

Bridging the Cedar

Walk up South Street from Battery Park in New York City late some summer evening and look straight ahead. Brooklyn Bridge, a gigantic cobweb dotted with points of light, is before you. Along the arched steel span of the cobweb drift the white lights of passing cars while the red and green lights of river craft float mistily beneath. There it stands — in its day the wonder of the world, and still, after forty years of service, a monument to the constructive genius of man.

Thirty-two years before the famous Brooklyn Bridge was opened for traffic, a suspension bridge very similar in appearance to the marvelous structure spanning the East River was constructed over the Cedar River in Iowa. But the history of the Cedar River Suspension Bridge is a far different story.

The year 1850 found Muscatine a growing river town of 2540 inhabitants, awake to its advantages as a distributing center for the inland trade. Long newspaper articles proclaimed the necessity of building graded plank roads over which much of the produce of central Iowa would find its way to market. Projects such as these, it was thought, could not fail to pay big dividends — perhaps twenty cents on each dollar subscribed. To the enthusiastic

boosters for Muscatine, the broad Cedar River about ten miles to the west afforded no serious obstacle to their plans for trade expansion. It should be bridged.

Accordingly, during the summer of 1850, arrangements were made with N. L. Milburn, an inventor and contractor from Paducah, Kentucky, to erect his patented suspension bridge over the Cedar. This structure was supposed to be much more durable than the Remington arch bridge. Both Mr. Milburn and his bridge were recommended to other communities by Muscatine enthusiasts.

To finance the project, the Muscatine, Washington, and Oskaloosa Road and Bridge Company was organized. The name elicited from a local editor the remark, "what a long tail our cat's got". Stock was sold without difficulty through personal solicitation to business men, townspeople, and farmers. The stockholders elected a board of directors and Joseph Bennett, one of the principal shareholders and an energetic supporter of the project, became president of the company. So completely did Mr. Milburn gain the confidence of the directors in his integrity and in the merits of his plan that he was not required to furnish bond but was urged to proceed with the construction of the bridge with all possible dispatch.

Material for the structure was brought up the Mississippi River on the small steamer *General Bem*, thence up the Iowa River to its juncture with the Cedar, and then up the latter stream to the spot

designated for the erection of the bridge — a place nine or ten miles west of Muscatine. At this point the timbers and lumber were unloaded and, early in the autumn of 1850, Milburn and his crew began work. The eager stockholders and merchants looked forward to the early completion of the structure.

There were some citizens in Muscatine, however, who had doubts about the success of the project and did not share the optimism of the directors. In fact, certain critics were outspoken in their opposition to the type of bridge being built. Common sense principles of construction should be used, they argued, instead of the new-fangled idea of a suspension bridge. Others objected to the site of the new structure. It was a big mistake, in their judgment, to put the bridge any place above the junction of the Iowa and Cedar rivers. But the stockholders and directors of the company were indifferent to these criticisms, and the work of construction continued.

The *Iowa Democratic Enquirer* for October 19, 1850, published an item of news which was welcome to both the tradesmen of Muscatine and to the farmers living west of the town. "FARMERS, AHOY! BRIDGE!" The item read, "We are pleased to announce that a strong safe temporary bridge has been thrown across the Cedar by Mr. Milburn at the point of the Suspension Bridge and until the latter is completed, over which the farmers of that region are already bringing their produce. Come on. Market is brisk and prices high. Try us."

Another item in the same issue announced that the "temporary bridge over Cedar at the site of the Suspension Bridge is strong and safe, and being on a level with the shore is very easy crossing. We were on the ground Thursday last and were struck with the energy with which Mr. Milburn pushes forward the work. Mr. M. is determined to make a good bridge a 'model bridge', even if he loses by the contract."

Throughout the autumn, work on the bridge continued and a visitor to the scene of construction in December, 1850, reported, "The work is in a forward condition and going ahead with all dispatch compatible with its perfect combination of strength and durability. It now presents a most imposing view, and one of great interest. All were pleased with the appearance of the work. . . . Mr. Milburn by his polite explanations, convinced us of the merit of his plan."

Expenses of construction mounted, however, and soon exceeded the original estimate so that in January, 1851, perturbed stockholders of the Muscatine, Washington and Oskaloosa Road and Bridge Company held a meeting to determine what should be done. It was disclosed at this meeting that \$10,000 had already been spent, that a debt of \$4500 in addition had been incurred, and that \$2500 more had to be raised to prevent the company from losing all that had been invested. A spirited discussion ensued. Finally, resolutions were passed to issue

preferred stock certificates in sums not less than five dollars, these shares to bear interest at ten per cent payable semi-annually. Principal and interest of this loan were to be paid out of the first tolls collected and the bridge itself was to be pledged as security for the loan. The stockholders of the company were to be given ten days to advance this additional \$2500, which amounted to twenty per cent of the total stock already subscribed. After ten days any unsold stock was to be offered to the public. The editor of the *Enquirer* hoped that the stockholders themselves would raise the necessary sum. "Walk up gentlemen", he urged. Although the majority of the stockholders had subscribed all that they felt able to give, the danger of losing the amount already invested and the hope of rich returns from tolls led them to furnish the required \$2500. The crisis was met and construction continued.

Late in January, 1851, the stability of the new bridge was subjected to a severe test. Shortly after the trestle work was joined in the center, but before it was made secure by hogchains and bolts, a high wind blowing upstream carried away the scaffolding below and left the center span without support. Although the unsupported section deflected twelve to twenty inches upstream before the wind, not an inch did it give downward. The rest of the work stood firm and unmoved. Although the windstorm caused about forty dollars damage the company felt that

the successful test of the stability of the bridge was worth twice that amount. Thereafter the bridge stood unsupported, without staging or props.

Other towns began to notice the new structure and newspapers made favorable comments. The Burlington *Hawk-Eye* remarked, "The Muscatine folks have flung an arch of 600 feet span across Cedar River. The trestle work is said to be beautiful, and the bridge is to be one of the handsomest and the most substantial in the Union. Travellers from about pronounce the new bridge the most magnificent structure of the kind they ever beheld."

Indeed, the bridge was, in appearance, all that its admirers claimed. On each bank stood two high square towers reaching ninety feet above the surface of the river. These towers were five feet square, each side being the width of four logs which had been squared and bolted one to another with big iron bolts. The logs, perhaps twenty feet long and over a foot square, were of tough, hewn oak and were placed end to end, jointed at the middle of the adjoining log. The bases of these towering piers were sunk in the ground on the banks almost as deep as the bed of the river but no stone was used in the foundation to make them more secure. Between each pair of towers extended heavy, six by six inch cross braces high enough above the road so as not to interfere with travel. Heavy wire cables supported the driveway of the bridge, which was twenty-one feet wide at the piers and narrowed to twelve feet

in the middle. The driveway spanned the river in a graceful arch, high enough in the center to allow the small steamboats to pass under. The wire cables came together in bundles at the top of the square towers then extended downward toward each bank and were fastened to logs buried several feet in the ground as anchors. Long approaches on trestle work sloped up to the twin towers on either side, joining the driveway at a point fifteen feet above the bank of the river. On each side of the long approaches was a plain wooden railing while an ornamental railing of wooden cross-pieces extended along the sides of the high arched driveway. Including the approaches, the total length of the structure was said to be twenty-one hundred feet and the span between the piers was six hundred and fifty-seven feet. All who saw the bridge praised the beauty of its design and marvelled at its strength.

By April 3, 1851, the work was so nearly finished that the president of the company, Joseph Bennett, rode across on horseback, the first man to cross in that fashion, but he had to turn back without landing on the west bank of the river because of the uncompleted condition of the approach.

During the night of April fourth, twenty-four hours after Bennett's triumphal ride on the bridge, a terrific storm of rain and wind swept down the Cedar Valley. Lightning revealed the swaying, swishing branches of trees. Suddenly, there came a heavy rumble, a ripping, wrenching crash, and the Cedar

River Suspension Bridge, the pride of Muscatine and the envy of other river towns, fell with a tremendous splash into the swirling waters below. The long arched span first parted in the center, then each half swinging around before the wind pulled the towers from their fastenings in the earth. The hogchains held firm and the whole structure tumbled into the river.

Great was the consternation among the stockholders when the news reached them. What was to be done? Milburn, it seems, confident that his task on the Cedar was drawing to successful completion, had gone to Keosauqua to begin work on another bridge. The *Iowa Democratic Enquirer* aired its views on the subject in the following item: "Our citizens were startled from their propriety on Saturday last by the news of the fall of the Suspension Bridge over Cedar River. It was like a shower on a stand up shirt collar to their hopes and calculations. The thermometer of public spirit stood at a low figure, and many feared that no degree of enthusiasm for any future project, could raise the mercury of individual liberality to the giving point. But subsequently upon a calm view of the calamity, it has lost more than half its horrors — though it is still regarded as a great triumph by that class of mushroom prophets, — 'birds of ill omen' — who, after every disaster, cock up their eyes, and with a toss of the head side-wise exclaim, 'ah, ha, I told you so!' The sensible view of the subject is that it's down, and can't be

helped — it must Go UP AGAIN, stronger and better, and that is a fact. The individual who supposes or teaches that Muscatine cannot recover from the loss of \$15,000 in a bridge, or that such a loss will discourage the public spirit of an intelligent community, should be tapped for the ‘simples’— and the man who has any interest in the city, and will now lay his hand on his pocket, and declare that ‘they’ve got the last cent they’ll get from me!’ should go straight to Bevard and order a pork barrel, that he may be headed up in it — he can receive all the food, air and light he needs through the bung hole.”

Following this outburst against the calamity howlers the editor proceeded to describe the appearance of the wreck. The timbers of the towers were shivered somewhat and the ornamental trestle work of the arched span was smashed in some places, but for the most part the structure was but little broken. Although nearly two-thirds of the plank flooring had floated down the river most of it was caught and landed at various points below. The inclined approaches at each end were uninjured. The disaster proved, thought the writer, that the bridge was strong enough to resist any amount of perpendicular weight but that it needed some lateral support to hold it against high winds.

The editor argued that it would do no good to grumble about the errors of the builder or to complain about the carelessness of the directors in not requiring him to give bond. “The bridge must be re-

erected and made to stand," he insisted. "We have the material for which our money has been paid,—the timbers are ready to be again put together. What has been done has cost \$15,000. From three to five thousand more will make it right and secure against the loss of the whole amount invested and last, though not least, the bridge is necessary for the prosperity of Muscatine and when completed as it should be will pay a handsome dividend to the stockholders. Those who think the means cannot be had should learn that it will not do to estimate other men's good sense and liberality by their own. The sum necessary can and will be forthcoming—a gentleman who lives beyond the bridge and has now no stock, declared on the ground Sunday, that he was ready to subscribe to put it up again. We heard one citizen in town who has no stock, say yesterday that he was ready to subscribe, and one other who has five shares, that he was ready to take four more. The money can and must be raised—if not one way it must be another—the bridge must and will go up—go up on common sense principles and under bonds from the contractor. The City of Muscatine is able to build a dozen such bridges, and this misfortune will only call forth her energies. We hope the directors will take the necessary steps to raise the means to put the bridge up as it ought to be. It won't do to stand still now."

Spirited discussion marked the meeting of the directors of the bridge company following the dis-

aster. The sentiment expressed by the editor prevailed, however. The board resolved that the bridge should be repaired and, as soon as they could hear from Milburn as to what he would and could do in the matter, they proposed to push the work forward rapidly.

Long articles from stockholders in the bridge company and others interested in the project appeared in the *Iowa Democratic Enquirer*. "The bridge on the upper route is down," wrote one enraged shareholder. "We should bridge the Iowa below the mouth of the Cedar. About \$20,000 will build a good bridge. None of your Milburn bridges."

Another contributor, signing his name "Muscatine", was moved to remark, "The bridge has fallen; and with it has fallen the countenances of all who were interested in its successful completion. This is a great calamity which falls heaviest upon the directors of the bridge company. Many are heaping odium upon them for not having Mr. Milburn under bonds, so that in the event of the bridge proving a failure, as it has, the stockholders would suffer no loss. But this is no time to curse the fruits of the indiscreet or fall into sulky melancholy and refuse to go forward with the improvements necessary for the good of our town. This misfortune should only incite us to greater caution and renewed energy and determination in going forward with this work. Now is the time to form a new bridge company and build a bridge on good common sense principles

below the forks of the Cedar and Iowa where the bridge should have been built in the first place.”

One of the stockholders felt that any rational being might have known that such a heavy structure could not stand without better support. He recommended that if the present company did not choose to rebuild the bridge, they should hand it over to the mayor and city council of Muscatine who with the assistance of the marshal might make it stand by the force of a city ordinance. Then in a more serious vein he admitted that all the money of Muscatine had not gone down the Cedar River and that he for one was willing to re-subscribe for as much stock as he had originally.

What did Milburn propose to do? News of his opinions and plans was eagerly sought. Late in April, word came from him that he would return to Muscatine in a short time to restore the bridge. He expressed his conviction that it could be reërected and rendered durable and secure. This information raised the hopes of the directors who forthwith dispatched a special messenger to confer with him at Keosauqua.

A few days later, however, came the disturbing news that Milburn would not return to reërect the bridge. He was reported to have said that his contract at Keosauqua prevented his leaving there and, moreover, that he had lost confidence in the suspension type of bridge for the Cedar River, on account of the length of the span and its location.

This report was a sad blow to every shareholder. What should be done? Some proposed that a bridge should be built from trestle work to trestle work, supported by strong abutments with a pier in the river and a draw section over the channel. Others favored the suspension type of bridge and wished to proceed with the replacement of the fallen span. Still others wanted to sell or assign the stock to a company which would guarantee to erect the bridge. They believed that the lure of fifteen or twenty per cent in tolls would attract a reputable company if the stockholders would agree to sell. No agreement could be reached.

Later in the month of May the report reached Muscatine that Milburn had changed his mind and that, if the directors would support him, he would raise the bridge and make it a permanent structure. Again hopes mounted, and confidence was nearly restored when Milburn further asserted that the bridge could again be placed upon its abutments at small expense and could be made secure against storms by means of suitable lateral fastenings.

Milburn did return to Muscatine toward the middle of June, 1851, considerably nettled by newspaper criticism of his conduct as a contractor. He threatened to hold the editor of the *Iowa Democratic Enquirer* personally responsible, but the editor advised him not to let his angry passions rise and refused to retract any of his statements. After a few days Milburn left Muscatine, promising to return soon

and make definite arrangements for the reërection of the bridge.

Apparently he never returned. The wreck was finally sold late in the autumn of 1851 to Joseph Bennett who planned to rebuild the structure during the coming spring. In the meantime, however, railroads became the all-absorbing topic and attention was focused on the project of securing a line through Muscatine to Oskaloosa. The Cedar River Suspension Bridge was forgotten, but for many years its rotting timbers and rusting cables remained — mute monuments to the soaring ambitions of Muscatine merchants and the wrecked hopes of the farmers to the west.

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