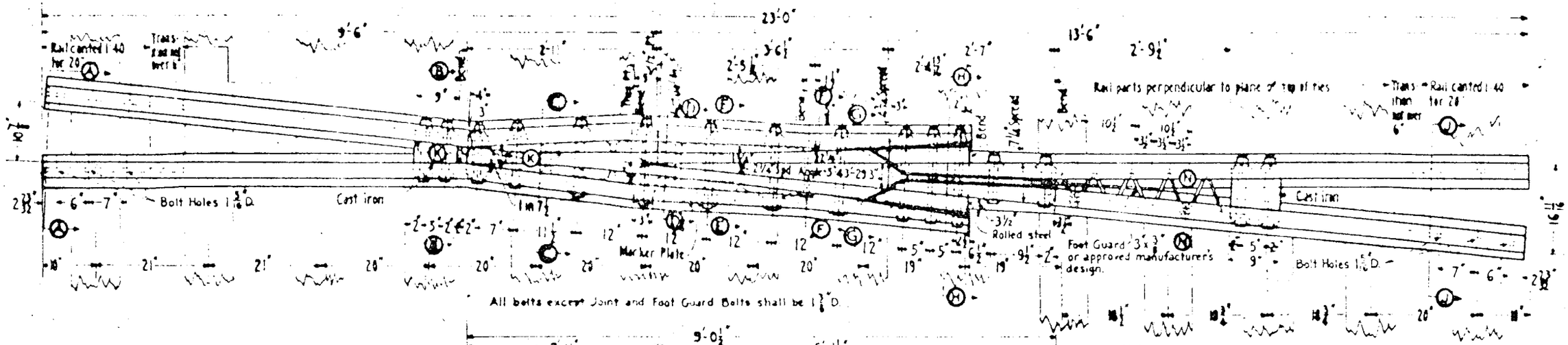
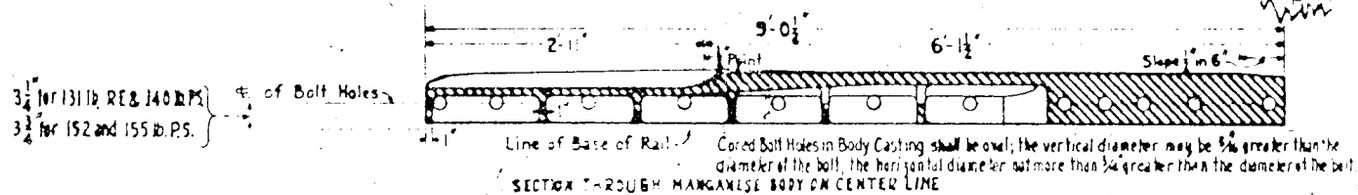




SECTION THROUGH MANGANESE BODY ON CENTER LINE

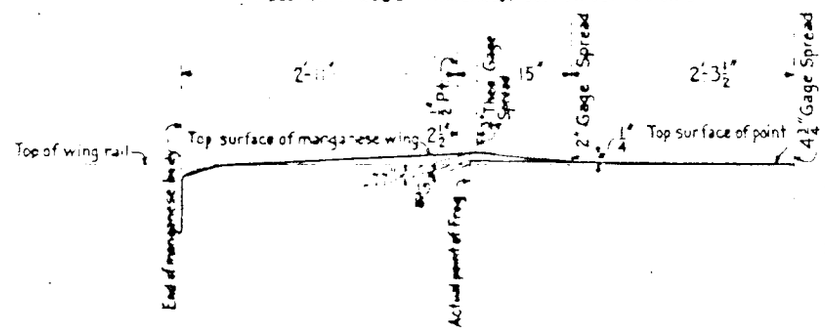


DIAGRAM OF WING WHEEL RISERS

The steel of manganese steel castings shall conform to the following requirements as to chemical composition:

Carbon, per cent	1.00-1.20
Manganese, Min., per cent	12.00
Silicon, Max. per cent	2.00
Phosphorus, Max., per cent	0.10
Sulphur, Max. per cent	0.05

A copy of the analysis of the manganese steel, with test drillings shall be furnished by the manufacturer to the P.R.R. inspector.

Note:-

Requisition must specify frog number, weight and type of rail desired and the number of this plan.

Body Casting shall be manganese steel or other approved alloy steel.

All rail parts must meet the requirements of No. 1 Rails as prescribed by The Pennsylvania Railroad Company's Specifications for O.H. Carbon Steel Rails, excluding "A" rails. Such rail parts shall be controlled cooled.

Bearing surfaces shall be finished to an accurate fit and the bottom bearing of the alloy steel casting, resting on top of bases of all rails, shall be continuous throughout except at bends.

All bolts and nuts must conform to The Pennsylvania Railroad Company's Specifications for Quenched Carbon and Alloy Steel Track Bolts.

All through bolts shall be threaded 4 1/2" with A.S. threads and shall have A.S.A. Regular square heads and square nuts, helical spring washers and suitable washers to provide square bearing under spring washers and, where necessary, to bring nuts out from under head of rail so that they may be tightened with standard wrench. All such bolts shall be fitted with headlocks which shall provide square bearing under heads of bolts.

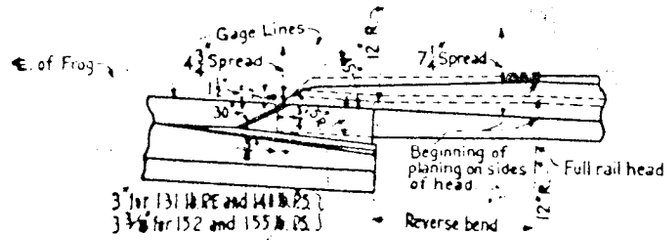
All bolts shall be dipped immediately before applying (so that all threads are thoroughly coated) in a mixture of wood flour and cylinder stock oil in proper proportion by weight of 10 parts of wood flour and 90 parts of cylinder stock oil.

Spring washers shall conform to The Pennsylvania Railroad Company's Specifications for Helical Spring Washers.

A Marker Plate of malleable iron or other approved metal showing, in raised characters, the name of the manufacturer and weight and type of rail and in raised or deeply cut characters the frog number and month of quarter and year manufactured shall be securely fastened to each frog in the position as indicated on this plan. The characters on the plate shall be not less than 1/2" high. The references "Pat. 1596718 and 2012807" shall be shown in raised or deeply cut characters either on this plate or on a separate plate.

The ends of the arms shall be beveled as shown on Standard Plan 71099-( ).

Sections and other details shall be in accordance with Standard Plan 74139-( ).



DETAIL OF HEEL RAIL

74131-B

THE PENNSYLVANIA RAILROAD

STANDARD

NO. 10 RAIL BOUND MANGANESE STEEL FROG

FOR 131 LB. R.E., 140, 152 AND 155 LB. P.S. RAILS DRILLED 2 23/32"-6"-7"

OFFICE OF CHIEF ENGINEER, PHILA., PA., DECEMBER 1939

Approved: Asst. Chief Engineer-Maintenance

Approved: Chief Engineer