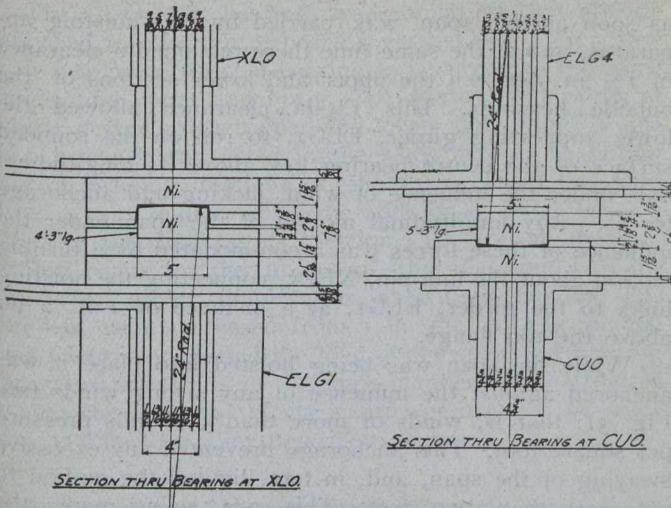

LOAD PER LINEAR INCH ON KEY

	CUO lbs.	XLO lbs.
D	49300	48300
Tor	7900	9800
I	9900	9700
W	500	600
Σ	67600	68400

Fig. 4.—Section Showing Nickel-Steel Bearing Keys at XLO and CUO Joints

the two outside webs of this post at the XLo joint and transmitted to heavy transverse diaphragms in the lower supporting girders, ELG1, through part bearings specially designed to perform the functions described before necessary prior to the floating of the span.

These sections of the bearing, as shown in Fig. 1, were built up under each outside web of the XLo joint by a series of plates of varying thickness and of different materials, confined in a lower cast-steel guide casting, Pattern No. 248A. The upper portion of the bearing, ELG1-B5, or that part bolted to the bottom of the XLo joint, was 3⅜ in. thick, and was made of three plates of material taken from stock and riveted together with countersunk rivets, the thicker plate on the bottom being planed on the edges and the under surface. This upper part was guided between the planed sides of the lower bed casting, and slid, under the action of temperature and deformations of the span, on the top bronze plate of the lower portion of the bearing. The lower portion of the bearing was 4⅝ in. thick, and was made up of a loose-top bronze plate, ELG1-B8, ¾ in. thick, with the upper surface polished and lubricated with paraffin. Beneath this bronze plate was placed two loose steel plates, ELG1-B9 and B7, ⅞ in. and 1 in. thick, respectively, and underneath the steel plates a laminated section of sheet lead, ELG1-B12, 13/16 in. thick, before taking load. This sheet lead flowed under the weight of the span and took care of the change in inclination of the bearing to the horizontal as the span straightened out and the initial camber disappeared, when the dead load of the span was transferred from the intermediate staging supports to the main end bents at L0 and L18. The loose bronze and steel plates were confined transversely in the bed casting, Pattern No. 248A, and were held against longitudinal motion by cast-steel blocks, Pattern No. 249A, which were bolted into each end of the bed casting by three 1-in. dia. through bolts, ELG1-B16.

Three-inch clearance for longitudinal motion on the bronze plate was allowed between the ends of the upper bearing and the cast-steel blocks. The laminated section of sheet lead filling was prevented from squeezing out around the edges of the loose steel plates in the lower casting by a sheet steel retaining collar, ELG1-B13. This sheet lead, which was 13/16-in. thick before taking load, was expected to reduce to an average thickness of ½ in. under the reaction of the span and fill the space between the loose steel plates and the casting. Measurements taken at the four corners of the span after the full reaction had come on the bearings showed that the sheet lead had squeezed down to an average thickness of from ½ in. to ⅝ in.

The span, when it was floated by the barges, carried the lower supporting girder, ELG1 with it, suspended from the XLo joint by the small plate hangers, ELG1-B1. The length, back to back, of pin-holes on these hangers was made such that when the span floated there was a clearance of ⅜ of an inch between the upper and lower

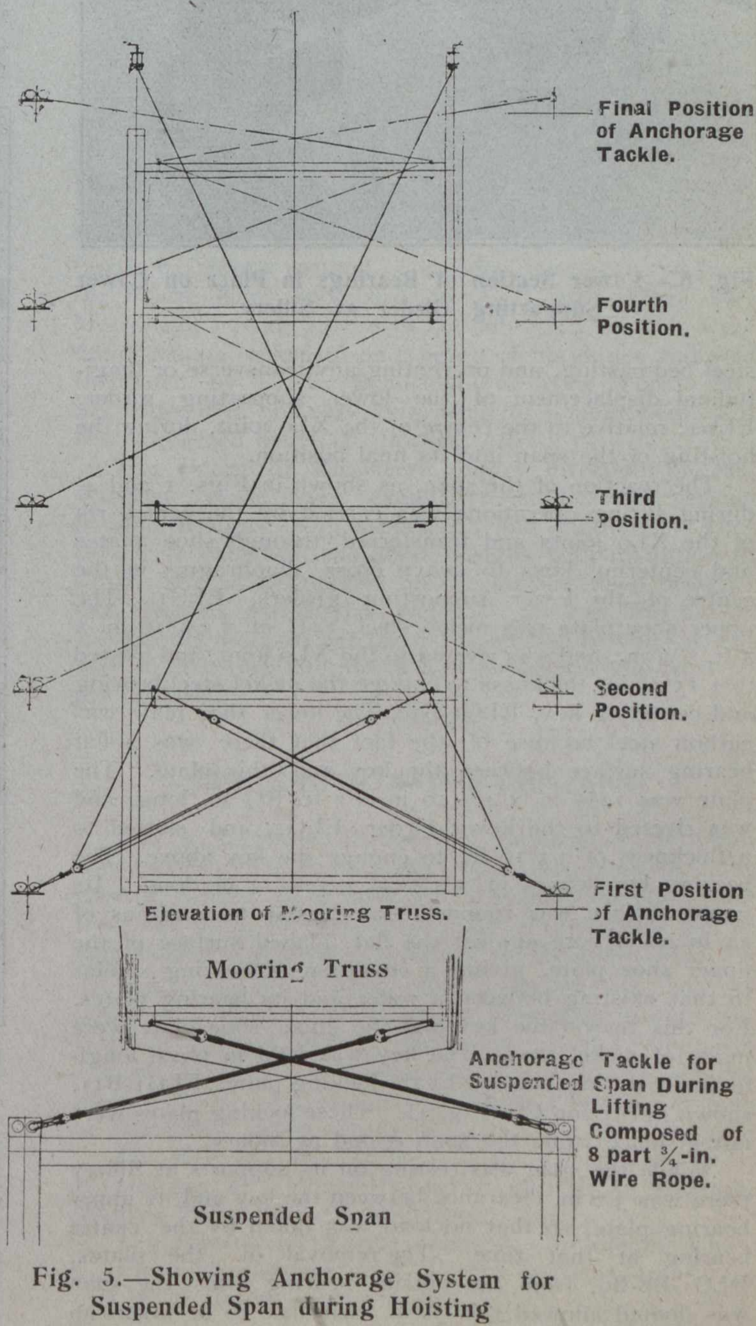

Fig. 5.—Showing Anchorage System for Suspended Span during Hoisting