

Pre-Prohibition American Breweries - A Midwestern View

Susan K. Appel

Breweries were once far more common features of Midwestern American towns and cities than many today would expect. These industrial buildings appeared soon after the founding of many 19th century communities, often growing alongside the towns they served. By 1920, when Prohibition decimated the brewing industry, Midwestern American breweries had evolved from very primitive structures to handsome complexes of specialized, architect-designed buildings [Fig.1]. While they ranged from modest local firms to huge corporations of national and worldwide significance, any fully developed pre-Prohibition brewery expressed numerous factors that, together, shaped the distinctive building types associated with this industry. As they grew more complex, they also became an area of specialization for architects. Thanks to the devastation of Prohibition, however, the vast array of once-thriving Midwestern breweries and the architects who designed them have fallen into obscurity.

Recovering some sense of the architectural history of pre-Prohibition Midwestern breweries requires tapping diverse sources, the most focused being

publications centered directly on the industry. *The Western Brewer*, headquartered in Chicago, is especially significant for documenting the industry's development from 1876 on and for publishing images and information on new breweries as they rose.¹ The journal's publishers in 1903 also produced the useful volume, *One Hundred Years of Brewing*.² Learning about earlier breweries requires visiting libraries, historical societies, the rare corporate archive, and communicating with 'breweriana' collectors, whose resources often include otherwise unknown images and information.³ Seldom do the papers of pre-Prohibition brewery architects survive, aside from chance finds of occasional letters or drawings scattered among widespread collections. A major exception is the salvaging of a quantity of architectural materials of one leading architect, brought to light recently as his successor company closed its doors.⁴

From such resources, and from still-standing physical remains, one can develop a sense of how the Midwestern brewery evolved between perhaps 1810 and 1920. The earliest examples can be known only through very limited written

descriptions that speak of breweries as one- or two-storey frame or stone buildings,⁵ or even a primitive kettle over a fire in a hole in someone's yard. Occasionally, images of early, if not the earliest, breweries appear, although some [Fig. 2] were based on later recollections or developed as advertising ploys.⁶

Regardless, breweries built before the Civil War were vernacular buildings, erected by local contractors according to needs of brewers, but not terribly specialized. They also shared English-based brewing processes, until at least the 1840s. That changed with the arrival of German techniques, German lager beer, and German-born brewers, who, by the 1870s, dominated American brewing.

Credit for introducing lager to the U.S. about 1840 traditionally goes to Philadelphian John (Johann) Wagner,⁷ but another German immigrant in St. Louis was close behind. Adam Lemp brewed his first lager about 1842 in a simple brewery [Fig. 3] in central St. Louis.⁸ Within three years demand made his cellar house too small, so Lemp acquired a cave-laced site then south of the city, where he began developing an extensive network of lagering vaults [Fig. 4].⁹ Above these, in the mid-1860s, his son began a new, much-enlarged Lemp brewery [Fig. 5].¹⁰

Lager's need for cold storage led other German brewers to develop vaults in south St. Louis and similar areas elsewhere. In

Cincinnati large numbers of German brewers dug lager vaults into steep hill-sides. Many became prosperous enough to build dramatic new breweries by the later 1860s. Windisch & Muhlhauser (1867) [Fig. 6], Christian Moerlein (1868), and others took brewery architecture into a new phase, marked by the version of the Romanesque Revival known as *Rundbogenstil* ('round-arched style').¹¹

The *Rundbogenstil's* close association with German mid-19th century architecture and the rising prosperity of German-American brewers reveals that this style had real meaning for Midwestern brewers. It expressed their pride in their success, industry, cultural heritage, and increasing presence in American culture. The greater sophistication of these buildings also suggests the involvement of professional architects in their design. Unfortunately, only one of many *Rundbogenstil* Midwestern breweries [Fig. 7] can thus far be tied to a specific architect, of whom little is yet known.¹²

Better-known professional architects and engineers entered the field of brewery design more emphatically beginning in the late 1860s-1870s. Among them, a 'pioneer' generation was composed of four German-born architect/engineers: Anthony Pfund (1823-1897), New York; Charles Stoll (1835-1897), Brooklyn; Frederick W. Wolf (1837-1912), Chicago; and Edmund Jungensfeld (1841-1884), St. Louis.¹³ Each left a legacy of important buildings; sadly, relatively few still stand today.

Earlier projects of these designers often involved brewery ice houses, direct reflections of brewers' growing dissatisfaction with the limitations of underground lagering.¹⁴ Various ideas arose for efficient, ice-filled, aboveground facilities to cool lager effectively. A good extant example is Fred Wolf's large ice house for the Jos. Schlitz Brewing Co., Milwaukee, finished in 1880 [Fig. 8].¹⁵ Its lower three stories were capped with an enormous natural ice body filling a chamber 102' x 168' x 21' high. But the messiness of melting ice soon aided the development of mechanical refrigeration, which quickly began to alter brewery design. Many brewery architects came to be associated with particular refrigeration equipment. Wolf, for instance, acquired the American rights to the famous German Linde refrigeration machine in 1882¹⁶ (initiating a tie to refrigeration that far outlived him, the Wolf-Linde Company closing only in 1998).

Fred Wolf and Edmund Jungenfeld were both prolific brewery designers [Figs. 9, 10], and both trained others who went on to important careers as brewery specialists. Louis Lehle, Wolf's co-designer from the 1870s, officially became a partner in Wolf & Lehle (1889-1894), then established his own office,¹⁷ designing breweries of all sizes [Fig. 11], far and wide, including internationally. Edmund Jungenfeld was a friend of Adolphus Busch, the son-in-law of Eberhard Anheuser and eventual leader of what became the Anheuser-Busch Brewing Association. Jungenfeld designed brew

houses for Anheuser in 1869 and 1879 [Fig.12],¹⁸ and oversaw the extensive architectural development of the growing plant, including its then-audacious conversion to entirely artificial refrigeration with Boyle machines in 1881-82.¹⁹ After Jungenfeld's untimely death in 1884, Anheuser-Busch's facilities continued to be designed until 1917 by various permutations of Jungenfeld's firm [Fig. 13], under his former draftsmen, Frederick Widmann, Robert Walsh, and Caspar Boisselier.²⁰

Brewing's dramatic post-Civil War expansion was fueled by scientific and technological changes and reflected in the architecture that housed it. Brewery architects advertised improved devices for malting, mashing, bottling, etc.,²¹ as they grappled with demand for larger, more efficient, more mechanized and sanitary facilities. Fireproof metal-framed construction and innovative insulation changed brewery buildings, which now often used a larger, more massive Richardsonian version of Romanesque Revival. Abundant work encouraged still more professionals, and a second generation of architects emerged, many based in Chicago. New breweries of the 1880s and 90s came not only from Lehle (Chicago) and Widmann, Walsh & Boisselier (St. Louis), but also from designers like Wilhelm Griesser (Chicago, previously in Jungenfeld's office) [Fig. 14], August Maritzen (Chicago, from Fred Wolf's office and once partner to Griesser), [Fig. 15], and George Rapp (Cincinnati) [Fig. 16].²² Another of this

group, Otto C. Wolf, once worked with Fred Wolf in Chicago, but returned to Philadelphia, becoming the most prolific brewery architect in the East.²³

These new breweries were complexes of distinct structures, often closely integrated with one another. Besides the brew house, they typically featured mill, engine, stock, wash/racking, and boiler houses [Fig. 5]. If a firm did its own malting, a malt house appeared, also increasingly mechanized [Fig. 5].²⁴ If it bottled its own brews, the brewery acquired a bottling house [Fig. 5], distinct because required by federal law to be separate from lagering facilities, across a 'public way,' to assure proper per-barrel taxation by Internal Revenue.²⁵

The second generation of brewery specialists gave rise to a third, evidence of the vibrancy of brewing as the century turned, at least for a while. Again, many worked from Chicago, if often on more modestly sized breweries. Richard Griesser [Fig. 17] was the son of Wilhelm (who relocated to New York when Richard began his Chicago practice).²⁶ Also Chicago-based, Bernard Barthel [Jacob Schmidt Brewing Co., St. Paul, Minnesota; see Appendix 1], once with Wolf & Lehle, had an active practice,²⁷ including a number of breweries in Canada. Oscar Beyer [Fig. 18] worked for Fred Wolf, then Griesser & Maritzen, where he met Fred Rautert [Fig. 19]; they were partners before each began his own practice.²⁸ All were busy until business began to wane under the on-

slaught of World War I restrictions on brewing, then the resurgent forces responsible for national Prohibition. The shifting mood was clear when the last new pre-Prohibition brewery was built in 1912 near Cincinnati,²⁹ once a major brewing center. A darker indication of the mood of the time was the 1914 suicide of architect Fred Rautert, now a brewer himself, when his Illinois town voted to go dry.³⁰

National Prohibition resulted from long efforts of various temperance organizations begun before the mid-19th century. When the 18th Amendment finally took effect in 1920,³¹ brewers had to cease operations. The once-vibrant industry was broken. Although Repeal came in 1933, and some pre-Prohibition breweries reopened, the industry entered a long, intense period of consolidation. Gradually, American brewing lost its earlier diversity and was increasingly concentrated in a relatively few large firms. Technological and architectural changes also made the brewery a different place. Too often, what remained of brewing's pre-Prohibition architectural magnificence also disappeared [Wiedemann Brewing Co., Newport, Kentucky; see Appendix 2]. On the other hand, the spirit of historic preservation has, on occasion, brought new life to old breweries. Adaptive reuses - as housing, restaurants [Fig. 20], offices, entertainment centres, even the rare new brewery³² - give hope that at least some of the historic architecture of brewing will survive. It is a rich heritage that should not be lost.

We thank Brewer & Distiller International for permission to reproduce this article, a version of which appeared in Vol.5, No. 4 (April 2009) pp.42-47.

References

1. *The Western Brewer: And Journal of the Barley, Malt and Hop Trades*, to give its full title, is difficult to find. I was fortunate to be given permission to use the full run of the journal held in the Archives of Anheuser-Busch, Inc., St. Louis, Missouri. The first twelve volumes, dating 1876-1888, may also be found in the Special Collections of the Newberry Library, Chicago, Illinois.
2. *One Hundred Years of Brewing: A Complete History of the Progress Made in the Art, Science and Industry of Brewing in the World, Particularly During the 19th Century*, Supplement to *The Western Brewer* (Chicago and New York: H.S. Rich and Company, 1903; reprint, New York: Arno Press, 1974).
3. Many collectors have contributed generously to my search for information. I have often found them through such organizations as the American Breweriana Association (ABA, <http://www.americanbreweriana.org>) and the National Association of Breweriana Advertising (NABA, <http://www.nababrew.com>).
4. The Chicago Historical Society now holds a large collection of architectural drawings and other records transferred there in 1998 from the vault of the about-to-be-closed Wolf-Linde Company, direct descendant of the Fred W. Wolf Company, Chicago.
5. Accounts of the earliest breweries in St. Louis, Missouri, for example, are cited in

Scharf, J.T. (1883) *History of Saint Louis City and County*. Philadelphia: L.H. Everts & Company, I, p.195, and James Lindhurst, 'History of the Brewing Industry in St. Louis 1804-1860,' M.A. thesis, Washington University, St. Louis, 1939, pp.15-16.

6. The image shown in Fig. 2 seems a good example of this phenomenon, since versions of it only began to appear in records of the Pabst Brewing Company about 1893, as in 'An Invitation / Pabst Milwaukee', 1893 pamphlet, Milwaukee County (Wisconsin) Historical Society, Breweries Coll., Box 1, Pabst - Adv. Mat. #1 file.

7. *One Hundred Years of Brewing* (1903) op. cit. p.207. The likely site of Wagner's brewery is now graced by an historical marker, near the corner of Poplar and American Streets, Philadelphia.

8. There are many discrepancies among sources for the initial brewing of lager in St. Louis, but Adam Lemp is always credited with being the initiator of this brew here. He purchased land and built a stone building on Second Street in 1841, but likely did not begin brewing lager until 1842, according to the carefully documented report in Lindhurst, 1939, pp.34-35.

9. *Missouri Republican* (St. Louis), 10 April 1845, describes the recently developed cave as about 100 yards long, divided into three compartments, each about 20 feet wide, with vaulted ceilings 'turned with great regularity.'

10. Dacus, J.A. & Buel, J.W. (1878) *A Tour of St. Louis, or the Inside Life of a Great City*. St. Louis: Western Publishing Company, Jones and Griffin, pp.276-7, note that, following the death of his father, Adam, in 1862, William J. Lemp's rapid development of the business led to his moving the brewery in

1864 to new facilities developed on Cherokee Avenue above the caves/vaults. The firm grew substantially thereafter.

11. Appel, S.K. (1986) "Buildings and Beer: Brewery Architecture of Cincinnati.' *Queen City Heritage, the Journal of the Cincinnati Historical Society* XLIV, 2 (Summer): pp.5-7.

12. Blum, P.H. (1999) *Brewed in Detroit: Breweries and Beers Since 1830*. Detroit: Wayne State University Press, p.60, citing 'Bernhard Stroh's New Brewery, *Detroit Tribune*, August 20, 1867, p.1, states that Bernhard Stroh's 1867 Lion Brewery, Detroit, was designed by Joseph Gottle, Cincinnati, an architect who has otherwise not come to my attention.

13. Brewery architects Pfund, Stoll, Wolf, and Jungenfeld were cited as pioneers in an article by another brewery architect (and Jungenfeld's protégé), F[rederick] Widmann, in "The Development of the Buildings and Equipments of Breweries from Pioneer Times to the Present Day," *The Western Brewer* XXXVIII, 1 (January 1912) pp.29-32.

14. *One Hundred Years of Brewing* (1903) op. cit. p.146.

15. 'A Mammoth Ice House,' *The Western Brewer* V, 4 (April 1880) p.367.

16. *The Western Brewer* VII, 4 (April 1882) p.554.

17. *The Western Brewer* XII, 6 (June 1887) p.1253; the incorporation of the Wolf & Lehle Co., Chicago, on April 11, 1891, was reported in XVI, 5 (May 1891) p.111, although they had been advertising as such for two years; in XIX, 3 (March 1894) p.523, Lehle announced the opening of his own office.

18. For the 1869 brew house, see 'Great Breweries of the World, the Anheuser-Busch Brewing Association, St. Louis,' *The Western*

Brewer IV, 12 (December 1879) p.1091, and Plavchan, R.J. (1976) *A History of Anheuser-Busch, 1852-1933*. New York: Arno Press, p.30. For the 1879 brew house, see *The Western Brewer* IV, 4 (April 1879) p.296, and the December 1879 story on Anheuser-Busch noted above, pp.1091-2 + Supplemental illustrations.

19. 'Great Breweries of the World: The Anheuser-Busch Brewing Association of St. Louis, Mo.,' *The Western Brewer* VIII, 4 (April 1883) pp.642-4.

20. Jungenfeld's former draftsmen continued the firm as 'E. Jungenfeld & Co.' from 1884 until 1898, when they finally emerged as 'Widmann, Walsh & Boisselier'. *The Western Brewer* XXIII, 1 (January 1898) p.7 & 102. In 1906 Boisselier withdrew from the firm, which then continued as 'Widmann & Walsh' until Widmann's death in 1925, according to Hunter, J.K. (1988) *Westmoreland and Portland Places: The Architecture of America's Premier Private Streets, 1888-1988*. Columbia: University of Missouri Press, p.188.

21. See advertisements for brewery architects, *The Western Brewer*, passim.

22. Wilhelm Griesser's background with Jungenfeld was noted in *The Western Brewer* X, 3 (March 1885) p.479, when he first began practicing in Chicago. August Maritzen's background with Wolf and new partnership with W. Griesser were reported in *The Western Brewer* XIII, 4 (April 1888) p.809. George W. Rapp, Cincinnati, first advertised as a brewery architect in *The Western Brewer* VII, 7 (July 1882) p.1076.

23. Otto C. Wolf, the son of Philadelphia brewer Charles C. Wolf, graduated with honors in mechanical engineering from the University of Pennsylvania in 1876 at age 20.

Among other early experiences, he spent three years as a supervising engineer for Fred W. Wolf in Chicago, where he received a thorough training in artificial refrigeration. He returned to Philadelphia in 1883, and until his death in late 1916, Otto C. Wolf distinguished himself as a designer of breweries and other projects throughout the east. 'Otto C. Wolf, Deceased,' *The Western Brewer* XLVIII, 1 (January 1917) p.5-6. His projects were frequently reported in *The Western Brewer* throughout his career.

24. Traditional floor-style malting gradually gave way to various 'pneumatic,' mechanized systems of malting, using equipment developed by various inventors from the 1870s on. These were frequently reported in both advertisements and articles in *The Western Brewer*. An early example is 'Pneumatic Malting in France,' *The Western Brewer* I, 3 (November 1876) p.85.

25. Federal taxation of beer (and more harshly, ardent spirits) began in 1862, during the Civil War - 'Milwaukee Breweries Totaled 26 in 1856,' *Wisconsin Beverage Journal* XVI, 12 (April 1958) p.2. Until the law was altered in 1890, there could be no direct connection between a brewery and its bottling house. *One Hundred Years of Brewing* (1903) pp.112-3.

26. The opening of the younger Griesser's office was noted in *The Western Brewer* XXV, 1 (January 1900) p.12. Earlier, *The Western Brewer* XXIII, 9 (September 1898) p.1605, reported that the elder Griesser had opened a New York City office in 1898, so that the son's business initially appears to have been to run one of two offices.

27. Barthel's separation from Wolf & Lehle to open his own office was reported in *The Western Brewer* XXVI, 7 (July 1901) p.302.

His many commissions were regularly noted by that journal for the next ten years.

28. *The Western Brewer* XVIII, 11 (November 1893) p.2446.

29. *The Western Brewer* XXXVIII, 6 (June 1912) pp.286-9, reported that the Bavarian Brewing Company, Covington, Kentucky (across the Ohio River from Cincinnati) had begun operations in its new brew house on March 26, 1912.

30. *The Western Brewer* XLII, 5 (May 1914) p.211.

31. See Chapter 33, 'Victory of the Drys,' in Baron, S. (1962) *Brewed in America: The History of Beer and Ale in the United States*. Boston: Little, Brown and Company, pp.295-307.

32. Among the pre-Prohibition Midwestern American breweries adaptively reused for housing are the former Best Brewing Co., Chicago; Val. Blatz Brewing Co., Milwaukee; and Columbia Brewing Co./Falstaff, St. Louis. In Dubuque, Iowa, the former Star Brewing Co. is now a restaurant and wine bar. In Milwaukee, the Jos. Schlitz Brewing Co., Milwaukee, is now a mixed-use business/office complex, and the former Pabst Brewing Co. is in the process of renovation as a mixed-use site. The former Lemp Brewing Co., St. Louis, has seen similar redevelopment plans come and go with little success, although parts of it are used for a variety of small manufacturing and storage functions. The small Potosi (Wisconsin) Brewing Co. has become the National Brewing Museum, opened in 2008, with a brewpub and restaurant occupying a portion of the facility. Similar museums of brewing are hoped for in the Pabst complex, Milwaukee, and, perhaps, in the Lemp complex, St. Louis.

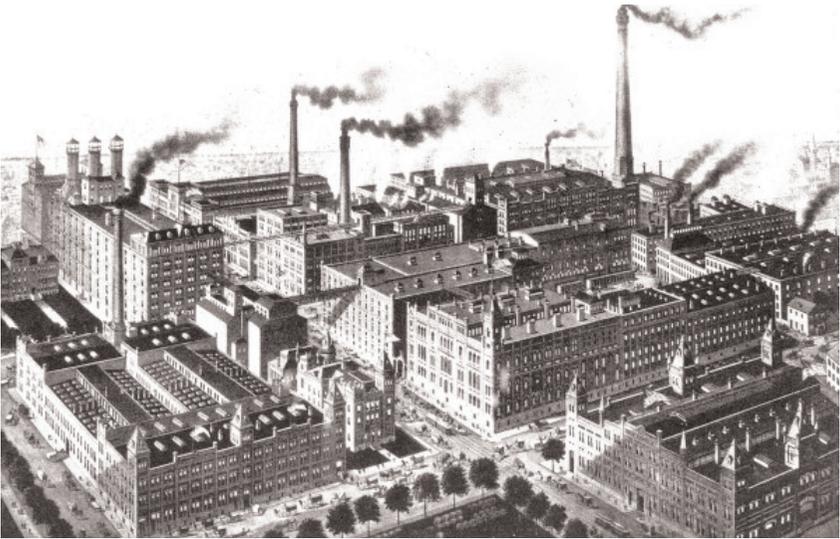


Figure 1. Pabst Brewing Co., Milwaukee, Wisconsin, view c. 1900. (One Hundred Years of Brewing, 1903, p.223.) Redevelopment of this site is in progress.



Figure 2. Jacob Best's Old Brewery (later Pabst Brewing Company), Milwaukee, Wisconsin. (One Hundred Years of Brewing, 1903, p.222.) Best established the brewery in 1844, although this image doesn't seem to appear until about 1893, likely developed for advertising purposes. Demolished.

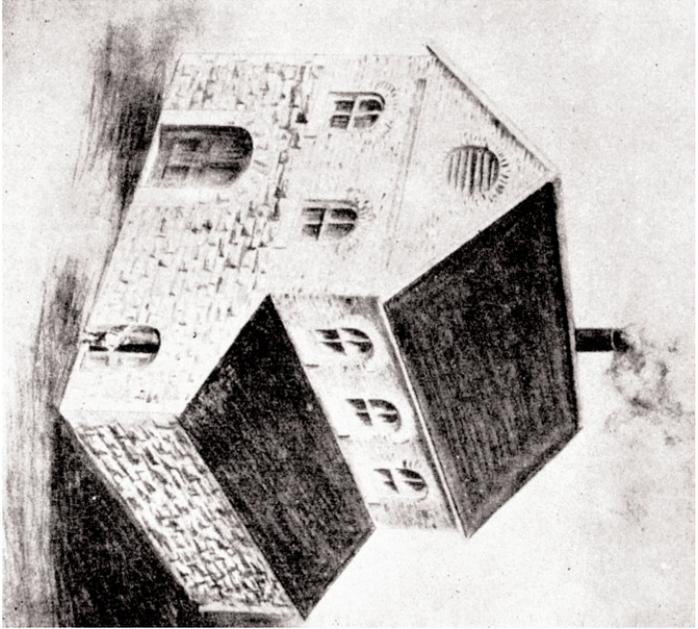


Figure 3. Adam Lemp's Original Brew House, St. Louis, Missouri, c. 1841-1842, as remembered rather later. (One Hundred Years of Brewing, 1903, p. 211.) Demolished.



Figure 4. Adam Lemp's Lagering Cellar, St. Louis, Missouri, c. 1845+. Extant (Photo by author, 1989.)

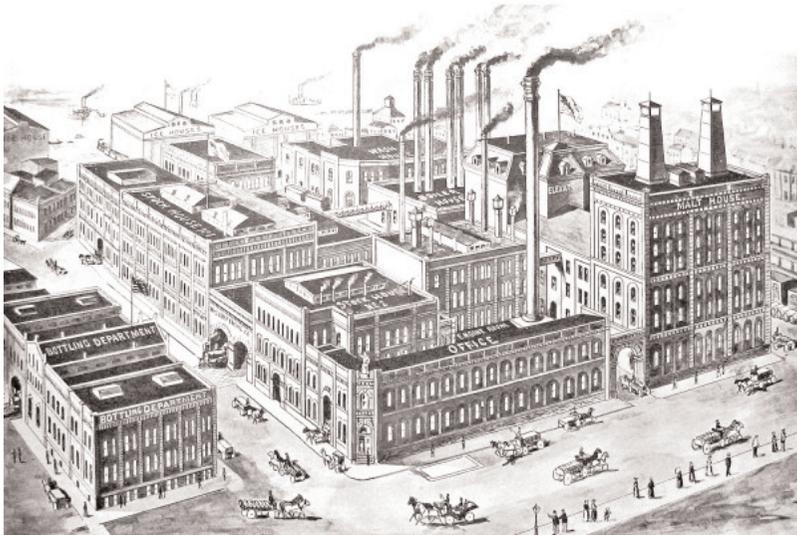


Figure 5. Various architects: W. J. Lemp Brewing Co., St. Louis, Missouri, begun 1864, view of c. 1894. (*Great Breweries of America*, c. 1894, collection of Rick Muhlhauer, Cincinnati, n.p.). Many ideas for redevelopment here have been proposed, but not implemented; some major buildings have recently been stabilized.

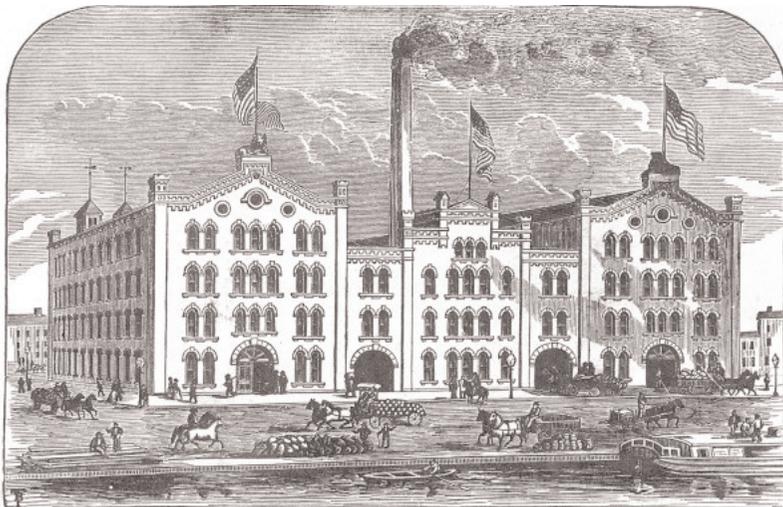


Figure 6. Windisch-Muhlhauser Lion Brewery, Cincinnati, Ohio, opened in this building 1867. (Andrew Morrison, ed., *Industries of Cincinnati*, 1886, p.156.). Demolished 1993.

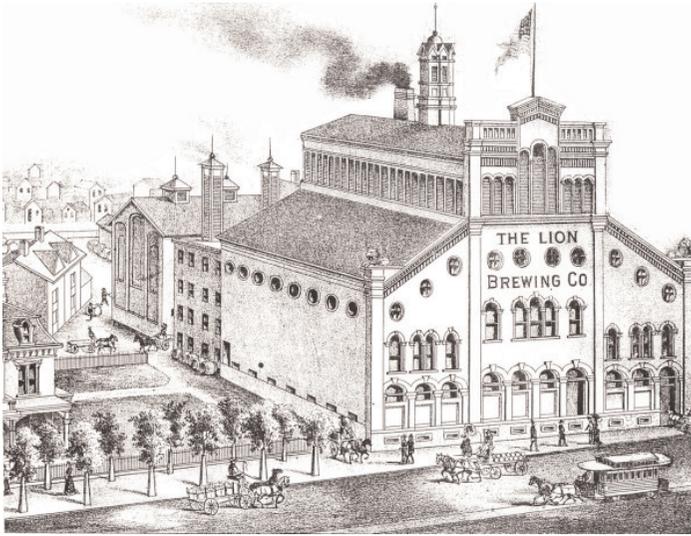


Figure 7. Joseph Gottle, architect (Cincinnati): Bernard Stroh's Lion Brewery, Detroit, Michigan, built 1867. (*The Western Brewer* V, 11, November 1880, Supplement, n.p.) Demolished.

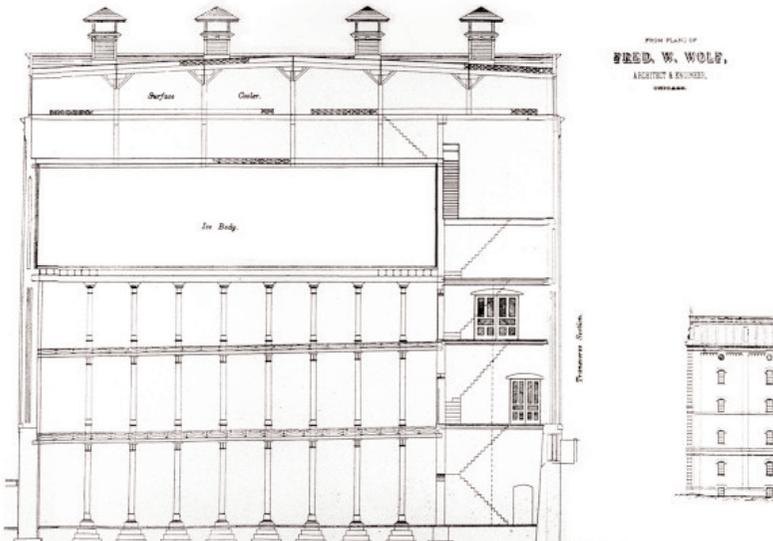


Figure 8. Fred W. Wolf, architect (Chicago): Section drawing, Ice House, 1879-80, Jos. Schlitz Brewing Co., Milwaukee, Wisconsin. (*The Western Brewer* V, 4 (April 1880): Supplement, n.p.). Extant, if modified (see Fig. 9).



Figure 9. Fred W. Wolf, architect (Chicago): Ice/Stock Houses & Cupola Corner, 1879-80 on, Jos. Schlitz Brewing Co., Milwaukee, Wisconsin. (Photo by author, 1992.). Extant, and part of the redeveloped 'Schlitz Park' business office complex.



Figure 10. Edmund Jungenfeld, architect (St. Louis): Lafayette Brewing Co., St. Louis, Missouri, built 1882. (*The Western Brewer* VII, 7 (July 1882): Supplement, n.p.). Demolished.

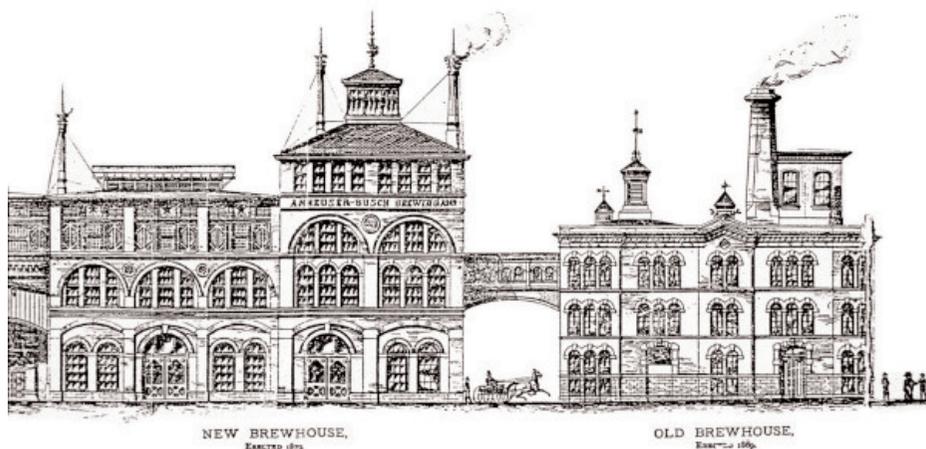


Figure 12. Edmund Jungenfeld, architect (St. Louis): Brew Houses of 1869 (R), 1879 (L), E. Anheuser Brewing Association, St. Louis, Missouri. (*The Western Brewer* IV, 12 (December 1879): Supplement, n.p.). Demolished.



Figure 11. Louis Lehle, architect (Chicago): Minneapolis Brewing & Malting Co. (Orth Branch), Minneapolis, Minnesota, built 1891-94. (Photo by author, 2008.) Redeveloped as headquarters of RSP Architects (Minneapolis & Phoenix).



Figure 13. E. Jungenfled & Co. (Widmann, Walsh & Boisselier), architects (St. Louis): Brew House, 1893, Anheuser-Busch Brewing Association, St. Louis, Missouri. (Photo by author, 1984.) Extant.

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Figure 14. Advertisement for Wilhelm Griesser, brewery architect (Chicago). (The Western Brewer, XIX, 5 (May 1894), 925.)



Figure 15. August Maritzen, architect (Chicago): Charles Gowen & Sons Brewery, Victoria, British Columbia, Canada, built 1891. (*The Western Brewer* XVI, 12 (December 18, 1891): 2846.) Demolished?

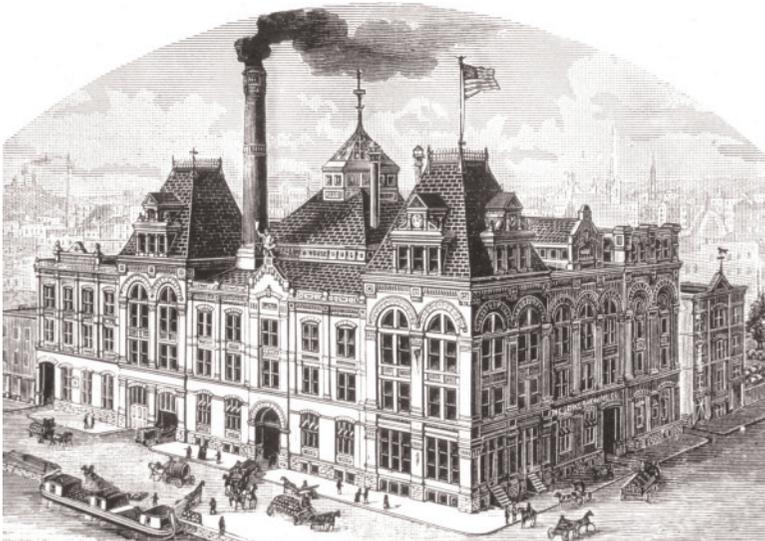
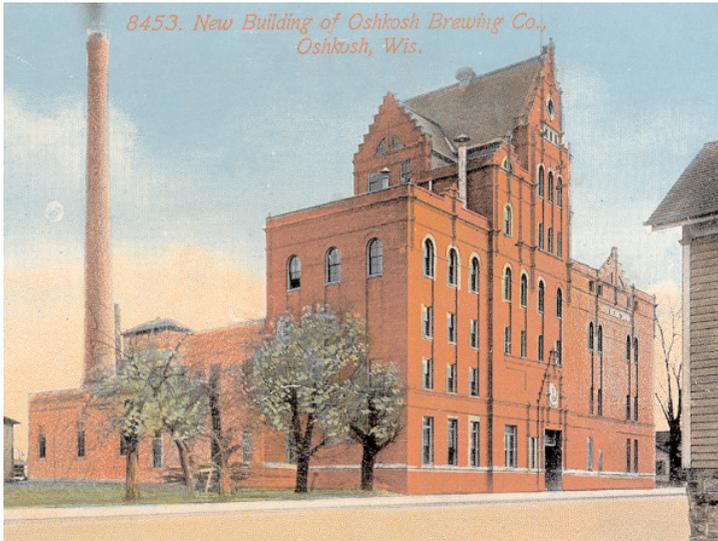


Figure 16. George W. Rapp, architect (Cincinnati): Design for Gerke Brewing Co., Cincinnati, Ohio, c. 1885. (Morrison, ed., *Industries of Cincinnati*, 1886, 143.) Likely mostly unbuilt in this form; demolished.



Figure 18. Oscar Beyer, architect (Chicago): Fairmount Brewing Co., Cincinnati, Ohio, built 1902. (Photo by the author, 1983.) Extant.



8453. New Building of Oshkosh Brewing Co.,
Oshkosh, Wis.

Figure 17. Richard Griesser, architect (Chicago): Oshkosh Brewing Co., Oshkosh, Wisconsin, built 1911. (Vintage postcard, collection of the author.) Extant, used as warehouse and office space.

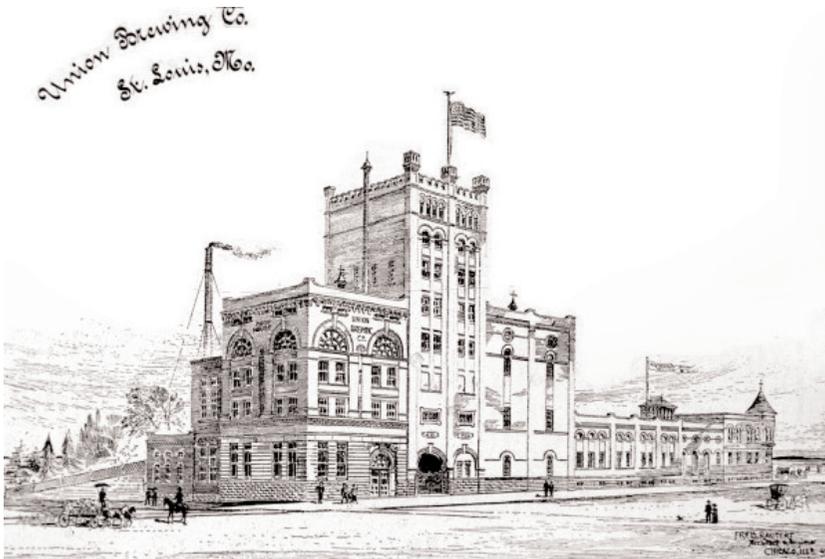


Figure 19. Fred Rautert, architect (Chicago): Union Brewery of Otto F. Stifel, St. Louis, Missouri, built 1899. (The Western Brewer XXIV, 3 (March 1899): 113.) Demolished.



Figure 20. Fred Rautert, architect (Chicago): Star Brewing Co., Dubuque, Iowa, built 1898, view into former brew house, renovated as the Star Restaurant. (Photo by the author, 2008.)



Bernard Barthel, architect (Chicago): Jacob Schmidt Brewing Co., St. Paul, Minnesota, built 1901 on. (Photo by the author, 2008.) Extant; redevelopment is hoped for but not assured.



Fred. W. Wolf, architect (Chicago): Geo. Wiedemann Brewing Co., Newport, Kentucky (across the Ohio River from Cincinnati), built 1888; view during demolition, 1987. (Photo by the author, 1987.)