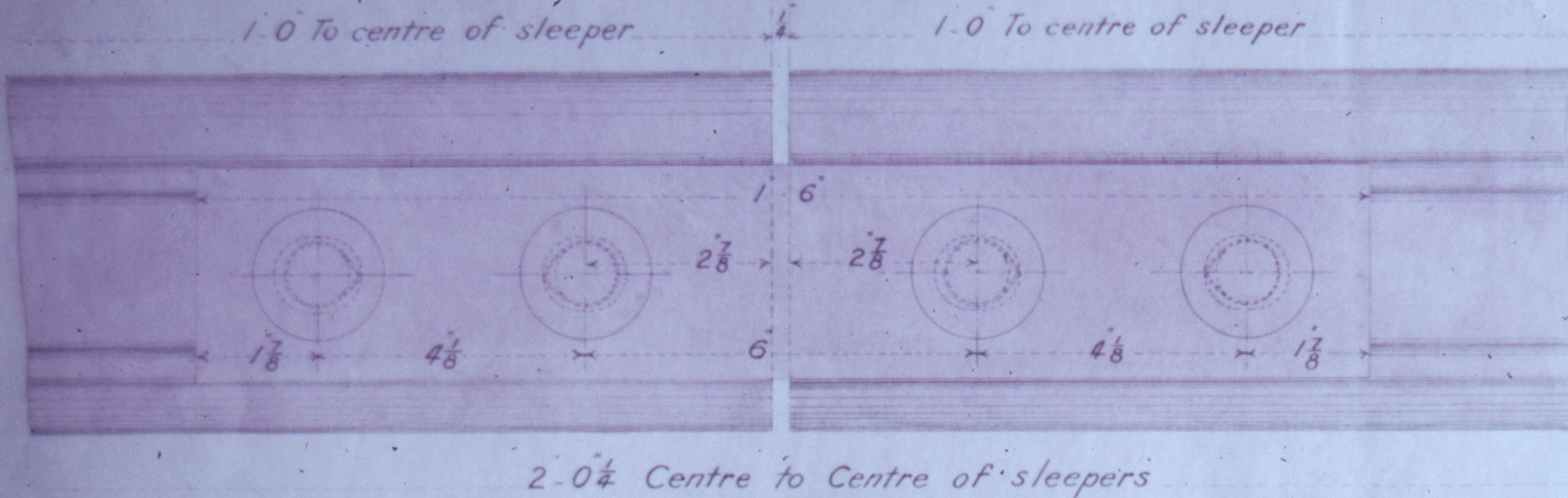


DETAILS OF PERMANENT WAY RAIL JOINTS INTENDED TO BE USED FOR 86 LBS RAIL.

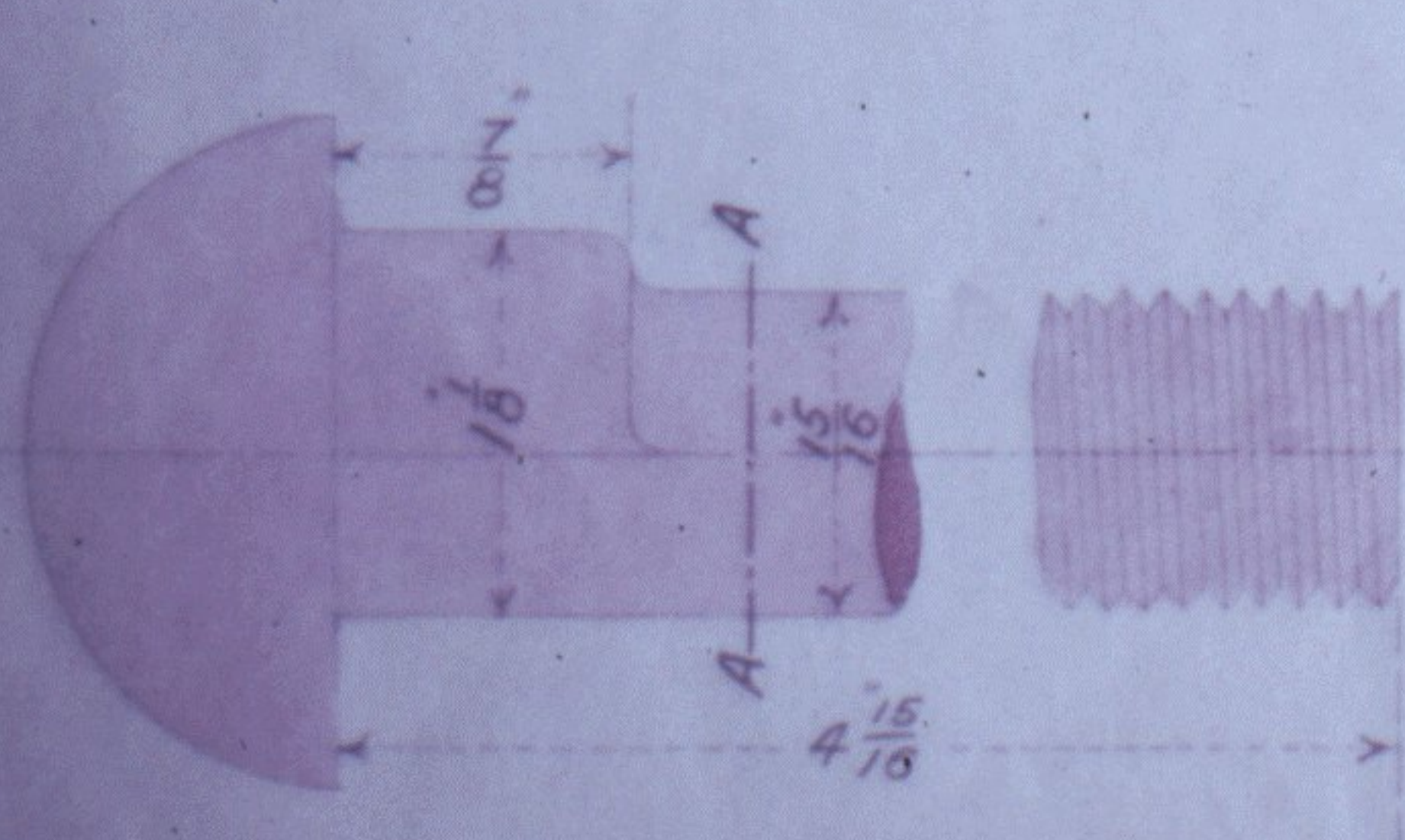


ELEVATION OF JOINT SHEWING FISH-PLATE

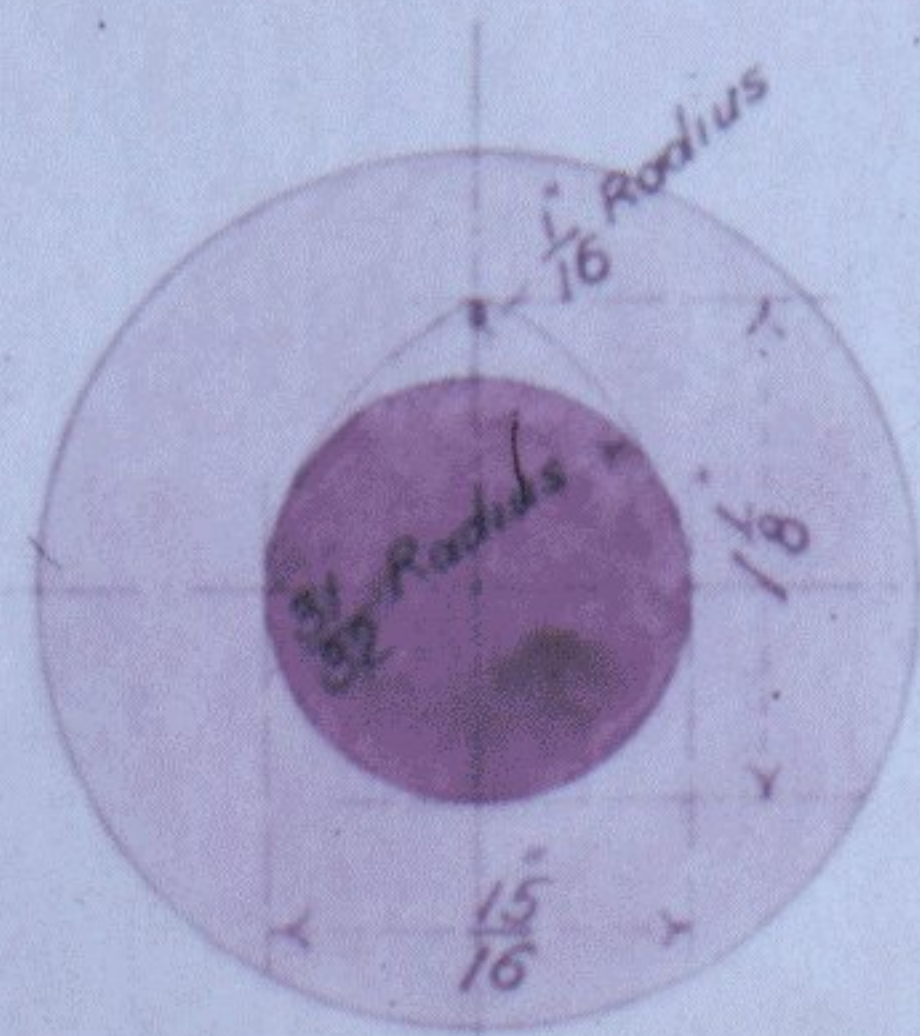
1/2 FULL SIZE

Weight of Fish-Plates 15 Lbs each.

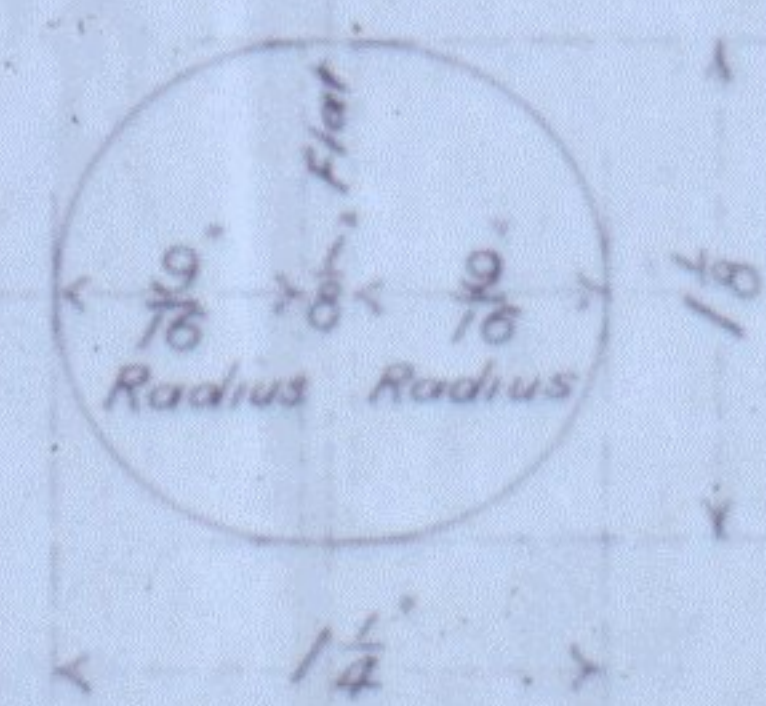
Weight of Bolt & Washer 2 1/2 Lbs.



DETAIL SHEWING LUG ON BOLT.



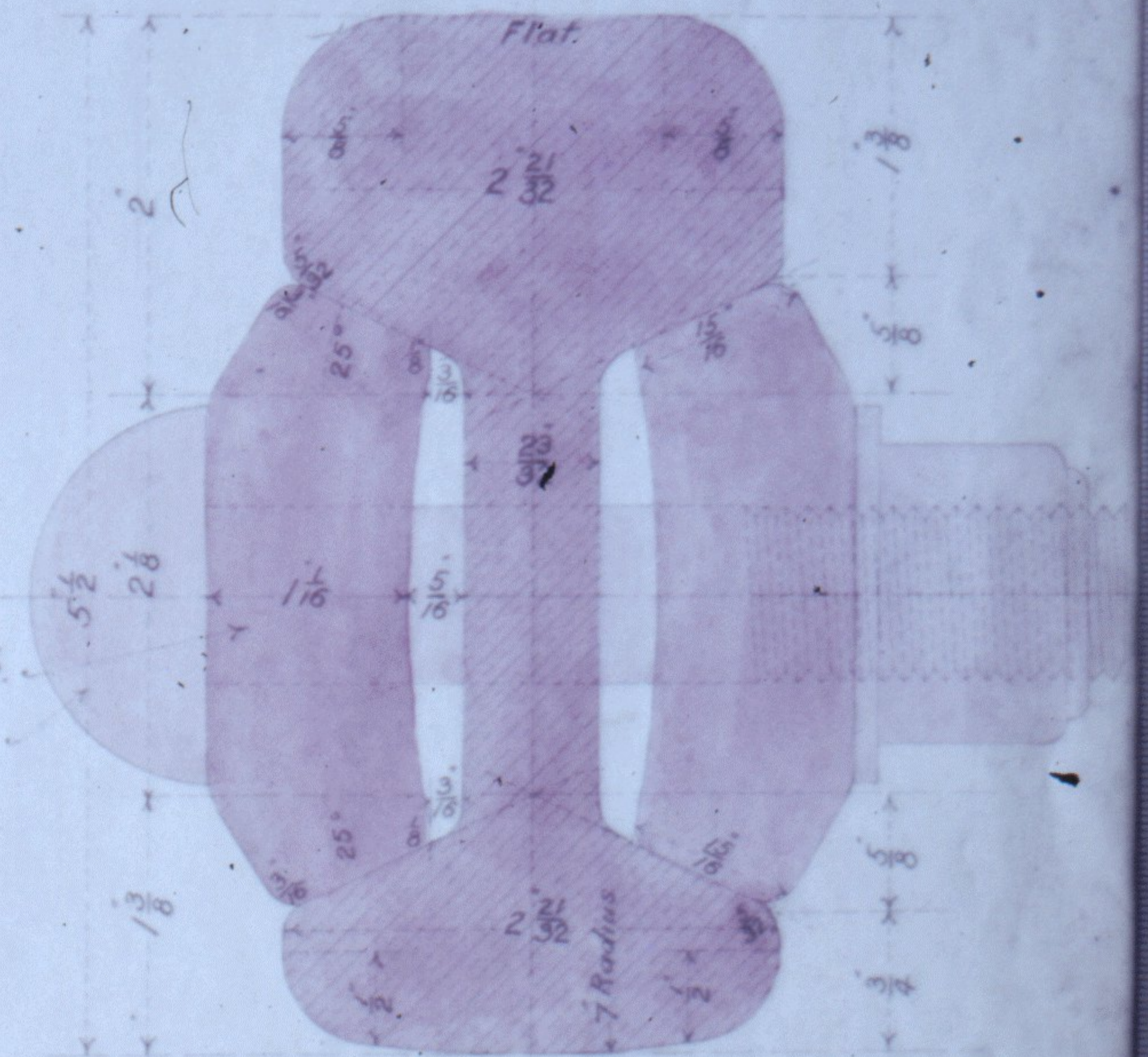
SECTION THROUGH A A.



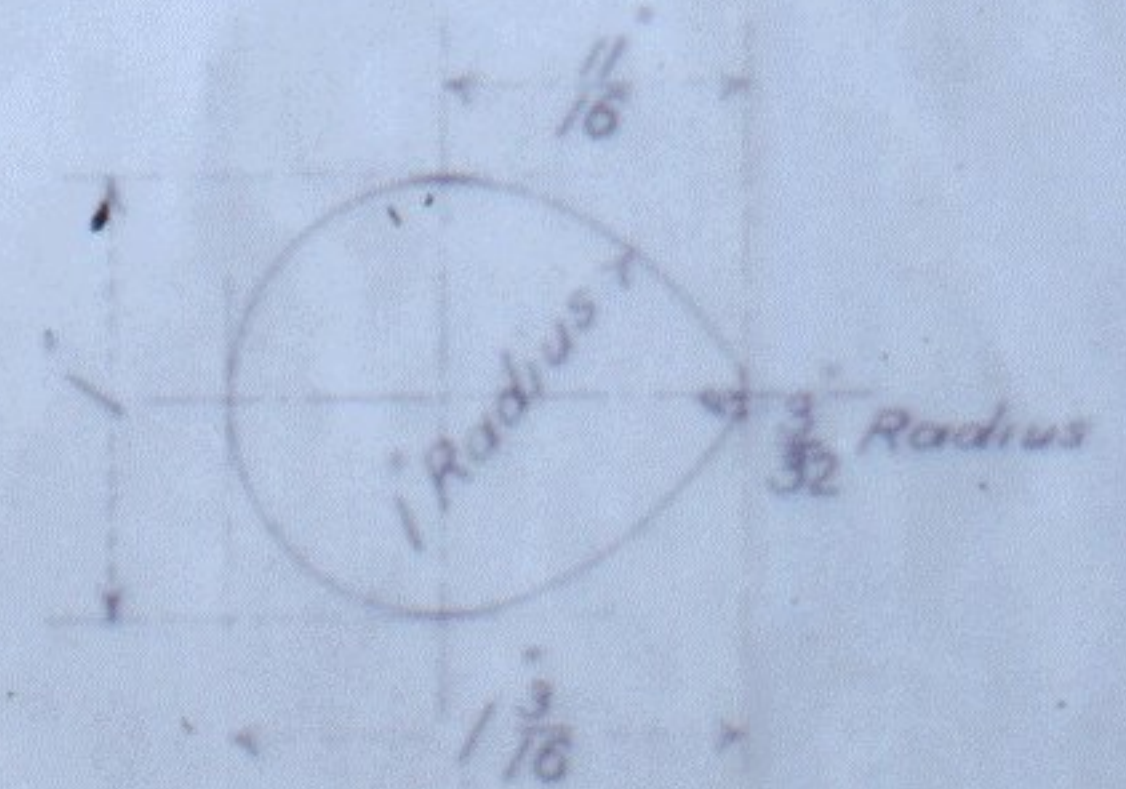
BOLT HOLE THROUGH RAIL.

FULL SIZE.

CHN 21 3 03



SECTION OF RAIL AND FISH PLATE.



BOLT HOLE THROUGH FISH-PLATES.

PLAN No 149

ENGINEERS OFFICE
LANCASHIRE AND YORKSHIRE RAILWAY
MANCHESTER