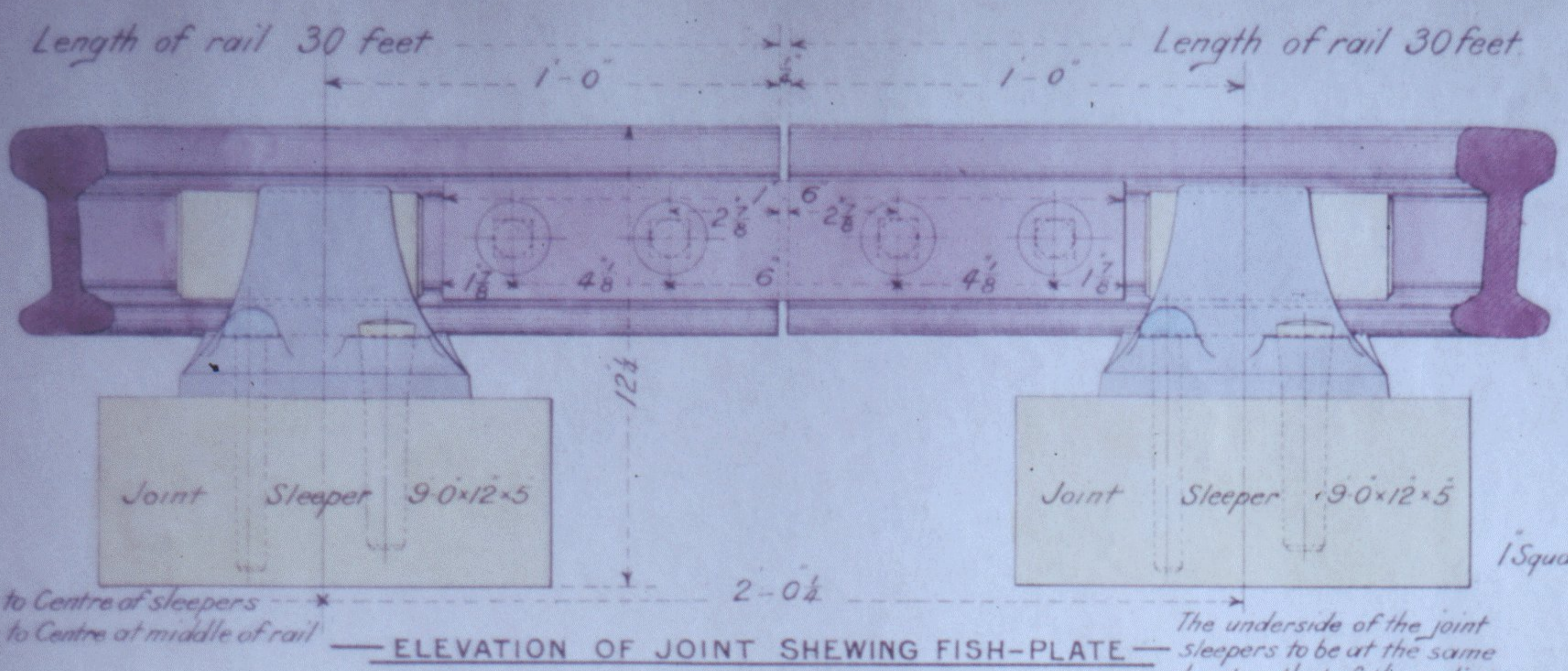


LANCASHIRE AND YORKSHIRE RAILWAY.

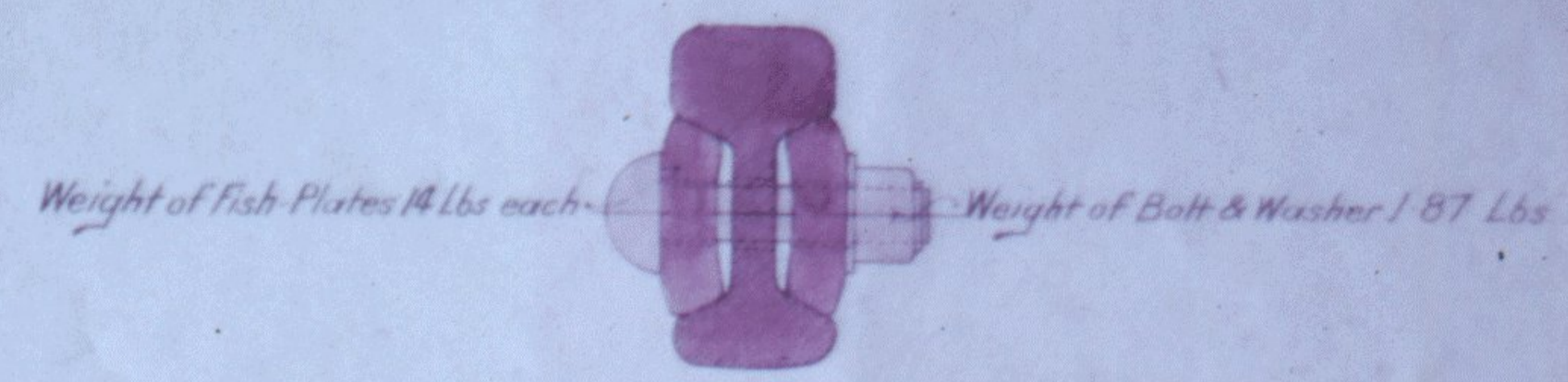
DETAILS OF PERMANENT WAY RAIL JOINTS NOW IN USE FOR 86 LBS. RAIL.



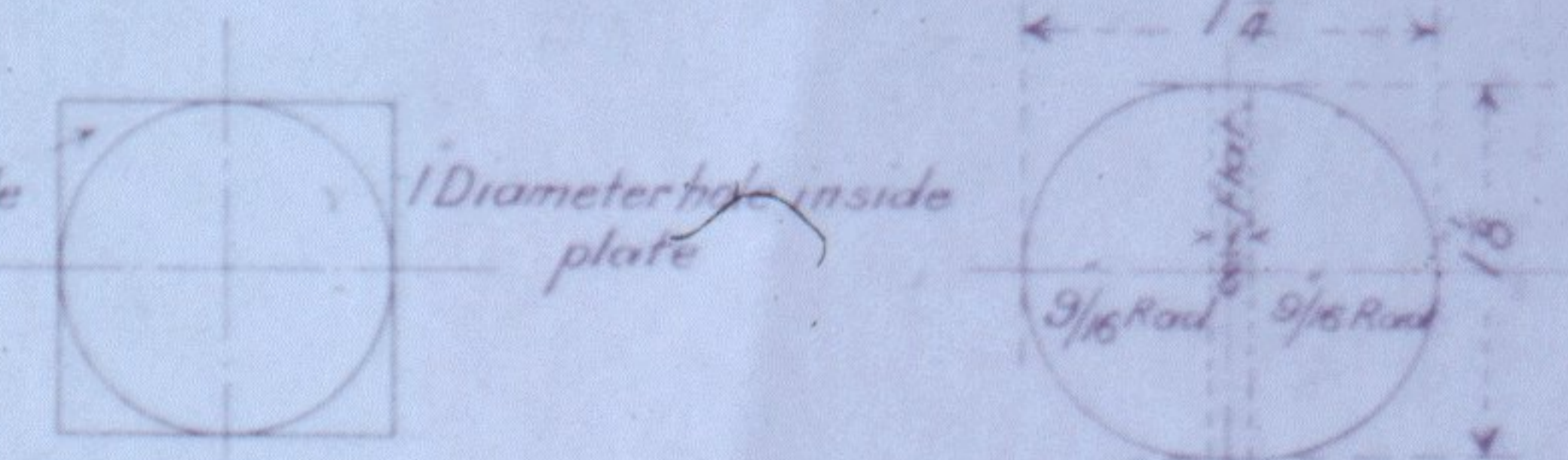
(B) 2-9 1/2 Centre to Centre of sleepers
 (2) 2-10 Centre to Centre at middle of rail

ELEVATION OF JOINT SHEWING FISH-PLATE

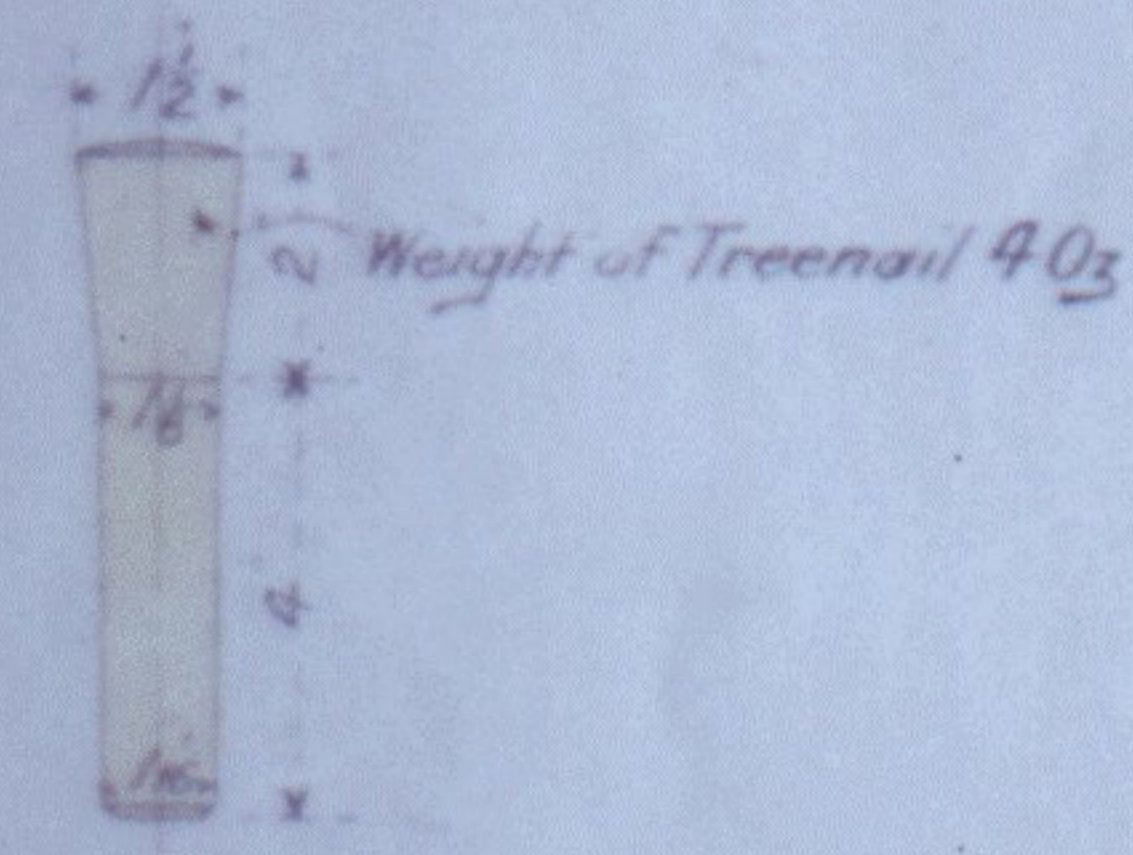
The underside of the joint sleepers to be at the same level as that of the ordinary sleeper.



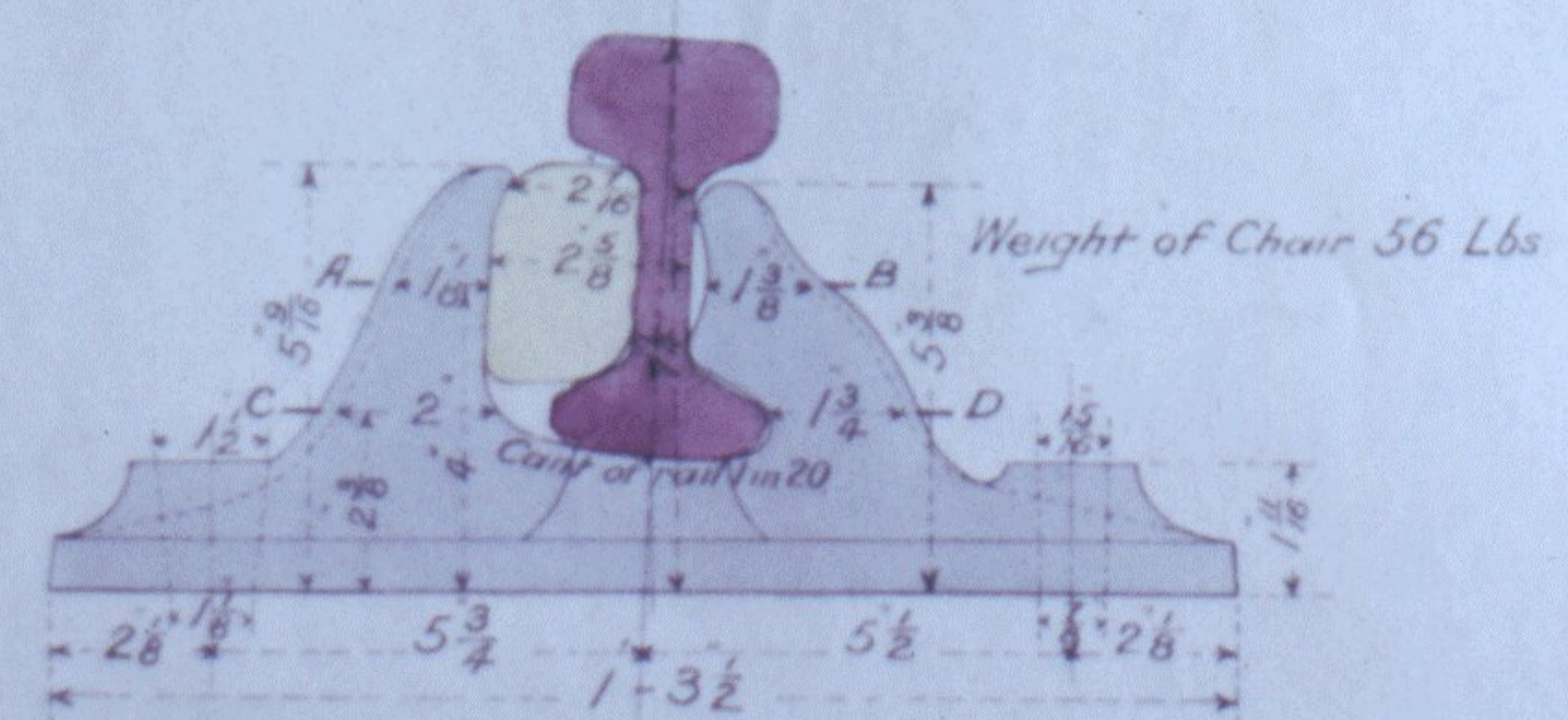
Weight of Fish-Plates 14 Lbs each
 Weight of Bolt & Washer 1 87 Lbs



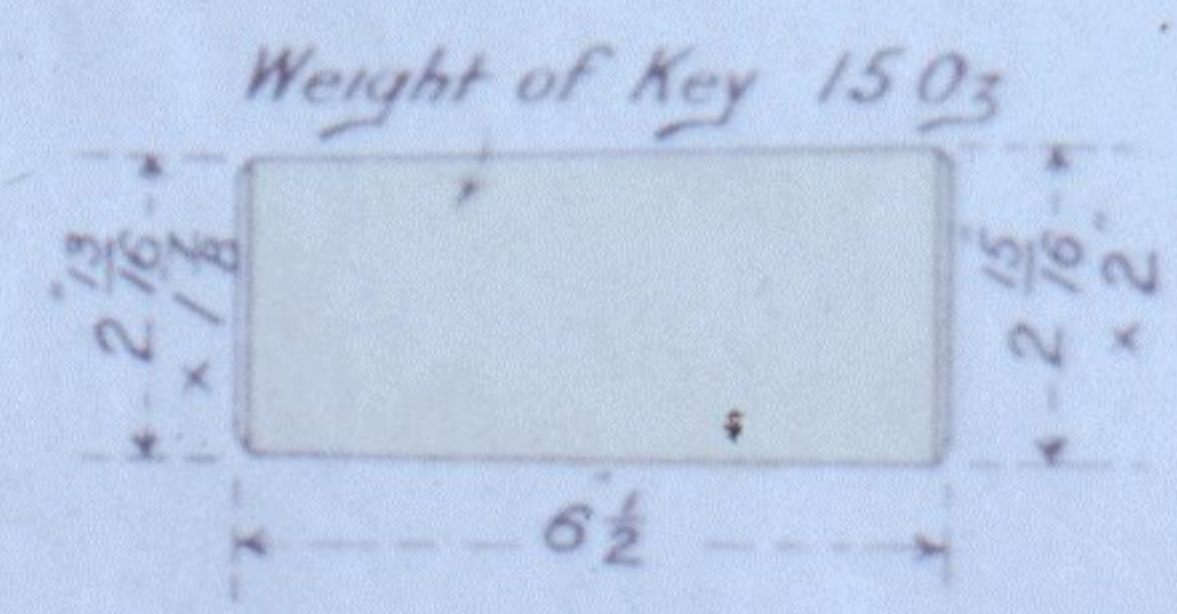
BOLT HOLE THROUGH FISH-PLATES — BOLT HOLE THROUGH RAIL



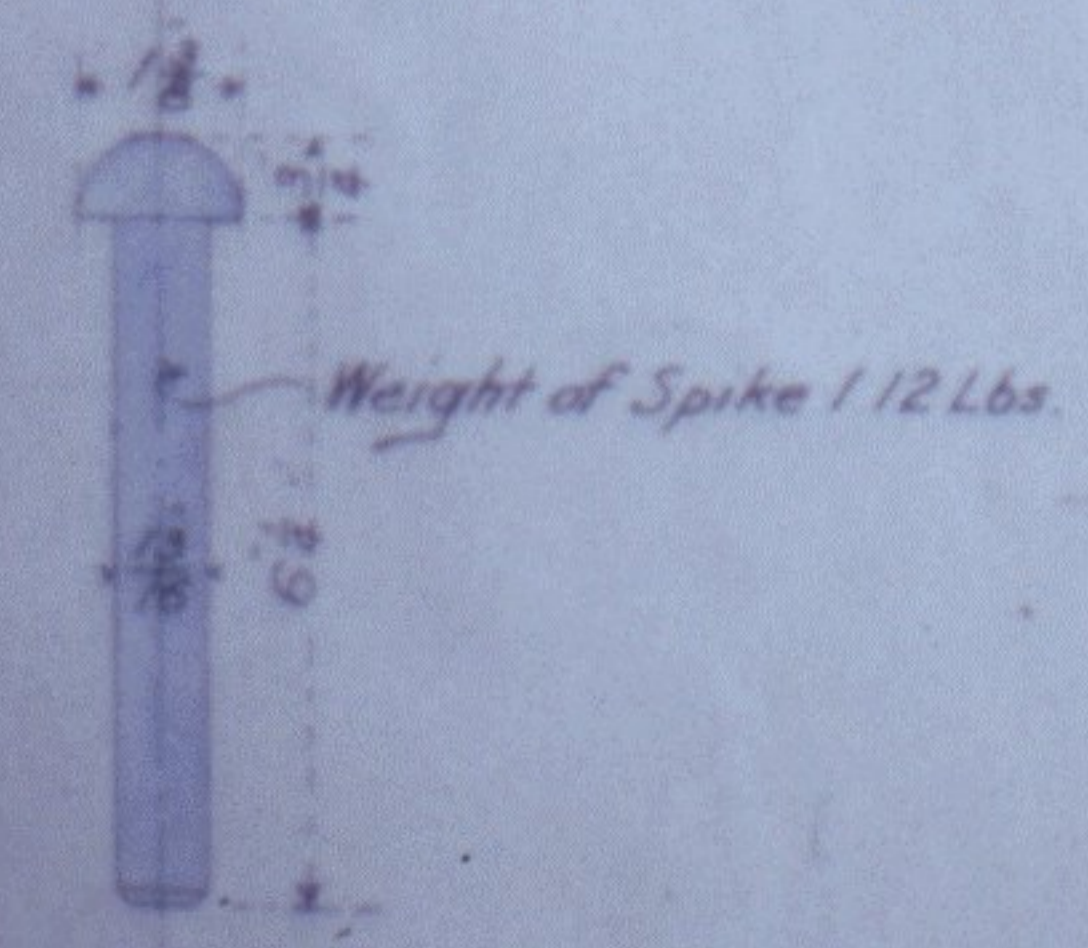
ENGLISH OAK PRESSED
 TREENAIL



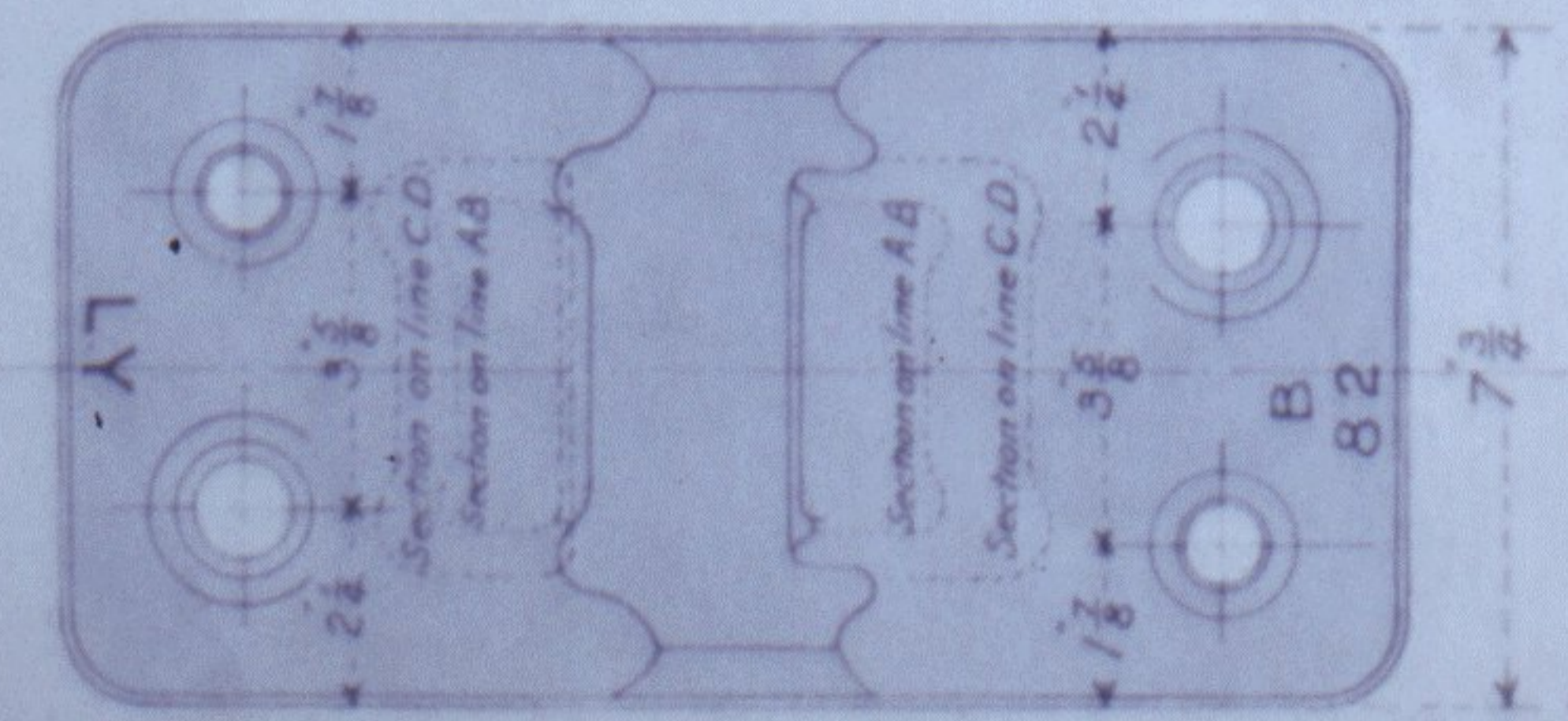
ELEVATION OF CHAIR



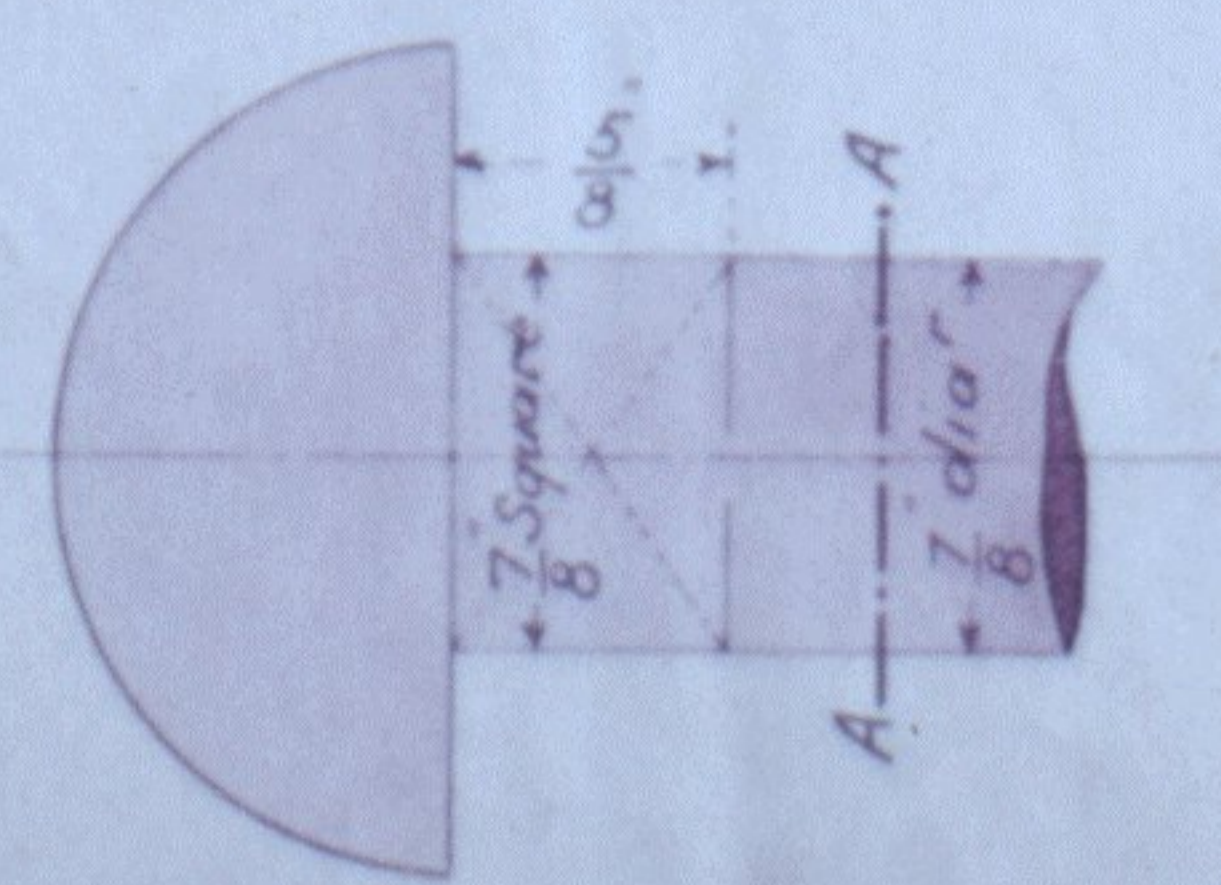
ELEVATION OF WOOD KEY



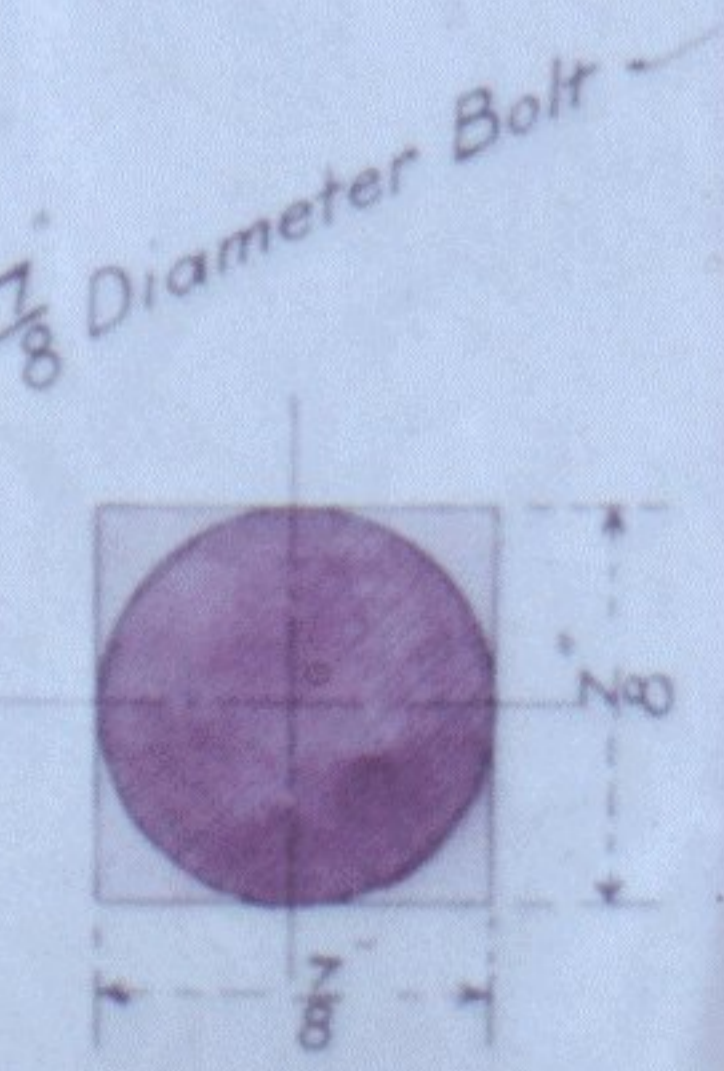
WROUGHT IRON
 SPIKE



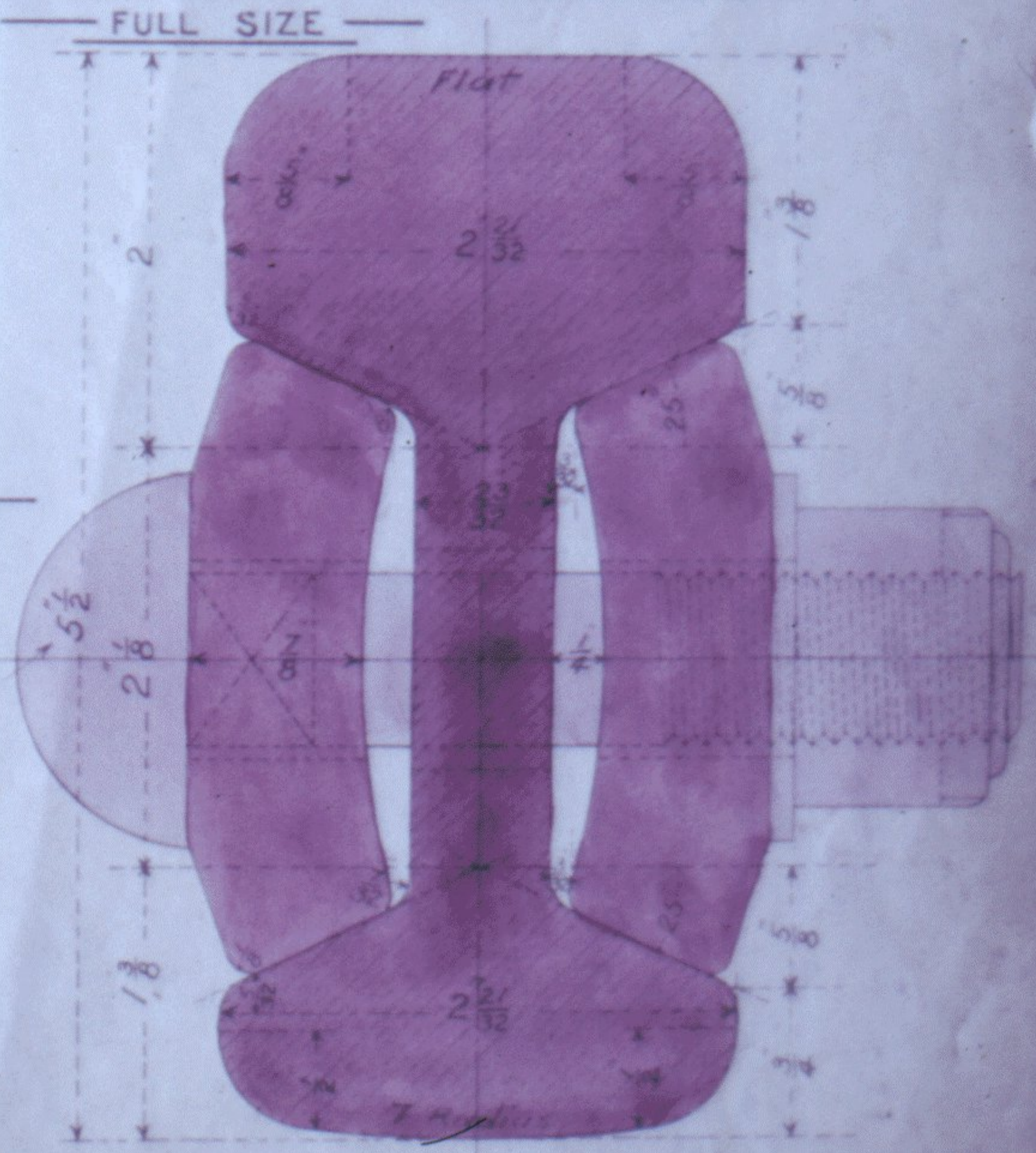
1/4 FULL SIZE



DETAIL SHEWING SHOULDER ON BOLT



SECTION THRU A. A.



SECTION OF RAIL AND FISH-PLATE

FULL SIZE
 CHN 30.5.05

L.S. Worthington
 PLAN N°1458
 ENGINEERS OFFICE
 LANCASHIRE & YORKSHIRE RAILWAY