

D.G. YUENGLING & CO. (LATER BERNHEIMER & SCHWARTZ)  
 BREWERY COMPLEX BUILDINGS  
 PUBLIC HEARING JUNE 11, 1991  
 LANDMARKS PRESERVATION COMMISSION

THE COUNCIL OF THE CITY OF NEW YORK



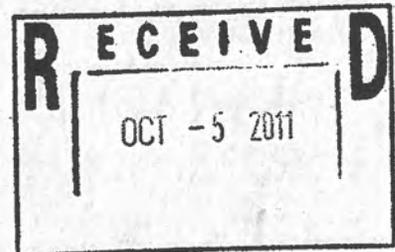
ROBERT JACKSON  
COUNCILMEMBER, 7<sup>TH</sup> DISTRICT  
MANHATTAN

- DISTRICT OFFICES**
- 751 WEST 183<sup>RD</sup> STREET  
NEW YORK, NY 10033  
212.928.1322  
FAX 212.928.4177
  - 425 WEST 144<sup>TH</sup> STREET  
NEW YORK, NY 10031  
212.234.0551  
FAX 212.234.0552
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NEW YORK, NY 10007  
212.788.7007  
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- rjackson@council.nyc.gov  
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- EDUCATION  
CHAIR
- BLACK, LATINO & ASIAN CAUCUS  
CO-CHAIR
- 
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FRANCHISES  
RULES, PRIVILEGES & ELECTIONS  
SANITATION & SOLID WASTE  
MANAGEMENT  
STANDARDS & ETHICS

September 30, 2011

Commissioner Robert Tierney  
Landmarks Preservation Commission  
Municipal Building  
1 Centre Street, 9th Floor  
New York, NY 10007



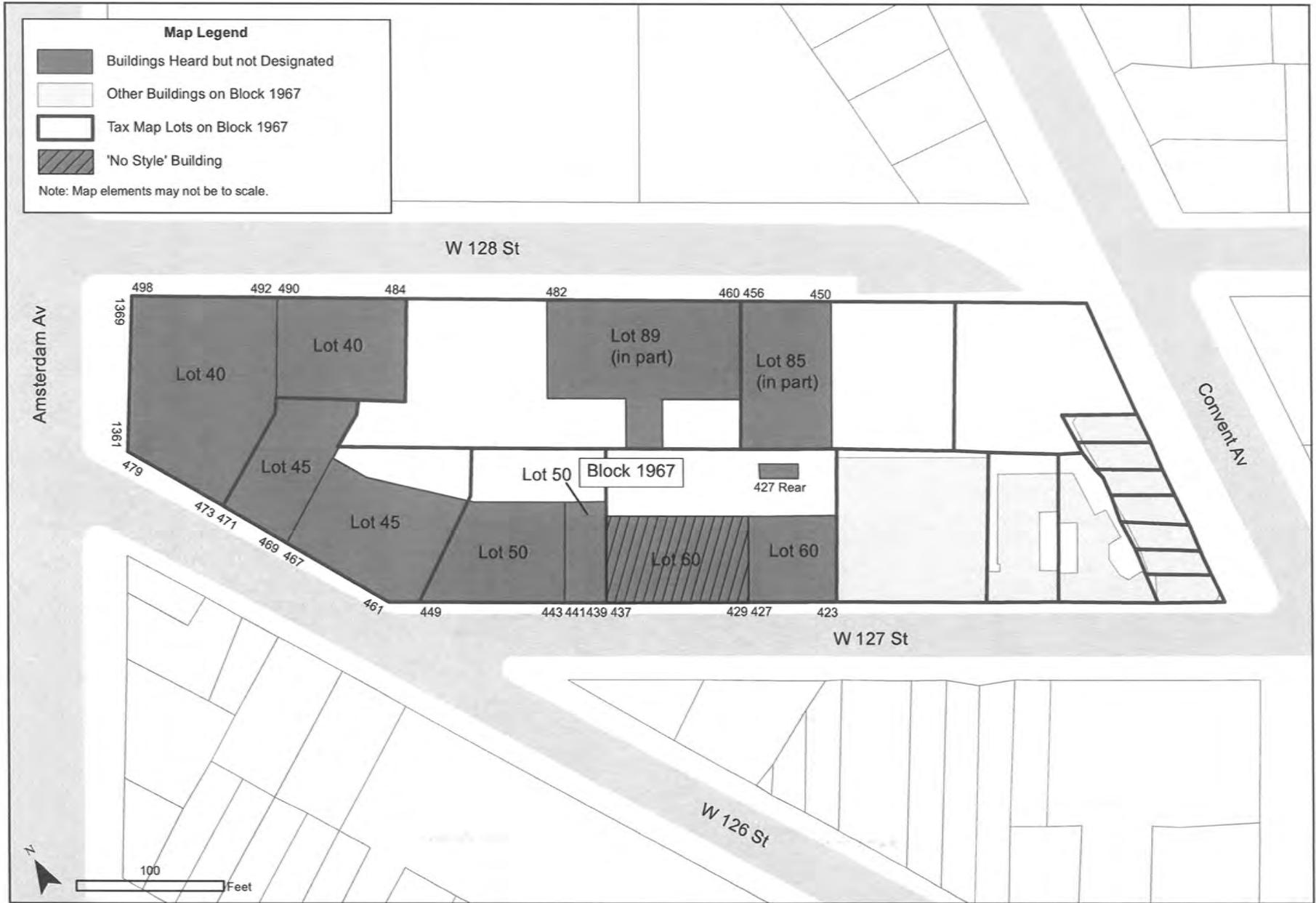
Re: Block 1967/Lots 40, 45, 50, 60 and 89, calendared by the LPC

Dear Commissioner Tierney:

I am writing to express my disappointment at your lack of response to my repeated overtures asking you to either schedule a Commission hearing in connection with the above referenced properties or to come back to the negotiating table with the goal of getting them permanently off the Commission's calendar. I first communicated directly with you in early 2011 about this and requested that you schedule a hearing. I did not receive the courtesy of a reply.

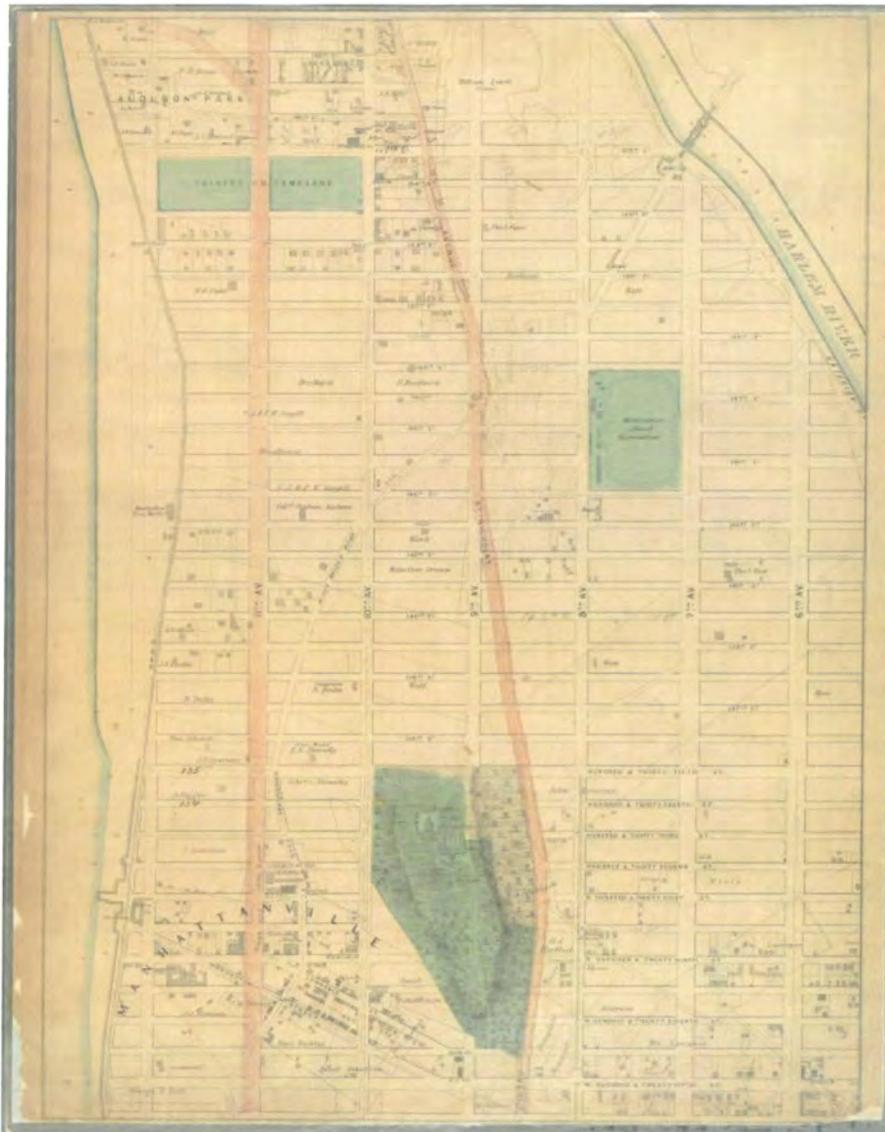
After our most recent telephone conversation of nearly a month ago which I initiated, Susan Russell, my Director of Operations and General Counsel spoke with your Chief of Staff in even more detail about my desire to resolve these matters cooperatively. I have not received any further communication from your office and I find this troubling. As the elected representative of the community in which these properties are located, I anticipated that you would have been more respectful to my office even if you do not agree with my stated positions with respect to their designation as landmarks.

I am asking you to respond to this communication and please indicate whether you are willing to resume negotiations with the owners of the properties in question beyond repeating the



**D.G. YUENGLING & CO. (LATER BERNHEIMER & SCHWARTZ) BREWERY COMPLEX BUILDINGS**

Public Hearing: June 11, 1991



**Image Title:** Sheet 17: [Bounded by 158th Street, 10th Avenue, 155th Street, 8th Avenue, 154th Street, 7th Avenue, 149th Street, 6th Avenue, W. Hundred & Twenty Fifth Street, and (Audubon Park) 11th Avenue.]

**Item/Page/Plate:** 17

**Source:** Atlases of New York city. / Plan of New York City, from the Battery to Spuyten Duyvil Creek. Showing every lot and building thereon; old farm lines, street numbers at the corners of blocks, railroads, steamboat landings, bulkhead and pier lines, etc. Based on the surveys made by Messrs. Randall & Blackwell, and on the special survey by J. F. Harrison.

**Location:** Stephen A. Schwarzman Building / The Lionel Pincus and Princess Firyal Map Division

**Catalog Call Number:** Map Div. (New York City 1867) (Dripps, M. Plan of New York City.)

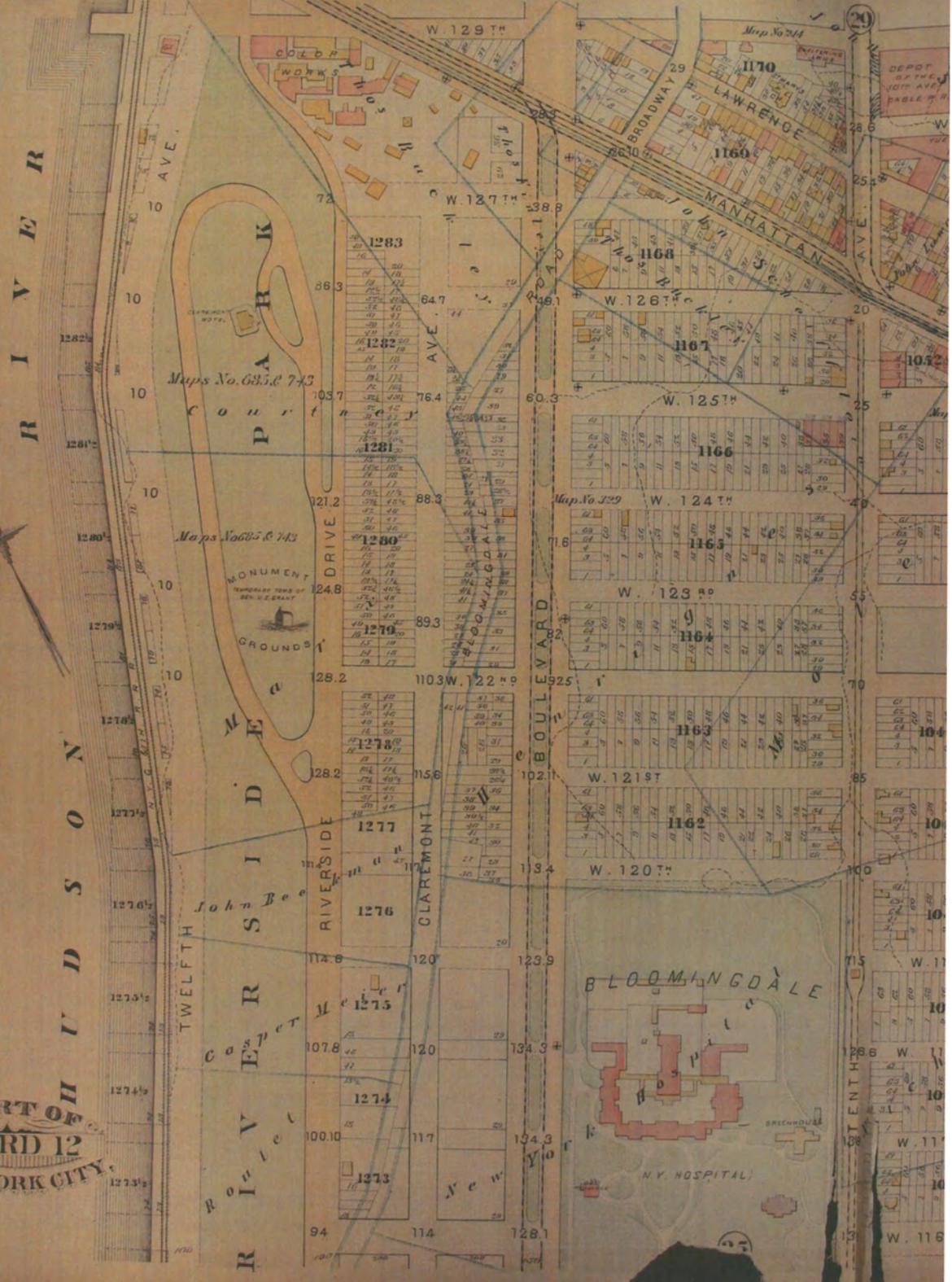
**Digital ID:** 1520740

**Record ID:** 844801

**Digital Item Published:** 8-11-2006; updated 6-22-2011



PART OF  
WARD 12  
NEW YORK CITY



Maps No. 685 & 743

Maps No. 685 & 743

Map No. 329

Map No. 244

TWELFTH

RIVERSIDE

CLAREMONT

BOULVARD

W. 129<sup>TH</sup>

W. 127<sup>TH</sup>

W. 126<sup>TH</sup>

W. 125<sup>TH</sup>

W. 124<sup>TH</sup>

W. 123<sup>RD</sup>

W. 121<sup>ST</sup>

W. 120<sup>TH</sup>

W. 119<sup>TH</sup>

W. 118<sup>TH</sup>

W. 117<sup>TH</sup>

W. 116<sup>TH</sup>

COURT

MONUMENT

ROSE

RI-VI-C

1283

1282

1281

1280

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1274

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1063

COLEMAN

WORKS

W. 129<sup>TH</sup>

W. 127<sup>TH</sup>

W. 126<sup>TH</sup>

W. 125<sup>TH</sup>

W. 124<sup>TH</sup>

CLAREMONT

BOULVARD

W. 123<sup>RD</sup>

W. 121<sup>ST</sup>

W. 120<sup>TH</sup>

W. 119<sup>TH</sup>

W. 118<sup>TH</sup>

ROSE

RI-VI-C

1278

1277

1276

1275

1274

MONUMENT

BOULVARD

W. 123<sup>RD</sup>

W. 121<sup>ST</sup>

W. 120<sup>TH</sup>

W. 119<sup>TH</sup>

W. 118<sup>TH</sup>

ROSE

RI-VI-C

1276

1275

1274

1273

1272

ROSE

RI-VI-C

1273

1272

1271

1270

1269

ROSE

RI-VI-C

1270

1269

1268

1267

1266

ROSE

RI-VI-C

1266

1265

1264

1263

1262

BLOOMINGDALE

N.Y. HOSPITAL

GREENHOUSE

W. 119<sup>TH</sup>

W. 118<sup>TH</sup>

W. 117<sup>TH</sup>

W. 116<sup>TH</sup>

W. 115<sup>TH</sup>

W. 114<sup>TH</sup>

W. 113<sup>TH</sup>

W. 112<sup>TH</sup>

W. 111<sup>TH</sup>

W. 110<sup>TH</sup>

W. 109<sup>TH</sup>

W. 108<sup>TH</sup>

W. 107<sup>TH</sup>

W. 106<sup>TH</sup>

W. 105<sup>TH</sup>

W. 104<sup>TH</sup>

W. 103<sup>TH</sup>

W. 102<sup>TH</sup>

W. 101<sup>ST</sup>

W. 100<sup>TH</sup>

W. 99<sup>TH</sup>

W. 98<sup>TH</sup>

W. 97<sup>TH</sup>

W. 96<sup>TH</sup>

W. 95<sup>TH</sup>

W. 94<sup>TH</sup>

W. 93<sup>TH</sup>

W. 92<sup>TH</sup>

W. 91<sup>ST</sup>

W. 90<sup>TH</sup>

W. 89<sup>TH</sup>

W. 88<sup>TH</sup>

W. 87<sup>TH</sup>

W. 86<sup>TH</sup>

W. 85<sup>TH</sup>

W. 84<sup>TH</sup>

W. 83<sup>TH</sup>

W. 82<sup>TH</sup>

W. 81<sup>ST</sup>

W. 80<sup>TH</sup>

W. 79<sup>TH</sup>

W. 78<sup>TH</sup>

W. 77<sup>TH</sup>

W. 76<sup>TH</sup>

W. 75<sup>TH</sup>

W. 74<sup>TH</sup>

W. 73<sup>TH</sup>

W. 72<sup>TH</sup>

W. 71<sup>ST</sup>

W. 70<sup>TH</sup>

W. 69<sup>TH</sup>

W. 68<sup>TH</sup>

W. 67<sup>TH</sup>

W. 66<sup>TH</sup>

W. 65<sup>TH</sup>

W. 64<sup>TH</sup>

W. 63<sup>TH</sup>

W. 62<sup>TH</sup>

W. 61<sup>ST</sup>

W. 60<sup>TH</sup>

W. 59<sup>TH</sup>

W. 58<sup>TH</sup>

W. 57<sup>TH</sup>

W. 56<sup>TH</sup>

W. 55<sup>TH</sup>

W. 54<sup>TH</sup>

W. 53<sup>TH</sup>

W. 52<sup>TH</sup>

W. 51<sup>ST</sup>

W. 50<sup>TH</sup>

W. 49<sup>TH</sup>

W. 48<sup>TH</sup>

W. 47<sup>TH</sup>

W. 46<sup>TH</sup>

W. 45<sup>TH</sup>

W. 44<sup>TH</sup>

W. 43<sup>TH</sup>

W. 42<sup>TH</sup>

W. 41<sup>ST</sup>

W. 40<sup>TH</sup>

W. 39<sup>TH</sup>

W. 38<sup>TH</sup>

W. 37<sup>TH</sup>

W. 36<sup>TH</sup>

W. 35<sup>TH</sup>

W. 34<sup>TH</sup>

W. 33<sup>TH</sup>

W. 32<sup>TH</sup>

W. 31<sup>ST</sup>

W. 30<sup>TH</sup>

W. 29<sup>TH</sup>

W. 28<sup>TH</sup>

W. 27<sup>TH</sup>

W. 26<sup>TH</sup>

W. 25<sup>TH</sup>

W. 24<sup>TH</sup>

W. 23<sup>TH</sup>

W. 22<sup>TH</sup>

W. 21<sup>ST</sup>

W. 20<sup>TH</sup>

W. 19<sup>TH</sup>

W. 18<sup>TH</sup>

W. 17<sup>TH</sup>

W. 16<sup>TH</sup>

W. 15<sup>TH</sup>

W. 14<sup>TH</sup>

W. 13<sup>TH</sup>

W. 12<sup>TH</sup>

W. 11<sup>TH</sup>

W. 10<sup>TH</sup>

W. 9<sup>TH</sup>

W. 8<sup>TH</sup>

W. 7<sup>TH</sup>

W. 6<sup>TH</sup>

W. 5<sup>TH</sup>

W. 4<sup>TH</sup>

W. 3<sup>TH</sup>

W. 2<sup>TH</sup>

W. 1<sup>ST</sup>

W. 0<sup>TH</sup>

W. -1<sup>ST</sup>

W. -2<sup>ND</sup>

W. -3<sup>RD</sup>

W. -4<sup>TH</sup>

W. -5<sup>TH</sup>

W. -6<sup>TH</sup>

W. -7<sup>TH</sup>

W. -8<sup>TH</sup>

W. -9<sup>TH</sup>

W. -10<sup>TH</sup>

W. -11<sup>TH</sup>

W. -12<sup>TH</sup>

W. -13<sup>TH</sup>

W. -14<sup>TH</sup>

W. -15<sup>TH</sup>

W. -16<sup>TH</sup>

W. -17<sup>TH</sup>

W. -18<sup>TH</sup>

W. -19<sup>TH</sup>

W. -20<sup>TH</sup>

W. -21<sup>ST</sup>

W. -22<sup>ND</sup>

W. -23<sup>RD</sup>

W. -24<sup>TH</sup>

W. -25<sup>TH</sup>

W. -26<sup>TH</sup>

W. -27<sup>TH</sup>

W. -28<sup>TH</sup>

W. -29<sup>TH</sup>

W. -30<sup>TH</sup>

W. -31<sup>ST</sup>

W. -32<sup>ND</sup>

W. -33<sup>RD</sup>

W. -34<sup>TH</sup>

W. -35<sup>TH</sup>

W. -36<sup>TH</sup>

W. -37<sup>TH</sup>

W. -38<sup>TH</sup>

W. -39<sup>TH</sup>

W. -40<sup>TH</sup>

W. -41<sup>ST</sup>

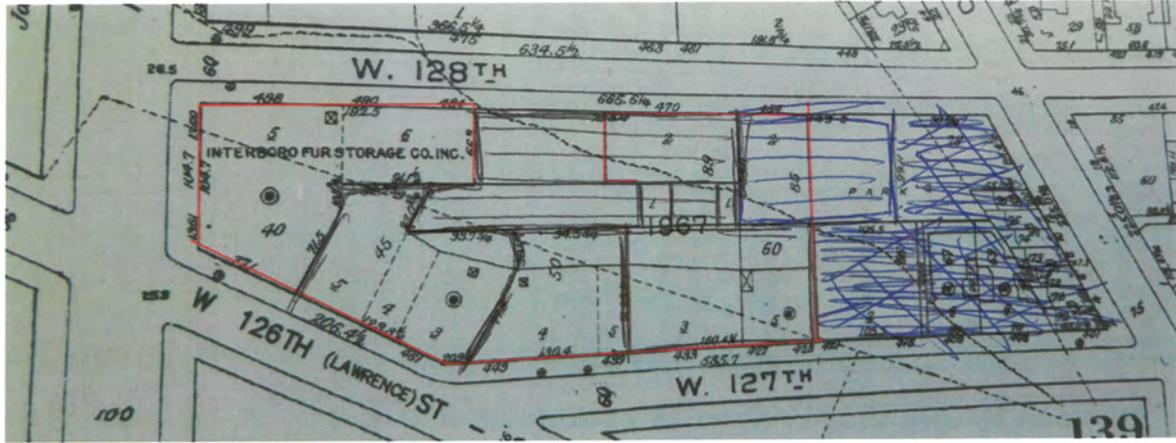
W. -42<sup>ND</sup>

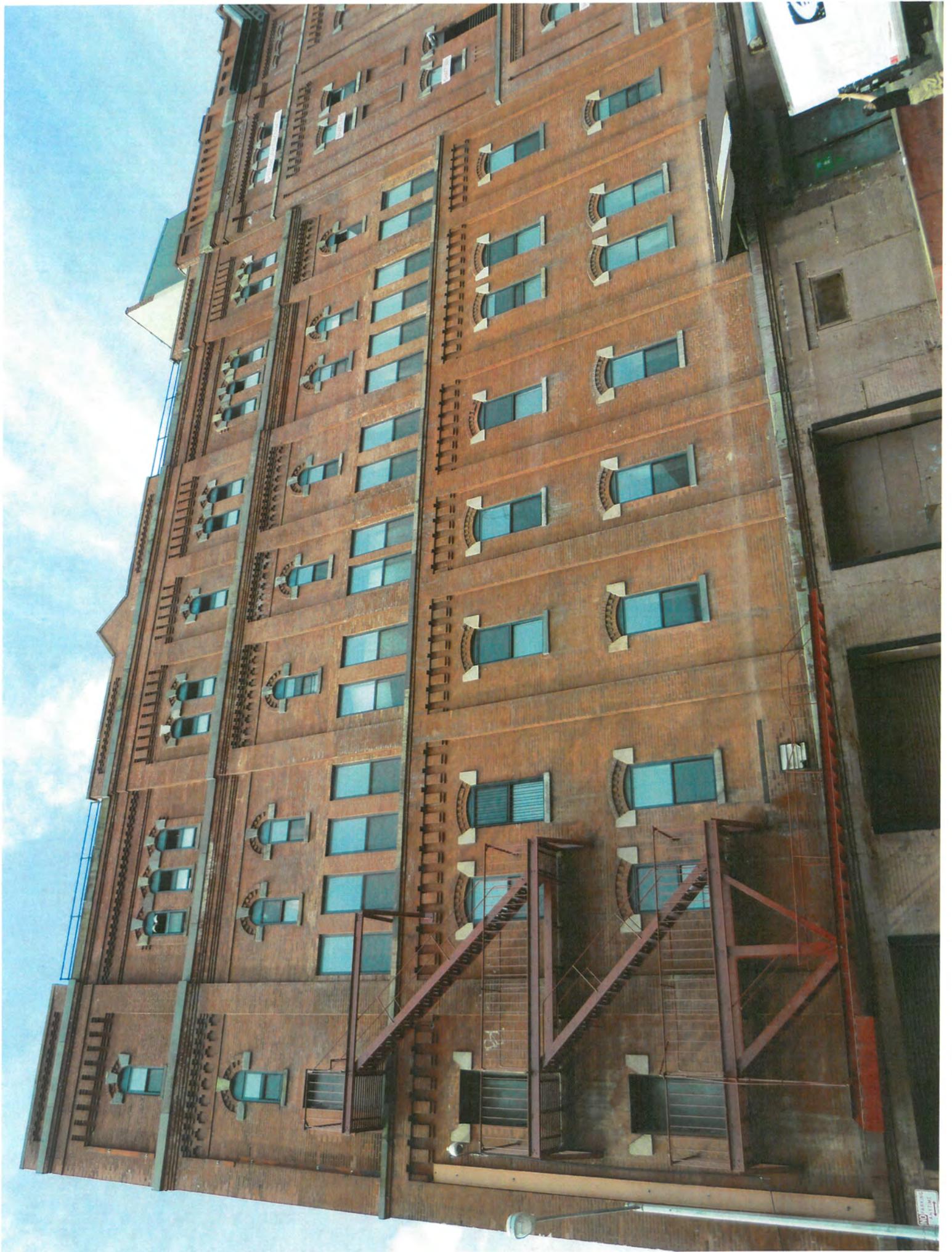
W. -43<sup>RD</sup>

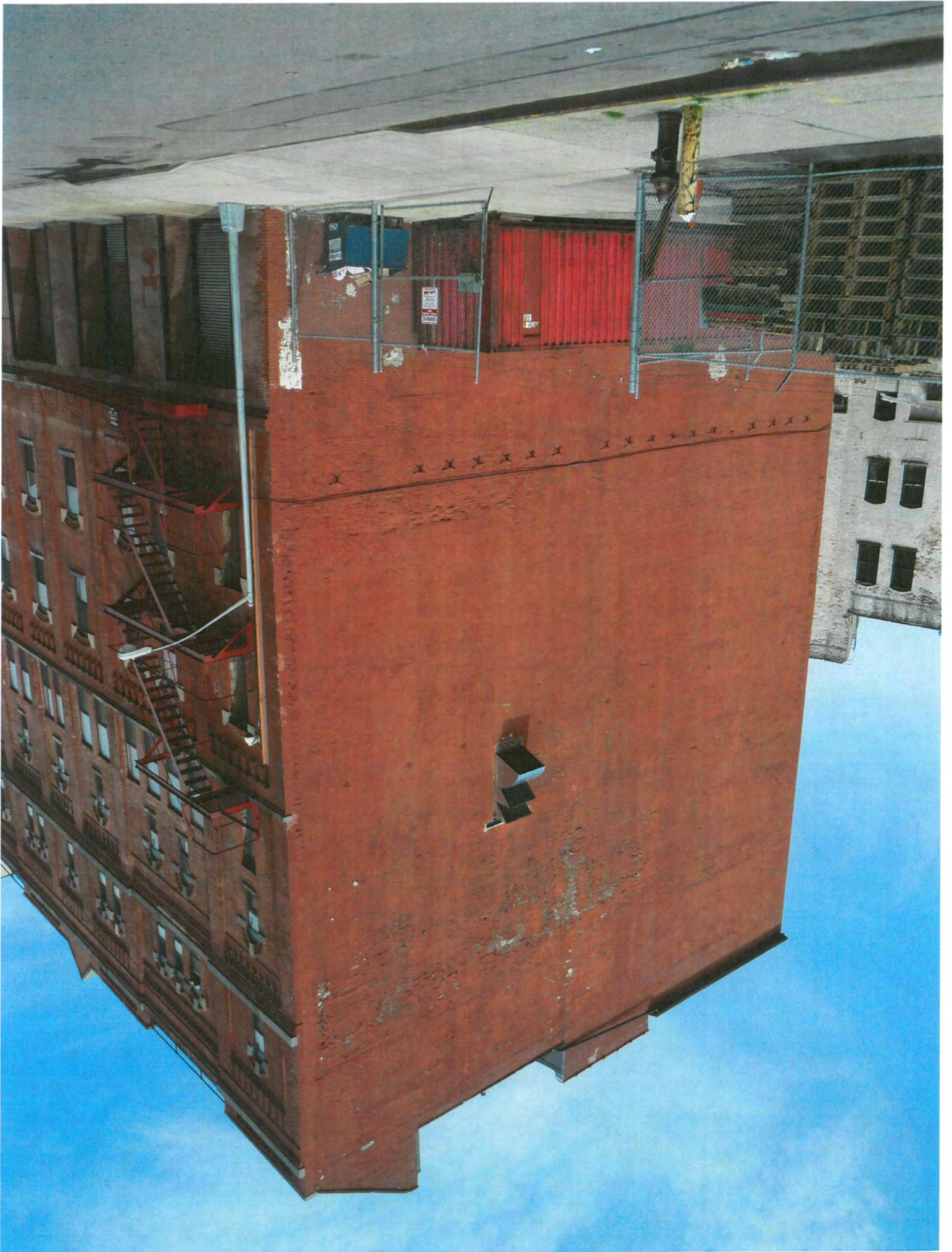
W. -44<sup>TH</sup>

W. -45

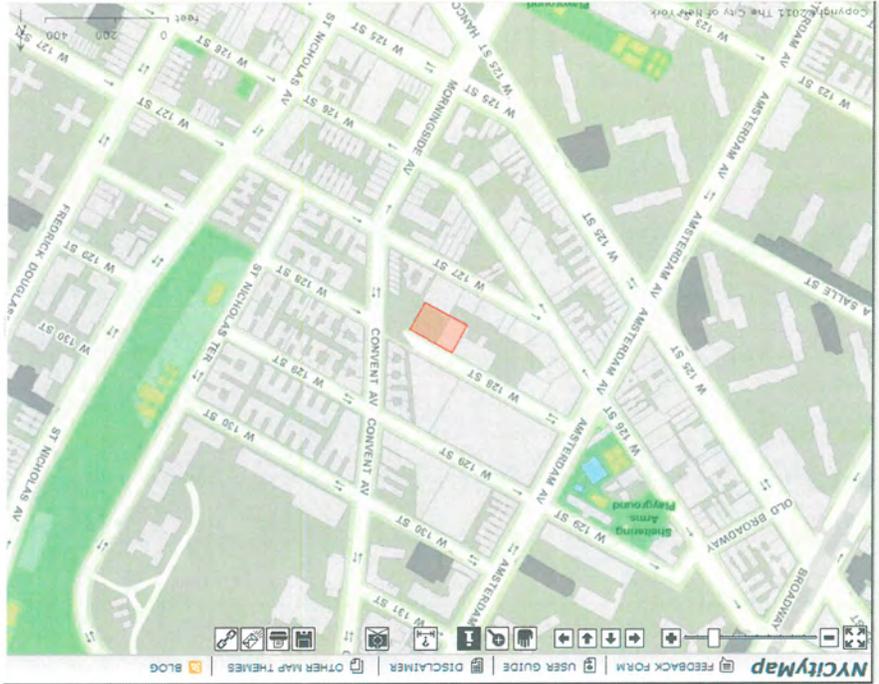




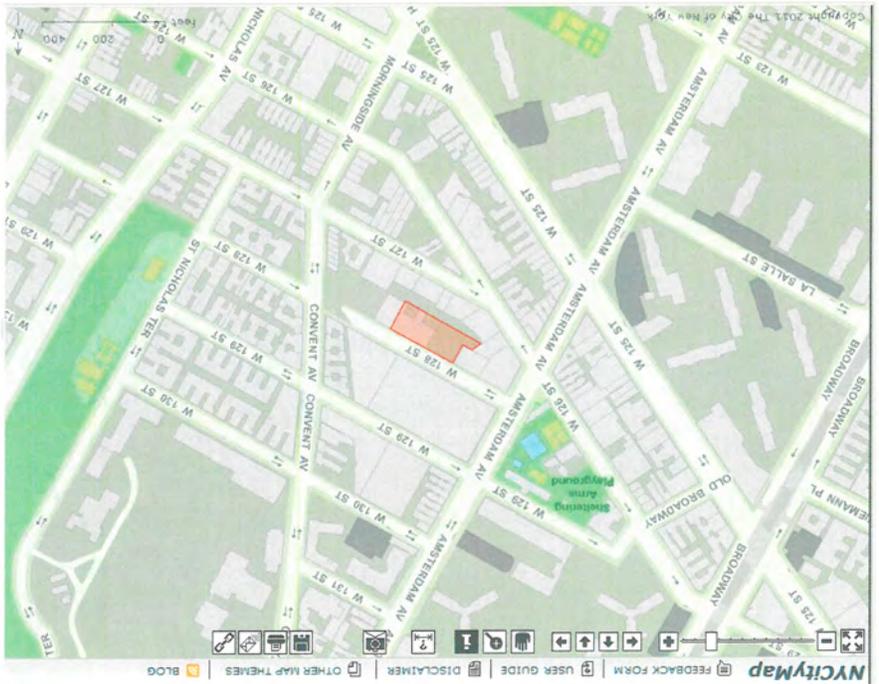




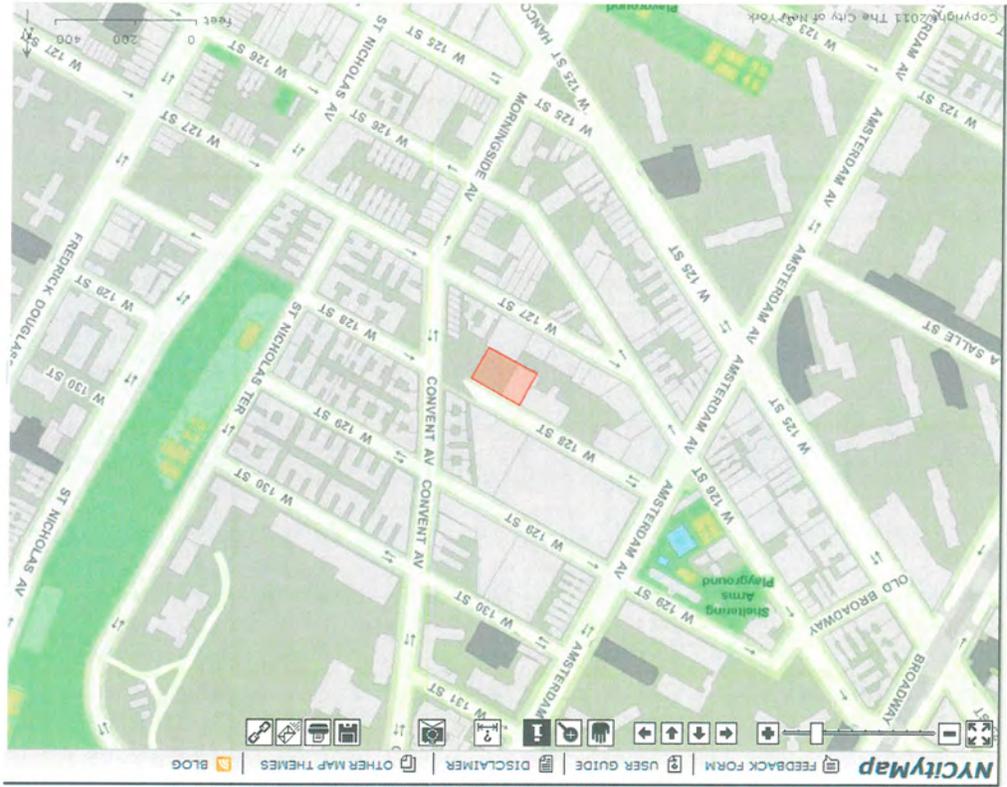
LOT 85



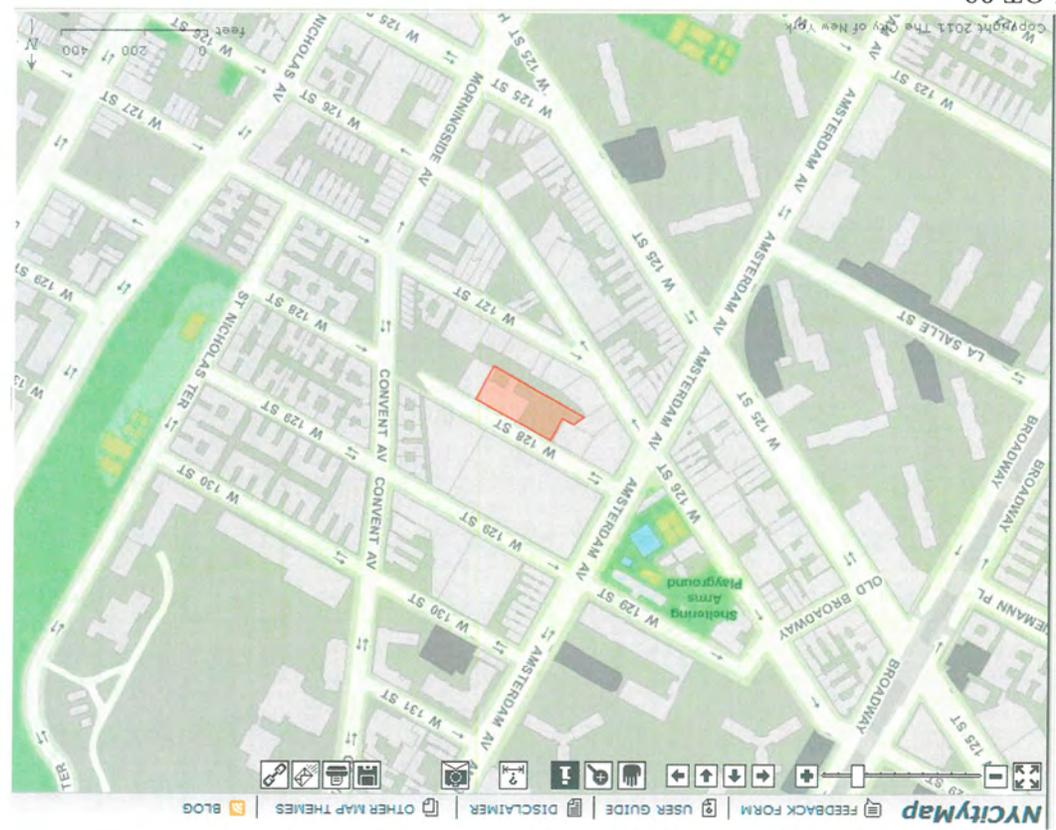
LOT 86

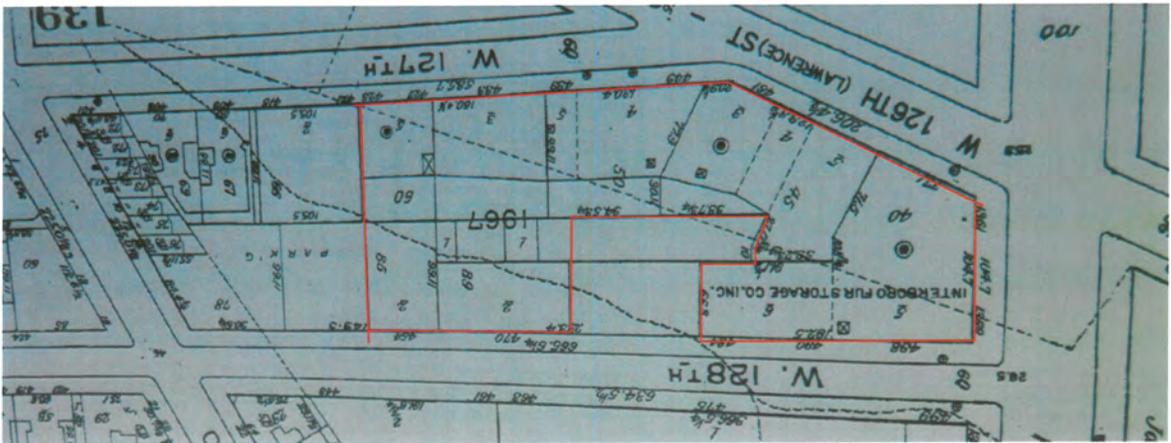


LOT 85



LOT 89





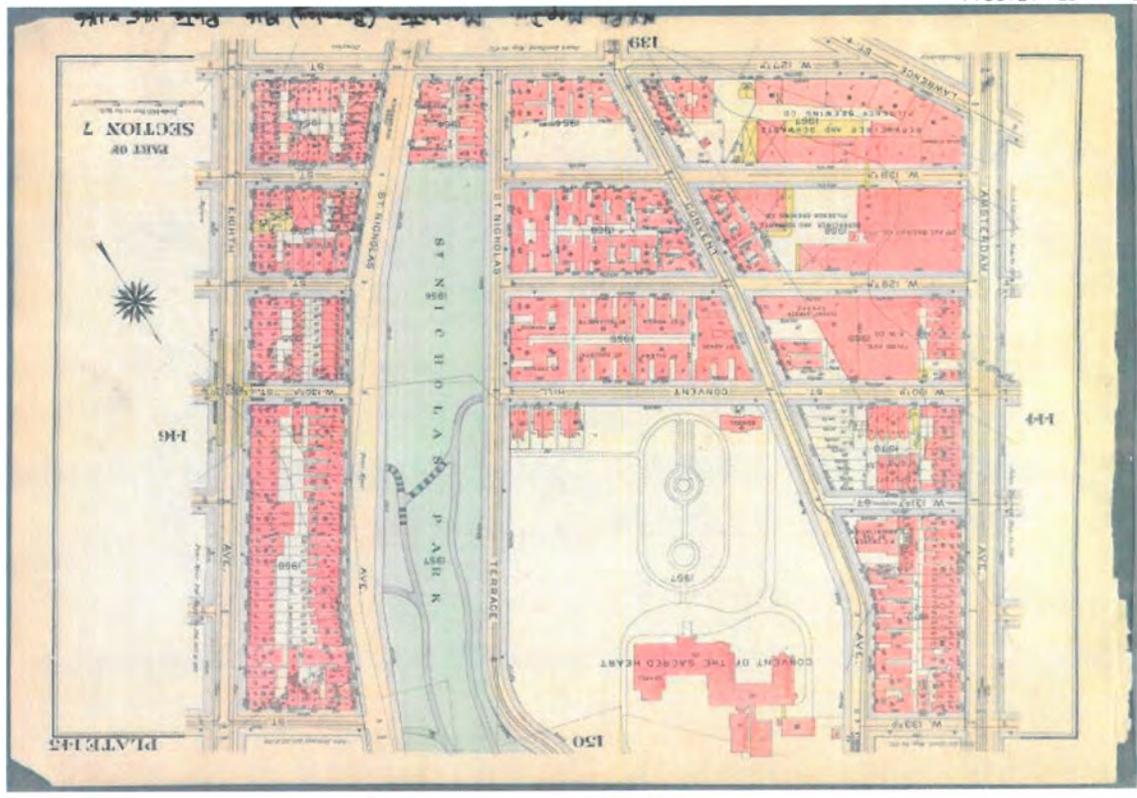


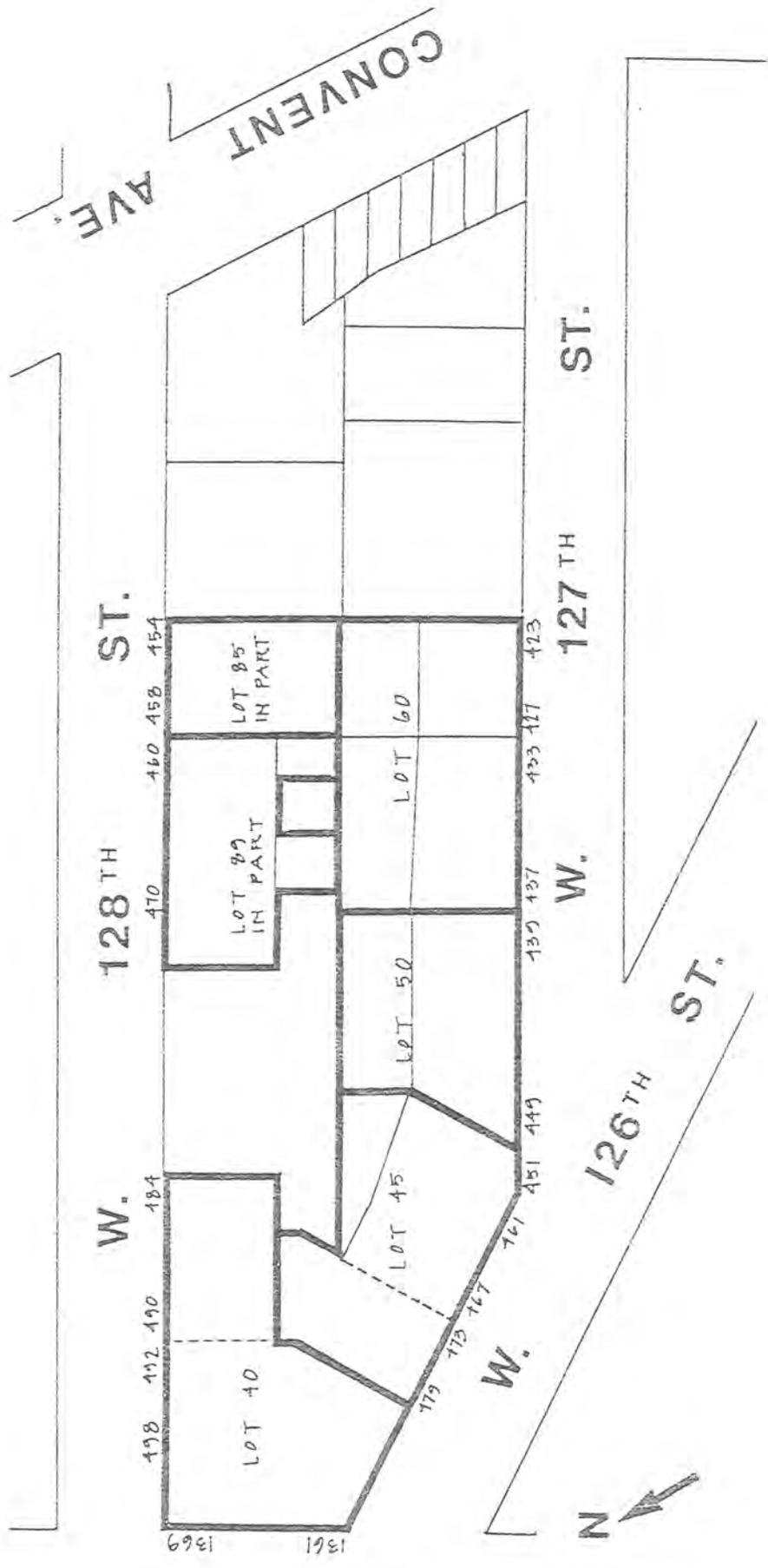
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 [Plate 145: Bounded by W. 133rd Street, Eighth Avenue, W. 127th Street, Lawrence Street and Amsterdam Avenue.] [Part of Section 7: Plate 145] (1916)

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*Brumby*  
 1916

AVE.

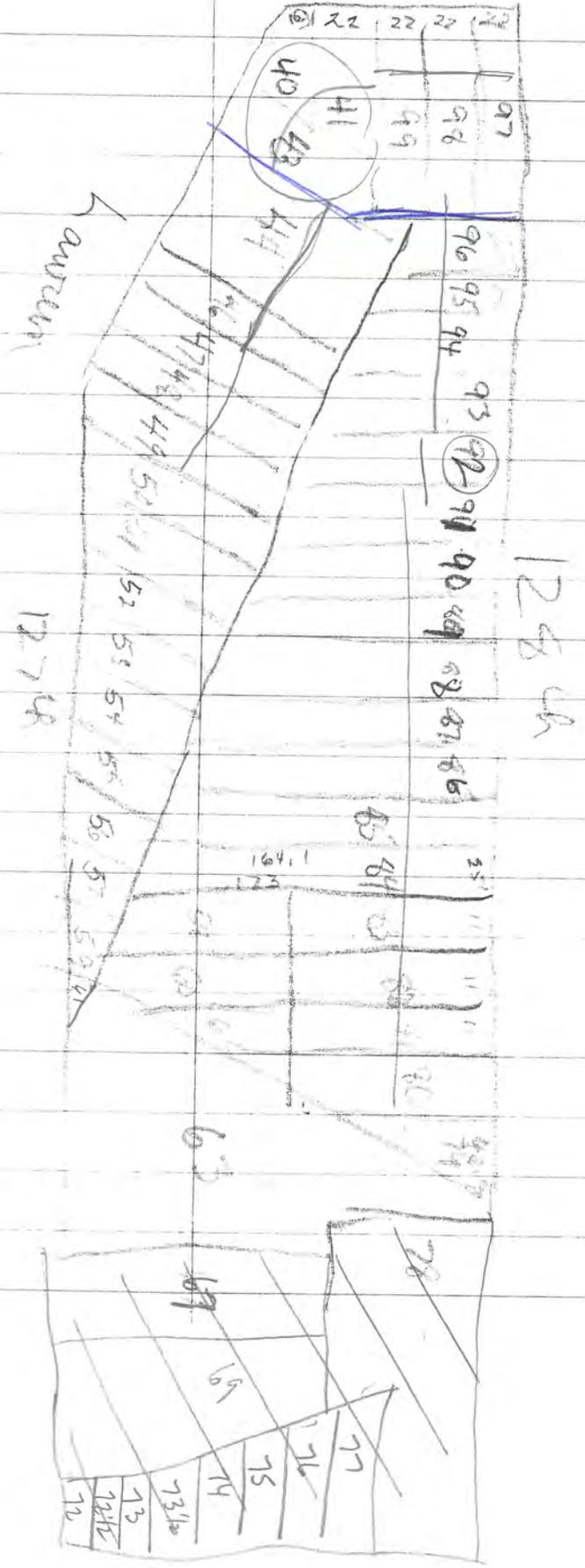
AMSTERDAM



D.G. YUENGLING BREWING CO. (LATER BERNHEIMER &  
 SCHWARTZ PILSENER BREWING CO.)  
 COMPLEX BUILDINGS



Amsterdam  
10th Ave



40M, 193 (1903) ✓

47-59

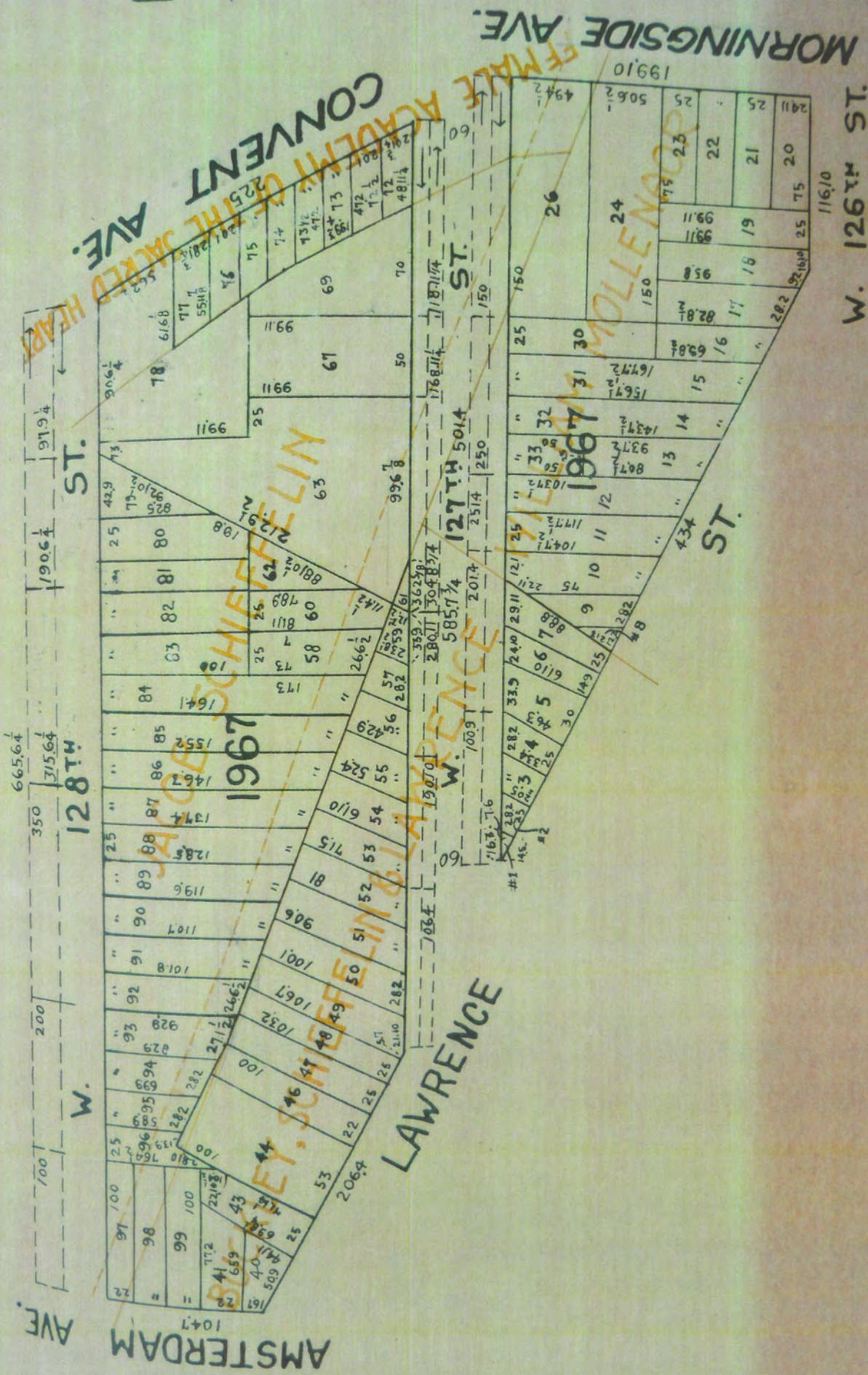
47, 48, 44

53-59 - (1906)

40-99 Lots  
Excluding 67-78

Deeds

RAY  
CHA  
(M)  
TIT



JOHN J. HOFFER  
REGISTER NEW YORK COUNTY

APPROVED

*J. J. Hoffer*  
COUNTY CLERK

W. 126th ST.  
116.10

ST.  
1906 1/4

128th ST.  
1906 1/4

ST.  
1768 1/4

127th ST.  
1768 1/4

ST.  
434

W. 126th ST.  
1768 1/4

W. 127th ST.  
1768 1/4

W. 128th ST.  
1768 1/4

W. 129th ST.  
1768 1/4

W. 130th ST.  
1768 1/4

W. 131st ST.  
1768 1/4

W. 132nd ST.  
1768 1/4

W. 133rd ST.  
1768 1/4

W. 134th ST.  
1768 1/4

W. 135th ST.  
1768 1/4

W. 136th ST.  
1768 1/4

W. 137th ST.  
1768 1/4

W. 138th ST.  
1768 1/4

W. 139th ST.  
1768 1/4

W. 140th ST.  
1768 1/4

W. 141st ST.  
1768 1/4

W. 142nd ST.  
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W. 143rd ST.  
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W. 144th ST.  
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W. 145th ST.  
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W. 146th ST.  
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W. 147th ST.  
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W. 148th ST.  
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W. 149th ST.  
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W. 150th ST.  
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W. 151st ST.  
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W. 152nd ST.  
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W. 153rd ST.  
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W. 154th ST.  
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W. 169th ST.  
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W. 170th ST.  
1768 1/4

W. 171st ST.  
1768 1/4

W. 172nd ST.  
1768 1/4

W. 173rd ST.  
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W. 174th ST.  
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W. 175th ST.  
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W. 176th ST.  
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W. 177th ST.  
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W. 178th ST.  
1768 1/4

W. 179th ST.  
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W. 180th ST.  
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W. 181st ST.  
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W. 182nd ST.  
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W. 183rd ST.  
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W. 184th ST.  
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W. 185th ST.  
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W. 186th ST.  
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W. 187th ST.  
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W. 190th ST.  
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W. 191st ST.  
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W. 192nd ST.  
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W. 193rd ST.  
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W. 194th ST.  
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W. 195th ST.  
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W. 196th ST.  
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W. 197th ST.  
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W. 198th ST.  
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W. 199th ST.  
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W. 200th ST.  
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W. 201st ST.  
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W. 202nd ST.  
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W. 203rd ST.  
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W. 204th ST.  
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W. 205th ST.  
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W. 206th ST.  
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W. 207th ST.  
1768 1/4

W. 208th ST.  
1768 1/4

W. 209th ST.  
1768 1/4

W. 210th ST.  
1768 1/4

W. 211st ST.  
1768 1/4

W. 212nd ST.  
1768 1/4

W. 213th ST.  
1768 1/4

W. 214th ST.  
1768 1/4

W. 215th ST.  
1768 1/4

W. 216th ST.  
1768 1/4

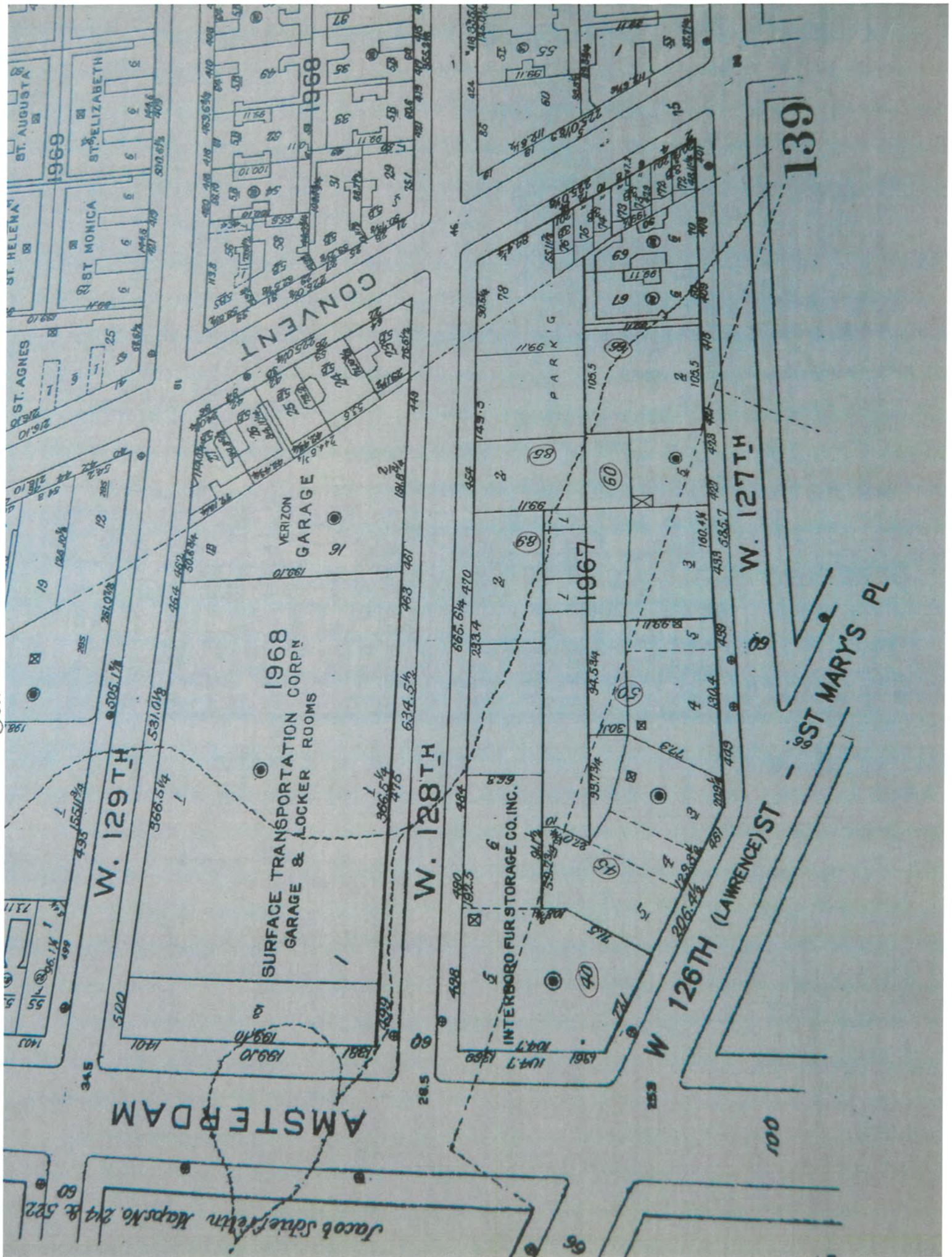
W. 217th ST.  
1768 1/4

W. 218th ST.  
1768 1/4

W. 219th ST.  
1768 1/4

W. 220th ST.  
1768 1/4

Clarkston



AMSTERDAM

W. 129TH

W. 128TH

W. 127TH

W 126TH (LAWRENCE) ST

ST MARY'S PL

1968  
SURFACE TRANSPORTATION CORPN  
GARAGE & LOCKER ROOMS

VERIZON  
GARAGE

1967  
INTERBORO FUR STORAGE CO. INC.

CONVENT

PARK

139

100

Jacob Schaefer Kapra No 214 & 522

DOCUMENTATION: New Building Applications

NB- 142 - 1866

Docket  (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: SE corner, 128<sup>th</sup> St & 10<sup>th</sup> Ave

Owner/Developer: Harold & Kerung

Architect: John M. Foster

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

Extension to Brewery

No. of Buildings: \_\_\_\_\_ No. of Stories: 2

Building(s) Dimensions: 39, 43 x 66

Material(s): brick, masonry

Method of Construction: \_\_\_\_\_

Fireproof: Yes  No

Roof Type/Material: \_\_\_\_\_

Cost: \_\_\_\_\_

Storefront(s): Yes  No

Commencement: \_\_\_\_\_ Completion: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DOCUMENTATION: New Building Applications

NB- 612-1867

Docket  (OR) Application  ?

Address(es): SE Cor 10<sup>th</sup> & 128<sup>th</sup> St

Block/Lot(s): \_\_\_\_\_

Location: \_\_\_\_\_

Owner/Developer: Casper Heindel

Architect: John M Forster

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

" 1 sty frame shed in rear of Manhattan Brewery, extending

No. of Buildings: \_\_\_\_\_ No. of Stories: 1

Building(s) Dimensions: 22 x 137

Material(s): \_\_\_\_\_

Method of Construction: wood

Fireproof: Yes  No

Roof Type/Material: tin/flat

Cost: not given

Storefront(s): Yes  No

Commencement: \_\_\_\_\_ Completion: \_\_\_\_\_

Notes: \_\_\_\_\_

from 128<sup>th</sup> St to Lawrence St.  
Commenced Apr 15, 1867

DOCUMENTATION: New Building Applications

NB- 368-1869

Docket \_\_\_\_\_ (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: NS 127<sup>th</sup> ST about 275' from 9<sup>th</sup> Ave

Owner/Developer: \_\_\_\_\_

Architect: Georg Smith

Builder: Georg Smith

Type: \_\_\_\_\_

Original Use/No. of families per building: dwellings 1 family each

No. of Buildings: 2 No. of Stories: 2

Building(s) Dimensions: 26 x 34 x 35

Material(s): wood

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: mansard

Cost: ~~15,000~~ 1500

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: \_\_\_\_\_ Completion: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(over)

DOCUMENTATION: New Building Applications

NB- ~~544-1876~~ 498-1874

Docket \_\_\_\_\_ (OR) Application \_\_\_\_\_ ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: 10<sup>th</sup> ave SE Cor 128<sup>th</sup> St

Owner/Developer: W Maach

Architect: A Pfond

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

factories / ice house

No. of Buildings: \_\_\_\_\_ No. of Stories: 4

Building(s) Dimensions: 43<sup>2</sup> x 43<sup>2</sup> x 65<sup>8</sup>

Material(s): Brick / galv iron cornice

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_ No \_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \$25,000

Storefront(s): Yes \_\_\_ No \_\_\_

Commencement: 7/2/1874 Completion: Oct 31, 1874

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(over)

DOCUMENTATION: New Building Applications

NB- 432 - 1876

Docket \_\_\_\_\_ (OR) Application \_\_\_\_\_ ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: 128<sup>th</sup> St NS 100' E 10<sup>th</sup> Ave

Owner/Developer: Youngling & Co

Architect: William E Waring

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

Wagon Hse & Loft

No. of Buildings: \_\_\_\_\_ No. of Stories: 1 1/2

Building(s) Dimensions: 100 x 50

Material(s): \_\_\_\_\_

Method of Construction: stone & brick

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \$3000

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: \_\_\_\_\_ Completion: Abandoned 6/17/1876

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DOCUMENTATION: New Building Applications

NB- 546-1876

Docket  (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: 128<sup>th</sup> St 175' E 10<sup>th</sup> Ave.

Owner/Developer: Yuengling & Co

Architect: A Pfund

Builder: John Weber

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

~~Manufacturing & Workshop~~ Brewery Ale Hse

No. of Buildings: \_\_\_\_\_ No. of Stories: 3

Building(s) Dimensions: 50' x 66'

Material(s): Brick

Method of Construction: \_\_\_\_\_

Fireproof: Yes  No

Roof Type/Material: flat

Cost: 30,000

Storefront(s): Yes  No

Commencement: Oct 11, 1876 Completion: Mar 24, 1877

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DOCUMENTATION: New Building Applications

NB- 528-1876

Docket  (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: AS 129<sup>th</sup> St 200' E 10<sup>th</sup> Ave

Owner/Developer: Guensling 9 B

Architect: A Pfund

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: stable

No. of Buildings: \_\_\_\_\_ No. of Stories: 2

Building(s) Dimensions: 63 x 63 x 99'

Material(s): \_\_\_\_\_

Method of Construction: Brick / Galv iron cov

Fireproof: Yes  No

Roof Type/Material: \_\_\_\_\_

Cost: 8000

Storefront(s): Yes  No

Commencement: 8/24/76 Completion: Oct 31, 1876

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DOCUMENTATION: New Building Applications

NB- 76-1880

Docket  (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: 127 St NS 175 St E 10<sup>th</sup> Ave

Owner/Developer: David Youngling

Architect: Anthony Plund

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

No. of Buildings: \_\_\_\_\_ No. of Stories: 1 1/2

Building(s) Dimensions: 52<sup>8</sup> x 52<sup>8</sup> x 82<sup>7/2</sup>

Material(s): Brick

Method of Construction: \_\_\_\_\_

Fireproof: Yes  No

Roof Type/Material: \_\_\_\_\_

Cost: \$ 20,000

Storefront(s): Yes  No

Commencement: 2/9/1880 Completion: 5/29/1880

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DOCUMENTATION: New Building Applications

NB- 106 - 1882

Docket \_\_\_\_\_ (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: 128 W ST, 225' from SE cor 10<sup>th</sup> Ave SE cor

Owner/Developer: David Gruening, Manhattan Brewery

Architect: A Pfund 232 W 36

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

Boiler & Engine Hse

No. of Buildings: \_\_\_\_\_ No. of Stories: 4

Building(s) Dimensions: 51' x 66

Material(s): ~~brick~~ hard burnt brick

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: \_\_\_\_\_ galv iron cov

Cost: 20,000

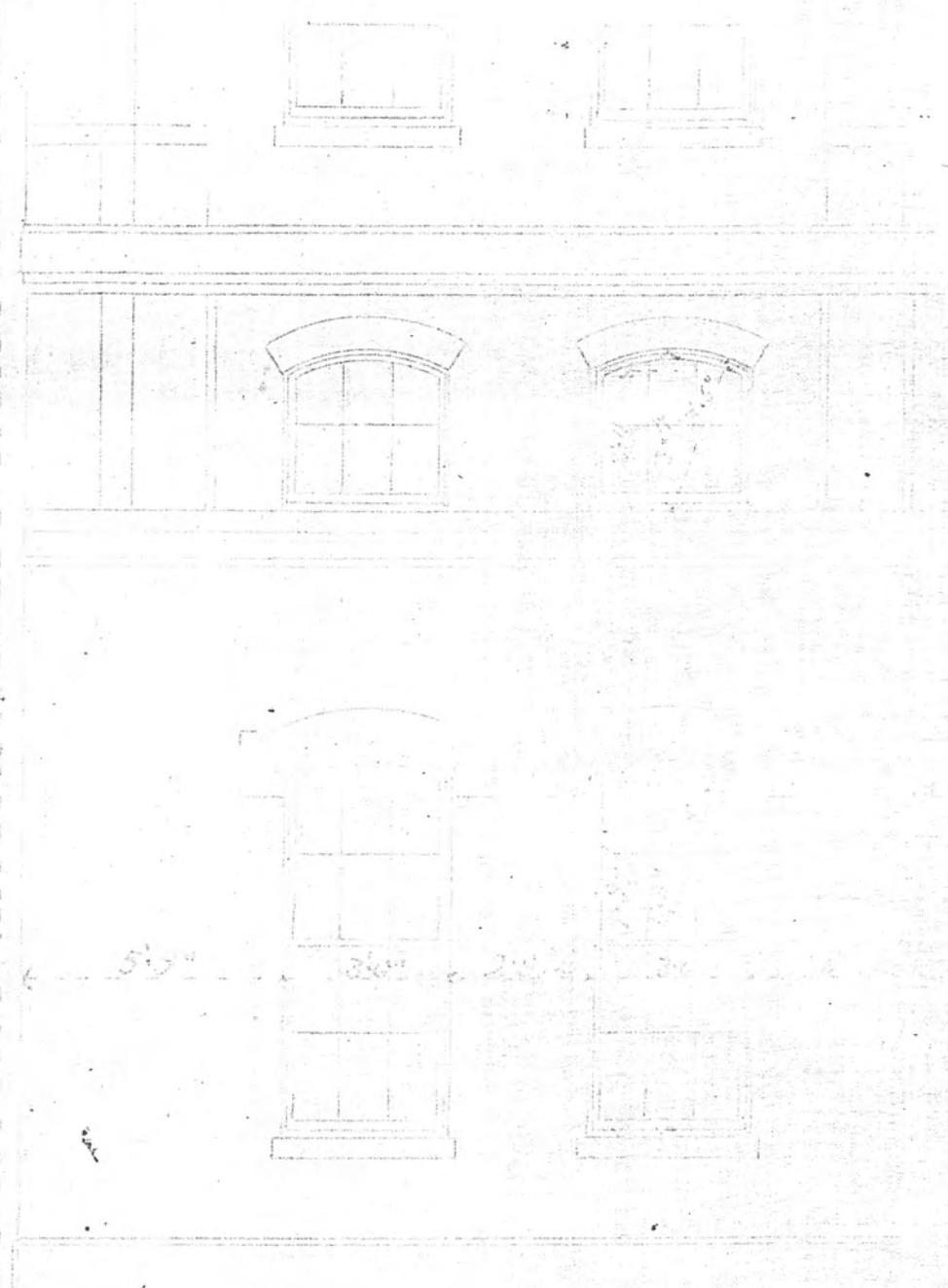
Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: July 14, 1882 Completion: May 31, 1882

Notes: The easterly side wall of the present ice hse will be used as a party wall of the same with a perfectly safe condition

128<sup>th</sup> & 10<sup>th</sup>  
Embassy pl.  
extending 275 E 10<sup>th</sup>

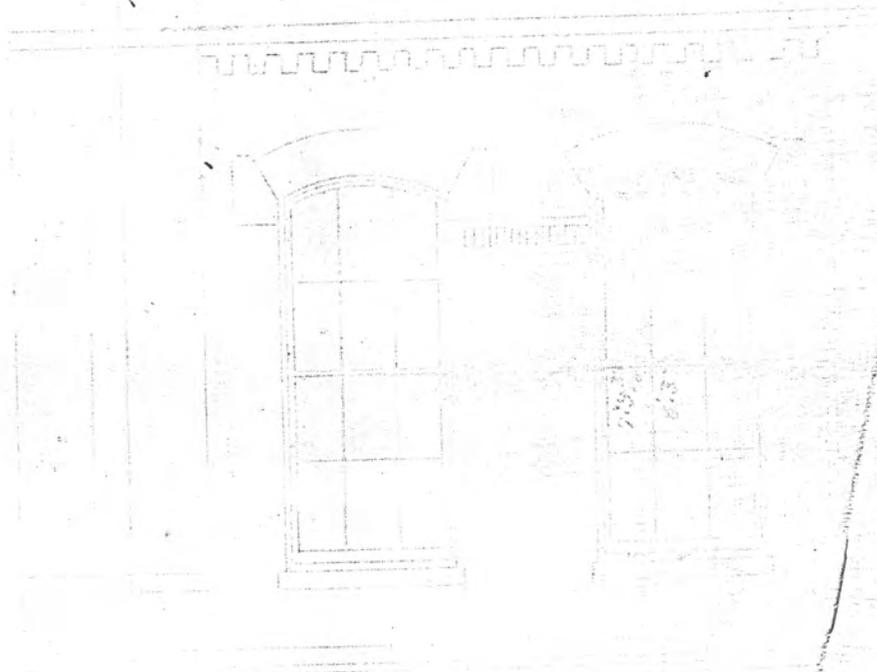
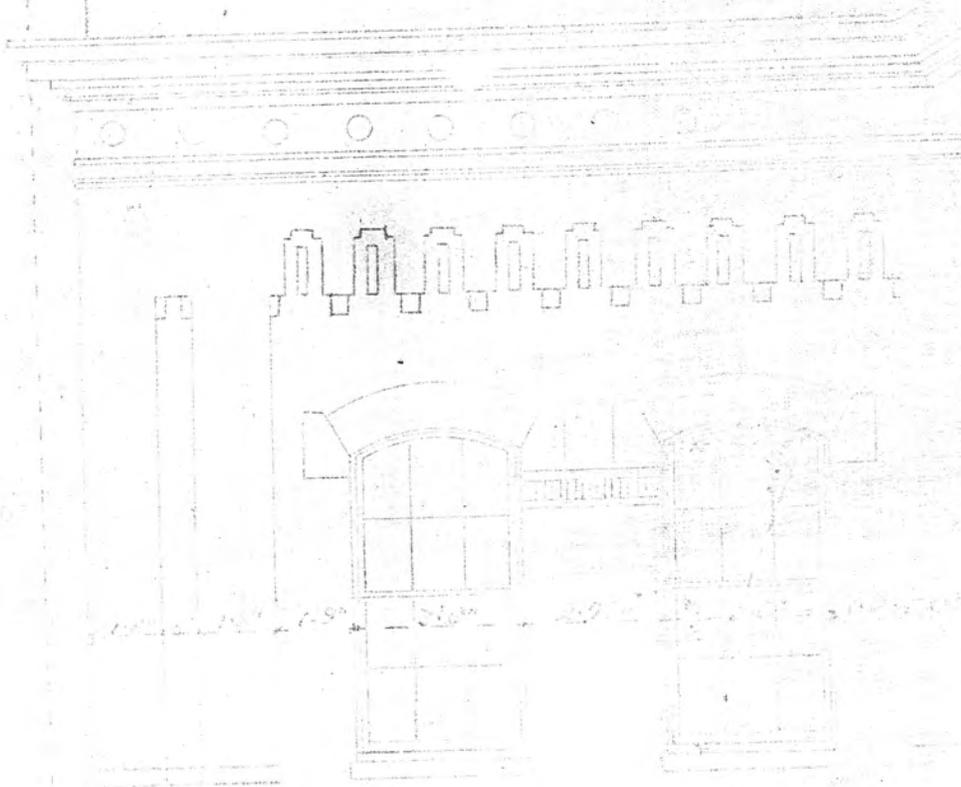
1832



NB  
1832



1832



DOCUMENTATION: New Building Applications

NB- 1386-1883

Docket \_\_\_\_\_ (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: SS 128<sup>th</sup> St & 245 E of 10<sup>th</sup> Ave

Owner/Developer: D J Guanzling No 1 E 62<sup>nd</sup> St

Architect: Paul J Schoen, 744 Bway

Builder: W & S Weber

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

Storage & Laboratory

No. of Buildings: \_\_\_\_\_ No. of Stories: 2

Building(s) Dimensions: 179.9 x 179.9 66.2 1/4

Material(s): brick / Blue stone foundation & coping

Method of Construction: brick bearing wall

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: 15 000

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: 1/14/1884 Completion: 5/31/1884

Notes: Plans amended Mar 11, 1884. Make 2 west sections  
50' x 66' three stories, also erect open shed <sup>214' x 33 wide</sup>  
gravel roof at rear bldg

original plans <sup>(over)</sup> in folder

West 128 St SS 193.7 E 10<sup>th</sup> Ave

ALTERATIONS: Address(es): \_\_\_\_\_

Block/Lot(s): 1967/40

Alt Number 141/1890 or BN Number \_\_\_\_\_

Date Plans filed: Feb 4, 1890 Commenced: Feb 11, 1890 Completed: May 27 1890

Architect: Weber & Drosser

Owner: \_\_\_\_\_

Builder: \_\_\_\_\_

Approx. Cost: \_\_\_\_\_

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 51.7 width rear: 51.7 depth: 66

height: 50 stories: 4

Facade materials: brick

Roof profile/materials: \_\_\_\_\_

Use: Brewery

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

exlen

Building: width front: 23.6 width rear: \_\_\_\_\_ depth: 22

height: 37 stories: 2

Facade materials: wood & iron

Roof profile/materials: \_\_\_\_\_

Use: Boiler shed & tank room, new steamboiler

Nature of Alterations:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



DOCUMENTATION: New Building Applications

NB- 289-1890

Docket \_\_\_\_\_ (OR) Application ✓?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: NS 128<sup>th</sup> St 311' E 10<sup>th</sup> Ave

Owner/Developer: DG Guenzler Jr

Architect: Weber & Grossen

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: Wagon & Storage Shed

No. of Buildings: \_\_\_\_\_ No. of Stories: 1

Building(s) Dimensions: 74 X 100

Material(s): \_\_\_\_\_

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: Flat & Mansard

Cost: 7000

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: \_\_\_\_\_ Completion: \_\_\_\_\_

Notes: used west wall of bldg NS 128 385' E 10<sup>th</sup> Ave  
for support

*Abandoned*

(over)

S J W 128, 193.7 E 10 ~~10~~

ALTERATIONS: Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Alt Number 1438/1590 or BN Number \_\_\_\_\_

Date Plans filed: 10/3/1880 Commenced: \_\_\_\_\_ Completed: Apr 30, 1881

Architect: Weber & Drosser

Owner: D G Quenzling Jr

Builder: \_\_\_\_\_

Approx. Cost: 5000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: Cushion shed

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 49' 8" width rear: 63' 8" depth: 33' 6"

height: 42 stories: 2

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

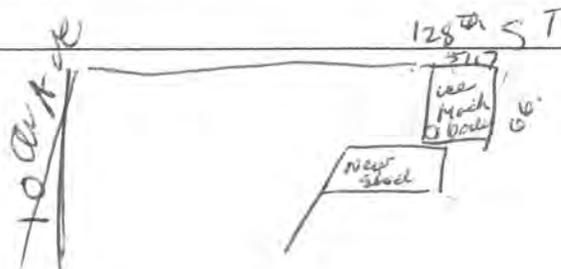
Use: Open shed & condenser room abo

Nature of Alterations:

Present warden shed taken down

amended add story Dec 1891

Ext



ALTERATIONS: Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Alt Number 2015 / 2016 - 1400 or BN Number \_\_\_\_\_

Date Plans filed: \_\_\_\_\_ Commenced: \_\_\_\_\_ Completed: \_\_\_\_\_

Architect: Hill & Stout

Owner: John J. Betz

Builder: \_\_\_\_\_

Approx. Cost: \_\_\_\_\_

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: 15128<sup>th</sup> 95<sup>th</sup> E Amsterdam  
Engine Room / Ala. Brewery / Brewery & Hse  
NS Lawrence 75<sup>th</sup> E Amsterdam

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Nature of Alterations:

Strengthen floor loads

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ALTERATIONS: Address(es): 55 W 128, 245' 2" E Amsterdam

Block/Lot(s): \_\_\_\_\_

Alt Number 1422/1903 or BN Number \_\_\_\_\_

Date Plans filed: 5/21/03 Commenced: \_\_\_\_\_ Completed: \_\_\_\_\_

Architect: J Oberlum

Owner: Bernharder & Schwartz

Builder: \_\_\_\_\_

Approx. Cost: \_\_\_\_\_

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 50 width rear: \_\_\_\_\_ depth: 60

height: 56 stories: 4

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: Offices

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Nature of Alterations:

many bldgs on lot; Brewery, icehouses, Stables etc  
lot 524  $\frac{1}{2}$  x 99' 10"

1st story new ext cut, <sup>west</sup> door filled in replaced by  
window 2 blind panels, 2 windows on 2<sup>nd</sup> story cut down  
beam doors

DOCUMENTATION: New Building Applications

NB- 23-1904

Docket \_\_\_\_\_ (OR) Application \_\_\_\_\_ ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: 15 Lawrence St, 131 B & E Connecticut Ave

Owner/Developer: Bornhauser & Schwartz

Architect: P Oberlin

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: Handling Beer & Storing Malt  
Washhouse & Racking Cells

No. of Buildings: \_\_\_\_\_ No. of Stories: 2B & partly 3B

Building(s) Dimensions: 78'3 1/4", 76'6" x 23'0" var, 68' x 77' deep

Material(s): Brick

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \_\_\_\_\_

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: 10/1/04 Completion: 10/2/05

Notes: Height increased when decided to use  
ply for cleaning & sweeping of malt  
racking cellar connected to storage use by  
tunnel

DOCUMENTATION: New Building Applications

NB- 1007-1905

Docket \_\_\_\_\_ (OR) Application  ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: E 5 Amsterdam Ave. block between 128<sup>th</sup> & 129<sup>th</sup> Lawrence

Owner/Developer: Bernhard Schur

Architect: Rowland Oberlin

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

Storage of beer

No. of Buildings: \_\_\_\_\_ No. of Stories: 5-B

Building(s) Dimensions: 104  $\frac{5}{2}$  x 147  $\frac{1}{2}$  x 99  $\frac{1}{2}$

Material(s): Brick / copper cornice

Method of Construction: steel & cast iron frame

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: flat slay

Cost: 125,000

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: 9/1/05 Completion: 8/31/06

Notes: use West wall cold storage bldg on Lawrence St

DOCUMENTATION: New Building Applications

NB- 628-1907

Docket \_\_\_\_\_ (OR) Application 1 ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: N5 W127 St 106 ft 7 in Corner Lawrence @ 127

Owner/Developer: Bernhard D Schwarzky

Architect: A Oberlin

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: Wagonshed

No. of Buildings: 1 No. of Stories: \_\_\_\_\_

Building(s) Dimensions: 120' 1/2 x 103' 1/2 x 71' 2 1/4 33' 1/3 deep

Material(s): \_\_\_\_\_

Method of Construction: wood brick

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \_\_\_\_\_

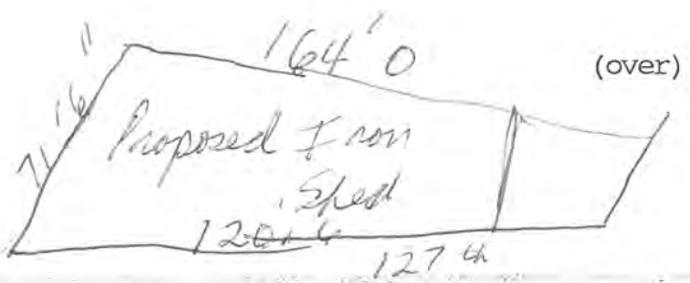
Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: \_\_\_\_\_ Completion: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

*Sawyer*



DOCUMENTATION: New Building Applications

NB- 312-1911

Docket \_\_\_\_\_ (OR) Application \_\_\_\_\_ ?

Address(es): 55 W 128<sup>th</sup> 90'6 1/2" W Convent Ave

Block/Lot(s): \_\_\_\_\_

Location: \_\_\_\_\_

Owner/Developer: Bernhard G Schwarz

Architect: A Oberstein

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: Storage of automobiles

No. of Buildings: \_\_\_\_\_ No. of Stories: \_\_\_\_\_

Building(s) Dimensions: \_\_\_\_\_

Material(s): \_\_\_\_\_

Method of Construction: Steel frame, galv corr

Fireproof: Yes \_\_\_ No \_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \_\_\_\_\_

Storefront(s): Yes \_\_\_ No \_\_\_

Commencement: 6/27/11 Completion: 8/3/11

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DOCUMENTATION: New Building Applications

NB- 172 ~~172~~ - 1911 \_\_\_\_\_

Docket \_\_\_\_\_ (OR) Application \_\_\_\_\_ ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: 129 ST, 55, 92.8 W Convert an

Owner/Developer: ~~Ed~~ Bernheimer, Schwartz, Pilsner Brewery

Architect: G. Oberlein <sup>Simon Bernheimer, Peter</sup>

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

Garage

No. of Buildings: \_\_\_\_\_ No. of Stories: 1

Building(s) Dimensions: \_\_\_\_\_

Material(s): concrete

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_ No \_\_\_

Roof Type/Material: galvanized iron

Cost: \$ 800

Storefront(s): Yes \_\_\_ No \_\_\_

Commencement: \_\_\_\_\_ Completion: \_\_\_\_\_

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Amsterdam Ave btwn W 128 & Lawrence  
Block 1054 Lot 61-64 W 128 ST  
4 & 3 Lawrence ST

ALTERATIONS: Address(es): 4 & 3 Lawrence ST

Block/Lot(s): Original Plan NB 1007-1905

Alt Number 2127-1905 or BN Number 4/17/12

Date Plans filed: \_\_\_\_\_ Commenced: Oct 4, 1911 Completed: \_\_\_\_\_

Architect: Louis Oberlin

Owner: Bernheimer & Schwartz

Builder: \_\_\_\_\_

Approx. Cost: 60,000

Existing Building and Lot:

Lot: width front: 104'  $\frac{5}{12}$  width rear: 76' 4" depth: 75' 10"  
99' 9"

Building: width front: \_\_\_\_\_ width rear: 77' 11" depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: 2 B

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: Storage of beer

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: 78' stories: 5

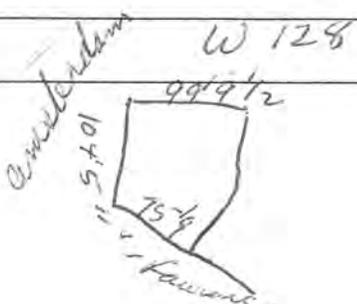
Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: Some cold storage beer & hops

Nature of Alterations:

3 stories added



NS Lawrence 130 E Amsterdam

ALTERATIONS: Address(es): 51 - 57 Lawrence

Block/Lot(s): \_\_\_\_\_

Alt Number 1567 - 1911 or EN Number \_\_\_\_\_

Date Plans filed: \_\_\_\_\_ Commenced: \_\_\_\_\_ Completed: \_\_\_\_\_

Architect: L Oberlin

Owner: Bernhard Schwartz

Builder: \_\_\_\_\_

Approx. Cost: 10,000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 77 width rear: 23' 4 7/6 1/2 depth: 68' 4 7 1/2

height: 75 stories: 4

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Nature of Alterations:

new cooling tower

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

15 W 128<sup>th</sup> 193'8" E Amsterdam Ave

ALTERATIONS: Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Alt Number 2963-1911 or BN Number \_\_\_\_\_

Date Plans filed: 11/13/11 Commenced: 12/29/11 Completed: 2/4/14

Architect: L Oberlun changed to Frederick S Keller 10/9/12

Owner: Bernheimer & Schwartz

Builder: \_\_\_\_\_

Approx. Cost: \$75,000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 51'7 1/2 width rear: 51'7 1/2 depth: 66

height: 75 stories: 4

Facade materials: \_\_\_\_\_

Roof profile/materials: flat

Use: Brewery

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: ~~33'4~~

*extension*

Building: width front: 22 1/2 width rear: \_\_\_\_\_ depth: 33'4

height: 117' stories: 6

Facade materials: \_\_\_\_\_

Roof profile/materials: peak / asbestos tiles

Use: brewery

Nature of Alterations:

Extension, new steel girders & cols

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ALTERATIONS: Address(es): 15 W 128, 143' 5" E Amsterdam

Block/Lot(s): \_\_\_\_\_

Alt Number 2635-1911 or BN Number \_\_\_\_\_

Date Plans filed: 9/30/11 Commenced: 10/23/11 Completed: 1/12/1912

Architect: A Oberlein

Owner: Bernheimer & Schwarz

Builder: \_\_\_\_\_

Approx. Cost: 2000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 50 3/8 width rear: 50 3/8 depth: 66 1/6

height: 5-8' 6" stories: 3 B

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: Storage of Beer

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: 81' 9" stories: 6

Facade materials: \_\_\_\_\_

Roof profile/materials: peak & flat

Use: Storage of Beer & Grinding of Malt

Nature of Alterations:

part of bldg increased in height starting at  
flr of 3<sup>rd</sup> story

Alt 2214 - 1912

~~220~~ 15 128 St 320' E of Broadway  
129' 10" 0" x 66' 2"

Berkheimer & Schwartz / Fred Keeler

Strengthen second floor for additional flats

Temporary condition on will be torn down

by Jan 1914 for new fireproof structure

to occupy sites above plat & present office

~~LOWEST ACCOMMODATION~~

No. of Buildings: \_\_\_\_\_ No. of Stories: 1

Building(s) Dimensions: 71' x 33

Material(s): \_\_\_\_\_

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_ No \_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \_\_\_\_\_

Storefront(s): Yes \_\_\_ No \_\_\_

Commencement: \_\_\_\_\_ Completion: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(over)

DOCUMENTATION: New Building Applications

NB- <sup>alt</sup> 92-1912



Docket \_\_\_\_\_ (OR) Application \_\_\_\_\_ ?

Address(es): \_\_\_\_\_

Block/Lot(s): \_\_\_\_\_

Location: SE W 128<sup>th</sup> 130' 1" 1/2 E Amsterdam

Owner/Developer: Bornheimer & Schwartz

Architect: Louis Oberlein / Frederick Stedee  
6/20/12

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

Storage for beer

same after alt

No. of Buildings: \_\_\_\_\_ No. of Stories: 4

Building(s) Dimensions: 93 2/3 X 66

Material(s): \_\_\_\_\_

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \_\_\_\_\_

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Selected 1/12/12

Commencement: \_\_\_\_\_ Completion: 4/15/13

Notes: 2 stories added  
brick w/ tie w/ purlin  
steel girders

use storage of beer & brewing materials  
amended w/

(over)

DOCUMENTATION: New Building Applications

see 259-1912

184  
Lawrence

NB- \_\_\_\_\_

Docket \_\_\_\_\_ (OR) Application  ?

99'8" 30'2"

Address(es): 433-51 W 127 & 53-57 Lawrence

Block/Lot(s): \_\_\_\_\_

Location: NS Lawrence St 51, 53, 55, 57 Blk 1054 Lot 9-11  
NS 127 St 2110

Owner/Developer: Bernheimer & Schwartz

Architect: Kenneth Oberlun / Fred Keeler after July 15, 1912

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: \_\_\_\_\_

No. of Buildings: \_\_\_\_\_ No. of Stories: \_\_\_\_\_

Building(s) Dimensions: \_\_\_\_\_

Material(s): \_\_\_\_\_

Method of Construction: \_\_\_\_\_

Fireproof: Yes \_\_\_\_\_ No \_\_\_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \_\_\_\_\_

Storefront(s): Yes \_\_\_\_\_ No \_\_\_\_\_

Commencement: \_\_\_\_\_ Completion: 1/7/14

Notes: Extended at east 130' 1/2 x 117' 1/2 dup 9710

Brick wall 2650 cost

cellars for racking

cellars

Amended const 4 story extension to brewery 45' 1/2" front 64' 1/2" near 68' 5" covering 5000 sq ft portion 30' 6" x 68' 5" taken up by malt bins w/ no intermediate fls

(over)

DOCUMENTATION: New Building Applications

NB- 531-1912

Docket \_\_\_\_\_ (OR) Application \_\_\_\_\_ ?

Address(es): 423 - 427 W 127<sup>th</sup>

Block/Lot(s): \_\_\_\_\_

Location: N.S. W 127<sup>th</sup> St, 243' 1 3/8" from corner 127<sup>th</sup> & Lawrence

Owner/Developer: Bernheimer & Schwartz

Architect: Frederick S. Koeler

Builder: \_\_\_\_\_

Type: \_\_\_\_\_

Original Use/No. of families per building: lofts

No. of Buildings: 7610 No. of Stories: 5

Building(s) Dimensions: 68 X 60

Material(s): brick

Method of Construction: steel

Fireproof: Yes \_\_\_ No \_\_\_

Roof Type/Material: \_\_\_\_\_

Cost: \$60,000

Storefront(s): Yes \_\_\_ No \_\_\_

Commencement: 10/10/1912 Completion: 12/17/13

Notes: wood shed demolished

ALTERATIONS: Address(es): 55 W 128<sup>th</sup> 193<sup>rd</sup> SE Amsterdam

Block/Lot(s): \_\_\_\_\_

Alt Number 229-1913 or BN Number \_\_\_\_\_

Date Plans filed: 2/1/13 Commenced: \_\_\_\_\_ Completed: 8/9/14

Architect: Frederick S Keeler

Owner: Bernheimer & Schwartz

Builder: \_\_\_\_\_

Approx. Cost: \_\_\_\_\_

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 51' 7" width rear: \_\_\_\_\_ depth: 66' 2"

height: 62 stories: 4

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: 74' 1" stories: 4 & gallery

Facade materials: \_\_\_\_\_

Roof profile/materials: flat / slay or gravel

Use: Brew House

Nature of Alterations:

wood roof to be replaced w/ fireproof roof  
at higher level

ALTERATIONS: Address(es): 443 - 451 W 127<sup>th</sup> St #520'10 E Kew-Forest  
Block/Lot(s): \_\_\_\_\_

Alt Number 6-1917 or BN Number \_\_\_\_\_

Date Plans filed: 1/2/17 Commenced: \_\_\_\_\_ Completed: 6/19/17

Architect: Schwartz & Gross

Owner: Bernharder & Schwartz

Builder: \_\_\_\_\_

Approx. Cost: 5000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 130'2 width rear: 67' depth: \_\_\_\_\_

height: 4 stories: 5-2

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Nature of Alterations:

erect cooling tower on roof

\_\_\_\_\_

\_\_\_\_\_

ALTERATIONS: Address(es): 51-53 Lawrence NS 154'9" E Amsterdam

Block/Lot(s): \_\_\_\_\_

Alt Number 73-1917 or BN Number \_\_\_\_\_

Date Plans filed: 1/10/17 Commenced: 6/29/17 Completed: 10/6/17

Architect: Schwartz & Gross

Owner: Bernheimer & Schwary

Builder: \_\_\_\_\_

Approx. Cost: 5000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 71'7 width rear: \_\_\_\_\_ depth: 158'5"

height: 50 stories: 4

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: 60 stories: 4

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: Brewery

Nature of Alterations:

Remove portions of ~~roof~~ roof and new metal awning

\_\_\_\_\_  
\_\_\_\_\_

ALTERATIONS: Address(es): 460 W 128, 55 128 @ 246 'E Amsterdam

Block/Lot(s): \_\_\_\_\_

Alt Number 210-1917 or BN Number \_\_\_\_\_

Date Plans filed: \_\_\_\_\_ Commenced: \_\_\_\_\_ Completed: 12/28/17

Architect: Schwartz & Gross

Owner: Besshaime & Schwartz

Builder: \_\_\_\_\_

Approx. Cost: 1000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: driveway wagon storage, offices, watchmen's quarters

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: \_\_\_\_\_ stories: \_\_\_\_\_

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: \_\_\_\_\_

Nature of Alterations:

install new engine room on 1st flr

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ALTERATIONS: Address(es): 429-437 W 127

Block/Lot(s): 1967 - 40 in part

Alt Number 423-1934 or BN Number \_\_\_\_\_

Date Plans filed: \_\_\_\_\_ Commenced: \_\_\_\_\_ Completed: 6/5/36

Architect: Frank A. Rooke

Owner: Horton Pilsner Brewery Co

Builder: \_\_\_\_\_

Approx. Cost: 20,000

Existing Building and Lot:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: 92 width rear: \_\_\_\_\_ depth: 62

height: 1 stories: 18

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: storage & loading platform

Building and Lot as Altered:

Lot: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

Building: width front: \_\_\_\_\_ width rear: \_\_\_\_\_ depth: \_\_\_\_\_

height: 3 stories: 46

Facade materials: \_\_\_\_\_

Roof profile/materials: \_\_\_\_\_

Use: 5 use / upper floor storage

Nature of Alterations:

2 stories added

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Handwritten:* X 100 West 128 Street  
460-482 W 128 Street  
04 Building

# NYC BUILDINGS

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## NYC Department of Buildings Property Profile Overview

460 WEST 128 STREET  
WEST 128 STREET

460 - 482

MANHATTAN 10027

BIN# 1059581

Health Area : 1100  
Census Tract : 21301  
Community Board : 109  
Buildings on Lot : 1

Tax Block : 1967  
Tax Lot : 89  
Condo : NO  
Vacant : NO

[View DCP Addresses...](#) [Browse Block](#)

[View Certificates of Occupancy](#)

Cross Street(s): CONVENT AVENUE, AMSTERDAM AVENUE

DOB Special Place Name:

DOB Building Remarks:

Landmark Status:	C - CALENDARED	Special Status:	N/A
Local Law:	NO	Loft Law:	NO
SRO Restricted:	NO	TA Restricted:	NO
UB Restricted:	NO		
Little 'E' Restricted:	N/A	Grandfathered Sign:	NO
Legal Adult Use:	NO	City Owned:	NO
Additional BINs for Building:	NONE		

Special District: NONE

Department of Finance Building Classification: E9-WAREHOUSE

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open	Elevator Records
Complaints	1	0	Electrical Applications
Violations-DOB	0	0	Permits In-Process / Issued
Violations-ECB	0	0	Illuminated Signs Annual Permits
Jobs/Filings	1		Plumbing Inspections
PRA / ARA Jobs	0		Open Plumbing Jobs / Work Types
Total Jobs	1		Facades
Total Actions	0		Marquee Annual Permits
			Boiler Records
			DEP Boiler Information

If you have any questions please review these [Frequently Asked Questions](#), the [Glossary](#), or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

p. 28-38 The Journal of the Society for Industrial Archeology  
V. 16, no. 1 (1990)

"Artificial Refrigeration & the Architecture of 19<sup>th</sup> Century  
American Breweries" by Susan K. Appel

Frederick Widmann "The Development of the Buildings  
& Equipment of Breweries from Pioneer Times to the  
Present Day," WB 38, 1 (January 15, 1912): 30.  
The Western Brewer

p. 29-32

Published  
Monthly

p. 25 Anthony Pfund in 1879 built a substantial  
icehouse for the Schaller & Yerke Eagle Brewery  
in Cincinnati. (FN 45 - WB 4, 1 (January 15, 1879) was  
47x100 feet - 2 high cellars topped by a fermenting  
room & an ice chamber.

Susan K. Appel { Artificial Refrig & Arch of 19<sup>th</sup> C breweries (1990)  
Brewery Arch in Ohio from the Civil War to Prohibition (in file) (1991)  
Chicago & The Rise of Brewery Architecture (1995)  
Minneapolis Brewery Arch (Jstor)

(1903) One hundred years of brewery - Chapter on architecture ✓

(1976) Schlegel - 19<sup>th</sup> C brewery arch - specific reference to Bklyn ✓

Widmann & Walsh - Architects & Engineers, St Louis  
Frederic Widmann & Robert B. Walsh

Orthography is death.

Coordinates: 40.8142°N 73.9556°W﻿ / ﻿

Advertising 2 Elmer Fudd wikipedia: Mink Building

# Mink Building

From Wikipedia, the free encyclopedia

The **Mink Building**, located at 1361 Amsterdam Avenue between 126th and 128th Streets, is a five-story red brick structure in the Harlem/Manhattanville neighborhood of New York City. Towering over most of its neighbors, it is recognizable because of its historical German-American style. The Mink Building was built in 1905 as the main building for the Bernheimer and Schwartz Pilsener Brewing Company. It was their purpose to create a building that also served as a symbol for their business, and though their business is long gone, the building continues to broadcast its presence in the area. The Mink Building has undergone multiple transformations in use, although not form, over the last century. Its nickname comes from its use in the 1950s as a storage facility for fur coats, although it is now a mixed-use facility with few tenants. The Mink Building is currently playing an important role in efforts to revitalize business and commerce in Harlem. The real estate agency of Cushman and Wakefield along with the owner, the Janus Property Company, are pushing to lease more of the 137,000 square feet (12,700 m<sup>2</sup>) to new tenants to achieve this goal.

## Contents

- 1 History
- 2 Architect
- 3 Site and context
- 4 Form and use
- 5 Materials and methods of construction
- 6 Significance
- 7 References

## History

The Mink Building was originally known as the Bernheimer & Schwartz Pilsener Brewing Company. The brewers chose the site of the former Yuengling Brewery, widely recognized as the oldest brewery in America, which was founded in Pottsville, Pennsylvania in 1829.<sup>[1]</sup> The Yuengling Brewery opened in this New York City location in 1876, when there was plenty of land to use in this part of Manhattan. The brewery included a stable with room for one hundred horses, a swimming pool, and large lofts for entertaining. Yuengling's Brewery enjoyed initial success, and an 1885 article in the New York Times gave the plant a rave review. It was not long, however, before Yuengling's management decided to consolidate the company in Pennsylvania and sold the Manhattanville site to the Bernheimer & Schwartz Pilsener Brewing Company in 1903.

After the purchase of the site, it would be two years before the new Bernheimer & Schwartz Pilsener brewery was completed with all new buildings. The brewery was originally a complex of buildings; the five-story red brick structure taking up most of the block at West 126th Street and Amsterdam Avenue was the main building. The brewery was extremely successful, making owner Simon Bernheimer one of the richest men in New York (his partner Anton Schwartz committed suicide in 1910). Unfortunately, Bernheimer died a sudden death in 1911. His death was attributed to apoplexy; he was thought to have been overexcited at the opportunity to finally achieve his lifelong dream of playing the bass drum with his favorite band, the Mecca Temple Band. The band belonged to the Masonic Order of which Bernheimer was a member.<sup>[2]</sup>

The brewery remained open until Prohibition in 1920, when the complex of buildings fell into disuse. The Horton Pilsener Brewing Company bought the company just before Prohibition and had to find other means of

The specific site of the Mink Building is between West 126th and West 128th Streets on Amsterdam Avenue, just one block away from the main commercial corridor of 125th Street. 125th Street, which is a low point in the geography of the neighborhood, linked the village of Manhattanville to the village of Harlem, before the two became one larger neighborhood in the twentieth century. Amsterdam Avenue was also very close to the new Interborough Rapid Transit, which after it opened in the first decade of the twentieth century, enabled speedy travel up and down the length of Manhattan. The location of the site very near to a major transport hub, and away from the hillier areas of Manhattanville, was strategic for a business that relied on shipping its product out of the immediate vicinity. With neighbors such as St. Mary's Church and other brick warehouses and factories, Bernheimer & Schwartz' decisions about where and how their building would be constructed are clear.

Since the time of the Bernheimer & Schwartz brewery, the Mink Building has undergone changes in use. For about half a century starting in the 1950s, it was used solely as a place to store fur coats in the summertime. Recently, it has become a mixed-use commercial building, home to numerous small businesses. Its owner, the Janus Property Company, hopes that the Mink Building will play a part to bring more business back to the Manhattanville area and spur a revival of Harlem as a place for new and small businesses to thrive.<sup>[8]</sup>

## Form and use

The form of the Mink Building derives largely from its original use as a brewery owned by German-Americans. Although little is known about the architect Louis Oberlein, the owners of Bernheimer & Schwartz Co. likely hired him because of their shared heritage. Here was an architect who understood how to make a building stand out as German-American, a desirable trait for a German beer-maker. The Bernheimer & Schwartz Pilsener Brewing Company was arguably Oberlein's biggest client, although he designed other buildings and even another brewery, the Mt. Kisco Brewery.

One thing to notice about the Mink Building is that it still stands out among its surrounding, similarly styled neighbors. The building at 447 W. 128th Street directly abuts the Mink, and was a part of the original Bernheimer & Schwartz complex designed by Oberlein. It is noticeably different, however, both in the number of floors and the ornamentation. The Mink Building has five high-ceilinged floors to accommodate the machinery needed for brewing; this neighbor has six lower ones. It is marked with the same window decorations in brick and stone, but with less ornamentation overall. It is even built with brick of a slightly different shade of red, indicating that it was probably constructed at a later date. All this is evidence that the Mink Building was meant to draw the attention of visitors. It housed the main brewery, where the heart of the business was located and where visitors could see the process of beer making. The adjacent structure, at 447 W. 128th Street was probably built later as a warehouse for storage and shipping, possibly with offices on the upper floors.

The design of the Mink Building was extremely practical; from the floor heights, which were strictly necessary, to the façade, which achieves the purpose of advertising for the company. The exterior decoration was typical of German-American architecture of the late-nineteenth and early-twentieth centuries. In fact, it is possible to find buildings in Manhattan that may have influenced Oberlein's work. The Free Library and Reading Hall and German Dispensary, designed by William Schickel in the 1880s, probably drew Oberlein's attention.<sup>[8]</sup> Schickel used patterned brick-work as economical ornamentation, especially to highlight windows and cornices and mark floor heights, and Oberlein included this kind of decoration as a way to make the Bernheimer & Schwartz building easily identifiable to potential customers, business partners, and workers, as well as to German-Americans in general.

## Materials and methods of construction

- [6]
- White, Norval, Elliot Willensky, and Fran Leadon. AIA Guide to New York City. Oxford: Oxford UP, 2010. Print.

Retrieved from "[http://en.wikipedia.org/wiki/Mink\\_Building](http://en.wikipedia.org/wiki/Mink_Building)"

Advertising 2

Categories: Buildings and structures completed in 1905 | Buildings and structures in Manhattan

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Dziobas RAR Player, djvu, Wykopki

!!POLECAM!: User:Aquarius Rising/Books/sample, User talk:Sep1958, Michael Francis Middleton, User talk:69.120.102.92, User talk:Langing,

Do przejżenia: State-sponsored terrorism, polityka, religia

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A Study of the Population of Manhattanville

Howard Braun Woolston (1909)

p. 28

German Colony centered on Lawrence Ave

Mostly Southern German + Catholic. 1860 St Joseph's built

Establishment of Youngling's brewery afforded occupation + consolation for the colony. Mostly laborers, artisans,

+ small trade people. acquired shops, houses + gardens. frame houses still there on Lawrence st

29

1865 - Street car from 125th to City Hall - 1 1/2 hours

1875 19th ward - 42,501

Bloomerdale Rd main highway in 1865

Amsterdam Ave merely a route of water mains

30

1880 elevated train, 1895 12 ward - 364,412

31

1904 subway

1900 pop of Manhattanville - 14,675

p. 62

1848 political disturbances in Germany

1st wave Bavarians who settled in cottages along Lawrence st  
This is still the German Center.

North German - Rhinelanders came later

1905 - 1684 German-born in Manhattanville - 9% of pop <sup>local</sup>

perhaps 3800 of German heritage

Yuengling: A History of America's Oldest Brewery by Mark A. Noon  
Jefferson, NC: McFarland Company, Inc. 2005

The prominent Philadelphia business leader died from Bright's disease in New Jersey on New Year's Eve, 1902, leaving his considerable fortune to his son, John F. Betz II.

Another former Yuengling apprentice, Henry C. Clausen Sr., became a significant force in the New York brewing market.<sup>48</sup> Sources indicate that Clausen was a Schuylkill County native. There is also strong possibility that he knew Betz while in Pottsville because the pair had maintained business ties in New York City early in their careers. A brewery, Clausen and Betz, opened in about 1857 at 235 West 44th St. and 250 West 45th St. Clausen's independent operations included Henry Clausen's Phoenix Steam Brewery at 309-313 East 47th St. which opened in 1855. Soon afterwards, Clausen brought his son, Henry Clausen Jr. (1838-1893), into the family business while the boy was still in his late teens. The H. Clausen and Son Brewery produced about 90,000 barrels in 1877, making it the sixth largest brewery in the country. In 1888, it merged with Flanagan, Nay & Company and became known as the New York Breweries Company. A few years later it was purchased by an English syndicate, an industry trend in the late nineteenth century. The younger Clausen founded the U.S. Brewers' Association and served as its president from 1866 to 1875. He remained a prominent figure in the association throughout his life. Like the Betz family, the Clausen family purchased some notable real estate. In 1890, not long before his death, Henry Clausen Jr. purchased what would become known as Clausen Farms in Sharon Springs, New York. The area was known for its hop production and featured a view over the Mohawk Valley into the Adirondacks and the Green Mountains of Vermont. The prominent family turned it into a country estate, complete with a Victorian gentlemen's guesthouse, a pool and a single lane bowling alley.

The success of Betz and Clausen in the urban markets may have convinced D. G. Yuengling that his sons could have better success as brewers outside of Pottsville. He also may have recognized as early as the 1860s that Pottsville's economy was changing and that the city would not become the industrial center he had once imagined. The coal trade was shifting to northern Schuylkill County. Pottsville was further weakened by the monopolization of the coal industry in the southern region by the Philadelphia and Reading Railroad. Many coal entrepreneurs, several of whom were Pottsville's key leaders, got out of mining. The Panic of 1873 also dealt a blow to Pottsville's standing as a business center. When Yuengling's sons were completing their training as brewers in the 1860s, the city was already beginning to experience outmigration. Many of its most promising young citizens felt their prospects for a prosperous future did not rest in Pottsville's slowly declining business climate. They looked to other communities outside the region for better opportunities.<sup>49</sup> Similarly, D. G. Yuengling had reasons to think about the growing market for beer in urban areas beyond Pottsville.

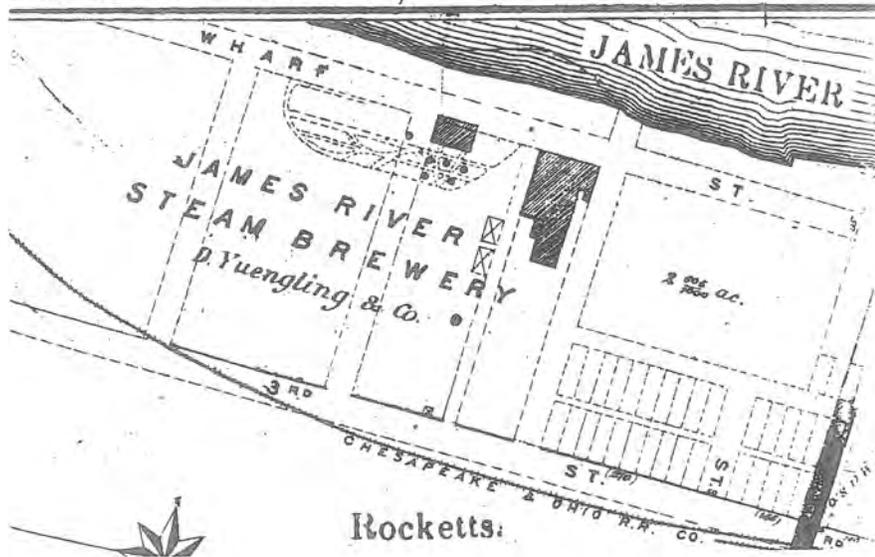
The challenging task of taking the Yuengling brewing tradition to other parts of the country fell to the eldest son. David G. Jr. was born in 1842. He was educated in Pottsville schools and then successfully completed his apprenticeship as a brewer under the direction of his father. In his youth, he was active in the Good

D. G. YUENGLING, Jr.

CHAS DUNCREE,

LEON H. MICHEL.

**JAMES RIVER STEAM BREWERY,**  
**YUENGLING & CO.**  
**B R E W E R I E S .**  
 AND DEALERS IN MALT AND HOPS.  
**ROCKETTS, RICHMOND, VA.**



A newspaper ad for the James River Brewery. (D. G. Yuengling and Son, Inc.)

Intent Fire Company No. 1 of Pottsville. In fact, he is listed among the applicants for the charter for the organization.<sup>50</sup> He would move from the city at an early age in an effort to widen his experiences in the craft of brewing. At the age of 19, he accepted the position as foreman at John Frederick Betz's brewing operation in New York City. D. G. Yuengling obviously encouraged his sons and other apprentices to learn more about brewing in Europe. Like his brother, Frederick, and like Betz, David traveled to Europe. He enhanced his skills by taking courses at famous breweries in Munich and Stuttgart as well as at the Dreher brewery in Kleinschwechat near Vienna. He returned to Pottsville when his additional training overseas was completed and once again worked with his father. He would move again before long, and this time he would take the Yuengling brewing tradition south.

When David Jr. stepped out of his father's shadow, he undertook some ambitious projects. In 1866, he helped manage the construction of a five-story brick



David Yuengling Jr.'s James River Steam Brewery. (D. G. Yuengling and Son, Inc.)

brewery at 912 East Main Street in Richmond, Virginia. The beer-making facility was located along the James River near what was then Wharf Street in the former capital of the Confederacy, and the setting offered a new mode of transportation for Yuengling beer. Barrels of brew could be rolled out from the five-story brick building to riverboats tied up and waiting at the brewery's dock. The original name of the brewery — Betz, Yuengling, & Beyer — indicates that the venture was possibly a partnership between David G. Jr., John Frederick Betz, and another brewer of the mid-nineteenth century, Louis Beyer. However, the records of the brewery's initial years of operation are sketchy. In 1869, the name of the brewery changed to James River Steam Brewery, D. G. Yuengling Jr. and Company. Like the anthracite region of Pennsylvania, the Richmond-James River region had plenty of beer-loving coal miners. Mines in a basin just west of the city produced a significant amount of bituminous coal in the nineteenth century. The brewery remained under the direction of David Jr. until 1878 when the Yuengling family sold the Richmond operation to the Richmond Cedar Works, an ice-cream freezer manufacturer.<sup>51</sup> This did not mean, however, that David Jr. was ready to return to Schuylkill County and make it his home.

David Jr. had not forgotten his experience working in New York City a decade earlier. Perhaps drawn by the highly competitive but lucrative beer market, the young brewer moved to New York with his wife, Catherine. The couple had three



the richest men in the country, robber baron Jay Gould. Belden had a very questionable reputation among investors on Wall Street. According to one source, Belden and his brother were under suspicion of stealing securities from Gould to the tune of \$3 million in the late 1870s, helping to bring Gould to the brink of financial disaster.<sup>53</sup> Belden was also known as a man with extravagant taste who maintained a fast-living lifestyle in New York social circles.

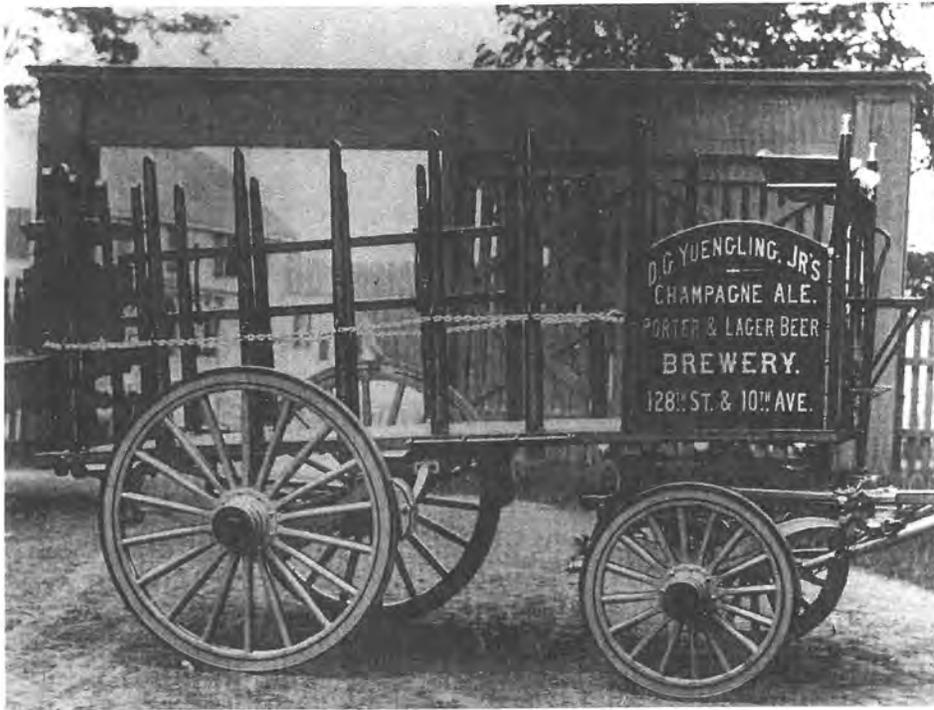
David Jr. and Belden wielded enough influence to make the brewery the focus of an article in the *New York Times*—an article that seemed to have the sole purpose of promoting the brewery. The article carried the headline, “A Model Brewery. The Establishment of David G. Yuengling, Jr.—Acres of Cool Cellars.” In flowery language loaded with superlatives, the anonymous author, who was given an extensive tour of the brewery, expresses amazement at both the spaciousness and cleanliness of the “well appointed” brewery. The brewery’s modern equipment draws most of the praise:

A storage place for ale, which does not require as cool a temperature as lager in which to mature, is to be found on the ground floor measuring 200 by 60 feet, filled to its utmost capacity. Passing through this, one next enters the refrigerating room in which there are three of the largest ice machines ever made. They were constructed by the Empire Refrigerating Company of Saint Louis, Mo. and have each a cooling capacity equal to that produced by one hundred and fifty tons of ice per day. They are based upon the ammonia absorption principle, and so intense is the cold produced as to form a thin coating of ice on the floors of the five cellars in which the lager is stored until it is fit for use. Of these cellars more will be said later on. Still on the ground floor is the cooperage where somewhere about a score of workmen were busily employed. In one of the wide spacious yards was an unimposing little Knowles pump, which forces water from a well 130 feet deep. This well was sunk by Mr. Yuengling and the water which it yields is absolutely pure.<sup>54</sup>

At the time the article appeared, David Jr. was counted among the top businessmen on the New York City social scene.<sup>55</sup> In the 1880s, newspaper reports place him among the city’s elite at important dinners and social affairs. The article about the brewery in the *Times* closed with words of praise for the “gentleman brewer”:

The counting room is filled up in a rich and most elegant manner, and everywhere is seen evidence of an able, energetic, competent head. And that head is Mr. David G. Yuengling Jr. to whose alone and unaided the phenomenal growth of the business is to be traced. And not only is Mr. Yuengling a man of business, but he is also a gentleman of culture and refined artistic taste. This is most strikingly illustrated in the elegant suite of private apartments which are situated over the office. Here Mr. Yuengling has gathered together many valuable works of art in the way of paintings and costly bric-a-brac, together with a complete library of standard authors. Connected with the main apartment are one or two sleeping rooms and Russian and plunge baths. The furnishings are all in perfect harmony of color and material, and well suited as surroundings of a gentleman brewer.<sup>56</sup>

The same newspaper was less kind a decade later. Following the Panic (or crash) of 1893, David Yuengling Jr. fell victim to a variety of financial troubles and business problems, eventually leading to bankruptcy in October, 1905. In one



A beer wagon from David Yuengling Jr.'s New York operation. (D. G. Yuengling and Son, Inc.)

instance, David Jr. faced a case in which he failed to pay a judgment of \$685.50. According to the *Times* account of the testimony at the hearing, Yuengling provided an overview of his financial problems, stating that most of his woes began when he took a trip to Europe:

When he left this country the firm's indebtedness was about \$400,000, but when he returned it had been increased to \$1,800,000. This, he said, he had never been able to explain. Notes were in the hands of thirty-four banks. The crash came, and the firm was put in the hands of a receiver, subsequently being made a corporation, with a capital of \$1,000,000 in stocks and \$100,000 in bonds.... Yuengling claimed that at this time he had no property, and from 1885 to 1893 his expenses had not been over \$10,000 a year. He said his home was owned by his wife, and had on it a mortgage of \$35,000.<sup>57</sup>

Of course, David Jr. preferred not to have his business trouble spelled out in the press, and he probably wished that his son, Frederick D. Yuengling, received less press coverage, too. A reading of the young man's press clippings provides at least one source of his father's financial woes.

Popularly known by the Americanized version of his name, "Fred" Yuengling was born in 1870. He was a good brewmaster, perhaps one of the best in the country, as well as one of the best paid. But not long after he started his career, while

he was in his early twenties, he found himself involved in a variety of scandals. His reputation as a skilled brewer faded, and he became "known from one end of the city to the other for his lavish expenditures and luxurious life" and reportedly occupied the "handsomest bachelor apartment in the city."<sup>58</sup> The *New York Times* covered Fred Yuengling's exploits in detail and published the following example of his lifestyle in 1908:

Yuengling on one occasion took a party of friends to Europe at his own expense, and then brought them all back to New York, and during all the time they were away Yuengling never allowed them to spend a cent. One the top floor of the Yuengling brewery there was a famous room where Yuengling was wont to entertain his friends on a lavish scale.<sup>59</sup>

Reports indicate that he became romantically involved with a woman, "Baroness Blanc," in the early 1890s. A divorce suit, with Frederick Yuengling named as a co-respondent, was filed by Baron Blanc. The controversy was heightened when the "Baroness" produced and starred in a play called *Deception* on Broadway at the Fifth Avenue Theatre in the winter of 1892-93. "The venture was not a success," wrote an anonymous *New York Times* reporter, "and in the course of the attending tribulations Mr. Yuengling discharged the manager of the company, thrashed a coachman who was impudent, threw out a lawyer's clerk who had come to serve papers on the star, and was finally arrested for passing bogus checks upon the actors in the company."<sup>60</sup>

In the wake of the scandals, Fred Yuengling traveled extensively and eventually took up residence outside of the country in South America and British Columbia. He utilized his brewing skills for a time at a brewery in Trail, British Columbia. He then returned to New York in the late 1890s, and problems with the law continued, including an appearance before a judge on charges of non-support. He died in 1908 while being transported to the prison ward of Bellevue Hospital, following his arrest on charges of passing a bad check to an automobile agency. "F.D. Yuengling Dies, Bellevue Prisoner," roared the headline on the front page of the *New York Times*: "Son of Retired Brewer Victim of Alcoholism After a Wild Career."<sup>61</sup>

Even his death was marked by controversy. Yuengling was very sick prior to his arrest, and at the West Side Prison he was in a partial coma and running a temperature approaching 106 degrees. Doctors at the prison insisted that the brewer be taken to Bellevue Hospital immediately; however, the prison warden refused, claiming he did not have a prison guard available to send with the ambulance. Delays continued despite the doctors' insistence that Yuengling was in no condition to attempt an escape. Finally, a guard was assigned to accompany the ambulance, but Yuengling died on the way to the hospital despite a valiant attempt by doctors to save his life.

The impact of Frederick Yuengling's difficulties on the family business is difficult to assess. A report on Yuengling's arrest on embezzlement charges in October, 1900, notes that he "is alleged to have been largely responsible for the finan-

cial troubles which befell his father."<sup>62</sup> The beginning of David Jr.'s business woes did coincide with the beginning of his son's scandals in the early 1890s. The economy of the entire nation, however, was reeling from the Panic of 1893 at the same time. Late in that year, the D. G. Yuengling Jr. Brewing Company at 10th Avenue was purchased by Samuel Untermeyer at a foreclosure sale. A reorganization plan was implemented, and David Jr. stayed on board as a member of the new board of directors. The brewery also retained his name, but only for a few more years. Business problems continued, however, and the brewery was sold in 1897. The brewery maintained indirect ties to the Yuengling family, since the purchaser was John Frederick Betz, D. G. Yuengling's brother-in-law. Betz and his son, John, operated the brewery under the name Betz's Manhattan Brewery until 1903. Following the sale of his brewing operations in the city, David Yuengling Jr. moved upstate and opened a smaller brewery in the community of Hudson at Second and State streets. The facility was named Yuengling's Hudson-New York Breweries and was operated by the Yuengling family in partnership a bottler, Edward F. McCormick, for only a year—1903 to 1904. Newspaper reports indicate that David Jr. was still alive at the time of his son Frederick's death in 1908. He maintained an apartment in New York but also spent time in Philadelphia, where he assisted the Betz brewing operations.

The promotional material for David Yuengling's New York brewing operations provides information about the Yuengling family that needs to be considered carefully. While company commemorative programs cannot be accepted uncritically, an undated souvenir publication from David Jr.'s brewery, probably written in the 1880s, describes the Yuengling brewing tradition as a large "dynasty" that extends back to Germany. "The Yuengling family of good old German stock, forms a real dynasty of brewers," states the booklet, "at one time there were about 28 breweries in the family, and it is not to be wondered at that Mr. Yuengling followed in the footsteps of his forefathers."<sup>63</sup> While the Yuengling family did expand brewing operations to other states, there is little evidence to support the claim of 28 breweries in the family at one time.

A document from another brewer describes David Yuengling Jr. and raises another significant question. Did D. G. Yuengling have relatives in the United States before he emigrated from Germany? Horton Pilsener Brewing in New York, which eventually took over D. G. Yuengling Jr.'s brewery at 128th Street and Amsterdam Avenue, produced a pamphlet that provides a short history of its company. A few intriguing sentences are devoted to the origins of the Yuengling brewing tradition:

The history and traditions of this great brewery dates [sic] back to the earliest days of ale and lager beer in America. The original founder was Jans Yuengling, who came to the United States about 1770 and founded his brew tavern in Richmond, Virginia. The original Yuengling ale and lager were famous in the pioneer days of our country. They were the favorite beverages at important social functions thruout Virginia and Maryland.<sup>64</sup>

Who was Jans Yuengling? Did D. G. Yuengling have a relative—an uncle or grandfather—who was brewing beer in America decades before him? It's certainly a pos-

sibility; however, the document makes no reference to D. G. Yuengling Sr. as a pioneer brewer, and additional references or records about Jans Yuengling have yet to be found. Did he even exist? Of course, the Richmond, Virginia, reference is significant because David Jr. operated his James River Brewery there. Perhaps David G. Yuengling Jr. embellished his family's brewing tradition while promoting his beer and a myth crept into the family brewing tradition. The mystery has yet to be solved.

David Jr. was assisted in his New York brewing operations by his brother, the youngest of D. G. Yuengling's children, William G., who was born in 1862. William Yuengling was educated in Pottsville schools. In addition to developing brewing skills at the Pottsville brewery, he "spent several years in New York, where he studied the business in all its branches in the brewery of his brother, David G. Yuengling Jr."<sup>65</sup> In addition to providing valuable assistance with the New York operations, William would go on to manage a branch depot/brew pub called the D. G. Yuengling Summer Garden Brewery and Hotel Todd on Broadway in Saratoga Springs. He returned to Pottsville in 1895, to use his impressive brewing experience to assist his brother, Frederick, who was in the process of opening the bottling shop at the brewery. The future appeared to be bright on Mahantongo Street for the two brewers and their families. Life, however, brings times when families are personally gripped by sadness—and this includes members of the social aristocracy. In the 1890s, the Yuengling family faced more than its share of difficult moments. The matriarch of the family, Elizabeth Yuengling, passed away at the family home at 501 Mahantongo St. on January 9, 1894, at the age of 71. Her four-line obituary in the *Miners' Journal* simply noted that she was the "widow of the late David G. Yuengling." The equally concise notice in the *New York Times* only added that her death came "after a lingering illness."

By nineteenth-century standards, Elizabeth Yuengling had lived a very long life. The same could not be said for William, who passed away on August 7, 1898, at the age of 36. In contrast to the brief accounts of his mother's death, several columns of newspaper copy detail William Yuengling's passing, further evidence that the Yuengling family was one of the most prominent in the community. The young brewer's death was described in the *Miners' Journal* as "one of the saddest that ever occurred in the community."<sup>66</sup> Like other members of the family, he had been very active in the community, assisting with a variety of charitable endeavors:

The social side of Mr. Yuengling's life was a happy picture. He was a favorite everywhere and being possessed of a fine baritone voice and rare musical talents he shone as an entertainer. For many years he was a member of Trinity Episcopal Church choir. He was always ready to help any charitable movement and his musical talents and his purse were at the disposal of any worthy cause.<sup>67</sup>

William Yuengling was ultimately "the victim of diseases involving the stomach, liver, kidneys and lungs."<sup>68</sup> He had been ill for approximately two months and succumbed despite the efforts of doctors from Philadelphia. The tragedy was partic-

46. *One Hundred Years of Brewing*, 395.
47. Betzwood was eventually sold to pioneer silent film maker Siegmund Lubin in 1912. The film producer transformed the estate into a movie studio. For more on Betzwood and its significance as a film studio, see Joseph P. Eckhardt's *The King of the Movies: Film Pioneer Siegmund Lubin* (Madison: Fairleigh Dickinson University Press, 1997).
48. Clausen brewing operations in New York are described in *One Hundred Years of Brewing*, 260 and 379.
49. Edward Davies, *The Anthracite Aristocracy: Leadership and Social Change in the Hard Coal Regions of Northeastern Pennsylvania, 1800–1930* (DeKalb, Illinois: Northern Illinois University Press, 1985), 103.
50. Men in the Yuengling family from subsequent generations would also become members of the Good Intent Fire Company.
51. For additional details on the Yuengling operation in Richmond, Virginia, see Stephen Pytak, "The Other Yuengling," *Pottsville Republican* 18–19, December 1999, 1+.
52. Sales figures are drawn from an appendix in Frederick William Salem's *Beer, Its History and Its Economic Value as a National Beverage* (1880) (New York: Arno, 1972).
53. Maury Kline, *The Life and Legend of Jay Gould* (Baltimore: Johns Hopkins University Press, 1986), 223–24.
54. "A Model Brewery," *New York Times*, June 7, 1885, 4.
55. One of David Jr.'s brewmasters went on to establish his own successful business. Leonhard Michel worked for thirteen years at Yuengling's Manhattan brewery. In 1889, he went on to establish the India Wharf Brewery on Hamilton Avenue in Brooklyn. The large structure had a capacity of 150,000 barrels a year and one of the largest ice plants in that section of New York.
56. *New York Times*, June 7, 1885, 4.
57. *New York Times*, November 12, 1897, 5.
58. *New York Times*, October 14, 1900, 19.
59. *New York Times*, September 28, 1908, 1+.
60. *New York Times*, October 14, 1900, 19.
61. *New York Times*, September 28, 1908, 1+.
62. *Ibid.*
63. Document of D. G. Yuengling and Son, Inc.
64. Horton Pilsener Brewing Company, "A Century and a Half of Making the Best Beer Brewed in America." This document is part of the Yuengling archives. The reference to "Jans Yuengling" in the 1770s in Richmond, Virginia, is addressed in Pytak, "The Other Yuengling."
65. *Miners' Journal*, August 8, 1898.
66. *Ibid.*
67. *Ibid.*
68. *Ibid.*
69. *Ibid.*
70. *New York Times*, January 4, 1899, 7. In an intriguing twist, the *New York Times* originally reported that "Fred" Yuengling, David Jr.'s son, was the Yuengling family member who had passed away on January 2, 1899. Fred Yuengling's "death" was probably anticipated by reporters of the *Times* who had written about his allegedly reckless lifestyle. "The New York Times was in error yesterday in publishing an obituary notice of Frederick D. Yuengling. The man who died in Pottsville, Penn., on Monday was Frederick G. Yuengling, an uncle of Frederick D. Yuengling," stated the correction in the newspaper. Fred Yuengling went on to live for about another decade after reading his own obituary in the *Times*.
71. *Miners' Journal*, January 2, 1899.
72. *Miners' Journal*, January 6, 1899.
73. Edith Yuengling, 49.
74. Document of D. G. Yuengling and Son, Inc.
75. *Pottsville Republican*, January 2, 1899.
76. Edith Yuengling, 49.
77. Frank Julian Warne's account of conditions in the region, *The Slav Invasion and the Mine Workers: A Study in Immigration* (1904) (New York: Jerome Ozer, 1971), provides some insight into Schuylkill County's thriving beer trade. Its breweries produced 230,000 barrels of beer during the first eight months of 1903. Thirty breweries located outside the county also helped quench the thirst of county residents. Each of these companies reported selling about 20,000 barrels. The county issued 1,167 liquor licenses in that year (112–13).
78. Adolf Schalck and Hon. D.C. Henning, eds., *History of Schuylkill County Pennsylvania*, 547.
79. David Yuengling, *Letters to an Unknown Generation* (Hicksville, New York: Exposition Press, 1979), xi.
80. *Ibid.*
81. A helpful study of immigration trends in Pennsylvania is Sarah Florence Elliot's unpublished master's thesis, "Immigration to Pennsylvania, 1860–1920" (Pennsylvania State University, 1923).
82. Biographical information on Reverend Roberts is drawn from Paul McBride's "Peter Roberts and the YMCA Americanization Program, 1907–World War I," *Pennsylvania History* 44.2 (1977), 145–162. In 1907, Roberts left his post in Mahanoy City and accepted a position as

**Betz, John F., & Son, Inc.** (Brewery). John F. Betz learned the brewers' trade at the Yuengling (q.v.) brewery in Portsville, Pennsylvania. In 1853 he opened a brewery in New York and sold it to L. H. Roehmer in 1880. In addition, in 1867 he established a brewery in Philadelphia that was the third largest in output among the city's eighty-five breweries in 1878. He had bought the old Gaul (q.v.) brewery that Frederick Gaul had purchased from Reuben Haines in 1785. Upon the sale of his New York plant in 1880, Betz moved to a new site in Philadelphia and produced lager (q.v.), in addition to ale (q.v.) and porter (q.v.). In 1886 he took over the Germania brewery but sold it to Henry Hess around 1900. Then in 1897 Betz, and his son John, bought the David G. Yuengling Company brewery in New York and operated it until 1903. Philadelphia's John Betz & Son, Inc. continued in operation until 1939.

*SOURCES:* Will Anderson, *The Beer Book* (Princeton, N.J., 1973); John P. Arnold and Frank Penman, *History of the Brewing Industry and Brewing Science* (Chicago, 1933); Manfred Friedrich and Donald Bull, *The Register of U.S. Breweries* (Trumbull, Conn., 1976); *One Hundred Years of Brewing* (Chicago and New York, 1903; Arno Press Reprint, 1974).

**Beverwyck Brewing Company.** Michael Nolan founded his brewery in Albany as a lager beer plant sometime in the 1870s or 1880s. The firm was built as an addition to the ale brewery operated by Nolan and T. J. Quinn. The ale plant was built in 1845 by James Quinn, who became Nolan's father-in-law. The Beverwyck company, named after Albany's Dutch name, survived Prohibition but sold out to F. & M. Schaefer (q.v.) in 1950; the latter company operated the plant until 1974. The Quinn & Nolan Ale Brewing Company closed with the coming of Prohibition in 1920.

*SOURCES:* Manfred Friedrich and Donald Bull, *The Register of U.S. Breweries* (Trumbull, Conn., 1976); *One Hundred Years of Brewing* (Chicago and New York, 1903; Arno Press Reprint, 1974).

**Birk Brothers Brewing Company.** Jacob Birk and his sons, William and Edward, established their brewery in Chicago in 1891. Birk, a German immigrant, was first involved in the Wacker & Birk Brewing & Malting Company, which was sold to Chicago Breweries Ltd. (q.v.) in 1889. The Birk Brothers Company remained in operation and under family management until it was closed in 1950.

*SOURCES:* Richard J. La Sasa, "Nevertheless the Local Lagers," *Chicago Tribune Magazine* (April 24, 1977); *One Hundred Years of Brewing* (Chicago and New York, 1903; Arno Press Reprint, 1974).

**Blatz, Valentine** (October 1, 1826-May 26, 1894). A Bavarian-born Milwaukee brewer who migrated to the U.S. in the late 1840s, Blatz came from a

brewing family and worked in John Braun's Milwaukee brewery before opening his own business in 1851. Braun died shortly afterward; Blatz subsequently married his widow and merged the two companies. He was a very successful brewer and entrepreneur who expanded his company to the limit of the local demand and expanded thereafter by branching out into bottled beer (q.v.). Blatz is considered the first Milwaukee brewer to capitalize on the large-scale marketing possibilities of bottled beer. Production increased from 52,000 barrels in 1874 to 125,000 by 1880. In 1891, three years before his death, Blatz sold control of his brewery to Milwaukee and Chicago Breweries, Ltd., an Anglo-American syndicate. The name was to be continued and the firm was to have a Blatz as president for ten years. *See also*, Blatz, Val., Brewing Company.

*SOURCES:* "Blatz Brewing Company's Centennial," *American Brewer* (April 1951); Wayne Kroll, *Badger Breweries* (Jefferson, Wis., 1976); *One Hundred Years of Brewing* (Chicago and New York, 1903; Arno Press Reprint, 1974).

**Blatz, Val., Brewing Company.** John Braun founded this Milwaukee brewery in 1846. Valentine Blatz (q.v.) who emigrated from Bavaria, worked at Braun's plant from 1848 to 1851. Braun died in 1851 and Blatz, who had already opened his own small plant, subsequently married Braun's widow and merged the two breweries. The business prospered, and Blatz was a pioneer in the bottling and exporting of beer. He began exporting his beer, establishing agencies (q.v.) and outlets in New York, Boston, Chicago, and other distant cities, during the mid-1870s. From twenty-ninth in production among the nation's brewers in 1877 with about 47,500 barrels in output, Blatz climbed to seventh in 1895 with more than 350,000 barrels produced. The firm was incorporated in 1889. In 1890, Blatz sold a share in his company to a British-American syndicate known as the Milwaukee and Chicago Breweries, Ltd., and he was named president. During the Prohibition era in the 1920s, however, the company was run by Edward Landsberg of the Chicago and Milwaukee group. Landsberg kept the company in operation by producing near beer (q.v.), and various carbonated beverages. He also kept the Blatz name before the public by wide-scale advertising. Upon Landsberg's death in 1941, Frank M. Gaber became president. In 1945, Schenley Industries, Inc. (*see* Schenley Distillers Company) purchased control of Blatz from Landsberg's heirs, and Gaber retired in 1946. Schenley named Frank C. Verbest as president, and he was noted for vigorous leadership and sales expansion and was ultimately succeeded by James C. Windham in the 1950s. Pabst (q.v.) bought Blatz in 1958, but federal intervention forced Pabst to divest itself of the Blatz brand—which it did to G. Heileman (q.v.) in 1969. Windham became president of Pabst in 1958.

*SOURCES:* "Blatz Brewing Company's Centennial," *American Brewer* (April 1951); Wayne Kroll, *Badger Breweries* (Jefferson, Wis., 1976); *One Hundred Years of Brewing* (Chicago and New York, 1903; Arno Press Reprint, 1974).

## Appendix IX: The Largest Breweries in 1877, 1895, and 1973

Largest Brewers (1877)	Production (Barrels)
George Ehret, New York, N.Y.	138,449
Ph. Best, Milwaukee, Wis.	121,634
Berger & Engel, Philadelphia, Pa.	119,807
P. Ballantine & Sons, Newark, N.J.	107,592
Conrad Seipp, Chicago, Ill.	95,167
H. Clausen & Son, New York, N.Y.	90,642
Flanagan & Wallace, New York, N.Y.	88,677
Jacob Ruppert, New York, N.Y.	84,432
Headleston & Woertz, New York, N.Y.	79,658
Jos. Schlitz Brewing Company, Milwaukee, Wis.	79,538
Wm. Massey & Co., Philadelphia, Pa.	75,193
Albany Brewing Co., Albany, N.Y.	72,723
Christian Moerlein, Cincinnati, Ohio	72,588
Frank Jones, Portsmouth, N.H.	71,471
Rueter & Alley, Boston, Mass.	67,121
Clausen & Price, New York, N.Y.	64,896
Boston Beer Co., Boston, Mass.	62,881
Yuengling & Co., New York, N.Y.	62,740
W. J. Temp, St. Louis, Mo.	61,229
Windisch, Multhausen & Bro., Cincinnati, Ohio	59,475

SOURCE: *One Hundred Years of Brewing* (Chicago and New York, 1903; Arno Press Reprint, 1974).

Largest Brewers (1895)	Production (Barrels)
Pabst Brewing Co., Milwaukee, Wis.	900-1,000,000
Anheuser-Busch Brewing Assn., St. Louis, Mo.	700,000-800,000
Jos. Schlitz Brewing Co., Milwaukee, Wis.	600,000-700,000
George Ehret, New York, N.Y.	500,000-600,000
Ballantine & Co., Newark, N.J.	500,000-600,000
Berthelmer & Schmid, New York, N.Y.	400,000-500,000
Val. Blatz Brewing Co., Milwaukee, Wis.	350,000-400,000
Wm. J. Lemp Brewing Co., St. Louis, Mo.	300,000-350,000
Conrad Seipp Brewing Co., Chicago, Ill.	250,000-300,000
Frank Jones Brewing Co., Portsmouth, N.H.	250,000-300,000
Peter Doelger, New York, N.Y.	250,000-300,000
Ruppert, New York, N.Y.	250,000-300,000
James Everard, New York, N.Y.	250,000-300,000
Christian Moerlein Brewing Co., Cincinnati, Ohio	250,000-300,000
Berger & Engel, Philadelphia, Pa.	250,000-300,000
Bartholomay Brewing Co., Rochester, N.Y.	250,000-300,000

SOURCE: *Brewers Guide for the United States, Canada and Mexico* (1896).

Largest Brewers (1973)	Production (Barrels)
Anheuser-Busch, Inc. <sup>MO</sup>	29,887,000
Jos. Schlitz Brewing Co. <sup>WI</sup>	21,343,000
Pabst Brewing Co. <sup>WI</sup>	13,128,000
Adolph Coors Co. <sup>CO</sup>	10,950,000
Miller Brewing Co.	6,919,000
Falstaff Brewing Corp.	6,009,000
F. & M. Schaefer Brewing Co.	5,000,000
Stroh Brewery Co.	4,646,000
G. Heileman Brewing Co.	4,420,000
Carling Brewing Co.	3,800,000
Olympia Brewing Co.	3,637,000
C. Schmidt & Sons, Inc.	3,520,000
Theo. Hamm Brewing Co.	3,400,000
Rheingold Breweries, Inc.	2,675,000
National Brewing Co.	2,196,000
Cenasee Brewing Co.	1,850,000
Pearl Brewing Co.	1,611,000
Grain Belt Breweries, Inc.	1,100,000
Lone Star Brewing Co.	1,066,000
Ramier Brewing Co.	860,000

SOURCE: Manfred Friedrich and Donald Bull, *The Register of U.S. Breweries, 1876-1976* (Tumbull, Conn., 1976).

## Appendix IV: Urban Brewing Centers and Prominent Breweries

## MAIN BREWING CENTERS

## Boston

Haltfenreffer & Co.  
 New England Breweries, Ltd.  
 Massachusetts Breweries Co., Ltd.  
 John Roessle Brewery

## Brooklyn

Consumer's Park Brewing Corp.  
 Peter Doelger Brewing Corp.  
 Edelbrew Brewery, Inc.  
 Nassau Brewing Co.  
 Piel Brothers Brewery  
 Rheingold Breweries, Inc. (S. Liebmann)  
 F. & M. Schaefer  
 John F. Trommer's Brewery  
 F. W. Witte Brewing Co.

## Buffalo

Magnus Beck Brewing Co.  
 William Simon Brewery

## Chicago

Best Brewing Co. of Chicago  
 Birk Brothers Brewing Co.  
 Michael Brand Brewing Co.  
 Canadian Ace Brewing Co.  
 Chicago Breweries, Ltd.  
 Peter Hand Brewing Co.  
 John A. Huck Brewery  
 Keeley Brewing Co.  
 Lill and Diversey  
 McAvoy Brewing Co.  
 Schoenhofen-Edelweiss  
 Conrad Seipp Brewing Co.  
 Sieben's Brewery  
 United States Brewing Co.

## Cincinnati

Burger Brewing Co.  
 John Hauck Brewing Co.

Hudspohl Brewing Co.  
 Christian Moerlein Brewing Co.  
 Red Top Brewing Co.  
 Schoening Brewing Co.  
 George Wiedemann Brewing Co.  
 Windisch-Muhlhauser Brewing Co.

## Detroit

Detroit Brewing Co.  
 E. & B. Brewing Co.  
 Goebel Brewing Co.  
 Philip Kling Brewing Co.  
 Koppitz-Melchers Brewing Co.  
 Pfeiffer Brewing Co.  
 Stroth Brewery Co.  
 E. W. Voight Brewing Co.

## Milwaukee

Val. Blatz Brewing Co.  
 Cream City Brewing Co.  
 Adam Gettelman Brewing Co.  
 Miller Brewing Co.  
 Pabst Brewing Co.  
 Jos. Schlitz Brewing Co.

## New York

Beadleston & Woertz  
 Bernheimer & Schmid  
 H. Clausen & Son  
 Peter Doelger Brewing Corp.  
 George Ehret's Hell Gate Brewing Co.  
 James Everard Brewing Co.  
 Flanagan, Nay & Co.  
 Jacob Ruppert Brewery  
 F. & M. Schaefer Brewing Co.

## Philadelphia

Louis Bergdoll Brewing Co.  
 Bergner & Engel Brewing Co.  
 John F. Betz & Son, Inc.  
 Esslinger Brewing Co.  
 Liebert & Obert  
 William Massey & Co.  
 Henry F. Ortlieb Brewing Co.  
 Francis Perot's Sons (Malting Co.)  
 F. A. Poth & Sons, Inc.

Year	Spirits		Wine		Cider		Beer		Total
	Beverage	Absolute Alcohol							
1970	2.5	1.1	1.8	0.3	—	—	25.7	1.2	2.5
1975	2.4	1.1	2.2	0.3	—	—	28.8	1.3	2.7

SOURCE: W. J. Rorabaugh, *The Alcoholic Republic: An American Tradition* (New York: Oxford University Press, 1979). Rorabaugh cautions that this table represents consumption estimates and approximations that tend to suggest a precision that is lacking. Nevertheless, the figures are based on often solid evidence and indicate the general trend in drinking.

Appendix III: Number of Breweries, Population, and Production in Urban Brewing Centers, ca. 1890

City	Approximate No. of Breweries		Population	Production (barrels)
	Main Brewing Centers	Secondary Brewing Centers		
Boston	21	—	448,477	838,365
Brooklyn	38	—	(included in New York)	1,402,415
Buffalo	20	—	255,664	482,473
Chicago	41	—	1,099,850	1,566,392
Cincinnati	24	—	296,908	1,068,594
Detroit	33	—	205,876	269,203
Milwaukee	14	—	204,468	1,472,096
New York	77	—	2,507,414	4,247,851
Philadelphia	91	—	1,046,964	1,387,004
St. Louis	29	—	451,770	1,538,369
San Francisco	26	—	298,997	489,145
Secondary Brewing Centers				
Albany	16	—	94,923	377,411
Baltimore	38	—	434,439	486,778
Cleveland	28	—	261,353	323,465
Louisville	23	—	161,129	—
Newark	30	—	181,830	943,805
Pittsburgh	34	—	238,617	307,866
Rochester	15	—	133,896	423,669
Syracuse	15	—	88,143	—

SOURCES: Will Anderson, *The Beer Book* (Princeton, N. J., 1973); Manfred Friedrich and Donald Bull, *The Register of U.S. Breweries, 1876-1976* (Trumbull, Conn., 1976); U.S., Bureau of the Census, *Abstract of the Twelfth Census of the United States, 1900*, 3rd ed. (Washington, D. C., 1904); *Western Brewer* (February 1890).

NOTE: See Boston Brewing Industry, Brooklyn Brewing Industry, and so on, for a brief article on each brewing center listed.

Appendix X: Operating Breweries by States in Selected Years,  
1876-1973

State	1876	1880	1890	1895	1900	1910	1914	1919	1935	1940	1945	1950	1955	1960	1965	1973
AL	4	—	1	4	5	1	2	—	—	—	—	—	—	—	—	—
AK	1	—	3	4	15	5	4	3	3	2	—	—	—	—	—	—
AZ	7	11	4	2	3	2	2	—	1	1	1	1	1	1	1	1
AR	—	—	—	—	1	1	1	—	—	—	—	—	—	—	—	—
CA	206	186	145	120	117	82	74	65	41	32	21	17	16	12	12	10
CO	36	27	21	18	15	13	12	—	5	4	4	4	3	3	3	2
CT	31	20	23	20	21	21	20	19	12	9	5	2	2	1	1	1
DE	2	4	4	5	5	6	4	3	1	2	2	2	—	—	—	—
DC	16	10	7	5	5	5	4	4	2	1	1	1	1	—	—	—
FL	—	—	—	—	1	1	2	1	10	6	6	6	6	7	3	6
GA	2	1	3	6	6	4	4	4	1	1	1	1	—	1	1	2
HI	—	—	—	—	1	1	1	—	6	7	2	5	5	4	3	2
ID	10	12	30	18	19	10	6	—	5	4	3	3	1	—	—	—
IL	165	110	112	122	114	113	100	93	62	52	39	31	21	15	12	3
IN	105	66	48	49	45	41	39	33	17	16	13	11	6	4	4	3
IA	132	118	23	27	28	20	18	—	4	3	3	3	3	2	1	1
KS	34	30	2	2	2	—	—	—	—	—	—	—	—	—	—	—
KY	35	32	28	25	30	22	19	17	7	8	6	6	5	5	4	2
LA	10	9	8	7	9	12	12	11	7	6	6	5	4	4	3	3
ME	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MD	70	57	43	29	29	24	19	15	11	9	7	7	6	6	6	4
MA	28	31	33	35	47	40	39	32	14	15	14	13	8	7	4	3
MI	147	117	107	98	87	74	70	59	45	37	23	19	13	10	7	5
MN	112	103	100	95	85	71	66	60	24	22	19	18	15	13	10	5
MO	87	64	59	47	52	52	53	46	19	17	13	10	9	6	6	4
MT	22	19	18	16	26	22	21	21	10	9	8	7	5	3	1	—
NB	15	26	23	22	22	14	14	13	5	5	4	4	3	3	2	1
NV	30	32	17	8	5	5	3	—	2	2	2	1	1	—	—	—
NH	6	5	5	6	5	4	4	4	1	1	1	1	—	—	—	1
NJ	69	51	47	45	51	40	40	36	15	14	13	9	9	8	6	5
NY	393	334	290	274	270	194	165	153	69	61	44	36	24	18	13	7
NC	1	—	—	—	—	—	—	—	—	1	1	1	1	—	—	1
ND	—	—	6	1	—	—	—	—	—	—	—	—	—	—	—	—
OH	216	164	133	122	124	120	118	104	54	50	38	33	15	12	8	5
OK	—	—	—	1	—	—	—	—	2	3	2	1	1	1	1	—
OR	30	32	33	25	26	20	13	—	6	6	4	2	1	1	1	1
PA	361	297	266	221	220	248	233	209	107	72	63	53	32	26	24	18
RI	6	5	3	5	8	8	7	6	6	3	2	2	2	1	1	1
SC	3	2	1	2	1	1	1	1	—	—	—	—	—	—	—	—
SD	—	—	8	5	5	4	4	4	1	1	—	—	—	—	—	—
TN	6	2	4	4	4	5	4	—	3	3	2	2	1	—	—	1
TX	47	21	9	13	12	15	16	14	10	8	7	7	6	6	7	7
UT	22	14	9	8	7	6	5	4	2	2	2	2	2	2	1	—
VT	1	1	1	—	1	—	—	—	—	—	—	—	—	—	—	—
VA	5	2	2	4	8	6	6	6	2	4	4	4	3	2	2	2
WA	13	29	31	29	33	34	26	—	18	15	11	11	8	7	5	4
WV	16	—	7	8	9	14	10	—	4	2	1	1	1	1	1	—
WI	157	205	171	168	163	140	138	131	86	74	61	48	43	33	27	11
WY	8	6	7	3	5	3	2	3	3	3	3	2	—	—	—	—
	2,685	2,266	1,902	1,732	1,751	1,498	1,404	1,179	703	592	462	392	283	225	182	122

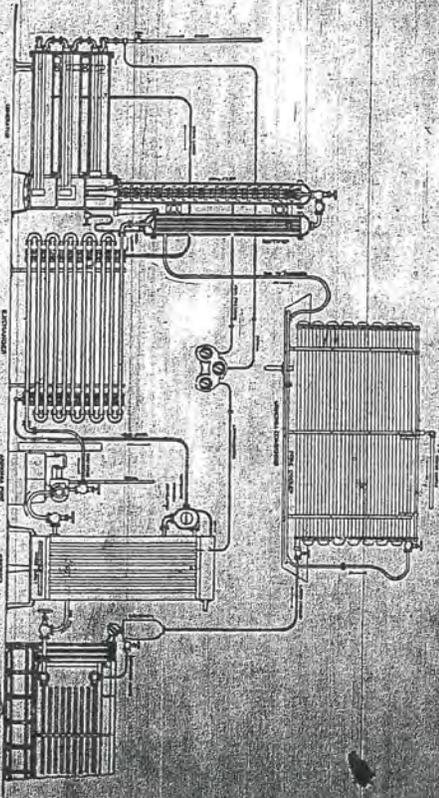
SOURCE: Manfred Friedrich and Donald Bull, *The Register of U.S. Breweries, 1876-1976* (Trumbull, Conn., 1976).

NOTE: Mississippi never had a brewery.

pany, of Milwaukee, Wisconsin, patented a double-acting, horizontal refrigerating machine, which Weiss & Viller commenced to build in that year. The first machine was installed in the Green City Brewery, of Milwaukee. Since that time various improvements have been made on the original and the Viller apparatus has played a leading part in brewery refrigeration.

THE "THOMPSON" ICE MACHINE.

In 1864, E. W. Nieling, a refrigerating engineer of Cincinnati, patented a horizontal double-acting ammonia compressor. In it were incorporated three suction and two discharge valves, the patentee claiming that by the location of the third suction valve near the center of the ammonia cylinder a more uniform and effi-



THE VOIGT ABSORPTION SYSTEM.—HENRY VOIGT MACHINE COMPANY, LOUISVILLE, KENTUCKY.

cient suction of gas was attained. The machine known as the "Triumph" Ice Machine is built by the company of that name, Mr. F. W. Nieling being its superintendent.

THE VOIGT ABSORPTION MACHINE.

The ice-making and refrigerating machines manufactured by the Henry Voigt Machine Company, of Louisville, Kentucky, are all of the absorption type. Although the company was founded in 1880 this class of machinery was not manufactured until 1887. The first machine to be applied to brewery refrigeration was installed during the year named at the Knoxville (Tennessee) Brewery. At the present time twenty per cent. of the total number of machines turned out find their way into breweries.

Reference has already been made to the so-called Krausch ice chambers, with the mechanical device for the circulation of the circulating air. In 1878 the inventor of this apparatus, Theodore Krausch, introduced a refrigerating machine of the ammonia compression type, which he first installed at Ferns Brewery, St. Louis. This was one of the pioneer machines applied to the refrigeration of breweries in the United States. Mr. Krausch continued to manufacture his machines for many years thereafter.

CONCLUSION.

In the foregoing pages we have not attempted to present a history of artificial refrigeration and have

given only the main facts as they bear upon the subject of refrigeration in the brewery. The topic has been treated chiefly from the standpoint of the inventor of the machinery which has been so instrumental in the wonderful development of the brewing industry. The principal manufacturers of the apparatus, who form a prominent industrial class by themselves, have also been mentioned as a marked feature of the subject; but, as stated, the plan has been followed of treating chiefly with the pioneer inventors of those distinct types of refrigerating machinery which have been found, by practical experiment, to be best adapted to the refrigeration of the brewery and best applied to the various processes connected with brewing, as well as the preservation of the manufactured product.

1903

# Brewery Architecture and Engineering.

## CHAPTER XI.

### INTRODUCTION.

BREWERY architecture has become a special branch of the architect's profession during the past thirty years, owing to the wonderful progress made in the brewing industry, caused by the steadily growing demand for its product and the development of machinery and brewery engineering during that period. Small breweries grew to the proportions of large ones. The inside and outside of the brewery were transformed to correspond with the change from hand operations to steam power. The requirements of a modern brewery have grown to such an extent that it demands much special study and experience in order to fit an architect to build a brewery, even of moderate size and properly equip the same for operation. Only a specialist in that branch, a brewery architect and engineer, who has made that work the exclusive study of his life, can undertake the building and practical equipment of such an establishment.

The development of the construction of breweries in this country can be divided for purposes of description into certain periods. First, the development during the time when top fermentation brewing was still dominant; secondly, that period in which, step by step, bottom fermentation brewing gained the supremacy, and finally the period when the industry was in the most flourishing condition—the present time—marked by the construction of immense places and plants representing the modern industry. Each of these periods has, in a certain sense, its own special characteristics.

### THE TOP FERMENTATION PERIOD.

In describing the interior of breweries at the beginning of the last century, we have in previous chapters



as yet entirely undeveloped. In the older cities as Philadelphia, New York, Boston, Albany, etc., there were at that time several breweries, built during colonial days, of such superior construction that they inspired the admiration of the brewers generally. But when we turn our eyes to the West, which just commenced to be opened for settlement, we behold diminutive breweries, located in huts and frame houses, the humble origin of modern monster establishments. Little thought was given to appearance or construction, the chief point being to make the plant and its operation as cheap as possible.

Even in the large breweries of the East, where steam power, step by step, crowded out manual labor, requiring frequent changes and additions in buildings, caused by the enlargement and the improvement in the operations, more regard had to be paid to an increase of capacity than to fine architecture, at least in comparison with the plant of the present period, which shows many monumental edifices.

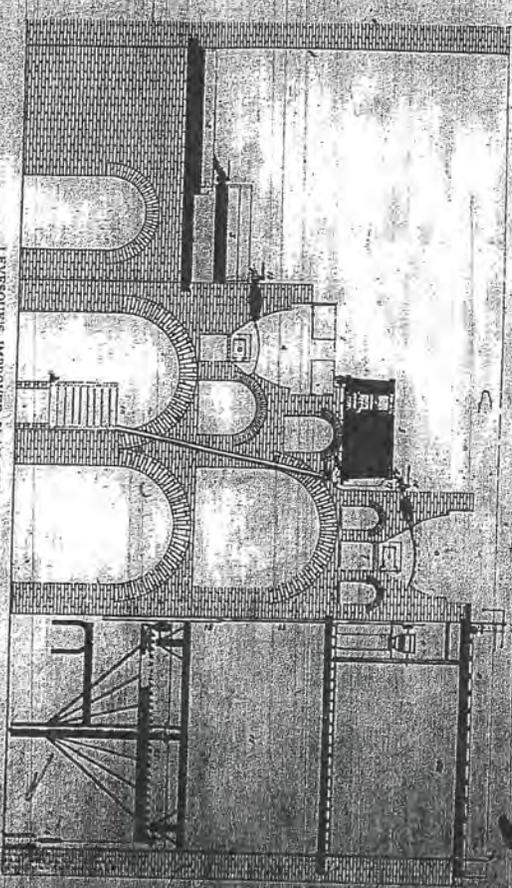
The interior equipment, based upon the principle of gravitation, remained unchanged for a long time, and not until the advent of the period of lager beer was there any general deviation from this plan. Nevertheless, until about 1870 the ale breweries of the East still surpassed in magnitude of operation and equipment the larger beer breweries.

The mashing machines were operated by steam power, the furnaces were gradually changed to steam boilers, modern mechanics commenced to place diverse apparatus and machinery at the service of the brewer, while at the same time the general construction and equipment of the larger beer brewery commenced to take the lead, and rapidly outrank that of the ale brewery. The larger ale breweries at that time were of substantial and solid construction, though little importance was attached to their outward appearance. The interior equipment has fully kept pace with the general

United States in 1863; and that in 1870 the manufacture had only increased to seven million five hundred thousand barrels, ale and lager beer combined.

A fair illustration of the middle-century brewery is given in the accompanying illustration, taken from a work published about 1853 by John Levesque, once connected with the well-known Anchor Brewery of London. It is entitled "Levesque's Improved Plan for a Brewery." It represents the main features of the interior construction of the average brewery of that time.

THE BEGINNING OF THE LAGER BEER PERIOD. The larger beer breweries, which at the end of the sixth decade were still far behind the ale breweries in number and capacity, commenced to surpass the latter in magnitude, equipment and construction during the succeeding decade. A brewer of Germany, who



KEY: 1—Water tank, 2—Water cistern, 3—Cooler, 4—Hop back, 5—Wort copper, 6—Holding copper, 7—Pump, 8—Malt room, 9—Malt and hop room, 10—Malt and hop room, 11—Malt and hop room, 12—Malt and hop room, 13—Malt and hop room, 14—Malt and hop room, 15—Malt and hop room, 16—Malt and hop room, 17—Malt and hop room, 18—Malt and hop room, 19—Malt and hop room, 20—Malt and hop room, 21—Malt and hop room, 22—Malt and hop room, 23—Malt and hop room, 24—Malt and hop room, 25—Malt and hop room, 26—Malt and hop room, 27—Malt and hop room, 28—Malt and hop room, 29—Malt and hop room, 30—Malt and hop room, 31—Malt and hop room, 32—Malt and hop room, 33—Malt and hop room, 34—Malt and hop room, 35—Malt and hop room, 36—Malt and hop room, 37—Malt and hop room, 38—Malt and hop room, 39—Malt and hop room, 40—Malt and hop room, 41—Malt and hop room, 42—Malt and hop room, 43—Malt and hop room, 44—Malt and hop room, 45—Malt and hop room, 46—Malt and hop room, 47—Malt and hop room, 48—Malt and hop room, 49—Malt and hop room, 50—Malt and hop room, 51—Malt and hop room, 52—Malt and hop room, 53—Malt and hop room, 54—Malt and hop room, 55—Malt and hop room, 56—Malt and hop room, 57—Malt and hop room, 58—Malt and hop room, 59—Malt and hop room, 60—Malt and hop room, 61—Malt and hop room, 62—Malt and hop room, 63—Malt and hop room, 64—Malt and hop room, 65—Malt and hop room, 66—Malt and hop room, 67—Malt and hop room, 68—Malt and hop room, 69—Malt and hop room, 70—Malt and hop room, 71—Malt and hop room, 72—Malt and hop room, 73—Malt and hop room, 74—Malt and hop room, 75—Malt and hop room, 76—Malt and hop room, 77—Malt and hop room, 78—Malt and hop room, 79—Malt and hop room, 80—Malt and hop room, 81—Malt and hop room, 82—Malt and hop room, 83—Malt and hop room, 84—Malt and hop room, 85—Malt and hop room, 86—Malt and hop room, 87—Malt and hop room, 88—Malt and hop room, 89—Malt and hop room, 90—Malt and hop room, 91—Malt and hop room, 92—Malt and hop room, 93—Malt and hop room, 94—Malt and hop room, 95—Malt and hop room, 96—Malt and hop room, 97—Malt and hop room, 98—Malt and hop room, 99—Malt and hop room, 100—Malt and hop room.

traveled throughout this country in 1867—at that time placed the American lager beer breweries of the first class on an even footing with the large breweries of Munich and of the breweries of the second class at Vienna. But he also said that in smaller cities, recently founded, he had met with breweries more like block-

houses in appearance, describing a small brewery as follows: "Somewhat aside, in the woods, located near a clean and bubbling spring, there is a small house, with a single living room, and a shed made of boards, containing the diminutive brewing copper and the corresponding small mashing tub. The malt-kiln is of about the size of a baking oven, the half of the house serves as mashing floor, and the cellar, equipped with a few small vessels, serving as fermenting tubs, may measure three and a half to four square meters. All the labor is performed by the brewer, generally assisted

only by his wife. In close proximity the horse lands rich pasture in the woods.

A great number of such diminutive breweries, at that time, eked out a scanty existence, the result being that during the following ten years there was a steady decrease in the number of breweries of that character, while at the same time the larger breweries grew in capacity, causing a period of prosperity, owing to the disappearance of the weaker breweries, which were unable to place themselves upon a sound business basis.

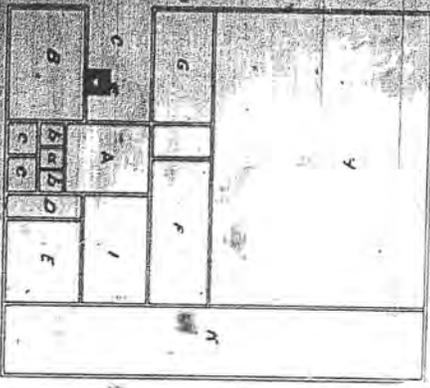
The population increased rapidly, immigration supplying good and useful material from the European countries, for whom this country soon became a second home, and who brought with them the habits and customs of the Fatherland. The consumption of beer doubled within ten years, and it was during this period of the modern brewing industry that the foundation of its future success and greatness was laid.

The modern breweries of this period are far superior to the earlier plans, excelling in a construction at once much more tasteful and substantial, and with an interior equipment much more perfect and practical.

About 1880 a marked change in brewery construction was inaugurated, on account of the introduction of mechanical refrigeration, and the displacing of many cumbersome devices and structures employed for the storage and use of natural ice. Fortunately the transition period is fully recorded in the files of *The Western Brewer*, Chicago, which came into existence during this all-important epoch in the progress of brewing and brewery construction. In the November issue of 1876, that journal published a practical as well as prophetic article by Fred Baumann, the architect, who laid down

the following as the general plans of a model brewery of his day:

"In these plans," the architect explains, "c and b are the bins for the storage of malt and grain, of which there should be two for each, in order that one bin may be wholly emptied and cleaned before touching the other, for the bottom contents of a bin are the last to flow through the pans. The elevator within a handles the stuff and puts it through the crushing mill, placed on the fourth floor, whence it flows into the mash tub, placed on the third floor. Hot and cold water are let into the mash tub from tanks placed on the floor above.



The mash juice is let into the seed-keel, placed on the second floor, wherein the wort is prepared in whatever manner preferred by the brewer. The boiled wort flows into a large settling tank, placed on the first floor, whence it is let over a Baudouin cooler, placed in the basement.

"The basement story further contains the engine, from two to four pumps, an air-pump for the discharge of the beer from the lager vats, and a suction fan for ventilating the fermenting room. From the Baudouin the wort is directly pumped into a vessel placed over the fermenting vats and under the ceiling of the room,

wherein it is again allowed to settle before being discharged into the fermenting vats.

"Two points it is necessary to observe in a good brewery, though often neglected. First, no vapor should be allowed to escape within the building. Second, the fermenting room should be properly ventilated. Cool, fresh air is in all cases supplied from cold-air chambers overhead, which rapidly descends to the floor."

The great majority of brewers continued to do their own making, although toward the latter portion of the century the plants of considerable size conducted their making processes in separate structures. With the growth of the brewing industry and the many improvements in making machinery, the malt-house became one of the most important and imposing structures of the entire plant. The Anheuser-Busch Brewing Association buildings, St. Louis, devoted to these purposes, constitute one of the largest (having a frontage of six hundred feet) and most complete establishments of the kind in the world. The two storage-elevators have a total capacity of one million bushels. The breweries and malt-houses of this period, as this example indicates, are not only remarkable for solid construction of stone and iron, but for the care of the architect in making due allowance for the erection of necessary additions without interference with the regular operations. They also indicate a desire to present an attractive architectural construction corresponding with the magnitude of the business. It is not sufficient that the brewery should be equipped with all the latest apparatus and machinery, but the consideration should also be made of general taste and to the wealth of the owners by a handsome architectural construction and with an eye for the beautiful. In this manner breweries have been erected and equipped with the most liberal expenditure of money, doing justice in every particular to the modern taste touching interior and exterior finish. The cellar construction was improved upon the same plan, the new cellars were perfectly dry, well ventilated and isolated, and the whole picture of the brewery, the building fronts and the entire exterior architecture aroused laymen and professional men to a sense of the magnitude of the business enterprise, of the success hitherto achieved, and possibilities for the future, of so flourishing an industry.

From 1880 to 1890 the consumption of beer increased from thirteen million to twenty-six million barrels, from 1890 to 1901 to over thirty-seven million four hundred thousand barrels, this enormous increase being the product of the newly erected large breweries, and of many old ones which, during that time, had assumed proportions never dreamt of before.

The superior development of brewery construction in America is illustrated by the utility and grace which are combined in the architectural construction of a large number of the latest plants erected, but none of them can be said to possess a national style. The predominant feature, however, of both interior and exterior construction, is strength and grace without cumbersome, and certainly no better illustration of

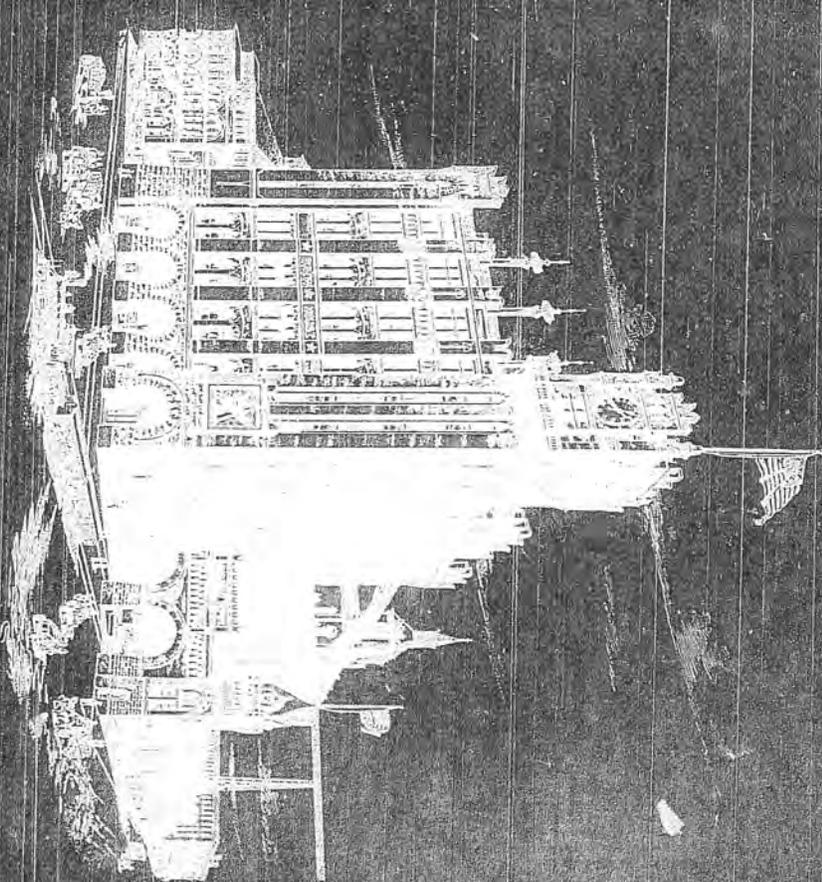
ONE HUNDRED YEARS OF BREWING.

our meaning can be afforded than the brew-house of the Ambeser-Busch Brewing Association erected in 1893 designed by Waldmann Walsh & Boisselier brewery architects of St. Louis, shown below.

In England, Germany and Austria a special type of brewery architecture is rarely found, owing to the fact that many of the leading breweries are of very old construction, representing and showing the character of the various periods of the development and growth of brewing, which possibly gives them a more interest-

architecture is as plainly evinced in the typical British brewer of to-day as in the more lofty and ornamental Gothic type in the modern German.

As illustrative of this picturesque and impressive combination of the old and the new, perhaps no better example could be taken than the Anton Dreher breweries, which represent two of the greatest plants on the continent of Europe. The great lager cellars, both in course of construction and completed, are shown in the illustrations on the opposite page, the lines of the arches



MODERN BREW-HOUSE, AMBERSER-BUSCH BREWING ASSOCIATION, ST. LOUIS, MISSOURI

ing or picturesque appearance, in their exterior form as well as in the interior, in brew-house and cellar.

In Germany they are often massively Gothic, and show the impress of princely hands, members of royalty, in medieval times, not seeming the honor and profits of the industry. Here, as in Austria and Eng-

land, the gloomy, yet picturesque lines of the monastery can often be traced in the architecture of existing breweries, being relics of the days when the church also set a good example to the citizen and countryman, of good and successful brewing. Despite all, however, the somewhat severe and utilitarian style of Anglo-Saxon

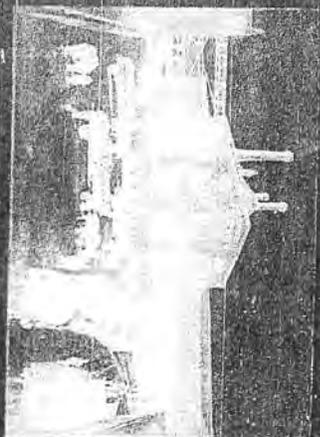
being often jagged, but the general effect being impressive and almost oppressive. Again, in the new breweries, the official residences and other buildings of a comparatively recent date is seen the clean-cut style of the modern architect.

The Guinness (St. James) Brewery, of Dublin, the largest manufactory of porter in the world, is offered as an illustration of the modern plant, which, though a very old business, retains few traces of age in the construction of its plant. Its main buildings are generally square and severe in outline, and even the interior of its maltings, which in many German breweries is an

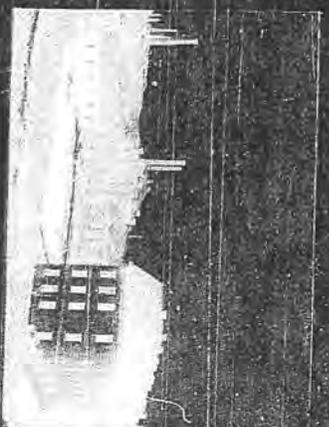
ONE HUNDRED YEARS OF BREWING.

rough and massive as to take one back in thought to the Middle Ages, has here a rather light, arched effect. On an inspection of the ground plan of the premises

a whole. Place such institutions as these beside the small primitive structure, with its rough beams and crude implements, which constituted the plant of the



DREHER BREW-HOUSE, AT KLEIN-SCHWECCHAT, AUSTRIA.



OFFICIAL BUILDING AND BREWERY, ANTON DREHER, BUDA-PEST, AUSTRIA.



LAGER CELLAR, ANTON DREHER BREWERY, BUDA-PEST, AUSTRIA.



CONSTRUCTING A LAGER CELLAR AT DREHER'S BREWERY BUDA-PEST, AUSTRIA.



UNDERGROUND FERMENTING FLOORS, ANTON DREHER BREWERY, BUDA-PEST, AUSTRIA.

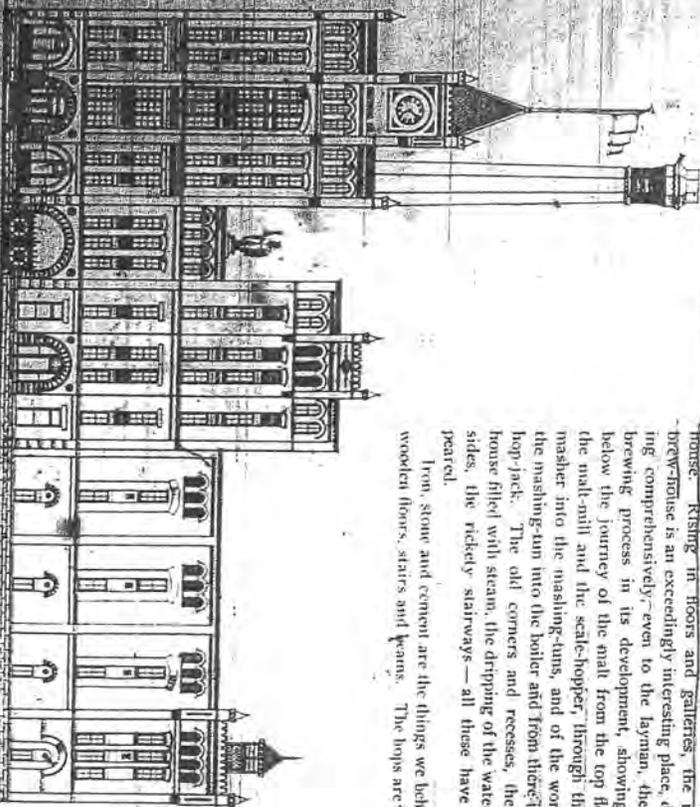
shown on the following page we are enabled to realize somewhat the magnitude of this typical plant, also the various constructive parts, which go to form it as

seventeenth century, and the reader may form some conception of what progress has been made in brewery architecture and construction.



GROUND PLAN, ST. JAMES GATE BREWERY PREMISES, DUBLIN, ARTHUR GUINNESS, SON & CO., LIMITED. (JANUARY, 1900)

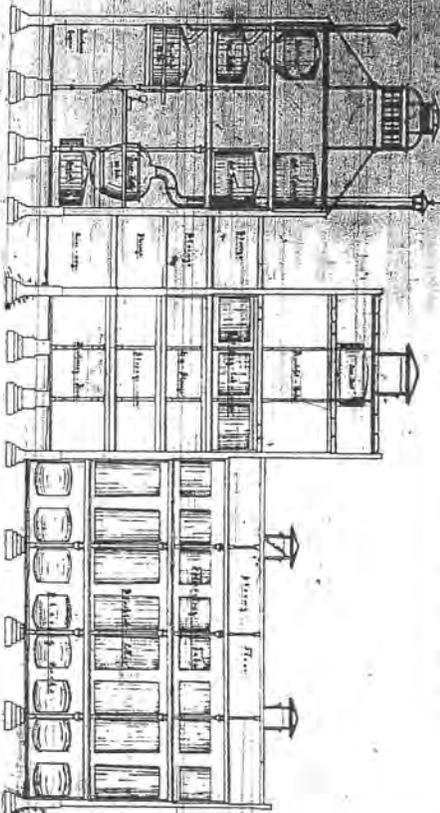
THE CONSTRUCTION OF MODERN BREW-HOUSES. The development of the modern brew-house has been discussed in the various chapters upon that sub-



VERTICAL SECTION MODERN BREWERY - FROM PLAN BY LOUIS LEROUX, CHICAGO

scriptions allow us to take in almost the entire operation of brewing at one glance, or from one standpoint, in the high, lofty and airy, often richly adorned, brew-house. Rising in floors and galleries, the modern brew-house is an exceedingly interesting place, displaying comprehensively, even to the layman, the entire brewing process in its development, showing from below the journey of the malt from the top floors to the malt-mill and the scale-hopper, through the formasher into the mashing-tuns, and of the wort from the mashing-tun into the boiler and from there into the hop-jack. The old corners and recesses, the brew-house filled with steam, the dripping of the water on all sides, the richly carpeted stairways—all these have disappeared.

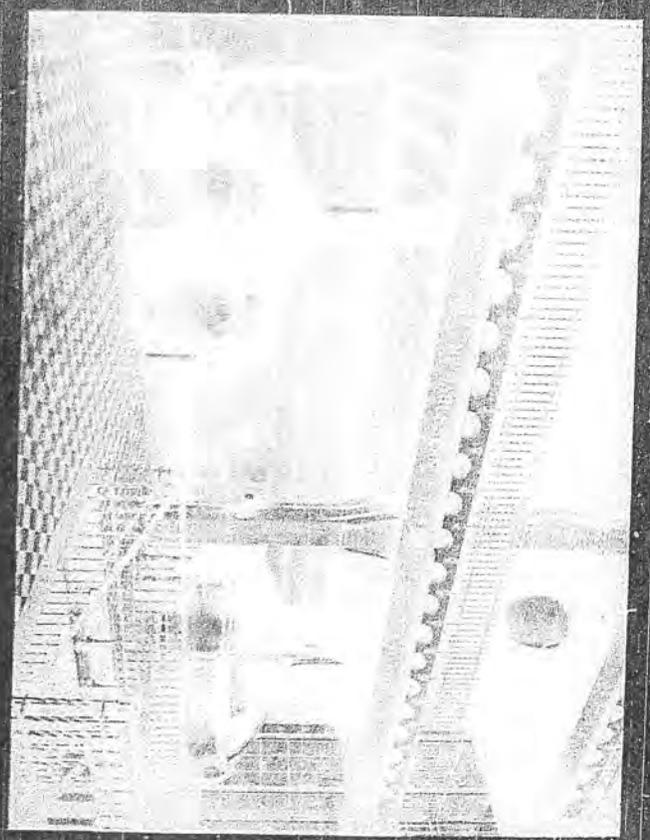
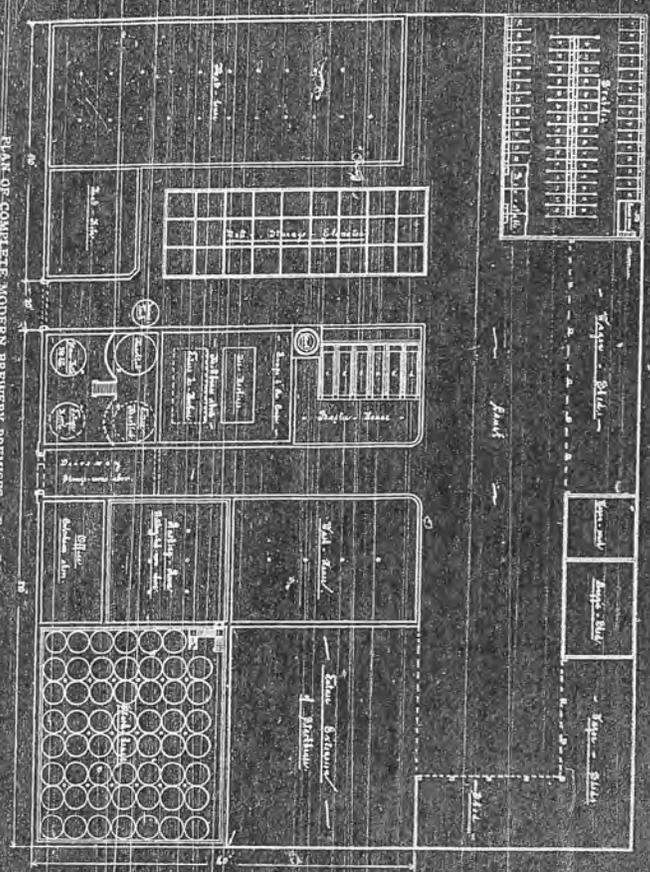
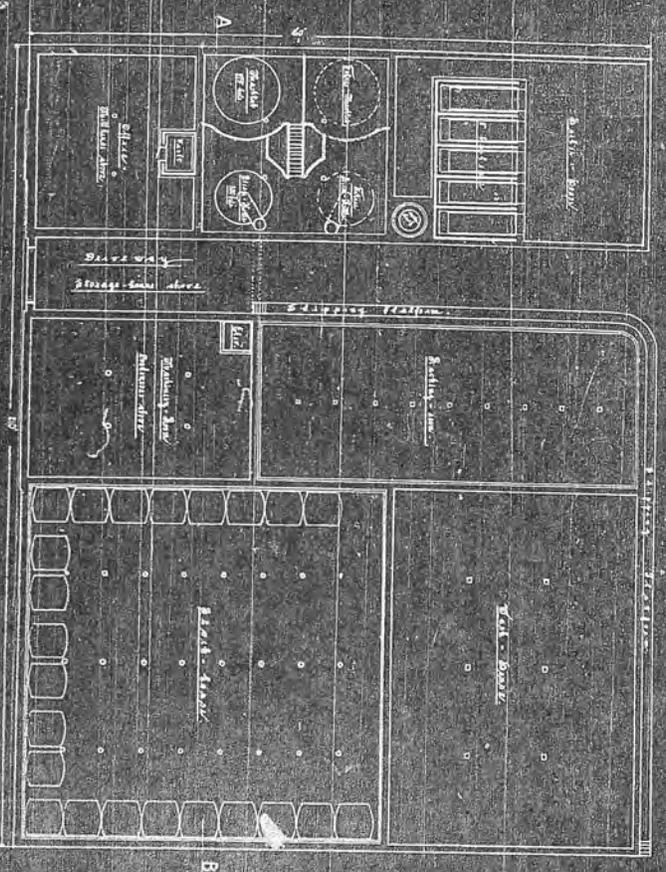
From stone and cement are the things we behold, no wooden floors, stairs and beams. The hops are carried



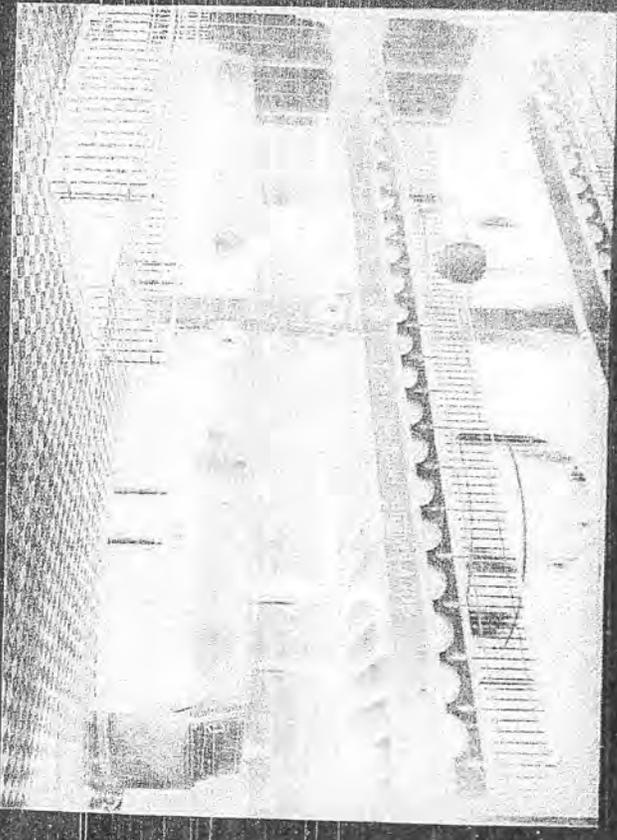
SECTION MODERN BREWERY - FROM PLAN BY LOUIS LEROUX, CHICAGO

ject, and we shall therefore confine ourselves to a brief statement as to its general character and arrangement. Built upon the gravitation principle, the new con-

from the hops chamber, which is artificially refrigerated, directly into the kettle. The connection between brew-house and cellars is a direct one also, and not the



AN INTERIOR VIEW BREW-HOUSE, NEW CARLSBERG BREWERIES, COPENHAGEN, DENMARK.



AN INTERIOR VIEW BREW-HOUSE, NEW CARLSBERG BREWERIES, COPENHAGEN, DENMARK.

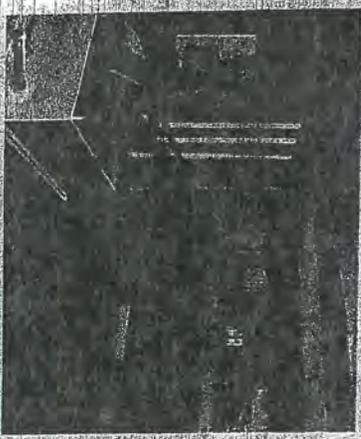
roundabout way of yore. The brew-houses are either equipped with double brew apparatuses, or in such a manner that there is room for the construction of a second one. The polished, covered copper kettles, with the steam fit, also of copper, tend to increase the impression of cleanliness, rather than copper having been spared, nor unnecessarily wasted as material for the interior finish. The coat of paint on the iron machinery and apparatus, the iron construction and vaults, etc., are also kept clean at all times, being the pride of the cellar.



SEVEN HORSE-POWER BULLOCK MOTOR, OPERATING MALT CLEANING AND GRINDING MACHINERY.

men, who, during hours when time will permit, make liberal use of the brush and the paint pot.

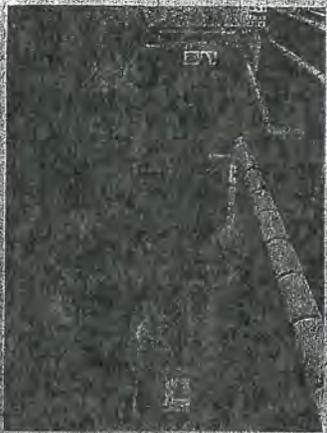
As we view from the upper gallery the immense iron apparatuses for boiling the raw grain, etc., and the powerful apparatuses used, we are forced into an involuntary comparison of these with the mashing and brewing processes of former times, and we realize that it is



SEVEN HORSE-POWER BULLOCK MOTOR, OPERATING MASH MACHINE.

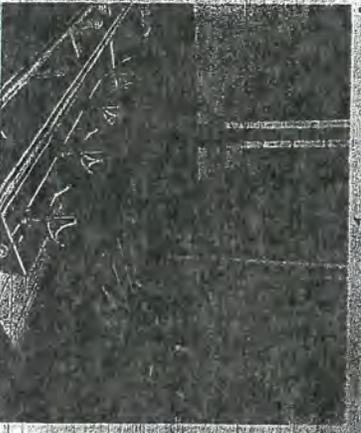
owing to this modern equipment alone, large and complicated as it may appear at first, that a single man is competent to manipulate the entire process, from top to bottom, to finish a brew of beer from the grinding of the malt to the cooling of the wort, where formerly a half-dozen men and double the time were required.

The foregoing may sufficiently illustrate the progress made in brewery construction to which we have



FIFTEEN HORSE-POWER BULLOCK MOTOR, OPERATING COOKING KEE WASHER.

goes to show that we have to deal not alone with an industry, but also that within a relatively short period success has crowned the efforts of the brewer, and he has accumulated wealth which can with perfect propriety be displayed in presenting the most attractive exterior appearance to his place of business which modern architectural skill is able to bestow in an appropriate and substantial manner upon an industrial



SEVEN AND ONE-HALF HORSE-POWER BULLOCK MOTOR, OPERATING KEE WASHER.

establishment, that will at once command respect and admiration to the fullest extent.

ELECTRICAL POWER IN THE BREWERY.

It is needless to say that since the period when the Levesque diagram illustrated a model brewery, especially great strides have been made in the development of the mechanisms used for the generation and transmission of power. The primitive form of horse power

has given place to steam and electric plants. As the industry developed, the steam power plants also expanded until in later years, it was necessary to house them in separate and often imposing structures. An illustration of the importance and magnitude of the steam power plant as an integral part of the modern brewing establishment is afforded by the Pabst Brewing Company, of Milwaukee, whose boiler-house is a handsome, three-story building. Twenty-four huge steel boilers are arranged in two rows, three-quarters of the battery being in use continuously. Several barrels of water are evaporated into steam every minute and the two main engines transmit power through about one mile and a half of shafting. For the purpose of providing against an accident to the central plant separate engines are installed in the principal departments.

Within recent years electricity has taken the place of steam to a considerable extent in the generation and transmission of power. One great advantage of the former over the latter is economy of space. There are a number of generators in the central plant, while separate motors are required in different portions of the brewery; but the machines are comparatively small and wires, of course, replace the cumbersome shafting, pulleys and belts. Furthermore, by law bottling-works in the United States must be housed separately, and the use of electric power does away with a large amount of shafting or long lines of steam piping which would be necessary if steam were the agency employed. In cold-storage cellars, where steam is in use it is difficult to obtain power when required, without heat. The use of electricity obviates this objection. In such operations as the cleaning and grinding of the malt, working the mash machine and cooling and washing the bottles and kegs, and racking off the finished product, electric motors are now used, in not a few breweries of the United States.

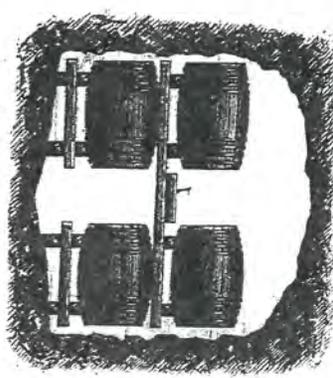
Among the pioneers in the application of electricity to brewing operations was the Bullock Electric Manufacturing Company, of Cincinnati, which made its first installation of this class of machinery at the George Wiedemann Brewery, of Newport, Kentucky, in the year 1888. The John Gund Brewing Company, of La Crosse, Wisconsin, was among the first plants to install a more complete electric equipment and motors to operate the machinery in the malt-house as well. The Consolidated Park Brewing Company, Brooklyn, New York, adopted electricity at a later day and the Anheuser-Busch Brewing Association, of St. Louis, Missouri, has now several electric motors in operation. In this connection must also be mentioned the Central Brewing Company of East St. Louis, Illinois, which is among the latest plants to be equipped with complete electric apparatus.

The substitution, more or less complete, of electricity for steam will undoubtedly be made by other breweries, and this change will necessarily have its effect upon the construction and architecture of the brewery plant of the future.

THE EVOLUTION OF CELLARAGE.

In the earlier days of beer brewing, and until within the second half of the nineteenth century, the

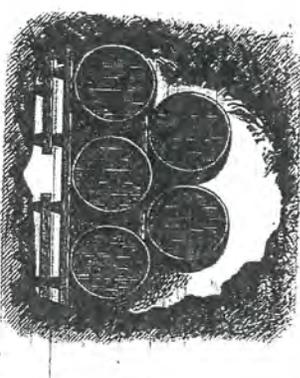
menting depended entirely upon the season of the year. In the countries of top fermentation brewing, the outer temperature, excepting during the very hot months, was not so much taken into account as in bottom fermentation brewing, but even there the colder season, as a rule, furnished sufficient time for brewing the supply of lager beer necessary to meet the demand, but when the consumption of beer increased to a point



INTERGROUND CELLARAGE.

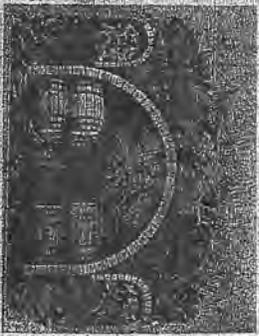
where continuous brewing during the entire year became necessary, ways and means had to be found to secure complete independence from outside atmospheric conditions and influences. The cellars of the old top fermentation breweries, of underground construction and without any refrigeration except that supplied by natural drains, proved insufficient to meet the increased demand for storage when lager beer began its triumphant march through Germany, and the same experience was had, only somewhat later, in the United States, as a result of increased lager beer brewing.

The march of improvement, which changed its course from ale to lager beer, says one of the pioneer brewers who assisted us with valuable information, also directed the attention of brewers to the construction and arrangement of their storage-houses, so as to protect their beer from the heat of summer and avoid the loss they had to suffer under previous conditions. They stored their beer, during the winter, in



UNDERGROUND CELLARAGE.

vated in the ground and arched over. The caves were divided into sections, the divisions were made air-tight as near as possible to prevent the cold air, bottled up in the several sections during the winter, from leaking out of one section while the other section was being



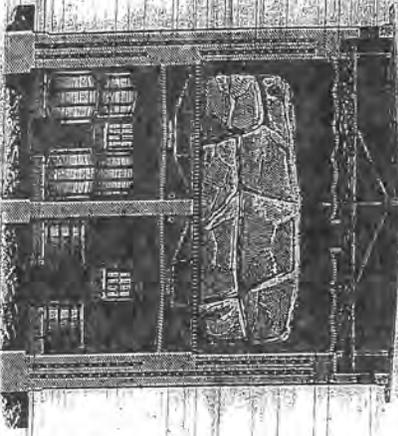
UNDERGROUND STORAGE CELLAR, WITH ICE CHAMBERS.

emptied. This method at best was unsatisfactory, and various changes were made from time to time in the use of ice, until large ice chambers were built over their fermenting and storage rooms, which required enormously strong buildings to support the ice, in addition to the weight of the fermenting tubs and storage vats, with their contents.

Some idea may be formed of the strength required when it is stated that some of the ice chambers were twenty feet deep, filled to the top, representing a weight to be carried, of ice alone, of eleven hundred and fifty pounds per square foot.

#### OVERGROUND STORAGE CELLARS.

The greater part of the United States is in a favorable position for the providing of the necessary supply



OVERGROUND STORAGE WITH ICE.

of ice during the long winter. For more than a century a flourishing ice trade for the home market, as well as for export, has been carried on in this country, and apparatus for ice cutting, machinery, tools, etc., has been improved to perfection. The improvements in the

requirements of ice harvesting since the middle of the last century, especially as regards the ice-houses of breweries and ice-tanks of fermenting rooms.

It was soon discovered, however, that the storing of great masses of ice alone would not answer the purpose, but that a rational utilization of refrigerating capacity, isolation, ventilation, dryness of the air, etc., are factors of great importance. This gradually led to the overground storage and fermenting cellars, and the massing of the ice above the room which it was intended to refrigerate instead of in the center, on the sides. Thus we find cellar constructions erected forty years ago meeting all requirements of natural refrigeration, though they could not be compared with the constructions for artificial refrigeration of later years. The storage and fermenting cellars constructed on floors lying above each other receive their refrigeration by means of air shafts sunk in the isolated wall, from the ice stored under the roof, the cold air sinking to the bottom and the warm air rising to be cooled off. Due regard is given to the cellar ventilation, an important factor for fermenting cellars, requiring dry and pure air.

#### VINTOR'S ICE-HOUSE.

Various constructions have been given, the best of actual practice, among others the refrigerating system adopted by Mr. Voigt (illustrated on page 122) using a mixture of ice and salt. These innovations proved a success up to a certain point, when nature's law could not be obtained, or only in insignificant quantities, where the transportation proved too expensive, and the brewer finally arrived at the conclusion that an ice machine was his only protection and would render him perfectly independent of all these disadvantages, and the losses to which he was exposed as a result.

#### ARTIFICIAL COOLING OF CELLARS.

During the period from the first introduction of lager beer brewing into the United States to the year 1870, and still more so in the succeeding years, the construction of ice machines made such vast progress that the experimental stage gradually became a thing of the past, and the brewer required no more experiments full of risk, and liable to endanger his cellars with their entire contents.

#### THE FERMENTING CELLAR.

The fermenting cellar of to-day, with its system of refrigeration by pipes running along the walls, kept at a temperature of 2° to 4° R. (36° to 40° F.), can not be compared with the damp, dark, moldy, ill-smelling chamber of former years, with the water dripping from the ceiling, and with wet and decaying wooden floors.

To-day we have the light, overground fermenting rooms, with dry walls, ceiling and floor, where the intimate cleanliness can be enforced, a condition of things which, though desired, could never be brought about to the same extent in former times. The carbonic acid settling on the floor is allowed to escape through small, controllable openings, or it is carried into the fermenting tuns. The atmosphere is clean, and can be easily handled, the ice-swimmers have disappeared, and

from the ceilings. The asphalt and cement floors, with drainage tiles, show no pools of beer or water, these and broom reach into every corner and after the work of cleaning has been performed, the fermenting cellar



REFRIGERATED FERMENTING CELLAR, ASTOR BREWERY, ELKHART, INDIANA.

is a room where to-day the admiring visitor can examine into the progress of modern improvements, breathing in a pure atmosphere, and walking with dry feet.

#### THE "BEH" CELLAR.

The *beh* cellar, which is refrigerated after the same system as the fermenting cellar, being kept, however, at a temperature of 6° to 12° R. (32° to 34° F.), with its racks, impresses the visitor still more by its clean and dry condition, neither the heat generated by the continued fermentation nor the uninterrupted work of the fermenting cellar being apparent here. One receives the impression of *ruh* (rest) indeed, while in the rows of high vats, containing in some breweries up to fifteen hundred and two thousand barrels, the first period of after-fermentation slowly takes place, interrupted by nothing but the sampling by the brewmaster, watching the maturing of the wort with experienced eye.

#### THE CHIP-CASK CELLAR.

Upon the lower floor of the modern brewery is situated the chip cellar, with its chip casks, principally of oval shape, and kept at a temperature of from 0° to 12° R. Here the floor is insulated, in order to keep out

the ground heat and to be perfectly independent of the temperature of the earth, which is subject to considerable variations, according to the season of the year. The refrigerating system, ventilation, ceiling and floor are similar to those of the *ruh* cellars.

The construction of underground cellars has almost ceased, for the reason mentioned, that their temperature is influenced by the heat of the ground during the winter, and also because of difficulty or almost impossible ventilation.

#### INSULATION.

The improvement of insulating methods has kept pace with the improvement in the construction of plants artificially refrigerated. In place of wood and saw-dust, we now find brick, hollow tiles, tiled air spaces, or spaces filled with pitch or mineral wool, and many other materials, for protection against both moisture and heat. We have frequent construction of brick, stone and iron, instead of the former buildings, prepared against the danger of fire. Even the supports for the casks and tubs are frequently of iron, and an inspection of the construction of a modern vacuum fermentation plant is indeed calculated to reveal to our mind the fact that we are on the verge of steel.

#### THE CELLAR, BEER-KING, ROOM, ETC.

Although not directly belonging to the fermenting rooms, but as a part of the modern cellar, the racking room, or filling cellar, must be mentioned. It is refrigerated in the same manner as the rooms before referred to and requires the same temperature as the chip cellar. It is usually situated somewhat higher than the latter, frequently in connection with the shipping room, where the filled packages are kept in readiness for shipping.

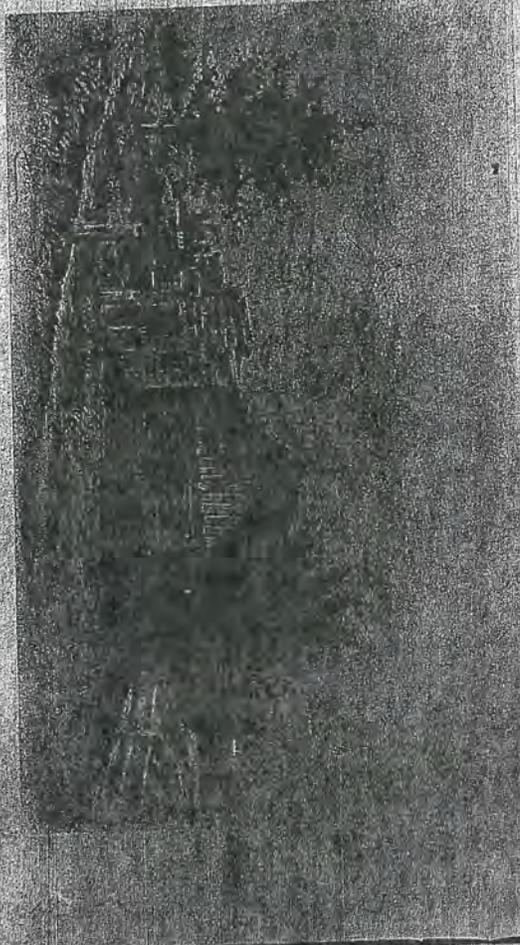
Directly connected with the racking room is the wash-house, with its apparatus and machinery, all of quite modern construction for soaking, scrubbing and rinsing the packages. The storage room for kegs, usually below or alongside of the wash-house, and the rooms for washing the chips and filter substance, with their apparatus, must also be mentioned.

Lastly, in the neighborhood of the racking room, or in the wash-house, the visitor to the brewery finds the place where he can refresh himself with a drink of the product the manufacture of which has now been followed from beginning to end, a place found in every American brewery, and called "*The Silverthorn*."

the sale of their ales. Ebenezer Beadleston, a relative, who had been engaged at Troy, in various business occupations for many years, was selected for their agent, and in 1837 located in the metropolis for the purpose of extending the business in that locality.

In 1840 Mr. Beadleston was received into the firm, which then became known as Nash, Beadleston & Company. Five years later they purchased the old State Prison property in New York city, bounded by Washington, West, Charles and West Tenth streets. The prison had been first occupied in November, 1797, but upon the completion of the new institution at Sing Sing, in 1838, the convicts there were removed to the more modern establishment. The site of the village of Greenwich and after it was abandoned for penal purposes was purchased by P. Donahard, who at one

practical and technical part of the business, during that year (1866). Ebenezer Beadleston retired from active participation in the business in 1865, a reorganization taking place with the following gentlemen as members of the firm of Beadleston, Price & Woertz: Ebenezer Beadleston, W. W. Price, Alfred N. Beadleston, and J. G. W. Woertz. The firm continued thus until 1871, when Ebenezer Beadleston retired permanently in favor of his son, the late William H. Beadleston, who had become connected with the firm in 1870. Mr. Price died in 1876, leaving his share in the business to his son, Walter J. Price. In 1872 the latter retired and the firm of Beadleston & Woertz was organized as De Forest Fox being the new member of the business. As now arranged, the financial part of the business was managed by William H. Beadleston, the gen-



THE OLD SALMON BREWERY, MADISON, INDIANA, 1881.

time contemplated transforming it into a hospital. Finally, as stated, it was purchased by the firm of Nash, Beadleston & Company, and opened for business as a branch of the Troy brewery, in 1846.

The premises contained seventeen city lots, fronting on West Tenth street and running through the blocks to Charles and Washington streets. They contained a number of substantial buildings, which were fitted up for brewing and malting purposes; the plant going into operation as the Empire Brewery.

Until 1866 the houses were operated together as the New York establishment as a branch—but in that year the business was separated, the New York firm being known as Beadleston & Nash. In 1860 Mr. Nash retired, being succeeded by W. W. Price, who had for a decade previously been an employe of the concern. E. G. W. Woertz took charge of the

eral affairs by Alfred N. Beadleston, the practical expert (brewing and buying of supplies) by Mr. Woertz, and the outside interests of the firm and chain agencies by Mr. Fox. In 1889 an incorporation was effected with William H. Beadleston as president. The latter died October 24, 1895.

The present members of the incorporated firm of Beadleston & Woertz, brewers of ale, porter and lager beer, are Alfred N. Beadleston and E. G. W. Woertz. The old State Prison, whose buildings were occupied as a brewing and malting plant, was constructed of stone and surrounded by a high wall. The wall was torn down, when the property was purchased by Nash, Beadleston & Company, who used the cells for malting rooms and built three stories upon the massive foundation. The main building remained intact until 1879, when it was torn down to make way for a more

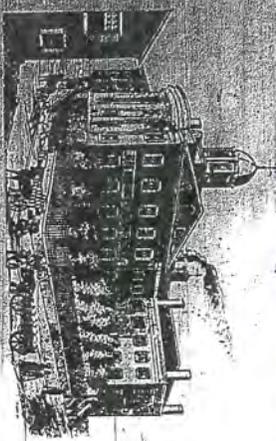
modern plant, the last vestige of the so-called Greenwath Prison disappearing in 1881.

In 1872 the firm erected a handsome malt-house on that part of their property fronting on Charles street.



NEW YORK STATE PRISON, NEW YORK CITY, 1869. STREET OP BEADLESTON & WOERTZ BREWERY.

the remainder of the State Prison being used for brewing purposes, until 1879, when, as stated, the demolition of the old structure commenced. In January, 1881, their new ale and porter brewery was completed, and in the same year they demolished the remainder of the prison. This was done in order that a large ice-house might be erected and the brewing of lager beer commenced. As then completed, the plant covered ten city lots, the main building being a red brick structure, with granite facings, extending 250 feet on West Tenth street to a height of seven stories. The ice-house, on Washington street, was



BEADLESTON & WOERTZ EMPIRE BREWERY, NEW YORK CITY, 1866.

60 by 120 feet in dimensions and built on the Pfund system. The malt-house, on Charles street, same dimensions was at the rear of the brewery.

THE BOSTON BEER COMPANY, SOUTH BOSTON, MASSACHUSETTS.

The incorporation of the Boston Beer Company in 1828 was one result of the agitation which for many years had been progressing at the Hibb, in favor of the substitution of malt liquors for distilled spirits as a popular drink.

According to the records of the company, which are still jealously preserved, by June 20, 1827 the following had subscribed for the establishment of a brewery at South Boston: P. J. Jackson, James Jackson, Ephraim Cabot, Charles Jackson, Edward Clarke, Rice & Thaxter, William Worthington, Elijah Loring, N. Russell & Company, George Blake, James Perkins, Eben Francis, Thomas Lee, Nathaniel Goddard and

Israel Thornthill. The first meeting of the subscribers was held at the hall of the Massachusetts Bank, Boston, on July 24, 1827, Elijah Loring being chosen as moderator and Gamaliel Bradford as secretary.

The incorporating act, approved February 1, 1828, was as follows:

COMMONWEALTH OF MASSACHUSETTS.—In the year of our Lord one thousand eight hundred and twenty-eight.

An Act to Incorporate The Boston Beer Company. Sect. 1st. Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, that Gamaliel Bradford, Nathan Rice, Benjamin Thaxter and Elijah Loring, together with such other persons as are, or may become, associates with them, their successors or assigns, be, and they hereby are made a Corporation by the name of the Boston Beer Company, for the purpose of manufacturing malt liquors in all their varieties in the City of Boston and for that purpose shall have all the powers and privileges and be subject to all the duties and requirements contained in an Act passed the third day of March, in the year of our Lord one thousand eight hundred and nine, entitled, "An Act defining the general powers and duties of Manufacturing Corporations," and the several Acts in addition thereto.

Sect. 2nd. Be it further enacted, That the said Corporation may hold and possess such real estate, not exceeding in value the sum of fifty thousand dollars, and such personal estate not exceeding one hundred thousand dollars, as may be found necessary and convenient for carrying on the manufacture of malt liquors in the City of Boston.

In House of Representatives, Jan'y 29th, 1828. Passed to be enacted. Wm C. Jarvis, Spk. In Senate, Jan'y 29th, 1828. Passed to be enacted. Jno. Mills, Pres. Levi Lincoln, Secy.

Feb. 1st, 1828: Approved Edward D. Barnes, A true copy: Attest Secretary of the Commonwealth.

The first meeting of the corporation was held at the brewery in South Boston, April 12, 1828, Dr. James Jackson being chosen as chairman and Gamaliel Bradford as clerk. Nathan Rice was elected treasurer and the following were named as directors: Elijah Loring, Nathan Rice, Benjamin Thaxter and Gamaliel Bradford. In September, 1851, the business of the original corporation was practically suspended.

The Boston Beer Company was reorganized on February 17, 1865, at a meeting held at Young's Hotel, Boston. The new proprietors were Michael Doherty (president), D. H. Tully (treasurer) and clerk), James Collins, P. F. Logan, John Miller, Robert Moore, Garret Nagle, Edward A. Kinney and James McIntosh. Col. L. J. Logan is at the head of the present company, and John J. Collins, treasurer.

D. G. YUENGLING & SON, PITTSVILLE, PENNSYLVANIA.

This is one of the oldest brewing establishments in the country in continuous existence. The founder, David G. Yuengling, was born in Germany in 1805 and came to America in 1828. After residing in Reading and Lancaster, Pennsylvania, for one year, he removed to Pottsville and immediately engaged in the brewing of malt liquors, being among the first to make lager beer. He continued in business until the time of his death, which occurred in 1876. Three years previously his son, the late Frederick G. Yuengling had been admitted to partnership and the firm name was changed to D. G. Yuengling & Son. F. G. Yuengling

## ONE HUNDRED YEARS OF BREWING.

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conducted the business alone until 1895, when William G., a younger brother, was admitted to the firm. The latter died in August, 1898, and the former in January, 1900. Although the business is conducted by Frank D. Yuenghing, son of the late Frederick G., the firm name remains D. G. Yuenghing & Son.

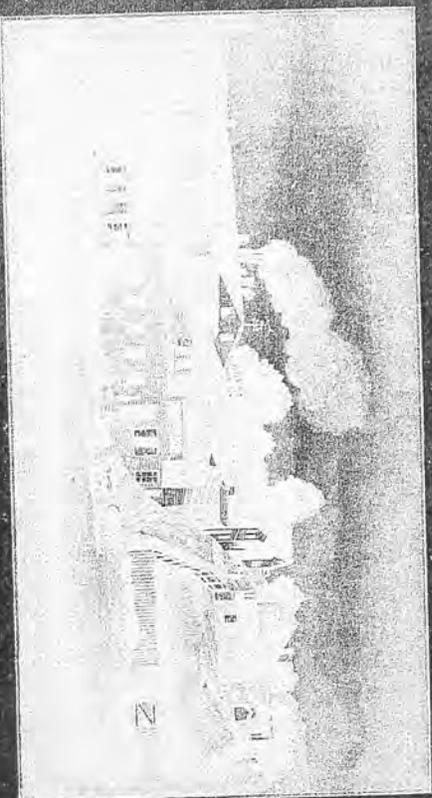
In the early years of the brewery it was necessary to transport the malt from Philadelphia by team, a distance of ninety-six miles, where it was purchased from John Gault, one of the pioneer-maltsters of the East. During the first year about six hundred barrels of ale and common beer were manufactured. It should here be mentioned that such well-known brewers as the following received their early education in the art of brewing at the Pottsville plant of David G. Yuenghing: John F. Betz, Philadelphia; George C. and Henry Clausen, Jr. (sons of Henry Clausen), and William Woertz, of Beadleston & Woertz, New York.

THE CONSOLIDATED BREWING COMPANY, ERIE, PENNSYLVANIA

This is the oldest plant in Erie, Pennsylvania, and is one of the two breweries in that city not controlled by the Erie Brewing Company. It was founded in 1830 by a Mr. Dietz, who was succeeded by Charles Koehler, the father of Jackson, Frederick and Louis Koehler, who are still in that line in Erie. A King and M. Wittman followed—the latter in 1878—when the property was purchased by Downer & Howard. E. J. Howard became sole proprietor in 1894, and in 1899 the Consumers Brewing Company was formed, with Mr. Howard as president. In September of the latter year the Pfander Company installed an "F.F." plant.

THE FIRST BUFFALO (N. Y.) BREWERY.

In the year 1830 Jacob Roos founded a brewery at Buffalo in what was then called Sandy Town. It



YUENGHING BREWERY, POTTSVILLE, PENNSYLVANIA, 1844.

city, as well as George W. Robinson, of the Albany (New York) Brewing Company.

Since that early period, owing to expanding trade, the premises have been practically rebuilt several times, and now occupy three entire blocks. When the late Frederick G. Yuenghing was admitted to partnership, in 1873, the output amounted to 23,000 barrels of ale, porter and lager beer; 65,000 were manufactured in 1901. Bartling works were added to the plant in 1895, which includes, besides this department, its own private reservoir, an elevator with a storage capacity of 60,000 bushels, a malt-house in which 50,000 bushels of barley are annually malted for its own use, and ice manufacturing and electric light plants with equipments of modern machinery of the highest class.

J. WALKER BREWING COMPANY, CINCINNATI, OHIO.

It is said that the original brewery from which has developed the business of this company was founded in 1828, although there is no definite record as to its establishment, or its successive proprietors.

was beyond the Erie Canal, between what is now Church and York streets. After the year named, Mr. Roos purchased a tract of land on Broadway, now included in the site of the Ingoquois Brewing Company. The brewery remained in the hands of the Roos family until 1887, when the Roos Co-operative Company was formed, and in 1892 the plant was purchased by the Ingoquois Brewing Company. The old buildings were at once replaced by modern structures, the annual capacity of the plant now being 150,000 barrels. The officers in 1901 were E. Bierweg, president, and Robert F. Scheffing, secretary and treasurer.

DAISER'S BREWERY, CANTON, OHIO.

An old plant in Canton, Ohio, which was built about 1830 by T. C. Nighman, was purchased in 1856 by Kasper Balser, who commenced the brewing of lager beer at once, and continued same until his death in the year 1876. His widow, Mrs. Louisa Balser, continued the business until 1890, when the brewery was totally destroyed by fire, and was never rebuilt.



Photographed by A. Menzies & Co., 228 Arch Street, Philadelphia

GEORGE MANGER, PHILADELPHIA, PENNSYLVANIA  
 One of the first Lager Beer Brewers of America

CHAPTER V.

Progress of the General Industry and Rise of Lager Beer Brewing, 1840 to 1850.



THE FIRST LAGER BEER BREWERS.  
 REVIOUS to 1840 there were no breweries in America manufacturing lager or bottom fermentation beer; that is, there are no authentic data or documents obtainable that would prove that such was the case. The following, furnished by Mr. Charles C. Wolf, of the old firm of Engel & Wolf, the forefathers of the Bergher & Engel Brewing Company, presents the claims of the first considerable brewery to manufacture lager beer in the United States, as well as of several pioneer brewers with whom the had been associated.

The first lager beer brewed in America was that of John Wagner in 1840, who had a small brewery in the rear of his house on St. John street, near Poplar, Philadelphia. It was a very primitive plant; indeed, the kettle being hung on a crane over an open hearth, and it had a capacity—remember, of not over eight barrels. The beer was stored in the cellar under the little rear structure which served as the brewery. Wagner brought the first lager beer yeast to this country from a brewery in Bavaria in which he had been brewmaster. At this time (and since 1837) I was engaged in the business of sugar refining at the corner of Crown and Vine streets. George Manger was employed by me, but being a practical brewer he was given some of Wagner's yeast and started a brewery on a somewhat larger scale in New street near Second, in a building long since removed to make way for more modern structures.

Charles Engel came to America in 1840 and also found employment in my sugar house. He was a practical brewer who had occupied important positions in Germany and France and was one of the companions of my early youth. The first beer I brewed, with Mr. Engel's assistance, was in 1841; this beer was made in my sugar pan and stored in sugar hogsheads. This beer was made for private consumption by my friends, employers and Germans who came to our place.

In this year (1844) Mr. Engel went to Harrisburg and started a brewery at Lewisburg, where he brewed ale and *trunk beer*. The brewery was destroyed by fire the same year. The small kettle used by him is still preserved and has accompanied a brewery of more than once on special parade occasions. During 1844 my sugar house was partly destroyed by fire dur-

ing the Catholic riots. I closed out the sugar refinery and, with Mr. Engel, commenced a lager beer business at 324 and 354 Dillwyn street, in conjunction with a distillery, the firm name being Engel & Wolf.

This, too, was for many years the resort of the Germans of Philadelphia, who more than once drank the brewer dry; and often we were compelled to display the placard that beer would again be dispensed after a certain date. At this locality the first vault built for the storage of lager beer were completed in 1845. With the steady influx of Germans the business grew and additional cellars were rented under the buildings of the Mitchell griststone works, at York avenue and Wood street, our annual sales at this time approximating 3,500 barrels. In 1849 the property on the Schuylkill River, known as Fountain Green, was procured, where extensive vaults were excavated having a total length of over two hundred feet.

The magnificent springs of cold water indicated the selection of the site, ice also being procured from the river within one hundred feet of the property. For some years the brewing was done on Dillwyn street and the wort taken to the new vaults by ox teams, but in the ensuing years a new brew-house, malt-storage house, boiler-house, office and stables



ENGEL & WOLF'S LAGER BEER BREWERY FOUNTAIN GREEN PHILADELPHIA, IN THE FIFTIES.

were erected, the plant being most complete for those early days.

Here the making of lager beer was actively continued until 1870, when the property was acquired under "eminent domain law" by the Eastmount Park Association of Philadelphia, and in 1890 I retired from the brewing business, while Mr. Engel joined Gustave Bergher in the firm of Bergher & Engel, BERGNER & ENGEL BREWING COMPANY, PHILADELPHIA. Expanding the narrative of Mr. Wolf into a continuous sketch of the Bergher & Engel Brewing

Company, it is found, first, that upon the death of Charles W. Berger, in 1851, he was succeeded by Gustavus Berger. He, in 1857, erected a brewery at



Charles W. Berger started a brewery in 1850. It was continued after his death in 1851 by Gustavus Berger.

#### MORE OF MANGER AND WAGNER.

For further details regarding the career of George Manger, the early brewer of lager beer in America, the reader is referred to the sketch of Peter Schlemm on page 248 of this chapter, with whom he associated himself in 1850. He was also in partnership with Charles Prota, Louis Bergdoll's brother-in-law.

Amropos of the first batch of yeast brought by John Wagner to this country for the purpose of brewing the first lager beer, it is related by Jacob Conrad that so valuable was it that Wagner's brother-in-law was tempted beyond his strength and state, or at least, took without leave, about a pint of it. For this he was arrested and convicted and sentenced to a term of two years in the State penitentiary.

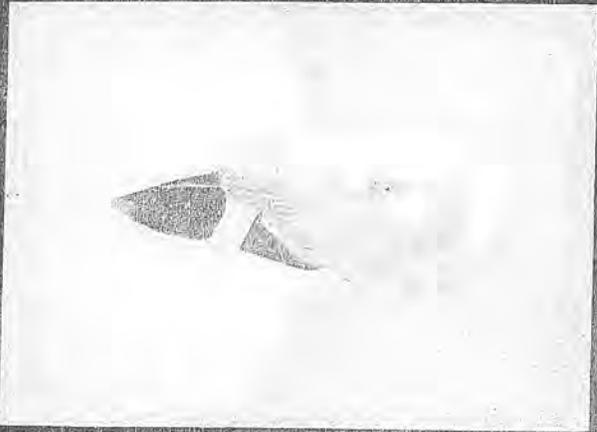
#### BUFFALO'S (N. Y.) SECOND BREWERY.

The following, taken from the souvenir issued by the Buffalo Brewers Association in June, 1897, describes the second brewery, venture in that city.

In 1860 Messrs. J. F. Schanzlin and Hoffman established a brewery at the corner of Main and St. Paul streets—a stone building and brew-house were located here. Part of the stone building was used as a restaurant; these buildings are to-day the same as in 1860, and are now used as tenements. In 1842 the firm was dissolved. Mr. Hoffman continuing the business, and Mr. Schanzlin purchased a number of acres of ground on the corner of Main street, Deagan yeaple and Scjagnum creeks, now known as the Buffalo Athletic field. He erected there a large brew-house and a fine dwelling and

CHARLES ENGEL, PHILADELPHIA.

Thirty-second and Thompson streets, to which additions were made yearly. In 1870 the firm of Engel & Wolf was dissolved—the business being continued by Charles Engel. In November of that year Messrs. Berger and Engel, united their interests, conducting the plant at Thirty-second and Thompson streets under the firm name of Berger & Engel. On June 1, 1879, an incorporation was effected as the Berger & Engel Brewing Company, with Gustavus Berger, president; Charles Engel, director-general, and Theo. C. Engel, secretary and treasurer. Gustavus Berger died May 6, 1883, and Charles Engel May 29, 1900. C. Wm. Berger is now president (1902); Aug. W. Wockhen, secretary and treasurer, and Gustavus A. Mueller, general manager. The company operates what are known as Brewery No. 1 (Thompson street plant) and No. 3 (Corner Thirty-third street and Pennsylvania avenue), Portraits of Gustavus Berger and C. W. Berger will be found in the History of the United States Breweries Association, Chapter IX of this part of this work. They both having been president of said organization.

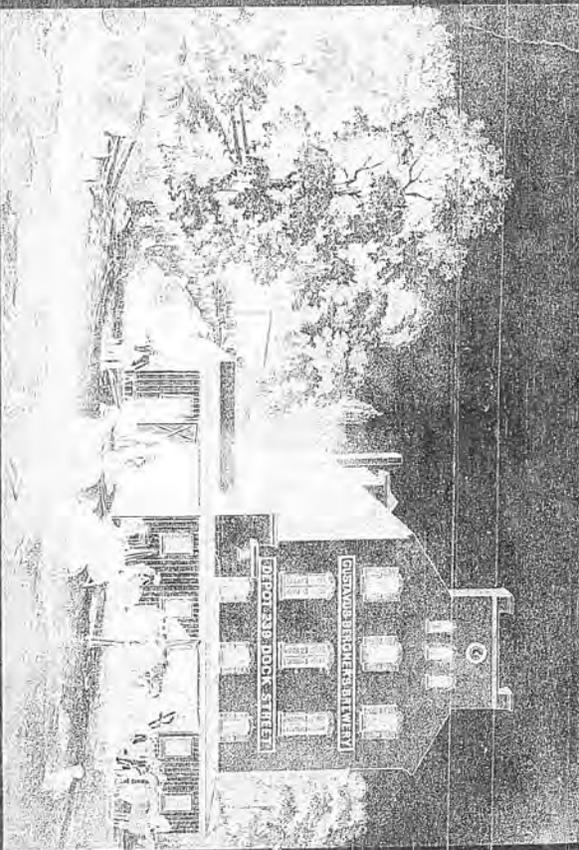


CHARLES C. WOLF, PHILADELPHIA.

restaurant, which was patronized by many of the most prominent citizens of Buffalo in those days. The brew-house was torn down, but the dwelling-house, restaurant and barn remain.

THE GILLIG BREWERY, NEW YORK CITY. — George Gillig, a Bavarian, was a journeyman brewer of Germany until 1836, when he entered the

Doelger, and took possession of a newly erected one between Forty-fifth and Forty-sixth streets and First and Second avenues. This he conducted until his death.

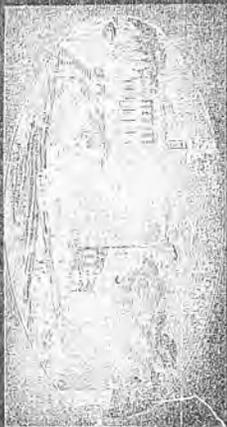


GUSTAVUS BERGER'S BREWERY, PHILADELPHIA, 1857.

army of his native kingdom, and after serving therein for three years, came to New York city. In 1840 he established himself as a brewer on Fifth Avenue, between Fifth and Fifty-first streets, occupying the present site of the Vanderbilt mansion. Subsequently he built and operated a brewery at Thirtieth street and Lexington Avenue, and still later (1843) one on Third street between Avenues A and B. During 1844 and in the last-mentioned plant he brewed lager beer, claiming that he was the first to thus engage in the city.

In 1862 His estate continued the business for some years, and then leased it to the firm of Gillig & Oppermann, composed of Mr. Gillig's son, John George, and Frederick Oppermann, Jr. In 1873 they purchased the brewery, which finally came into the possession of Mr. Oppermann. In 1892, after it had passed into other hands, it was torn down to make way for the brewery of the Thomas Conville Brewing Company. At that time it was pronounced the oldest and the most primitive lager beer plant in the city.

MAGNUS BECK BREWING COMPANY, BUFFALO, NEW YORK.



GEORGE GILLIG'S BREWERY, NEW YORK CITY, 1837.

New York, and that the product of all the breweries prior to that year was "small beer."

Mr. Gillig was at that time also the owner of breweries at Staten Island and Williamsburg. He sold the former to a Mr. Bischoff and the latter to a Mr. Hann. In 1853 he sold the Third street brewery to Joseph

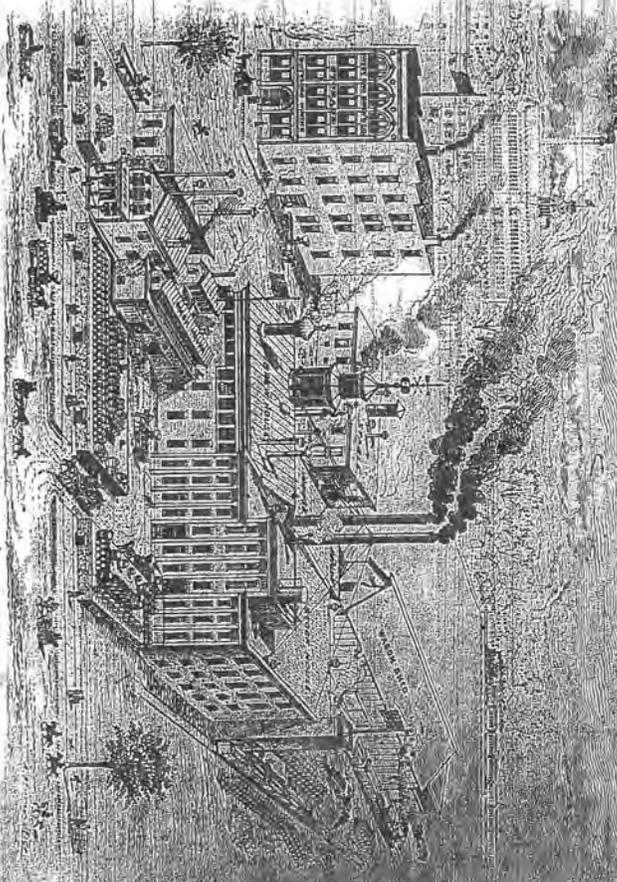
About 1830 Joseph Friedrich erected a small brew-house, dwelling and restaurant in Buffalo, situated on Oak street, near "Tipper", where St. Marcus Church now stands. As he persisted in selling his beer at six pence per quart, despite the fact that the ruling price was five cents, he was called a "sixpencer"—and flourished, notwithstanding. In 1855 the plant passed into the hands of Beck & Baumgartner, the former becoming the sole proprietor five years thereafter.

Magnus Beck was a native of Württemberg, Germany, serving his apprenticeship as a brewer in that kingdom, and coming direct to Buffalo in 1850. Subsequently he held responsible positions at Heiser and Kalenbach's breweries, in that city, and in 1855, as stated, he formed the partnership of Beck & Baumgartner, which continued for five years.

ONE HUNDRED YEARS OF BREWING.

eries and malt-houses in the United States. In May, 1887, the founder of the business died at his home in Syracuse, where he had resided for half a century. Not only respected for his business ability, but admired for his benevolence and liberality. For some time previous to his death the active management of the brewery devolved upon his son, John Greenway, Jr. In 1902 the plant was sold to a syndicate of Cleveland capitalists, who, it is reported, will remodel the brewery and add machinery for brewing lager beer.

*West End Brewing Company, Utica.*—Charles Bierbauer, a Bavarian by birth, served a thorough apprenticeship at brewing in Munich, Vienna, and other European cities. In 1849 he came to the United



PREMISES OF THE WEST END BREWING COMPANY, UTICA, NEW YORK.

States, locating at Lyons, Wayne county, New York, and in the following year settled at Utica, where, in 1853, he built a brewery, which he conducted for about three years. In 1856 he erected the plant which he operated until his death, in August, 1885. As a brewer Mr. Bierbauer clung steadfastly to the custom of manufacturing from hops and malt alone, and for many years supplied the bulk of the lager beer consumed in Utica. He also conducted a popular hotel and resort, and was actively interested in musical, literary and educational enterprises.

In 1885, the year of Mr. Bierbauer's death, the business was merged into the Columbia Brewing Company, and two years later, into the West End Brewing Company. This company added many extensive

improvements including buildings equipped with the latest modern machinery having a capacity of eighty to one hundred thousand barrels per annum. For the original manufacture of lager beer has been added that of ale and porter, the output having increased from five thousand barrels, in 1887, to sixty-five thousand barrels, in 1901. H. Roemer is president of the company, S. D. Powers, vice-president, and J. X. Mahan superintendent and treasurer. The directors are as follows: H. Roemer, S. D. Powers, J. X. Mahan, J. E. Dilling and Mrs. H. Bierbauer (deceased).

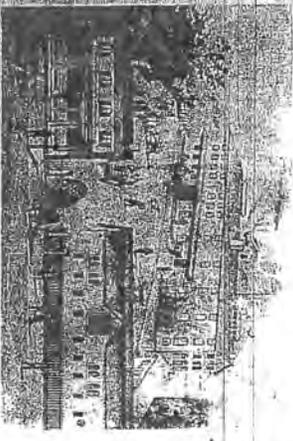
*Eagle Brewery, West York (1901).*—Mr. John H. Betz, now of Philadelphia, started a brewing business in West York, forty-fourth street, in 1883, and has been

since purchased in 1886, when it came into possession of L. H. Roemer & Company, Mr. Betz having, in the meantime (1867) started his present business in Philadelphia. L. H. Roemer & Company were succeeded in 1889 by the Roemer Brewing Company and in 1890 by the Eagle Brewing Company. It was closed in 1892.

*Rubens & Horrmann Brewing Company, Stapleton, Staten Island.*—In the year 1834 brewery vaults were built at Stapleton (now West New Brighton), Staten Island, and were used for storage by Bernheimer & Schmidt, of Four Corners, until 1865. Kring & Bach then commenced to brew beer upon their site, the vaults and the brewery embracing a portion of the site of the plant now conducted by the Rubens &

ONE HUNDRED YEARS OF BREWING.

Horrmann Brewing Company. The firm of Rubens & Horrmann was formed in 1870, both Joseph Rubens and August Horrmann being now dead. The latter, at the time of his death, February 9, 1900, was



RUBENS & HORRMANN BREWERY, STAPLETON, STATEN ISLAND, NEW YORK.

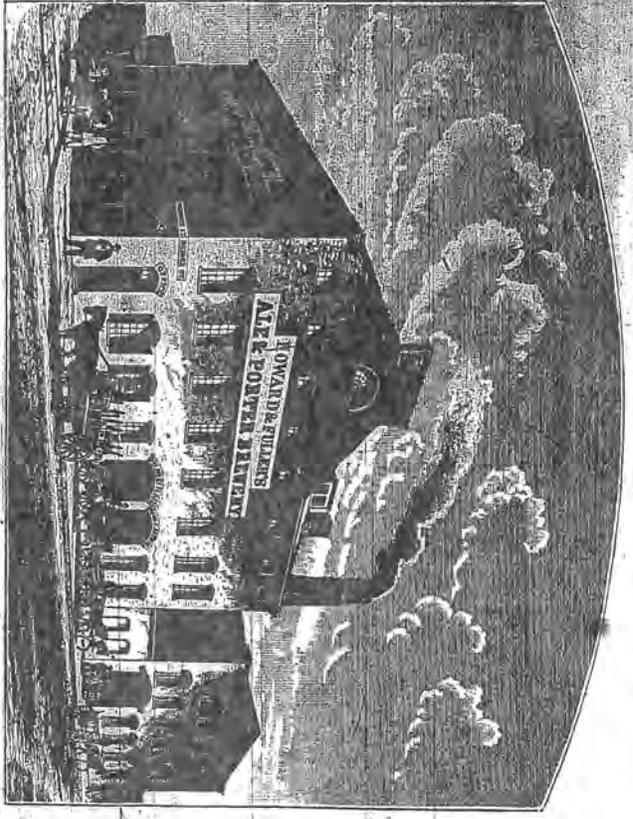
president of the incorporated company. William Horrmann is now (1902) president, Charles Horrmann, vice president, and William K. Leitch, secretary.

*J. Chr. G. Hupfel Brewing Company, New York City.*—In 1854 John Roemmel, Anton Hupfel, and

avenues. In 1856 Andrew Leitch, father of Andrew E. Leitch, of Chicago, Charles K. Leitch, of Newburgh, New York, and John M. Leitch, of Cleveland, Ohio, purchased Dr. Assenheimer's interest, and two years later (1858) Anton Hupfel bought out Messrs. Koemmel and Leitch. Mr. Hupfel, in 1862, also purchased of Xavier Grant the plant located at One Hundred and Sixty-first street and Third avenue. He operated both breweries under the name of Anton Hupfel until 1873, when he disposed of his entire interest to his two sons, J. Chr. G. Hupfel and Adolph G. Hupfel. The latter continued the business as A. Hupfel's Sons until 1883, when they dissolved partnership. J. Chr. G. Hupfel retaining possession of the Thirty-eighth street plant and Adolph G. Hupfel that of the One Hundred and Sixty-first street brewery. The latter establishment is conducted under the firm name of A. Hupfel's Son.

The Thirty-eighth street plant was operated by J. Chr. G. Hupfel until 1887, when he incorporated the business, taking his three sons into partnership. The organization thus became the J. Chr. G. Hupfel Brewing Company, of which the father is president, Anton C. G. Hupfel, vice-president, Adolph G. Hupfel, secretary, and Chr. G. Hupfel, the remaining member of the firm.

Lager beer has been the sole product of this establishment from the beginning.



BREWERY PREMISES OF MESSRS HOWARD & FULLER, BROOKLYN, NEW YORK.

Dr. Assenheimer, under the firm name of John Roemer & Company, founded a brewery in New York city, in Thirty-eighth street, between Second and Third

*Howard & Fuller Brewing Company, Brooklyn.*—This house manufactures fine ales and porters only and represents the oldest business in those lines.

ONE HUNDRED YEARS OF BREWING.

on Long Island. The plant was established in 1854, by William Howard (who had been of the firm of Howard & Ryckman, Albany, New York, brewers) and Julius A. Fuller (who was of Smith & Fuller, Brooklyn, New York, brewers). Mr. Fuller founded a modest brew-house for the manufacture of ale, in Hudson avenue, as early as 1835, using at the time horse-fired-steam-power. The company, which is continuing the business established by Messrs. Howard & Fuller in 1854, was incorporated thirty-four years hereafter under its present name.

**Federal Brewing Company, Brooklyn.**—The Long Island Brewery, Brooklyn, was established in 1854 by Samuel Duell as an ale brewery, and was continued in operation by him until 1872, when Arthur A. Brown came into possession. The business was continued under his management as an ale brewery until 1877, when it was incorporated as a stock company, Arthur A. Brown being elected president. The business was continued as an ale brewery until 1887, when extensive additions were made to the plant, and the brewing of lager beer commenced. At this time also occurred the first installation of the Pfaudler-enameled steel tanks, the plant now consisting of twenty-seven tanks. Since 1887, the manufacture of lager beer has been carried on, in connection with the brewing of ale. A large bottling department was established shortly after lager beer was added to the original product of the brewery, the enterprise proving very successful.

The business has been under control of the Brown family since 1872, when Arthur A. Brown acquired possession of the property. He retained the position of president after the incorporation of the business in 1877, until his death in 1879, when his son, J. W. Brown, succeeded to the presidency. In July, 1901, the Federal Brewing Company was organized, and the following year took possession of the plant of the Long Island Brewery.

**Dallegruen Brewing Company, Olean.**—At Olean, Cattaraugus county, located the brewery founded by Charles Dallegruen, in 1854, and which then had a capacity of two hundred barrels per annum, now its annual capacity is twelve thousand barrels of lager beer.

**The Henry Elias Brewing Company, New York City.**—Henry Elias, a cooper of Cassel, Germany, came to the United States in 1850, and after working for others a number of years, established (about 1853) a business of his own in West Thirty-ninth street. In 1854 he started a small lager beer brewery, near Fifth street and Broadway, which has long since gone out of existence. When the lease of the premises expired, Mr. Elias formed a partnership with Mr. Schmitt and founded the original Central Park Brewery on Fifty-ninth street, between Third and Lexington avenues. The plant was subsequently removed to Fifty-seventh street and East river, and is now known as Schmitt & Schwannfliegel.

Mr. Elias sold his interest in the Central Park Brewery to Mr. Kohne, the firm becoming Schmitt & Kohne, about 1872. Afterward he bought the land

and built the brewery now owned by the George King Brewing Company on East Thirty-second street. George Krefinger and Christian Hegenmeister came into possession of the property in the early seventies, and Mr. Elias went to his old home in Germany for a few years. There he engaged in the exportation of hops to America.

In 1870 or thereabout returned to New York city and organized the Henry Elias Brewing Company, of which he remained sole proprietor until 1886, when the business was incorporated and the founder retired from active participation in it. Mr. Elias died in February, 1888, at Cassel, Germany.

The brewery has made lager beer from the first, mechanical refrigeration being introduced to the plant as early as 1882. The present annual capacity of the establishment is one hundred and fifty thousand casks. The officers are as follows: Fred W. Kroehle, president; William J. Elias, vice-president; Charles Kroehle, treasurer, and Joseph J. Lippe, secretary.

**H. Clausen & Son Brewing Company, New York City.**—This establishment is controlled by the New York Breweries Company, and the plant is in West Forty-seventh street. It was founded by Henry Clausen, Sr., in 1855. Soon afterward, when but sixteen years of age, his son, Henry Clausen, Jr., entered the brewery to master the business. His mother, an eloquent and broad-minded member of the Fraternity, being one of the founders of the United States Brewers Association, at one time its president, and in some respects its most prominent figure. In 1866 he became the junior member of the firm of H. Clausen & Son, and later the father retired from business. Henry Clausen, Jr., then associated George C. and Herman

in business with himself, the combination being known as the Henry Clausen & Son Brewing Company, with Henry Clausen, Jr., as president. In 1888 a consolidation was effected with Flanagan, May & Company, under the name of the New York Breweries Company. An English syndicate afterward purchased the business and Mr. Clausen retired prior to his death, which occurred in December, 1893.

During that year the Pfaudler Company installed a plant of fourteen 135-barrel tanks.

**Congress Brewing Company, Brooklyn.**—In 1855 John Schneider founded a brewery in Ewen street, Brooklyn, New York, many of the old-time brewers of that vicinity finding employment in this establishment. Among others may be mentioned Joseph Falbert, Ferdinand Munch, Charles Prese and Otto Finber. Mr. Schneider met with business reverses in 1876 and the plant was purchased by the Williamsburg Brewing Company, Brooklyn, and I. and S. Bernheimer.

In 1894 the firm name of the company was changed to the Congress Brewing Company, the officers of which were (until Mr. Lewisohn's death) as follows: Leonard Lewisohn, president; Max Drey, secretary and treasurer, and James J. Long, managing director. Mr. Lewisohn, president of the company, died in London, England, March 5, 1902. The products of the



EDW. HANITZSCH, 2 Pres.

Wm. J. ELIAS, Vice Pres.

HENRY ELIAS, Founder

FRED W. KROEHLE, Treas.

HENRY LIPPE, Pres.

FOUNDER AND OFFICERS (1901) OF THE HENRY ELIAS BREWING COMPANY, NEW YORK CITY.

*The David G. Yuengling, Jr., Breweries, New York City.*—In 1871 David G. Yuengling, Jr., son of the pioneer brewer of Pottsville, Pennsylvania, established an ale brewery at Fourth avenue and One Hundred and Twenty-eighth street, with W. T. Ryerson as a partner. In 1875 Mr. Yuengling purchased the lager beer plant at Tenth avenue and One Hundred and Twenty-eighth street. He operated both breweries for many years, the former under the name of Yuengling & Company, until about 1884, when it was closed, and the latter under his own name until 1897, when it was sold to the Betz & Sons Brewing Company, the plant being known as the Manhattan Brewery.

*William Ulmer Brewery, Brooklyn.*—In 1871 William Ulmer and Anton Vigelius founded a brewery at Brooklyn, New York, under the firm name of Vigelius & Ulmer. The first brew was placed upon the market in the spring of 1872. In December, 1877, Mr. Ulmer became sole proprietor and conducted the business alone, as the William Ulmer Brewery, until May, 1900. He then retired and was succeeded by his two sons-in-law, John F. Becker and John W. Weber. Mr. Weber is president and Mr. Becker secretary and treasurer. Lager beer only is brewed, mechanical refrigeration being employed.

*George Ringler & Company, New York City.*—In July, 1872, George Ringler founded a brewery in New York city, and in October, 1889, the business was incorporated under State laws as George Ringler & Company. Besides the founder, the members of the firm were John C. Boettner, William Orth and Christian Hachemeister. Since the incorporation the annual business has increased tenfold, and a large modern brew-house has been erected. The present officers of the company are: William G. Ringler, president; George J. Jetter, vice-president; Henry Hachemeister, treasurer, and J. Edward Jetter, secretary and manager.

*Amtmann Brewing Company, Rome.*—Julius Smith founded a lager beer brewery at Rome, New York, about 1873. In 1888 John Amtmann was received into the business, the style of the firm being J. Smith & Company. Mr. Amtmann died in 1896 and the business was continued for about one year under the old firm name. In 1898 the plant was closed, a new brewery having in the meantime been started by the widow and son of Mr. Amtmann, about one block away, under the firm name of P. Amtmann & Company. This was afterward changed to the Amtmann Brewing Company.

*Star Brewery, Buffalo.*—David Haas founded the Star Brewery, Spring and Cherry streets, Buffalo, New York, about the year 1873. It was absorbed by the Clinton Co-operative Brewing Company in 1901, and its operations subsequently discontinued.

*Chicago Star Brewery, Buffalo.*—In 1875 William Wersch commenced brewing lager beer at 1024 West Bennett street, Buffalo, N. Y., the business since being transferred to the Clinton Co-operative Brewing Company, which was organized in 1885 at the corner of

sand barrels per year to about twenty thousand barrels. The firm name was changed to the Clinton Star Brewery in 1902, with the following officers: John L. Schwartz, president; Moses Shire, secretary, and Jacob Dilcher, treasurer.

*Evans & Giehl, Rome.*—Edward Evans and John Giehl, in 1875, founded the ale brewery at Rome, New York, operated by Evans & Giehl.

#### PENNSYLVANIA BREWERIES FOUNDED, 1862-1875.

*Henry Fink's Sons, Harrisburg.*—Henry Fink, the founder of this firm, was a native of Hesse-Cassel, Germany, where he was born September 7, 1835. He was one of three sons, who were thoroughly educated by their parents, Conrad and Helen (Bischof) Fink. In 1854 the family came to the United States, settling at Harrisburg, Pennsylvania. The father, however, died during the following year and the mother in 1867.

With a thorough education, both in literary and business branches, as a guarantee of future success, Henry Fink eagerly accepted employment in the Barnitz Brewery, Harrisburg. After eight years of faithful work and valuable experience there, he leased the establishment named in 1862 and, in partnership with Christian Boyer, founded an independent plant. The business was continued under the firm name of Fink & Boyer until 1875, when the partnership was dissolved and Mr. Fink remained sole proprietor until his death, January 10, 1898.

Mr. Fink was married in 1857 to Christina Katharine Beyer, a native of Württemberg, Germany, seven children being born to them—Frederick J.; Katharine, wife of James Q. Handshaw, of Harrisburg; Bertha Helen; Henry C.; Robert B.; Christina K., wife of Milton Plank; and Henrietta, deceased. At Mr. Fink's death, in 1898, Henry C. and Robert B. Fink formed the firm of Henry Fink's Sons.

The plant, known as the Keystone Brewery, was built in 1881, and manufactures ale, porter and lager beer. The original brewery was quite small, turning out only ale and porter, and its annual sales amounting to about three thousand barrels. The output of the present plant is (1902) about eighteen thousand barrels a year.

*Fred Koehler & Company, Erie.*—This brewery (now F. Koehler & Company, branch of the Erie Brewing Company) was built by Charles Koehler, in 1862, who was succeeded, in 1882, by Fred Koehler & Company (Fred Koehler and A. L. Curtze) and the Erie Brewing Company, April 1, 1899.

*Brookville Brewing Company, Brookville.*—S. C. Christ founded a lager beer brewery at Brookville, Pennsylvania, in 1862, which he still operates as the Brookville Brewing Company. He received Bernard Snyder into partnership in 1890, and two years later, when the plant was destroyed by fire, bought him out and rebuilt the brewery.

*George Keller Brewing Company, Philadelphia.*—In 1862 George Keller founded a small brewery in North Third street, Philadelphia. The location of his plant was changed to Third street, above Mas-

p. 368 Betz & Sons Brewery Co,  
Manhattan Brewery, NY  
Plant, owned by Philadelphia brewers  
of this name, was founded by  
Caspaw Heindl many years ago,  
for a quarter of a century was in  
possession of David G. Yuengling Jr.  
He enlarged & improved the plant  
in August 1897 the present proprietors  
purchased it. The founder of the  
Brewery produced Lager beer only,  
ale, porter, stout & "Manhattan"  
malt extract were subsequently  
added

Chicago & The Rise of Brewery Architecture  
by Susan K. Appel p. 4-15

Chicago History

The Magazine of the Chicago Historical Society  
Spring 1995 v. 24 no. 1

p. 5 Chicago brewery architects - engineers designed  
half of the approx. 2400 projects known to be done  
by Ambrose & Arch.

Before 1860 - Small vernacular buildings

1860 - American form of the German (Rundbogenstil)

"Round-arched style" version of Romanesque Revival

German-style lagers brewing gained in popularity over  
the English manner of ales

different yeast, extended period of resting & maturing,  
lager was lighter than ale.

1840s <sup>lager</sup> began to rise & <sup>nearby</sup> complete by 1870s

p. 7 The Western Brewer; Sept. 15, 1898 p. 1524  
advertisements by brewery architects includes  
Louis Oberlein (formerly Federle & Co) Arch + Eng  
Brewery & Malt House Work a specialty  
15 to 25 Whitehall St., Remble Bldg, Rm 77, NY

p. 9 Edmund Jungenfeld of St Louis was one of 4 architects  
seen as pioneers in this field by later St Louis brewery designers.  
Frederick Widmann. Others were Charles Still, Bklyn;  
Anthony Pfund, NYC & Frederick W. Wolf, Chicago.  
Frederick Wolf 1880s was - grander style of bldg,  
more polychromatic & muscular. New bldg techniques -  
latest development in brewery techniques.

The Breweries of Brooklyn  
by Will Anderson

1976 self published, Croton Falls, NY

1840-1860 1,350,000 Germans emigrated to the US

Brewer's Row - 2 blocks by 7 blocks - 12 square blocks  
had 11 breweries in 1850-1886 - Scholis. Meserole Streets  
from Bussard Place to Lorimer Street

MS Business Directories

4-1-1949 strike by 7 locals against NYC's 14 breweries,  
on strike 81 days. National breweries from Midwest  
expanded their market (4/11 - 6/20)

p. 78

Leonhard Michel founded his namesake brewery in  
BKlyn. He had been brewmaster at David G. Youngley Jr  
brewery in Manhattan for 13 years

Don+June Kauffman, The United States Brewers' Guide  
1630-1864. 1967

Published by Kaufmanns - Cheyenne, Wyoming  
41 page pamphlet

- United States Brewers Association formed 1862
- p.2 1785 Philadelphia - John F Betz began the business that  
later assumed his dimensions
- p.3 1829 Pottsville PA - David G Yuengling began to brew  
lager beer. The business continued by his sons under  
the name D.C. Yuengling & Sons

# One Hundred Years of Brewing - (1903)

- Pt. 1 - Ancient & Medieval Times
- Pt. 2 - Process of Brewing Beer - Art & Science of Brewing for Loosley  
Chapter XI - Brewery Arch + Eng - photocopied in file  
Brewery literature & Scientific Research
- Pt. 3 - History of Brewery Industry of the World

Chapter I - US

D. 197 Yuengling Pottsdam -

David G. Yuengling b. Germany 1806, came to US 1823

Moved to Pottsdam after residing for year in Reading & Lancaster  
became engaged in making malt liquors, among the 1st to make  
lager beer. died 1876. 3 years before son Frederick G.

admitted to partnership & name changed to D.G. Yuengling & Son  
Frederick continued the business alone until 1895

when William G. a younger bro. admitted to firm who died  
8/1898 & Frederick died Jan 1900. Business continued by  
Frank D., son of Frederick - firm name remains the same.  
John F. Bots of Philadelphia learn the art of brewing here at  
Pottsdam

1873 - 23,000 barrels of ale, porter & lager

1901 - 65,000 barrels

Rise of Lager 1840 to 1850 -

Lager or bottom fermentation beer

1809-1810 - New York State - 42 breweries, 66,896 barrels of  
beer, \$340,766. Only state with Lager was Penn in  
48 breweries, 71,263 barrels, \$376,072.

9/7 of total 1 malt liquor manufactured in NY & PA

198 - photo of  
Menu

199

p. 252

Brewed in America: A History of Beer and Ale in the US by Stanley Baron

Boston: Little, Brown and Company, 1962

p. 175

Porter, stout, ale - English

Lager - German - 1st brewed in US in early 1840s

Lager stored in winter in a cool place + ready to drink in spring  
W/ a yeast that fermented to the bottom of the vat instead of the top

176

This particular living yeast had to be isolated + brought here  
1st Lager beer brewed in US was of John Wagner in 1840 in

Philadelphia. Charles C. Wolf, one of the pioneers of Lager-beer  
brewers in Philadelphia stated this. Also says Wagner brought the  
yeast from Bavarian brewery where he had been brewmaster  
(Cites 100 Years, p. 207)

p. 180

The Brewery became famous for beer gardens in the 1860s

p. 278

1st brewery workers strike in NYC in 1872 - unorganized fash.

279

1877 - Brewery Workers' Union of NY + vicinity formed

280

1884 - Brewers' Union No. 1 of NY

313

Winstead Act defined 1/2 of 1% volume as the outside limit for  
non-intoxicating beverage

1917 - Carl A. Nivner, Secretary of the Master Brewers' Assoc of US - book New Field for Brewers -

low alcohol (or near) beers, non-malt beverages - fruit juices.

Yeast products, vinegar, malt extract, breakfast foods,  
commercial feeding stuffs, dairy products, industrial alcohol +  
mechanical appliances.

by 1917 - 25 states were dry

25 Years of Brewing 1891 George Eker  
he owned the Hell Gate Brewery est 1866

The Brewing Industry - The brewer who's names in America (1911)  
Hermann Schluter

Worshipp monuments 1881, 1886, 1888

49

1840 Anton Kaiser - obstacle to brewing in NYC

1840 - George Gillig, a Bavarian, started at 5<sup>th</sup> Ave + 53<sup>rd</sup> St

1842 - 2 bro's Schaefer Brewery.

" Johnson Brewery in Bklyn

1846 - Joseph Doelger

1848 - John Koller

057

before 1840s here in US ale + porter (English method)

Lager brewed in Germany since 13<sup>th</sup> century, not known here

Friedrich Lauer in Reading PA began in 1844 or 1845 to

produce Lager beer. He said he was not the 1<sup>st</sup> who did,

he said a certain Wagner who came here in 1842 shortly

after he arrived began to brew Lager in a suburb of Philly

52

Merks of brewing firm of ~~Engel~~ Engel + Wolf in Philly  
confirm this. Says in 1840 John Wagner brewed the 1<sup>st</sup> Lager  
beer in a small brewer in Philly. Used yeast he had sent  
over from a Brewer in Bavaria where he used to work.

53

In NYC 1<sup>st</sup> Lager beer brewed by George Gillig in 1844

54-55

of 3,235,545 barrels produced in US, 8,55,803

was Lager

56

S. Liebmann's Sons Brewery Co in Brooklyn in 1870

introduced the 1<sup>st</sup> cooling machine in the NYC vicinity

1850-1850 US pop went from 23 million to 31 million;

431 to 1,269 breweries - Great increase of German pop in US

25 years of Brewing

p. 102

1-7-1881 accident at Peter Doelger's brewery  
in NY - 4 workers lost their lives

193

Special boycott against largest brewery in NY - George Chert  
in 1891 by United Hotel Executive - body organized  
by brewery workers unions in Greater NY

Brewing in Troy N.Y. - Fitzgerald  
Bros Western Brewer 8 (Feb  
1883) 261 & Suppl.

One Hundred Years of Brewing  
Chicago H S Rich 1903

Frederick Widmann: The  
Development of the Bldgs  
& Equipments of Breweries  
from Pioneer Times to the Present  
Western Brewer 38 (Jan 1912)

sports writer for a number of city newspapers and magazines, including the *New York Journal-American*. He was later a columnist for the *New York Herald-Tribune* and the *New York Post*; in the early 1960s he and Wolfe became staff writers for the *Herald-Tribune's* Sunday supplement, which in 1968 became *New York* magazine. In 1969 Breslin blurred the line between journalism and politics and ran for president of the City Council under mayoral candidate Norman Mailer, with a platform that sought to make New York City the 51st state of the United States. Breslin maintained an extensive network of contacts with city officials, police officers, politicians, and mobsters. He endured a violent beating by the Lucchese mob family in 1970 after writing an article about a family member; the same year, he published his first novel, *The Gang That Couldn't Shoot Straight*, a Brooklyn Mafia comedy. Since 1982 Breslin has been married to former New York City Council member Ronnie Eldridge; his first wife died in 1981. Through the twentieth century Breslin continued to write novels about working-class cops, mobsters, immigrants, and race and religion in New York City; he won the Pulitzer Prize in 1986 for his newspaper columns. In 2008 Breslin, who lived on Central Park West, published *The Good Rat*, a collection of stories about the Mafia.

Kate Lauber

**Bretons.** Bretons began immigrating to the United States from Brittany in the early twentieth century. They were distinguished from other French citizens by their Celtic origin, and about 40 percent of those who immigrated spoke a Celtic language closely related to Welsh. Although at first most entered the United States through the Port of New York and settled in central New Jersey, during the late 1940s New York City became the center of Breton American life. Soon after their arrival, Bretons were widely distributed in the workforce and were well known for the crepe restaurants they owned and managed. Additionally, Bretons formed the Stade Breton, a sporting association in New York City, and the Breton Association of the United States, a sponsor of cultural and social events. At the end of the twentieth century, an estimated 90,000 Breton immigrants and their descendants lived in New York City.

Paul Robert Magosci

**Brevoort, James Renwick** (b Yonkers, N.Y., 20 July 1832; d Yonkers, 15 Dec 1918). Landscape painter. He grew up in Williamsbridge and Fordham, in what is now the Bronx, and in 1850 began to study architecture, working as an assistant to his cousin James Renwick, Jr., whom he helped to prepare designs for St. Patrick's Cathedral. In 1854 he earned a cer-

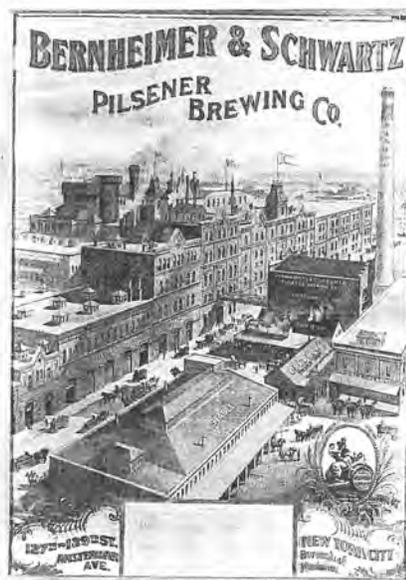
tificate in architecture from the School of Design at New York University, and he soon enrolled at the National Academy of Design, where he mounted exhibitions from 1856 to 1901. His work was also shown at the Brooklyn Art Association between 1861 and 1881. He lived on 10th Street from 1858 to 1861 and at 212 Fifth Avenue from 1863 to 1872. During the 1870s and 1880s he often traveled and worked in Europe, primarily in England, Italy, and the Netherlands; he returned to Yonkers in 1890, built a house at 390 North Broadway, and between 1898 and 1906 also maintained a residence at 52 East 23rd Street. Brevoort's paintings are leading examples of a phase in American landscape painting known as Native Impressionism and American Luminism.

Allen J. Share

**brewing and distilling.** Brewing was a small-scale industry in New York City during the seventeenth century. English techniques and a top-floating yeast were used to produce beer, ale, and porter, which did not require cooling. Sold in local markets, they were consumed warm. The first brewery was established by the Dutch governor Peter Minuit in 1633 in a log cabin in Marckvelt (Market Field), which would today lie in the financial district. Distilling was a separate undertaking confined mostly to the production of rum, using sugar cane transported from the West Indies by colonial merchants. By 1770 there were four distilleries in Manhattan and 12 others nearby that produced rum for sale locally and abroad. When whiskey displaced rum as the most popular liquor during the early nineteenth century, the distilling industry gradually moved west. Both industries

were transformed by new technology. Spirits were bought by wholesale firms in the city that colored, flavored, and bottled them and sent them to retailers, often saloons. German brewers who settled in the city during the 1840s introduced yeasts that required cool temperatures and produced "lager," or stored beer, which became especially popular in the summer heat. Brewing flourished for a time after water of good quality became widely available. The Hell Gate Brewery, opened by the German immigrant George Ehret in 1866, was the country's largest in 1877, and that of Jacob Ruppert was the eighth largest. In 1879 the number of breweries reached 78 in Manhattan and 43 in Brooklyn; those numbers declined after 1880, when cheap rail transportation and mechanical refrigeration allowed entrepreneurs in Milwaukee, St. Louis, and Cincinnati to make inroads into local markets. As successful breweries made larger investments in production and distribution facilities, small firms disappeared. In 1895 the Hell Gate Brewery was the country's fourth largest, Ruppert the 12th largest. By 1910 there were only 39 breweries in the city; they usually sold their beverages in kegs through saloons under their control. Formed by western suppliers in 1899, the Distilling Company of America made its headquarters in New York City and sought unsuccessfully to dominate the spirits trade. It was reorganized as National Distillers Products in 1932.

Under the 18th Amendment the manufacture, transportation, and sale of alcoholic beverages became forbidden in 1920. Some breweries declared bankruptcy, while others reorganized to make such products as soft drinks and ice cream. Many New Yorkers defied Prohibition, and illegal factories opened locally to supply their needs. Such efforts became known nationally through news media based in the city and led much of the country to conclude that Prohibition had failed to reduce liquor consumption effectively. After the repeal of the 18th Amendment in 1933, 23 of the city's brewers resumed business, most aiming their products only at the large local market. Stores displaced saloons as the most important retail outlets, and brewers expanded their sales of bottled beer. Canned beer was introduced that same decade. Only the firm of F and M Schaefer Brewing sought to compete in national markets. After 1937 the firm of Seagram's had its headquarters in the city and was the world's largest distiller. National Distillers Products became National Distillers and Chemical after 1948 and was one of four large companies that dominated the American distilling industry to the end of the 1960s. Between the late 1940s and the mid-1970s brewing in the city declined, as small firms were forced out of business by large companies with national distribution. The country's four largest firms



Advertisement of Bernheimer and Schwartz, Pilsener Brewing Company, 1911

(none in the city) increased their share of the national market from 21 percent to 59 percent. By 1950 only five local firms brewed beer, and brewers blamed the city's high electricity and water rates for their inability to compete. The country's second-largest brewer, Joseph Schlitz, bought the Hell Gate Brewery in 1949 and maintained operations there until 1973, when it withdrew to escape the city's high labor costs and invest in newer facilities. The city's last brewery closed in 1976. During the 1980s expensive beers were produced in small quantities for exclusive markets by newly opened microbreweries. In 1987 National Distillers and Chemical sold its liquor division to American Brands. The Brooklyn Brewery opened in 1987 and produces most of its beer upstate in Utica. In 1996 the Harlem Brewing company started its Sugar Hill brand, which is brewed in Saratoga Springs (the name was inspired by the Sugar Hill neighborhood in Harlem). Two well-known microbreweries are the Times Square Brewery, at 210 West 42nd Street, and the Chelsea Brewing Company, on Pier 59.

Stanley Wade Baron, *Brewed in America: A History of Beer and Ale in the United States* (Boston: Little, Brown, 1962)

K. Austin Kerr

**Briarwood.** Neighborhood in east central Queens, bounded to the north by Union Turnpike, to the east by Parsons Boulevard, to the south by Hillside Avenue, and to the west by the Van Wyck Expressway. The area was first developed about 1905 by Herbert A. O'Brien; the name was suggested by his wife, Adeline, for the thick woods and briars covering the land. The Briarwood Land Company later declared bankruptcy and the area remained largely undeveloped until the mid-1920s, when it was divided into lots that were sold at auction. Together with the New York Life Insurance Company the United Nations built Parkway Village in 1947 to provide housing for its staff members. The development became a cooperative in 1983 and housed residents of many nationalities, although by that time few worked for the United Nations. Several apartment buildings rise above the surrounding one- and two-family houses. Briarwood has been traditionally, and remained in the twenty-first century, a diverse community with a population nearly equally divided among many ethnic groups. Well-known residents have included the diplomat Ralph Bunche, the feminist and social activist Betty Friedan, and the civil rights leader Roy Wilkins.

*Plan for New York City, 1969: A Proposal*, vol. 5 (Cambridge, Mass.: MIT Press, 1969)

Patricia A. Doyal

**Brice, Fanny** [Borach, Fannie] (b New York City, 29 Oct 1891; d Los Angeles, 29 May

1951). Comedian. She became known for performing songs and parodies of the arts and society in such revues on Broadway as Florenz Ziegfeld's *Follies* between 1910 and 1920. She lived from 1914 to 1918 at 8 West 58th Street and from 1918 to 1921 at 230 Central Park West. In the early 1920s she bought a house at 306 West 76th Street, where she lived with Nicky Arnstein until their divorce in 1927. She then had an apartment at 15 East 69th Street (now the Westbury Hotel) and lived there with Billy Rose after they were married in February 1929. She became well known in Rose's musical revues *Sweet and Low* (1930) and *Crazy Quilt* (1931). During the 1930s and 1940s she performed as "Baby Snooks" on the radio. Brice was portrayed by Brooklyn-born Barbra Streisand in the musical *Funny Girl* (1964, film version 1968) and the motion picture *Funny Lady* (1975). Brice was the first female Jewish comedian to work successfully in musical comedy and radio in the commercial mainstream.

Barbara Wallace Grossman, *Funny Woman: The Life and Times of Fanny Brice* (Bloomington: Indiana University Press, 1991)

Barbara Cohen-Stratynier

**Brick Presbyterian Church.** Church founded in 1767 by the Reverend John Rodgers. The church was first located on Beekman Street, but moved to Fifth Avenue and 37th Street in 1858 as many of its members moved uptown to that area. It moved again in 1940 to Park Avenue and 91st Street, where it remains today. The church has been in continuous operation since its founding, save for a brief closure during the Revolutionary War, and currently has more than 1200 members. Noted members of the congregation have included New York governor Edmund Morgan, U.S. Secretary of State John Foster Dulles, and IBM founder Thomas J. Watson. Charles Dickinson, the church organist and choirmaster from 1909 to 1965, founded the School of Sacred Music at Union Theological Seminary and the American Guild of Organists.

Sarah Brafman

**bricks.** From Dutch times, brick has been the most popular construction material used in New York City buildings. It is fireproof and, since the soft clay of the nearby lower Hudson Valley was ideal for making bricks, both readily available and inexpensive. The demand for bricks went through four stages before 1900. In colonial times it was the common material for almost all buildings, residential and commercial, and there were kilns throughout the city (one in the 1740s was located on the site of City Hall Park). From 1800 to 1840 brick was identified with fashionable construction in Federal-style houses, often with a brownstone facade produced by applying a layer of soft New Jersey sandstone. At mid-century

there appeared a new, ornamental style of brick residential construction in the Greek Revival style, which had originated in Philadelphia and used fine-grained, smooth-faced "pressed brick" of a uniform red. After the Civil War the upper classes favored stone houses, and brick houses tended to be occupied by workers. ("Brick is getting too common for first-class fashionable houses," sniffed a newspaper in the 1860s.)

Bricks were made in many sizes, shapes, and colors. "No regulation appears to exist in the United States beyond the custom of the place and the caprice of the maker," one observer of American construction observed in 1837. Brick size was finally standardized in 1890 at 8¼ by 2¼ by 4 inches. During a boom in building brick apartment houses in the 1940s and 1950s, a new "jumbo" size brick was developed, and later bricks the size of tiles were used in city buildings.

Brickworkers and bricklayers were united in craft unions from the early 1800s, maintaining prices by collectively shutting down works and pressing employers for shorter working days. The 10-hour work day, which arrived in New York in the 1830s, was largely brought about by brickworkers. Their efforts in favor of the eight-hour day failed in a wave of unsuccessful strikes in 1868. Long independent of the other building trades, bricklayers finally united with plasterers and masons to form a union with 130,000 workers in 1921 and 149,000 in 1973.

Charles Lockwood, *Bricks and Brownstones: The New York Row House* (New York: Abbeville Press, 1972); Irwin Yellowitz, "Eight Hours and the Bricklayers' Strike of 1868," in *Essays in the History of New York City: A Memorial to Sidney Pomerantz*, ed. Irwin Yellowitz (Port Washington, N.Y.: Kennikat Press, 1978); John D. Stewart, ed., *The Schermerhorn Row Block: A Study in Nineteenth-Century Building Technology in New York City* (Waterford, N.Y.: New York State Parks, Recreation, and Historic Preservation, Bureau of Historic Sites, 1981)

John Roumanian

**Bridewell.** A name once used to refer to certain prisons in Manhattan. The first Bridewell in the city was built in 1734, the second in 1775 at City Hall, near where the Sons of Liberty fought to maintain the liberty pole. The site became a rallying point for protests against the British, and the jail was first used to imprison and punish patriots and revolutionary soldiers. After the Revolutionary War it was used as a city jail.

William Jackson Davis, *Reminiscences of the City of New York and Its Vicinity* (New York: Privately printed, 1855)

Joseph P. Viteritti

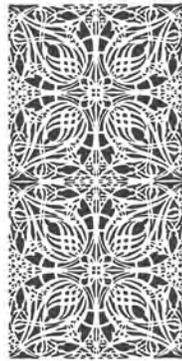
**bridge.** Card game. It was introduced to New York City in 1893 by Henry I. Barbey, a banker

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# THE MIDWEST IN AMERICAN ARCHITECTURE



EDITED BY  
JOHN S. GARNER

UNIVERSITY OF ILLINOIS PRESS  
URBANA AND CHICAGO

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# BREWERY ARCHITECTURE IN AMERICA FROM THE CIVIL WAR TO PROHIBITION

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SUSAN K. APPEL



American industrial architecture of the nineteenth century was rich and varied, the physical and visual expression of a significant process—industrialization—that reshaped American life throughout the century, but especially after the Civil War. Industrial architecture of the entire period was more than just the history of mills and mill towns. It included many kinds of buildings and complexes which, although they shared some common features, also developed distinctive forms that reflected the particular needs and purposes of the industries they served. The variety of such specialized forms has yet to be understood completely, but it deserves study: first, to clarify how changing technology influenced the forms taken by industrial architecture, and second, to explain how industrial buildings, like other kinds of buildings, express culture—not just the drive to industrialize, but also the social, ethnic, philosophical, and economic conditions prevalent at the time of building. More specifically, such study should investigate the roles played in this architectural development by established traditions, new conditions, and the desires of both clients and professional designers.

Like many other industries in the later nineteenth century, brewing in the United States experienced phenomenal growth. The boom began with major changes in the kind of brewing practiced and the preference for German lager beer over traditional English common beer or ale. Introduced to America by German immigrant brewers in the 1840s,<sup>1</sup> *lagerbier* was light and effervescent and tasted different because it was fermented with a different kind of yeast and aged (“lagered”) for an extended period after brewing. Lager was the preferred brew in Germany, and it became tremendously popu-

lar in America as well, stimulated first by a ready market in the vast numbers of German immigrants then flooding into the country.

While some of these Germans settled in the East, even more of them settled in the Midwest. Cincinnati, St. Louis, Milwaukee, Chicago, and dozens of other places large and small became centers of transplanted German culture, an enduring landmark of which was the brewery. Long before Milwaukee became known for its beer, Cincinnati and St. Louis were the leading brewing cities in the Midwest,<sup>2</sup> but all three contributed to the architectural development of the American brewery. Chicago also acquired significance as an important brewing center and headquarters for many of the most prominent brewery architects, who began to professionalize brewery design in the 1860s and 1870s.

Even before the emergence of brewery specialists within the architecture profession, the move to lager brewing itself gradually altered the design of breweries. In addition to a building in which brewing took place, the early lager brewery also required some kind of cool, generally underground storage chamber in which to lager the beer. Increasing demand for lager inspired more breweries to open, but also pushed the well-established ones to expand their facilities. As the industry grew, its success encouraged the invention of more efficient and economical equipment, which helped to regulate the process more scientifically and further increase production.

At the same time, new equipment forced the physical reorganization of brewery spaces. Increased production also intensified the problem of providing sufficient space and controlled conditions for both brewing and lagering vast quantities of beer. Solving these problems began to be more than brewers and traditional builders could handle. As a result, in the years following the Civil War, professionally trained architects and engineers began to address the issues of creating brewery buildings capable of containing new kinds of equipment efficiently, withstanding the weight of increasing amounts of materials, and taking advantage of new scientific, architectural, and engineering ideas. Brewery design as an architectural specialty grew and prospered along with the brewing industry until both were checked by Prohibition after World War I.

Before Prohibition, at least one prominent brewery architect set down his thoughts on the historical development of brewery architecture in the United States. Frederick Widmann of St. Louis, writing in 1912 in the important trade journal *The Western Brewer*,<sup>3</sup> laid out a sequence of three distinct periods in the brewery's history. During the first of these, dating from pioneer days to about 1860, breweries were generally small and very simple in their layout and manner of production. In Widmann's second period, from 1860-80, prosperity in the industry encouraged more carefully designed and substantially built breweries, requiring the services of the earliest architects and engineers recognized as specialists in this field. During Widmann's third period, from 1880 to the date of his article, brewery design was entirely dominated by architects and engineers, whose expertise helped brewers to

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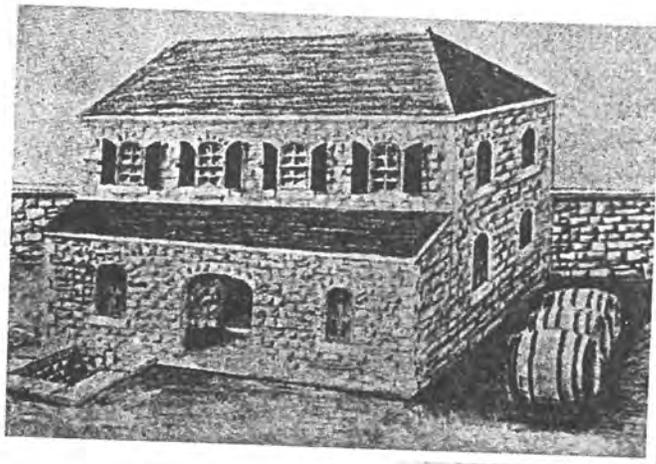
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deal effectively with greatly increased demand, competition, and complexity in equipment and facilities.

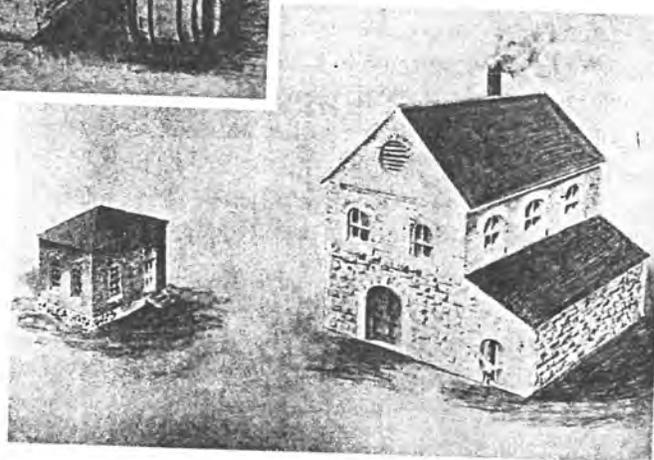
Closer study of the changing nature of brewery design verifies Widmann's outline for the most part, although his final period could be extended a few years to the beginning of Prohibition or broken into a second and third generation of architects. Also apparent but not emphasized by Widmann is the fact that throughout the pre-Prohibition era, the most active of these architects were based in the Midwest. Of all the architects who came to work in the field, however, it was the first generation, the pioneers of professional brewery design, who established the essential features and direction of change that made possible the transformation of the vernacular brewery into a highly specialized and handsome form of industrial architecture.

In the period before the brewery architect emerged, breweries were vernacular buildings shaped in part by the needs of the brewing process and by traditional building forms and methods. Few breweries before the middle of the nineteenth century were very large, even in the East, or had equipment much beyond the most basic vessels and tools needed to run the operation by hand or by horsepower. A brew house was generally no more than two stories high, perhaps with a louvered cupola for ventilation, and its interior equipment was arranged to facilitate a relatively horizontal, semigravitational flow of the developing brew. The process entailed pumping water to a reservoir on the highest level, letting it run down into a copper for boiling, then down again into the mash tub, where it was mixed with malt to become mash. The mash was then pumped up into the brew kettle for boiling into wort, then run through large, shallow cooling pans arranged in a horizontal sequence before being transferred to large vats for fermentation and storage in cool, underground caverns. If the brewery became prosperous, it would likely adopt steam power, which began to complicate matters architecturally.<sup>4</sup> Unfortunately, few early breweries were illustrated or described in detail. It appears there was little architectural difference between breweries run by English or German brewers until lager began to catch on in the later 1840s and 1850s.

In St. Louis, lager brewing began when Adam Lemp established his first small brewery, probably in 1841–42.<sup>5</sup> Lemp had come to the United States from Germany, and his introduction of lager to St. Louis was credited with revolutionizing the local brewing business.<sup>6</sup> Architecturally, however, Lemp's brewery was traditional and vernacular in the American mode. His initial brew house and the cellar house added behind it (fig. 7.1) were tiny, two-story stone structures on a sixty-four-foot-wide lot on Second Street. These facilities were soon too small to satisfy demand, and in 1845 Lemp began altering a natural cave just south of the city limits for use as a lagering cellar for the beer produced back on Second Street.<sup>7</sup> A newspaper of the time found the project sufficiently interesting to describe in detail: "The cave is about one hundred yards long, and is divided into three compartments: the average width is about 20 feet, and the arch is turned with great regularity.



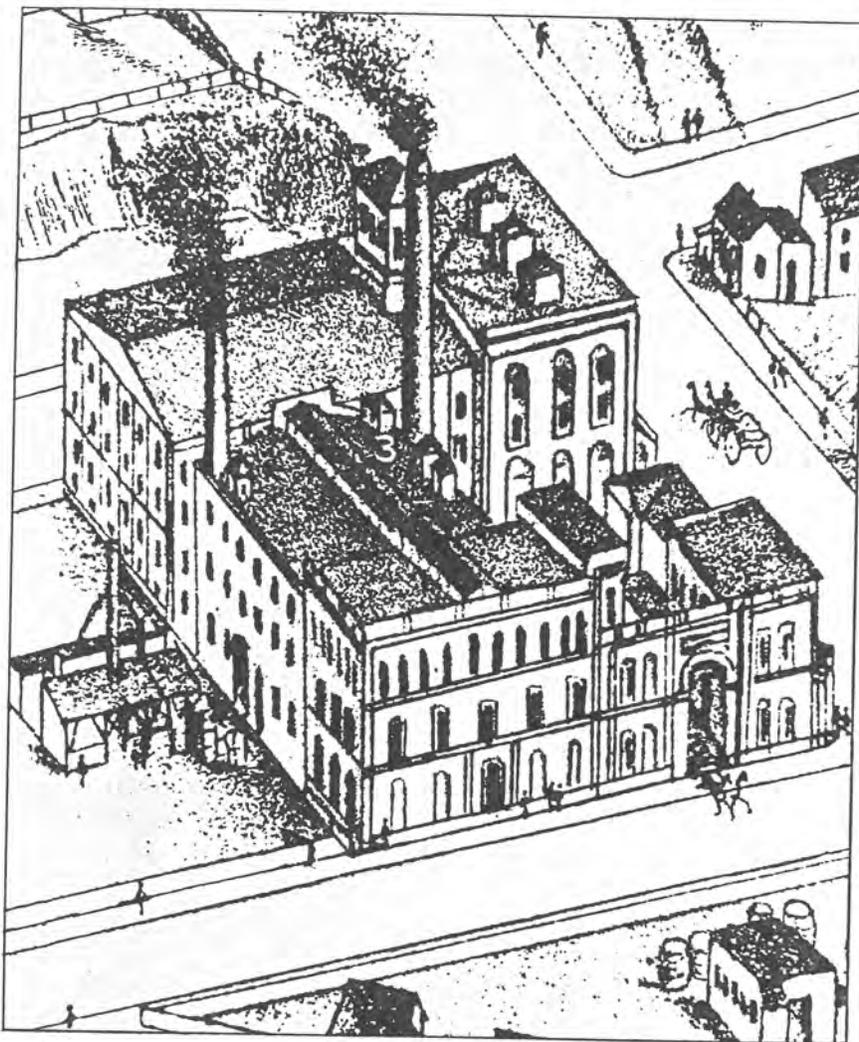
7.1 Adam Lemp's original brew house and storage cellar building, St. Louis, 1840s. (*One Hundred Years of Brewing* [Chicago: H.S. Rich, 1903], pp. 211–12)



Mr. L. has now stored in it about 3,000 barrels, and more may, when his arrangements are completed, be stored in it. The cave, and the style in which it is fitted up, and the taste displayed in laying off the grounds, will richly repay a visit."<sup>8</sup>

Enlarged facilities and continued high demand made Lemp one of the larger brewers in St. Louis by 1850.<sup>9</sup> Further expansion above the cellars<sup>10</sup> eventually made his the largest brewery in St. Louis, until Anheuser-Busch surpassed it in the early 1880s. Two years after Lemp's death in 1862, his son, William J. Lemp, moved the brewery's operations entirely to the site above the cellars, where he developed the business extensively. By 1875, the younger Lemp had invested more than \$200,000 in buildings and machinery,<sup>11</sup> and the Lemp Brewery had become a compact cluster of three-story buildings (fig. 7.2) capable of producing more than forty-two thousand barrels of beer. The period when architects and engineers would reshape the brewery's architecture substantially was about to begin.

In Cincinnati, one of the earliest brewers of German background was George Herancourt, who came from Bavaria and established the City Brewery in 1836.<sup>12</sup> Herancourt represents the German brewer in a transitional period: he began brewing when top-fermented English beer was the norm, but turned to bottom-fermented German lager brewing in 1851, building the first underground lager cellars in Cincinnati in 1852. Almost nothing is pre-



7.2 William J. Lemp Brewing Company, St. Louis, 1875. (Richard Compton and Camille Dry, *Pictorial St. Louis* [St. Louis: Compton, 1875], plate 9)

served of his original brewery, in part because of his prosperity. To keep up with demand, Herancourt's plant was enlarged considerably beginning in the 1880s under the direction of the architect George Rapp;<sup>13</sup> its remaining buildings thus no longer represent the vernacular phase of the history of brewery architecture.

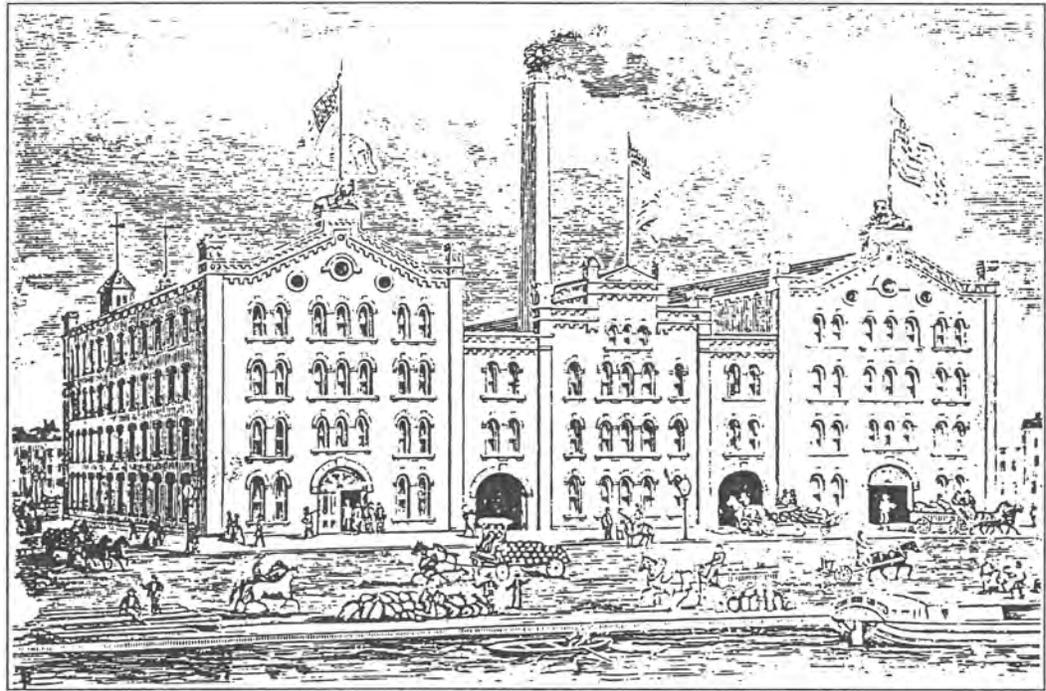
Brewery architecture did not move directly from the primitive structures of the 1840s and 1850s to the professionally designed plants of the 1880s. Little remaining visual evidence documents clearly what happened to St. Louis breweries in the 1860s, but in Cincinnati in that decade, at least three major brewing firms built important structures that remained the core of their plants up to Prohibition. These three, the Hauck, Windisch-Muhlhauser, and

Moerlein breweries, begun in 1863, 1866, and 1868, respectively, resembled one another and demonstrated the enlarged form and more elaborate style associated with major breweries by the 1860s. None of the three was recorded as having been designed by a known architect. All were composed horizontally, with streetfronts of several distinct but connected units spread out along their respective properties. Each of them also shared what was basically an early Romanesque Revival style in brick, incorporating round-arched and circular windows aligned in regular patterns and set in pilastered walls capped with corbelled blind arcades and hints of battlements. While all had numerous windows, they also had a visual balance between openings and smooth, solid wall surfaces. Such features tied these American breweries to the German *Rundbogenstil*, an eclectic style combining Romanesque and Renaissance design elements, of which their owners may well have been aware.

Representative of these 1860s breweries was Windisch-Muhlhauser's Lion Brewery (fig. 7.3), built in 1866 by Conrad Windisch and Gottlieb and Henry Muhlhauser, all of German background.<sup>14</sup> Windisch had just sold his interest in the successful Moerlein Brewery to his partner and was establishing the brewery that would be Moerlein's strongest local competitor through the end of the century. In style, the Lion Brewery possessed all of the basic Romanesque Revival and 1860s brewery characteristics noted previously. It was composed of three major units, the center one slightly smaller than the outer two, all of them connected by narrow units with wagon entries in an *A-B-C-B-A* rhythm. This structure was about 227 feet wide by 156 feet deep and rose above extensive underground cellars dug in 1866, directly alongside the Miami and Erie Canal, which it used for transportation.<sup>15</sup>

The success achieved by breweries like Lemp, Windisch-Muhlhauser, Moerlein, and Hauck reflected the remarkable burgeoning of lager beer's popularity with the American public at large, not just the German-born.<sup>16</sup> To take advantage of this situation, brewers had to find ways to produce greater quantities of beer, lager it efficiently in larger temperature-controlled places, and distribute it to markets that began to extend far beyond earlier geographical boundaries. Continual expansion and innovation complicated the construction of brewery buildings. To work out the complexities, brewers turned more frequently to the professional architects and engineers who had begun to specialize in brewery design.

Widmann dates the pioneer generation of brewery architects to the period between 1860 and 1880. His dating seems intended to draw attention to this as an inaugural period when fundamental principles of brewery design were first worked out, but some of those whom Widmann characterizes as pioneers were active far beyond 1880. Widmann does not point out that most of these pioneer brewery architects, like many brewers, were German-born, and that some are known to have trained in German polytechnic schools. American brewery architecture in this important period thus



7.3 The Windisch-Muhlhauser Brewing Company's Lion Brewery, Cincinnati, 1866. (Andrew Morrison, *The Industries of Cincinnati* [Cincinnati: Metropolitan Publishing, 1886], p. 157)

acquired a double dose of German influence, while it also responded to the particular conditions of building and brewing in the United States.

Despite Widmann's claim, there is little evidence of architect-designed brewery projects before the late 1860s. One of the earliest known architect-designed brew houses was Edmund Jungenfeld's building for E. Anheuser and Company in St. Louis (1869). The company's owner, Eberhard Anheuser, was not originally a brewer, but by 1860, as a result of another firm's bankruptcy, he came into possession of the small Bavarian Brewery, built in 1852.<sup>17</sup> In 1865, when Anheuser took his son-in-law, Adolphus Busch, into the firm, the brewery was successful, but still considerably smaller than those discussed previously in either St. Louis or Cincinnati. It was, however, about to enter a period of exceptional growth as a direct result of Busch's involvement in the firm.<sup>18</sup> Adolphus Busch was universally acclaimed as the genius behind the phenomenal success of what became in 1879 the Anheuser-Busch Brewing Association.<sup>19</sup> It was under his direction that the brewery began rapidly to increase its production, and it was Busch who brought Jungenfeld's considerable talents to the task of expanding the brewery's physical plant.

Like Busch, Jungenfeld came from Mainz, Germany, and was well edu-

cated in his homeland before emigrating to the U.S.<sup>20</sup> Shortly after arriving in St. Louis in 1864, Jungenfled entered into partnership with one of the most respected of the city's architects, Thomas Waryng Walsh, with whom he is known to have worked on numerous prominent public buildings.<sup>21</sup> However, when Busch employed Jungenfled to build a new brew house in 1869, he set in motion a major shift in the career of Edmund Jungenfled, who from then on began to specialize in this new branch of architectural design.<sup>22</sup> By the time of his early death in 1884, Jungenfled had become a leading figure in the field.<sup>23</sup>

The relationship between Jungenfled and Busch proved highly beneficial for the Anheuser-Busch Brewery as well. From 1869 almost to Prohibition, the brewery's physical layout and general appearance were guided first by Jungenfled himself, then according to his plans or in the spirit of them by his handpicked successors.<sup>24</sup> By the early 1890s, Anheuser-Busch was often called the largest brewery in the world, and "while one of the most colossal establishments on the globe, with its massive buildings covering some forty-five full city blocks, there is [*sic*] being added constantly new buildings, new departments and facilities to meet the increase in consumption of its famous beers."<sup>25</sup> Most of those new buildings were designed by E. Jungenfled and Company.

A glance at the brewery as it looked in 1869 (fig. 7.4) hardly prepares one for the mammoth complex Anheuser-Busch became later in the century. Instead, the 1869 brew house was a modest three-story structure, more or less rectangular, perhaps sixty-two by thirty feet in plan and about twenty-six feet high.<sup>26</sup> It was likely built of brick and featured triple round-headed windows regularly spaced in four of the five bays of the facade. The focus of the facade was a gabled central bay, which stepped out slightly from the rest of the wall and had double rather than triple windows. The bays flanking the center had large wagon entrances at ground level, giving the facade an *A-B-C-B-A* rhythm. Jungenfled's rhythmic order, along with his window forms, balance between wall surfaces and openings and overall horizontality were reminiscent of, but simpler and less ornate than, the Cincinnati breweries of this same decade. Compared with the adjacent original brew house (on the left in fig. 7.4), Jungenfled's design was clearly more orderly and more sophisticated, yet it hardly altered the traditional vernacular approach to brewery design.

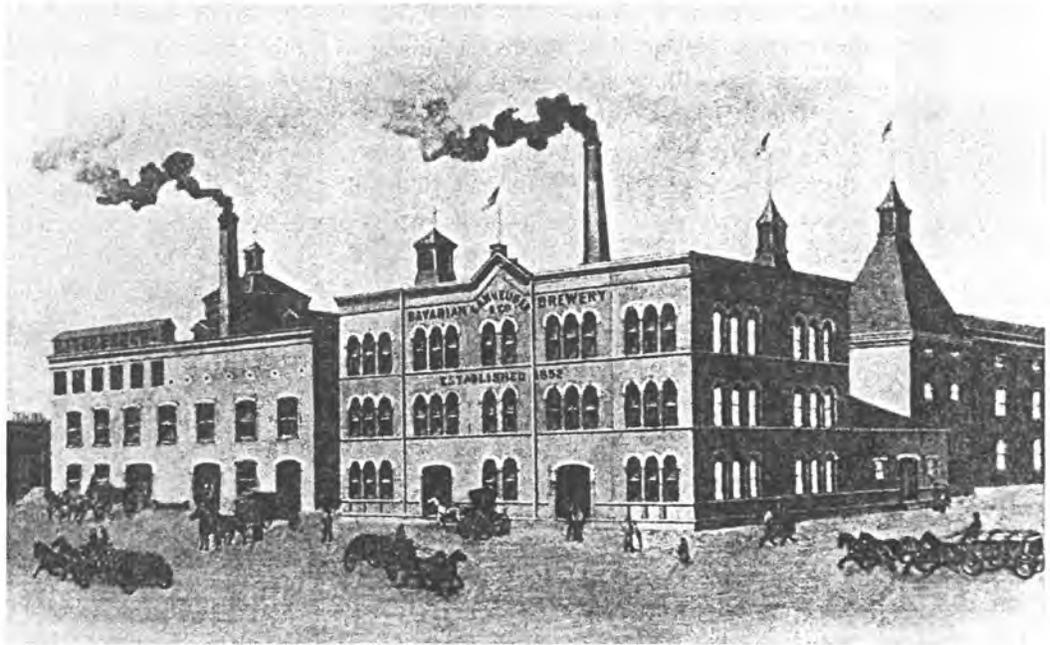
Within ten years, though, significant changes were afoot in the design of breweries, and Jungenfled's activities at Anheuser-Busch again illustrated those changes. The brewery's business had grown tremendously, especially after 1873, when Anheuser-Busch first introduced pasteurizing of bottled beer. This process allowed for long-term viability and distant shipment of bottled beer, the large-scale marketing of which propelled the brewery to enormous nationwide success.<sup>27</sup> By 1878, its production had surpassed sixty-eight thousand barrels,<sup>28</sup> far outstripping the original twenty-five-thousand barrel capacity of the 1869 brew house,<sup>29</sup> even though continuous addi-

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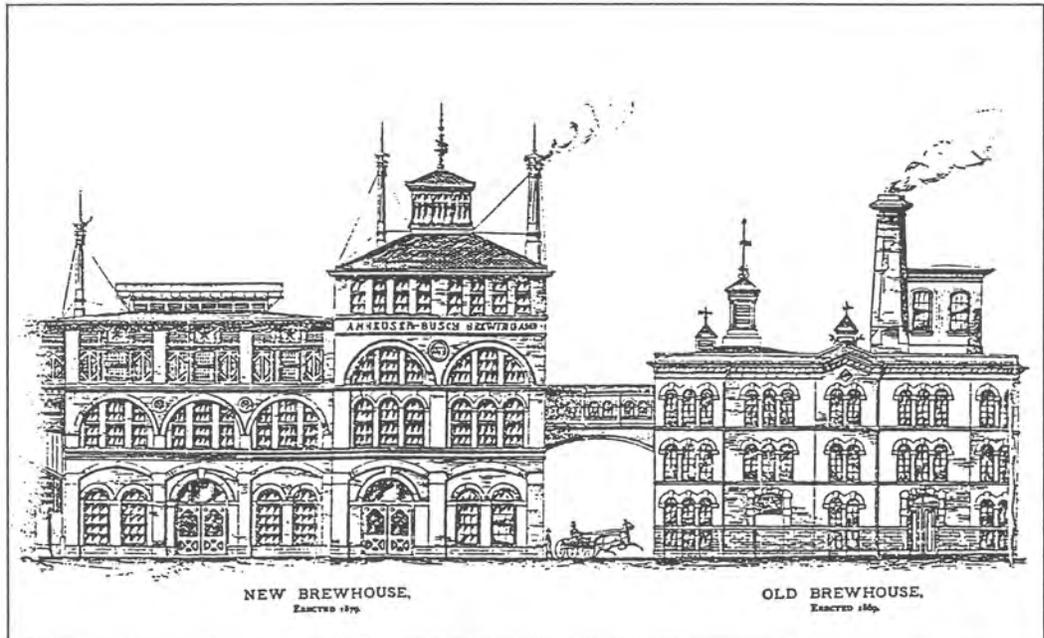
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7.4 Edmund Jungenfled, brew house for E. Anheuser and Company (right), with original brew house, St. Louis, 1869. (*One Hundred Years of Brewing*, p. 348)



7.5 Edmund Jungenfled, brew house and other additions for the Anheuser-Busch Brewing Association, St. Louis, 1879. (*The Western Brewer*, December 1879, supplement)

tions had been made to it. A larger facility was required—a second new brew house designed by Jungenfled along with other additions (fig. 7.5), described and illustrated in an article in *The Western Brewer* in late 1879.<sup>30</sup>

The 1879 brew house was larger than that of 1869, perhaps 97 feet by 55 to 60 feet in plan overall, but was divided into two functionally and visually distinct sections. On the right, crowned with a cupola on a hipped roof, was the section where brewing actually took place, the process confined to a space only about 40 by 37.5 feet in plan, but about 50 feet high.<sup>31</sup> Inside (fig. 7.6), the water tanks, malt hopper, mash tub, brew kettle, and other equipment were organized vertically, rather than horizontally. This vertical interior arrangement was clearly expressed in the upright, cubic exterior design of this part of the structure. Jungenfled's use of interior iron columns and beams, clearly visible in the section drawing, helped make possible the more vertical arrangement within. The iron supports took up relatively little floor space, allowing plenty of room for the enlarged hoppers, tanks, and kettles, yet had the strength to support the weight of several levels of large, liquid-filled vessels. Iron framing also helped protect the brewery from fire.

The walls of the new brew house were more open than in Jungenfled's earlier design, providing abundant light and ventilation within. The exterior still showed groups of round-headed windows placed in a carefully ordered way, but now they were more ornately framed within a system of pilasters, larger arches and stringcourses. Although this brew house was in some ways more decorative than the earlier one, efficiency was also a primary concern, as indicated by *The Western Brewer's* comment that the Anheuser-Busch layout "clearly illustrates the labor-saving principle of its construction on the smallest possible superficial area. From the cold water tank and hoppers to the grand, everything runs without the assistance of pumps."<sup>32</sup>

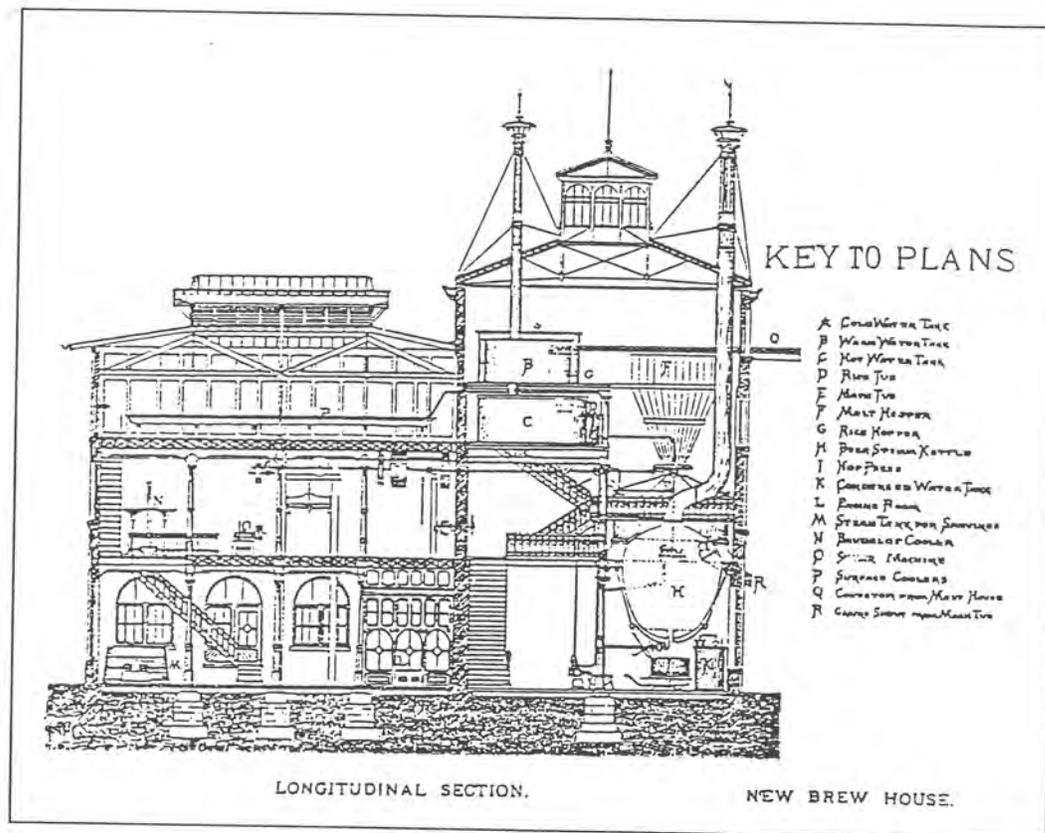
Such an interior arrangement constituted a full gravity-flow system of brewing—not an entirely new system, but one being reshaped at this period into a more emphatically vertical arrangement that was efficient and logical and came to be standard in lager breweries throughout the rest of the century. In this system, the raw materials of brewing (water, malt, hops, and any adjuncts used) entered the top of the brew house and were combined and cooked in various steps as appropriate, each step flowing by gravity from one level downward to the next.

At the bottom of the brew house, the brew was pumped with steam power to open surface coolers, where its temperature was reduced so that yeast could be added. In Jungenfled's design, the coolers were on the upper level of the left section of the brew house, again supported by interior iron framing, in an area ventilated by louvered windows and cupola. From these surface coolers, the brew descended to the floor below, flowing over the ice-water-filled metal tubes of a Baudelot cooler to further reduce its temperature. It then was pumped again, first to the fermenting house, then to storage chambers to begin lagering.

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7.6 Edmund Jungensfeld, 1879 brew house, longitudinal section. (*The Western Brewer*, December 1879, supplement)

Jungensfeld's handling of these fermenting and storage structures was experimental and brings up other important changes occurring in the design of 1870s breweries. As production skyrocketed, brewers like Anheuser-Busch needed larger and larger spaces in which to ferment and lager beer at properly cool temperatures. Underground cellars were not entirely abandoned,<sup>33</sup> but their fluctuating temperatures in summer,<sup>33</sup> had traditionally confined brewing to the winter months.<sup>34</sup> Increasing demand required that more efficient avenues be explored for keeping fermenting and lagering cellars cool so that year-round brewing could become a reality. In the 1870s, these concerns spawned a wide variety of schemes to build the perfect above-ground icehouse. Most such structures contained three stories of "cellars" below a huge ice chamber. Jungensfeld's 1879 fermenting and storage additions to Anheuser-Busch, however, were based on a patented system devised by William D.W.C. Sanford, which spread out the components somewhat horizontally, both to avoid extremely heavy construction and to provide free-flowing cool air where needed.<sup>35</sup> The new fermenting house was here placed between two ice chambers, both with few if any wall openings to help

keep the cold inside; the smaller of the ice chambers also cooled a storage chamber below itself.

Although unusual in its horizontality, Jungenfeld's scheme was nevertheless an example of the decade's moving away from strictly underground lagering facilities. Above-ground and using natural ice to create a temperature-controlled environment, the icehouses were a transitional form. They stood between the early reliance of lager brewers on caves and underground cellars and the development of large-scale, above-ground, mechanically cooled stock houses made possible by artificial refrigeration in the 1880s and beyond. The quickness of this development is demonstrated by the fact that as early as 1881–82, again under Jungenfeld's direction, Anheuser-Busch boldly converted its entire plant to mechanical refrigeration, undertaking the largest refrigeration job attempted anywhere to that date.<sup>36</sup>

Jungenfeld's concern with refrigeration was in no way unique among early brewery architects. It was a basic issue to be dealt with, and some of the first generation of designers themselves invented or became distributing agents for the latest innovative ideas in refrigeration. Jungenfeld provides an introduction to one of these. From November 1878 to April 1880, he was a long-distance partner of Theodor Krausch, another German-born and German-trained brewers' architect and engineer. Krausch moved his office from New York City to Chicago in 1877,<sup>37</sup> a good indication of the growing significance of the Midwest as a base of operations. He was especially interested in refrigeration technology and in 1877 patented a system that combined natural ice with an early ice machine; the system was installed successfully in Buffalo and Chicago breweries.<sup>38</sup> In the 1870s and early 1880s, Krausch specialized in providing refrigerating houses for breweries from New York to Nebraska, Wisconsin to Texas.<sup>39</sup> In addition, he also designed new brew houses, notably the one built in 1885 in St. Louis as part of the great expansion of William J. Lemp's brewery.<sup>40</sup>

Krausch was one of a growing number of brewery specialists who congregated in Chicago from the 1870s on, making that city, with St. Louis, New York, and Philadelphia, one of the major centers of brewery design. By 1915, Chicago had produced almost twice as many of the brewery projects known to have been designed by architects as any other city in the country.<sup>41</sup> Many of these architects, in Chicago and elsewhere, shared the German heritage of their clients and brought to their work solid training that served them well in addressing emerging issues in brewery design.

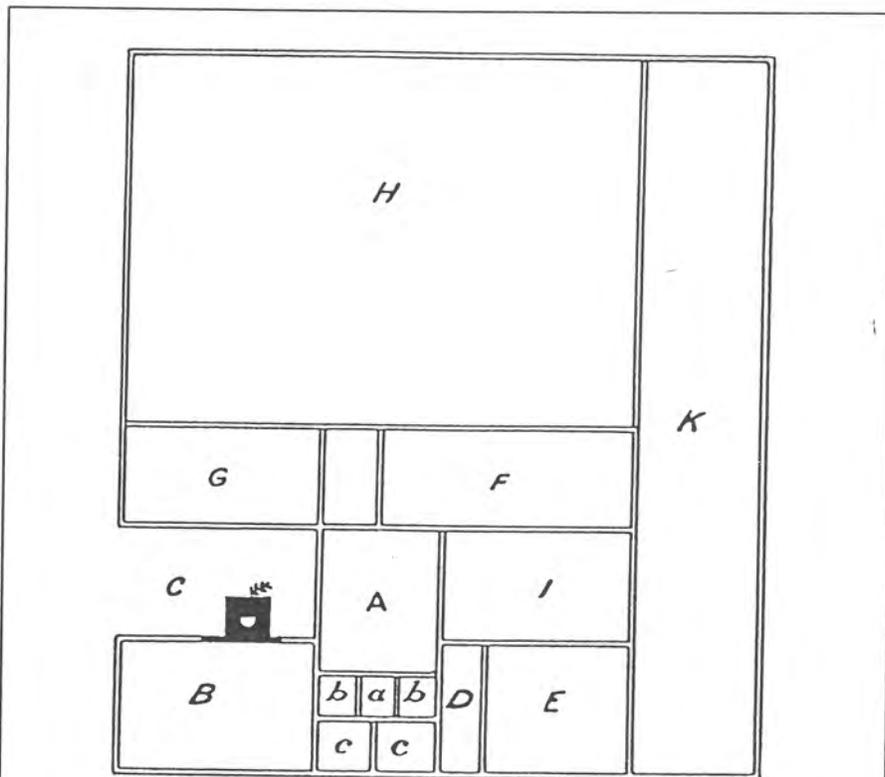
One of the architects was Frederick Baumann, the first German-born architect to practice in Chicago, who arrived there in 1850 and is generally better known today for his work in buildings other than breweries.<sup>42</sup> No brewery projects actually built by Baumann are known, but by the 1870s, he was actively involved in this field. He also proved influential in its future development, especially through his writings. Baumann's up-to-date understanding of the problems of contemporary breweries appeared in an article

in *The Western Brewer* in November 1876.<sup>43</sup> His simple plan and section drawings (fig. 7.7) described a model brewery quite different from the norm of earlier decades, but quite like what was about to appear in Jungenfeld's 1879 Anheuser-Busch brew house. Even a quarter of a century later, *One Hundred Years of Brewing* declared the ideas expressed in Baumann's article "practical as well as prophetic."<sup>44</sup>

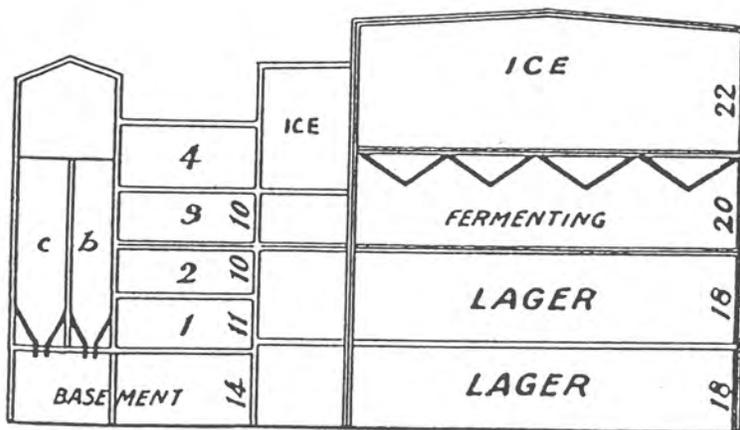
Baumann's model brewery plan was divided into two portions of roughly equal size, the lower part of the plan showing the brewery proper (to the left in the section), the upper part an above-ground fermenting and lagering house (to the right in the section). Shown in the section as the central element of the brewery proper, Baumann's brew house was to be four stories high above a tall basement, but limited in plan size. It was clearly intended for a vertically arranged gravity system of brewing and was centrally and efficiently located in the middle of malt and grain bins, boiler house, office, and other functionally related spaces. There was no sense here of the old horizontal organization of the early brewery. Instead, the brewery was organized in sections shaped and sized according to their different needs, and the brew house was becoming a distinctively vertical element among them.

The considerable bulk of Baumann's fermenting and lagering house in both plan and section reflected the need for plenty of space for these functions at this period. Baumann's interior arrangement was typical of the 1870s' above-ground icehouse. It was cooled by a large ice mass stored in a chamber atop a three-level sequence of spaces, with the fermenting room directly below the ice and two separate lagering floors below. Such a design required heavy construction to support the weight of the ice mass in the upper chamber<sup>45</sup> and the vats of liquid below, one reason that the icehouse would soon give way to a new variation of its theme. Despite his design here, Baumann also understood more advanced technological developments just emerging in the later 1870s that had major implications for the brewery and its architecture. He was remembered for correctly predicting in 1876, the same year these drawings appeared, that the brewery of the not-too-distant future would be cooled by cold air, not ice.<sup>46</sup> In this respect, Baumann anticipated the age of artificial refrigeration, about to dawn in the 1880s.

Visual evidence for the breweries of the 1870s is thin, but the appearance of quite similar ideas in the early work of Baumann and Krausch in Chicago and Jungenfeld in St. Louis throws some light on the architectural and procedural changes that began to alter the appearance of the American brewery in the period. Better preserved are visual records of breweries of the early 1880s, which show more clearly the changing appearance of the American brewery in the hands of other members of the pioneer generation of brewery architects. One of the most prolific of these was Fred W. Wolf, a German-born designer who established an office in Chicago in 1867. He became one of the most widely recognized and longest-lived of pioneer brewery architects and engineers, active and influential in the field from the 1870s until his death in 1912.<sup>47</sup> Wolf's early training in mechanical engineer-



GROUND PLAN, MODEL BREWERY.



SECTION OF A MODEL BREWERY.

A—Brew-house. a—Elevator. b—Grain bins. c—Malt bins. B—Boiler-house with chimney. D—Entrance. E—Office. F—Hop chamber. G—Experiment room. H—Fermenting room. I—Open court. K—Wash room.

7.7 Frederick Baumann, plan and section of a model brewery, 1876. (*One Hundred Years of Brewing*, p. 137)

ing led him to develop a number of new mechanical devices for brewers and maltsters. From 1882, he became a major figure in the field of artificial refrigeration, acquiring the U.S. patent rights to manufacture and distribute the famous German Linde ice machine.<sup>48</sup> In addition, from 1879 on, Wolf advertised his readiness to design and build breweries, icehouses, and related structures. Dozens of designs were attributed to Fred Wolf over the course of his career. Determining how many of them dating before 1894 can actually be identified as Wolf's alone is complicated by the presence in his office from 1874–94 of Louis Lehle, another fine designer of breweries.

Wolf's practice must have developed into a two-sided operation, one part engaged in more mechanical matters, the other in architectural projects. Lehle's position in the firm probably grew gradually, but became substantial. By 1889, if not before, he was managing the architectural side of things,<sup>49</sup> and he advanced further, becoming a partner in the renamed firm of Wolf and Lehle from 1889–94. The partners split in 1894,<sup>50</sup> with each man continuing in his own practice. Their relative architectural input during their time together may be mirrored in their activities after the breakup of the partnership: after 1894, Lehle was involved in almost 150 brewery projects, whereas Wolf is known to have worked on only thirty-five. Certainly, many of the projects from the Wolf office before 1889 must have been collaborations, if not actual designs by Lehle.

Among the earliest illustrated architectural designs attributed to Fred Wolf was a new brew house and projected malt house of 1880 for Fortune Brothers of Chicago.<sup>51</sup> Published only in a section drawing, the brew house demonstrated that Wolf was completely in touch with contemporary thinking on the proper arrangement of such a structure. All of the brewing equipment was organized vertically in a tall, narrow iron-framed space of several levels to facilitate a gravity-flow system of brewing. The connections among Wolf, Jungenfeld, and Baumann are apparent. Little can be said of Wolf's exterior design for this brewery, aside from *The Western Brewer's* comment that the new buildings "tower high into the air, and are a great improvement for West Van Buren street";<sup>52</sup> they were also said to be solid and imposing, possessing a facade that complemented the new icehouse facade added to the brewery in 1879.<sup>53</sup> Wolf was thus designing something large, substantial, and efficient for a brewery still using an icehouse to lager and store its beer. Shortly thereafter he was promoting a revolutionary new technology—artificial refrigeration—and designing buildings to incorporate it.

Many changes, including some tied to mechanical refrigeration, were visible in Fred Wolf's (and Louis Lehle's?) 1884 design for the Foss-Schneider Brewing Company of Cincinnati (fig. 7.8). This brewery, a descendant of one begun in 1849, had almost outgrown its facilities when it was severely damaged in a February 1884 flood; together, these factors inspired the company to rebuild its plant entirely.<sup>54</sup> Wolf's plans provided a building of architectural grandeur considerably beyond what breweries had possessed in past de-



7.8 Fred W. Wolf (and Louis Lehle?), Foss-Schneider Brewing Company's Queen City Brewery, Cincinnati, 1884; 1938 photograph. (Cincinnati Historical Society)

acades. The Foss-Schneider Queen City Brewery was both highly decorative and very functional. Its street facade was varied but cohesive, arranged in six irregular bays, five of them four stories high and crowned with a tall bowed mansard roof that made room for a fifth floor.<sup>55</sup> Each bay or group of bays served a different function: the three on the left (south) were the brew house proper (further identified by inscription), the fourth was the mill house and wagon entrance to the interior yard, and the fifth was the office, which continued into the shorter sixth bay, the back of which was the boiler house.<sup>56</sup> The entire exterior was a rich mixture of brick, stone, and terra cotta, lively and polychromatic, with a High Victorian flavor of mixed heritage. Windows included both Gothic and Romanesque forms, some with Venetian banding or machicolations, gables were stepped and steep-sided, shaped of Flemish or German character, and the roof form and its circular louvered dormers had overtones of the Baroque and Second Empire styles.

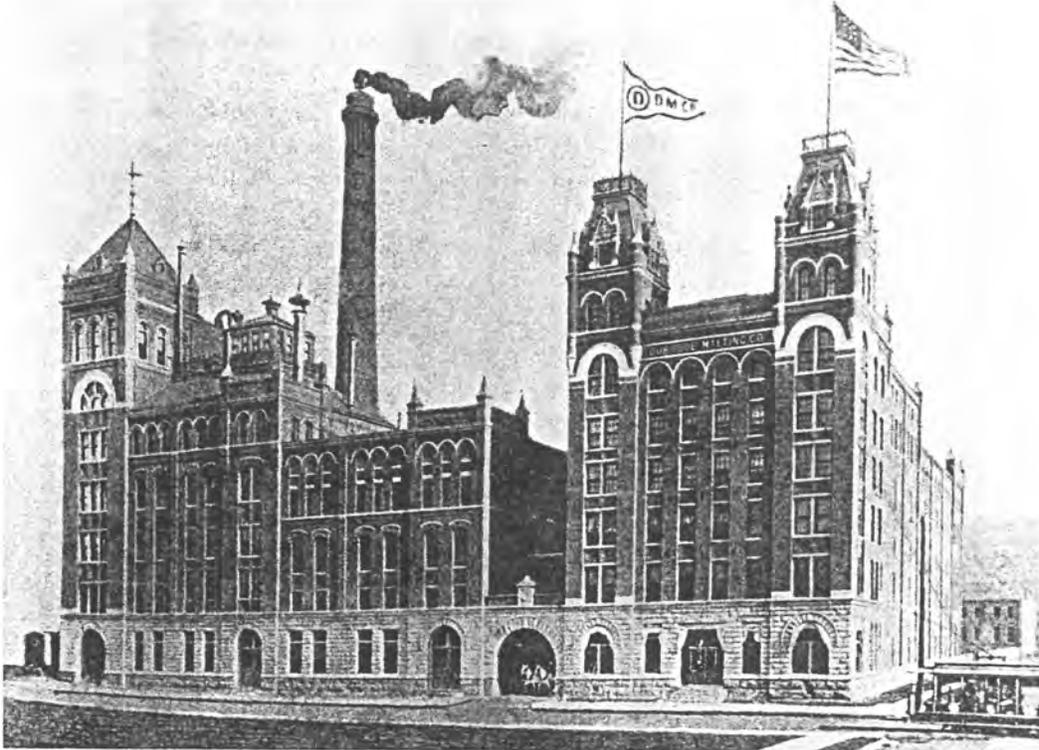
Although the overall form was a horizontal block akin to what was seen in earlier breweries, this one showed neither their balance between wall sur-

faces and openings nor their simplicity of design. The wall was no longer a smooth foil for orderly and largely repetitive openings. It was far more plastic, colorful, and open, and if each bay was carefully ordered by aligning its windows and doors in both directions, variety was clearly more important to the designer(s) than regularity. Visually, the brewery had become a striking architectural element of the city at the same time that it provided efficient spaces in which to pursue a growing business: "the Foss-Schneider Brewing Co. was installed in one of the finest and most completely equipped brewery structures in the country, and Cincinnati was adorned with one more grand and magnificent building."<sup>57</sup>

Inside the brew house proper, according to a 1904 Sanborn Insurance Company map,<sup>58</sup> the brewing equipment was carefully organized, brew kettles behind the windows of the left bay, mash tubs behind those of the right, no doubt to facilitate the gravity-flow brewing that had already become typical. Floors in the brew house were cement and ceilings brick-arched, so that interior framing, although not specified as to material, may well have been iron.

Somewhat different from earlier breweries were the four- and five-story cold storage buildings adjacent to and behind the brew house. These were no longer icehouses, but large above-ground stock houses, perhaps forty feet wide and with a combined depth of about 160 feet, supported internally on wooden posts and cooled with mechanically generated cold produced by machines housed in smaller adjacent buildings. Foss-Schneider had begun using artificial refrigeration in 1882, when it installed two twenty-five-ton ice machines; Fred Wolf reorganized the refrigeration system, installing two additional thirty-ton Linde ice machines in 1884.<sup>59</sup> Appearing in other breweries of this period as well, the above-ground stock house became a new architectural element of the brewery by the mid-1880s, a more sophisticated kind of structure in which to ferment and lager beer, and one whose size could increase easily because it no longer needed to depend on massive quantities of heavy ice as the cooling agent.

Lehle, known to have been working with Wolf at the time of the Foss-Schneider design, eventually broke with Wolf in 1894 and went on to pursue his own successful career in brewery architecture. Although most of his work on his own is later in date than that of other pioneering figures, Lehle may rightly be seen as part of their generation. Like Wolf's, Lehle's career extended into the mid-1910s. Of his nearly 150 additional brewery projects, those for which exterior designs are known generally continued basic design features developed in brewery architecture through the 1880s. For example, Lehle's 1895 brewing plant for the Dubuque Brewing and Malting Company, Dubuque, Iowa (fig. 7.9) struck a kind of balance between the functional layout of its various components and the decorativeness of its Romanesque style. It also possessed a certain crispness of line and general organization that came to be common in Lehle's work. It had a picturesque roofline, broken by towers and short battlements, yet an orderly wall pattern of openings



7.9 Louis Lehle, Dubuque Brewing and Malting Company, Dubuque, 1894–95. (*One Hundred Years of Brewing*, p. 517)

carefully aligned and arcaded across the top; the rock-faced coursed stone of the first story gave the whole a solid, but not overwhelmingly massive, base. All of Lehle's Dubuque buildings had concrete and stone foundations, brick walls and stone trim, and they were fireproofed with interior construction of iron and steel, brick and hollow tile arches, and cement and asphalt floors.<sup>60</sup>

If his exteriors did not change markedly in style, Lehle's structural methods showed his interest in the latest technological advances and his rapid assimilation of new ideas. This is particularly visible in his early use of reinforced concrete as a building material, a technique just coming into its own in the first two decades of this century and reported in accounts of Lehle's work by 1908.<sup>61</sup> In 1911, Lehle built "the first brewery stock house to be constructed wholly of reinforced concrete,"<sup>62</sup> for the Theo. Hamm Brewing Company, St. Paul, using the "mushroom" column system patented by C. A. P. Turner of Minneapolis. The following year, in the same issue of *The Western Brewer* in which Frederick Widmann's history of brewery architecture appeared, Lehle's article "Notes on Brewery Design" concluded with a strong statement encouraging the consideration of reinforced concrete for brewery projects. As he rightly concluded, "This material is destined to

occupy a most prominent place in the building and engineering operations of the future.”<sup>63</sup>

Despite the prominence of brewery architects from Chicago and St. Louis, other cities such as New York also produced early brewery architects of importance. In addition to Jungensfeld and Wolf, Widmann’s 1912 article named as important pioneers in brewery architecture both Charles Stoll and Anthony Pfund of New York City. Neither of the latter pair, however, is as well known as the former, and neither appears to have had nearly as long a career as Wolf or Lehle.

No illustrations and only a few references have as yet surfaced to bear witness to Stoll’s contributions to brewery architecture. He must have been a prominent figure because he was entrusted with the design of the influential “Centennial Brewery,” an exemplary modern working brewery set up in Brewers Hall during the Centennial Exhibition in Philadelphia in 1876. This occasion proved to be a great impetus to the future development of the brewing industry—its coming of age, according to Stanley Baron. Unfortunately, all that is known of Stoll’s model brewery is that it could produce 150 barrels of beer in each brewing, used an icehouse for beer storage, and was the most popular part of the brewers’ exhibit.<sup>64</sup>

Stoll advertised in *The Western Brewer* as a designer, builder, and equipper of breweries and related structures from 1877–85 and, like Theodor Krausch, had his own patented icehouse to offer as well. Three projects by Stoll for breweries in Brooklyn, New York City, and Pittsfield, Massachusetts, were reported in the trade press, none of them illustrated. One of these, the 1877 Otto Huber Brewery in Brooklyn, was noted as being of masonry and iron,<sup>65</sup> suggesting that his approach was at least as up-to-date as anything coming out of Chicago or St. Louis. Still, with so little specific information, Stoll remains an intriguing but shadowy figure, unknown beyond 1885.

Somewhat more information exists about Anthony Pfund’s brewery projects, but he too remains in the background. Of the dozen projects by Pfund reported in the pages of *The Western Brewer* between 1879–83 five were described as new breweries of brick and iron. The use of iron in brewery designs was clearly increasing in frequency in both the East and Midwest. Pfund’s last known but only illustrated project was the new Garryowen Ale Brewery for the Fitzgerald Brothers of Troy, New York, finished in early 1883 (fig. 7.10)<sup>66</sup> The brewery had a capacity of nearly sixty thousand barrels and was six stories high and forty feet wide on the street, 110 feet wide with the adjacent malt house. It was built substantially, with foundations laid on rock, thick walls, girders and pillars of iron throughout, with the first two floors of brick arches between iron joists covered with cement and asphalt.

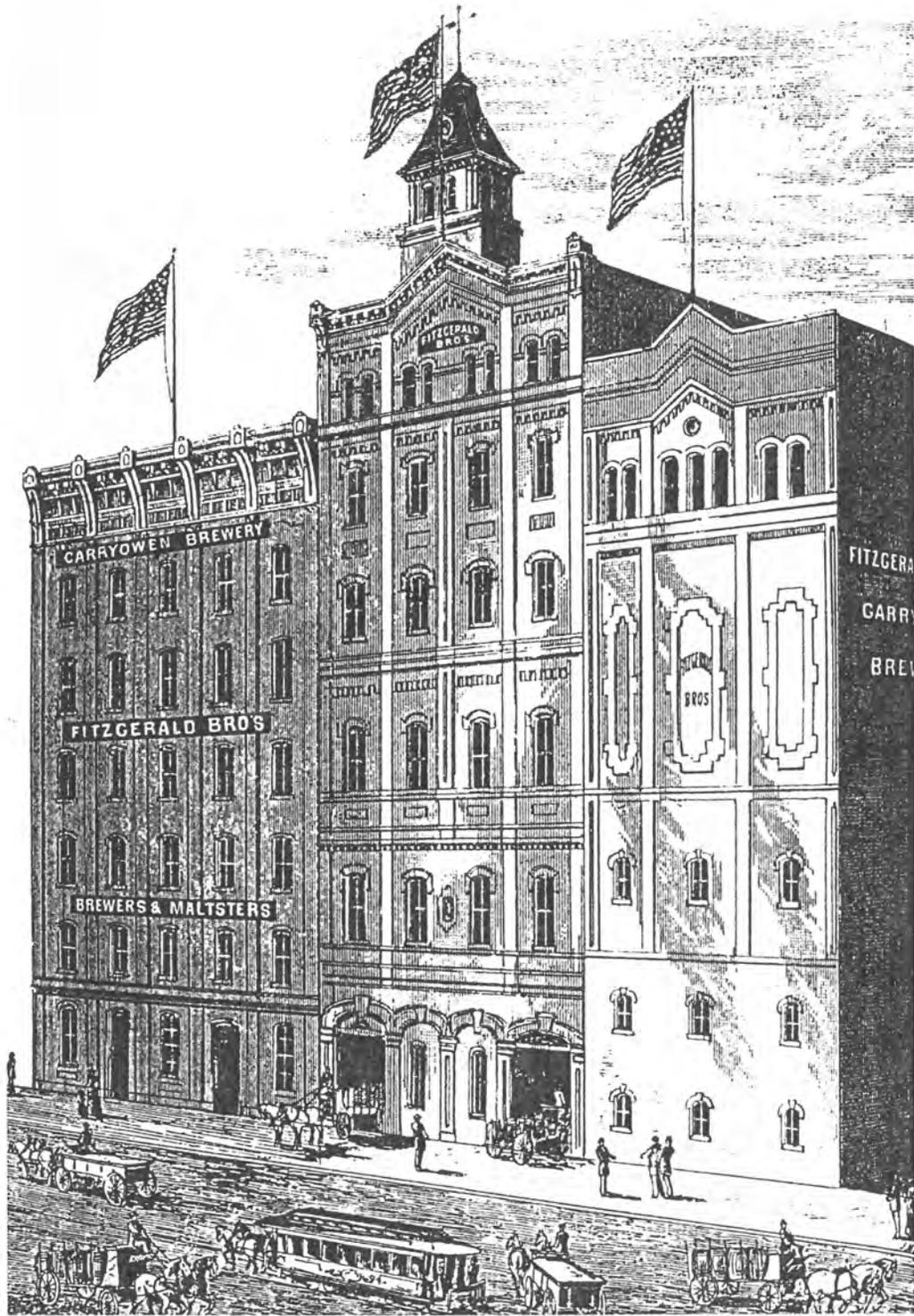
The Garryowen Brewery’s exterior design was restrained in style when compared with Wolf’s design a year later for Foss-Schneider. Both were designed with the facade broken into distinct functional units, each of those ordered into bays and stories with pilasters and stringcourses. However, the overall effect in the Troy brewery was flatter, with less ornamentation

and a greater emphasis on the wall than found in the Cincinnati plant. It is not clear whether these differences can be attributed to the architect's own stylistic preferences or to the fact that this was an ale, rather than a lager brewery, run by non-Germanic owners.

A few other architects and firms were also active in brewery design in the first-generation period, for example, Lederle and Company (Joseph Lederle and Lewis Oberlein) in New York City, and Haas and Parsons Company (with J. D. Parsons) in Philadelphia; David Roberts worked in Canada at the same time. Even less is known of their brewery designs than those of Stoll and Pfund. While many breweries were constructed in the East during the time that the first-generation architects were active, more activity and more inspiration for further refining brewery architecture were generated by brewery architects in the Midwest. Some of them, like Wolf and Lehle, lived long lives that allowed them not only to continue working, but also to train and set examples for younger architects over several decades. Other pioneers, like Jungenfled, died much earlier, but not before training younger designers who carried on and further developed architectural approaches begun by the pioneer generation.

From the solid foundation established by the earliest brewery architects arose the golden age of American brewery design in the 1880s and 1890s. A number of the younger architects who became prominent in this period began their careers in the firms of the pioneers. In St. Louis, Jungenfled's office was the starting point for Frederick Widmann, Robert Walsh, and Caspar Boisselier, who continued Jungenfled's business after his untimely death in 1884,<sup>67</sup> and whose masterpiece was undoubtedly the 1892-93 brew house for Anheuser-Busch, still in use. Jungenfled also employed Wilhelm Griesser, who went on to open an office in Chicago in 1885, pursuing a noted and active career as a brewery designer into the 1910s.<sup>68</sup> Griesser was from 1888-90 the partner of August Maritzen, who got his start in Wolf's office. Maritzen, too, produced a great many brewery projects in the 1890s and attained a considerable reputation in the field.<sup>69</sup> Sometimes the Chicago connection extended beyond the Midwest; for example, Fred Wolf provided training, especially in artificial refrigeration, for the Philadelphian Otto C. Wolf,<sup>70</sup> who became the most prominent brewery architect in the East in the 1880s and 1890s. All of these men and others contributed to the ongoing refinement of the American brewery, yet remained loyal to the ideas, forms, and concepts initiated by the preceding generation.

Second-generation brewery designers also helped launch the careers of still younger architects. The third generation included Chicago-based Oscar Beyer, who had worked with Fred Wolf, then with Griesser and Maritzen, in whose firm he met his later partner, Fred Rautert.<sup>71</sup> More direct family connections also brought new designers into the field. Wilhelm Griesser, for example, saw to the education of his son, Richard Griesser, in American architectural practices and German architectural and brewing schools, then turned over his Chicago office to his son and moved his own operations to



7.10 Anthony Pfund, Fitzgerald Brothers' Garryowen Brewery, 1883, Troy, New York.  
(*The Western Brewer*, February 1883, p. 261)

New York City.<sup>72</sup> Such interrelationships among the three generations of pre-Prohibition brewery specialists gave the field a strong sense of continuity. In spite of competition among architects for brewery projects, most improved gradually on what had already been accomplished, rather than producing radically innovative schemes.

The continuity of development was soon to be broken, however. Architects of the youngest generation, taking the brewery into the early twentieth century, often found themselves designing smaller breweries because the largest companies' needs were generally met by architects with long-established ties to particular firms.<sup>73</sup> In addition, fewer new breweries were being established, in part because the ever-growing national-market firms tended to force smaller brewers out of business,<sup>74</sup> and in part because of the increasing success of prohibitionist forces.<sup>75</sup> With restrictive rationing of agricultural products during World War I, then full-scale national Prohibition, brewers and brewery architects alike found their livelihoods largely cut off by 1920.

From the Civil War until Prohibition, then, American brewery architecture was conditioned by its German heritage, the innovations demanded by the growth of the industry, and the expertise of well-trained architects and engineers. Springing from professional rather than vernacular attitudes initiated by the pioneer generation of brewery architects, both large and small brewing plants became generally more handsome and well-built structures through the later nineteenth and early twentieth centuries. They incorporated ever more sophisticated equipment for greater efficiency and production. To facilitate new brewing and structural ideas, their physical makeup changed, revealing a more scientific attitude among both brewers and architects. In exterior appearance, breweries took part in contemporary stylistic trends, but also expressed the usually German background of brewers, who took pride in making their buildings attractive additions to urban environments. The architects responsible for creating the late-nineteenth-century brewery as a distinctive industrial building type were not merely repeating revivalist styles or tapping into a lucrative source of commissions. They too were often of German heritage, well trained, open to technical innovation and seriously interested in continually improving a kind of building that symbolized the German impact on American culture, ethnically, socially, and technologically.

This phase of the history of brewery architecture was brought to an end by national Prohibition, and its especially German quality was lost in the anti-German furor of the World War I years. When Repeal allowed the resumption of brewing in 1933, many of the old breweries were brought back into operation, but they were frequently surpassed by new needs and new market conditions. Breweries built from that point on reflected other attitudes toward the design of industrial buildings, attitudes seldom sympathetic to the preservation of the old, despite its real beauty and rich history. The few pre-Prohibition breweries that remain nevertheless paint an expressive

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picture of the architects, clients, and complex influences that shaped this colorful element of American industrial architecture in the late-nineteenth and early-twentieth centuries.

#### NOTES

1. Although it is unclear exactly who first introduced lager to the United States, when or where, *One Hundred Years of Brewing: A Complete History of the Progress Made in the Art, Science and Industry of Brewing in the World, Particularly in the Nineteenth Century* (Chicago: H. S. Rich, 1903), recounts the story by Charles C. Wolf, of the firm of Engel and Wolf, Philadelphia, that John Wagner of Philadelphia first made the brew in that city in 1840. Stanley W. Baron, *Brewed in America: A History of Beer and Ale in the United States* (Boston: Little, Brown, 1962), pp. 184–86, notes that lager was made in Philadelphia, New York, Cincinnati, St. Louis, Chicago, Milwaukee, and many other places in the 1840s and 1850s, once the cities' German populations were large enough to make it worthwhile.

2. Both Cincinnati and St. Louis had active breweries by about 1810, whereas Milwaukee's first dated to 1840. By the time lager arrived in the middle of the century, brewing was already a substantial industry in both Cincinnati and St. Louis. Even as late as 1877, Cincinnati was the third largest brewing center in the United States, behind only New York and Philadelphia, while St. Louis was fifth and Milwaukee only ninth. As the largest St. Louis and Milwaukee brewers developed more extensive markets, those cities pulled away from Cincinnati. Thus, in 1882, St. Louis was still the third largest brewing city in the nation and Milwaukee fourth, still behind New York and Philadelphia, but Cincinnati had slipped to sixth behind Brooklyn, *The Western Brewer* 7 (July 1882):1061.

3. Frederick Widmann, "The Development of the Buildings and Equipments of Breweries from Pioneer Times to the Present Day," *The Western Brewer* 38 (January 1912):29–32. Widmann was a principal in the firm of Widmann and Walsh, St. Louis, earlier known as Widmann, Walsh and Boisselier (1898–ca.1907), and earlier still as E. Jungfeld and Co. (before 1884–98).

4. *One Hundred Years of Brewing* states that "steam power, step by step, crowded out manual labor, requiring frequent changes and additions in buildings, caused by the enlargement and the improvement in the operations, [and] more regard had to be paid to an increase of capacity than to fine architecture. . ." (p. 135).

5. James Lindhurst, "History of the Brewing Industry in St. Louis 1804–1860," M.A. thesis, Washington University, June 1939, pp. 34–35. Sources disagree over just when Lemp established his brewery, but Lindhurst cites city directory listings showing him as a grocer at Sixth and Morgan streets in 1840–41, while in 1842, Lemp and Company was a brewing concern on Second Street.

6. D. W. Grissom "Breweries," *Encyclopedia of the History of St. Louis*, ed. William Hyde and Howard L. Conard, vol. I (St. Louis: Southern History, 1899), p. 223. Lindhurst, "History of the Brewing Industry," declares that Lemp "opened a new era in the industry and for that reason may well be termed the 'Father of modern brewing in St. Louis'" (p. 37).

7. *Ibid.*, pp. 35–36.

8. *Missouri Republican*, April 10, 1845.

9. Lindhurst, "History of the Brewing Industry," Appendix A. According to this

chart, the top producer in St. Louis for 1850 was the Winkelmeyer Brewery, whose annual production of 7,500 barrels of beer and ale was valued at \$40,000; the smallest was the Gast Brewery, whose 150 barrels were worth \$750. Adam Lemp, George Busch, and Charles G. Stifel all produced 4,000–5,000 barrels valued at about \$24,000, tying for the fifth largest spot among the seventeen operating breweries.

10. *Ibid.*, p. 73.

11. Richard Compton and Camille Dry, *Pictorial St. Louis: The Great Metropolis of the Mississippi Valley* (St. Louis: Compton, 1875), p. 191.

12. "The Late Geo. M. Herancourt, Cincinnati," *The Western Brewer* 5 (July 1880):698.

13. George Rapp, an architect raised and trained in Cincinnati, was especially active in Cincinnati brewery projects in the 1880s. According to Andrew Morrison, *The Industries of Cincinnati* (Cincinnati: Metropolitan Publishing, 1886), Rapp was a fellow of the American Institute of Architects, president of the Association of Ohio Architects and of the Cincinnati Chapter of Architects, and vice president of the Western Association of Architects (p. 214). He was reported to have designed the new brewery for the Herancourt Brewing Company in *The Western Brewer* 10 (February 1885):280.

14. Conrad Windisch was the son of a Bavarian brewer, came to Cincinnati about 1851, and worked in the Herancourt Brewery, among others, before becoming the partner of Christian Moerlein in 1854. In 1866, he sold his interest in the Moerlein Brewery, largest in Cincinnati, to form his own with the Muhlhauser brothers. *One Hundred Years of Brewing*, pp. 408–9; "Conrad Windisch, Esq., Cincinnati, O.," *The Western Brewer* 5 (December 1880):1273. Gottlieb Muhlhauser was also Bavarian-born, but emigrated to the United States as a child, according to *One Hundred Years of Brewing*, pp. 408–9. He and his American-born brother, Henry, operated a successful steam flour mill before associating with Conrad Windisch in the new brewery in 1866.

15. G. A. Muhlhauser, Receipt Book, 1866, collection of Rick Muhlhauser, Cincinnati, Ohio. This receipt book includes records of expenses for constructing the cellars, including materials such as lime and stone, actual digging, and masonry work.

16. In 1850, 431 U.S. breweries produced more than 750,000 barrels of beer, and per capita consumption was a little more than one gallon per year, *One Hundred Years of Brewing*, pp. 252–53; Baron, *Brewed in America*, p. 226. By 1870, those numbers had increased dramatically: a total of 1,972 breweries produced more than six million barrels of beer, and per capita consumption was 5.31 gallons, William L. Downard, *The Cincinnati Brewing Industry: A Social and Economic History* (Athens: Ohio University Press, 1973), pp. 29, 46. The upward trend continued, although the number of breweries declined, so that in 1890, the production of about 1,930 U.S. breweries surpassed 26 million barrels, and per capita consumption increased to 13.67 gallons, *The Western Brewer* 15 (June 1890):1307; Downard, *Cincinnati Brewing*, p. 46.

17. While some sources, such as *One Hundred Years of Brewing*, p. 348, claim 1857 as the year in which Anheuser acquired the Bavarian Brewery, Ronald J. Plavchan, *A History of Anheuser-Busch, 1852–1933* (New York: Arno Press, 1976), dates the acquisition to 1860 (pp. 14–19). Anheuser, formerly in the soap business, was a major creditor of the preceding firm, Hammer and Urban, which failed in 1860. According to Plavchan, Anheuser was optimistic that the little brewery could be a

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success, despite its being twenty-ninth in size of the forty breweries then operating in St. Louis.

18. Anheuser's production in 1865 was fewer than four thousand barrels, but increased 100 percent in the next year, once Adolphus Busch was part of the firm. *The Western Brewer* 32 (January 1907):46.

19. One example of the laudatory appraisal of Busch's contributions is the following passage from Hyde and Conard, *Encyclopedia of the History of St. Louis*, "The time was opportune for inaugurating the manufacture of beer on a larger scale than had ever before been attempted in America. Adolphus Busch was master of the situation, and at once the enterprise with which he had become connected felt the vivifying effect of his mental force, his commercial acumen, and his splendid executive ability. He had the genius of a general coupled with the instincts of the merchant, and he marshaled the forces which tend to promote commercial growth not only with consummate ability, but with apparent ease" (vol. 1, p. 284). The change in the name of the firm was reported in *The Western Brewer* 4 (June 1879): 531.

20. Jungenfeld was born in 1841, reportedly studied at the best polytechnic schools at Darmstadt, Karlsruhe, and Paris, then traveled extensively, including to England, France, and Italy, before coming to the United States in 1864, *The Western Brewer* 9 (May 1884):829. Adolphus Busch was born about 1840 (accounts vary), was educated at a college in Brussels, then began his business education in a mercantile house in Cologne, emigrating to the United States in 1857, *The Western Brewer* 7 (October 1882):1575.

21. *The Western Brewer* 9 (May 1884):829.

22. *Ibid.*, pp. 829-30. Because of the brewery's rapid growth and increasing need for new buildings, Jungenfeld "was obliged to devote more and more of his time to the training and studying of the smaller details, and the theories of brewing, so as to distinguish what was needful and useful in all the branches of this important business. . . ." In the literature of brewing, if not that of architecture, Jungenfeld is repeatedly referred to through the 1870s and early 1880s in the most glowing terms as a well known and highly qualified brewery architect.

23. In its obituary, "The Late Edmund Jungenfeld," *The Western Brewer* 10 (January 1885):86, proclaimed that "No man better understood the needs of brewers architecturally, or the building and laying out of brewery plant, and in this respect he has left many monuments of his skill and judgement that will carry his name to posterity. There are few men living capable of taking the place he occupied in our trade."

24. *The Western Brewer* 11 (November 1886):2390, commented on the planned design approach of the Anheuser-Busch expansion: "The original design of this vast group of buildings, made by the late Edmund Jungenfeld, is being carefully worked out, as they approach perfection and development—as building after building, elevator after elevator is added, by his successors, E. Jungenfeld & Co., who have charge of the entire work, and who have proved themselves worthy of the fame of their instructor, whose ideas and expert judgement he bequeathed into good hands." As early as 1875, Frederick Widmann, Robert W. Walsh, and Caspar D. Boisselier were listed in the St. Louis city directory as draftsmen for Walsh and Jungenfeld, then for E. Jungenfeld and Company. The three men continued the architectural practice under the latter name following Jungenfeld's early death in 1884. Finally, in 1898, they changed the firm name to Widmann, Walsh and Boisselier, *The Western Brewer*

23 (January 1898):7. Sometime between the end of 1904 and the beginning of 1907, Boisselier disappeared from the firm, which then became Widmann and Walsh. This is the same Frederick Widmann who wrote the article on the history of brewery architecture mentioned earlier.

25. *Pen and Sunlight Sketches of St. Louis* (Chicago: Phoenix Publishing, ca.1892), p. 82.

26. Dimensions for this brew house are rough estimates figured from the few dimensions included in drawings of the updated Anheuser-Busch facilities published in *The Western Brewer* 4 (December 1879): supplement.

27. "Memo from A-B, Inc.," newsletter for Anheuser-Busch Employees, no. 4 [1959], p. 5, Archives of the Missouri Historical Society, St. Louis, Brewing Industry Papers. This account noted Adolphus Busch's response to a major problem of early brewers, before pasteurization was known—how to keep beer from spoiling. Busch made a point of repeatedly visiting Europe and studying all advancements adopted by European brewers, thus learning early of Pasteur's great scientific work. He set his technical staff to work to perfect a method of pasteurizing bottled beer, which was accomplished in 1873, "after years of long and patient effort." Downard, *Cincinnati Brewing*, p. 46, explains that it was Busch's success with bottled beer and his effective system of distributing it by railroad that began to change the brewery into a national supplier, a goal pursued by the great Milwaukee brewers as well, if a bit later. The national scope of their marketing took these brewers into a different realm than the more regionally oriented brewers in Cincinnati, who (aside from Moerlein) never really tried to move in this direction.

28. *The Western Brewer* 3 (July 1878):434.

29. *The Western Brewer* 4 (December 1879):1091.

30. "Great Breweries of the World," *The Western Brewer* 4 (December 1879): 1091-92 and supplemental illustration.

31. *Ibid.*, supplemental illustration. Approximate dimensions were again calculated from the few figures provided in Jungenfeld's drawings published herein.

32. *Ibid.*, p. 1091.

33. *Ibid.* Along with the description of the new buildings at Anheuser-Busch, mention was made here of extensive, presumably preexisting storage vaults under the hill behind the new buildings, "all blasted out of solid rock, arched with bricks 21 ft. 6 in. wide, 13 ft. 6 in. high and cooled by direct application of ice. With the completion of the vaults in course of erection, there will be 1,886 lineal feet of vaults, giving the brewery a total storage capacity of over 50,000 barrels."

34. *One Hundred Years of Brewing*, p. 145.

35. "Great Breweries of the World," *The Western Brewer* 4 (December 1879): 1091, no other mention of Sandford or his system has been found.

36. *The Western Brewer* 7 (January 1882):56.

37. Krausch's advertisement in *The Western Brewer* 2 (June 1877):219, gave a New York City address. In describing a new brewery by Krausch in Chicago, the journal's place of publication, it referred to Krausch as "formerly of New York, but now a permanent resident engineer of this city," *The Western Brewer* 2 (September 1877): 344. Some years later, the same journal ran a biography of Krausch, wherein he was said to have been born in 1828 in Dresden and educated there at the *Kreutz Schule* and Polytechnic Academy. He emigrated to the United States during the Revolution of 1848, and after several years' work in railroad design, turned to the technical aspects

of the brewing business, for which he created any number of important technological devices and systems. His date of death is not known, but in 1885 Krausch was called "one of the oldest, if not the oldest, brewery and mechanical engineers in the country . . ." "Theodore Krausch, Esq., Engineer," *The Western Brewer* 10 (November 1885):2225.

38. Krausch's advertisement in *The Western Brewer* 3 (April 1878):235, claimed that his refrigeration system was working perfectly at A. Ziegele's brewery in Buffalo, and was being constructed for Michael Brand's new Lion Brewery in Chicago.

39. Based on references listed in Krausch's advertisement in *The Western Brewer* 3 (November 1878):764.

40. Lemp's 1885 brew house is not discussed herein because most images which include it show it so enclosed by other structures as to make it difficult to analyze effectively.

41. At this writing, I have uncovered roughly 1,680 architect-designed brewery projects dating between the 1860s and 1910s and created by 67 known architects or firms. They range in scope from providing some small component of a brewery to designing whole new plants. Of these 1,680 projects, the majority came out of four major cities: 858 projects can be attributed to architects from Chicago, 460 to those from Philadelphia, 141 to those from St. Louis, and 82 to those from New York. A second group of four cities provided less substantial numbers of brewery designs: 43 from Cincinnati firms, 36 from Pittsburgh, 24 from Brooklyn, and 12 from Boston. The remainder were scattered among architects in a variety of other cities.

42. See comments on Frederick Baumann as the first German architect to practice in Chicago in Roula M. Geraniotis, "An Early German Contribution to Chicago's Modernism," in *Chicago Architecture 1872-1922*, ed. John Zukowsky (Munich: Prestel-Verlag, 1987), pp. 92-94. Baumann was born in Prussia, studied architecture and building in various trade schools, and attended the university and the Royal Academy in Berlin.

43. Reprinted with illustrations in *One Hundred Years of Brewing*, pp. 136-37.

44. *Ibid.*

45. John P. Arnold and Frank Penman, *History of the Brewing Industry and Brewing Science in America* (Chicago: G. L. Peterson, 1933), p. 114, note that such an ice chamber could be twenty feet high and when full could represent a weight of perhaps 1,150 pounds per square foot.

46. Baron, *Brewed in America*, p. 236.

47. According to Fred Wolf's obituary in *The Western Brewer* 38 (March 1912): 129, he was born near Heidelberg in 1837, educated in local schools, trained first as a locksmith, then in a locomotive works and the sugar industry before studying mechanical engineering at a technical college in Karlsruhe. He emigrated to the United States in 1866, and settled in Chicago in 1867.

48. *The Western Brewer* 7 (September 1882):1395, reported Wolf was the new general agent in the United States for the Linde machine and planned to install a patent Linde *eis maschiene* in the new brew house he was then building for Wacker and Birk, Chicago.

49. Lehle's role was mentioned in a short article, "The Fred W. Wolf Company," *The Western Brewer* 14 (August 1889):1759, which gave considerable attention to current orders placed with the company for Linde ice machines, but also noted how busy it was with architectural design: "Not alone in the machine shops, but also

in the architects' department of Mr. Fred W. Wolf, so ably managed by his partner, Mr. Louis Lehle, do we find this same activity."

50. A notice that Louis Lehle, "late of the Wolf & Lehle Co.," had opened his own offices appeared in *The Western Brewer* 19 (March 1894):523. The notice also indicated that Lehle had twenty-two years of experience in brewery and malt house design.

51. A section drawing appeared in *The Western Brewer* 5 (March 1880): supplement, but was referred to only briefly on p. 250. It showed the already finished new brew house for Fortune Brothers and the malt house they planned to add soon.

52. *The Western Brewer* 4 (October 1879):873.

53. *The Western Brewer* 5 (March 1880):250.

54. The flood damage and the choice of Fred Wolf as architect for the new brewery were reported in *The Western Brewer* 9 (March 1884):473. *The City of Cincinnati and Its Resources* (Cincinnati: Cincinnati Times-Star, 1891), p. 92, notes that the flood devastated the city, including the Foss-Schneider malt house, which collapsed while holding sixty thousand bushels of malt; despite the damage, the company's business was still better than the preceding year's. George M. Roe, ed., *Cincinnati: The Queen City of the West* (Cincinnati: Cincinnati Times-Star, 1895), p. 170, says nothing of the flood damage, but noted that Foss-Schneider's business was so large in 1884 that the firm acquired more ground for a larger facility and engaged "a regular brewing architect."

55. The sixth bay at the right (north) was lower and flat-roofed, suggesting the remains of a once-taller bay. The illustration of the brewery generally used in the company's advertising after 1884 supports this notion because it showed a facade ten bays wide with a very tall, separately mansarded tower at this sixth bay. However, a 1904 insurance map (Sanborn Insurance Company, *Insurance Maps of Cincinnati* [New York: Sanborn Map Company, 1904], vol. 1, plate 49) indicates that the brick part of Foss-Schneider was then basically as seen in the 1938 photo, with the sixth bay just two stories high; to its north was only a one-story frame structure. This discrepancy suggests that a good portion of what the company showed in its advertising was never actually built. Artistic license was not unusual in such illustrations, which complicates trying to determine how breweries really looked in the past.

56. Aside from the brew house's inscription, the functional layout was clarified using the detailed plan of the brewery found in the 1904 Sanborn Map.

57. *The City of Cincinnati and Its Resources*, p. 92.

58. Sanborn Insurance Company, *Insurance Maps of Cincinnati*, vol 1, plate 49.

59. *One Hundred Years of Brewing*, 239, mentions the machines installed in 1882 without identifying their make. Those acquired from Fred Wolf in 1884 appear as numbers 230 and 231 in a list of Linde machines then in operation in "The Linde Ice Machine," *The Western Brewer* 10 (April 1885):688-89.

60. "Brewing in Dubuque, Iowa," *The Western Brewer* 20 (February 1895): 358-59.

61. Lehle's experiments with this material dated to the earliest phase of its development for large-scale building projects. As reported by Sigfried Giedion, *Space, Time and Architecture*, 5th ed. (Cambridge: Harvard University Press, 1967), pp. 325-27, reinforced concrete was first used in the United States by Ernest Ransome in the 1890s, but not used widely until the first decade of the twentieth century. C. W. Westfall's "Buildings Serving Commerce," in *Chicago Architecture 1872-1922*, ed.

Zukowsky, indicates that in Chicago, traditional mill construction "was challenged at the turn of the century when reinforced concrete began to be used in special applications, but this alternative to traditional construction did not become the dominant system until after World War I" (p. 81).

62. "Concrete Construction as Applied to a Brewery Stock House," *The Western Brewer* 36 (April 1911):176-77.

63. Louis Lehle, "Notes on Brewery Design," *The Western Brewer* 36 (January 1912):10-15.

64. Baron, *Brewed in America*, pp. 226-27.

65. The most detailed account of a Stoll project accompanied the announcement of the opening of Otto Huber's model brewery in Brooklyn in *The Western Brewer* 2 (November 1877):462. The new brewery was described as thirty-four by seventy feet in plan and five stories high, built of solid masonry and iron, with a malt tower and cupola on top bringing the height to 110 feet. It had a capacity of sixty thousand barrels per year. Stoll must have been well established in the trade as a brewery designer, given that he was here acclaimed as having "again won lasting praise for his thorough experience and judicious judgement in designing and executing brewery work."

66. "Brewing in Troy, N.Y.—Fitzgerald Bros.," *The Western Brewer* 8 (February 1883):261 and supplemental illustration, n.p.

67. An obituary for Edmund Jungenfeld in *The Western Brewer* 10 (January 1885):86, stated that Widmann, Walsh, and Boisselier had long been employed by Jungenfeld, were selected by him as his successors, and had been "fully and heartily endorsed by all brewers and maltsters with whom they were thrown in contact during their service with the deceased."

68. Griesser was born in Baden, Germany, where he worked as an architect for some time before emigrating to the United States. He worked in Jungenfeld's St. Louis office until the latter's death in 1884, then established his own office in Chicago; his first complete brewery plant was built for the Keystone Brewing Company of Pittsburgh, 1885-86, "Brewing in Pittsburgh," *The Western Brewer* 11 (July 1886):1447. The pages of *The Western Brewer* reveal more than 125 other brewery projects created by Griesser all over the country and dating up to 1915.

69. August Maritzen's work after the demise of his partnership with Griesser was extensive, although limited in time. Nothing was heard of him after the end of 1898, but by then he had worked on almost eighty projects in every region of the country and internationally as well, *The Western Brewer*, 1890-98, passim.

70. Despite their having the same family name, no family connection between Fred Wolf and Otto Wolf has surfaced. Otto C. Wolf was the son of Charles Wolf, an important early lager brewer in Philadelphia. After being educated in mechanical engineering at the University of Pennsylvania, Otto Wolf spent three years with Fred Wolf's company in Chicago, familiarizing himself especially with the intricacies of mechanical refrigeration. He opened his own office in Philadelphia in 1883, and at his death in 1916, was said to have completed 572 projects, the vast majority of them for breweries. "Otto C. Wolf, Deceased," *The Western Brewer* 48 (January 1917):5.

71. Oscar Beyer and Fred Rautert first appeared as the Chicago firm of Beyer and Rautert in 1893, after both had worked with various other architects and firms specializing in brewery design. Beyer had been with Fred W. Wolf for a number of years, then was foreman for Griesser and Maritzen (whose firm was dissolved in late

1890), and continued with August Maritzen. Rautert had worked with Charles Kaestner and Company, then Griesser and Maritzen (where he presumably made contact with Beyer), and was briefly a partner in Lewandowski and Company before joining Beyer. *The Western Brewer* 18 (November 1893):2446.

72. Born in Baden, Germany, in 1868, Richard Griesser came to the United States at the age of seventeen, about the same time that his father opened his practice in Chicago; obituary for Richard Griesser, *Illinois Society of Architects Monthly Bulletin*, 23 (December 1938–January 1939):8. In 1892, after six years' experience in his father's office, Griesser returned to his native Germany to complete his studies in architecture and engineering in German technical schools and to take a course in the German brewing schools, which further prepared him for a career in brewery architecture; *The Western Brewer* 17 (November 1892):2489. After his return in 1895, Griesser probably spent another few years with his father, then opened his own office in Chicago in 1900; *The Western Brewer* 25 (January 1900):12, his first advertisement appeared on page 52. At that same time, Wilhelm Griesser moved his base of operations to New York City, where he had previously had a branch office, turning over his Chicago business to his son. The Wilhelm Griesser Engineering Company was first noted as being located in New York, rather than Chicago and New York, in late 1899, in a notice in *The Western Brewer* 24 (November 1899):446.

73. Edmund Jungenfeld, for example, has already been cited as the architect responsible for beginning the development of the Anheuser-Busch plant in St. Louis as early as 1869. As has also been indicated, his ideas were carried out and expanded after his death almost exclusively by his successors, E. Jungenfeld and Company (later Widmann, Walsh and Boisselier, then Widmann and Walsh), through 1912. In like vein, Fred Wolf served as primary architect for another major firm, the Joseph Schlitz Brewing Company, Milwaukee, from 1874 to the breakup of his partnership with Louis Lehle in 1894; "The Jos. Schlitz Brewery, Milwaukee," *The Western Brewer* 16 (May 1891):1106. Lehle is recorded in *The Western Brewer*, 1895–1911, passim, as carrying on all known additional projects for Schlitz before Prohibition.

74. Baron, *Brewed in America*, p. 260, comments on the stiff competition that raged among the national brewers and their ability to take business away from smaller local brewers, thanks to their superior facilities and capital for advertising. He also notes (p. 265) that one means of insuring a free field in an economy based on free competition is to buy a competitor's plant and operate it as a branch of one's own or to shut it down completely.

75. *Ibid.*, chap. 32, "The Brewing Dynasties and Their Enemies," pp. 286–94, and chap. 33, "Victory of the Drys," pp. 295–310. Although national Prohibition did not officially go into effect until January 1920, from 1917 on, brewers and distillers were increasingly cut off from supplies by crop failures, labor shortages, and wartime concerns for food supplies. The growing power of the Anti-Saloon League of America and its commitment to the prohibition of alcoholic beverages meshed with these conditions to bring about passage of the 18th Amendment. The groundwork had already been laid by campaigns to impose prohibition on a state-by-state basis; as noted in Donald Bull, Manfred Friedrich, and Robert Gottschalk, *American Breweries* (Trumbull, Conn.: Bullworks, 1984), p. 9, nine states were dry in 1912, fourteen in 1914, and twenty-three in 1916.

**MATT'S PREMIUM LAGER**—slightly skunky aroma that carries into the taste, metallic flavor, aftertaste of grain. *Note:* Both rice and corn are used as adjuncts in this recipe.

**FORT SCHUYLER LAGER BEER**—grainy barley aroma that reflected the taste that followed, some hops underlying the grainy flavor, very dry, brief finish. A fairly good beer at its price. It is called "the beer drinker's beer," a claim that has got to be one of the more pretentious on a U.S. label (the prize, however, goes to "the expert beer drinker's beer" [Courage Draught of Australia]).

**BILLY BEER**—bright yellow, sour malty well-hopped nose, faintly skunky in back, very dry, doubtful balance, short metallic finish. Totally different from Billy Beer of Falls City, this brew seems slightly similar to fort Schuyler.

D. G. Yuengling & Son, Inc.  
(Pottsville, Pa.)

In 1903, stated *One Hundred Years of Brewing*, D. G. Yuengling & Son was "one of the oldest brewing establishments in the country in continuous existence." That claim is still true; Yuengling is the oldest brewery in the United States for continuous operation (even during Prohibition) and for continuous ownership of the same family (since 1829).

David G. Yuengling was born in Germany in 1806 and came to America in 1828. After residing in Reading and Lancaster for one year, he moved to Pottsville and established the brewery, becoming one of the first in the country to make the new "lager" beer.

In 1873 Frederick G. Yuengling was admitted to the partnership, and the same year David G. Yuengling Jr., established an ale brewery in New York City. The New York operation was extended to a second plant manufacturing lager beer, but neither of these ever became successful, and each required continual financial support from Pottsville. They were finally closed down in 1897. A second abortive attempt at expansion was initiated about that time with a

firm in Richmond, Virginia, under the name of Betz, Yuengling, & Beyer.

Members of the Yuengling family have maintained continuous control of the company; the current president is master brewer Richard L. Yuengling, a direct descendant of the founder.

Throughout the entire period, the firm of D. G. Yuengling & Son, Inc. (incorporated as such in 1914) has remained at the forefront of modern brewing technique, and has maintained an extremely high-quality product line.

Yuengling products are marketed primarily in eastern Pennsylvania, but can be found in nearby New Jersey, Maryland, and Washington, D.C. The product line is headed by the very fine Yuengling Premium Beer. The firm also produces Old German Brand Beer, Lord Chesterfield Ale, Yuengling Porter, Yuengling Bock Beer, and a Bavarian Type Premium Beer, attributed by the label to the Mount Carbon Brewery of Pottsville, Pennsylvania.

**YUENGLING PREMIUM BEER**—light gold color, good malt aroma with a subtle hop background. For flavor few beers start off as well as this one. The first few mouthfuls are incredibly clean and fresh with plenty of good hop character and a bright zesty flavor. Then, inexplicably, the flavor sags and becomes quite ordinary after several more sips. That initial effect is very pleasant, however, and sufficient to ensure that this beer be ranked high on the list of America's finest. Try it by all means; it has been seen from Washington to Boston, but not regularly at any one place. This beer is made without any artificial ingredients; only the finest barley malt, corn grits, hops, and natural spring water are used.

**OLD GERMAN BRAND BEER**—darker color than the premium, deep yellow gold, aroma of burnt baked potato, sharp hop taste, bitter finish.

**LORD CHESTERFIELD ALE**—yellow gold, good sweet malty aroma that faded quickly, perfumy sweet and bitter ale taste, plenty of body, lingering aftertaste. Good value for its type; priced quite reasonably in returnable bottles; seen only in Pennsylvania.



**YUENGLING DARK BREW PORTER**—deep copper-brown color, rich malty coffee-like aroma, coffee flavor, finish on the bitter side, lingering aftertaste. Pretty good beer of its type and very reasonably priced in returnable bottles. Seen only in returnables and in Pennsylvania.

**BAVARIAN TYPE PREMIUM BEER**—medium color, sweet malty aroma with hop background, most of the initial flavor is hops, then flavor flattens out in the middle and the finish is quite bitter.

**Australia**

Australia ranks fourth in per capita consumption of beer (trailing Czechoslovakia, Germany, and Belgium), downing about twenty-five gallons each year, but the inhabitants of Darwin in northern Australia are the world's recordholders with a staggering annual consumption rate of over sixty gallons.

Beer in Australia is more than a way of life; it is almost a religion. It is a symbol of manliness, the totem of the rugged individualist, the drink of the frontiersman. It is said that much of the beer drinking in Australia today may be caused by doubts concerning that rugged individualism, for Australians now cluster in cities, for the most part, involved in factory or office jobs, which can scarcely be deemed the milieu of the rugged individualist. So they drink enormous quantities of their fine beers while watching bruising Australian athletic competition.

Brewing began in earnest in Australia in the middle of the nineteenth century and by the 1880s production was about thirty million imperial gallons, with consumption around thirty-two million. The Australian brewing industry has grown in leaps and bounds since then and today a substantial quantity of beer is exported throughout the world. Several years ago Foster's boasted that its lager was the third largest nationally distributed imported beer in the U.S. It was third immediately following saturation advertising to promote sales of the huge 740 milliliter cans (almost a U.S. quart), but it does make the point.



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Warner Books, 1978

## Towers of Strength: Brewery architecture at home and abroad

Lynn Pearson

Paper to be given at the Victorian Society/BHS Study Day 'From Hops to Hostelry: the brewing and licensed trades 1837-1914', Young's Brewery, Wandsworth, London, 25th February 2006.

### **The architectural history of British breweries: An outline**

Early brewing was carried out at homes and on farms, and also in monasteries, producing beer for travellers, pilgrims, and monks; monastery accommodation eventually became commercial, the forerunners of inns. Ale brewing at inns and taverns took place from the mid 13th century; beer was introduced into London from the Low Countries in the early 15th century. Early beer brewers came from the Low Countries and settled in London, near Kent, a source of hops. Demand for ale and beer steadily increased in the 15th century and 16th century; beer was also brewed in universities, schools and country houses.

By the 18th century the purpose-built brewhouse had become an integral part of the offices typically found at the large country house, although its production of steam and smells meant that it had to be sited well away from family quarters; it was often placed close to the bakehouse and laundry. Brewing required good ventilation, thus the structure was normally a good two storeys in height, with large, unglazed louvred windows and often a ventilation lantern on the roof ridge. The height of the brewhouse also allowed full advantage to be taken of gravity during the brewing process, as pumps were either non-existent or inadequate. Country house breweries were still being built in the mid 19th century, and brewing carried on until the early years of the 20th century. Architecturally, these early vernacular brewhouses set the pattern for the industrial breweries of the future: often muted classical in style, with fenestration, ventilation and height marking it out. Later buildings were defined by requirements of power and refrigeration.

Brewing began on an industrial scale in early 18th century London. The earliest of the city's large-scale commercial breweries was probably the Anchor in Southwark, which became Barclay Perkins; a new brewhouse was built there, almost on the site of the Globe Playhouse, in 1700. By 1740 the 'great common brewhouse' had become a relatively well-known sight in London, although most of them were constructed later in the century. The availability of steam-powered malt mills, and pumps to raise the wort back to the copper for boiling, made large-scale brewing even more economical. The provision of labour-saving, modern brewing equipment and ample storage space were key elements in the new industrial breweries, but the central London brewers were often constrained by narrow sites. They had to expand by taking in adjacent properties or building upwards. Ample storage space was necessitated not only by the need to house adequate supplies of malt and hops, but to accommodate the porter vats, in which the beer matured for a year or more. Initially, brewers managed with cellars and tun rooms full of butts (large casks containing 108 gallons), but the large single vessel was a more economic solution to the problem. The use of vats became commonplace after 1760. By the time Barclay, Perkins & Co's Anchor Brewery, Southwark, became the first to break the 300,000

in railway construction allowed Pilsener-style lagers, also brewed in Bavaria, to be transported around Europe, and emigration ensured that beers in Pilsener, Bohemian or Bavarian style - and the breweries to produce them - were soon found in North America and eventually throughout the world; a few lager breweries were even built in Britain.

Before the 1860s, breweries were built on a relatively small, almost domestic, scale, but the late nineteenth century boom in the popularity of lager saw the rise of industrial-scale breweries. European examples tend to have plain, almost Burton-style, exteriors with ornament concentrated inside, often in the brewhouse itself. The Weilemans-Ceuppens Brewery moved from the centre of Brussels to a suburban site in 1879, expanding greatly (architect Bordiaux) during the 1880s when they began to brew 'Munich-type' beers. Further expansion followed in the early 1900s and in 1930 with the modernist brew house (architect Adrien Blomme); the latter is currently being converted to an arts centre. Another notable early twentieth century brewery is at Dortmund, the Dortmunder Union Bräuerei, dating from the 1920s; only the landmark brewhouse remains.

European, and especially German, brewhouse interiors are often tiled and frequently include stained glass windows with brewing imagery. Northern French artisan breweries often have particularly ornate exteriors, making use of colourful ceramic tiles, produced around Beauvais, just south of the main brewing area. One of the most elaborate brewhouses in Europe is at the palatial Feldschlösschen Brewery in Rheinfelden, Switzerland, which was completed in the 1890s, although the interior was altered in 1908. A stained glass window depicts one of the firm's founders, there are marble-faced columns and unusual tiling and mosaic work. Another well-known idiosyncratic and ornate brewhouse can be seen at the Carlsberg Brewery (built 1892-1901) in Copenhagen, designed by Carl Jacobsen (son of Carlsberg's founder) with architect Vilhelm Dahlerup (1836-1907). The brewery sports all sorts of imagery including tile murals of brewery workers and the Elephant Gate, which is supported by four 15 foot tall elephants carved from Danish granite.

### **North America**

German-style lager quickly became tremendously popular in North America, after its introduction by the many German immigrants reaching America in the 1840s. Many of them settled in the midwest, and from the late 1860s (following the Civil War of 1861-5) professional engineers and architects, often trained in Germany, began to specialise in brewery design; Chicago (Illinois), a noted brewing city, was the base of many brewery architects. By the 1880s, breweries were being constructed on a vast scale, with Cincinnati (Ohio) the leading brewing centre until it was displaced by St Louis (Missouri) in the early 1900s. The Windisch-Mulhauser Lion Brewery (now demolished), Cincinnati, was built in 1866 by three brewers with German backgrounds, and the brewery was much expanded before the turn of the century. This pattern was repeated in many other American towns and cities.

The American Brewery, Baltimore (Ohio) was built in 1863 by the German immigrant John Frederick Weissner, then rebuilt and enlarged in 1887. The Lone Star Brewery, San Antonio, Texas, built 1883-4 by a group of businessmen brought

together by Adolphus Busch of St Louis. Its early buildings were wooden, and were replaced from 1895 by brick structures with flat roofs, crenellations and round-headed windows; the former brewery reopened as the San Antonio Museum of Art in 1981. The F. W. Cook Brewery in Evansville (Indiana) was built in 1893 and designed by the architect August Maritzen; it was demolished in the 1960s. Henry Weinhard's City Brewery at Portland (Oregon) was established around 1870 and a new brewhouse added in 1908; the architects were Whidden & Lewis, who were also responsible for many other Portland buildings including the City Hall (1895). What remains of the brewery now forms the centre of the Brewery Blocks Project, a regeneration initiative.

Many of the leading businessmen in Buffalo (New York State) were of German origin. Several small breweries were established there in the 1840s, and by 1896 there were nineteen large firms including Germania, Magnus-Beck, Gerhard-Lang and the German-American Brewing Company. Most of these large breweries were still managed by their German-American founders or their descendants. Decorative elements similar to those found inside German brewhouses also appeared in American buildings: in Detroit (Michigan), the 1912 brewhouse built for Stroh's Lion Brewery by the German firm of Topf & Sons of Erfurt had hand-painted tiling from the local Pewabic Pottery, a nationally-known arts and crafts pottery established in 1903. Appel (1991, p206) suggests that German brewers took pride in making their buildings attractive, symbolising the German impact on American culture.

Charles Centlivre was born in France and emigrated to America in 1847, opening a brewery - known as the French Brewery - in Fort Wayne (Indiana) in 1862. Fire destroyed the brewery in 1889 but it was immediately rebuilt on a much larger scale, with a massive brewhouse and other structures set within a park; the remaining buildings were demolished in 1989.

The huge scale of some of the turn-of-the-century breweries is illustrated by Portner's Brewery in Alexandria (Virginia), established during the Civil War and extending over four blocks in area by 1895. In Milwaukee (Wisconsin), Schlitz coined the slogan 'The beer that made Milwaukee famous' and Pabst became a national giant. Adam Lemp established his lager brewery in St Louis (Missouri) in 1841-2, his son William J. Lemp moving to a new site and expanding the plant until by the 1870s it was the biggest in St Louis. The firm was the first to introduce coast-to-coast distribution of its beers, and the brewery eventually covered five city blocks. Since brewing ceased, it has been used as workshops for artists; the caves still exist, and it is planned to be a national brewing museum. The earliest part of the mammoth Anheuser-Busch Brewery complex in St Louis was designed by the German-born and German-educated architect Edmund Jungfeld for Anheuser & Co in 1869; Jungfeld, who died in 1884, became a specialist brewery architect and employed other significant architects in his practice.

### **Australia, Africa and Asia**

Immigrants from the British Isles played a large part in Australia's brewing history, but the climate made it difficult to make English-style top fermented ales, and it was not until lager was introduced that the numerous small-town breweries - often with

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**P R E S S**

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# Building Milwaukee's Breweries: Pre-Prohibition Brewery Architecture in the Cream City

*By Susan K. Appel*

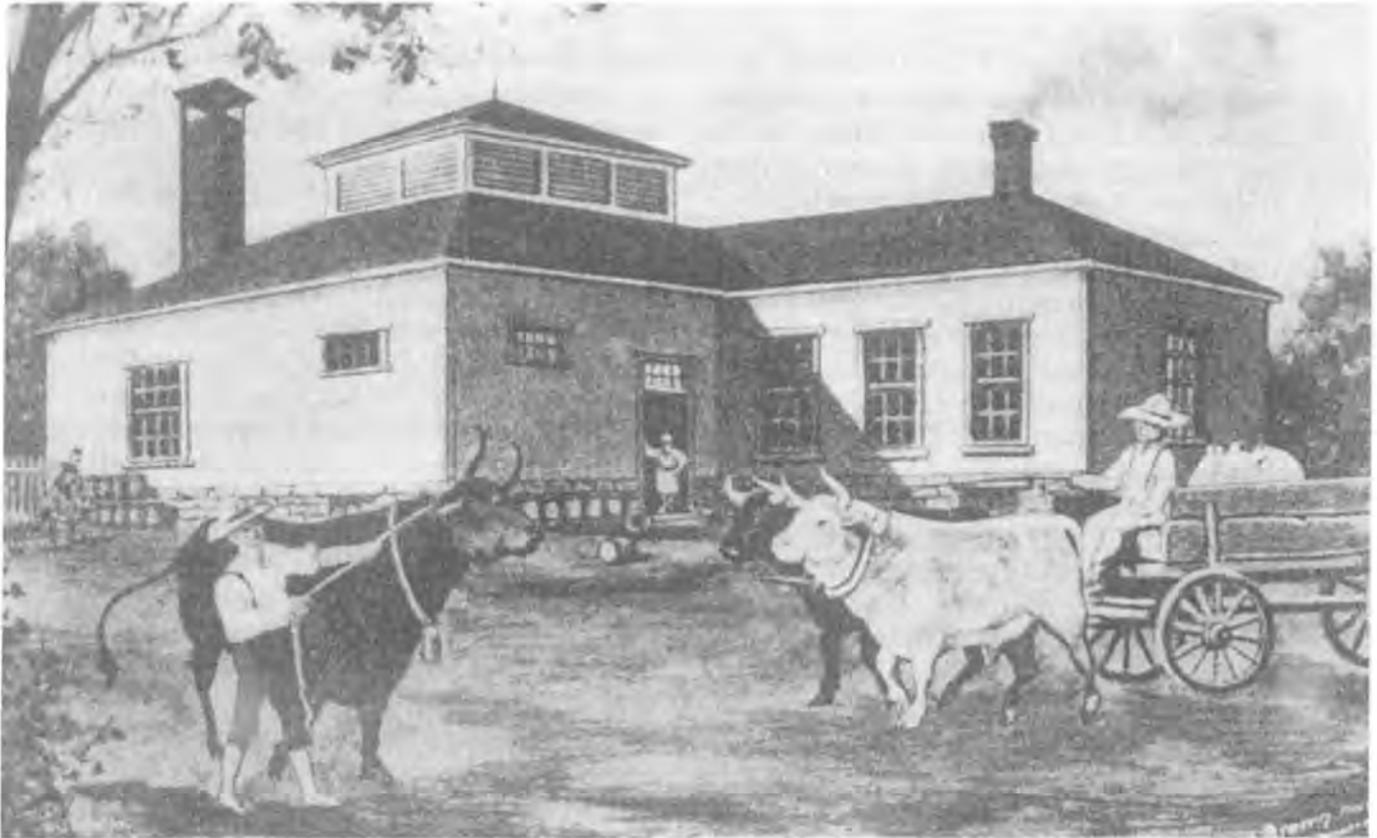
MILWAUKEE beer and the breweries that produced it are the stuff of legend. To this day, despite the decimation of Milwaukee's once-great collection of nationally significant brewers, the American public continues to associate the city with beer and brewing. And although Schlitz, Blatz, and many other smaller trademarks have disappeared from the local scene, many of the plants that once produced them survive. Milwaukee therefore provides a special opportunity to investigate the architectural development of the brewery in its heyday.

Still, Milwaukee's love of beer and brewing was not unique or isolated. Rather, it was part of a widespread phenomenon throughout the Midwest. Indeed, by the time Milwaukee's first breweries were built in the early 1840's, such buildings had

been operating in Cincinnati and St. Louis for a generation. Over the next eighty years breweries in all three cities, and in many others as well, prospered and were transformed into a distinctive and impressive type of industrial architecture.

The breweries of Cincinnati and St. Louis evolved along very similar lines, suggesting a pattern of architectural growth and change that might, in theory, be expected to repeat itself in other midwestern brewing centers, such as Milwaukee. To explore this question requires looking at the city's breweries individually, in comparison with one another and with breweries elsewhere, and against the backdrop of American brewing as it matured in the nineteenth and early twentieth centuries. The city's breweries must not only be looked at individually but also compared with one another, and with breweries elsewhere. This approach should disclose similarities as well as differences in the architectural responses of various companies to growth and competition, technological and scientific change, and economic and political vagaries of the period. Though the final returns are by no means in, the evidence strongly suggests that Milwaukee's brewers and breweries did in fact parallel, in broad terms at least, the architectural

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*Jacob Best's Brewery in Milwaukee, about 1844. Illustration from One Hundred Years of Brewing.*

eries grew, although through the mid-nineteenth century, even very successful commercial breweries remained rather small. The first buildings constructed by early midwestern brewers were products of the near-frontier nature of the region.<sup>5</sup> They were simple vernacular structures, built by ordinary builders according to established customs.

In Milwaukee, virtually none of these early brewery buildings survives, and only rarely is there much evidence of what they

looked like. Not surprisingly, no images have surfaced of either of the first two Milwaukee breweries. Even verbal descriptions are scarce, although the original Reutelshöfer brewery was apparently one-and-a-half stories high, with a basement under its east end that extended into a bank of ground; this space must have served for aging the beer.<sup>6</sup> The initial Owens, Pawlett and Davis brewery was

<sup>5</sup> This frontier-like state is captured in Frederick Miller's experience shortly after purchasing his brewery in 1855. According to "Miller Plant Still Run by Family," in the *Milwaukee Sentinel*, April 7, 1933, "His new brewery was rather far from the center of town, as the newcomer was to realize when, shortly after his arrival, a black bear ambled out of the bushes across the road from Miller's plant. The young brewer shot the bear and then went back to his brewing."

<sup>6</sup> Schnabel, "History of Milwaukee Breweries," 3. According to Schnabel, Reutelshöfer's business was taken over by a creditor, J. J. Meier, who turned it over to his father-in-law, F. Neukirch, who in 1848 gave it to his son-in-law, Charles T. Melms. It was Melms "who started to brew along scientific lines" and who developed the brewery into the largest of its kind in the city, surrounded by spacious grounds used as a popular beer garden. It apparently continued in use until the mid-1860's, though by then it had been relocated, rebuilt, and enlarged well beyond its original modest beginnings. See also notes 3, 32, and 58.



*Frederick Miller's Plank Road Brewery, about 1870. Photo courtesy the Milwaukee County Historical Society.*

family than many other immigrant brewers. He left Germany in 1854, apparently in response to mid-century political upheavals and family tragedy. He brought with him to the United States the substantial sum of \$10,000 in gold,<sup>13</sup> traveling and discussing with other brewers in this country where best to establish a new business before investing \$8,000 in the Plank Road Brewery.<sup>14</sup>

In Miller's first year in his new brewery he, like Jacob Best, made perhaps 300

<sup>13</sup> *Ibid.*, which reports that Frederick Miller was born in Riedlinger, Württemberg, Germany, November 24, 1824, into a family of politicians, scholars, and businessmen. He reportedly received \$3,000 per year from his ancestral estate. Although heir to his father's wholesale business, Frederick was more interested in brewing, which he learned in seven years' study with an uncle in Nancy, France. Returning to Germany, Miller leased the Royal Brewery at Sigmaringen, which prospered under his supervision. A 1933 account in the *Milwaukee Sentinel* echoed the anonymous source's claim that Miller carried \$10,000 with him to America.

A pamphlet produced in 1980 by the Miller Brewing Company, "The Miller Legacy," reported that Miller's decision to emigrate to the United States resulted from "political difficulties, the stifling of personal freedoms and the tragic loss of his family." This last was noted by Miller himself in a

barrels of beer. Also like Best's, Miller's brewery was architecturally very simple, although his first building of clapboarded frame construction was somewhat more residential in form. Early on, brewery growth came through additions to the main structure or by building other structures adjacent; the building at the far right (above) was the new brewery built in 1870.<sup>15</sup> Miller also expanded the beer vaults here over a number of years, until they could lager 12,000 to 15,000 barrels of beer. Such vaults—also called caves or cellars—were dug by hand and lined with

letter to his relatives in Germany in the summer of 1879, where he mentioned, without explanation, having lost seven children and his wife "in the flower of their youth." Typescript copy in English of "Letter Written by Frederick Miller to Relatives in Germany, Milwaukee, End of July, 1879," in the Milwaukee County Historical Society. After settling in the Milwaukee area, he remarried and began another family, which in 1879 included four children. If there were political reasons for his move, Miller was likely responding to the upheavals in Germany in the wake of the revolutionary period around 1848, which brought so many other Germans to America.

<sup>14</sup> *History of Milwaukee, Wisc.* (1881), 1463.

<sup>15</sup> *Ibid.*, 1463.

Krug's business began to change in 1855 with the arrival in Milwaukee of the young Joseph Schlitz, a native of Mainz, Germany, who found employment as August Krug's bookkeeper. Through his commercial training and mechanical knowledge, Schlitz became invaluable to Krug. And when Krug died in 1856, Schlitz took charge of the business for his employer's widow, investing in the brewery himself and, in 1858, becoming Mrs. Krug's husband.<sup>18</sup>

The image on the facing page shows the Krug-Schlitz brewery, probably in the later 1850's. By that time it had developed into a compact complex of several buildings, possibly including the brewer's residence just left of center. Most notable among this collection of buildings was the one at the far left. Decidedly Late Federal in style, if a vernacular example, this symmetrically composed three-and-a-half-story structure was probably brick and had parapeted end walls, each with double chimney stacks. It seems likely to have been built before the less "styled" industrial structures adjoining it, and it may have been Krug's original brewery. Such an identification is supported by the close resemblance of this structure to what is today the only brewery building of the 1850's still standing in Milwaukee: the former Gipfel brewery, constructed in 1853 at 423 West Juneau Avenue (page 170).<sup>19</sup> Since the Federal style is usually

first vault in the city used for storing lager beer, and it later served as a storage cellar for lager beer and wine; particularly that of Philip Best and Otto Zweitusch." (This undated typescript contains many discrepancies with other sources, making it a difficult source to rely on; but it also provides tantalizing details not found elsewhere.)

<sup>18</sup> "Joseph Schlitz Brewing Company," *History of Milwaukee, Wisc.* (1881), 1464. See also "House Called Schlitz...", 1933, 4; Schnabel, "History of Milwaukee Breweries," 6; and Rohde, "Story of the Jos. Schlitz Brewing Co.," 1.

<sup>19</sup> Landscape Research [Randy Garber, ed.], *Built in Milwaukee* (Milwaukee, 1983), 74. See also "Gipfel Brewery," file HABS WIS 40 Milwa, 11-, in the Historic

thought to have died out decades before mid-century, both buildings show how earlier architectural styles hung on in newer regions of the country beyond their more common endpoints in older areas.

The preceding examples demonstrate the limited scale yet varied architectural forms used for Milwaukee breweries before the Civil War; these parallel what is known of midwestern brewery forms elsewhere in the same period. The increasing numbers of Milwaukee's breweries also suggest the growth of the industry, a trend likewise borne out regionally and nationwide. On the other hand, while Milwaukee was gaining on other midwestern brewing centers, it remained smaller in the period before the Civil War. By 1859 there were about twenty-six breweries operating in Milwaukee.<sup>20</sup> At that time, Cincinnati had thirty-six and St. Louis, forty; Chicago, like Milwaukee a latecomer to the brewing industry, had only twenty-two breweries in 1860.<sup>21</sup>

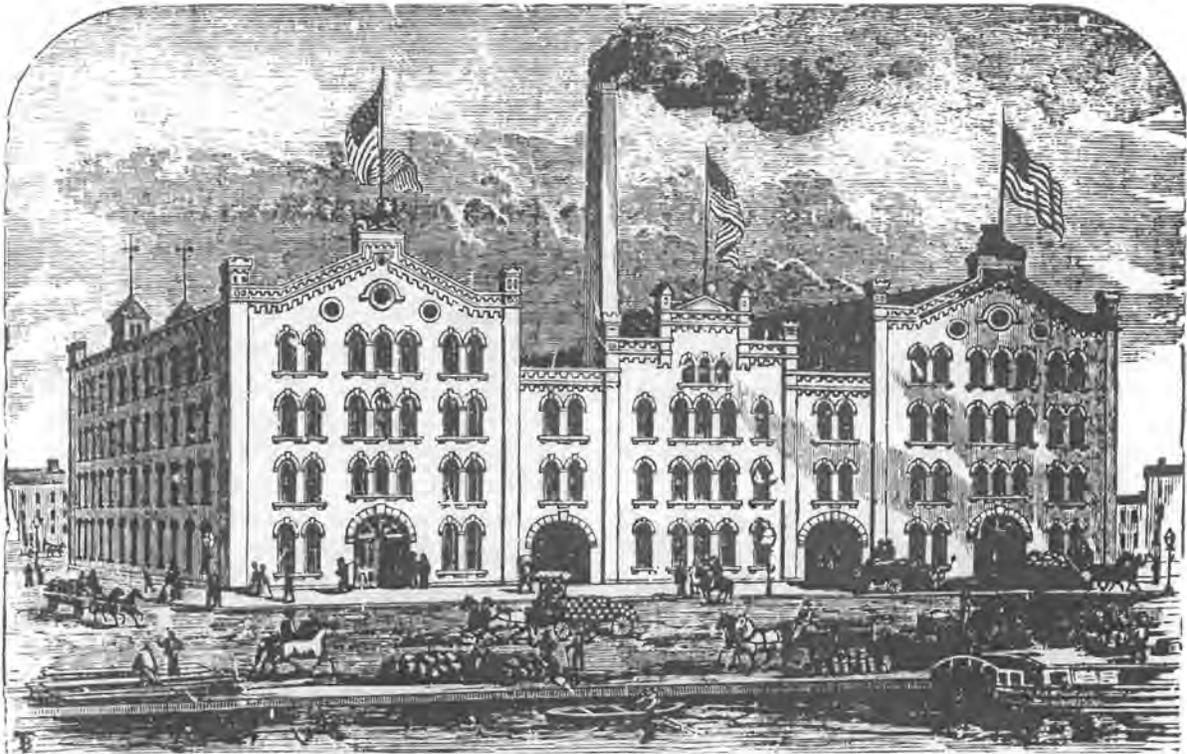
The economic depression of 1857-1863 interrupted this prosperity, but the popularity of beer, especially lager, increased dramatically in the U.S. during and following the Civil War, a fact which was felt very directly by breweries in the

American Buildings Survey, National Park Service, Washington, D.C.

The typescript "History of Brewing and Its Meaning to Milwaukee" reports that in the spring of 1843, Wolfgang Weise began a brewery that was more firmly established later that year by David Gipfel. Gipfel died in 1849, and was succeeded by his son Charles, an able manager who changed the brewery's name to the Gipfel "Union Brewery" and constructed a new building in 1853. Charles continued brewing brown or lager beer until 1872, then introduced weiss beer (brewed from wheat, rather than barley). He still operated a brewery and saloon at this site in 1891, and a saloon for some years after.

<sup>20</sup> "Milwaukee Breweries Totaled 26 in 1856," in the *Wisconsin Beverage Journal*, XVI:12 (April, 1958), 2.

<sup>21</sup> *One Hundred Years of Brewing* (1903), 310. The growth in sheer numbers of American breweries peaked in 1873, when 4,131 breweries were in operation. See Stanley W. Baron, *Brewed in America: A History of Beer and Ale in the United States* (Boston, 1962), 226.



*The Windisch & Muhlhauser & Bro. Lion Brewery, Cincinnati, built 1866.  
Print from Andrew Morrison, The Industries of Cincinnati (1886).*

The emerging reversal in brewing traditions was clear in Milwaukee, which in 1866 produced 68,000 barrels of lager but only 3,600 barrels of ale.<sup>23</sup>

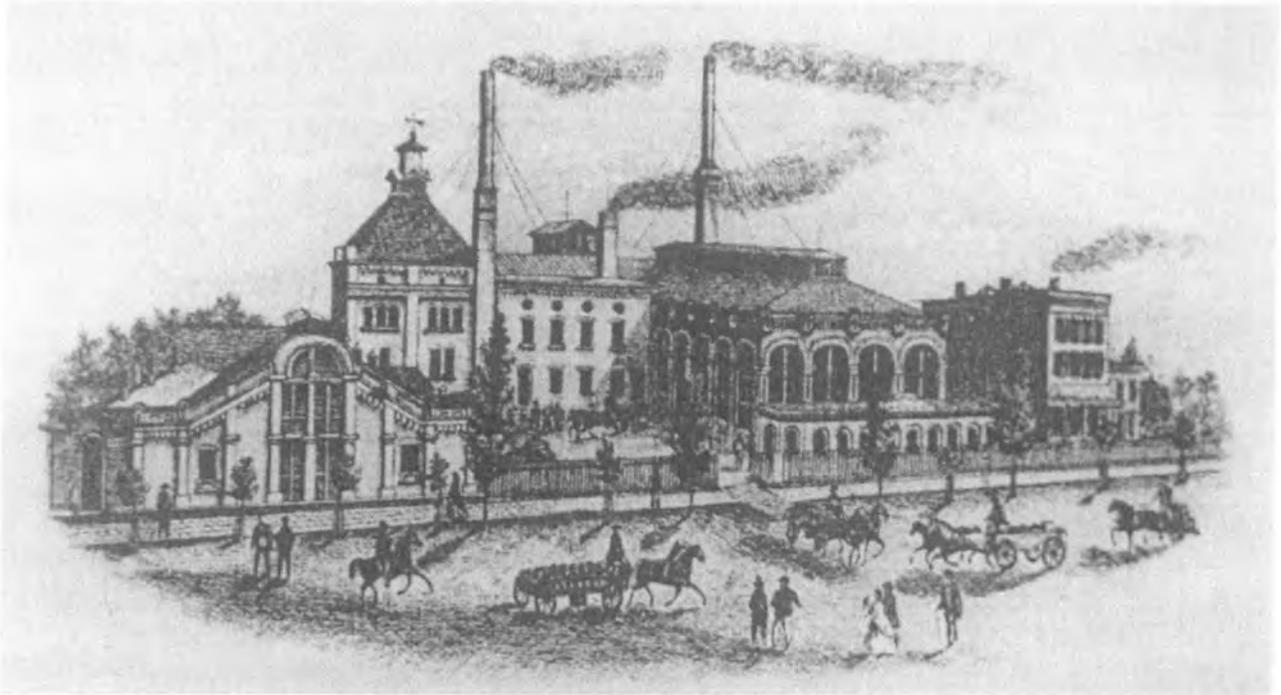
**A**RCHITECTURAL response to these industry-wide changes took the form of larger, more substantial, and more elaborate breweries. In Cincinnati, St. Louis, Detroit, and other important brewing centers, breweries were rebuilt or newly constructed, generally of brick. They grew more style-conscious as well, commonly adopting what has been called the *Rundbogenstil*. This German term, literally “round-arched style,” refers to a version of the Romanesque Revival popular in Germany from the 1820’s through mid-century, and used in German breweries, among many other building types.<sup>24</sup>

<sup>23</sup> *Ibid.*, 189.

The appearance of this style in post-Civil War American lager breweries marked a distinct break in the manner in which these industrial buildings were conceived, and esthetically it expressed some of the changes then being felt in the industry.

In place of the modest structures of pre-War times, lager breweries of the 1860’s and 1870’s became grander in both scale and appearance, as in Cincinnati’s Windisch-Muhlhauser Lion Brewery of 1866 (above). Breweries of this new type still seem to have been vernacular buildings, and no architects’ names can yet be associated with them. But they were clearly more concerned with presenting a stronger, more “styled” public face. Significantly, the style chosen also expressed very directly the Germanic background of both the buildings’ owners and the brewing processes they pursued.

The same phenomenon swept over Milwaukee’s breweries as the city rose to greater prominence in the brewing



*Val. Blatz's Brewery, Milwaukee, in 1865, from One Hundred Years of Brewing (1903), above; Franz Falk's Bavaria Brewery, Milwaukee, below. Photo courtesy the Milwaukee County Historical Society.*



other of its characteristics which must have made the style attractive for industrial use. Individual buildings, while sharing the same general style, could be shaped according to the functions they served yet distinguished from one another visually. This quality was useful to brewers because, in the period after the Civil War, the larger Milwaukee breweries, like those elsewhere, began to develop a more specialized division of tasks among distinct buildings. Such specialization reflected both the growing complexity of the business and the increasing need for more space for particular activities. Best's brewery of 1870 bore out this fact, notably in the leftmost structure (opposite page, bottom). Identified by inscription as the "Phillip Best & Co. Malt House" and dated 1869, it was also visually recognizable as a malt house from the distinctive exterior roof form and exhaust tower of the malt kiln rising at its rear.<sup>32</sup> Nevertheless, the building's over-

<sup>32</sup> In addition to its malting, brewing, and lagering facilities, the Best firm was among several Milwaukee brewers which initiated large-scale bottling operations in the mid-1870's. This new activity quickly brought another architectural element into the brewery's makeup, one that greatly facilitated expansion of the brewery's markets. Best's first bottling facility was not at the Juneau Avenue plant, but was installed in a small structure at its South Side Brewery (the former Melms brewery, which Best acquired in 1869). See *History of Milwaukee, Wisc.* (1881), 1459; also notes 6 and 58.

Adolphus Busch of St. Louis is generally credited with initiating large-scale bottling about 1872. Milwaukee's brewers were quick to recognize bottling's potential value; both Best and Blatz began bottling operations in 1875, and Schlitz and Falk followed in 1877. While bottled beer had existed since the eighteenth century, it was not until the 1870's and the application of the discoveries of Louis Pasteur that it became possible to bottle a sparkling lager that would retain its quality despite climatic changes and the rigors of shipping. It was the success of bottled beer that had much to do with the national-level status of great brewers like those mentioned above. See Ronald J. Plavchan, *A History of Anheuser-Busch 1852-1933* (New York, 1976), 69-77; and *History of Milwaukee, Wisc.* (1881), 1458, 1462, 1464, 1468.

all *Rundbogenstil* qualities tied it together with the other buildings adjacent.

The Schlitz brewery, too, underwent substantial change in the post-Civil War period. In 1870-1871, the old location on Chestnut Street was left behind in favor of relocating the business to the site of its beer vaults, at Third and Walnut. The first buildings constructed here were not only much larger than the old ones but were also much more up-to-date in style, adopting the *Rundbogenstil* seen elsewhere in the 1860's and 1870's. Schlitz's relocation made possible its production of over 12,000 barrels in 1871, nearly three times what this company had turned out in 1865.<sup>33</sup> Some of these buildings of 1870-1871 continued in use for many years, as indicated by a view of about 1890 (page 176). Some of the facades visible here still showed the distinctive groupings of round-arched windows in pilaster-articulated walls crowned with corbel arcades typical of the *Rundbogenstil*, although that style had generally been superseded by 1890.

Between the 1870's and the 1890's, brewery architecture changed considerably, both at Schlitz and throughout America. These changes were in direct response to ongoing growth, as well as other complicating factors, for which the further development of Schlitz's plant and operations may serve as a representative example. By 1890, Schlitz had increased production to between 400,000 and 500,000 barrels of beer,<sup>34</sup> which the

<sup>33</sup> *An Illustrated Description of Milwaukee* (Milwaukee, 1890), 137. At the same time, Best produced 60,668 barrels, according to *History of Milwaukee, Wisc.* (1881), 1458.

<sup>34</sup> "The Jos. Schlitz Brewery, Milwaukee," *The Western Brewer*, XVI:5 (May, 1891), 1106. Schlitz was second in Milwaukee only to Pabst (formerly Best), which in 1890 made over 650,000 barrels, according to a souvenir booklet, "Compliments of Pabst Brewing Co., Milwaukee U.S.A.," August, 1890, in the Milwaukee County Historical Society.

OFTEN the first architect-designed projects were undertaken after brewing companies incorporated. Of the five largest pre-Prohibition Milwaukee breweries, Phillip Best and Joseph Schlitz both incorporated in 1873; Franz Falk followed in 1882, Frederick Miller in 1888, and Val Blatz in 1889.<sup>36</sup> Useful in protecting the firm's members, this practice also raised capital for expanding the plant under professional supervision. Shortly after Schlitz's relocation and reorganization, the new corporation began making use of the services of the German-born Chicago architect Fred W. Wolf, one of the first to concentrate on brewery design.<sup>37</sup> Through the next three to four decades, the architectural development of the Joseph Schlitz Brewing Company, Milwaukee's second largest brewery, was guided by Fred Wolf, then by the firm of Wolf and Lehle, then by Louis Lehle alone.

As early as 1879, Fred W. Wolf was adding buildings that transformed older brewing practices, providing Schlitz, for example, with an iron-framed structure touted as the largest icehouse in the United States (page 178).<sup>38</sup> The exterior style of Wolf's building and its brick finish blended with the slightly older *Rundbogenstil* buildings here. On the other hand, Wolf had already reduced the number of wall openings, altering the older

style so as to help control interior temperature. Inside, this structure demonstrated the revolution in lagering techniques begun in the 1870's. It took the aging of lager beer out of caves and placed it in an aboveground stack of "cellars" cooled by a massive body of ice housed at the top of the building. Fred Wolf was not the first architect to devise such an icehouse. But as a member of the first generation of professional brewery designers in the United States, he shared his contemporaries' concern for creating architectural solutions for lagering ever-larger amounts of beer.<sup>39</sup> This is one of many designs that bypassed the arduous task of underground excavation and provided cleaner facilities for this important process.<sup>40</sup>

Within a few years, however, the brewery icehouse came to be seen as only a transitional stage between the old underground aging vaults and the new possibilities of artificial refrigeration. Fred Wolf was instrumental in this evolution,

<sup>37</sup> "The Jos. Schlitz Brewery, Milwaukee," in *The Western Brewer*, XVI:5 (May, 1891), 1106. This article states that Wolf had been Schlitz's architect since 1874, although the first project with which his name is clearly associated did not come until the great icehouse of 1879.

<sup>38</sup> "A Mammoth Ice House," in *The Western Brewer*, V: 4 (April, 1880), 367, and supplementary illustration. The building was begun in October, 1879, and ready for the installation of ice by January, 1880, a remarkably short construction time made possible because "all the iron and other material had been ordered so far in advance that it was on the spot ready to put in place." This reference and the section drawings make clear that this icehouse was an iron-framed structure within which individual "cellars" were stacked above one another so that no columns or posts interfered with the work, "all the supports being made in the partition walls."

<sup>39</sup> In 1879 Schlitz was producing nearly 111,000 barrels a year, an increase of over 28,000 barrels over the preceding year's total. See *The Western Brewer*, IV:9 (September, 1879), 765.

<sup>40</sup> For further information on the icehouse as a stage in the development of artificial refrigeration, see Susan K. Appel, "Artificial Refrigeration and the Architecture of American Breweries," in *IA: The Journal of the Society of Industrial Archeology*, XVI:1 (1990), 21-38.

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ers of breweries cannot be efficient in their vocation unless they are, besides being 'brewery architects,' which title they traditionally bear, also brewery mechanics and engineers." See "Brewing in Milwaukee, Complete Technical Description of the Pabst Brewing Co.'s Mammoth Establishment at Milwaukee," in *The Western Brewer*, XX:1 (January, 1895), 85.

<sup>36</sup> For Best, see *The Western Brewer*, XX:1 (January, 1895), 84; for Schlitz, the "Corporations" Record Book, in the archives of the former Stroh Brewing Company, now River Place Holding Company, Detroit. For Falk, see *The Western Brewer*, VII: 5 (July, 1882), 710; for Miller, *One Hundred Years of Brewing* (1903), 225; and for Blatz, "Valentin Blatz, Deceased," in *The Western Brewer*, XIX: 6 (June, 1894), 1163.



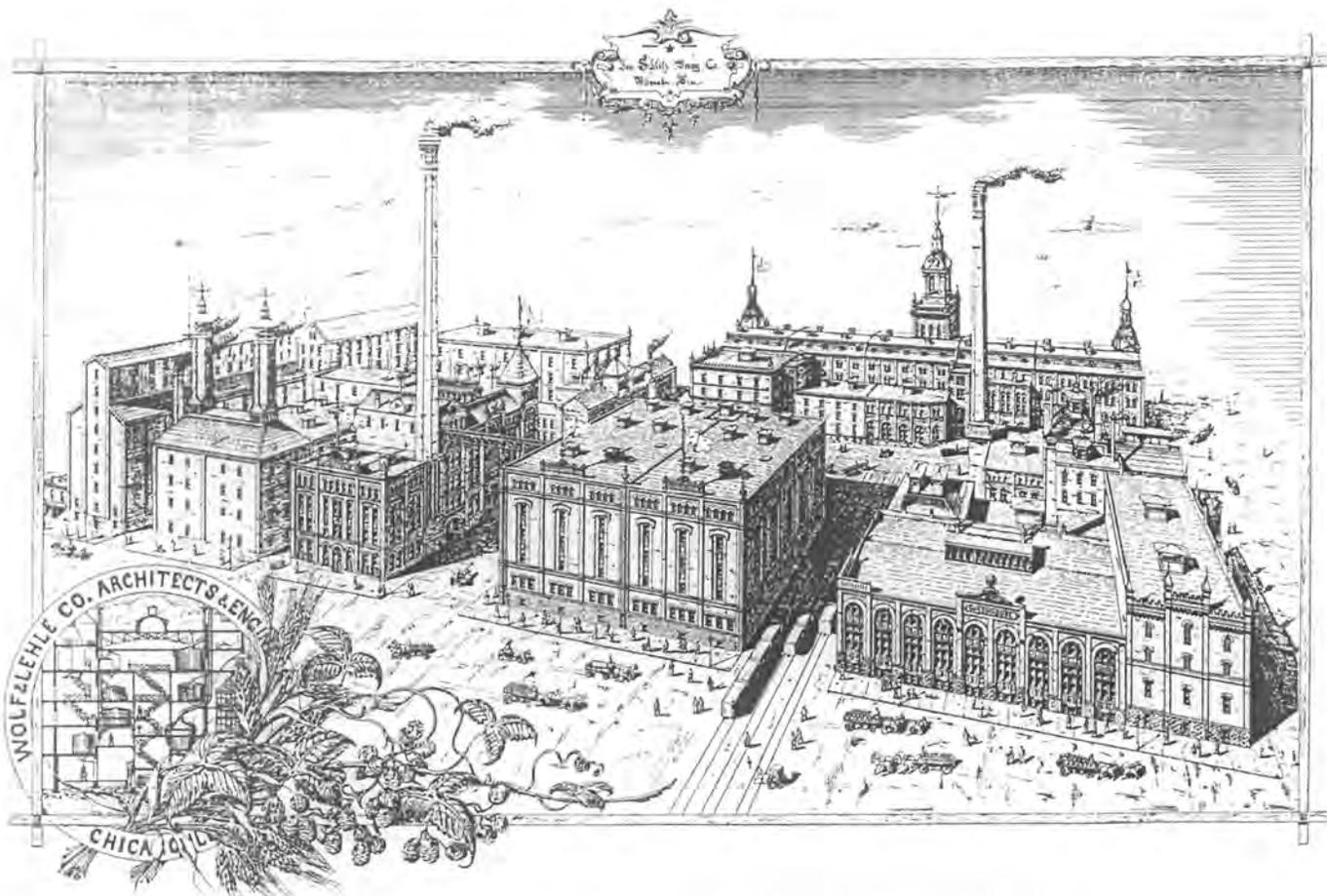
*The Schlitz stock house designed by Louis Lehle, 1911. Photo by author.*

acquiring from Germany in 1882 the American rights to the celebrated Linde refrigeration machine. He installed two of his early machines at the Schlitz plant in 1884 and two more in 1886.<sup>41</sup> With the advent of artificial refrigeration, the icehouse began to evolve into the mechanically refrigerated “stock house,” a still more enclosed and insulated structure where fermenting and lagering of beer could be even more scientifically controlled.

**A**N excellent, fully developed example of such a structure is the much later Schlitz stock house of 1911 (above). It was designed by Louis Lehle, once the partner of Fred Wolf and then his successor as principal architect for the Schlitz Brewing Company. Handsomely proportioned and nearly cubic in form, this stock house rises six stories, its height modulated by shallow cornices and moul-

dings into a base, four-story main section, and attic, the last crowned with a central penthouse. Cream brick walls are subtly articulated with shallow pilasters and panels, windows are stacked vertically, and the uppermost levels are accented with orange terra-cotta trim. Typical for a stock house, it contains few windows, although blind echoes of window forms are used as organizing devices to avoid too bare an expanse of wall. Many of these seemingly “bricked-in” windows were probably designed blind originally, to control the amount of light

<sup>41</sup> “A Boss Brewery, The Jos. Schlitz Brewery Co., Milwaukee,” in *The Western Brewer*, IX:1 (January, 1884), 74, reported that Schlitz had contracted with Wolf for Linde ice machines that would increase the capacity of the brewery 100,000 barrels, raising its total capacity 600,000 barrels a year. (Breweries at this time rarely produced at capacity at first.) The initial Linde plant was duplicated in 1886, according to *The Western Brewer*, XI:10 (October, 1886), 2152.



*The Joseph Schlitz Brewing Company plant designed by Fred W. Wolf and Wolf & Lehle, Chicago, 1870's-1890's, from The Western Brewer (1892).*

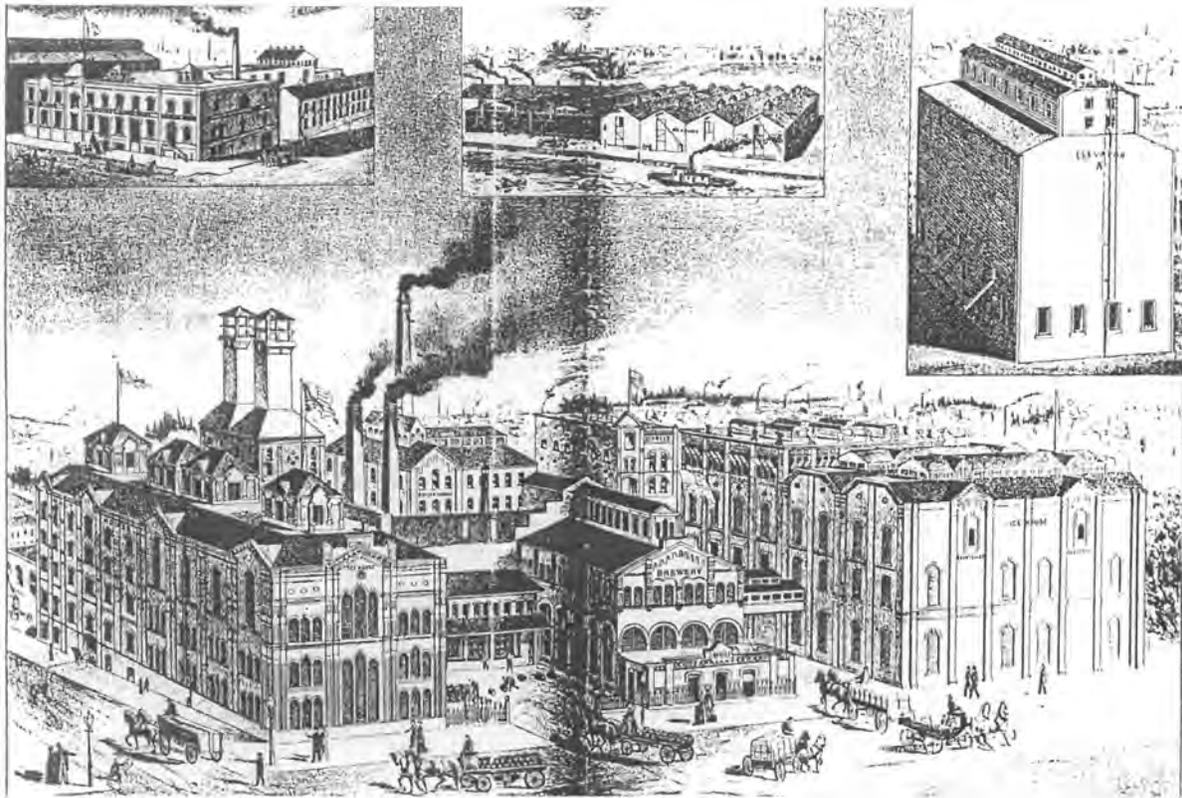
other hand, their adoption of the smoother, flatter quality somewhat calmed the vigor of the Richardsonian style, allowing the brew house to blend more effectively with earlier Schlitz buildings, particularly in using Milwaukee cream-colored brick.

On through the 1890's Schlitz added still more buildings: grain and malt elevators, more stock houses with still more sophisticated refrigeration machinery, and many subsidiary buildings like Lehle's stables of 1896,<sup>46</sup> all in that creamy Mil-

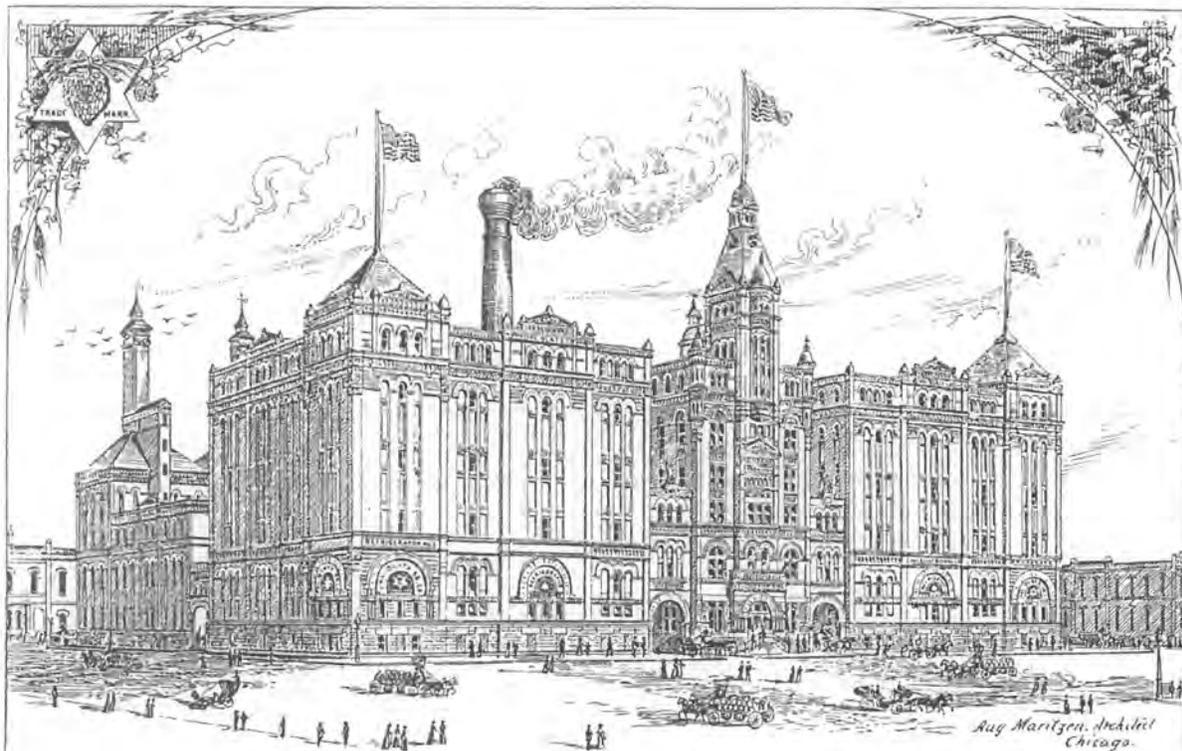
<sup>46</sup> *The Western Brewer*, XXI:5 (May, 1896), 906, and XXI:10 (October, 1896), 1897, 1914-1915. In the latter article the stables were described as nearing completion. Lehle had separated from Wolf and begun his own practice in 1894.

waukee brick, creating a densely packed accumulation of buildings (outside back cover and above). While these were all very functional in nature, they were also coordinated with one another in an attractive manner, sometimes accented with quite wonderful ornamental details, such as Fred Wolf's (or Louis Lehle's) clock tower of 1884 (page 162).<sup>47</sup> There was an

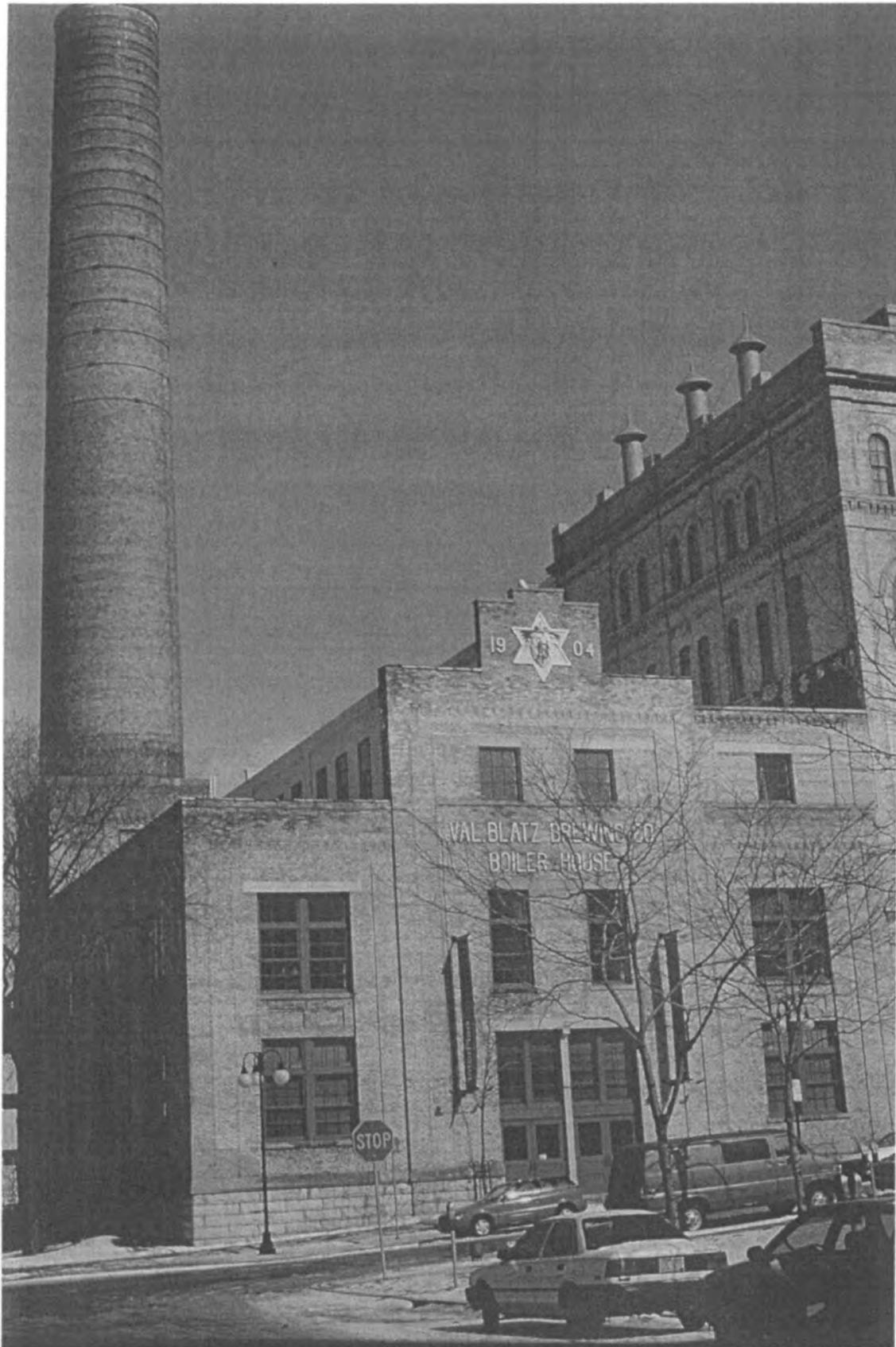
<sup>47</sup> *The Western Brewer*, IX:4 (April, 1884), 630, described this as the crowning element of a "magnificent structure at the corner of Third and Galena Streets, which will form the key stone of their entire system of buildings, and add a finished effect to their extensive premises." The function of the building proper was as a model icehouse. The tower at its corner was (and is) 128 feet high, with a ten-foot-diameter clock face on each side lit from the start with electric light at night and visible (originally) all over the city. Although here



*Two views of the Valentin Blatz Brewing Company along Broadway. Above, 1885, from The Western Brewer (1885). Below, the new brewery designed by August Maritzen, 1891, also from The Western Brewer (1891).*







*Boiler house for the Val. Blatz Brewing Company, designed by Louis Lehle, 1904.  
Photo by the author.*

And in 1882, only shortly after Adolphus Busch initiated the concept in St. Louis, Pabst audaciously determined to adopt for his entire operation the still somewhat experimental process of artificial refrigeration. Abandoning the icehouse technology of the 1870's, which he had used just two years before, he contracted with the Boyle Ice Machine Company of Chicago to provide machinery to cool all the storage and fermentation rooms at the Empire Brewery.<sup>61</sup>

By about 1880, improvements at Best/Pabst had also begun to involve brewery architects. Fred W. Wolf, who the year before had designed the large icehouse at Schlitz, was in 1880 superintending another such structure for the Best Brewing Company.<sup>62</sup> However, Best's relationship with architects generally took a different path from that at other breweries.

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by the a somewhat later observation that this early form of pneumatic malting was not as successful as had been hoped. See *One Hundred Years of Brewing* (1903), 64. From 1891 on, Pabst installed other, more proven mechanical malting systems; nevertheless, the company's willingness to experiment with the Galland system so early is significant.

<sup>61</sup> Plavchan, *History of Anheuser-Busch*, 57, dates to 1881 the monumental decision by Adolphus Busch, head of the Anheuser-Busch Brewing Association, to do away with natural ice and adopt artificial refrigeration, initially using three fifty-ton ice machines from the Boyle Company. Only a few months later *The Western Brewer*, VI:9 (September, 1881), 1126, marveled at the magnitude of Pabst's contract with the Boyle Company, noting that the machinery on order would have to cool 1.6 million cubic feet of fermenting and storage rooms, would require at least twenty freight cars to ship it to the brewery, and would cost the then enormous sum of \$80,000.

Cochran, *Pabst Brewing Company*, 107–108, discusses the mixed blessing of artificial refrigeration for Milwaukee brewers. Located so far north, these brewers had long benefited from their proximity to consistent supplies of lake ice. The arrival of artificial refrigeration removed this natural advantage and, in a sense, forced them to acquire expensive refrigeration equipment to keep up with the increasing capacities of mechanically cooled breweries in other places. Pabst was certainly in a position to do this, but some smaller breweries were hard pressed by the added expense.

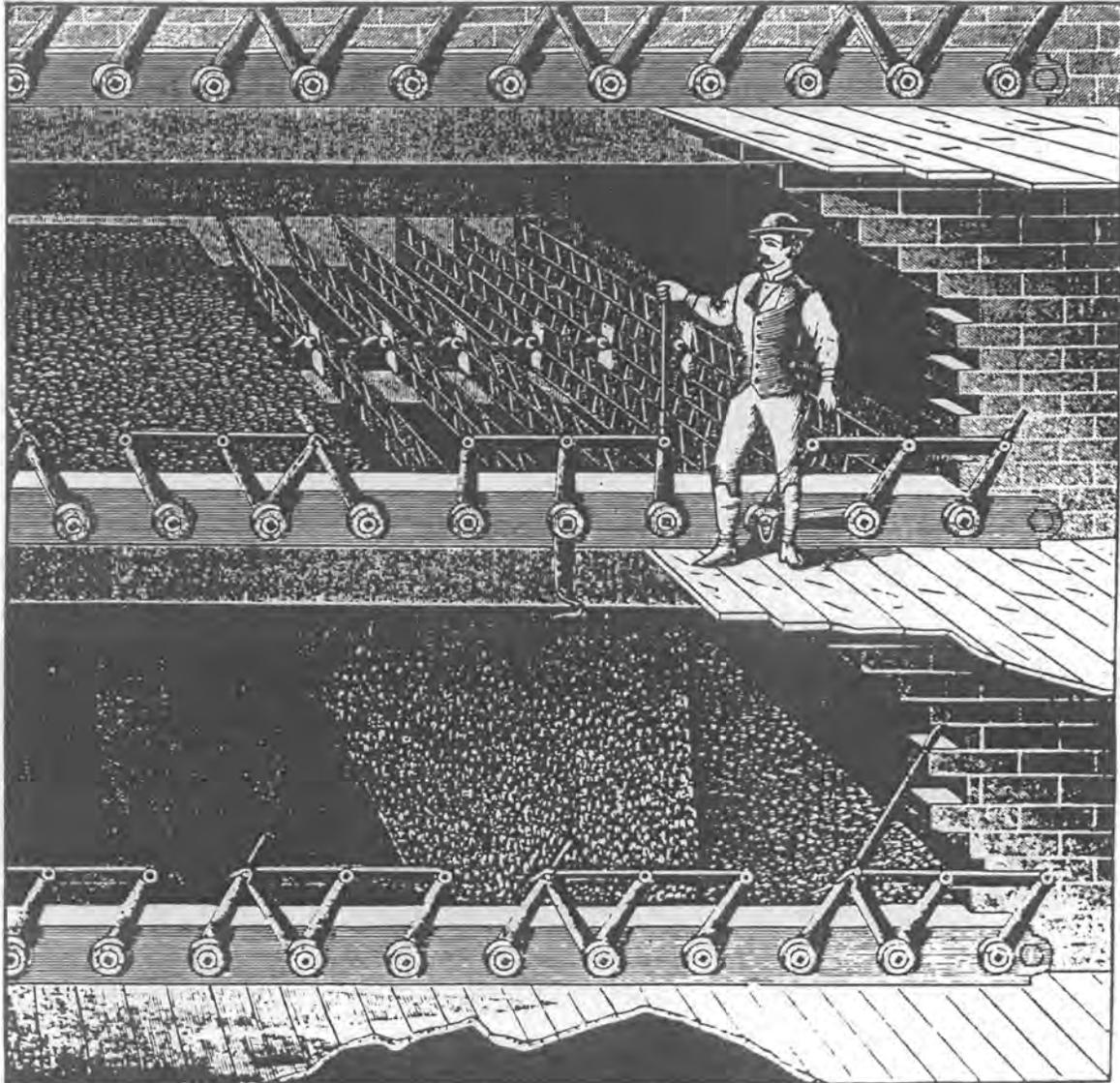
Best relied less on designers brought in for particular projects than on in-house employees; perhaps the largest brewery in the country could more easily afford to hire its own architects full-time. In any case, during the 1880's and 1890's, some of this brewery's most important buildings were designed by the Prussian-born Charles G. Hoffmann, a Pabst employee.<sup>63</sup>

The "mammoth new malt house" completed at the Empire plant in 1883 may have been Hoffmann's first major project (page 190). Celebrated as the largest of its kind in the United States, even the world,<sup>64</sup> this malt house was not only big but was also technologically advanced. It made use of new and improved dumping malt kiln floors designed and patented by W. Toepfer & Son of Milwaukee (page 191). With these, a single worker could

<sup>62</sup> *The Western Brewer*, V:10 (October, 1880), 1029. It is not clear with which of Best's buildings Wolf's name should be associated.

<sup>63</sup> Hoffmann was described in "The Mammoth New Malt House of the Ph. Best Brewing Co., Milwaukee, Wis.," in *The Western Brewer*, VII:2 (February, 1883), 285, as being employed exclusively by the Best Company. According to U.S. Census information in the Milwaukee County Historical Society, in 1880 Charles Hoffmann was forty-eight years old, born in Prussia, and living with his wife Charlotte, forty, also Prussian-born, at 807 Walnut Street, Milwaukee. Hoffman also appears in the Milwaukee City Directory for 1880 at the same address, identified as a cashier for Ph. Best Brewing Co. The following year, Hoffmann appears in the general residential listings (p. 275) as an architect; and in 1883, in the same section (p. 306), as architect for the Ph. Best Brewing Co. This last designation continues in residential directory listings annually until 1897, but does not appear in 1898—perhaps indicating the general date of his death, which is not yet otherwise established. Despite his identification with the architectural profession, Hoffmann's name never appears in the business directory under "Architects," bearing out the idea that he was always employed within the brewery, rather than practicing on his own or with any other architectural firm.

<sup>64</sup> "The Mammoth New Malt House of the Ph. Best Brewing Co., Milwaukee, Wis.," in *The Western Brewer*, VII:2 (February, 1883), 285. The journal described this building in very specific terms as "probably the largest structure in the world built on a pre-concerted plan and entirely at one time, and devoted exclusively to malting."



*Toepfer's dumping kiln floor as installed at the Best Brewing Company's malt house in Milwaukee, from The Western Brewer (1884).*

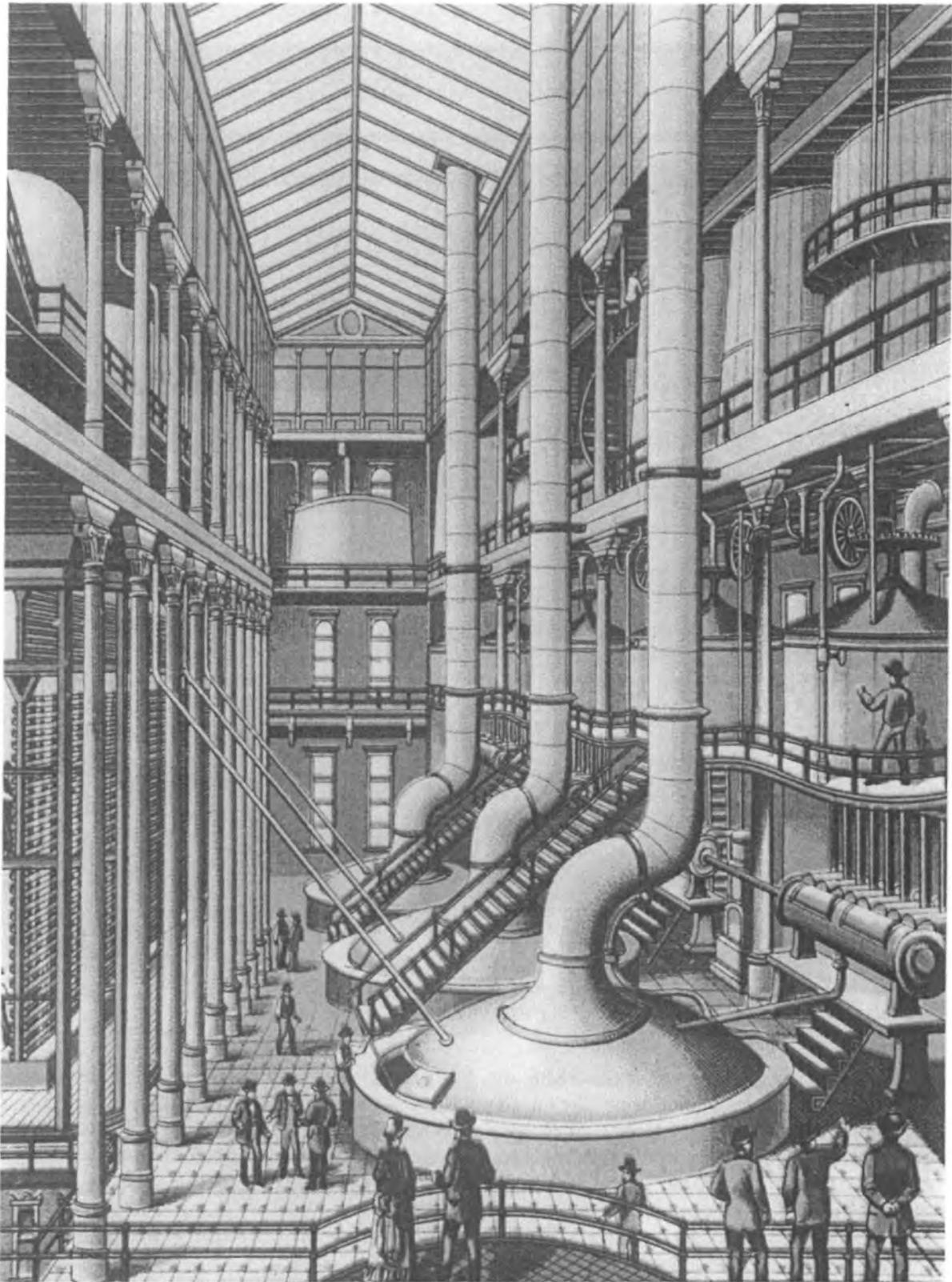
**D**RIVEN by its ever-expanding success, Best undertook construction of a whole group of new buildings in 1885–1886. First among these was a great new brew house (page 192). Charles G. Hoffmann again served as architect,<sup>66</sup> cre-

<sup>66</sup> Although not specifying how long Hoffmann had worked for Pabst, *The Western Brewer*, XX:1 (January, 1895), 85, said in 1895 that the company's buildings "have all been designed by the brewery architect, Mr. Chas. G. Hoffmann, who has been employed by the Pabst company for many years, and

ating a structure described as "unquestionably the finest and most perfect model of its kind in the world."<sup>67</sup> At first, the new

is a man of undoubted ability and experience in his business. He has been remarkably successful in his constructions, both light and heavy."

<sup>67</sup> *An Illustrated Description of Milwaukee* (1890), 141. Once Best's new brew house was ready, the company converted its South Side Brewery into an additional malting facility, explaining that it was not "advantageous" to maintain two separate establishments. See *The Western Brewer*, XI:5 (May, 1886), 986, and XX:1 (January, 1895), 84.



*Interior of the Best Brewing Company's brew house showing the original three brew kettles, from the souvenir of the Pabst Brewing Company for the Grand Army of the Republic encampment in Milwaukee, August 25-31, 1889. Photo courtesy the Milwaukee County Historical Society.*



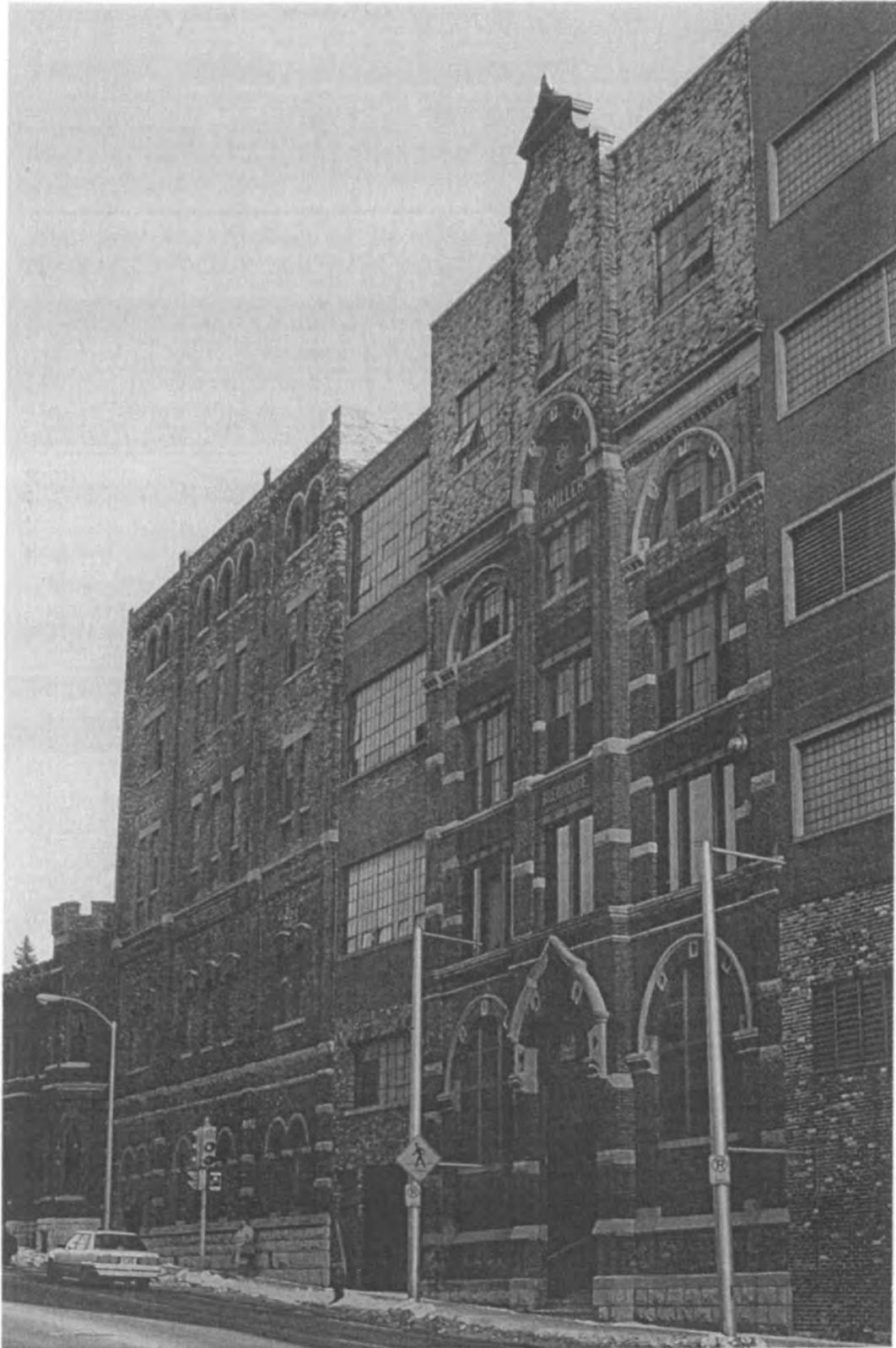
*The interior of the Anheuser-Busch brew house, from a company advertising booklet, 1942, courtesy of Michael Schille, Tampa.*

these spaces reveals that both brewing companies clearly saw value in commissioning impressive architecture.

Architectural form not only provided necessary space, but again served as a vehicle for displaying company pride, prosperity, and Germanic heritage. As happened at Schlitz in 1890–1891 and Blatz in 1891, however, both Pabst and Anheuser-Busch now felt the need for a bolder, more powerful style that went well beyond the scale and visual impact of the *Rundbogenstil* of the 1860's and 1870's.

Brewery architects throughout the industry fulfilled this need by adapting to brewers' purposes the more Richardsonian form of the Romanesque Revival often used in 1890's commercial and industrial sites. This muscular style effectively expressed the sense of solidity the brewers wished to project.<sup>71</sup>

<sup>71</sup> Architectural solidity was definitely an attribute of the big breweries in the 1880's and 1890's. It may also be that emphasizing solidity (whether consciously or not) was desirable in the face of mounting opposition



*The brew and stock houses of the Frederick Miller Brewing Company, 1886–1887, perhaps designed by Fred W. Wolf and/or Louis Lehle. Photo by the author.*

affecting the design of new buildings and the remodeling of old ones. In the sixty years since, increasingly cutthroat competition, mergers, and forced takeovers have eliminated most of the smaller breweries, though some of their buildings survive. In Milwaukee, all of the smaller pre-Prohibition brewers are gone, and even Schlitz and Blatz, the one-time giants, have closed. What remains of their plants is being redeveloped for commercial and residential use.

ONLY two of the great Milwaukee breweries survive: Pabst and Miller. A substantial portion of the pre-Prohibition Pabst Brewing Company's plant remains; but the company itself has the peculiar distinction, given its origins, of being controlled from offices in San Antonio. The Miller Brewing Company is a stronger force in the local scene, and its plant reflects the prosperity it has enjoyed in the post-Prohibition era. Some evidence remains of Miller's older architectural nature, such as the 1886–1887 brew and stock houses, possibly designed by Fred W. Wolf of Chicago but now largely encased in later alterations (page 197).<sup>74</sup> By contrast, Stock House I, finished in 1955, stands free of other buildings and soars skyward, its sheer size enhanced by strikingly clean lines and abstract forms (page 198). Since Miller has achieved far greater success since

Prohibition than before, its most significant buildings today are, appropriately enough, more representative of mid-to-late-twentieth-century architecture than of the era when brewing was the most important of Milwaukee's industries.

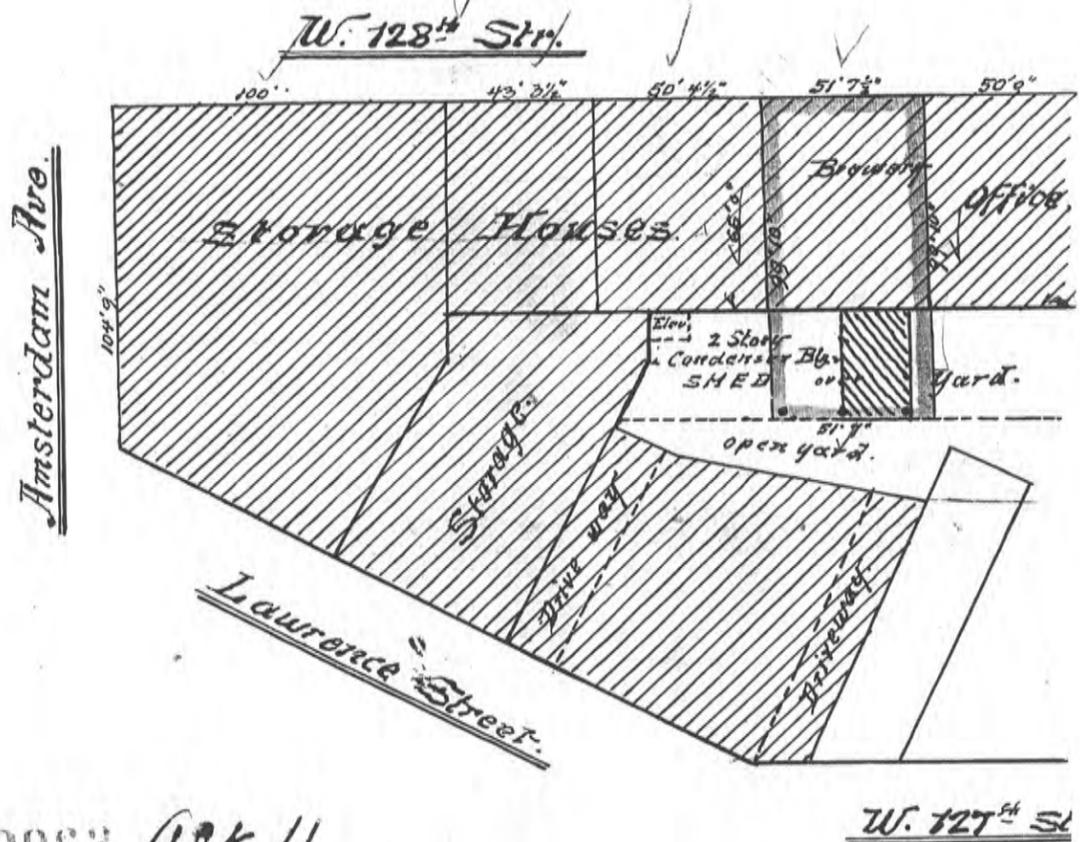
Generally speaking, then, Milwaukee's breweries before Prohibition appear to evince the same patterns and phases of architectural development seen in places like Cincinnati and St. Louis. The post-Civil War prominence of Milwaukee's large firms often placed them at the forefront of experimental brewery design. At the same time, general patterns were varied in accord with local circumstances, materials, the individual tastes of brewers, their competition with one another, and their quickness to take advantage of the emerging possibilities of industrialized brewing. While taking into account these variables, it is nevertheless possible to say that, in Milwaukee and elsewhere, the midwestern brewery of the nineteenth and early twentieth centuries evolved in a generally consistent manner. It passed through a series of clear stages, each expressive of the technological, esthetic, and ethnic factors at work at given moments. And it became in the process a very special type of industrial enterprise—one that contributed directly to the visual richness of Milwaukee in its expression of the prosperity and progress of one of the city's great industries.

<sup>74</sup> The Miller building inscribed "Brew House" bears an 1886 date block. Although no evidence as yet confirms Fred W. Wolf as its designer, Wolf had built a second brewery for Miller in Bismarck, Dakota Territory, in 1884. Chas. Kaestner & Co. of Chicago provided the machinery and millwork for that plant. Three years later, the excellence of the Kaestner company's earlier work earned it the contract for the complete machinery and millwright work for the Miller brew house then going up in Milwaukee. That Fred Wolf might also have been

rehired by Miller does not seem farfetched, especially given the similarity of the 1886–1887 design with others of Wolf's brew houses, such as the one he designed in 1886 for J. G. Sohn & Company in Cincinnati. On the other hand, as with other projects of this period, Louis Lehle's known close association with Wolf makes it possible that Lehle could have designed any or all of these buildings. For data bearing on Wolf's career, see *The Western Brewer*, IX:10 (October, 1884), 1722; XI:10 (October, 1886), 2149; and XII:6 (June, 1887), 1263.

Property  
of  
Messrs. Bernheimer & Schwartz.  
Pilsener Brewery Co.  
W. 128<sup>th</sup> Str  
Manhattan, N.Y.

DEPARTMENT OF BUILDINGS  
 of the City of New York  
 Received Nov 1 1911  
 FOR THE BOROUGH  
 OF MANHATTAN



2963 Oct 11

W. 127<sup>th</sup> St

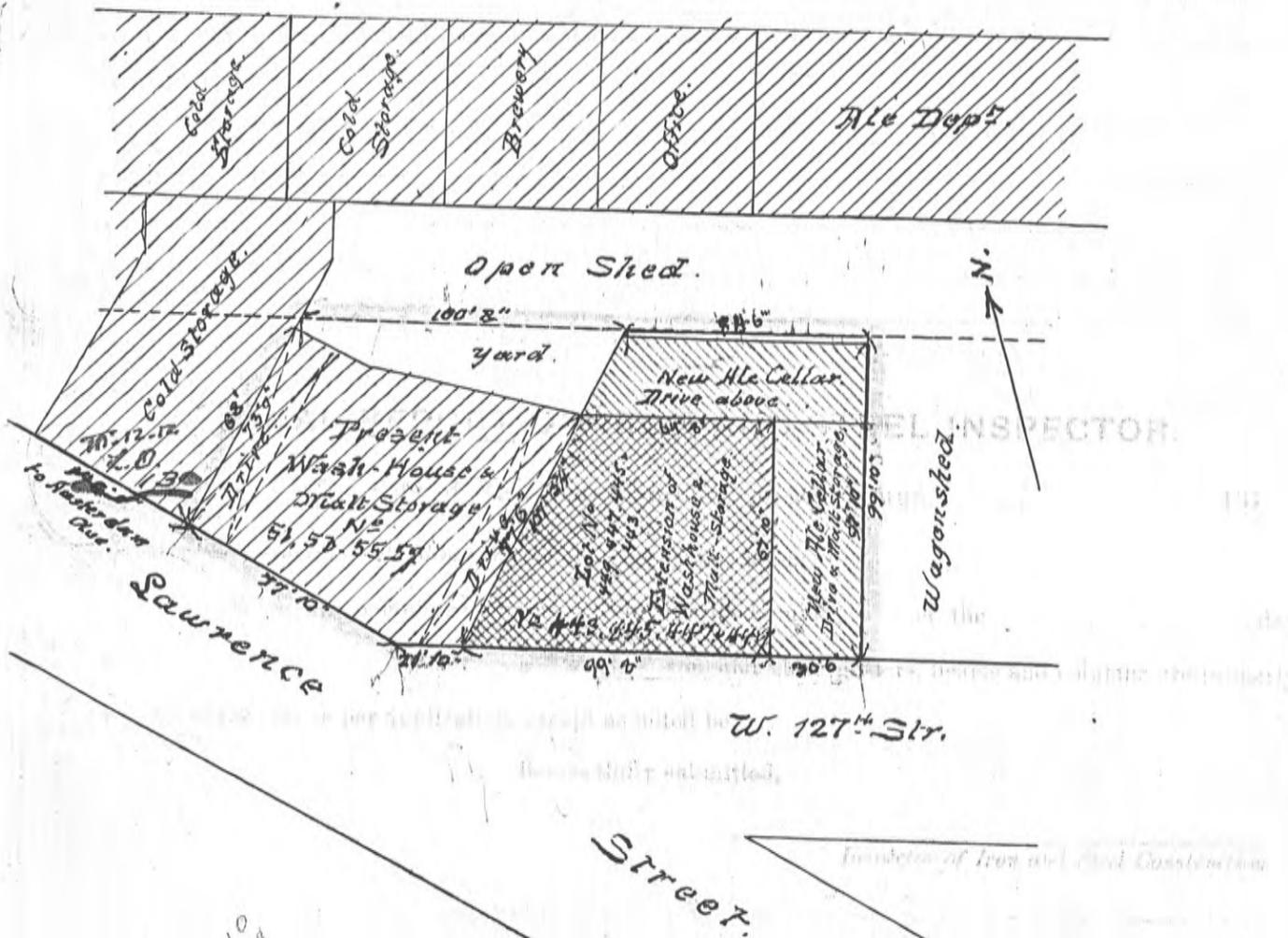
To the Superintendent of Buildings for the Borough of Manhattan

Work was completed 259 *Oct 12* on the \_\_\_\_\_ day

at \_\_\_\_\_ and all the work upon said building has been done in accordance with the foregoing detailed statement, except as noted below.

*W. 128<sup>th</sup> Street.*

Inspector



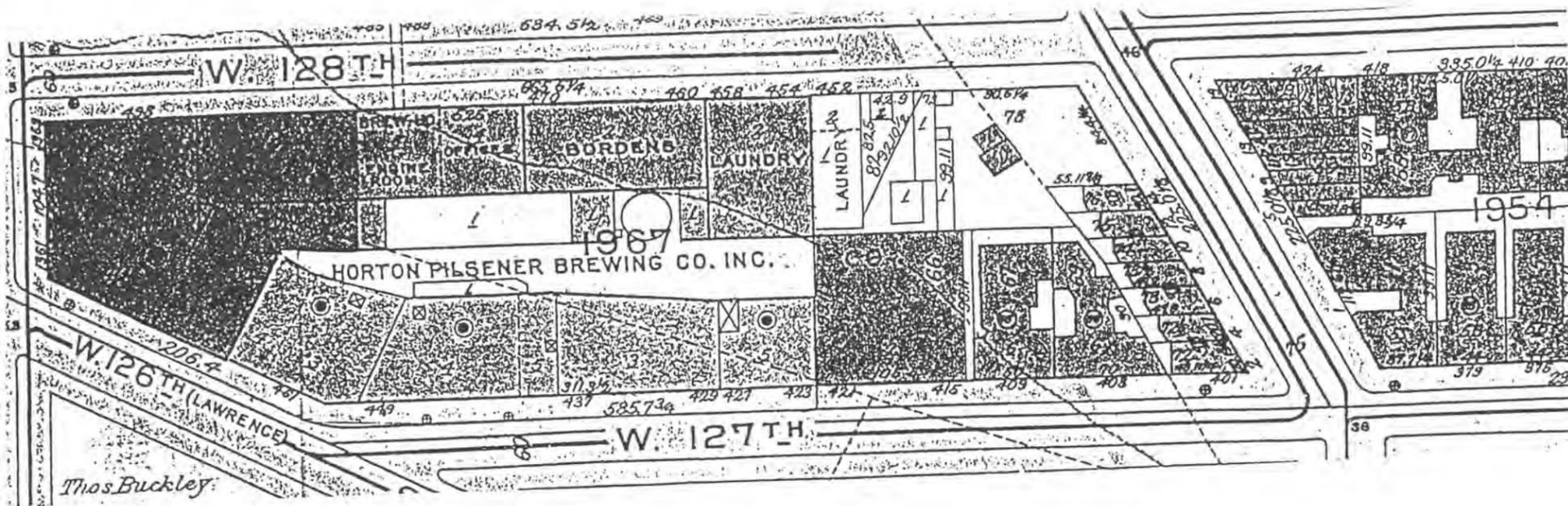
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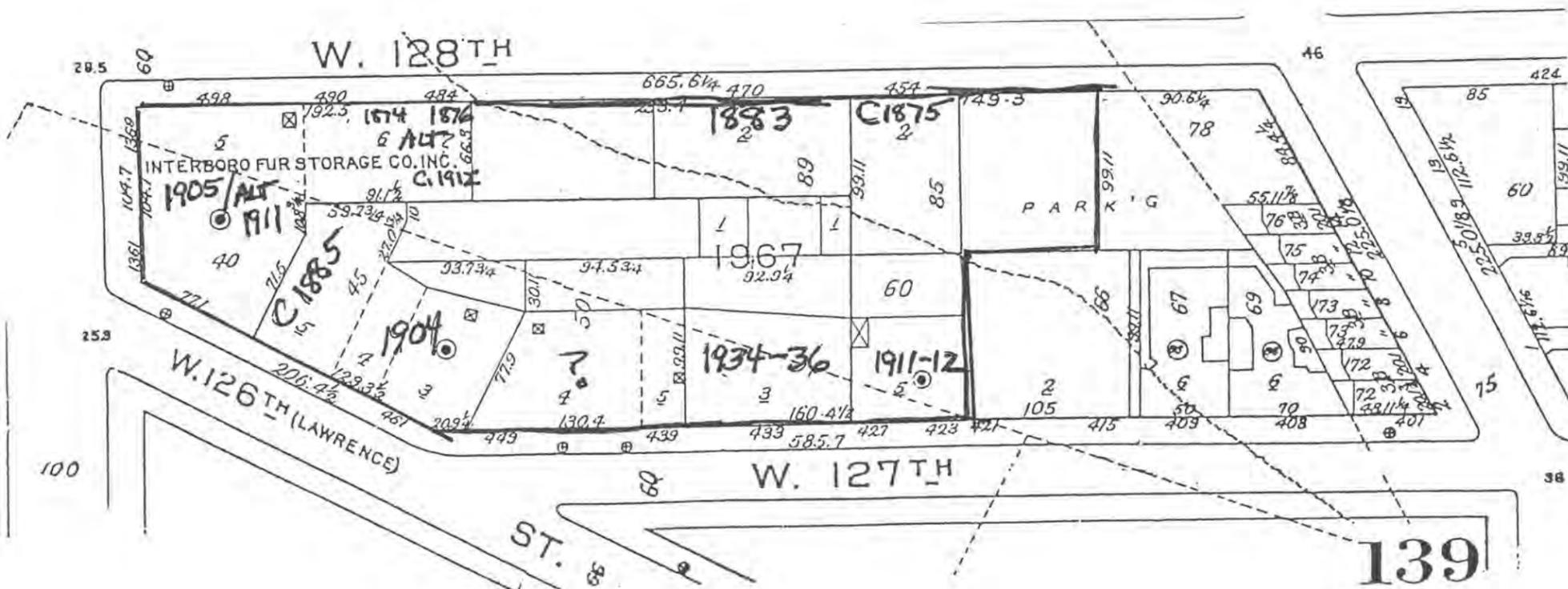
Signed Peter H. Rank

Const. Inspector

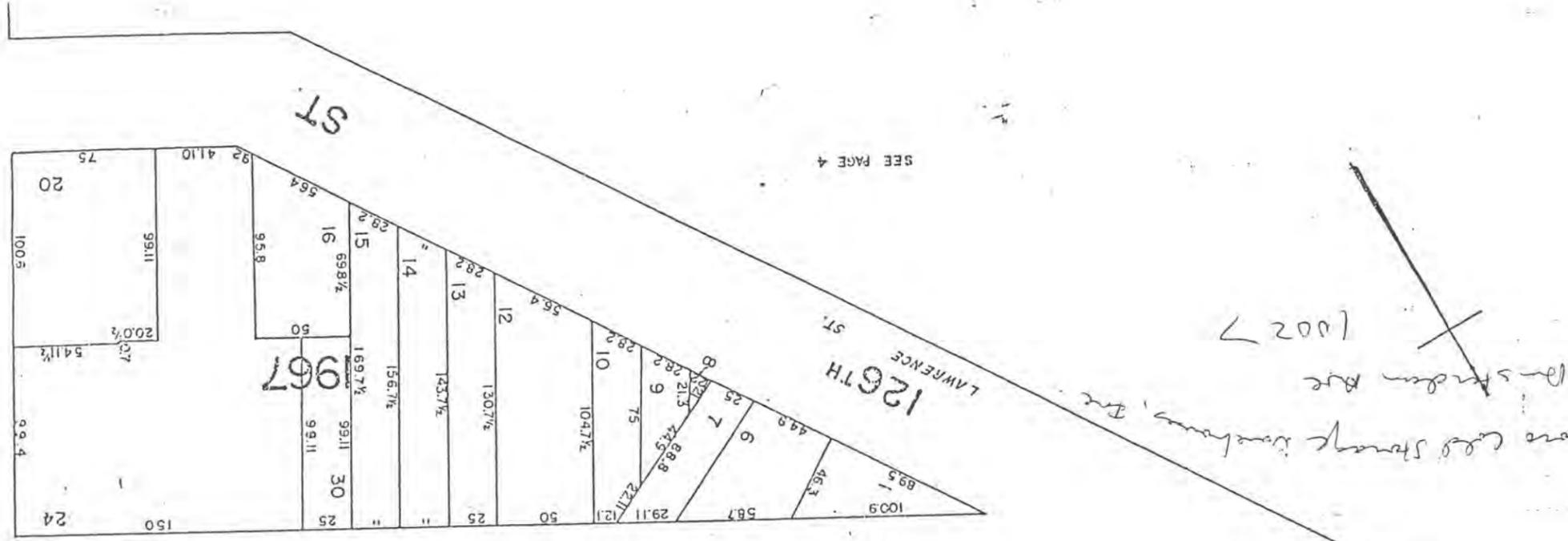
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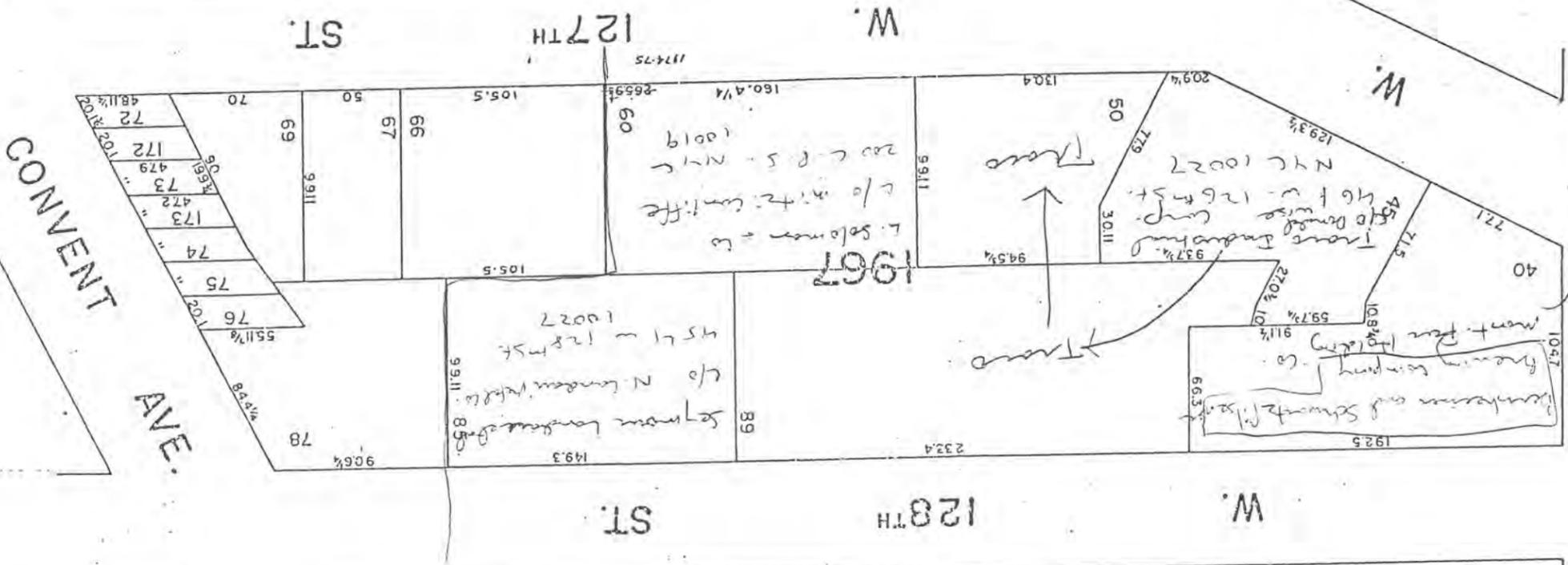
1934



Current



156 1 105-100 Ave  
 10027  
 The Interiors Ltd Storage Warehouse, Inc



AMSTERDAM AVE.

CONVENT AVE.

SEE PAGE 14

8-17-73  
 DL 187107  
 NEW LOT

Vol. 38 No. 1 (January 15, 1912)

### THE DEVELOPMENT OF THE BUILDINGS AND EQUIPMENTS OF BREWERIES FROM PIONEER TIMES TO THE PRESENT DAY.\*

By F. Widmann, St. Louis, Mo.

The progress of brewery structures in the United States may be classified into three periods, viz: the first period during the pioneer days up to 1860, the second period from 1860 to 1880, and the third period from 1880 to the present day.

#### The First Period.

Buildings and equipments of this period were of the most primitive character, many small plants were scattered all over the country, generally located on sloping ground with the buildings placed at its lowest point, with underground arched cellars extending under the higher portion of the ground, all erected by the proprietor without the assistance of an architect or engineer. It is true, the plants were small, consisting mostly of one and two story structures, some being operated by hand and others having a boiler and engine equipment. The brew house being the heart of every brewing plant, was the most conspicuous structure, generally two stories high, with a tower shaped ventilator over the center; its principal contents were a direct-fire steel or copper brew kettle, wooden mash tank with its mashing rake operated either by hand or power, a flat cooling vessel, beer cooler and a very simple malt mill. The wash house was generally in the first story of the same building as the brew house. The boiler and engine were placed in an adjoining one-story structure. The beer cellars, also adjoining the brew house, were entirely underground and arched, refrigerated from an ice house placed at the extreme end of the cellar and extending from bottom of cellar to the level of the ground with a light open roof over it; this house was filled during the winter season with ice, covered by a 3-foot layer of sawdust. A packing room was located at the inner end of these cellars and a shaft extended up to the wash-house to permit lowering or hoisting kegs, as required. Not every brewery had a malt-house, but if there was a malt-house, it was generally on the same premises and often directly connected with the brewery, and built of brick or frame, one or two stories high, the upper floor being used for storage of barley or malt, the sprouting floors as a rule being in a basement or arched cellars, with kiln furnace adjoining the malt-house and located on the same level as the basement and the kiln floor above.

The entire plant was an unsightly conglomeration of one-story structures.

#### The Second Period.

As the consumption of beer increased throughout the United States, the brewery buildings and their equipment were built, altered and added to with a great deal more care; men of experience in the architectural and engineering line made a deep study of brewery structures and equipments, and the result was the erection of very creditable plants throughout the country. Men like Stoll and Pfundt of New York, F. W. Wolf of Chicago, and Edmund Jungenfeld of St. Louis are beyond question the pioneer architects and engineers of

\*A paper read at the Second International Brewers' Congress, Chicago, October, 1911.

breweries in this country, many structures erected by them are still samples which can be pointed to with pride.

A semi-fireproof construction for buildings was adopted, the exterior was clothed in architectural lines and the appearance of breweries became more pleasing and conspicuous. The equipment throughout was thoroughly studied from its practical as well as economical point of view, and the entire plant made an impression of a homogeneous, harmonious whole.

The brew-house, as stated above, the heart of the plant, received more and more attention; its arrangement was a special study for making the beer in a more economical way; it was built two or three stories high, steam boiling kettles were used, power transmission throughout was installed, the position of the different vessels in relation to each other was such that the progress of the manufacture was almost automatic. The underground beer cellars were practically abandoned and new beer storage houses or stock houses entirely above ground were substituted; these houses consisted of one, two or three stories with high ice-chamber above, and the cellars below were successfully refrigerated by means of cold and warm air flues. The racking room and wash house, as a rule, were in connection with or adjoining these cellars, sometimes forming a part of them. The boiler house—a one story affair—was very often placed adjoining the brew-house.

The malt-house in connection with a brewery was built entirely above ground, if possible adjoining the brewery proper; the sprouting floors were in the lower stories of this building, the ceilings of these stories being quite low; storage space for malt and barley was arranged in the upper stories; the kiln with at least two drying floors and a very high tower, producing a natural draft. The whole plant was equipped with power transmission for handling barley and malt. The kiln floors were sometimes constructed with movable trays for dumping the malt from one floor to another, and into a hopper below, from where it was conveyed to the storage floors.

More pride was taken in having a presentable office in connection with the brewery, sometimes a special office building was erected, and sometimes a neat office room was arranged in one of the main buildings.

Commodious stables well lighted and ventilated, with wagon sheds adjoining, were erected, so that at the end of this period many of the breweries had the appearance of a well-managed industrial plant.

As the bottling of beer was a new enterprise and only introduced by very few breweries in the United States during the latter part of this period the buildings for this purpose did not enter into the erection of a brewery plant.

#### The Third Period.

With the introduction of refrigerating machinery, electric power transmission, and new and improved machinery generally, together with a great increase in the consumption of beer, besides earnest competition in business through the United States, the brewing industry took a marvelous stride forward. Existing plants were remodeled, additions erected and entire new plants were built in nearly all large cities, especially in the manufacturing centers. All of these new structures were designed and built under the direction of well-trained architects and engineers, most buildings being strictly fire-

proof, equipped with the most modern design, patented machinery, insuring economical and automatic operation, with the one point in view of producing the best possible product at the least cost.

A complete modern brewing plant consists of groups of buildings, as follows:

- (1) Brew house, storage house, machine house, boiler house;
- (2) Stock house, racking house, wash house;
- (3) Malt house, kiln and storage elevators;
- (4) Bottling department;
- (5) Stables and wagon sheds;
- (6) Ice plant.

1. The brew house, frequently as high as six stories, is always the subject of most serious consideration by the architect, engineer and proprietor; the general arrangement of this house determines the cost of operation, and is therefore of the utmost importance and necessarily receives the greatest attention from all interested parties. The continuous striving towards that goal finally suggested a high building to make the process automatic as near as possible. The malt tanks are placed in the top story with sufficient storage for at least two brews; underneath these tanks on the fifth floor the malt mills are located and connected by a spout with the malt tanks; from the malt mill the crushed malt is spouted into a crushed malt tank placed in the fourth story, from which the crushed malt flows direct into the mash tank in third story, thence into malt straining tank in second story and from there to brew kettle in same story at a lower level, from where it is pumped to a cooling vessel and Baudelot cooler generally located on top of stock house; in case the malt tank is used for straining purposes and the malt straining tank is eliminated, one story of the building can be omitted. The tanks for rice and other raw material are generally located in the story above mash tank, hot and cold water tanks are placed in the upper stories to supply the different vessels in lower stories; all these vessels are made of steel, copper, or a combination of steel and copper. Great progress is also made in handling the spent malt which was formerly hauled from the brew house in a moist condition for immediate use, but is now dried and reduced to a non-perishable commercial article and a source of considerable revenue to the brewer; this is accomplished by patent drying machines generally placed in the first story of brew house, and to which the spent malt is spouted from the mash tank or malt straining tank; when dried, the finished product is sacked ready for the market. The pipe connections between the different vessels are also of steel and copper. The power transmission, being entirely electrical, eliminates the unsightly belting and shafting. The brew house as a rule is designed to admit a great deal of light and ventilation, easy stairs and elevator with simple space around each vessel for cleaning purposes. The above description is probably that of a typical brewhouse of the later days, but there are many variations to comply with the ideas and manners of brewing of the respective proprietors. This building should be constructed throughout of steel with reinforced concrete floors and roof, and brick or stone walls.

Adjoining and directly connected with the brewhouse is a general storage house for the storage of a large quantity of malt, hops, rice and other materials for immediate

use of brewing purposes. The malt is placed in steel, tile or reinforced concrete tanks, received and conveyed to the brew house by means of conveying machinery. The hops are stored in a specially designed room, well insulated and refrigerated to the proper temperature. Rice is stored and handled in a similar way to malt. In the first story of this building, commodious offices can be arranged. The construction of this building should be similar to the brew house. The machine and boiler house should, if possible, adjoin the brew house, as the greatest amount of power and steam is used in the brew house. The machine house is generally two or three stories in height, the first story being amply commodious to receive the refrigerating machines and electric generators, second story to contain the condensers and water tanks. The boiler house should be no more than one very high story, well ventilated and in all cases provided with a brick, tile or reinforced concrete smoke stack creating a good draft for the boilers and producing proper combustion of coal, thereby insuring economy in the long run; if the plant is a large one, say 2,500 H. P. and upwards, coal bunkers, chain grates and coal and ash handling machinery should be installed as a matter of economy.

2. The stock house, wash house and racking house might adjoin the first group of buildings, but it is a considerably better plan to separate them, to admit more light and air, and also allow sufficient elbow room for future additions. The stock house, as a rule, is about three stories high, with settling tanks, Baudelot cooler and cooling tank or vessel above; this will allow the beer, after it is pumped from brew house to cooling tank, to flow by its own gravity to fermenting cellar in the third story, Ruhcellar in second story and chip cask or tanks in first story. The building is constructed either of heavy carrying walls or light curtain walls, steel construction throughout, reinforced concrete floors with cement or asphalt finish. The insulation of walls, floors and ceilings has changed considerably since the introduction of building cellars above ground; the walls formerly were built with hollow spaces, well plastered and sometimes filled with hot pitch; double hollow tile lining with paper between tiles was also a favorite method of construction, but since the compressed cork came in use, scarcely anything else is used for this purpose; it is beyond question the most effective insulation and very economical. Cellars have been constructed directly under the roof and with an additional thickness of corkboard are kept at an even temperature without any difficulty. Ventilation is necessary only for the fermenting room when open tanks are used, this might be accomplished by means of fans or steam jets and air flues.

The refrigerating pipes are placed against the wall or over passages in order to avoid dripping on top of cooperage or tanks; sometimes drain gutters are placed underneath the pipes to conduct the drip water towards one end near a sewer inlet. In case two, three or more stories are used for one purpose, say Ruhcellar, and the intermediate floors in this case are omitted and simple passages in each story provided to reach the manhole of each tank, then the refrigerating pipes are located in the top story, allowing a circulation of cold air through the entire building. The fermenting and storage tanks are generally of wood and have been found very satisfactory, but since the steel enameled tanks are made cheaper

they have been frequently used and found very practical, especially as they can be made any size and are easily kept scrupulously clean. Lately aluminum tanks have been introduced, but on account of their expense up to the present time, have not made great progress.

The racking house adjoining the stock house is built sometimes only one story high, but often with beer storage cellars above, all constructed same as stated above for stock houses. The most satisfactory floors are found to be of mastic asphalt; it is clean and has sufficient elasticity to preserve the small cooperage. This floor is designed to be on the same level with wagons to facilitate the loading.

The wash house adjoining the racking house is, in most cases, one story high, well lighted and ventilated, floor of wood or asphalt, the latter being preferable; it should be on the same level with racking room.

3. The malting plant to be, if possible, near the group of brew house buildings, to enable the handling of malt to brew house proper by means of conveyors and elevators. At the present date the floor malt houses are practically eliminated and different pneumatic malt-plants have taken their place. The two systems mostly in use are the Galland-Henning and the Saladin; both systems are very efficient, producing good wholesome malt, and the process is absolutely under the control of the malster. The plant consists of distributing house where the barley is received, cleaned, separated and elevated and conveyed to storage elevator, and from there to the steeping tanks, and after it has gone through the pneumatic malting process, it is elevated to the kiln and when properly dried, conveyed and elevated to the malt cleaning machine and again back to storage elevators; this work is all done in this building for practical and economic reasons. It is essential to have this building equipped with the latest machinery, such as cleaning and separating barley in different sizes, say large, medium and small kernels, as each size requires a different treatment in the malting process. It should also contain sufficient automatic scales to weigh barley when received, after cleaning, before steeped and the finished malt before it is conveyed to storage elevators. This enables the malster to control his receipt of barley and output of malt. The pneumatic malt house proper will contain the steep tanks, the air regulating chambers, fans for circulating of air through the system, and the compartment or drum house. The kiln adjoining consisting of a furnace room, two kiln floors and fan room on top. The green malt is elevated and conveyed to the top kiln floor and after it has sufficiently dried, dumped into lower floor where it is finished, dumped into hoppers below and then conveyed to distributing house where it is cleaned and conveyed to storage elevators, the latter are built either of wood (crib work), steel, tile and lately of reinforced concrete, the two latter types being the most preferable, eliminating entirely the danger of fire.

4. The bottling department, practically a new enterprise in connection with breweries—since the rigid laws regulating the sale of beer are enforced, the bottled beer has become more and more in demand—has made more advance in the later years than any other branch of the brewery. This building is to be isolated from the brewery premises, according to the United States revenue law, but it can be connected with same by means of a

pipe line either through a tunnel or overhead. There are no rules as to the height of these buildings, this is regulated by the size of the property designated for its purpose, but it requires a great deal of floor space, as everything in connection with it is bulky; the idea in designing a bottling department is to place the machinery closely together, to avoid as much as possible the handling of bottles, boxes and barrels by hand, thus reducing the operating expense. Many different bottling outfits are on the market and some of them work very satisfactorily, with as little repairs as possible. The boxes and barrels are handled by means of gravity conveyors. A modern bottling establishment is equipped with a Government Measuring Cellar, containing measuring tank for revenue purposes; the beer is pumped through a pipe line, as stated above, to these tanks, which are under control of a Government officer, and then brought to the filler by means of air pressure. The building should be strictly fireproof, as a great deal of expensive machinery and stock is contained therein.

5. The stables, wagon sheds and autotruck house ought to be entirely separated from the other groups of buildings, for the reason of cleanliness, odor and fire. If possible they should be built fireproof, especially when a two story stable is required. They should be well ventilated and lighted to admit good, fresh air at all times; the stables should be large and commodious, having floors of either oak plank, brick or asphalt; the wood floor is used mostly and is no doubt best for the horses, but is not as sanitary as the brick or asphalt; lately creosoted wood blocks have been used with satisfaction. The floor in passageways can be either wood, brick, cement, asphalt or corkblock. The wood is very good for the horses to walk on, but not sanitary; the corkblocks are sanitary and very good for the horses to walk on, but quite expensive. The brick, cement and asphalt are very sanitary, and should be laid with grooves to prevent the horses from slipping. Hay and grain is to be stored in the upper story in an absolutely fireproof place, with no direct connection with stable proper. The wagons and autos might be sheltered in a commodious enclosed shed with an adjoining wash room, this will no doubt preserve and keep them in a neat, presentable condition.

6. An ice plant in connection with a brewery is always desirable, especially in the southern part of the country, and principally for shipping breweries, as a great deal of ice is needed for refrigerating the cars. It is also a profitable branch, as it requires no additional administrative or expert work. This group of buildings should be isolated from the brewery, but near by, to shorten the steam, water and ammonia pipe lines, as the machinery, together with condensers are all located in machine house next to the brew house; the ice plant proper consists of a freezing house and ice storage house, and if sufficient ground is available, to be only one story high.

It is also desirable to build a separate office building, located so the officers housed in same can have a general supervision of the workings about the plant; it also insures a better organization of the office force, which is very desirable to the management.

The best site for a complete modern plant is a level piece of ground, adjoining a railroad, and as close as possible to the heart of the respective city; both features

will reduce the operating expenses considerably, especially for a shipping plant.

The brewing industry of today is one of the most important in the United States, its plants in the different cities and smaller towns are a credit to its citizens and the employment of labor by them and its kindred trades is enormous.

#### BERGNER & ENGEL BREWING CO.

The report submitted by G. W. Bergner, president pro tem., to the stockholders of the Bergner & Engel Brewing Co., Philadelphia, at the annual meeting held recently in that city, showed the company to be in splendid condition. The last fiscal year which ended September 30 was a successful one in spite of the high price of materials, which reduced the profits (\$393,242) slightly from the previous year. Regular dividends on the preferred stock were paid, besides an extra dividend, the last of the back dividends.

Sales increased 6,200 barrels over the previous year. The balance sheet as of September 30, 1911, follows:

ASSETS.	
Real Estate and Buildings.....	\$2,905,929.09
Machinery, Casks, Barrels, Horses, Wagons, etc.....	548,838.56
Fixtures and Depot Chattels.....	10,253.63

Total Fixed Assets..... \$3,465,021.28

Stock:

Beer, Ale, Porter, Malt, Hops, Revenue Stamps and Sun- dry Materials.....	\$ 198,325.41
Bills Receivable.....	1,049.76
Accounts Receivable:	
Loans to Customers.....	897,820.83
Sundry Debtors.....	196,527.11
Cash in Banks and Office.....	133,605.69
Insurance Premiums, etc., paid in advance.....	11,164.33

Total Available Assets.....  
Mortgages Receivable.....  
Investments in other Companies...  
Goodwill Account.....  
Stock of the Company held in the  
Treasury.....  
Bonds of the Company held in the  
Treasury.....

\$1,438,493.13  
6,500.00  
20,800.00  
500,000.00  
302,003.52  
31,000.00  
\$5,763,817.93

#### LIABILITIES.

First Mortgage Bonds.....	\$1,500,000.00
Preferred Capital Stock.....	1,650,000.00
Common Capital Stock.....	1,650,000.00
Accounts Payable.....	59,333.87
Bond Interest and other Charges Accrued.....	44,847.21
Mortgages Payable.....	76,050.00
Reserve for Special Allowances to Customers.....	15,708.96
Contingent Reserve Fund.....	500,000.00
Surplus and Undivided Profits....	267,857.89

\$5,763,817.93

#### ANOTHER "MUTUAL" BREWERY PLANNED FOR DETROIT.

Michael Neckel is at the head of a company in which about 40 Detroit saloonkeepers are interested, and which proposes to erect a new brewery near the junction of Military and Michigan avenues. Part of the equipment will come from the plant at Ionia, Mich., which was put out of operation by an adverse local option election about two years ago.

#### CHICAGO CONSOLIDATED BRG. & MLTG. CO.

Following is the report of the City of Chicago Consolidated Brewing & Malting Co., Ltd., for the year ended Sept. 30, 1911. This company comprises the Conrad Seipp brewery, the West Side brewery and the Geo. Bullen malt houses, all in Chicago. The sales of beer were the largest in the history of the company with the exception of 1892 and 1893. The net profits from operation were \$623,223, an increase of \$86,173 over 1910. The directors have recommended the payment of a dividend of 1 per cent on the preference shares, on which no dividends have been paid since the 2½ per cent distribution of 1903. The profit and loss account of the subsidiary operating company, known as the Chicago Consolidated Brewing & Malting Company, compares as follows:

	1911.	1910.
Profits after deducting for ma- terials, wages, revenue stamps and general expenses.....	\$623,223	\$537,050
Interest on investment and other receipts.....	640	460
Total net income.....	\$623,863	\$537,518
Repairs.....	\$131,022	\$ 97,085
Depreciation.....	144,514	137,185
Head office charges, etc.....	22,975	23,509
Bankers and general interest... ..	19,069	8,930
Reserve for bad debts.....	64,284	40,544
Mortgage bond interest.....	128,137	134,476
Total deductions.....	\$510,011	\$441,729
Balance profit.....	\$113,852	\$ 95,781

\*Further special deductions made in 1911 are: Sinking fund appropriation, \$63,320; dividends paid to English company, \$45,000, leaving an actual credit balance in this account of \$5,532

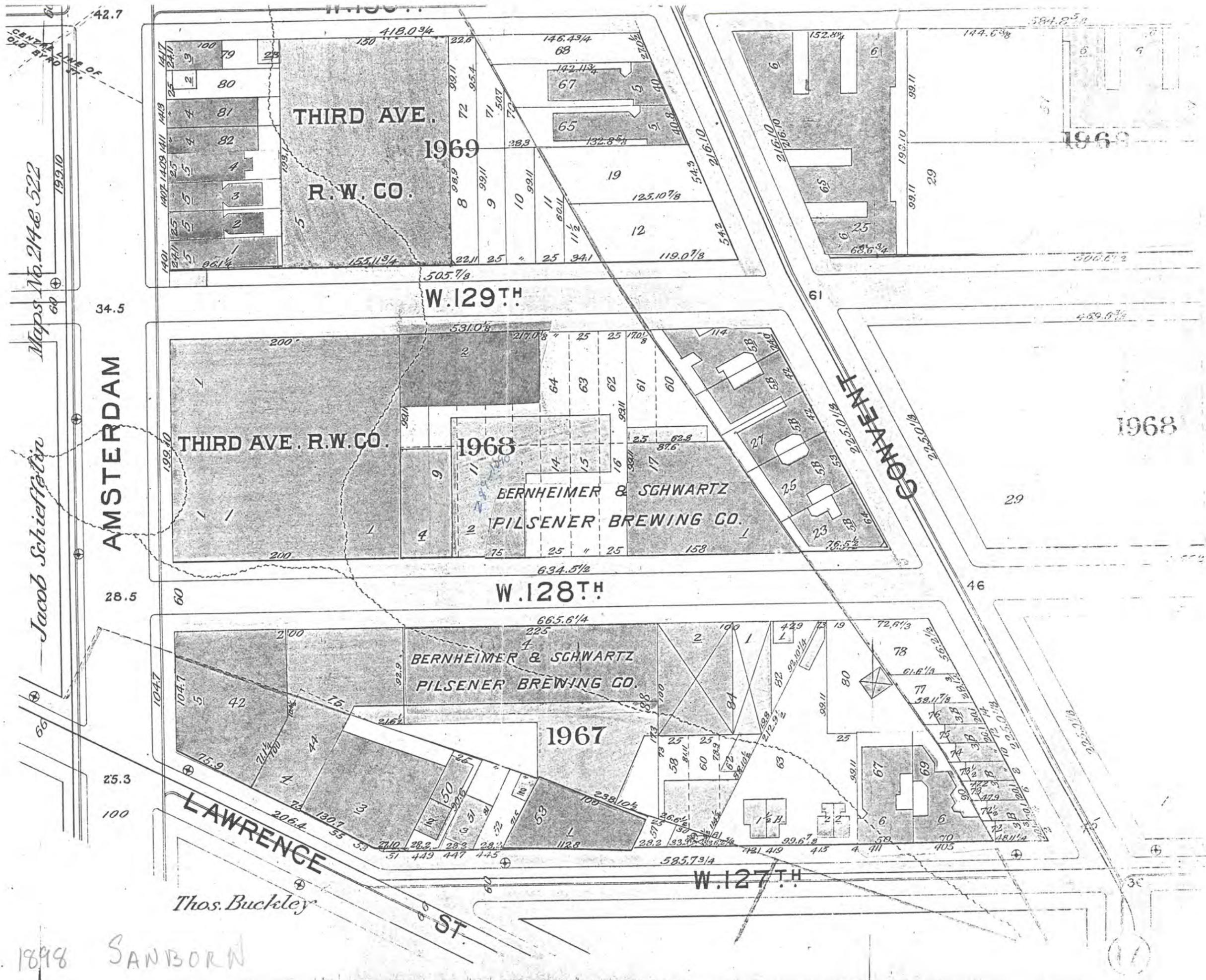
#### EXPORTS AND IMPORTS.

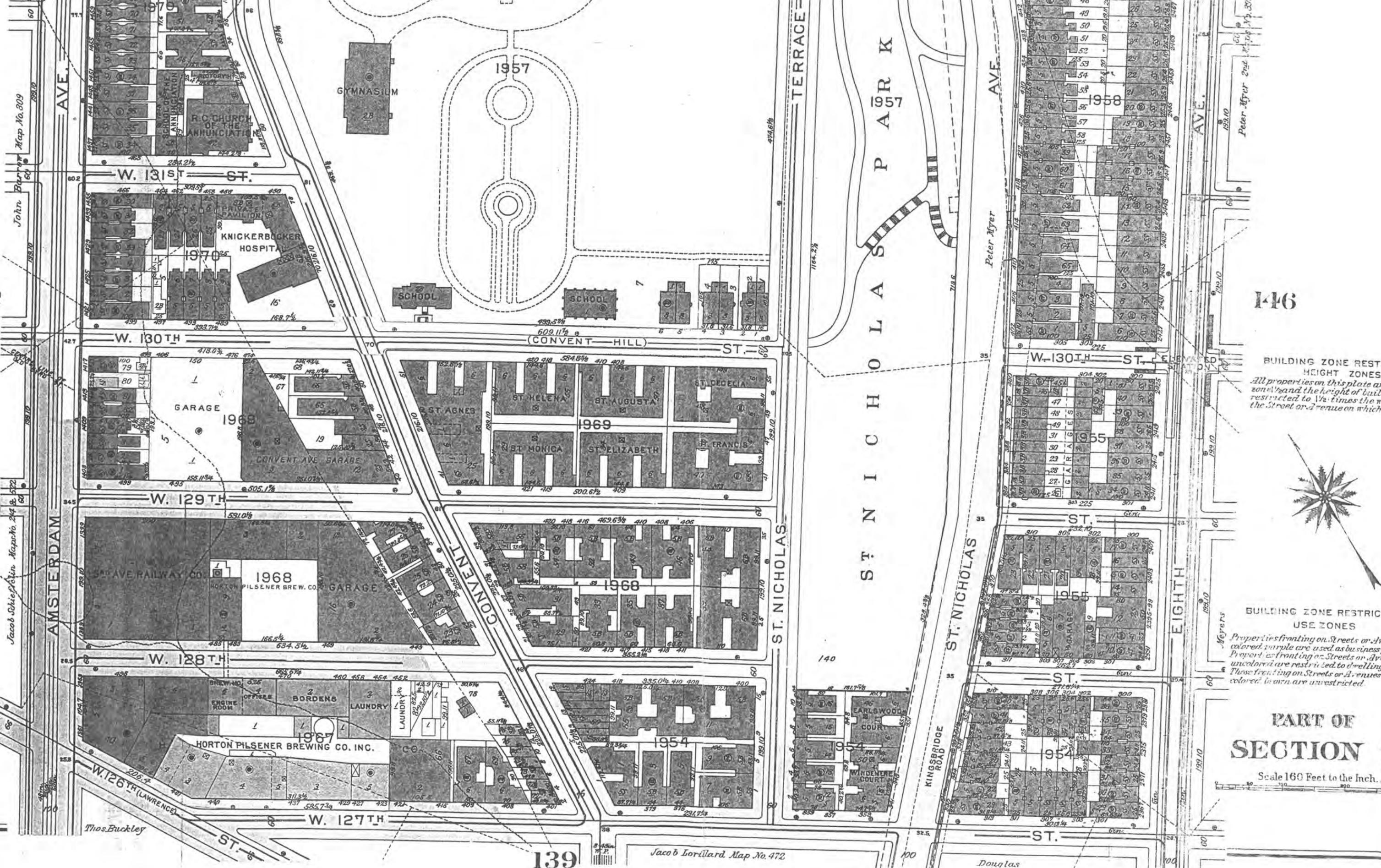
The imports of malt liquors into the United States during the month of November, 1911, amounted to 610,846 gallons, a decrease of 107,807 gallons from November, 1910. The imports of hops for November amounted to 362,825 pounds, valued at \$277,212, as against 1,593,333 pounds, valued at \$488,344 in November, 1910. The exports of malt liquors in November was 65,525 dozen quarts in bottles and 15,277 gallons in wood. Barley exported, 164,833 bushels, valued at \$158,833, as against 2,353,863 bushels, valued at \$1,279,713, exported in November, 1910. Hops exported, 2,148,569 pounds, valued at \$816,519 as compared with exports in November, 1910, of 2,997,726 pounds, valued at \$491,489.

#### NEW RECEIVER FOR GERKE BREWING CO.

Joseph A. Keadin, receiver of the Gerke Brewing Co., Cincinnati, filed the inventory of the company's assets in the Common Pleas court December 29. The inventory shows a total valuation of \$364,000. Receiver Keadin tendered his resignation, and Judge Caldwell appointed Robert Kuerze, president of the company, as receiver. Mr. Kuerze will operate the brewery with a committee of three of the creditors.

He has been connected with the Gerke Brewing Co. for fourteen years, starting in as an apprentice boy and working himself up to his present position as president.





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BUILDING ZONE RESTRICTED HEIGHT ZONES  
 All properties on this plate are in zone and the height of building restricted to the times the width of the street or avenue on which the



BUILDING ZONE RESTRICTED USE ZONES  
 Properties fronting on Streets or Avenues colored purple are used as business property. Properties fronting on Streets or Avenues uncolored are restricted to dwelling use. Those fronting on Streets or Avenues colored brown are unrestricted.

PART OF SECTION 7

Scale 160 Feet to the Inch.

John Barrer Map No. 309  
 Jacob Schieffelin Map No. 244 & 572

Jacob Lorillard Map No. 472

1934 Bromley

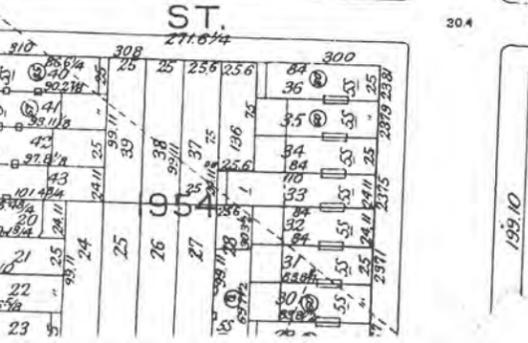
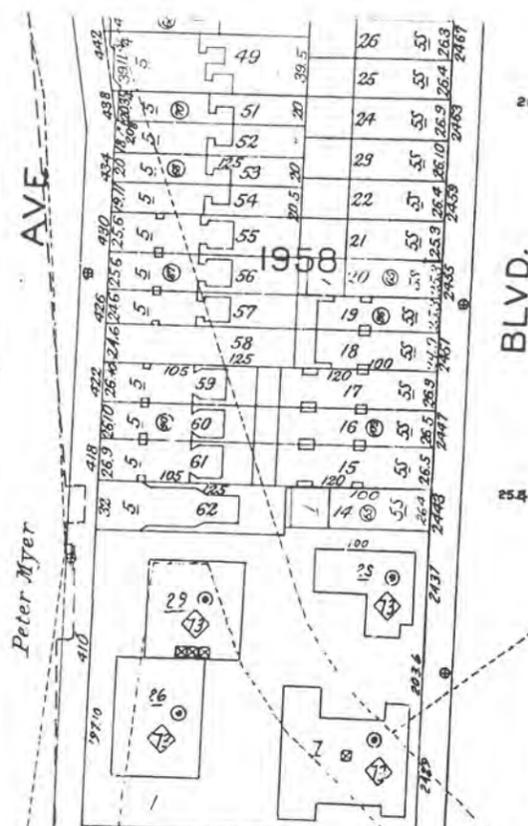
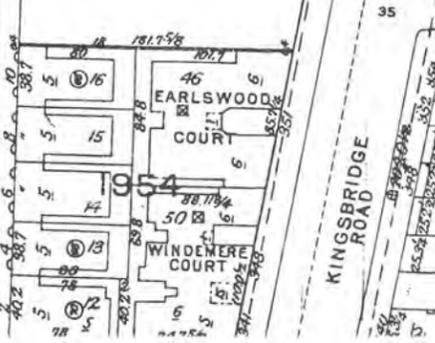
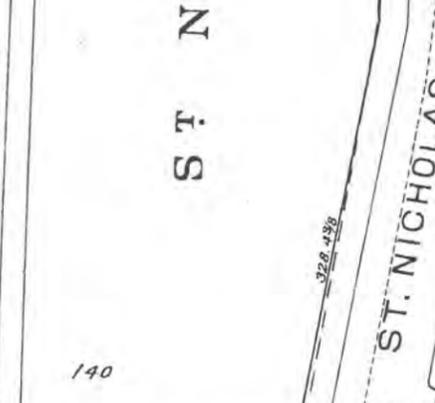
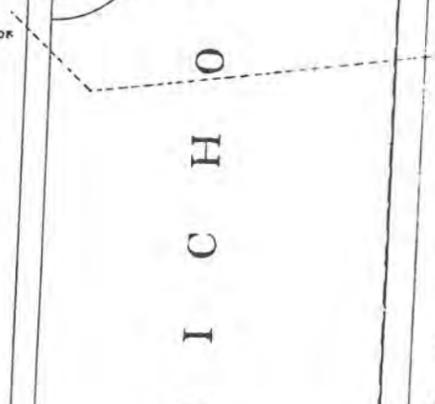
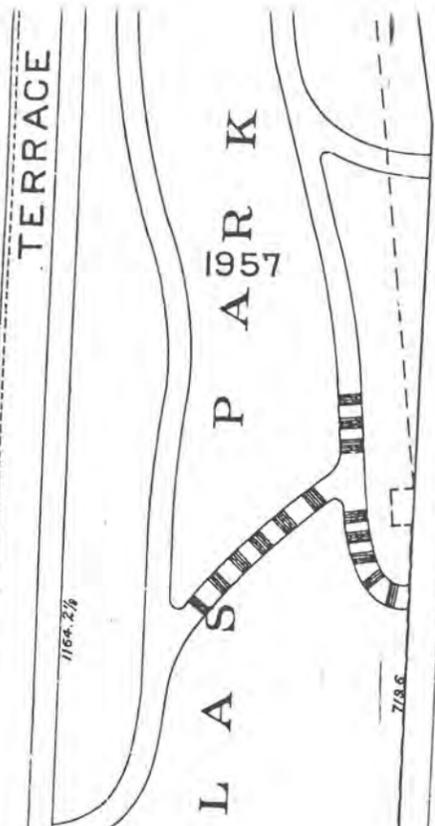
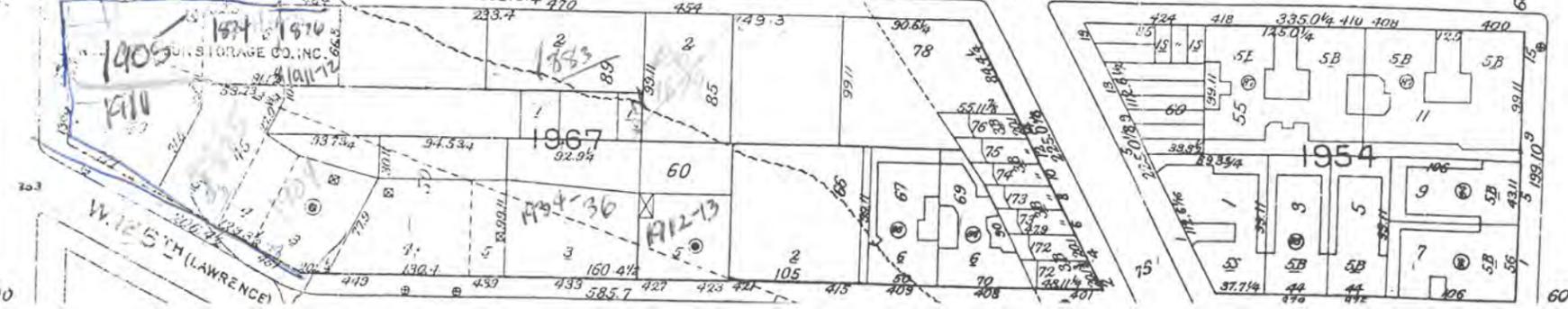
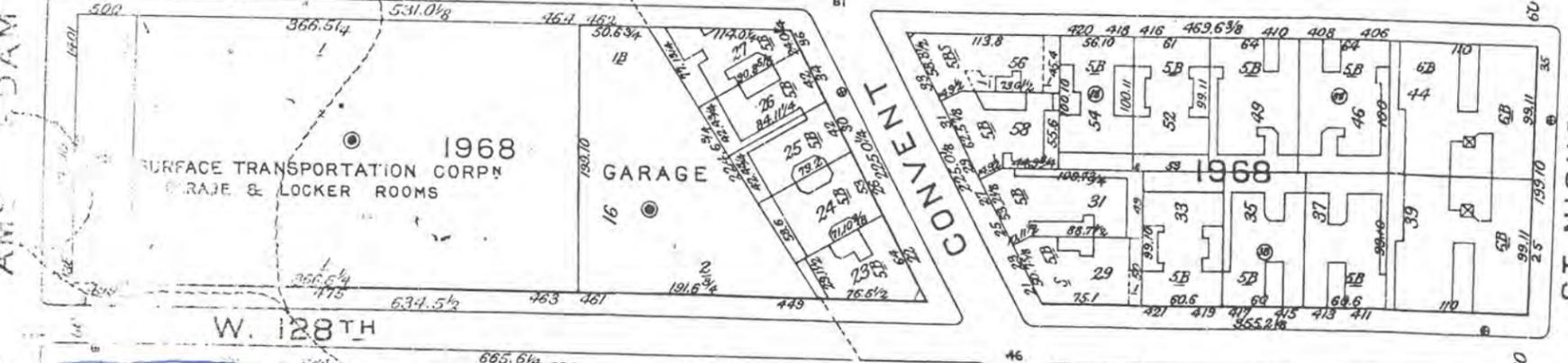
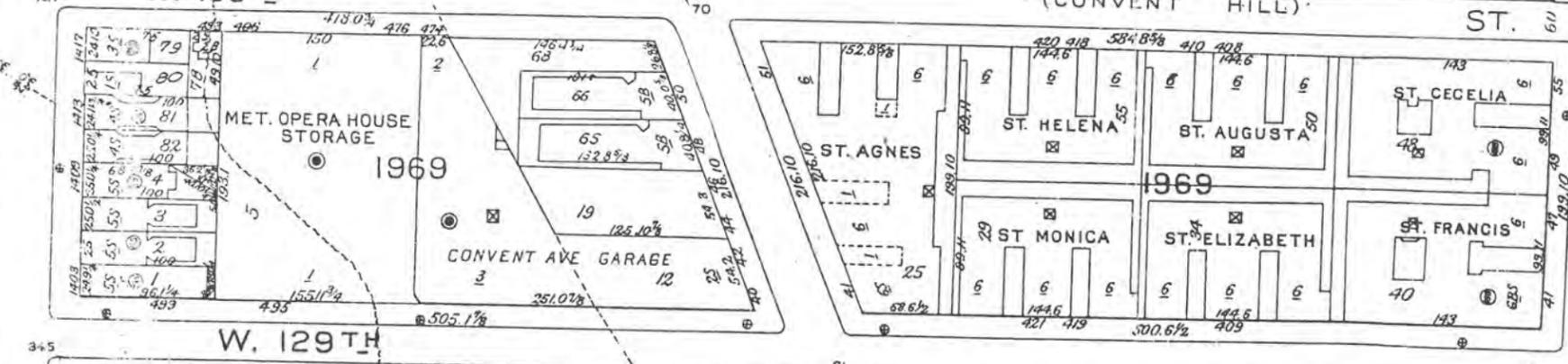
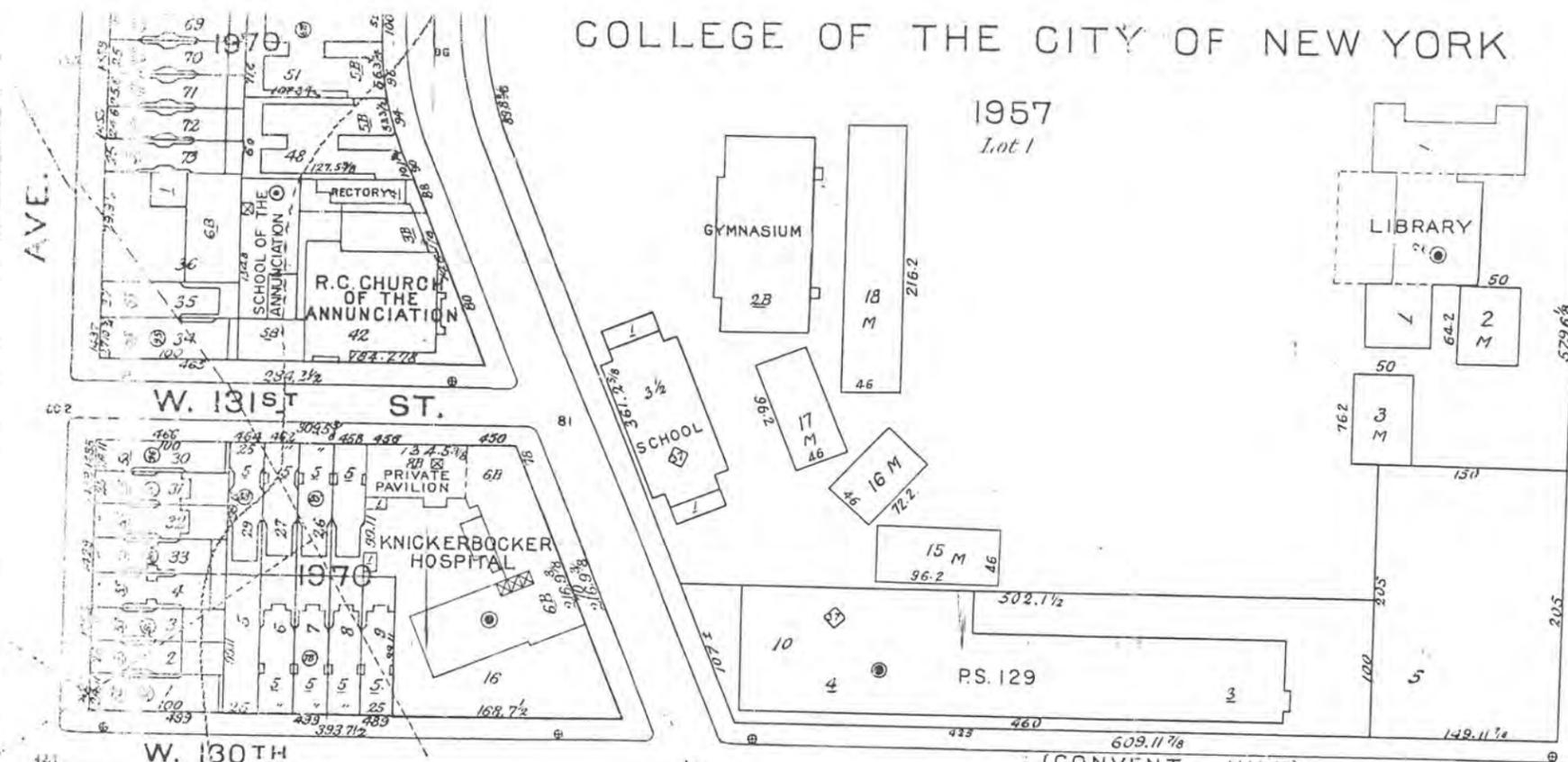
139

Douglas



COLLEGE OF THE CITY OF NEW YORK

1957  
Lot 1



AVE.

W. 131ST ST.

W. 130TH

W. 129TH

W. 128TH

W. 125TH (LAWRENCE)

GYMNASIUM

LIBRARY

KNICKERBOCKER HOSPITAL

PS. 129

(CONVENT HILL)

MET. OPERA HOUSE STORAGE

CONVENT AVE GARAGE

GARAGE

KINGS STORAGE CO. INC.

ST. NICHOLAS PARK

TERRACE

AVE.

ST.

ST.

DOUGLASS

FREDERICK

BLVD.

## The President and Fellows of Harvard College

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Local and Regional Breweries in America's Brewing Industry, 1865 to 1920

Author(s): Martin Stack

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Although this was a significant sum, it was disappointing when compared to the firm's success twenty-four years earlier.<sup>1</sup>

Pabst's experience, while extreme, was not unique among the small group of national breweries that were trying to combine mass production with national distribution. Through the early 1890s, it appeared that these national shipping breweries would steadily extend their overall position in the brewing industry; however, after the mid-1890s, they began to see their relative share of industry production fall. Rising to fill the gap were hundreds of local and regional breweries: some quite large and others of modest size.

To date, studies of the brewing industry for this period have emphasized the arrival and growth of the large national shippers, such as Pabst and Anheuser-Busch. This work has greatly enhanced our understanding of the central role played by these national shipping breweries, but it has overlooked the important contributions made by other firms. During these formative years, regional and local breweries played a significant role in the industry's growth and development.<sup>2</sup>

The chronology of these paradoxical developments is traced through two distinct periods, beginning with the thirty-year span following the Civil War, when the industry built its complex structure and the large national shippers emerged into prominence. During the second period, which lasted from 1895 to 1920, the national shippers witnessed the relative decline of their position in the industry. This turn of events contradicts the findings of scholars who have argued that, once firmly established, the national shippers steadily drove less efficient smaller producers out of the market.<sup>3</sup> The strong performance of many regional and local breweries in the years following the national shippers' rise to prominence suggests that the domination of individual industries by big businesses was full of starts, stops, and even reverses.

<sup>1</sup> Thomas Cochran, *The Pabst Brewing Company* (New York, 1948) 84, 183.

<sup>2</sup> There is a growing literature that highlights the important roles played by local and regional firms during these years. See for example John Ingham, *Making Iron and Steel: Independent Mills in Pittsburgh, 1820-1920* (Columbus, Oh., 1991) for a discussion of the continued importance of local steel mills. Philip Scranton has also written extensively in this area. See "Manufacturing Diversity: Production Systems, Markets and an American Consumer Society, 1870-1930," *Technology and Culture*, 35 (1994): 476-505; "Determinism and Indeterminism in the History of Technology," *Technology and Culture*, 36 supp. (1995): S31-52; *Endless Novelty: Specialty Production and American Industrialization, 1865-1920* (Princeton, N.J., 1998).

<sup>3</sup> See, for example, Stanley Baron, *Brewed In America: A History of Beer and Ale in the United States* (Boston, Mass., 1962) and Anita McGahan, "The Emergence of the National Brewing Oligopoly in the American Market, 1933-58," *Business History Review*, 65 (1991): 229-284.

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*Martin Stack*

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## Local and Regional Breweries in America's Brewing Industry, 1865 to 1920

Between the end of the Civil War and the enactment of national Prohibition in 1920, America's brewing industry grew to become one of the nation's leading manufacturing industries. During the first thirty years of this period, the industry's growth was propelled by the emergence of a small group of nationally oriented breweries. These firms pioneered a series of important technological, scientific, and organizational innovations, which allowed them to increase annual sales. Yet, after several decades of spectacular growth, they began to see their relative position in the industry decline. From the mid-1890s until Prohibition, hundreds of regional and local breweries reasserted themselves in the market for beer. These firms often were able to provide less expensive beer and to sell it in saloons that they owned or controlled. Together, these two factors enabled regional and local breweries to present a competitive challenge to national firms in the years leading up to Prohibition.

In 1890, the Pabst Brewing Company, which integrated America's largest brewery with a broad, national distribution network, reported total net profits of \$1,560,254. The upward trend in annual sales and profit data during the preceding years suggested that the future would be even better. Yet Pabst's profits over the next several decades proved extremely volatile. Between 1900 and 1915, net profits averaged \$779,000, approximately half the level reached in 1890. In 1914, when the industry reached its pre-Prohibition production high of 66.2 million barrels of beer, Pabst recorded net profits of only \$555,189.

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Although this was a significant sum, it was disappointing when compared to the firm's success twenty-four years earlier.<sup>1</sup>

Pabst's experience, while extreme, was not unique among the small group of national breweries that were trying to combine mass production with national distribution. Through the early 1890s, it appeared that these national shipping breweries would steadily extend their overall position in the brewing industry; however, after the mid-1890s, they began to see their relative share of industry production fall. Rising to fill the gap were hundreds of local and regional breweries: some quite large and others of modest size.

To date, studies of the brewing industry for this period have emphasized the arrival and growth of the large national shippers, such as Pabst and Anheuser-Busch. This work has greatly enhanced our understanding of the central role played by these national shipping breweries, but it has overlooked the important contributions made by other firms. During these formative years, regional and local breweries played a significant role in the industry's growth and development.<sup>2</sup>

The chronology of these paradoxical developments is traced through two distinct periods, beginning with the thirty-year span following the Civil War, when the industry built its complex structure and the large national shippers emerged into prominence. During the second period, which lasted from 1895 to 1920, the national shippers witnessed the relative decline of their position in the industry. This turn of events contradicts the findings of scholars who have argued that, once firmly established, the national shippers steadily drove less efficient smaller producers out of the market.<sup>3</sup> The strong performance of many regional and local breweries in the years following the national shippers' rise to prominence suggests that the domination of individual industries by big businesses was full of starts, stops, and even reverses.

<sup>1</sup> Thomas Cochran, *The Pabst Brewing Company* (New York, 1948) 84, 183.

<sup>2</sup> There is a growing literature that highlights the important roles played by local and regional firms during these years. See for example John Ingham, *Making Iron and Steel: Independent Mills in Pittsburgh, 1820–1920* (Columbus, Oh., 1991) for a discussion of the continued importance of local steel mills. Philip Scranton has also written extensively in this area. See "Manufacturing Diversity: Production Systems, Markets and an American Consumer Society, 1870–1930," *Technology and Culture*, 35 (1994): 476–505; "Determinism and Indeterminism in the History of Technology," *Technology and Culture*, 36 supp. (1995): S31–52; *Endless Novelty: Specialty Production and American Industrialization, 1865–1920* (Princeton, N.J., 1998).

<sup>3</sup> See, for example, Stanley Baron, *Brewed In America: A History of Beer and Ale in the United States* (Boston, Mass., 1962) and Anita McGahan, "The Emergence of the National Brewing Oligopoly in the American Market, 1933–58," *Business History Review*, 65 (1991): 229–284.

### The Brewing Industry: 1865–1895

The Civil War provides a useful marker in discussions of the brewing industry. In the antebellum period, brewing was a relatively unimportant affair. Following the war, it grew into a leading national manufacturing industry. Beer output is measured in thirty-one-gallon barrels, and accurate production statistics date to August 1862, when Congress first imposed a federal excise tax on beer.<sup>4</sup> This action resulted in the formation several weeks later of one of the nation's first trade associations, the United States Brewers Association, whose goal was to help brewers articulate their needs and concerns.<sup>5</sup>

In 1863, the total national production of beer was 1.7 million barrels. By 1865, the year the Civil War ended, production had doubled to 3.5 million barrels. Over the next thirty years, output rose at a tremendous pace, fueled not only by a population that doubled during this period, but also by an influx of beer-drinking immigrants. Per capita consumption rose by 340 percent, growing from 3.4 gallons per capita in 1865 to 15.0 gallons in 1895.

Between 1865 and 1895, total output rose nearly tenfold, to 33.6 million barrels. Yet, this increase was not distributed evenly among the states. The top thirteen beer-producing states—New York, Pennsylvania, Ohio, Illinois, Wisconsin, Missouri, Massachusetts, New Jersey, Connecticut, Rhode Island, Maryland, Michigan, and Minnesota—accounted for 91 percent of total production in 1880 and 89 percent in 1895. In fact, the combined output of two states, New York and Pennsylvania, accounted for 48 percent and 40 percent, respectively, of the total output in these years.<sup>6</sup>

### Industry Structure: 1865–1895

Despite the record increases in production between 1870 and 1895, the number of firms actually fell by 46 percent. Average brewery output rose significantly, driven partly by a rapid increase in output by the largest breweries. As late as 1877, only four breweries topped 100,000 barrels annually, with the largest, George Ehret in New York, producing

<sup>4</sup>The tax was imposed on production, and breweries paid a monthly tax on each barrel of beer they brewed. United States Brewers Association, *1979 Brewers Almanac* (Washington DC, 1979), 94.

<sup>5</sup>*Ibid.*, 8.

<sup>6</sup>See Appendix for a detailed listing of national and state production figures from 1880 to 1915.

*Table 1*  
Trends in the Brewing Industry, 1865–1895

Year	Number of Breweries	Number of Barrels Withdrawn (millions)	Largest Firm (annual production, millions of barrels*)	Per Capita Consumption (gallons)
1865	2,252	3.7	.080	3.4
1870	3,286	6.6	.085	5.3
1875	2,783	9.5	.138 <sup>†</sup>	6.6
1880	2,741	13.3	.272	8.2
1885	2,230	19.2	.385	10.5
1890	2,156	27.6	.770	13.6
1895	1,771	33.6	1.0	15.0

\*A barrel of beer consists of thirty-one gallons.

<sup>†</sup> Figure for 1877.

Sources: United States Brewers Foundation, *1956 Brewers Almanac* (New York, 1956), 10, 90; Ko Ching Shih and C. Ying Shih, *American Brewing Industry and the Beer Market* (Brookfield, Wisc., 1958), 56, 108; Thomas Cochran, *The Pabst Brewing Company: The History of an American Business* (New York, 1948), 734, 109; Roland Krebs and Percy Orthwein, *Making Friends Is Our Business: 100 Years of Anheuser-Busch* (St. Louis, MO, 1953), 242–243. All the national production and consumption figures come from the United States Brewers Foundation's *Brewers Almanac*. There are slight discrepancies between these data, which are based on Internal Revenue Service calculations, and similar data reported in the manufacturing censuses.

138,000 barrels. By 1895, the largest sixteen firms had greatly increased their productive capacity and were all brewing over 250,000 barrels annually. During this eighteen year span, the Pabst Brewery grew by over 650 percent, becoming the nation's largest brewery and the first to top one million barrels in annual production, while Anheuser-Busch increased its output by over 1,500 percent, an achievement that catapulted it into the number two position in the industry.<sup>7</sup>

Thomas Cochran details the integral investments Pabst made in production, distribution, and marketing as it rose to industry prominence and the challenges it faced in trying to maintain its gains.<sup>8</sup> He

<sup>7</sup> In 1895, Pabst sold 955,000 barrels, 129,000 barrels below its 1893 level, while Anheuser-Busch sold approximately 700,000 barrels. Cochran, *Pabst Brewing Company*, 73–4, 180.

<sup>8</sup> Cochran's study of Pabst remains the most detailed examination of an American brewery. He wrote this work with the cooperation of the Pabst brewery, focusing in part on the entrepreneurial ability of Pabst's early managers. This is not surprising, as he intended his study to serve as a model for how to write an academic company history. (See Steven Sass, *Entrepreneurial Historians and History*, unpublished Ph.D. dissertation, Johns Hopkins University, 1978.) One of the leading members of Harvard's Center for the Study of Entrepreneurial History, he felt that neoclassical economists had ignored the institutional framework in which firms operated and with which they interacted.

was the first of several authors who have chosen to concentrate on a small subset of this period's leading breweries, which have been called "shipping" breweries since, in addition to serving their local market, they shipped their beer to regional and, ultimately, national consumers.<sup>9</sup> It is easy to see why earlier authors have emphasized the importance of the national shippers: they revolutionized brewing during these years with the introduction of a series of pioneering technical and scientific advances that permitted them to brew quantities of beer that only years before would have been regarded as unattainable. However, this focus on the national shippers at the expense of other breweries has fostered an impression that the industry during these years consisted of large national shippers and small local firms. In fact, the important categorization may not be large versus small, but shipper versus local manufacturer. Large local breweries often had more in common with their smaller, nearby rivals than with equally large competitors based hundreds of miles away. This distinction is important because it reveals that brewery interests and alliances may have had more to do with the scope of distribution than the scale of production. That is, firms brewing for a local market had different concerns and challenges than breweries looking to ship their beer into distant regional and national markets. To help illustrate the differences and commonalities among breweries, it is useful to divide the industry into four categories: large-scale shippers; large-scale local breweries; medium-sized shippers; and small-to-medium-sized local breweries.

The large national shippers integrated mass production and mass distribution.<sup>10</sup> Based in Milwaukee (Pabst, Schlitz, and Blatz), St. Louis (Anheuser-Busch and Lemp), and Cincinnati (Christian Moerlein), their home markets were too small to absorb significant levels of production. Breweries in these and similarly sized cities were thus left with two choices: they could limit their output to locally sustainable levels of production, or they could try to maximize their productive efficiency and ship their beer to other regions. The national shippers chose the second option.

To illustrate how a small brewery could transform itself into a national concern, let us consider the experiences of Milwaukee's Pabst Brewery. Begun in 1844 as the Philip Best Brewery, Pabst had become

<sup>9</sup> Baron, for example, argues that the few national shippers were the vital force propelling the industry forward. See Baron, *Brewed In America*, Chapters 29–32. In addition, the two most complete business histories are of national shippers: Cochran's study of Pabst, and Ronald Plavchan's, *A History of Anheuser-Busch, 1852–1933* (New York, 1969).

<sup>10</sup> See Alfred D. Chandler, *Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass., 1977), 301–2.

the nation's second largest brewery by 1877, with annual production of 121,000 barrels. By 1895, it was the nation's leading brewery, with annual output between 800,000 and one million barrels. During these years, Pabst modernized its productive and distributive capacities.

Two advances in technology proved particularly important: artificial refrigeration and mechanized bottling. By removing the limitations of natural ice, artificial refrigeration promised breweries an extended brewing season and increased production. Despite the successful introduction of an artificial ice machine in a New Orleans brewery in 1869, Pabst continued to rely exclusively on natural ice until the early 1880s.<sup>11</sup> In 1883, Pabst began using ice machinery, and by the decade's end, when it no longer purchased any natural ice, its annual production had risen to over 800,000 barrels.

Important improvements were also made in the bottling of beer. Among the labor-saving innovations during these years were the Gouling bottle-washing machine in 1884, which ended the need for workers to clean individual bottles by hand, and the Crown Cork and Seal Company's metal cap in 1892, which provided brewers with a secure stopper for beer bottles that could be applied by machines.<sup>12</sup> Bottled beer also received a legislative boost when Frederick Pabst, the company's president, lobbied to modify the outdated government policy for taxing bottled beer. The federal government's initial tax on beer in 1862 was designed to measure kegged beer. If brewers wanted to bottle beer, they first had to keg the beer, pay the appropriate excise taxes, and then laboriously transfer the beer from kegs to bottles. In 1889, two Pabst employees developed a pipeline and bottling system that facilitated the bottling of beer while also ensuring that the correct taxes were assessed. Frederick Pabst successfully petitioned Congress to allow brewers to bottle beer directly from the plant, and on June 8, 1890, Congress amended the appropriate section of the Internal Revenue Act.<sup>13</sup> These technical and legislative developments helped Pabst to increase its bottled beer production from 5 percent of its total output in the early 1880s to 10 percent in the 1890s.<sup>14</sup>

Pabst also began to pasteurize beer. Louis Pasteur published an entire book on fermentation and beer in 1876, but his numerous contributions can be distilled to one main idea: by heating or pasteurizing

<sup>11</sup> William Downard, *Dictionary of the History of the American Brewing and Distilling Industries* (Westport, Conn., 1980), 158.

<sup>12</sup> Baron, *Brewed in America*, 241–6; Plavchan, *History of Anheuser-Busch*, 71–7.

<sup>13</sup> Cochran, *Pabst Brewing Company*, 126–8.

<sup>14</sup> *Ibid.*, 109, 124.

beer to a temperature just below boiling, harmful bacteria can be eliminated and the production and storage of beer made more reliable.<sup>15</sup> It is believed that Anheuser-Busch was the first American brewery to utilize pasteurization, but Pabst followed soon after.<sup>16</sup> By extending the shelf life of beer, pasteurization enabled the shippers to increase production and to distribute their beer—in particular their bottled beer—to a growing number of markets.

In order to send their beer to the new markets opened up by pasteurization, the shippers needed an extensive and affordable transportation system. The growing railroad networks provided them with an infrastructure capable of transporting beer across increasingly great distances.<sup>17</sup> In order to keep the beer fresher and to prevent spoilage, the shippers introduced refrigerated railroad cars, first developed by the meat packers. As the railroads covered more of the country, and as transportation costs fell, Pabst continued to expand its distribution network.<sup>18</sup>

Yet this very success in transportation presented another hurdle for the shippers: how were they to sell their beer in these new markets? Shippers developed a three-pronged approach. First, they created depots in key cities near railroad lines to handle their shipped beer. For example, in Kansas City, Pabst, Anheuser-Busch, Schlitz, Blatz, and Lemp set up depots on sidings of the Missouri Pacific Railroad and the Chicago & Alton Railroad.<sup>19</sup> Next, they established branches to manage their interests in these cities. Pabst established its first branch in Chicago in 1878 and its second in Kansas City in 1879. By 1893, it had at least 40 branches, reaching from Minneapolis to Houston to New York City.<sup>20</sup> Finally, they secured access to retail outlets. Prior to 1895, 90 to 95 percent of beer was kegged, and nearly all of it was sold in saloons.<sup>21</sup> To help place its beer, Pabst and the other shippers bought saloons in order to guarantee access for their beer.

<sup>15</sup> Louis Pasteur, *Studies on Fermentation. The Diseases of Beer, Their Causes, and the Means of Preventing Them* (London, 1879).

<sup>16</sup> Plavchan, *History of Anheuser-Busch*, 69.

<sup>17</sup> Chandler, *Visible Hand*, 256.

<sup>18</sup> The shippers did not invest in multiple plants prior to Prohibition, so any beer sold in various parts of the country had to be transported from the home city. There was, however, a difference in how bottled beer was handled: sometimes it was bottled at the home brewery, and then shipped in bottles; in other instances, it was shipped in kegs and bottled upon its arrival. See Cochran, *Pabst Brewing Company*, 175; Plavchan, *History of Anheuser-Busch*, 91–2.

<sup>19</sup> H. James Maxwell and Bob Sullivan, *Hometown Beer: A History of Kansas City's Breweries* (Kansas City, Mo., 1999), 75.

<sup>20</sup> Cochran, *Pabst Brewing Company*, 173.

<sup>21</sup> Bottled beer's market share slowly rose over this period, reaching perhaps 10 percent by 1895. Canned beer was a post-Prohibition phenomenon, not appearing until 1935.

Pabst supported its significant investments in production and distribution with extensive advertising and marketing campaigns. From very low levels of about \$10,000 annually in the late 1870s, Pabst rapidly increased its advertising expenditures to between \$80,000 and \$160,000 by the late 1880s and into the 1890s.<sup>22</sup> These advertising outlays, combined with the expenses involved in shipping beer, offset the advantages shippers may have gained from more efficient production and helped drive the retail price of their beer above that charged by local breweries. To sustain this differential, the shippers had to convince consumers that their beer was a superior product, and during these years of rapid growth they were often able to do just that. In 1886, Pabst's profit rate per barrel of beer ranged from \$3.93 at the Minneapolis branch to \$6.31 in a branch in Houghton, Michigan, in the Upper Peninsula.<sup>23</sup> From 1873 to 1895, Pabst recorded a profit every year. These profits ranged from \$17,000 to \$200,000 annually between 1873 and 1880 and from \$1,000,000 to \$1,500,000 in the early 1890s.<sup>24</sup> By the late 1880s, Pabst was selling its beer in thirty-five states, with Wisconsin accounting for only 13 percent of its sales.<sup>25</sup>

The large national shippers all began this period as small local or regional firms, but by combining aggressive marketing campaigns with extensive investments in production and distribution, they transformed themselves into large-scale, nationally oriented firms by the mid-1890s.

The second category of firms comprised the large local breweries. They rivaled the national shippers in size but concentrated their energies on local markets.<sup>26</sup> Many of these firms were based in eastern cities, such as New York, Philadelphia, and Newark. With sizable markets nearby, they did not need to ship beer.<sup>27</sup> In his discussion of the steel industry, historian John Ingham noted that some of the local steel firms in Pittsburgh had large plants, but that by other measures they acted like much smaller businesses.<sup>28</sup> The brewing industry manifested a similar division. The national shippers displayed the broadest perspective within the brewing industry, exhibiting a deep appreciation of the threats the industry faced. Large local firms, insulated from many of

<sup>22</sup> Cochran, *Pabst Brewing Company*, 136.

<sup>23</sup> *Ibid.*, 175.

<sup>24</sup> *Ibid.*, 84, 183.

<sup>25</sup> *Ibid.*, 87, 176.

<sup>26</sup> Some of these firms did occasionally ship small amounts of their beer, but this was never a primary concern. If they did transport beer, they tended to concentrate on nearby regional markets, having much more modest ambitions than their midwestern brethren.

<sup>27</sup> See Appendix for details concerning the dominant roles New York, Pennsylvania, and New Jersey played during these years.

<sup>28</sup> Ingham, *Making Iron and Steel*, ch. 1.

the temperance controversies erupting in states less hospitable to drink, continued to focus on their immediate concerns, often refusing to believe that the state and local prohibition movements gathering steam in other parts of the country could possibly affect their operations in safe havens like New York City or Philadelphia.<sup>29</sup>

This is not to suggest, however, that these firms were backward or produced an inferior product. Their plants incorporated the latest machinery, and their brewing operations were well organized. A good example of a large local brewery is New York City's Ehret brewery.<sup>30</sup> Founded in 1866, it was the nation's largest brewery by 1877 (138,000 barrels), and in 1895 its annual production was approximately 550,000 barrels, a level topped only by Pabst, Anheuser-Busch, and Schlitz.<sup>31</sup> George Ehret, the company's founder, published a history in 1891 detailing the rapid growth of his brewery and explaining how he maintained high product quality.<sup>32</sup> The Ehret Brewing Company invested in new plants and equipment, but with an abundant supply of local beer consumers, it did not have to worry about pasteurization or transport in refrigerated railroad cars. Shippers viewed bottled beer as the mechanism that allowed them to break into new markets when they did not have enough outlets for their kegged beer; local breweries, dominant in their backyards, did not have this concern, and often choose not to bottle their beer.<sup>33</sup>

Local brewers had no need for many of the technical and scientific advances that allowed the national shippers to extend their distribution to new markets. They did, however, take advantage of artificial refrigeration. Artificial cooling machines enabled all brewers to avoid the uncertainties that came with natural ice. In 1891, Ehret wrote, the "refrigerators of to-day completely emancipate the brewer from the thralldom of [climate]; he can brew almost anywhere and everywhere."<sup>34</sup> He might have added "at any time," since refrigeration enabled brewers to brew quality beer year-round, even in the warm sum-

<sup>29</sup> For further information on the local ordinances that anti-drink forces implemented, see K. Austin Kerr, *Organized For Prohibition: A New History Of The Anti-Saloon League* (New Haven, Conn., 1985), chs. 3–5.

<sup>30</sup> Additional examples include Ruppert, Bernheimer & Schmid, F. & M. Schafer, Peter Doelger, and James Everard, all based in New York City, and Berger & Engel and Louis Bergdoll based in Philadelphia.

<sup>31</sup> *One Hundred Years of Brewing* (New York, 1974 reprint), 374–5.

<sup>32</sup> George Ehret, *Twenty-Five Years of Brewing* (New York, 1891).

<sup>33</sup> Some late New York City breweries continued to sell only keg beer up to the early 1940s. In 1939, for example, Ehret produced exclusively kegged beer. Research Company of America, *A National Survey of the Brewing Industry* (New York, 1941), 106–7.

<sup>34</sup> Ehret, *Twenty-Five Years*, 74.

mer months. Along with the national shippers, Ehret and its large local rivals used artificial refrigeration to raise annual production levels significantly.

To help place its beer, Ehret relied on an extensive array of New York City saloons that it owned or influenced. The company supported its beers with advertising and marketing campaigns, but on a much more modest scale than the shippers had to undertake. The Ehrets of the brewing world demonstrated that they could comfortably compete on the basis of mass production alone, completely sidestepping the complications associated with mass distribution.

The third grouping of breweries comprised medium-sized shippers whose annual production reached the level of at least 30,000 barrels.<sup>35</sup> The dividing line between a mid-sized and a national shipper is imprecise. Part of the distinction reflects production levels. Here, mid-sized shippers can be categorized as those producing between 30,000 and 170,000 barrels annually. Yet output levels alone do not fully capture the differences between these firms. Equally important was the scale of distribution. National shippers like Pabst, Anheuser-Busch, Blatz, and Schlitz sent their product throughout the country, while mid-sized shippers directed their energies to their home region.<sup>36</sup> Among the scores of regional breweries were the George Wiedemann Brewing Company in Newport, Kentucky, the Theodore Hamm Brewing Company based in St. Paul, Minnesota, and M. K. Goetz Brewing of St. Joseph, Missouri.

Another important regional brewery of this era was the Stroh Brewery of Detroit. Many decades later it would grow to become one of the nation's largest breweries, but it began as a small operation founded by in 1850 Bernard Stroh. As was true of many breweries of the day, it was a family business, and Stroh descendants continued to run the company into the 1990s.

From very humble beginnings, in which Bernard Stroh delivered kegs of beer in a wheelbarrow, the Stroh brewery slowly expanded its production and reach. Although some of its beer was shipped as far east as New England, this was atypical. The Stroh brewery did not have

<sup>35</sup>To place this amount in perspective, during the current microbrewery revolution begun in the late 1970s, microbreweries were defined as producing less than 10,000 barrels. Very few of the new breweries started in the last two decades produce over 30,000 barrels.

<sup>36</sup>All regional and national shippers brewed the beer in their home plant and then shipped it to the destination cities. This led to a key question: should they ship the beer in kegs, and then bottle it upon arrival, or should they bottle the beer at their plant, and then ship it? Individual breweries answered this question differently, depending in part upon their ability to contract with reliable bottlers in their destination markets.

national aspirations and was content to carve out a regional sphere of influence. During the 1880s it began shipping its beer throughout Michigan and to cities near Lake Erie.<sup>37</sup> The brewery installed artificial refrigeration in 1887, a step that aided its rapid growth in the late 1880s and 1890s. Earlier, in 1885, it had set up a bottling line in the plant, a move that was integral to its efforts to expand from a local into a regional brewery.<sup>38</sup> Regional shipping breweries such as Stroh faced many of the same problems the national shippers grappled with. Unlike local breweries, shippers of all sizes had to deal with the science and technology of preserving and transporting bottled and keg beer and with distributional issues, such as securing outlets for “foreign” beer. In some cases, regional shippers may have faced the toughest obstacles, since they often were forced to compete with national shippers and the local breweries. Yet, despite these challenges, firms like Stroh prospered during these years, suggesting that the more narrowly focused regional firms offered yet another path to industry success.

The fourth and final category consisted of the small to medium-sized local breweries with annual production levels of up to 170,000 barrels. These firms generally sold their beer on tap in saloons under their control or influence. Although their number steadily fell from 1865 to 1895, they continued to account for the majority of the nation’s breweries and operated in a wide range of markets. Some were the only brewery in small towns, miles away from the nearest competitor, while others prospered in the face of active competition from national and regional shippers.

Leinenkugel was the sole brewery in the northern Wisconsin town of Chippewa Falls. In 1880, motivated less by ambition to achieve quantity than by a desire to provide quality beer for its immediate community, it produced only 1,800 barrels.<sup>39</sup> In turn, it received the loyal support of local consumers, which allowed Leinenkugel to continue to focus on small-scale, high-quality production. A world away from the cloistered life of Chippewa Falls was the booming town of Kansas City, Missouri, which supported a vibrant pre-Prohibition beer market. It did not serve as a home base for any large shippers, but more than twenty breweries from six states actively competed for sales; national shippers (e.g., Anheuser-Busch and Lemp from St. Louis, and Pabst, Schlitz, and Blatz from Milwaukee); regional shippers (e.g., Miller

<sup>37</sup> Peter Blum, *Brewed in Detroit: Breweries and Beers since 1830* (Detroit, Mich., 1999), 57–65.

<sup>38</sup> *One Hundred Years of Brewing*, 254–5.

<sup>39</sup> Jerry Apps, *Breweries of Wisconsin* (Madison, Wisc., 1992), 142–6.



George Muehlebach Brewing Co., Kansas City, c. 1892. (Photograph courtesy of the Western Historical Manuscript Collection, Kansas City.)

from Milwaukee, Heileman from LaCrosse, Wisconsin, and Wiedemann from Newport, Kentucky); and local breweries (e.g., Fred Heim Brewing Company, the Royal Brewing Company, the Imperial Brewing Company, and the George Muehlebach Brewing Company).<sup>40</sup> Despite the intense competition, several of the local firms prospered during these years, and their sales and profits rose steadily.

Perhaps most surprising was the fact that many small, local breweries operated successfully in the back yards of the national shippers in Cincinnati, Milwaukee, and St. Louis. Among them were Schaller Brewing, Fairmount Brewing, and Jung Brewing in Cincinnati; Eugene Husting Brewing and the Independent Milwaukee Brewery in Milwaukee; and Empire Brewing, Columbia Brewing, and Forest Park Brewing in St. Louis.<sup>41</sup> The ability of these small breweries to compete with their cross-town rivals depended on a wide array of factors, including price, product quality, and access to retail outlets.

<sup>40</sup> Maxwell and Sullivan, *Hometown Beer*, 93.

<sup>41</sup> For a complete list of the breweries operating in these, and all other, cities, see Dale Van Wieren, *American Breweries II* (West Point, Pa., 1995).

Leisy Brewing, based in Cleveland, Ohio, was one successful local firm that also shipped a small percentage of its product. Herbert Leisy, a descendent, stated: "In the old days they used to say that any brewery that could see a large proportion of its market from the top of its own chimney was in good shape, and those that had to ship any distance did not fare as well."<sup>42</sup> Leisy was the largest brewery in Cleveland, and, like Pabst, Ehret, and Stroh, was family owned and run. During the early 1870s, Leisy sold between 10,000 to 15,000 barrels annually, and it increased production to more than 25,000 barrels by 1877. As the population of Cleveland rose, so too did Leisy's production. By 1890, it was producing over 90,000 barrels.<sup>43</sup> Several factors were instrumental to its rapid success. First, it actively advertised the merits of its leading brands, Premium Lager and Budweiser.<sup>44</sup> Second, it incorporated important new technology, such as artificial refrigeration. Third, it secured outlets for its beer by buying saloons throughout Cleveland.<sup>45</sup>

The experiences of Leisy, Leinenkugel, and the thriving local firms in Kansas City, Milwaukee, Cincinnati, and St. Louis exemplify the ability of small firms that attended closely to their immediate market to prosper, even when regional and national shippers presented strong competition.

The market for beer during this period covered a wide spectrum and was not confined to large, shipping breweries and small, local businesses. In addition to varying levels of production, breweries manifested important differences in how and where they sold their beer. Yet, up until now, this degree of variety has been overlooked. In part, this reflects the very real accomplishments of the national shippers. Cochran, for example, calculates that the four leading shippers—Anheuser-Busch, Pabst, Schlitz, and Blatz—increased their proportion of total beer production from only 2.4 percent in 1872 to 8.8 percent by 1893.<sup>46</sup> These market-share data seem to support the impression that the national shippers, once established, would steadily gain more and

<sup>42</sup> Bruce Leisy, *A History of Leisy Brewing*, (Wichita, Kans., 1975), 13–14.

<sup>43</sup> *Ibid.*, 12–24.

<sup>44</sup> During these years, several breweries, in addition to Anheuser-Busch, sold Budweiser-brand beers, and Leisy sold its Budweiser until the 1900s or 1910s (Leisy, *History of Leisy*, 17–18). In 1898 Anheuser-Busch brought a trademark suit against a Brooklyn brewery that had changed its name in the 1890s to Budweiser Brewery. The owner promptly changed the company's name to Nassau Brewing. However, in 1905, the DuBois Brewery Company of DuBois, Pennsylvania, began selling DuBois Budweiser. Despite many lawsuits filed by Anheuser-Busch, it continued to sell this brand until 1970 when the U.S. Supreme Court in Pittsburgh ruled that Anheuser-Busch had the exclusive rights to the name Budweiser. See Will Anderson, *From Beer to Eternity* (New York, 1987), 10–13.

<sup>45</sup> Leisy, *History of Leisy*, 46–7.

<sup>46</sup> Cochran, *Pabst Brewing Company*, 71.

more control over the industry. However, as a detailed review of the next period shows, this is not exactly what happened.

### The Brewing Industry, 1895–1920

From 1895 to 1915, the brewing industry expanded almost continuously. By 1910, it had grown into one of the largest manufacturing sectors in the country. Annual output reached its peak in 1914 with 66 million barrels, double the level produced in 1895.<sup>47</sup> As in the prior period, annual increases in production continued to outpace the rate of population growth. From 15.0 gallons in 1895, per capita consumption rose to its pre-Prohibition peak of 21.0 gallons in 1913 and 1914. Though per capita levels began to decline slightly in 1915, they remained above 1895 consumption until 1919. This is particularly remarkable because these years saw an increasing number of people coming under the purview of local and state temperance and prohibition legislation.<sup>48</sup>

Whereas from 1865 to 1895 the number of breweries in operation fell steadily, the years from 1895 to 1920 present a more complicated picture. After 1895, the number of breweries actually began to increase slightly, rising by 10 percent between 1895 and 1905. This growth reversed a trend set in motion back in 1870, and, remarkably, came about during a period in which temperance legislation was closing down breweries in many communities and states.<sup>49</sup> By 1910, the number of

<sup>47</sup> Jonathan Hughes and Louis Cain, *American Economic History* (New York, 1994) cite 1860 and 1910 *Census of Manufactures* data in documenting the changing order of importance of America's industries. The 1910 census shows that breweries ranked eighteenth in number (1,531), sixth in capital, twenty-seventh in average number of wage-earners, seventeenth in amount of wages, seventh in the net amount of the value of products, and eleventh in the gross amount of value of products. Using the criteria of "value added to materials by manufacturing processes," they show that by 1910 brewing trailed only four other industries: machinery, lumber, printing and publishing, and iron and steel. According to a footnote in the *1910 Census of Manufactures*, value added deducts the cost of raw materials and adds the cost of mill supplies to the net value of products. For a useful discussion of value added as a measure, see Philip Scranton, *Endless Novelty*, Chapter 1.

<sup>48</sup> Some states were completely dry, having passed statewide prohibition laws outlawing the production and distribution of alcoholic beverages. Other regions, though, unable to pass statewide legislation, succeeded in implementing local option laws that prohibited production within specific cities or counties. See K. Austin Kerr, *Organized For Prohibition*. For a state-level distribution of the number of people living in dry or local option areas between 1910 and 1919, see United States Brewers Association, *1979 Brewers Almanac* (Washington D.C., 1979), 115.

<sup>49</sup> For data detailing state-level beer production between 1878 and 1919 see United States Brewers Association, *1908 Year Book* (New York, 1908), Table XI; United States Brewers Association, *1914 Year Book* (New York, 1914), 332–3; and United States Brewers Association, *1979 Brewers Almanac* (Washington, D.C., 1979), 12–13.

Table 2  
Brewing Industry Data, 1895–1920

Year	Number of Breweries	Number of Barrels Withdrawn (millions)	Largest Firm (annual production, millions of barrels)	Per Capita Consumption (gallons)
1865	2,252	3.7	.080	3.4
1895	1,771	33.6	1.0	15.0
1900	1,816	39.5	1.0	16.0
1905	1,847	49.5	1.3	18.3
1910	1,568	59.5	1.5	20.0
1915	1,345	59.8	1.1	18.7
1920–1933	Prohibition	No legal production	n.a.	n.a.

Source: United States Brewers Foundation, *Brewers Almanac* (New York, 1956), 10, 90; Shih and Shih, *American Brewing Industry*, 56, 108; Cochran, *Pabst Brewing Company*, 73–4, 109; Krebs and Orthwein, *Making Friends*, 242–3.

breweries resumed their decline, though the fall was not nearly as precipitous as it had been from the 1870s to the mid 1890s. If the years from 1865 to 1895 are most remarkable for the emergence of the national shippers, then the following 25 years are significant because the national shippers did not continue to expand at their earlier rate or even to maintain their share of the market.

A comparison of these two chronological periods reveals distinct differences in firm and industry performance.<sup>50</sup> While the two leading shippers, Pabst and Anheuser-Busch, outpaced industry growth from 1877 to 1895, between 1895 and 1915 they grew more slowly than the industry overall. Indeed, in the twenty years leading up to 1915, all of the national shippers grew at a slower rate than the industry, whose total output rose by 78 percent, from 33.6 million barrels to 54.8 million barrels.<sup>51</sup> After rising to 8.8 percent in 1893, the combined market share of Pabst, Anheuser-Busch, Schlitz, and Blatz, fell to approxi-

<sup>50</sup> Cochran recognized that the shippers did not enjoy the same growth rate in the years from 1895 to 1920; however, he only provided data tables detailing individual brewery production levels in 1877 and 1895. It is possible that subsequent authors have extrapolated from the trends clearly apparent in his 1877 and 1895 data tables and applied them to the period 1895 to 1915 for which fewer industry and firm data have been published. See Cochran, *Pabst Brewing Company*, 73–4, 180–2.

<sup>51</sup> Caution, however, must be exercised in interpreting these data. During the earlier period, when the national shippers were emerging in full force, the percentage increase in industry output (242 percent) was much greater than the percentage increase between 1895 and 1915 (78 percent).

*Table 3*  
 Percentage Change in Output by the Leading Shipping Breweries,  
 1877–1915

	1877–1895	1895–1915
Anheuser-Busch	1,566	58
Pabst	679	–23
Schlitz	713	0
Blatz	681	0
Lemp	433	0
Industry	242	78

Source: Cochran, *Pabst Brewing Company*, 73–4; Krebs and Orthwein, *Making Friends*, 242–3; United States Brewers Foundation, *1979 Brewers Almanac*, 10. Data for Schlitz, Blatz, and Lemp for the period 1895 to 1915 have been estimated.

mately 6 percent in the early 1910s. A number of factors may have contributed to this decline. For example, the national shippers, after experiencing several decades of unprecedented growth, may have reached their optimal production levels.<sup>52</sup> In addition, local and regional breweries may have enhanced their competitiveness by skillfully adopting new technologies, scientific developments, and organizational practices first introduced by the shippers. That is, the shippers may have paved the way for their competitors to improve their productive and distributive efficiencies. This process of catch-up may have been aided by a general slowdown in technical innovations. Cochran argues that there were no “outstanding developments either to reduce cost or to improve quality . . . in the brewing process between 1893 and 1920,” and this might have led to a convergence in brewing techniques and processes.<sup>53</sup>

If the national shippers were not behind the increase in industry output between 1895 and 1915, who was? During these years, Pabst ceded its position as the dominant shipper. Anheuser-Busch passed it in annual production in the late 1890s, and Schlitz topped it several

<sup>52</sup> This idea needs further study. It does not appear that Pabst was capacity constrained in the years after 1895, and indeed they struggled to retain many of the markets that they had earlier won (Cochran, *Pabst Brewing Company*, chapters 6 to 9). In addition, Anheuser-Busch, America’s largest brewery during these years, had annual production levels that were between 36 to 54 percent of that produced by the leading UK brewery. There do not appear to have been technical limitations that limited American brewery maximum output to between 1 and 1.5 million barrels. See Krebs and Orthwein, *Making Friends*, 242–3 and T. R. Gourvish and Richard Wilson, *The British Brewing Industry: 1830–1980* (Cambridge, England, 1994), 99.

<sup>53</sup> Cochran, *Pabst Brewing Company*, 204.

years later. However, this trio had long dominated the industry, and these changes only represented a reordering at the top of the field. From 1895 to 1917, though Pabst's annual production did not fall below 800,00 barrels, it never significantly eclipsed its output in 1893 of 1,084,051 barrels.<sup>54</sup> Profits were perhaps even more important than overall sales, but here too Pabst's performance was disappointing. Annual profits peaked in 1890 at \$1.56 million; after 1895, profits reached the one million dollar mark only three times, and in some years fell to half this level.<sup>55</sup> The volatility in profits reflected, in part, the industry's growing competitiveness. As local breweries became more efficient in producing and distributing draught beer, shippers began to rely increasingly on bottled beer, which came to play an important role in overall profits. Prior to 1893, it had never accounted for more than 25 percent of Pabst's profits, but by the 1900s, it contributed over half of Pabst's annual profits.<sup>56</sup>

Driven in part by a search for fresh markets for its bottled beer, Pabst continued to ship a large share of its output. Between 1909 and 1913, only 19 percent of Pabst's sales were within its home state of Wisconsin, while it shipped nearly 10 percent of its beer to New York.<sup>57</sup> In order for shippers such as Pabst to survive in this competitive market, they had to continually win new customers for their bottled and keg beer.

Their efforts in this vein did not go unchallenged, however. While New York and Philadelphia presented attractive markets to the shippers, the large local breweries, unencumbered by high transportation costs, continued to thrive. The largest of them topped one million barrels a year, a level that not even all of the national shippers reached.<sup>58</sup> The Brooklyn-based George Ehret Brewery continued to focus its efforts locally, brewing fresh draught beer for sale in saloons that it either controlled or influenced. Breweries such as Ehret continued to show that mass production without the costs of broad distribution was still a viable strategy.

The national shippers also ran into competition from the growing number of well-run regional shippers, which, despite many challenges,

<sup>54</sup> In 1906, total production reach its pre-Prohibition high, 1,086,140. Cochran, *Pabst Brewing Company*, 180.

<sup>55</sup> *Ibid.*, 84, 183.

<sup>56</sup> *Ibid.*, 187.

<sup>57</sup> *Ibid.*, 243-4.

<sup>58</sup> For example, Ruppert Brewery of New York City sold over 1 million barrels in 1916. Downard, *Dictionary*, 162.



G. Heileman Brewing Co., La Crosse, Wisconsin, c. 1910. (Photograph courtesy of the State Historical Society of Wisconsin.)

often proved to be vigorous rivals, equally skilled at production and distribution. The Stroh brewery in Detroit, discussed earlier, and the Heileman brewery, a small Wisconsin shipper, both exemplify the competitiveness of regional shippers around the turn of the century.

Until the mid 1890s, the Stroh brewery was content to ship its beer from Detroit throughout Michigan and to towns along Lake Erie. In 1897, it opened its first and only branch, in Cleveland. Despite hosting several local breweries, Cleveland presented a promising market for regional shippers. Too far away to warrant attention from the large East Coast breweries, and not as attractive to the Milwaukee and St. Louis shippers as Chicago, Cleveland proved to be a good market for regional shippers.<sup>59</sup> The Stroh brewery sent its beer to Cleveland in kegs, where it was either bottled or sold on tap. Organizationally, the Stroh enterprise mimicked the national shippers in setting up its Cleveland branch. Workers for the branch remained Stroh employees,

<sup>59</sup> It is curious that the Christian Moerlein Brewery of Cincinnati, often regarded as a national shipper, did not more aggressively attack the Cleveland market. It appears to have looked west and south for much of its export market, establishing branch agencies in Council Bluffs, New Orleans, and Pensacola. For further discussion of the Christian Moerlein Brewery, see William Downard, *The Cincinnati Brewing Industry* (Columbus, Ohio., 1973), 53–54.

and the Stroh brewery bought several local saloons to help distribute its beer.<sup>60</sup>

Stroh's production levels increased rapidly, reflecting in part its growing ability to distribute beer into an expanding geographic market. From sales of around 30,000 barrels annually in 1880, Stroh steadily increased its output and by 1900 production exceeded 100,000 barrels annually. In 1902 plant capacity was enlarged from 300,000 barrels to 500,000. While annual sales rarely matched plant capacity, high consumer demand led to continued increases in production.<sup>61</sup>

Though it did not grow quite as large as Stroh during these years, Heileman presents another example of a successful regional shipper. Based in LaCrosse, a city in northwestern Wisconsin, it grew from a small local brewery in the 1870s to an important regional shipper. LaCrosse is much farther from Chicago than is Milwaukee, but Heileman overcame its transportation disadvantage and competed quite successfully in the crucial Chicago market. In the 1900s and 1910s, it distributed beer to the more than fifty saloons it owned in Chicago, at times outperforming Milwaukee's national shippers.<sup>62</sup> Heileman's annual production rose from 30,000 barrels in 1900 to just over 100,000 barrels in 1911. Bottled beer played an important role in this increase. In 1900, less than 17 percent of its beer was bottled, yet after 1908, it bottled between 42 and 49 percent of its beer—a level significantly greater than the national average of 10 to 15 percent.<sup>63</sup> Heileman successfully competed with the national shippers across a fairly wide stretch of land, ranging from Chicago to Kansas City, but it also understood its limitations and did not seek to challenge the national shippers in more distant markets.

Like the regional shippers, many of the small to mid-sized local firms performed quite well. These breweries, including the Leisy Brewery of Cleveland and the George Muehlebach Brewing Company of Kansas City, tended to concentrate their energies on their immediate markets.

Leisy's performance illustrates that locally oriented breweries outside of the East Coast could also reach impressive levels of production. It increased its annual output from just under 92,000 barrels in 1891 to 230,000 barrels in 1906 and, despite World War I conservation measures that limited the ability of most breweries to continue normal op-

<sup>60</sup> Blum, *Brewed in Detroit*, 64.

<sup>61</sup> *Ibid.*, 62–8.

<sup>62</sup> Heileman Brewery Archives, *1902 and 1911 Annual Reports* (Heileman Brewery, LaCrosse, Wisc.) and Cochran, *Pabst Brewing Company*.

<sup>63</sup> Heileman Brewery Archives, *1902 and 1911 Annual Reports*.

erations, to an impressive 358,000 barrels in 1917.<sup>64</sup> Annual profits during the 1910s averaged nearly one million dollars, a large sum for this family-held concern.<sup>65</sup> The owners attributed their achievements to a high quality product, but they also benefited from an effective advertising campaign and a string of company-owned saloons.

Leisy faced an additional threat around the turn of the century: the formation of a brewery trust. In May 1898, an American financier succeeded in uniting nine breweries in Cleveland and nearby Sandusky into the Cleveland and Sandusky Brewing Company.<sup>66</sup> Leisy refused to join this effort, and publicly criticized it in a letter to a Cleveland newspaper, arguing that trusts “stifle competition” and increase prices. Soon after, a devastating price war erupted between the Cleveland and Sandusky Brewing Company and Cleveland’s remaining independent breweries—which was led by Leisy. Prices were cut so low that within three months the independent breweries suffered a combined loss of nearly one million dollars. Though a truce was eventually agreed to, tensions between these combatants remained high. In the end, Leisy survived the trust and grew into one of the leading local breweries in the entire region.<sup>67</sup>

The George Muehlebach Brewery also prospered despite intense competition from regional and national shippers. Founded in 1870, Muehlebach focused on serving Kansas City’s growing population. It was truly a local concern, and its beer wagon made regular deliveries to private homes, restaurants, and company-owned saloons. Though all of the national shippers sent beer to Kansas City, many consumers contin-

<sup>64</sup> Leisy, *History of Leisy*, 53. On December 11, 1917, President Wilson ordered a 30 percent reduction in the amount of grain that breweries could use, a step intended to free up large amounts of barley, corn, and rice for uses deemed more essential. This followed several earlier steps designed to reduce non-essential consumption of these crops. For further information regarding the conservation measures imposed on breweries during and after World War I, see Plavchan, *A History of Anheuser-Busch*, 144–8, K. Austin Kerr, *Organized For Prohibition*, 183, and Cochran, *The Pabst Brewing Company*, 320–321. For a broader discussion of the politics and economics of food administration policies during the war, see David Kennedy, *Over Here: The First World War and American Society* (Oxford, 1980), 117–23.

<sup>65</sup> *Ibid.*, 38, 53.

<sup>66</sup> Though an American managed the Cleveland merger, British investors financed a series of other consolidations. In 1889, a British syndicate offered \$16.9 million dollars to buy out Pabst, Schlitz, and Blatz. This offer was rejected, as were similar offers for Anheuser-Busch and Christian Moerlein. With one notable exception, the national shippers preferred to remain independent. Blatz eventually agreed to a separate offer, and in 1891 Valentine Blatz sold his company to Milwaukee and Chicago Breweries, an Anglo-American syndicate. Some of the syndicates reached large annual production levels, and while they often impacted local production and prices, they did not greatly affect the overall market for beer. For further discussion of consolidations and syndicates, see Baron, *Brewed in America*, chapter 30.

<sup>67</sup> Leisy, *History of Leisy*, 48–52.

ued to prefer Muehlebach's. While production data are unavailable, it is possible to gain a sense of its steadily growing demand by tracing out the rapid increases in plant capacity. Annual capacity rose from 15,000 barrels in 1897 to 25,000 in 1899. By 1907, capacity had doubled to 50,000, and by 1911 it exceeded 100,000 barrels.<sup>68</sup>

As these brief summaries suggest, local and regional breweries played an important role in the industry's overall growth. Data from the *1905 Census of Manufactures* confirm these findings. The census grouped breweries into five categories according to their level of annual production: less than 800 barrels; 800 to 3,000 barrels; 3,000 to 15,000 barrels; 15,000 to 170,000 barrels; and greater than 170,000 barrels. The aggregate output of breweries at these different production levels provides some insight into the industry overall. The top category—breweries making more than 170,000 barrels annually—includes both national shippers and large local firms. By combining these two types of breweries, it might well be expected that this category would dominate national output.

The production data in Table 4 confirm that big breweries were indeed quite important. The largest 46 breweries generated nearly 30 percent of the nation's beer, and on a per brewery basis, they contributed the highest percentages of output. Yet these data also show, somewhat unexpectedly, that breweries whose annual production levels ranged from 15,000 to 170,000 barrels produced slightly over 60 percent of the nation's beer and dominated production in New York, Pennsylvania, New Jersey, Ohio, and Illinois. Only in Missouri and Wisconsin, the two states where national shippers were in the vanguard, did the largest breweries contribute more than 50 percent of a state's output.

The bottom row of the table lists state production levels. These data show that while Wisconsin and Missouri had reached significant levels of output, they still trailed three other states in total production. Of particular note is the continuing importance of New York and Pennsylvania, which together produced 35 percent of the nation's beer in 1905. In these two pivotal states, breweries producing between 15,000 and 170,000 barrels of beer accounted for over 70 percent of production.

Together, Tables 3 and 4 suggest that the steady post-1895 growth in the brewing industry reflected the contributions of a range of breweries: some were large and nationally oriented, but many others focused on local or regional markets.

<sup>68</sup> Maxwell and Sullivan, *Hometown Beer*, 37-44.

Table 4  
 Number of Breweries, Share of Output by Brewery Size, and Overall Production, 1905

Production Levels (barrels)	N.Y. No. (%)	Penna. No. (%)	N.J. No. (%)	Ohio No. (%)	Ill. No. (%)	Wisc. No. (%)	Mo. No. (%)	U.S. No. (%)
>800	9 (<1)	3 (<1)	0 (0)	6 (<1)	6 (<1)	15 (<1)	0 (0)	128 (<1)
800-3,000	20 (<1)	20 (<1)	5 (<1)	10 (<1)	13 (<1)	49 (2)	7 (<1)	258 (1)
3,000-15,000	50 (5)	97 (16)	9 (3)	43 (10)	32 (7)	52 (9)	15 (3)	479 (9)
15,000-170,000	121 (71)	102 (73)	19 (50)	52 (65)	63 (84)	19 (17)	16 (29)	620 (62)
>170,000	9 (24)	3 (11)	4 (46)	3 (24)	2 (6)	4 (73)	12 (68)	46 (28)
Total Production (million barrels)	11.1	6.1	2.2	3.9	4.8	4.1	3.5	49.4

Note: Production levels are estimated by dividing the value of output by the average price. For Illinois, the two breweries with production levels exceeding 170,000 barrels (or value of output >\$1 million) were collapsed with the category of breweries making 16,600-170,000 barrels. It is estimated that these two breweries produced 8% of Illinois' total production. See Appendix for data relating state production levels to overall output.

Source: U.S. Bureau of the Census, 1905 Census of Manufacturers.

Firm Behavior and Strategy, 1895–1920

Why were the shipping breweries unable to extend their control of the market during these years? While a range of factors contributed to this outcome, two developments in particular impeded their ability to increase sales: prohibition and temperance forces closed off previously open markets, and local breweries became more competitive. From 1895 to 1920, many states and communities experimented with varying prohibition and temperance laws that regulated the production and sale of beer (and spirits). Some of these efforts were continuations of anti-drink campaigns begun years earlier. However, in December 1895, the organization most responsible for the eventual passage of national Prohibition, the Anti-Saloon League, came into being.<sup>69</sup> Early on, it concentrated on increasing the number of states that either prohibited all alcohol or imposed local option laws that gave individual counties and cities the power to decide if beer could be produced or sold. While statewide prohibition laws found their most receptive audience in conservative southern states, a surprising number of states eventually passed local option laws, including Illinois and Wisconsin, two of the leading beer-producing states.<sup>70</sup> By 1910, 17 percent of the U.S. population lived in dry states that prohibited the production of alcoholic beverages, and another 31 percent lived in local option counties or cities that regulated or prohibited liquor sales.<sup>71</sup>

The Anti-Saloon League also worked to modify an 1888 Supreme Court decision that guaranteed the right of alcohol producers to send their product into dry states and counties. This meant that neither state prohibition legislation nor local option provisions prevented alcohol from being shipped in from other states. The League lobbied Congress for more than twenty years for legislation that would circumvent this ruling, and in 1913 Congress passed the Webb-Kenyon Act prohibiting the interstate transportation of liquor from wet to dry states. The cumulative effect of this act and of the growing number of people who came under local option or state prohibition law was to shut down the breweries based in these dry communities, and, more significantly, to close off to the shippers important existing markets and promising avenues of expansion. Pabst, for example, suffered a large decline in its

<sup>69</sup> K. Austin Kerr, *Organized For Prohibition*, 76.

<sup>70</sup> By 1906, over 600 Wisconsin towns had abolished saloons. Cochran, *Pabst Brewing Company*, 310.

<sup>71</sup> In 1910, nine states were completely dry: Alabama, Georgia, Kansas, Maine, Mississippi, North Carolina, North Dakota, Oklahoma, and Tennessee. United States Brewers Association, *1979 Brewers Almanac* (Washington D.C., 1979), 115.

sales in the 1900s and 1910s as more and more states and cities banned the production and sale of beer.<sup>72</sup> This trend, however, did not affect all breweries equally. In fact, overall industry output rose steadily between 1895 and 1915, even as more of the national population came under some form of prohibitory legislation. Successful local and regional breweries based in the leading beer-producing states (see Appendix A) were less concerned about these developments, but the national shippers, faced with falling sales and significant fixed investments in distant beer depots, saloons, and bottling facilities, had much more at stake and were less sanguine about the implications of these national changes.

Increased competition from local firms and regional shippers provided another challenge to the national breweries. Though there were several dimensions to this threat, two issues were of key importance: retail outlets and price. Prior to Prohibition, the American brewing industry was characterized by a tied-house system in which breweries owned or controlled their principal retail outlets, saloons.<sup>73</sup> Local breweries began to expand their control of saloons in the 1890s, and they extended this power during the 1900s and 1910s, precisely the same period in which shippers began to see their production levels beginning to stagnate.<sup>74</sup>

All breweries—locals and shipping alike—had strong reasons for encouraging close relationships with saloons, but saloons also benefited from these ties. State and local authorities had begun imposing expensive license requirements on saloons, and many saloons turned to breweries for financial support.<sup>75</sup> In addition, it was costly and cumbersome for saloons to stock a variety of draught beers and to maintain accounts with multiple breweries. Yet, while all breweries profited from strong relationships with saloons, this arrangement benefited local firms the most since they needed to own or control saloons in their immediate area only. To fully support their brands, national shippers had to gain access to saloons throughout the country. The expense of con-

<sup>72</sup> Cochran, *Pabst Brewing Company*, 187.

<sup>73</sup> England also had a tied-house system for many years. For a brief historical overview of the development and evolution of this system in Great Britain, see David Gutzke, *Protecting the Pub: Brewers and Publicans Against Temperance* (Woodbridge, U.K., 1989), 4–5.

<sup>74</sup> Perry Duis, *The Saloon: Public Drinking in Chicago and Boston, 1880–1920* (Urbana, Ill., 1983), 25.

<sup>75</sup> There were exceptions to this general pattern however. While breweries took advantage of license laws to gain control of Chicago's saloons, in Boston wholesalers rather than breweries secured control of many of the city's saloons. The basic issue was the same: whoever gained access to the saloons controlled what brands would be made available. See Duis, *The Saloon*, 26–8, 32.

trolling thousands of saloons was daunting, and, in a political environment that was giving rise to many local and state prohibition movements, quite risky. National shippers, often more attuned to these developments than local brewers, had good reasons for limiting their saloon investments in many parts of the country.

Clearly, a better strategy for them would be to promote a legal system that formally separated the selling and producing of beer, and that is exactly what they began to do. Shippers supported calls—even those by temperance advocates—for greater regulation and control of the saloons. They supported a 1909 Ohio state law requiring saloonkeepers to be local residents with no connection to the liquor industry—a step that would have required the legal separation of retailing and brewing.<sup>76</sup> Though this approach was not widely embraced by political authorities prior to Prohibition, it rematerialized after repeal in 1933. During Prohibition, Anheuser-Busch employees worked with repeal advocates, including many temperance supporters who had become disillusioned with the workings of the Twenty-First Amendment, to help draft the eventual post-Prohibition legal environment that would govern the brewing industry.<sup>77</sup> Significantly, after 1933, nearly all states passed laws stipulating that breweries could not own retail outlets such as saloons.<sup>78</sup>

Despite substantial investments in packaging, pasteurizing, and transportation, shippers realized they would not benefit from these efforts if they could not place their beer in the dominant retail outlets. As local breweries steadily increased their control of saloons, shippers were left with fewer retail outlets for their draught beer. This left them in the difficult position of trying to secure traditional outlets for their draught beer, while simultaneously promoting bottled beer that could be sold in other venues.<sup>79</sup>

Local breweries focused on working-class drinkers, who preferred the more affordable draught beer served by the neighborhood saloon. By the early 1900s, shippers were already beginning to rethink their re-

<sup>76</sup> K. Austin Kerr, *Organized For Prohibition*, 167.

<sup>77</sup> See, for example, a pamphlet published by Anheuser-Busch, "Herein is proof that beer and light wines disassociated from hard liquors and spirits produce real temperance" (St. Louis, Mo., 1923).

<sup>78</sup> This legislation proved an initial obstacle for the brew-pub movement that began around 1980. Brew-pubs, establishments that produce and sell their own beer, violated this separation. As a result, the first brew-pubs in many states had to lobby to end or modify this restriction.

<sup>79</sup> The number of retail liquor establishments during these years is staggering. In 1907 there were over 250,000 retail purveyors of liquor and beer. United States Brewers Association, *1908 Year Book* (New York, 1908), 194–5.

*Table 5*  
Production and Price Data in the Thirteen Leading Brewing States,  
1905

<i>State</i>	<i>Production (Barrels)</i>	<i>Value of Output (\$)</i>	<i>Average Price per Barrel (\$)</i>
New York	11,060,000	61,958,142	5.60
Pennsylvania	6,114,000	34,863,823	5.70
Illinois	4,777,000	23,787,036	4.98
Wisconsin	4,078,000	28,692,340	7.04
Ohio	3,907,000	21,620,794	5.53
Missouri	3,502,000	24,154,264	6.90
New Jersey	2,684,000	17,446,447	6.50
Massachusetts	1,832,000	11,080,944	6.05
Maryland	1,310,000	4,967,063	3.79
Michigan	1,217,000	6,999,251	5.75
Minnesota	986,000	6,177,528	6.27
Connecticut and Rhode Island	937,000	5,666,332	6.05
Top 12 states	42,404,000	247,413,964	5.83
Total for industry	49,459,000	298,358,732	6.03

Note: Price per barrel is calculated by dividing production levels by the value of the output. These price calculations correspond with historical data. See Cochran, *Pabst Brewing Company*, 160–79 and Downard, *Cincinnati Brewing*, 85. It should be noted that prior to Prohibition, there were no state excise taxes, only a common federal tax that applied equally to all states. So, any differences in the average price per barrel across states are not attributable to different state excise taxes.

Source: United States Brewers Association, *1911 Year Book* and U.S. Bureau of the Census, *1905 Census of Manufactures*. Production data are taken from the United States Brewers Association, *1911 Year Book* (New York, 1911) and value data are from the U.S. Bureau of the Census, *1905 U.S. Census of Manufacturers* (Washington D.C., 1905).

liance on saloons and targeting more affluent drinkers, who could afford bottled beer and perhaps wished to avoid the saloon. While too much can be made of the differences in clientele for shipping and local firms, which were probably not that great, it is nonetheless true that shippers often charged more money for their beer. Earlier authors have attributed the national shippers' higher prices to superior product quality and substantial transportation costs.<sup>80</sup> Another ingredient that

<sup>80</sup> For example, see McGahan, "Emergence of the National Brewing Oligopoly," 242–4; Cochran, *Pabst Brewing Company*; Baron, *Brewed In America*. Transportation costs certainly were an important factor in the higher retail prices the shippers charged. However, smaller breweries did not have to rely on distance to safeguard their operations, and many small and medium-sized breweries operated alongside the largest shipping firms in the same city. For listings of the breweries that coexisted with the shippers in St. Louis, Milwaukee, and Cincinnati, see Van Wieren, *American Breweries II*. In addition, the assertion that the shippers

has received less attention was their extensive and expensive advertising and marketing campaigns. All of these factors increased costs for national shippers and forced them to charge a relatively high price for their product.

The impact of national shippers on retail prices is indicated in the figures of the *U.S. Census of Manufacturers* and the data of the U.S. Brewers Association. Wisconsin's three national shipping breweries and Missouri's two shippers accounted for over 50 percent of the total beer output in these states, and their statewide average price per barrel—Missouri (\$6.90 per barrel) and Wisconsin (\$7.04 per barrel)—were the highest among the leading brewing states.<sup>81</sup> The three top beer-producing states—New York, Pennsylvania, and Illinois—all had much greater roles for regional and local breweries and their average prices were well below the national average.<sup>82</sup>

### Conclusion

The history of the brewing industry reveals how local and regional firms in specific industries continued to compete successfully with large, nationally oriented businesses. The details of how these enterprises coexisted vary from industry to industry. National breweries emerged in the 1870s, and their rapid growth helped propel the overall industry forward over the next two decades. In many industries, once nationally oriented enterprises appeared, they steadily extended their hold on the market. However, their eventual ascendancy to the top of the brewing industry was not quite so simple or direct. After having outpaced the overall growth rate from the 1870s to 1895, they grew

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made a higher quality beer is open to debate; this issue raises important questions about the relationship between product standardization and product quality. Many of the modifications the shippers made to their beer during these years paralleled similar changes in other American goods. For a discussion of how standardization emerged in American industries and what the implications of this development were for consumers, see Philip Scranton, "Determinism and Indeterminism," 531–52.

<sup>81</sup> In 1905, Missouri production was 3.5 million barrels; Anheuser-Busch produced 1.375 million barrels, and Lemp produced around 500,000 barrels. Wisconsin production in 1905 was 4,078,000 barrels; Pabst produced 875,000 barrels; Schlitz, around 1 million barrels; and Blatz, over 500,000 barrels. See Cochran, *Pabst Brewing Company*, 180, and Krebs and Orthwein, *Making Friends*, 242.

<sup>82</sup> These data also help clarify which were the most important brewing states. While Missouri and Wisconsin have received a great deal of attention because of the national shippers based in St. Louis and Milwaukee, throughout the pre-Prohibition era New York and Pennsylvania were the dominant brewing states. As late as the 1910s, these two states accounted for approximately one-third of national beer production. See Appendix A. For more information on the Chicago beer market, see Bob Sklnik, *The History of Beer and Brewing in Chicago: 1833–1978* (St. Paul, Minn., 1999).

more slowly than the industry between 1895 and 1915. Far from continuing to propel the industry forward, the national shippers saw their relative share of industry output fall, as regional and local breweries reasserted themselves. The story behind this reemergence of regional and local breweries is complex, but three key factors include the higher prices charged by the shippers, the emergence of state and local prohibition legislation that eliminated current and potential markets, and this period's distinctive legal arrangements that allowed breweries to own or control saloons. Together, these factors impeded the national shippers' ability to build upon their earlier achievements, while strengthening the competitiveness of rival breweries.

Appendix  
Top 13 State Production Levels (Barrels), 1880-1915

	1880	1885	1890	1895	1900	1905	1910	1915
New York	5,000,000	6,438,000	8,572,000	9,758,000	9,923,000	11,060,000	12,095,000	13,180,000
Pennsylvania	1,343,000	1,983,000	2,762,000	3,591,000	4,683,000	6,114,000	7,664,000	7,166,000
Ohio	1,245,000	1,684,000	2,393,000	2,633,000	3,049,000	3,907,000	4,252,000	4,622,000
Illinois	805,000	1,204,000	2,281,000	3,292,000	3,809,000	4,777,000	6,024,000	6,269,000
Wisconsin	853,000	1,416,000	2,067,000	2,807,000	3,157,000	4,078,000	4,790,000	4,718,000
Missouri	756,000	1,144,000	1,883,000	2,139,000	2,461,000	3,502,000	3,890,000	3,567,000
Massachusetts	678,000	885,000	947,000	1,337,000	1,802,000	1,832,000	2,112,000	2,378,000
New Jersey	641,000	953,000	1,526,000	1,894,000	2,150,000	2,684,000	3,260,000	3,219,000
Connecticut & Rhode Island	121,000	181,000	293,000	492,000	739,000	937,000	1,311,000	1,381,000
Maryland	276,000	446,000	687,000	837,000	1,025,000	1,310,000	1,434,000	1,116,000
Michigan	284,000	389,000	557,000	659,000	907,000	1,217,000	1,538,000	1,929,000
Minnesota	151,000	278,000	332,000	420,000	706,000	986,000	1,578,000	1,643,000
Subtotal: top 13 states	12,153,000	17,003,000	24,300,000	29,859,000	34,411,000	42,404,000	49,948,000	51,188,000
Total U.S. production	13,347,000	19,185,000	27,561,000	33,589,000	39,472,000	49,459,000	59,485,000	59,808,000
Subtotal: output as a % of total output	91%	89%	88%	89%	87%	86%	84%	86%
N.Y. and Penna.: output as a % of total output	48%	44%	41%	40%	37%	35%	33%	34%

Sources: United States Brewers Association, 1908 Year Book (New York, 1908), Table XI; United States Brewers Association, 1914 Year Book (New York, 1914), 332-3; United State Brewers Association, 1979 Brewers Almanac (New York, 1956), 12-13.

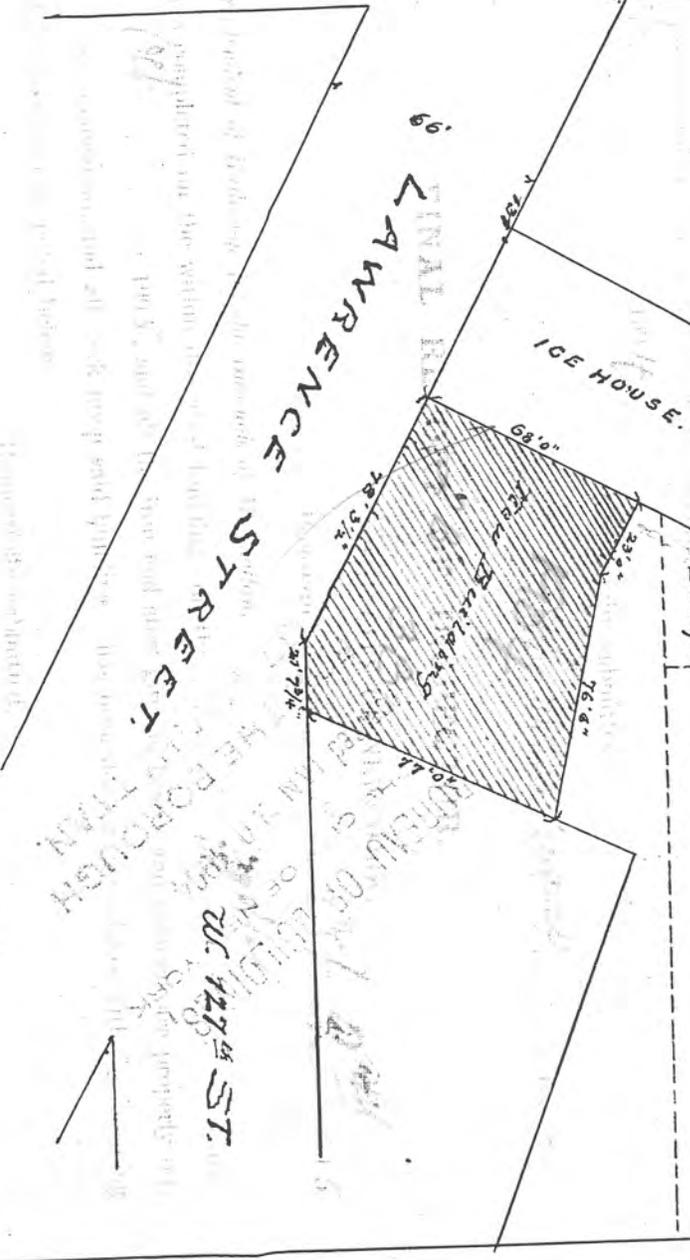
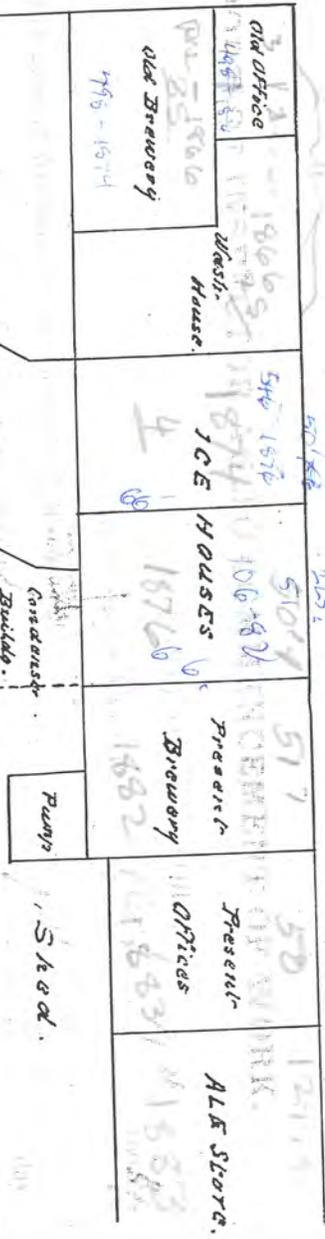


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WEST 128th ST.



WEST 127th ST.

NB 23-1904

**D.G. YUENGLING BREWING CO. LP-2501**

423-427 & 433-437 West 127<sup>th</sup> Street, Manhattan

*D.G. Yuengling Brewing Co, (Later Bernheimer &  
Schwartz Pilsener Brewing Co.) Complex Buildings*

LP FILE INFORMATION

LP#: 2501 BOROUGH: \_\_\_\_\_ BLOCK: \_\_\_\_\_ LOT: \_\_\_\_\_  
 SITE NAME: D. G. Yuengling Brewing Co. (Larzel Benheimer + Schwartz Pilsener Brewings Co.) Amber Bids.  
 SITE ADDRESS: 423-427 and 433-437 West 127th St.  
 AKA(s): \_\_\_\_\_  
 Date Calendars: \_\_\_\_\_ Other Actions: \_\_\_\_\_ Date: \_\_\_\_\_  
 Date Heard: \_\_\_\_\_ Special Info: \_\_\_\_\_  
 Date Designated: \_\_\_\_\_

POLITICAL REPRESENTATIVE INFORMATION

POLITICAL REP. INFO	REPRESENTATIVE NAME	ADDRESS	TELEPHONE/FAX
Assembly District # <u>70</u>	<u>Keith L. Whelan</u>	<u>163 W 125TH ST. STE. 911 Adam C. Powell Bldg NY 10027</u>	<u>866-5809 (212)</u>
House of Representatives District # <u>15</u>	<u>Charles Rangel</u>	<u>163 W 125TH ST STE #737 NY, NY 10027</u>	<u>603-3900 (212)</u>
Senate District # <u>30</u>	<u>Bill Perkins</u>	<u>163 W 125TH ST. STE. 912 NY, NY 10027</u>	<u>228-7315 678-0001 (212)</u>
City Council District # <u>07</u>	<u>Robert Jackson</u>	<u>Washington Heights 751 W. 163RD ST. NY, NY 10033</u>	<u>928-1322 (212)</u>
Community Board District # <u>09</u>	<u>Harvey Einbush</u>	<u>16-18 Old Broadway NY, NY 10027</u>	<u>212-864-6200 212-662-7396</u>

NOTES

Additional Political Reps:  
Robert Jackson Hamilton Hts. 425 W. 144th St.  
NY 10031  
212-234-0552 fax  
212-234-0551 phone

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- Function 1A
- Function 2
- Function 3
- Function 3S
- Function BL
- Function BN
- Function B

Function 1: Geographic Information by Address

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Street Name / Place Name:

Select Borough:

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Geographic Information for 423 WEST 127 STREET in MANHATTAN

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**Geographic Information:**

---

<b>Orientation:</b> Address is on the right when facing from CONVENT AVENUE to WEST 126 STREET.	
<b>Zip Code:</b> 10027	<b>Community District:</b> 109
<b>2000 Census Tract:</b> 213.01	<b>X / Y Coordinates:</b> 997050 / 235465
<b>2000 Census Block:</b> 3002	<b>Low House Number:</b> 401
<b>1990 Census Tract:</b> 213.01	<b>High House Number:</b> 499
<b>Dynamic Block:</b> 302	<b>Segment ID / Length:</b> 0038642 / 655
<b>LION Face Code:</b> 5510	<b>Street Code:</b> 3631001010
<b>LION Sequence Number:</b> 01070	<b>Preferred LGC:</b> 01
<b>Low End Cross Streets:</b>	<b>High End Cross Streets:</b>
115910 CONVENT AVENUE	136290 WEST 126 STREET
126490 MORNINGSIDE AVENUE	

**City Service Information:**

---

<b>Police Borough Command:</b> 2	<b>Sanitation District / Section:</b> 109 / 092
<b>Police Precinct:</b> 26	<b>Sanitation Subsection:</b> 2B
<b>Fire Division:</b> 3	<b>Regular Sanitation Pick-Up:</b> TTHS
<b>Fire Battalion:</b> 11	<b>Recycling Sanitation Pick-Up:</b> ETH
<b>Fire Company:</b> E 37	<b>DOT Street Light Area:</b> 1
<b>Health Area:</b> 1100	<b>School District:</b> 5
<b>Health Center District:</b> 16	<b>CD Eligibility:</b> Eligible

**Political Information:**

---

<b>Congressional District:</b> 15	<b>Senatorial District:</b> 30
<b>Civil Court District:</b> 7	<b>City Council District:</b> 7
<b>Assembly District:</b> 70	<b>Election District:</b> 90



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NYC Department of Buildings  
Property Profile Overview

423 WEST 127 STREET  
WEST 127 STREET 423 - 427

MANHATTAN 10027  
Health Area : 1100  
Census Tract : 213.01  
Community Board : 109  
Buildings on Lot : 3

BIN# 1084105  
Tax Block : 1967  
Tax Lot : 60  
Condo : NO  
Vacant : NO

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Cross Street(s): CONVENT AVENUE, WEST 126 STREET  
 DOB Special Place Name:  
 DOB Building Remarks:  
 Landmark Status: C - CALENDARED Special Status: N/A  
 Local Law: YES Loft Law: NO  
 SRO Restricted: NO TA Restricted: NO  
 UB Restricted: NO  
 Little 'E' Restricted: N/A Grandfathered Sign: NO  
 Legal Adult Use: NO City Owned: NO  
 Additional BINs for Building: NONE

Special District: NONE

This property is not located in an area that may be affected by Tidal Wetlands, Freshwater Wetlands, or Coastal Erosion Hazard Area. [Click here for more information](#)

Department of Finance Building Classification: O1-OFFICE BUILDINGS

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open	<u>Elevator Records</u>
<u>Complaints</u>	3	0	<u>Electrical Applications</u>
<u>Violations-DOB</u>	26	15	<u>Permits In-Process / Issued</u>
<u>Violations-ECB (DOB)</u>	2	0	<u>Illuminated Signs Annual Permits</u>
<u>Jobs/Filings</u>	35		<u>Plumbing Inspections</u>
ARA / LAA Jobs	0		<u>Open Plumbing Jobs / Work Types</u>
Total Jobs	35		<u>Facades</u>
Actions	2		<u>Marquee Annual Permits</u>
OR Enter Action Type:			<u>Boiler Records</u>
OR Select from List:			<u>DEP Boiler Information</u>
Select...			<u>Crane Information</u>
AND <input type="button" value="Show Actions"/>			<u>After Hours Variance Permits</u>

If you have any questions please review these [Frequently Asked Questions](#), the [Glossary](#), or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

**D.G. YUENGLING BREWING CO. LP-2500**

439 West 127<sup>th</sup> Street, Manhattan

*D.G. Yuengling Brewing Co, (Later Bernheimer &  
Schwartz Pilsener Brewing Co.) Complex Buildings*

LP FILE INFORMATION

LP#: 2500 BOROUGH: 11 BLOCK: 1967 LOT: 50  
 SITE NAME: D. G. Yungling Brewing Co. (Aire Beheimer  
+ Schupetz Pilsener Brewing Co Complex  
 SITE ADDRESS: 439 W 127th St.  
 AKA(s): 439-441 West 127th St.  
 Date Calendarad: \_\_\_\_\_ Other Actions: \_\_\_\_\_ Date: \_\_\_\_\_  
 Date Heard: \_\_\_\_\_ Special Info: \_\_\_\_\_  
 Date Designated: \_\_\_\_\_

POLITICAL REPRESENTATIVE INFORMATION

POLITICAL REP. INFO	REPRESENTATIVE NAME	ADDRESS	TELEPHONE/FAX
Assembly District # <u>70</u>	<u>Keith L. Wright</u>	<u>163 W 125th St. STE. 911 Adam C. Powell Bldg NY 10027</u>	<u>866-5809</u> <u>(212)</u>
House of Representatives District # <u>15</u>	<u>Charles Rangel</u>	<u>163 W 125th St STE #737 NY, NY 10027</u>	<u>(212)</u> <u>668-3900</u>
Senate District # <u>30</u>	<u>Bill Perkins</u>	<u>163 W 125th St. STE. 912 NY, NY 10027</u>	<u>(212)</u> <u>228-7315</u> <u>678-0001</u>
City Council District # <u>07</u>	<u>Robert Jackson</u>	<u>Washington Heights 751 W. 163rd St. NY, NY 10033</u>	<u>(212)</u> <u>928-1322</u>
Community Board District # <u>09</u>	<u>Mary English</u>	<u>16-18 Old Broadway NY, NY 10027</u>	<u>212-864-6200</u> <u>212-602-7396</u>

NOTES

Additional Political Reps:  
Robert Jackson Hamilton Hts. 485 W. 144th St.  
Mg 10031  
212-234-0552 fax  
212-234-0551 phone

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- Function 1
- Function 1A
- Function 2
- Function 3
- Function 3S
- Function BL
- Function BN
- Function B

Function 1: Geographic Information by Address

Address Number (if any):

Street Name / Place Name:

Select Borough:

Show Political Information?

Geographic Information for 439 WEST 127 STREET in MANHATTAN

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**Geographic Information:**

---

<b>Orientation:</b> Address is on the right when facing from CONVENT AVENUE to WEST 126 STREET.	
<b>Zip Code:</b> 10027	<b>Community District:</b> 109
<b>2000 Census Tract:</b> 213.01	<b>X / Y Coordinates:</b> 996984 / 235501
<b>2000 Census Block:</b> 3002	<b>Low House Number:</b> 401
<b>1990 Census Tract:</b> 213.01	<b>High House Number:</b> 499
<b>Dynamic Block:</b> 302	<b>Segment ID / Length:</b> 0038642 / 655
<b>LION Face Code:</b> 5510	<b>Street Code:</b> 3631001010
<b>LION Sequence Number:</b> 01070	<b>Preferred LGC:</b> 01
<b>Low End Cross Streets:</b> 115910 CONVENT AVENUE 126490 MORNINGSIDE AVENUE	<b>High End Cross Streets:</b> 136290 WEST 126 STREET

**City Service Information:**

---

<b>Police Borough Command:</b> 2	<b>Sanitation District / Section:</b> 109 / 092
<b>Police Precinct:</b> 26	<b>Sanitation Subsection:</b> 2B
<b>Fire Division:</b> 3	<b>Regular Sanitation Pick-Up:</b> TTHS
<b>Fire Battalion:</b> 11	<b>Recycling Sanitation Pick-Up:</b> ETH
<b>Fire Company:</b> E 37	<b>DOT Street Light Area:</b> 1
<b>Health Area:</b> 1100	<b>School District:</b> 5
<b>Health Center District:</b> 16	<b>CD Eligibility:</b> Eligible

**Political Information:**

---

<b>Congressional District:</b> 15	<b>Senatorial District:</b> 30
<b>Civil Court District:</b> 7	<b>City Council District:</b> 7
<b>Assembly District:</b> 70	<b>Election District:</b> 90



439-449

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NYC Department of Buildings  
Property Profile Overview

439 WEST 127 STREET  
WEST 127 STREET 439 - 441

MANHATTAN 10027  
Health Area : 1100  
Census Tract : 213.01  
Community Board : 109  
Buildings on Lot : 2

BIN# 1081785  
Tax Block : 1967  
Tax Lot : 50  
Condo : NO  
Vacant : NO

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Cross Street(s): CONVENT AVENUE, WEST 126 STREET  
 DOB Special Place Name:  
 DOB Building Remarks:  
 Landmark Status: **Special Status:** N/A  
 Local Law: NO **Loft Law:** NO  
 SRO Restricted: NO **TA Restricted:** NO  
 UB Restricted: NO  
 Little 'E' Restricted: N/A **Grandfathered Sign:** NO  
 Legal Adult Use: NO **City Owned:** NO  
 Additional BINs for Building: NONE

Special District: NONE

This property is not located in an area that may be affected by Tidal Wetlands, Freshwater Wetlands, or Coastal Erosion Hazard Area. [Click here for more information](#)

Department of Finance Building Classification: F2-FACORY/INDUSTRIAL

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open	<u><a href="#">Elevator Records</a></u>
Complaints	0	0	<u><a href="#">Electrical Applications</a></u>
<u><a href="#">Violations-DOB</a></u>	5	2	<u><a href="#">Permits In-Process / Issued</a></u>
Violations-ECB (DOB)	0	0	<u><a href="#">Illuminated Signs Annual Permits</a></u>
<u><a href="#">Jobs/Filings</a></u>	3		<u><a href="#">Plumbing Inspections</a></u>
ARA / LAA Jobs	0		<u><a href="#">Open Plumbing Jobs / Work Types</a></u>
Total Jobs	3		<u><a href="#">Facades</a></u>
Total Actions	0		<u><a href="#">Marquee Annual Permits</a></u>
OR Enter Action Type:			<u><a href="#">Boiler Records</a></u>
OR Select from List:			<u><a href="#">DEP Boiler Information</a></u>
Select...			<u><a href="#">Crane Information</a></u>
AND <input type="button" value="Show Actions"/>			<u><a href="#">After Hours Variance Permits</a></u>

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**D.G. YUENGLING BREWING CO. LP-2502**

454 West 128<sup>th</sup> Street, Manhattan

*D.G. Yuengling Brewing Co, (Later Bernheimer &  
Schwartz Pilsener Brewing Co.) Complex Buildings*

LP FILE INFORMATION

LP#: LP-2502 BOROUGH: NY BLOCK: LAURE BERNHEIMER + LOT:   
 SITE NAME: D.G. YUENGLING BREWING Co. (LAURE BERNHEIMER +  
SCHWARTZ RISNER BREWING Co.) CAMPEX BUILDING  
 SITE ADDRESS: 454 W 128TH ST.  
 AKA(s): 450-456 W 128TH ST.  
 Date Calendered: \_\_\_\_\_ Other Actions: \_\_\_\_\_ Date: \_\_\_\_\_  
 Date Heard: \_\_\_\_\_ Special Info: \_\_\_\_\_  
 Date Designated: \_\_\_\_\_

POLITICAL REPRESENTATIVE INFORMATION

POLITICAL REP. INFO	REPRESENTATIVE NAME	ADDRESS	TELEPHONE/FAX
Assembly District # <u>70</u>	<u>KEITH L. WELSH</u>	<u>163 W 125TH ST. STE. 911 ADAM C. BOWEN Bldg NY 10027</u>	<u>866-5809 (212)</u>
House of Representatives District # <u>15</u>	<u>Charles Rangel</u>	<u>163 W 125TH ST STE #737 NY, NY 10027</u>	<u>(212) 228-7315 678-0001</u>
Senate District # <u>30</u>	<u>Eric Perkins</u>	<u>163 W 125TH ST. STE. 912 NY, NY 10027</u>	<u>(212)</u>
City Council District # <u>07</u>	<u>ROBERT JACKSON</u>	<u>Washington Heights 751 W. 183RD ST. NY, NY 10033</u>	<u>928-1322</u>
Community Board District # <u>09</u>	<u>MARCY ENGLISH</u>	<u>16-18 Old Broadway NY, NY 10027</u>	<u>212-864-6200 212-662-7396</u>

NOTES

Additional Political Reps:  
Robert Jackson Hamilton Hts. 425 W. 144th St.  
NY 10031  
212-234-0552 fax  
212-234-0551 phone

- Goat Home
- Function 1
- Function 1A
- Function 2
- Function 3
- Function 3S
- Function BL
- Function BN
- Function B

Function 1: Geographic Information by Address

Address Number (if any):

Street Name / Place Name:

Select Borough:

Show Political Information?

Geographic Information for 454 WEST 128 STREET in MANHATTAN

[Report Error](#) | [View Help](#)

**Geographic Information:**

---

<b>Orientation:</b> Address is on the left when facing from DEAD END to AMSTERDAM AVENUE.	
<b>Zip Code:</b> 10027	<b>Community District:</b> 109
<b>2000 Census Tract:</b> 213.01	<b>X / Y Coordinates:</b> 997009 / 235776
<b>2000 Census Block:</b> 3002	<b>Low House Number:</b> 450
<b>1990 Census Tract:</b> 213.01	<b>High House Number:</b> 498
<b>Dynamic Block:</b> 302	<b>Segment ID / Length:</b> 0118755 / 624
<b>LION Face Code:</b> 5515	<b>Street Code:</b> 3633001010
<b>LION Sequence Number:</b> 02040	<b>Preferred LGC:</b> 01
<b>Low End Cross Streets:</b> 116400 DEAD END	<b>High End Cross Streets:</b> 111710 AMSTERDAM AVENUE

**City Service Information:**

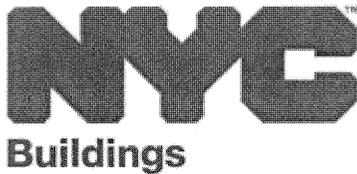
---

<b>Police Borough Command:</b> 2	<b>Sanitation District / Section:</b> 109 / 092
<b>Police Precinct:</b> 26	<b>Sanitation Subsection:</b> 2B
<b>Fire Division:</b> 3	<b>Regular Sanitation Pick-Up:</b> TTHS
<b>Fire Battalion:</b> 11	<b>Recycling Sanitation Pick-Up:</b> ETH
<b>Fire Company:</b> E 37	<b>DOT Street Light Area:</b> 1
<b>Health Area:</b> 1100	<b>School District:</b> 5
<b>Health Center District:</b> 16	<b>CD Eligibility:</b> Eligible

**Political Information:**

---

<b>Congressional District:</b> 15	<b>Senatorial District:</b> 30
<b>Civil Court District:</b> 7	<b>City Council District:</b> 7
<b>Assembly District:</b> 70	<b>Election District:</b> 90



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NYC Department of Buildings  
Property Profile Overview

454 WEST 128 STREET  
WEST 128 STREET 450 - 456

MANHATTAN 10027

BIN# 1059580

Health Area	: 1100	Tax Block	: 1967
Census Tract	: 213.01	Tax Lot	: 85
Community Board	: 109	Condo	: NO
Buildings on Lot	: 1	Vacant	: NO

[View DCP Addresses...](#) [Browse Block](#)

[View Zoning Documents](#)

[View Challenge Results](#)

[View Certificates of Occupancy](#)

Cross Street(s):	DEAD END, AMSTERDAM AVENUE		
DOB Special Place Name:			
DOB Building Remarks:			
Landmark Status:	C - CALENDARED	Special Status:	N/A
Local Law:	NO	Loft Law:	NO
SRO Restricted:	NO	TA Restricted:	NO
UB Restricted:	NO		
Little 'E' Restricted:	N/A	Grandfathered Sign:	NO
Legal Adult Use:	NO	City Owned:	NO
Additional BINs for Building:	NONE		

Special District: NONE

This property is not located in an area that may be affected by Tidal Wetlands, Freshwater Wetlands, or Coastal Erosion Hazard Area. [Click here for more information](#)

Department of Finance Building Classification: K9-STORE BUILDING

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open	<a href="#">Elevator Records</a>
<a href="#">Complaints</a>	4	0	<a href="#">Electrical Applications</a>
<a href="#">Violations-DOB</a>	10	0	<a href="#">Permits In-Process / Issued</a>
<a href="#">Violations-ECB (DOB)</a>	5	1	<a href="#">Illuminated Signs Annual Permits</a>
<a href="#">Jobs/Filings</a>	25		<a href="#">Plumbing Inspections</a>
<a href="#">ARA / LAA Jobs</a>	1		<a href="#">Open Plumbing Jobs / Work Types</a>
<a href="#">Total Jobs</a>	26		<a href="#">Facades</a>
<a href="#">Actions</a>	23		<a href="#">Marquee Annual Permits</a>
			<a href="#">Boiler Records</a>
OR Enter Action Type:			<a href="#">DEP Boiler Information</a>
OR Select from List:			<a href="#">Crane Information</a>
Select...			<a href="#">After Hours Variance Permits</a>
AND <input type="button" value="Show Actions"/>			

If you have any questions please review these [Frequently Asked Questions](#), the [Glossary](#), or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

**D.G. YUENGLING BREWING CO. LP-2503**

460-470 West 128<sup>th</sup> Street, Manhattan

*D.G. Yuengling Brewing Co, (Later Bernheimer & Schwartz Pilsener Brewing Co.) Complex Buildings*

SITE ADDRESS:

*460-470 West 128th St. Bernheimer +*

AKA(s):

*None*

Date Calendars:

Date Heard:

Date Designated:

Other Actions:

Special Info:

Date:

POLITICAL RECORD

LP FILE INFORMATION

LP#: 2503 BOROUGH: M BLOCK: 1967 LOT: 89  
 SITE NAME: D. G. Yuengling Brewing Co. (Larzer Bernheimer + Schwartz Pilsener Brewing Co.) Complex Buildings  
 SITE ADDRESS: 460-470 West 128th St.  
 AKA(s): None  
 Date Calendered: \_\_\_\_\_ Other Actions: \_\_\_\_\_ Date: \_\_\_\_\_  
 Date Heard: \_\_\_\_\_ Special Info: \_\_\_\_\_  
 Date Designated: \_\_\_\_\_

POLITICAL REPRESENTATIVE INFORMATION

POLITICAL REP. INFO	REPRESENTATIVE NAME	ADDRESS	TELEPHONE/FAX
Assembly District # <u>70</u>	<u>Keith L. Wright</u>	<u>163 W 125th St. Ste. 911 Adam C. Powell Bldg NY 10027</u>	<u>866-5809 (212)</u>
House of Representatives District # <u>15</u>	<u>Charles Rangel</u>	<u>163 W 125th St Ste #737 NY, NY 10027</u>	<u>663-3900 (212)</u>
Senate District # <u>30</u>	<u>Bill Perkins</u>	<u>163 W 125th St. Ste. 912 NY, NY 10027</u>	<u>232-7315 678-0001 (212)</u>
City Council District # <u>07</u>	<u>Robert Jackson</u>	<u>Washington Heights 751 W. 163rd St. NY, NY 10033</u>	<u>928-1322</u>
Community Board District # <u>09</u>	<u>Harvey Einvalsh</u>	<u>16-18 Old Broadway NY, NY 10027</u>	<u>212-864-6200 212-662-7396</u>

NOTES

Additional Political Reps:

Robert Johnson Hamilton Hts. 425 W. 144th St.

NY 10031

212-234-0552 fax

212-234-0557 phone

- [Goat Home](#)
- [Function 1](#)
- [Function 1A](#)
- [Function 2](#)
- [Function 3](#)
- [Function 3S](#)
- [Function BL](#)
- [Function BN](#)
- [Function B](#)

Function 1: Geographic Information by Address

Address Number (if any):

Street Name / Place Name:

Select Borough:

Show Political Information?

Geographic Information for 460 WEST 128 STREET in MANHATTAN

[Report Error](#) | [View Help](#)

**Geographic Information:**

---

<b>Orientation:</b>	Address is on the left when facing from DEAD END to AMSTERDAM AVENUE.		
<b>Zip Code:</b>	10027	<b>Community District</b>	109
<b>2000 Census Tract:</b>	213.01	<b>X / Y Coordinates:</b>	996961 / 235803
<b>2000 Census Block:</b>	3002	<b>Low House Number:</b>	450
<b>1990 Census Tract:</b>	213.01	<b>High House Number:</b>	498
<b>Dynamic Block:</b>	302	<b>Segment ID / Length:</b>	0118755 / 624
<b>LION Face Code:</b>	5515	<b>Street Code:</b>	3633001010
<b>LION Sequence Number:</b>	02040	<b>Preferred LGC:</b>	01
<b>Low End Cross Streets:</b>	<b>High End Cross Streets:</b>		
116400 DEAD END	111710 AMSTERDAM AVENUE		

**City Service Information:**

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<b>Police Borough Command:</b>	2	<b>Sanitation District / Section:</b>	109 / 092
<b>Police Precinct:</b>	26	<b>Sanitation Subsection:</b>	2B
<b>Fire Division:</b>	3	<b>Regular Sanitation Pick-Up:</b>	TTHS
<b>Fire Battalion:</b>	11	<b>Recycling Sanitation Pick-Up:</b>	ETH
<b>Fire Company:</b>	E 37	<b>DOT Street Light Area:</b>	1
<b>Health Area:</b>	1100	<b>School District:</b>	5
<b>Health Center District:</b>	16	<b>CD Eligibility:</b>	Eligible

**Political Information:**

---

<b>Congressional District:</b>	15	<b>Senatorial District:</b>	30
<b>Civil Court District:</b>	7	<b>City Council District:</b>	7
<b>Assembly District:</b>	70	<b>Election District:</b>	90



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NYC Department of Buildings  
Property Profile Overview

460 WEST 128 STREET  
WEST 128 STREET 460 - 482

MANHATTAN 10027  
Health Area : 1100  
Census Tract : 213.01  
Community Board : 109  
Buildings on Lot : 1

BIN# 1059581  
Tax Block : 1967  
Tax Lot : 89  
Condo : NO  
Vacant : NO

[View DCP Addresses...](#) [Browse Block](#)

[View Zoning Documents](#)

[View Challenge Results](#)

[View Certificates of Occupancy](#)

Cross Street(s): DEAD END, AMSTERDAM AVENUE  
DOB Special Place Name:  
DOB Building Remarks:  
Landmark Status: C - CALENDARED Special Status: N/A  
Local Law: NO Loft Law: NO  
SRO Restricted: NO TA Restricted: NO  
UB Restricted: NO  
Little 'E' Restricted: N/A Grandfathered Sign: NO  
Legal Adult Use: NO City Owned: NO  
Additional BINs for Building: NONE

Special District: NONE

This property is not located in an area that may be affected by Tidal Wetlands, Freshwater Wetlands, or Coastal Erosion Hazard Area. [Click here for more information](#)

Department of Finance Building Classification: E9-WAREHOUSE

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open	<a href="#">Elevator Records</a>
<a href="#">Complaints</a>	1	0	<a href="#">Electrical Applications</a>
<a href="#">Violations-DOB</a>	0	0	<a href="#">Permits In-Process / Issued</a>
<a href="#">Violations-ECB (DOB)</a>	0	0	<a href="#">Illuminated Signs Annual Permits</a>
<a href="#">Jobs/Filings</a>	5		<a href="#">Plumbing Inspections</a>
<a href="#">ARA / LAA Jobs</a>	0		<a href="#">Open Plumbing Jobs / Work Types</a>
<a href="#">Total Jobs</a>	5		<a href="#">Facades</a>
<a href="#">Total Actions</a>	0		<a href="#">Marquee Annual Permits</a>
OR Enter Action Type:			<a href="#">Boiler Records</a>
OR Select from List:			<a href="#">DEP Boiler Information</a>
Select...			<a href="#">Crane Information</a>
AND <input type="button" value="Show Actions"/>			<a href="#">After Hours Variance Permits</a>

If you have any questions please review these [Frequently Asked Questions](#), the [Glossary](#), or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

**D.G. YUENGLING BREWING CO. LP-2499**

461-467 West 126<sup>th</sup> Street, Manhattan

*D.G. Yuengling Brewing Co, (Later Bernheimer &  
Schwartz Pilsener Brewing Co.) Complex Buildings*

LP FILE INFORMATION

LP#: 2499 BOROUGH: M BLOCK: 1967 LOT: 40  
 SITE NAME: D.E. Yuenqing Brewing Co (later Beerhenge + Schwartz Pilsener Brewing Co.) Complex Building  
 SITE ADDRESS: 461-467 W. 126th St.  
 AKA(s): 451 W/127th St. and 473-479 W/ 126th St.  
 Date Calendars: \_\_\_\_\_ Other Actions: \_\_\_\_\_ Date: \_\_\_\_\_  
 Date Heard: \_\_\_\_\_ Special Info: \_\_\_\_\_  
 Date Designated: \_\_\_\_\_

POLITICAL REPRESENTATIVE INFORMATION

POLITICAL REP. INFO	REPRESENTATIVE NAME	ADDRESS	TELEPHONE/FAX
Assembly District # <u>70</u>	<u>Keith L. Whelan</u>	<u>163 W/125th St. STE. 911 Adam C. Powell Bldg NY 10027</u>	<u>866-5809</u> <u>(212)</u>
House of Representatives District # <u>15</u>	<u>Charles Rangel</u>	<u>163 W/ 125th St STE #787 NY, NY 10027</u>	<u>(212)</u> <u>663-3900</u>
Senate District # <u>30</u>	<u>Bill Perkins</u>	<u>163 W/125th St. STE. 912 NY, NY 10027</u>	<u>(212)</u> <u>222-7315</u> <u>678-0001</u>
City Council District # <u>07</u>	<u>ROBERT JACKSON</u>	<u>Washington Heights 751 W. 163rd St. NY, NY 10033</u>	<u>(212)</u> <u>928-1322</u>
Community Board District # <u>09</u>	<u>MARCY ENGLISH</u>	<u>16-18 Old Broadway NY, NY 10027</u>	<u>212-864-6200</u> <u>212-662-7396</u>

NOTES

Additional Political Reps:

Robert Jackson Hamilton Hts. 425 W. 144th St.

Mg 10031

212-234-0552 fax

212-234-0551 phone



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NYC Department of Buildings  
Property Profile Overview

461 WEST 126 STREET  
WEST 126 STREET  
WEST 127 STREET

461 - 467  
NO NUMBER

MANHATTAN 10027

Health Area : 1100  
Census Tract : 213.01  
Community Board : 109  
Buildings on Lot : 2

BIN# 1081783

Tax Block : 1967  
Tax Lot : 45  
Condo : NO  
Vacant : NO

[View DCP Addresses...](#) [Browse Block](#)

[View Zoning Documents](#)

[View Challenge Results](#)

[View Certificates of Occupancy](#)

Cross Street(s): WEST 127 STREET, AMSTERDAM AVENUE

DOB Special Place Name:

DOB Building Remarks:

Landmark Status:	C - CALENDARED	Special Status:	N/A
Local Law:	NO	Loft Law:	NO
SRO Restricted:	NO	TA Restricted:	NO
UB Restricted:	NO		
Little 'E' Restricted:	N/A	Grandfathered Sign:	NO
Legal Adult Use:	NO	City Owned:	NO
Additional BINs for Building:	NONE		

Special District: NONE

This property is not located in an area that may be affected by Tidal Wetlands, Freshwater Wetlands, or Coastal Erosion Hazard Area. [Click here for more information](#)

Department of Finance Building Classification: F9-FACTORY/INDUSTRIAL

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open	
<b>Complaints</b>	3	0	<a href="#">Elevator Records</a>
<b>Violations-DOB</b>	11	5	<a href="#">Electrical Applications</a>
<b>Violations-ECB (DOB)</b>	11	5	<a href="#">Permits In-Process / Issued</a>
<b>Jobs/Filings</b>	19		<a href="#">Illuminated Signs Annual Permits</a>
<b>ARA / LAA Jobs</b>	0		<a href="#">Plumbing Inspections</a>
<b>Total Jobs</b>	19		<a href="#">Open Plumbing Jobs / Work Types</a>
<b>Actions</b>	11		<a href="#">Facades</a>
			<a href="#">Marquee Annual Permits</a>
			<a href="#">Boiler Records</a>
			<a href="#">DEP Boiler Information</a>
			<a href="#">Crane Information</a>
			<a href="#">After Hours Variance Permits</a>

OR Enter Action Type:

OR Select from List:

Select...

AND

If you have any questions please review these [Frequently Asked Questions](#), the [Glossary](#), or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

- Goat Home
- Function 1
- Function 1A
- Function 2
- Function 3
- Function 3S
- Function BL
- Function BN
- Function B

Function 1: Geographic Information by Address

Address Number (if any):

Street Name / Place Name:

Select Borough:

Show Political Information?

Geographic Information for 461 WEST 126 STREET in MANHATTAN

[Report Error](#) | [View Help](#)

**Geographic Information:**

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<b>Orientation:</b> Address is on the right when facing from WEST 127 STREET to AMSTERDAM AVENUE.	
<b>Zip Code:</b> 10027	<b>Community District:</b> 109
<b>2000 Census Tract:</b> 213.01	<b>X / Y Coordinates:</b> 996632 / 235714
<b>2000 Census Block:</b> 3002	<b>Low House Number:</b> 461
<b>1990 Census Tract:</b> 213.01	<b>High House Number:</b> 499
<b>Dynamic Block:</b> 302	<b>Segment ID / Length:</b> 0038515 / 256
<b>LION Face Code:</b> 5505	<b>Street Code:</b> 3629001010
<b>LION Sequence Number:</b> 01080	<b>Preferred LGC:</b> 01
<b>Low End Cross Streets:</b> 136310 WEST 127 STREET	<b>High End Cross Streets:</b> 111710 AMSTERDAM AVENUE

**City Service Information:**

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<b>Police Borough Command:</b> 2	<b>Sanitation District / Section:</b> 109 / 092
<b>Police Precinct:</b> 26	<b>Sanitation Subsection:</b> 2B
<b>Fire Division:</b> 3	<b>Regular Sanitation Pick-Up:</b> TTHS
<b>Fire Battalion:</b> 11	<b>Recycling Sanitation Pick-Up:</b> ETH
<b>Fire Company:</b> E 37	<b>DOT Street Light Area:</b> 1
<b>Health Area:</b> 1100	<b>School District:</b> 5
<b>Health Center District:</b> 16	<b>CD Eligibility:</b> Eligible

**Political Information:**

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<b>Congressional District:</b> 15	<b>Senatorial District:</b> 30
<b>Civil Court District:</b> 7	<b>City Council District:</b> 7
<b>Assembly District:</b> 70	<b>Election District:</b> 90

D. G. YUENGLING BREWING CO. LP-2468  
(LATER BERNHEIMER & SCHWARTZ PILSENER  
BREWING CO.) COMPLEX BUILDINGS

LP FILE INFORMATION

LP#: 2468 BOROUGH: M BLOCK: \_\_\_\_\_ LOT: \_\_\_\_\_

D. G. YUENGLING BREWING CO. (LATER BERNHEIMER & SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS, 1361-1369 Amsterdam Avenue, aka 492-498 West 128<sup>th</sup> Street, and 484-4990 West 128<sup>th</sup> Street [Lot 40]; 461-467 West 126<sup>th</sup> Street, aka 451 West 127<sup>th</sup> Street; and 473-479 West 126<sup>th</sup> Street [Lot 45]; 439-449 West 127<sup>th</sup> Street [Lot 50]; 423-427 and 433-437 West 127<sup>th</sup> Street [Lot 60]; 454-458 West 128<sup>th</sup> Street [Lot 85 in part]; and 460-470 West 128<sup>th</sup> Street [Lot 89 in part], Manhattan

Date Calendars: \_\_\_\_\_ Other Actions: \_\_\_\_\_ Date: \_\_\_\_\_  
 Date Heard: \_\_\_\_\_ Special Info: \_\_\_\_\_  
 Date Designated: \_\_\_\_\_

POLITICAL REPRESENTATIVE INFORMATION

*ADAM CAYTON RUDWELL JR.*

POLITICAL REP. INFO	REPRESENTATIVE NAME	ADDRESS	TELEPHONE/FAX
Assembly District # <u>70</u>	KEITH L.T. WEGART	163 W. 125 <sup>TH</sup> ST. STE. 911 NY, NY 10027	866-5809 (212)
House of Representatives District # <u>15</u>	CHARLES B. KANDEL	163 W. 125 <sup>TH</sup> ST STE. 737 NY, NY 10027	663-3900 663-4277 (212)
Senate District # <u>30</u>	BILL PERKINS	163 W 125 <sup>TH</sup> ST. STE 912 NY, NY 10027	233-7315 (212)
City Council District # <u>07</u>	ROBERT JACKSON	HAMILTON HHS (HH) 425 WEST 144 <sup>TH</sup> ST. NY, NY 10031	234-0557 234-0552 (212)
Community Board District # <u>09</u>	LARRY ENGLISH	16-18 Old Broadway NY, NY 10027	864-6200 662-7396 (212)

NOTES

Additional Political Reps: \_\_\_\_\_

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When LPC planned to hear Yuengling on 7/19/11, the Buildings were outlined as described below:

<p>PUBLIC HEARING ITEM NO. 1</p> <p>TIME:</p> <p>STAFF: C.D.</p> <p><b>THERE WAS NO PH FOR THIS ITEM ON 7/19/11</b></p>	<p><u>PUBLIC HEARING ITEMS</u></p> <p>LP-2468  <u>D. G. YUENGLING BREWING CO. (LATER BERNHEIMER &amp; SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS</u>          1361-1369 Amsterdam Avenue (aka 492-498 West 128<sup>th</sup> Street and 484-490 West 128<sup>th</sup> Street), Manhattan  <i>Landmark Site:</i> Borough of Manhattan Tax Map Block 1967, Lot 40          [Community District 9]</p> <p>LP-2499  <u>D. G. YUENGLING BREWING CO. (LATER BERNHEIMER &amp; SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS</u>          461-467 West 126<sup>th</sup> Street (aka 451 West 127<sup>th</sup> Street and 473-479 West 126<sup>th</sup> Street), Manhattan.  <i>Landmark Site:</i> Borough of Manhattan Tax Map Block 1967, Lot 45          [Community District 9]</p> <p>LP-2500  <u>D. G. YUENGLING BREWING CO. (LATER BERNHEIMER &amp; SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS</u>          439-449 West 127<sup>th</sup> Street, Manhattan.  <i>Landmark Site:</i> Borough of Manhattan Tax Map Block 1967, Lot 50          [Community District 9]</p> <p>LP-2501  <u>D. G. YUENGLING BREWING CO. (LATER BERNHEIMER &amp; SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS</u>          423-427 and 433-437 West 127<sup>th</sup> Street, Manhattan.  <i>Landmark Site:</i> Borough of Manhattan Tax Map Block 1967, Lot 60          [Community District 9]</p> <p>LP-2502  <u>D. G. YUENGLING BREWING CO. (LATER BERNHEIMER &amp; SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS</u>          454-458 West 128<sup>th</sup> Street, Manhattan.  <i>Landmark Site:</i> Borough of Manhattan Tax Map Block 1967, Lot 85 in part          [Community District 9]</p> <p>LP-2503  <u>D. G. YUENGLING BREWING CO. (LATER BERNHEIMER &amp; SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS</u>          460-470 West 128<sup>th</sup> Street, Manhattan.  <i>Landmark Site:</i> Borough of Manhattan Tax Map Block 1967, Lot 89 in part          [Community District 9]</p>
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*This is how Yuengling was heard in the 70s*

1361-1369 Amsterdam Avenue  
*D.G. Yuengling Brewing Co. (later Bernheimer & Schwartz Pilsener Brewing Co.) Complex Buildings*  
Heard: 07/15/91, 10/29/91 [LP-1853]

1818-1838 Amsterdam Avenue  
*Joseph Loth & Company Silk Ribbon Factory*  
Heard: 07/15/91, 10/29/91 [LP-1860]  
New York City Landmark, designated 09/21/93

1854 Amsterdam Avenue  
*(former) 30th Police Precinct Station House*  
Heard: 07/12/66, 06/23/70 [LP-0318]  
Heard: 09/14/82 [LP-1389]  
New York City Landmark, designated 07/15/86

#### **ASSER LEVY PLACE**

Asser Levy Place  
*Public Baths*  
Heard: 11/27/73 [LP-0842]  
New York City Landmark, designated 03/19/74

#### **ASTOR PLACE**

Astor Place (Lexington Avenue Line)  
*Interborough Rapid Transit System: Stations*  
*Interior*  
Interior heard: 09/11/79 [LP-1096]  
New York City Interior Landmark, designated 10/23/79

#### **AVENUE A**

29-41 Avenue A  
*First Houses*  
Heard: 10/08/74 [LP-0876]  
New York City Landmark, designated 11/12/74

#### **AVENUE OF THE AMERICAS**

462 Avenue of the Americas  
*Avenue of the Americas House*  
Heard: 12/21/66 [LP-0508]  
Absorbed into Designated Historic District  
464 Avenue of the Americas  
*Avenue of the Americas House*  
Heard: 12/21/66 [LP-0509]  
Absorbed into Designated Historic District  
466-470 Avenue of the Americas  
*Avenue of the Americas House*  
Heard: 12/21/66 [LP-0510]  
Absorbed into Designated Historic District  
1260 Avenue of the Americas  
*Radio City Music Hall*  
Interior heard: 03/14/78 [LP-0995]  
New York City Interior Landmark, designated 04/07/78

#### **BANK STREET**

1-131 Bank Street  
*Greenwich Village Historic District*  
Heard: 12/21/66, 02/07/67, 02/28/67 [LP-0489]  
New York City Historic District, designated 04/29/69

2-136 Bank Street  
*Greenwich Village Historic District*  
Heard: 12/21/66, 02/07/67, 02/28/67 [LP-0489]  
New York City Historic District, designated 04/29/69

55 Bank Street  
*Bank Street House*  
Heard: 12/21/66 [LP-0532]  
Absorbed into Designated Historic District

57 Bank Street  
*Bank Street House*  
Heard: 12/21/66 [LP-0533]  
Absorbed into Designated Historic District

61 Bank Street (and rear house)  
*Bank Street House*  
Heard: 12/21/66 [LP-0534]  
Absorbed into Designated Historic District

#### **BARCLAY STREET**

22 Barclay Street  
*St. Peter's R.C. Church*  
Heard: 10/19/65 [LP-0078]  
New York City Landmark, designated 12/21/65

#### **BARROW STREET**

1-97 Barrow Street  
*Greenwich Village Historic District*  
Heard: 12/21/66, 02/07/67, 02/28/67 [LP-0489]  
New York City Historic District, designated 04/29/69  
2-84 Barrow Street  
*Greenwich Village Historic District*  
Heard: 12/21/66, 02/07/67, 02/28/67 [LP-0489]  
New York City Historic District, designated 04/29/69

95 Barrow Street  
*Barrow Street House*  
Heard: 12/21/66 [LP-0514]  
Absorbed into Designated Historic District

97 Barrow Street  
*Barrow Street House*  
Heard: 12/21/66 [LP-0513]  
Absorbed into Designated Historic District

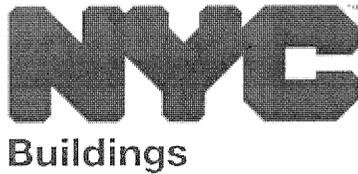
#### **BATTERY PARK**

Battery Park  
*Castle Clinton/now Castle Clinton National Monument*  
Heard: 10/19/65 [LP-0029]  
New York City Landmark, designated 11/23/65

Battery Park  
*Pier A*  
Heard: 01/27/76 [LP-0918]  
New York City Landmark, designated 07/12/77

#### **BATTERY PLACE**

Battery Place  
*Battery Park, Interborough Rapid Transit System: Control House*  
Heard: 09/25/73 [LP-0829]  
New York City Landmark, designated 11/20/73



[CLICK HERE TO SIGN UP FOR BUILDINGS NEWS](#)

NYC Department of Buildings  
Property Profile Overview

1361 AMSTERDAM AVENUE

AMSTERDAM AVENUE 1361 - 1369  
WEST 126 STREET 473 - 479  
WEST 128 STREET 492 - 498

MANHATTAN 10027

Health Area : 1100  
Census Tract : 213.01  
Community Board : 109  
Buildings on Lot : 2

BIN# 1081781

Tax Block : 1967  
Tax Lot : 40  
Condo : NO  
Vacant : NO

[View DCP Addresses...](#) [Browse Block](#)

[View Zoning Documents](#)

[View Challenge Results](#)

[View Certificates of Occupancy](#)

Cross Street(s): WEST 126 STREET, WEST 128 STREET

DOB Special Place Name:

DOB Building Remarks:

Landmark Status:	C - CALENDARED	Special Status:	N/A
Local Law:	NO	Loft Law:	NO
SRO Restricted:	NO	TA Restricted:	NO
UB Restricted:	NO		
Little 'E' Restricted:	N/A	Grandfathered Sign:	NO
Legal Adult Use:	NO	City Owned:	NO
Additional BINs for Building:	NONE		

Special District: NONE

This property is not located in an area that may be affected by Tidal Wetlands, Freshwater Wetlands, or Coastal Erosion Hazard Area. [Click here for more information](#)

Department of Finance Building Classification: E9-WAREHOUSE

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open	<u>Elevator Records</u>
Complaints	0	0	<u>Electrical Applications</u>
Violations-DOB	34	1	<u>Permits In-Process / Issued</u>
Violations-ECB (DOB)	3	0	<u>Illuminated Signs Annual Permits</u>
Jobs/Filings	32		<u>Plumbing Inspections</u>
ARA / LAA Jobs	2		<u>Open Plumbing Jobs / Work Types</u>
Total Jobs	34		<u>Facades</u>
Actions	171		<u>Marquee Annual Permits</u>
			<u>Boiler Records</u>
			<u>DEP Boiler Information</u>

OR Enter Action Type:

OR Select from List:

Select...

AND

If you have any questions please review these [Frequently Asked Questions](#), the [Glossary](#), or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.



**CB9M**

16-18 Old Broadway  
New York, New York 10027  
(212) 864-6200/Fax # 662-7396

**COMMUNITY BOARD #9, MANHATTAN**

Scott Stringer  
President, Borough of Manhattan

March 22, 2011

Larry English, Esq.  
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**Hon. Robert B. Tierney**

**Chair**

**Landmarks Preservation Commission**

**Municipal Building**

**One Centre Street, 9<sup>th</sup> Fl.**

**New York, New York 10007**

**Re: De-Calendaring of Buildings in M District**

Dear Chair Tierney,

Eutha Prince  
District Manager

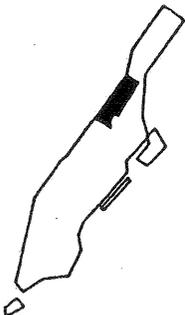
At its regularly scheduled monthly meeting held on Thursday, March 17, 2011, Manhattan Community Board No. 9 passed the following resolution re: De-Calendaring of Buildings in the M District by a vote of 26 in favor, 3 opposed, and 4 abstentions:

WHEREAS, Community Board 9 Manhattan ("CB9") desires to encourage economic development and job creation in its community and for its residents as stated in its 197-a Plan (the "Plan"); and

WHEREAS, the Plan contains certain rezoning recommendations that would encourage such economic development and job creation, increase neighborhood amenities, revitalize the M-zoned district located between West 126th and 129th Streets from Amsterdam to Convent Avenues (the "M Zone"), and result in safer, more active streets; and

WHEREAS, the rezoning of West Harlem, including the existing M-zoned district, undertaken to achieve the goals of the Plan, has been underway for over a year with the Department of City Planning ("DCP"); and

WHEREAS, the primary goal of the rezoning as it relates to the existing M-zone is to encourage the development of new mixed-use facilities, primarily manufacturing, commercial, retail and community facility uses that will serve the community and create new employment opportunities with a multiplier effect in the community by rezoning to a Mixed-Use District; and



**Hon. Robert B. Tierney**

**March 22, 2011**

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cc: Hon. Michael Bloomberg, Mayor  
Hon. Charles Rangel, Congressman  
Hon. Scott Stringer, Manhattan Borough President  
Hon. Bill Perkins, State Senator  
Hon. Adriano Espaillat, State Senator  
Hon. Keith Wright, Assemblymember  
Hon. Daniel O'Donnell, Assemblymember  
Hon. Herman D. Farrell, Jr., Assemblymember  
Hon. Inez Dickens, City Councilmember  
Hon. Robert Jackson, City Councilmember  
Hon. Walter South, Chair, Landmarks Committee, CB9M  
Hon. Simon Thoresen, Assistant Chair, Landmarks Committee, CB9M

Hon. Robert B. Tierney

March 22, 2011

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WHEREAS, affiliates of The Janus Property Company ("Janus"), a CD9-based real estate development firm, own approximately two acres of contiguous buildings and vacant lots located at Block 1967, Lots 40, 45, 50, 60 and 89, which represent the most substantial and immediate single redevelopment opportunity in the M Zone (the "Janus Buildings"); and

WHEREAS, in 1990 all of the Janus Buildings were calendared for consideration for landmark designation by the Landmarks Preservation Commission ("LPC"); and

WHEREAS, after extensive public hearings held on July 15, 1991 and October 29, 1991, LPC chose not to designate any of these buildings as New York City Landmarks; and

WHEREAS, LPC continues to consider these buildings calendared for landmark consideration after more than twenty years of its original consideration of the Buildings, including the two days of public hearings which did not result in designation; and

WHEREAS, the Janus Buildings are not identifiable as the extensive original complex that once spanned Block 1967 and the block to the north; and

WHEREAS, the individual Janus Buildings have been so altered by both Janus and prior owners since their original design and construction that they lack original individual architectural merit and/or are in such a state of disrepair and are so obsolete for modern use that further extensive alteration is required; and

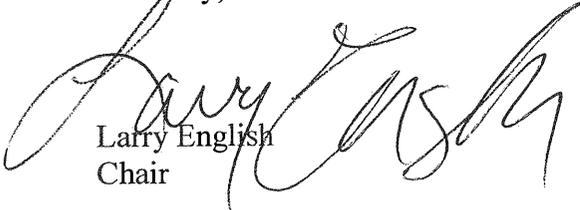
WHEREAS, CB9M strongly desires that the pending rezoning to a Mixed Use designation result in the transformative development of all properties in the M-zone to create the greatest economic development opportunity for the community possible; and

WHEREAS, CB9M further strongly desires that neither the Buildings' calendared status nor LPC's desire to designate any or all of the Buildings as New York City Landmarks should hinder the future redevelopment of this large and critical area of the M Zone; now therefore, be it

RESOLVED, That Manhattan Community Board No. 9 strongly urges the New York City Landmarks Preservation Commission to de-calendar the Janus Buildings located at Block 1967, Lots 40, 45, 50, 60 and 89.

If any further information is needed please do not hesitate to contact myself or District Manager Eutha Prince at the board office (212) 864-6200.

Sincerely,

  
Larry English  
Chair

**D.G. YUENGLING BREWING CO. (LATER BERNHEIMER & SCHWARTZ PILSENER BREWING CO.) COMPLEX BUILDINGS**, 1361-1369 Amsterdam Avenue, aka 492-498 West 128th Street, and 484-490 West 128th Street [Lot 40]; 461-467 West 126th Street, aka 451 West 127th Street, and 473-479 West 126th Street [Lot 45]; 439-449 West 127th Street [Lot 50]; 423-427 and 433-437 West 127th Street [Lot 60]; 454-458 West 128th Street [Lot 85 in part]; and 460-470 West 128th Street [Lot 89 in part], Manhattan

A reminder of the period when brewing was a major industry in New York, this complex of nine buildings with frontages on Amsterdam Avenue, West 126th Street (formerly Lawrence Street), West 127th Street, and West 128th Street, is the larger and more architecturally distinguished of the two groups of brewery buildings surviving in Manhattan from the thirty-two breweries in operation at the turn of the century. (The other buildings are 646 and 662 First Avenue which once formed part of the Kips Bay Brewery.)

As early as the mid-1860s, a brewery, known first as the Excelsior Brewery and later as the Manhattan Brewery, was in operation at the northeast corner of Amsterdam Avenue and West 128th Street. In 1875, this property was acquired by a consortium of investors headed by David G. Yuengling, Jr., the son of a prominent Pennsylvania brewer. Under Yuengling, the brewery underwent a considerable expansion, extending eastward on 128th, southeastward along Lawrence Street (now West 126 Street), and eastward along 127th Street. In 1897, the Yuengling firms in Pennsylvania and New York merged with the John F. Betz Brewery of Richmond, Virginia, and the New York brewery complex was renamed the John F. Betz Manhattan Brewery. In 1903, it was sold to Samuel and Max Bernheimer, Anton Schwartz, and Arthur Friedland -- the Bernheimers having recently sold their interest in the nearby Lion Brewery which had been founded by their father Emanuel Schmid in the 1850s. The Bernheimers immediately undertook a major renovation and expansion of the brewery. The older buildings on Amsterdam Avenue were replaced, the buildings on West 128th Street were modernized and enlarged, and new buildings were constructed on West 126th Street and West 127th Street. During Prohibition the buildings were adapted for use by a variety of businesses including a dairy, cold storage warehouse, and laundry. All but two of the buildings, 454-458 West 128th Street and 460-470 West 128th Street, were returned to brewery use by Horton's Pilsner Brewing Company during the 1930s. The last building to be added to the complex, 423-427 West 127th Street, was constructed for Horton's in 1934-36.

The complex is comprised of the following buildings:

No. 1361-1369 Amsterdam Avenue, aka 492-498 West 128th Street, and No. 484-490 West 128th Street -- These two buildings, which have now been joined, have a complex history involving several building campaigns. The building at No. 484-490 was originally two four-story buildings -- No. 484-486, constructed by the Manhattan Brewery as an ice house in 1874, and No. 488-490, erected as a brewery for ale by the D. G. Yuengling Brewing Company in 1876-77. Both buildings were designed by Anthony Pfund, an architect active in New York between 1857 and 1897, who specialized in the planning of brewery buildings, working for such well-known companies as the Ehret, Ruppert, and Hupfel Breweries in Manhattan and the Ebling Brewery in the Bronx. In 1912-13, under Bernheimer & Schwartz the two buildings were joined and raised two stories to create the present structure. The architect of this alteration, was Louis Oberlein, a specialist in brewery design, who had previously designed buildings for the Bernheimers' Lion Brewery. Oberlein was also responsible for the design of No. 1361-1369 Amsterdam Avenue which was constructed in two stages for Bernheimer & Schwartz -- the lower three stories in 1905-06, and the upper three stories in 1911-12. Though they worked almost a quarter century apart, the two architects employed a common vocabulary for their designs. The facades were articulated into bays by pilaster strips and stories were arranged into groupings by stone string courses. Windows are either round-or segmental arched and are set off by stone impost, keystones and skewbacks or dentiled moldings. Extensive use is also made of corbeling and recessed panels and the roofline is generally broken by a central pediment.

Anthony Pfund was also responsible for No. 454-458 West 128th Street, a two-story stable building constructed for the Yuengling Brewery in 1876, which is especially noteworthy for the use of a cross-gabled center bay and the boldness of the decorative treatment.

Oberlein's other works in the complex are No. 473-479 West 126th Street and No. 461-467 West 126th Street aka 451 West 127th Street. These were also constructed as separate buildings and have now been joined. No. 473-479 is almost identical in articulation to the adjacent 1361-1369 Amsterdam and was probably constructed in 1911-12. No. 461-467 was built in 1904-05. Among its notable features are the eyebrow moldings enriched by dentils over the windows.

No. 460-470 West 128th Street was designed by architect Paul F. Schoen and constructed for the Yuengling Brewery in 1883-84. A two-story brick structure it was originally used for the production and storage of ale. It has five large segmental-arched vehicle entrances on the ground story and segmental-arched windows at the second story. Faced with tawny orange brick, its facade is enriched by patterned brick courses at the springing of the ground story arches, beneath the second story window sills, and at the roofline.

No. 439-449 West 127th Street was originally constructed in 1912-14 as an addition to No. 461-467 West 126th Street, though the buildings are now on separate lots. Originally begun by Louis Oberlein, this building appears to be largely the work of Fred Keeler, a younger architect who was retained by Bernheimer and Schwartz in 1912. Built as a skeleton frame daylight factory, it is more open and structurally articulated than the earlier buildings in the complex. Like them it is faced with brick trimmed with stone and has projected piers and recessed spandrel panels.

The windowless structure at 437 West 127th Street was built to contain malt bins which extended through several stories. Originally part of the building at 439-449 West 127th Street, it is now joined to 433 West 127th Street, a one-story storage building raised to three stories for the Horton Pilsner Company by architect Frank Rooke in 1934-36.

No. 423-427 West 127th Street is a loft building designed for Bernheimer and Schwartz by Frederick Keeler in 1912-13. Though characteristic of early twentieth-century industrial architecture, the design echoes many of the features of the earlier buildings in the complex including the use of projected piers and a gabled parapet.