

CREAM CITY: THE BRICK THAT MADE MILWAUKEE FAMOUS

by

ANDREW CHARLES STERN

(Under the Direction of MARK EDWARD REINBERGER)

ABSTRACT

This thesis examines the unique cream-colored brick produced in Milwaukee, Wisconsin, and the ways the brick created an identity for the city in the nineteenth century. The brick, known as Milwaukee brick and later Cream City brick, was produced from deep bands of glacial clay with elevated levels of magnesium and calcium. The durable material became the ubiquitous masonry building material in the city in the nineteenth century and was sought around the country as a facing material. This thesis examines the methods of manufacture and producers of Cream City brick, as well as the composition of Milwaukee's glacial clay. Architectural examples spanning the breadth of Cream City brick's use are also detailed. Finally, the ways the brick and cream-colored architecture provided Milwaukee with exposure, produced numerous nicknames for the city, and ultimately culminated in an identity for the city, are also examined.

INDEX WORDS: Historic Preservation, Milwaukee, Wisconsin, Cream City Brick, Milwaukee Brick, Architectural History, Historic Brick, Burnham Brothers, Lacustrine Clay

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ANDREW CHARLES STERN

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ANDREW CHARLES STERN

Major Professor:	Mark Reinberger
Committee:	Wayde Brown
	Brian Cook
	Scott Messer

Electronic Version Approved:

Julie Coffield
Interim Dean of the Graduate School
The University of Georgia
May 2015

DEDICATION

For my parents, who would have been incredibly proud of the effort.

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CHAPTER 1: INTRODUCTION

Milwaukee, Wisconsin, has been known as the Cream City for over one hundred and fifty years. For those unfamiliar with the city, it would be easy to assume the name refers to the area's illustrious connections to the beer industry or the area's numerous dairy farms. However, the name was derived from the light-colored brick that became the ubiquitous masonry building material in the city during its development in the nineteenth century. By the 1840s, the cream-colored brick had become synonymous with Milwaukee and provided the burgeoning young city with some of its first national exposure. Both the brick as a material and the appearance of Milwaukee in light of the brick's use were regularly discussed throughout the nineteenth century. While Schlitz Brewery had proclaimed themselves "the beer that made Milwaukee famous" by the end of the century, it was the brick that built Schlitz and numerous other breweries that actually first made Milwaukee famous.

The brick, often branded as Milwaukee brick or Cream City brick, was mined from deep deposits of glacial clay found along the river valleys throughout Milwaukee. The clay was high in calcium and magnesium, two important components that negated the red-producing iron also present in the clay. The earliest brick producers assumed their product was worthless, as they had been accustomed to the red brick so familiar on the East Coast. However, a reputation for a clean and crisp color, as well as being durable, helped the brick's popularity to spread throughout the country. As early as the 1840s, the brick was being exported throughout the

Great Lakes region. Soon thereafter, it was exported to markets throughout the East and eventually shipped as far away as Germany.¹

The brick was used in a vast breadth and range of buildings and structures. It was used in buildings representing every architectural style found in Milwaukee in the nineteenth century, including many of the city's most-treasured architectural examples. Its use ranged from grand mansions and cathedrals, to numerous commercial blocks, farmhouses and vernacular structures, and even for more utilitarian purposes such as chimneys, foundations, and sewers. While used as a common structural masonry material in Milwaukee, it was exported at great cost for use as a facing material in grand mansions and public buildings elsewhere.

Demand for the brick increased dramatically as the city of Milwaukee grew and as the reputation for the brick increased elsewhere. A number of brickyards existed in the city to help meet this demand, producing in the tens of millions of bricks annually at the peak of the industry. George and Jonathan Burnham led producers in the city, thanks in part to a revolutionary brick machine they invented in the 1850s. However, a confluence of factors led to the end of Cream City brick production in the early part of the twentieth century. Cream City brick structures are a finite resource and a reminder of Milwaukee's earlier days as a burgeoning industrial city. And while numerous Cream City brick buildings are extant, this represents a fraction of the structures that once stood in the city. With each additional demolition, the city loses an invaluable part of its history and cultural fabric.

¹ "The City. Sailing of the M.S. Scott for Hamburg," *Milwaukee Daily Sentinel*, 03 June 1859.

Despite the brick's importance to the city of Milwaukee, a lack of substantive research exists outlining both the qualities of the brick and its use. More importantly, there exists a lack of documentation as to how the brick contributed to creating an identity for the city. Its importance was well noted in the nineteenth century, but seemingly forgotten afterwards, despite the prevalence of the "Cream City" name in Milwaukee. This thesis aims to fill this gap by answering the questions: *What is Cream City brick and why is it important; and in what ways did the Cream City brick produced in Milwaukee create an identity for the city in the nineteenth century?*

To answer this question, it is necessary to examine a number of interrelated topics. A developmental history of the Milwaukee and the brick industry in the city provides context for the growth of Cream City brick. The same is true of the characteristics that make the brick unique, including chemical composition and physical characteristics. Likewise, examining architectural examples of how the brick was used, at home and abroad, is necessary in exploring the breadth of use of the brick. Finally, examining how Cream City brick and Milwaukee were thought of needs to be investigated to understand the development of the city's identity.

This scope of thesis is confined to the nineteenth century. This period encompasses the development of Milwaukee, as well as the origins and height of cream-brick production there. Milwaukee's best-known brick producers, including the Burnham Brothers, operated during this period and were partially responsible in helping a small frontier town rise to a great industrial center and "Cream City." It was during this time period that the city's brick identity was

established and solidified. Most of the sources used in this book date to the nineteenth century. These provide firsthand accounts of how the city was viewed during that period.

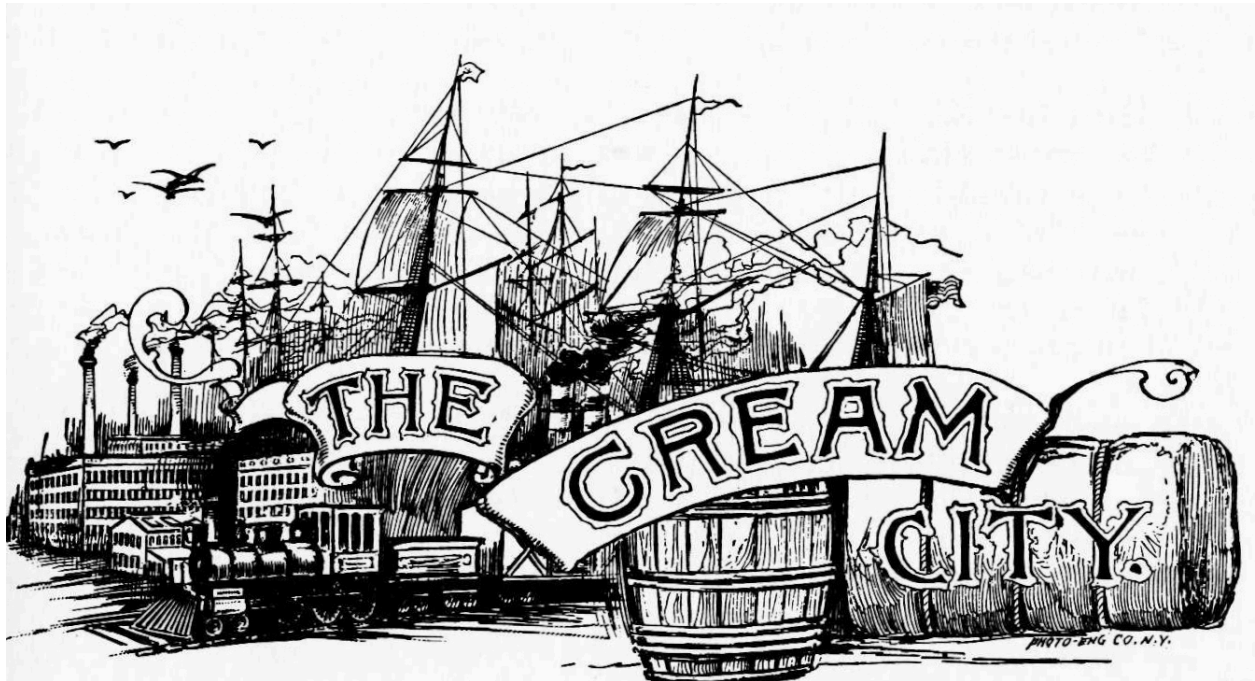


Figure 1.1: Ornamental title from late nineteenth century Milwaukee souvenir book²

Review of Current Literature

Despite the lack of a comprehensive history of Cream City brick and its importance to the city of Milwaukee, a number of resources exist to help piece together this narrative. Currently, the most comprehensive study of Milwaukee brick is the journal article, “Milwaukee’s Cream City Brick,” written by Milwaukee architect and historian H. Russell Zimmermann. The article first appeared in the March 1970 *Historical Messenger of the Milwaukee County Historical Society* and has since been reprinted in *Historic Preservation* and as part of the introduction to Zimmermann’s *Heritage Guidebook* to landmarks and historical

² H. Russell Zimmermann, *The Heritage Guidebook: Landmarks and Historical Sites in Southeastern Wisconsin*, 2nd ed. (Milwaukee: H.W. Schwartz, 1989), 21.

sites in Southeastern Wisconsin. The article provides a history of the brick's production and use and briefly examines reactions to how the brick was received abroad. The article is well researched and well written; yet at eleven pages, the brevity of the article provided just a cursory look into Cream City brick.

The only other document dedicated specifically to Cream City brick was a master's thesis completed in 2011 by Christopher Ciesielski at the Art Institute of Chicago. The thesis covers the composition of Milwaukee clay, the manufacture of Cream City brick, an account of brick producers in the city, and conservation issues. The paper mainly draws information from histories of Milwaukee and surveys conducted of the clay industry in Wisconsin. The thesis provides a solid history of the brick producers in the city and a clear analysis of conservation issues facing cream-brick buildings. However, it does not discuss any architectural uses of the brick and provides more of a material history of the product.

A number of histories of Milwaukee exist, yet the three most useful for examining the developmental history of the city and the brick industry are the four-volume *Pioneer History of Milwaukee*, written by James S. Buck, the three-volume *History of Milwaukee County From Its First Settlement To The Year 1895*, edited by Howard Louis Conrad, and John Gurda's *The Making of Milwaukee*. Buck's *Pioneer History of Milwaukee* is a four-volume set released between 1876 to 1886. These volumes contain many firsthand accounts of the city's development as well providing valuable biographical information on some of the city's prominent citizens. As an early settler to Milwaukee, Buck also includes his opinions and remembrances of living in the city. The Conrad work provides a social, political, and economic history of Milwaukee County from settlement until the end of the nineteenth century. It has

the benefit of seeing the city through to the end of the period covered in this thesis. In addition, its numerous biographical sketches go well beyond the depth or number presented in the Buck work. Both of these works provide valuable information on the early use of brick as well as information on the men who produced Milwaukee brick. Milwaukee writer and historian John Gurda provides a contemporary view of Milwaukee history in his book, *The Making of Milwaukee*. The book benefits from the knowledge gained with an additional century of Milwaukee history and provides a concise, yet detailed, look into the historic context of the city.

A number of useful studies were undertaken on the geology of Wisconsin and the composition of the clay deposits in the state in the 1800s. These help to shed light on the composition of the brick and its characteristics and provide context for the clay industry in the state. Geologist Thomas Chrowder Chamberlain produced the four-volume *Geology of Wisconsin: Survey of 1873-1879*. These studies looked at, among many other things, the location and composition of glacial clays throughout the state and the production of cream brick in the state. It was the most in-depth look into the geology of Wisconsin at the time it was written.

Ernest Robertson Buckley, Ph.D., expanded upon this early work in 1901 with the publication of the bulletin *Clay and Clay Industries of Wisconsin*, produced by the Wisconsin Geological and Natural History Survey. The bulletin looks specifically at Wisconsin clay and goes into much more depth on the character of clay deposits throughout the state. It also examines the products produced with the clay, including brick, tile, and terracotta. The

bulletin includes a description of the brick and tile industry in the state at the time and includes photographs of many of the state's brickyards.

The most in-depth document is the follow-up to the Buckley document, the 1906 *The Clays of Wisconsin and Their Uses* by Heinrich Ries, Ph.D. The paper goes into the minutia concerning properties of each compound contained in Wisconsin clay, firing characteristics of clay, and geographical locations of the clay throughout the state. Most importantly, the paper goes into great detail on the different methods of brick production employed in Wisconsin, notes the production statistics of individual brickyards, and performs tests on various bricks and clay.

Information on the Cream City brick architecture of Milwaukee was primarily gleaned from three sources. H. Russell Zimmermann's *Magnificent Milwaukee* goes into great detail on nearly three-dozen of the city's best architectural treasures, mainly confined to residential mansions. The book includes background information on the buildings, photographs, and context on both the architects of the buildings and the families who lived there. Zimmermann also wrote *The Heritage Guidebook*, which very briefly looks at nearly one thousand buildings in and around Milwaukee, including churches, business blocks, residences, and industrial buildings. The book helps to illustrate just how prevalent Cream City brick usage was in early Milwaukee. Finally, *Built In Milwaukee: An Architectural View of Milwaukee* provides an account of the architectural history of the city. It was produced by the City of Milwaukee in 1980, following a comprehensive architectural survey of the city. It includes examples of buildings constructed in the many architectural styles found in the city, both extant and demolished.

Finally, nineteenth century newspapers and magazines were examined to look for mentions of Milwaukee brick or news articles describing Milwaukee. These provided a glimpse of how the city of Milwaukee was viewed in light of its cream-brick architecture. Milwaukee's first daily paper, *The Sentinel*, proved the most useful both through their reporting and their reprinting of articles written for other newspapers about Milwaukee.

Gaps In Current Literature

With the exception of the Zimmermann article on Cream City brick, none of the sources mentioned above provide a comprehensive account of the many facets involved in answering the question at hand. Rather, they each provide a piece of the larger contextual puzzle. The sources on the historical background of Milwaukee shed light on the beginnings of the brick industry and the men responsible for it, but largely ignore any great discussion about how or where the brick was used. Likewise, the documents on the geology and clay of Wisconsin provide valuable information on the inner-workings of the clay industry in Wisconsin around the turn of the twentieth century, and give detailed information about clay deposits and composition, but do not look at architectural uses of the brick. The books on architecture briefly touch on Cream City brick but leave out any discussion of the brick's production and how the brick influenced the identity of Milwaukee. Unfortunately, personal papers or business records from the brick producers either do not exist or have not been made public. These would be useful in providing more information on brick production in Milwaukee. It is surprising that for such an important part of the city's history, no comprehensive document exists tying

together these pieces of Cream City brick and its role in helping Milwaukee develop. The value of such a resource would be immense.

Chapter Summaries

This first chapter presents the context for the research conducted and poses the question to be answered in this thesis. A review of available literature is presented, and gaps in literature are explained.

The second chapter examines the development of the City of Milwaukee and the brick that made the city famous. The development of Milwaukee in the nineteenth century will be briefly examined, including settlement patterns and the growth of the city as an industrial center. The chapter also examines the composition of the clay in Milwaukee and the characteristics of the finished cream-brick produced there. Both have unique qualities that set them apart from their red counterparts. The methods of brick production, the brickyards where brick was produced, and the men responsible for building Milwaukee's brick industry will also be studied.

Chapter Three looks at the architectural uses of Cream City brick, both in Milwaukee and abroad. The brick was used extensively in the City of Milwaukee throughout the nineteenth century and was found in architecture spanning many different styles and purposes. This chapter looks at some well-known high-style examples, as well as some of the vernacular uses where possible. The brick's use outside of Milwaukee will also be examined. The brick was used extensively in the Great Lakes area but also found markets throughout the country and overseas.

The fourth chapter examines the ways that Milwaukee's brick provided the city with an identity, in both architectural terms and more psychological terms. The cream-colored brick became the defining characteristic of the city, when viewed from within or abroad. It also provided the city with the identity of the Cream City. This identity was embraced by those who lived in the city, becoming incorporated with a large number of businesses and organizations. Nineteenth century newspaper and magazine articles are used to help tell the story of the progression of Milwaukee's Cream City identity. The development of the Cream City nickname and its uses are also looked at.

The fifth chapter looks at the decline of the Cream City brick industry in Milwaukee. Undercutting of prices by Chicago producers, changing architectural preferences, and exhaustion of clay in the Milwaukee area all contributed to the demise of the industry in the city. The character defining characteristics of the brick will be reviewed, as will conservation issues regarding the brick. The chapter also summarizes the arguments presented in support of the thesis question and examines the lasting importance of Cream City brick to the city of Milwaukee.

CHAPTER 2: THE DEVELOPMENT OF MILWAUKEE, ITS CLAY, AND BRICK PRODUCERS

Following the settlement of Milwaukee by non-Native Americans in the 1830s, the city was rapidly transformed from a heavily timbered and wild land to a bustling urban center and industrial powerhouse. As the city rose along the shoreline of Lake Michigan, city founder Solomon Juneau quickly realized the need for reliable building materials. While timber was abundant, Juneau also recognized the need for a more durable material to help build his city. At Juneau's urging, local brick was first fired in Milwaukee in the fall of 1835.³ The curious light cream-colored brick that was produced initially disappointed the pioneer brickmakers who were more familiar with the red brick of the East Coast.⁴ However, the local product proved to be very durable and eventually highly regarded visually.

This chapter will trace the development of Milwaukee, looking at the early landscape and settlement patterns and the people who contributed to the growth of the city. This history is by no means comprehensive but will provide context for the success of the brick making industry in the city. The characteristics of Milwaukee's clay will also be examined. The composition of the clay found in Milwaukee holds the key to the unique brick the city became known for. A brief description of the clay deposits, along with the physical and visual characteristics will be addressed. The methods used for producing brick in the nineteenth

³ Howard Louis Conrad, *History of Milwaukee County From Its First Settlement to the Year 1895*, vol. 2 (Chicago: American Biographical Publishing Company, 1895), 19.

⁴ James S. Buck, *Pioneer History of Milwaukee, From the First American Settlement in 1833, to 1841* (Milwaukee: Milwaukee News Company, 1876), 48.

century will also be examined. As technology progressed, the techniques for making brick advanced from the rudimentary, hand-molded bricks of the early pioneers to a more streamlined, power driven method in use at the end of the century. Finally, the brickmakers and brickyards of Milwaukee will be examined. As technology advanced and demand both locally and nationally increased, the brick industry rose from a few small yards to an economic powerhouse in the city of Milwaukee.

The Development of Milwaukee

First Settlement in Milwaukee

Early European settlers to Milwaukee found a land dominated by thick stands of oaks and maples, tamarack groves, and clusters of hickories.⁵ The Milwaukee, Menomonee, and Kinnickinnic Rivers ran through the area, converging near the shoreline of Lake Michigan before emptying into the lake. The lowlands along the rivers consisted of swamps of reeds, grasses, and wild rice. Above these valleys were bluffs reaching upwards of 100 feet tall.⁶

Native American villages dotted the landscape along the three rivers and bluffs.⁷ The villages, averaging 500 occupants in size, were inhabited annually during the non-winter months by a mix of Native American groups, including the Potawatomi, Chippewa, Ottawa, Fox, Sauk, and Menominee.⁸ This important Native American gathering spot was known by varying

⁵ H. Russell Austin, *The Milwaukee Story: The Making of an American City* (Milwaukee: Milwaukee Journal, 1946), 11.

⁶ John Gurda, *The Making of Milwaukee* (Milwaukee: Milwaukee County Historical Society, 1999), 8.

⁷ *Ibid.*, 7.

⁸ *Ibid.*, 5.

names among them Milwogues, Miskouminia, Melecki, Willawaky, Milwacky, etc.⁹ Translations of the name were commonly given to mean “good land.”

European contact had been limited to relatively small numbers of French missionaries and fur traders through the seventeenth and eighteenth centuries. By the end of the eighteenth century, however, the first permanent non-native residents began to settle the region. Among the earliest was Jacques Vieau, who arrived in 1795, establishing a trading post along the Menomonee River.¹⁰ Vieau welcomed an apprentice and future son-in-law, Solomon Juneau, to Milwaukee in 1818. Vieau, Juneau, and a few other traders remained as seasonal residents of Milwaukee through the 1820s. The near extinction of beaver, and a smallpox epidemic, drove most from Milwaukee by 1830. Solomon Juneau remained, determined to develop his “homesite into a townsite.”¹¹

Early Milwaukee Development

Newcomers arrived, largely driven by land speculation. The non-native population of Milwaukee pushed into the hundreds by 1835.¹² Three competing settlements arose in the city, bounded by the natural geography of Milwaukee’s rivers. Solomon Juneau established a partnership with Morgan Martin and established their townsite, Juneautown, between the Milwaukee River and Lake Michigan. Byron Kilbourn arrived in Milwaukee in 1834, intent on

⁹ Austin, *The Milwaukee Story: The Making of an American City*, 11.

¹⁰ Gurda, *The Making of Milwaukee*, 12.

¹¹ *Ibid.*, 23.

¹² Austin, *The Milwaukee Story: The Making of an American City*, 22.

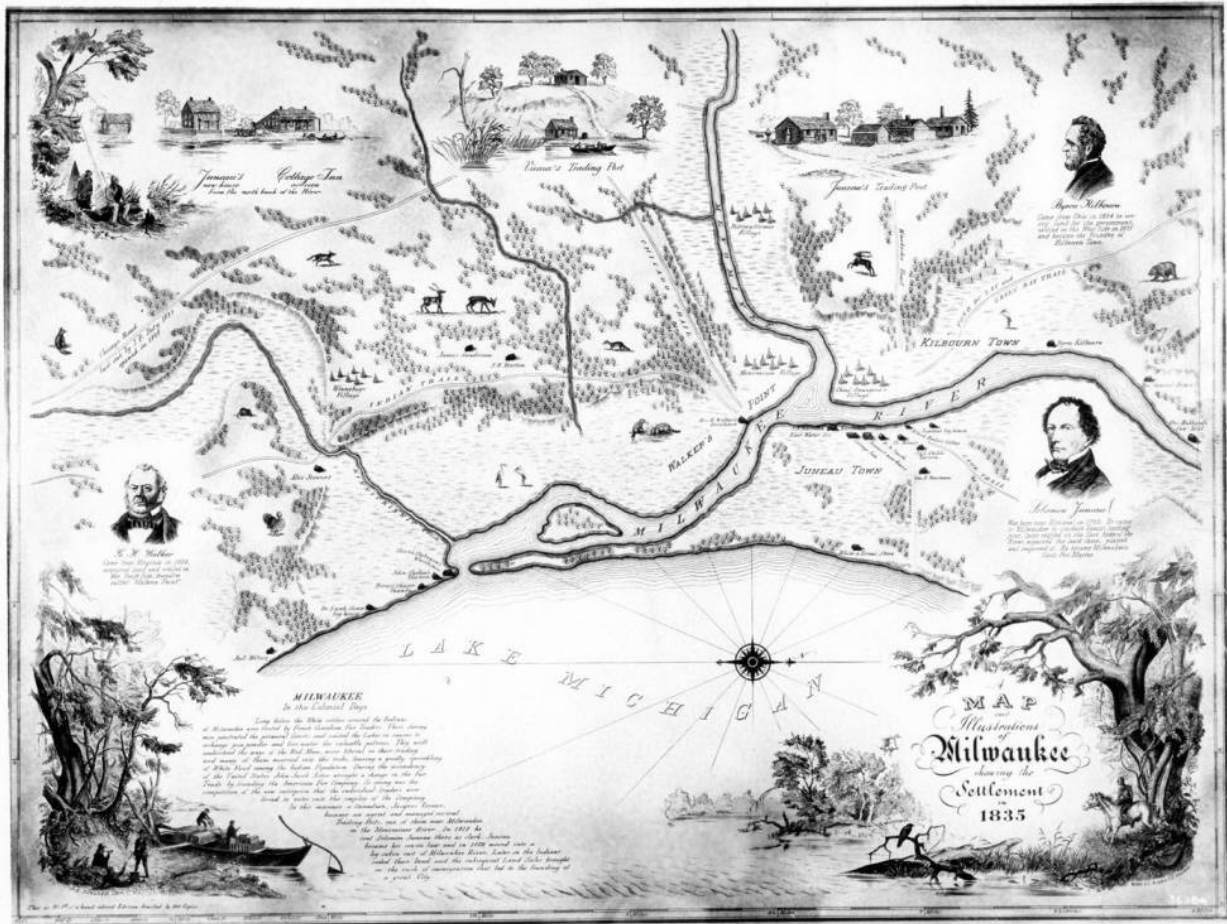


Figure 2.1: View of Milwaukee as it appeared in 1835, looking west¹³

making Milwaukee the “greatest city in the Midwest.”¹⁴ His settlement, Kilborntown, was located opposite Juneautown, along the western banks of the Milwaukee River. Virginia-born George H. Walker also arrived in 1834 and established himself south of Juneautown, at the confluence of the Milwaukee and Menomonee Rivers – an area soon known as Walker’s Point. These settlements, based on the highest and driest land in their respective parcels, would be

¹³ "Map of Milwaukee print, Circa 1835," Milwaukee Public Library Digital Collections, accessed 15 February, 2015, <http://content.mpl.org/cdm/ref/collection/MilwWaterwa/id/559>.

¹⁴ *The Milwaukee Story: The Making of an American City*, 39.

the centers on which Milwaukee developed and expanded.¹⁵ The three operated as competitors, each trying to define itself as the true city. Juneautown and Kilbourntown led the way, with Walker's Point developing more slowly. These divided settlements remained until unified as one "City of Milwaukee" in 1846.

To accommodate the great number of settlers and speculators arriving, improvements were needed in the city. A federal survey conducted in January 1835 set the area into the well-recognized gridded pattern of 640-acre squares. Streets were graded in 1836, the dense forest was cleared for both building materials and developable land, and bluffs were leveled – their soils providing fill for nearby marshes.¹⁶ The log houses of Milwaukee's earliest settlers soon gave way to more advanced structures. A Greek Revival courthouse was erected by Solomon Juneau in 1836, as was the city's first hotel. Kilbourn was also busy filling in swamps and grading roads on his side of the river. The competition for supremacy between the two main settlements was well recognized. In two well-recounted examples, Kilbourn intentionally paved his west side streets to not conform to the east side grid and also published an official "City of Milwaukee" map in 1836 depicting the gridded development of his settlement with nary a sign of life on the east side of the Milwaukee River.

It was during this time that the first of Milwaukee's famed bricks were fired. As a journal article on *Nineteenth Century Midwest Brick* notes, "brickmaking was one of the most localized of all nineteenth century industries."¹⁷ Prior to rail transportation, especially in a quasi-isolated

¹⁵ Megan E. Daniels, *Milwaukee's Early Architecture* (Charleston, SC: Arcadia Publishing, 2010), 7.

¹⁶ Gurda, *The Making of Milwaukee*, 30.

¹⁷ William D. Walters, "Nineteenth Century Midwestern Brick," *Pioneer America* 14, no. 3 (1982): 125.

settlement like Milwaukee was at the time, importing building materials was not feasible.

Historian Howard Louis Conrad, in the second volume of his *History of Milwaukee From Its First Settlement to the Year 1895*, recalls the story of Solomon Juneau's involvement in the beginnings of Milwaukee brick. Juneau, intent on having brick manufactured "at home," contracted with brickmaker Nelson Olin in 1835 to come to Milwaukee and open a yard. By the end of that year, 25,000 bricks had been fired for use in the first brick buildings in the city.¹⁸ The cream-brick produced that year, the color of which was not initially admired, would provide a ready supply of local masonry for the rise of Milwaukee.

In spite of setbacks following a national depression and bursting of the real estate bubble in 1837, the city continued to grow through the end of the 1830s. The competition between the settlements drove development, with each trying to outdo the other.¹⁹ By 1843, when the population of Milwaukee had increased to 3,000 citizens, the *Milwaukee Sentinel* described the building boom, "They are building houses and stores in all directions. Being here is just like living in a carpenter's shop – the sound of hammers heard continually."²⁰ The Yankee settlers of the 1830s gave way to foreign settlers of the 1840s, with roughly half of the populace born in either Germany or the British Isles in 1846.²¹ The three competing villages were finally merged when the City of Milwaukee was officially chartered on January 31, 1846. Solomon Juneau was elected the first mayor.

¹⁸ Conrad, *History of Milwaukee County From Its First Settlement to the Year 1895*, 2, 19.

¹⁹ Gurda, *The Making of Milwaukee*, 57.

²⁰ *Ibid.*, 48.

²¹ Austin, *The Milwaukee Story: The Making of an American City*, 74.

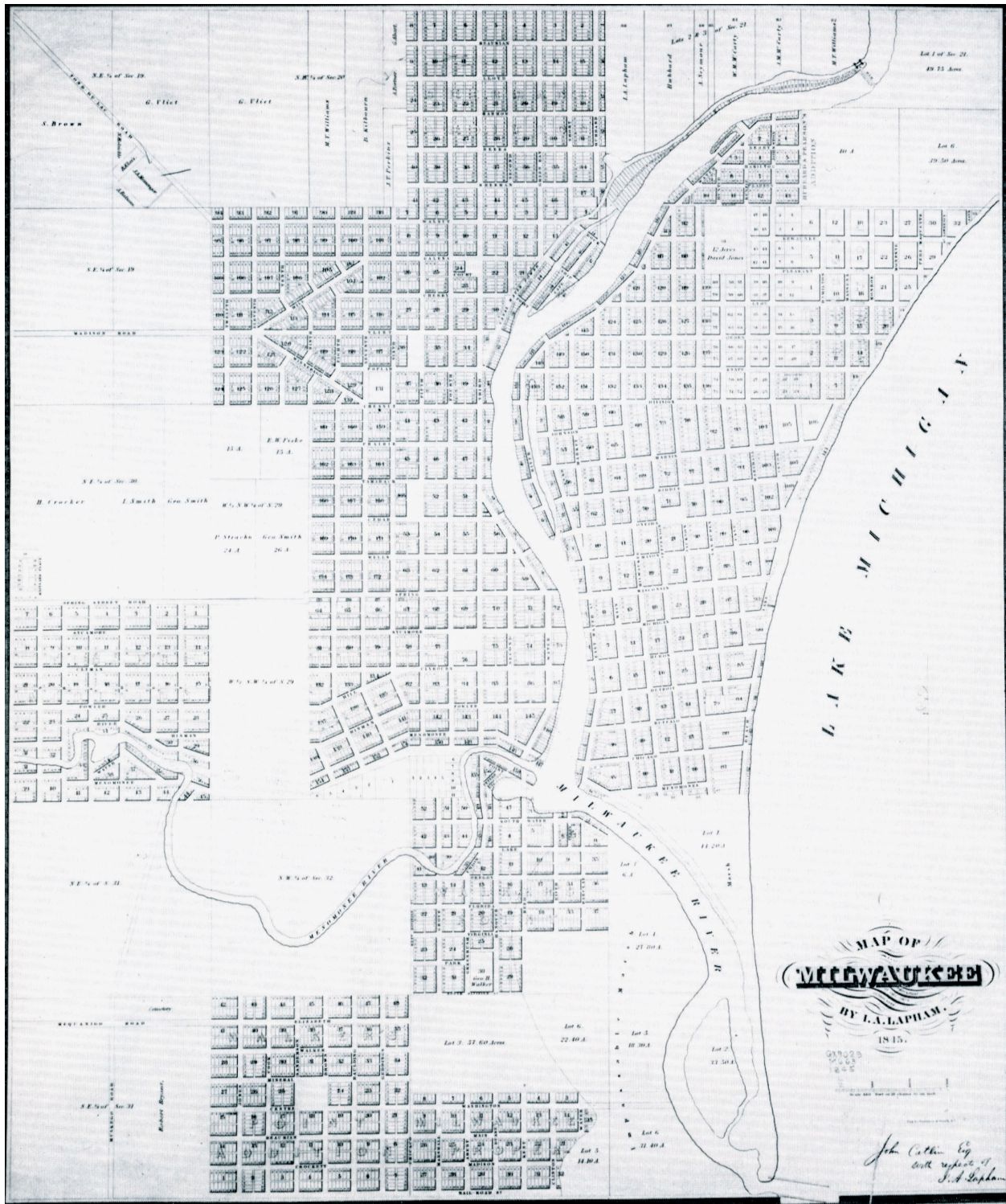


Figure 2.2: 1845 map of Milwaukee by Increase A. Lapham²²

²² Milwaukee Department of City Development, *Built In Milwaukee: An Architectural View of the City* (Milwaukee: City of Milwaukee, Department of City Development, 1983), 4.

The Rise of an Industrial City

Milwaukee's economic prosperity continued through the 1840s and 1850s. This period witnessed Milwaukee progressing beyond settlement status and transforming into a successful small city.²³ The population more than doubled, to over 20,000, in the four years since the city was chartered in 1846, and it more than doubled again to over 45,000 from 1850 to 1860.²⁴ This period saw the expansion of infrastructure around Milwaukee to accommodate the increasing number of residents. Many of Milwaukee's lasting industries such as "flour mills, meat packers, tanners, and brewers earning a national reputation for beer production" were established during this period.²⁵ The raw and finished goods produced were sent by the increasingly important and busy port, and by the railroads that arrived in the 1850s. Not least among the industries established and thriving was Milwaukee's brick industry. The dramatic rise of both industry and population meant a boon for the brickyards in operation. The reputation of Milwaukee brick was already spreading by the 1840s, with no shortage of demand for the product.

Despite a grim national background, the Civil War brought Milwaukee continued growth and prosperity. The city's industries churned out much needed supplies for the Union during the war, including wheat, meat, leather, and beer.²⁶ Following the war, the city became "the greatest shipper of wheat on earth, one of the top twenty cities in America, and a leading

²³ Daniels, *Milwaukee's Early Architecture*, 17.

²⁴ Gurda, *The Making of Milwaukee*, 92.

²⁵ Daniels, *Milwaukee's Early Architecture*, 17.

²⁶ Gurda, *The Making of Milwaukee*, 101.



Figure 2.3: 1872 birds-eye view of Milwaukee looking west²⁷

source of products ranging from harness leather to lager beer.”²⁸ The post-Civil War formula for Milwaukee was described as “industries plus immigrants equaled growth.”²⁹ The population topped 71,000 in 1870, and increased to 115,000 by 1880. Many of these arrivals were immigrants from Germany and later, Poland.³⁰ New offices, commercial blocks, industrial centers, and residences rose around the city. Many of the city’s older wooden-framed structures were replaced with more elaborate masonry structures. Increasing individual wealth

²⁷ Bailey, H.H. *Milwaukee, Wisconsin* [map]. Milwaukee: Holzapfel & Eskuche, 1872. From Library of Congress, *Map Collections*. Accessed. <http://www.loc.gov/item/76693067/> (accessed 15 February 2015).

²⁸ Gurda, *The Making of Milwaukee*, 103.

²⁹ *Ibid.*, 138.

³⁰ Austin, *The Milwaukee Story: The Making of an American City*, 22.

manifested itself in elaborate and grand mansions erected throughout the city. Tastes were changing as well, as “architectural design ran rampant with exuberance, ornament, and considerable size.”³¹

The twenty-five year period following the Civil War witnessed unprecedented growth in industry in Milwaukee. Many of these trades had been around since the pioneer times, yet now “assumed a scale that few Milwaukeeans could have imagined before the Civil War.”³²

Milwaukee’s best-known breweries, including Miller Brewing Company, Best Brewing Company (later renamed Pabst Brewing Company), Joseph Schlitz Brewing Company, and Valentin Blatz Brewing Company, all expanded operations – Best becoming America’s largest producer by 1874.³³ The meatpacking and tanning industries expanded, and the new business of machinery manufacturing, led by Edward P. Allis, took off.³⁴ Much of the industrial expansion was centered in the rapidly in-filled swamplands of the Menomonee River Valley (including the city’s largest brickyards). Almost without exception, these newly expanded industries built their factories, warehouses, and offices of Milwaukee’s Cream City brick.

Industry continued to dominate as the city approached the beginning of the twentieth century. The value of manufactured produces increased from nearly \$19 million in 1869 to nearly \$124 million in 1899.³⁵ While still a predominantly German city by the turn of the twentieth century, other nationalities, such as Poles, Irish, Italians, and eastern European Jews

³¹ Daniels, *Milwaukee's Early Architecture*, 27.

³² Gurda, *The Making of Milwaukee*, 117-18.

³³ *Ibid.*, 121.

³⁴ *Ibid.*, 123.

³⁵ Bayrd Still, *Milwaukee, History of a City* (Madison, WI: State Historical Society of Wisconsin, 1948), 321.

settled in Milwaukee in search of work.³⁶ The city was well connected by rail and streetcar lines and miles of paved roads. Electricity had arrived in the city, used primarily for lighting and electric streetcars. Some of Milwaukee's most notable architecture was also completed in the last decade of the nineteenth century, including Milwaukee City Hall, the Pfister Hotel, the Pabst Building, the Federal Building and United States Courthouse and Milwaukee Public Library and Museum.

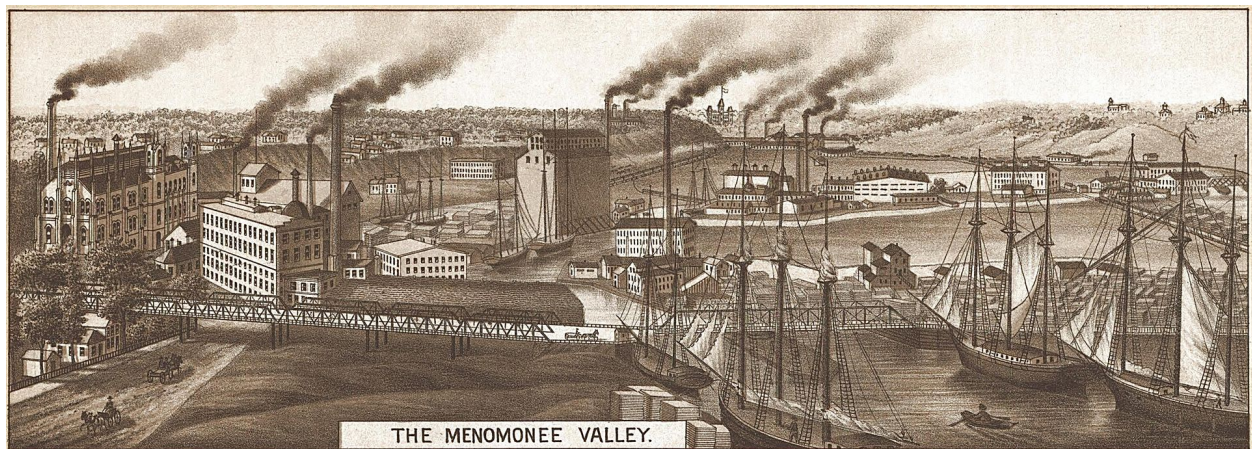


Figure 2.4: Menomonee Valley circa 1882³⁷

Milwaukee emerged from a small fur-trading settlement to become a burgeoning urban center and industrial leader in the nineteenth century. Buoyed by immigration and industry, the city grew dramatically in the second half of the century. Milwaukee had established an identity for its German proclivities, beer production, and manufactured goods. Yet behind much of Milwaukee's growth during the nineteenth century were the building blocks responsible for making the city. The following section examines the clay used in Milwaukee's

³⁶ Gurda, *The Making of Milwaukee*, 175.

³⁷ "The Menomonee Valley In Milwaukee in 1882," Wikimedia, accessed 16 February, 2015, http://commons.wikimedia.org/wiki/File:The_menomonee_valley_in_milwaukee_1882.jpg.

brick production, methods of manufacturing the brick, and the businesses and businessmen responsible for propelling the industry.

Characteristics of Milwaukee's Cream Brick Producing Clay

Despite the disappointment of the early pioneers at their cream-colored brick, the product was not only durable but also eventually highly regarded visually. Early speculation for the color of the brick placed the blame on a lack of iron in Milwaukee clay. This was, however, not the case. This section examines the types of clay found in Milwaukee, as well as the chemical composition of the clay. The characteristics of the finished brick will also be looked at.

The clays in Wisconsin can be divided into two broad categories – residual clay and transported clay. Generally, residual clays are composed of rocks that have disintegrated in place with only soluble salts removed, while transported clays are formed of rocks disintegrated in one location and transported elsewhere by water, ice, and wind.³⁸ Transported clays make up the largest type of clay in the state of Wisconsin and the clay responsible for the cream-colored brick produced in Milwaukee.³⁹ These clays were deposited in Wisconsin in two distinctly different ways - by glacial action and by water.

Glacial clay is found around the state, though distributed in an irregular manner. This clay is difficult to work into brick due to the presence of large pebbles and boulders.⁴⁰ By contrast, the clays deposited by water are the more extensive in the state and make up the majority of the clay found in Milwaukee. These clays were deposited during successive

³⁸ Ernest Robertson Buckley, *The Clay and Clay Industries of Wisconsin*, Wisconsin Geological and Natural History Survey, Bulletin No. 7 (Madison, WI: Published by the State, 1901), 1.

³⁹ *Ibid.*, 30, 67.

⁴⁰ *Ibid.*, 34.

advances and retreats of ice sheets during the glacial period.⁴¹ Known as lacustrine clays, these clays are not as widely distributed as glacial clays but make up deposits much thicker than the glacial deposits.⁴² While found throughout the state, they are found in the greatest depth along the shorelines of Lake Michigan and Lake Superior. In some locations in Milwaukee and along Lake Michigan these clay deposits were shown to be upwards of one hundred feet deep.⁴³ These clays range in color from reddish brown to light purple to grayish blue.⁴⁴

The clay deposits are found below a few feet of topsoil. The upper level of these lacustrine deposits averages one to three feet in depth and is reddish brown in color, while the lower beds are of a bluish or pinkish tint and extend the depth of the clay deposit. These layers exhibited differing properties when burned. The upper, red layer tended to burn closer to a more familiar red brick, while the lower clay layer produced a pure white or buff when burned.⁴⁵ Milwaukee's brick producers commonly mixed these two layers to accomplish their desired result. A common ratio used in Milwaukee consisted of one part red mixed with three parts blue clay to produce the desired cream color.⁴⁶ It should be noted that these clay deposits were not uniformly dispersed around the Milwaukee area. Yards within miles of each other could contain drastically different depths and types of clay.⁴⁷

⁴¹ Ibid., 35.

⁴² Ibid.

⁴³ Ibid., 36.

⁴⁴ Ibid., 60.

⁴⁵ Christopher Ciesielski, "Cream City Brick" (master's thesis, Art Institute of Chicago, 2011), 9.

⁴⁶ Ibid.

⁴⁷ Ciesielski, "Cream City Brick," 9.

Composition of Milwaukee Clay

Historian H. Russell Zimmermann rightly points out in his essay on Cream City brick that because “almost all clays contain [the] same list of ingredients, it becomes obvious that their proportions are the critical factor” for determining the color and characteristics of fired brick.⁴⁹ This list of ingredients found in clay includes silica (silicon oxide), lime (calcium oxide), magnesia (magnesium oxide), alumina (aluminum oxide), iron (ferric oxide), potash (potassium oxide), combined water, and trace amounts of other elements.⁵⁰ Each of these has some effect on what types of products can be produced with the clay and the overall characteristics of the finished product.

Silica, often in the form of sand, lessens the tendency of clay to shrink when fired. However, the presence of too much silica causes brick to become weak and brittle. Potash is usually found in small amounts and serves as a binding agent with silica and iron. Iron in the clay is most obviously observed in the red color of fired bricks. It also serves to strengthen the brick by binding with other compounds. While the earliest brickmakers in Milwaukee had assumed that their clay lacked this crucial element, increased levels of magnesia and lime were actually responsible for the cream-colored brick.

These elevated levels of magnesia and lime in Milwaukee clay give the brick both their cream color and their noted durability. These compounds form a light-colored, strong bonding alumina-lime-magnesia-iron compound when burned at high temperatures, thus producing a

⁴⁹ H. Russell Zimmermann, "Milwaukee's Cream City Brick," *Historical Messenger of the Milwaukee County Historical Society* 26 (1970): 4.

⁵⁰ *Ibid.*

buff cream brick rather than a red brick.⁵¹ Magnesia in lacustrine clays can be present at levels as high as twelve times the national average. Lime present at levels three to one compared to iron produce the most marked results.⁵² There are many possible sources for the elevated levels of these compounds, although in Wisconsin the mineral dolomite, a double carbonate of lime and magnesia, is thought to be the one most responsible.⁵³

Clay burned at an insufficient temperature would result in the iron oxidizing, rather than binding with the lime and magnesium. A red or pink brick would result. This had a practical advantage in that “the effects of inadequate burning are made evident in the imperfect development of the cream color, and hence a more carefully burned product is usually secured.”⁵⁴ Four times the heat was required to secure a cream colored product as opposed to a red brick.⁵⁵ The other effect this bonding has is to create a remarkably hard and firm product. The strength of the brick will be examined in the next section.

The following chart shows relative percentages of compounds found in Milwaukee clay. Four tests included below were conducted on clays found at yards producing cream-colored brick in Milwaukee. For comparisons sake, clay from other regions of the state and county are included. Note that both the clays found in Madison and Ashland, Wisconsin, are of a red-burning variety. The results show the clays found in Milwaukee are considerably lower in silica and alumina than those found elsewhere. Likewise, Milwaukee clay is vastly higher in both lime

⁵¹ Thomas Chrowder Chamberlin, *Geology of Wisconsin: Survey of 1873-1879*, vol. 1 (Madison, WI: Commissioners of Public Printing, 1883), 669.

⁵² Heinrich Ries, *The Clays of Wisconsin and Their Uses*, Wisconsin Geological and Natural History Survey, Bulletin No. 15 (Madison, WI: Published by the State, 1906), 17.

⁵³ *Ibid.*, 18.

⁵⁴ Chamberlin, *Geology of Wisconsin: Survey of 1873-1879*, 1 669.

⁵⁵ Zimmermann, "Milwaukee's Cream City Brick," 9.

and magnesia. As noted above, these two compounds are responsible for the cream color of Milwaukee's brick.

Table 2.1: Chemical makeup of brick clays⁵⁶

Compound	Silica	Alumina	Iron	Lime	Magnesia	Potash	Soda	Water	Other Compounds	Total
Location										
Madison, WI	75.80	11.07	3.84	1.84	0.08	1.74	0.40	3.70	1.09	99.56
Ashland, WI	58.08	25.38	4.44	8.30 (combined)		-	-	4.09	-	100.2
Choctaw County, AL	83.30	5.12	1.60	0.46	0.00	0.00	0.00	6.60	2.06	99.14
Golden, CO	45.88	35.42	1.74	0.44	0.20	1.19	0.00	14.10	3.57	102.5
Mt. Savage, MD	50.46	35.91	1.51	0.13	1.02	0.00	0.00	12.78	1.64	103.5
Burnham Bros, Howell Yard, Milwaukee	40.17	9.14	3.00	14.49	8.34	3.06	-	21.37	0.78	100.4
Burnham Bros, West Yard, Milwaukee	41.63	8.51	3.40	14.39	8.02	2.90	-	20.08	1.12	100.1
Standard Brick Co., Milwaukee	43.84	7.82	2.00	15.16	8.03	2.44	-	19.79	0.95	100.0

For further comparison, tests were conducted in March 2015 on a Milwaukee brick and a common brick produced in Athens, Georgia, likely around the turn of the twentieth century. These tests were conducted under the direction of Alice M.W. Hunt at the Center for Applied Isotope Studies at the University of Georgia. The results are similar to those conducted around the turn of the twentieth century on brick from Milwaukee and elsewhere. The Milwaukee brick contains higher percentages of lime (calcium) and magnesia compared with the Athens

⁵⁶ Buckley, *The Clay and Clay Industries of Wisconsin*, 273, 78, 79; *The History of Racine and Kenosha Counties, Wisconsin*, (Kenosha, WI: Western Historical Company, 1879), 169.

red brick. Similarly, the Athens brick contains more iron, the compound largely responsible for determining the color of brick.

Table 2.2: 2015 composition tests of Milwaukee and Athens, Georgia, brick⁵⁷

Compound	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	K ₂ O	TiO ₂	MnO	Other Compounds	Total
Location										
Milwaukee, WI	55.77	10.51	3.59	14.77	10.78	3.55	0.39	0.07	0.66	100.0
Athens, GA	64.89	24.04	7.05	0.19	0.74	2.00	1.10	0.09	0.00	100.0

Cream City Brick Manufacture and Characteristics of Finished Brick

Methods of Brick Manufacturing

Brick manufacturing is a complex process. Many steps are involved between the extraction of raw clay from the ground and the burning of a durable, dependable, and beautiful brick. While brick have been produced for nearly 10,000 years, and fired brick for approximately 5,000 years, the process became much more regulated and efficient in the nineteenth century. The Industrial Revolution made the technological advances that allowed bricks to be produced in quantities never before possible. Due to the localized nature of early brick manufacture, production was “more widespread in the American frontier than is often realized.”⁵⁸

Before examining the techniques used for brick production in Milwaukee, it is useful to look at some of the advances that occurred during the nineteenth century that made mechanized production possible. Production was “seasonal, cyclical and badly paid, [and] ... required substantial amounts of young and unskilled labor,” of which there was no shortage in

⁵⁷ Hunt, Alice M.W., Center for Applied Isotope Studies, University of Georgia, March 2015.

⁵⁸ Walters, "Nineteenth Century Midwestern Brick," 126.

Milwaukee. Through most of the nineteenth century, bricks were hand-molded and set in wooden brick molds. An average output for a twelve-hour workday was 9,000 to 10,000 bricks per worker using this method.⁵⁹ However, due to the time-consuming nature of the work and desire to increase output, attempts were made at streamlining production by developing mechanical means of brick production.

Because hand-molded bricks were fairly porous and prone to absorbing water, the earliest brick-making machines were designed to further press brick molded by hand into a more dense and stronger product. However, these early machines were constructed of wood and ill-suited for the rigors of the heavy work.⁶⁰ Other early devises aimed at molding brick also failed because they were designed for use with one type of clay but did not work for other clay types. The machines often proved difficult to operate and prohibitively expensive to produce. Numerous patents were filed in the early nineteenth century, yet few of these models were either practically functional or went into widespread production.⁶¹ Despite failure of these early devises, “rising demand and the lure of significantly lower production costs continued to foster invention” and improvements eventually occurred.⁶²

Successful early machines for dry-pressed clay contained brick molds that rotated on a disk under a piston that compressed the clay into the mold. Once molded, the green bricks would be taken away by conveyor belt. Thomas Culbertson of Cincinnati produced one notable example in 1846. This machine replaced pistons with compressing rollers that pulverized the

⁵⁹ I.B. Holley Jr., "The Mechanization of Brickmaking," *Technology and Culture* 50, no. 1 (2009): 84.

⁶⁰ *Ibid.*, 85.

⁶¹ *Ibid.*

⁶² *Ibid.*, 90.

clay then fed it into molds rotating under the rollers. This model was copied and updated by numerous other producers. The Chambers Brothers Company of Philadelphia produced one of the earliest successful models for use with stiff-mud clay in 1857. Their machine was an extrusion machine that pushed clay through a die onto a conveyor belt where they were then sanded and cut by knife or later by wire. The machine was initially horse-powered and later driven by steam. The Milwaukee-based Burnham Brothers have been credited with producing the first successfully operated steam-powered brick machine likely in the 1850s. Unfortunately, the patent for this machine has not been located to back-up this claim. The patent for a later improved machine is available. Even after the onset of successful machines there remained a stigma against machine made bricks in some quarters with the belief that hand-molded bricks were superior to machine-made brick.⁶³

The following is a brief explanation of the steps involved in the production of Cream City brick. Different brickyards used different methods of production (of which some will be noted later), and this section serves as a general overview of the processes involved in the production of Milwaukee brick. The production methods described largely come from manuals written early in the twentieth century. The power-driven and mechanized production techniques certainly were not available in Milwaukee until the 1850s and not widely implemented in the city until well later than that.

⁶³ *Ibid.*, 92.

Mining

The mining process involves physically removing suitable clay from a clay bank or pit for use in manufacture. At a majority of Milwaukee plants, particularly the smaller operations, clay was dug out with the use of picks and shovels and hauled to the yards in carts.⁶⁴ Many yards set up temporary rail lines to haul clay by carts pulled by horses. Larger yards, mainly those found in Milwaukee, used hydraulic steam shovels to aid in getting clay loose. Dynamite was also frequently used for particularly difficult sections.⁶⁵

The mining process involved intricate knowledge of the types of clays found at the deposits. The man in charge of removing clays would have to know the character of the clay layers, how the clay burned, the color the clay burned, and the composition of the clay.⁶⁶ Different clay types were removed separately, allowing them to be mixed in exact proportions later according to the finished product desired.

A crucial second step, and one often neglected, was the weathering of the clay. This involved exposing the mined clay to one season of freeze-thaw cycles before being mixed. This allowed the clay to become more plastic and easily worked. Ideally, the clay was mined in fall, spread on the surface of the ground, and allowed to weather through the “off” months when the ground was frozen and could not be worked.⁶⁷

⁶⁴ Ries, *The Clays of Wisconsin and Their Uses*, 42.

⁶⁵ Buckley, *The Clay and Clay Industries of Wisconsin*, 41.

⁶⁶ *Ibid.*, 42.

⁶⁷ Buckley, *The Clay and Clay Industries of Wisconsin*, 42.



Figure 2.6: Clay pit of Davelaar & Son, Milwaukee, depicting mining method of plow and scrapers dumping clay onto a platform⁶⁸

Tempering and Mixing

Following mining (and ideally, weathering), the clay was tempered and mixed. If the clay contained gravel or stones, it was often screened or passed through a crusher to remove these elements before these processes. Tempering involved adding water to the raw clay and allowing it to sit for twelve to forty-eight hours to soften before mixing.⁶⁹ The amount of water added varied depending on the consistency necessary for the type of brick to be produced. Soft-mud brick required a different consistency than stiff-mud, for example. Most commonly in Wisconsin, vats of clay and water were filled and tempered on alternate days to allow for a continuous supply of clay ready to be mixed.

⁶⁸ Ries, *The Clays of Wisconsin and Their Uses*, 42.

⁶⁹ *Ibid.*

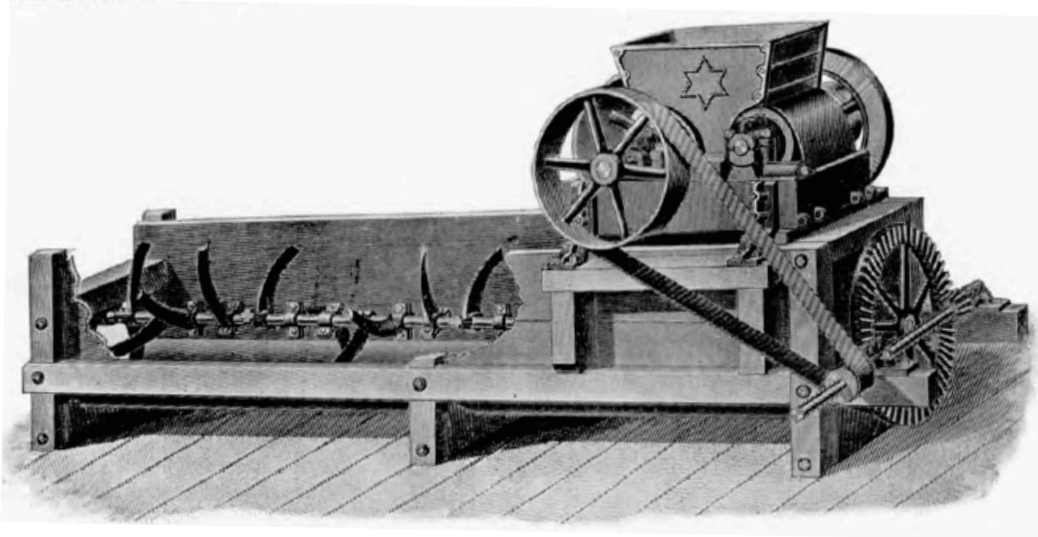


Figure 2.7: Dual disintegrator and pug mill⁷⁰

Mixing was a particularly important step, as improper mixing often resulted in bricks that delaminated quickly when exposed to harsh weather.⁷¹ It was during this step that sand, coal, and other stabilizers were also added to the tempered clay to help prevent uneven shrinkage and cracking.⁷² The process was generally done in one of two ways – pug mill or tempering wheel.

A pug mill was the most common method by the 1840s. The pug mill was a machine consisting of a hopper where clay was loaded, auger blades used to mix the clay, and an extruder slot end where mixture exited. The pug mills were operated with horsepower until the 1850s, when they were converted to steam power.⁷³

The other method of mixing used was by a tempering wheel. This involved tempering the raw clay with water in a vat overnight and working it the following day with a large wrought

⁷⁰ Buckley, *The Clay and Clay Industries of Wisconsin*, 60.

⁷¹ *Ibid.*, 44.

⁷² Ciesielski, "Cream City Brick," 15.

⁷³ *Ibid.*

iron wheel that was lowered into the vat. It was worked for a half-day or more, depending on the qualities of the clay. E.R. Buckley observed in his 1901 report that while it was a more expensive method it was “perhaps the most satisfactory” in thoroughly mixing the clay.⁷⁴ The mixed clay was then allowed to rest for a twenty-four hour period, allowing moisture to evenly disperse.⁷⁵

Molding Methods

Once the clay was tempered and mixed, it was ready to be worked into brick molds. The two methods used in the nineteenth century were hand molding and machine molding. Within each category are sub-categories used for different circumstances.

Hand-molded brick is a more rudimentary method of molding clay and was used earliest in Milwaukee. Hand-molded brick can either be sand-molded or slop molded. In sand-molding, wooden brick molds are dipped in water, filled with sand, then emptied. A thin layer of sand remained in the mold, helping the clay avoid becoming stuck in the mold. Slop-molded brick is placed into metal molds that are first dipped into water, rather than sand. In both cases, the molds contained one to four brick compartments.⁷⁶ The bricks varied greatly in size and shape and often had softer corners than those made by machine.⁷⁷

⁷⁴ Ibid., 46.

⁷⁵ Ciesielski, "Cream City Brick," 15.

⁷⁶ Buckley, *The Clay and Clay Industries of Wisconsin*, 48.

⁷⁷ Ciesielski, "Cream City Brick," 16.

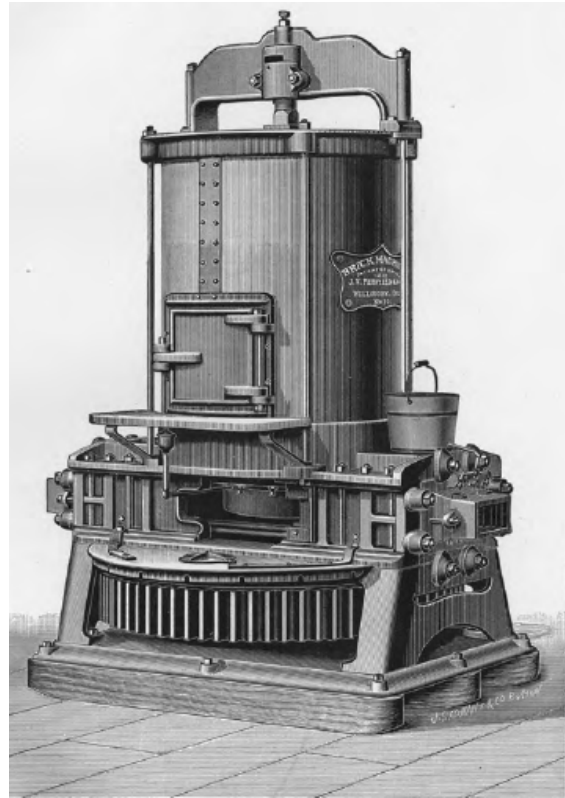
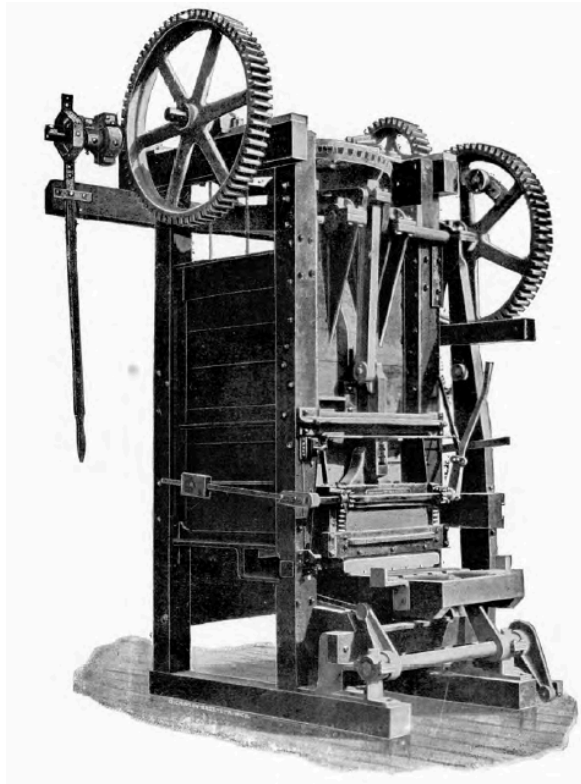


Figure 2.8: Soft-mud machine at left and stiff-mud machine at right in typical use at the turn of the twentieth century⁷⁸

Machine made bricks were produced with soft-mud, stiff-mud, or dry-press methods. Soft-mud brick are produced by plunging clay into six-compartment, sanded molds. The clay used for these molds is generally softer than that of stiff mud.⁷⁹ Stiff-mud bricks are produced from clay with less water content. They are extruded through a machine into ribbon shape, where they are cut with tightly stretched metal wires.⁸⁰ These are distinguishable as having five smooth sides, with the side cut by the wires being rougher. Stiff-mud bricks are a higher quality

⁷⁸ Buckley, *The Clay and Clay Industries of Wisconsin*, 55, 58.

⁷⁹ *Ibid.*, 48.

⁸⁰ Ciesielski, "Cream City Brick," 16.

than soft-mud and are used commonly for interior faces of buildings.⁸¹ Dry-pressed bricks are the highest quality bricks, primarily used as facing or veneer bricks. Owing to costs involved in production, they were also the least-frequently produced and most expensive to purchase. This method uses clay with the lowest water-content. The clay is subjected to high pressure in molds, which produces a very hard and durable brick. In addition to producing very hard bricks, this method is beneficial for not having to dry the bricks prior to firing.

Drying of Brick

Three methods of drying were used in brickyards in Wisconsin – open-yard (hack drying), pallet-racks and artificial heat dryers. The first method was most widely used, as it required the least expense. These bricks were taken from their molds and placed flat in the yard to dry for about a day, after which they were stacked on edge in piles known as hacks.⁸² These hacks were ten to twenty courses of brick in height and allowed to dry for a period of one to two weeks, depending on weather conditions. The hacks were covered with wooden tops and canvas sides to protect them from inclement weather. Because bricks tended to crack when exposed to direct sun, rain, or freezing temperatures, many thousands of bricks annually were lost in open-yard drying.⁸³ A *Milwaukee Sentinel* article from 1880 noted that the brick production season that year was especially hard hit because frequent rain showers made drying

⁸¹ Ibid.

⁸² Buckley, *The Clay and Clay Industries of Wisconsin*, 50.

⁸³ Ibid., 51.

the brick impossible. One of the yards produced ten million bricks that year, when a typical year produced sixteen million.⁸⁴

Pallet drying was another method used for drying. Green bricks were placed on wooden pallets under sheds. These bricks tended to dry in a more uniform manner than open-yard drying but, although protected from rain and extreme heat, were as frequently destroyed by frost as open-yard bricks.⁸⁵

Drying brick with artificial heat was a process developed later in the nineteenth century. It was beneficial because of the ability to be used in cold weather, allowing for brick to be dried regardless of weather. Artificial heat usually required twenty-four to thirty-six hours for the brick to pass through the drier before they were ready for firing.⁸⁶ However, this method was more expensive due to added fuel costs. These were negated at some of the largest yards, which constructed driers recycling heat from firing kilns.

Burning

The final step in the production of brick is the burning of the dried clay. The earliest brick in Milwaukee was burned in temporary kilns called “clamps.” As with other processes in the production of brick, technological advances made more efficient and reliable kilns possible by the latter half of the nineteenth century. Three general kiln types were used in the burning of Cream City brick – up-draft kilns, down-draft kilns, and continuous kilns.

⁸⁴ "Milwaukee Brick-Makers," *Milwaukee Sentinel*, 30 September 1880.

⁸⁵ Buckley, *The Clay and Clay Industries of Wisconsin*, 51.

⁸⁶ *Ibid.*, 52.

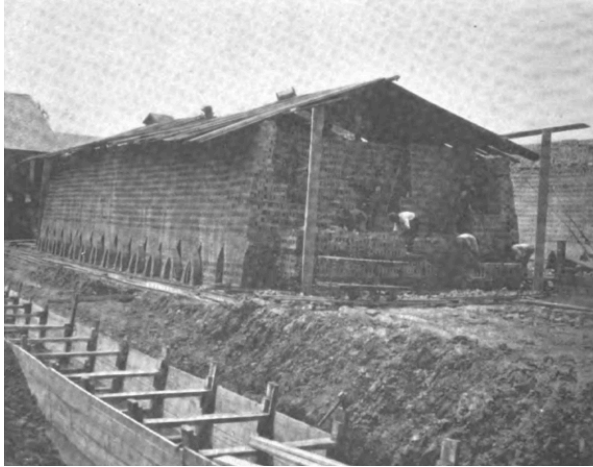


Figure 2.9: Scove kiln, the most typical burning method in use in Milwaukee⁸⁷



Figure 2.10: Circular down draft kiln⁸⁸

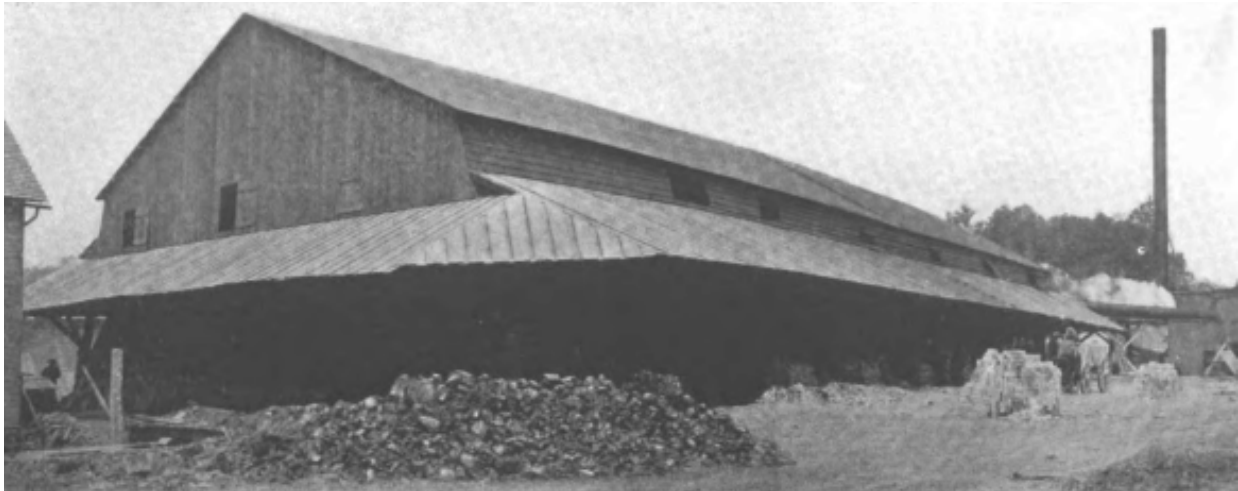


Figure 2.11: Continuous kiln at Burnham Brothers' Wauwatosa yard⁸⁹

The up-draft kilns were the simplest used in brick production and were found in two varieties – a temporary kiln (also known as a clamp) and a permanent kiln, or scove. Clamps were kilns temporarily constructed of the green brick about to be fired. A wood fire in the center of the structure was used to burn the brick, with the exhaust exiting the top of the kiln.

⁸⁷ Ries, *The Clays of Wisconsin and Their Uses*, 45.

⁸⁸ *Ibid.*

⁸⁹ *Ibid.*, 47.

The inability to control the temperature and wind drafts often resulted in wildly variable production. Bricks at the center of the kiln tended to be melted, whereas bricks at the edges were often left unburned.⁹⁰

The permanent up-draft kiln was constructed in a circular shape, made of fired-brick walls. The 1906 report on the clay industry in Wisconsin noted that about five-sixths of brick made in the state was fired in these scove kilns.⁹¹ Again, green brick was placed inside the kiln with a wood fire most often used to burn the brick. This was a more reliable method due to the permanent nature of the kiln, but it still resulted in uneven results.

Down-draft kilns differed from up-draft kilns in that their heat source was located at the top of the structure, and exhaust carried through flues at the bottom of the kiln. As the fire source never touched the bricks and was easier to control, this method produced a more reliable product. The kilns were either square or circular in shape and were generally constructed out of brick. Coal was the preferential fuel source, rather than wood.

A continuous kiln contained a series of separated chambers, each stacked with brick. The fire was started at one end of the kiln and allowed to slowly progress down the kiln as fuel was added from holes above the structure. This method was beneficial in a number of ways. The fire was always maintained, allowing for control of the temperature. Additionally, as fire progressed through the kiln, heat from neighboring chambers dried green brick in such a way that prior drying was unnecessary. Finally, by incorporating separate chambers that could be loaded and unloaded independently, the kiln allowed for brick to be burning in one chamber,

⁹⁰ Ciesielski, "Cream City Brick," 19.

⁹¹ Ries, *The Clays of Wisconsin and Their Uses*, 45.

drying in another, and burned brick removed and reloaded in another.⁹² Continuous kilns were expensive to purchase and operate and most often found at large yards. They were found at numerous yards in Milwaukee but they were not found in high numbers outside of the city.

Brick Grading

One peculiarity of brick manufacture in Milwaukee, and Wisconsin generally, is the lack of a recognized standard size for finished brick. The National Brick Manufacturer's Association's agreed upon specifications for brick sizing in 1901 were 8 ¼" x 4" x 2 ¼" for common brick and 8 ⅜" x 4" x 2 ⅜" for pressed brick.⁹³ However, Milwaukee producers did not commonly adhere to these standards. Rather, they sorted burned brick according to their finished characteristics before being sold. These included categories such as hard, soft, chimney, well, and veneer.⁹⁴ No explanation has been given as to exactly why the city's producers did not produce bricks of standard size. One reason could be the high demand for Milwaukee brick negated any need to produce a uniformly sized product. E.R. Buckley noted in *The Clays and Clay Industries in Wisconsin* that brick of differing sizes were produced at one brickyard and often within one kiln.⁹⁵ Brickmakers often used the same molds for all production, regardless of the type of clay (and thus, differing shrinking values). He also noted that while this was not a detrimental problem for common brick, pressed brick used for facing buildings needed smooth faces,

⁹² Buckley, *The Clay and Clay Industries of Wisconsin*, 55.

⁹³ *Ibid.*, 58.

⁹⁴ Ciesielski, "Cream City Brick," 21.

⁹⁵ Buckley, *The Clay and Clay Industries of Wisconsin*, 58.

squared corners, and a uniform size. It was common for manufacturers to retain about half the brick produced in a summer season to be sold in the winter off-production months.⁹⁶

Characteristics of Milwaukee's Cream City Brick

While generally referred to as "cream brick," a variety of shades of brick were produced at the brickyards in Milwaukee. This was due to differing methods of firing the brick, as well as where clay was mined and how it was mixed. As noted above, insufficient heat could result in a red or pink brick, whereas that same clay fired at a higher temperature would have gone through the reaction necessary to negate the presence of iron and produce a cream brick.

While many yards mixed their clay to achieve the desired cream color, others simply mixed and fired separate layers of clay.⁹⁷ This would result in red brick produced from the upper level of clay. Mixing brick at other ratios could also result in shades varying from white to pink to salmon to light red. Bricks with shades of yellowish-green and grey were also possible, depending on the clay mixtures.⁹⁸

The bricks produced in Milwaukee were noted for durability and strength as well as their beauty. While the bricks were hailed as being exceptionally strong as early as the 1840s, no tests prior to the 1890s have been located to quantify this assessment. Tests conducted in 1894 by Edward P. Allis Company on behalf of the Milwaukee Brick Manufacturers appear to be the first examining these characteristics. Additional tests were conducted on Wisconsin bricks

⁹⁶ "Milwaukee Brick-Makers."

⁹⁷ Ciesielski, "Cream City Brick," 9.

⁹⁸ Buckley, *The Clay and Clay Industries of Wisconsin*, 107.



Figure 2.12: Wall showing various shades of Cream City brick in Milwaukee⁹⁹

at the University of Wisconsin in the early-1900s. Brief summaries of their results are included below.

The first tests on Milwaukee brick were done at the behest of Milwaukee Brick Manufacturers, a brick-making conglomerate predating the later Milwaukee Building Supply Company conglomerate. They requested tests following the bitter loss of a contract for sewer brick to Chicago brickmakers. The Milwaukee group argued that while cheaper, in awarding the contract for Chicago brick, the Milwaukee Board of Public Works had accepted a product inferior to theirs. The tests were conducted in February 1894 and reprinted in an editorial in the *Milwaukee Sentinel*.

The tests, as certified by Louis Allis for the Edward P. Allis Company, show that Milwaukee brick was superior to that from Chicago. The February 24, 1894 tests showed Milwaukee dry pressed bricks crushed at ninety-five tons of pressure, while Chicago sewer brick crushed at forty-five tons. A February 27th test found that Chicago sewer brick crushed at sixty-three tons pressure and Milwaukee brick at one hundred twenty-three tons. An absorption test

⁹⁹ Photo by author, December 2014.

was also conducted. Following submersion in water for twelve hours, Milwaukee brick absorbed nine ounces of water, while Chicago brick absorbed nearly seventeen-and-a-half ounces.¹⁰⁰

Tests conducted in 1906 were intended to be included in the second part of E.R. Buckley's 1901 bulletin on *The Clay and Clay Industries of Wisconsin*. However, Buckley's departure from the Wisconsin Geological Society delayed their completion. These tests were conducted at the University of Wisconsin and used to determine crushing strength, transverse strength, and absorption properties of Wisconsin brick. These results appear in *The Clays of Wisconsin and Their Uses* by Heinrich Ries, Ph.D. The crush test measured the pressure per square inch at which bricks would crush, transverse strength measured the pressure at which a brick would break in two while exposed only to pressure at the center of the sample, and absorption tested the amount of water absorbed by a sample after a forty-eight hour immersion. These tests included different burning clays from around the state and were compiled as statewide averages. These averages are included in the table on the following page.

The crush test determined that the strength of stiff-mud and dry-press bricks was substantially higher than soft-mud brick. Ries attributed this to stiff-mud and dry-press bricks primarily being cream bricks that required them to be fired harder than red brick. He concluded, "manufacturers of cream brick fire their product as hard as possible, while the red-

¹⁰⁰ "Accept Inferior Chicago Brick," *Milwaukee Journal*, 05 March 1894.

brick manufacturers knowing that their clays fire easily, do not take the trouble to fire them hard.”¹⁰¹

Table 2.3: Brick tests conducted by Heinrich Ries, Ph.D., 1906¹⁰²

Crushing Test (lbs./in²)	Minimum	Maximum	Average
Soft-mud	1,074	5,838	2,829
Stiff-mud	1,304	7,060	4,224
Dry press	993	5,558	3408
Transverse Strength (lbs./in²)			
Soft-mud	157	1,438	575
Stiff-mud	442	1,861	1027
Dry press	256	702	512
Absorption (percent weight gained following 48 hour immersion)			
Soft-mud	5.8	28	18.6
Stiff-mud	13.05	24	20.26
Dry press	12.9	33	21.47

Ries deemed transverse strength as a more important quality in a brick, as bricks were rarely exposed to pressures at which they would crush but were often subjected to the limits of their elasticity, subsequently cracking.¹⁰³ Results of the tests found that stiff-mud bricks were the most elastic, followed by soft-mud and dry-pressed brick. No explanation is explicitly given, although it is likely that due to their highly-compacted nature, dry-press bricks would be less likely to bend and would subsequently more readily break under this type of pressure. The presence of pebbles or lumps of clay drastically decreased the transverse strength of the brick.

¹⁰¹ Ries, *The Clays of Wisconsin and Their Uses*, 183.

¹⁰² *Ibid.*, 183-84.

¹⁰³ *Ibid.*, 177.

Harder burning, such as that necessary for Cream City brick, was found to increase both the crushing and transverse strength.¹⁰⁴

The absorption test found that soft-mud brick shows the lowest minimum and average absorption, while stiff-mud showed the highest. This was attributed to stiff-mud and dry-pressed bricks primarily being made from cream burning, calcareous clay.¹⁰⁵ Full descriptions of these tests and results are available in *The Clays of Wisconsin and Their Uses* by Heinrich Ries, Ph.D.

This absorption by the brick was one noted drawback, however, as it readily absorbed pollutants and presented a soiled appearance. While the physical makeup of the brick provided the source of the problem, it was indeed not helped by the fact that pollutants were much more evident against the cream-colored surface of the brick. While not impairing the strength of the brick, the soiling does dull the otherwise bright appearance of buildings. Buildings located in urban areas are especially susceptible to this type of soiling. A number of Milwaukee's oldest remaining Cream City brick structures display signs of pollution so severe that the brick appears almost completely blackened. Steps can be taken to mitigate noticeable pollution from the bricks and restore their appearance without exhorting to damaging treatment methods. A number of successful brick restorations have occurred in Milwaukee, including recent examples at the Pritzlaff Hardware Building and Pabst Brewery Brewhouse rehabilitation. Conservation issues will be addressed in the fifth chapter of this thesis.

¹⁰⁴ Ibid., 186.

¹⁰⁵ Ibid., 184.

Milwaukee's Cream City Brick Producers

Like many other industries in Milwaukee, the city's brick industry started from modest beginnings and rose to become economically successful and highly regarded. Yet in many ways, the brick industry in the city was on the front edge of Milwaukee's industrial awakening. The brick produced in the city's yards quite literally provided the building blocks for Milwaukee's other successful industries. Aided by technological advances and an ever-increasing reputation, entrepreneurial businessmen as diverse as the color of the product they created helped the industry rise from humble beginnings to great fame. Yet the millions of brick produced annually were not enough to satiate the overwhelming demand for the product in some years. However, by the end of the nineteenth century, changes in architectural tastes and depletion of clay led to a decline in the product that had helped put Milwaukee on the map. The industry would continue into the twentieth century but not with the prominence so recognized in the century before. This section examines the history of the brickmaking industry in Milwaukee and the men responsible for it. Because the rise of the brick industry in many ways goes hand-in-hand with that of the city, the previous history of Milwaukee provides a context for the production increases. Figure 2.19 provides a contextual map noting the location of the Milwaukee brickyards referred to in this section.

Humble Beginnings

As noted in the history of Milwaukee, the first Cream City brick produced in Milwaukee likely occurred in fall of 1835. Credit is generally given to brothers Nelson and Thomas Olin for firing the first 25,000 brick at Solomon Juneau's urging. The Olin brothers were born in the

town of Canton, St. Lawrence County, New York – Nelson in 1809 and Thomas in 1811.¹⁰⁶ The pair traveled west, arriving in Green Bay, Wisconsin in 1835. There they met Solomon Juneau and were persuaded to follow him to Milwaukee on the promise of better employment opportunities. They arrived in Milwaukee in June 1835, when only fifty non-Native Americans occupied the city.¹⁰⁷

According to Nelson Olin, the first brick was burned in September of that year at the foot of Huron Street along with help from his brother Thomas, George Reed and a Mr.

Loomis*.¹⁰⁸ Olin, then 86, corroborated the story in an 1895 article in the *Milwaukee Sentinel*:

In September, 1835, my brother and I put up a kiln containing 25,000 brick at the foot of Huron street, that being the first kiln of brick made in Milwaukee. Nowadays people would laugh to see the way we made brick then. We excavated a large hole in the ground, which we filled with sand and clay, and then set our oxen to treading the mixture until it was worked fine enough to mould well.¹⁰⁹

The clay was then fired in a clamp measuring 24 by 8 feet and 12 feet high.¹¹⁰ This first brick was used in the construction of chimneys for Juneau's eastside residence and a small handful of other residences. Mason William Sivyver, who also built the first brick residence in the city, laid the brick.

While no sources exist noting the Olins' reaction to the first cream brick in Milwaukee, the same cannot be said of the proprietor of the first proper brickyard in the city. Benoni Finch is credited with starting the first official brickyard in the spring of 1836, as well as erecting the

* Sources identify Loomis as either Isaac C. Loomis or Levi G. Loomis.

¹⁰⁶ Frank Abial Flower, *History of Milwaukee, Wisconsin: From Prehistoric Times to the Present Date* (Chicago: Western Historical Company, 1881), 172.

¹⁰⁷ *Ibid.*, 173.

¹⁰⁸ *Ibid.*

¹⁰⁹ "He Came West in 1835," *Milwaukee Sentinel*, 24 February 1895.

¹¹⁰ James S. Buck, *Pioneer History of Milwaukee, From 1840 to 1846, Inclusive*, vol. 2 (Milwaukee: Symes, Swain & Co., 1881), 27.

second brick house in the city.¹¹¹ James S. Buck recalled Finch's reaction as "not a little disgusted when he saw his bricks were not red, thinking they were, of course, worthless."¹¹² Finch's yard was located at the foot of 14th Street in the Menomonee Valley. It is unclear how long Benoni Finch produced bricks at that location. Classified advertisements in the *Milwaukee Sentinel* from late in the 1830s place George Reed as having a brickyard at that same location. Whether or not this was the same or an adjacent yard is not known.

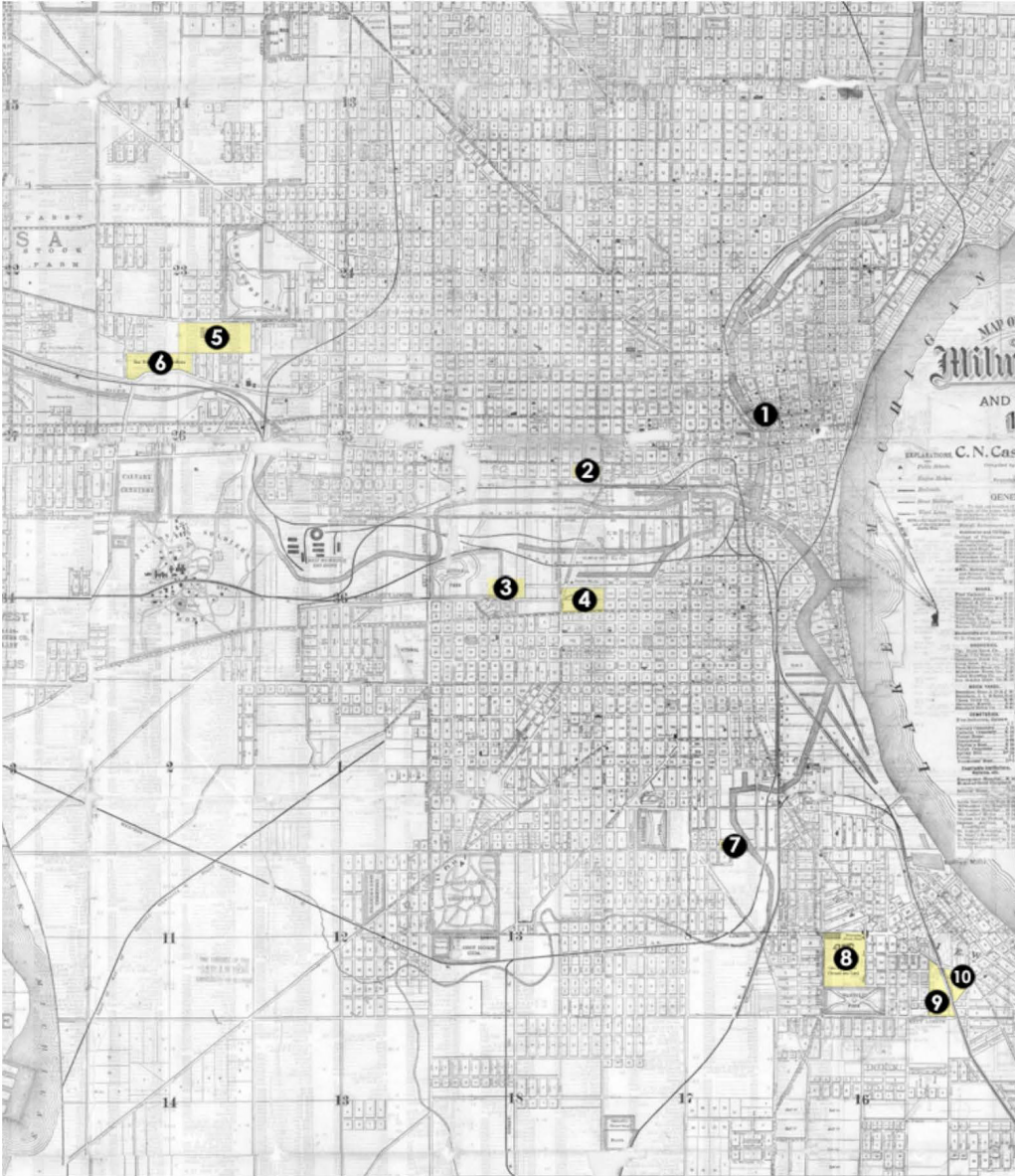
Four early brickyards were recognized in H. Russell Zimmerman's article on Cream City brick. These consisted of Benoni Finch's yard at the foot of 14th Street, the Horace Kaffren yard used to produce brick for mason-contractor William Sivyler, John A. Messenger's yard at Chestnut Street above 12th Street, and the South Side yard operated by the Childs Brothers (Sidney S. and Samuel) on Sixth Avenue and Park Street.¹¹³ An additional search of *Milwaukee Sentinel* archives reveals mentions of at least two additional pre-1850 yards – a Tibbetts and McKnight yard located in the 4th Ward and later sold to James H. Rogers and Murray's Brick Yard located near the Cold Spring House and Eagle Brewery, likely near what is now 8th Street and Highland Avenue.¹¹⁴

¹¹¹ Buck, *Pioneer History of Milwaukee, From the First American Settlement in 1833, to 1841*, 47.

¹¹² *Ibid.*, 48.

¹¹³ Zimmermann, "Milwaukee's Cream City Brick," 7-8.

¹¹⁴ "Multiple News Items," *Milwaukee Sentinel and Gazette*, 01 August 1849; "Multiple Classified Advertisements," *Daily Sentinel and Gazette*, 29 June 1849.



1. Huron St. and E. Water St. - Olin Brothers Brick Kiln (1st in Milwaukee)
2. Cream City Brick Company
3. J.L. Burnham & Sons
4. George Burnham & Sons
5. Kraatz Estate
6. George Burnham & Sons - Wauwatosa yard
7. E. Chase & Sons
8. George Burnham & Sons - Howell Ave yard
9. Standard Brick Company
10. Devaaler & Sons

Figure 2.13: Locations of Milwaukee brickyards¹¹⁵

¹¹⁵ Ciesielski, "Cream City Brick," 94.

The Burnham Brothers (and Sons)

It was not until the establishment of the Burnham Brothers brickyard that the Cream City brick industry in Milwaukee excelled. The business George and Jonathan L. (J.L.) Burnham created would quickly eclipse other brick producers in the city, moving the Milwaukee brick industry from a localized endeavor to a national and international business. Along with their



Figure 2.14: George Burnham¹¹⁶



Figure 2.15: Jonathan L. Burnham¹¹⁷

progeny, the Burnham name would remain synonymous with Milwaukee brick production until the decline of the industry in the early-twentieth century. The Burnhams helped to streamline the production of brick with the development of new techniques and technology. They also produced the greatest number of bricks in the city – those used in the construction of countless buildings around Milwaukee and beyond.

¹¹⁶ Conrad, *History of Milwaukee County From Its First Settlement to the Year 1895*, 2, 263.

¹¹⁷ *Ibid.*, 324.

The brothers were born on their father’s farm in Plattsburg, Clinton County, New York – George in 1816 and Jonathan in 1818. George took up brick making at age 15, learning the profession from his brick making father, Andrus. At age 15, George took his craft to Buffalo, New York, marrying there in 1843 before moving west to Milwaukee with Jonathan in July of that year.¹¹⁸ Following their arrival in the city, the brothers entered into business together, renting a tract of land from another brickmaker, James H. Rogers, at the foot of 13th Street in the Menomonee Valley in spring 1844. The brothers worked this land for one year, reportedly losing \$1,000 that season.¹¹⁹ For the three years following, the brothers rented land at Grand Avenue in exchange for paying taxes on the property. The brothers relocated to Spring Street for one season in 1847 before purchasing their vast 150-acre South Side location at Park Street (now West Bruce Street), west of Muskego Avenue for \$20 an acre in 1848.¹²⁰ This land would remain in the Burnham family until the dissolution of the brick industry in the city.

The brother’s business quickly excelled at their new South Side location. Their early operation mirrored that of other early Milwaukee producers. They mixed clay with a horse-powered tempering wheel, and their bricks were molded by hand. However, the brothers, “ingenious and enterprising, not content with following beaten paths,” soon produced a machine that would put them far ahead of rivals and crown them the kings of Milwaukee brick.

¹²¹ With the aid of their employee Stoddard Martin, the Burnham’s created and patented the

¹¹⁸ Les Vollmert and Paul Jakubovich, “J.L. Burnham Block,” National Register of Historic Places Nomination Form, Washington, D.C.: U.S. Department of Interior, National Park Service, 1987, 8.

¹¹⁹ *Ibid.*

¹²⁰ John Goadby Gregory, *History of Milwaukee, Wisconsin*, vol. 1 (Chicago: S.J. Clarke, 1931), 514.

¹²¹ *Ibid.*

first machine in the country that ground and tempered the clay, and simultaneously molded the bricks with steam power. The machine “was a fortunate invention which enabled the Burnham Brothers to make brick much cheaper than by hand and brought them also a revenue of one thousand dollars for each machine sold, netting them a large sum.”¹²²

By 1853, the Burnhams were the largest producer of bricks in the city, manufacturing six million bricks annually, two million of which were exported to Chicago and Michigan.¹²³ That year they also exported 300,000 pressed brick to New York for use in a Deaf and Dumb Asylum at a price of \$12 per thousand (but costing the contractors \$25 per thousand with shipping costs).¹²⁴ Thanks in part to the success of the Burnham Brothers and the almost exclusive use of the yellow brick throughout the city, Milwaukee had acquired the nickname “Cream City by the Lakes” by the 1850s. In 1856, the brothers dissolved their partnership through “mutual consent,” with J.L. retaining the Park Street brickyard and George purchasing a nearby Menomonee Valley parcel.¹²⁵

J.L. Burnham managed production at his yard until partnering with his sons, John F. and Clinton, forming J.L. Burnham & Sons. Burnham was responsible for the building of the Burnham Canal of the Menomonee River, as well as other Menomonee Valley improvements, which assisted in the transportation of finished brick. Following the death of Jonathan in 1891, his sons continued operation at their present location. By the mid-1890s, their production averaged around ten million bricks annually.

¹²² Conrad, *History of Milwaukee County From Its First Settlement to the Year 1895*, 2, 324.

¹²³ "Milwaukee Industrial Establishments," *Milwaukee Daily Sentinel*, 28 September 1853.

¹²⁴ "Milwaukie Brick," *Cleveland Daily Herald*, 03 October 1853.

¹²⁵ Ciesielski, "Cream City Brick," 29.



Figure 2.16: Advertisement for J.L. Burnham & Sons¹²⁶

Likewise, George Burnham continued with brick production in the Menomonee Valley. Burnham remained on a tract of land near his brother until 1870 when he purchased land at 8th Avenue and Park Street. In the spring of that year, his son Charles T. joined the business, joined by another brother, John Q. in 1871.¹²⁷ They subsequently operated as George Burnham & Sons. In 1871, the firm fired a kiln containing over one million brick, the largest quantity to be burned in the city.¹²⁸

Apparently still not satisfied with the technology available at his yards, George Burnham, along with employee Gaylord Martin (his relationship to previous Burnham employee

¹²⁶ W.J. Anderson and Julius Bleyer, *Milwaukee's Great Industries: A Compilation of Facts* (Milwaukee: Association for the Advancement of Milwaukee, 1892), 333.

¹²⁷ Ciesielski, "Cream City Brick," 31.

¹²⁸ "City Matters," *The Milwaukee Sentinel*, 24 November 1871.

Stoddard Martin is unknown), patented an “improved” brick machine that again revolutionized the brick industry and propelled Burnham’s business beyond levels previously unimagined. The machine they invented ground, tempered, and molded the clay at the same time, with steam power.¹²⁹ An 1867 *Milwaukee Sentinel* article described the machine:

The clay is thrown into the machine, and all stones prevented from intermixing with it by a guard. Each revolution of the shaft moulds eighteen bricks, half a dozen being stamped by each mould. The bricks, which are taken from the machine by a self-acting moving carriage, are conveyed to the yard on trucks. One machine will make from 3,000 to 4,000 bricks an hour – the greatest capacity ever attained by any machine ever put in successful operation. ... It is noteworthy that no brick-maker who has examined this machine has left the foundry without ordering one or more.¹³⁰



TO BRICK MAKERS.
Burnham's Milwaukee Brick Machine.
THIS Machine, we claim, possesses superior advantages over all others. It will manufacture ordinarily 3,000 bricks an hour, and can be worked by either steam or horse power. Persons wishing to examine the machine can see it at work at Geo. or J. L. Burnham's, or Green & Watkins' yards, Milwaukee. Orders for Wisconsin should be addressed to Geo. & J. L. Burnham, and for any other state to Burnham & Martin, Milwaukee, Wis. apr18w507dif

Figure 2.17: Advertisement for Burnham’s new brick machine¹³¹

Brick from the Burnham yard was used extensively throughout Milwaukee and beyond.

The Burnham yard received orders for 500,000 bricks following the Great Chicago Fire in 1871.¹³² Brick was also sent to places as far away as New York, for the construction of a city hall at Utica. George Burnham & Sons produced an average of fifteen million bricks by 1881 and

¹²⁹ Conrad, *History of Milwaukee County From Its First Settlement to the Year 1895*, 2, 324.

¹³⁰ "Milwaukee Brick Machine," *Milwaukee Daily Sentinel*, 18 April 1867.

¹³¹ "Multiple Classified Advertisements," *Milwaukee Daily Sentinel*, 16 May 1867.

¹³² Ciesielski, "Cream City Brick," 32.



Figure 2.18: Burnham Brothers' Howell Avenue yard as seen in the late-1890s¹³³

employed around two hundred men.¹³⁴ George Burnham's worth was reported at two million dollars at the time of his death in 1889.

Following George's death, his sons continued the business, readopting the "Burnham Brothers" name. They remained at the Spring Street yard for three years, before purchasing the Howell Avenue yard in 1892. The massive operation produced upwards of thirty million bricks annually and employed three hundred men in 1895.¹³⁵ The brothers also operated a Wauwatosa yard by 1901 that produced only stiff-mud brick. The two Burnham operations were merged in 1910 by J.L. Burnham's son, John F., and operated as Burnham Brothers Brick Company until at least 1929.¹³⁶ Operations were moved to South Milwaukee in 1923 due to the depletion of raw material at the Kinnickinnic Avenue yard, while the Wauwatosa yard was abandoned during World War I.¹³⁷ Their expected capacity at their South Milwaukee yard was

¹³³ Ries, *The Clays of Wisconsin and Their Uses*, 65.

¹³⁴ Ciesielski, "Cream City Brick," 32.

¹³⁵ Conrad, *History of Milwaukee County From Its First Settlement to the Year 1895*, 2, 441.

¹³⁶ Ciesielski, "Cream City Brick," 34.thesis 34

¹³⁷ "Burnham Bros. Building New Plant," *The Clay Worker* 1922, 464.

forty million bricks annually. Their Howell Avenue yard was later annexed by the City of Milwaukee for neighboring Humboldt Park.

Additional Brick Manufacturers

While the Burnham family certainly played a massive role in the evolution and recognition of Milwaukee brick, they were not the only producers in the city. Other notable companies operated throughout the period of Cream City brick production, a number of which will be briefly described.

The Colclough Brothers operated a yard at Clybourn and North Canal Streets between 13th and 15th streets in the Menomonee Valley starting in 1849.¹³⁸ Their yard was composed of two of the earliest yards located in the city – that of Benoni Finch at 14th Street and the yard formerly belonging to James H. Rogers (and rented to the Burnham Brothers in 1844). The Colclough Brothers operated at this location until 1877. The land was subsequently leased to H.R. Bond, who took on partner William H. Hanchett two years later and reorganized the business as Bond & Hanchett.¹³⁹ The firm was producing six million brick annually by 1881. Bond bought out Hanchett some years later and took his son Hiram on as partner – operating as H.R. Bond & Son.¹⁴⁰

¹³⁸ Ciesielksi, "Cream City Brick," 34.

¹³⁹ *Ibid.*, 35.

¹⁴⁰ Howard Louis Conrad, *History of Milwaukee County From Its First Settlement to the Year 1895*, vol. 3 (Chicago: American Biographical Publishing Company, 1895), 194. Conrad vol 3, 194

Milwaukee Cream City Brick Companies 1835 - 1929

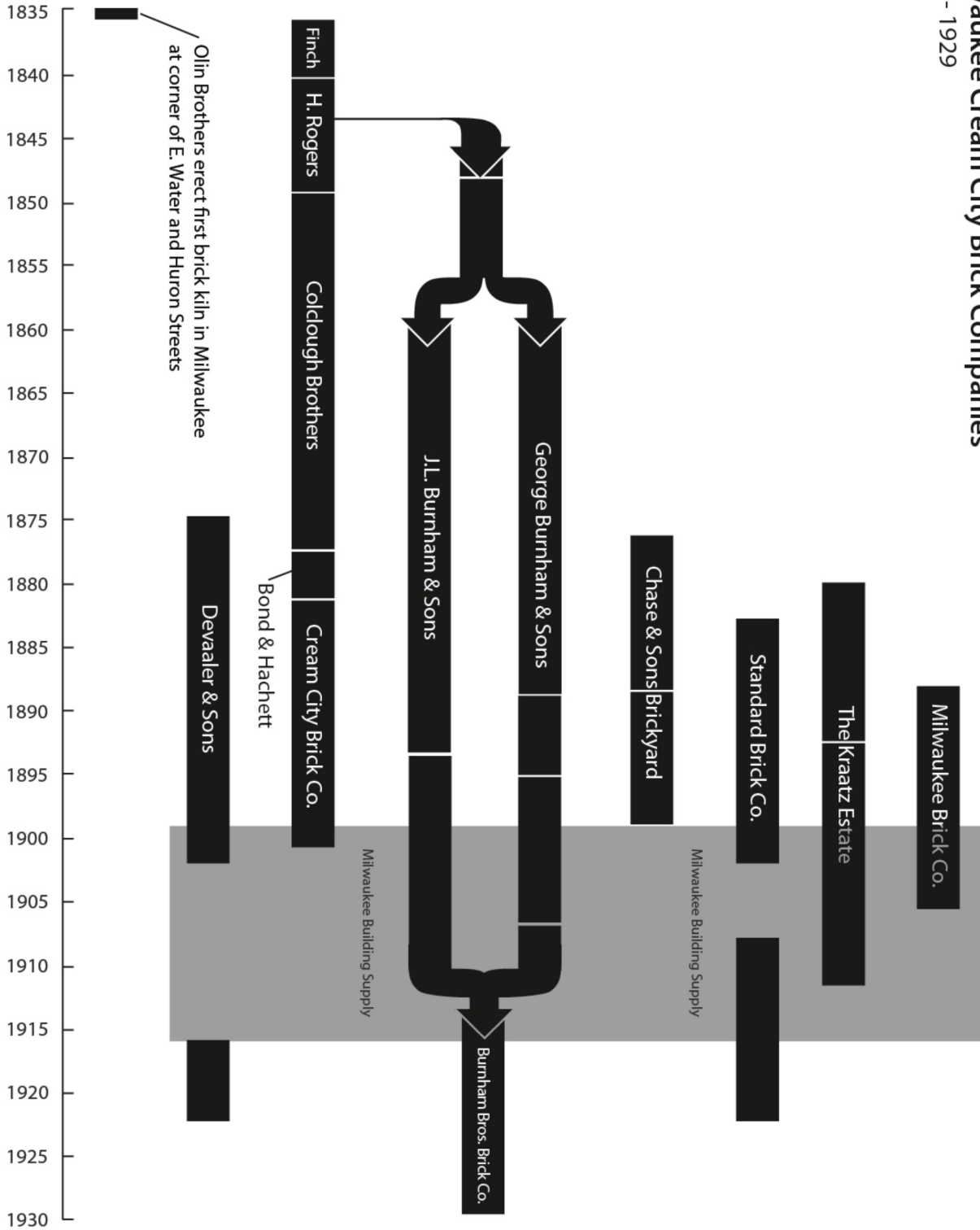


Figure 2.19: Milwaukee Cream City Brick Companies¹⁴¹

¹⁴¹ Ciesielksi, "Cream City Brick," 100.

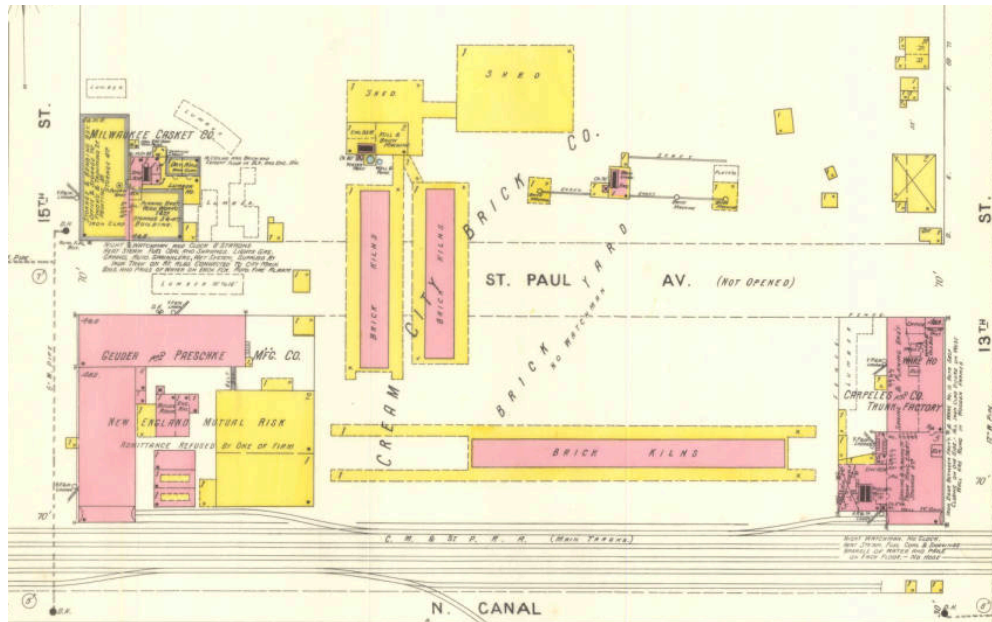


Figure 2.20: 1894 Sanborn map showing the Cream City Brick Company yards¹⁴²

Under the ownership of William Drake, the yard was taken over in 1883 and subsequently incorporated as the Cream City Brick Company. Their mid-1890s production was around seven-and-a-half million pressed and common brick annually.¹⁴³ The company provided brick for such notable Milwaukee buildings as the Pfister Hotel, Lindsay Building, and Davidson Theater.¹⁴⁴ Although the yard employed eighty men in 1896 and was noted for their spacious facilities and state of the art machinery, the yards were abandoned by 1901.

Davelaar & Sons brickyard was established in 1880 by Martin Davelaar and was located first in Chase's Valley and later relocated to Bay View at Pryor and Ellen Streets.¹⁴⁵ The yard

¹⁴² "Milwaukee 1894, vol. 2, sheet 152," (New York, NY: Sanborn-Perris Map Co. Limited, 1894).

¹⁴³ *Milwaukee, a Half Century's Progress, 1846-1896: A Review of the Cream City's Wonderful Growth and Development from Incorporation Until the Present Time.*, (Milwaukee: Consolidated Illustrating Co., 1896), 178.

¹⁴⁴ *Ibid.*

¹⁴⁵ *Memoirs of Milwaukee County: From the Earliest Historical Times Down to the Present, Including a Genealogical and Biographical Record of Representative Families in Milwaukee County*, vol. 2, Part 2 (Madison, WI: Western Historical Association, 1909), 814.

produced between six hundred thousand and three and a half million bricks annually by 1894, many of which were used in sewer projects around the city. They were equipped with scove kilns and molded brick using the soft mud process. The yards were leased to the Milwaukee Building Supply in 1899, at which point they sat idle for a number of years. They resumed operation as Davelaar & Sons in 1916, switching production to concrete block before disbanding operations in 1923.¹⁴⁶

The Chase Valley Brickyards were established in 1876 at the western bank of the Kinnikinnic River, at the intersection of the Lincoln Avenue Bridge.¹⁴⁷ George H. Chase began making brick in the 1860s. He later entered into a partnership with his well-known Milwaukee pioneer father, Dr. Enoch Chase, and brother Clarence (later adding another brother, Clifford). The yards, known as the Lincoln Avenue yard, rose to become the second-largest producer of Milwaukee brick. They produced from six million brick in 1890 to up to seventeen million bricks by the end of the decade. Nearly all of their stock was sold within the Milwaukee vicinity.¹⁴⁸ The yards were leased to the Milwaukee Building Company in 1899.

Carl (Charles) Frederick Wilhelm Kraatz founded the Kraatz Estate in 1880 with yards adjacent to the George Burnham & Sons' Wauwatosa yard.¹⁴⁹ Kraatz, along with brothers Wilhelm and John, worked extensively as builders before entering the brick business. The yard contained excellent clay ten to fifteen feet in depth and produced about eight million bricks

¹⁴⁶ Ciesielski, "Cream City Brick," 36.

¹⁴⁷ *Ibid.*, 37.

¹⁴⁸ Buckley, *The Clay and Clay Industries of Wisconsin*, 110.

¹⁴⁹ Jerome A. Watrous, *Memoirs of Milwaukee County: From the Earliest Historical Times Down to the Present, Including a Genealogical and Biographical Record of Representative Families in Milwaukee County*, vol. 1 (Madison, WI: Western Historical Association, 1909), 181.



Figure 2.21: Clay pit of the Standard Brick Company¹⁵⁰

annually in the 1890s. While Carl Kraatz died in 1892, the business continued at least through the early 1900s.

The Standard Brick Company incorporated in 1883 with Ferdinand Vogt and Otto Zielsdorf forming the company. Their yards included fifteen acres located across from Davelaar & Sons at 496 Clement Street. Their 1893 value was placed at \$60,000 with production of twelve to fourteen million bricks annually.¹⁵¹ A description of their facilities from that year noted, “the plant includes spacious sheds, kilns, dry house, boiler and engine house, etc., and from sixty to eighty men are constantly employed.”¹⁵² Their bricks were noted for their uniformity, strength, and durability and were endorsed by Milwaukee architects and builders. They were also members of the Milwaukee Building Company. However, by 1901 their land was

¹⁵⁰ Ries, *The Clays of Wisconsin and Their Uses*, 42.

¹⁵¹ *Milwaukee, a Half Century's Progress, 1846-1896: A Review of the Cream City's Wonderful Growth and Development from Incorporation Until the Present Time.*, 173.

¹⁵² *Ibid.*

vacant and had not been operated for a number of years.¹⁵³ This property was later acquired by the City of Milwaukee, becoming Kinnickinnic Park.

The Milwaukee Brick Company was one of the last yards formed in Milwaukee.¹⁵⁴ Henry Hermann owned the 30-acre yard, located slightly north Wauwatosa. The yard contained only shallow deposits of clay, worked to about ten feet. In 1901, the yard was equipped with both dry-press and stiff-mud machinery and ran a continuous kiln with fourteen chambers, each with a capacity of 28,000 bricks.¹⁵⁵

Milwaukee Building Supply Company was a conglomerate of Milwaukee brick producers formed in 1897 as a means of stabilizing brick prices. The idea was attempted in 1895 but failed after a short time due to infighting amongst members.¹⁵⁶ Henry Hermann, Ferdinand Vogt, and Charles T. Burnham formed the company with the understanding that Milwaukee brick had become so standardized that any manufacturer could produce brick suitable for any job. The job orders were received at a central office with the closest yard to the delivery site handling the brick delivery in order to reduce shipping costs. The company was able to control prices in the city and also exclude outside competition from bidding on jobs in the city. A number of factors, including a surplus of building supplies, an increase in labor costs, and a reduction in the price of brick all weakened the Building Supply Company, which was disbanded in the 1910s. Following disbanding, a number of member brickyards once again returned to individual production.

¹⁵³ Buckley, *The Clay and Clay Industries of Wisconsin*, 110.

¹⁵⁴ *Ibid.*, 108.

¹⁵⁵ *Ibid.*

¹⁵⁶ "Goes to Pieces," *Milwaukee Journal*, 03 February 1897.

The companies examined briefly here were by no means the only brick producers that operated in the city. They did, however, benefit by being the businesses still in operation when the clay and brick industry in Wisconsin was examined around 1900. Sources prior to the 1880s are limited, with only brief mentions of production techniques, capacities, and prices found in newspapers.

Other brick producers found in City of Milwaukee directories include Beckman & Co. (north corner of 8th Street and Washington Avenues), J.B. Dieckmeier (corner of Lombard and Rail Road Streets), Green, Watkin & Co. (corner of Clybourn and Clermont Street), W.W. Watkins & Co. (150 E. Water Street), Franz Buellesbach (468-470 16th Street), Milwaukee Brick and Cement Company (65 Loan and Trust Building). Additionally, a number of yards producing cream-colored brick operated in other southeastern Wisconsin areas containing suitable lacustrine clay. Medium sized producers existed in Racine, Watertown, and Green Bay, with local operations located in numerous other towns in the state. While these yards did not produce anywhere near the capacity of the Milwaukee yards and often produced brick of questionable quality, their bricks were used in local building projects. However, the quality and quantity of Milwaukee brick manufacture meant that brick produced there was also exported to these locations. Unless otherwise known, this can make it difficult to pinpoint exactly where brick used smaller communities was produced.

Milwaukee's Cream City brick industry spawned numerous companies and produced millions of Cream City bricks in the nineteenth century. As will be examined with greater detail in the next chapter, these bricks were used in many building types and styles, and in locations local, national, and international. However, by the turn of the twentieth century, the industry

was beginning to fail. Numerous factors, including outside competition, changing architectural preferences, and the disappearance of suitable clay, led to the decline and eventual halt of Cream City brick production in Milwaukee. These factors will be examined further in Chapter Five.

CHAPTER 3: CREAM CITY BRICK ARCHITECTURE

Introduction

Cream City brick production spanned nearly the first one hundred years of European settlement in Milwaukee. By the latter half of the nineteenth century, production exceeded tens of millions bricks produced annually. Much of this production was consumed in the building of Milwaukee, however millions of bricks were exported for use in other markets.

In his survey of *Historic Wisconsin Buildings*, architect and author Richard W.E. Perrin notes that once the color of Milwaukee brick was accepted, “it was used in and around [Milwaukee] to the exclusion of practically all other materials for more than fifty years.”¹⁵⁷ Due to this, brick is found in the construction of nearly every building type in the city. Majestic mansions, lavish public buildings, and grand cathedrals were constructed of cream brick, as were countless office blocks, warehouses, industrial buildings, and vernacular residences. Due to the span of time it was used, it also shows up in every building style constructed in the nineteenth century – from early Milwaukee Federal-style buildings through the Beaux-Arts period. Photos from the nineteenth century reveal exactly why Milwaukee was called the Cream City – street after street lined with cream-colored buildings. The brick also shows up in places less obvious, such as the chimneys and foundations of frame buildings, as the structural element in buildings veneered with other materials, and in Milwaukee’s sewers and roads.

¹⁵⁷ Richard W.E. Perrin, *Historic Wisconsin Buildings: A Survey of Pioneer Architecture 1835-1870*, Publications in History (Milwaukee: Milwaukee Public Museum, 1962), 47-48.

Use of Milwaukee brick was by no means limited to the Cream City, however. The reputation of Milwaukee brick was already spreading east by the time the city was incorporated in 1846. Buoyed by these early reviews (of which more will be mentioned later) demand for Cream City brick in other markets rapidly increased. The quickly expanding city of Chicago, ninety miles to the south, proved an eager market. Chicago imported Milwaukee brick as early as 1847 and used the brick in great numbers following the Great Fire of 1871. Likewise, brick was exported from areas ranging from Minneapolis to Cincinnati to New York.

This chapter examines examples of Cream City brick architecture found in Milwaukee and beyond. Examples will be provided in chronological order, divided by architectural style and separated into two sections – Milwaukee architecture and examples found elsewhere. The buildings examined were selected with several considerations in mind.

Firstly, as implied above, there were thousands of Cream City brick buildings constructed in Milwaukee during the nineteenth century. There are countless examples that could be examined in greater detail here. Unique examples of both high style and vernacular buildings, as well as examples spanning the entirety of the nineteenth century, are represented. Some of the buildings most representative of a given style were demolished decades ago and prove difficult to examine. Generally, the examples chosen are either still extant or have sufficient documentation to warrant inclusion. The buildings with the most ample documentation tend to be of a high architectural style. Vernacular examples have been included where possible.

Secondly, with regard to examples outside of Milwaukee, limited sources make it difficult to identify all of the buildings using Milwaukee brick. While Milwaukee was a voracious

consumer of the brick, many millions were exported to other markets. The buildings examined here appear in nineteenth-century newspapers or National Register of Historic Places nominations with specific mentions of Milwaukee brick use. There are, no doubt, many more examples yet to be located.

Finally, unless specified, it can be difficult to ascertain whether or not “Milwaukee brick” was genuine brick from Milwaukee. There are examples of “fake” Milwaukee brick being used in New York, and firms in Chicago marketing their brick as Milwaukee brick. Additionally, although Milwaukee was by far the largest producer of cream brick, the abundance of smaller yards around the state make it possible that some “Milwaukee brick” buildings are constructed of a similar product produced elsewhere. In general, these smaller yards were not capable of providing brick in such quantities as to qualify them as being suppliers for the buildings examined.

Milwaukee’s Cream City Brick Architecture

Earliest Examples

As mentioned in Chapter Two, William Sivyler laid the earliest Milwaukee brick, used for chimney construction, in 1835. The mason was also responsible for constructing the first brick house in the city, put up in 1836. William, along with brothers Henry and Samuel, operated as the sole brick masons in the city for some time.¹⁵⁸ Henry Sivyler’s obituary stated that there was no lack of work; once the brothers arrived, “they were kept constantly engaged in the seasons

¹⁵⁸ James S. Buck, *Pioneer History of Milwaukee, From 1840 to 1846, Inclusive*, vol. 2 (Milwaukee: Symes, Swain & Co., 1881), 93.

that followed and many of the well-known buildings of the pioneer city were constructed by the Sivyver brothers.”¹⁵⁹

James S. Buck compiled a list of the first ten brick structures constructed in the city in the third volume of his *Pioneer History of Milwaukee*. This list is useful in detailing the pace at which the city’s early brick buildings were erected. Part of this had to do, no doubt, with the rudimentary manufacturing process in place at the first brickyards in the city. The list is given below:

Table 3.1: The first ten brick residences in Milwaukee¹⁶⁰

DATE	DETAILS
1836	1) At the rear of 447 Jackson Street – one-story house erected by William Sivyver in May 1836 with bricks from the Benoni Finch yard.
	2) 14 th Street & Clybourn Street – erected by Benoni Finch at his brickyard, Summer 1836.
1837	3) East corner of Hanover and Walker Streets – small, one-story dwelling erected by Thomas Eggleston.
1838	4) Foot of Wisconsin Avenue – lighthouse and dwelling
	5) 364 Railroad Street – two-story house erected by Aaron Herriman
	6) 461 Jefferson Street – at rear of William Webber house
1839	7) 235 9 th Street – erected by Henry Hubbard
1840	8) 447 Jackson Street – constructed in phases between 1840 and 1842 by William Sivyver.
1841	9) Rear part of 140-142 Mason Street – erected by Dr. E. Porter Eastman
1842	10) Northwest corner of Wisconsin and Jackson Streets – erected by Rev. Lemuel B. Hull, at the time of construction it was the finest house in the city.

¹⁵⁹ "A Pioneer Passes Away," *Milwaukee Sentinel*, 09 September 1902.

¹⁶⁰ *Milwaukee Under the Charter, From 1847 to 1853, Inclusive*, vol. 3 (Milwaukee: Symes, Swain, & Co., 1884), 97-101.



Figure 3.1: Reverend Lemuel B. Hull House as seen in the 1880s¹⁶¹

As noted, the earliest brick structures were quite basic in design. However, by the time Reverend Hull erected his residence, “high style” buildings were becoming more common in Milwaukee. The earliest architectural styles to appear in the city generally reflected the tastes

¹⁶¹ "Lemuel B. Hull Residence, close front view," Milwaukee Historic Photos, Milwaukee Public Library Digital Collections, accessed 15 February, 2015, <http://content.mpl.org/cdm/singleitem/collection/HstoricPho/id/390/rec/1>.

of the newly arrived settlers from New England.¹⁶² The Federal style popular in New England was one of the earliest to appear in Milwaukee, remaining common there through the 1850s. Greek Revival, Italianate and Gothic Revival buildings were also constructed in pre-Civil War Milwaukee, with Cream City brick lending itself well to application of these styles.¹⁶³

Federal Style

The Federal style appears often in early Milwaukee buildings. Although few of these buildings remain, a “considerable number of brick buildings, including dwellings and stores, which show Federal Style characteristics” were built in the city’s earliest neighborhoods.¹⁶⁴ Milwaukee brick was often chosen because it “lent itself admirably to the crisp lines demanded by the [Federal] style.”¹⁶⁵ Milwaukee’s examples were much simpler than those found in the East. Few had flanking pavilions, curving or octagonal bays, or delicate ornamentation.¹⁶⁶

As seen in Figure 3.1, the Reverend Hull House was an example of early Federal style architecture found in Milwaukee. The three-story house featured a four-bay front façade and imposing pediment with cornice return. The two-story front portico had massive square

¹⁶² Milwaukee Department of City Development, *Built In Milwaukee: An Architectural View of the City* (Milwaukee: City of Milwaukee, Department of City Development, 1983), 32. Built in MKE, 32

¹⁶³ Ibid.

¹⁶⁴ Ibid., 33.

¹⁶⁵ Perrin, *Historic Wisconsin Buildings: A Survey of Pioneer Architecture 1835-1870*, 48.

¹⁶⁶ City of Milwaukee, "Historic Designation Study Report - James S. Brown Double House," accessed 02 February, 2015, <http://city.milwaukee.gov/ImageLibrary/Groups/cityHPC/DesignatedReports/vticnf/BrownDoubleHouse.pdf>.



Figure 3.2: James S. Brown Double House following a 2007 restoration¹⁶⁷

columns on the first level with more delicate Doric columns on the second level. The house was described as the first brick residence of consequence in the city.¹⁶⁸ It is no longer standing.

One of the few remaining Federal houses in Milwaukee is the James S. Brown Double House built in the Yankee Hill neighborhood. Constructed of solid brick masonry in 1852, the house was the first on its block, occupying the highest land between the Milwaukee River and Lake Michigan. It features a symmetrical arrangement with rectangular windows, stone lintels, a shallow pitched roof, stepped side parapets, mismatched dormers, and a wood cornice with

¹⁶⁷ David Jones, "James S. Brown Double House," LiveMILWAUKEE.org, accessed 15 February, 2015, http://www.livemilwaukee.org/milwaukee_federal.htm.

¹⁶⁸ Andrew Carpenter Wheeler, *The Chronicles of Milwaukee* (Milwaukee: Jermain & Brightman, 1861), 123.

carved brackets.¹⁶⁹ Originally two separate dwellings, each containing three bays, the building has been connected and now has six bays across the front. Although the house has been heavily altered in its 163-year-old existence, the soft yellow brick is bright and clean, accented by green trim and the white stone lintels. Other notable examples of Federal style Cream City brick buildings in the city include Gipfel Brewery, Layton House, Abel Decker Residences, and Old Cross Keys Hotel.

Greek Revival

Greek Revival residences in the city were often built of the unique Milwaukee cream brick and this style was dominant in the city from 1840 to 1860. The Greek Revival style suited the area's numerous farmhouses, as well as religious buildings. Much like the Federal style buildings in the city, few of these remain within the city.

The Edward Diedrich House (also known as the "Lion House") is one of the few remaining cream brick Greek Revival residences, and one of the more elaborate constructed. Built as a one-story residence in 1855, the stately house has a five-bay front with ornamented center pediment held up by Doric columns. The large rectangular windows are decorated with window hoods, pilasters are located between bays, and the frieze is decorated with triglyphs. The house's nickname was derived from the large lion statues that flank the front steps. Numerous additions have occurred to the house, including the addition of a second-story in 1895.

¹⁶⁹ Milwaukee, "Historic Designation Study Report - James S. Brown Double House".



Figure 3.3: Edward Diederich House with 1895 second-story addition¹⁷⁰

Rundbogenstil

Milwaukee's early Cream City brick churches represented the most notable German influence over the city's architecture. German-born Victor Schulte, one of the first trained architects in the city, constructed three of the city's first Roman Catholic churches, all of which were built in the Rundbogenstil style.¹⁷¹ Rundbogenstil, or round arch style, was a revival type of architecture popular in German-speaking lands. As the name implies, the style is dominated by the use of numerous round arches throughout the facades. These early Schulte designed churches have also been characterized as Zopfstil architecture. This style also originated in

¹⁷⁰ "Edward Diederichs House," Wikimedia Commons, accessed 15 February, 2015, http://commons.wikimedia.org/wiki/File:Edward_Diederichs_House_Apr10.jpg.

¹⁷¹ Megan E. Daniels, *Milwaukee's Early Architecture* (Charleston, SC: Arcadia Publishing, 2010), 14.



Figure 3.4: Old St. Mary's Church¹⁷²

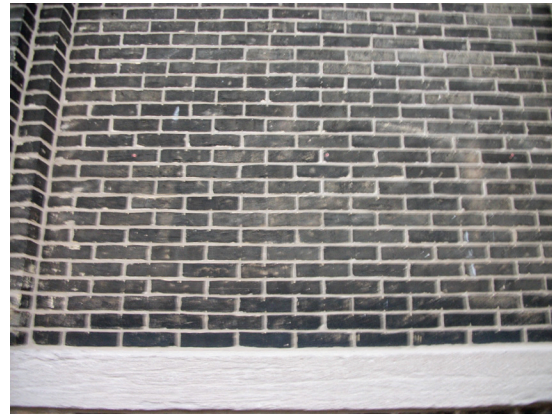


Figure 3.5: Detail of St. Mary's discolored cream-brick¹⁷³

Germany as a “stern response to the frivolous designs of late German Baroque and Rococo of the 18th century.”¹⁷⁴ The style called for a simpler, symmetrical and orderly design. Milwaukee's cream brick worked perfectly with the more astute and simple design the style represented.

Old St. Mary's Church was the first constructed by Schulte. Built in 1846 for the city's first German-speaking Catholic parish, the building was later expanded in 1867. The two-story building has three well-proportioned entrance bays, large round arches, a dentil cornice, and a looming central clock tower. The church is the city's oldest extant example, although years of pollution have caused the yellow cream brick to turn a dark brown. St. John's Cathedral (1847)

¹⁷² "Old St. Mary Church in Milwaukee, Wisconsin," Tang's Photo Memories, accessed 15 February, 2015, <http://tangspphoto.photoshelter.com/image/I00008N5ja85YkfM>.

¹⁷³ Photo by author, December 2014.

¹⁷⁴ Daniels, *Milwaukee's Early Architecture*.

and Holy Trinity Church (1849) also display cream brick in Rundbogenstil. The Leonard Kowalski designed St. Stanislaus Roman Catholic Church, though constructed much later, also shows hallmarks of Rundbogenstil. This 1872 cream brick church was the third Polish congregation in the United States and features limestone trim and two imposing bell-towers at the corners of the front façade. All of these churches represent the overwhelming German influence on the city's early religious architecture.

Gothic Revival

The cream color of Milwaukee brick was also well suited for use for Gothic Revival buildings throughout the city. Andrew Jackson Downing, one of the leading proponents of the movement, advocated for the use "smooth brick, colored after some of the soft neutral tints," in his designs.¹⁷⁵ In his *Cottage Residences*, he further went on to decry the "offensive hue of red brick walls in the country."¹⁷⁶ Downing was well aware of Milwaukee brick, writing of how its use as an ornamental element enlivened the Eustatia House of John Monell in Beacon, New York.¹⁷⁷ Numerous Gothic Revival residences and churches existed around Milwaukee exemplifying the qualities of cream brick use in this style.

The Saint John de Nepomuc Rectory, built in 1859, is an early Gothic Revival religious building. The two-story building has a limestone basement with cream brick above and decorative wood trim. Red-stained brick alternates with the cream brick, providing the building

¹⁷⁵ Andrew Jackson Downing, *Cottage Residences: Or, A Series of Designs for Rural Cottages and Cottage Villas, and Their Gardens and Grounds, Adapted to North America*, 4th ed. (New York: Wiley & Halsted, 1856), 46.

¹⁷⁶ *Ibid.*, 9.

¹⁷⁷ Francis R. Kowsky, "The Architecture of Frederick C. Withers (1828-1901)," *Journal of the Society of Architectural Historians* 35, no. 2 (1976): 90.



Figure 3.6: St. John de Nepomuc Rectory¹⁷⁸

with a Venetian Gothic effect.¹⁷⁹ The front façade has five bays, each with Gothic arches. The second story has gabled dormers across the front, with a larger central dormer. Decorative brickwork follows the ridgeline on the left elevation, with an inset Greek cross constructed of brick.

One of the best residential Gothic Revival examples existing in Milwaukee is the Russell Bennett house, built as a farmhouse on Kinnickinnic Avenue in 1855-56.¹⁸⁰ The cream brick

¹⁷⁸ Bobby Tanzilo, "Gothic Milwaukee: 10 great buildings," OnMilwaukee, accessed 15 February, 2015, <http://onmilwaukee.com/visitors/articles/gothicmilwaukee.html>.

¹⁷⁹ H. Russell Zimmermann, *The Heritage Guidebook: Landmarks and Historical Sites in Southeastern Wisconsin*, 2nd ed. (Milwaukee: H.W. Schwartz, 1989), 117.

¹⁸⁰ Milwaukee Department of City Development, *Built In Milwaukee: An Architectural View of the City* 35.

used in construction was burned at a local yard set up for the construction of the St. Francis Seminary grounds.¹⁸¹ Limestone lintels and sills, polychrome window sashes, eaves, and cornices accented the cream brick walls. The house features a number of gables and characteristic Gothic Revival touches such as Gothic arch windows, and decorative bargeboards and finials.

Italianate

As with the Gothic Revival, Andrew Jackson Downing was an early advocate of the Italian Renaissance Revival, or Italianate style. The earliest Italianate examples appeared in Milwaukee by the early 1850s. The style dominated both residential and commercial structures until the 1870s, coinciding with the rise of industry and commerce in the city. Numerous cream brick commercial blocks in Milwaukee's business district displayed Italianate details. Likewise, many of the city's first mansions were built of cream brick in the Italianate style. Fortunately, owing to the vast number of buildings constructed in this style, many exemplary buildings are still extant and easily examined.

Among the notable early Italianate residences is the Villa Uhrig, constructed in 1851 as a summer residence for St. Louis brewer Franz Joseph Uhrig. A villa Uhrig observed while in Germany influenced the design. The house stood on top of a hill in the center of twenty acres of land and originally included many outbuildings.¹⁸² The main house was roughly square in shape and built of cream brick on a limestone foundation. It has a hipped roof and wooden cupola.

¹⁸¹ Zimmermann, *The Heritage Guidebook: Landmarks and Historical Sites in Southeastern Wisconsin*, 175.

¹⁸² Zimmermann, *Magnificent Milwaukee* (Milwaukee: Milwaukee Public Museum, 1987), 11.



Figure 3.7: Villa Uhrig, with later side addition¹⁸³

Hand-cut scrolls support an overhang, with drop finials and a fascia board between them.¹⁸⁴

Corinthian columns support the porch, and the rounded windows are decorated with elaborate wooden window-hoods.

The James S. Peck House represents one of the city's most intact Cream City brick residences. The house was designed by noted Milwaukee architect Edward Townsend Mix and constructed beginning in 1870. H. Russell Zimmermann noted in *Magnificent Milwaukee* that while there are hundreds of intact Italianate residences in Milwaukee, this one stands out

¹⁸³ "Franz Joseph Uhrig House," Wisconsin Historical Society, accessed 15 February, 2015, <http://www.wisconsinhistory.org/Content.aspx?dsNav=N:4294963828-4294963814&dsNavOnly=N:1159&dsRecordDetails=R:HI16376>.

¹⁸⁴ *Magnificent Milwaukee*, 12.

because of its “elegant proportions, superbly designed details and the finest craftsmanship.”¹⁸⁵

The pressed cream brick stands over a rock-faced stone base. The eaves extend forty inches, decorated by carved wood rope molding. The house has six different window shapes, with a variety of surrounds. Salmon-colored terra cotta and painted moldings are highlighted against the bright cream color of the brick.



Figure 3.8: James S. Peck House¹⁸⁶

There are numerous other notable examples including the Dr. Robert J. Faries Residence (1850), Francis E. McGovern Residence (1852), George W. Peckham Residence (1855), Matthew Keenan House (designed by E.T. Mix, 1860), Robert Patrick Fitzgerald Residence (E.T. Mix,

¹⁸⁵ *Ibid.*, 38.

¹⁸⁶ John December, "Peck House," December.com, accessed 15 February, 2015, <http://www.december.com/places/mke/album/peckhouse.html>.

1874), John Dietrich Inbusch Residence (1874), and Dr. Henry Harrison Button Residence (1875).

The Italianate style is probably best observed in the numerous Milwaukee commercial blocks displaying Italianate features such as overhanging, bracketed eaves and rounded windows. Photographs showing the city in the nineteenth century show block after block of downtown buildings constructed of this style. While urban “renewal” and neglect have greatly diminished the number of these still standing, fine examples are still present in the city.

The John Pritzlaff Hardware Company, built in 1874 with later additions, is representative of this Italianate business block. The four-block complex has a cast-iron storefront with three cream-brick stories above. The building’s motifs include rounded windows with limestone sills and keystones, brick pilasters, corbelled brickwork below the cornice, and a heavy bracketed cornice. Recently restored, the red terracotta sills and trim stand out distinctively against the bright cream-brick. Italianate commercial buildings, including brick-maker J.L. Burnham’s block, are still found throughout many areas of Milwaukee.



Figure 3.9: Pritzlaff Hardware prior to restoration¹⁸⁷



Figure 3.10: Pritzlaff Hardware following restoration¹⁸⁸

¹⁸⁷ "Old Pritzlaff Buildings Reborn as the Life of the Party," Milwaukee Journal Sentinel, accessed 15 February, 2015, <http://www.jsonline.com/multimedia/photos/historic-pritzlaff-buildings-find-new-life-b99118655z1-228044131.html>.

High Victorian Gothic

Cream City brick was particularly suited for use in High Victorian Gothic buildings. The cream brick provided an excellent base pallet on which to pair with a wide variety of materials and colors, providing them a “distinctive luminosity.”¹⁸⁹ Polychromy, pointed arches, and steep gables were all characteristics of these buildings. This style is found in residential, commercial, and institutional use in Milwaukee.

While many examples of this style still stand in the city, the National Soldier’s Home best exemplifies its application in Cream City brick. The overall complex sits on four hundred acres of land and consists of over twenty-five buildings and a National Cemetery, built for veterans following the Civil War. Edward Townsend Mix designed the first five of these buildings, with later contributions from renowned Milwaukee architect Henry C. Koch. The vast majority of the buildings are constructed of Cream City brick, many with unique polychromy. The focal point of the complex, known as “Old Main,” provides the best example of High Victorian Gothic architecture on the campus.

Old Main was designed by E.T. Mix and constructed between 1867 and 1869. The imposing building was designed to house many functions, including dormitories, chapel, dining hall, and administrative offices. It has a four-story main block over a raised basement, with three-story hyphens and four-story end pavilions. A massive six-story tower provides the center focus of the building. A variety of Gothic arches are present on the façade, including the two-story arched entrance. Elaborate brickwork is found throughout the façade, including arches

¹⁸⁸ "Hack Furniture/Pritzlaff Hardware," Urban Milwaukee, accessed 15 February, 2015, http://urbanmilwaukee.com/2010/07/09/cream-city-brick-showcase/dsc_0652/.

¹⁸⁹ Milwaukee Department of City Development, *Built In Milwaukee: An Architectural View of the City* 42.



Figure 3.11: National Soldier's Home, Old Main Building¹⁹⁰



Figure 3.12: Old Main, tower in detail¹⁹¹

¹⁹⁰ Dori Zori, "a.MKE," 88Nine Radio Milwaukee, accessed 15 February, 2015, <http://www.radiomilwaukee.org/amke/amke-national-soldiers-home-tour-app-kohls-cares-gulf-mexico-explosion-and-mcc-72413>.

and heavy corbelling. Polychromy is found throughout the building. The main block of the building is a slight-yellow Milwaukee brick, with a lighter limestone rubble foundation and brown slate Mansard roof. Bright red accents are found in the window sashes and dormers, with light limestone sills throughout. The Mansard roofs found on the center block and hyphens have decorative red, yellow, and green slate accents. The building has been listed on the National Register of Historic Places and as a National Landmark.

Other examples of High Victorian Gothic include the National Historic Landmark designated Dr. Fisk Holbrook Day House (1870), Milwaukee News Building & Milwaukee Abstract Association Building (1879), Harry B. Walker House (1878), Fourth District School (1885), and Trinity Lutheran Church, amongst others.

Second Empire

Further architectural eclecticism hit Milwaukee in the 1860s and lasted into the 1890s. European influences were often seen in these revivalist trends, and Milwaukee brick was often chosen to execute these designs. The residence of banker and financier Alexander Mitchell started as a humble Cream City brick dwelling before gaining substantial additions designed Edward Townend Mix beginning in 1870. Mix designed a sprawling Second Empire estate complete with a ballroom, card room, conservatory, and belvedere. Mansard roofs and a five-story tower were added to the main house, as were numerous wings. Polychrome trim of blue and grey around the windows and dormers are accented against the cream brick masonry. Distinctive painted brackets and scrollwork are also easily discerned against the yellow

¹⁹¹ Tanzilo, "Gothic Milwaukee: 10 great buildings".



Figure 3.13: Alexander Mitchell Mansion circa 1905¹⁹²

background of the house. The style was also used in the construction of some of the city's commercial blocks and finer mansions, although there are few examples remaining in the city. The Mitchell mansion remains the best intact high-style residential example in the city.

Richardsonian Romanesque

A number of Milwaukee's best-known buildings were constructed in the Richardsonian Romanesque style using Cream City brick, usually paired with a stone foundation. Turner Hall (Henry C. Koch, 1882-83) is a massive four-story cream brick block on a limestone foundation, with dark red brick used in belt courses and decorative arches. The Fourth Street School

¹⁹² "Deutscher Club, Milwaukee, Wis.," University of Wisconsin-Madison Libraries, accessed 01 March, 2015, http://search.library.wisc.edu/items/WHO_MkePostcards_201_bib.



Figure 3.14: Turner Hall, designed by Henry C. Koch¹⁹³

(renamed in 1979 the Golda Meir School, after the Israeli Prime Minister who attended there from 1906-1912) was designed by Henry Koch and completed in 1890. The majestic Pfister Hotel (1892-93), designed by Henry C. Koch and Hermann J. Esser, features a three-story limestone base and cream city exterior supplemented with terracotta trim and stained glass windows.¹⁹⁴ The German-English Academy (1890-91), designed by Crane and Barkhausen, was “lavishly decorated with cream-colored brick and terracotta.”¹⁹⁵ Other notable buildings,

¹⁹³ "Turner Hall (Milwaukee, Wisconsin)," Wikipedia, accessed 15 February, 2015, http://en.wikipedia.org/wiki/Turner_Hall_%28Milwaukee,_Wisconsin%29.

¹⁹⁴ Zimmermann, *The Heritage Guidebook: Landmarks and Historical Sites in Southeastern Wisconsin*, 52.

¹⁹⁵ *Ibid.*, 65.

including the city's first skyscraper, the Pabst Building (Solon Spencer Beman, 1891, demolished 1980), and the venerable Pabst Theater (Otta Strack, 1895) were built of Cream City brick.

Even one of Milwaukee's most recognizable and well-loved buildings was constructed of Cream City brick, although it is not immediately obvious. Milwaukee City Hall, designed by Henry C. Koch and constructed in 1893-1895, is in an immaculately decorated eclectic Romanesque style. At 353 feet tall, the building was the tallest in America from its completion until 1899. The exterior is constructed of Berea sandstone, terracotta, and St. Louis red pressed-brick. However, behind the red brick veneer, carrying the weight of the building is Milwaukee brick. The building's National Historic Landmark nomination notes, "The inner backup masonry behind the press brick (as well as the terra cotta and sandstone) is a cream-colored brick generally referred to as Milwaukee Cream City brick. The face brick is tied to the backup brick with a press brick header at every fifth course."¹⁹⁶ Architect Henry Koch designed many buildings in the city using Cream City brick. It is curious why he decided to use St. Louis brick as the exterior material for what is perhaps his greatest design - perhaps as a way to distinguish it from the countless cream brick buildings found throughout the city. Editorials in the city's newspapers commented on this slight towards Milwaukee brick as well.

¹⁹⁶ Quinn Evans Architects, "Milwaukee City Hall National Landmark Nomination," accessed 02 February, 2015, <http://www.nps.gov/nhl/find/statelists/wi/Milwaukee.pdf>.



Figure 3.15: Milwaukee City Hall¹⁹⁷

Queen Anne

Much as with the High Victorian Gothic, Cream City brick was well suited for use in the eclectic Queen Anne style. Popular in the city from the 1880s into the early part of the next century, the style incorporated many different materials with a penchant for exuberant, asymmetrical designs. Modest residential examples were usually constructed of wood in the city, with masonry examples reserved for commercial or high style buildings.

¹⁹⁷ Andy Tucker, "Milwaukee City Hall," Flickr, accessed 01 March, 2015, <http://www.flickr.com/photos/mspdude/3469357399>.

One of the city's grandest Queen Anne buildings constructed of cream-brick was the Edward Townsend Mix designed Industrial Exposition Building (1881, destroyed by fire 1904). The building occupied an entire city-block and featured a massive center dome, numerous arches, dormers, turrets, and finials. Polychrome terracotta, limestone, wood trim, iron and glass complimented the building's brick exterior.



Figure 3.16: Industrial Exposition Building prior to the 1905 fire¹⁹⁸

One of the city's finest cream-brick Queen Anne residences belonged to Schilitz Brewery President Henry Uihlein. The mansion was designed by Henry C. Koch and built in 1882 (demolished 1973). Cream brick is mixed with a stone foundation, red terracotta, spindled woodwork, and decorative shingles. There are numerous window shapes and arches, stone arches, a turret and prominent chimney.

¹⁹⁸ "Exposition Building, three quarter close view from southeast," accessed 15 February, 2015, <http://content.mpl.org/cdm/singleitem/collection/HstoricPho/id/294/rec/12>.

Another representative Queen Anne examples include the “completely original and pure Victorian” mansion of George P. Miller (August Fiedler, 1885).¹⁹⁹ The building includes a variety of materials, including pressed Milwaukee brick, pink quartz, buff terracotta, hammered copper, stained glass, wrought iron, brass, wood, and gray slate.²⁰⁰ The building has an asymmetrical design with a large arched entrance, various dormers, domed turret, and a number of chimneys.

Beaux-Arts

The Beaux-Arts style of architecture gained prominence in Milwaukee following the World’s Columbian Exposition held in neighboring Chicago in 1893. The style was primarily found on institutional buildings, often faced with marble and stone rather than brick. A small number of buildings incorporating Cream City brick are found in the city, however. The Beaux-Arts style represents the last architectural style of note in Milwaukee in the nineteenth century, and thus the last style examined in this section.

Two fine examples of Beaux-Arts residential architecture in the city using Milwaukee brick are the Fred Pabst, Jr. Residence and the George J. Koch Residence, both built in 1897. Both retain a stately, almost institutional, quality. The Pabst residence sits on a limestone foundation with fluted Ionic columns supporting a grand portico done in cream-brick. Edward V. Koch designed the George Koch* Residence of cream brick over a limestone foundation. Two

*Relationship unknown.

¹⁹⁹ Zimmermann, *Magnificent Milwaukee*, 55.

²⁰⁰ Ibid.



Figure 3.17: Frederick Pabst, Jr. Mansion²⁰¹

lion statues flank the stairway, which leads to a Corinthian portico. White columns, gold capitols, red terracotta trim, and limestone trim and cornice contrast with the pressed cream brick. Cream brick was also found in Beaux-Arts examples such as the Layton Art Gallery, Edward C. Wall Rowhouse, and the Lake Lodge and Auditorium.

Industrial Buildings

Numerous factories, warehouses, and industrial buildings were also constructed of Milwaukee brick in the nineteenth century. As the de facto masonry material used for these

²⁰¹ "3112 W. Highland Blvd," Wisconsin Historical Society, accessed 15 February, 2015, <http://www.wisconsinhistory.org/Content.aspx?dsNav=Nrc:id-1079,N:4294963828-4294963814&dsNavOnly=N:1160&dsRecordDetails=R:HI42071>.

buildings, cream brick was ubiquitous in industrial areas of the city, forming a veritable sea of massive cream brick buildings. This is perhaps most evident in the large brewery complexes around the city.

Miller, Best (Pabst), Schlitz, and Blatz Breweries all used cream brick for the construction of their production complexes. The breweries were usually built up over a period of decades, as production increases demanded more space. However, cream brick was used in the construction of virtually all buildings. The Pabst Brewery complex includes twenty-five buildings, many with Rundbogenstil, Italianate, Flemish Revival, or Gothic details built of cream brick between 1870 and 1900.²⁰² Miller Brewery includes many cream brick buildings, with a brewhouse built in Romanesque style with polychrome terracotta and wood trim. Schlitz Brewery's cream brick buildings largely date to the 1880s and 1890s and were built in German Renaissance and Rundbogenstil style, with grand domes, large parapets, stone and terracotta trim. Schlitz often featured their glowing Cream City brick complex on their promotional postcards. Likewise, the Valentin Blatz Brewery's downtown complex dates to the 1890s and included acres of industrial cream brick buildings, many of which remain.

²⁰² City of Milwaukee, "Historic Designation Study Report - Pabst Brewing Company," accessed 02 February, 2015, <http://www.city.milwaukee.gov/ImageLibrary/Groups/cityHPC/DesignatedReports/vticnf/hdpabst.pdf>.

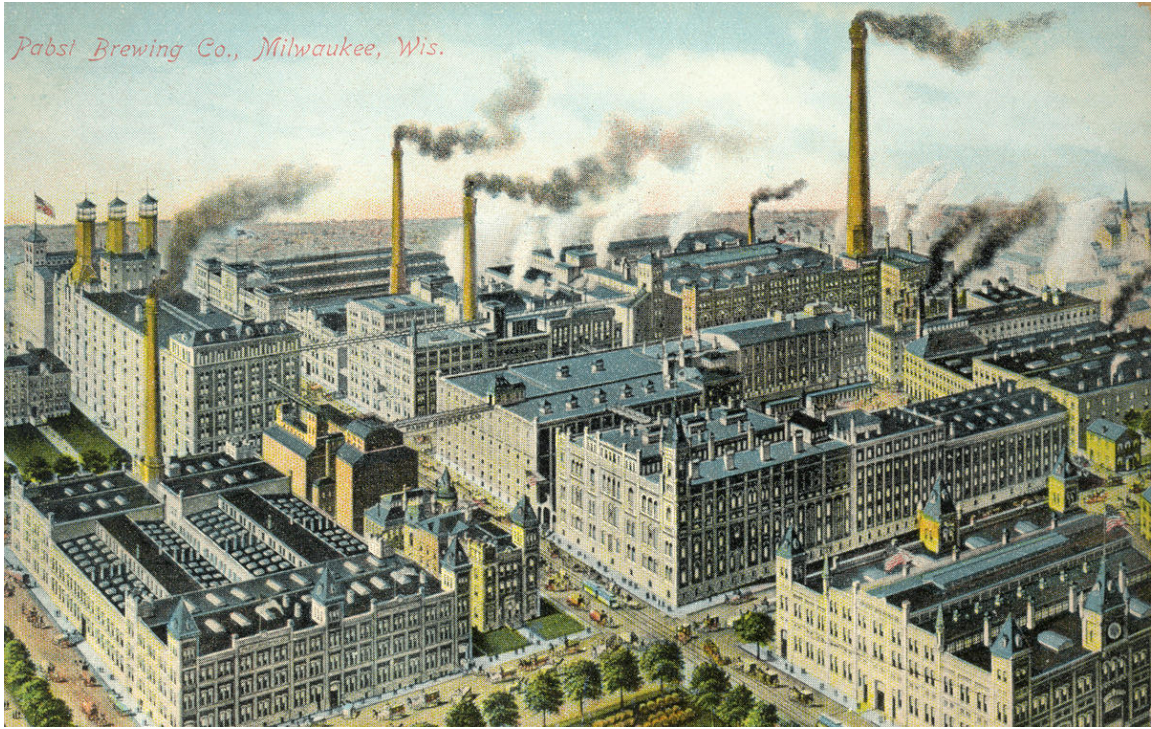


Figure 3.18: Pabst Brewery complex as depicted circa 1900, constructed almost entirely of Cream City brick buildings²⁰³



Figure 3.19: The Pabst complex in 2014 with the rehabilitated brewhouse and unrestored building²⁰⁴

²⁰³ "Pabst Brewery Postcard," Pabst Mansion, accessed 15 February, 2015, <http://www.mbtmag.com/news/2014/04/milwaukee-group-wants-bring-pabst-blue-ribbon-home>.

²⁰⁴ Photo by author, December 2014.

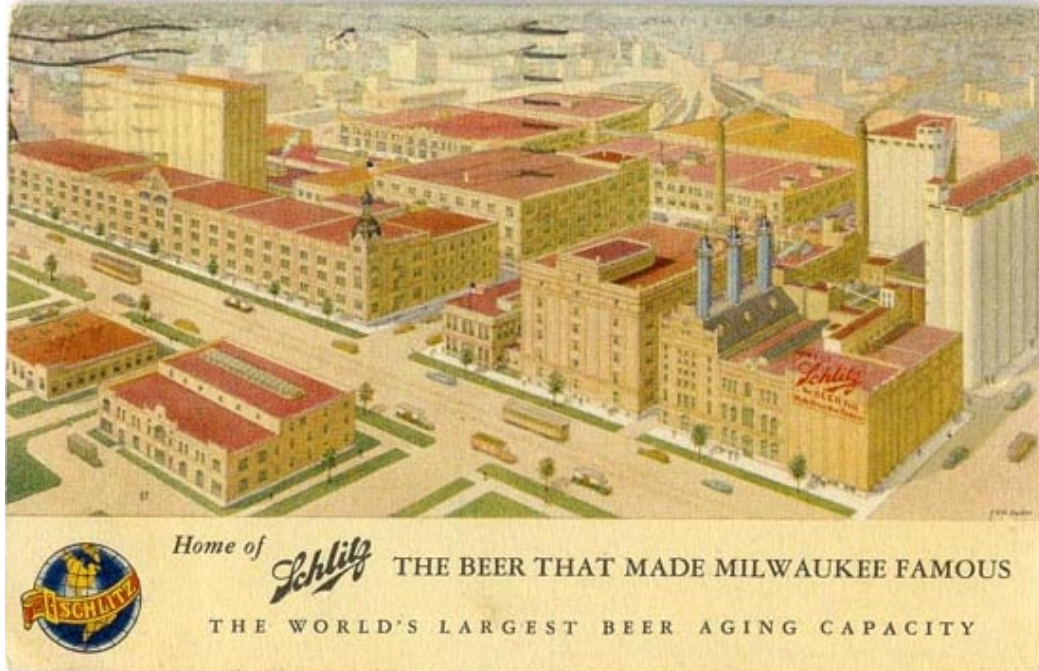


Figure 3.20: Schlitz Brewing postcard from the mid-twentieth century²⁰⁵



Figure 3.21: Miller Brewery Complex, with newer brick buildings evident²⁰⁶

²⁰⁵ "Schlitz Park History," Schlitz Park, accessed 15 February, 2015, <http://www.schlitzpark.com/categories/5-history>.

²⁰⁶ "Miller Brewery," Flickr, accessed 15 February, 2015, <http://www.flickr.com/photos/josepha/15020284715/in/photostream/>.

Utilitarian Use

In addition to its use as a facing material Cream City brick was used extensively in the foundations and chimneys of nineteenth century Milwaukee houses. Because of this, nearly all of the houses built in the city contained Milwaukee brick in some capacity. As Paul Jakubovich noted in his guide to rehabilitating Milwaukee homes, “a typical brick foundation under an older Milwaukee wood frame house is an impressive piece of masonry work being about 14 inches thick and containing more than 18,000 bricks for an average sized 24 by 44-foot house.”²⁰⁷ The bricks are part of the architectural character of the houses and often contrast with the painted wooden sheathing above. This is particularly evident in the so-called “Polish flats” of Milwaukee that have unusually tall basement stories. Unfortunately, the exposed basements on many of these houses have been painted and no longer expose the cream-brick. Cream-brick was used extensively in the construction of chimneys for residences in Milwaukee. Many are distinctively corbelled and visually striking against the roof cladding. Even when no longer functional the cream-brick chimneys contribute to the architectural character of the structures.

The previous examples show the breadth of uses and styles in which Cream City brick was employed in the nineteenth century in Milwaukee. Many other unnamed and unexamined blocks and residences were constructed either wholly or partially of Cream City brick. Despite the ravages of urban renewal, many of these structures remain, tying them to Milwaukee’s Cream City image. The following section examines Milwaukee brick examples found outside of the city.

²⁰⁷ Paul J. Jakubovich, *As Good As New: A Guide to Rehabilitating the Exterior of Your Old Milwaukee House* (Milwaukee: The Department of City Development, 1993), 93.

Cream City Brick Use Outside of Milwaukee

A drive through Southeastern Wisconsin reveals the prevalence of cream brick used in pre-twentieth century architecture. It is easy to locate the early downtown cores in the numerous small towns of the state by finding their cream brick commercial buildings. Similarly, it is common to see the familiar red barns and silos in the rolling landscape, only to come upon the accompanying cream-brick farmhouse when getting closer. Whether or not these buildings are constructed of the famed Milwaukee brick or a like product produced at a small local brickyard is hard to discern. By the 1850s, the railroads were bringing goods, including brick, to many regions throughout the state. As the *Milwaukee Journal* pointed out in 1932, many farmhouses existed throughout Southeastern Wisconsin constructed of Cream City brick. The article noted that area farmers “hailed loads of wheat to this then great wheat market and frequently took a return load of brick from the Burnham yards.”²⁰⁸ This section will examine some of the examples found throughout Wisconsin but will primarily look at known Cream City brick use throughout the United States.

The state capital of Madison, Wisconsin, contains many notable Cream City brick houses. The bricks produced near Madison were a very soft, red variety and their use was superseded after 1854 when a rail connection to Milwaukee allowed for the transport of heavy materials such as Cream City brick.²⁰⁹ The grand Keenan House (August Kutzbock, 1857), an Italianate meets Rundbogenstil with later Second Empire additions, elegantly displays intricate brickwork and dark wood trim. Much like Milwaukee, houses and mansions in a variety of

²⁰⁸ Bill Hooker, "Glimpses of an Earlier Milwaukee," *The Milwaukee Journal*, 23 January 1932, 4.

²⁰⁹ Planning Division City of Madison, "Madison Landmarks," accessed 15 January, 2015, <http://www.cityofmadison.com/planning/landmark/madison%20landmarks.htm>.



Figure 3.22: Keenan House, Madison, Wisconsin²¹⁰

architectural styles were constructed of the brick in Madison. Some of the city's other pre-twentieth century Cream City landmarks include the Nathaniel W. Dean House (1856), Brown House (1863), Bush House (1867), Thompson's Block (1868), Kircher House (1876), and Fess Hotel (1883).

A great number of lighthouses built along Lake Michigan were constructed of Milwaukee's cream brick. The regional headquarters of the United States Lighthouse Board was located in Milwaukee, an important trading port. In part, the board was responsible for the purchase of supplies used for constructing new lighthouses.²¹¹ Because of this, brick for construction was purchased from Milwaukee yards and shipped to locations throughout the

²¹⁰ "The George Keenan House, Madison, WI," *The Picturesque Style: Italianate Architecture*, accessed 15 February, 2015, <http://picturesqueitalianatearchitecture.blogspot.com/2013/05/the-george-keenan-house-madison-wi.html>.

²¹¹ "WAKE UP!," *The Milwaukee Journal*, 19 July 1910.

Great Lakes. Among the lighthouses constructed using Cream City brick are the Grand Traverse Lighthouse (1858), Kenosha Light (1866, Kenosha, Wisconsin), Eagle Bluff Lighthouse (Fish Creek, Wisconsin, 1868), McGulpin Point Light (Straights of Mackinac, Michigan, 1869), Grosse Point Lighthouse (Grosse Point, Illinois, 1874), and Old Mackinac Point Light (Mackinaw City, Michigan, 1892).

Outside of Wisconsin, Chicago provided a market eager to use Milwaukee brick. Already in the 1840s, brick was being sent the ninety miles south for use in Chicago. In 1846, the *Daily Sentinel and Gazette* reported approvingly that Chicago was about to erect buildings of Milwaukee brick, noting that this was sure to start a trend in Chicago.²¹² The following year, the *Chicago Democrat* reported, in a section entitled "IMPORTANT ARRIVAL," that one of the city's best masons had just received ten thousand Milwaukee brick, which "it should be remembered, are of a cream color."²¹³ Other reports from that early period note that both houses and commercial blocks were being constructed of Milwaukee's famed brick. So in demand was Milwaukee brick that Chicagoans began attempting to produce a similar product in the city around that time.²¹⁴ However, they remained importers of Milwaukee brick, with imports topping five hundred fifty thousand in one month alone in 1853.²¹⁵

²¹² "Multiple News Items," *Daily Sentinel and Gazette*, 18 May 1846.

²¹³ "Multiple News Items," *Daily Sentinel and Gazette*, 09 June 1847.

²¹⁴ Julius Ferdinand Feiring, "Some Phases of Chicago's Early Development, 1832-1852" (master's thesis, University of Wisconsin-Madison, 1914), 31.

²¹⁵ H. Russell Zimmermann, "Milwaukee's Cream City Brick," *Historical Messenger of the Milwaukee County Historical Society* 26 (1970): 8.



Figure 3.23: Arcade Building, Riverside, Illinois, following a 2010s restoration²¹⁶

Following the Great Chicago Fire the *Chicago Tribune* chose Milwaukee brick for the front of their new building. Edward Burling and Dan Adler designed the stately five-story building that stood at S. Dearborn and W. Madison Streets until 1901.²¹⁷ Another notable Cream City brick building is the Arcade Building in Riverside, just outside of Chicago. The building was designed by Frederick C. Withers and constructed in 1871. Its cream-brick exterior is enhanced with red brick used in window arches, red terracotta stringcourses, and red terracotta tracery. In 1890, the largest church yet constructed in Chicago, The Church of Our Lady of Sorrows, was erected of Milwaukee brick with brown stone, iron, and terracotta trim.²¹⁸ The Vatican declared the Italian Renaissance building a basilica in 1956.

²¹⁶ "Landmarks Illinois honors Arcade Building owner for restoration," Riverside - Brookfield Landmark, accessed 15 February, 2015, <http://www.rblandmark.com/News/Articles/9-19-2014/Landmarks-Illinois-honors-Arcade-Building-owner-for-restoration/>.

²¹⁷ Frank A. Randall, *History of the Development of Building Construction in Chicago* (Urbana, IL: University of Illinois Press, 1949), 58.

²¹⁸ "The Largest Church in the City," *Daily Inter Ocean* 1890, 5.



Figure 3.24: Grain Belt Brewery, Minneapolis, Minnesota²¹⁹

Perhaps inspired by the beauty of Milwaukee's breweries, brick was exported to Minneapolis for use in the Minneapolis Brewing Company (also known as Grain Belt) Brewery. Construction on the brewery started in 1891 with numerous buildings added for the next twenty years. The more architecturally significant of these were built in the 1890s. The Brew House (1891-92) is a five and six story L-shaped Romanesque building constructed of load-

²¹⁹ "Grain Belt Brewery Renovation," Meyer, Borgman, Johnson, accessed 15 February, 2015, <http://www.mbjeng.com/home/projects/renovation-adaptive-reuse/grain-belt-brewery-renovation>.

bearing Milwaukee brick.²²⁰ The building sits on a stone foundation, with numerous stone arches on the first floor and numerous round arches throughout the façade. There is ornate corbelling throughout the building and a number of blind arches. The roofline contains paired, hipped towers on one end and a large Mansard domed roof with cupola on the other. While this is the most notable building in the complex, the Office (1893), Bottling House (1906), Warehouse (1910), and a number of buildings now demolished were also constructed of Cream City brick.

The brick found its way to other Midwestern cities during the nineteenth century. Dubuque, Iowa's L.D. Randall Block (1857) was constructed with a Milwaukee brick front, and the brick was found as a decorative element in the city's 1st Congregational Church (1856).²²¹ The Academy of the Sacred Heart in St. Louis, Missouri was faced with Milwaukee brick and stone dressings. The Second Empire building was designed by Chicago architect Gurdon P. Randall in 1868 and includes an impressive center tower with cupola, Mansard roofs, and a façade dominated by round arches. The Italianate style Kossuth County Courthouse (1874) in Iowa was faced with Milwaukee brick, as were the Muskegon Michigan Courthouse (1870) and the beautiful Second Empire polychrome Houghton County Courthouse (1886) in Houghton, Michigan. Detroit received Milwaukee brick by 1851, at which point the *Detroit Advertiser* remarked on the beauty and uniformity of the brick.²²² By 1852, Milwaukee brick buildings

²²⁰ Michael Koop, *Minneapolis Brewing Company Historic District* ed. National Register of Historic Places Nomination Form (Washington, D.C.: U.S. Department of the Interior. National Park Service, 1988), 5.

²²¹ James E. Jacobsen, "Architectural and Historical Survey Report - Downtown Dubuque," accessed 15 January, 2015, <http://www.cityofdubuque.org/DocumentCenter/Home/View/2935>.

²²² "Milwaukee Brick," *Milwaukee Daily Sentinel and Gazette*, 17 September 1851.

were constructed in Cleveland. A reporter from Cincinnati wrote after visiting Cleveland that the “quality of brick is only to be obtained at Milwaukee” despite costing more and implored his brethren to build with the Milwaukee product.²²³ Specific examples of buildings in some of these cities have been difficult to locate and it is unclear if they are extant or not.

Bricks made it to New York by the 1850s. One of the earliest complexes mentioned in nineteenth century newspapers is the Institution for the Deaf and Dumb, located in Washington Heights, Manhattan. The Italianate complex was constructed by 1854, the main building of which featured a large center pavilion, towers, and a great dome. *New York Times* reported at the time that “the yellow Milwaukee brick is in favor for heavy buildings, like the Trinity block in Broadway and the new Deaf and Dumb Institution at the foot of One Hundred and Fifty-fifth street, - in both of which places it is employed with good effect.”²²⁴ A later view remarked that the Milwaukee brick both saved the expense of having to paint the building and contrasted agreeably with the granite copings and foundation.²²⁵ The Burnham Brothers provided the 300,000 pressed brick used at a price of twelve dollars per thousand, but costing the contractors a total of twenty-five dollars after shipping considerations.²²⁶ The company also sent a reported 30,000 to Buffalo, New York in 1852.²²⁷ A report from Buffalo in 1860 mentioned these bricks, stating, the “beauty of finish equals anything of the kind in the city,

²²³ Mr. Starbuck, "Milwaukee Brick,," *ibid.*, 02 September 1852.

²²⁴ "The Building Stones," *The New York Times*, 16 November 1854.

²²⁵ Appletons' Journal: A Magazine of General Literature, Volume 2
Library of American civilization

Publisher D. Appleton, 1869, p 393

²²⁶ "Milwaukie Brick," *Cleveland Daily Herald*, 03 October 1853.

²²⁷ "Milwaukee Brick," *Milwaukee Daily Sentinel*, 24 July 1852.



Figure 3.25: New York Institute for the Deaf and Dumb in 1856²²⁸

while the soft, subdued color of the material imparts an appearance which is in pleasing contrast to those built of the *sickly* [emphasis original] red brick of this city.”²²⁹

An example of a later prominent New York City building constructed of Cream City brick was the James W. Wilson designed, Beaux-Arts style, Manhattan Criminal Courts Building (1894). The six-story structure has a granite-faced basement level with Milwaukee brick above and brownstone and terracotta trim. It has heavily ornamented pediments and numerous round-arched and flat-arched windows.

An example outside of New York City was found in Utica, New York. The Utica City Hall was an Italianate building designed by Richard Upjohn and constructed in 1853-54. The building

²²⁸ *New York Institution for the Instruction of the Deaf & Dumb*, (New York, NY: The Fanwood Press, 1918).

²²⁹ "A Letter From Buffalo," *Milwaukee Daily Sentinel*, 16 January 1860.



Figure 3.26: Levi Leiter Mansion during construction in 1893²³⁰

had a five-story corner tower with a four-faced clock and upper triple-arched arcade. The rest of the brick exterior consisted of arched windows, brick belt courses, and overhanging eaves. The building was demolished in 1968.²³¹

Other examples located include The Orchard, a house designed in 1873 for Col. George Fearing of Newport, Rhode Island, by George Champlin Mason & Son. At the time of its completion, the local press noted that the mansion was “the only new house in the city built of Milwaukee brick.”²³² The Chandler House (1890) was the first to introduce Milwaukee brick to

²³⁰ "What Once Was," TheInTowner, accessed 15 February, 2015, <http://intowner.com/2013/09/18/parvenus-and-buccaneers-the-leiters-of-dupont-circle/>.

²³¹ "Landmarks," Oneida County Historical Society, accessed 15 January, 2015, <http://www.oneidacountyhistory.org/landmarks/landmarks.asp>.

²³² James L. Yarnall, *Newport Through Its Architecture: A History of Styles From Postmedieval to Postmodern* (Newport, RI: Salve Regina University Press, 2005), 124.

the Nation's capital. A writer for the *New York Sun* wrote, "the effect of an immense house built of this material in the midst of the piles of red brick which abound on K and Sixteenth Streets will no doubt be quite startling."²³³ The Levi Leiter Mansion (1893) in Washington, D.C., a grand Beaux-Arts mansion, was faced with 150,000 selected Milwaukee brick. Upon completion, a report called it out as being one of the most beautiful houses in the city.²³⁴ The Frank Smith House (1893) in Wayne, Pennsylvania had a Queen Anne style that mixed gray-blue stone with yellow shingles, green trim, and Milwaukee brick.²³⁵ An 1892 article on the brick industry noted that it had found a market in New Orleans, Connecticut, and Dakota but that as much as ninety percent was used locally.²³⁶

Milwaukee's famed brick also made it to overseas markets. In June 1859, the *M.S. Scott* left port in Milwaukee bound for Hamburg, Germany. Among the cargo items being sent to the Mayor of Hamburg were samples of Milwaukee's best products including lager beer and Milwaukee brick from the Burnham yards.²³⁷ It is unclear if or when other shipments of brick were sent overseas, however various sources mention the use of Milwaukee brick in German cathedrals and other European buildings.²³⁸

All of the Cream City brick usage, both within Wisconsin and abroad, helped to spread the glowing reputation for both the brick and the city that produced it. As Milwaukee grew, descriptions of the city's bright appearance spread throughout the country. By the late-1840s

²³³ "Mrs. Chandler's New Home," *Daily Inter Ocean*, 05 June 1890.

²³⁴ "Leiter House," *San Francisco Call*, 05 March 1893.

²³⁵ "A Residence at Wayne, Delaware Co., PA," *Scientific American - Architects and Builders Edition* 1893, 46.

²³⁶ "A Year's Business," *The Milwaukee Sentinel*, 02 January 1889, 6.

²³⁷ "The City. Sailing of the M.S. Scott for Hamburg," *Milwaukee Daily Sentinel*, 03 June 1859.

²³⁸ Jakubovich, *As Good As New: A Guide to Rehabilitating the Exterior of Your Old Milwaukee House*, 73.

Milwaukee was already known as the “City of Bricks,” and later by a number of other brick related names such as “Cream City by the Lakes.” The next chapter examines the ways that brick helped to bring national attention to Milwaukee and produce an identity for the city in the nineteenth century.

CHAPTER 4: THE LEGACY OF CREAM CITY BRICK

Milwaukee brick provided the city with more than just a material to be used in the construction of houses and businesses. The brick supplied the city with its first, and in many ways most lasting, identity. Long before the German lager began flowing, the city shipped off record wheat harvests, or the industrial centers were churning out manufactured goods, the cream-colored brick brought renown to the city. The brick piqued the interest of those who both visited and resided in the city and brought notice to it. Already by the time Milwaukee incorporated in 1846, the city's reputation as the "city of bricks" was being noticed. The ubiquitous cream-brick earned the city titles such as the "Fair City of the West," "Cream White City of the Unsalted Seas," and "Cream City of the Lakes." By the 1860s Milwaukee settled upon its most recognized moniker as the "Cream City." Numerous social groups and businesses branded themselves with the Cream City name, firmly associating themselves with the city of Milwaukee.

This chapter examines the ways Milwaukee's identity was tied to its brick. This story is largely told through firsthand accounts written for nineteenth century newspapers, magazines, and travel accounts. Milwaukee's newspapers, in particular, often reprinted articles recounting visitors' experiences and impressions of Milwaukee. These provide a practical account of the prevailing view of how Milwaukee was seen nationally. No matter how brief, these articles invariably describe the color or use of Milwaukee brick. The writing at times is self-aggrandizing or self-promoting, but it nonetheless reveals how the city promoted itself and how others

observed it. The first part of this chapter is divided into two distinct, yet connected, narratives tying Milwaukee's identity with cream-brick – the reputation of the brick itself and the appearance of Milwaukee because its of cream-brick use. The final section of the chapter more closely examines the city's most lasting nickname, Cream City. This name has transcended others as the most lasting moniker for the city. The origins of the name will be investigated, as will the ways the name was appropriated for numerous other purposes, becoming in effect the nickname for Milwaukee.

Milwaukee Brick

As examined in the previous chapters, Milwaukee brick production and use rose markedly in the 1840s. The decade provided the earliest accounts of the brick's use and budding reputation abroad. By the end of the 1840s, the brick's use was so noted that Milwaukee had gained its first significant nickname as "the city of brick." This section tells the story of how the brick's reputation developed locally and abroad. Arrival of the brick in other markets was often accompanied with excitement and glowing reviews of the product. At a time when the city was just developing and little else was known of the small town along the shores of Lake Michigan, these mentions helped to spread the name of the city throughout the United States. The larger context of how Milwaukee itself was viewed in light of the brick will be examined in detail in the next section.

MILWAUKEE BRICK.—Milwaukee brick, for the fronts of buildings, are just now the fashion here, and their Quaker hue is certainly very becoming. We noticed a day or two ago two large double houses on Michigan avenue just up, with drab fronts, and a large pile of brick, alongside of a new foundation indicates that another house is to be fronted in like manner. We also noticed yesterday a schooner with a cargo of this article unloading at our wharves. We almost wish we had an interest in a Milwaukee brick-yard.—*Chicago Tribune.*

Figure 4.1: Newspaper article on Milwaukee brick, typical of the late-1840s²³⁹

The first mentions about the qualities of the brick appeared in print in Milwaukee as early as 1845, at a time when only a handful of brick buildings were yet constructed. Of the new United States Hotel, the *Sentinel* wrote it would be “built of the best Milwaukie brick (and there is no *better* anywhere).”²⁴⁰ Upon the brick’s use in Chicago, the Milwaukee paper noted, “the peculiar color and excellent texture of this material cannot fail to bring it into general favor along the Lake shore.”²⁴¹ The sentiment soon spread beyond Milwaukee. Further west in Wisconsin, the *Watertown Chronicle* wrote of the brick in 1847, “The Milwaukee brick are very deservedly winning the public favor abroad, as well as at home. They are already exported in considerable numbers to different towns on the lake, and this trade must increase as the qualities of the article become better known.”²⁴²

²³⁹ "Multiple News Items," *Daily Sentinel and Gazette*, 19 May 1848.

²⁴⁰ "The United States Hotel," *Milwaukie Daily Sentinel*, 20 October 1845.

²⁴¹ "Multiple News Items," *Daily Sentinel and Gazette*, 18 May 1846.

²⁴² "Multiple News Items," *Watertown Chronicle*, 07 July 1847.

Milwaukee's southern neighbor already knew of their qualities by this time. Following the brick's arrival and use in Chicago, the *Prairie Farmer* noted in 1847 that the brick were "by far the most beautiful we have ever seen. They are so even that at a very little distance they seem as perfect as if made in a cabinet shop. ... Their color is a uniform cream, rather dark, but which cannot be improved by paint."²⁴³ It is of note to point out that rail service between the two cities did not exist for the first number of years that the brick was imported there. The brick's demand was such that that they were sent by boat from Milwaukee at considerable cost.

Chicago and Milwaukee were also involved in two incidents that served as the opening volleys of what escalated into their brick war of the 1890s. As briefly mentioned in Chapter Three, Chicago began to produce their own local product by the early 1850s, a light brick that tended towards pink rather than cream or yellow. When the *Chicago Democrat* reported in 1852 that the brick produced there was the same color and a *better* quality than Milwaukee brick, the Milwaukee paper retorted, "they certainly do not exceed, or even equal [Milwaukee brick] in quality."²⁴⁴ Chicago later backed off of this claim, stating, "Our Milwaukee friends, it must be acknowledged, are great on brick. They manufacture one of the best articles in the States, and are now supplying our builders freely."²⁴⁵ That same year, there was a reported "new kind of brick" called "Chicago brick," being imported heavily in New York. The news article on the brick praised their beautiful cream color and went on to describe how the bricks were manufactured in Milwaukee, sent to Chicago, and then forwarded on to New York by rail. It is

²⁴³ *Milwaukie Brick*, vol. 7, *Prairie Farmer* (Chicago: Prairie Farmer Publishing Company, 1847), 231.

²⁴⁴ "Chicago Brick - Important Discovery," *Milwaukee Daily Sentinel*, 07 June 1852.

²⁴⁵ "Milwaukee Brick - Chicago Democrat," *Milwaukee Daily Sentinel*, 18 June 1853.

unclear how long Chicago attempted to market Milwaukee brick as their own; however, as the reputation of proper Milwaukee brick spread, it is unlikely they could have kept up the charade for long.

Other early praise for the brick from around the Midwest included a glowing review from Cleveland in 1847. The Cleveland paper's account of the "infant city of the territory" devoted the longest paragraph to Milwaukee's famed brick. In part, it read:

The brick made at Milwaukee are superior to any other in the West, if not the Union, and give freshness of appearance and uniformity of taste to every part of the city...the contrast is exceedingly favorable to the eye which has been accustomed to the garish, fashionable red of most cities. ... We think Clevelanders, who admire really fine fronts, would do well to import Milwaukee brick for their construction.²⁴⁶

Those Clevelanders must have listened. By 1852, the *Cleveland Herald* wrote of being "pleased to note that [Milwaukee brick] are about to be introduced to the Forest City" with 32,000 of the best bricks arriving in August of that year.²⁴⁷ A visitor from Cincinnati wrote about those first cream-brick buildings in Cleveland:

[The brick] presents an appearance equal to the finest marble, it being of a cream-color, and I should judge, more capable of withstanding frost than the common brick. This quality of brick is only to be obtained at Milwaukie, and although the cost of transportation is double that of the common brick, it is greatly cheaper than the stone fronts would be, and much handsomer.²⁴⁸

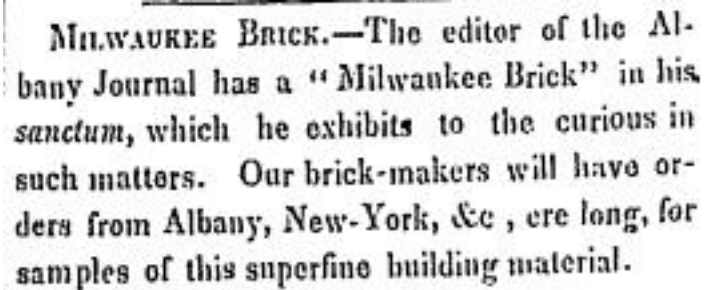
By 1860, the *Cleveland Morning Leader* noted, "Milwaukee brick and Milwaukee lager beer enjoy a broad fame – the only difficulty being that many of the citizens from too freely

²⁴⁶ "Editorial Correspondence," *Daily Sentinel and Gazette*, 22 July 1847.

²⁴⁷ "Milwaukie Brick," *Cleveland Herald*, 03 February 1852.

²⁴⁸ "Dr. Palte's Block—College," *Cleveland Herald*, 28 August 1852.

imbibing of the latter fall into the singular habit of carrying several of the latter *in their hats* [emphasis original]. This is probably owing to the ‘force of circumstances.’”²⁴⁹



MILWAUKEE BRICK.—The editor of the Albany Journal has a “Milwaukee Brick” in his *sanctum*, which he exhibits to the curious in such matters. Our brick-makers will have orders from Albany, New-York, &c , ere long, for samples of this superfine building material.

Figure 4.2: Newspaper article describing Milwaukee brick on display in Albany, New York²⁵⁰

Knowledge of the brick had already spread back East before the close of the 1840s. In 1847, an editor of the *Albany Journal* in New York kept a Milwaukee brick on his desk to display to curious visitors.²⁵¹ This prompted the *Sentinel* in Milwaukee to speculate that numerous orders from Albany would be forthcoming. The brick had already been used in a number of buildings in the East by the time the *New York Times* reported about, “How Milwaukee Grows,” in 1855. They wrote, “Milwaukee brick (much used in the East, and somewhat so here in New York, for public buildings,) is a large business – upwards of three millions and a half having been exported last year. And this is a story that shows better every year.”²⁵² The fact that many Easterners were accustomed to red brick used for houses and businesses may have led to some of the early notoriety for the product. The cream bricks were so unusual that their appearance

²⁴⁹ “Wisconsin Correspondence,” *Cleveland Morning Leader*, 18 August 1860.

²⁵⁰ “Multiple News Items,” *Daily Sentinel and Gazette*, 11 August 1847.

²⁵¹ *Ibid.*

²⁵² “How Milwaukee Grows,” *New York Daily Times*, 14 April 1855.

often elicited comment. This could help explain the vast number of articles written specifically about the “unusual” brick in the earliest days of its use.²⁵³

Another case of imposter Milwaukee brick appeared in New York in the 1850s. In anticipation of Milwaukee brick being sent to New York for use in the Deaf and Dumb Asylum in 1853, the *New York Evening Mirror* wrote of excitement for arrival of “the handsomest and the best article of this kind in the universe.” But, the paper wanted real Milwaukee brick, “and not such wretched libels upon their beautiful, clear and cream-colored brick as may be seen in the Trinity Buildings – brick which never came from Milwaukee any more than we came from the moon.”²⁵⁴ The Milwaukee papers later wrote that the offending products were Buffalo made and sold as Milwaukee brick.²⁵⁵

In addition to the praise from abroad, Milwaukee remained innately proud of their famed export. The first full-length history of Milwaukee, *The Chronicles of Milwaukee*, appeared in 1861. In it a section was dedicated to Milwaukee’s brick, stating, “Milwaukee has long been celebrated for the beauty and superiority of its bricks, which are of a light cream or buff color, admirably adapted to the ornate modern architecture of cities, as being more pleasing to the eye and in reality more durable than the red bricks of the eastern kilns.” He concluded, “The esteem in which Milwaukee bricks are held, is evident from the fact that orders from New York and other eastern cities, as well as Chicago, have been filled here since the opening of the works, and several of the finest buildings in New York and other cities are constructed of this

²⁵³ "A Year's Business," *The Milwaukee Sentinel*, 02 January 1889, 6.

²⁵⁴ "Milwaukee Brick," *Milwaukee Daily Sentinel*, 14 September 1853.

²⁵⁵ "Multiple News Items," *Milwaukee Daily Sentinel*, 19 June 1854.

material. Indeed, we believe, in one or two instances Milwaukee bricks have been sent to Europe.”²⁵⁶

That same year, the *Wisconsin Farmer and Northwestern Cultivator* reported on the state of brick-making in Milwaukee, noting “The manufacture of Brick is carried on to a greater extent, probably, than in any other city in the whole county. ... When finished they have a peculiar creamy tint, almost inimitable by paint, which has won for Milwaukee the title of ‘Fair White City,’ and even secured their importation at a large cost for transportation, into several cities East and West.”²⁵⁷

The brick was also known in the Far West and able to be sent there after completion of the transcontinental railroads. In 1874, the San Francisco *Daily Evening Bulletin* wrote of the demand for brick and a need to import brick. They wondered if it would not pay to import Milwaukee brick, which were “very fine looking, and eminently adapted to this dusty city.”²⁵⁸ In 1880, a visitor from San Francisco wrote of visiting Milwaukee to try the beer and see the brick, the latter of which he pointed out were the best in the world. Because of the brick, “the architecture of the city is grand and imposing; and, viewed from almost any near point of approach, is attractive,”²⁵⁹ The *San Francisco Morning Call* reported on a mansion faced with Milwaukee brick, noting, “The effect of these bricks is that of marble, or rather of a delicate Ivory, and the house is more beautiful than any marble palace [the reporter had] ever seen.”²⁶⁰

²⁵⁶ Andrew Carpenter Wheeler, *The Chronicles of Milwaukee* (Milwaukee: Jermain & Brightman, 1861), 296-97.

²⁵⁷ *The Wisconsin Farmer, and North-Western Cultivator*, vol. 8 (Madison, WI: J.W. Hoyt & Co., 1861), 234.

²⁵⁸ "Merchandise Market," *San Francisco Daily Evening Bulletin*, 04 November 1874.

²⁵⁹ "A Thrifty Western City," *San Francisco Evening Bulletin*, 13 October 1880.

²⁶⁰ *San Francisco Call*, Volume 73, Number 95, 5 March 1893

As the brick became in common use throughout the states, some commentators viewed its use as a prerequisite for becoming a “proper city.” After visiting Springfield, Illinois, one reporter noted that the “principal deficiency” observed in the town was “the absence of Milwaukee brick for private residences,” with residents of the town declaring that obtaining the brick was “essential to a well conducted city.”²⁶¹

In one of the more interesting anecdotes, thinking of the brick as the backbones of the city is not an entirely unfounded thought. One of the city’s earliest cemeteries was located on land George Burnham later purchased for a brickyard on the south side of the Menomonee Valley.²⁶² While many of the bodies were later moved to Forest Home Cemetery, it appears not all of them made the journey. An 1881 article in the *Sentinel* noted, “George Burnham’s brick-makers were again exhuming bones in the old cemetery grounds they are now converting into building material. They have doubtless ground, and baked the dust of many of the pioneer citizens who were laid to rest in that cemetery.”²⁶³ This was confirmed a few years later, when a well-known builder in Milwaukee came out in the paper saying, “Many of the bricks in some of the finest buildings in the city are partly composed of human bones. ... I have actually seen small pieces of bone pressed into these bricks.”²⁶⁴

²⁶¹ "From Illinois," *Milwaukee Sentinel*, 07 July 1871.

²⁶² James S. Buck, *Pioneer History of Milwaukee, From the First American Settlement in 1833, to 1841, Revised Edition* (Milwaukee: Swain & Tate, 1890), 87.

²⁶³ "Local Brevities," *Milwaukee Daily Sentinel*, 28 July 1881.

²⁶⁴ "Bones in Bricks," *Milwaukee Daily Sentinel*, 20 June 1886.

Milwaukee to a Stranger

It was not just the brick that was gaining praise throughout the country. As the Midwest and later the West were opened up through settlement and the establishment of railroads, visitors from throughout the country traveled to or through Milwaukee in the nineteenth century. Among these visitors were correspondents for newspapers, who provided accounts of their travels and experiences for the readers back home. Many of these accounts were reprinted in the Milwaukee papers, providing an account of how the city was viewed by outsiders. These accounts are often full of praise for the “city of bricks” and describe how the light appearance of the brick produces a clean and healthy looking city. It is interesting to note just how quickly Milwaukee became associated with brick and how quickly this association provided an identity for the city.

In an apt preview of things to come, the *Milwaukee Daily Sentinel* as early as 1845 described the brick, noting “the richness of color, durability and the neatness of manufacture elicits the admiration of all visitors.”²⁶⁵ This was certainly true of a visitor from Watertown, some fifty miles to the west of Milwaukee, who visited in 1848. In the *Watertown Chronicle*, he wrote of Milwaukee, “For a city of her age, Milwaukee contains more handsome and substantial buildings than any in the country. The ‘city of brick,’ brick is making the city. In every direction in which the eye is turned, scarcely any thing is to be seen save brick piled upon brick, while under foot there is ‘nothing else’ than brick.”²⁶⁶

This sentiment was excelled in an account of Milwaukee in the 1840s found in the Wisconsin State Archives and later reprinted in *The Clay Worker*. The article provides a striking

²⁶⁵ "The Nebraska House," *Milwaukee Daily Sentinel*, 06 August 1845.

²⁶⁶ Watertown Chronicle, "Milwaukee," *Milwaukee Sentinel and Gazette*, 29 December 1848.

account of just how prevalent the brick was and how brick provided a hearty discussion in the town:

We were much surprised, also pleased, to see many thousands of these articles of every size, shape and dimension laying in piles at every corner ready to “go up,” and stretching their slow length by what are to be sidewalks, ready to “go down.” There are carts and wagons labeled “brick,” which haul brick and nothing but brick. Men who have nothing to do or say about brick are not to be found in the Queen City. Do you see two or more men or boys, women or girls engaged in conversation – the subject is “brick.” If anybody is trading, buying or selling, the commodity is “brick.” Go where you will, you see nothing, hear nothing, feel nothing but “brick, “brick,” “brick.”²⁶⁷



Figure 4.3: Milwaukee in the late 1860s, when older wooden-framed structures were being replaced with brick buildings²⁶⁸

²⁶⁷ *The Clay-Worker*, vol. 68 (Indianapolis: T.A. Randall & Co., 1917), 529.

²⁶⁸ "Yesterday's Milwaukee, Market Square, Late 1860s," *Urban Milwaukee*, accessed 17 February, 2015, <http://urbanmilwaukee.com/2014/11/19/yesterdays-milwaukee-market-square-late-1860s/>.

A common topic of conversation with regards to Milwaukee was the light and clean appearance of the city, on account of their brick architecture. The *Chicago Tribune* wrote in 1848 of Milwaukee brick buildings being in fashion there, with their “Quaker hue” very becoming, “we almost wish we had an interest in a Milwaukee brick-yard,” the review concluded.²⁶⁹ Captain Willard Glazer echoed this thought nearly forty years later in his 1886 book, *Peculiarities of American Cities*. In the chapter on Milwaukee, he wrote of Milwaukee’s nickname as the “Cream City of the Lakes,” and added, “[The brick] gives to the streets a peculiar light and cheerful aspect. The whole architectural appearance of the city is one of primness rather than of grandeur, which might not inappropriately suggest for it the name of the “Quaker City of the West.””²⁷⁰

There appeared a marked difference in the Milwaukee of old and the new, brick-laden town. Having not been to Milwaukee since 1836, surveyor and editor J. Ambrose Wright wrote in 1849 about the differences he observed. The early Milwaukee, he noted, was filled with “sundry half-finished buildings” and “very dirty and whiskey perfumed taverns,” while the Milwaukee of 1849 he called “a finer place to look at than our own metropolis [Chicago].”²⁷¹ He went on, “Milwaukie presents a fine appearance as a new town, from the fact that so many of her buildings are constructed of brick. These have been often described. They are of a dull drab color, very hard and perfect in make, and have a softened and soothing effect to the eye. That

²⁶⁹ "Multiple News Items."

²⁷⁰ Willard W. Glazier, *Peculiarities of American Cities* (Philadelphia: Hubbard Bros., 1886), 225.

²⁷¹ Bayrd Still, "Milwaukee in 1836 and 1849: A Contemporary Description," *The Wisconsin Magazine of History* 53, no. 4 (1970): 295.

fierce, fiery glare, enough to give the beholder a fever in a hot day, common to brick buildings, is wanting."²⁷²

The praise for the appearance of the city continued on, often with similar compliments. The 1852 article, "Milwaukee as Judged by a Stranger," said of the city, "One of the most striking features in the appearance of Milwaukee is the color of the brick. All the buildings of this material are of a light yellow or cream color, which gives the streets a cheerful aspect, quite different and far more pleasing to the eye than the red brick so common in other cities."²⁷³ The *Detroit Advertiser* agreed in 1853, writing, "The fine cream colored brick so extensively manufactured here give to the structures built with them an appearance of cleanliness and solidity that no traveler can fail to admire."²⁷⁴

This thought continued to prevail as the city continued to build with their cream-brick. The *Sheboygan Chronicle* in 1853 introduced the city to readers who may not have ever been there, "The general appearance of Milwaukee is quite prepossessing. The buildings, both public and private, are built of that beautiful cream colored brick, which in our own 'Gotham' are so highly prized both for their beauty and their superior quality."²⁷⁵ In 1856, a visitor from Buffalo, New York described the "substantial beauty" of Milwaukee, adding, "Her cream-colored brick, the envy of the world, give her a unique and very attractive appearance."²⁷⁶ *Frank Leslie's Illustrated Newspaper*, based in New York City, did a feature on Milwaukee in 1856. The paper noted how the city had been "poetically baptized the Fair White City" because of the brick,

²⁷² Ibid., 295-96.

²⁷³ "Milwaukee as Judged By a Stranger," *Milwaukee Daily Sentinel*, 15 September 1852.

²⁷⁴ Correspondence of the *Detroit Advertiser*, "Milwaukee to a Stranger," *ibid.*, 15 March 1853.

²⁷⁵ "Milwaukee to a Stranger.," *ibid.*, 13 December.

²⁷⁶ "Milwaukee, by a Stranger," *Milwaukee Daily Sentinel*, 18 August 1856.



Figure 4.4: Downtown Milwaukee circa 1867 showing numerous Cream City brick commercial buildings²⁷⁷

adding, "Built of a cream-colored brick (for which Milwaukee has attained so great a celebrity), and containing for so young a city a marvelous number of fine buildings, it is not at all surprising that its attractiveness impresses a stranger favorably."²⁷⁸ A traveler from St. Louis wrote of his

²⁷⁷ "Sherman's Photographic Gallery, 1867," Urban Milwaukee, accessed 17 February, 2015, <http://urbanmilwaukee.com/2014/05/20/yesterdays-milwaukee-shermans-photographic-gallery-1867/>

²⁷⁸ "Milwaukee, Queen City of the Lakes," *Frank Leslie's Illustrated Newspaper* 21 May 1859.

time there, "It is a beautiful city. ... It is built principally of the well-known Milwaukee brick, cream colored. A traveler for pleasure may well spend a few days there."²⁷⁹

Milwaukee had in fact become a well-known destination and would remain so through the end of the century. Many wealthy Chicagoans summered "up north," while the mineral springs in Waukesha, just to the west of Milwaukee, also attracted numerous visitors to the area. An 1873 pamphlet, *Guide to Summer Resorts in Wisconsin, Minnesota, Michigan*, wrote of vacationing in Milwaukee:

The stranger who visits Milwaukee is at once struck by its neat and clean appearance. This is due to the care taken in keeping the streets in excellent order but largely, also, to the cream-colored brick, widely known as "Milwaukee brick," of which the buildings are almost exclusively constructed. These facts together with the width of the streets, give the place a most charming and delightful look, affording a pleasing variation to the monotonous rows of glaring red bricks met with in the large eastern cities.²⁸⁰

Construction with Milwaukee brick was so common and desired that buildings constructed of other materials became a topic for public discourse in the city. In 1869, a new courthouse faced with stone was proposed, which prompted an immediate backlash. Prominent businessman and politician, Edward D. Holton, wrote of being appalled that a building not built of cream-brick was being erected. "I beg to take this opportunity to enter my protest as one tax-payer to having any public building built in the city and county from any other material than that which the Beneficent Creator has given us at our door in such profusion and excellence. ... Dr. Lapham* demonstrated, twenty years ago, that the Milwaukee

* Increase A. Lapham was one of Milwaukee's earliest residents and a well-known naturalist, surveyor and scientist.

²⁷⁹ "The Great Northwest," *St. Louis Globe-Democrat*, 20 July 1880.

²⁸⁰ *Guide to summer resorts in Wisconsin, Minnesota, Michigan, Etc., Etc.*, (Chicago: Rand, McNally & co., 1873), 8.



Figure 4.5: Milwaukee circa 1875 with the second courthouse and St. Johns Cathedral in the background²⁸¹

²⁸¹ "Yesterday's Milwaukee, East Town and Second Courthouse, 1875," Urban Milwaukee, accessed 17 February, 2015, <http://urbanmilwaukee.com/2014/12/17/yesterdays-milwaukee-east-town-and-second-courthouse-1875/>.

brick was equal in its quality to endure the ravages of time to the best marble in the world."²⁸²
The courthouse was constructed of the stone, but not without further wrangling in the city's papers.

These accounts provide just a sample of the material written about Milwaukee and its brick in the nineteenth century. They help put into context how the developing city was seen at the time they were written. It is striking to note just how quickly the city developed its reputation for brick and how long that quality of the city was the subject of notice. A cream-colored city was such an anomaly as to provide fodder for those visiting and must have been an attractant in bringing people to the city.

Cream City

Milwaukee's first city nicknames referenced the brick produced there and also the appearance of the city. This seems logical, as the brick provided both one of the earliest and most recognizable industries. Before the numerous breweries helped create Brew City, there was Cream City. Yet, arrival at the Cream City name came after a number of other brick-related nicknames were bestowed upon the city.

Milwaukee was commonly referred to at the "City of Bricks" as early as the 1840s. This name appeared in both local and national print with reference to the city. Milwaukee picked up the additional nicknames by the mid-1850s, such as the "Fair White City." This name appears in the *Milwaukee Daily Sentinel* as early as July 1857 and in other city newspapers into the 1890s. Eastern newspapers used the "Fair White City" name as early as 1860. The nickname fell out of

²⁸² "The New Court House," *Milwaukee Daily Sentinel*, 07 January 1869.



Figure 4.6: Contemporary view of Walker's Point Historic District, Milwaukee²⁸³



Figure 4.7: Warehouse district in Walker's Point²⁸⁴

²⁸³ "Walker's Point Historic District," Wikimedia, accessed 17 February, 2015, http://commons.wikimedia.org/wiki/File:Walker%27s_Point_HistDist_Apr11.jpg.

²⁸⁴ "Warehouse District in Walker's Point," Wikimedia, accessed 17 February, 2015, http://en.wikipedia.org/wiki/George_H._Walker#/media/File:Walker%27s_Point.jpg.

use following the 1893 World's Columbian Exposition in Chicago, where the name "White City" was used in reference to the architecture of the fair.

However, soon the "cream" element of the city became the preferred designation. It is not clear exactly when the stand-alone "Cream City" name was first applied to the city. The earliest precursor located comes from an 1849 article referring to the "city of cream-colored brick."²⁸⁵ The *Rock County Badger* newspaper the following year wrote similarly of a "beautiful city of cream hued brick."²⁸⁶ Both the "Cream City of the Lakes" and "Cream City of the West" were commonly bestowed names by the 1850s, as was the longer "Cream City of the Unsalted Seas." The slightly shorter "Cream Colored City" was used to describe Milwaukee in 1857.²⁸⁷ Finally arriving at a shorter derivation, "Cream City," seems like an obvious conclusion. An 1889 report on manufacturing in Milwaukee noted that "Milwaukee has been known as the 'Cream City' for over fifty years," although that seems unlikely considering the city had but a smattering of brick buildings erected that early.²⁸⁸ The first definitive use of Cream City has not been located, but regardless of when it was first used, the term has been a constant companion to Milwaukee since.

By using the Cream City name, the business or group it was attached to became branded and identified as being from, or associated with, Milwaukee. By 1860, the name was beginning to be used in this capacity, appearing first with reference to Cream City Extra flour.

²⁸⁵ "Internal Improvements," *Milwaukee Sentinel and Gazette*, 28 June 1849.

²⁸⁶ Rock Co. Badger, "Milwaukee," *ibid.*, 12 June 1850.

²⁸⁷ Green Bay Advocate, "Something About Milwaukee," *Milwaukee Daily Sentinel*, 15 May 1857.

²⁸⁸ "A Year's Business," 6.

The flour was regularly sold in places as far away as Boston by the early 1860s.²⁸⁹ The *Sentinel* reported in 1862 that Sands' Cream Ale beer might have been known as Cream City beer abroad before the flour brand's usage of the phrase, although this has not been verified in print.²⁹⁰

The shipping vessel, the bark *Cream City*, was regularly hauling shipments from Milwaukee's port by 1862.²⁹¹ Newspaper articles place it throughout the Great Lakes, and as far away as Buffalo, New York, during the 1860s. Hauling a regular cargo of wheat from Milwaukee, the bark helped spread not only the Cream City name in relation to the city. The vessel was operating in the Great Lakes as late as the mid-1880s.

Starting in 1865, the Cream City name appeared with regular usage. A Cream City Wine Hall was opened at the end of that year, and more importantly the first professional "base ball" team was established. The city's reputation for its beautiful brick appearance provided the obvious inspiration in naming the Cream City Base Ball Club. The group was based in Milwaukee between at least 1865 through 1889. The first game covered by the *Sentinel* was in November 1865, with the Milwaukee club losing to Chicago by a score of 30-36 when the game was suspended due to darkness after seven innings.²⁹² In a criticism that the modern Milwaukee Brewers team may agree with, the club decried in 1887 that reporters covering the team "seem to labor under the delusion that their club ought to win every game they play. ... The papers

²⁸⁹ "Multiple Classified Advertisements," *Boston Daily Advertiser*, 22 March 1861.

²⁹⁰ "Cream City.," *Milwaukee Morning Sentinel*, 31 March 1862.

²⁹¹ "Marine Intelligence," *Milwaukee Morning Sentinel*, 04 July 1862.

²⁹² "Match Game of Base Ball," *Milwaukee Daily Sentinel*, 09 November 1865.



Figure 4.8: Milwaukee's Cream City Base Ball Club, likely in 1868²⁹³

belabor the home team unmercifully every time they loose (*sic*) a game and declare they cannot play ball."²⁹⁴ The team played throughout the Midwest and into the East and, much like the bark *Cream City*, represented Milwaukee by carrying the Cream City name throughout the country.

Whether seeking to follow the trends set by both a successful baseball club and shipping vessel, or just due to civic pride, many other businesses in Milwaukee soon branded themselves with the Cream City name. City directories from the mid-1860s through the end of the century reveal the multitude of businesses, clubs, buildings, and social groups branded with the Cream City name. Businesses ranging from advertising companies, breweries, brickyards, hat companies, and insurance companies incorporated the name in the nineteenth century. Establishments such as the Cream City House and Cream City Hotel operated in the city.

²⁹³ Dennis Pajot, *The Rise of Milwaukee Baseball: The Cream City From Midwestern Outpost to the Major Leagues, 1859-1901* (Jefferson, NC: McFarland & Company, Inc., 2009), 13.

²⁹⁴ "Multiple News Items," *Wisconsin State Register*, 17 September 1887.



Figure 4.9: Cream City Hotel and Restaurant, with cream-brick blocks surrounding²⁹⁵

Numerous social clubs, including cycling clubs, athletic organizations, and political groups all adopted the name. The name provided a clear association with Milwaukee and was a point of pride for these organizations. A large number of businesses, social groups, and places continued to incorporate the Cream City name through the twentieth and into the twenty-first centuries.

In addition to being used extensively *in* Milwaukee, the name was the subject of many news articles *about* Milwaukee. These articles helped to bolster Milwaukee's image abroad with the light and clean appearance associated with the brick. An 1869 account from the *Free Press* in Iowa included a long description of Milwaukee's Cream City nickname. "The name was very appropriately given because of the number of buildings built of the beautiful cream or straw colored brick which are manufactured [in Milwaukee]. It is the first thing that strikes the eye of a stranger as he enters the city, every building of any pretensions being built of these

²⁹⁵ "Cream City Hotel and Restaurant at the corner of E Wisconsin Ave and N Jackson St," Milwaukee Historic Photos, Milwaukee Public Library Digital Collections, accessed 17 February, 2015, <http://content.mpl.org/cdm/singleitem/collection/HstoricPho/id/250/rec/6>.

Cream City Bill Posting Co. F. A. Fitzgerald mngr. 218-220 3d.
 Cream City Box & Label Co. William Korb, prop. 1043 Teutonia av.
 Cream City Brewing Co. J. Meiners, pres.; W. Klann, v.-pres.; A. H. Meyer, sec. and treas.; 501 13th.
 Cream City Brick Co. E. W. Drake, pres.; Wm. Drake, sec. and treas.; 13th and St. Paul av.
CREAM CITY BRUSH WORKS,
 Michael Volkert, prop. 611 Chestnut.
 Cream City Can Works (Wm. Wilson, John Peterson and F. H. Wilson) tin can mnfrs. 261-263 Reed.
 Cream City Furniture Co. A. D. Seaman, pres.; J. L. Seaman, sec. treas.; 318-320 Milwaukee.
 Cream City Hat Co. Oscar C. Hansen, pres.; Wm. J. Meyer, v.-pres.; Harry Neumeister, sec.-treas.; 355-359 E. Water.

Cream City Land Co. W. H. Richardson, sec.; 23 Sentinel bldg.
 Cream City Laundry, Charles W. Durnin, prop. 489 Broadway.
CREAM CITY PLANING MILL,
 H. V. Jalass, prop. box mnfr. 1018-1024 St. Paul av.
CREAM CITY SASH & DOOR CO.
 J. W. Cameron, pres.; E. V. Jones, v.-pres.; W. S. Paddock, sec.-treas.; Park, s.w. cor. 7th av.
 Cream City Window Cleaning Co. (W. C. Roesler) 348 5th.
 Cream City Woven Wire Works, F. L. Kunkel, pres. and treas.; P. Sibenaler, v.-pres.; A. H. Hammetter, sec.; 724-728 Canal.

Figure 4.10: "Cream City" businesses appearing in the 1896 Milwaukee directory²⁹⁶

same far-famed 'Milwaukee brick.'²⁹⁷ The same sentiment was shared by a Vermonter who wrote in 1871, "It is indeed a beautiful city, and aptly called the 'Cream City of the West,' from the color of the Milwaukee brick, which is mostly used in the construction of the residences and business houses ... it is indeed a beautiful site."²⁹⁸

A long report about Milwaukee appeared in the Chicago *Daily Inter Ocean* newspaper in 1882. The article was aptly titled, "Cream City – In Beer, Bricks, and Boats, Milwaukee Claims to Outrank the World." It was noted that while Milwaukee's reputation for beer preceded it, one

²⁹⁶ *Wright's Milwaukee County and Milwaukee Business Directory 1896*, vol. 21 (Milwaukee: Alfred G. Wright, 1896), 354-55.

²⁹⁷ "An Iowa View of Milwaukee," *Milwaukee Daily Sentinel*, 23 December 1869.

²⁹⁸ "The Cream City," *Milwaukee Sentinel*, 10 January 1871.

“only needs a visit to the place to change any such impressions, and put things in their proper places. There is not a more beautiful town in the West than Milwaukee.”²⁹⁹ It continues:

If asked what the city excels in, the Milwaukeean will first speak of the “Cream City” – the nom de plume – and tell you it was given that name because of the creamy color of the many fine residences and business blocks built of the brick manufactured here and known all over the county, where they are shopped as “Milwaukee brick.” These brick are sent to cities in the East and West for building-fronts, for which they are peculiarly adapted, because of the hardness and the beautiful appearance they make in a building. The brick manufactured and sold last year brought to Milwaukee \$1,250,000. After hearing that Milwaukee is the Cream City you will *next* hear that it is the city of beer and bricks [emphasis added].³⁰⁰



1848—MILWAUKEE—1898

THE CREAM CITY OF THE UNITED STATES

Figure 4.11: Flyer for the semi-centennial of Milwaukee³⁰¹

In perhaps one of the clearest indications of how Milwaukee’s identity was connected to its Cream City brick, Milwaukee mayor Emil Wallber opened his address to President Grover

²⁹⁹ "The Cream City," *Daily Inter Ocean*, 05 July 1882.

³⁰⁰ *Ibid.*

³⁰¹ "1848-Milwaukee-1898," *The Milwaukee Sentinel*, 26 February 1898.

Cleveland and the First Lady upon their arrival in Milwaukee in October 1877 with a soliloquy about Milwaukee's best-known attribute. "Mr. President, you have now reached 'Modern Athens,' or 'The Cream City of the Lakes.' Either name is characteristic of our town, like that of the famous city of ancient Hellas [Greece]. ... And in passing along our streets you have noticed a great many buildings of cream-colored brick, hence its other name, 'the Cream City.'"³⁰²

Clearly, both the brick and the identity as the Cream City were of such great importance for the mayor and for the citizens of Milwaukee that they were the first thing mentioned to the visiting president.

An article originally appearing in the *St. Louis Republican* in 1879 so eloquently sums up Milwaukee's then two best-known products. Of the "beautiful city," the paper printed:

Its principal productions are Milwaukee brick and Milwaukee beer, which have made the place and made Milwaukee a household word abroad. The place is built of Milwaukee brick and Milwaukee beer. If it were not for the brick and the beer there would probably be no Milwaukee. Milwaukee brick is Milwaukee beer in a solid state and the beer is the brick liquefied. They both are of a beautiful cream color and of good body – combining in their composition beauty and strength. One does not need to be struck with a Milwaukee brick to comprehend its distinguishing qualities.³⁰³

The mentions of both the appearance of the city and of its famed brick lasted through the end of the century, but with somewhat less frequency. When *Cosmopolitan* published a twelve-page feature on Milwaukee entitled "The Cream City" in 1890 it certainly mentioned the city's appearance and the city's bricks but it did not need to belabor the point. By that time it was taken for granted as a common fact about the city. Milwaukee *was* the Cream City; Milwaukee *was* cream-brick. It did not need to be explained and elaborated upon the way it

³⁰² "Exercises at the Courthouse," *Milwaukee Daily Journal*, 06 October 1887.

³⁰³ "Yesterday in the City," *Milwaukee Daily Sentinel*, 08 August 1879.

had when few had heard of or been to the city. And while the beauty of Milwaukee still merited numerous mentions at the end of the century, having to go into detail about what Milwaukee brick was and why it was unique were not needed. The brick were commonly known and by that point readily emulated elsewhere.

Yet, despite its place in the hearts, minds, and walls of the city, Cream City brick production did not continue indefinitely. The next chapter examines the factors that led to the decline of Cream City brick and examines the lasting importance of the brick to Milwaukee.

CHAPTER 5: CONCLUSION

The Decline of Cream City Brick

Cream City brick production continued briefly into the twentieth century, but by the end of the 1920s production of Milwaukee's famed product had ceased. Owing to the prominence of the brick in the city, it seems unfathomable that the Cream City would no longer produce Cream City brick. However, a number of factors led to the decline in the industry, including a prolonged brick war with Chicago, changes in architectural preferences, and exhaustion of clay used in producing Cream City brick.

Chicago and Milwaukee brickmakers were engaged in a bitter brick war throughout much of the 1890s. This battle was not only protracted, but its effects were amplified following the depression of 1893. The *Sentinel* declared brickmaker were at war in both 1894 and 1897, but in reality, the two markets were engaged in battles throughout the decade. Chicago brickmakers had been intentionally undercutting Milwaukee brick prices and thus able to import vast numbers of brick into the city. Already by 1887 twenty-five percent of the brick used in Milwaukee was coming from outside the Wisconsin city.³⁰⁴ The brick that was being cheaply imported from Chicago during this time was primarily for structural purposes due to the lower quality of the brick. In an attempt to mitigate the damage caused by these cheap imports, the Milwaukee producers formed a brick collective in 1895. As mentioned in Chapter Two, this collective quickly fell apart due to infighting. The collective was tried again in 1897,

³⁰⁴ "Cream City Notes," *Daily Inter Ocean*, 22 April 1887.

with incorporation of the Milwaukee Building Supply Company. However, despite the company's hoping to keep prices stable, the prolonged war with Chicago caused prices to drop to their lowest rate in twenty-five years.³⁰⁵ Common brick that had previously sold for seven dollars per thousand was selling for four dollars in 1897.³⁰⁶ At those prices, it was not profitable for the brick producers to be in operation, and a number of yards ceased operation. When E.R. Buckley surveyed the state of Milwaukee brickyards in 1900, he noted that numerous yards had not been operated for a number of years and were unlikely to resume operation.

Changes in architectural preferences also affected the brick industry in the city. In the city's early days, the brick was used extensively because it was not feasible to import other building materials. The arrival of railroads made it much easier to import products, and by the end of the century brick of many different colors and textures was being imported for use in Milwaukee.³⁰⁷ Additionally, the popularity of the city's famed brick had started to wane at home. Already by 1883, it was observed that while light-colored bricks had been preferred, "handsome red brick are now much demanded, and the tendency of present taste is turning

³⁰⁵ "Brick Makers at War," *Milwaukee Sentinel*, 07 July 1897.

³⁰⁶ "Reviving the Combine," *Milwaukee Sentinel*, 30 August 1879.

³⁰⁷ Paul J. Jakubovich, *As Good As New: A Guide to Rehabilitating the Exterior of Your Old Milwaukee House* (Milwaukee: The Department of City Development, 1993), 72.

somewhat in that direction.”³⁰⁸ By the turn of the century, this preference was more starkly acknowledged in *Architectural Record*:

The cream-colored brick in which the city at one time took especial pride has fallen into disfavor, and justly enough, for in color it is thin and cold, with no value except perhaps in contrast with new-fallen snow. It is particularly ugly in its cheap, rough grades, as used in blank party walls and on inferior buildings, where it turns, when stained with soot and weather, to a dreary, sickly, streaked gray – as utterly a forlorn building material as can be imagined. For all the better class of work nowadays the brown, red or pink brick of other localities is imported.³⁰⁹

By the end of the nineteenth century stone and marble became the preferred material for use in public buildings in Milwaukee particularly Beaux-Arts style buildings. Examples of stone or marble buildings include the Milwaukee Public Library, Loyalty Block, Milwaukee Interurban Terminal, and Germania Building. Similarly, wooden-framed structures that were more quickly and cheaply constructed had become the standard for modest residences. While these were often built as cottages in the late 1800, by the turn of the twentieth century a newer wooden-framed residence began to gain favor in Milwaukee. These Milwaukee bungalows were influence by the American Arts and Crafts movement, were one to one-and-a-half story buildings often with exposed rafted ends, jerkinhead roofs, wood cladding, and exterior details expressed with stone, stucco, or red brick.³¹⁰ These are found throughout Milwaukee in numerous residential subdivisions constructed from the late-1890s through the first decades of the twentieth century. Yet Cream City brick was regularly used in the foundations and chimneys of these bungalows and wooden-framed buildings.

³⁰⁸ Thomas Chrowder Chamberlin, *Geology of Wisconsin: Survey of 1873-1879*, vol. 1 (Madison, WI: Commissioners of Public Printing, 1883), 670.

³⁰⁹ *The Architectural Record*, vol. 17 (Chicago: The Architectural Record Co., 1905), 210.

³¹⁰ Milwaukee Department of City Development, *Built In Milwaukee: An Architectural View of the City* (Milwaukee: City of Milwaukee, Department of City Development, 1983), 66-67.

The exhaustion of the clay needed to produce Cream City brick also contributed to the downfall of the industry. While the deposits of clay in the Menomonee River Valley had been as thick as one hundred feet in some locations, decades of mining had depleted the clay available for suitable brick production. *The Clay Worker* reported in 1897 that production of true Cream City brick had ceased in the city. While a light-colored brick was still being made, “old settlers aver that it does not present the peculiar yellowness that made the earlier output famous the country over.”³¹¹ The Cream City brick produced in the Menomonee Valley had depleted the necessary clay, and efforts to find similar deposits had failed. Additional pressures were put on the brickyards due to demand for real estate. In 1890, it was noted that many of the brickyards were in or near the center of the city and faced encroachments for real estate development. “Eventually the land will become too valuable for use as brick yards, and will be used altogether for building purposes,” the annual report on Milwaukee industries reported.³¹² These numerous factors led to the collapse of the Cream City brick industry. Brick production in the city had disappeared by the 1930s. The last known producer of brick in the city, the Burnham Brothers Brick Supply Company in South Milwaukee, went out of business in 1929 and closed the chapter on an immensely important industry in the history of Milwaukee.³¹³ Outside of reuse of the brick, the closure bookended the period of Cream City brick architecture in the city that lasted nearly one hundred years from 1835 to 1930.

³¹¹ *The Clay-Worker*, vol. 28 (Indianapolis: T.A. Randall, 1897), 183.

³¹² Chamber of Commerce, *Thirty-Third Annual Report of the Trade and Commerce of Milwaukee, For the Year Ending December 31st, 1890* (Milwaukee: Cramer, Aikens & Cramer, 1891), 65.

³¹³ Christopher Ciesielski, "Cream City Brick" (master's thesis, Art Institute of Chicago, 2011), 45.

Conservation of Cream City Brick

Because Cream City brick is a finite resource, conservation is important for maintaining the brick. The most obvious issue with regards to the brick is the surface soiling so evident against the cream background. As noted in Chapter Two, while Milwaukee brick is highly durable it is also highly susceptible to this type of surface staining and soiling. In his book, *As Good as New: A Guide for Rehabilitating the Exterior of Your Old Milwaukee Home*, Paul Jakubovich provides an account of soiling issues of Milwaukee brick and ways to conserve it. This book provides a clear and concise guide for addressing problems associated with brick and other masonry material found throughout Milwaukee and elsewhere. Of problems with the brick he notes, “the surface of porous cream brick acts like a magnet for soot, smoke and other airborne dirt and over the years much of the original golden luster has been hidden under a layer of black grime.”³¹⁴ This is a more prominent problem for the porous common brick than pressed brick. This soiling rarely causes any structural issues but is primarily a cosmetic issue. However, improper cleaning can lead to damage that causes structural problems with the brick.

Much like the National Park Service’s *Preservation Brief #1* on cleaning masonry buildings, Jakubovich advocates using the gentlest means possible to clean Milwaukee brick and avoid irrevocably harming it. A light, low-pressure wash and hand scrubbing is suggested for buildings not heavily affected by environmental soiling. Steam can also be used to help lift the pollutants from the surface of the brick before rinsing with a light wash. For more urban buildings, he suggests a combination of chemical cleaners, strippers, and a non-abrasive power

³¹⁴ Jakubovich, *As Good As New: A Guide to Rehabilitating the Exterior of Your Old Milwaukee House*, 76.

wash with clear water.³¹⁵ When chemical treatments are used care must be taken to avoid chemicals that will cause excessive damage to mortar or other historic exterior materials. For instance, cleaners containing hydrofluoric acid may cause damage to glass and stone.³¹⁶ Sandblasting the brick, while once an accepted method of cleaning, should not be used to clean historic brick. Sandblasting the brick removes the outer protective skin of the brick and exposes the soft inner clay of the fired brick. This opens up the brick to additional deterioration from water and wind. The newer method of water-sand blasting is equally destructive and should not be used to clean brick. One newer method of cleaning surface soiling is with use of a laser cleaner. This method is attractive due to the ease of use, minimized debris created, lack of harmful chemicals needed, and absence of damage to the surface of the brick.³¹⁷ However, the method does require a high initial purchase price, which makes unfeasible for smaller restoration projects.

Because historic lime-based mortars were relatively soft and prone to deterioration, repointing the mortar is often necessary for historic walls. The process involves carefully removing failing mortar with the aid of chisels, hammers, and repointing rakes and replacing it with a mortar that is of a similar hardness and color as the historic mortar. While electric tools such as grinders can be used these are not advised due to the higher likelihood of damage to the bricks. Test patches of mortar should be applied to gauge compatibility before the entire surface is repointed.

³¹⁵ *Ibid.*, 77.

³¹⁶ *Ibid.*, 79.

³¹⁷ Ciesielski, "Cream City Brick," 56-57.

If historic Cream City bricks have failed beyond repair replacement with a reclaimed Milwaukee brick is the best course of action. However, this method is not without issue. Milwaukee bricks were generally produced without adhering to a strict set of dimensions. This can create issues in matching sizes for replacement bricks. Likewise, the color of the finished bricks varied greatly from yard to yard and locating replacement bricks with exactly similar colors may be difficult.

If replacement with a historic Cream City brick is not a viable option newer, commercially produced cream-colored bricks can be used as replacements. However, these too are not without issue. Newer bricks are much denser and harder than historic bricks and may expand and contract at different rates.³¹⁸ Modern bricks also have internal voids that cause issues with vapor transfer in the brick. Water may collect in the voids and cause the bricks to spall and fail. If modern brick is to be used one suggestion is to rebuild an entire wall with modern brick and reuse salvaged brick for spot patching as required.³¹⁹ With any brick cleaning or replacement a qualified contractor or specialist versed in historic masonry conservation should be consulted to minimize risk of damage to the historic fabric of a structure.

Analysis and Conclusion

In what ways did the Cream City brick produced in Milwaukee create an identity for the city in the nineteenth century? The arguments presented in the previous chapters have provided evidence answering this central question to the thesis, along with another question,

³¹⁸ Ibid., 58.

³¹⁹ Ibid.

“What is Cream City brick and why is it unique?” These questions are central to understanding what makes the brick more than just a building material. The product manufactured in what was then the hinterland set the town apart from other budding settlements on the Western frontier. It supplied the city with its earliest notoriety, its first broad export material, and most enduring city nickname. On the practical side, the brick provided Milwaukee with decades of beautiful and durable masonry material. On the more existential level, it provided the city and its residents with an identity.

Today, city slogans and nicknames are developed by advertising agencies or through community outreach as a way of branding a city for tourism or economic reasons. Milwaukee’s developed organically in the mid-1800s. Yet, the reasons why communities today desire catchy slogans have been inherent in Milwaukee since their identity developed. It was a source of pride for the city, and provided a unified sense of community for what had been a demographically diverse population. *“We are Cream City,”* was the sentiment expressed in Milwaukee throughout the nineteenth century. *“Cream City”* so eloquently tells the story of Milwaukee in two simple words.

To the twenty-first century mind, it can be difficult to comprehend just how overwhelming the brick’s presence would have been in the nineteenth century. Modern cities are composed of a plethora of materials, each providing different textures, styles, and colors to a cityscape. Milwaukee, on the other hand, was simply the Cream City. Accounts of first-time visitors are filled with a sense of awe over the appearance of the city. And for those who had not seen firsthand, Cream City conjured a vision of Milwaukee. Based on written accounts of the city, one can only surmise that the Milwaukee imagined by foreigners was a grand,

sparkling city. It was a place where the streets may not have been paved with gold but the buildings were.

While the number of historic structures remaining in the city is likely in the thousands, this is far from the number of buildings once present in the city. A comprehensive survey of existing structures would help to document and assess the number and condition of extant structures. The difficulty in performing such a survey is compounded by the fact that in addition to buildings faced with the brick, many buildings contain Cream City brick as party walls, foundations, or chimneys. Cream City brick is so indelibly linked with Milwaukee's past that each additional loss distances the city further and further from its own history. Historian H. Russell Zimmermann so eloquently concluded his essay on Cream City brick with the same sentiment: "The community must become aware of its priceless heritage and rekindle a pride in what examples remain if we are to salvage the genesis of **'Milwaukee, Wisconsin, Cream City of the Lakes.'**"³²⁰

³²⁰ H. Russell Zimmermann, "Milwaukee's Cream City Brick," *Historical Messenger of the Milwaukee County Historical Society* 26 (1970): 13.

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