

The Adolphus Busch Glass Factories

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Adolphus Busch was the son-in-law of Eberhard Anheuser and the driving force behind the Anheuser-Busch Brewery's success (Hernon & Ganey 1991). He made a number of tremendous advances in brewing history, the most important of which (at least from a bottle research standpoint) was employing Pasteurization to the beer-making process. This, in 1872, allowed for the long-range shipping of beer and, coupled with the use of refrigerated railroad cars (also pioneered by Busch), accounted for the spread of lager beer across the American West and internationally.

Busch was also highly interested in beer bottles. Plavchan (1969:75), a historian researching Anheuser-Busch, discussed the series of glass houses used by Anheuser-Busch in its quest for sufficient bottles to keep up with its beer distribution. To maintain the increase in beer production, Anheuser-Busch even imported bottles from Germany.¹ Because of this increasing need for bottles, Adolphus Busch became involved in bottle production, becoming one of the principals in the Streator Bottle & Glass Co. and possibly other glass houses. Of interest to us, Adolphus Busch also formed a series of companies to manufacture bottles for the brewery.

Histories

Adolphus Busch Glass Co., Belleville, Illinois (1886-1892)

Adolphus Busch Glass Co., St. Louis, Missouri (1891-1892)

In 1886, Adolphus Busch bought the Belleville Glass Works (Jones 1968:11; Toulouse 1971:26). It was first listed in the city directories as the Adolphus Busch Glass Works in 1887. On January 19, 1887, the *St. Louis Globe-Democrat* announced the incorporation of the

¹ For more discussion about importation of German beer bottles, see Lockhart et al. (2009).

Adolphus Busch Glass Co., with Adolphus Busch, Erwin Sproul, and Gustav Hausmann as the incorporators – with a capital of \$50,000. The article noted that the “principal object of the company” was to produce bottles for Anheuser-Busch. The brewery had been importing bottles from Germany to the tune of ca. \$250,000 per year, money that would now remain in the U.S. Listings varied between the Adolphus Busch Glass Works and Adolphus Busch Glass Co. – a phenomenon familiar to glass researchers. The former indicated the factory name, while the latter was the operating company.

Busch apparently refurbished and enlarged the plant soon after the incorporation. The *American Glass Worker* (1886:2) noted in 1886 that “a St. Louis, Mo., correspondent writes us that the Anheuser-Busch Brewing Association are building a large bottle house and intend to import foreign blowers to run it.” By 1891, the Belleville factory made sodas, minerals, and bitters, adding fruit jars in 1892, the same year that Busch renamed the firm (Toulouse 1971:26).²

On September 30, 1890, Henry Hiemenz told the *St. Louis Globe Democrat* that he had sold the property formerly belonging to the Great Western Glass Works to Adolphus Busch for \$20,000. The same newspaper reported on October 26, 1890, that Busch had obtained a building permit the week before to erect a “one-story glass house, Third street, between Barton and Victor streets.” The permit cost \$5,000. Busch demolished the old factory and built anew with the intention of making beer bottles for Anheuser-Busch. The *Age of Steel* (1890) commented that the St. Louis plant was almost completed and that Busch’s Belleville factory had not been sufficient to supply the needed bottles for the Anheuser-Busch brewery. Busch hoped that the new plant would be “keeping them more nearly supplied with bottles.”

The factory probably began production sometime in January of 1891. The *Streator Free Press* noted on May 29, 1891, that the St. Louis plant was “turning out 110 gross of bear [sic] bottles daily. The same company is completing a new six-pot factory at Belleville.” The latter comment almost certainly referred to an addition or refurbishment of the existing Belleville plant.

² Several researchers (Ayres et al. 1980:2; Anheuser Busch 2005; Berge 1980:114-115) noted that the St. Louis plant originally used the Adolphus Busch Glass Co. name and was renamed in 1893. The new name, however, began in January 1892.

Adolphus Busch Glass Mfg. Co., Belleville, Illinois (1892-1894; 1896-1905)

Adolphus Busch Glass Mfg. Co., St. Louis, Missouri (1892-1905; ca. 1908-ca. 1920)

The Adolphus Busch Glass Mfg. Co. incorporated at St. Louis, Missouri, in mid-January 1892. Adolphus Busch, with 1,580 shares, was by far the senior stockholder with 84.3% of the subscribed stock. Other stockholders were Peter Schlutter (120 shares), W.F. Modes (50 shares), Matthew Joch (25 shares), Adolphus Busch, Jr. (50 shares), and A.A. Busch (50 shares) (Roller 1997a). However, the beginnings of the reorganization began earlier. In late October of 1890, Adolphus Busch received a \$5,000 building permit to build a one-story glass house on “Third street between Barton and Victor streets” at St. Louis, Missouri. (*St. Louis Globe Democrat* 10/26/1890). Although we have not discovered the exact timing, the St. Louis factory probably opened sometime during 1892. The new name was almost immediately a herald of disaster. Because of the 1893 depression, Busch closed the Belleville plant in 1894. The St. Louis factory, however, remained open (Ayres et al. 1980:2-3), and the Belleville plant reopened in mid-1896 to make amber beer bottles (Roller 1997b).

In 1897 and 1898, the St. Louis plant used 48 pots to make its bottles, and that number remained steady until 1900. The St. Louis factory was unlisted in 1901, but the Belleville plant used 78 pots and continued that number in 1902 (*National Glass Budget* 1897:7; 1898:7; 1900:11; 1901:11; 1902:11). On September 13, 1898, the firm increased its capital stock from \$200,000 to \$300,000 (von Mechow 2012).

From 1892 to 1900, the St. Louis directories listed the address for the glass house as “3d, sw. cor. Barton” (i.e., Third St. at the southwest corner of Barton St.). However, a disastrous fire destroyed the plant on April 1, 1900 (\$75,000 estimated damages). The wood-framed building “burned like tinder.” Defective electrical wires apparently caused the blaze. Busch immediately (the day of the fire!) bought “the old Heitz Glass Works, located at the foot of Dorcas street” with plans to resume production within two weeks. Heitz had been last listed in the directories in 1898 (von Mechow 2012).

A 1904 pamphlet entitled “World’s Fair Souvenir of the Engineers’ Club of Saint Louis” provided a cameo look at the production capabilities of both plants. The St. Louis factory manufactured “green bottle glass. One 20-ring regenerative tank furnace, capacity 50 tons in 24

hours, the largest in the world.” The Belleville location was “15 miles from St. Louis. Green bottle factory of the Anheuser-Busch brewery. Three continuous tank furnaces, 32 rings; capacity 82 tons in 24 hours, or the equivalent of 164,000 bottles.” The entire operation became part of the merger that formed the American Bottle Co. in 1905 (Toulouse 1971:27).

Toulouse (1971:27) asserted that “Busch had been a hand plant all these years, which is one reason why the American Bottle Co. immediately [i.e., 1905] closed the Belleville plant.” In another section, however, he stated that the Belleville factory was still open when the Owens Bottle Co. bought American in 1916, and all the hand plants (including Belleville) were closed in 1917. To add to the confusion, the *American Glass Review* (1934:173) stated that the Belleville plant “closed in 1913.” None of these are correct; the factory actually permanently shut its doors in 1909 (Lockhart et al. 2007a:48).

Toulouse (1971:30) also noted that “eventually Busch withdrew his St. Louis operations from the merger [that created the American Bottle Co.] and operated them independently until 1928.” However, the St. Louis plant was destroyed by fire on the night of February 22, 1905, at a loss estimated between \$50,000 and \$75,000. Rebuilding was in process by at least August (*National Glass Budget* 1905a:6; 1905b:9; *Cambridge Jeffersonian* 2/22/1905). As part of the rebuilding effort, Busch purchased the Belgian Pavilion from the 1904 World Fair and had it moved to Dorcas St., the location

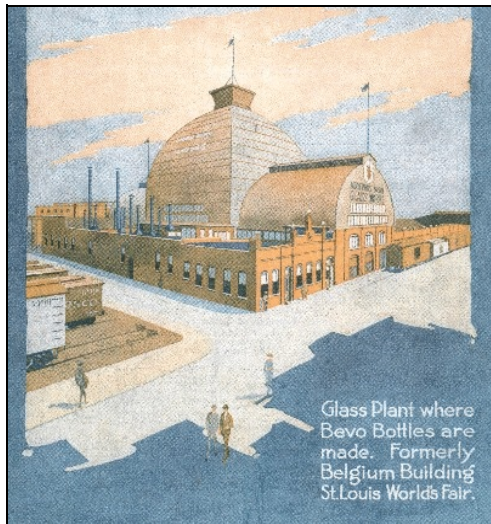


Figure 2 – Pavilion (*Bevo Tatler* April 1919)

of the destroyed plant (Figure 1). Soon, he had the anheuser-Busch emblem attached to the front of the building above the name “ADOLPHUS BUSCH GLASS WORKS” (Figure 2). The factory appeared on an undated Sanborn Fire Insurance Map, showing what had to be the rebuilt plant (Figure 3).

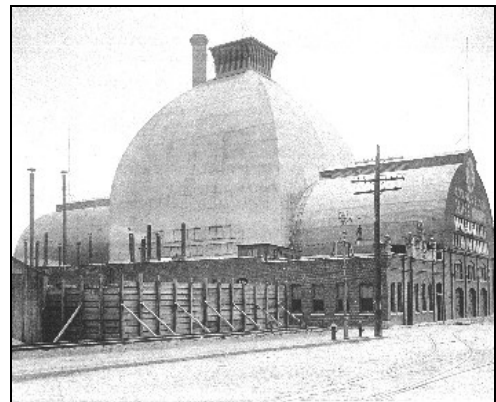


Figure 1 – Former Belgian Pavilion (Wikipedia Commons)

The timing of the merger, the fire, and Busch’s withdrawal of the St. Louis plant have created some confusion – including our first studies. The American Bottle Co. incorporated on August 23, 1905 – almost exactly six months after the destructive fire – but the changeover was not complete until sometime in September. Von Mechow (2021) has speculated that the St. Louis plant was not rebuilt in time for the merger and thus was never a part of the American Bottle Co. However, as noted above, Busch had rebuilt the factory by August, using the former Belgian pavilion from the St. Louis World Fair as the basis for the new operation. The *Commercial & Financial Chronicle* in 1905 made it clear that *both* Busch plants were part of the American Bottle Co. merger.

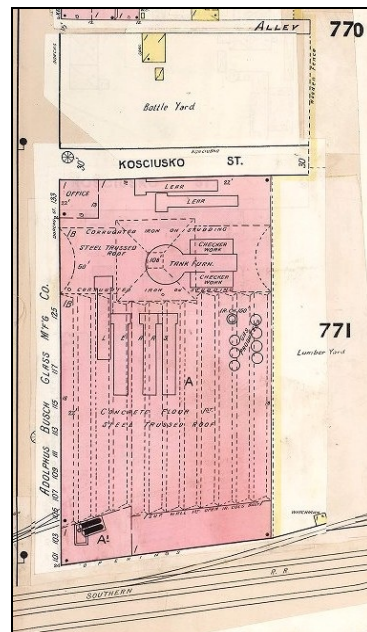


Figure 3 – Dorcas St. plant (Sanborn Fire Insurance Map 1896 – courtesy of Terry Schaub)

Terry Schaub discovered a clipping that stated on April 3, 1906, Busch paid \$278,800 to the American Bottle Co. for a glass works. This was almost certainly the “withdrawal” of the St. Louis plant. The 1913 *Poor’s Manual of Industrials* noted the date of Busch’s withdrawal as 1907, possibly suggesting that the transfer was not complete until that year – although *Poor’s* was probably a year off. For more detail about this aspect of the Busch businesses, see the section on the American Bottle Co.

A 1913 list noted that the plant used one continuous tank with 23 rings to make beer bottles. Unfortunately, the article failed to state whether production was by hand or machine (*Journal of Industrial and Engineering Chemistry* 1913:952). An article in the October 6, 1916, issue of the *National Glass Budget* suggested that Busch had adopted machines, almost certainly the first ones used at the plant:

When, a couple of weeks ago, the big Busch bottle factory at St. Louis, Mo., resumed operations, following a protracted shutdown for repairs and improvements, a big battery of O’Neill one-man machines was put to work. At present, 14 of them are busy as bees, turning out 12-oz. amber malt-shaped “Bevos” bottles. . . . A Bevos bottle, as we understand it, is a container to be used as a substitute for beer in Bone Dry territory.

On December 8, 1917, A.E. Bristow (1917:16) reported in the *Glassworker*: “Since my last visit here, [the St. Louis plant] has been transformed from a hand blow factory to a semi-automatic machine plant” with 14 O’Neill and two Lynch machines, making “bevovs, beers and malts.” He appeared to be convinced that mouth-blown bottles had been eliminated.

Busch went patriotic in late 1918, announcing that “the \$10,000,000 Busch ‘Bevo’ plant, at St. Louis, has been closed for the period of the war, and the property tendered to the Government in connection with its war activities” (*National Glass Budget* 1918). However, since World War I ended on November 11, 1918, less than a month after the announcement, the factory was probably back in Bevo production soon.

There is some controversy surrounding the closing of the plant. Anheuser Busch (2005) placed the closing at 1925, but Ayres et al. (1980:3) noted the last listing in the city directories in 1926. According to Toulouse (1971:27), the operation ceased in 1928. The 1927-1929 listings in the *American Glass Review* (1927:127) support the Toulouse date, although directories were notorious for continuing to list glass houses after they had closed. The 1927 listing claimed that the plant made “beers, beevos [i.e., bottles for Anheuser-Busch’s near-beer, Bevo], malt nutrines [another cereal beverage, Malt Nutrine] and minerals” on 15 machines. The entry remained in 1928 and 1929, although it had vanished from the 1930 edition (*American Glass Review* 1927:127; 1928:128-129; 1929:94).

Apparently, however, all of these secondary sources were incorrect. In a 1938 study, the Temporary National Economic Committee (1939:805) noted that “plants such as the Busch Glass Mfg. Company of St. Louis . . . went out of business shortly after 1920.” Although the Busch plant advertised for help from February to August of 1920 (e.g., *St. Louis Post Dispatch* 8/22/1920), we could find no indication from newspapers or other primary sources that the firm remained in business after that year.

It was pretty clear that the doors were closing between March 1921 and January 1922. In the March 26, 1921, issue of the *Glassworker*, Busch offered for sale “at a very attractive price fifteen standard O’Neill narrow neck bottle blowing machines.” A followup in the January 7, 1922, issue offered “seven blowing machines, No. 21 O’Neill one boy narrow neck, slightly used machines, in good condition. \$350 each. Including mold equipment for standard export bottles.”

The seven machines were likely ones that had not sold the previous year. The Busch bottle production years were at an end. See Table 1 for a chronology of the glass houses.

Table 1 – Chronology of the Adolphus Busch Glass Factories

Date	Bellville	St. Louis
1886	Purchase of Belleville plant	
1892	Adolphus Busch Mfg. Co,	Purchase of St. Louis plant
1894	Belleville plant closed	
1896	Belleville plant reopened	
1900		St. Louis plant burned
1905		St. Louis plant burned again; purchase of old Frederick Heit plant; Belgian pavilion moved to Heit site
1905	American Glass Co. merger	American Glass Co. merger
1906		Withdrawal of St. Louis plant
1909	Closure of Belleville ABGCo plant	
ca. 1916		End of hand production
ca. 1926		Closure of St. Louis plant

Containers and Marks

Adolphus Busch Glass Co.

Prior to the name change in 1892, the Belleville factory apparently made only beer bottles in both aqua and amber colors. The vast majority of these were generic export beer bottles, probably made exclusively for Anheuser-Busch. There is no question that Anheuser-Busch had continuous difficulty obtaining a sufficient quantity of bottles for its beer during the 1870s and 1880s (Lockhart et al. 2009). The plant made at least some champagne-style beer bottles that were side embossed – also for Anheuser-Busch. The final category – cobalt export beer bottles – were made exclusively for Liquid Bread (see the Liquid Bread section below).

The St. Louis plant may have only manufactured Hutchinson soda or beer bottles during its two years under the original company name. We have not found any other bottles with the St. Louis marking (see below). Of course, our sample is small. These bottles appear to be scarce or even rare.

Finishes on beer bottles made by the early Busch firm spanned two production issues. First, most had two-part finishes, made for corks. As discussed in Lockhart (2007) and Lockhart et al. 2012), there was a general industry change from sharp lower rings on two-part beer bottle finishes to rounded lower rings – apparently because rounded lower rings were less prone to breakage. The earliest finishes had sharp lower rings, and those continued in production until ca. 1883. The shift to rounded lower rings began ca. 1878 and continued until ca. 1914, when the last holdouts adopted crown finishes.



Figure 4 – Applied two-part finish with sharp lower rings

Bottles with A.B.G.Co. logos were originally made with two-part finishes and sharp (tapered) lower rings – especially the ones made for Liquid Bread (Figure 4). Since the Busch firm began in 1886, this use of sharp lower rings was much later than in the industry in general. It is impossible to



Figure 5 – Applied two-part finish with rounded lower rings

tell when the change occurred, but both rounded (Figure 5) and sharp lower rings appear in roughly equal numbers in our sample (only 16 bottles). The firm also made a few smaller bottles with one-part finishes.

The second trend was the change from applied to tooled finishes. In this case, there seems to have been a clean division between the firms. Our entire sample of A.B.G.Co. bottles was made with applied finishes. This fits with the industry trend. In general, glass houses made smaller bottles with tooled finishes early (ca. 1870s) but continued to use applied finishes on larger bottles much later. In the case of beer bottles, applied finishes remained the norm until ca. 1896 or a bit later.

A final trend was apparent on bases. Lockhart et al. (2012) discussed what we call double stamps on bases. These are secondary marks of the logos or basecodes that are usually flat in appearance rather than rounded like the intended embossing (Figure 9 below). These were apparently caused when a blower tamped the parison (first-stage of bottle blowing) onto the bottom of the mold then lifted it to blow the actual bottle. This technique *may* have been devised to deal with foot-operated molds. In the older system, a mold boy opened and closed the molds. Later, this was done by the blower using a foot pedal.



Figure 6 – 1913 Malt Nutrine ad (eBay)

Yet another characteristic of the Busch bottles needs to be addressed. Most of the beer bottles made at the Busch plants were the export style – long, narrow cylinder with a swelled, extended neck. Already, by the 1880s, these had become the “typical” beer bottles of the West and gradually gained popularity in the East.



Figure 7 – Malt Nutrine label (eBay)

But, Busch produced huge quantities of what Lindsey (2021) called malt extract/malt tonic bottles. In 1885, Anheuser-Busch introduced Malt Nutrine, a malt extract to compete with Liquid Bread (see the discussion below). These were bottled in containers that were more “squat” shaped than the export bottles, still with a swelled neck (Figures 6 & 7).

When Anheuser-Busch offered its near-beer, Bevo (pronounced BEE-vo) in 1916 to serve military personnel who were no longer allowed access to alcohol, the brewery selected the same squat bottle for the brew – while almost all of its competitors bottled near-beers in typical export bottles (Figure 8). The firm continued to advertise Bevo until 1930 – although sales had dropped so dramatically by 1924 that Anheuser-Busch sold

When Anheuser-Busch offered its near-beer, Bevo (pronounced



Figure 8 – Bevo sign (Antique Advertising Expert)

most of its cases and bottles for junk and discontinued Malt Nutrine the following year (St. Louis Globe Democrat 4/18/1936).

A.B.G.Co. (1886-1892)

Jones (1966:6; 1968:9), Wilson (1981:113), Ayres et al. (1980:n.p.), and the Rhyolite Bottle House webpage all illustrated the “A.B.G.Co.” manufacturer’s mark. It was also described in Herskovitz (1978:8), although he did not note the configuration of the mark. The printed sources all had the mark across the center of the bottle base (accompanied by a “3” in Wilson and a “4” in Ayres et al.), but the Rhyolite website showed the mark in an arch on what appeared to be a post bottom accompanied by the number “26” in the center. The horizontal marks each had a lower-case “o” in “Co”; however, the “O” was capitalized in the arched variation. All marks we have seen had punctuation between the major letters and after the “o” in “Co.”



Figure 9 – ABGCo mark, horizontal (Tucson Urban Renewal Collection)

Horizontal A.B.G.Co. numbers in our sample ranged from 3 to 12 (Figure 9); the ones on the arched variation were 8, 12, 21, and 28 (Figure 10). Assuming that the mold numbers were applied sequentially, the arched variation *may* have been used after the horizontal format. The horizontal marks were also more common (although our sample was small), suggesting that the arched variation was not used for a long period of time. Since both styles have been found on cobalt blue “Liquid Bread” bottles, made between ca. 1890 and 1915, the horizontal variation was probably used between 1886 and ca. 1891, with the arched mark used from ca. 1891 to 1892. See Liquid Bread section below for more discussion about mold numbers.



Figure 10 – ABGCo mark, arched (eBay)

Herskovitz found a total of 12 bottles from Fort Bowie (1862-1894) with the A.B.G.Co. mark along with numbers from 1 to 10 in association with the mark. Wilson showed only one base from Fort Union (occupied from 1863 to 1891). Our examination of the TUR collection revealed that the four examples there all had applied, two-part finishes.

Von Mechow (2021) included seven 12-ounce beer bottles embossed with the A.B.G.Co. logo horizontally across the base. These included single-digit numbers below the logo (5, 8, 8); four in cobalt blue color, two aqua; all topped by two-part finishes with rounded lower rings. The final beer bottle had the logo in an arch around “23” – also cobalt blue with the same finish. Von Mechow (2021) also displayed a single pony beer bottle in amber and an amber ginger ale bottle, both with the logo horizontal.

A.B.G.CO. / S^TL and A.B.G.M.CO / ST.L (1892-1893)

At this point, we have only recorded a few bottles with this designation – always Hutchinson soda or beer bottles. According to an eBay seller (describing a beer bottle)

The A.B.G.C. was in large letters and was embossed around the bottom with the St.L in a line below with a large dot in the center - might have been a number but the whole thing was so crude I couldn't tell. The top was the standard AB blob with bottom ring (like the Liquid Bread bottles).”

Since the seller described the base as “crude,” the logo was almost certainly “A.B.G.CO.” – possibly “A.B.G.M.CO.” A very unusual beer bottle base fragment, found in a collection at Fort Bliss (El Paso), Texas, was embossed “A.B.G.(M.CO.) / 68 / ST. (L.)” – with one “leg” of the “M” and the top of the “L” visible. Jim Jenkins contributed a complete base photo from an intact bottle (Figure 11). It is possible that the “ST.L.” was added to an existing mold shipped over from the Belleville factory.



Figure 11 – A.B.G.M.CO. / ST. L beer base

An eBay seller photographed a similar mark on the heel of a Hutchinson soda bottle – A.B.G.CO. (tombstone-shaped arch) / S^TL (horizontal) on the back heel (Figure 12). Miller (1980:17) also illustrated the mark, but his drawing was crude. Ron Fowler’s Hutchinson Bottle Directory (2013) listed five bottles with the A.B.G.CO. STL logo. In all five cases, the mark was on the heel of the bottle and in the same arched shape. Most of the bottlers using the bottles were located in the American South – as far away as Dublin, Texas – and one was for a plant in

the state of Washington. Unlike the beer bottles described above, the St. Louis initials could not have been added to an existing mold. We have found no Hutchinson bottles with just an A.B.G.CO. mark.



Figure 12 – ABGCo / St.L on Hutchinson heel (eBay)

This leaves us with a sample of at least five Hutchinson bottles with A.B.G.CO heelmarks plus the St. Louis initials, and one possible beer bottle with the same logo on the base. It is possible, however, that the eBay seller inadvertently left off the “M” in his description. Similar exclusions, misspellings, and other errors are *very* common with eBay descriptions. The only other beer bottles (sample of two) had basal embossings of A.B.G.M.CO. in an arch around “STL.”

Busch opened his St. Louis factory in January of 1891 and changed names the next year (see below), so the A.B.G.CO. mark could only have been used during 1891 and part of 1892, possibly into 1893 or so – used until the molds wore out. The tiny sample of A.B.G.M.CO. beer bottles were probably only produced in a single mold that was made right after the change of the company name in 1892 – although that mold, too, could have been used until it wore out, likely only a couple of years later. Since the Belleville factory was a long-established operation, it was the “default” plant and needed no special designation. It seems likely that the 1892 reorganization shifted the balance of power to the St. Louis plant. That shift was certain by 1894 when Busch selected the Belleville factory as the one to be closed because of the 1893 “panic” (depression). Even after Belleville reopened in 1896, St. Louis was obviously the dominant location.

Adolphus Busch Glass Mfg. Co.

After the name change, the Adolphus Busch Glass Mfg. Co. continued making beer bottles as its primary product. Between 1892 and 1905, generic aqua and amber export beer bottles remained the dominant output – again primarily for Anheuser-Busch. Like the earlier firm, the St. Louis plant also made side-embossed champagne-style beer bottles for Anheuser-Busch and, occasionally, for other brewers, including Lemps and a few local firms.

The factory also manufactured at least ten side-embossed Hutchinson bottles. With one exception, the logos were all horizontal and placed at or near the heel. The one exception was embossed “A.B. / G.M. / CO.” near the heel. As with the earlier Hutchinson bottles, the majority of these were made for bottlers in the South, but two were as far away as Philipsburg, Montana, and Springer, New Mexico (Fowler 2013). The final product category was grooved-ring wax-sealer fruit jars.

During the post-fire (1906) period, the plant may have almost exclusively made export beer bottles for Anheuser-Busch and cobalt-blue bottles for Liquid Bread, although the factory may still have produced a few embossed champagne-style bottles for Anheuser-Busch. By the time, Busch adopted machinery in 1916, it is very likely that the plant only made export beer bottles.

Like the earlier firm, the Adolphus Busch Glass Mfg. Co. went through two major trends in finishes. The firm made a few smaller bottles with one-part finishes, but the vast majority used two-part



Figure 14 – Baltimore Loop finish (eBay)

finishes for corks. All examples we have seen had rounded lower rings. Since Budweiser advertisements offered cork finishes until ca. 1914, the two-part finish (made for cork stoppers) was probably used by Anheuser-Busch until then, although the company used corks in crown finishes as well (Figure 13). The firm also made at least one bottle with a Baltimore Loop finish (Figure 14). See the section on crown caps below for more information on this transition.

The second trend in finishes concerns manufacturing technique. In our sample of A.B.G.M.Co. bottles, we have only found a single applied finish. The discovery of almost exclusively tooled finishes is intriguing (Figure 15). In general, beer bottle makers continued using applied finishes on their bottles until 1896 or later (see Lockhart 2007). Some beer bottles were made with tooled finishes as early as 1890, but they were usually embossed with the name of the brewery. Generic bottles for paper labels generally retained the applied finishes.



Figure 13 – Crown finish used for a cork (eBay)



Figure 15 – Tooled, two-part finish (eBay)

Since we have only found a single example of an applied finish on a bottle with the A.B.G.M.Co. mark, it seems that Busch may have been the trendsetter, using tooled finishes about four years or more ahead of his competitors. This may even have forced the trend. Glass factories had made virtually all smaller, non-beer bottles with tooled finishes decades earlier.

A.B.G.M.Co. (1892-ca. 1916)

Beer and Hutchinson Bottles

This mark was found on post bottom beer bottle bases, often encircling a letter/number in the center. Two different types of variation occur, but neither appears to be temporally relevant. One dichotomy centers on the size of letters, with both smaller and larger variations. The second concerns the shape of the arch. In one variation, “A.B.G.M.CO.” formed a complete circle around the central letter/number combination; in the other, a notable gap was present between the “O” and the “A.” Hutchinson-style soda bottles used yet another configuration and placement of the mark – small letters embossed horizontally on the back heel of a bottle (Figure 16), although the horizontal variation appeared on occasional beer bottle bases. In all examples we have seen, the “O” in “CO” was upper case, and punctuation occurred between the major letters.



Figure 16 – A.B.G.CO., heel (eBay)

The mark was used from the name change in 1892 (to include the word “Manufacturing”) until the end of hand production ca. 1917 or just slightly later. Note that only the St. Louis plant continued to apply the mark after 1906, when Busch withdrew that factory from the American Bottle Co., while the Belleville plant only used the logo until the 1905 merger – when it became part of the American Bottle Co. Both plants used the mark, of course, during the 1892-1905 period. The logo was *not* used between the 1905 merger (when both plants became part of the American Bottle Co.) until the withdrawal of the St. Louis factory in early 1906 – but this tiny time period was so short as to be statistically insignificant.

We should expect some significant changes in bottle styles between the two date ranges, and the two variations may indicate each of those time periods. Although the sample is small, current empirical data suggest that the only notable variance that might suggest a temporal

change is the numerical system used for mold marks. The vast majority of the bottles we have recorded have marks that surround letter/number combinations, ranging from A2 to Y9 (including some two-digit numbers, e.g., S45). We suggest that these belong in the post-fire period, beginning in 1906 (Figures 17 & 18).



Figure 17 – A.B.G.M.CO., large letters – letter and number (eBay)



Figure 18 – A.B.G.M.CO., small letters – letter and number (eBay)

A few bottles, however, have numbers without letters (only “1,” “13,” and “76” recorded so far), and one was recorded by the Ayres group as having only the letter “F” in the center. These, we suggest, were used during the pre-fire period, 1892 to 1905 (Figure 19). By 1908 (and probably both earlier and later), most if not all of the Busch bottles were sold to the Anheuser-Busch brewery. A 1908 article noted that the Busch glass factory had “a capacity of 1,000 gross of beers per day.

They will run on Budweiser bottles exclusively” (*Commoner and Glassworker* 1908b:1).



Figure 19 – A.B.G.M.CO., large letters – numbers only (eBay)

Occasional bottles had the A.B.G.M.Co. marks with no



Figure 20 – A.B.G.M.CO., no letter or number (eBay)

accompanying letters or numbers (Figure 20). Unfortunately, these were used during both periods. Clint (1976:128, 153) illustrated two Colorado beer bottles with the mark and no letters or numbers. He dated one of these ca. 1895-1899 and the other ca. 1902-1908,³ confirming that the unaccompanied mark was used during the first period. Logos with no numbers were also found on bottles with crown finishes.

³ Clint conducted exhaustive research into individual bottles used in Colorado. His ranges were based on dates of operation for bottlers or brewers, changes in various local names, and stylistic changes of the bottles.

Crown Caps & Finishes

In 1907, Busch decried the use of crowns, claiming that the use of openers for the crown caps caused chips in the glass of the finishes (Busch 1907). His worries were unfounded, of course, and a Budweiser ad in the October 4, 1908, issue of the *St. Louis Post-Dispatch* noted that the brew was available “corked or with crown caps” (Figure 21). The dual ads continued until 1914, so the glass house almost certainly continued to make both finishes during the 1908-1914 transition. This almost certainly indicated the adoption of crown finishes at the Adolphus Busch Glass Mfg. Co.; therefore, all bottles with “A.B.G.M.CO.” basemarks and crown caps may be dated between 1908 and ca. 1916. We have found no machine-made bottles with “A.B.G.M.CO.” logos.

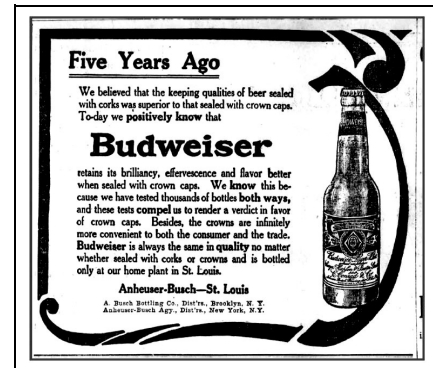


Figure 21 – 1910 ad (*Brooklyn Daily Eagle* 6/22/1910)

Incidentally, Busch branded each cork used to close Budweiser and St. Louis beer. In a blurb in the October 6, 1903, edition of the *Meriden Morning Record*, Busch decried what he called “these days of imitation and substitution. . . . Genuine Budweiser has branded upon its cork, according to the style of bottling, either the simple word ‘Budweiser’ or the familiar ‘A’ and the eagle—the mark of quality.” St. Louis Beer used the word “Anheuser.”

Machines

As noted in the history section (above), Busch adopted semiautomatic O’Neill machines to make beer bottles in 1916. All of our searches have failed to disclose any reference to hand or mouth-blown production after that date. In addition, we have not discovered any machine-made bottles with the “A.B.G.M.CO” logo. Therefore, we accept a closing date for the mark of ca. 1916. For more conservative estimates, the logo was certainly retired when the firm closed ca. 1920.

Grooved-Ring, Wax-Sealer Fruit Jars (1892-ca. 1895 or later)

Roller (1983:2; 2011:12) and Creswick (1987:1) both noted that the A.B.G.M.Co. mark was also found on the bases of grooved-ring, wax-sealer fruit jars in an arched shape with a

number in the center of the base. Roller suggested an 1880-1890 date range, and Creswick dated the jars as “circa 1886 and later.” Unfortunately, neither source noted the presence or absence of valve scars or any other marks that would denote either machine or hand manufacture. Jars on eBay did not have valve scars, suggesting that they were mouth blown. The only number noted on the jars by Creswick was a “2” – also the only number we have seen on eBay (Figure 22).

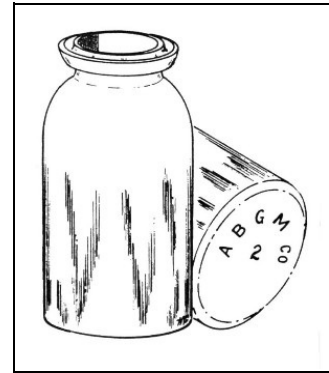


Figure 22 – A.B.G.M.CO. on fruit jar base (Creswick 1987:1)

Neither of the fruit jar references took into consideration that the initials A.B.G.M.Co. could not have been used prior to the name change in 1892. In addition, the Belleville plant added fruit jar production that year. Thus, 1892 is solidly referenced as the initial date for the logo on fruit jars. Production of the jars almost certainly ceased by 1905 – because of the merger at Belleville and the 1905 fire at St. Louis – if, indeed, jars were ever made at the St. Louis plant.

However, jars with no basal number and those with only the number 2 suggest that only two molds were made for the jars. If this logic is correct, the production of marked, wax-sealer fruit jars would only have lasted a few years – depending on how often the factory made the jars. This would reduce the end date to ca. 1895, possibly as much as a few years later.

By 1905, a plant at Belleville (almost certainly the Busch factory) had installed six fruit jar semi-automatic machines (*National Glass Budget* 1912:1). This occurred just about the time that the Belleville plant became part of the American Bottle Co. Like the machine-made beer bottles from American, jars produced by these machines were apparently not marked with any Busch or American Bottle logos.

A.B.G.M.Co Belleville Ill. (1896-1905)

The inclusion of the name “BELLEVILLE” was shown in Adams (1972:47) and Miller (n.d.:12), both on cobalt blue “liquid bread” bottles. In both cases, “A.B.G.M.Co.” was embossed in an arch around the edge of the base, and “BELLEVILLE / ILL.” was marked horizontally across the center (Figure 23). Since the only time the Belleville name would have been needed was when both the Belleville and St. Louis plants were under Bush’s name, the

mark was probably used from 1896 to 1905. All known liquid bread bottles had cork (two-part) finishes. We found a single example of this mark on a cobalt blue export-style beer bottle in the TUR collection. Photos from eBay show the same style bottle. Possibly, this was the only style of bottle produced by the Belleville plant during that time period. Unlike the more common style (without “BELLEVILLE”) discussed above, the “o” in “Co” was always lower case. It also seems likely that many bottles made in Belleville during that time were embossed “A.B.G.M.CO.” without the “BELLEVILLE” notation. It seems likely that the molds with the name “BELLEVILLE” were made only immediately after the Belleville factory reopened in 1896 and used until they wore out. See Table 2 for a chronology of the bottles.



Figure 23 – A.B.G.M.Co. / 2 / BELLEVILLE / ILL. (Tucson Urban Renewal Collection)

Table 2 – Chronology of Marks used by Adolphus Busch

Mark	Company	Location	Date Range
A.B.G.Co.	Adolphus Busch Glass Co.	Belleville, IL	1886-1893
A.B.G.CO. / S ^T L	Adolphus Busch Glass Co.	St. Louis, MO	1892-1894
A.B.G.M.Co.	Adolphus Busch Glass Mfg. Co.	St. Louis, MO	1893-1905
A.B.G.M.Co. / BELLEVILLE / ILL.	Adolphus Busch Glass Mfg. Co.	Belleville, IL	1896-1905
A.B.G.M.Co.	Adolphus Busch Glass Mfg. Co.	St. Louis, MO	1906- ca. 1916

Liquid Bread

History

According to Leonard (1887:65), David Nicholson, Importer, opened the business by that name in 1843 – also the year appearing on Nicholson ads. Originally, William Strachan was a partner with the senior Nicholson, but he soon left the business (*St. Louis Post Dispatch* 2/8/1920). An undated letterhead (Vienna Art Plates) advertised Nicholson products as teas, wines, and Condiments, although the firm also carried groceries, and the focus later concentrated more heavily on fine liquors (Figure 24).

After Nicholson died on November 26, 1880, his successors became unclear. The *St. Louis Globe-Democrat* reported on December 12, 1880, that John H. Tracy was appointed the administrator of the Nicholson estate. The article named David Grace Nicholson (son of founder David) and Peter Nicholson as “the surviving partners” in the business. The same paper posted a notice on February 17, 1883, that Peter Nicholson, “surviving partner of the late firm of David Nicholson,” was “administrating said estate” (i.e., David Nicholson the elder) and intended to make the final settlement during the next term of the Probate Court. Jane Nicholson, the widow of David Nicholson, entered into partnership with her nephew, Peter Nicholson, on January 5, 1884. Although Jane had the dominant interest, Peter devoted his full time to the business – now called David Nicholson & Co. (*St. Louis Post-Dispatch* 1/3/1893).

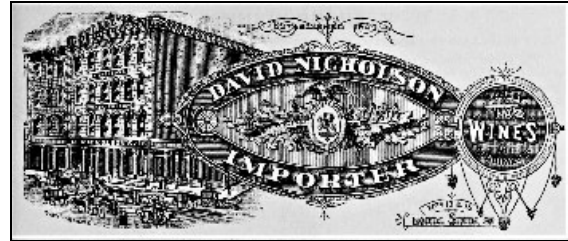


Figure 24 – Nicholson ad (*Industries of St. Louis*)

Liquid Bread

The “Copartnership of Peter Nicholson and Jane Nicholson, doing business as David Nicholson” applied for a trademark for “Condiments and Sauces” in 1886, claiming a first use in 1867. The next year (January 10, 1887), the firm applied for a trademark for “Malt Extract of Liquid Bread” (No. 41,193), again claiming a first use of the mark in 1867.

Regardless of these claims, it is virtually certain that Liquid Bread first came on the market in 1884. On May 11, 1884, the *St. Louis Post-Dispatch* stated that the “house of David Nicholson, of this city, has recently introduced a pure malt extract of high character, made at their request and under their suggestions by Mr. Adolphus Busch, and which is popularly known as ‘Nicholson’s Liquid Bread.’”

The firm of David Nicholson (not to be confused with the deceased David Nicholson or his son, David G. Nicholson) released a notice in the May 24, 1884, issue of the *St. Louis Post-Dispatch*: “We have just placed upon the market our own ‘Trade Mark’ brand of Pure Malt Extract or ‘Liquid Bread.’” Along with a diatribe exalting the the benefits and curative properties of the drink, the firm noted that it had “taken three years to mature and bring it to its present condition of refined purity and richness. This clearly places the introduction of Liquid

Bread in early 1884. A Liquid Bread advertisement in Germany the next year (*Pharmacuetisch Rundschau* 1885) confirmed that it was “a little more than a year that the Extract of Malt was first offered to the public.”

Adolphus Busch and Liquid Bread

The relationship between Busch and the senior Nicholson had been established by at least 1876, possibly earlier. Nicholson advertised that he was the “Sole Agent for the City of St. Louis, Mo.,” for Anheuser’s St. Louis Beer. Although the formula for Liquid Bread belonged to Nicholson, and he distributed the drink through his import firm, the Anheuser-Busch Brewery actually produced and bottled the product. Almost certainly, Anheuser-Busch made and bottled Liquid Bread from its beginning in 1884 (Figure 25). Leonard (1887:65) claimed that the beverage was

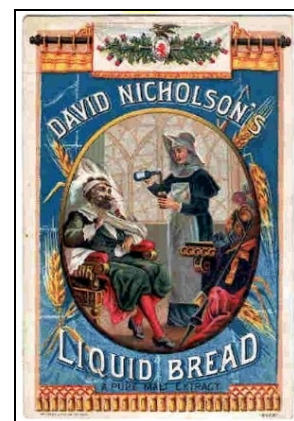


Figure 25 – Trade Card for Liquid Bread (Bill Lindsey)

a substitute for all alcoholic drinks, and is used by invalids with the most beneficial results, and as a stimulating beverage for nursing mothers. The preparation is commended as healthful, harmless and nutritious by the most eminent chemists in the United States, and is extensively sold throughout the country.

The *Maryland Medical Journal* (1895) called the drink “one of the oldest Malt Extracts in the country.” Despite these endorsements, Liquid Bread included 5% alcohol in its content. By at least 1885, Adolphus Busch’s signature also appeared on the labels and in ads. That year, Anheuser-Busch introduced Malt Nutrine, the firm’s own malt extract in competition with Nicholson’s Liquid Bread (see Figures 6 & 7). It would be interesting to know if both drinks were actually made from the same formula. After all, Busch had to have access to Nicholson’s recipe in order to produce the brand. Anheuser-Busch continued to offer Malt Nutrine until 1931. The firm also introduced a “near-beer” called Bevo (pronounced BEE-vo) in 1916 to serve military personnel who were no longer allowed access to alcohol (see Figure 8). The firm continued to advertise Bevo until 1930.

The Breach

Although the original David Nicholson firm was located at the northeast corner of Fourth and Market Streets, it moved several times as it grew, finally ending at No. 13 and 15 N. Sixth St. (*St. Louis Post Dispatch* 2/6/1906). A major fire destroyed the Sixth St. building on June 29, 1891 (*St. Louis Globe-Democrat* 7/1/1891). The conflagration precipitated a major change in the company.

Jane Nicholson brought suit against Peter Nicholson in January of 1893. According to the *St. Louis Post-Dispatch* for January 3, Jane complained that Peter “rented the present place of business after the fire without her consent.” However, the January 6 issue reported that Jane Nicholson withdrew the suit against Peter, “as an amicable settlement of the affair has been arranged.” Jane paid Peter for his full share of the business – “between \$65,000 and \$70,000 and be given \$10,000 additional to retire from the firm,” leaving her and her son, David G., in full control of the business. The Nicholsons planned to “rebuild on the old site of Sixth and Chestnut streets and continue the business” – while Peter Nicholson and his sons planned to “open up a new concern on Broadway.”

The Peter Nicholson Firms

On February 26, 1893, the *St. Louis Post-Dispatch* reported that firm of Peter Nicholson & Sons, 208, 210 and 212 North Broadway, had built a six story building plus a basement, a wholesale business, selling groceries, coffee, wine, liquors, vinegar, and pickles. A followup on October 11 added that the Nicholson & Sons Grocery Co. incorporated on October 10, 1894, with \$100,000 in capital stock, noting that “the leading stockholders are Peter Nicholson, 906 shares; David and James Nicholson, 1 each, and others.”

However, the firm was quickly in trouble. The *Globe-Democrat* announced on January 16, 1895, that the entire stock of Peter Nicholson & Son “must be closed out inside of 30 days!” That inventory consisted of “\$250,000 of fine groceries, wine, liquor, cigars, etc., etc.” As a followup, the *Globe-Democrat* reported on January 1, 1898, that “the copartnership existing between Peter Nicholson and Peter Nicholson, Jr., is this day [i.e., December 31, 1897] dissolved by consent, Peter Nicholson, Jr., retiring. The business will be continued by Peter Nicholson.”

Family Trouble and the Later David Nicholson Firms

David Grace Nicholson (son of founder David) and his brother-in-law, John H. Tracy, operated the firm together after Peter Nicholson left the business in 1893. The two did not get along and refused to speak to each other for almost 20 years, even though their desks were only a few feet apart – going so far as to dictate letters to each other or speak through C.H. Albers, surprisingly a friend to both feuders. Neither ever revealed the cause of their discord (*St. Louis Post-Dispatch* 5/9/1912).

Tracy became sick about 1904 and was an invalid by about 1905. His disability probably precipitated a major change in the company. On October 11, 1906, the firm incorporated with the more formal name of the David Nicholson Grocer Co., with a capital of \$500,000. According to the *St. Louis Globe-Democrat* for October 12, 1906, the incorporators were David Nicholson (the younger), Jane Nicholson, Maggie Macy, Joseph Lyttle, and John H. Smith. Maggie was actually Margaret Nicholson Tracy, the wife of invalid John Tracy, and David's sister.

By the time David G. Nicholson died on May 2, 1912, Tracy had been an invalid, no longer able to be involved, for seven years. Nicholson left his entire estate to his sister, Mrs. Margaret Tracy, with the understanding that it would eventually go to Margaret's son, Nelson Nicholson Tracy. Despite the bad blood between the brothers-in-law, David Nicholson was very fond of Nelson, making him the executor of his estate, valued at \$500,000 (*St. Louis Post-Dispatch* 5/9/1912). David Nicholson's old enemy, Nelson's father, followed him in death on September 30, 1913. Nelson became president of David Nicholson Grocer Co. by at least 1913.

Nelson Nicholson Tracy announced in the February 6, 1920, edition of the *St. Louis Post Dispatch* that the import house would shut its doors permanently "on or close to March 31." But, the story still had a final chapter. According to the *Post-Dispatch* for February 17, 1920, the J.F. Conrad Grocery Co. – a retail establishment – purchased "the stock and goodwill of the David Nicholson Grocer Co." for about \$100,000. Conrad planned to make the Sixth St. building a branch of its retail operation on March 6. Nicholson explained that two-thirds of his firm's business consisted of alcoholic beverage sales, so Prohibition had forced the sale – as it had done for so many other alcohol-related businesses. Nelson Nicholson Tracy continued on as president of the branch – but Liquid Bread did not survive the transition.

Cobalt Blue Bottles

Although Anheuser-Busch almost certainly bottled Liquid Bread from its introduction in early May of 1884, the brew was likely put into amber or aqua bottles initially. The adoption of cobalt blue bottles was probably associated with the opening of the Adolphus Busch Glass Co. in 1886 – although the idea of the color may have come a year or so later. Although we have no evidence, there is also the possibility that Busch purchased the Belleview factory – at least in part – with the thought of Liquid Bread bottles in mind; however, Anheuser-Busch was always in need of more bottles, so that certainly played the major part in the decision to enter the glass business.

So, why blue? Although we have no records of the conversation, clearly either Busch or Nicholson came up with the idea of the blue bottles to make Liquid Bread stand out on the store shelves. Both parties would have seen the value in a different color bottle. For Nicholson, it would have made Liquid Bread *very* distinctive; for Busch, it would mean a steady order for the bottles made from an “off” color. But, why not green, red, or yellow? Yellow was never an intentional color for glass. Apparently, it was not something that was easy to make, or it may not have been seen as a pleasant color to the public. Red involved the use of gold or another expensive ingredient – not cost effective. Green was often an unintended color and may have been too close to aqua – a very common hue. And, the answer may have been as simple as a nearby supply of cobalt.

Cobalt blue beer bottles are known with four variations of the Busch glass firm’s manufacturer’s marks. Two were “A.B.G.CO.” marks from the earlier Adolphus Busch Glass Co. One of these (Variation A) was embossed horizontally across the base with a one- or two-digit number below it (currently, we have recorded 1, 5, 6, 8, and 11) (Figure 26); the other (Variation B) was in an arch at the top of the base (with ends extending halfway down) and a two-digit number (23) in the center.



Figure 26 – ABGCo mark, horizontal on Liquid Bread bottle (eBay)

The other two logos were from the Adolphus Busch Glass Mfg. Co. and were marked “A.B.G.M.CO.” One of these (Variation C) was arched with the ends drooping well below the center line to almost complete the circle (Figure 27). These were embossed in the center with a

letter and a single-digit number (P3, M2, U2, V1, V2, X5, Y2, Y5, Y6). The other variation (Variation D) was described above with BELLEVILLE / ILL. in the center and the numeral “1” (or no number) between the company initials and the location (Figure 28).



Figure 28 – A.B.G.M.Co. / 1 / BELLEVILLE / ILL. on Liquid Bread bottle (eBay)

Using the company information, we can deduce a chronology for the marks. Nicholson introduced Liquid Bread in 1884. An ad in the *Druggists' Journal* (1885) included a picture of the body label from a Liquid Bread bottle that carried the signature of Adolphus Busch – showing that Busch was connected with the brew at least that early (Figure 29). Busch’s glass house, therefore, made cobalt blue

Nicholson’s Liquid Bread bottles from 1886 (when he began making bottles at Belleville) to ca. 1916 (when Busch adopted machines and probably stopped production of mouth-blown bottles); “A.B.G.CO.” was used from 1886 to 1892; “A.B.G.M.CO.” was used from 1892-1916; and the mark with Belleville added was used only during the 1896-1905 period (probably not beyond ca. 1900).

- Variation A – ca. 1886-1892
- Variation B – ca. 1890-1892
- Variation C – 1892-ca. 1916
- Variation D – 1896-1905

This broad chronology requires some speculation. Lockhart et al. (2010b) discussed the likelihood that mold numbers on pre-Prohibition beer bottles followed a sequential order that roughly could be used to establish ordinal scales for such containers. Lockhart and his associates further hypothesized (based partly on historical information in Jones 1963:[19-20])



Figure 27 – A.B.C.M.CO / Y2 on Liquid Bread bottle (eBay)



Figure 29 – Label No. 1 (*Druggists Journal* 1885)

that letter/number combinations occurred temporally after the use of numbers alone.⁴ Thus, Variation A was likely used during the early part of the ca. 1890-1893 period, while Variation B was used during the later years. Variation A marks on amber bottles also have single-digit numbers, suggesting an earlier use.

Numbers alone and letter/number combinations below “P” appeared on amber and aqua-colored bottles with Variation C marks (as low as “1” up to “13” and “A2” up to “Y2” with numbers as high as “S45”). Assuming that the mold codes followed a sequential order, and assuming that numbers were used prior to the letter/number combinations, the lack of numbers-only on Liquid Beer bottles coupled with the high range of letter/number combinations suggest that these bottles were used during the 1908-ca. 1916 period. In other words, even though Variation C has the potential to have been used during the 1893-1905 period, it is probable that only the logo/number combination was used then.

Since the three Belleville bottles we have observed all apparently were made in the same mold (with the numeral 1 between the logo and location or with no number), Variation D bottles were probably only manufactured during overload situations, when the St. Louis plant could not furnish enough containers, or they were only used for the first couple of years after the Belleville factory reopened in 1896. Von Mechow (2021) included a single example with no mold code.

A final marking on cobalt-blue export beer bottles probably was used during the concluding four years of Liquid Bread production – 1916-1920. One base was embossed “A.B.CO.” on the heel and “1425 / 31” on the base – with other reports of “44” and “52” (Figure 30). These were made by the American Bottle Co., another glass producer where Busch was involved. That firm would have been the logical next choice after the Adolphus Busch Glass Co. adopted machines and was no longer supplying the blue, mouth-blown bottles. Table 3 is intended to show the probable time periods when the Adolphus Busch marks and other cobalt blue bottles were used for Liquid Bread.



Figure 30 – ABCO heelmark (eBay)

⁴ This is an oversimplification, modified to fit the A.B.G.Co./A.B.G.M.Co. configurations.

Table 3 – Chronology for Bottles and Marks Used on Cobalt Blue Liquid Bread Containers

Description	Date Range
A.B.G.Co. (horizontal on base) with numbers from 1-11*	ca. 1890-ca. 1892
A.B.G.Co. (arched on base) with number 20	ca. 1892-1893
A.B.G.CO. (arch) / S ^L L (horizontal) (both on heel)	1892-1894
A.B.G.M.Co. (arch) with numbers only**	1893-1905
A.B.G.M.Co. (arch) “BELLEVILLE / ILL (horizontal) with number 1	1894-1905
Turn-Mold	ca. 1905-ca. 1908
A.B.G.M.Co. (arch) with letter/number combination	ca. 1908-1915

* These are the numbers we have observed. At this time, we do not know what number between 11 and 20 separates the two configurations.

** Because we have seen so few of these logo/number bases, many of the turn-mold bottles may have been produced during this period.

Turn-Mold Bottles

Munsey (2007:63) noted that Liquid Bread “came in both ‘turn-mold’ bottles with no vertical seam marks and ‘two-piece mold’ bottles” – all cobalt blue in color (Figure 31). Currently, we have found no evidence that either of the Adolphus Busch factories made turn-mold bottles. The Streator Bottle & Glass Co., however, was noted for them and had distinct connections with Anheuser-Busch.⁵ However, we have found no record that Streator ever made cobalt blue glass. Germany was well known for its “twister blowers” and turned out large numbers of turn-mold beer bottles, usually in green or amber colors.

A study of the few discoverable cobalt blue, turn-mold, export beer bottles online, revealed eight that included photos



Figure 31 – Turn-mold and labeled Liquid Bread bottles (Bill Lindsey & Norman A. Helkler)

⁵ For a discussion about the introduction of turn-mold bottles to the U.S., see Lockhart et al. (2007b) or the section on the De Steiger Glass Co.

sufficiently in-focus to reveal diagnostic attributes. The two most important points were discussed much earlier in the section on the regular amber and aqua bottles made by the Adolphus Busch glass houses – sharp v. rounded lower rings and tooled v. applied finishes. A surprising discovery from the bases is discussed below in the Discussion and Conclusions section.

Findings from our painfully small eight-bottle sample appear to be significant. First, the small sample suggests that there were comparatively few turn-mold bottles produced in comparison with those manufactured by the Adolphus Busch glass houses. Five of the eight finishes were certainly applied, and the other three (indistinct in the photos) probably were. Six showed finishes with sharp lower rings, two with rounded lower rings (Figure 32).



Figure 32 – Cobalt blue finishes (eBay)

As noted above, Busch’s first glass firm – the Adolphus Busch Glass Co. – produced bottles from 1886 to 1892, when the firm was reorganized. Our sample of 16 bottles indicated rounded and sharp lower rings in roughly equal numbers in our sample, possibly indicating that the switch occurred ca. 1889 or 1890. If this assumption is correct, it *may* also be relevant for the turn-mold bottles. This would suggest that turn-mold bottles were made during the same period as those produced by the Adolphus Busch Glass Co.

This *could* mean that Bush’s first firm could not keep up with the demand for Liquid Bread bottles, so Anheuser-Busch had to have some of the bottles made at Streator or had to import them from Germany. Alternatively, it could mean that the Adolphus Busch Glass Co. made some of its bottles in turn molds. The data – especially the presence of rounded lower rings – almost certainly indicate that the turn-mold bottles were *not* made exclusively prior to the opening of Busch’s Belleville plant. Although this is not absolute, there is no reason to believe that the bottles used for Liquid Bread during the first two years (prior to the Busch glass house) were any color besides amber or aqua. It also clearly refutes any idea that the turn-mold bottles were used near the Prohibition end of the spectrum.

Paper Label Variations

We have discovered only three variations in paper labels on Liquid Bread bottles. While the sequencing of these labels was quite clear almost immediately, our dates for their uses required a bit more investigation.

Label No. 1 (1884-ca. 1888)

While we have not found one of these affixed to an actual bottle, a drawing of the label appeared in an 1885 ad (see Figure 30). The main heading for this label (centered, with larger letters) was “Pure Malt Extract” with “Liquid Bread” in smaller letters below it. At the bottom was “David Nicholson: / Sole Agent for U.S.A. and British America. / St. Louis, U.S.A.” The background showed a coat of arms below an eagle with outstretched wings with leafy designs to the sides. Also in the background were three gold medals, but the printing on the ad was too unfocused to tell where the medals were from or their dates. However, these medals were the same as three of the ones on Label No. 2 (see below). At the side, “Manufactured by” was above the Adolphus Busch signature and “St. Louis, Mo.”

Because it was printed on the earliest ad we have for Liquid Beer, Label No. 1 was certainly the first of the three label types on the earliest Liquid Bread bottles – possibly in both amber (or aqua) and cobalt blue glass colors. Nicholson trademarked the frame for the No. 2 label (Figure 33) in 1913, claiming a first use in 1886. However, the 1887 trademark application (No. 41,193) was for “Malt Extract of Liquid Bread” – suggesting that “Malt Extract” continued in use until at least 1887. The labels would have been used until the supply was exhausted. Thus, our date range is from the introduction of Liquid Bread in 1884 to ca. 1888.

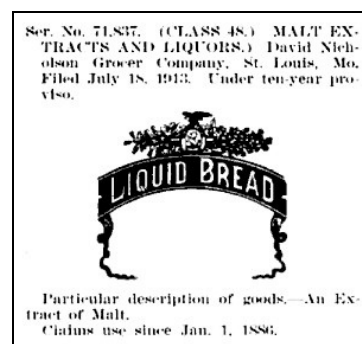


Figure 33 – 1913 Trademark

Label No. 2 (ca. 1888-ca. 1914)

Label No. 2 was an obvious modification of Label No. 1 (Figure 34). However, the name “Liquid Bread” had been catapulted into prominent larger letters with “Extract” as a secondary term. The bottom now read “David Nicholson / Sole Proprietor / St. Louis, U.S.A.” The

background had the same coat of arms, eagle, and shrubbery but now had four medals: Paris 1872; Philadelphia 1876; New Orleans 1885; and Amsterdam 1883. Since the earliest two were awarded prior to the marketing of Liquid Bread, they obviously referred to the Anheuser-Busch Brewery. Busch's signature as the manufacturer remained on the side.



Figure 34 – Label No. 2 (eBay)

A medal date of 1885 makes it certain that the labels were not used before that year – although they were probably printed and adopted fairly soon thereafter. As noted in the discussion of Label No. 1, Nicholson claimed a first-use date of 1886 for the Liquid Bread frame used on Label No. 2, but Label No 1 almost certainly lasted at least one more year, probably two. The No. 2 labels were by far the most common ones in our tiny sample, so they were likely used for most of the life of Liquid Bread. Unless there is a label we have not discovered, the next one *could not* have been used prior to 1906 – the year that the Nicholson firm changed names – but was almost certainly not adopted until 1913 or 1914, when volume labeling became mandated (see below). So, our suggested date range for this label is ca. 1888-ca. 1914.

Label No. 3 (ca. 1913-1920)

The third label was an obvious outgrowth of the second one (Figures 35). “Liquid Bread” remained the primary name with “A Pure Fermented Preparation of Malt and Hopps” as the secondary name. Although the top background remained the same (coat of arms, eagle, vegetation), the medals had been replaced by a single circular drawing in the center. Below the drawing was “Contains Less Than 5½% Alcohol / Bottle Capacity 12 Fluid Ounces / David Nicholson Grocer Company / Sole Proprietor / St. Louis, U.S.A.” Although the right side of the label was torn, it appeared to say “Manufactured for / David Nicholson / Grocer Company / St. Louis, U.S.A.” A commercial message appeared on the left side.



Figure 35 – Label No. 3 (eBay)

In 1906, the firm, always before a partnership, reorganized as a corporation – the David Nicholson Grocer Co. However, it retained mostly the same management – and probably continued to use the No. 2 labels. When David Nicholson (the younger) died in 1912, things shifted, of course, but there was a more important change the following year. Beginning with the Pure Food and Drug Act in 1906, people and (more importantly) city, state, and local governments were inspecting the packaging of food and drinks *much* more closely. The Gould Act of 1913 – an auxiliary to the Pure Food and Drug Act – required volume information to be included on all labels by September of the following year. During the two years – 1913 and 1914 – almost all of the soda and beer bottle embossing and paper labels shifted to the inclusion of the volume – in this case adding “12 Fluid Ounces” along with the alcohol volume, equally important with an increasing number of states enacting boundary-wide or local Prohibition.

The other end of this particular spectrum is easier to assess. All advertising for Liquid Bread disappeared after the sale of the David Nicholson Grocer Co. in 1920. Production of the beverage thus ceased with the end of the company that had made it rather than shifting to the new firm. So, Label No. 3 extended from ca. 1913 (Gould Act) to 1920 (the end of the company).

Discussion and Conclusions

The Adolphus Busch Glass Houses

Both the names and the dates for the Adolphus Busch glass houses have been confused by almost all past researchers (including our original studies). This presentation has added some previously unavailable information to produce a clearer picture of the changes in the two Busch factories and when those occurred.

The Adolphus Busch glass houses used two major variations in their manufacturer’s marks, each with a single sub-variation. The “A.B.G. Co” mark represented the period when the firm, located at Belleville, Illinois, was named the Adolphus Busch Glass Co. (1886-1892). The St. Louis plant, only open in 1891 and early 1892 under the Adolphus Busch Glass Co. moniker, used “A.B.G.CO. / S^TL.” – until the name change in 1892 and probably continued to use the molds until they wore out.

When Busch altered the name slightly to the Adolphus Busch Glass Mfg. Co. in the 1892 reorganization, both plants may have used the “A.B.G.M.Co.” logo for the first two years. The mark then became the exclusive property of the St. Louis factory, when the Belleville operation closed in 1894 – due to the Panic of 1893. The St. Louis unit then apparently became the flagship – even after Belleville reopened in 1896 – and used the “A.B.G.M.Co.” logo until the fire that destroyed the the factory in 1905. When the Belleville plant reopened in 1896, it used the “A.B.G.M.Co. / BELLEVILLE / ILL.” mark but probably dropped the location embossing after the initial molds wore out. Of course, use of the Belleville name *could* have continued until the merger that created the American Bottle Co. in 1905, but these bottles are scarce, suggesting a limited time frame. When Busch reclaimed the St. Louis plant in 1906, it resumed the name Adolphus Busch Glass Mfg. Co. and used the “A.B.G.M.Co.” logo again until the factory discontinued hand manufacture ca. 1916 or later.

We have discovered no mark used by the firm on machine-made bottles. This procedure may have been inspired by the American Bottle Co. With only three exceptions, we have not found any machine-made bottles with any known logos used by American Bottle during the 1905-1916 period. All marks during that period (except the few noted above) were on mouth-blown bottles. When Owens-Illinois gained control of American Bottle in 1916, the new management began embossing factory, date, and mold codes on the heels of bottles (Lockhart et al. 2007a, or see the section on the American Bottle Co.).

Although not fully relevant to this discussion, Busch purchased the Colorado City Glass Co., Colorado City, Colorado, ca. 1893, although there is no evidence that he operated the plant personally. The unanswered question is: What happened to all the glass-blowing equipment? Local newspapers say that the firm sold the equipment but not to whom. Because of the high cost of molds, virtually every glass house used them until they wore out. These could have been shipped to the St. Louis plant. Possible future research could compare bottles from the two factories to see if any molds match.

Liquid Bread and Cobalt Blue Bottles

Because the firm began making cobalt blue bottles for Liquid Bread a bit after Busch had purchased the Belleville plant and ended before the closure of the St. Louis factory, the

chronology for the blue bottles is slightly different from the one for the more typical aqua and amber ones.

Why Did Nicholson Choose 1867 as a “First Use” Date?

Peter Nicholson, the nephew of founder David Nicholson, and Nicholson’s widow, Jane, applied for the Liquid Bread trademark on January 10, 1887, receiving Trademark No. 14,193 on March 22, 1887 – claiming 1867 as the date of first use for the logo. Since all evidence suggests that Nicholson introduced the brand on or near the first of May 1884, the use of a date 17 years earlier is puzzling. However, it is obvious that the Nicholsons were catching up at that point. On the same date, they registered five other trademarks (Nos. 14,188-14,192), claiming the same first use date (1867) for each one. Since Nicholson’s lawyer was likely the one who actually processed the registration, he probably just pulled a date out of the air for all the marks. When the firm filed for a new Liquid Bread trademark on July 18, 1913, the registrar claimed a first use date of January 1, 1886, once again obviously not knowing the exact date.

Some Thoughts on Turn-Mold Bottles

Photos of nine bases on cobalt blue turn-mold bottles revealed some interesting characteristics of that manufacturing technique. The generally accepted theory on identifying turn-mold bottles – also called paste-mold bottles – focuses on the horizontal striations on the body. These striations were caused by impurities in the paste, older deteriorating paste, or even flour granules used as part of the formula. For a very thorough discussion of turn-mold bottles and the techniques that made them, see Lindsey (2021).

Although Lindsey discussed how fresh molds and paste could result in bottle surfaces that looked like free-blown bottles or those that were blown into dip molds, these create interesting ramifications for the identification (or misidentification) of base fragments. A complete bottle blown into a dip mold almost always clearly shows a visible horizontal surface texture and/or glass thickness discontinuity at the juncture of the lower shoulder and upper body that marks the top of the dip mold. But, that is no help if you only have a base fragment.

A look at the bases from complete cobalt blue bottles in Figure 36 shows a wide range of variation – from ones with no apparent striations to others where striations are very obvious. In

some cases, striations are visible on some sections of the bases but not others. In addition, some bases exhibit dots or mamelons in the center, and some show push-ups while others do not. Obviously, this creates a strong possibility for misidentification of base fragments. It is virtually certain that these variations were created by the molds, themselves, rather than the techniques of the blowers. Since the bottles were turned within the molds to remove the side seams, the blowers would have had little or no control over the resulting bases.



Figure 36 – Turn-mold bases (eBay)

The Mysterious A.B. Logo

In addition to the marks discussed in this section, we have observed and recorded export beer bottles with “A.B.” and a two-digit number embossed on the bases. Most of these bottles had applied finishes (one example with a tooled finish), suggesting a ca. 1880s-1890s manufacture. Although it is tempting to assign the mark to Adolphus Busch, it does not fit with the known sequencing for the Busch marks. In our original study of these bottles, we assigned them to the American Bottle Co. New information, however, makes that assignment also very unlikely. See the section on the Perplexing AB Logos for more information.

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