

## **Belleville Glass Co.**

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Although found on some fruit jars and soda bottles, a “B.G.Co.” mark appears most often on export beer bottles of the type generally made during the ca. 1880-1896 period. Beer bottles with BGC marks are commonly found at Western forts and other Western contexts. Although little controversy has appeared in print, there has been some dispute between researchers over the use of this mark. The mark was certainly used by at least two glass bottle manufacturers and possibly others. One company that assuredly used the mark was Belleville Glass Co. After its initial year of operation – when it made a variety of containers – Belleville’s production was likely exclusively export beer bottles.

### **History**

#### **Belleville Glass Co., Belleville, Illinois (1882-1886)**

On February 3, 1882, E. Abend, J. Eimer, J. Fuess, and F. Sunkel incorporated the Belleville Glass Works. The new firm issued 250 shares of stock at \$100 each, for a capitalization of \$25,000. John N. Eberle was elected president on September 1, with D.H. McAdams as vice president, and R.M. Foster as secretary/treasurer. The plant actually opened on September 6 and made beer and soda bottles, flasks, fruit jars, and druggists vials (Jones 1968:11; Schneider n.d.; Smith 1891:404-407; von Mechow 2013a).

The operation was variously referenced in newspapers and books as both the Belleville Glass Co. and the Belleville Glass Works. This was a common situation in the 19<sup>th</sup> and early 20<sup>th</sup> centuries, when, typically, an operating company managed a glass factory, and the two had separate names. Thus, it is likely that the firm – the Belleville Glass Co. – operated the factory – the Belleville Glass Works.

Although the plant originally operated a single five-pot furnace, plans were laid early to build a second furnace, which was apparently built; by November 1882, the factory employed 98 men and boys and had a daily production of 14,400 beer bottles. In March 1883, the plant

landed a contract with the Wm. Lemp Brewing Co. – located at nearby St. Louis – and made beer bottles exclusively (*Crockery & Glass Journal* 1883:26). Lemp was one of the early brewers that shipped beer to western destinations and outside the U.S., so the firm increasingly needed beer bottles. The factory apparently ceased production of all other types of containers at this time, although the plant certainly made a variety of soda and water bottles as well as wax-sealer fruit jars – probably throughout most of its tenure.

The company apparently ran into financial difficulties fairly early. The firm reorganized on March 28, 1884 (Jones 1968:11).<sup>1</sup> Although the plant was reported as “in operation” on December 3, 1885 (Roller 1997), “on or about May 12, 1886,” the Belleville Glass Co., “being hopelessly insolvent, assigned all its property to the Belleville Savings Bank.” A receiver appointed by the courts reported on December 3, 1888, that there were no assets left from the company (Smith 1891:404-407). The lack of assets was unsurprising; Adolphus Busch had purchased the plant 17 months earlier – on July 2, 1886. The firm was henceforth known as the Adolphus Busch Glass Co. (Jones 1968:11; Lockhart et al. 2006; Schneider n.d).

## **Containers & Marks**

Jones (1966:7) originally was confused about the origin of the BGCo mark. She speculated that the maker was the “Buckeye Glass Co? Bridgeport, Ohio [or] Buckglass Co. – 1865-‘73?” and that the mark was used between 1887 and 1895. Later, Jones (1968:11) correctly assigned this mark to the Belleville Glass Co. Toulouse (1971:85) only noted the Burlington Glass Works as the user of the logo, certainly based on the Burlington jar (see below). Herskovitz (1978:8) attributed the mark to either the Belleville Glass Co. or the Bushwick Glass Co. of Brooklyn, New York. Ayres et al. (1980:5) noted the Belleville firm as that best possibility and refuted both Burlington and Bushwick.

## **Soft Drink Bottles**

With a single exception (see the Moxie discussion below), all soda bottles we have found with a B.G.Co. logo had the mark embossed on the back heels. Aside from the Moxie bottle, the

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<sup>1</sup> Unfortunately, Jones (1968:11) failed to list the new officers.

logo appeared on two different types of soda bottles. The older style is known as the “blob-top” due to the large, rounded finish. These finishes can be tapered or extremely round.

We have discovered a single example that was offered for sale on eBay. The aqua bottle was embossed “CRONE & C<sup>o</sup> / S<sup>t</sup> LOUIS / M<sup>o</sup>” on the front and “BGCo” on the back heel. The “G” had the right-extended serif. The finish was applied and was very rounded in shape.

The second style is found on bottles that used the Hutchinson stopper, invented in 1879 and made well into the 20<sup>th</sup> century. Peters (1996:42-43) discussed and illustrated a single Wisconsin soft drink bottle with a B.G.Co. mark. The bottle was embossed “R.T. WARDELL / EAU CLAIRE / WIS.” on the front. The bottle had a “mug” bottom – ten flat panels around the heel section. According to Peters, Robert T. Wadell was in business from 1886 to 1889.

Miller (1980:8) illustrated and described a Hutchinson bottle embossed “A. KOOB / BELLEVILLE / ILL” on the front and “B.G.CO.” on the back heel. Although Miller used a capital “O” in “CO,” this was typewritten in the text rather than drawn on the bottle. The “o” may have been lower case. Koob purchased the soda works from Louis Abegg in 1879 and operated it until he died in 1888. His son, Jacob, continued to run the firm after his father’s death until ca. 1894.

A Hutchinson bottle offered on eBay was embossed with a crude “BGC<sup>o</sup>” in large letters on the heel (Figure 1). The “G” had the distinctive serif to the right. Aside from the manufacturer’s logo, the bottle was generic – with no city/state of bottler information. At least one Hutchinson bottle was used by a brewer in Kansas. The bottle was embossed “BRANDON & KIRMEYER (arch) / LEAVENWORTH / KANSAS (both horizontal)” with a similar BGCo logo – including the serif to the right. Brandon & Kirkmeyer were in business from 1862 to 1868 according to Van Wieren, but that was too early for the Hutchinson finish; obviously, the firm continued longer (Van Wieren 1995:119; von Mechow 2013a).



Figure 1 – BGC<sup>o</sup> heelmark Hutch bottle

Belleville also apparently made Saratoga-style mineral water bottles. At least two sizes of the bottles were embossed “COOPER’S / WELL / WATER (all arched) / MISS (horizontal), the BGCo mark on the back heel. The well – located near Raymond, Mississippi, ca. 15 miles southwest of Jackson – was in use during the 19<sup>th</sup> century, although we have found little information (von Mechow 2013a; Worthpoint).

Hutchbook (Fowler 2013) listed 11 Hutchinson bottles embossed with B.G.Co logos. Six listed marks with a capital “O” in “CO” – although this may reflect reporting error rather than actual embossing. All people reporting bottles do not attend to detail equally. Two of these recorded the logo on the base; the other had heelmarks. These included the all Hutchinson bottles listed above, except the Koob bottle.

Whitten (2013) noted that “a Moxie soda bottle variant with a crown lip carries the ‘B.G.CO.’ mark, and in that case would have been made by a factory some time after c.1893, eliminating Belleville as a possibility” (Figure 2). The “c. 1893” date refers to the crown finish and is conservative. Although the crown was patented in 1892, it was rarely used during the first few years of its existence (see the section entitled BGCo on a Crown-Finished Bottle).



Figure 2 – B.G.CO. basemark - Moxie bottle

## Fruit Jars

The typical fruit jar source books noted three types of jars with BGCo logos.

### Wax Sealers (1882-1896)

Creswick (1987:18) and Roller (1983:68) noted the B.G.Co. mark on the bases of grooved-ring, wax-sealer fruit jars in amber, aqua, and cornflower blue colors. Neither author attempted to assign a manufacturer. Leybourn (2008:83) added a variation in “light cobalt” that is rare, although the aqua variation is apparently fairly common. Creswick showed the jar with a “2” embossed



Figure 3 – Wax-sealer fruit jar base (eBay)

below the logo, but eBay auctions have included jars without numbers (Figures 3 & 4). Roller (2011:106) also listed the jar but offered no additional information. These were almost certainly made by the Belleville Glass Co.

**BURLINGTON BGCo Jars (1875-1890s or later)**

Toulouse (1969:55; 1971:97) and Roller (1983:78) each listed a single variation of a jar embossed “THE BURLINGTON” on the front with “B.G.Co.” below it. Both attributed the jars to the Burlington Glass Works, Hamilton, Ontario, Canada. Creswick (1987:24) showed six variations of



Figure 4 – Wax-sealer fruit jar (eBay)

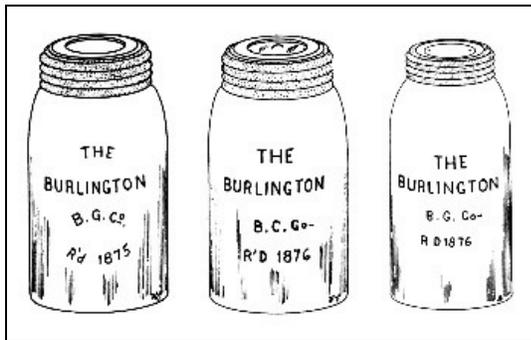


Figure 5 – Burlington BGCo jars (Creswick 1987:24)

the same jar that included “B.G.Co-,” or “B.G.Co<sup>o</sup>” as alternates to the “B.G.Co.” noted by the earlier authors. One variation was mis-struck as “B.C.Co.” Each had “R<sup>d</sup> 1876,” “R’D 1875,” or “R D 1876” (Registered 1875 or 1876 – the Canadian equivalent of the U.S. Patent number) embossed below the manufacturer’s logo (Figures 5 & 6). Creswick, too, attributed all the variations to the Burlington Glass Works. The Roller revision (2011:118) noted that the “R<sup>dd</sup>” variation had two commas below the “<sup>dd</sup>”.

The revision also included a variation with an arched “THE”; one with a large dot under “THE”; and one with only an arched “THE” and no other embossing.

In a different part of his book, Toulouse (1971:85) dated the use of BGCo on the Burlington jars from 1877 to 1909, based on the idea that the company name had changed to the Burlington Glass Co. ca. 1878. According to King (1987:61-64), however, the Burlington Glass Works was only operating from ca. 1874 to 1875. The name changed in 1875 to the Burlington Glass Co. (see more discussion in the BGW entry of the Other B section). Oddly, King (1987:64) did not mention fruit jars as being made by Burlington, although he included such



Figure 6 – Burlington BGCo jar (eBay)

diverse products as prescription ware, milk bottles, soda bottles, bottles for alcoholic beverages, lamp chimneys, lamps shades, and other household items. As shown above, however, empirical evidence clearly places Burlington as the manufacturer of the jars.

The company name requires a bit of discussion. A Google search revealed both names in association with the 1875+ period, although more historical sources used the Burlington Glass Co. moniker. Miller and Pacey (1985:38-39), however, labeled the firm as the Burlington Glass Works through at least 1891. This is almost certainly a case of the same well-known late-19th and early 20<sup>th</sup> century pattern as noted above – where an operating firm (in this case, the Burlington Glass Co.) managed a factory (the Burlington Glass Works), and the plant/company used both names interchangeably in advertising and listings. Thus, the jars may have been offered anytime during the period between 1875 and the 1890s, or even later.

### **BGCo Monogram**

Roller (1983:220-221) showed one additional variation, a BGCo monogram on a Mason's Improved jar that he suggested probably came from Australia. Unfortunately, the jar was not listed in the recent update (Roller 2011). Creswick (1987:121) included an illustration and claimed that the jar was made by the Commonwealth Bottle Co., Sydney, Australia. One of the prominent letters of the monogram, however, is a distinct "G" – unless the drawing is in error (Figure 7).



Figure 7 – BGCo monogram (Creswick 1987:121)

### **Drug Store/Pharmacy Bottles**

Under their “Medicinal (druggists’ packing) bottles” category, Wilson and Caperton (1994:60) listed a single aqua bottle with the BGCo mark found at Fort Selden, New Mexico. The bottle had a tooled “patent” finish and held 29 ounces. This is the only example of the BGCo mark we have found for this bottle type. Fort Selden was occupied from December 1880 to May 1888. Druggists bottles were noted in 1882 (see history section) but were almost certainly discontinued in early 1883, when Belleville Glass received the Lemp contract and began the exclusive manufacture of beer bottles.

## Beer Bottles

All of the beer bottles with B.G.Co. logos that we have examined or seen in photos had applied, two-part finishes. The containers were usually amber or light blue in color. In his study of Fort Union and Fort Laramie beer bottles, Wilson (1981:114) showed two variations of the B.G.Co. mark, both placed horizontally across the center of the base. The first variation had periods following the B. and G.; the second had no punctuation. In all cases, the “o” in “Co” was lower case. Each mark was accompanied by a single-digit number, an “X,” or two dots above the mark.

Ayres et al. (1980) illustrated the mark twice, both with “BGC<sup>o</sup>” across the center of a post-bottom base – and a variation with a large “X” below it – on a bottle found at Tucson (Figures 8 & 9). Jones (1968:10) noted the same format and had the mark variously accompanied by two dots, an “X” above, a cross below, or with no accompanying symbols. The drawings by Jones (1966:7; 1968:10), however, always had a capital “O.” In the San Elizario context, Lockhart and Olszewski (1994) found the same mark and one slightly different variant: “B.G.Co” (note punctuation).

Whole bottles from the Tucson Urban Renewal (TUR) collection provided some additional insight into the date range for bottles with B.G.Co. logos. When the Bottle Research Group examined the collection, all three bottles we observed were export style with applied, two-part finishes. The best current information suggests that applied finishes were commonly used on beer bottles as late as ca. 1896.

Two-part finishes were generally used for corks, and these were applied on beer bottles until ca. 1896; tooled finishes were used at least as late as 1914. The TUR bottles with B.G.Co. marks all had rounded lower rings on the finishes, although a bottle dug by collectors at Hillsboro, New Mexico, had a sharp lower ring. The glass industry initiated beer bottle finishes with rounded lower rings ca. 1878 and gradually replaced the sharp lower rings by ca. 1882

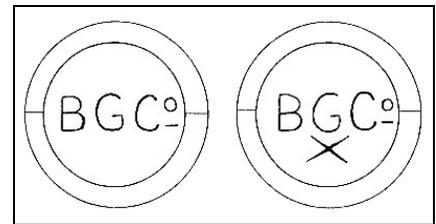


Figure 8 – BGC<sup>o</sup> logos (Ayres et al. 1980)



Figure 9 – BGC<sup>o</sup> base – Fort Bowie, Arizona

(Lockhart 2007:56). The marks are found in various contexts both with and without punctuation.

Wilson and Caperton (1994:69-72) examined every copy of the *Western Brewer* (journal) from January 1883 to December 1890 as well as a non-representative sample of “scattered issues” from 1878 to 1882 – and created a graph of all the beer bottle advertisers. Their study discovered no ads for the Belleville Glass Co. (or Works). The authors also illustrated two examples of the BGCo logo (Figure 10).

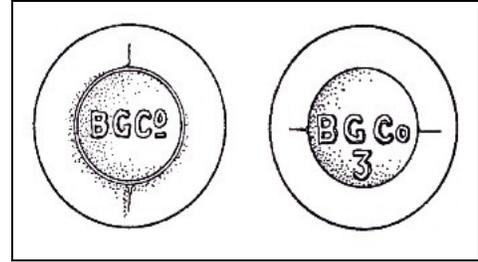


Figure 10 – BGCo logos (Wilson and Caperton 1994:65)

Farnsworth and Walthall (2011:482-486) only included a single champagne beer bottle with a BGCo mark and the embossed name of the distributor – the only beer bottle of that type we have discovered with the BGCo logo. The amber bottle was embossed “E. SCHROEDER / EAST ST. LOUIS / ILL” on the front and “B.G.Co. on the back heel (Figures 11 & 12). The “G” was the “standard” style with the serif pointing left. Schroeder was in business by at least 1871 and used embossed porter or ale



Figure 12 – “B.G.Co.” heelmark on beer bottle (Farnsworth & Walthall (2011:482-483)

bottles by at least 1875. Although the Farnsworth and Walthall study stopped at 1880, Schroeder remained in business after that time. The bottle was probably produced during the first year that the Belleville Glass Co. was in business – 1882-1883. Miller (1982:4) described the same bottle.



Figure 11 – Beer bottle with “B.G.Co.” logo (Farnsworth & Walthall (2011:482-483)

### Finishes on Export Beer Bottles

[Most of this section was originally published in Lockhart et al. 2012.]

From the invention of the export beer bottle in 1873, the finish was in two parts. The upper part was originally a sharp-cornered, upwardly tapered “collar” with a sharp lower ring (Figure 13). Eventually, the upper “collar” became more rounded, especially at the edges. The

sharp edge on the lower part of the finish could be at the end of a downward flare or could be wedge shaped. Currently, we have hypothesized that the downwardly flared lower ring was used earlier than the wedge-shaped one – based on the discussion below – but we have discovered no way to separate the two in a temporal context. Although the more angular upper collar was used first, we have been unable to ascertain when the change to a more rounded upper collar occurred.

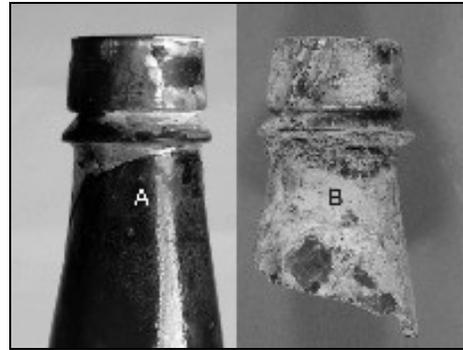


Figure 13 – A) two-part beer finish, sharp upper “collar,” flared lower ring (Fort Riley); B) two-part finish, rounded upper “collar,” wedge lower ring (San Elizario)

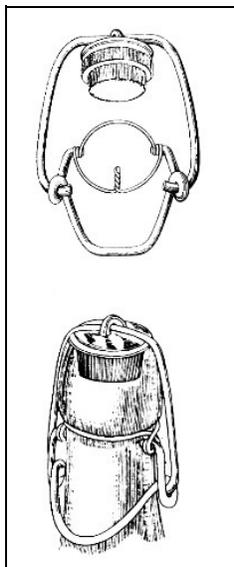


Figure 14 – De Quillfeldt’s Lightning Stopper (Lief 1965:16)

The finish situation soon became more complex, however. Although Henry W. Putnam patented the Putnam Stopper on March 15, 1859, it was mostly used on fruit jars. The stopper was not adapted to beer bottles until Charles De Quillfeldt received Patent No. 158,406 for the Lightning Stopper on January 5, 1875 (Figure 14). Although the Lightning Stopper *could* be applied to a two-part finish, beer bottles soon appeared with a single-part finish that eliminated the lower ring. These were both upwardly tapered and rounded (Figure 15), with the latter probably used later. One-part finishes are found alongside those with two parts in virtually every late-19th century excavation that has a large number of beer bottles or fragments, and they were used until the crown finish replaced them ca.

1914. In addition, several other finish types appeared, but none of them achieved the popularity of the two-part “cork” finish and the one-part finish for Lightning stoppers (Lockhart 2007).

As noted above, there was a major shift in the manufacture of two-part finishes on beer bottles during the period between ca. 1878 and ca. 1882. The new finish had a rounded lower ring (Figure 16). Although the date is certainly not absolute, very few glass houses made bottles with sharp lower rings after 1882.



Figure 15 – A) one-part finish, tapered collar (San Elizario); B) one-part finish, rounded collar (San Elizario)

Prior to Lockhart et al. (2012), however, no one seems to have addressed why the industry adopted the rounded lower rings. We would like to propose that the change from sharp to rounded lower rings was likely a function of the physics of fracture initiation. Bottle glass fractures in exactly the same way as flint, chert, obsidian, or other types of siliceous material used to make flaked stone tools. In fact, Apache warriors – as well as other Native American groups – used the broken bases of export beer bottles and other bottle types to make arrow points and other “stone” tools, such as scrapers.



Figure 16 – Two-part beer finish, rounded lower ring

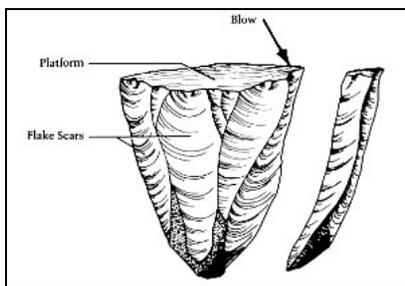


Figure 17 – Fracture angle for flaking stone (Whittacre 1994:15)

Flintknappers are well aware that an angle of less than 90 degrees is optimal for fracture initiation to detach flakes from a core (Whittacre 1994). At best, angles greater than 90 degrees are difficult to fracture (Figure 17). At typical angles of 50-65 degrees, the downwardly flared sharp lower rings would have chipped quite easily (Figure 18). Wedge-shaped rings would have been somewhat more fracture resistant, but they still maintained angles of 70-75 degrees – an easily breakable arc (Figure 19). The rounding of the lower ring virtually removed this angular effect, making the lower part of the ring highly chip resistant (see Figure 16).



Figure 18 – Angle of tapered lower ring

While the chipping of the ring, itself, could have created cuts and damage to other objects, future empirical research should be conducted to determine the exact effects. It is possible that a chip at the ring could have created a longer fracture that would have broken away the entire finish. In a bottle pit at San Elizario, Texas, Lockhart and Olszewski (1994) discovered numerous finish and neck/finish fragments from export beer bottles, many of which were broken at the finish. Unfortunately, the collection is no longer available to test exactly how those were broken.

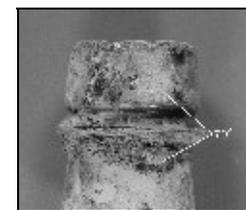


Figure 19 – Angle of wedge-shaped lower ring

It is probable that the sharp lower ring held the wire better than a rounded one. The sharp lower ring was certainly the traditional favorite dating back to at least 1815 (von Mechow

2013b). Never before, however, had bottles been made in these quantities; thus, speed of production increased. It is virtually certain that the rate of breakage became more important. Some form of pliers or similar tool must have been used to apply the tie-down wires, further increasing the probability of fracture during the assembly process. As a means to reduce the breakage, the industry apparently first switched from the flared lower rings to the wedge shape. Eventually, someone caught on, and rounded lower rings became the industry standard between ca. 1878 and ca. 1882.

Tod von Mechow (2013b) noted a similar change between what he called the “tapered lip, circ: 1844-1855” and the “rounded taper lip, circ: 1847-1920.” He noted that the latter:

is often called a “blob” top by collectors. It was first used on soda shaped bottles and later on various shapes of beer bottles. Its rounded shape prevented chipping and provided the strength needed to mount various closures. It was used almost exclusively on pony and champagne beer shaped bottles. It was by far the most common type of lip used on pre-crown soda and beer bottles.

Of final interest, some of the neck/finish fractures may have been intentional. It seems that people realized the problems associated with sharp rings and took advantage of the situation to theatrically open bottles. Informants, who have performed in “Mountain Man” rendezvous in the west, tell stories of observing participants striking a crown finish with Bowie knives or axes to break off the finish and cap.

Purportedly, this practice is historical in nature and could account for some of the bottles found in archaeological sites where the finish is separated from the neck. In many historic examples, the break is diagonal, beginning below the finish on one side of the bottle and tapering up, often to include a portion of the lower part of the finish on the other side – in keeping with such a removal. This practice was also a part of the historical showmanship of Sam Arnold, whose Fort Restaurant in Morrison Colorado is world renowned for its attention to detail in recreating dishes and atmosphere from the frontier days of the American West. Arnold took pleasure in using a tomahawk to remove the tops of champagne for the edification of his customers.

## Glass Blower's Whimsey

An interesting and unusual item, offered on eBay, was a glass blower's whimsey – an item made by a glass blower in his free time for his own amusement or as a gift for a friend.



Figure 21 – Glassblower's Whimsey (hat)

This whimsey was a cowboy hat that was originally blown into a beer bottle mold – complete with a BGC<sup>o</sup> baseplate. Once blown, the gaffer used a blow pipe as a pontil, attaching it to the base, then worked the sides of the bottle into the wide brim of a cowboy hat, leaving the bottle heel and base sticking up as the hat's crown (Figures 20-22).



Figure 20 – Glassblower's Whimsey (hat)



Figure 22 – BGC logo, Glassblower's Whimsey

## B.G.Co. Variations<sup>2</sup>

### B.G.Co. and BGC<sup>o</sup>

Bill Lockhart and Wanda Wakkinen recorded a series of beer bottle dump sites at Fort Stanton, New Mexico, in early 2006 as a follow-up to an earlier examination of the various dumps at the fort (Lockhart 2011:39-40). At one of these sites, B.G.Co. was the dominant mark on beer bottle bases, appearing in several variations. Lockhart recorded the variations and Wakkinen photographed “strong” marks embossed on the bases. The following study compared the variations with B.G.Co. marks from other sources.

The results disclosed two major trends – variations in the “o” in “Co” (see Figure 10) and variations in the “G” in the logo. The “o” appeared in two formats: 1) underlined superscript (C<sup>o</sup>); and 2) a typical, lower-case “o.”<sup>3</sup> Other studies (Lockhart 2007:54-55; Lockhart et al.

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<sup>2</sup> Much of the letters study was previously published in Lockhart (2011) and Lockhart et al. (2011).

<sup>3</sup> Although a capital “O” appeared on one fruit jar base (auctioned at eBay), each example we have seen had lower-case “o.”

2009:38) have suggested that the superscript “o” – frequently underlined – was the older format and was closely associated with the sharp lower ring on the two-part finish.

**Table 1 – Characteristics of BGCo Manufacturer’s Marks**

Co	G	Numbers/Symbols	Comments
C <sup>o</sup>	right serif	3	below logo
C <sup>o</sup>	right serif	plus sign	may be below or above the logo
C <sup>o</sup>	right serif		
C <sup>o</sup>	left & right serifs		left serif appears to have been added – possibly retouching an old mold; a second “B” appears to have been started at the left edge of the mold
C <sup>o</sup>	left & right		one dot above; one dot below; round lower ring
C <sup>o</sup>	left & right serifs	I	above logo
C <sup>o</sup>	left serif	X	below logo
C <sup>o</sup>	left serif	H	above logo
C <sup>o</sup>	left serif		one dot above; one dot below
C <sup>o</sup>	left serif	X	below logo; round lower ring
C <sup>o</sup>	left serif		round lower ring
Co	left serif	2	2 below logo; 2 dots above
Co	left serif		two dots above logo; “G” upside down
Co	left serif		two dots above logo; “G” right side up; sharp lower ring

The second trend was distinguished by three variations in the letter “G” (Figure 23). Those include a “standard” “G” with the serif extending to the left. In several cases, however, the serif extends to the right, and three marks had the serif extending to both left and right. Table 1 shows some of the pertinent characteristics of the marks, including the “o” in “Co,” serifs on the “G,” and accompanying numbers, letters, and/or symbols. Another common variation, a “G” with a “tail” extending downward, was *not* found on any BGCo bottles.

Wilson (1981:114) illustrated variations of the B.G.Co. mark (all with “Co” – no underline or superscript) with a large “X” above the mark, a “3” below the logo, a “3” above, or two dots above. Unfortunately, he did not note any variations in the



Figure 23 – “G” styles – (left to right) standard; serif to both sides; serif to right



Figure 24 – B.G.Co base – San Elizario, Texas

“G.” B.G.Co. marks from San Elizario, Texas, also included a single base with the “C<sup>o</sup>” variation and no accompanying symbols or numbers and two examples with two dots above the logo – as well as “Co” variations (Figure 24). The shape of the “G” was not recorded in the “C<sup>o</sup>” variation, but the “two dot” version had a “G” with standard “tail” or “serif.” Although Herskovitz



Figure 25 – B.G.Co base with 2 crosses and “G” with right serif – Fort Bowie, Arizona

(1978:8) did not illustrate the marks found on Fort Bowie, Arizona, beer bottles, he noted only the “C<sup>o</sup>” variation accompanied by 1, 3, 4, H, I, T, X, one dot, or two dots (Figure 25).



Figure 26 – B.G.Co base, serif of “G” extending both ways – Tucson Urban Renewal collection

Ayres et al. (1980) also indicated only the “C<sup>o</sup>” variation, one with an “X” below the mark (see Figures 8 & 9). The illustrations showed normal “Gs,” although our photograph of one from the TUR collection showed a “G” with a large “bar” extending to both left and right and extended serifs on the “B.” The extended serifs actually look as if there was an engraver’s error that started the “B” too close to the edge of the



Figure 27 – B.G.Co base, with upside down “G” – Fort Stanton, N.M.

base post (Figure 26). A final unusual example – found at Fort Stanton, New Mexico – had the “G” upside down, an obvious engraver’s error (Figure 27).

Lockhart noted a complete export beer bottle dug by the New Mexico Historic Bottle Club on June 1, 2008. The bottle had the B.G.Co. basemark with the serif on the “G” extended to the right and a two-part finish with a sharp lower ring. As noted above, two-part finishes with sharp lower rings were used on export beer bottles from 1873 to ca.1882 (Lockhart 2007).

Based on the current sample, there are no real patterns associated with the numbers, letters, and symbols that accompany this mark. Numbers extend from at least 1 to 4, with virtually all the letters of the alphabet and various symbols, including, an equilateral cross or plus sign (+), “X,” and dots. The numbers/letters/symbols may appear either above the logo or below it. Lockhart and Whitten (2005:43; 2006:38-39) have discussed the likelihood that such marks as the Maltese Cross, “X,” and other symbols were used as “signatures” by individual mold makers.

It is equally likely that the “G” with the serif extending to the right was a similar “signature.” Lockhart et al. (2011:40-41) traced the right-serif-G to four glass houses, three of which were in the St. Louis area. The fourth, however, was in Pittsburgh. All but the Belleville Glass Co. were making beer bottles during the late 1870s. It is likely that a single mold engraver, located at or near St. Louis, made these right-serif-G logos at some point during the late 1870s and very early 1880s.

## **Discussion and Conclusions**

The Belleville Glass Co. (or Works) produced a variety of bottles and fruit jars from the opening of the factory on September 1, 1882, to November 1883, when the plant switched to the exclusive manufacture of export beer bottles for the Wm. Lemp Brewing Co.<sup>4</sup> The factory probably only made beer bottles from November 1883 until it ceased production sometime in late 1885 or very early 1886.

As part of this study, we initially investigated 29 glass firms with “BGCo” or related initials, but we quickly eliminated most of them because they did not make bottles, did not make the types of containers associated with the BGCo mark, or were in business during the wrong time periods.

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<sup>4</sup> This major contract with Lemp may explain why Wilson & Caperton (1994:72) failed to find any ads for Belleville in the *Western Brewer*.

## Beer Bottles

Because beer bottles with the B.G.Co. mark were found at Fort Union (1862-1894), Fort Stanton (1855-1896), San Elizario, Texas (in ca. 1880-1886 context), and Kingston, New Mexico (ca. 1880-1886 context), they were certainly made prior to 1896 and probably before 1886. In addition, the alternate forms of the “G” serifs and sharp lower rings on finishes suggest a late 1870s-early 1880s manufacture of some of the bottles. By the mid-1880s, only the “standard G” format appears on most export beer bottles, and virtually all had rounded lower rings (or one-part finishes).

Although our study included a fairly substantial number of export beer bottle bases (41 examples), we have only found five complete bottles with BGCo basemarks (including one photo on an internet site). Of these, only one complete bottle had a sharp lower ring on the two-part finish; the others had rounded lower rings. Although not conclusive due to the small numbers, this fits with the current evidence, which suggests that sharp lower rings were mostly phased out by ca. 1882, the year the Belleville Glass Co. opened. Rounded lower rings began to appear ca. 1878 and continued in use until ca. 1914.

Toulouse (1971:85) attributed the BGCo mark (with no punctuation) to the Burlington Glass Co. of Hamilton, Ontario, but he did not mention beer bottles, and his reference was almost certainly restricted to fruit jars (see below). Ayres et al (1980:6) doubted the veracity of Burlington as a claimant for bottles found in Tucson, Arizona. Lockhart and Olszewski (1994:39) echoed Toulouse, although the argument put forth by Ayres and associates fits the San Elizario, Texas, context as well. Miller (1980:8; 1982:4) attributed the logo to the Belleville Glass Co., 1882-1886. Johnson (1971:128) suggested the Beaumont Glass Co. of Bridgeton, New Jersey, but neither the dates of operation nor the type of glass produced is currently known.

Jones (1968:10-11) endorsed both Bushwick Glass Co. and Belleville Glass Co. as contenders for the mark. Herskovitz (1978:7-8) echoed her ambivalence. Ayres et al. (1980:6) refuted Jones’ suggestion of the “Bushwick Glass Co.,” noting that the company she referred to was actually the “Bushwick Flint Glass Works of Brooklyn, New York and its successors.” By the time the firm was called Bushwick Glass Co., it was far too late (1915) to fit 19<sup>th</sup> century mold-blown beer bottles.

Ayres and his associates also pointed out that the initials fit the Brookfield Glass Co., founded as a corporation in 1898, but the company was in business too late to have made bottles found in Southwestern fort contexts. An ad from 1892 for the Bushwick Glass Works, operated by William Brookfield, noted “Bottles: Carboys, Battery jars, Insulators, Etc. Every Description of Green and Amber Glass Blown to order. Particular Attention Paid to Private Moulds” (Putnam 1965), but the company was “works” rather than “Co.”

The BGCo mark is consistently found in pre-1896 contexts and, at least in all the samples we are aware of, is consistently associated with applied finishes, a technique that was phased out from beer bottle manufacture ca. 1896 and was completely eliminated by 1900. Because B.G.Co. marks were found in ca. 1881-1896 contexts at Fort Stanton, Brookfield could not have been the manufacturer. With an 1898 incorporation date, the company is completely eliminated. At some point, however, the Bushwick Flint Glass Works dropped the “Flint” and became the Bushwick Glass Works. By 1893, however, the company was still “Works” – not “Co.” Thus, Bushwick – never using “Co.” in its title – is also eliminated.

The only remaining factories known to have made beer bottles are the Binghamton Glass Co. (1880-1928, poss. 1936) and the Belleville Glass Co. (1882-1886). A major problem with the Binghamton choice is that the firm was in business for so long – why are there no later beer bottles with BGCo logos?

A study of beer bottle dumps at Fort Stanton, New Mexico (Lockhart 2011), along with contexts of ca. 1880-1886 at both San Elizario, Texas, and Kingston, New Mexico, suggest that the mark was used during the ca. 1881-1886 period. Both Binghamton and Belleville were open and active during that period.

Export beer bottles were distributed all over the West – primarily by breweries at St. Louis and Milwaukee – and would certainly have found their way to the contexts where these bottles have been reported. By 1870, Lemp was the largest brewery in St. Louis and followed in the footsteps of Anheuser-Busch – shipping beer to western locations beginning at some point during the 1870s. This almost certainly resulted in the 1883 contract with the Belleville Glass Co. and is consistent with the distribution of beer bottles – with the BGCo logo – during the 1880-1890 period. In addition, Binghamton *only* used logos on bottles when required to by its

customers (see the Binghamton section) – certainly not on generic (slick-sided) export beer bottles.

Since Binghamton was not located close to or connected with a brewery known to have distributed beer to western locations during the 1880-1890 period, our final choice must remain the Belleville Glass Co.

## **Soft Drink Bottles**

Unfortunately, we know little about soft drink bottles bearing the B.G.Co. mark. The only independent date (i.e., date for the individual bottle – not the factory) that we have is for the 1880s. The presence of the mark on a blob-top soda bottle indicates a manufacture no later than the early 1880s, but Hutchinson bottles were made between 1880 and ca. 1912, although a few were still manufactured as late as 1929.

Only four companies with appropriate initials were known for or probably made soda bottles:

Bellingham Glass Co., Bellingham, Washington (1906-1910) – “beverages”

Belleville Glass Co., Belleville, Illinois (1882-1886) – “soda . . . bottles”

Binghamton Glass Co., Binghamton, New York (1880-1928) – “sodas”

Brookfield Glass Co., Brooklyn, New York (1868-1922) – soda bottles

Since we have established that the Belleville Glass Co. was the most likely user of the BGCo mark on beer bottles and that the firm also made soda bottles during its first year in operation, it is likely that the bottles that can be reasonably dated to the 1882-1883 period were made by Belleville. In addition, the marks on some early soda bottles are consistent with BGCo logos found on beer bottles – including a heelmak of “BGC<sup>o</sup>” with a right-extended serif on the “G” – on a Hutchinson soda bottle (see Figure 1).

At least one blob-top soda bottle with the “BGC<sup>o</sup>” logo was made for Crone & Co., a St. Louis bottler; another was for a brewer in Kansas. The Saratoga-style water bottles were used in Mississippi. Hutchinson bottles were made for firms in West Virginia, Wisconsin, South

Carolina, Oklahoma Territory, South Dakota, Missouri, and Kansas – with four bottles used in Missouri, two in Kansas, and only one in each other state. It is unlikely that most of these firms would have purchased their bottles from a New York glass house.

Whitten’s (2013) Moxie soda bottle with a B.G.CO. mark – and a crown finish – fits into the known time period for all three other glass houses. No other soda bottle with both a crown finish and a B.G.Co. mark has been reported (at least to our knowledge). It is likely that Moxie required all its manufacturers to emboss company initials across the bases of the bottles. Since Moxie was a New England beverage, either Binghamton or Brookfield are better choices than Bellingham – located at Washington state. Also, see the section on Binghamton, where we concluded that Binghamton was the probable user of the mark.

### **Wax-Sealer Fruit Jars**

Because of the crudity of the jars and similarity of the BGCo logos to those found on beer bottles, the Belleville plant is by far the most likely choice as the manufacturer of these wax-sealer jars. Belleville only advertised fruit jars during its first year in operation – 1882-1883.

### **Other Fruit Jars**

The designation “BURLINGTON” on fruit jars with the “B.G.Co.” mark makes the Burlington Glass Co. the certain maker. Since the BGCo monogram was apparently used on a foreign fruit jar, it is beyond the scope of this work.

### **Conclusion**

With the exception of the Moxie soda bottle and the Burlington jars, the Belleville Glass Co. is by far the most likely candidate for the maker of bottles and wax-sealer fruit jars with the BGCo marks. The Burlington Glass Co. certainly made the Burlington fruit jars. Although the Moxie bottles could have been made by three companies, the proximity of the Binghamton Glass Co. to Moxie’s New England regional distribution makes and other factors addressed in the Binghamton Glass section make it the likely choice for the manufacture of *that* bottle.

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