



Historic Bridge Foundation Facebook Archives

Did You Know... That a company named the Blaw-Knox Company played a critical role in the construction of many large and well-known concrete arch bridges?

October 2015

Typically the review of a bridge's history includes considering who designed the bridge and who constructed the bridge. However, there were often many engineers and subcontractors whose involvement might go unnoticed. Based in Pennsylvania, the Blaw Steel Construction Company, which later became the Blaw-Knox Company, is a good example of an often-overlooked company. This company provided centering (falsework) for concrete arch bridges to enable their construction. Their most common type of centering was ribbed arches composed of a riveted steel truss design. The company called their centering "Blawforms." Centering from the Blaw-Knox Company enabled the construction of a number of noteworthy historic concrete arch bridges which remain standing today. Photos from historical catalogs from the company show the impressive engineering and design of the Blawform centering.

Blawforms for General Concrete Construction



All Blaw-Knox Forms Fully Covered by Patents
or Patents Pending

Catalog No. 23

Blaw-Knox Company

General Office and Works—BLAWNOX, PA.

DISTRICT SALES OFFICES

PITTSBURGH—626 Farmers Bank Bldg. CHICAGO—Peoples Gas Bldg. NEW YORK—165 Broadway
BOSTON—Little Bldg. DETROIT—Lincoln Bldg. BALTIMORE—Bayard & Warner Sts.
SAN FRANCISCO—Monadnock Bldg. BIRMINGHAM—American Trust Bldg.
KANSAS CITY—Interstate Bldg.
EXPORT OFFICES—165 Broadway, New York City
Agents in all principal cities

Title page for a company catalog when the company was known as Blaw-Knox Company

The Blaw SYSTEM

NEW YORK
165 Broadway



CHICAGO
Peoples Gas Bldg.

PITTSBURGH SALES OFFICE
Farmers Bank Building

GENERAL OFFICES AND WORKS—HOBOKEN, PA.

concrete forms

A Book of Descriptive Text and Photographs
Which Illustrate the Economy and
Adaptability of Blaw Steel Forms
for Concrete Work of All Kinds

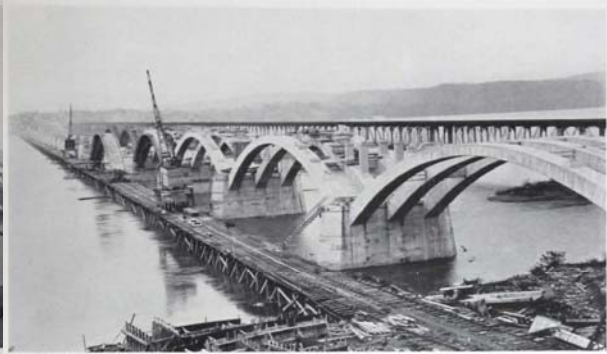
(c. 1920's)

CATALOG No. 16

Title page for a company catalog when the company was known as Blaw Steel Construction Company



Columbia-Wrightsville Bridge over Susquehanna River, Wiley-Mason Company, contractor, showing method of erecting twin trusses on 185' spans.



Columbia-Wrightsville Bridge over Susquehanna River. Centers being moved ahead on trestle.



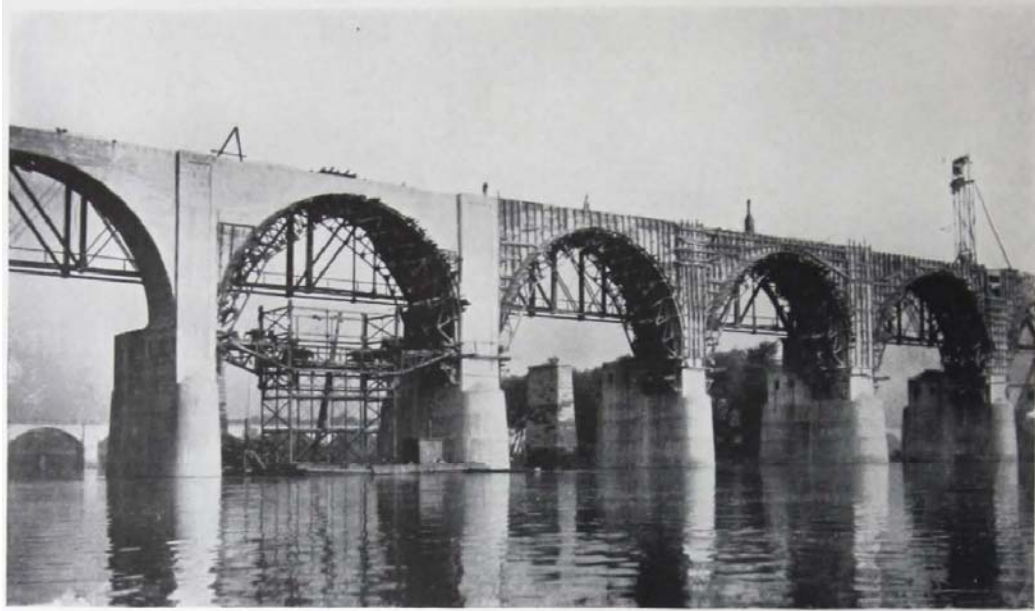
Columbia-Wrightsville Bridge over Susquehanna River. Blaw-Knox Steel Centers are being rolled laterally onto construction trestle.



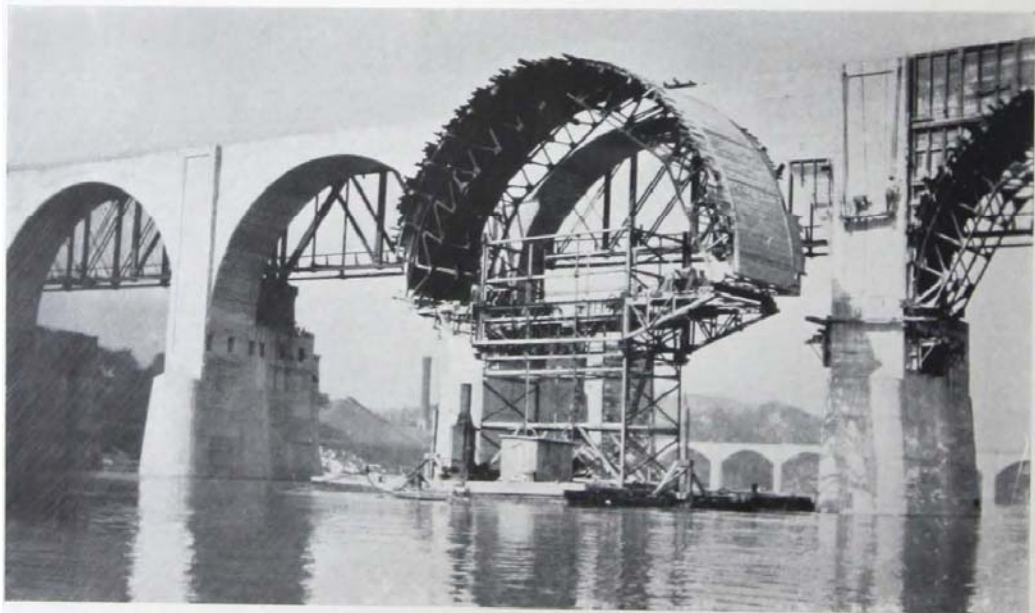
Columbia-Wrightsville Bridge over Susquehanna River. Blaw-Knox Steel Centers ready to be rolled in position between piers.

The

Columbia Wrightsville Bridge over Susquehanna River in Pennsylvania was the longest multi-span concrete arch bridge in the world when completed in 1929. The Blawform centering used to construct the bridge were reused and moved from span to span during construction by rolling them along a temporary construction rail trestle that ran parallel to the bridge.

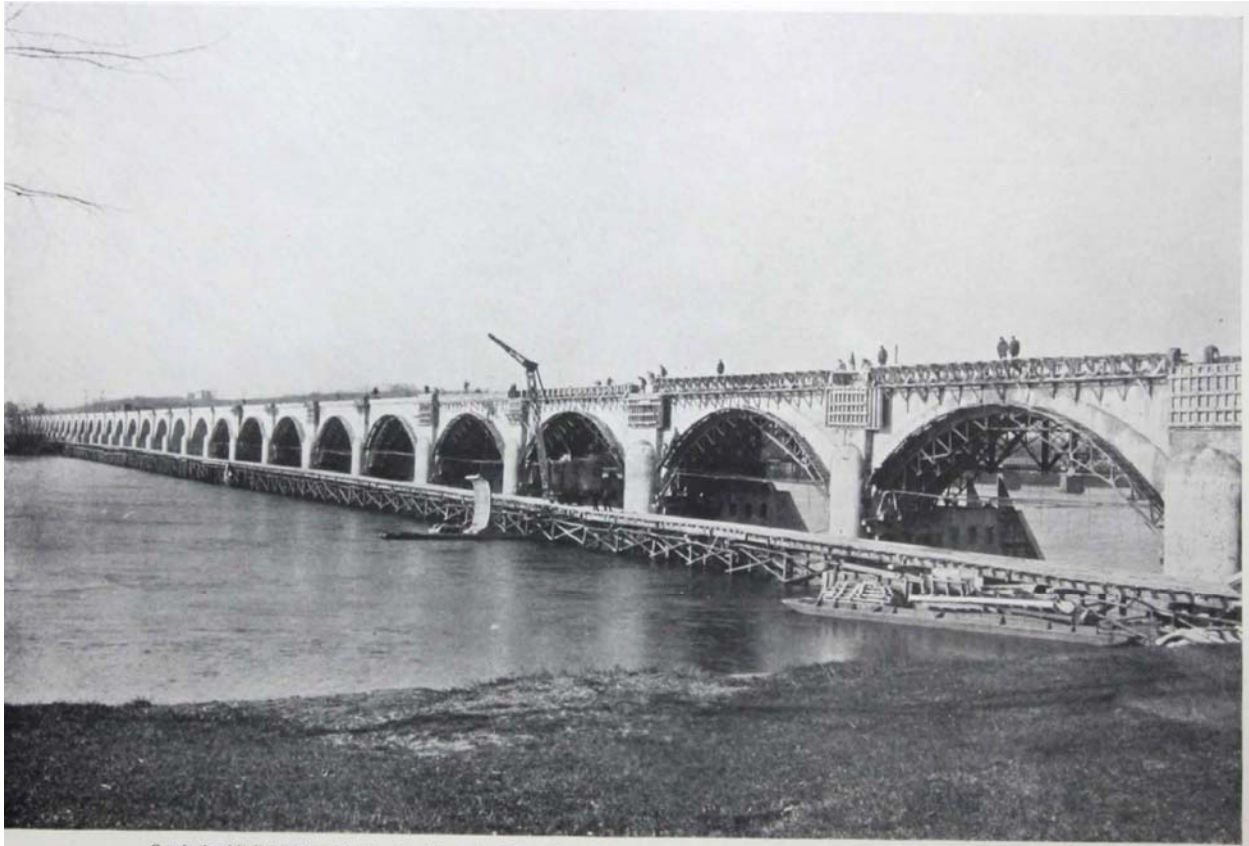


Blaw-Knox steel bridge centering in place supported on steel brackets on piers. Centering for ten spans half width of barrel arch, furnished. P. & R. Bridge No. 8, Harrisburg, Pa. James McGraw Company, contractor.



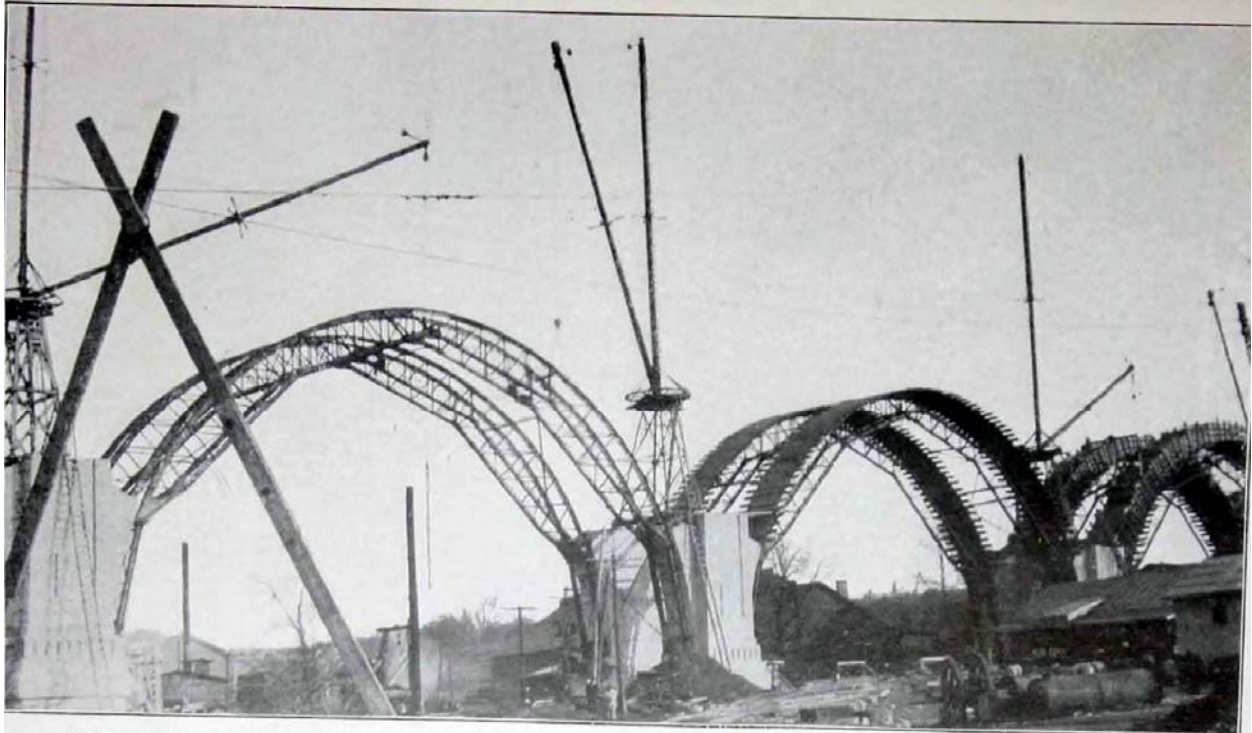
Blaw-Knox steel centering on same construction as shown in above illustration, being moved on floating equipment. A Blaw-Knox collapsible steel traveler is shown on the scows. This is used for raising and lowering centering.

Two concrete arch railroad bridges in Harrisburg, PA, noted for their extremely long length and number of spans, were constructed with the use of Blawforms. Shown here is the Philadelphia and Reading Railroad Bridge. The centering was reused during construction, and moved around by floating it on barges which had a collapsible support system (also a Blaw-Knox product), which enabled the centering to be lowered and raised into position.



Cumberland Valley Railroad Bridge, Harrisburg, Pa. Robert Grace Contracting Company, contractor. 44 spans—74' 6" and 77' between piers.
Blaw-Knox steel centers were adjustable to both spans.

Two concrete arch railroad bridges in Harrisburg, PA, noted for their extremely long length and number of spans, were constructed with the use of Blawforms. Shown here is the Cumberland Valley Railroad Bridge.



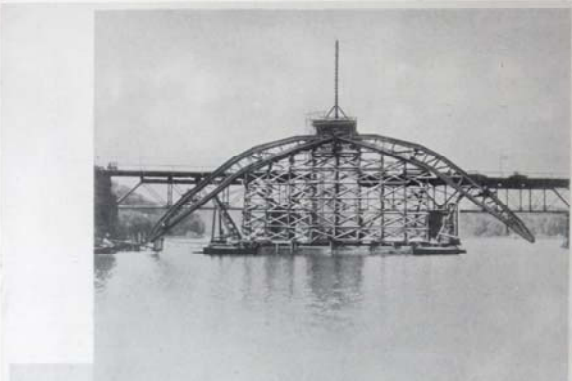
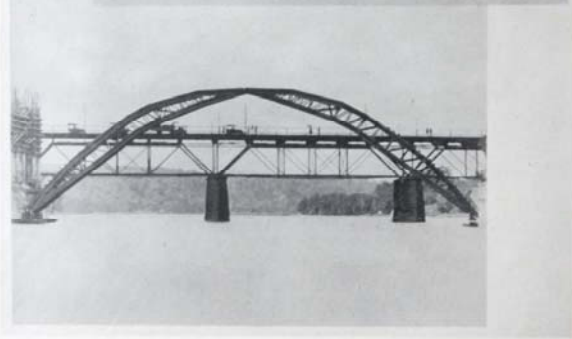
Blaw Arch Ribs, 120-foot Span, Eighth Street Viaduct, Allentown, Pa. MacArthur Brothers and Cullen-Freistedt Company, Contractors; Showing Method of Erecting Arch Ribs; also Method of Placing Lagging and Wood Forms for the Concrete Arch

The 8th Street Viaduct in Allentown, Pennsylvania is a large high-level historic concrete arch bridge.



Key Bridge, Georgetown Washington, D. C. U. S. Engineering Corps. Blaw-Knox steel covering for 200' clear span being lowered with floating equipment using tide or crane and lower centering.

Blaw-Knox for General
Concrete Construction

Blaw-Knox Steel Centers for Concrete Bridges. One of the largest and most difficult applications of steel centers, sold direct to the U. S. Government for the Key Bridge, Washington, D. C. Note the false work with rib floating into place in upper illustration and in the lower illustration the false work floated from under the rib and the rib ready for the wood form work.

Blawforms were used for two major bridges in Washington DC, the Arlington Memorial Bridge and the Francis Scott Key Bridge. Shown here is the Francis Scott Key Bridge.



Arlington Memorial Bridge, Washington, D. C. Hunkin-Conkey Construction Company, contractor. Eight spans, barrel type arches. Minimum spans 166', Maximum spans 180', width of arch 94'. Blaw-Knox steel centering furnished for four spans one-fourth width of arch.

Blawforms were used for two major bridges in Washington DC, the Arlington Memorial Bridge and the Francis Scott Key Bridge. Shown here is the Arlington Memorial Bridge.



Yadkin River Bridge, Yadkin, N. C. Hardaway Contracting Company, Inc., contractor. Blaw-Knox centering furnished for full width of bridge.
Seven 150' spans. Rib type arches.

The Wil-Cox Bridge over Yadkin River in North Carolina is a historic concrete arch bridge that has been bypassed and preserved for pedestrian use, and was constructed using Blawforms.