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Some details from the original static calculation
of the Chain bridge in Budapest – 1842

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ABSTRACT

The Chain Bridge over the River Danube in Budapest is the most famous chain bridge in the world. This bridge is the symbol of Hungary. It was originally built between 1839 and 1849 based to the plans of William Tierney Clark who was also supervising the work. The superstructure was rebuilt in 1914-15. 30 years later, it was destroyed at the end of World War II but rebuilt in 1949. The Chain Bridge still stands today and serves public traffic. The stress-analysis of the first original chain bridge was kept in secret by the designer. Unexpectedly, in the summer of 2022, the original detailed calculation was found in an old library with the handwriting of W. T. Clark. It is a special and unknown technical document. You can follow the steps of the bridge design in it from that time, when the knowledge of dimensioning had barely begun to develop. We present the basics and details of the original calculation, with some comments in light of the possibilities of modern methods.

Keywords: chain bridge, industrial heritage, historical detail calculation, Budapest, Danube.



Figure 1: Chain bridge of Budapest (postcard, Fővárosi Szabó Ervin Könyvtár, bibFSZ01498858)