Innovation & Aesthetic

The chronic complaint of passengers over the bridge who are delayed by the opening of the draw, if roads going through were required to employ tug boats, as in Chicago and other cities, much time would be saved. The innovations only are often occasioned by the opening of them by hand. Bridge design continued to employ new advances: steel, cement, steam, innovative engineering technology, mass production and prefabrication. The rudimentary onshore construction of timber trestles which Samuel Sewall used in constructing the Charles River Bridge was taken to a new level, additionally there was a movement toward aesthetic, which would play out in the twentieth century.

1874 - Canal Bridge rebuilt.
1875 - West Boston Bridge draw rebuilt.
1877 - Bachmann Boston

Quite extensive repairs have been made upon portions of the Charles River Bridge. The draw has been provided with a new under floor, the sides of the water way have been partially planked, the surface of the roadway has been wholly re-planked, and a building, together with the machinery for moving the draw by steam-power, are now in process of erection. The draw foundation continues its sink, and one set of all timber trestles upon wedges which have to be frequently adjusted. The engine and machinery formerly used on the Warren Bridge have been transferred to this bridge. Some modifications of the machinery necessary for it for use on moving this draw, and the arrangement is considered a temporary one as it is supposed that radical changes will be required in the bridge in a short time. The necessity for having at times greater power to move the draw than a horse could furnish, made the application of steam-power unavoidable. The side sidewalks, roadway and sidewalk pavements are now in process of repairs, $3,866.76.

1877 - West End Consolidation Act united all refuse lines into one operation to be known as the West End Street Railway. This led to the creation of one of the largest street railway operations in the United States at that time.

1880 - “As a whole, the bridge at West Boston is a old, narrow and poor. It is no wider than it was in 1834, and the street over it has greatly changed and remained, and is now very large. The draw, built in 1859, is almost reached the first of its frame structure of its admitted.”

1893 - North Union Station opens combining all four railroads terminals at Causeway Street.

1899 - “It is a modern job, a bridge, with double retractile road-draws. They are placed side by side, occupying, with the exception of a 7 feet space between them, the entire width of the main bridge, which is 80 feet. At the draw the roadway of the main bridge is divided into two, each 24 feet 9 inches wide, in the deck, one of which roadways, together with a sidewalk, is continued through.”

Note: Of the eight retractile bridges built by the City before 1901, only two remain: the Summer Street Retractable Bridge over Fort Point Channel and the single-leaf retractile bridge at the other end of Summer Street over the Reserved Channel. Currently, only four of these have been identified in the country.