**Hecla Iron Works Building.** 100-118 North 11th Street, Brooklyn. Built 1896-97; design attributed to Niels Pouslon; iron elements cast by the Hecla Iron Works.

Landmark Site: Borough of Brooklyn Tax Map Block 2296, Lot 14, in part, consisting of the land beneath the 1896-97 building.

On March 3, 2004 the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Hecla Iron Works Building and the proposed designation of the Landmark Site (Item No. 3). The hearing had been duly advertised in accordance with the provisions of law. A total of five speakers, including representatives of the Landmarks Conservancy, Historic Districts Council and Modern Architecture Working Group, as well as a tenant in the building, testified in support of designation. The commission also received numerous letters in support of designation, including many from residents of Williamsburg. A representative of the owner faxed a letter expressing opposition to designation.

**Summary**

The Hecla Iron Works Building, constructed in 1896-97, is located on North 11th Street in Williamsburg, Brooklyn. Four stories tall, the front and rear elevations are faced with cast-iron panels enriched by simple classical details. While most iron fronts incorporate rows of weight-bearing columns, this facade is only a few inches thick, suggestive of skin rather than structure. In combination with metal frame windows, which are all original to the building, it anticipates the decline of masonry fronts and the rise of the modern curtain wall.

Niels Poulson, who co-founded the company with Charles Eger in 1876, is likely to have supervised the building’s design and construction. During the 1880s, Hecla pioneered various technologies, most notably the Bower-Barff process which was used to treat the iron. In contrast to most cast-iron facades, which were painted to resemble stone and prevent corrosion, the panels were exposed to super-heated steam that converts rust to magnetite, creating an unusual black, velvety, surface that is unaffected by moisture. As the company’s headquarters, the building served as a showpiece for the types of architectural and ornamental metalwork that Hecla produced.

Hecla’s contribution to New York City’s built fabric was extremely significant. Named for an active volcano in Iceland, this versatile firm supplied ornamental work for the exteriors and interiors of many designated New York City Landmarks, most notably the American Surety Building, New York Life Insurance Company Building, B. Altman & Co. Department Store, Macomb’s Dam Bridge and 155th Street Viaduct, and Grand Central Terminal. Hecla also produced the 133 original kiosks for the IRT subway system. Poulson and Eger became major philanthropists; Eger funded the Norwegian Home for the Aged, now the Eger Health Care Center on Staten Island, and Poulson’s gifts helped establish the American-Scandinavian Foundation. After their deaths, the works closed and the building was sold in 1928 to the Carl H. Schultz Mineral Water Company. Since 1989, the lofts have been leased to commercial and residential tenants.
DESCRIPTION AND ANALYSIS

The Hecla Iron Works
In 1898, shortly after completion of the Hecla Iron Works Building, William J. Fryer commented:

It is largely due to the skill and enterprise of the proprietors of the Hecla Iron Works that nowhere else in the world can be found as artistic interior iron work in modern buildings as in this country. Types of iron work unknown twenty years ago, and which would have been impossible for production by any processes of manufacture then in vogue, are to be seen now in nearly every first-class modern building in New York, and in other large cities in this country. The influence of the artistic labors of Messrs. Poulson & Eger has spread far and wide, and the methods initiated by the firm are being followed by other manufacturers.

Founded by Scandinavian immigrants, Niels Poulson and Charles Michael Eger, the Hecla Iron Works grew to occupy roughly forty lots on Williamsburg’s north side. They met during the early 1870s when both were employed by Daniel D. Badger’s Architectural Ironworks of New York. Badger, who erected one of the earliest cast-iron fronts in the United States in 1842, moved from Boston to New York City in the mid-1840s and was active here until at least 1876.

A native of Denmark, Poulson (1843-1913) was trained in Copenhagen as a mason-journeyman. He moved to New York City in 1864. Two years later, Poulson relocated to Washington, D.C., where he was employed by the federal government as an architectural draftsman. In 1869 he returned and became head of the architecture and engineering department at the Architectural Ironworks of New York. It seems likely that he oversaw the installation of one of Badger’s largest commissions, the six hundred foot-long train shed at Grand Central Depot (1871, demolished). Costing more than a million dollars to build, the project employed fifteen hundred workers. Eger (1843-1916) was born in Oslo, Norway, and emigrated to Brooklyn in 1869 to study the American building trade. Trained as a mason-journeyman, he had difficulty finding work and for a brief period served as a “common” laborer in the construction of Prospect Park. Hired by Badger as a draftsman in the early 1870s, he and Poulson established their own company in 1876.

The rapid growth of New York City in the 19th century created a great demand for building materials. Cast iron held numerous advantages; not only was it inexpensive to manufacture, but it required less hand labor than brick or stonework. Local foundries played an important role in the city’s development, at first forging simple exterior ornament, such as balconies and railings, and after mid-century, supplying prefabricated iron fronts and multi-story structures. In addition to Badger, leading firms included: Jordan L. Mott, Jackson Architectural Works, Aetna, Excelsior, Atlantic, and J. B. and W. W. Cornell. Most were found close to the East and Hudson Rivers, where raw materials could be easily delivered.

Industrial Williamsburg

Founded as part of the town of Bushwick in the mid-17th century, Williamsburg was incorporated as a village in 1827. In subsequent decades, the current street grid was planned and gradually implemented. The community grew quickly and by 1852 Williamsburg was the twentieth largest city in the nation. Three years later, it became part of Brooklyn and was commonly referred to as the Eastern District. Commercial activity was located close to the East River; ferry service began in 1800 and by mid-century many companies of national importance were active, including Pfizer Pharmaceuticals, Astral (later Standard) Oil, Brooklyn Flint (later Corning) Glass, and what is today called Domino Sugar.

Poulson & Eger “started life in a little office not larger than a common hall room.” At first, work was outsourced to a “Brooklyn foundry under Poulson’s personal supervision and at stipulated price on the weight.” They moved their operations to North 11th Street in 1881, leasing nine lots between Wythe Avenue and Third (now Berry) Street from Samuel H. Hunt. The company prospered and in 1883 it leased nine adjacent lots along North 10th Street. Four years later, they purchased the entire site for $33,000. Neighboring businesses included a glassworks and cooperage, as well as Charles Pratt’s Astral Oil refinery.

The company was incorporated as the Hecla Iron Works in 1885. It was named for Mount Hekla, an active volcano in Iceland. A contemporary photograph shows that originally there were three distinct groups of structures on the half-block site. On Third Street stood four single-story brick buildings (probably foundries) with pitch roofs and squat ventilation towers. The largest building faced North 10th Street. Five stories tall, it had an L-shaped footprint, extending toward North 11th Street. A four-story brick structure occupied the present site of the Hecla Iron Works Building. Visible on the east
facades of the latter two buildings were the words "HECLA IRON WORKS." A fire damaged most of the complex in November 1889. Although the four-story building that housed the offices survived, it was destroyed in a subsequent fire during February 1891. The combined loss to the company was nearly half a million dollars.13

Iron and Fireproof Construction14

Iron was first used in construction during the 18th century. The earliest multi-story structure to incorporate cast-iron framing was a flax mill (1796) in Shropshire, England. American foundries started manufacturing iron door frames, arches and columns in the 1820s. James Bogardus, a pioneer in the field who never operated a foundry, commissioned iron fronts for two commercial buildings in lower Manhattan during the late 1840s, as well as a factory (1848-49, demolished) at the northeast corner of Duane and Centre Streets. A promotional brochure described the latter building as "the first completely cast-iron edifice ever erected in America, or in the world."15 Extant works in New York City associated with Bogardus include: 254 Canal Street (1856-57, a designated New York City Landmark), 75 Murray Street (1857, a designated New York City Landmark), 63 Nassau Street (c. 1860), and 85 Leonard Street (1861, a designated New York City Landmark).

In subsequent decades, at least forty foundries were active in New York and Brooklyn. Badger’s Architectural Ironworks of New York was one of the most successful firms; his iron-fronted office building was located at 42 Duane Street (1850s, demolished) and the works at East 13th and 14th Streets, between Avenue B and C. His company supplied the iron components for some of the city’s best-known buildings, including the Cary Building (1856-57), Haughwout Store (1856-57), Condict Store (1861) and Gilsey House (1869-71) -- all designated New York City Landmarks. One of the last iron fronts cast by the ironworks was 90-94 Maiden Lane (1870-71), a small mercantile structure.16

The 1870s were a critical decade for cast-iron construction. Though a large number of iron facades were erected in what are now called the SoHo Cast-Iron and Ladies Mile Historic Districts, catastrophic fires in New York City, Chicago and Boston caused builders to question its use. While the iron itself performed adequately, fire and smoke passed easily from building to building and through hollow columns. New building regulations did improve public safety during the 1880s but cast iron was gradually eclipsed by wrought iron and steel framing.17 When iron was used after 1890, it generally served an ornamental purpose, enriching the lower floors or windows. Notable examples include: 9 East 4th Street (1887-88, part of the NoHo Historic District), 648 Broadway (1891, altered 1898, part of the NoHo Historic District), 550 Broadway (1901, part of the SoHo Cast-Iron Historic District), and 60-62 West 23rd Street (1905, demolished).18

A year after the Hecla Iron Works were destroyed by fire, Poulson built a fireproof residence (1890, demolished) for himself on Shore Road and 88th Street in the Fort Hamilton section of Brooklyn. Though there is some dispute as to what materials were used—all were non-combustible, from the floors and ceilings to walls. Of particular note was the metal framework:

This frame was slightly vaulted upward which gave the ceiling a domed shape. This made the floor framing very strong to carry the concrete floor which was placed above the steel. The floor framing was also the bracing for the entire building.19

An article published in the American Architect and Building News in 1893 outlined Poulson’s system. Presented with drawings, photographs and a model of the house, it was praised as “one of the most interesting in America.”20 This system, or a variant, was used in construction of the Hecla Iron Works Building, which has concrete floors, metal columns and arches, as well as domed plaster ceilings.

A New Headquarters

During the 1890s, the Hecla Iron Works was gradually rebuilt. Plans for a new office building were filed with the Brooklyn Department of Buildings in June 1896. Poulson and Eger are listed as owner, architect, and builder. Completed the following year, construction cost approximately $20,000.21 Four stories tall, the structure combined an iron front, that had been probably cast on site, with Poulson’s fireproof construction system. Located near the center of the works, it became the company headquarters, providing space for offices, drafting rooms, and a showroom that filled an entire floor:

In the exhibition hall of the Hecla Iron Works, may be seen, not only such utilitarian objects as railings, columns, mantel-pieces and fire-irons, but purely artistic objects as busts, bas-reliefs, memorial tablets; decorative figures and vases.22

The Manhattan showroom, then located at 63 Park Row, was closed and the new building became a showpiece for Hecla and the types of work it produced.23
Relatively few structures associated with the manufacture of building materials have survived in New York City. A comparable example is the New York Architectural Terra Cotta Company Building (Francis H. Kimball, 1892), a designated New York City Landmark, located in Long Island City, Queens. Like the Hecla building, this gabled structure was built to demonstrate the “range and potential of the products manufactured by the company.”

Four types of cast-iron panels were used to construct the front and rear facades of the Hecla building: two-story pilasters that divide it into five bays, single-story pilasters that flank the windows, as well as horizontal and vertical panels that separate the floors. The panels are embellished with modest classical details, suggestive of metopes, capitals and rosettes. While the decision to use iron at this late date might be viewed as conservative or self-serving, the elevations were designed in a manner that looks forward rather than back. In contrast to earlier iron fronts, which often incorporate rows of weight-bearing columns, the facade is only a few inches thick, suggestive of skin rather than structure. Executed in metal and glass, it supports only its own weight, anticipating the decline of masonry fronts and the rise of the modern curtain wall.

Metal Patination
Whereas the majority of iron fronts were painted to give the appearance of stone and prevent corrosion, the elements used in the Hecla building were treated with the Bower-Barff process.

As the business grew, large sums of money were spent in introducing new processes by which the work was made better and less costly; the Hecla Iron Works was the first concern to introduce electro-plating, galvanoplastic work, the Bower Barff process and plastic patterns. 25

Patented by Frederick Settle Barff in 1876 and modified by George Bower in 1881, it was licensed for use by four American companies, including Hecla, in the mid-1880s. 26 To create the black velvety surface associated with this technique, iron is exposed to super-heated steam which converts rust to magnetite, making it hard and unaffected by moisture. Components treated this way require no painting and the facade is remarkably well-preserved.

Poulson and Eger formed their partnership during the period when the demand for architectural iron was on the wane. To counter this trend, they adopted new technologies, rescuing traditional casting techniques with improved patination treatments. The Bower-Barff process won many international awards and supporters claimed it would:

... greatly increase the use of iron for structural and building purposes, and will be a boon to the architect who will thus have an opportunity of introducing ornate and florid designs to an extent, which would on account of the great cost be impossible in stone or other building material. 27

By treating the entire facade, Hecla demonstrated that the process could be used on a large scale. While such finishes were not unique to the firm, what set Hecla apart from rivals was its ability to work with “columns, cornices, statues and other large pieces.” 28 Ultimately, the impact of this process was limited. Though frequently used in the manufacture of pipes and library stacks, the Hecla Iron Works Building is possibly the only extant structure in New York City to display this unusual protective coating.

Windows 29
The gridded windows are original to the building and appear in early views of the interiors. With metal sash and frames, as well as some wire glass, they are among the earliest surviving examples in New York City. Although iron window frames were introduced during the 1850s, in such buildings as the Crystal Palace (1853, demolished) and the Watervliet Arsenal, West Troy, New York (1857), wood sash remained popular until the early 20th century. One of the main reasons builders were reluctant to use iron was its weight. In defense, Badger wrote in his 1865 catalogue that iron “while scarcely heavier than wood (being hollow), possess the superior advantages of beauty, durability, and incombustibility.” 30

The windows are arranged in horizontal grids. The four central panels pivot vertically, and the wide panel, above, pivots horizontally. Such windows had multiple advantages. Inexpensive to manufacture, they require little maintenance and improve ventilation. Since screens are difficult to install in this type of window, they are generally found in industrial contexts. It is difficult to know with certainty whether the metal employed is iron or steel. During this period, iron was frequently used in the manufacture of pivoting windows; on the other hand, the muntins are relatively thin and have an angled profile suggesting steel was used and that the sash might have been produced elsewhere.

Hecla and the Architecture of New York City
Hecla’s contribution to New York City’s built
fabric was extremely significant. Active during the rise of the skyscraper and the development of the midtown shopping district, it fabricated both interior and exterior components for many well-known structures. At its height as many as a thousand men were employed and the works offered:

... designing, drafting, photographing, clay, plaster and wax modeling; wood, plaster and metal pattern making; foundries for different metals; heavy, light and ornamental blacksmithing; drop forging; assembling and fitting; grille and wire working; sand blasting; galvano-bronze deposition; electroplating and finishing; Bower Barffing; fire-proofing; also trucking and erecting departments for the handling and placing of work in position.\(^{31}\)

Hecla's production, up to 1908, is well-documented in three volumes of photographs that are part of the collection at New York Public Library.\(^{32}\) Organized by type of commission, the books display images of elevator cars, marquees, stairs, railings, grilles, balconies, windows, columns and sculptural work. Designated New York City Landmarks that illustrate the firm's varied workmanship are the Dakota Apartments (1880-84, fence), Macomb's Dam Bridge and 155th Street Viaduct (1890-95), American Fine Arts Society (1891-92, gates), 14th Regiment Armory (Brooklyn, 1891-95, truss work and balcony), American Surety Company Building (1894-96, elevators and stairs), New York Life Insurance Company Building (1894-99, elevators and grillwork) at 346 Broadway, New York Stock Exchange (1901-3, interior and exterior work), St. Regis Hotel (1901-4, marquee and windows), 90 West Street (1903-7, elevators and grillwork), B. Altman & Co. Department Store (1905-13, marquees and grillwork) on Fifth Avenue, Grand Central Terminal (1903-13, windows), and J.P. Morgan & Co. (1913, entrance screen).\(^{33}\) Hecla also produced the original 133 entrance kiosks for the IRT subway system, completed in 1904. Outside New York City, projects included the lobby of the Rookery (1886, stairs and vaults) in Chicago, the Prudential Insurance Company Building (1909-13, demolished) in Newark, New Jersey, as well as buildings in Albany, Atlantic City, Baltimore, Boston, Philadelphia, San Francisco, Springfield, Illinois; Toledo, Ohio; and Troy, New York.

The success of the Hecla Iron Works made Poulson and Eger wealthy men. Poulson helped found the American-Scandinavian Foundation in 1908 and when he died in 1911 more than half his estate was left to the new organization.\(^{34}\) Eger retired in 1913. At the time of his death in 1916 his estate was valued at one million dollars. He left $60,000 and two houses in Greenpoint to Our Saviour's Lutheran Church to establish a home for aged, impoverished, Norwegian Lutherans. Originally located on Pulaski Street, not far from his home, it moved to Staten Island in 1926 and is now known as the Eger Health Care Center.\(^{35}\)

**Subsequent History**

Hecla merged with a rival firm, Winslow Brothers of Chicago, in 1913. In subsequent years, the firm was known as the Hecla-Winslow Company, Inc., with offices at 101 Park Avenue in Manhattan, and 4600 Harrison Street in Chicago. The east coast division was managed by Francis D. Jackson.\(^{36}\) By the 1920s, the company was in decline. Poulson left ownership of the building to the American-Scandinavian Foundation and in September 1928 it was purchased by the Carl H. Schultz Mineral Water Company, a division of the American Beverage Corporation. Faded lettering on the iron panels above the first story identify the various products Schultz manufactured. At this time, the building was expanded and the lower rear facade altered by architect Francisco Jacobus. Since 1989, the former Hecla Iron Works Building has been leased to various commercial and residential tenants.

**Description**

The Hecla Iron Works Building is located on the south side of North 11th Street, between Berry Street and Wythe Avenue. Four stories tall, the north or street facade is faced with cast iron. The plates have a black patina and simple classical ornamentation, including moldings, metopes, and rosettes. Pilasters divide the facade into five bays. Within each bay are three sets of windows. The fenestration, which is original to the building, is arranged in a grid-like pattern. While the outer panes are fixed, the central panels pivot vertically, and the wide panel, directly above, pivots horizontally. The bays on the ground story have been significantly altered: from east to west, the first bay has been filled with brick and incorporates a black metal entrance door, the second with grey concrete block and a single concrete plate, the third and fourth with three concrete plates, and the fifth, with a roll-down silver metal garage door, flanked by black iron gates. The concrete plates are located above the original metal base and each has a steel cross brace. Between the first and second story, non-historic lighting fixtures have been installed. Behind these fixtures and aluminum piping, faded whitish lettering is visible, reading from east to west: AMERICAN BEVERAGE CORP. CARL H. SCHULZ SPARKLING BEVERAGES, etc. The east bay has
two non-historic signs: “AIR 2,3,4” and “Warehouse & Bottling Center.” Above the signs, “118 OFFICE 118” has been painted. At the top of the bay directly to the west is painted: “118.”

The east facade is visible above the roof of the adjoining 1½ story building and the west facade is visible above the neighboring two-story building. Both walls are faced with red brick. Below the fourth story, the bricks are a lighter shade of red. The east wall has a pipe that runs down the center of the facade and two windows: the third-story window is sealed with concrete block and the fourth-story window, which may be original, has six panes and pivots outward. The west wall has no windows. At either end of the roof concrete bulkheads are visible, as well as non-historic wood terrace structures. The south or rear facade, faced in iron above the second story, is partially visible from streets to the south.

NOTES

1. The Hecla Iron Works Building was included in an unpublished list of twenty significant buildings in “Williamsburg, Brooklyn: A Preservation Plan to Protect Historic Resources,” Columbia University Graduate School of Architecture, Planning and Preservation, Historic Preservation Program. Class of 2002, April 30, 2001. The abstract for the Hecla building was written by Sandy Waltuck and Eddie Nelms. The author wishes to thank Waltuck who kindly shared her bibliography and list of works by the firm. The Friends of Cast-Iron Architecture prepared an unpublished study of the Williamsburg area in 1976. Among various iron fronts and related structures described — some now demolished — the Hecla building was not included. Files, Landmarks Preservation Commission.


3. Joost Dahlerup, “Niels Poulsen,” The American Scandinavian Review (September-October 1915), 261-270. Also see Catherine D. Groth, “Poulson’s Personality,” The American-Scandinavian Review (September-October 1915), 271-73. It should be noted that Eger was variously identified as Charles, Carl, and Michael Eger.


10. Ibid.

11. Wythe Avenue was named for George Wythe, a signer of the Declaration of Independence. Berry Street, originally called Homer Street and later known as Third Street, was named for Dr. Abraham J. Berry, first mayor (1852-53) of Williamsburg. See Eugene L. Armbruster, Brooklyn’s Eastern District (1942), 391, 87.

12. An earlier and probably unrelated Hecla Iron Works was located in Brooklyn on Driggs Avenue in 1855. Armbruster, 256.


17. During the second half of the 19th century, a combination of wrought iron beams and cast iron columns were frequently used. The first building to incorporate steel beams was the Home Insurance Building in Chicago (1885). See Metals in America’s Historic Buildings: Uses and Preservation Treatments (National Trust for Historic Preservation, 1980), 44-49, 74-79. Most early skyscrapers were hybrid forms, for instance, the Manhattan Life Insurance Company Building (1893-94) incorporated steel, cast-iron, and probably wrought iron. The “lattice-web box forms” used in construction of the six-story tower and dome were manufactured by Hecla. Sarah B. Landau and Carl Condict, Rise of the New York Skyscraper (Yale University Press, 1996), 224; and “Hecla Iron Works from 1876 to 1908,” three volumes of photographs (some with captions) in the collection of the New York Public Library.


21. Real Estate Guide and Record, June 20, 1896, 1092; also see Valuation of Real Estate, Brooklyn, 1897, Ward 14, Block 38.

22. Unidentified newspaper clipping, April 3, 1908, from Brooklyn Collection, Central Library, Brooklyn Public Library.

23. From approximately 1886 to 1893, the showroom was located at 216 West 23rd Street. Trow’s New York City Directory, various years, 1886-1900.


25. Unidentified newspaper clipping, April 3, 1908, from Brooklyn Collection.


27. Ibid.


31. Unidentified newspaper clipping, April 3, 1908, from Brooklyn Collection.

32. “Hecla Iron Works from 1876 to 1908.” Hecla proposed but did not build the stacks for the New York Public Library. It is possible that at this time the three books were acquired by the library. The Friends of Cast-Iron Architecture sponsored the restoration of these books.
33. For an image of the Morgan project, see Architecture (December 1914).


36. The company’s president was W. H. Winslow. See Brooklyn Eagle, September 22, 1913; Real Estate Guide and Record, October 4, 1913, 639.
FINDINGS AND DESIGNATION

On the basis of a careful consideration of the history, the architecture and other features of this building, the Landmarks Preservation Commission finds that the Hecla Iron Works Building has a special character, special historical and aesthetic interest and value as part of the development, heritage, and cultural characteristics of New York City.

The Commission further finds that the Hecla Iron Works Building, located in Williamsburg, Brooklyn, was built by one of the most important manufacturers of architectural and ornamental iron and bronze in the United States; that the four-story structure was built in 1896-97 to serve as the company’s headquarters and as a showpiece for the types of architectural and ornamental work that Hecla produced; that it has a cast-iron facade with simple classical details that was fabricated on site and treated with the Bower-Barff process to protect corrosion; that the pivoting metal windows are arranged in grids and are original to the building; and that this combination of features anticipates the decline of masonry fronts and the rise of the modern curtain wall.

Accordingly, pursuant to the provisions of Chapter 74, Section 3020 (formerly Section 534 of Chapter 21) of the Charter of the City of New York and Chapter 3 of Title 25 of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark the Hecla Iron Works Building, 100-118 North 11th Street, Williamsburg, Borough of Brooklyn, and designates Borough of Brooklyn Tax Map Block 2296, Lot 14, in part, as its Landmark Site.
Hecla Iron Works Building
100-118 North 11th Street, Brooklyn
Photo: Carl Forster
Hecla Iron Works Building
windows and pilasters
Photo: Carl Forster

Hecla Iron Works Building
east facade
Photo: Carl Forster
Hecla Iron Works Building
100-118 North 11th Street, Brooklyn
Landmark Site: Borough of Brooklyn Tax Map Block 2296, Lot 14, in part
Source: Sanborn Building & Property Atlas, Brooklyn (2003), Region 1, book 1, vol. 4, pl. 14
Hecla Iron Works Building
100-118 North 11th Street, Brooklyn
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