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# KEYSTONE BRIDGE COMPANY.

Illustrated Circular

—OF—

## LONG SPAN BRIDGES.



General Office and Works, Pittsburgh, Pa.

PRESIDENT'S OFFICE,

*No. 218 South Fourth Street, Philadelphia.*



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REFERENCE.

PAMPHLET.



*KEYSTONE BRIDGE COMPANY,*

ENGINEERS AND CONTRACTORS FOR THE CONSTRUCTION OF

Railway and Highway Bridges,

*OF STEEL, IRON, OR WOOD,*

IRON ROOFS, IRON AND WOODEN BUILDINGS, ROLLING MILLS, STEEL WORKS,  
ENGINES AND TOOLS, HYDRAULIC MACHINERY, HYDRAULIC FORGINGS,  
BUCKLE PLATES, TUBULAR COLUMNS OF IRON OR STEEL,

AND

General Machine and Foundry Work.

IMPROVED WROUGHT-IRON TURN-TABLES.



J. B. LIPPINCOTT & CO.,

BOOK AND JOB PRINTERS,

Nos. 713 and 717 Market Street,

PHILADELPHIA.



OFFICERS, 1876

*President, J. H. LINVILLE, C. E.,*

*Office, 218 South Fourth St., Philadelphia.*

*General Manager, J. L. PIPER,*

*Pittsburgh, Pa.*

*Asst. General Manager, A. G. SHIFFLER,*

*Pittsburgh, Pa.*

*Treasurer, THOMAS M. CARNEGIE,*

*Pittsburgh, Pa.*

*Secretary, A. D. CHERRY,*

*Pittsburgh, Pa.*

*Western Office, Metropolitan Block, Corner Randolph and La Salle Streets, Chicago, Ill.,*

*A. GOTTLIEB, Engineer.*

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**Directors:**

*J. H. LINVILLE,*

*ANDREW CARNEGIE,*

*A. G. SHIFFLER,*

*J. L. PIPER,*

*THOMAS M. CARNEGIE,*

*JOHN A. WILSON,*

*ROBERT PITCAIRN.*



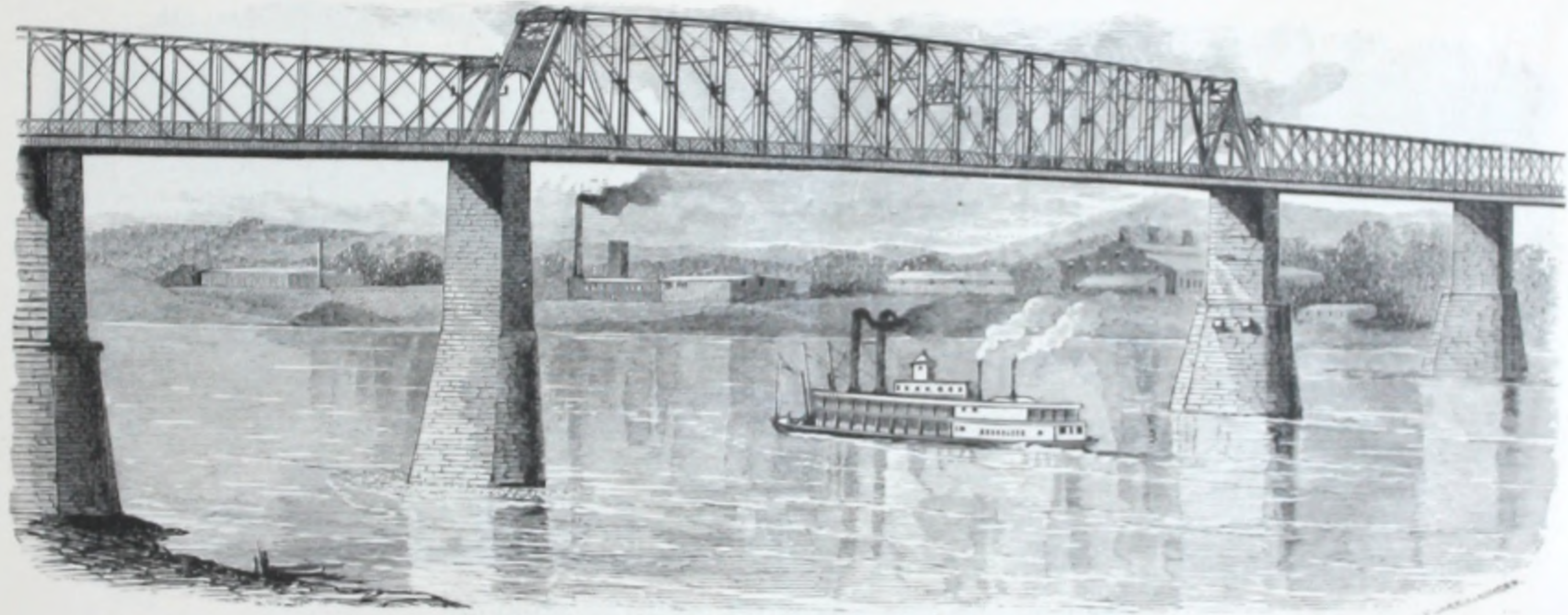


BRIDGE OVER THE MISSISSIPPI AT ST. LOUIS.

SPANS, 520 AND 515 FEET.

Constructed with arches of crucible cast-steel, manufactured and erected, on cables without scaffolding, by the Keystone Bridge Company. The cut illustrates the methods employed to erect the arched ribs, by suspending them by means of guys depending from temporary towers, the towers standing on hydraulic rams, which were automatically moved to compensate for changes of temperature in the cables.





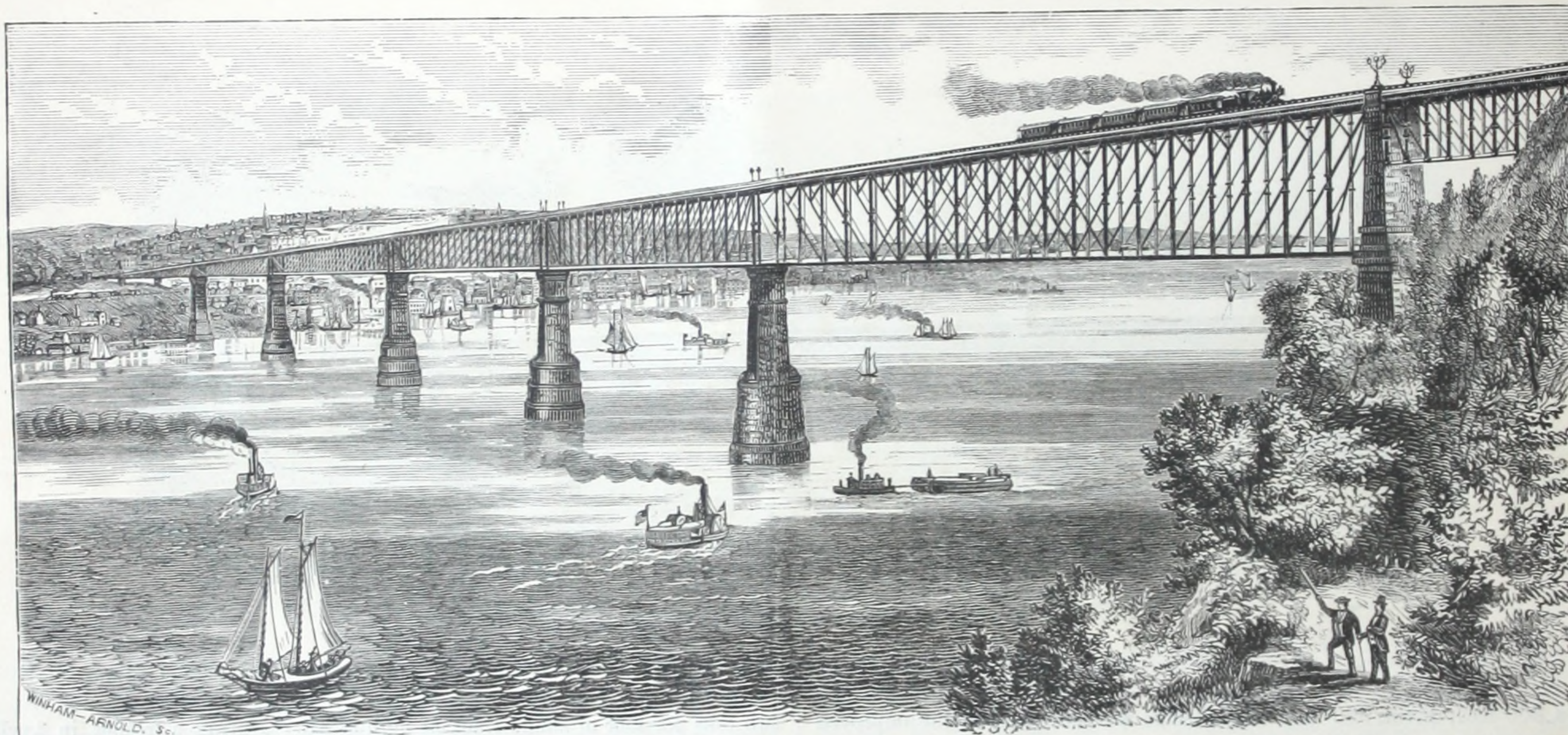
CHANNEL SPAN, NEWPORT AND CINCINNATI BRIDGE.

SPAN, 420 FEET.

This Company has erected bridges over the Ohio River at Steubenville, 320 feet span, Parkersburg, 350 feet span, Belair, 350 feet span, and is erecting the Cincinnati Southern Bridge, 520 feet span, which will be the *longest truss in the world*. This bridge will be entirely of wrought-iron. In accuracy of proportions,

and perfection of details, this bridge stands unrivaled in this and probably in any country. The designs were prepared under the supervision of J. H. Linville, President, and Chief Engineer of the Company, who was also Chief Engineer of the Newport and Cincinnati bridge.



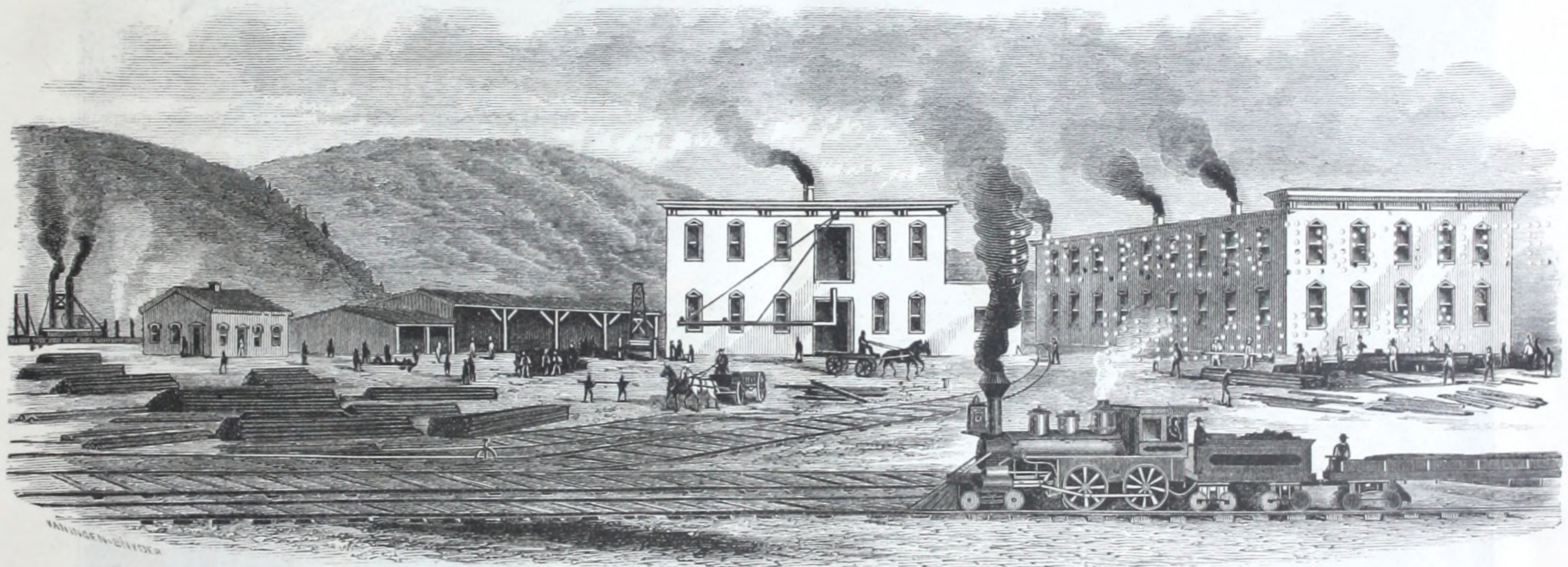


BRIDGE DESIGNED TO CROSS THE HUDSON RIVER, AT POUGHKEEPSIE.

FIVE SPANS, 525 FEET EACH.

Surveys, soundings, and plans for this structure were made by J. H. Linville, former Chief Engineer; but owing to the failure of the Poughkeepsie Bridge Company to secure funds for the work, the contract was declined by the Keystone Bridge Company.



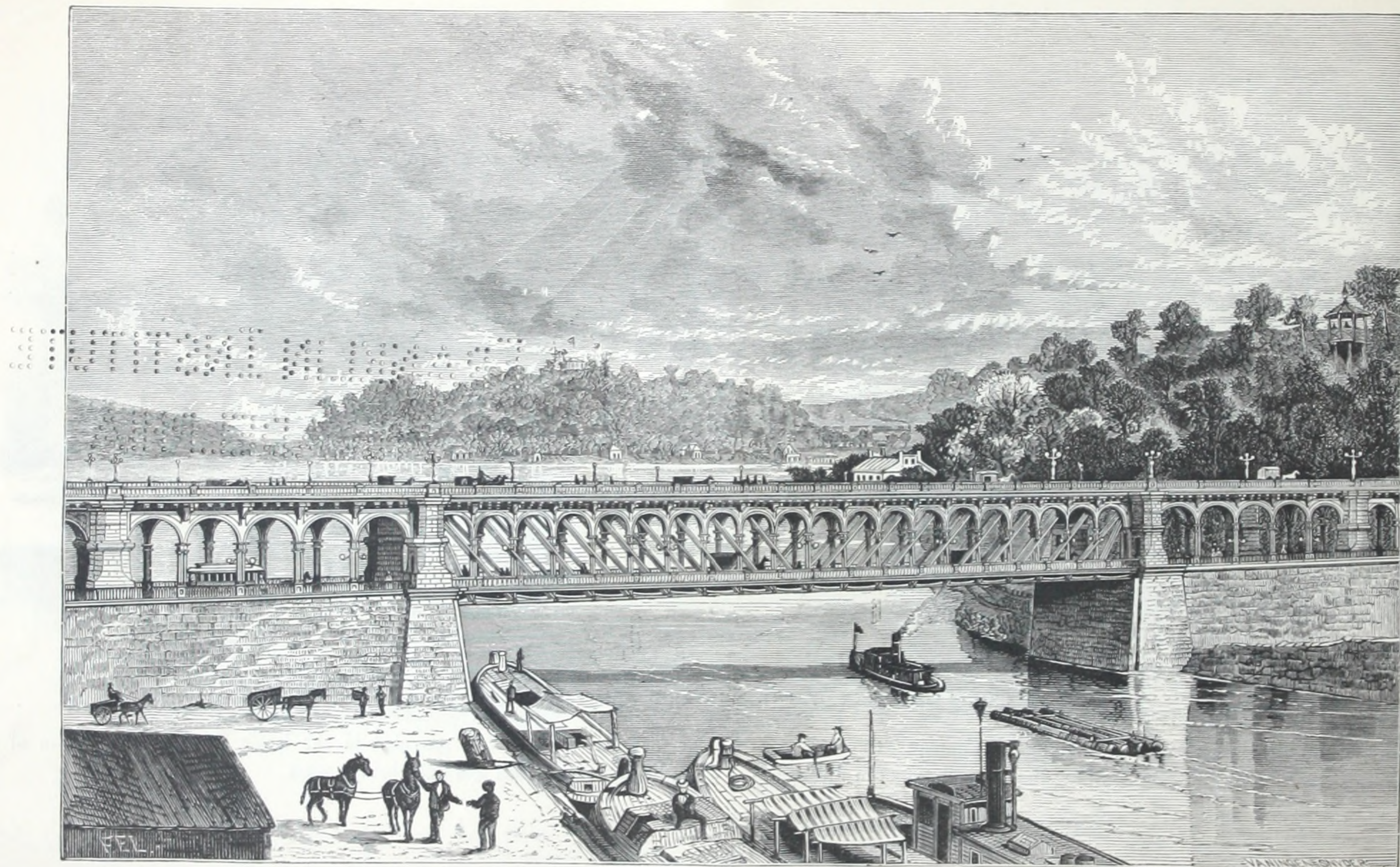


ORIGINAL WORKS OF THE KEYSTONE BRIDGE COMPANY.

In addition to the extensive new works erected by the Company, the large contracts in hand have rendered it necessary to continue the original works in full opera-

tion. Special facilities are provided in the latter for the construction of improved wrought-iron turn-tables and light bridge work.





FAIRMOUNT BRIDGE.  
Channel Span, 348 Feet.



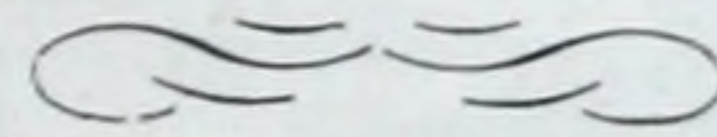
The trusses of this immense span were designed by J. H. Linville, to whom the first premium was awarded by the City Councils. The bridge was erected by the Keystone Bridge Company. The river span contains 1900 tons of iron, and is designed

for a load of 1200 tons, in addition to its weight. It has upper and lower roadways for vehicles and street cars, and sidewalks for pedestrians. This truss is considered the finest in the world.

THE KEYSTONE BRIDGE COMPANY,

SOLE MANUFACTURERS OF

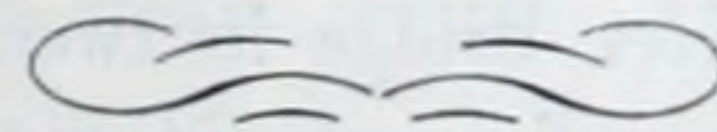
PIPER'S PATENT RIVETLESS COLUMNS,



CLOSED AND HERMETICALLY SEALED IN ROLLS,

Equal in Strength to Riveted Columns,

AS DEMONSTRATED BY CRUCIAL TESTS, AND MUCH CHEAPER  
AND MORE ORNAMENTAL THAN RIVETED WORK.



ALSO, MANUFACTURERS OF

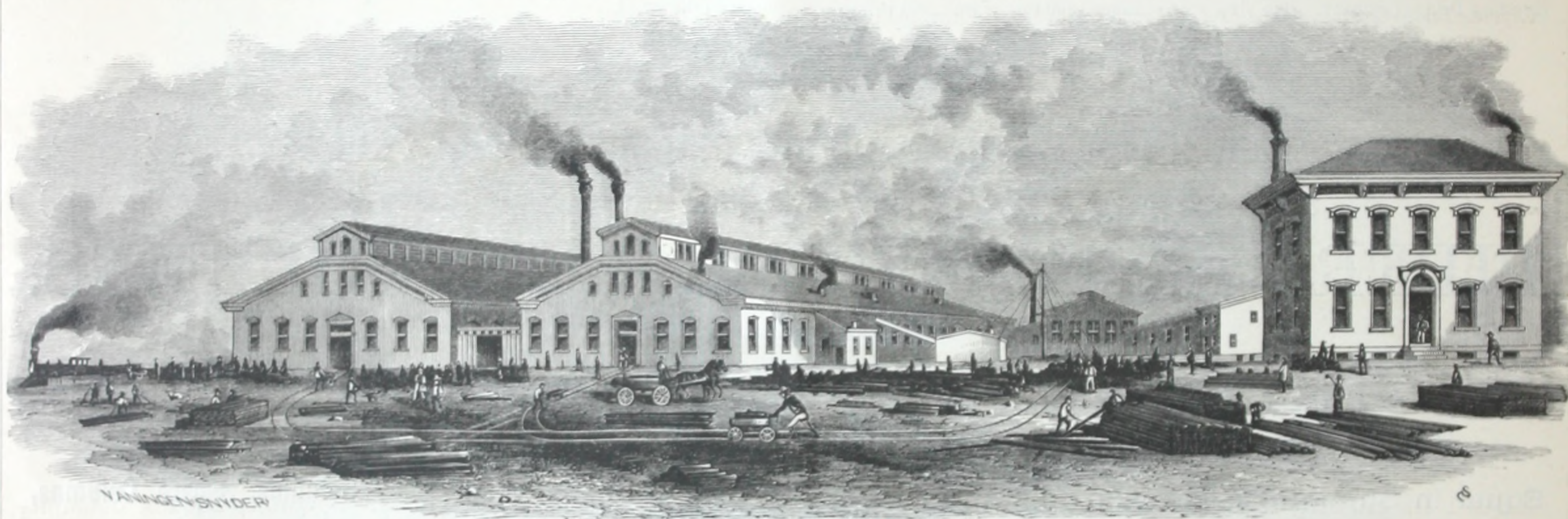
Linville Patent Bolted Columns, Square Columns,  
ETC., ETC.,

FOR BRIDGES AND ARCHITECTURAL WORK.



SEND FOR LITHOGRAPHS.



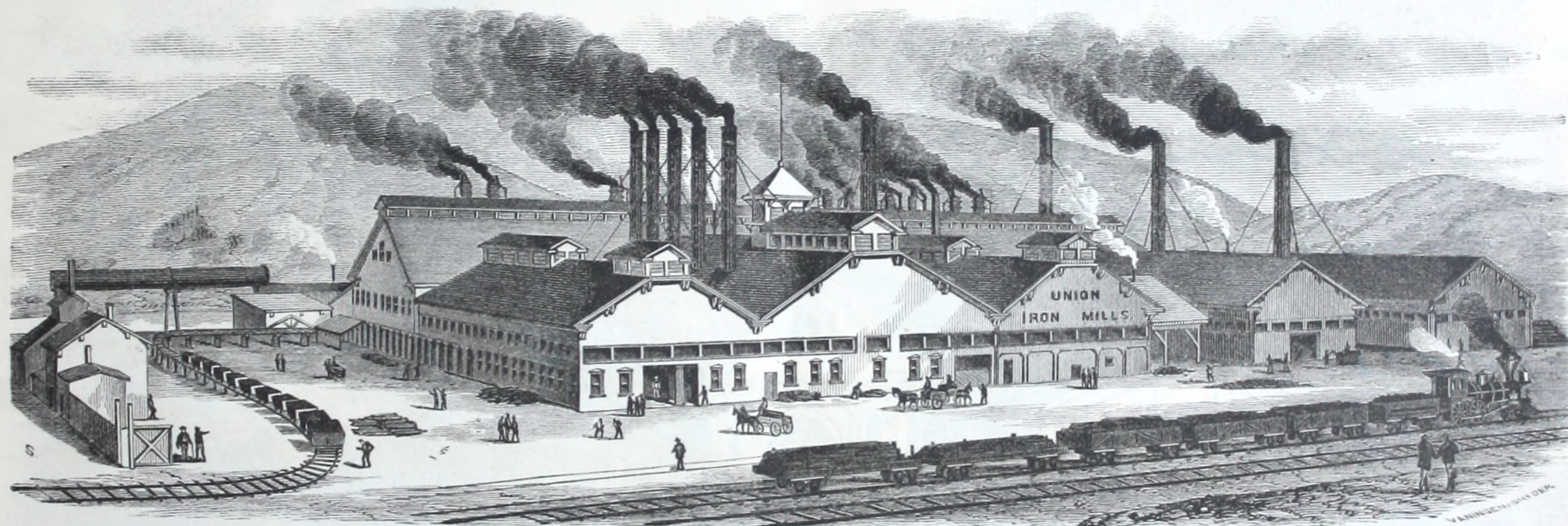


NEW BRIDGE WORKS OF THE KEYSTONE BRIDGE COMPANY.

Extensive additions to these works will probably be completed during the year 1876. They now contain tools of superior character for every description of bridge and girder work. Hydraulic forging, power riveting, machine and engine work, roll turning, etc. An extensive Iron Foundry is connected with these works. The Com-

pany possesses ample capital and facilities for the prompt execution of important work. The construction of Market Street Bridge in twenty days, and four spans of iron bridge in forty days, are instances of unequalled rapidity in bridge construction.





UNION IRON MILLS.

These extensive mills are especially provided with facilities to supply all our demands for rolled beams, shapes, column iron, plates and bars of any size or length

and of superior quality. They are located in the immediate vicinity of our works, affording us the opportunity of inspecting the manufacture of our bridge irons.





LUCY FURNACE.

The metal used in our manufactures is supplied principally by this Furnace, one of the largest and best in the United States. The metal produced is of superior quality for bridge construction and for Bessemer steel. These works belong to the

Messrs. Carnegie Brothers & Company, who are devoting great attention to the manufacture of special shapes of iron and steel for bridge construction.



*The Keystone Bridge Company has constructed about THIRTY MILES in length of iron truss, plate girder, lattice girder, and wooden Howe truss bridges, in the United States and South America.*

*These bridges have been constructed for the following companies, the officers of which may be referred to for information as to the character of our work.*

Pennsylvania R. R. Co.\*  
 Pittsburgh, Ft. Wayne and Chicago R. R. Co.  
 Pittsburgh, Cincinnati and St. Louis R. R. Co.  
 Baltimore and Ohio R. R. Co.  
 Central Railroad of New Jersey.  
 New York and Long Branch R. R. Co.  
 Lehigh Valley R. R. Co.  
 Lehigh and Susquehanna R. R. Co.  
 Boston, Hoosac Tunnel and Western R. R. Co.  
 New Haven and Northampton R. R. Co.  
 Norwich and Worcester R. R. Co.  
 Toledo, Wabash and Western R. R. Co.  
 Baltimore Short Line R. R. Co.  
 Baltimore, Pittsburgh and Chicago R. R. Co.  
 Vermont and Massachusetts R. R. Co.  
 Cincinnati Southern Ry. Co.  
 United Railroads of New Jersey.  
 North Missouri R. R. Co.  
 Chicago, Alton and St. Louis R. R. Co.  
 Illinois Central R. R. Co.  
 Cleveland, Mt. Vernon and Delaware R. R. Co.  
 Pittsburgh and Cleveland R. R. Co.

Michigan Southern and Northern Indiana R. R. Co.  
 Chicago and North-Western R. R. Co.  
 Philadelphia, Wilmington and Baltimore R. R. Co.  
 Allegheny Valley R. R. Co.  
 Pittsburgh, Washington and Baltimore R. R. Co.  
 Little Miami, Columbus and Xenia R. R. Co.  
 Pacific R. R. of Missouri.  
 Northern Central Ry. Co.  
 West Chester and Philadelphia R. R. Co.  
 Connecting Ry. of Philadelphia.  
 Terre Haute and Indianapolis R. R. Co.  
 Baltimore and Potomac R. R. Co.  
 Marietta and Cincinnati R. R. Co.  
 New Orleans, Mobile and Chattanooga R. R. Co.  
 New Haven, Middletown and Willimantic R. R. Co.  
 New Jersey R. R. and Transportation Co.  
 Junction Ry. of Philadelphia.  
 Little Miami R. R. Co.  
 Philadelphia, Germantown and Norristown R. R. Co.  
 Oil Creek and Allegheny River R. R. Co.  
 Philadelphia and Erie R. R. Co.  
 Williamsport and Elmira R. R. Co.

Shamokin R. R. Co.  
 Bennett's Branch R. R. Co.  
 Cumberland Valley R. R. Co.  
 Mifflin and Centre County R. R. Co.  
 Tyrone and Clearfield R. R. Co.  
 Harrisburg and Potomac R. R. Co.  
 Alexandria and Fredericksburg R. R. Co.  
 Mississippi River Bridge Co.  
 Sharpsburg and Lawrenceville Bridge Co.  
 Dubuque and Dunleith Bridge Co.  
 Keokuk and Hamilton Bridge Co.  
 Newport and Cincinnati Bridge Co.  
 Illinois and St. Louis Bridge Co.  
 Thomas Iron Works.  
 Chicago City.  
 Allegheny City.  
 Cuyahoga.  
 Kansas City.  
 City of Philadelphia.  
 Delaware Division, Pennsylvania Canal.  
 San Paulo and Rio Janeiro R. R. Co.,  
 Brazil, S. A.



THE KEYSTONE BRIDGE COMPANY,  
BUILDERS OF  
LONG SPAN BRIDGES,

Steel, Iron, and Wooden Railway and Road Bridges, Iron Roof-Trusses,  
Wrought-Iron Turn-Tables, Buildings,

“LINVILLE & PIPER” PATENT WROUGHT-IRON BRIDGES,

“Wrought-Iron Riveted and Rivetless Columns” for Bridges and Buildings, Buckle Plates, Hydraulic Forgings,  
AND

“UPSET EYE-BARS,”

PIVOT BRIDGES, IRON VIADUCTS, IRON PIERS, SUSPENSION BRIDGES, COMPOSITE BRIDGES, BRIDGE BOLTS,  
AND GENERAL MACHINE WORK.

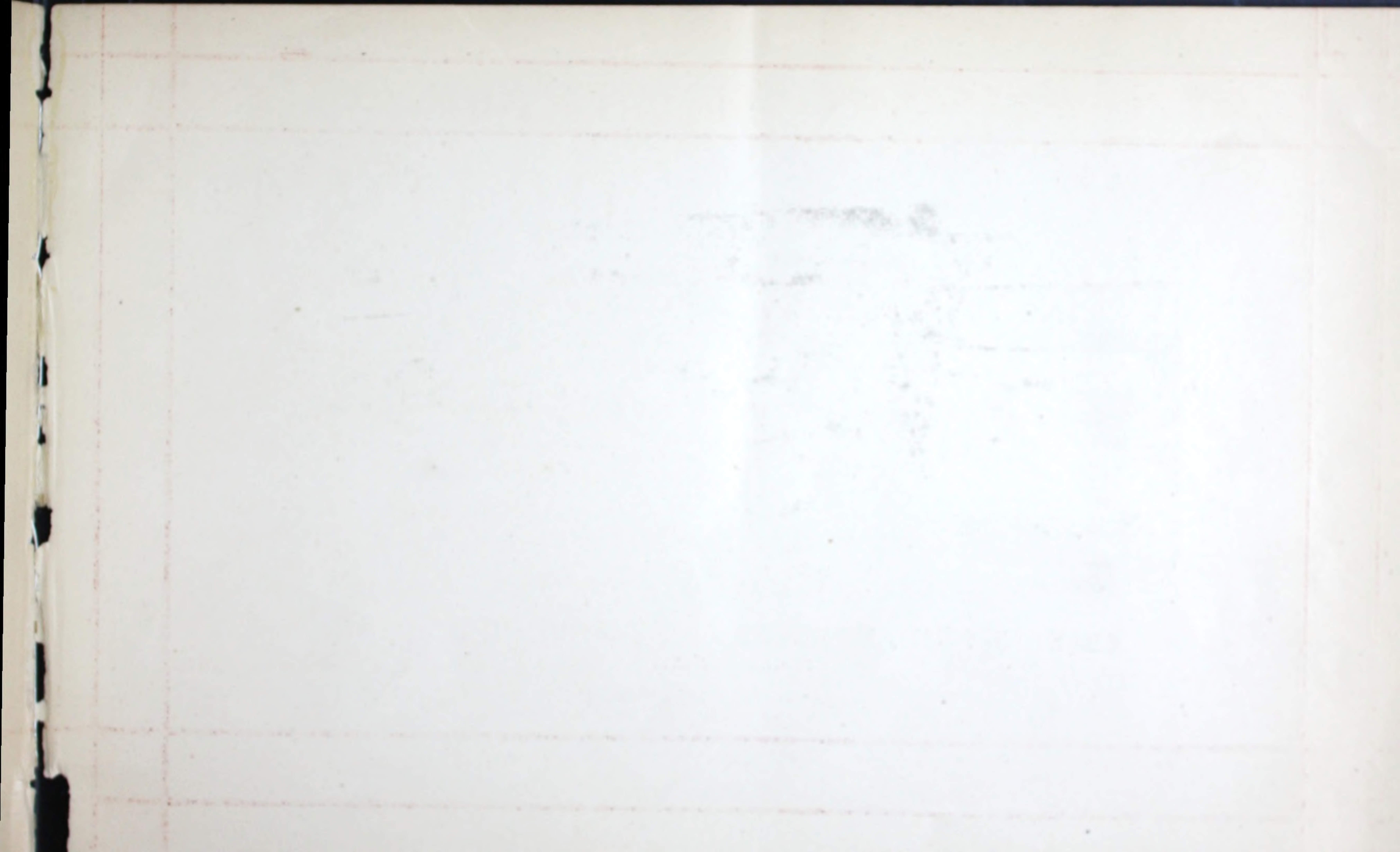
Office and Works, 51st and Harrison Sts. (18th Ward), Pittsburgh, Pa.

WESTERN OFFICE, COR. RANDOLPH AND LA SALLE STS., CHICAGO.

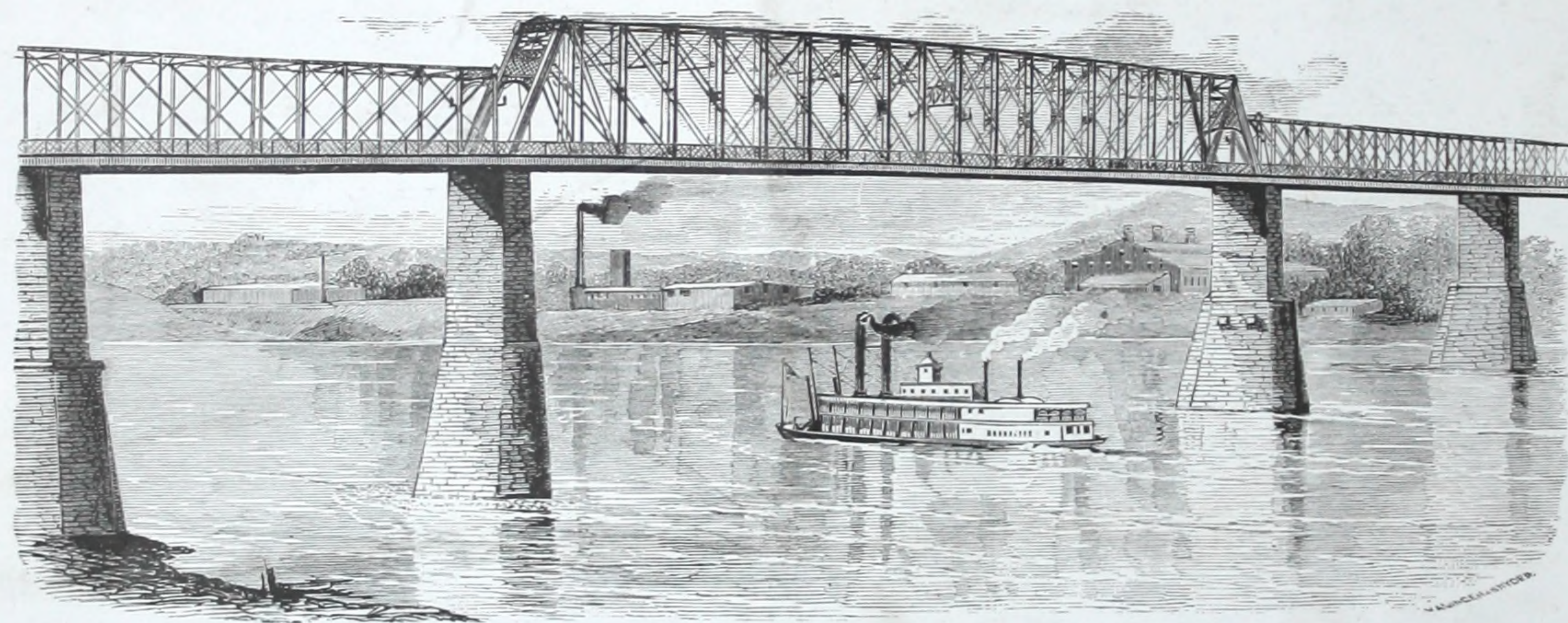
Album of designs and description of important bridges sent free on application to J. H. LINVILLE, President, 218 South Fourth Street, Philadelphia.

The Keystone Bridge Company has able and experienced bridge engineers at its principal offices, who will examine localities and advise as to the best methods and plans for replacing existing bridges, and furnish designs and specifications for new bridges. These examinations will have the special attention of the President and General Managers of the Company, who are practical constructors of great experience.









CHANNEL SPAN, NEWPORT AND CINCINNATI BRIDGE.

SPAN, 420 FEET.