while portions of bridge material and urgent freight were carried over on the suspension ropes.

The material of the existing bridge, which the new one was to replace on account of increased rolling loads, was removed by means of same booms, gear and tackle as were afterwards employed in launching the new span.

As before mentioned, special end bearings had to be designed to allow provision for displacement by earthquakes. As will be seen in plate, the shoes were of disc form, resting on a number of balls, these in turn resting on bed plates of suitable dished form. This form of bearing was found to work in a very satisfactory manner during earthquake shocks, which gave oscillatory motion at centre of span of about three inches, with no signs of cracks or settlements of abutments or wing walls.

The total weight of the bridge as launched, was about one hundred and twenty tons, thus giving a load on each launching boom of about thirty tons.

Provision was also made for adjusting the rail approaches by the use of four moveable track entrance trussed beams 12″ x 18″ fixed at each end of bridge, one end being strapped and bolted to side of end floor beam, the other end resting on cross beam bearers, skids and wedges for facilitating alignment and levelling up of track entrances into bridge after earthquake shocks or settlement of ground.

The cost of erection and launching, including labour, material and transportation of same, was about $500.00.

The material used in construction of the bridge was steel, the unit stress allowed being about 13,000 pounds per square inch for both tension and compression.

Maximum deflection at centre estimated at 2½ inches.

The main joints of trusses at the centre, as also the gusset plates were rivetted, all other connections being bolted, chiefly on account of lack of skilled labour and with a view to facilitate speedy erection.