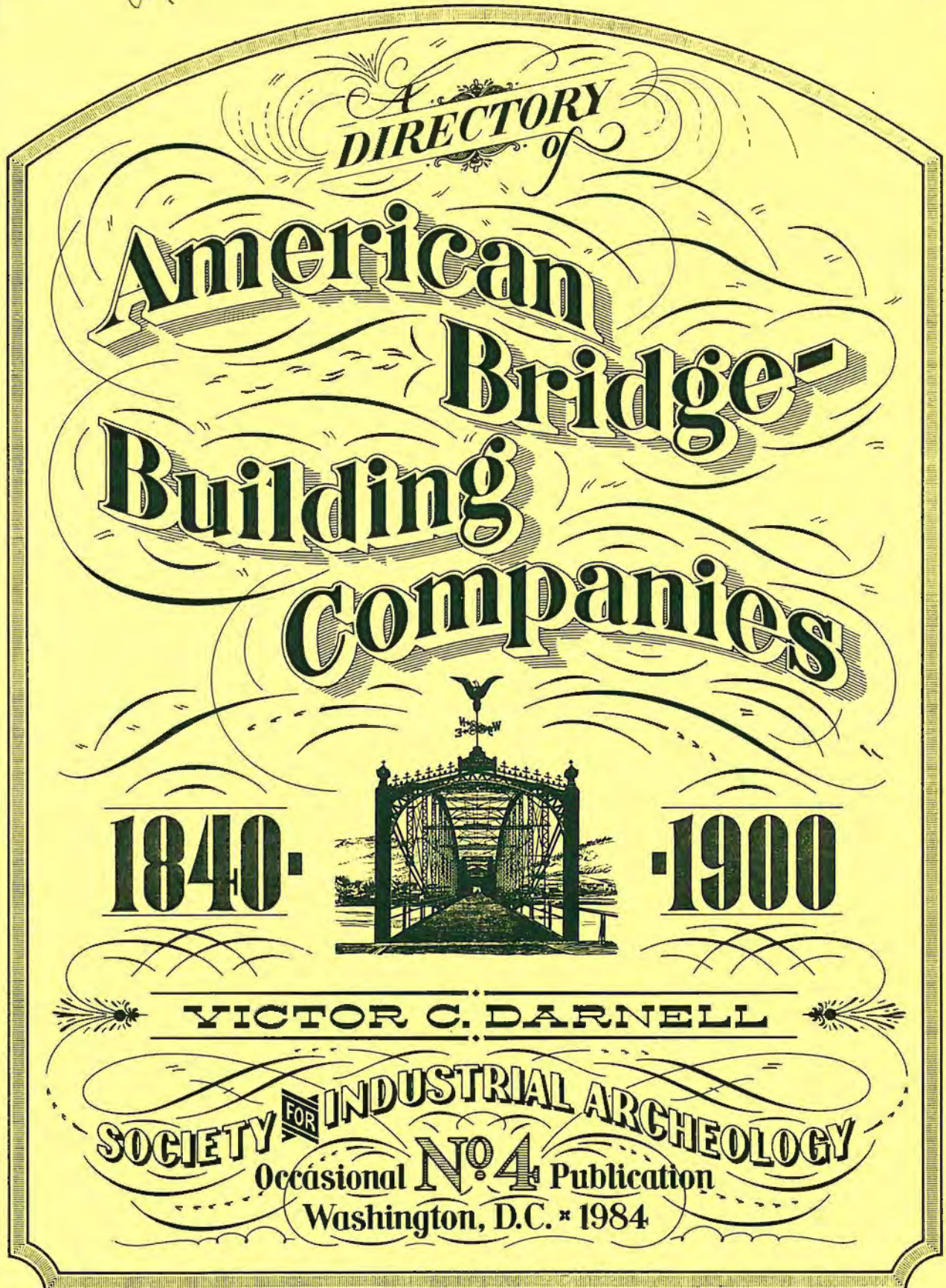


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A
DIRECTORY
of
**American
Bridge-
Building
Companies**

1840



1900

VICTOR C. DARNELL

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

Occasional **No. 4** Publication

Washington, D.C. * 1984

THE SOCIETY FOR INDUSTRIAL ARCHEOLOGY promotes the study of the physical survivals of our industrial heritage. It encourages and sponsors field investigations, research, recording, and the dissemination and exchange of information on all aspects of industrial archeology through publications, meetings, field trips, and other appropriate means. The SIA also seeks to educate the public, public agencies, and owners of sites on the advantages of preserving, through continued or adaptive use, structures and equipment of significance in the history of technology, engineering, and industry. A membership information brochure and a sample copy of the Society's newsletter are available on request.

Society for Industrial Archeology
Room 5020
National Museum of American History
Smithsonian Institution
Washington, DC 20560



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Library of Congress Catalogue Card Number: 84-51536



Cover illustration: 'The above illustration is taken direct from a photograph and shows a square end view of a Parabolic Truss Bridge designed and built by us at Williamsport, Pa. The bridge is built across the Susquehanna River and consists of five spans of 200 ft. each with a roadway 18 ft. wide in the clear. Since the bridge was built a walk has been added on the north side. This is one of the longest iron high way bridges in the State of Pennsylvania and is built after our Patent Parabolic Form.' The bridge was built in 1885 and had a short life, being destroyed by flood in the 1890s. Cut and quote from an advertisement in Electrical World, October 8, 1892. For a detailed history of the Berlin Iron Bridge Company and its products, see 'Lenticular Bridges from East Berlin, Connecticut' by Victor C. Darnell in IA, the journal of the Society for Industrial Archeology, Vol. 5, 1979 and Vol. 7, 1981 (p. 73).

Back cover illustration: the heroic name plaque of Australia's Hawksbury River Bridge (1886-1946), its only surviving fabric. Photograph by D. Fraser, New South Wales.

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FOREWORD

The Society for Industrial Archeology is pleased to publish this valuable guide prepared by one of its members, Victor C. Darnell. Industrial Archeology is the study of the surviving structures and artifacts of the industrial past. Bridges are among the most significant examples of industrial design, yet there has been little previous research on the American bridge builder of the nineteenth century. With the exception of great builders such as the Roeblings, the men who erected the bridges that linked American communities and regions have remained largely unknown. Mr. Darnell's work goes far to remedy the unfortunate neglect of this important part of American social, business, and technological history.

As industrial archeologists, the members of the Society are concerned with the preservation of the physical record of American industrial development, a record which includes the products of our nation's bridge builders. Mr. Darnell's meticulous documentation will provide essential information for surveys of bridges and for historical investigations of particular structures. Knowledge is a powerful weapon in the continuous fight to save threatened but still functional bridges.

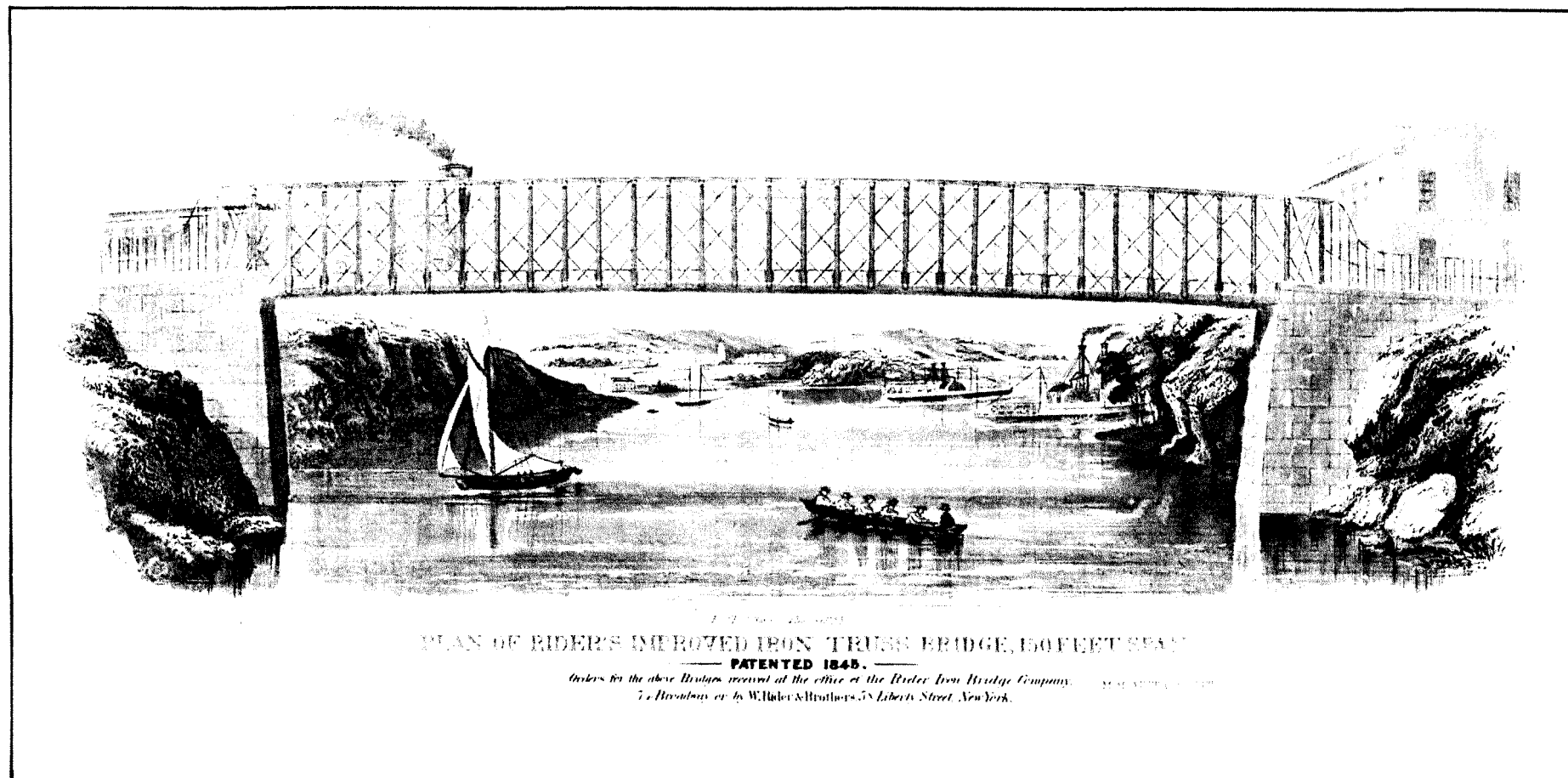
The dissemination of scholarship through publication is one of the services provided by the Society for Industrial Archeology. The Society publishes an annual journal, IA, a quarterly Newsletter, and occasional special publications. Local chapters of this international organization also produce publications of their own. For information about the Society, its activities, and publications please write to SIA, Room 5020, National Museum of American History, Washington, D.C. 20560.

Patrick M. Malone
Past President, SIA

THE AUTHOR

Victor Darnell received a Bachelor's degree in Civil Engineering from the Massachusetts Institute of Technology in 1943 and then spent three years in the U.S. Navy assigned to construction and repair of naval vessels. He then joined the Berlin Construction Company, Berlin, Connecticut, retiring in 1977. For much of that period he was Chief Engineer, responsible for most of the major design projects, and had the opportunity to inspect bridges and work with the erection department.

While active in business he also took part in civic organizations and still is a Trustee of the New Britain Museum of American Art where he had been Chairman for nine years. Since retiring, Darnell has intensified his study of the development of bridges in which he combines an interest in history with the training and experience of a professional engineer and steel fabricator. His article Lenticular Bridges from East Berlin, Connecticut appeared in IA, the journal of the SIA, and he contributed to Connecticut-An Inventory of Historic Engineering and Industrial Sites.



Flyer for Rider's patented iron bridge, ca. 1846, the first known advertisement by an American bridge company.

INTRODUCTION

Bridge builders seem to have been an anonymous group. Their products are described as finished objects, artifacts of industry and commerce, symbols in our cities and landscapes. The bridges might have appeared without the agency of man. Most studies are directed to the structures - and general histories, descriptive lists of those in a particular area, and in-depth analyses of individual projects. Perhaps this is the result of the nature of the business, for, when the construction was finished, the crews departed for the next job, the equipment was hauled away, and the only reminder of the builder was his nameplate, which often has been removed or destroyed. Perhaps this is why the completed bridges now seem to have appeared overnight. There has been little study of the men, the companies, and the methods of fabrication and erection. This guide is concerned with the organizations that signed the contracts, coordinated all the parts of the job, took the risks, and produced the spans. It is intended to be of assistance to the surveyors of old bridges, to those who study the history of technology, and to the students of nineteenth-century industry.

Until the expansion of the railroads and the introduction of the Howe truss in the early 1840s, timber bridges were constructed by traveling master builders such as Lewis Wernwag and Theodore Burr or by local craftsmen who also erected factories and mills. Most, if not all, of the material was obtained close to the site, and the fabrication was done there. The guide begins at that time, the early 1840s, and ends with the close of the nineteenth century. The Howe truss, with its small but vital amount of iron, began the move to industrialization as firms such as Boody, Stone in Massachusetts and Stone and Boomer in Chicago established shops for fabricating the materials, which were shipped to the erection site. The next step, iron bridges, required foundries and fabricating shops to form, drill, assemble, and rivet the pieces before shipment. This off-site work in turn necessitated designs, drawings, and obtaining the materials from rolling mills and other suppliers. These new activities marked the progression from a craft to an industry. The guide covers the most dynamic period of the industry's history. The changes included the replacement of wood by iron and then the use of steel, development of analytical methods of design, emergence of the independent practice of bridge engineering, the growth of the domestic iron industry, and the evolution of business organizations. This last was climaxed with the formation of American Bridge Company in 1900 with its control of half of the nation's fabricating capacity. With the exception of American Bridge's later acquisitions, no effort has been made to record any activities of the twentieth century.

The Directory shows that there was no single pattern for the companies or the proprietors. Some concerns were stable, continuing operations such as Keystone Bridge, which lasted for thirty years, or Detroit Bridge and Iron, which ran for forty, while others existed only a short time. Some men spent their working careers at one place, and others, as shown in Appendix D, made many moves. There was an equal diversity in operations, with some firms performing all the functions, extending sometimes to the foundations, and others subcontracting much of the work. Some of the companies had their own proprietary designs for bridges. Often the patentee of such a design had formed the company to sell and build his idea of a proper truss. The demands of the expanding economy, the ease of entry into the business, the moving about of managers and engineers with

the resulting diffusion of information, and the greater availability of materials all contributed to the development of the industry and its great diversity.

The data can be used to locate the builder of a particular bridge, to analyse the growth of the industry in terms of number of companies and geographic distribution, and to examine the patterns of company formation, growth, and longevity. It also suggests other questions that could be addressed only in a more complete study. Why did Ohio have such a large number of small to medium size fabricators? Why was New England's capacity so small? How did companies obtain work so far from their shops - Detroit Bridge and Iron built in every state, and Berlin (Connecticut) Iron Bridge Company sent four bridges to Indiana and seven to Texas? Why were branch plants unsuccessful? Zenas King made two attempts, and Union Bridge failed to keep both of its shops operating.

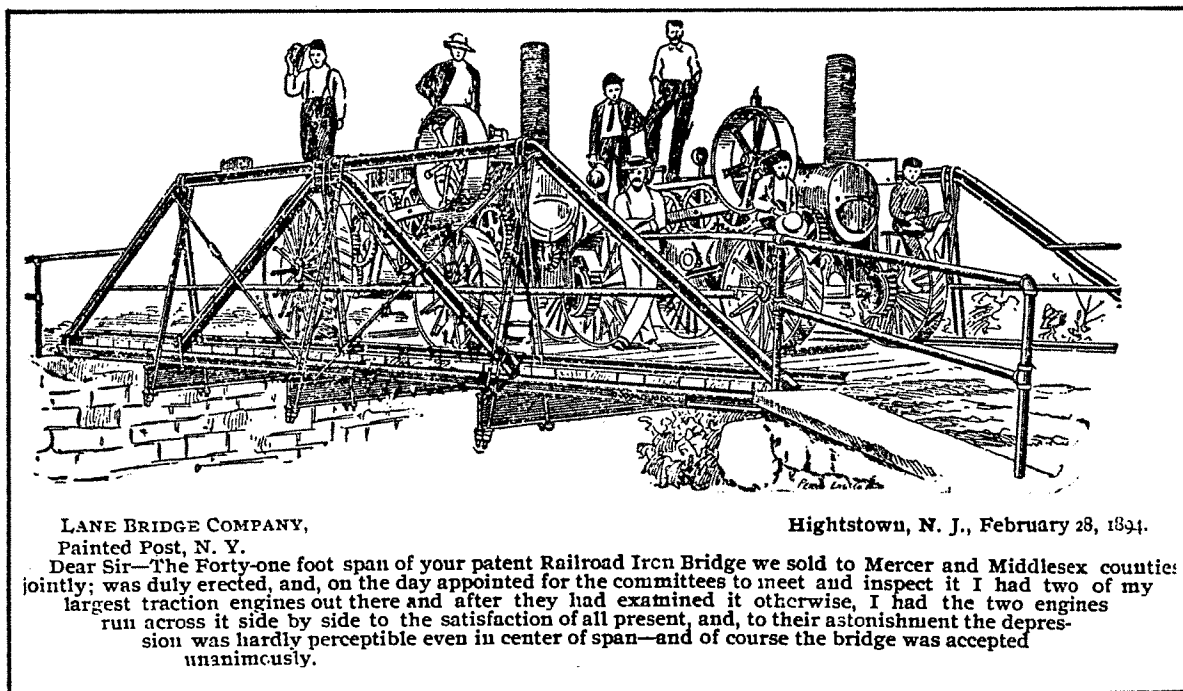
The Directory includes companies that built bridges or advertised to do so, and those concerns that erected at least one major bridge even though, as in the case of John Roach, it was not their usual activity. It also lists, until the mid-1880s, the engineers who advertised as bridge builders, signing contracts for complete projects, making the designs, and subcontracting the actual construction. Some large bridges were built in this manner, but gradually the practice disappeared as the engineering profession developed. Another group is composed of the companies listed in national directories as 'bridge builders'. Undoubtedly this included some that had no shop facilities or built only minor structures and those that did only foundations or masonry, but there is no feasible way of editing those lists at this time. The coverage of the business directories was uneven and seems to have varied with the diligence of their local agents. In some instances well-established companies were omitted and in others it is most doubtful that so many real bridge builders could have existed in the area covered. The American Iron and Steel Association directories of the 1890s were more selective and also provided fabricating capacities. The companies included in the AISA publications are marked with an asterisk (*), and the capacity data are given in Appendix A.

The word 'companies' is used in a broad sense to cover the individuals, partnerships, and incorporated bodies that fall within the scope of this work. When the parent company and the shop bore different names, the one ordinarily used in advertisements and directories has been featured and the other included in the text, and all of the secondary names are included in the index. Occasionally both names were equally prominent - Clarke, Reeves and Company and Phoenixville Bridge Works; A. and P. Roberts Company and Pencoyd Iron Works. In such cases each name has its own directory entry. The index lists all the proprietors and other names mentioned in the directory and those in Appendix D, but, in general, it does not cover the other appendices. Companies that built only for themselves, such as the Pennsylvania, New York Central, and other railroads, are not included. Agents for fabricating companies also are excluded, as are those companies that owned or promoted individual structures (the names of some are misleading). The books by Richard Allen and George Danko include many names that were not listed in national directories. As these men seem to have been on the fringe of the industry, building bridges being only one of several occupations, their names have been omitted; to have included them would give a false impression of the activity in some states.

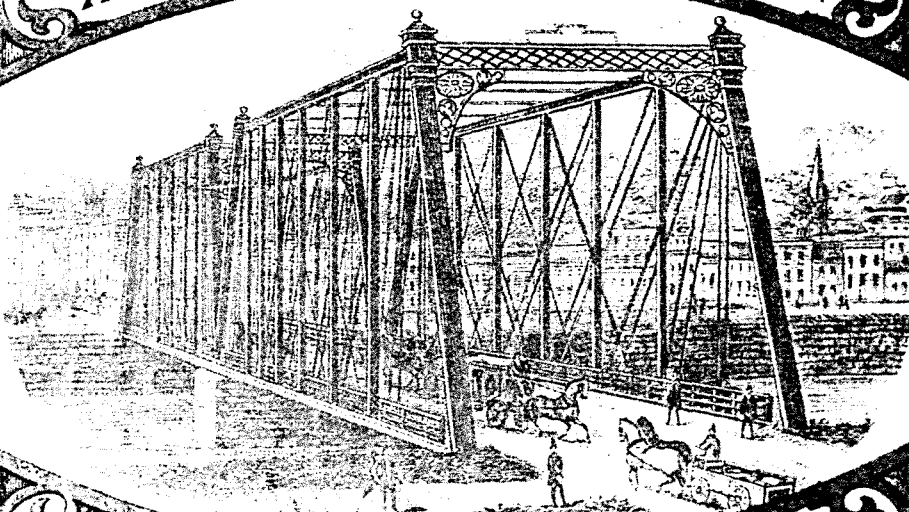
The dates given for each entry are those of known activity or directory listing. These dates must be taken as only approximations of when the company existed, for the time between gathering data and its publication was at least half a year, and in that period a company could change its name or close. Some firms were listed for several years after they had stopped operating. Definite information is given in the text portion of the entries, and only the positive statements should be considered as describing the company's period. The year 1901 in the date column signifies only that the company was active or was listed in that year. As this study does not extend into the twentieth century, 1901 should not be taken as a terminal date.

The author gratefully acknowledges the assistance of the following people in the preparation of this directory: Richard S. Allen who has provided information over the years and David Simmons for his review and additions to the Ohio section; Nanci Kostrub Batchelor for producing the final copy from the manuscript and Helena Wright for planning the directory's format; Matthew Roth for his encouragement and direction; Richard K. Anderson, Jr., for the layout and design; and Robert M. Vogel for the suggestion that started the project and guiding it into book form, including the selection of illustrations. The author's thanks are also extended to the librarians and archivists who guided him to some of the sources and answered requests for information. Patrick M. Malone was President of the Society when this publication was approved, and the author thanks him for his support and for writing the Foreword. All of those named are members of the Society for Industrial Archeology.

This is a preliminary study and a considerable amount of work remains to be done. The author is, of course, responsible for errors of fact and interpretation, and he will be grateful for additions and corrections so that a more complete list of the nineteenth-century bridge builders can be made.



WROUGHT IRON BRIDGES
 FOR RAILWAYS, PARKS, HIGHWAYS &c
Mill Reef Mill
IRON BUILDINGS
 Iron Trestle Work AND OTHER Iron Structures
 PLANS, SPECIFICATIONS & ESTIMATES FURNISHED



CORRUGATED IRON
 PAINTED, UNPAINTED & GALVANIZED
 FOR ROOFING AND SIDES OF BUILDINGS.
Sheet Plate & Forged Iron Work
COMPETITORS
WM B. SCAFFE & SONS
 OFFICE: No 119, FIRST AVE. **PITTSBURGH, PA**

100 Kents Lane, Pittsburgh, Pa

THE DIRECTORY

ALABAMA

Birmingham	
*Alabama Bridge and Boiler Company	1898-1899
Birmingham Bridge Company	1887
Birmingham Bridge and Bolt Works	1896-1898
*Southern Bridge Company	1896-1901
Southern Iron and Steel Works	1901
Watkins and Hardaway	1896-1898
Decatur	
Decatur Bridge and Construction Company	1887-1888
In receivership 1888.	
Jasper	
Alabama Bridge Company	1896-1898
Marion	
B. Mickle	1896-1898
Mobile	
Thompson and Bailey	1899-1901
Edgar Thompson Foundry Company	1896-1898

CALIFORNIA

Coronado	
Coronado Foundry and Machine Company	1896-1901
Los Angeles	
Baker Iron Works#	1872-1901
Founded 1872.	
D.P.N. Little	1896-1901
Llwelllyn Iron Works#	1884-1901
Founded 1884.	
Sawyer and Arthur	1899-1901
Union Iron Works#	1884-1901
Founded 1884.	

* See Appendix A, typical throughout Directory
 # See Appendix C

CALIFORNIA

Oakland	
Cotton Bros. and Company	1899-1901
Johnson and Peterson	1899-1901
San Francisco	
Bay City Iron Works	1899-1901
California Bridge Company	1887-1896
California Bridge and Construction Company	1899-1901
Dundon Bridge and Construction Company	1901
David Finley	1888
Healy, Tibbitts and Company	1899-1901
*Judson Manufacturing Company	1894-1901
Office at San Francisco, works at Oakland.	
Laydon, Darby and Company	1899-1901
McCann and Sons	1899-1901
B.C. McMahon and Company	1887
Jas. A. McMahon and Company	1899-1901
Pacific Bridge Company	1887-1901
Pacific Construction Company	1901
*Pacific Rolling Mill Company	1894-1898
*Phelps Manufacturing Company	1894
AISA Directories for 1896 and 1898 state that plant was idle.	
W.R. Richardson	1888
San Francisco Bridge Company	1887-1901

SAN FRANCISCO BRIDGE COMP'Y,

Engineers and Contractors

FOR

Highway and Railroad Bridges
Sub and Superstructure,

MARINE PIERS,

*Screw Pile Foundation, Pile
Driving, Contractors for Rail-
roads and Public Works.*

Designs and Estimates Furnished

**Office: 42 Market St.
SAN FRANCISCO, CAL.**

J. McMULLEN, President.
WALTER STANLEY, Secretary
GEO. W. CATT, Chief Engineer



CORRESPONDENCE SOLICITED.

CALIFORNIA

San Francisco (continued)

San Francisco Timber Preserving Company	1899-1901
Smith Construction Company	1899
Thomas Bridge Company	1899-1901
Western Bridge Company	1896

COLORADO

Colorado Springs

Atkinson Bros. and Company	1898-1901
----------------------------	-----------

Denver

Gilbert H. Denton	1896-1898
Hughes and Stewart	1901
Lane Bridge and Iron Works	1896-1898
M.J. Patterson	1898-1901
Vulcan Iron Works	1899-1901

La Junta

M.W. Lincoln	1898-1901
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Pueblo

Pueblo Bridge Company	1898-1901
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CONNECTICUT

Berlin

*Berlin Construction Company	1900-1901
------------------------------	-----------

Formed 1900 by some executives of Berlin Iron Bridge Company when that company was absorbed by American Bridge. Fabricated at Pottsville, Pennsylvania, until 1902 when shop built at Berlin.

*Berlin Iron Bridge Company	1883-1900
-----------------------------	-----------

Started as Corrugated Metal Company which began making roof trusses in mid-1870s and bridges about 1879. Name changed to Berlin Iron Bridge Company in 1883 and acquired by American Bridge Company in 1900.

Bridgeport

Miles B. Beardsley	1879-1883
--------------------	-----------

Hartford

J. McClay and Son	1879-1888
Also bought and sold machinery.	

CONNECTICUT

THE CORRUGATED METAL CO.,
EAST BERLIN, CONN.

S. C. WILCOX,
President and Treas.

G. W. COOK,
Secretary.

JOHN TOWNE,
Agent.

C. M. JARVIS,
Engineer.



IRON BUILDERS.

Engineers and Contractors for Douglas Patent Wrought Iron Bridge,
ROOF TRUSSES, CORRUGATED IRON SHUTTERS, ROOFING, CEILING, SIDING,
And General Iron Construction.

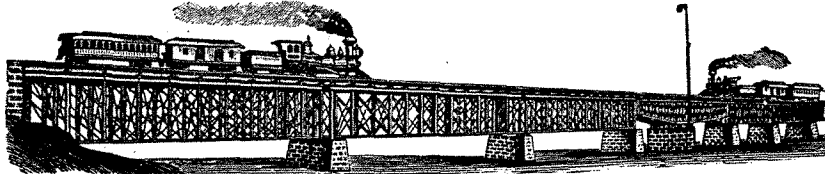
THE BERLIN IRON BRIDGE CO.

S. C. WILCOX, Pres.

CHAS. M. JARVIS, Vice-Pres. and Eng.

ROBINS FLEMING, Asst. Eng.

OFFICE AND WORKS, EAST BERLIN, CONN.



Double-Track Railroad Bridge on N. Y., N. H. & H. R. R., at Riverside, Conn.

Iron Bridges, Iron Roofs covered with Slate or Corrugated Iron.
HEAVY PLATE GIRDERS.

Iron Buildings and Sheds. Iron Fire-Proof Doors and Shutters. Fire-
Proof Buildings, Chord Bars, Heavy Forgings, Corrugated
Iron. General Wrought Iron Construction.



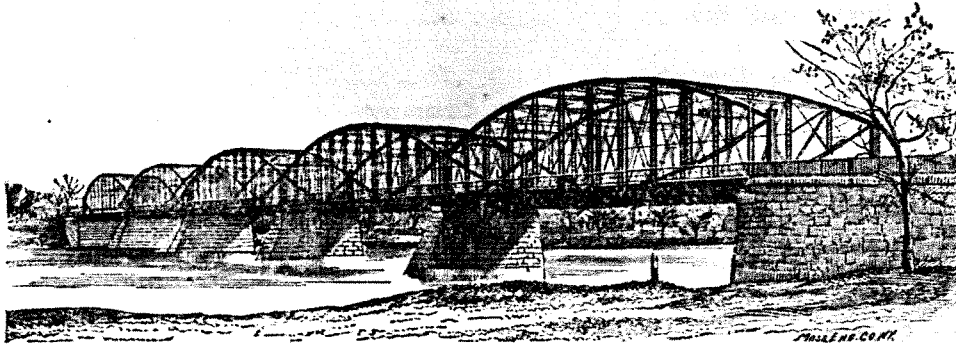
Ca. 1883

CONNECTICUT

THE BERLIN IRON BRIDGE CO.,

—EAST BERLIN, CONN.—

—BINGHAMTON, N. Y.—



IRON * HIGHWAY * BRIDGES.

Ca. 1886



DESIGNED AND BUILT BY
The Berlin Iron Bridge Company,

OFFICE AND WORKS, EAST BERLIN, CONN.

Bridge over the Naugatuck River between Shelton and Birmingham (Derby),
Connecticut.

CONNECTICUT

New Haven	
J.B. Buddington	1892-1901
R. Redfield and Sons	1883-1898
C.R. Waterhouse and Son	1883-1885
Yale Manufacturing Company	1883
Succeeded by Yale Safe and Iron Company	
Yale Safe and Iron Company	1891-1901

DELAWARE

Wilmington	
Delaware Construction Company	1891-1901
*Edge Moor Iron Company	1873-1900
Also did business as Edge Moor Bridge Company. Started bridge fabrication in 1873, but iron works began earlier. Acquired by American Bridge Company in 1900.	

EDGE MOOR IRON CO.

MANUFACTURE

RAILWAY BRIDGES, VIADUCTS AND ROOF WORK

IN IRON AND STEEL,

and offer as Specialties in their construction

HYDRAULIC FORCED EYE BARS.

HYDRAULIC FORGINGS and HYDRAULIC RIVETED WORK.

WROUGHT IRON TURN-TABLES, IMPROVED SLEEVE NUTS.

GALLOWAY BOILERS, { Sole Licensee and Manufacturer for the United States as Improved under the 1876 Patent.

Specifications from Railroad Companies, Engineers and Contractors solicited, upon which estimates will be promptly furnished.

WM. SELLERS, Prest. JOHN SELLERS, Jr., V. Pres. ELI GARRETT, Treas. GEO. H. SELLERS, Gen. Supt.	{	Main Office and Works at Edge Moor on the Delaware River. Post Office, WILMINGTON, Del.	}	Philadelphia Office: 1600 HAMILTON ST. New York Office: 79 LIBERTY STREET.
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FLORIDA

Jacksonville	
S.S. Leonard Company	1899-1901

GEORGIA

GEORGIA

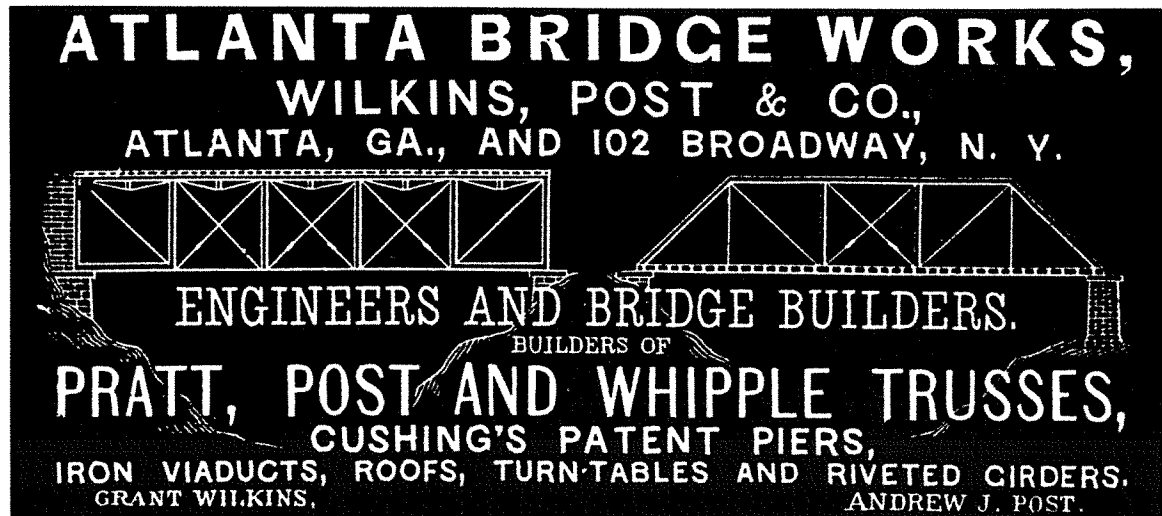
Atlanta

Atlanta Bridge Works

1880-1887

Wilkins, Post and Company, proprietors.

Grant Wilkins in Atlanta and Andrew Post,
engineer, in New York.



Atlanta Bridge and Axle Company

1888-1896

Grant Wilkins secretary and engineer in
early listings.

Gude and Walker

1898-1901

Grant Wilkins

1896-1901

ILLINOIS

Bloomington

Willard A. Gray

1899

Chicago

American Bridge Company/

1870-1878

Organized 1870. Entered bankruptcy in
1878 and reopened as Rust and Coolidge.

*American Bridge Works/

1891-1900

Started 1891 and purchased by American
Bridge Company in 1900.

Austin Bridge Company

1896-1901

Sometimes listed 'F.C. Austin
Manufacturing Company (Tubular Truss)'.

/ See Appendix B

Railroad and Highway Bridge across the Missouri River at Leavenworth, Kan.



Substructure: Pneumatic Iron Piers.

Superstructure: Post's Patent Diagonal Iron Truss.

BUILT (1872) BY

The American Bridge Co., Chicago.

High Bridge, 340 feet Spans.

POINT BRIDGE, AT PITTSBURGH, PENN.

SUSPENSION BRIDGE (stiffened chain) crossing mouth of Monongahela River, in process of construction, 1876. Length of Main Span, 800 feet. Height, from bed of River to top of Iron Suspension Towers, 210 feet.

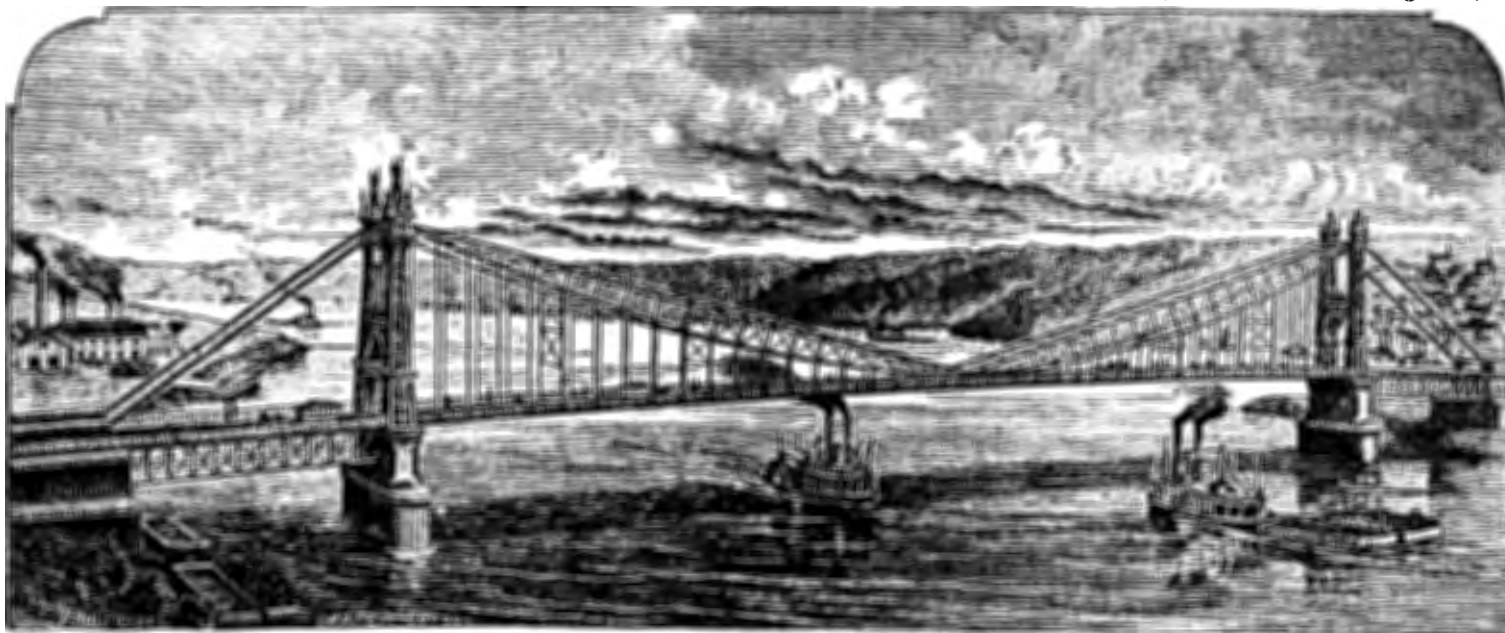
THE AMERICAN BRIDGE COMPANY, Designers and Builders,

Office: No. 210 La Salle Street, cor. Adams.
Works: Cor. Egan and Stewart Aves.,

CHICAGO.

New York Office: No. 20 Nassau Street.
Address, The American Bridge Co., Chicago.

Builders of Omaha Bridge, Atchison
Bridge, Leavenworth Bridge, Boon-
ville Bridge, } Missouri
River Bridge.



CONSTRUCTED AND UNDER CONTRACT.
Hudson River Bridge, at Poughkeepsie; Cumber-
land River, &c., Cin. So. Ry.; Fall River Bridge, O. C.
R. R. Co.; New York Elevated Ry., Ninth Ave., N. Y.

Manufacturers and Builders of BRIDGES, ROOFS, TURNING-TABLES, PIVOT BRIDGES, IRON TRESTLES, WROUGHT IRON COLUMNS, HEAVY CASTINGS, GENERAL IRON and FOUNDRY WORK, Builders of PNEUMATIC, MASONRY and SCREW-PILE SUB-STRUCTURES.

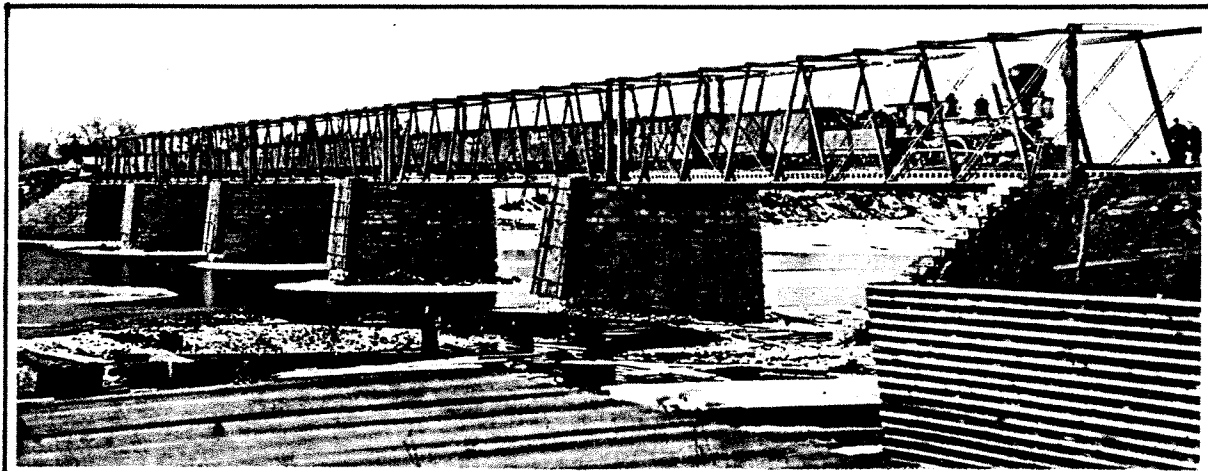
Iron Bridges and Roofs, upon the Principal Railroads in the U. S. illustrate designs and attest the character and extent of products of Works.

A. B. STONE, No. 20 Nassau St. New York, President.
H. A. EUST, Vice Pres't and Gen'l Manager.

Proposals, accompanied by Plans, Specifications and Lithographs, promptly submitted on application.

EDWARD HEMBERLE,
W. G. COOLIDGE, Sec'y, } Engineers.

ILLINOIS



**Iron Bridge over Kankakee River at Wilmington, Illinois,
CHICAGO & ALTON RAIL ROAD.**

L. B. BOOMER, Builder.

S. S. POST, Inventor.

Chicago (continued)

Lucius B. Boomer

Entered the business in this area about
1849 and was connected with the following
sequence of businesses:

Boomer (L.B.) and Company

1849-1851

Stone and Boomer

1851-1857

Boomer Bridge Works

1857-1870

with interruption for Boomer, Boyington
and Company before 1868.

(with American Bridge Company)

1870-c1876

L.B. Boomer and Company

1879

L. B. BOOMER, President,

| Established A. D. 1849. |

W. B. BOOMER, Sec. and Treas.

L. B. BOOMER & CO.,

Bridges, Roofs, Turntables & Substructures

Office: Howland Block, Chicago, 184 Dearborn Street.

Boyington and Rust

1870

F.E. Canda

1870-1879

N. Chapin and Company

1860

Chapin and Wells

1867-1870

Exhibited at Paris Universal Exposition in
1867. Wells became partner in Wells, French
and Company according to an 1871 directory.

See Appendix B

ILLINOIS

Chicago (continued)

*Chicago Bridge and Iron Company Formed 1889 by Horace E. Horton who had directed a company at Rochester, Minnesota.	1889-1901
Chicago Forge and Bolt Company/ For brief period added bridges to other lines.	1885-1891
Chicago Timber and Bridge Company	1879
W.G. Coolidge and Company/	1887-1889
Eureka Bridge and Iron Company	1876
Gagnier-Griffin Suspended Railway Company	1896
A. Gottlieb and Company	1887-1891
Hansell-Elcock Company	1901
H.M.R. Construction Company	1898
Illinois Bridge Company	1901
T.A. Kearns Company	1901
Kelly and Atkinson	1898
*Kenwood Bridge Company	1891-1901
William E. Lamon	1896
*Lane Bridge and Iron Works P.E. Lane proprietor. Sometimes listed as P.E. Lane Bridge Company.	1886-1896
Moritz Lassig/ Formed partnership with Alden in 1881.	1871-1881
Lassig and Alden Bridge and Iron Works When Lassig formed the partnership with John Alden 1 July 1881, his Chicago plant was renamed. They also leased and later bought the shop of Leighton Bridge at Rochester, New York. Partnership ended January 1886, and Lassig regained the Chicago operation which he renamed Lassig Bridge and Iron Works.	1881-1886
*Lassig Bridge and Iron Works See Lassig and Alden for background. Acquired by American Bridge Company 1900.	1886-1900
MacDonald and Onderdonk	1898

/ See Appendix B

ILLINOIS

Chicago (continued)

F.J. McCain Company	1896
W. Morava	1898-1901
Morris Construction Company	1898
Pittsburgh Construction Company	1896-1898
Rapid Transit and Bridge Construction Company	1891
Warren Roberts Company	1899-1901
Rust and Alden Lassig's former partner?	1888
Rust and Coolidge/	1878-1885
Scherzer Rolling Lift Bridge Company	1898-1901
Shailer and Schniglau	1889-1901
Edward Skelsey	1896
Stone and Boomer See Lucius B. Boomer entry.	1851-1857
C.L. Strobel	1896-1901
William E. Traver	1899-1901
William Tweeddale 'Bridge Engineer and Contractor'	1860
*Universal Construction Company	1898-1899
Vulcan Iron Works	1887
Thomas Walker	1899-1901
Wells, French and Company Wells had been with Chapin and Wells earlier. Sometimes listed as Wells and French Company. 1887 directory listed under 'car builders'.	1871-1883
*Western Bridge Company	1899-1901
R.D. Wheaton Bridge Company	1890-1899
Albert H. Wolf	1888-1901

/ See Appendix B

ILLINOIS

Jacksonville

Eli Bridge Company

1900-1901

Despite the name, the principal and perhaps only product has been Ferris wheels for carnivals and amusement parks. Included because of name. Started 1900.

Joliet

*Joliet Bridge and Iron Company

1898-1901

New Albany

Ohio Falls Iron Works

1887

Peoria

Joseph Cody and Son

1899-1901

*A. Lucas and Sons

1899-1901

Princeton

McManis and Son

1899-1901

Springfield

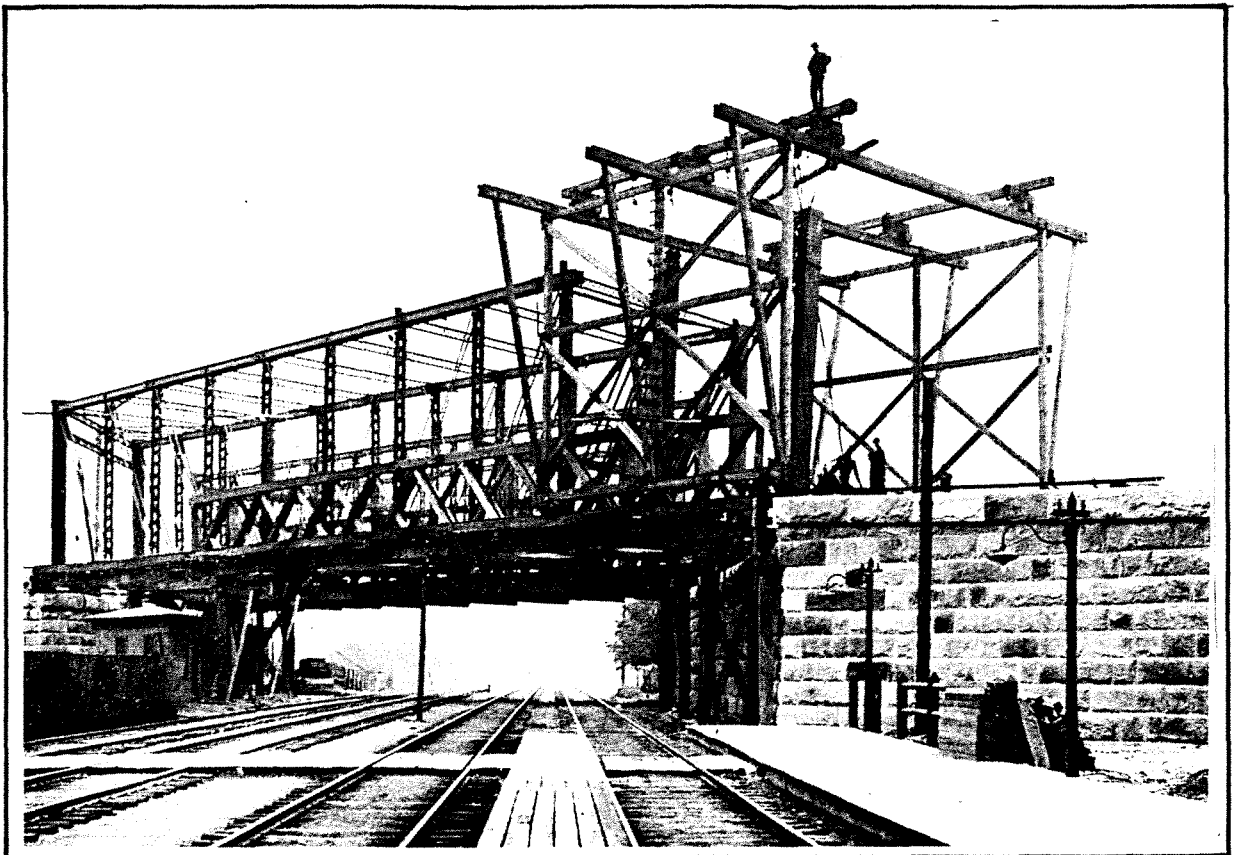
*Springfield Bridge and Iron Company

1899-1901

Sullivan

*Illinois Bridge and Iron Company

1901



INDIANA

INDIANA	
Attica	
*Attica Bridge Company	1896-1901
Evansville	
Crisle and Conkey	1896-1898
Fort Wayne	
H.W. Tapp	1896-1898
Western Bridge Works	1879
Frankfort	
Dunn and Goar	1901
Jno. Ross	1901
Indianapolis	
J.D. Adams and Company	1896
Two years later listed as proprietor of Indianapolis Bridge and Iron Works.	
B.L. Blair and Company	1899-1901
C.F. Hunt Company	1896-1901
Indianapolis Bridge Company	1873-1876
*Indianapolis Bridge and Iron Works	1898-1901
J.D. Adams and Company proprietors in 1898.	
Indianapolis Switch and Frog Company	1898-1899
Parkhurst Brothers and Company	1901
Lafayette	
*Lafayette Bridge Company	1889-1900
Acquired by American Bridge Company 1900.	
Muncie	
*Indiana Bridge Company	1887-1901
New Castle	
*New Castle Bridge Company	1900-1901
Rochester	
*Rochester Bridge Company	1898-1901
Rockville	
Joseph J. Daniels	1861-1901
Before moving from Ohio he built two wooden bridges in Indiana in 1850 and 1853.	

INDIANA

Rushville

Archibald McM. Kennedy

Built wood bridges from 1870 to 1883. After a few years was joined by sons Emmett and Charles. The former continued to build bridges after the latter went into other work.

A.M. Kennedy

1870-c1873

A.M. Kennedy and Sons

c1873-1883

Kennedy Brothers

1883-1885

Emmett Kennedy

1885-1892

Terre Haute

*Thatcher A. Parker

1899-1901

*Terre Haute Bridge Company

1898

Wabash

*Wabash Bridge and Iron Company

1896-1901

IOWA

Audubon

John Ward

1899-1901

Cedar Rapids

T.J. Duncan

1901

B.F. Parks

1899-1901

1901 Directory listed as B.F. Parks and Son.

Wardie and Yeager

1901

Clinton

Clinton Bridge Company

1876-1886

Advertisements from 1879 to 1882 stated Clinton shop was called Union Iron Works and built wood trusses and their Cleveland, Ohio shop, Novelty Iron Works, built iron trusses. Perhaps product of Clinton shop had changed if Cleveland was added facility.

*Clinton Bridge and Iron Works

1894-1901

Council Bluffs

C.E.H. Campbell

1898-1901

Raymond and Campbell

1876-1886

George C. Wise and Company

1898-1901

Des Moines

*Des Moines Bridge and Iron Works

1901

Des Moines Manufacturing and Supply Company

1899-1901

IOWA

Des Moines (continued)

George E. King Bridge Company	1891-1901
S.G. Magden	1901
J.B. Marsh	1899-1901
J.R. Sheely and Company 'Iron, wood and combination'	1899-1901
N.M. Stalk and Company	1898-1901

Dubuque

Dunleith and Dubuque Bridge Company	1896-1901
Novelty Iron Works	1896-1901

Fort Madison

Santa Fe Bridge Company	1901
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Keokuk

J.B. Diver and Company	1887-1901
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Manchester

D.H. Young	1896-1901
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Marshalltown

*Marshalltown Bridge and Iron Works	1896-1901
Also appears as Marshalltown Bridge and Boiler Shops, A.E. Shorthill proprietor.	

Monroe

Burchinal and Hurtzog	1899-1901
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North English

W.H. Roller and Company	1899-1901
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Oskaloosa

Seevers Manufacturing Company	1899-1901
Also listed as Seesero Manufacturing Company.	

Ottumwa

*Fair-Williams Bridge and Manufacturing Company	1894-1901
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Sigourney

R. Blaise	1899-1901
Storm and Parker	1899-1901

Sioux City

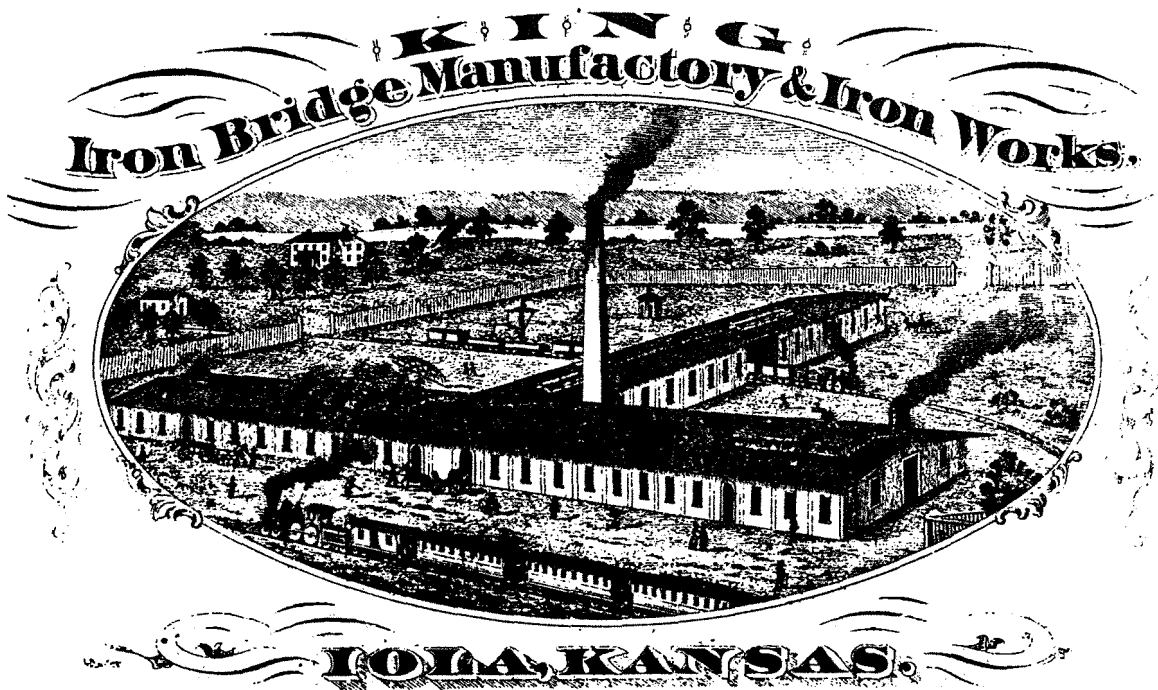
Goodrich and Robson	1896-1899
Haley Foundry and Machine Works	1896-1899
J.A. Robson	1901

IOWA

Waukon		
J.G. Radcliffe		1899-1901
Webster City		
John Quackenbush		1899-1901

KANSAS

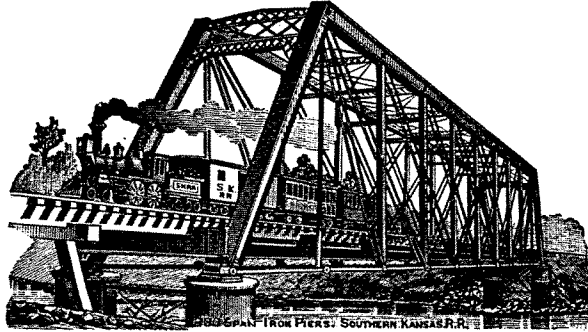
Humboldt		
Humboldt Brick Manufacturing Company		1899-1901
Iola		
King Wrought Iron Bridge Manufactory and Iron Works		1871-1872
Formed 1871 by Zenas King of Cleveland, Ohio, and operated in a plant partly financed by the town. The shop closed after one year when King formed another company at Topeka, Kansas. George King, later at Des Moines, Iowa, and E.I. Farnsworth, later at Kansas City, Missouri, were agent and engineer respectively.		



Leavenworth		
*Missouri Valley Bridge and Iron Works		1876-1901
Insley, Shire and Tullock proprietors in 1884 listing. A.J. Tullock sole proprietor in 1890.		
A.J. Tullock		1896-1901

KANSAS

MO. VALLEY BRIDGE & IRON WORKS,



LEAVENWORTH, KAN.

M. H. INSLEY,
A. J. TULLOCK, Eng. & Supt
D. SHIRE.

MANUFACTURERS AND BUILDERS OF

Wrought Iron, Steel, Howe Truss and Combination Bridges, Turn Tables, Draw Spans, Roof Trusses, Piers, Substructures, Foundations, Etc., Etc.

Topeka

King Wrought Iron Bridge Manufactory and Iron Works of Topeka

1872-1873

Formed 1872 by Zenas King. As was the case at Iola, the plant was partly financed by the municipality and closed after a year.

KENTUCKY

Covington

Licking Iron Works

1887

Frankfort

Mason, Gooch and Hoge Company

1887

'Railroad contractors and bridge builders'


Louisville

*Louisville Bridge and Iron Company

1868-1901

LOUISVILLE BRIDGE & IRON COMPANY

OFFICE AND WORKS: CORNER OLDHAM AND 11TH STS., LOUISVILLE.



BUILDERS OF

TRIANGULAR, WHIPPLE AND FINK TRUSSES.

and other forms of Iron and Combination Bridges. Also Manufacturers of Iron Roofs, Turn-Tables, Frogs, Switches, etc

F. W. VAUGHAN, President.
A. P. COCHRAN, Secretary.

GILMAN TRAFTON, Engin'r.

J. W. AINSLIE, Vice-President.
F. H. VAUGHAN, Treasurer.

Richmond

Shanahan and Company

1896-1901

LOUISIANA

New Iberia

Guilfoux and Blanc

1899-1901

MAINE

MAINE

Bangor

Penobscot River Steam Boiler Works

1896-1901

Portland

W.F. Bennett and Company

1901

MARYLAND

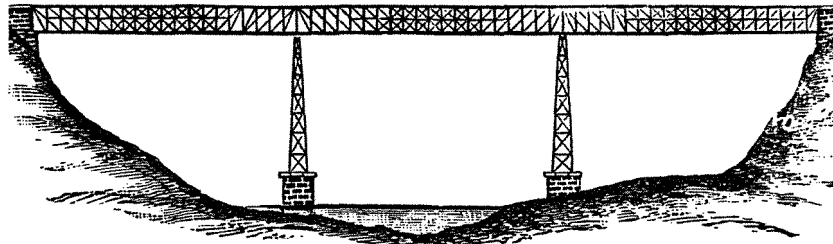
Baltimore

Baltimore Bridge Company

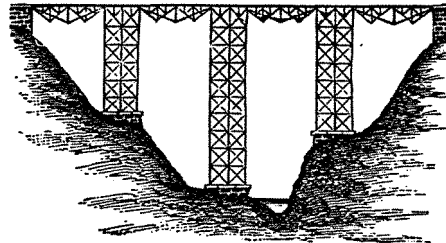
1869-1880

Incorporated 1869 as successor to Smith,
Latrobe and Company; Charles Shaler Smith,
President and Chief Engineer, Charles H. Latrobe,
Secretary and Assoc. Engineer

Baltimore Bridge Company.



KENTUCKY RIVER BRIDGE.



VARRUGAS VIADUCT.

REFER TO FOLLOWING STRUCTURES.

"**ST. CHARLES BRIDGE**," containing 4 spans, 304 feet each, deck Fink truss, 3 spans, 321 feet each, through Trellis, and 4,500 feet of iron approach viaduct, over Missouri River, on line of St. Louis, Kansas City and Northern Railroad. Total length of iron work, 6,680 feet.

"**HIGH BRIDGE**," containing 21 spans, 112 feet each, deck Fink truss, over Appomattox River, Atlantic, Mississippi and Ohio Railroad.

"**ROCK ISLAND BRIDGE**," containing double deck Whipple truss pivot span 386 feet, 2 fixed spans 258 feet each, 3 of 220 feet, and 2 single deck spans, 95 and 190 feet, over Mississippi River, built for United States Government.

"**VARRUGAS VIADUCT**," containing 4 deck Fink spans 100 to 125 feet each, and 3 iron piers 152 feet, 177 feet, and 232 feet high each, on line of Lima and Oroyo Railroad in Peru, South America. Also, "**AREQUIPA VIADUCT**," 1,500 feet long on same line.

5 SPANS 255 feet each, through Whipple truss, over Susquehanna River, at Havre-de-Grace, on line of Philadelphia, Wilmington and Baltimore Railroad.

"**KENTUCKY RIVER BRIDGE**," containing 3 spans 375 feet each, and 2 iron and stone piers, making, with trusses, a total height of 276 feet above water, on line of Cincinnati Southern Railroad.

A GENERAL TOTAL, including the above, of over *thirteen miles of bridges*, together with many other works, such as Roofs, Depots, Foundations, Round Houses, Piers, &c., making a cost aggregate of over **FIVE MILLION DOLLARS**.

C. SHALER SMITH, C. E., **FRED. H'Y SMITH, C. E.,**

No. 215 Washington Ave., St. Louis, Mo.

No. 13 German St., Baltimore, Md.

WENDEL BOLLMAN.

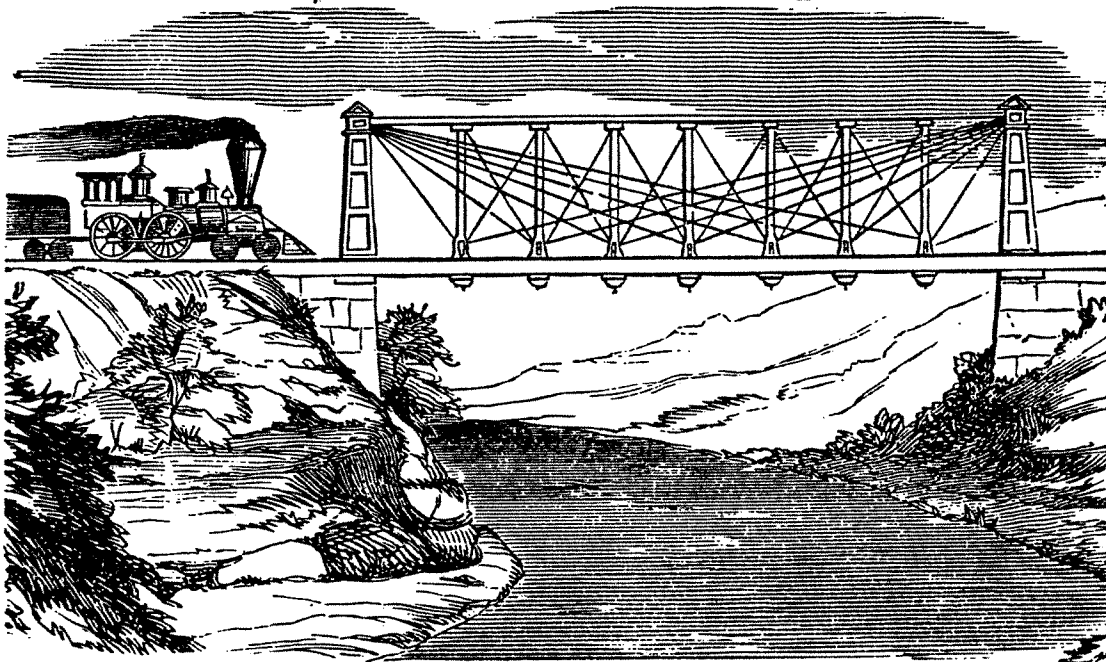
J. H. TEGMEYER.

JAMES CLARK.

BOLLMAN'S

PATENT

Iron Railroad Bridge.



The undersigned are prepared to execute orders for Bollman's Patent Iron Railroad Bridge, and to furnish Drawings, Estimates, &c., &c., for

BRIDGES, ROOFS, ENGINE HOUSES, MACHINE SHOPS, &c.

Or to contract for the erection of the same, in any part of the United States or abroad, with promptness and upon satisfactory terms.

Address

W. BOLLMAN & CO., Baltimore, Md.

Among other references, may be named the following gentlemen:—

WM. PARKER, Esq., *Civil Engineer, Boston.*

WM. J. McALPINE, Esq., *Civil Engineer, Albany, N. Y.*

ISAAC R. TRIMBLE, Esq., *Civil Engineer, Baltimore.*

CAPT. M. C. MEIGS, *U. S. Engineer Corps, Washington.*

COL. CROZET, *Civil Engineer, Washington.*

HERMAN HAUPT, Esq., *Civil Engineer, Philadelphia.*

MARYLAND

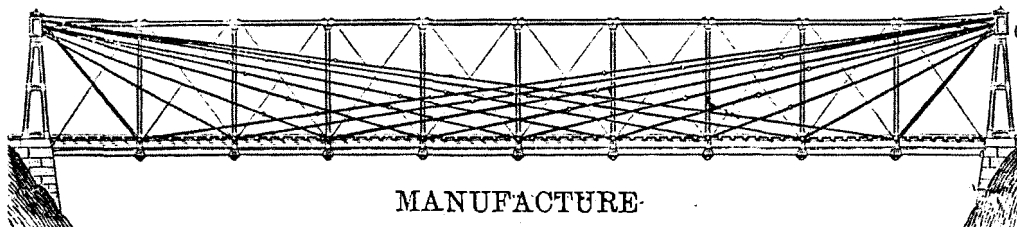
Baltimore (continued)

Bartlett, Hayward and Company	1896-1901
W. Bollman and Company Formed 1858 by Wendel Bollman, John H. Tegmeyer and John Clark. Ceased operating from 1861 to 1863 because of Civil War and may have been dissolved. Bollman later formed Patapsco Bridge. Also see Tegmeyer entry below.	1858-c1863
Campbell and Zell Company Listed as proprietors of Enterprise Iron Works in one 1896 Directory but appears without mention of Enterprise elsewhere. (Principally boilermakers.)	1896-1899
J.G. Clarke and Company 'Engineers...design and construct bridges, etc.'	1879
Clarke Bridge Company Same address as J.G. Clarke and Company.	1881-1883
A. and W. Denmead and Sons Also known as Monumental Foundry. Produced locomotives, cars, engines and an unknown quantity of bridges. Bridge building activity seems to have been in the 1850s.	
*Enterprise Iron Works Campbell and Zell proprietors.	1896
Murray and Hazelhurst Established c1845 and operated until 1869, although much smaller after 1857 panic. Advertised iron bridges 1857. Called shop Vulcan Works. Built locomotives, cars and engines.	
Patapsco Bridge and Iron Works Organized by Wendel Bollman and ended with his death.	c1865-1884
Smith, Latrobe and Company Organized 1866 and became Baltimore Bridge Company in 1869.	1866-1869
*Structural Iron Company	1898-1901
John H. Tegmeyer Advertised 1855 'prepared to furnish drawings and estimates for bridges...on the plan of Bollman's Patent.' Engineer, promoter or bridge builder? One of the founders of W. Bollman and Company 1858.	1855-1858

PATAPSCO BRIDGE AND IRON WORKS,

WENDELL BOLLMAN, PROPRIETOR,

The only Establishment in Baltimore Manufacturing its own Bridges,



BOLLMAN'S PATENT SUSPENSION TRUSS,

And other forms of Iron and Combination Bridges, Roofs, Iron Fronts and every description of Cast and Wrought Iron Work for Buildings and Railroad construction.

PNEUMATIC PILE,

Having on hand all the necessary appliances for sinking the same, we would call especial attention to our great facilities for executing this branch of work.

THIEMEYER'S PATENT SWITCHES.

Eight-Inch Cast Iron Revolving Station Water Column,

Which will fill locomotive tanks in about one minute, and such as used on the Baltimore and Ohio Railroad.

MARINE WORK IN ALL ITS BRANCHES.

The most improved designs and thorough execution guaranteed in the construction of all classes of work.

OFFICE, No. 8 S. Gay St., Baltimore,

WORKS, Canton, Baltimore.

Frederick

Potomac Bridge Works

1896-1898

Sparrows Point

*Maryland Steel Company

1896-1901

Construction of steel mill started 1887,
but bridge fabrication began later.

MASSACHUSETTS

Boston

D.H. Andrews

1877-1878

Works at Cambridgeport. Followed by
Boston Bridge Works.

*Boston Bridge Works

1879-1901

D.H. Andrews founder and proprietor.

Boston Steel and Iron Company

1901

G.H. Cavanaugh

1885-1888

D.F. Gallagher

1885

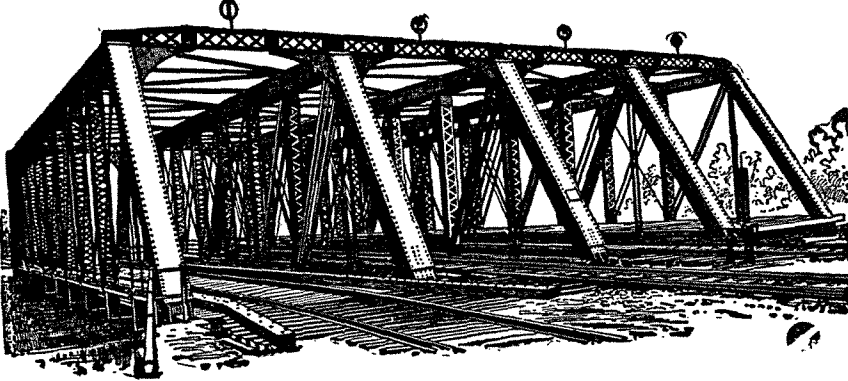
Garrett-Ford Company

1896-1899

MASSACHUSETTS

BOSTON BRIDGE WORKS.

D. H. ANDREWS, Proprietor. 70 KILBY ST., BOSTON MASS.

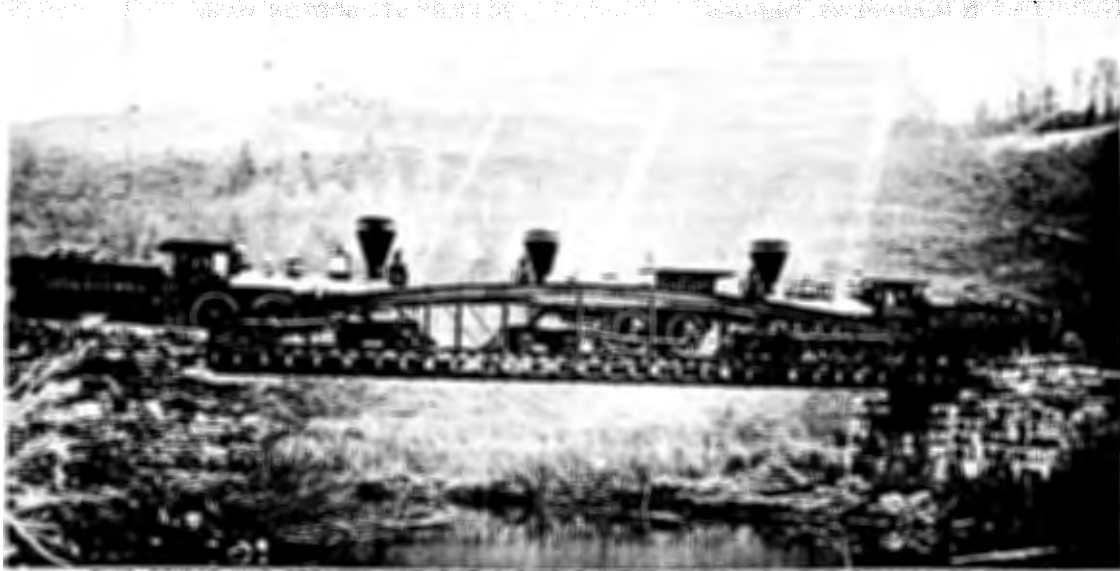


DESIGNERS AND BUILDERS OF
Railroad Bridges and Heavy Wrought Iron Structural Work.
OF EVERY DESCRIPTION.
SUPERIOR WROUGHT IRON TURNTABLES A SPECIALTY.
Works on Grand Junction Railroad. Annual Capacity, 10,000 Tons.

Boston (continued)

Harrington Robinson Company	1899-1901
J. Harris	1885-1888
Moseley Iron Building Works Organized 1861 and had own rolling mill in 1864. Followed by New England Iron Company 1871. Thomas W.H. Mosley.	1861-1871
National Bridge and Iron Works Established 1868. Blodgett and Curry proprietors and Charles H. Parker, engineer. Built Parker's 'Patent Arched Cantilever bridges'.	1868-1875
New England Iron Company Successor to Moseley Iron Building Works.	1871
J.P. Perkins and Son	1885-1888
Cambridge	
C.W. and F. Smith Iron Company	1896-1901
Chelsea	
Montgomery and Howard	1879-1885
East Everett	
*New England Structural Company	1898-1901
Norton Iron Company	1896-1898

PARKER'S PATENT WROUGHT-IRON TRUSS BRIDGE



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DEPTH OF TRUSS AT CENTRE, 10 FEET.
 " " " " CORNERS, 5 "
 LENGTH OF PANELS, 9 FT. 6 IN.

DEFLECTION AT CENTRE, 15-16 IN.
 " " QUARTER, 7-16 "
 Returned to original camber after remov

Returned to original camber after removal of load.

BLODGETT & CURRY, PROPRIETORS,

Contractors for Building and Erecting Wrought-Iron Rail-
way and Highway Bridges and Roof Trusses.

A. W. PARKER, *Supt. of Works.*

THE PARKER TRUSS WROUGHT-IRON RAILWAY BRIDGE, shown on the opposite side of this Card, was built and erected for the Vermont Central Railway Co., within four weeks after the burning of a wooden structure. It is situated on the main line, near Montpelier, Vt. It is 104 ft. 6 in. long, and is made to our standard for a single track, having an ultimate strength of six tons to the lineal foot of span, besides six times its own weight. The Bridge was tested Dec. 2, 1870, as shown, in the presence and under the direction of Hon. J. Gregory Smith, President, G. Merrill, Esq., General Superintendent, and other Railway officials, with three freight engines, showing results stated underneath.

East Windsor

c1888-1896

24

MASSACHUSETTS

Fall River		
	New England Engineering Company	1898
	Joseph C. Terry	1898-1901
Fitchburg		
	Works and Briggs	1899-1901
Lowell		
	Dobbins, Richard	1898-1901
Medford		
	W.G. Mayo	1879-1885
Northborough		
	A.W. Colburn and Company	1888
Palmer		
	Flynt Building and Construction Company	1879-1898
	Location also given as Monson in some early Directories, with name as W.N. Flynt and Company.	
Pittsfield		
	H.S. Russell	1883-1901
	Listed as a bridge builder in Directories, but 1890 write-up described products as boilers, tanks and other plate work.	
Somerville		
	John Butler	1885
Springfield		

- These eleven builders formed an unbroken chain, so they are listed in chronological order. Some dates may be in error by a year.

William Howe		1838-1846
	Inventor of the Howe truss. His brother-in-law Amasa Stone, Jr., was associated with him on some projects.	
Boody, Stone and Company		c1841-1846
	Azariah Boody and Amasa Stone, Jr.	
Boody, Stone and Harris		1846-1848
	Daniel Harris joined partnership.	
Stone and Harris		1848-1859
	Boody withdrew and later moved to Midwest. Stone moved to Cleveland in 1850, but the name was not changed for some time.	

MASSACHUSETTS

Springfield (continued)

Harris, Briggs and Company 1859-1864
 Daniel Harris and Albert D. Briggs. Briggs
 had been employed by Boody, Stone and Company
 and later directed his own company.

D.L. Harris and Company 1864-1867

Harris and Hawkins 1867-1868
 Richard F. Hawkins first worked for Harris
 in 1853, and later married niece of William
 Howe.

Hawkins, Herthal and Burrall 1868-1871
 W.H. Burrall first appeared as an employee
 of D.L. Harris and Company in 1864. Herthal
 was a St. Louis, Missouri, inventor and
 engineer, and the firm advertised his patent
 bridges.

Hawkins and Burrall 1871-1877

*R.F. Hawkins Iron Works 1877-1901

Harris and Wright 1868-1875
 Harris died 11 July 1879. Dates indefinite.

Agawam Foundry 1854
 Harris and Birnie proprietors. Started 1854
 'for general work, with special reference
 to railroad bridge and machinery castings...'

A.D. Briggs and Company c1868-1881
 First listed 1868, but may have been
 started earlier while he was mayor of
 Springfield. 'Builders of Truesdell's
 Patent Truss Bridge.' Beginning in 1870
 J.R. Smith was listed in advertising.
 Briggs died 20 February 1881.

Dwight and Hoyt 1879-1883

New England Engineering 1891

John R. Smith 1881-1888
 Previously with A.D. Briggs

*Springfield Construction Company 1898-1901

Springfield Iron Works 1891-1901

Worcester

*Eastern Bridge and Structural Company 1901

MICHIGAN

MICHIGAN

Detroit

*Detroit Bridge and Iron Works

1863-1901

Established 1863 and absorbed by American Bridge Company 1902. Built a bridge in California in 1876 and claimed 'to have a bridge of their manufacture in every state of the union'. Successor to Charles Kellogg and Company.



Augustus J. Dupuis

1889-1901

William J. Frasier

1901

M.J. Griffin

1901

Charles Kellogg and Company

1857-1863

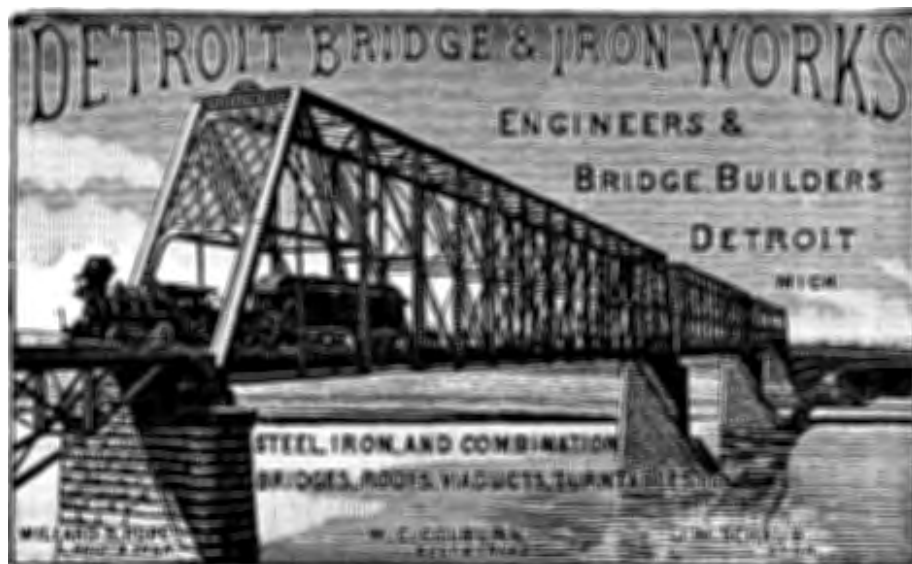
Michigan Bridge and Construction Company

1871-1872

Grand Rapids

Grand Rapids Bridge Company

1901



MISSOURI

Kansas City	
Farnsworth and Blodgett	1896-1901
Farnsworth had been with King Bridge, Iola, Kansas.	
Freygang and Trocon	1901
J.W. Hoover	1899-1901
Kansas City Bridge and Iron Company	1878-1901
McGee, Kohlmann and Company	1899-1901
Lamar	
Lamar Iron Works	1896-1899
St. Joseph	
Lee Hill	1898
H.C. Hodges	1898-1899
H.J. Mayer	1898-1901
St. Joseph Bridge and Boiler Works	1896
*St. Joseph Bridge and Iron Company	1894-1898
St. Louis	
Abbott-Gamble Contracting Company	1896-1901
M.S. Cartter and Company	1882-1899
'Engineers, Bridge Builders, and Contractors'	
Received bridge patents in 1870 and 1872.	

M. S. CARTTER.	A. W. HUBBARD, Eng'r.	W. S. CARTTER.
M. S. Cartter & Co. Engineers, Bridge Builders and Contractors, Room 31, Singer Building, } St. Louis, Mo. Fifth and Locust Streets, } IRON, COMBINATION, HOWE TRUSS BRIDGES, IRON TRESTLES, TURN-TABLES, ROOFS, Iron Substructures and Foundations.		

Central Bridge Company	1901
Jno. T. Garrett	1901
James Gates	1878
Geisel Construction Company	1899-1901
Heman Construction Company	1896-1899
H.S. Hopkins and Company	1877

MISSOURI

St. Louis (continued)

Hopkins Bridge Construction Company	1888
Hopkins Construction Company	1896
*Koken Iron Works	1893-1901
Predecessors Koken, Graydon and Company (1880-1888) and Scheope-Koken Architectural Iron Company (1888-1893), may have done no bridge work. Acquired by American Bridge Company between 1912 and 1916.	

KOKEN IRON WORKS, ^{9th Floor} Koken Building, ST. LOUIS, Mo.

(Largest in the Southwest)

Bridges—All Classes. Buildings and General Structural Work, Cast Iron Columns and Heavy Castings.

...ANNUAL CAPACITY, 16,000 TONS.

R.L. Miller	1888
Charles F. Muler	1896-1898
Northwestern Iron Works	1901
R.H. Phillips	1899-1901
St. Louis Bridge Company	1882-1898
Advertisements of 1882 to 1884 listed C.S. Smith as consulting engineer and displayed the Kentucky River bridge that he had designed while president of Baltimore Bridge Company.	
St. Louis Bridge and Iron Company	1896-1901
H.W. Sebastian and Company	1879
Charles Shaler Smith	
Advertised as 'Designer and Builder of Bridges' in 1881 and from 1884 to 1886. In between he was mentioned in St. Louis Bridge Company advertisements. Smith moved to Missouri in 1868 to supervise construction of the St. Charles bridge and stayed there while serving as president and chief engineer of Baltimore Bridge Company.	
*Stupp Brothers Bridge and Iron Company	1894-1901

MONTANA

MONTANA

Bozeman		
	F.W. Vreeland	1899-1901
Butte		
	Perham Brothers	1899-1901
	Thompson and Company	1899-1901
Great Falls		
	M.S. Parker	1899-1901
Missoula		
	O.E. Peppard	1889-1901

NEBRASKA

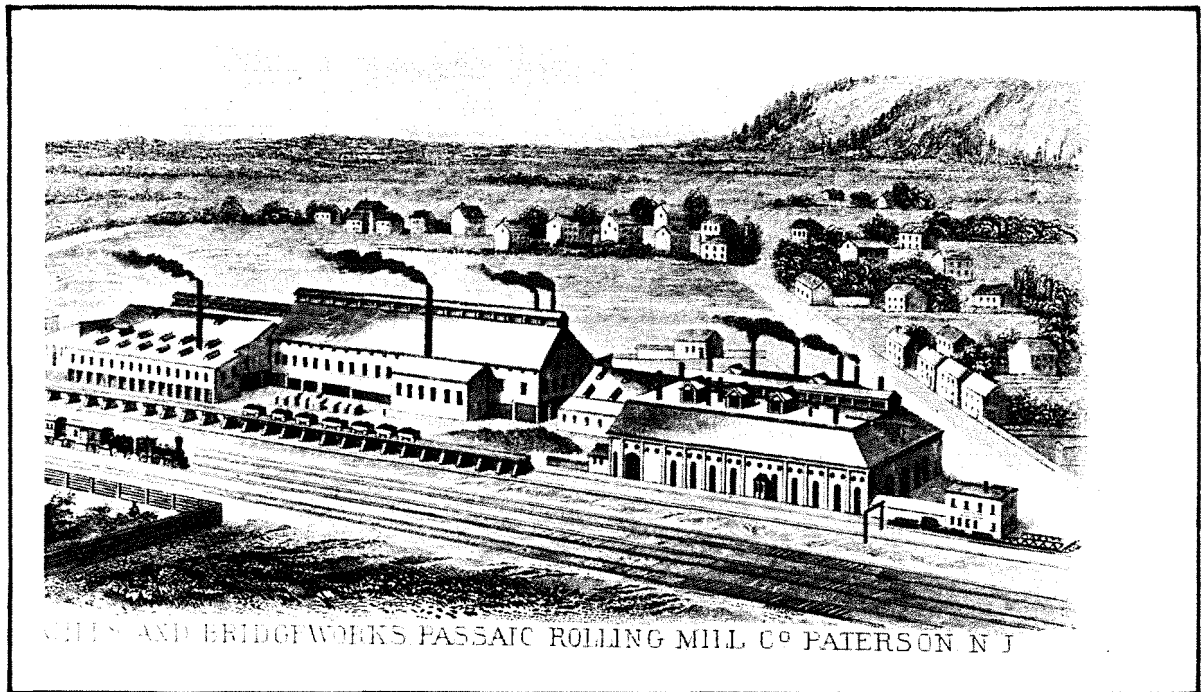
Lincoln		
	R.L. Smith Machine Works	1899-1901
Omaha		
	Andrews Bridge Company	1896-1899
	1898 and 1899 directories gave Ogden, Utah, as second address, but was listed only at Ogden in 1901.	
	J.R. Lehmer	1901
	A.A. Raymond	1896-1899
	'wood bridges'	
	Jno. A. Templeton	1896-1899
	Wood and Bancroft	1896-1899

NEW JERSEY

Dover		
	Dover Boiler Works	1901
Elizabeth		
	E.G. Brown	1888
	New Jersey Dock and Bridge Building Company	1899-1901
Jersey City		
	P.S. Ross	1896-1898
	B.M. and J.F. Shanley	1887
	Wallis Iron Works	1883-1891
Lambertville		
	William Cowin	1868-1870

NEW JERSEY

Newark		
Hay Foundry and Iron Works		1896-1901
Passaic		
Union Building and Construction Company		1899-1901
Paterson		
Bogert and Carlough Company		1901
*Passaic Rolling Mill Company		1877-1901
Fabricating capacity in 1884 was 12,000 tons		
a year, one of the largest of that time.		



WORKS AT
PATERSON, N. J.

Passaic Rolling Mill Co.

BRIDGE BUILDERS.

NEW YORK OFFICE,
Room 45, Astor House.

N. Y., Lack. & Western Ry.—Erie Crossing at Buffalo.

Wrought Iron Railroad & Highway Bridges, Turn Tables & Roofs.

All made from the best material of our own manufacture. Manufacturers of all kinds of Iron and Iron Work for Bridges and Buildings. Plans and Estimates furnished.

WATTS & COOK President; **W. O. FAYERWEATHER**, Treasurer; **FRANK A. LEERS**, Engineer.

Riverside Bridge and Iron Works	1889-1899
Watson Manufacturing Company	1869-1876
Specialized in Post type trusses. In	
1876 built three 300 foot spans in Brazil,	
and in same year went into receivership.	

NEW JERSEY



S. S. POST'S PATENT IRON RAILROAD BRIDGE

ACROSS THE SUSQUEHANNA RIVER, ERIE RAILWAY.

(In Four Spans, whole length 650 feet.)

BUILT BY THE WATSON MANUFACTURING COMPANY, PATERSON, N. J.

Phillipsburg

Phillipsburg Manufacturing Company

1871-1874

Built bridges in early 1870s. Earlier
had made bolts for bridges and other uses and
later manufactured machinery.

Tippett and Wood

1868-1901

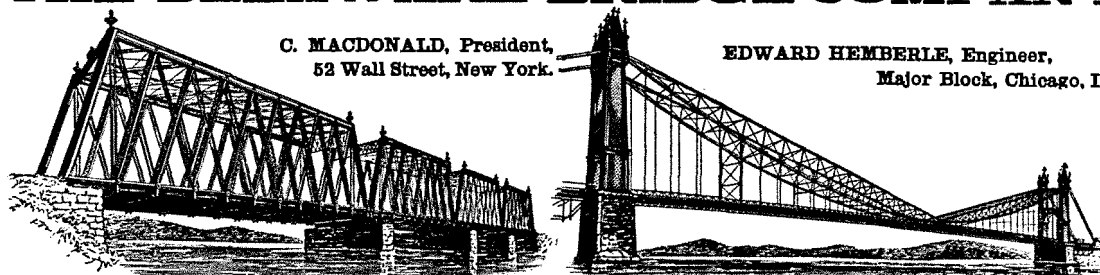
Established 1868.

Plainfield

W.T. Kirk

1901

THE DELAWARE BRIDGE COMPANY.



C. MACDONALD, President,
52 Wall Street, New York.

EDWARD HEMBERLE, Engineer,
Major Block, Chicago, Ill.

CIVIL ENGINEERS AND CONTRACTORS FOR THE CONSTRUCTION OF BRIDGES, ROOFS, VIADUCTS AND IRON PIERS
WORKS AT TRENTON, N. J. COOPER, HEWITT & CO.

NEW JERSEY

Trenton	
Delaware Bridge Company	1875-1883
Cooper, Hewitt and Company, New York, proprietors.	
F.C. Lowthorp	1857-1884
Sometimes misspelled Lowthrop. Temporarily Lowthorp and Henderson, c1874-1876.	
New Jersey Steel and Iron Company	-1900
Formed 1866 and part of the Cooper, Hewitt and Company operations which also included Delaware Bridge Company. This company operated the Trenton Iron Works, but from 1886 to 1899 advertised under its own name as a bridge builder although Trenton was also advertising. Acquired by American Bridge Company in 1900.	
John A. Roebling's Sons Company	-1901
The plant to manufacture wire rope was established in 1849 and renamed after his death in 1869. His will required that his name be used, and this nomenclature was adopted to include his sons. Only suspension bridges were constructed, and these were an adjunct to the manufacturing.	
*Trenton Iron Works	1886-1900
See New Jersey Steel and Iron.	
Trenton Locomotive and Machine Manufacturing Company	1853-1862
Organized under this name in 1853 from earlier partnerships that manufactured locomotives, gas plants, etc. Company was renamed Trenton Arms Company in 1862. Apparently constructed bridges only while bearing this name. Built Fink's patented trusses.	

NEW MEXICO

Albuquerque	
Albuquerque Bridge Company	1888

NEW YORK

Albany	
Albany Bridge and Iron Works	1885
Albany Iron and Machine Works	1866-1882
Operated under three proprietors: Jones, Haskell and Company 1866-67, Haskell and Orchard 1868-1871, Henry C. Haskell 1872-1882. Under the last, advertised as 'Manufacturers of Reznor Patent Improved Wrought Iron Tubular Arch Truss Bridge'.	

NEW YORK

Albany (continued)

Albany Iron Works

1849

F. Townsend and Company, proprietors. Built iron bridge over Erie Canal basin at Albany 1849.

*Hilton Bridge Construction Company

1880-1900

Began 1880 and bought by American Bridge Company 1900. Charles Hilton was chief engineer and died 1884; he had been with New York Central Railroad and Leighton Bridge.



J. McCormick

1887

Perhaps the man listed as president of Albany Bridge and Iron Works two years earlier.

Pruyn and Lansing

1855-1865

'manufacturers of steam engines, boilers, Iron Bridges...'

Squire Whipple

1864

S. and J.M. Whipple

1857

Buffalo

*Buffalo Bridge and Iron Works

1891-1900

Established 1891 and bought by American Bridge Company 1900.

Buffalo Engineering Company

1898-1901

*Buffalo Structural Steel Works

1899-1901

Central Bridge Company

1876-1884

Organized 1876 and purchased shop of Kellogg Bridge Company 1881. Became part of Union Bridge Company (of New York City) in 1884, and the shop was closed c1890.

Henry Clark

1899

NEW YORK

Buffalo (continued)

George H. Gilmon

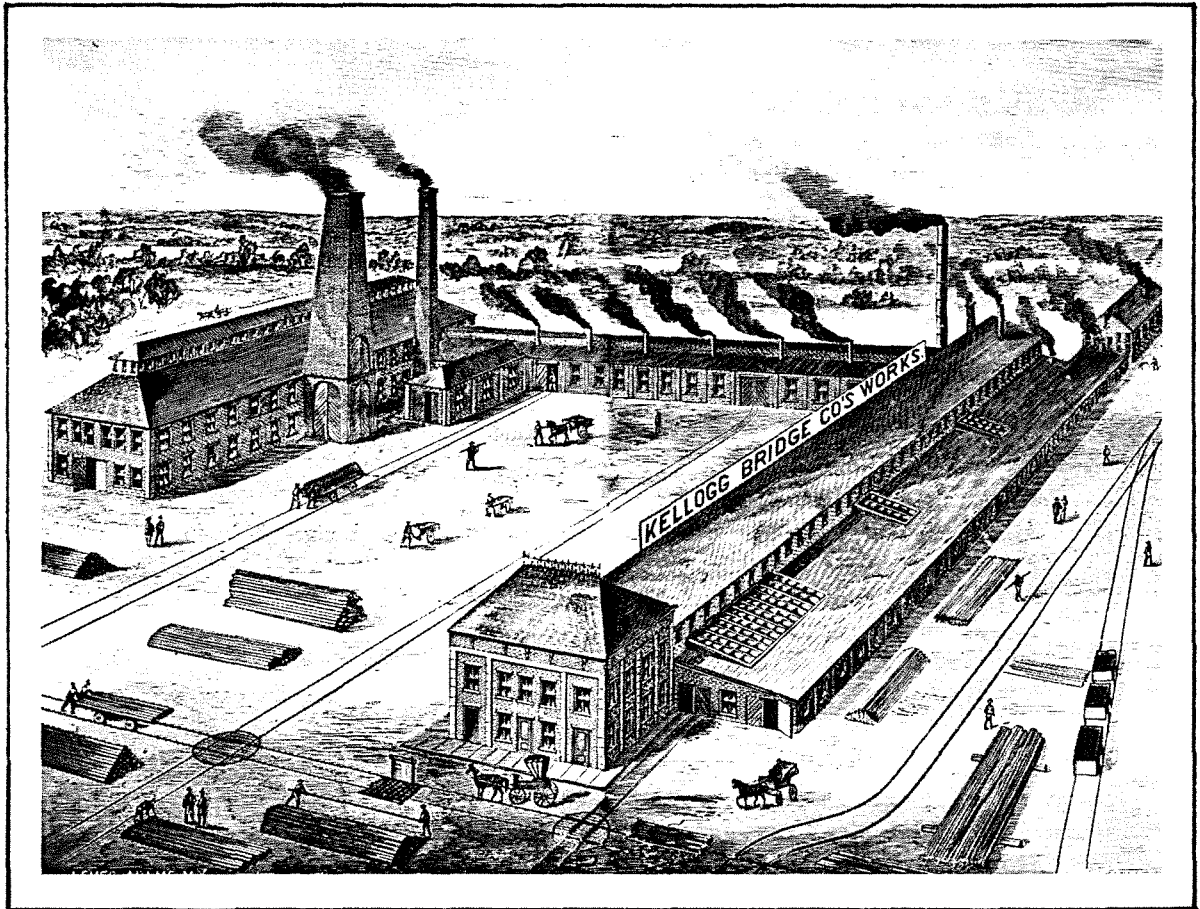
1896-1898

Kellogg Bridge Company/

1870-1881

Organized November 1870 by Charles Kellogg.

Shop acquired by Central Bridge 1881.



Charles H. Kellogg

1888-1889

Son of Kellogg Bridge Company proprietor.
Advertised 1889 'contracting engineer,
iron work and bridge builder'. Later
directed Kellogg Iron Works and perhaps
Kellogg Iron Bridge Works.

*Kellogg Iron Bridge Works

1894

Listed once in AISA. Possibly an unsuccessful
plan to use the Union Bridge Company shop.

Kellogg Iron Works

1891-1901

Sporadically Kellogg Steel and Iron Company.

/ See Appendix D for the two Charles Kelloggs

NEW YORK

Buffalo (continued)

Niagara Bridge Works Organized 1873.	1873-1896
Frederick Overhoff	1901
Union Bridge Company See Central Bridge Company.	1884-c1890

Elmira

*Elmira Bridge Company, Limited/ Established 1889 by Charles Kellogg (formerly with Kellogg and Maurice) and others. Sold to American Bridge Company 1900.	1889-1900
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Fort Edward

Cooper and Nash Established 1875.	1875-1878
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Groton

*Groton Bridge and Manufacturing Company Founded 1877 as Groton Iron Bridge Company and name changed to that listed in 1887. Also manufactured punches, straightening machines, and wood-working machinery. Acquired by American Bridge Company 1900, and 1901 they sold it to former owners who adopted name of Groton Bridge Company.	1877-1900
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Havana

(Name of village changed to Montour Falls about 1895.) *W.H. Shepard's Sons Bridge Company Followed by Havana Bridge Works of Montour Falls.	1891-1896
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Horseheads

*Horseheads Bridge Company Started 1890 and acquired by American Bridge Company 1900.	1890-1900
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Hudson

Hudson River Bridge Works Whitbeck and Power proprietors in 1881.	1881-1888
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Montour Falls

*Havana Bridge Works The outgrowth of W.H. Shepard's Sons Bridge Company and the predecessor of Rochester Bridge and Construction Company listed in 1903.	1896-1901
--	-----------

/See Appendix D for the two Charles Kelloggs



A well-appointed bridge shop of the 1890s. The 80-by-400-foot building—itsself presumably a product of the firm's works—was entirely of iron and glass with no wood used. The capacity was 1,000 tons of finished work per month. (Berlin Iron Bridge Company, East Berlin, Connecticut)

NEW YORK

New York City

American Bridge Company 1900-1901
Formed 1900. See Appendix C.

Architectural Iron Works
Daniel Badger proprietor. 1865 catalogue showed bridges, but it is not known if any were built.

Atlantic Bridge Works 1863
Post, McCallum and Company proprietors.
'Prepared to erect Post bridges of iron and of wood and iron.'

Atlas Iron Construction Company 1891-1896

Blake and Duffy 1888

Alfred P. Boller 1877
'Civil Engineer and Bridge Builder, contractor for all descriptions of engineering ironwork, Bridges...'

Brown and Lucius 1888

Burton and MacDonald 1870
'Engineers and Contractors for the Construction of Iron and Wooden Bridges...'.
Also had office in Philadelphia.

Carrere and Haas 1891

Cooper, Hewitt and Company
Proprietors of New Jersey Steel and Iron Company and related companies of Trenton, New Jersey. Although not an operating company, it sometimes advertised as a bridge builder.

Cooper and Wigand 1899-1901

*J.B. and J.M. Cornell
Started in 1847 and best known for its cast iron building facades. It was listed in Directories of the 1890s and mentioned as a possible component of American Bridge.

Edward Corning and Company 1896

Dean and Westbrook 1886-1901
Listed as Dean-Westbrook Bridge Company in some Directories of 1899 and 1901.

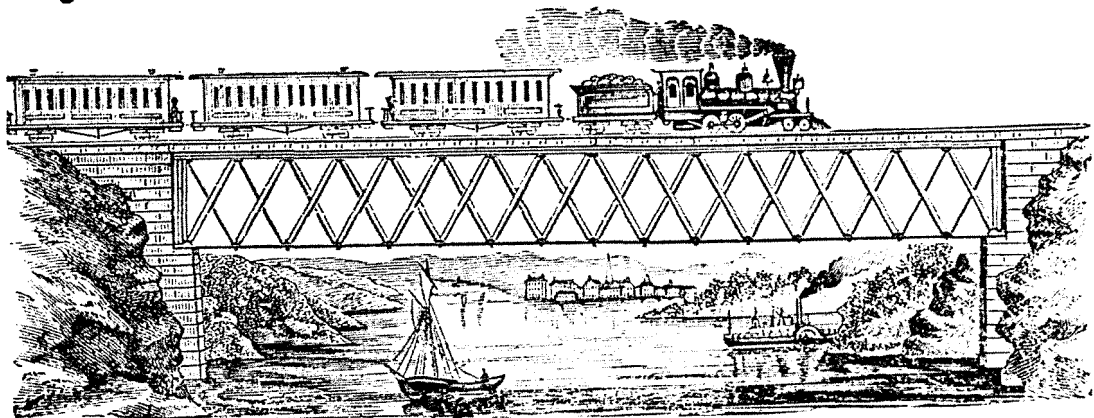
Empire Bridge Company 1900-1901
Formed 1900 by American Bridge Company to operate the shops in New York State. See Appendix C.

NEW YORK

New York City (continued)

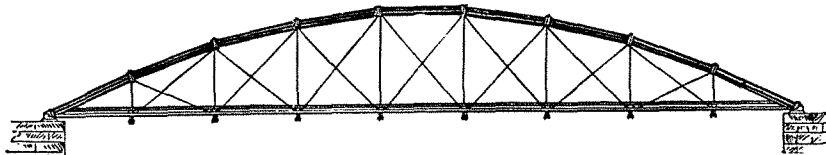
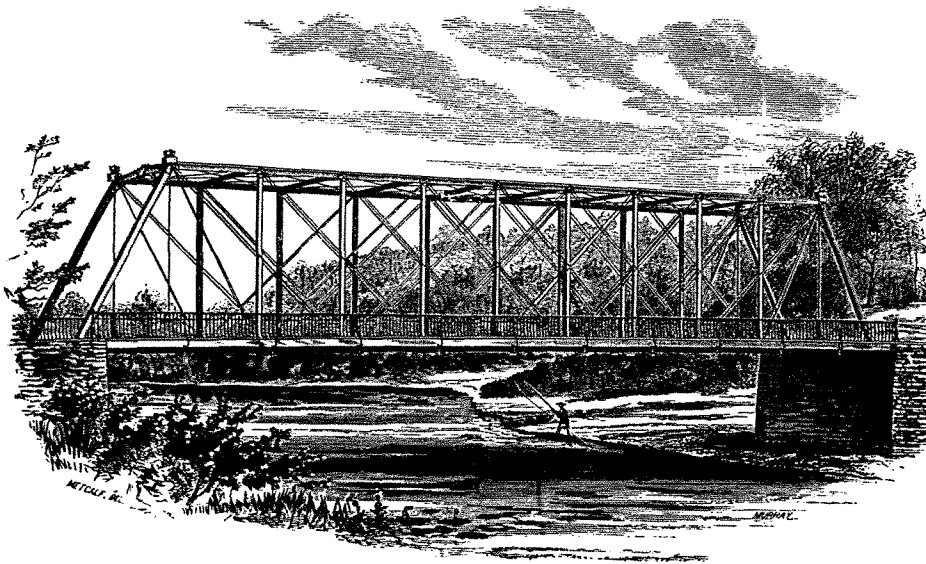
Empire Construction Company	1899
R.H. Hood	1898-1899
Isaac A. Hopper	1896
*Jackson Architectural Iron Works Despite name was listed in Directories for period indicated. The company had provided the balustrades for the Washington Bridge over the Harlem River in 1888.	1896-1901
Henry A. La Chicotte	1898
Lewinson and Just	1896-1901
Frank R. Long	1896-1901
Charles MacDonald Formerly a partner in Burton and MacDonald.	1871-1872

CHARLES MACDONALD,
Engineer and Contractor for the Construction of



IRON AND WOODEN BRIDGES,
Viaducts, Steel Suspension Bridges, Roofs, Etc.,
80 BROADWAY, NEW-YORK.

Manhattan Bridge Building Company
Despite name constructed no bridges. Company
was promoter of the Poughkeepsie railroad
bridge of 1888.



New York Bridge Co.,
 CONTRACTORS, BUILDERS,
 AND
ENGINEERS,

J. D. HUTCHINSON.

OFFICE 26.

J. W. SHIPMAN.

110 BROADWAY, NEW YORK.

~~W. J. MORRIS~~

Gentlemen:

We are prepared to furnish the Whipple Iron Truss and Arch Bridges, of any desired length of span and capacity, on short notice, as well as the celebrated "Roeb-ling" Steel Wire Cable Suspension Bridges for long spans, where the nature of bottom makes it difficult to put in masonry, or at localities where it is deemed inexpedient to obstruct the flow of water by putting in piers; also wood and combination bridges. We invite examination of the many bridges in use, put up by us, of the above named plans, and will be pleased to show our work to all parties who may favor us with a call. Plans, Specifications and estimates furnished on short notice.

Notices of all Bridge Projects and Lettings will be esteemed a favor.

Very Truly Yours,

Dec. 1, 1877.

NEW YORK

New York City (continued)

*Milliken Brothers	1891-1901
John Monks	1888
Moseley Iron Bridge and Roof Company Sometimes listed as Moseley Iron Bridge and Corrugated Roof Company.	1867-1901
New York Bridge Company Managed by J.D. Hutchinson and J.W. Shipman.	1877
New York Iron Bridge Company Formed to continue the work of Rider Iron Bridge Company. Col. Stephen Long and M.M. White were associated. Dates approximate.	1850-1853
O'Brien, Sheehan and McBean	1899
*Post and McCord Started 1877 and acquired by American Bridge Company in 1900. Shop at Greenpoint, Long Island City, New York.	1877-1900
C.O. Richards and Company	1885-1888
Rider Iron Bridge Company Formed about 1848 by Nathaniel Rider and became New York Iron Bridge Company about 1850. The change may have been caused by Rider's death which occurred about that time. Some advertisements refer to 'W. Rider and Brothers', this firm was directed by Nathaniel's brother and dealt in rubber, but it may have carried on the bridge business before the new company was formed. In 1853 G.F. Rider of the Washington Iron Bridge Company, location not given in program, exhibited a model of an iron bridge identical to that submitted by the New York Iron Bridge Company. It is not known if G.F. Rider was related to Nathaniel or had been associated with either of the two companies.	c1848-1850
John Roach A ship and engine builder who constructed at least one bridge in the city, Third Avenue over the Harlem River, in 1864.	
R.P. and J.H. Staats	1896
Stephens and O'Rourke	1898-1899
Thorp and Bond	1896

NEW YORK

New York City (continued)

Union Bridge Company 1884-1900
 Formed 1884 by the combination of Central Bridge Company of Buffalo with Kellogg and Maurice, Athens, Pennsylvania. The office was in New York City. The Buffalo shop was closed c1890 and American Bridge Company acquired the balance 1900.

I.E. White 1888

Moore M. White 1852-1854
 After working for the New York and Rider iron bridge companies, White wrote in 1854 that he was the only builder of iron bridges in or near New York, had built one in Nashua, New Hampshire, 1852 and had just shipped a 112 foot single-span bridge to Peru for the Arica and Tacna Railroad.

Oswego

Oswego Bridge Company
 Apparently an error for Owego Bridge Company, as no structures have been identified as their product. Appeared in Directories 1896-1899.

Owego

*Owego Bridge Company 1891-1901

Painted Post

*Lane Bridge Works c1890-1901
 D.F. Lane proprietor. Fabricated bridges that used rails for the chords and compression members as well as the usual types of trusses.

Weston Engine Company 1896-1898

Port Jervis

Barrett Bridge Company 1901

Rochester

Alden and Lassig Bridge Works 1881-1886
 John Alden, formerly chief engineer of Leighton Bridge, and Moritz Lassig of Chicago formed a partnership on 1 July 1881. They operated Lassig's Chicago plant and leased Leighton's which they operated as Alden and Lassig Bridge Works 'Lessees of Leighton...'. They purchased the plant in 1884. Partnership dissolved January 1886 with Lassig resuming ownership of the Chicago part and Alden taking Rochester which he called Rochester Bridge and Iron Works.

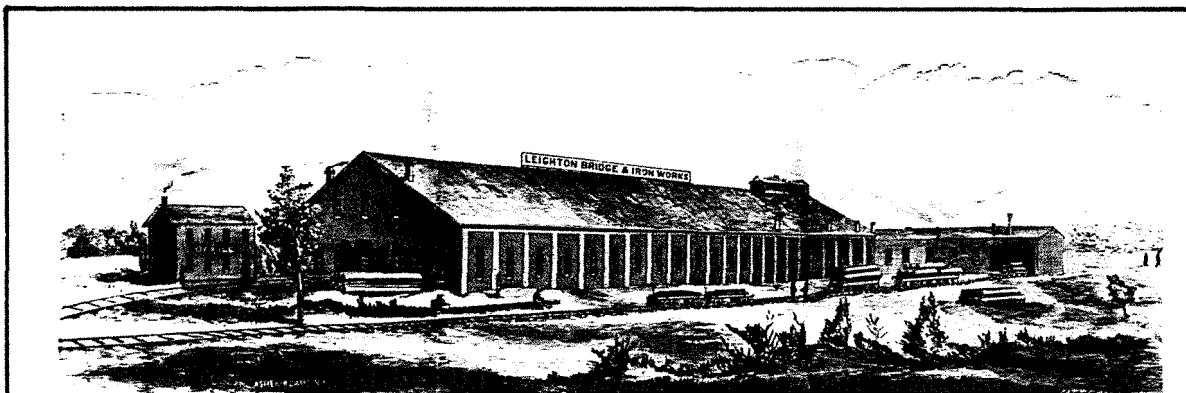
NEW YORK

Rochester (continued)

Leighton Bridge and Iron Works

1870-1881

Formed by Thomas Leighton 1870 when partnership with Fowler ended. Leased to Alden and Lassig 1881.



LEIGHTON BRIDGE AND IRON WORKS
ROCHESTER, N. Y.



Wrought Iron Truss Lattice Railroad and Highway Bridges, Wrought Iron Water Pipes and General Truss Work.

ORDERS SOLICITED FROM CIVIL ENGINEERS AND CONTRACTORS. .

Leighton and Fowler

c1854-1870

*Rochester Bridge and Iron Works

1886-1900

Formerly Alden and Lassig Bridge Works. Became part of the American Bridge Company 1900. Alden, the proprietor, was sometimes listed separately as a bridge builder and may have been a partner in Rust and Alden, Chicago, 1888.

B.P. Smith

1899

NEW YORK

Syracuse

Alexander Iron Works

1899-1901

Simon DeGraff

1866-1871

Listed as 'contractor' 1857-1865 and 'bridge contractor' or 'bridge builder' 1866-1871.

Troy

Reuben Comins

1855-1883

Also was president of Hilton Bridge Company, Albany, formed 1880. As Directories listed him as 'bridge builder' until his death in 1883, he may have continued a separate business.

John D. Hutchinson

1859-1870

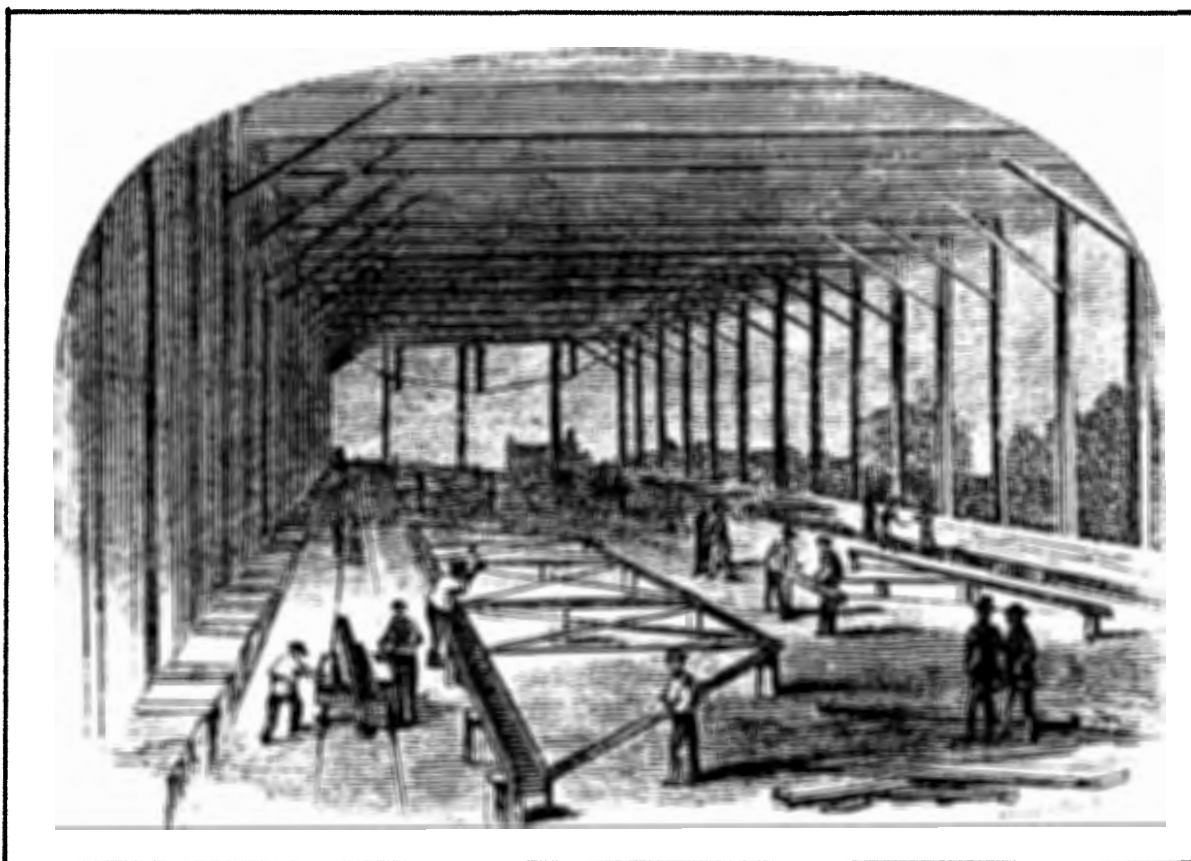
Later associated with J.W. Shipman in the construction of a bridge at Stockport, New York (1875), and then in New York Bridge Company.

Van Hornesville

J. Shipman and Company

1856

Built shop 1856 for the manufacture of iron bridges and axles. See Appendix D for later career.



Trial assembly of a bridge truss in the shop, ca. 1872

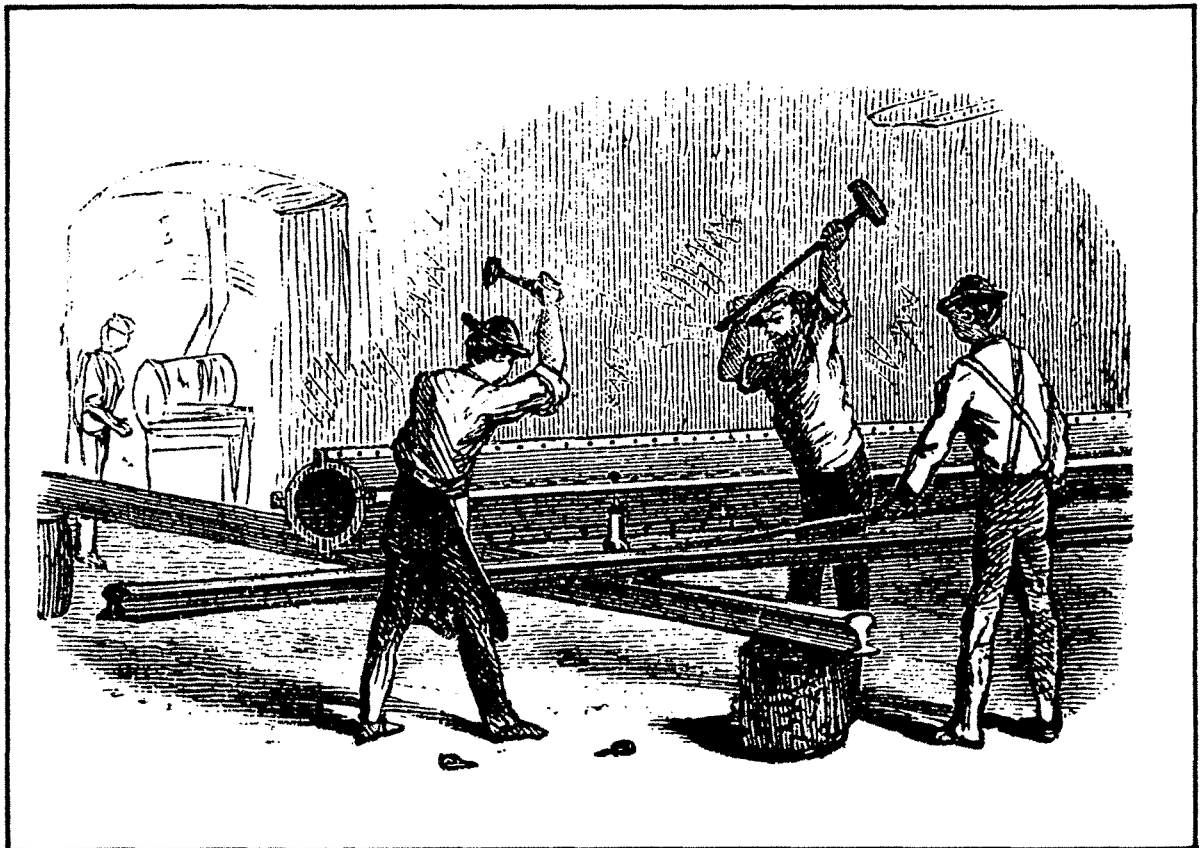
NORTH DAKOTA

NORTH DAKOTA

Fargo		
W.J. Haskins		1899-1901
Jno. Jardine		1899-1901
Jas. Kennedy		1899-1901
Grand Forks		
A.F. Turner		1901
Wahpeton		
North Western Construction Company		1896-1899

OHIO

Bellaire		
*Standard Boiler and Bridge Company		1891-1896
Incorporated 1891. Directories of 1894 and 1896 specify 'light bridges'.		
Bellefontaine		
*Bellefontaine Bridge and Iron Company		1894-1901
Successor to Buchanan Bridge Company.		
*Buchanan Bridge Company		1890-1894
Started 1890 and name changed 1894.		



Riveting a column, ca. 1872

OHIO

Canton

- *Canton Bridge Company 1876-1901
Reorganized or incorporated 1891.
- John Laird and Company 1864-c1871
Organized 1864 as a development of Laird's foundry which started in 1840.
- *Wrought Iron Bridge Company 1864-1900
Organized 1864 by David Hammond and incorporated 1871. Absorbed by American Bridge Company 1900. Job Abbott who joined the company in 1872 was one of the organizers of Toronto (Canada) Bridge Company c1879 and Dominion Bridge Company 1883, and served as first president of both.

WROUGHT IRON BRIDGE CO.

Iron and Steel

BRIDGES, VIADUCTS,

GIRDERS, TURN-TABLES,

Power-Houses, Electric-Light Stations,

STEEL AND IRON ROOFS.

— COMMUNICATE WITH NEAREST OFFICE. —

Canton, 136 Liberty Street, 1309 Monadnock Building,
OHIO. NEW YORK CITY. CHICAGO, ILL.
New York Life Building, Kansas City, Mo.

Cincinnati

- *Brackett Bridge Company c1890-1901
Name changed about 1890 from Lomas Forge and Bridge Works after F.J.P. Brackett gained control.
- Cincinnati Architectural Iron Works 1896-1898
- Cincinnati Bridge Company 1873-1877
J.W. Shipman manager. Company was active for only short time but built several large bridges. It submitted a proposal for a suspension bridge with a 734 foot main span over New York City's East River.
- Cincinnati Bridge Company 1896
Incorporated 1896.

OHIO

Cincinnati (continued)

- | | |
|---|------------|
| Charles Graham | 1872-1875 |
| Gregory, Bandon and Robinson
Built Moseley's patent trusses. Bandon,
which appears on a c1860 advertising
pamphlet, may be a misprint for Brandon. | 1857-1860 |
| Lomas Forge and Bridge Works
Started 1880 and became Brackett Bridge
Company about 1890. Evolved from William Lomas
and Company, makers of tools and hardware. | 1880-c1890 |
| Moseley and Company | 1856-1861 |

MOSELEY'S TUBULAR WROUGHT IRON



ARCH BRIDGES AND ROOFS.

THESE BRIDGES AND ROOFS HAVE
 now been fully tested in this vicinity, and it is
 universally conceded that they can not be excelled.
 The Roofs, are wholly of Wrought Iron, or mixture of
 Wood and Iron ; Sheeting always Iron.
 The bridges are wholly Wrought Iron except the floor,
 which is wood, like the floors of ordinary Bridges
 We are prepared to make these structures in any
 quantities, at prices about as follows:
 Railroad Bridges, 50 feet span, 8,000 lbs., \$17 50 per
 foot lineal.
 Common Road or Turnpike, 50 feet span, 2600 lbs.
 \$5 75 per foot lineal.
 Roofs, all iron, 50 feet width of building. \$25 per 100
 square feet, part wood and part iron, from \$12 to \$20
 per square.

- | | |
|--|-----------|
| Nunning and Lubbering | 1888 |
| Queen City Bridge and Steam Forging Company | 1888 |
| *L. Schreiber and Sons Company
Listed in AISA for 1898, but advertisement
in a different directory for 1899 does not
mention bridges. | 1898 |
| *Stacey Manufacturing Company
In existence 1868 and incorporated 1880. | 1868-1899 |

OHIO

Cleveland

Buckeye Bridge Company 1872-1886
Miller, Jamieson and Company proprietors
in 1872.

Buckeye Bridge and Boiler Works 1888
Perhaps same as above or its successor.

Cleveland Bridge Company 1899-1901

Cleveland Bridge and Car Works 1870-1888
McNairy and Claflen Manufacturing Company
proprietors.

Cleveland Bridge and Iron Company 1884-1888

Cleveland Erecting Company 1895-1901
Incorporated 1895.

Clinton Smith Bridge Company 1876

Zenas King 1861-1871
Began his connection with the industry in
1858 as an agent for Moseley. In 1861 King
established a partnership with Peter Frees to
build boilers and bridges. This was dissolved
after a few years with King retaining the
bridge portion. Formed company in 1871. Names
of businesses before 1871 not known.

*King Iron Bridge and Manufacturing Company 1871-1901
Incorporated 1871 by Zenas King. Name changed
to King Bridge Company about 1893. See related
companies at Iola and Topeka, Kansas.

McLaughlin and McKenna 1901

Novelty Iron Works 1875-1882
Zwilling Brothers and Company, early proprietors.
Advertisements of Clinton (Iowa) Bridge
Company in 1879 to 1882 Directories listed
this name and location as their shop for
iron bridges. Either Clinton acquired the
shop or there were two with the same name.

Ohio Bridge Company 1869-1874
Rezner, Stone and Company, proprietors, may
have operated under their own name before
starting Ohio Bridge.

Standard Contracting Company 1896-1901

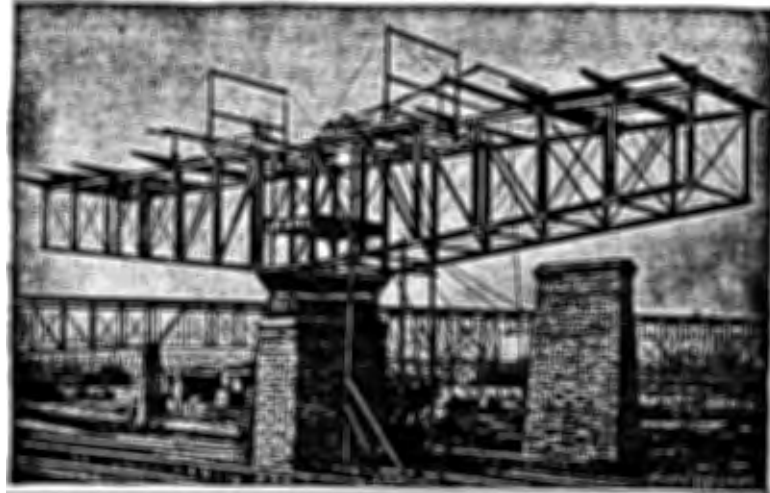
W.A. Stevens and Company 1899-1901

OHIO

THE KING BRIDGE CO.,

BRIDGES. CLEVELAND, OHIO. VIADUCTS.

IRON AND STEEL EYE BARS, GIRDERS AND STRUCTURAL WORK FOR BUILDINGS.
PLANS, ESTIMATES AND SURVEYS FREE OF COST.



CLEVELAND CENTRAL VIADUCT SWING,
Showing erection without False Work.
BUILT BY THE KING BRIDGE CO.

Cleveland (continued)

Thatcher, Burt and Company

1863 -

Had the local franchise for Howe trusses
in the 1850s and were succeeded by McNairy
and Claflen Manufacturing Company (Cleveland
Bridge and Car Works) by 1870.

Van Dorn Iron Works

1891

Incorporated 1891.

*Variety Iron Works

1888-1901

Columbus

Joseph Braun

1888

Columbus Bridge Company

c1885-1894

Started about 1885 by Reuben A. Sawyer,
incorporated 1886 and apparently closed
about 1894, although some Directories
listed it later.

Etna Construction Company

1895-1897

*Iron Substructure Company

1884-1901

Incorporated 1884.

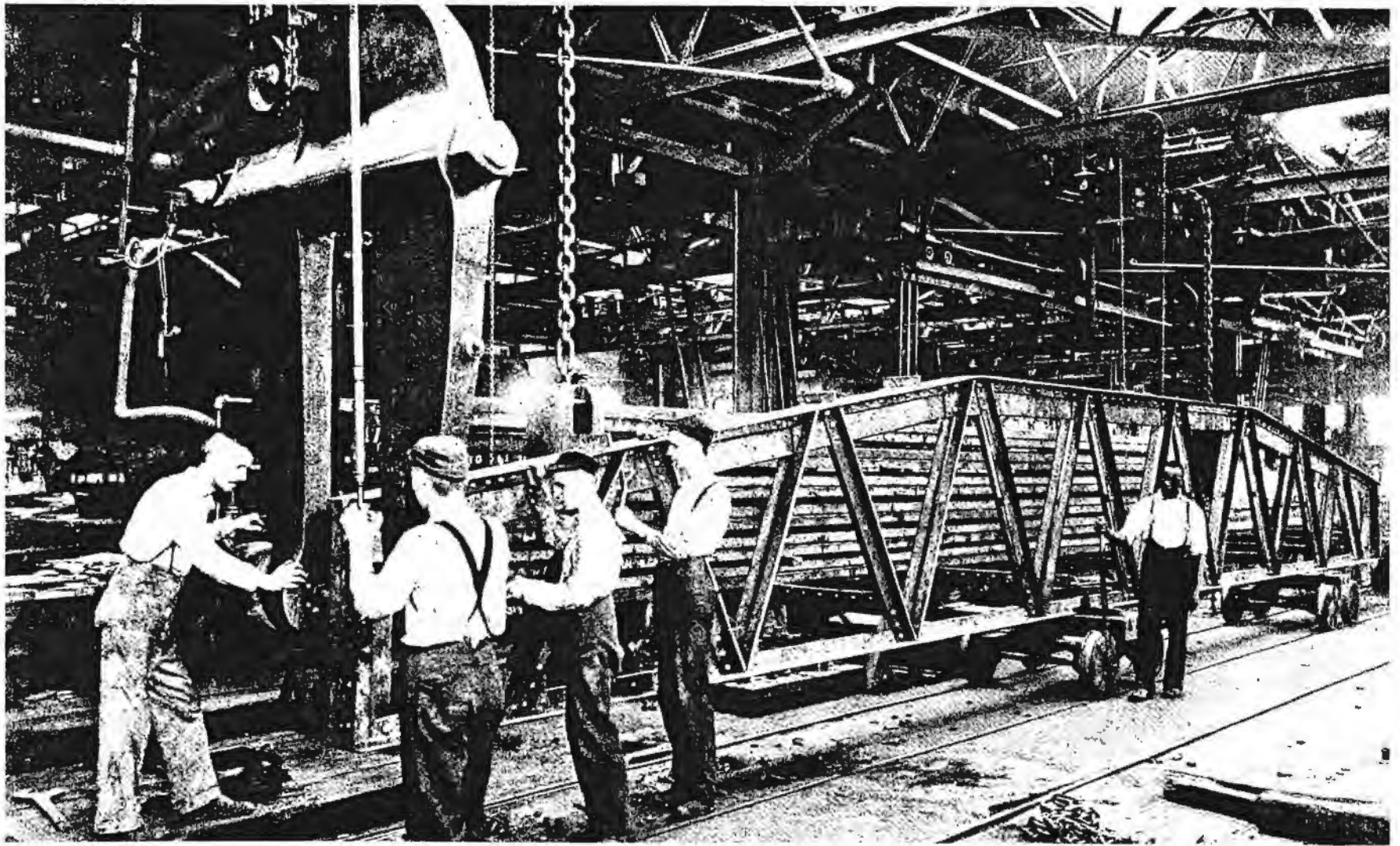
*New Columbus Bridge Company

1894-1900

Incorporated 1894 and absorbed by
American Bridge Company in 1900.

Reuben A. Sawyer

1884



Assembling a small prefabricated bridge truss in the shop using a portable hydraulic riveter.(Edge Moor Iron Works)

OHIO

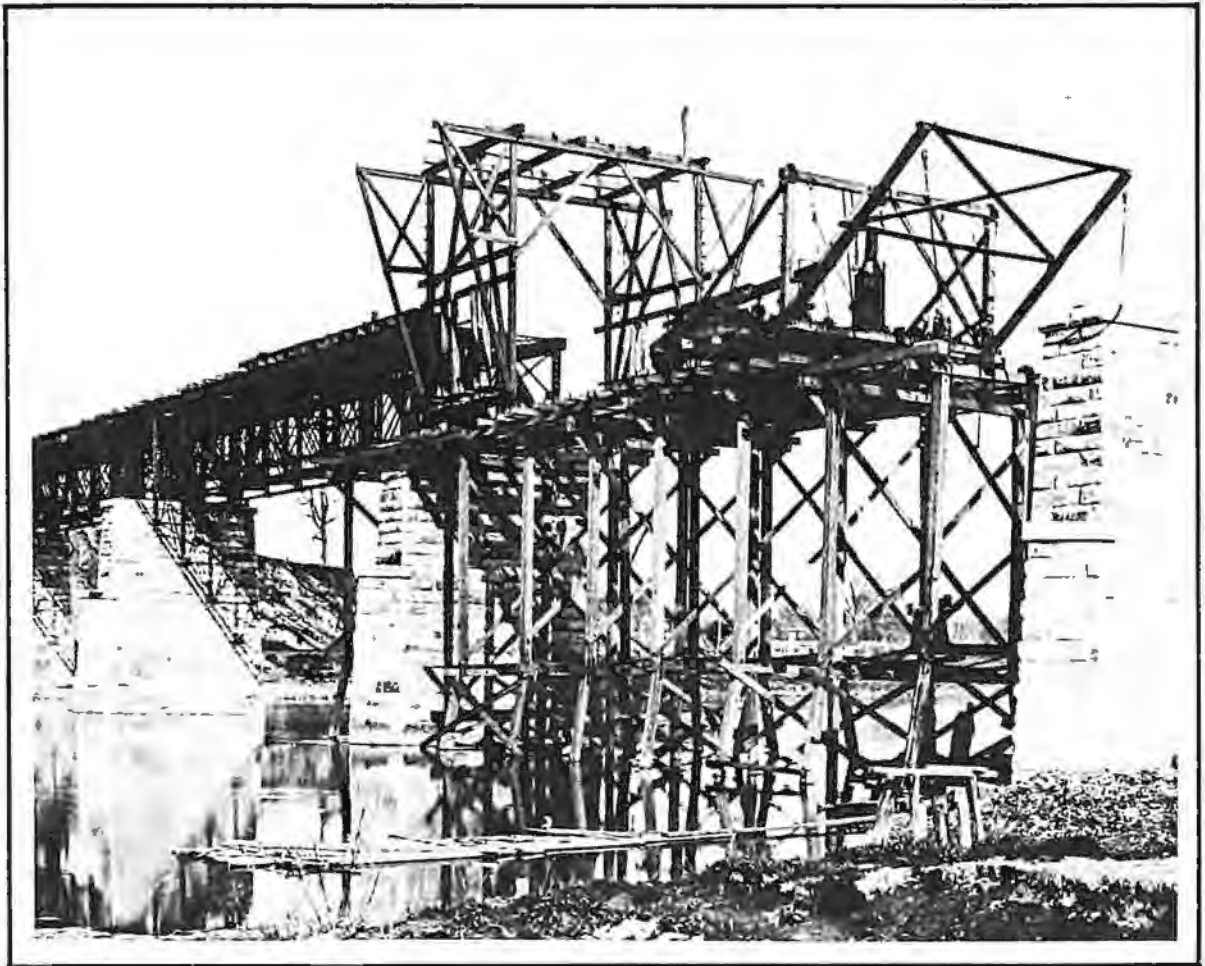
Coshocton		
Coshocton Iron Works		1861-1874
James Shipman, manager.		
Dayton		
Columbia Bridge Company		c1868-1890
D.H. Morrison started building wood bridges in 1848 and received a patent in 1867 for an iron one. The following year he built a fabricating shop and the company probably was formed at that time. Later he was joined by his son C.C. Morrison.		
Dayton Architectural Iron Works		1888-1893
McHose and Lyon proprietors.		
Dayton Bridge Company		1883
Incorporated 1883.		
Hamilton		
Champion Iron Bridge Company		1874-1875
See Champion Bridge Company, Wilmington, Ohio.		
Hamilton Bridge Company		1896-1901
Hamilton Tool and Construction Company		1896-1898
Zimri Wall and Company		1860-1871
See Champion Bridge Company, Wilmington, Ohio.		
Z. and J. Wall and Company		1871-1874
See Champion Bridge Company, Wilmington, Ohio.		
Kenton		
*Champion Iron Company		1896-1901
Lancaster		
August Bornemann and Sons		1880
Later were proprietors of Hocking Valley Bridge Company.		
Hocking Valley Bridge Company		c1881-1901
Started by Bornemann in the early 1880s. After his death about 1890, the company was acquired by Benjamin F. Dum.		
Lima		
Lima Bridge Company		1873
McCurdy and McDurmut		1872-1874
Logan		
Motherell Iron and Steel Company		1896-1901

OHIO

Marietta		
Stephen Daniels		1836-c1855
Agent and builder of S.H. Long's patented		
trusses.		
Marietta Bridge Company		1890
Marysville		
Reuben L. Partridge		1855-1900
Wooden bridges.		
Massillon		
*Massillon Bridge Company		1869-1901
Established in 1869 as Massillon Iron Bridge		
Company. Incorporated in 1887, and name may		
have been changed at that time.		
Russell Bridge Company		1872
Middleport		
Ohio Machine Company		1896-1898
Mount Vernon		
*Mount Vernon Bridge Company		1880-1901
Incorporated in 1880. Company was in		
receivership in 1894 but resumed business.		
Newark		
Lane Brothers Bridge and Construction Company		1890-1898

The Lane Brothers Bridge & Construction Co.,
 IRON AND STEEL
Bridges, Jails *and* Court House Work
 NEWARK, OHIO.

New Bremen		
Lanfersieck and Grothaus Company		1895-1901
Oregonia		
Bradbury and Spencer		1888-c1897
Started as blacksmiths and built first		
bridge in 1888. Became Oregonia Bridge		
Company about 1897.		
*Oregonia Bridge Company		c1897-1901
Formerly Bradbury and Spencer.		
Portsmouth		
*Portsmouth Structural Steel and Iron Company		1898
Sidney		
Bemis and Krum		1899-1901



Springfield		
Jno. V. Clayton		1901
*Rogers Iron Company		1896-1901
Tippicanoe City (later Tipp City)		
Robert W. Smith		1867-1869
Moved to Toledo. See Smith Bridge Company.		
Toledo		
T.H. Hamilton		1885-1888
Legget and Berry		1896-1898
Ohio Bridge Company		1896-1901
Smith Bridge Company		
Smith moved from Tippicanoe City where he had built his patented wood bridges in 1869. At the new location he also built composite trusses and in 1870 formed Smith Bridge Company which he sold in 1890. The new owners changed the name to Toledo Bridge Company and sold it to (continued)		

OHIO

Toledo (continued)

American Bridge Company in 1901.

Robert W. Smith

1869-1870

Smith Bridge Company

1870-1890

*Toledo Bridge Company

1890-1901

See Smith Bridge Company for history.

Upper Sandusky

John H. Junkins and Son

1861-1889

Urbana

Urbana Bridge Company

1879-c1885

William A. Black proprietor.

Wilmington

*Champion Bridge Company

The last and longest used of five names at two locations. 1874 and earlier dates are approximate.

Zimri Wall and Company

Hamilton

1860-1871

Z. and J. Wall and Company

Hamilton

1871-1874

Champion Iron Bridge Company

Hamilton

1874-1875

Champion Iron Bridge Company

Wilmington

1875-1878

Champion Iron Bridge and

Manufacturing Company

Wilmington

1878-1881

Champion Bridge Company

Wilmington

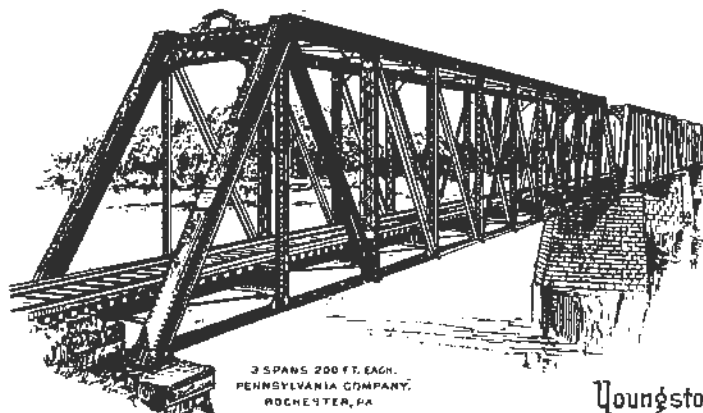
1881-1901

Youngstown

Morse Bridge Company

1878-c1889

Founded in 1878. Name changed to Youngstown Bridge Company between 1888 and 1891.



3 SPANS 200 FT. EACH.
PENNSYLVANIA COMPANY,
ROCHESTER, PA.

Morse Bridge Co.

Engineers & Manufacturers of

Bridges & Structural Work

in Iron & Steel

Upset and Die Forged Eye Bars

and Upset Bridge Rods.

Youngstown, Ohio.

Aug. 7th.

18 86.

*Youngstown Bridge Company

c1889-1900

Formerly Morse Bridge. Acquired by American Bridge Company in 1900.

OREGON

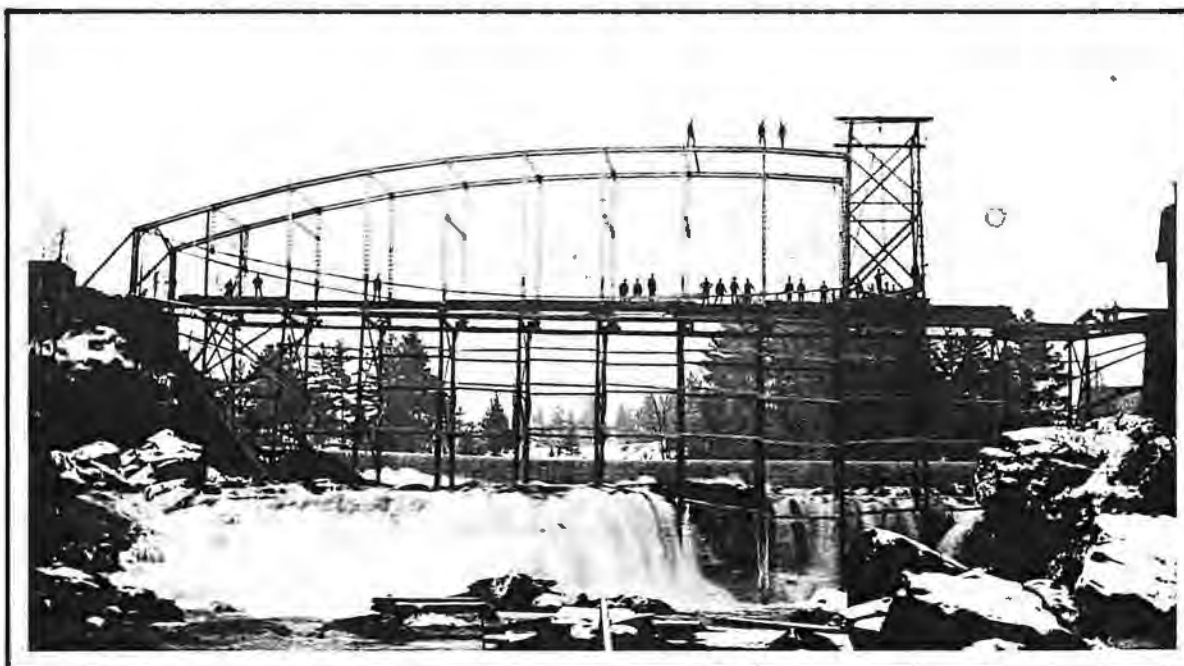
OREGON

Portland

American Bridge and Contract Company	1896-1899
Bentley Construction Company	1901
N.J. Blagen	1901
Bullen Bridge Company	1896-1899
C.A. Bullen	1901
Columbia Bridge Company	1901
Hoffman and Bates	1896-1899
*Portland Bridge and Building Company	1896-1901
Sanderson and Maney	1898
Wakefield and Jackson	1898-1899
Robert Wakefield	1901
Willamet Iron Works	1901
Wolff and Zwicker Iron Works	1897-1901
Also built several torpedo boats for U.S. Navy. Bankrupt in 1901.	

Woodburn

R.L. Morris	1896-1899
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Erection of a Berlin Iron Bridge Company lenticular truss

PENNSYLVANIA

PENNSYLVANIA

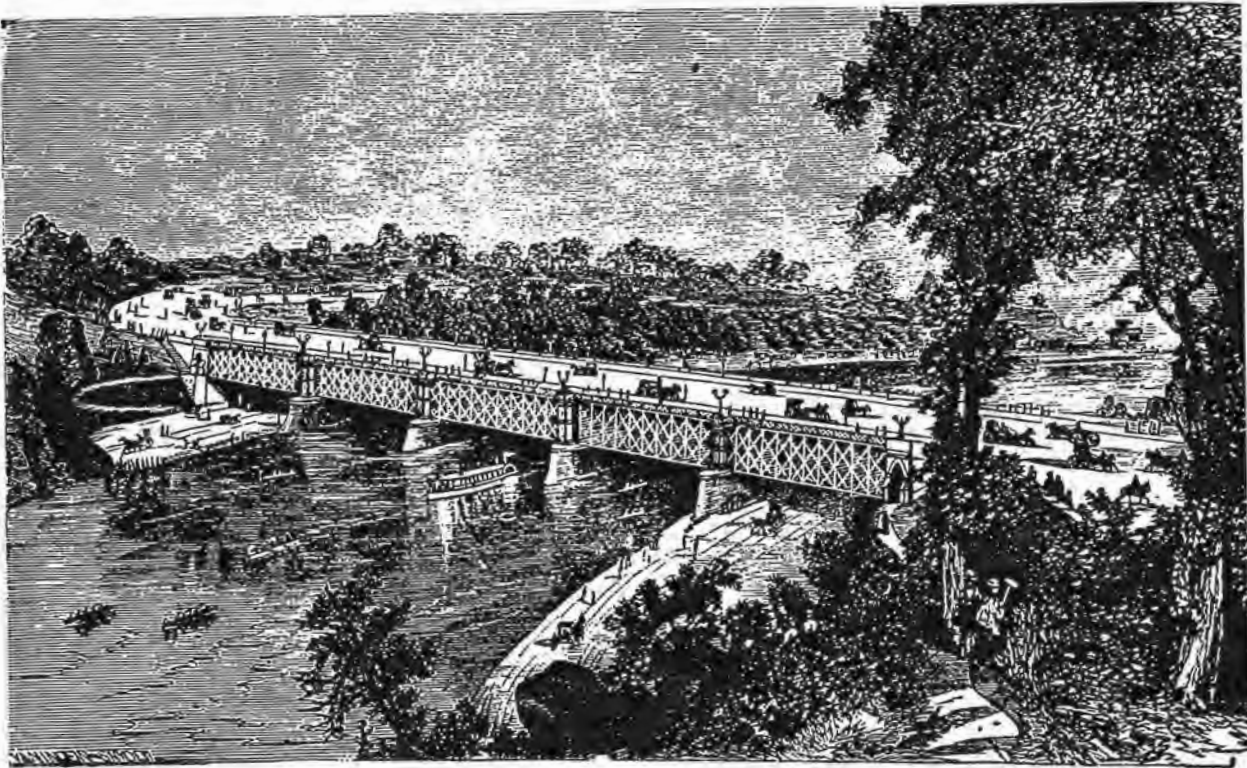
- Allegheny (now part of Pittsburgh)**
Chester B. Albree 1896-1899
 1901 Directory lists only as manufacturer of bridge railings.
- Allentown**
***Allentown Rolling Mill Company** 1886-1901
- Athens**
Charles Kellogg (See Appendix D) c1865-1871
 Started constructing wood railroad bridges in central New York and North-central Pennsylvania about 1865, and built shop at Athens in 1870. The next year he formed partnership with Maurice.
- Kellogg and Maurice** 1871-1884
 Organized in 1871 when Kellogg formed a partnership with Charles S. Maurice. They worked with Central Bridge Company, Buffalo, and joined with them to form Union Bridge Company in 1884.
- *Union Bridge Company** 1884-1900
 Office at New York City. Operated Athens shop until acquired by American Bridge Company in 1900. Built 600 ton testing machine in 1885, one of few in U.S. at that time.
- Beaver Falls**
***Penn Bridge Company** 1868-1901
 Established 1868.



- Canonsburg**
***Fort Pitt Bridge Company** 1896-1901
 See listing under Pittsburgh where main office was located.
- *Pittsburgh Architectural Iron Works** 1894-1896
 See listing under Pittsburgh where main office was located. Plant was bought by Fort Pitt.

PENNSYLVANIA

Chambersburg		
Nelson and Buchanan		1891-1901
Previously agents for Pittsburgh Bridge Company.		
Corry		
E. and E. Love		1901
Dauphin		
*Dauphin Bridge and Construction Company		1898-1901
Germantown		
Hy. Warden		1888
Gettysburg		
Gilbert and Smith		1886
Kane		
C.W. Grout		1899
F.R. Walker		1901
McKees Rocks		
*Schultz Bridge Iron Company		c1890-1900
Evolved from business started by C.J. Schultz c1850 to supply iron parts for wood bridges. Sometimes, erroneously, Schultz Bridge and Iron Company. Acquired by American Bridge Company 1900.		
Milton		
Murray, Dougal and Company		1878
New Brighton		
Penn Bridge and Machine Works		1876
Location is just across river from Beaver Falls where Penn Bridge Company was located. Perhaps same company.		
Philadelphia		
Armstrong and Printzenhoff		1896-1899
Barnes Culvert Bridge Company		1898-1899
Benner and Opdyke		1891-1899
Apparently descended from Jones and Benner and followed by Stacy, Opdyke and Company.		
J.E. Brenneman		1898
Burton and MacDonald		1870
Also had office in New York City.		



CLARKE, REEVES & CO.,

OFFICES:

410 Walnut St., Philadelphia. 49 William St., New York.

Phoenixville Bridge Works of Pa.

DESIGN AND CONSTRUCT ALL KINDS OF

IRON RAILWAY BRIDGES, VIADUCTS, ROOFS, And Similar Structures.

The attention of the officers of Railway Companies is called to our "ALBUM OF DESIGNS," showing the various styles of Iron Railway Bridges, Viaducts, etc., that we have constructed and are prepared to construct, which we will send by mail to any person requiring such structures. We are prepared to furnish first-class Iron Bridges in as short a time as any other bridge builders can do, and at very reasonable rates. We refer to the officers of the following Railway Companies, for whom we have constructed since October 1870, and are now constructing 283,604 lineal feet of first-class IRON BRIDGES, or over 53 miles:

Chicago, Burlington and Quincy—Illinois Central—Chicago and Northwestern—Philadelphia, Wilmington and Baltimore—Connecticut Air-Line—Portland and Kennebec—Northern Pennsylvania—Philadelphia and Reading—Portland and Ogdensburg—New York Central and Hudson River Bridge Co.—Cambria Iron Co.—Catawissa R. R. Co.—Chesapeake and Ohio—Camden and Amboy—Philadelphia and West Chester—Ohio and Mississippi—Grand Trunk of Canada—Inter-Colonial of Canada—Louisville and Nashville—Elevated Railway of New York—Galveston, Harrisburg and San Antonio of Texas.

Address:

CLARKE, REEVES & CO.,

THOMAS C. CLARKE.
ADOLPHUS BONZANO.
DAVID REEVES.
JOHN GRIFFEN.

49 William Street, New York.
410 Walnut St., Philadelphia.
Phoenixville, Penn.

PENNSYLVANIA

Philadelphia (continued)

Clarke, Reeves and Company	1870-1884
Formed 1870 by Thomas C. Clarke and the Reeves family which controlled Phoenix Iron Company. Plant at Phoenixville was called Phoenixville Bridge Works. Clarke left in 1883 and the following year the company was succeeded by Phoenix Bridge Company.	
J.H. Cofrode and Company	1870
Followed by Cofrode and Saylor	
Cofrode and Evans	1891
Followed by Louis P. Evans	
Cofrode and Saylor	1877-1896
Proprietors of Philadelphia Bridge Works with shop located at Pottstown.	
Continental Bridge Company	1871-1877
'Builders of Henszey's Patent Wrought Iron Arch Bridge.'	

CONTINENTAL

BRIDGE Co.,

110 SOUTH FOURTH STREET,
PHILADELPHIA.

BUILDERS OF

HENSZEY'S PATENT

Wrought Iron Arch Bridges,

WITH IRON OR WOOD FLOOR BEAMS.

The HENSZEY PATENT WROUGHT IRON BRIDGE we claim has decided advantages over many others now in use, for the reasons: Firstly. That the Bridge is WROUGHT IRON throughout. Secondly. That the combination of the iron is such as to insure strength in a great degree. Thirdly. That the different parts are so arranged as to be easily reached for painting. Fourthly. No Nuts and Bolts, REQUIRING CONSTANT attention. Fifthly. DURABILITY. Sixthly. Neatness of appearance. Seventhly. For the real value furnished, the CHEAPEST.

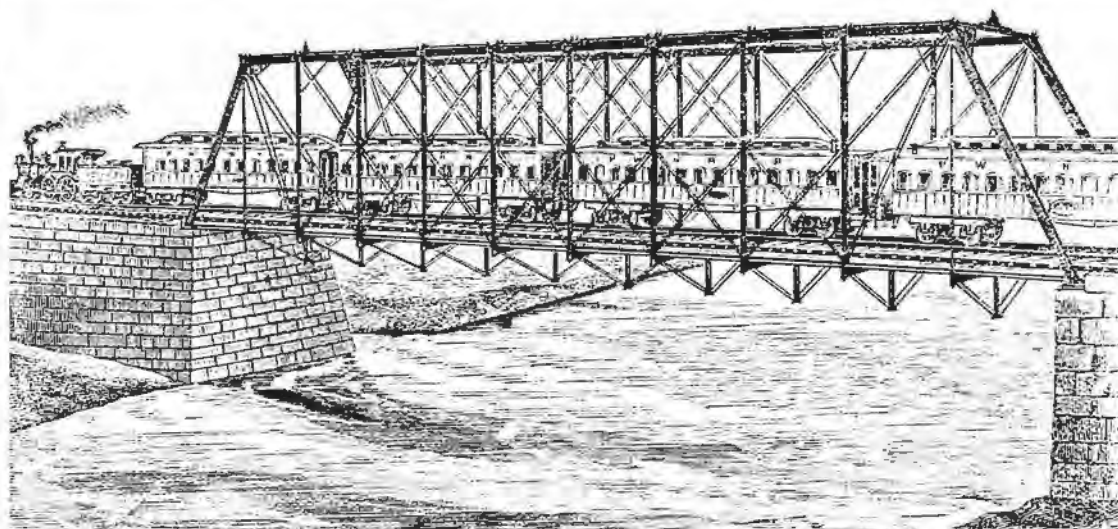
The PATENT WROUGHT IRON ARCH, the great element of strength, is formed of sections of the PHOENIX IRON COMPANY'S COLUMN IRON, so put together that while it is handsome in appearance its STRENGTH is BEYOND QUESTION.

Delaplaine and West	1901
H.O. Duerr and Company	1891-1896
Listed as bridge builder in 1891 and 1896, but in 1894 was manager of Lehigh Valley Construction Company.	
Louis P. Evans	1895-1898
Succeeded Cofrode and Evans	
John P. Eyre and Company	1887

PENNSYLVANIA

Philadelphia (continued)

R.W. Gibson	1887
J.H. Hathaway and Company	1896
Hoffman Engineering and Contracting Company	1901
Jones and Benner	1880-1890
Levering and Garrigues is an offshoot of this firm as the former was president and the latter secretary and treasurer in 1886. Benner and Opdyke may also be related.	
Kellogg, Clarke and Company	1868-1870
Formed 1868 and ended 1870 when Charles Kellogg moved to Buffalo and Thomas Clarke formed Clarke, Reeves and Company.	



Iron Bridges, Iron Roofs and Wooden Bridges.

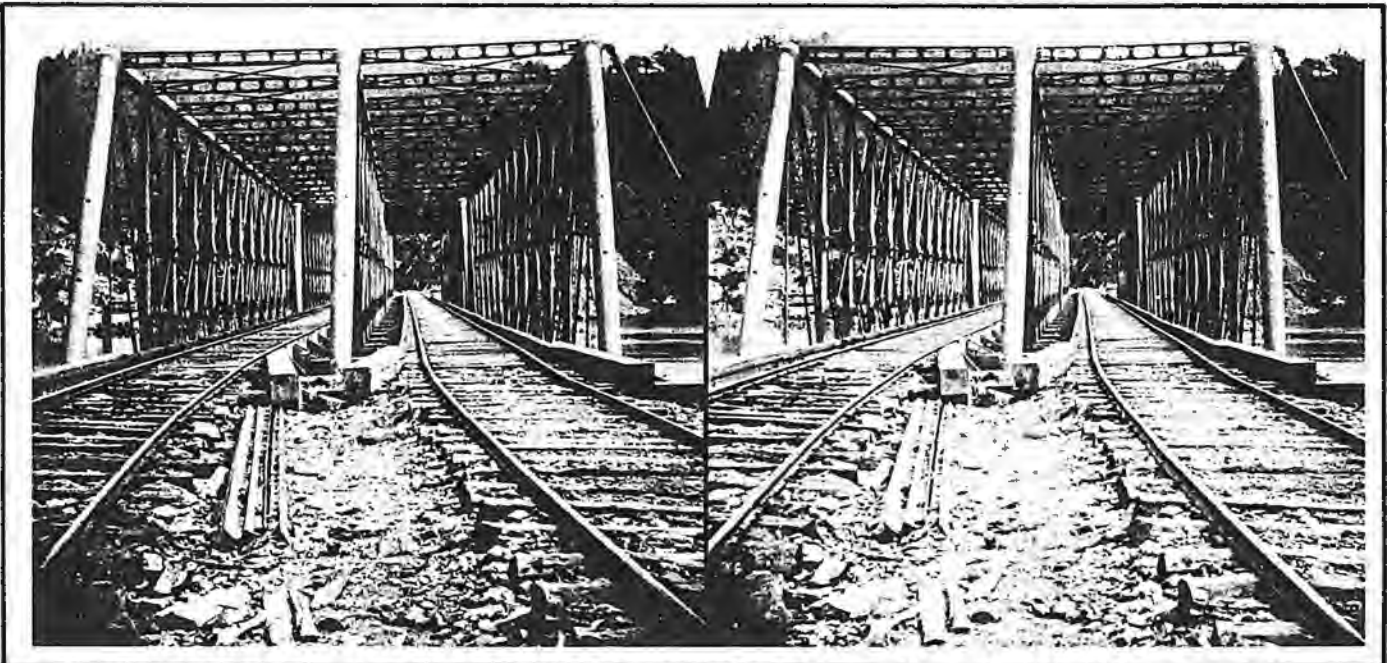
KELLOGG, CLARKE & CO.,

Engineers and Contractors, 410 Walnut St., PHILADELPHIA, Pa.,

SUCCESSORS TO CHARLES KELLOGG
CHARLES KELLOGG, Late Superintendent of the Detroit Bridge and Iron Works. THOS. C. CLARKE, Chief Engineer Mississippi Iron RR. Bridge, Quincy, Ill.
R. BLACKWELL, Resident Eng. of Construction of Iron Work of the Mississippi Bridges—Burlington, Iowa and Quincy Ill. ADOLPHUS BONZANO, Mechanical Eng.

*Keystone Structural Company	1896-1901
Shop at Royersford.	
Leonard, Foley and Company	1898-1899
*Levering and Garrigues	1890-1901
See Jones and Benner for earlier activity.	
W.C. Livengood	1896
Thomas W.H. Moseley	1876
Novelty Iron Works	1888

PENNSYLVANIA



Office of the Pencoyd Iron Works, No. 410 Walnut Street, Philad'a.

We herewith hand you a Stereoscopic View of an Iron Bridge, erected some few years since, near Mauch Chunk, Pa., on the Beaver Meadow Rail Road, (a Road of very extensive Coal traffic.) This structure has given the highest satisfaction to all parties concerned, has endured a trade of some 20,000 tons per week, moved by the heaviest class of Locomotives; and notwithstanding the rigorous climate incident to its location, the Thermometer marking, in some instances, 30 degrees below zero, it has stood the test of the trade and temperature, and is believed to be as permanent and durable as the material out of which it is constructed. This structure is of the Murphy Whipple plan, and is one of many that have been built within the last few years with the same signal success. We take the liberty of referring you to another heavy structure of 155 feet span, built for the North Pennsylvania Rail Road, near Bethlehem, as well as some seven other Roadway Bridges which we have constructed for the Deale (Government) Wagon Route to the Pacific. Should you contemplate the erection of any Bridges, we should be glad to hear from you.

JOHN W. MURPHY, Engineer.

Yours, Truly,

A. & P. ROBERTS.

The Photographs by LANGENHEIM, Philad'a. Views taken to order anywhere in the United States. For particulars, Address F. LANGENHEIM, PHILADELPHIA.

Advertising stereograph, front and rear. Full size.

MANUFACTURERS OF
Open Hearth Steel
Structural Shapes,
Bars, Shafting,
Car and Engine Axles.

PENCOYD IRON WORKS

PERCIVAL ROBERTS, JR., President. P. W. ROBERTS, Vice-Pres.
J. W. DAVIS, Sec. and Treas.

A. & P. Roberts Company

OFFICES:
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NEW YORK 100 Broadway.
BOSTON 27 State St.
CHICAGO The Rookery.
NEW ORLEANS, LA. 626 South Peter St.
CLEVELAND Perry-Payne Bldg.
ST. LOUIS Security Bldg.
BALTIMORE Equitable Bldg.
MONTREAL 35 St. Francois Xavier St.

DESIGNERS AND BUILDERS OF
Train-Sheds, Viaducts,
Bridges,
Elevated Railroads
and all Steel Structures.

PENNSYLVANIA

Philadelphia (continued)

*Pencoyd Iron Works

1887-1900

Operated by A. and P. Roberts Company. Iron production began about 1852 and bridge fabrication 1887. Acquired by American Bridge Company in 1900. Sometimes called Pencoyd Bridge and Construction Company. Office at Philadelphia, shop at Pencoyd.

Pennsylvania (or Penn?) Erecting Company

1901

*Philadelphia Bridge Works

1877-1898

Shop at Pottstown. Started 1877 by Cofrode and Saylor. 1898 Directory gave owners as C.R. Baird and Company and stated that plant was idle and for sale. The plant was bought by Pottstown Bridge Company who sold it to McClintic-Marshall in 1900. The works were on the location of the repair shop of Philadelphia and Reading Railroad where the first American metal railroad bridge was constructed in 1845.

THE PHILADELPHIA BRIDGE WORKS.

OLD RIVER BRIDGE AT HAVEN, PA.—CHANNEL SPAN 640 FEET.



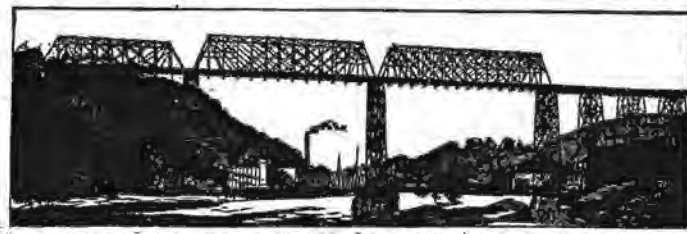
COFRODE & SAYLOR, Civil Engineers and Bridge Builders, design and construct Iron, Wooden and Combination Bridges, Roofs Locomotive Turn-Tables, etc. Office: No. 257 South Fourth street, Philadelphia.

*Phoenix Bridge Company

1884-1901

Formed 1884 from Clarke, Reeves and Company.

THE PHOENIX BRIDGE COMPANY,



ENGINEERS AND BUILDERS OF
IRON & STEEL BRIDGES, VIADUCTS, ROOFS, ELEVATED
RAILROADS, OCEAN PIERES, TURN
TABLES, ETC., ETC.
DESIGNS AND ESTIMATES FURNISHED ON APPLICATION
ALL WORK DONE ON THE PREMISES
From Ore to Finished Structure.
OFFICES: 410 WALNUT STREET, Philadelphia, Pa., 40 WILLIAM
STREET, New York City, and AT WORKS, Phoenixville, Pa.
DAVID REEVES, President. ADOLPHUS BONZANO, Vice-President and
Chief Eng. WILLIAM H. REEVES, General Superintendent. FRANK
T. DAVIS, Treasurer.

"RONDOUT BRIDGE—BUILT FOR THE NEW YORK, WEST SHORE & BUFFALO RAILROAD"

Phoenixville Bridge Works

1870-1884

See Clarke, Reeves and Company.

A. and P. Roberts

Proprietors of Pencoyd Iron Works and sometimes listed instead of the fabricating company.

PENNSYLVANIA

Philadelphia (continued)

Stacy, Opdyke, and Company 1899-1901
Possibly related to Benner and Opdyke.

Standard Roof and Bridge Company 1888-1896

Steele and Wike 1901

L. Sykes and Son 1888

Phoenixville

Clarke, Reeves and Company 1870-1884
Proprietors of Phoenixville Bridge Works.
See listing under Philadelphia where office
was located.

J. Denithorne and Company 1888

*Phoenix Bridge Company 1884-1901
See listing under Philadelphia.

Phoenix Iron Company c1868
Built a 151 foot span for Smith, Latrobe and
Company (1866-1869). Such work probably led the
Reeves family, which controlled Phoenix Iron
to form Clarke, Reeves and Company in 1870.

*Schuylkill Bridge Works 1891-1899
John Denithorne Son and Company proprietor.
Name was used 1903 by Lewis F. Shoemaker for
company located at Pottstown.

Pittsburgh

George R. Buchan 1899

Carnegie Steel Company
Sometimes listed in the late 1890s instead
of its subsidiary, Keystone Bridge Works.

D.W.C. Carroll and Company 1888

Carroll Porter Boiler and Tank Company 1896-1901

H.E. Collins and Company 1898

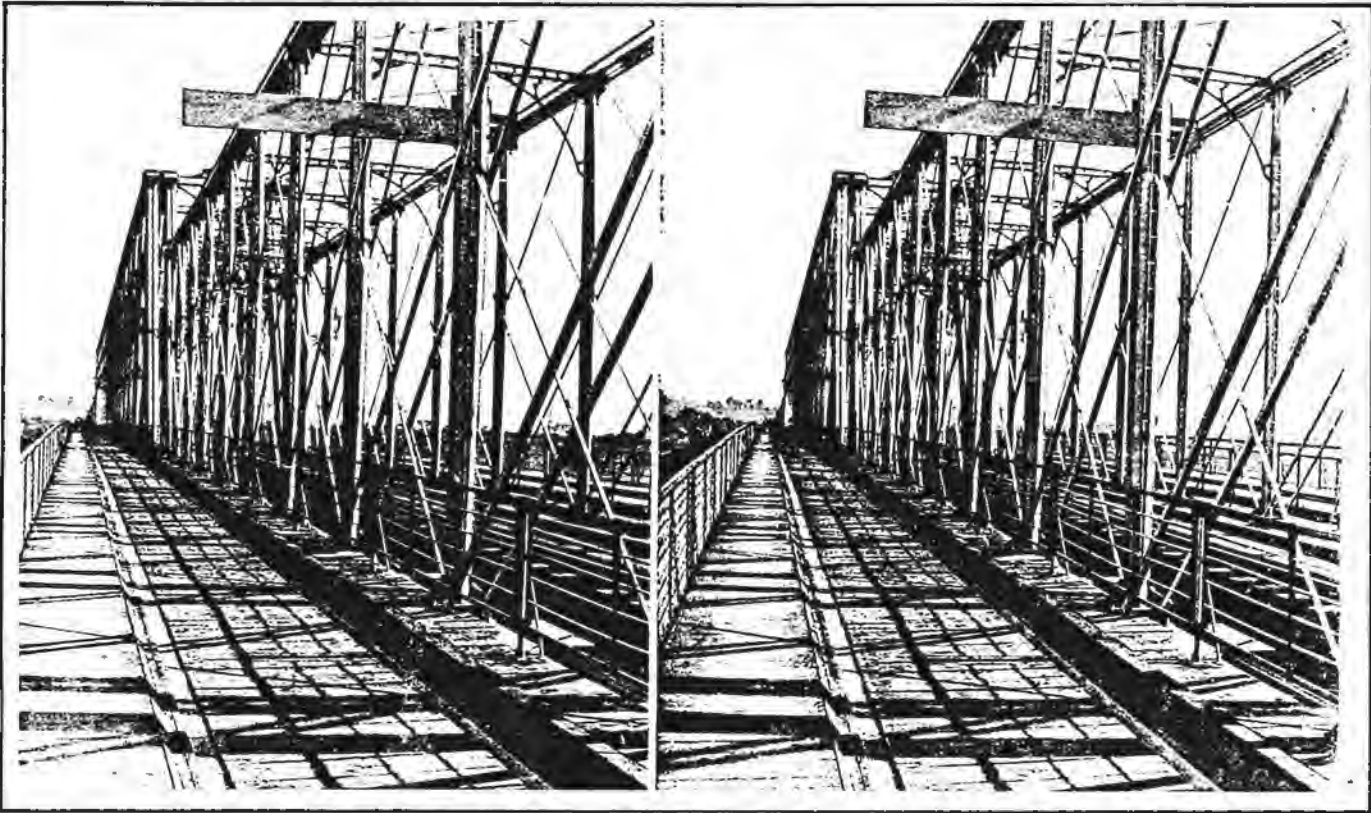
Curran and Hussey 1896-1901

Ferris, Kaufman and Company 1896

*Fort Pitt Bridge Company 1896-1901
Bought Canonsburg shop of Pittsburgh
Architectural Iron Works at sheriff's
sale 7 May 1896.

*Heyl and Patterson 1890-1901
Started 1890.

PENNSYLVANIA



Newport and Cincinnati Bridge.

BUILT BY THE

Keystone Bridge Company, of Pittsburgh, Pa.

RIVER SPANS.

1871.

RIVER SPANS.

Span No. 1, - 187 feet.

Span No. 2, - 418 feet.

Span No. 3, - 287 feet.

Span No. 4, - 260 feet.

Span No. 5, - 202 feet.

Span No. 6, - 202 feet.

CHAS WALDACK, Photo.

FROM
J. H. HOOVER,
Wholesale & Retail Dealer in
STEREOSCOPES AND VIEWS,
FRAMED PICTURES, &c.
No 150 Walnut St. CINCINNATI, O.

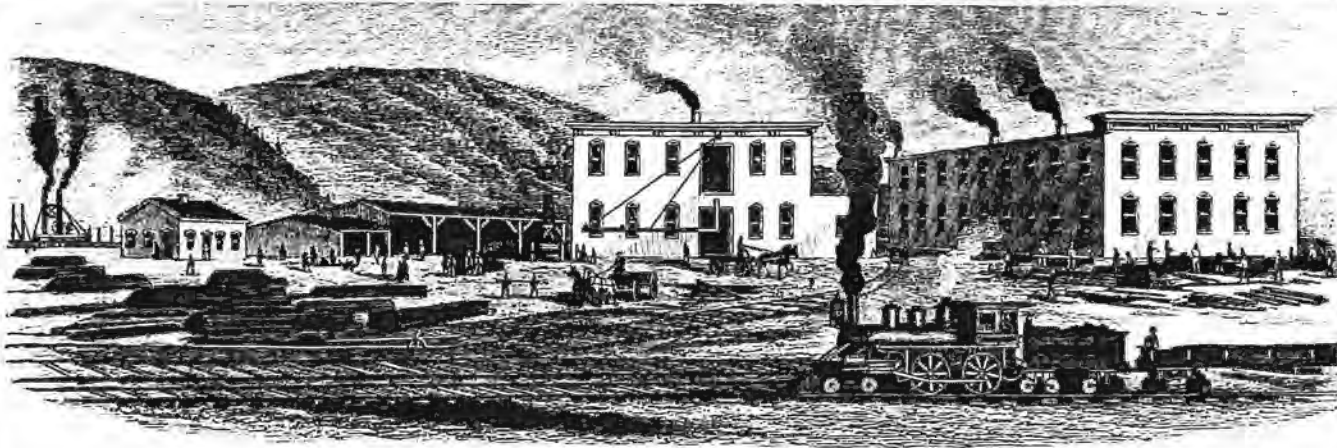
Advertising stereograph, front and rear. Full size.

PENNSYLVANIA

Pittsburgh (continued)

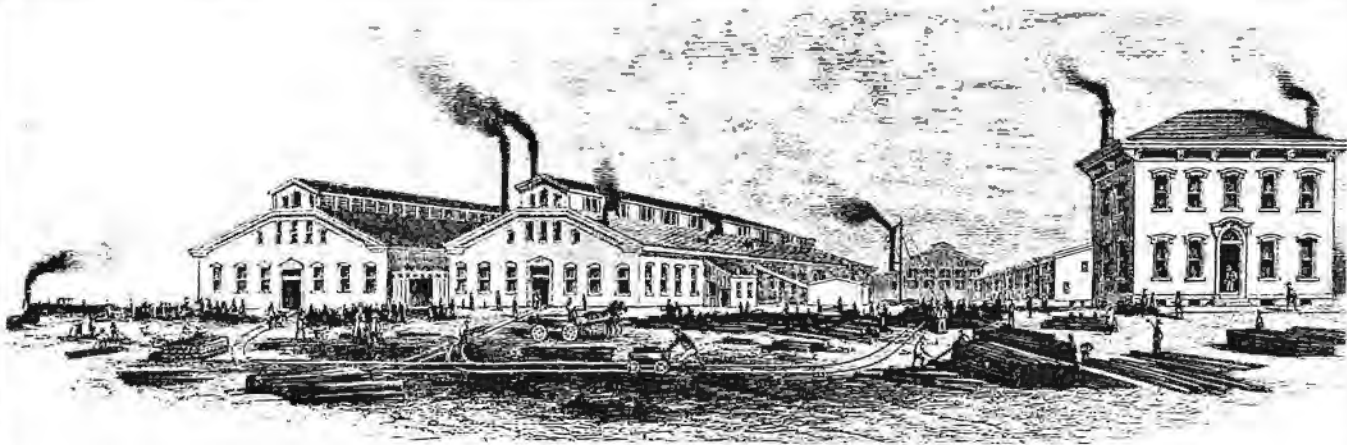
Iron City Bridge Company	1876-1896
Gustave Kaufman	1899
Keystone Bridge Company Organized 1865 by Carnegie, Linville, Piper, Shiffler and others, and purchased plant of Piper and Schiffler. Became Keystone Bridge Works of Carnegie Steel Company between 1891 and 1894. Acquired by American Bridge Company in 1900.	
Keystone Bridge Company	1865-c1893
*Keystone Bridge Works	c1893-1900
George W. Knopf	1899
C.N. Kuntz	1901
James Lappan and Company	1888
*McClintic-Marshall Construction Company Shop at Pottstown which was purchased from Pottstown Bridge Company. Formed 1900 by two officials of Shiffler Bridge Company who left when it was acquired by American Bridge Company.	1900-1901
C.J. McDonald	1896
Fred. K. Melber	1896-1901
Pennsylvania Construction Company	1896
Piper and Shiffler Organized in 1862 under the leadership of Andrew Carnegie. Became part of the newly formed Keystone Bridge Company in 1865.	1862-1865
*Pittsburgh Architectural Iron Works Purchased land at Canonsburg in 1894 and built shop with cupola and 80 hp. Corliss engine. Plant sold by sheriff to Fort Pitt Bridge Company 7 May 1896.	1894-1896
*Pittsburgh Bridge Company Established in 1878 and incorporated in 1881. Purchased by American Bridge Company in 1900.	1878-1900
Pittsburgh Iron and Steel Engineering Company	1896-1898
Pittsburgh Locomotive and Car Works Organized 1865 and absorbed by American Locomotive Company in 1901. Advertised 'iron or steel bridges' at unknown date.	

PENNSYLVANIA



OLD SHOPS.

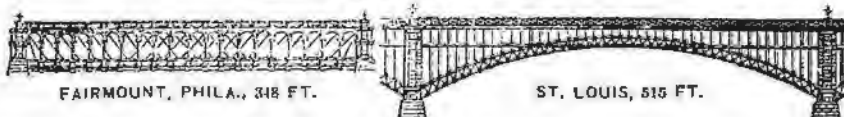
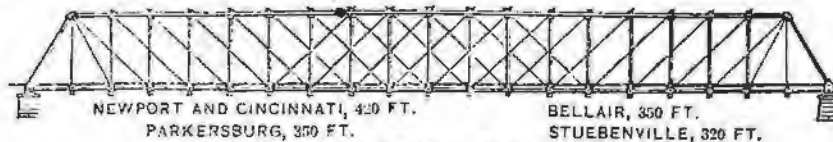
THE KEYSTONE BRIDGE COMPANY.



NEW BRIDGE WORKS.

THE KEYSTONE BRIDGE CO.

BUILDERS OF LONG SPAN BRIDGES.



Linville & Piper Patent Wrought Iron Bridges for Railways, Highways, Parks, Cities, &c. Improved Wrought Iron Turn-Tables, Iron Roofs, Patent Tubular Columns and Weldies' Eye Bars.

MAIN OFFICE AND WORKS—PITTSBURG, PA.

WESTERN OFFICE—211 WASHINGTON AVENUE, ST. LOUIS.

J. H. LINVILLE, President, 426 WALNUT Street, PHILADELPHIA

PENNSYLVANIA

Pittsburgh (continued)

- | | |
|--|------------|
| James M. Riter | 1863-1873 |
| Established business in 1863 and was killed in railroad accident in 1873. Concentrated on plate and tank work - perhaps for oil wells north on the Allegheny River. | |
| Riter and Conley | 1873-1898 |
| Formed to continue James Riter's business by his brother Thomas and William B. Conley. Conley had provided the financial backing and was bookkeeper of the original firm while Thomas Riter had been shop foreman. | |
| *Riter-Conley Manufacturing Company | 1898-1901 |
| Formed 1898 in reorganization of Riter and Conley. | |
| *William B. Scaife and Sons | 1883-1901 |
| *Shiffler Bridge Company | 1870s-1900 |
| Organized in 1870s and absorbed by American Bridge Company in 1900. Shiffler had been treasurer and superintendent of Keystone Bridge. See Appendix C for comment about the expansion of late 1890s. | |

THE SHIFFLER BRIDGE WORKS,
 J. W. WALKER, PROPRIETOR
*DESIGNER AND MANUFACTURER OF STEEL,
 IRON AND COMBINATION RAILROAD BRIDGES,*
 Iron Viaducts, Train Sheds, Girders, Roof Trusses, Iron Buildings, Etc.,
 OFFICE AND WORKS: 48TH STREET AND A. V. R. R., PITTSBURGH, PA.

- | | |
|---|-----------|
| E.L. Stratton and Company | 1896-1898 |
| Lewis Stratton | 1899-1901 |
| J.W. Walker | 1888-1890 |
| Sometimes listed as bridge builder although he was proprietor of Shiffler Bridge Company at the time. | |
| Western Pennsylvania Bridge Works | 1888 |
| Plattsville | |
| Plattsville Bridge Company | 1896-1898 |

PENNSYLVANIA

Pottstown

*McClintic-Marshall Construction Company 1900-1901
See listing under Pittsburgh.

*Philadelphia Bridge Works 1877-1898
See listing under Philadelphia.

Pottstown Bridge Company 1899-1900
Purchased plant of Philadelphia Bridge Works
and later sold it to McClintic-Marshall
Construction Company.

*Lewis F. Shoemaker and Company 1896-1901
Started 1896. Using name of Schuylkill
Bridge Works in 1903.

Pottsville

*Pottsville Bridge Works 1891-1900
Operated by Pottsville Iron and Steel Company
and the two were listed interchangeably. An
1886 mill catalogue mentioned fabrication
of roof trusses, columns, and girders. Berlin
Construction Company leased shop in 1900.

Reading

Reading Rolling Mill Company 1896

Spartansburg

F.C. Black 1901

Steelton

*Pennsylvania Steel Company c1891-1901
Started steel production in 1867, and the
fabrication shop began about 1891.

Stroudsburg

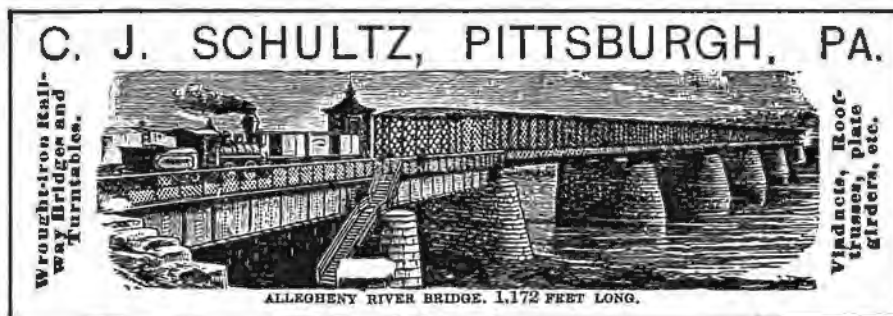
S.B. Palmer and Company 1891

Williamsport

M.M. Perry 1899

York

S. Stouffer 1888



RHODE ISLAND

RHODE ISLAND

Providence		
John A. Dailey		1883
Providence Architectural Iron and Metal Works		1888-1898
Providence Pile Driving and Bridge Building Company		1883-1888
James H. Tower		1879-1899

SOUTH CAROLINA

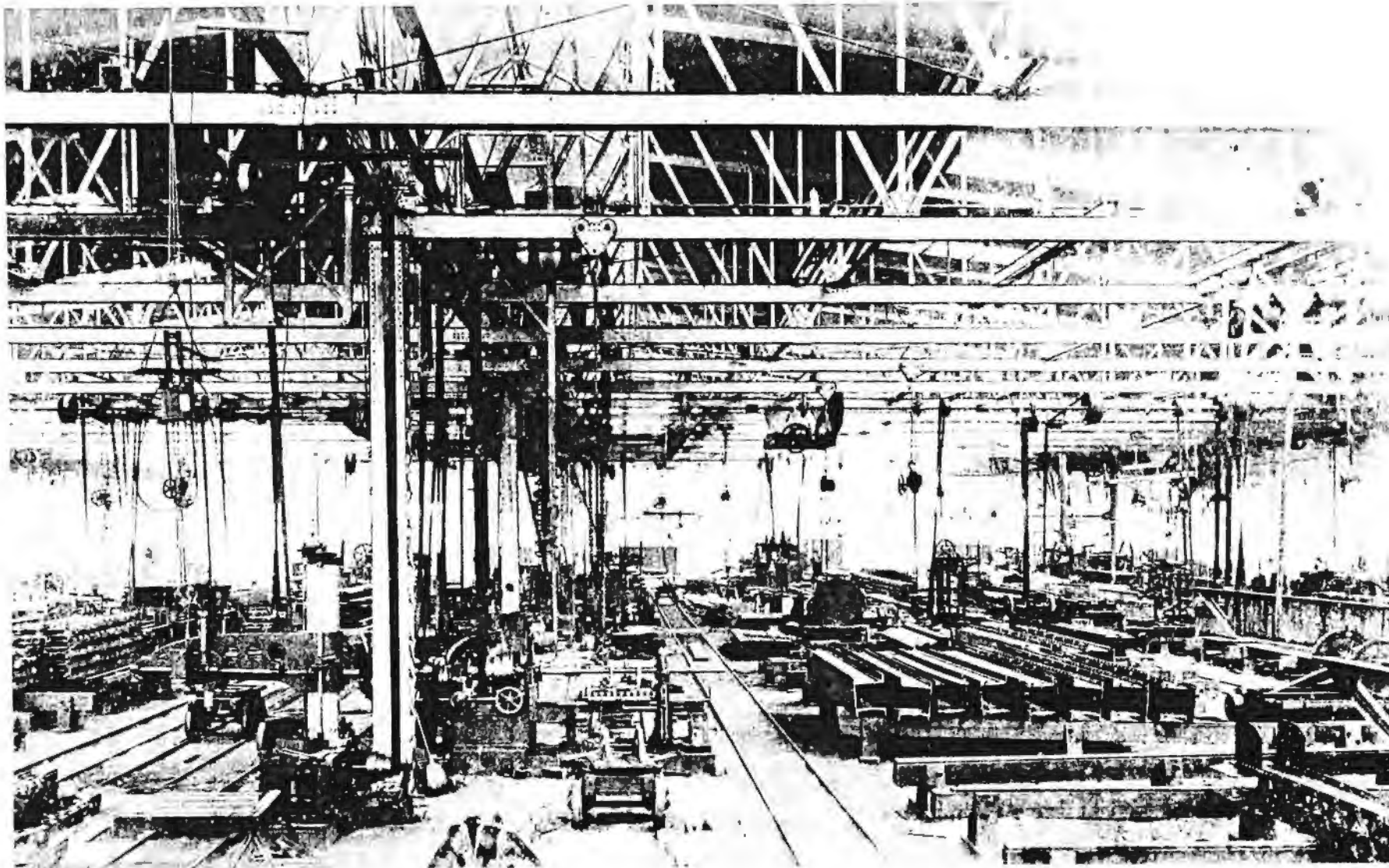
Charleston		
H.W. Crouch and Brother		1896-1901
B.F. Kramer		1896-1901

TENNESSEE

Chattanooga		
Cowan Bridge Company		1896-1898
George E. Crept		1896-1898
Ridgedale		
*Converse Bridge Company		1896-1901

TEXAS

Austin		
C. Horton		1899-1901
Dallas		
George L. Austin and Brother		1899-1901
Harris and Leversedge		1896-1898
Fort Worth		
M.S. Hasie Jr.		1901
*Southwestern Bridge and Iron Company		1894-1898
Plant under construction in 1894.		
Houston		
E.P. Ashbury and Son		1899-1901
B.A. Riesner		1896-1901
Southern Bridge and Construction Company		1899-1901
Waco		
Waco Bridge Company		1896-1901



A late-19th-century bridge shop. The tools for drilling, facing, and other machine work are ranged along the column line at center; bays for assembling are at either side. (Probably the King Bridge Company, Cleveland)

UTAH

UTAH

Ogden	Andrews Bridge Company	1898-1901
	Moved from Omaha, Nebraska.	

Salt Lake City	Anderson Bridge Company	1898-1899
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VERMONT

Clarendon	Nicholas M. Powers	1883
-----------	--------------------	------

Rutland	C.H. Bagley	1883-1885
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	J.H. Holmes and Company	1896-1901
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St. Albans	*Vermont Construction Company	1890-1901
	Organized by R.F. Hawkins who had a similar company at Springfield, Massachusetts.	

VIRGINIA

Richmond	Tredegar Iron Works	
	Opened in 1837 and built several bridges in 1861. Extent and duration of this activity unknown.	

Roanoke	*American Bridge and Iron Company	1889-1895
	Started in 1889 and reorganized as Virginia Bridge and Iron Company in 1895 after financial problems.	

	Cushman Iron Company	1896
--	----------------------	------

	*Virginia Bridge and Iron Company	1895-1901
	Organized in 1895 from American Bridge and Iron Company. Later purchased by American Bridge Company.	

Salem	Camden Iron Works	c1887-1901
	Established about 1887.	

WASHINGTON

Seattle	Allen and Nelson Mill Company	1896-1901
	Puget Sound Dredging Company	1901

WASHINGTON

Seattle (continued)	
Seattle Bridge Company	1901
Van Norman Bridge Company	1901
Tacoma	
N.W. Bridge Company	1899-1901
L. Vanden Stein	1896-1898
Tacoma Bridge and Construction Company	1896

WEST VIRGINIA

Charlestown	
Charlestown Bridge Company	1899-1901
Vulcan Road Machine Company	1891-1901
Proprietor of West Virginia Bridge Works but often listed in its own name.	
Walker Brothers	1900
*West Virginia Bridge Works	1891-1901
See Vulcan Road Machine Company.	
Wheeling	
*West Virginia Bridge and Construction Company	1894-1901
Incorporated 1894.	

WISCONSIN

Ashland	
E.E. Durkee	1884-1892
Later at Phillips, Wisconsin.	
De Pere	
John Grandville	1896-1898
Milwaukee	
*Milwaukee Bridge and Iron Works	1875-1900
Founded in 1875. Cunningham and Keepers were proprietors in 1880, Keepers and Riddell in 1886, and J.G. Wagner Company from about 1895 until its absorption by American Bridge Company in 1900.	
Milwaukee Bridge and Steam Forging Company	1888-1890
Milwaukee Variety Iron Works	1895-1896
Riddell and Morris proprietors.	
F. Weinbagen	1887
Earlier had been agent for Penn Bridge Company at Milwaukee and later was connected with Wisconsin Bridge and Iron Company.	

WISCONSIN

Milwaukee (continued)

*Wisconsin Bridge and Iron Company 1891-1901

Neenah

George Danielson 1885-1898

Ontario

Ontario Iron Bridge Company 1897-1898

Phillips

E.E. Durkee 1893-1899

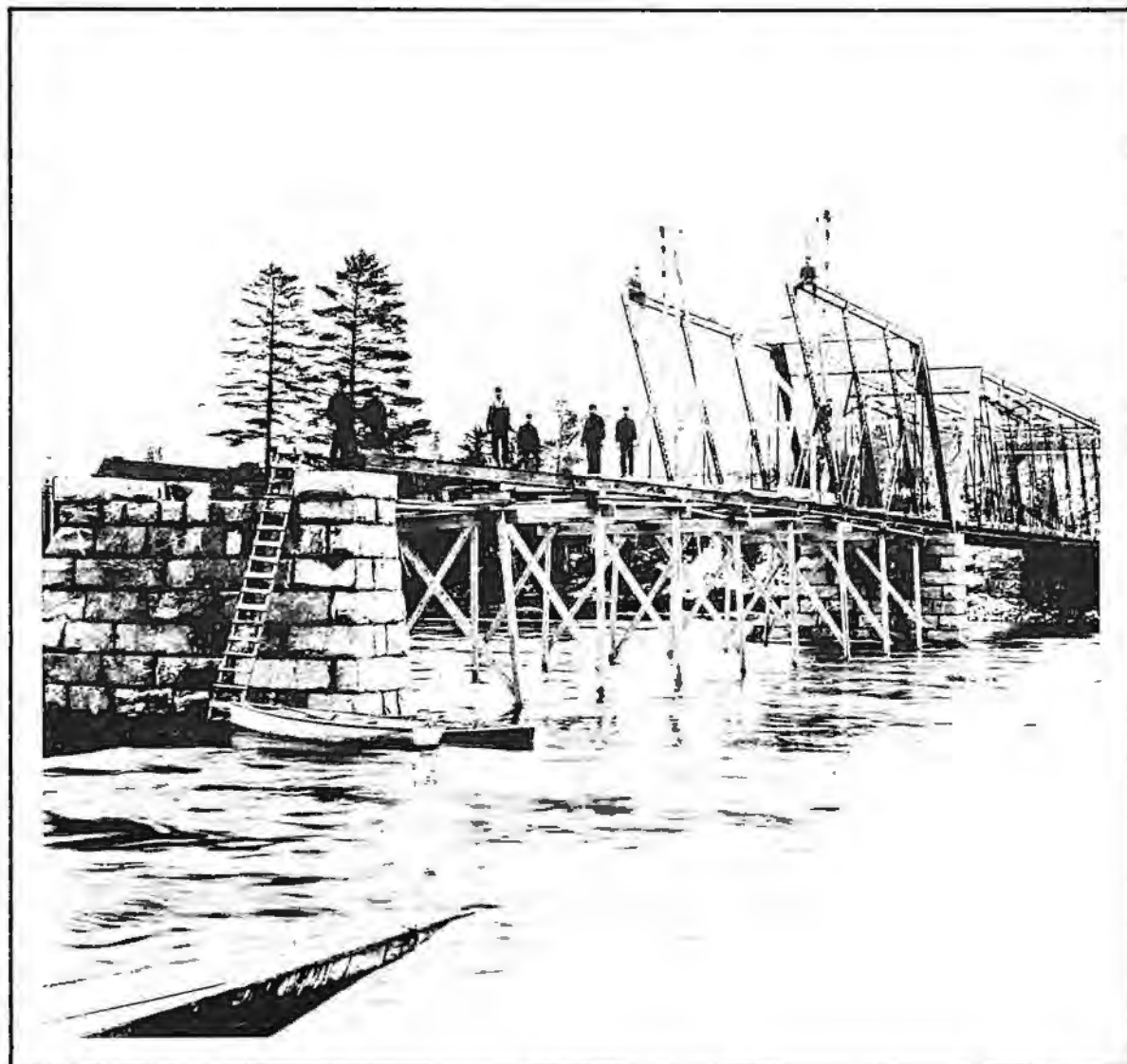
Moved from Ashland, Wisconsin.

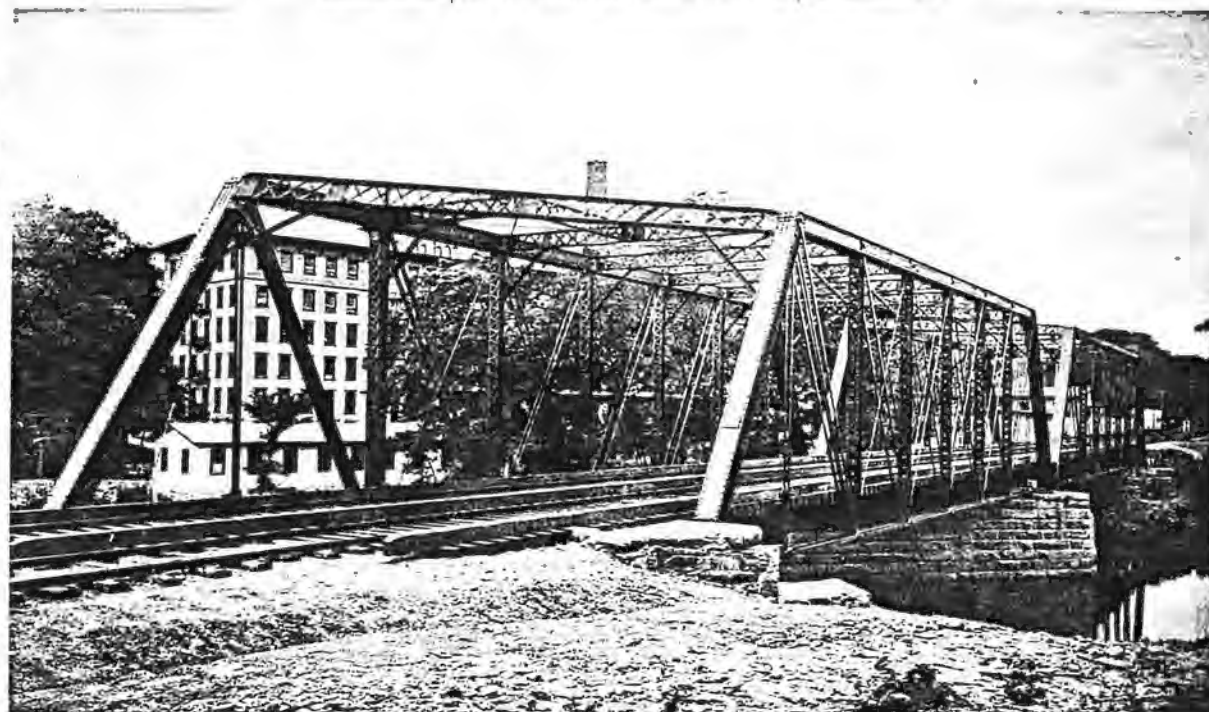
Prairie du Sac

Wisconsin Bridge Company 1897-1901

Watertown

E. Kunnert Manufacturing Company 1893-1901





Blackstone River Bridge Prov. & Wor. R.R. 115 ft. Span.

Structures built by us, nearly all of which are from our own designs.

Cheapside Bridge, over Deerfield River, for Connecticut River R. R.,	Length 710 feet
Connecticut River Bridge, Double Track, for Fitchburg R. R.,	" 650 feet
Blackstone River Bridge, Double Track, for Providence & Worcester R. R.,	" 230 feet
Canal Bridge, Lowell, Mass., Three Tracks, Boston & Lowell R. R.,	Span 160 feet
Cocheco River Bridge, Double Track, Boston & Maine R. R.,	" 160 feet
Fitchburg and Boston & Lowell R. R., crossing Somerville, Three Tracks, F. & B. & L. R. R's,	" 112 feet
Biddeford Bridges, Double Track, Boston & Maine R. R.,	Spans, 120, 104, 124 feet
High Viaducts, height 61 feet, Manchester & Keene R. R.,	Total length 1075 feet
Seakonk River Bridge, with 215 feet draw, City of Providence,	Total length, 1250 feet
Broadway Bridge, City of Boston,	Width 60 feet, span 155 feet
Groveland Bridge, with 168 feet draw, over Merrimack River,	Total length, 800 feet
Deer Island Bridge, with draw 154 feet over Merrimack River,	Total length, 404 feet

AND MANY OTHERS OF VARIOUS DIMENSIONS.

Also, many large Iron Roofs, of which the New England Manufacturers Institute Building, Boston, covering five acres, and containing 850 tons of iron truss work, is a fair example.

In addition to our regular bridge work, we have manufactured a large number of superior wrought-iron Turn-tables which are now in satisfactory use on many of the leading railroads of the country, of which the following may be named: Boston & Albany R. R., Baltimore & Ohio R. R., Atlantic & Pacific R. R., Atchison, Topeka & Santa Fe R. R., Mexican Central R. R., Chicago, Rock Island & Pacific R. R., Cincinnati Southern R. R.

Yours respectfully,

BOSTON BRIDGE WORKS.

APPENDIX A

SHOP CAPACITIES IN THE 1890s

The 1894 Directory of the American Iron and Steel Association was the first to provide annual capacity data for the larger bridge shops, and they provide a measure of the industry and each company's share. Unfortunately there is no issue closer to our termination date than the 1903 Supplement, corrected to January 1903. Material from that issue is included for companies named in this guide although some figures undoubtedly include plant expansions after 31 December 1900.

Annual Operating Capacities
in units of 1,000 long tons

	1894	1896	1898	1903
<u>Alabama</u>				
Alabama Bridge and Boiler Works	-	-	1.5	-
Southern Bridge Company	-	0.5	1.0	1.0
<u>California</u>				
Judson Manufacturing Company	NR	NR	6.0	12.0
Pacific Rolling Mill Company	2.0	6.0	6.0	-
Phelps Manufacturing Company	NR	NR	NR	-
<u>Connecticut</u>				
Berlin Construction Company	-	-	-	6.0
Berlin Iron Bridge Company	10.0	12.0	12.0	(18.0)
<u>Delaware</u>				
Edge Moor Bridge Works	30.0	30.0	40.0	(30.0)
<u>Illinois</u>				
American Bridge Works	30.0	30.0	30.0	(24.0)
Chicago Bridge and Iron Company	15.0	10.0	10.0	12.0
Illinois Bridge and Iron Company	-	-	-	1.0
Joliet Bridge and Iron Company	-	-	5.0	10.0
Kenwood Bridge Company	2.4	6.5	6.5	10.0
Lane Bridge and Iron Works	6.0	-	-	-
Lassig Bridge and Iron Works	15.0	15.0	25.0	(54.0)
A. Lucas and Sons	-	-	-	3.0
Springfield Bridge and Iron Company	-	-	-	5.0
Universal Construction Company	-	-	12.0	-
Western Bridge Company	-	-	-	NR
<u>Indiana</u>				
Attica Bridge Company	-	-	-	1.5
Indiana Bridge Company	3.0	10.0	10.0	10.0
Indianapolis Bridge and Iron	-	-	6.0	6.0
Lafayette Bridge Company	NR	5.0	5.0	(3.6)
New Castle Bridge Company	-	-	-	5.0

APPENDIX A

	1894	1896	1898	1903
<u>Indiana (continued)</u>				
Thatcher A. Parker	-	-	-	2.0
Rochester Bridge Company	-	-	-	0.7
Terre Haute Bridge Company	-	-	5.0	-
Wabash Bridge and Iron Company	-	NR	NR	7.5
<u>Iowa</u>				
Clinton Bridge and Iron Works	*5.5	*5.5	*5.5	10.0
Des Moines Bridge and Iron Works	-	-	-	4.0
Fair-Williams Bridge and Manufacturing Company	1.0	1.0	2.0	2.0
Marshalltown Bridge ...	-	NR	NR	2.5
<u>Kansas</u>				
Missouri Valley Bridge and Iron Works	20.0	12.0	12.0	12.0
<u>Kentucky</u>				
Louisville Bridge and Iron Company	7.5	7.5	7.5	7.5
<u>Maryland</u>				
Enterprise Iron Works	-	2.0	-	-
Maryland Steel Company	-	10.0	10.0	-
Structural Iron Company	-	-	5.0	-
<u>Massachusetts</u>				
Boston Bridge Works	10.0	10.0	10.0	15.0
Eastern Bridge and Structural Company	-	-	-	3.0
R.F. Hawkins Iron Works	4.0	4.0	4.0	4.0
New England Structural Company	-	-	7.0	17.0
Springfield Construction Company	-	-	3.0	6.0
<u>Michigan</u>				
Detroit Bridge and Iron Works	12.0	12.0	12.0	(16.8)
Jackson Bridge and Iron Company	2.0	2.0	-	-
<u>Minnesota</u>				
Gillette-Herzog Manufacturing Company	*6.5	7.0	10.0	(16.8)
St. Paul Foundry Company	-	-	-	7.0
<u>Missouri</u>				
Koken Iron Works	-	2.0	2.0	10.0
St. Joseph Bridge and Iron Company	1.8	1.8	1.8	-
Stupp Brothers Bridge and Iron Company	10.0	8.0	4.0	6.0
<u>New Jersey</u>				
Passaic Rolling Mill Company	15.0	13.5	24.0	60.0
Trenton Iron Works	24.0	24.0	30.0	(36.0)

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	1894	1896	1898	1903
<u>New York</u>				
Buffalo Bridge and Iron Works	6.0	7.5	7.5	(7.2)
Buffalo Structural Steel Company	-	-	-	6.0
J.B. and J.M. Cornell	-	-	-	50.0
Elmira Bridge Company, Ltd.	15.0	30.0	30.0	(31.8) (a)
Groton Bridge and Manufacturing Company	10.0	10.0	10.0	6.0
Havana Bridge Works	-	5.0	5.0	-
Hilton Bridge Construction Company	5.0	7.5	7.5	(4.8)
Horseheads Bridge Company	1.5	1.5	3.5	(a)
Jackson Architectural Iron Works	-	-	-	NR
Kellogg Iron Bridge Works	26.0	-	-	-
Lane Bridge Works	-	-	NR	1.0
Levering and Garrigues (b)	-	-	-	15.0
Milliken Brothers	-	-	-	36.0
Owego Bridge Company	NR	NR	8.0	9.6
Post and McCord	9.0	9.0	15.0	(30.0)
Rochester Bridge and Iron Works	12.0	12.0	12.0	(7.2)
Shepard Bridge Works	NR	-	-	-
<u>Ohio</u>				
Bellefontaine Bridge and Iron	-	NR	5.0	5.0
Brackett Bridge Company	10.0	10.0	10.0	10.0
Buchanan Bridge Company	NR	-	-	-
Canton Bridge Company	3.5	3.5	3.5	5.0
Champion Bridge Company	NR	2.0	3.0	3.0
Champion Iron Company	-	5.0	NR	NR
Iron Substructure Company	-	NR	5.0	5.0
King Bridge Company	18.0	20.0	20.0	30.0
Massillon Bridge Company	6.0	8.0	8.0	8.0
Mount Vernon Bridge Company	9.0	-	-	-
New Columbus Bridge Company	3.6	5.8	5.8	(4.8)
Oregonia Bridge Company	-	-	2.0	2.0
Portsmouth Structural Steel and Iron	-	-	NR	-
Rogers Iron Company	-	-	NR	1.0
L. Schreiber and Sons Company	-	-	NR	-
Stacey Manufacturing Company	NR	-	-	-
Standard Boiler and Bridge Company	NR	NR	-	-
Toledo Bridge Company	6.0	10.0	10.0	(36.0)
Variety Iron Works	*3.5	6.0	7.5	10.0
Wrought Iron Bridge Company	10.0	10.0	10.0	(12.0)
Youngstown Bridge Company	6.0	7.5	10.0	(14.4)
<u>Oregon</u>				
Portland Bridge and Building Company	-	-	-	NR
<u>Pennsylvania</u>				
Allentown Rollings Mills	-	3.0	3.0	3.0
Dauphin Bridge and Construction Company	-	-	6.0	5.0
Fort Pitt Bridge Company	-	-	12.0	30.0
Heyl and Patterson	-	-	-	4.8
Keystone Bridge Works	*18.5	35.0	50.0	(48.0)

APPENDIX A

	1894	1896	1898	1903
<u>Pennsylvania (continued)</u>				
Keystone Structural Company	—	6.0	6.0	6.0
McClintic-Marshall: Pittsburgh	—	—	—	50.0
McClintic-Marshall: Pottstown	—	—	—	35.0
Pencoyd Iron Works	40.0	*45.0	50.0	(84.0)
Penn Bridge Company	5.0	5.0	5.0	10.0
Pennsylvania Steel Company	12.0	16.0	*27.5	*35.0
Philadelphia Bridge Works	*19.0	*19.0	*19.0	—
Phoenix Bridge Company	50.0	50.0	50.0	50.0
Pittsburgh Architectural Iron Works	—	*14.3	—	—
Pittsburgh Bridge Company	10.0	12.0	10.0	(18.0)
Pottsville Iron and Steel Company	7.5	7.5	7.5	—
Riter-Conley Manufacturing Company	—	—	—	10.0 (c)
William B. Scaife and Sons Company	—	—	—	30.0
Schultz Bridge Iron Company	10.0	10.0	10.0	(10.8)
Schuylkill Bridge: Denithorne	—	—	*0.8	—
Schuylkill Bridge: Shoemaker	—	—	—	10.0
Shiffler Bridge Company	10.0	12.0	15.0	(24.0) (d)
Union Bridge Company	*16.5	*16.5	25.0	(15.0)
<u>Tennessee</u>				
Converse Bridge Company	—	—	1.0	2.5
<u>Texas</u>				
Southwestern Bridge and Iron Company	bldg.	2.0	2.0	—
<u>Vermont</u>				
Vermont Construction Company	2.0	2.0	2.0	—
<u>Virginia</u>				
American Bridge and Iron Company	3.0	—	—	—
Virginia Bridge and Iron Company	—	4.0	4.0	10.0
<u>West Virginia</u>				
West Virginia Bridge (Vulcan)	NR	1.2	1.2	—
West Virginia Bridge and Construction	—	—	—	10.0
<u>Wisconsin</u>				
Milwaukee Bridge and Iron Works	4.0	8.0	8.0	(12.0)
Wisconsin Bridge and Iron Company	3.0	5.0	10.0	15.0
TOTAL REPORTED	603.3	691.1	854.1	—

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NOTES

- Company not listed.

NR Company listed but capacity not recorded.

() Plant part of American Bridge. Smaller capacities may be result of elimination of duplicate facilities.

* Capacity reported as range (6,000 to 8,000 tons); the average is entered in table.

(a) 1903 capacity of Horseheads included in Elmira's.

(b) Previously located at Philadelphia, the office had been moved to New York City and the shop was at New Market, New Jersey.

(c) Listed in Directory as 100,000 tons. As this was twice the size of Keystone Bridge it has been assumed that a decimal error had been made.

(d) See Appendix C for comment about Shiffler's Walker Shop which is not included in this table.

APPENDIX B

THE AMERICAN BRIDGE COMPANY OF 1870

This Chicago company was one of the largest of its period, comparable in size to Keystone Bridge Company and Clarke, Reeves and Company, both of which started about the same time. Its contracts ranged from Texas, through the Midwest, to New England, where a two-level railroad and highway bridge was built at Fall River, Massachusetts. In addition to the usual structures the company built the Point Bridge at Pittsburgh, an 800-foot suspension bridge supported by trussed eyebars, and part of the Ninth Avenue El in New York City.

It was organized in 1870 by Lucius B. Boomer with some of his former associates. Boomer had formed L.B. Boomer and Company in 1849 after coming to Chicago from Massachusetts. Two years later he was joined by his brother-in-law Andros B. Stone and they operated as Stone and Boomer. Stone's brother, Amasa Stone, Jr., was the brother-in-law of William Howe who had developed the widely used Howe truss, and both the Stones had built Howe's patented bridges in the Springfield, Massachusetts area as had Boomer. Stone and Boomer constructed the first railroad bridge across the Mississippi at Rock Island and built many others throughout the Midwest, some of them for Amasa Stone, Jr., who had moved to Cleveland and become a railroad contractor. After their shop was destroyed by fire in 1857, Stone moved to Cleveland, but Boomer stayed and operated the Boomer Bridge Works.

American Bridge's general agent was L.C. Boyington who had worked on the Rock Island bridge and had been Boomer's partner for a brief period. H.A. Rust, a former employee of Boomer and later a partner of Boyington, was vice president, and Moritz Lassig, also employed at Rock Island, was general superintendent. An 1875 advertisement showed several changes. Boyington no longer was listed. Boomer had retired and his former partner, A.B. Stone, was president although living in New York City. Lassig had left after one year to form his own company. Rust still was vice president and had added the duties of general superintendent. A new name was that of W.G. Coolidge, engineer and secretary. The plant had about three acres under roof on a thirty-two acre site and included besides the usual shops a foundry with a daily melting capacity of fifty tons. The equipment also included floating pile drivers and barges as the firm's contracts sometimes included the bridge foundations.

A railroad bridge across the Hudson at Poughkeepsie, New York had been discussed for years. The State finally approved the idea in 1871, but financial problems halted the first attempt after a contract had been signed with Keystone Bridge Company. In 1876 the promoting company received new proposals that included not only foundations and superstructure but also assistance in raising funds or accepting partial payment in stock. American Bridge received the contract and as part of the agreement A.B. Stone became head of the Poughkeepsie Bridge Company so that he was both customer and supplier. Even this arrangement did not save American Bridge. The cofferdam for pier #2 failed in 1877 and this, combined with troubles on other contracts and general business conditions, forced the company into liquidation the following year.

APPENDIX B

Rust and Coolidge, formerly vice president and secretary, began operating the plant in 1878 and continued until Chicago Forge and Bolt Company leased it in 1885 and bought it soon afterwards. In both instances the new operators used their own names, and the American Bridge Company name disappeared after nine years. When that name reappeared it was borne by a completely new concern. In 1891 a new company, the American Bridge Works, was organized and leased the shop from Chicago Forge. They purchased it in 1895, and five years later sold the business to J.P. Morgan's just organized American Bridge Company.

APPENDIX C

THE AMERICAN BRIDGE COMPANY OF 1900

After more than a year of rumors and speculative articles the American Bridge Company was formally organized by J.P. Morgan and Company and incorporated in New Jersey on 14 April 1900. It was an independent company for less than a year as most of its stock was acquired by United States Steel Corporation, of which it became a subsidiary on 1 April 1901. However, this development did not affect its corporate organization. Statutory offices were maintained in New Jersey, and the headquarters were in New York City until 16 May 1901, then in Philadelphia until 1 April 1904, and finally in Pittsburgh.

Twenty-four companies, fifty percent of the nation's fabricating capacity, were purchased the first year. Those in New York State became part of a subsidiary, Empire Bridge Company, which started at the same time as its parent and existed until 2 July 1914. The others apparently reported directly to the main headquarters except, perhaps, for A. and P. Roberts Company (Pencoyd Iron Works) which had its own company officers, and the precise relationship here is not known. In addition to Empire Bridge there was another subsidiary, American Bridge Company of New York, which was responsible for all sales, contracts, and erection from 10 January 1901 until 31 December 1913. It is not known how the activities at each plant were fitted into this corporate structure, especially with A. and P. Roberts and Empire Bridge, but there was some degree of central control as shop drawings sometimes were made at one office and distributed to several different shops for fabrication.

As American Bridge's organization matured some shops were expanded, others closed, and the huge plant at Ambridge (formerly Economy), Pennsylvania constructed. When completed in 1903 its capacity was triple that of the previous record holder and was roughly equal to the combined capacity of the five largest companies bought by American Bridge. Part of the site had been purchased by Berlin Iron Bridge Company in 1899 for a western division, but the final plans were so much expanded that more land was acquired.

The twenty-four companies acquired in 1900 were:

- American Bridge Works, Chicago, Illinois
- Berlin Iron Bridge Company, Berlin, Connecticut
- Buffalo Bridge and Iron Works, Buffalo, New York
- Edge Moor Bridge Works, Wilmington, Delaware
- Elmira Bridge Company Ltd., Elmira, New York
- Gillette-Herzog Manufacturing Company, Minneapolis, Minnesota
- Groton Bridge and Manufacturing Company, Groton, New York
- Bilton Bridge Construction Company, Albany, New York
- Horseheads Bridge Company, Horseheads, New York
- Keystone Bridge Works, Pittsburgh, Pennsylvania
(from Carnegie Steel Company, Limited)
- Lafayette Bridge Company, Lafayette, Indiana
- Lassig Bridge and Iron Works, Chicago, Illinois
- Milwaukee Bridge and Iron Works, Milwaukee, Wisconsin
(from J.G. Wagner Company)

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New Columbus Bridge Company, Columbus, Ohio
Pencoyd Iron Works, Philadelphia, Pennsylvania
(A. and P. Roberts Company)
Pittsburgh Bridge Company, Pittsburgh, Pennsylvania
Post and McCord, New York, New York
Rochester Bridge and Iron Works, Rochester, New York
Schultz Bridge Iron Company, McKees Rocks, Pennsylvania
Shiffler Bridge Company, Pittsburgh, Pennsylvania
Trenton Iron Works, Trenton, New Jersey
(New Jersey Steel and Iron Company)
Union Bridge Company, New York, New York
(plant at Athens, Pennsylvania)
Wrought Iron Bridge Company, Canton, Ohio
Youngstown Bridge Company, Youngstown, Ohio

Several other large fabricators--Passaic Rolling Mill, King Bridge, and Phoenix Bridge--had been linked to the new company in the speculative articles, but they remained independent.

To complete the history of American Bridge's expansion it is necessary to go into the twentieth century. The later additions were:

Toledo Bridge Company, Toledo Ohio (1901)
Detroit Bridge and Iron Works, Detroit, Michigan (1902)
Koken Iron Works, St. Louis, Missouri (between 1912 and 1916)
Virginia Bridge and Iron Company, Roanoke, Virginia (1936)

In 1955 United States Steel transferred three shops from its Consolidated Western Steel Division to American Bridge. All in Los Angeles, California, they originally were Baker Iron Works (founded 1872), Llwellyn Iron Works (1884), and Union Iron Works (1884). They had joined to form Consolidated Steel in 1928. This later became part of Consolidated Western Steel Corporation which United States Steel bought in 1948.

Alabama Bridge and Iron Company is listed as one of American Bridge's acquisitions in Talbot's American Bridge Company History and Organization. Although its date of incorporation is given as 4 August 1900, it was not listed in the American Iron and Steel Association directories of 1903, 1908, or 1916 as either an independent company or a part of American Bridge. For this reason, and also because a location is not given, the company is not included in the directory portion of this work or the list of acquisitions.

The AISA directories of 1903 and 1906 offer a puzzle concerning one of American Bridge's shops as they include 'Walker Plant, West Homestead, Pennsylvania, Annual capacity 16,000 tons. (Formerly operated by the Shiffler Bridge Company.)' Earlier directories: 1894, 1896, and 1898, do not include any such plant, and it would appear that Shiffler had started an expansion between 1898 and the formation of American Bridge. Perhaps this shop, which doubled Shiffler's capacity, and Berlin Iron Bridge's start of a second plant provided the impetus for the formation of the bridge combine.

APPENDIX D

SOME ITINERANT ENTREPRENEURS

While most men remained with the same company, or at least in the same area, for most of their working lives, others moved and held several important positions. These individuals may not have been typical, but their movements show the restless nature of the developing industry. Also they were channels for the diffusion of engineering and construction ideas. Frequently the obituaries and memoirs do not record all the company associations. So that the information gathered in compiling the directory will be available, the more important affiliations of a few of the more notable participants are listed. The two Charles Kelloggs are included not only for their multiple companies but also to distinguish between the two competitors, who lived within 140 miles of one another.

Thomas C. Clarke 1827-1901

Kellogg, Clarke and Company	Philadelphia, Pennsylvania	1868-1870
Clarke, Reeves and Company	Philadelphia, Pennsylvania	1870-1883
Union Bridge Company	New York, New York	1884-1887

His memoir in the Transactions of the American Society of Civil Engineers states 'Mr. Clarke had intended to study the Law; but being in delicate health at that time, he decided to adopt the profession of Civil Engineering.' (The present author, a civil engineer, refrains from comment.)

Charles Kellogg

wood railroad bridges	north central Pennsylvania	c1865-1871
Kellogg and Maurice	Athens, Pennsylvania	1871-1884
Union Bridge Company	Athens, Pennsylvania	1884-1887
Elmira Bridge Company, Ltd.	Elmira, New York	1889-c1892

Charles Kellogg -1891

Charles Kellogg and Company	Detroit, Michigan	1857-1863
Superintendent of Detroit		
Bridge and Iron Works	Detroit, Michigan	1863-1868
Kellogg, Clarke and Company	Philadelphia, Pennsylvania	1868-1870
Kellogg Bridge Company	Buffalo, New York	1870-1881

Charles A. MacDonald 1837-1928

Burton and MacDonald	New York, New York	1870
consulting engineer	New York, New York	1871-1872
Delaware Bridge Company (a)	---	1880-1883
Union Bridge Company	New York, New York	1884-1900
American Bridge Company	New York, New York	1900-1901

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Thomas W.H. Moseley 1813-1880

Moseley and Company	Cincinnati, Ohio	1856-1861
Moseley Iron Building Works	Boston, Massachusetts	1861-1871
Moseley Iron Bridge and Roof Company (b)	New York, New York	1867-1880
office, perhaps no shop	Philadelphia, Pennsylvania	1876

Moseley sometimes was referred to as 'General' as he had been Adjutant General for Ohio during the Mexican War.

James W. Shipman

Manufacturer of bridges and axles	Van Hornesville, New York	1856
Coshocton Iron Works	Coshocton, Ohio	1861-1874
Cincinnati Bridge Company	Cincinnati, Ohio	1873-1877
New York Bridge Company	New York, New York	1877
submitted bids for bridges at Lowell, Massachusetts in his own name	New York, New York	1880-1881

Shipman was a nephew of Squire Whipple, the pioneer designer and builder of iron bridges.

NOTES

- (a) It is not known when MacDonald became associated with Delaware Bridge or if he remained in New York City even though the shop was at Trenton, New Jersey.
- (b) The company continued long after his death. It was listed in directories until 1905.

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 See also Columbus Bridge Company
 Scaife, (W.B.) and Sons
 Scheope-Koken Architectural Iron Company
 See Koken Iron Works
 Scherzer Rolling Lift Bridge Company
 Schreiber, (L.) and Sons Company
 Schultz, C.J.
 See Schultz Bridge Iron Company
 Schultz Bridge Iron Company
 Schnylkill Bridge Works
 Also see Shoemaker, (Lewis F.) and Company
 Seattle Bridge Company
 Sebastian, (H.W.) and Company
 Seesero Manufacturing Company
 Seevers Manufacturing Company
 Shailer and Schniglan
 Shanahan and Company
 Shanley, B.M. and J.F.
 Sheely, (J.R.) and Company
 Shepard's, (W.H.) Sons Bridge Company
 Sherwood, George W.
 Sherwood, Sutherland and Company
 Shiffler Bridge Company
 Shipman, James W.
 Shipman, (J.) and Company
 Shoemaker, (Lewis F.) and Company

St. Joseph, Missouri
 St. Joseph, Missouri
 St. Louis, Missouri
 St. Louis, Missouri
 St. Paul, Minnesota
 Portland, Oregon
 San Francisco, California
 San Francisco, California
 Fort Madison, Iowa
 Los Angeles, California
 Columbus, Ohio
 Columbus, Ohio
 Pittsburgh, Pennsylvania

 St. Louis, Missouri
 Chicago, Illinois
 Cincinnati, Ohio

 McKees Rocks, Pennsylvania
 McKees Rocks, Pennsylvania
 Phoenixville, Pennsylvania
 Pottstown, Pennsylvania
 Seattle, Washington
 St. Louis, Missouri
 Oskaloosa, Iowa
 Oskaloosa, Iowa
 Chicago, Illinois
 Richmond, Kentucky
 Jersey City, New Jersey
 Des Moines, Iowa
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 St. Paul, Minnesota
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Skelsey, Edward

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Smith, C. Shaler

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Smith, John R.

Smith, (R.L.) Machine Works

Smith, Robert

Also located at

Smith Bridge Company

Smith Construction Company

Smith, Latrobe and Company

South Park Bolt and Bridge Works

Southern Bridge Company

Southern Bridge and Construction Company

Southern Iron and Steel Works

Southwestern Bridge and Iron Company

Springfield Bridge and Iron Company

Springfield Construction Company

Springfield Iron Works

Staats, R.P. and J.H.

Stacey Manufacturing Company

Stacy, Opdyke and Company

Stalk, (N.M.) and Company

Standard Boiler and Bridge Company

Standard Contracting Company

Standard Roof and Bridge Company

Star Iron Works

Steele and Wike

Stein, L. Vanden

Stephens and O'Rourke

Stevens, (W.A.) and Company

Stone, Amasa Jr.

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Stone, Chas.

Stone and Boomer

Stone and Harris

Storm and Parker

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Stratton, (E.L.) and Company

Stratton, Lewis

Strobel, C.L.

Structural Iron Company

Stupp Brothers Bridge and Iron Company

Sykes, (L.) and Son

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Chicago, Illinois

Rochester, New York

St. Louis, Missouri

Baltimore, Maryland

Cambridge, Massachusetts

Springfield, Massachusetts

Lincoln, Nebraska

Tippicanoe City, Ohio

Toledo, Ohio

Toledo, Ohio

San Francisco, California

Baltimore, Maryland

St. Paul, Minnesota

Birmingham, Alabama

Houston, Texas

Birmingham, Alabama

Fort Worth, Texas

Springfield, Illinois

Springfield, Massachusetts

Springfield, Massachusetts

New York, New York

Cincinnati, Ohio

Philadelphia, Pennsylvania

Des Moines, Iowa

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Philadelphia, Pennsylvania

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Philadelphia, Pennsylvania

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Pittsburgh, Pennsylvania

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Thatcher, Burt and Company
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Thompson and Bailey
Thompson and Company
Thompson, (Edgar) Foundry Company
Thorp and Bond
Tippett and Wood
Toledo Bridge Company
Toronto Bridge Company
 See Wrought Iron Bridge Company
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Townsend, (F.) and Company
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Trenton Locomotive and Machine Mfg. Company
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Van Norman Bridge Company
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Vulcan Iron Works
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Vulcan Works
 See Murray and Hazelhurst

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Waco Bridge Company
Wagner, (J.G.) Company
 See Milwaukee Bridge and Iron Works

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Omaha, Nebraska
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Fall River, Massachusetts
Cleveland, Ohio
San Francisco, California
Mobile, Alabama
Butte, Montana
Mobile, Alabama
New York, New York
Phillipsburg, New Jersey
Toledo, Ohio

Canton, Ohio
Providence, Rhode Island

Albany, New York
Chicago, Illinois
Richmond, Virginia
Trenton, New Jersey
Trenton, New Jersey
Leavenworth, Kansas
Grand Forks, North Dakota
Chicago, Illinois

New York, New York
Passaic, New Jersey
St. Paul, Minnesota
Los Angeles, California

Clinton, Iowa
Chicago, Illinois
Urbana, Ohio

Cleveland, Ohio
Minneapolis, Minnesota
Minneapolis, Minnesota
Seattle, Washington
Cleveland, Ohio
St. Albans, Vermont
Roanoke, Virginia
Bozeman, Montana
Chicago, Illinois
Denver, Colorado
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 Walker, J.W.
 Walker, Thomas
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 Ward, John
 Warden, Hy.
 Wardie and Yeager
 Washington Iron Bridge Company
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 Waterhouse, (C.R.) and Son
 Watkins and Hardaway
 Watson Manufacturing Company
 Weinhausen F.
 Wells, French and Company
 Werntz, O.W.
 West Virginia Bridge and Construction Company
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 Western Pennsylvania Bridge Works
 Weston Engine Company
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 Whipple, Squire
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 Whitbeck and Power
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 Wilkins, Grant
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Portland, Oregon
 Portland, Oregon
 Kane, Pennsylvania
 Pittsburgh, Pennsylvania
 Chicago, Illinois
 Charlestown, West Virginia
 Hamilton, Ohio
 Hamilton, Ohio
 Jersey City, New Jersey
 Audubon, Iowa
 Germantown, Pennsylvania
 Cedar Rapids, Iowa

New York, New York
 New Haven, Connecticut
 Birmingham, Alabama
 Paterson, New Jersey
 Milwaukee, Wisconsin
 Chicago, Illinois
 Warsaw, Indiana
 Wheeling, West Virginia
 Charlestown, West Virginia
 San Francisco, California
 Chicago, Illinois
 Fort Wayne, Indiana
 Pittsburgh, Pennsylvania
 Painted Post, New York
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Hudson, New York
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Atlanta, Georgia

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