TO THE LENGTHS NEEDED BETWEEN SHEAVES. GLUE ONE END TO ONE SHEAVE AND ALLOW IT TO DRY, THEN GLUE IT TO THE OTHER SHEAVE.