

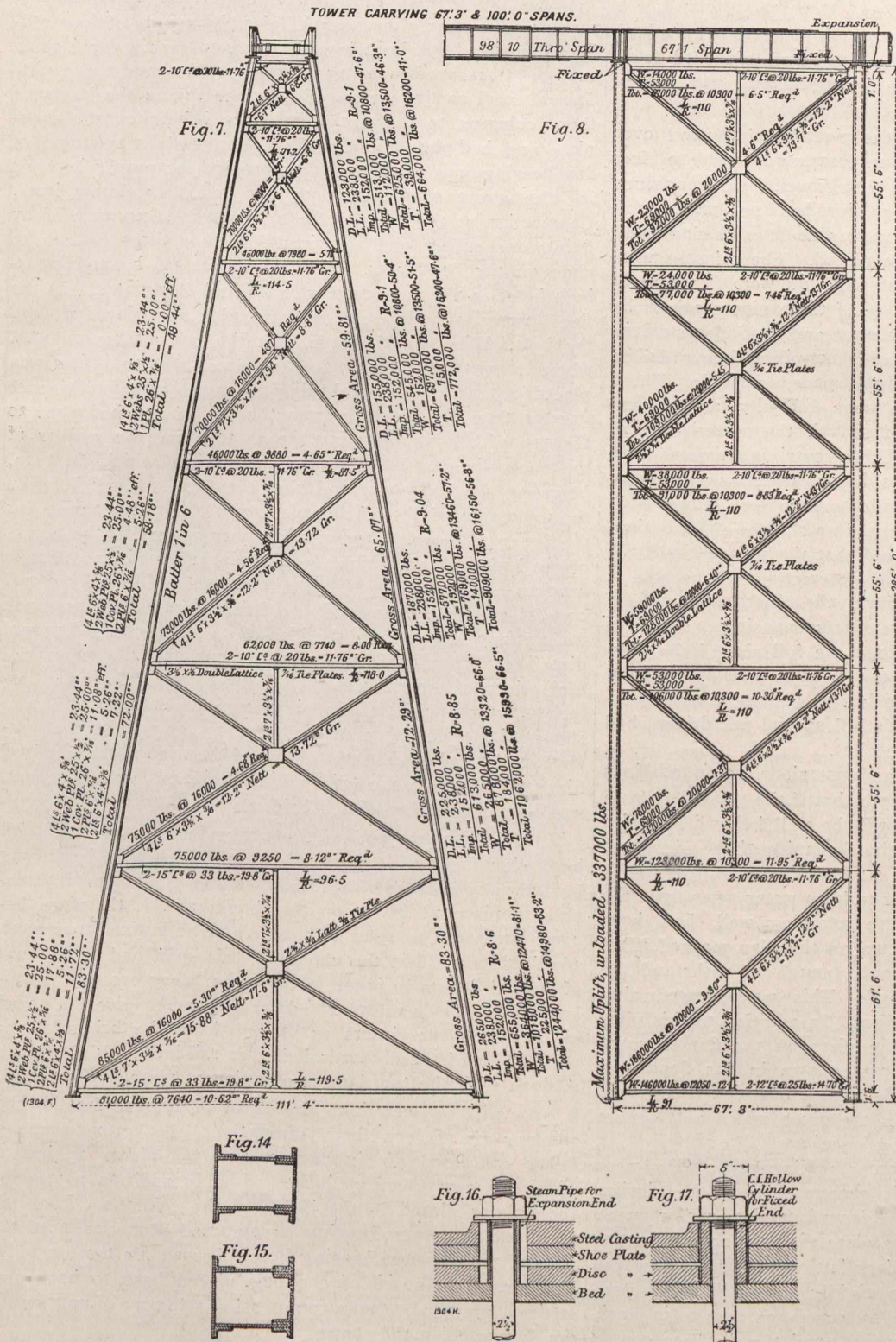
from about 25 feet at bent No. 23 to 150 feet below the surface at the east end of the bridge.

The work of finally laying out the centre line and locating the position of the pedestals for the viaduct was commenced during the first week of December, 1907.

Excavation.—The contract for the excavation and sub-structure of the bridge was awarded to J. Gunn & Sons, of the City of Winnipeg, the work to be completed by March 1, 1908. The excavation work was started in October, 1907, and the concreting was commenced in November, 1907, and

In order to make absolutely sure of the foundations near pier 23 a shaft was sunk to the old mine workings. In the sinking of this shaft we met with a couple of fatalities by men going in and being overcome with the accumulation of gas. They went down to rescue a small boy who was playing in the shaft after being repeatedly warned not to go near the place.

Considerable difficulty was experienced with the river piers, as it was found necessary to go down through the gravel and shale, making it very difficult to get tight coffer-



carried on continuously, being completed in February, 1909.

Before excavation was started borings were made at various points along the bridge site; results of these are shown in the profile which is marked "B" hereto attached. In addition to this several test-pits were sunk and test-piles were driven. These several test-piles consisted of fir piles about 11 inches in diameter, and were driven to a depth of 24 feet to refusal, and were afterwards loaded with a 30-ton load and showed no settlement.

dams. In June, 1908, before the excavation for these piers was completed, there was a flood, during which the water rose to a higher level than had ever been known at this point, being 1 foot higher than previous extreme high water, which occurred in June, 1902. These levels are shown on the profile attached, which is marked C. This high water completely submerged the cofferdam, carrying enough silt to fill them, besides which it carried away some of the contractors' plant, causing delay in the completion of the work.