

**Historic Preservation Council
Regular Meeting October 1, 2014
Agenda Item 6.B**

**State Register Nomination for the
Atlantic Screw Works, 81/83/85 Charter Oak Avenue, Hartford, CT**

The Historic Preservation Council votes to list the Atlantic Screw Works, Inc. located at 81/83/85 Charter Oak Avenue in Hartford on the State Register of Historic Places.

Motion By_____

Seconded By_____

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM

This form is for use in nominating individual properties and districts to the Connecticut State Register of Historic Places (C.G.S. Chapter 184b, Sec. 10-409(2)). See instructions in *How to Complete the Connecticut State Register of Historic Places Registration Form*. Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets. Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Atlantic Screw Works, Inc.

other names/site number _____

2. Location

street & number 81/83/85 Charter Oak Avenue

city or town Hartford

☐ vicinity

county Hartford

zip code 06106

☐ not for publication N/A

3. State Agency Certification

I hereby certify that this nomination ☐ meets ☐ does not meet the documentation standards and criteria for registering properties in the Connecticut Register of Historic Places. (See continuation sheet for additional comments.)

State Historic Preservation Officer

Date

4. Classification

Ownership of Property
(Check as many boxes as apply)

☒ private

☐ public-local

☐ public-state

☐ public-federal

Category of Property
(Check only one box)

☒ building(s)

☐ district

☐ site

☐ structure

☐ object

Number of Resources within Property
(Do not include previously listed resources in count.)

Contributing

1

buildings

sites

structures

objects

1

Total

Property Owner

name CIL Community Resources, Inc.

address 157 Charter Oak Avenue

city Hartford

state code CT

zip code 06106 phone (860) 563-6011

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

5. Historic Preservation Council

Approval date _____

Comments _____

6. Function or Use

Historic Functions

(Enter categories from instructions)

Industry/Processing/Extraction - Manufacturing Facility

Current Functions

(Enter categories from instructions)

Commerce/Professional

7. Description

Architectural/Archaeological Classification

(Enter categories from instructions)

Other/Early twentieth-century industrial

Materials

(Enter categories from instructions)

foundation Stone – Brownstone, Brick

walls Brick

roof Rubber

other

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

SEE CONTINUATION SHEETS

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

8. Statement of Significance

Applicable Connecticut Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for State Register listing.)

☒ 1 That are associated with events that have made a significant contribution to our history and lives of persons significant in our past; or

☐ 2 That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

☐ 3 That have yielded, or may be likely to yield information important in prehistory or history.

Levels of Significance (local, state)

Local/State

Areas of Significance (Enter categories from instructions)

Industry

Invention

Significant Dates

1879-c.1950

1902-1903

1911-1915

Significant Person

Tilton, David (1834-1911)

Cultural Affiliation (Complete if Criterion 3 is marked)

Architect/Builder

Davis and Brooks, Architects

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

SEE CONTINUATION SHEET

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

See Continuation Sheet

10. Geographical Data

Acreage of Property 2.330005

Municipal Map, Block and Lot Number and UTM Coordinate (If possible)

(Place additional UTM references on a continuation sheet.)

	271	466	084
	Map	Block	Lot
1	18	693693	4625624
	Zone	Easting	Northing
2	18	693652	4625572

3	18	693654	4625458
	Zone	Easting	Northing
4	18	693731	4625551

☐ See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Michael Forino, Consulting Historian; David Arai, Consulting Architect

organization Maier Design Group, LLC

date 8/8/2014

street & number 100 Wells Street, Suite 2i

telephone (860) 293-0093

city or town Hartford

state CT

zip code 06103

**CONNECTICUT STATE REGISTER OF HISTORIC PLACES
REGISTRATION FORM – Continuation Form**

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

7. Narrative Description

The former Atlantic Screw Works is a large early twentieth-century industrial complex at the corner of Charter Oak Avenue and Wyllys Street in the Sheldon-Charter Oak Neighborhood in Hartford, Connecticut. The complex sits directly east of the former Capewell Horse Nail Company manufacturing plant. The entire complex appears as a single L-shaped structure, but is composed of six distinct sections (marked 1A-1E with a Power House) (See Figure 1). The sections were constructed from 1902 to c. 1915, with small additions and alterations in the 1980s. The western leg of the complex, that runs north and south, is approximately 275' by 60' in total, with a 40' protrusion on the eastern wall. The eastern leg, that runs east and west, is approximately 140' by 85'. These sections are all clad in brick, range from single-story to three-story construction and utilize post and beam structural systems. The buildings also exploit slow-burn mill construction that was common in the early twentieth century. Beams, columns and trusses are hewn from hardwoods with chamfered edges and each floor consists of two intersecting hardwood layers to minimize the risk of fire penetrating between levels. With limited exceptions, the complex remains largely intact as it appeared after the company's major expansion projects concluded in c.1915. Among the most prominent alterations and changes was the demolition of a wooden storehouse at the southern end of the complex, two vertical additions and several large paneled windows. Nearly all of the building's original windows were replaced in the 1980s with modern aluminum windows, but recent examination has determined that a number of original jams survive under the replacements. The interior is also largely intact. Much of the original fabric has been enclosed by drop ceilings and partition walls, but very few historic materials have been removed or substantially altered. The entire complex is in excellent condition.

Building 1 Section A

Section A was the first Atlantic Screw Works building constructed on Charter Oak Avenue. It was built at the location of the former residence of Mrs. E. H. Colt in 1902, but was likely completed in 1903. It housed the company's sorting, slotting, washing threading operations, and the original office. The building measures approximately 150' by 60', is two-stories, and is constructed of brick. It has a slightly pitched rubber roof. A third-story addition was added to the northern 60' of the building in the 1980s. The entire structure sits atop a pier foundation set in clay. The piers are made from brick with granite bases and are contained within a crawl space underneath the building that is approximately 4' high (See Photo 1).

Northern Elevation: The northern elevation of Section A faces Charter Oak Avenue and measures approximately 60' across.(See Photo 2). The first-story has a series of 5 segmental arched windows with brownstone sills. There is an additional arched opening that houses a door. The second-story contains a series of 6 segmental arched windows with brownstone sills. Atop the series of windows is a band of simple brick corbelling and a central-raised brick rectangle that bears the name of the company, "-Atlantic-Screw-Works-." The lettering is bordered in an egg-and-dart pattern cast in terra-cotta panels (See Photo 3).

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM -- Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

On each side of the raised brick rectangle, there are two horizontal architectural brackets also made of terra-cotta. Above the raised rectangular section are another set of terra-cotta tiles that denote the year the company was organized and the year of Section A's construction: "-1877-1902-." Above the dates is a classical-revival pediment with dental moldings and a finial at the top, also cast from terra-cotta. Set behind the raised ornamentation of the second-story, as to not destroy the original fabric, is a series of glass panels that make up the façade of the 1980s third-story addition.

Western Elevation: The western elevation of Section A faces the former Capewell Horse Nail Company factory. The first-story contains a series of 19 segmental arched windows with brownstone sills. The second-story contains another series of slightly shorter segmental arched windows with brownstone sills. Above the windows is a band of brick corbelling that runs the length of the façade. Along the northern 60' of the western elevation, the wall of the 1980s third-story addition is visible. The façade is clad in red brick with 8 segmental arched window housings. Only 4 of the housings contain windows, the other 4 window housings are solid brick.

Eastern Elevation: The eastern elevation is two-stories, the first of which has a series of 8 segmental arched windows with a door on the southern end. The second-story has a series of 9 shorter segmental arched windows with brick corbelling along the top.

Southern Elevation: Only the 1980s third-story addition is exposed on the southern side. It is made up of a series of large glass panels.

Power House (See Photo 4)

Attached to the southeast corner of Section A, and protruding from the main body of the complex to the east, is the powerhouse that contained the boiler, engine and dynamo. The operation ran from a coal boiler that supplied both heat to the building and run the engine. The engine then powered the building's dynamo which created electricity for light and to power the various mechanical equipment required by the operation. The powerhouse was constructed in 1902-1903 when the operation first opened, but was adapted consistently to accommodate evolving power sources. This section is slightly L-shaped and measures approximately 20' by 25'. The entire powerhouse is constructed of brick and is two-stories. The roof of the powerhouse is currently flat. When it was originally constructed, it had a gable roof with twin protruding exhaust stacks. They have since been removed.

Northern Elevation: The first and second-stories each contain a series of 3 segmental arched windows with brownstone sills, with the windows on the second-story being slightly shorter.

Eastern Elevation: The eastern elevation of the powerhouse is devoid of most original features with the exception of a single protruding brick support. The rest of the façade contains 3 bays of vertical windows added in the 1980s.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

Building 1 Section B (See Photo 5)

Section B is a single-story building with a slightly pitched roof that is attached to Section A to the north. There is a later second-story addition on the north side, abutting Section A, that was constructed at an unidentified period. The entire section measures approximately 90' by 55' and the addition measures approximately 25' by 55'. The building was constructed in 1902-1903 and was used as the company's tumbling department.

Western Elevation: The first-story of the western elevation of Section B has a series of 11 segmental arched windows with brownstone sills. Above the windows is a simple band of brick corbelling. The western elevation of the second-story addition has 2 segmental arched windows with no corbelling.

Southern Elevation: The second-story addition is the only portion of Section B that is exposed to the south. It has a series of 6 segmental arched windows.

Eastern Elevation: The eastern elevation of Section B is virtually identical to the western elevation. There is a series of 10 segmental arched windows with brownstone sills and 1 door. Above the windows is the same simple brick corbeling.

Building 1 Section C (See Photo 6)

Section C was constructed between 1909 and 1917. It adjoins Section B perpendicularly to the south and measures approximately 80' by 35'. It is a one-story, brick-pier building with a basement that is exposed on the southern end. It served as a storage building for the operation's raw wire. An octagonal structure with a hipped slate roof at the southeast corner is a modern addition.

Western Elevation: The western façade of Section C has a series of 3 segmental arched windows with brick sills. There is brick corbelling along the roof line.

Southern Elevation: The ground-level of the southern elevation has a series of 7 segmental arched windows with brick sills, and one door with a modern glass awning. There is brick corbelling along the roof line. Below grade, accessible by a modern brick stairway, is a basement access door.

Eastern Elevation: The eastern elevation has a series of 3 segmental arched windows with brick sills, and a band of brick corbelling along the roof line.

Northern Elevation: The northern elevation has a series of 2 segmental arched windows with brick sills and brick corbelling along the roofline.

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

Building 1 Section D (See Photo 7)

Section D was constructed between 1910 and 1911.¹ It is a three-story brick-pier building with a basement and a flat roof. It is attached to Section A on its western side. It measures approximately 70' by 90'. This section contained the company's offices, machine shop, sorting and packing operations, pattern storage, and the southern side served as the company loading dock.

Northern Elevation: The first-story of the northern elevation has brownstone blocks along the grade. It contains a central portico flanked by a series of 4 segmental arched windows on each side. The windows have granite sills that extend along each brick pier to create a single band of granite. The central portico (See Photo 8) features a circular headed opening with recessed concentric reveals that contains a modern door. The brick pilasters that flank the door have brownstone bases and caps. Scoring along the brickwork indicates the existence of a removed outer gate. Above the pilasters is an arch made from brick, with diapering of alternating painted black brick to add additional emphasis on the arch. Above the arch is a pitched recessed panel that also has painted brick. The top of the portico is adorned with 11 small arches and a pitched roof. The second-story contains a series of 11 segmental arched windows with granite sills. All are of equal width with the exception of 2 narrow windows that flank the central window. The third-story contains a series of 11 quadrilateral windows with granite sills and granite lintel moldings above each window. Like the second-story, all of the windows are the same width, with the exception of the two narrower windows flanking the central window. Above the windows, at the center of the façade, is a series of terra-cotta tiles that read, "-Atlantic-Screw-Works-." Each of the words is separated by a large screw head. (See Photo 9) To the east of the company name is terra-cotta tile with the year "1877" and to the west "1910." On the outer flank of each date are 2 brick diamond patterns of brick, set above the two outermost windows on each end of the façade. Above the ornamentation is a band of terra-cotta tiles that border the roof line.

Southern Elevation: The southern elevation of Section D is flanked by two external octagonal stair towers that each feature 6 staggered segmental arched windows with brownstone sills on their southern elevations, and four segmental arched windows on their east and west elevations respectively (See Photo 10). The first-story contains a brick wall with a fork truck opening. The exterior wall is sealed in a glass enclosure that was added in the 1980s. The second-story contains a series of 5 segmental arched windows with granite sills. Like the northern elevation, the two windows flanking the central windows are narrower. The third-story contains another series of 5 segmental arched windows that are slightly shorter. They follow the same pattern as the windows on the second-story.

¹ "Hartford's Industrial Growth", *Boston Evening Transcript*, January 28, 1911.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

Building Section E (See Photo 11)

Section E was constructed shortly after Section D, in c. 1911-1915. It is a three-story (with a basement), brick-pier building with a flat roof. It housed one of the company's machine shops, finished stock and paper box storage. It measures approx. 85' by 55'.

Northern Elevation: The foundation of the northern elevation is clad in brownstone block. The first and second-stories each contain a series of 6 segmental arched windows with brownstone sills. The third-story contains a series of 6 quadrilateral windows with brownstone sills, keystones, and flanking stones. Above each window is a pair of brick arches with corbelling that creates a band of arches protruding slightly from the rest of the façade. Above the arches is a band of terra-cotta tiles that border the roof line. (See Photo 12).

Eastern Elevation: The eastern elevation is identical to the northern elevation with the exception that there are 10 windows along each story. This façade continues the brownstone foundation, granite sills and ornamentation and the arches along the roof line.

Southern Elevation: The southern elevation is devoid of any ornamentation. Along the western side is a series of windows added in the 1980s. The windows extend the entire height of the elevation. To the east, along the first-story, are 2 segmental arched windows with brick sills. The austere appearance of this façade may indicate that another addition was planned to adjoin this wall, but was never constructed. In fact, a contemporary drawing of the factory from *The Hartford Courant* shows the complex with a building in this location. But fire insurance maps and aerial photography demonstrate that the section was never constructed. (See Figure 2) The newspaper rendering may also have been a simple exaggeration, a practice that was common when illustrating industrial complexes.

Western Elevation: The western elevation is short, containing only 2 windows bays. Each of the windows on the three-stories has a segmental arch with brownstone sills.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

8. Narrative Statement of Significance

Summary Paragraph

The former Atlantic Screw Works, built between 1902 and c.1915, is an integral piece of the late nineteenth and early twentieth-century industrial experience in Connecticut. The building meets State Register Criteria 1, as it represents the only remains of a once thriving theatre of human activity in Hartford. An enumerable amount of individuals lived, worked, struggled and benefited from Atlantic Screw Works' existence for nearly a century. Its story embodies the best and worst of American industry. Like most industrial histories, Atlantic Screw benefited for the ingenuity of one of its early proprietors, David Tilton, whose skills with machines took his company from a small rented shop to the impressive building on Charter Oak Avenue. Its history is likewise marred with the experience of worker strikes, labor disputes, financial hardships, and the decline of industrial strength in the United States.

Coming to Hartford, 1877 to 1879

The history of the Atlantic Screw Works, like many stories of industrial entrepreneurship of the late nineteenth century, starts with a character with particular skill, and who is exposed to a number of fortuitous circumstances. This story begins with David Tilton (1834-1911), a skilled mechanic and machinist who was born into a modest household in Meredith, New Hampshire in 1834. In 1867, Tilton came to Hartford, Connecticut to work as a machinist for the National Screw Company, then located on Sheldon Street. In 1872, the establishment was bought by the American Screw Company of Providence, Rhode Island – which would go on to become one of the larger screw manufacturers in the United States. When the company was sold and the operations moved, Tilton did not follow. Instead he secured a position at a small job machining firm in Lakewood, New Jersey called the Smith and Garvin Company. Tilton worked as a machinist, designing and building screw threading machines. One of the shop's customers was a newly established (1877) small manufactory called the Castleton Screw Company that was located in Castleton-on-the-Hudson, New York. Likely having met the owner of the Castleton Screw Company when installing or servicing machinery, Tilton was offered a job as superintendent of the manufactory, which he accepted in 1877.²

Despite the owner's move to hire Tilton, the Castleton Screw Company was floundering by the close of 1877. The company had lost nearly \$70,000 of its own capital and was forced to borrow an additional \$35,000 from George W. Bruce, a hardware wholesaler from New York City. Unable to collect the substantial debt from the destitute shop, Bruce assumed ownership by the end of that year. Finding the small shop's equipment and facility grossly inefficient, Bruce disposed of all the machinery. At that moment, Tilton likely realized that coming to the screw company was an unfortunate error, but Bruce decided to hire Tilton as a private machinist

² *The Connecticut Magazine* 9 (1905): 915-917.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

of sorts. Under Bruce's support, Tilton began building improved screw threading machines in a shop in Brooklyn, New York.³ After some time experimenting, Bruce's confidence in his machinist's capabilities engendered his decision to establish another screw manufactory. The group moved to Hartford, Connecticut in 1879, where they rented space in the Colt West Armory at 70 Huyshope Avenue.⁴

The Early Years in Hartford, 1879 to 1902

The motivation for moving the company to Hartford is unclear, but there are several probabilities. The first is that Hartford was an established centralized industrial area where Bruce could maintain his business connections in New York while creating new ones in the Connecticut River Valley. Another probable factor was Tilton's familiarity with the city, having worked there in the 1860s. The third was likely Hartford's growing reputation for its metal making and precision machining industries, as well as the successful existence of several similar, but no competing firms. Hardware manufacturers such as the Hartford Machine Screw Company and Capewell Horse Nail Company already possessed important trade and sales connections. Those networks assuredly benefited the burgeoning screw company. Hardware dealers who bought machine screws and nails were likely to purchase wood screws as well, especially if they were originating from the same transfer point.

Upon the transition, the shop changed its name to the Atlantic Screw Works and continued to produce screw making machinery, some of which was exhibited in France and Belgium in the early 1880s and marketed in Europe.⁵ A patent filed in Tilton's name in 1878, and approved in 1880, illustrates some of his improvements. His new screw machine's cutter was designed for easy adjustment to accommodate different screw blank gauges, drastically reducing the labor and time needed to fit a machine to produce different gauge screws. The machine also fed the screw blanks automatically and withdrew them after threading was complete.⁶ Tilton also invented a useful clutch guard that was patented in England 1878 and the United States 1884. It disengaged a machine if a foreign object or some other force stopped or slowed its rotary motion. The benefit was two-fold. First, and most important, it limited the number of machine breakages. Secondly, it was useful as a safety device, although the patent mentions no indication of that being an intended benefit. Tilton's machines were so instrumental to the screw-making industry that his designs continued to be implemented in screw factories well into the 1950s and 1960s.⁷

³ William Davis, *The New England States: Their Constitutional, Judicial, Educational, Commercial, Professional, and Industrial History* (Boston: D.H. Hurd and Company, 1897), 855-856.

⁴ *Hartford, Conn. As a Manufacturing, Business and Commercial Center* (Hartford: Hartford Book of Trade, 1889), 147.

⁵ *The New England States: Their Constitutional, Judicial, Educational, Commercial, Professional, and Industrial History* (Boston: D.H. Hurd and Company, 1897), 855-856.

⁶ William Davis, *The New England States: Their Constitutional, Judicial, Educational, Commercial, Professional, and Industrial History* (Boston: D.H. Hurd and Company, 1897), 855-856.

⁷ "Atlantic Screw Finds Old Idea Still Paying Off," *The Hartford Courant*, April 27, 1952.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

In 1887, George Bruce fell ill and returned to his home in New York. Later in 1887 or 1888, he passed away, leaving in his will a bequest-offer for David Tilton to purchase the Atlantic Screw Works. Tilton agreed to the terms and became the sole proprietor in 1888. By 1890, the small shop had grown to approximately 30 employees.⁸

Charter Oak Avenue and Incorporation, 1902 to 1915

Under Tilton's leadership, the company quickly outgrew its space at the Colt West Armory and the construction of a company-owned building commenced on Charter Oak Avenue in 1902. As a measure of their growing success and a mark of the firm's growing reputation, in 1907, the Atlantic Screw Works jointly hosted a meeting of the Wood Screw Manufacturers Association with one of the largest and most renowned hardware firms in the country: the large New Britain firm Corbin. The meeting was held at the Hartford Club, followed by and auto trip for lunch at the Farmington Country Club, followed by a dinner party at the Berlin Fair.⁹

By 1910, increasing demand required the construction of an additional building on the site, one that would more than double the company's operation capabilities. But before they could set up manufacturing operations, an unusual group of tenants came to occupy it first. In December of 1910, the nearby Charter Oak School was destroyed by fire, leaving its students with inadequate space. In an act of unusual generosity (unusual in the sense that the following circumstances could not have been commonplace), the Tilton family offered the third floor of their new factory to house a temporary school. Despite the negatives of having a school in a factory, the Education Board found the bright, open space of the new industrial building a more than suitable option. The factory floor was partitioned for classroom space, bathrooms and water fountains were installed, and the principle was even provided an office space.¹⁰ And so, from December to June of 1911, many children of the South End of Hartford learned and played to the steady hum of industrial machines from the floors below, many of which were likely operated by their own parents.¹¹

David Tilton's success gained further note upon his death. When he died in 1911, he left an estate worth over \$265,000 - a substantial fortune for the day, amounting to just over six million dollars in today's market.¹² The company was willed to his son Fred N. Tilton, who had worked with his father since he was eleven years old. The company would continue to grow under Fred's direction. He would go on to file several patents, becoming a respected inventor and industrialist in his own right. Upon his retirement in 1943, his factory had the production capability of nearly one million screws per day – nearly a third of the factory's annual capacity

⁸ "The Library Fund: Names of the Friends of Hartford," *The Hartford Courant*, April 1, 1890.

⁹ "Screw Manufacturers Entertained at Dinner," *The Hartford Courant*, September 25, 1907.

¹⁰ "School Children in Factory," *The Hartford Courant*, December 8, 1910.

¹¹ "Charter Oak School In Screw Factory," *The Hartford Courant*, December 15, 1910.

¹² "David Tilton Estate \$265,000," *The Hartford Courant*, November 17, 1914.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

when his father was in charge. In 1915, Fred N. Tilton took a big step and incorporated the Atlantic Screw Works to become Atlantic Screw Works, Inc. with a capital stock of \$150,000. It was the first time that the firm was not the sole proprietorship of a single individual, although the majority share remained with Tilton, who was naturally elected president of the new corporation.¹³

Labor Disputes and the First World War, 1915 to 1929

The same year as incorporation, the first reported strike at the Atlantic Screw Works occurred. On September 7th of that year, nearly forty individuals, most young men and women who worked as automatic machine feeders and tenders and stockers, walked out of the factory led by a man named Thomas Walsh. At the time, no employee of the works had been organized in a union. With the company running ten to eleven hour shifts, six days a week, with only a ten minute lunch break, workers demanded a reduction in hours without a decrease in pay.¹⁴ The number of strikers quickly increased to 65, over half the workforce. By September 8th, and while making no formal demands to A. Winfred Bowman, the manager at the time, they applied to join the Central Labor Union. At a meeting at the Central Labor Union Hall on September 8th, the majority of the strikers voted to ask Atlantic Screw Works for an eight hour day and an increase of wages from \$8 to \$9 a week as well as the reinstatement of Thomas Walsh.¹⁵ A demand to increase women's pay was also reported, but the amount was not, although one newspaper article indicated that some girls were making a mere \$1.45 per week.¹⁶

The year 1915, and the early twentieth century in general, saw major hikes in striker activity for demand of the eight hour work day the was, at least in part, precipitated by news of Ford Motors Company's revolutionary eight-hour day with increased pay. In September of 1915, a throng of strikes in Connecticut grew off one another. Polishers and buffers from Colt walked out the same day as the Atlantic Screw workers. That same week, the American Graphophone Company in Bridgeport was forced to close after 1,600 workers left their posts. Other factories crippled by worker revolt were the A.H. Wells Co and Randolph-Clowes Company of Waterbury, Excelsior Needle Company, Standard Company, Progressive Manufacturing Company all of Torrington, and Salt's Textile Mill in Bridgeport, among many others in Connecticut and the Northeast. While some factory managers submitted to the demands of workers, Bowman and Atlantic Screw refused to bargain with theirs.¹⁷

¹³ "Atlantic Screw Becomes Corporation," *The Hartford Courant*, January 16, 1915.

¹⁴ "Employees at Screw Works on Strike," *The Hartford Courant*, September 8, 1915.

¹⁵ "No Development in Strike at Screw Works," *The Hartford Courant*, September 9, 1915.

¹⁶ "Making Hartford New Strike Center," *The New London Day*, September 8, 1915.

¹⁷ "Screw Co. Won't Meet Committee," *The New London Day*, September 9, 1915.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

In the end, Atlantic Screw appears to have won the standoff since workers were still not yet organized in 1919. However, winning an impasse with workers may not have been a victory the company anticipated. In 1918, the Atlantic Screw Works was sued by an English company called Bownson, Drew and Clydesdale, Inc. for failing to deliver a large order the fall of 1915, the agreement being made in October of that year.¹⁸ With striking workers in the midst of that contract, it put a great deal of stress on the company's manufacturing abilities and assuredly hindered the company's capability to fill the order.

To be certain, the Atlantic Screw Works overwhelmingly surmounted any financial difficulties ensued by lawsuits and striking workers. In 1918, even though the United States had not yet entered the First World War, the company received a substantial government contract to produce screws for various military applications – most notably, manufacturing screws for airplanes and other aviation related apparatus.¹⁹ With the company's mounting and visible success, workers once again resorted to strike in 1919. This time, the total number walk-outs numbered close to two hundred. The employees had still failed to organize union representation but they demanded many of the same terms as they did in 1915, including the same pay for an eight-hour day. Whether or not the all of the workers' demands were met is unclear, however, some concessions were made since the factory quickly resumed its war-time operations.²⁰

War-time orders increased production at Atlantic Screw Works at a staggering rate. By 1921, the factory could produce nearly 3,000,000 screws annually. The company made screws from various materials including iron, steel and brass. Aside from their military applications, their screws were used for enumerable applications such as furniture, construction, automotive, aviation, and marine.²¹

Financial Hardship and the End for Skilled Labor, 1929 to 1939

Like all industry, the Atlantic Screw Works was adversely affected by the depression of 1929. Despite its somewhat turbulent past with employees (which was mild in comparison to other Connecticut factories), the company did extend genuine goodwill to its employees. An example occurred during the Christmas season of 1930 when the company organized a party at the Forman's Club of Atlantic Screw Works for the married employees and their families. The company purchased presents for all of the children in attendance. This act was likely a tool to maintain good spirits among their now culled work force.²²

¹⁸ "English Concern Brings Suit Against Hartford Company," *The Hartford Courant*, December 24, 1918.

¹⁹ "Factories are Living up to Order," *The Hartford Courant*, January 21, 1918.

²⁰ "Employees at Atlantic Screw Works Strike," *The Hartford Courant*, July 26, 1919.

²¹ "Factory of Widely known Hartford Company," *The Hartford Courant*, October 17, 1921.

²² "Atlantic Screw Works Christmas Party Scene," *The Hartford Courant*, December 25, 1930.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

Slowed production during the Great Depression did afford Atlantic Screw a unique and unexpected luxury: time. By 1931, a new development was born in the machine shop. While it would take eight more years to complete, this new invention would become a major threshold at the factory and in the screw-making industry in general. In 1939, Atlantic Screw Works announced that at a cost of about \$25,000, it had built three "Vertical Threading Machines;" machines that were reported to be the fastest screw-producing machines in the world. While there were other automatic screw machines employed throughout other screw factories, the "Vertical Threading Machine" produced screws at a rate of nearly 36 times higher. The machine worked by pneumatically pressing pre-cut brass or steel blank wire continuously into a feeder, that with two high-speed rotating cutters, threaded the blank material as it was pushed downward. The machine's cutting implements also had the advantage of limited maintenance; they only needed to be reset every other month or so, while other machines needed to be reset at hourly intervals. Invented by Fred Tilton and Atlantic Screw's head machinist, Charles Ibell, each machine was capable of producing 120 screws per minute, although a safe operation produced about 60. Designed to operate with limited human interference (one operator could control six machines), the invention marked the end of skilled labor at Atlantic Screw. While the machine was reported not to reduce employment, it most certainly epitomized a time when skilled workers were being replaced by machines. Workers needed only to collect the massive amount of screws produced by the machine and prepare them for processing; a job that requires very little skill.

Twenty-five thousand dollars to build new machines during the Great Depression would seem like an unwise risk, but it could not have come at a better time for Atlantic Screw. Despite the country still experiencing the financial hardship of the Great Depression, screw sales were increasing due to the war in Europe. In September of 1939, Atlantic Screw saw more production than the last two quarters of 1938 and employment was up by 55 employees from 1933. The plant normally had about 100 to 125 employees, but that number was down to 44 in 1938.²³

Foreign Wars and Foreign Competition, 1941 to 1960

After obtaining key war-contracts, the Atlantic Screw Works would go on to see great success as the United States entered the Second World War in 1941, but that prosperity was short-lived. Fred Tilton, long time leader of the firm retired in 1943, rendering what was assuredly a structural blow to the company.²⁴ But there were deeper causing for despair. The screw making industry, like most American industries, would soon come under pressure from foreign import competition. This was in large part a result of the Reciprocal Tariff

²³ "Connecticut Industry Marches on," *The Hartford Courant*, November 16, 1939.

²⁴ F.N. Tilton, 90, Dies at E. Haddam, *The Hartford Courant*, May 28, 1959.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

Act of 1934, which opened liberal trade with other nations, and reduced tariffs on imported goods.²⁵ Despite the leniency of American trade, other countries placed harsh restrictions on incoming American goods. South American countries were among those which imposed high tariffs. This posed a serious problem for Atlantic Screw, since a large portion of their export business had developed in South American. To remedy the problem, Atlantic Screw established a plant in Santiago, Chile in 1951.

The problem of the Reciprocal Tariff Act was not immediately felt by the screw industry as it had been in others. Instead screw manufacturers were affected upon the United States' involvement in the Korean War, which began in the summer of 1950. Government officials were concerned that screw producers could not obtain the needed raw steel to produce enough products to quell demand, despite the industry's stark stance against that claim. By 1951, it was reported that foreign screw producers (many from Japan) were severely undercutting the price of domestic screws, and was taking more than 14 percent of the domestic market, while they only held 1 percent before World War II.²⁶ In spite of several hearings on the matter and complaints filed to the United States Tariff Commission on behalf of Atlantic Screw and seventeen other U.S. screw manufactures, the commission took no action.²⁷ On the other side of the fence, import businesses that were thriving from the increasing number of cheaper foreign screws adamantly opposed the petitions from the wood screw industry.²⁸ The United States Tariff Commission, after many years of appeal by the screw industry, dismissed their complaint and while the issue resurfaced in continually into the 1960s, no solution was found.²⁹

The End of Atlantic Screw Works

As foreign competition increased, the business of Atlantic Screw rapidly declined. The war-efforts and the development of faster machines greatly overbuilt the capabilities of the company, which suddenly found itself without enough business to sustain the operation. A new president, Newell T. Johnson was elected in 1965 to succeed Roy W. Johnson (who became president after Tilton), but his leadership did not have the desired effect.³⁰ New business models were no match for the rapid decline of the screw industry, and just as quickly as Atlantic Screw Works emerged, it was gone. By 1975, the company was closed and the buildings were being marketed to developers. Interested parties bought the building in the early 1980s and rehabbed it into office space. The building is still used for this purpose.

²⁵ Douglas Irwin, *Free Trade Under Fire*, Princeton: Princeton University Press, 2003, 309-338.

²⁶ "Counsel Pleads for Tariff Action to Protect Metal Fastener Trade," *The Hartford Courant Washington Bureau*, August 29, 1961.

²⁷ "Wood Screw Industry Isn't Entitled to Tariff Relief, Commission Decides," *The Hartford Courant Washington Bureau*, April 6, 1953.

²⁸ "Wood Screw Importers Oppose Hike," *The Hartford Courant*, May 28, 1954.

²⁹ "Wood Screw Men's Plea for Relief from Foreign Sources Dismissed," *The Hartford Courant Washington Bureau*, April 12, 1956.

³⁰ "Business Executives in the News," *The Hartford Courant*, January 17, 1965.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

9. Bibliography

The Connecticut Magazine 9 (1905).

Hartford, Conn. As a Manufacturing, Business and Commercial Center (Hartford: Hartford Book of Trade, 1889).

Davis, William, *The New England States: Their Constitutional, Judicial, Educational, Commercial, Professional, and Industrial History* (Boston: D.H. Hurd and Company, 1897).

Irwin, Douglas, *Free Trade Under Fire*, Princeton: Princeton University Press, 2003.

Boston Evening Transcript, 1911

The Hartford Courant, 1890-1990

The New London Day, 1915

“Hartford, Connecticut,” Sanborn Fire Insurance Maps, 1867-1970.

Nugent, E. and Tilton, D. Machine for Threading Wood Screw Blanks. U.S. Patent 233,266. Issued October 19, 1880.

Tilton, D. Clutch Guard. U.S. Patent 295,595. Issued March 25, 1884.

Tilton, F. Screw Machine. U.S. Patent 1,999,264. Issued April 30, 1935.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality

10. Geographical Data

Verbal Boundary Description

The boundary the Atlantic Screw site extends approximately 270' from Wyllys Street to the border of the lot that houses the former Capewell factory. From north to south, the boundary extends approximately 350' from Charter Oak Avenue to the corner of Hartford Square West.

Boundary Justification

The boundaries chosen for the Atlantic Screw Sites encompass the entire extant buildings, as well as the former factory yard, which is now the parking lot.

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Hartford, Connecticut

Name of Property

Municipality

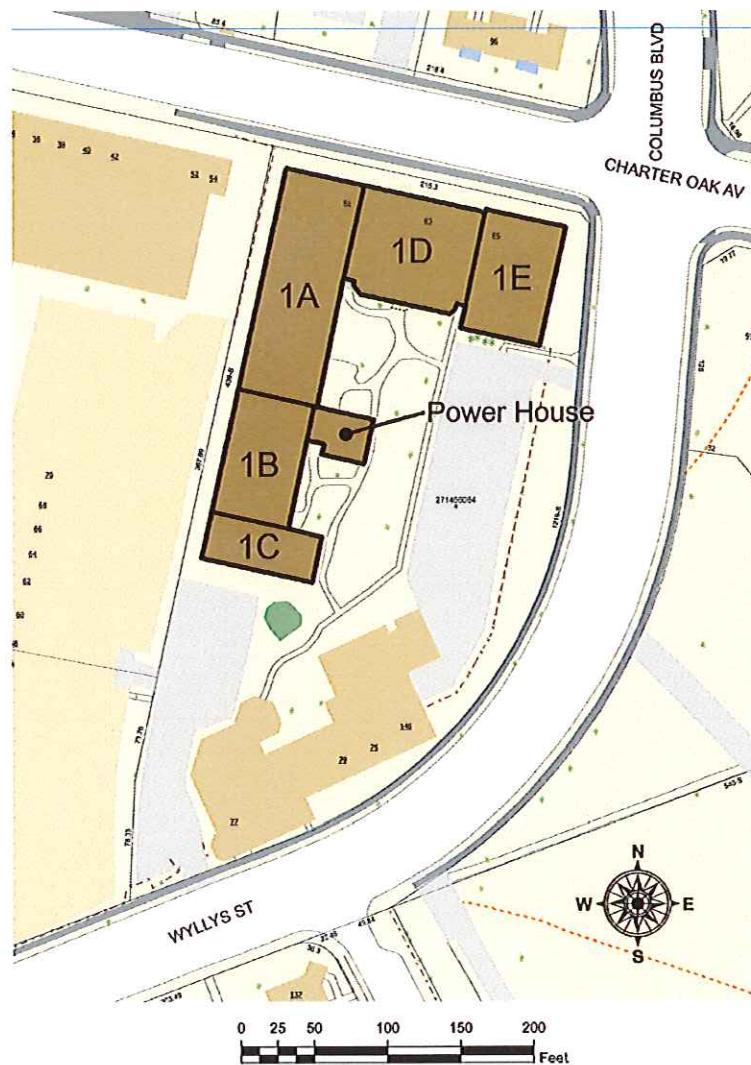


Figure 1 - Building Key Plan.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Hartford, Connecticut

Name of Property

Municipality

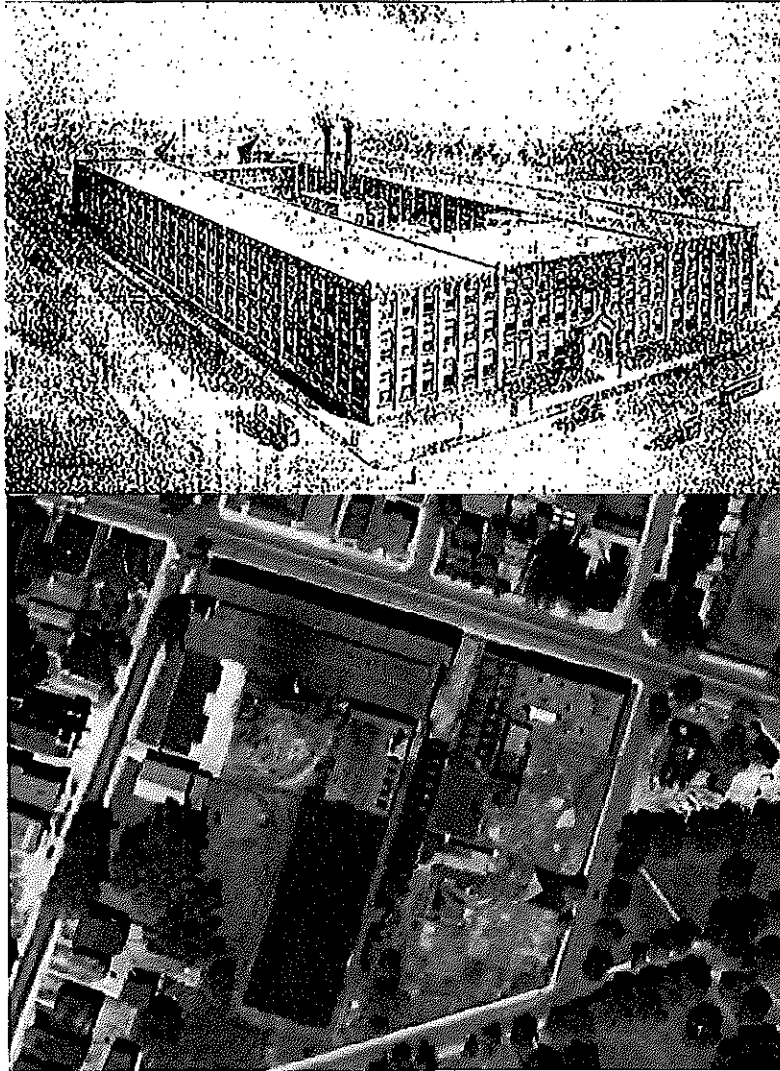


Figure 2 - Comparison of an illustration of Atlantic Screw from *The Hartford Courant*, 1921, showing eastern wing, and a 1934 Aerial photograph showing no eastern wing. .

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Hartford, Connecticut

Name of Property

Municipality



Photo 1 - Crawl Space Under Building 1 Section A.



Photo 2 - North Façade of Building 1 Section A.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality



Photo 3 - Close up of detail of Northern Façade Building 1 Section A.

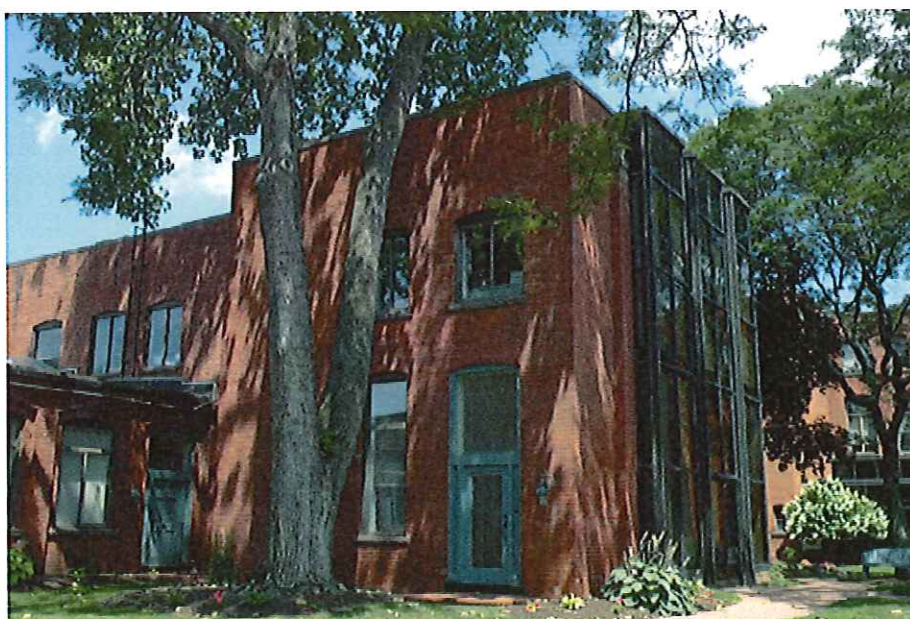


Photo 4 - Southeastern view of Powerhouse.

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Hartford, Connecticut

Name of Property

Municipality



Photo 5 - Northwestern View of Building 1 Section B.

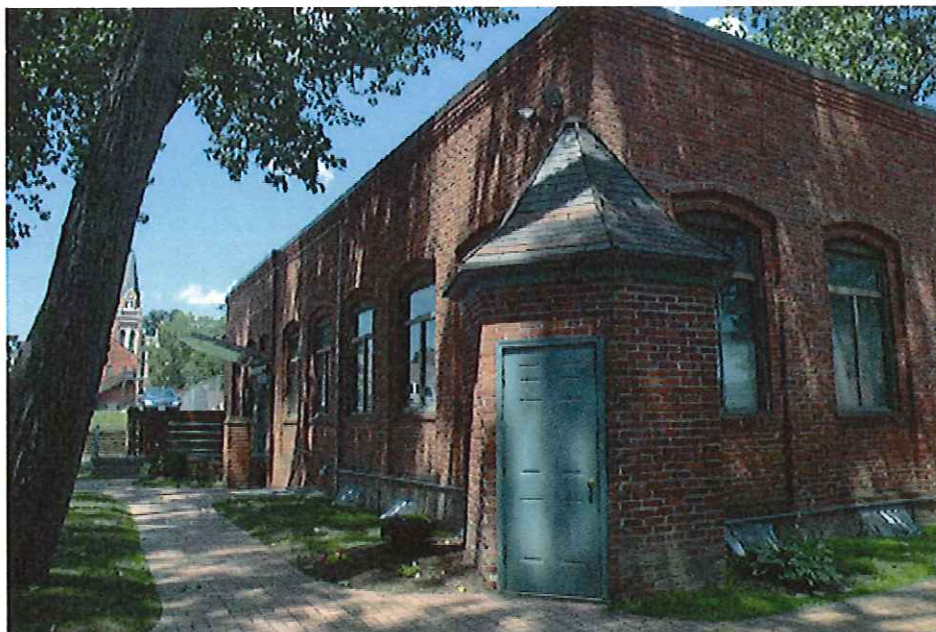


Photo 6 - Southeastern view of Building 1 Section C.

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Hartford, Connecticut

Name of Property

Municipality



Photo 7 - Northern Façade of Building 1 Section D.

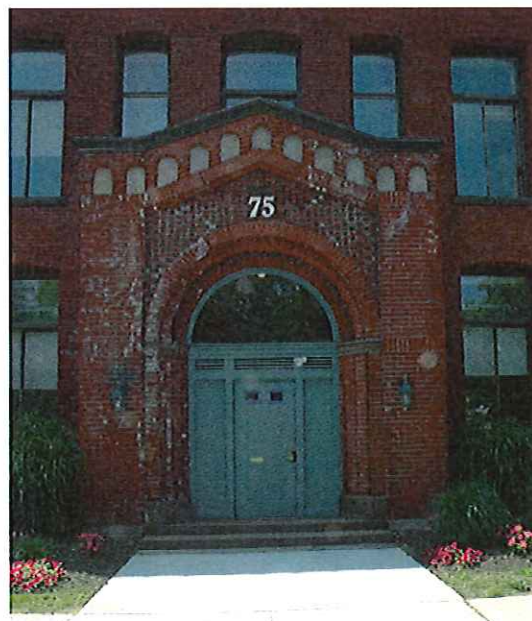


Photo 8 - Central portico detail of Building 1 Section D.

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality



Photo 9 - Detail of Northern Façade of Building 1 Section D.



Photo 10 - Southern Façade of Building 1 Section D.

Department of Economic and Community Development
Historic Preservation and Museum Division/State Historic Preservation Office

CONNECTICUT STATE REGISTER OF HISTORIC PLACES REGISTRATION FORM – Continuation Form

Atlantic Screw Works, Inc.

Name of Property

Hartford, Connecticut

Municipality



Photo 11 - Northeastern View of Building 1 Section E.



Photo 12 - Detail of Northern Façade of Building 1 Section E.