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The "Chicken Cock" and the Bridge

AT 5:00 P. M. Thursday, May 9, 1861, the packet *Grey Eagle,* bound downstream, approached the draw span of the Rock Island-Davenport bridge. The Mississippi was high, the currents tricky. As was his custom when running the draw, Capt. Daniel Smith Harris was at the wheel. There was no wind, the approach seemed controlled.

Within minutes the disaster was over. Striking the bridge pier on the Illinois side, the packet's hull was crushed and the *Grey Eagle* immediately sank. Three lives were lost. Capt. Harris, his perfect record of navigation shattered, retired to Galena, Illinois.

Harris took with him his beloved "Chicken Cock," a large wooden eagle salvaged from the jack staff of the *Grey Eagle.* Carved in Cincinnati in 1845, the great oak bird had accompanied the Captain with each command; first the *War Eagle,* then the *Senator,* the *Doctor Franklin II,* the *West Newton,* the second *War Eagle,* and finally the *Grey Eagle.*

The "Chicken Cock" remained in Galena until 1919, when Mrs. Irene Harris Gillette, Capt. Harris's daughter, gave it to Capt. Walter Blair. For one year the eagle was on Blair's packet, the *Helen Blair.*

Today, the "Chicken Cock" hangs in the rotunda of the Davenport Public Museum, having survived 112 years of river history: a memorial to Capt. Harris, to the tragedy of the *Grey Eagle,* and to the first bridge across the Mississippi.

The First Railroad Bridge to cross the Mississippi

BY DR. IRA O. NOTHSTEIN

THE COMPLETION of the first railroad bridge across the Mississippi River, between Rock Island, Illinois, and Davenport, Iowa, in 1856, was an event of more than ordinary importance. As an engineering feat, as an important link in the growth of the American railroad system, and because of the questions at law which it brought to the fore, it became an object of national interest. A Chicago newspaper reporter, who spent several weeks in this community while the bridge was under construction, described it in his paper as "a stupendous undertaking," and declared: "it is hardly possible to overestimate the importance of this bridge to the whole country." Its picture was reproduced in magazines, in framed engravings for the decoration of American homes and on innumerable letter heads; and it was often referred to in print as "the famous Rock Island bridge."

The bridge had special significance, since it was a forward step in that epic movement; the spanning of the North American continent by the steam railroad.

Steamboat transportation on the lakes and rivers of the United States had a twenty-year start over that of railroads. It had given a tremendous impetus to the settlement and development of the West and had been fostered in every possible way by the Government. Millions of dollars were invested in steamboats by companies and individuals. River transportation, however, had some very serious limitations. Four months out of each year the lakes and rivers in the northern half of the country were frozen or filled with floating ice, making navigation impossible. During the late summer and fall the rivers were often so low that steamboats could not safely pass. Where the rivers did not flow, the stage coach, the ox team and the prairie schooner served as transportation. These methods were slow and often uncomfortable. Therefore the country needed and welcomed the advent of the railroad; and steamboat transportation had to yield those rights which interfered with progress.

PLANS TO CROSS THE MISSISSIPPI

Transcontinental railroads and the bridging of the Mississippi were advocated long before they became realities. Remarkably enough, the earliest plans all proposed that the Mississippi should be crossed just where the event actually occurred. William C. Redfield, of New York City, published a pamphlet in 1828 advocating the building of a railroad to the far west and located its crossing of the Mississippi at the island of Rock Island. Ambrose C. Fulton of Davenport, Iowa, was taking soundings in the river between the island and Davenport as early as 1843 to locate a suitable route for a railroad bridge, and there were others who had the same dream.

Nature had done her very best to prepare an admirable site for a railroad bridge at this point. The river was as nar-

row as could be found within a hundred miles either way. The banks were rock-bound and above the greatest floods known at that time. The bed of the river was solid limestone and presented no problem for pier foundations, and the approaches on both sides were comparatively easy.

However, when the Chicago and Rock Island Railroad Company applied for its charter to the Illinois legislature in January, 1851, it apparently did not plan to cross the Mississippi. The specified termini were Chicago and Rock Island in Illinois. The company soon changed its mind due to the increasing stream of immigrants from Europe and eastern states, the creation of new farms and villages, and the willingness of eastern wealth to invest in railroad stock. Many stockholders of the Chicago and Rock Island Railroad joined with Iowa citizens to form a company to continue the work previously started by the Davenport and Iowa City Railroad Company (organized Oct. 14, 1850). The new company, known as the Mississippi and Missouri Railroad, was chartered Feb. 22, 1853 to build a railroad from Davenport to Council Bluffs, Iowa. Mr. John A. Dix of New York was elected president. Several directors also were officers for the C. & R. I. Railroad which was already building tracks toward Rock Island. This made a railroad bridge imperative.

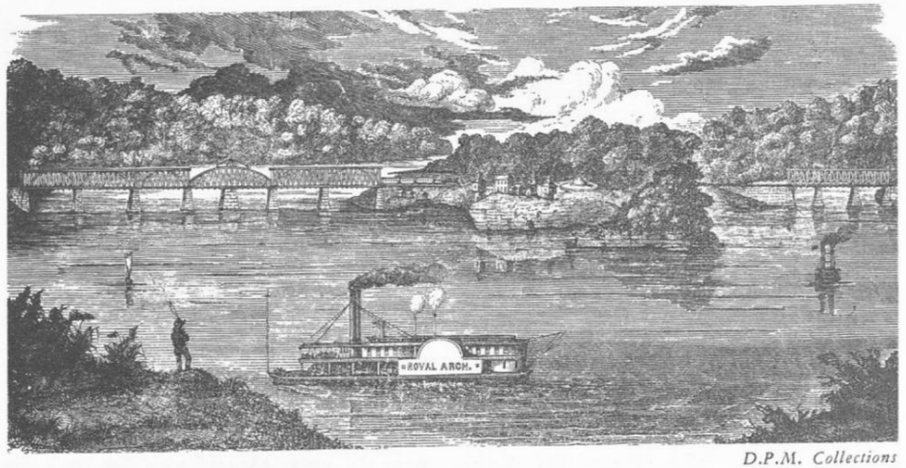
Next a subsidiary company was organized and application filed with the Illinois legislature for authority to build sufficient track and bridges to bring the end of the C. & R. I. Railroad to the Illinois-Iowa boundary at mid-channel of the river. Authority was granted June 17, 1853, with the proviso that the bridge must be so built as "not materially to obstruct" navigation. The incorporators were Joel A. Matteson, Joseph E. Sheffield, Norman B. Judd (Secretary), and Henry Farnam (President and Chief Engineer). The consulting engineer was John B. Jervis and the resident engineer in charge of construction was B. B. Brayton of Davenport. The M. and M. Railroad Company agreed to cooperate in building the bridge and to finance the project. Accordingly, bonds were issued to the amount of $300,000, later increased to $400,000 and finally to $600,000.

THE CONSTRUCTION BEGINS

One important problem remained to be solved — how to secure a "right of way" across the island? This was difficult since the status of the island was not clear. The Government seemed uncertain what it wished to do with the 900 acres, having abandoned the military post in 1836. Then, in 1848 the War Department officially relinquished the island as a military reservation and placed it "at the disposal of the department which had charge of the public lands." On January 7, 1850, President Taylor and Secretary of War Crawford had notified the Commandant at Jefferson Barracks, Mo., that the reservation of Rock Island was to be sold. A public sale of the island was advertised, but on the day of sale, a telegram from the Secretary of War ordered it postponed. No further instructions came from Washington.

On August 4, 1852, an act was passed by Congress authorizing states to grant right of way to railroads and highways through public lands unless held for military purposes.

The Railroad Bridge Company assumed that the island was public land, and proceeded to survey the river and the island to establish the location for the two bridges and the track between them. Plans for the bridges were prepared. These were submitted to the General Land Office with



D.P.M. Collections

Lithograph of the proposed bridge taken from the Architect's design (c. Dec. 1854)

a map of the island showing the location of the track with its unloading platform, water tanks, etc. Application was also filed to preempt sufficient land to accommodate the proposed railroad works. The land office evidently considered the island public land and granted the application early in 1853.

The aforementioned map shows the track leaving the south shore of the south channel (Sylvan Slough) at about 26th Street, Rock Island, and turning in a graceful curve in a north-easterly to northerly direction. On the island, the roadbed approached within a short distance of the quarter section belonging to the Col. George Davenport mansion. There it ran parallel to the Davenport property before curving towards the north shore of the island. The original abutment was just east of the present memorial. (See plate V in Flagler's History of Rock Island Arsenal.) The Iowa shore was attained near what is now the intersection of East 4th and East River Drive, Davenport. At that time this location was still part of Antoine LeClaire's farm. His house, not far from the bridgehead, was later presented by him to the M. and M. Railroad and used for some years as the Davenport depot. Today, this structure may be seen at the Davenport Public Museum.

The bridge company was greatly aided in setting the site by a survey of the river made for the U. S. Government in 1837 by Lieut. Robert E. Lee, Ironically, while the engineers were at work, a steamboat named the *Robert E. Lee,* went on the rocks in the rapids two-thirds of a mile above the bridge, and sank.

As soon as the location of the Davenport end of the bridge had been fixed, the M. and M. Railroad Company began preparations to lay track. An embankment was made to receive the bridge rails at the proper elevation, a portion of which is still standing on the property of the W. G. Block Company. On Thursday, Sept. 1, 1853, ground was broken with considerable celebration. Officials of the railroad company and nearby towns were present. The *Rock Island Republican* reported: "In the presence of an immense crowd Mr. LeClaire personally shoveled some of the earth and the crowd went wild with enthusiasm to see him take off his coat and go to work. The ceremony was performed

amidst the cheers of the people, music from the band, the firing of cannon, and the waving of flags." The celebration ended with a banquet and toasts at the LeClaire House. The C. & R. I. Railroad had, by this time, been completed as far as Bureau, and local papers were predicting that it would reach Rock Island by the end of the year.

The September 28, 1853 issue of the *Rock Island Republican* contained the following item under the heading: GOOD NEWS FOR ROCK ISLAND—"The contract for the Railroad Bridge across the Mississippi River at Rock Island was let to Messrs. John Warner and Co. last week. It is to be completed by December 1, 1854. We understand that a large portion of the work will be done this fall and winter. The location of the bridge, about which there have been so many anxious fears, is just where every Rock Islander desired to have it, and is entirely satisfactory to the whole town. It commences at the depot (20th Street and First Avenue) in the city, and runs to the Island, then to the point by the Davenport place, and across the river to Iowa — The job of grading for the railroad across the Island, has been taken by the Messrs. Reynolds, a sure evidence that the work will be promptly done."

Despite such favorable support, a storm of opposition broke loose among the steamboat owners. St. Louis businessmen took the lead and enlisted financial and moral support from Pittsburgh to St. Paul, to prevent the building of the bridge. The Chamber of Commerce of St. Louis passed a resolution which declared that a bridge over the Mississippi was "unconstitutional, an obstruction to navigation, dangerous, and that it was the duty of every western state, river city and town to take immediate action to prevent the erection of such a structure." A resolution was also passed by the St. Louis city council instructing their mayor to apply to the Supreme Court of the United States for an injunction restraining the building of the bridge.

A new Secretary of War, Jefferson Davis, had been appointed to office. An appeal was sent to him to declare the bridge company a trespasser on the island of Rock Island. Mr. Davis' response was favorable. In the army, he had been on the island at the conclusion of the Black Hawk War and was therefore familiar with the area. Accordingly, he took the position that the Government should retain the reservation for military purposes, and prepared to take measures to secure the removal of the bridge company. The latter, however, being confident that the island was actually public land, continued the work which it had begun, including the clearing of a 100-foot swath through the woods and underbrush which covered that part of the island.

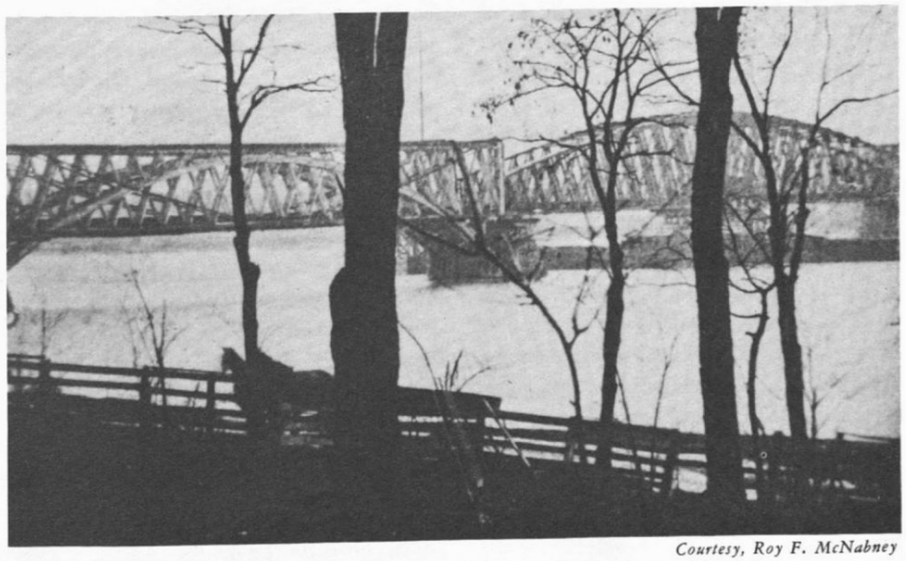
The winter of 1854-55 was mild. The C. & R. I. Railroad, however, failed to reach Rock Island by the end of the year. Track was completed as far as Geneseo by Dec. 19. A month later it reached Moline. On February 22 the first train from Chicago arrived at the freight house in Rock Island. At that time, Sylvan Slough was free of ice and work was already in progress on the bridge between the Rock Island shore and the island. The coffer dams had been completed. The piers were beginning to show above the water.

THE BIG CELEBRATION, AND THE HECTIC YEAR OF 1854

When the first train arrived at Rock Island late in the afternoon of Washington's birthday in 1854, the Tri-City community was prepared to give it a tremendous welcome. Citizens of the surrounding territory lined the right-of-way, filled the near-by streets and such vantage points as windows and roofs. In the assembled crowd were representatives from Rockford, Galena, Dubuque, Iowa City and Muscatine. The train, drawn by a new twenty-ton engine, was "handsomely decorated with flags, evergreens and bouquets, all presenting a very gay appearance." Some 400 invited guests from Chicago and towns along the way were aboard. The waiting crowd at the freight house on 20th Street shouted wildly and waved flags. The band played and cannon roared a joyous welcome. That evening there was a grand illumination on both sides of the river by means of lights in business houses and residences and from many bonfires. Open house with free lunches was held in Rock Island's largest hotel and a grand ball was held at Davenport's largest auditorium. The out-of-town guests were given free lodging for the night in hotels and private homes throughout the three cities.

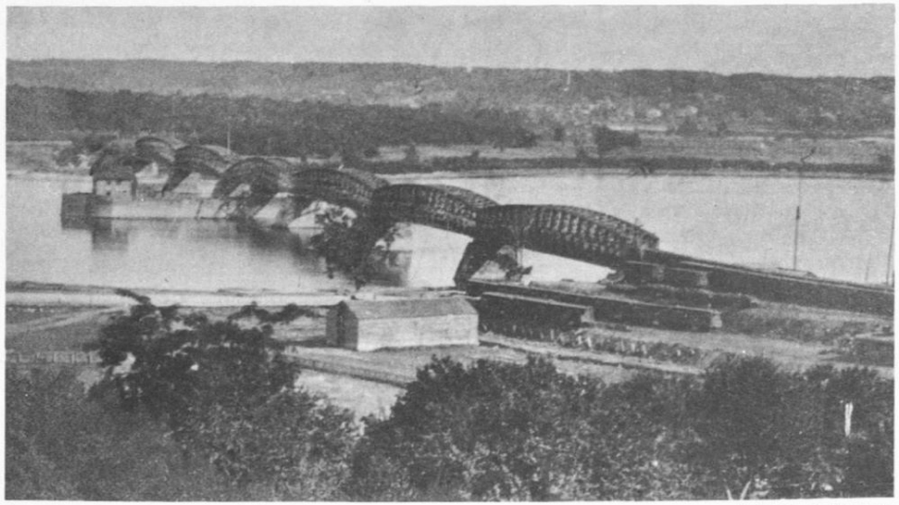
The outside world had suddenly become a next-door neighbor because of the telegraph line that had come with the railroad. Each issue of the local papers now contained the latest news about the war in Europe, the opening of Japan to American trade, the laying of the trans-Atlantic cable, a proposed polar expedition, movements to annex the Sandwich Islands, Cuba and the Galapagos Islands. America's internal problems became the problems of all, — slavery, immigration, disasters, epidemics and floods. No longer could life be lived in quiet retirement even in remote western settlements.

With the railroad also came prosperity for the Tri-Cities. The population grew by leaps and bounds. Business, manufacturing, the building of houses, the introduction of luxuries, all increased at an undreamed of rate. That year saw the new "public school" system, the introduction of gas-lighting, daily papers, fire departments, ladies' seminaries, a college, the Y.M.C.A., military organizations, new and larger ferry boats, etc. The citizens



Courtesy, Roy F. McNabney

The original bridge structure with suspension chains (1860)



D.P.M. Collections

View from Antoine LeClaire's orchard of modified bridge (c. 1865)

took time to attend concerts, panoramas, lectures, hold political rallies, enlarge their churches, go on river excursions, hold Fourth-of-July celebrations, picnics, county fairs; and strangest of all — to stage a public hanging of a wife-murderer, which was probably the last ever held in this part of the country and which attracted a crowd of six thousand fascinated onlookers from far and near.

Nature alone seemed to be out of harmony with the new prosperity. The summer opened with an unprecendented drought lasting six weeks. Then came a cyclonic storm that unroofed houses, toppled chimneys, uprooted shade trees and worked other havoc. The Asiatic cholera broke out with unusual fury and hundreds died. Fear was felt that in addition to this, the severe yellow fever epidemic raging in the South might be carried North on the steamboats. These were only a few of the worries that clouded the summer.

This was the back-drop against which the building of the bridge continued. By the time June arrived, the stone abutments on both sides of the island were finished and the grading of the roadbed between them was practically completed. Two stone piers in the south channel were also finished. On the first Monday in June, the "big excursion" of eastern capitalists and prominent men, such as ex-president Filmore, Governor Matteson, Charles A. Dana, Thurlow Weed and nearly a thousand more invited persons, stopped off in Rock Island. They were taken for an evening ride on the river, saw a spectacular illumination of the old fort, and had opportunity to see what progress had been made on the construction of the bridge. The abutment on the Iowa shore was just beginning to be visible above its foundation.

On July 14 the blow fell which threatened to ruin the whole project. On that day Major Sibley and two U. S. Marshals from Washington arrived on behalf of the Secretary of War and notified the contractors to stop work on the project and to remove all their buildings and other property from the island within fifteen days. Work ceased at once and

Mr. Farnam left immediately for Washington to see what could be done to extend the time for removal or to have the decision of the War Department reversed. He was evidently successful to some extent and work was resumed. The coffer dams for the piers in the main channel were begun, and by the end of August the first one on the island side was finished. On September 1, Mr. John Warner, the bridge contractor, took a large company of representative citizens from the Tri-Cities out to the completed coffer dam in his steamboat, *Lightfoot,* to witness the laying of the first stone for the first pier. Shortly after 10 a. m. a very large stone was slowly lowered to the floor of the dam amid the cheers of the assembled guests. A meeting was then called on the deck of the boat, resolutions were adopted expressing approval of the progress, and deploring the antagonism which had developed toward the project. After numerous speeches from the guests "a bountiful collation was served to the company." All through the fall the work on the piers proceeded at a rapid rate, and early in the spring of 1855 it was resumed.

The rock from the island could not be used for masonry on the piers, so the stone was brought from quarries in Greenbush and LeClaire. Each of the five massive piers was seven feet wide at the top and sixteen feet on the river bottom, thirty-five feet in length at the top and fifty feet at the bottom. The upstream ends of the piers were finished with sharp edges to cut the ice. The height of the five regular piers was thirty feet above low water. The draw pier, located 620 feet from the island shore, was round and measured thirty-two feet in diameter at the top. It was about ten feet lower than the other piers, and was protected by a crib forty feet wide and 350 feet long. The extreme upstream end was tapered and protected with boiler iron. Two buildings besides the turntable occupied the top of the filled-in crib. On the east end a two-story brick house was built for the bridge superintendent and other personnel in charge of the draw. On the west end a frame building was erected for use as a storage house. The channels on each side of the draw pier were 120 feet wide or twice as wide as the opening in the rocks of the rapids above.

RESTRICTIONS ARE REMOVED

The War Department realizing that it could not gain its point by employing force, succeeded in persuading the Government to sue the bridge company as a trespasser on the island and as the builder of an obstruction to navigation. However, as no temporary injunction was issued, the work on the piers continued in the hope that the trial would prove the legality of the company's charter. This hope was fortunately fulfilled. The case was heard by Judge McLean of the United States Supreme Court in Chicago July, 1855, when numerous witnesses on both sides were heard and questioned. The judge ruled, in substance, that no injunction could be granted because: first, the charter of the company was legal, because the Government's claim that the island was still a military reservation rested on a mere technicality; second, the bridges and track over the island would be to the Government's advantage if an arsenal were to be constructed; and third, the bridge over the main channel of the river would not be an obstruction to navigation in the sense implied in the charge.

Meanwhile work was progressing on the M. and M. Railroad, but a locomotive was now needed to haul materials. On July 19 an engine, the *LeClaire,* was fer-

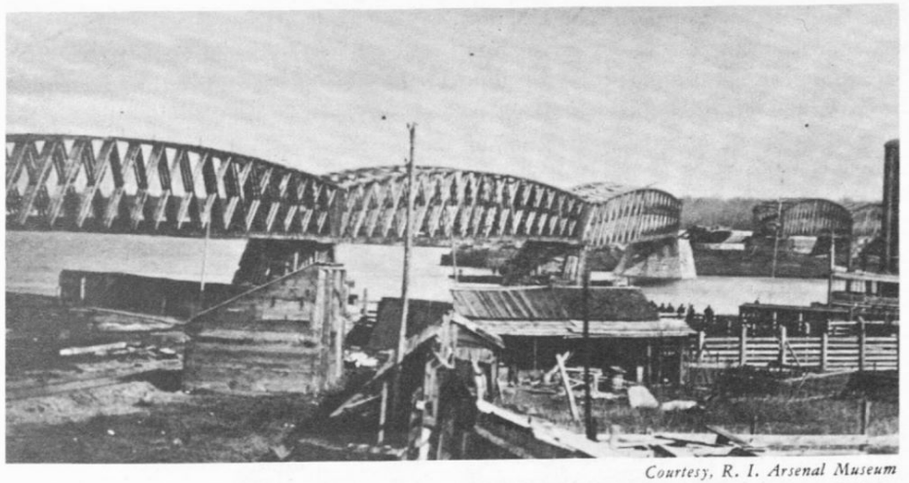
ried across the river from Rock Island, and was taken on a temporary track to the beginning of the line at the bridge head. Either on that day or the next it made its maiden run on the new railroad, a distance of two and one-half miles. Construction proceeded rapidly. On November 20 the first train had reached Muscatine, and on December 31, the road west was finished as far as Iowa City.

The piers of the bridge in the main channel were completed late in the fall of 1855. Preparations for adding the superstructure were already going on. The contract had been awarded to the firm of Stone and Boomer of Chicago. This company, which controlled the patent-rights to the Howe truss-type bridge, was composed of well-known and experienced men, and had previously built railroad bridges for Messrs. Farnam and Jervis.

The pine and oak timber for the great structure was brought from Wisconsin and Michigan; and after the logs had been cut into stringers, each piece was carefully planed to size.

Briefly stated, the Howe truss-type bridge was constructed as follows: Each span had two straight chords on each side. The lower chords were fifteen inches deep and thirty-four inches wide; the top chords twelve inches deep and thirty-four inches wide, both chords consisting of four sticks of timber bolted together. On each span there were four arches (one on each side of the two chords) ten inches thick and thirty-two inches deep. They rested on the piers thirteen feet below the floor of the bridge and rose at the center to the under side of the top chords. Twenty-two heavy timber braces, built like a narrow X, were placed on each side to keep the chords apart. The ends of these timbers rested against heavy iron plates; and two and one-half inch iron rods held the top and bottom chords to the braces. The draw span, contrary to the architect's plan, was built with its top chords formed into two long arches. The original plans also showed a wooden roof covering the whole length of the bridge. This, however, was omitted. Each of the five spans over the main channel was 250 feet long, and the draw span was 286 feet long — the longest in the United States. Over the south channel there were three fixed spans each 150 feet long. Here there was no draw span because that channel was closed to navigation by a dam at its head. Both spans and piers on this side were of somewhat lighter construction.

The wood construction was put up after the ice had formed in the river, so that the false work could be erected on the ice. The first attempt was a failure, for during a thaw the ice moved out, carrying the scaffolding away. Nature soon cooperated, however, and a cold wave produced ice of unusual thickness and stability. On January 20, 1856 the thermometer registered 26° below zero in the Tri-Cities. The M. and M. Railroad, needing another locomotive, had the *John Dix* hauled over the river ice by ox team on February 16. By February 28 the last span of the bridge was in place and work was concentrated on the draw span. The woodwork of the whole structure was then given two coats of white paint; the single track was laid, and on April 21 the last detail was completed. About five o'clock that afternoon the first locomotive, the *Fort Des Moines,* crossed the new structure. The tender was occupied by a number of workmen from the bridge crew. About nine o'clock the same evening, engine "No. 2" took over ten heavily loaded freight cars destined for Iowa



Courtesy, R. I. Arsenal Museum

View of the modified bridge after damage by ice and windstorm (spring, 1868)

City. The next morning the first passenger train crossed the bridge to connect with the train for Iowa City. Prominent citizens of the area had consulted with the officials of the company in regard to arranging a huge celebration of the opening, but the company was not in favor of such a demonstration. Nevertheless, when the first passenger train went across, crowds of people stood along the line and cheered heartily while: "the church bells of the Twin-cities rang out their joyous notes in honor of the achievement." A delegation of about fifty Sauk and Fox Indians were encamped at the time near the home of Mr. LeClaire. No one has recorded for us what they thought or said about the momentous event. After three years of labor, of alternating hopes and fears, of disappointments and triumphs, the great bridge was at last finished and in service.

SERVICE AND HONORABLE DISCHARGE

At five o'clock on the morning of May 6, 1856, the steamer, *Effie Afton,* on her maiden trip up the river, left the Rock Island levee to continue her journey to St. Paul. In moving out into the stream she collided with a ferry boat and suffered some slight damage. She seemed to be in a hurry to get to the draw of the bridge, for she put on extra speed and passed another boat which was heading for the same place. When she was almost through the draw, her bow swung around above the pier on her right. There she stopped, apparently unable to free herself. Other boats came up and took off the passengers, baggage and crew. After a while, fire started in the galley of the boat and soon spread to the wooden span above. Later she drifted down stream in flames. The steamboats tied up at the levee blew their whistles and many persons on shore watching the burning bridge shouted and clapped their hands. Was it an accident? No one really knows. The steamboat company sued the bridge company for damages and for obstructing navigation. The witnesses told conflicting stories; but the jury brought in a verdict in favor of the bridge company. Abraham Lincoln was the leading attorney for the bridge company; and the credit for obtaining the favorable verdict is generally

attributed to his masterly conduct of the case. In connection with his preparation for representing the bridge company, Lincoln visited the site of the accident to acquaint himself with the construction of the draw, the depth of the channel, and the strength and direction of the currents. This is revealed in correspondence with Lincoln, preserved in the files of the C. & R. I. Railroad Company.

The *Effie Afton* was not the last steamboat to strike the bridge. Until pilots and raftsmen learned the extra skill necessary to avoid contact, quite a few accidents occurred during the first two years. Resentment against the company continued. Slowly, however, sentiment changed. Other bridges were built along the Ohio and the Mississippi, and soon they were accepted as belonging properly to the American scene.

With the passage of time, the original bridge was modified. Only four years after it was completed, railroad traffic had so increased and the weight of engines and trains had become so much greater, that it became necessary to strengthen the spans by adding to each of them four heavy chains, two on each side. These were attached to the ends of the top chords and to the middle of the bottom chords, thus making use of the suspension principle. Even this was not sufficient to meet the increasing strain of heavier traffic. A few years later the spans were completely rebuilt, adding to their strength immensely. The old arches were discarded and the straight upper chords were replaced by arched chords. All this was accomplished without scaffolding or interruption of traffic. The new spans were built over and outside of the old ones which were then removed from the inside.

In the spring of 1868 the bridge suffered its worst disaster. As the ice broke up an ice jam formed above the bridge, and the river rose to flood stage. As a result, two of the piers on the Davenport side were badly damaged and two of the spans were pushed to the ends of the piers. Before this damage could be repaired a freak windstorm struck the draw span while it was partly open, broke it in half and dropped it in the river. This damage is visible in the picture on page 9. With characteristic energy the company set things in order again in a few months. Meanwhile passengers were transferred from the island to Davenport and vice versa by building temporary tracks enabling trains to run down to the shores and be loaded and unloaded directly from a special ferry boat.

For ten years the Rock Island bridge served faithfully in the interests of the general public and of the United States Government, the latter being happy to have it when in 1863 it decided to build on the island a prison for Confederate soldiers, and later an arsenal. In 1866, however, the Government proposed to the Bridge Company that the bridge location be changed to the site now occupied by the Government Bridge, that the cost be shared between them, and that the railroad be granted a permanent right-of-way over the island. The new iron bridge went into service in 1873, and the old one was taken down and became a historic memory.

Dr. Ira O. Nothstein served as Librarian and Archivist of Augustana College from 1917 to 1952. Now a Professor Emeritus of the college, he devotes much time to research and writing, particularly in the field of history. He is the author or editor of many books and articles, including a History of Rock Island Arsenal, published by the Illinois State Historical Society in 1937.