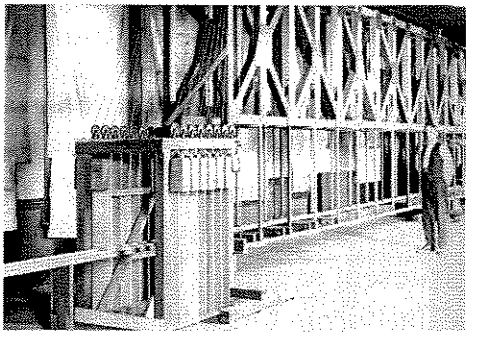
MOVABLE BRIDGE HALL OF FAME PAGE

John Lyle Harrington, Mechanical Master of the Vertical Lift Bridge

A partner of fellow Hall-of-Fame movable bridge engineer, Dr. J.A.L. Waddell, from 1907-1914, John Lyle Harrington actually began his association with Dr. Waddell during his college days at the University of Kansas. After spending two summers as an intern under Waddell prior to his graduation in 1895, the two men kept in close touch thereafter. Harrington compiled and edited a volume of 22 of Waddell's articles on engineering in 1905, while working in Montreal as Chief Engineer and Manager of the Locomotive and Machine Company. During this time he also graduated with a second B.S. plus an M.S. from McGill University.

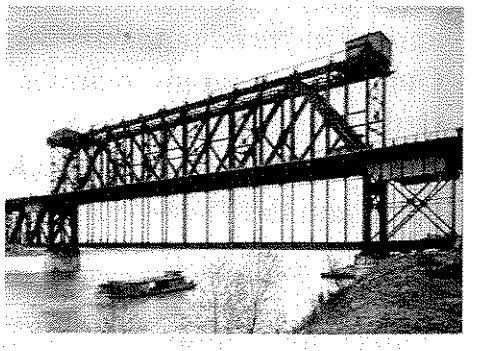


Waddell was responsible for the design of the first modern vertical lift span built at South Halsted Street in Chicago in 1893. However, no vertical lift bridges of this type had been constructed since that time. In particular, the lift mechanism of the Halsted Street Bridge needed significant improvement. John Harrington arrived to take the place of Ira G. Hedrick as Waddell's partner, and provided a catalyst to move forward.

Harrington's work with Dr. Waddell resulted in the following patents, shared between the two:

1909 - Span drive lift bridge. Machinery moves with span. Operating drums lift the span. (Example, below left.)

1910 - Fixed upper deck and lifting lower deck, cam type locking mechanism for posts. (Model shown above and bridge shown below, at right).

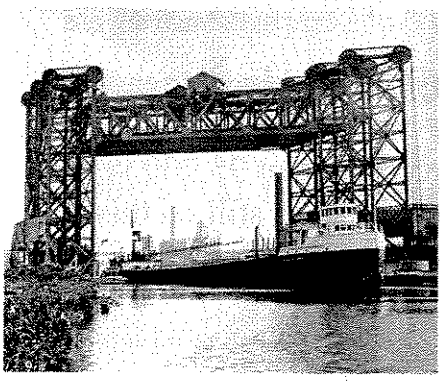


1910 - Tower Drive Lift Bridge, machinery in each tower with endless operating ropes to keep span level, provides rope tensioners, jaw type span locks, solenoid brakes, span guides, manual backup, can operate with only one machinery set.

1913 - Means to carry fluid conduit across a lift bridge on trusses.

As a result of the span drive lift bridge concept, in particular, more confidence was established in the marketplace. The firm of Waddell and Harrington designed approximately two dozen vertical lift bridges during these years as a result.

However, disagreements regarding the continued refinement of the design of this bridge type and the direction of the firm sowed seeds of discontent between Harrington and Waddell. The two engineers parted company, and the firm of Harrington, Howard, and Ash was formed in 1914. Ernest Howard and Henry Tammen were two other Waddell and Harrington engineers who worked closely with Harrington to develop the improved bridge mechanisms (Howard is standing by the model above). Both came away with him as Harrington left Waddell – one initially to become his partner, and the other his chief designer.



Later, a second firm was co-founded by Harrington and Frank Cortelyou, his former principal assistant engineer, when they split from the 1914 partnership in 1928. The names / initials of these three other engineers currently remain as part of the names of the two movable bridge design firms Harrington founded.

During his lifetime, in addition to his other work, John Lyle Harrington served as president of the American Society of Mechanical Engineers (1923), was a member of the American Engineering Council (1926-1932), and was a Presidential Appointee to the Engineers Advisory Board of the Reconstruction Finance Corporation in 1932.

The above is based on information found in *Diversity by Design: Celebrating 75 Years of Howard, Needles, Tammen & Bergendoff - HNTB 1914-1989,* by Kathi Ann Brown.