

The Dating Game: The American Bottle Co., A Study in Contracts and Contradictions

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As the title suggests, the American Bottle Co. was unique. An outgrowth of the Ohio Bottle Co., it was the first of the large conglomerates, setting a tone that would be followed two decades later by giants like the Knox Glass Bottle Co. and the Owens-Illinois Glass Co. American Bottle set the standard for small-mouth bottle production in the beer and soda bottle field and forced competitors to invent or adopt semiautomatic machines (and eventually gob feeders to make them fully automatic) to try to keep up. The company pioneered the use of date codes to establish the year a bottle was produced, but their markings were so cryptic that many of them have been misidentified, misunderstood, or ignored by researchers for decades. Ironically, most of the marked bottles associated with American Bottle are the result of hand – not machine – production, and the company refrained from using date codes on machine-made bottles until 1916.

The American Bottle Co. initiated the placement of date codes on the heels of bottles, a device for tracking the number of round trips that a soda or beer bottle makes. Because these bottles were intended to be returnable, the number of trips between the bottling plant and the consumer affects the profit margin. As financial planning became more important to the beverage industry, attention to the number of round trips became more important. By the mid-1920s, most returnable bottle manufacturers used date codes; by the 1950s, it was a standard throughout the industry. American Bottle initiated the practice in 1906.

History

Ohio Bottle Co. (1904-1905)

On October 11, 1904, a group of glass factories combined under the direction of Edward H. Everett to form the Ohio Bottle Co. Although Everett's company, the Edward H. Everett Glass Co., Newark, Ohio, was to be the flagship factory, the combine also included the Massillon Bottle & Glass Co. and Reed & Co., both in Massillon, Ohio, and the Wooster Glass

Co., Wooster, Ohio, the latter two owned by J. F. Pocock (see sections on each of these for more information on the companies prior to the formation of Ohio Bottle Co.). The purpose of the new company was to monopolize the use of the new Owens automatic machine in making beer and soda bottles. On November 1, barely three weeks after its formation, Ohio Bottle signed a contract with the Owens Bottle Machine Co. for an exclusive license to do just that (*National Glass Budget* 1904e:10; 1904f:1; Scoville 1948:104; Walbridge 1920:72).

The new machines could not be built and installed immediately, however. Initially, while continuing to make its own bottles by hand, Ohio Bottle Co. served merely as the selling agent for the Northwestern Ohio Bottle Co. Northwestern was a wholly-owned subsidiary corporation of the Owens Bottle Machine Co. The *National Glass Budget* (1905:11) noted that Ohio Bottle "had recently taken both the large orders of the Liquozone Company, of Chicago, and the immense order of the Emerson Drug Company, Baltimore, Md., manufacturers of Bromo Seltzer" – a strange circumstance if they were intended to be machine-made, since Ohio Bottle's license didn't include medicine bottles. Due to subsequent events, the orders reverted to Owens.

To make the scheme even more complex, Everett incorporated the Newark Machine Bottle Co. of Toledo in May 1905 and built a new plant to house the Owens machines at the Newark property (Chessman & Abbott 1991:26). The Ohio Bottle Co. (and later the American Bottle Co.) was the exclusive selling agent for the Newark enterprise (*National Glass Budget* 1905c:1). Although we have no direct evidence for the date this arrangement dissolved, it clearly lasted into the American Bottle Co. era.

Apparently, Everett had some inside knowledge from Owens. When he built the new Newark plant for the Owens machine, Ohio Bottle was only a sales agent for Northwestern, and the only Owens machines were still in the Owens factory. It was not until November 1, 1904, that

Owens granted the Ohio Bottle Co. the exclusive license to make "beer, porter, ale, and soda-water bottles" with the new Owens Automatic Bottle Machine, only the second license to be issued¹ (*National Glass Budget* 1904e:10; 1904f:1; Scoville 1948:104; Walbridge 1920:72). Even then, the Newark Machine Bottle Co. had no Owens machines, and Ohio Bottle was making containers by hand.

By September 1904, it was clear that other beer bottle makers were concerned about the sale of beer bottles by the Ohio Bottle Co. Much of the early speculation centered around how much the Owens machine would depress prices. "One who has made a special investigation of existing conditions" claimed that Ohio Bottle would only sell the Owens-made containers in Mexico. The argument went that, since Ohio Bottle plants made their *own* bottles by hand, selling containers made by Northwestern's Owens machines would hurt them as well. The Mexican connection would thus protect *all* U.S. plants (*National Glass Budget* 1904i:1). It soon became obvious, however, that the Ohio combine would sell to all comers.

The *National Glass Budget* (1904b:6) noted "a sort of stagnated condition" in the Massillon factories in late 1904. Although both Ohio Glass Co. plants were in "partial operation," they were "well stocked with bottles made last year, although practically all have been sold." This seems to have been a common situation during company changeovers. When a new company took over, it also acquired the responsibility to fill all the existing orders of the old company. Existing evidence (e.g., see Smith 1989 about Three Rivers Glass Co.; or *Pacific Bottler* 1930:24 about Southern Glass Co.) suggests that the transition took about a year. This, coupled with the short time in business, may be why bottles with the OBCo logo are comparatively uncommon.

The first Owens machine arrived at Newark in May 1905 (Chessman & Abbott 1991:26) and was operational by September (*National Glass Budget* 1905e:8). The additional plants at Massillon (as well as

the Newark shops) continued to produce mouth-blown beer and soda bottles. The Ohio Bottle Co. was short lived due to the acquisition of two newcomers (see below) to form the American Bottle Co. in 1905 (Toulouse 1971:30-31; 399-400).

The Wooster plant did not survive. The factory closed down at the end of October 1904 (*National Glass Budget* 1904c:4). By November, there was "little prospect of reopening" (*National Glass Budget* 1904d:10). Charles Blair, an American Bottle Co. representative at Wooster explained that "our effort last season to operate this plant cost us so much money that we do not care to repeat the experiment unless we are assured that sufficient boy labor at the same price we are paying at our other plants can be secured" (*National Glass Budget* 1905f:9). A year later the plant was sued by local investors for failure to operate according to its contracted schedule (*National Glass Budget* 1906:10). We have found no evidence that the plant was ever again in operation.

American Bottle Co. (1905-1929)

In 1905, the combine was strengthened with the addition of two factories owned by Adolphus Busch (in Belleville, Illinois, and St. Louis, Missouri) and the Streator Bottle & Glass Co., Streator, Illinois. With this strong influx from Illinois and Missouri, "Ohio" was no longer appropriate, so the name was changed to the American Bottle Co.² The new merger took place between August and September of 1905 and increased the number of plants in the conglomerate to seven (Scoville 1948:104; Toulouse 1971:31).³ The *National Glass Budget* (1905g:1) reported the new combine on August 26 and noted that the Owens machine had "been giving perfect satisfaction; the product, owing to its uniformity in structure and fluid capacity, has been finding a ready market."

American Bottle had maintained the same arrangement for selling Owens-made products as its predecessor. The Newark Machine Bottle Co., now equipped with two Owens machines at its Newark plant, actually made the bottles, and American bottle marketed the product. Anheuser-Busch was one of the largest customers (*National Glass Budget* 1905h:1). Again, like its predecessor, the American Bottle Co. also manufactured bottles with mouth-blown production at all of its plants.

The Owens Bottle Machine Co. acquired control of the majority American

Bottle Co. stock (more than 80%) in 1916, but the plants continued to operate under the American Bottle name. The management made that position clear by stating:

the present officers of The American Bottle Co. will continue in charge of its operations; that The Owens Bottle Machine Co. has simply acquired a majority of the American company's stock, and that the transaction will in no manner change the personnel of The American Bottle Co. and its Management (*National Glass Budget* 1916:1).

It was not until the merger that created Owens-Illinois Glass Co. in 1929 that American Bottle officially lost its standing as an independent company (Moody's 1932:2209).

Individual Plants

Each plant also developed its own history. Although the factories all belonged to the same firm, they were treated quite differently, and different ones were gradually eliminated.

Wooster

The former Wooster Glass Co. was only open from 1900 to 1904. It was the first casualty of the Ohio Bottle/American Bottle combine. Although the Wooster plant remained in the possession of American Bottle, it never reopened. A labor problem (see above) closed the factory in 1904, and it was never resolved.

St. Louis

Busch's St. Louis plant was only a part of the combine for a short time. According to Toulouse (1971:30), "eventually Busch withdrew his St. Louis operations from the merger." Toulouse (1971:400) also placed the withdrawal "after a few years." However, a 1908 article showed that the Adolphus Busch St. Louis plant was operating under the Adolphus Busch name by October 1908 (*Commoner & Glassworker* 1908:1). Empirical evidence (see AB-Connected-plus-Co below) suggests that Busch may have withdrawn the plant by 1907 or even by late 1906.

The plant had burned in early 1905, but it was being rebuilt by August. Although rumors circulated that the plant might get Owens machines, there is no indication that it ever happened (*National Glass Budget*

1905g:9). It is possible that the plant was probably not back in service prior to 1906.

Belleville

Early, there were rumors that the Belleville plant would receive automatic machines (*National Glass Budget* 1905b:6), but we have found no documentary evidence that the plans materialized. However, we have hypothesized that the AB-connected mark was used exclusively by the Busch plants. We have observed very few machine-made, 11- or 12-ounce beer bottles embossed with the AB-connected mark. While not conclusive, these suggest that perhaps a single machine was operating prior to the closing of the Belleville plant.

In fact, Belleville was American Bottle's third casualty. According to the *Belleville News-Democrat* (12/27/1998), "Walkouts and strikes by American Bottle workers in other places resulted in closure of the Belleville plants in 1909. They never reopened." These "walkouts and strikes" may have been in reaction to a serious reduction in production by beer bottle manufacturers. American Bottle noted that the effects of state and local prohibition had resulted in a 40% reduction in production. According to the company, payroll, normally \$300,000, was reduced by \$180,000 (*Commoner & Glassworker* 1909:2). Possibly, problems with "small help," such as was experienced at Wooster, contributed as well.

Toulouse (1971:423) is contradictory about the closing date for the Belleville plant. He noted (page 32), "In 1916 the company was purchased by the Owens Bottle Machine Co."⁴...It was then operating five plants ...Belleville, Ill. ...the following year three were closed, leaving Streator and Newark." This suggests that the Belleville plant was in operation until 1916. However, on page 27, he stated that "Busch had been a hand plant all these years, which is one reason why the American Bottle Co. immediately closed the Belleville plant." The word "immediately" suggests the plant was closed in 1905. Finally, on page 423, he noted that "in 1909 . . . with the Adolphus Busch plant, now American Bottle Co., also shut down, most of the glassblowers of the area left for other fields." This places the closing about 1908 or 1909. Both empirical and documentary evidence (see Who Used Which Marks?: Empirical Testing below) support a closing date of 1909.

Massillon

Apparently, all three plants of Reed & Co. survived into the Ohio Bottle Co. era, although they were discussed as “furnaces, Nos. 1 and 3” (*National Glass Budget* 1904d). The article added that “the No. 1 furnace at the Reed & Co. plant is the largest in the city.” A follow-up article noted the lighting of the furnace in No. 2 (*National Glass Budget* 1904h).⁵ David Reed, former owner of Reed & Co. became manager of the Massillon plants (*National Glass Budget* 1904d:10; 1904h:5). However, the Massillon plants (both the former Reed & Co. and the former Massillon Bottle & Glass Co.) all closed in 1913. A major flood damaged the former Reed & Co. plant so badly that it never reopened (Reed & Co. n. d.) and destroyed the former Massillon Bottle & Glass Co. factory as well (Kane 1978:84; Reed 1980). All of the Massillon plants continued hand production and never operated machines.

Newark

Newark (Everett’s original plant) became the flagship factory for the combine and eventually converted entirely to machine production. At least partly because of Edward H. Everett’s commanding position in the firm, his original factory received the greatest transformation. The first Owens machine arrived at Newark in April 1905 (*National Glass Budget* 1905a:6), although it was not in actual production until September.⁶

An interesting and connected event also occurred in late 1905. The training of apprentices was a long tradition among glass factories. Skilled gaffers (blowers) were the backbone of the glass industry. Machine production destroyed the tradition, and Everett made the first move. By December 1905, he had virtually eliminated the apprentice program at Newark. Although he retained very few apprentices in the “western factories” (i.e., Massillon, St. Louis, and Belleville), he abolished the practice at Newark, stating that “he would be ashamed to put a boy on the bench to learn to blow because there would be no trade before his apprenticeship was ended” (*National Glass Budget* 1905i:4; also see Chessman & Abbott 1991:26).

In 1907, Everett built a “huge new addition that would cover seven acres” at the Newark factory. Although the sources are unclear, at some point, the Newark Machine Bottle Co. dissolved, and American Bottle became the direct

producer of machine-made bottles, rather than the selling agent. This may have been connected with Everett’s major construction move at Newark in 1907.

In 1907, the plant had 15 Owens machines that produced six railroad carloads of bottles per day, yet orders demanded almost 17 carloads per day. The new operation included furnaces for mouth-blown bottle production (Chessman & Abbott 1991:32). The number of machines had grown to 27 by 1909 (*National Glass Budget* 1909:1). Hand manufacture, however, was on its way out. “The Company started to phase out its hand-blowing furnaces, until by 1914 there were just 34 Owens machines doing all the work in its remaining plants at Streator, Illinois[,] and Newark, Ohio” (Chessman & Abbott 1991:36).

In 1916, the Owens Bottle Co. became the majority stockholder of the American Bottle Co., thereby controlling its operation. American Bottle did not actually lose its identity until the merger of the Owens Bottle Co. and Illinois Glass Co. On May 1, 1929. The Newark plant operated under Owens control until the merger that created the Owens-Illinois Glass Co. on May 1, 1929, but it was closed the following year (Chessman & Abbott 1991:37; Toulouse 1971:32).

Streator

Streator also became a machine plant, but the conversion was more gradual. The number of machines, however, continued to grow, and it, too, abandoned hand manufacture by 1914 (Chessman & Abbott 1991:36). The Streator factory remained a production center for Owens-Illinois, although the “lower works” ceased glass making in 1918. The remaining Streator plant (an Owens-Illinois factory after 1929) burned in 1938 and was never rebuilt (Toulouse 1971:32).

Bottles and Marks

The Ohio Bottle Co. was licensed to produce beer, porter, ale, and soda bottles on Owens automatic machines (Miller & McNichol 2002:6). Empirical evidence, however, shows that export beer bottles were the single most important product produced by hand. While Hutchinson and crown-finished soda bottles were also manufactured, they appear to all have been made by hand. This situation apparently continued after the American Bottle reorganization, with beer bottles

dominating production until prohibition.

Manufacturer’s marks used by the Ohio/American combine fall into three temporal categories: 1) those used by the Ohio Bottle Co. from 1904 to 1905; 2) those used by American Bottle from 1905 to 1916; and 3) those used by the American Bottle Co. under the control of the Owens Bottle Co. for products made at Streator and Newark (1916-1929). It is important to note that virtually none of the American bottle marks appeared on machine-made containers (see *Who Used Which Marks?*, AB-connected).

Ohio Bottle Co. (1904-1905)

O.B.C. (1904-1905)

Toulouse (1971:30) claimed the only mark known for the Ohio Bottle Co. was O.B.C., and the company was only in business from October 11, 1904, to September 7, 1905 (Toulouse 1971:399). Kroll (1972:3) also suggested this mark for the Ohio Bottle Co., but his recording was *not* reliable, and he probably parroted Toulouse. Thus far, we have not located an example of this mark aside from the references by Toulouse and Kroll. Rydquist (2002:4), too, noted that he had not seen this mark.

O.B.Co. or O.B.CO. (1904-1905)

The Ohio Bottle Co. only used this mark, always with punctuation. The mark is found usually embossed on bottle heels. Basemarks occur, usually in a downward arch and always with a lower-case “o” in “Co.” [Figure 1]. All heelmarks we have seen used an upper-case “O” in “CO.” [Figure 2]. Heelmarks are generally unaccompanied by any codes, but basemarks often have a single-digit number in the center. All marks should be dated to both years (1904-1905) that the company was in business. All marked Ohio Bottle Co. containers we have examined were mouth blown into molds. The very few produced by the Owens machine prior to the end of the company must have been unmarked.

Mobley (2004)⁷ listed twelve beer bottles, all embossed on the heels with O B CO along



Figure 1: Ohio Bottle Co – Basemark [Lockhart]



Figure 2: Ohio Bottle Co – Heelmark [eBay]

with numbers in two lines (with one exception) on the base. The numerator (top line) was a two- to four-digit number, but the denominator (bottom number) was always a single digit (in one case, an “A”). Denominators ranged from 1 to 7, but numerators ranged from 37 to 1239. All were on mouth-blown bottles with a variety of finish styles. The numerators were probably catalog numbers; two identical markings (1109/2) were found on virtually identical bottles embossed on the sides with markings from two different breweries.

American Bottle Co. (1905-1916)

[According to Johnson (1971:128), there was another American Bottle Co. in business in Vineland, New Jersey, from 1893 to an undisclosed date. It is not known if this American Bottle Co. marked its bottles, or, if so, what with. In any event, the plant was not connected with the Ohio/Illinois American Bottle Co.]

Timing is important. Few bottles were probably produced during 1905. The merger that formed American Bottle Co. did not take place until August-September. There was almost certainly some administrative delay, so production under the American Bottle name is unlikely to have commenced prior to October and possibly began later. If any bottles were made using American Bottle marks in 1905, they were not date coded. The earliest date codes we have seen are “6-B” and “6-S.” We have included 1905 in the date ranges below, although it was probably the least likely year of production.

Date Codes

The American Bottle Co. appears to have been the first glass manufacturer to offer date codes to its customers. There was a possible exception in 1901-1903, when Hutchinson-style soda bottles from the Illinois Glass Co. were embossed with “01,” “02,” or “03.” If these were date codes, they were abandoned after 1903 and never again used by Illinois Glass.

It seems that American Bottle got the idea for date codes from the brewers. Bottles from the Rochester Brewing Co., Boston Branch, were embossed with script

“93,” “95,” “96,” and “97” under the name (also script) on the body. These are almost certainly date codes for 1893-1897. The Harvard Brewing Co. had the word “REGISTERED” at the heel, along with “98,” “00,” “1900,” and “1901” embossed on the body (in quotation marks) below the company designation – again references to 1898-1901. Some of the bottles for each of these breweries were made by Everett. Similarly, W.H. Jones & Co. (a distillery, not a glass house) used a four-digit date code on its whiskey bottles from 1896 to 1915 (Samuelson 2006:11-12).

Chessman and Abbott (1991:flyleaf) show codes of E1, E2, E3, E4, and E5 that they attribute to Everett’s factory. Unfortunately, they offered no explanation for the marks nor any indication of what they were used on. However, Creswick (1995:50) listed grooved-ring wax-sealer jars with “E1,” E2,” and “E5” embossed on the bases. Although Creswick made no attempt to identify the maker, these are obviously the marks referred to by Chessman and Abbott. These may or may not be date codes. An E4 mark was also used by Essex Glass Co. on milk bottles, but that cannot be confused with Everett, who never made milk containers.

AB-connected (1905-1909)

Toulouse (1971:26-27) attributed the AB-connected manufacturer’s mark to the Adolphus Busch Glass Manufacturing Co., Belleville, Illinois, and dated its use between about 1904 and 1907. Ayres et al. (1980), however, noted cases where the mark was followed by “Co.” – a configuration that is much more in keeping with the American Bottle Co. name. We concur with the Ayres group and further assign the mark to the Belleville, Illinois factory (see Who Used Which Marks?). For more discussion of the background of the mark and research leading to the



Figure 3: AB-Connected Mark on Beer Bottle Base [eBay]

identification, see Lockhart (2004a; 2004b).

The AB-connected mark is generally found embossed on the bases of beer bottles [Figure 3]. Additionally,

we have yet to find it on body embossed beer bottles. All known examples of the mark on beer bottles have two common characteristics: 1) the bottles have no embossing on the body – they were made for the addition of paper labels; and 2) they are of the export style bottles with crown finishes. In addition, all but a very few examples were blown into a mold.

Whereas beer bottles with the AB-connected mark are ubiquitous, soft drink bottles bearing the logo appear to be scarce. The few known soda bottles marked with AB-connected follow a different pattern.

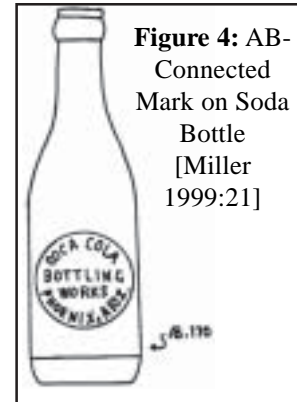


Figure 4: AB-Connected Mark on Soda Bottle [Miller 1999:21]

Miller (1999:21, 36), for example, showed two examples, both of which included circular plate molds on the front embossed with the

names of local Arizona bottlers [Figure 4]. These were a crown-finished bottle embossed AB (connected) 170 on the reverse heel, and a Hutchinson bottle marked AB (connected) 32, also on the reverse heel. Miller dated the bottles 1905-1906 and 1906-1907, respectively. The numerals following the marks may be catalog numbers.

The AB-connected heelmarks also occasionally appear on beer bottles. In two cases, we have also found basemarks on machine-made beer bottles. Although we have observed literally hundreds (possibly even thousands) of bottles with the AB-connected mark, we have only seen two with machine characteristics [Figure 5]. We found no other American Bottle Co.



Figure 5: AB-Connected Mark on Machine-Made Beer Bottle [Lindsey]

marks on machine-made bottles (with two possible exceptions discussed later in this study).

Date codes that we have seen associated with the AB-connected

mark range from “6-B” (identifying the Belleville plant and the year, 1906) to “9-B” (1909). It is, however, possible that bottles were made with no date codes during the September to December period of 1905. We therefore suggest a date range of 1905-ca. 1909 for the mark. For a discussion of factory identification and date codes, see *Who Used Which Marks?*

AB-connected-plus-Co (ca. 1906)

This mark is rare, and we have only seen two examples, both on bases accompanied



Figure 6: AB-Connected Mark with “Co” [Lockhart]

by a “6-B” date code on the heels [Figure 6]. There is also a letter/number combination below the mark and a number below the letter/number combination. Because the mark seems to be limited to this single year, and because of the factory code, we hypothesize that the mark was used by the St. Louis plant that Busch withdrew from American Bottle by 1908 (see *Who Used Which Marks?* for a more detailed discussion). This hypothesis suggests two additional propositions. First, the St. Louis factory may have been withdrawn as soon as early 1907 (no date codes after 1906).⁸ Second, the “B” in the code might indicate “Busch” rather than “Belleville.” Unless we find new evidence, we consider a date of ca. 1906 the best choice for this mark.

ABCo in an arch (ca. 1907)

We have only seen a single example of this configuration on the base of an export beer bottle. Because the accompanying heelcode was “7-B,” the producing factory was probably Belleville, and the date was 1907. However, this may also be the 1907 mark of the St. Louis plant.

ABCo horizontal across the base (1905-1914)

The ABCo mark was embossed on beer and some soda bottles across the center of the base [Figure 7]. The logo was used in two main variations, large and small, although we have not been able to correlate the differences with specific plants or date codes. The mark was often accompanied

by date codes but was also frequently by itself. It was used with the “B” series codes (“6-B” through “9-B”) and the “S” series (“6-S” through “11-S” and “S-11” through “S-14”). Feldhaus (1986:77, 84) also showed the 0-S, 12-S, 13-S, and 14-S codes on ABCo beer and soda bottles. The 0-S indicates a manufacture date of 1910, and this has been misidentified in the literature as O-S (indicating an alphabetical combination rather than a number/letter combination).

Feldhaus data also show that both 12-S, 13-S and S-12, S-13 were used by the company. Unless these marks are confirmed by other sources, however, they should be questioned. Feldhaus is riddled with typographic errors, so these may actually reflect the S-12, S-13, etc. series.

Variations include A B CO (large letters), A B Co (large letters), A. B. Co. (large letters), and A B CO (small letters) on bases. All may appear with or without numbers or letter/number combinations. Occasional odd heelmarks occur with ABCo bases, including 0-3, B9-S, 8-5, and 3-9, although these may all be mis-readings of indistinct embossing.

As noted with the AB-connected mark above, the ABCo mark was also likely used with no date code in 1905. Thus, the mark was probably used from 1905 to 1914 and possibly until 1916. For more information about date/factory codes, see *Who Used Which Marks?*

A.B.CO. horizontal on heel (1905-1914)

The A.B.CO. heelmarks we have seen all used an upper-case “O,” usually included punctuation, and frequently were followed by three- or four-digit numbers that were probably model or catalog codes [Figure 8]. Sometimes a single numeral or letter was placed under the other

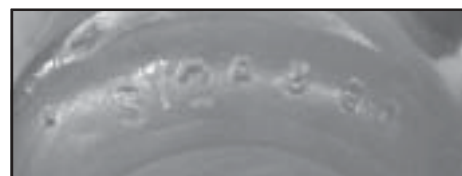


Figure 8: ABCO Heelmark – Note S12 Date Code [eBay]

numbers. However, we have only found the heelmark in conjunction with a single date code (0-S) indicating a manufacture in 1910. One other exception had a “7-8” code to the left of the logo (Mobley 2004). It is possible that this is a misreading of a “7-S” or “7-B” date code. Although less common than the basemark, the heelmark was probably used during the entire tenure of the company’s hand production (1905-1914).

“SABCo”

Although this mark was listed by Mobley (2004 – two examples), Miller (1999:17 – one example), Fowler (1998:21, 26, 41, 69 – four examples), and Clint (1976:194 – one example), this is actually the same ABCo heelmark described above with a typical American bottle date code instead preceding the logo and lacking any spacing. For example, 7-SABCo means the bottle was made by the Streator plant of the American Bottle Co. in 1907. Date codes range from 6-S to 11-S (including “0” for 1910). Although these are listed with both a capital and lower-case “o,” we have not examined enough examples personally to state that as certain.

S

Peters (1996:9) claimed that an “S” mark was used by the American Bottle Co. for bottles made by the Streator plant. Unfortunately, he did not justify his assertion, and he may have been referring to the 16 S series (below). Circumstantial evidence from Arizona Coke bottles suggests that the “S” may have been used on Coca-Cola bottles only by Southern Glass Co. (Personal communication, Mike Miller 9/19/2006).

American Bottle Co. (1916-1929)

When the Owens Bottle Co. bought the controlling stock in the American Bottle Co., there were only two factories still in operation, Streator and Newark. Both of these were equipped with Owens machines and had eliminated hand production.

16 S Series (1916-1929)

Beginning in 1916, the former American Bottle Co. plant at Streator, Illinois, began marking its bottles with two-digit date codes, followed by the letter “S” – then a one- or two-digit “mold” code [Figure 9]. The marks are always embossed horizontally on the heel of the bottle, and we have only seen them on soda



Figure 9: 16 S Date and Plant Code
[Lockhart]

or beer bottles, usually the former. The preponderance of soda bottles is hardly surprising, since most of the life of the mark was during Prohibition. All bottles bearing the mark are machine made and have what looks like a later Owens scar (with virtually no “feathering”) on the base.

The mark was most prevalent during the earliest seven or eight years of its use (see S 20 series below). Toulouse (1971:455) noted that “it is rare to find a year designation by a number higher than 21, 22, or 23.” However, we have recorded date codes as high as 29 (“29 S 2”), although the most common codes are 16-18. We have yet to find a date code of 19 or 20, a phenomenon possibly related to Prohibition (although we are unable to present a complete explanation).

While we concur with the Toulouse observation about the date codes becoming less common after 1923, he failed to explain the phenomenon. The explanation requires another observation: Most bottles with the 16 S series marks are also embossed on the body with information identifying the bottler or brewery. The company devised a completely separate marking system for “slick-sided” bottles (i.e., those without side or body embossing – see 20 S series below). All bottles connected with American Bottle during this period were machine made.

The gradual disappearance of the 16 S series of marks corresponds with a national trend in the soft drink industry toward bottles with paper labels. From the earliest development of embossed body labels in the early 1800s (Lockhart et al. 2006a:in press), the style had become increasingly popular with beverage bottlers in the U.S. Beginning about 1916, however, an increasing tendency toward the use of paper labels on soft drink bottles swept the industry (see Lockhart 2003:24-25). Paper labels had been the industry standard for beer bottles in the West since Anheuser-Busch first used Pasteurization to enable the sale of bottled beer at long distances (although there were exceptions). Eastern and Midwestern bottles were made in both embossed and paper-label patterns, but near-beer bottles during Prohibition were

primarily paper labeled. As the trend toward paper labels increased, the use of the 16 S series of marks (associated with embossed bottles) decreased.

Toulouse (1971:454) reversed the order of the mark and was confused about the configuration, listing it as S₁₇. Although we have examined literally hundreds of bottles with the 16 S series of marks, we have yet to find a single bottle with the S₁₇ configuration.

16 N Series (1916-1929)

Similar to the 16 S series, the 16 N series identifies the product as being made at the Newark, Ohio, plant. These bottles are much less common than those embossed with the 16 S series of marks. Again, Toulouse (1971:373) presented the configuration as N₁₇, but we have never seen the mark in this form.

In other aspects, the 16 N series mirrored the 16 S series, except that it was much less common. The marks appeared on machine-made, embossed beverage bottles. The 16 N series seems to have disappeared with the final 1923 date code, but this may be related to the small sample observed. The Newark plant either continued to make unmarked bottles or shifted to the manufacture of other bottle types. The plant may have only made beverage bottles when demand exceeded the production capabilities of the Streator factory.

Oddly, Mobley (2004) listed a “15N 1” (with no space between the 15 and the “N”). This may have been a typographical error; we have found no “15S” or “15 S” marks. It is, of course, possible that Newark used the mark a year earlier than Streator. Mobley also illustrated examples marked with “16 N 5”, “17 N 10”, and “18 N 6.” A final interesting mark was “23 N” (with no final numeral). The numeral to the right may have been very indistinct. It seems as if the Newark factory did not use the mark as much or for as long as Streator. Cusi’s Coke Collection (2006) showed a “17 N 1” mark.

Earlier “N” Marks

Members of our group have examined bottles with marks (e.g., 13 N) that do not seem to fit into the above chronology. Another example (14 S) is listed by Mobley (2006). All that we have seen, however, are very faint, and there is a (good?) chance that these are actually later marks. Until we actually observe good “strikes” of the

codes, we remain skeptical of the exceptions.

Another problem with these earlier “exceptions” is that they do not fit with historical or other empirical evidence. In 1916, there was a major shift as the Owens Bottle Co. acquired the majority stock in American Bottle Co. Empirically, there follows a large influx of machine-made soda bottles with the 16 S 1, etc. marks and fewer with the “N” code. These large numbers of examples continue until 1918, when they decline (as Prohibition began in many states). Early (and unclear) examples simply do not fit well.

One possible explanation, however, is that these heelcodes either appeared with very lightly marked ABCo bases or that such bases were intended to go with the bottles, but plain bases were used. Our single example of 13 N and Mobley’s 15N would still remain the only known marked bottle from the Newark factory during the period and is thus unlikely.

AB on Clicquot Club Bottles

Markings on Clicquot Club bottles add an intriguing dimension to the discussion. Clicquot Club sodas began in 1881 and added the Eskimo logo in 1913. See Hopson (2000) for more information on the company. On at least one style of Clicquot



Figure 10: AB Eskimo
on Clicquot Club Soda
Bottle [Schulz]

Club bottle, the Eskimo logo on the base is flanked by the letters “A” and “B” [Figure 10] and at least one of the those has a small “26” embossed below the “A.” This is likely a date code for 1926.

It is entirely possible that Clicquot Club restricted its bottle makers as to how they



Figure 11: Fleur-de-Lis
with AB Mark
[Lindsey – TUR]

could mark products destined for Clicquot. This was not unusual. Both Coca-Cola and Pepsi-Cola (Lockhart 2003; 2004) required

specific markings from bottle manufacturers. Thus, the “AB” split around the Eskimo logo may have indicated the American Bottle Co. However, it is also possible that the bottles were made by Adolphus Busch.

Another odd anomaly is an amber base with a fleur-de-lis in the center flanked by an “A” and “B” mark [Figure 11]. Since the mark is similar to those on the Clicquot Club bottles, it may have been used by the same company.

17 • B • 174

The 17 • B • 174 mark has been observed on the heels of two squat, amber bottles of the type used for Bevo, the near-beer or cereal beverage made by Anheuser-Busch from 1916 to 1929 (Plavchan 1969:159, 616). Although this mark is similar to those used by the American Bottle factories during the 1916-1929 period, the font size is slightly larger, and the dots have never been noted in American Bottle marks [Figure 12]. The “B” is also problematical, if the “17” is a date code (which is almost certain from the type of bottle). The Belleville plant had closed in 1909.



Figure 12: 17 • B • 174 Heelmark
[Lockhart]

The “B” is sans serif, similar to those used by the Buck Glass Co. (see Lockhart 2006). Buck was certainly open during the period, and the plant made beer bottles. We know little about the Buck configuration, however, so this may indeed be the mark of Buck during 1917. Although the Brockway Glass Co. and the Charles Boldt Glass Mfg. Co. both used simple “B” marks, both used marks with serifs (although Brockway used a sans serif “B” mark much later). Although the company was not known for using such a mark, this “B” may have been used experimentally by Adolphus Busch.

54B

Ayres et al. (1980) noted the 54B mark embossed on the heels of amber and aqua, export beer bottles in the Tucson Urban Renewal (TUR) Collection. The researchers attributed the mark to the Buck Glass Co. (see above) and noted additional numbers of “19,” “37,” and “41” along with

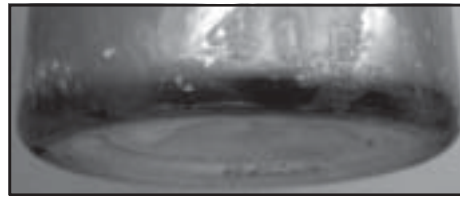


Figure 13: 41B Heelmark
[Lindsey – TUR]

the “B” on other bottles [Figure 13]. However, when the BRG examined the TUR collection in early 2006, we also discovered heelmarks of the same configuration (large, two-digit number; smaller capital letter) with letters “R,” “N,” and “C” replacing the “B” (e.g., 245R; 54C; 10N). Thus, it is unlikely that the “B” or any other letter in the sequence indicates a glass company and equally unlikely that the numbers are date codes. All these marks were found on crown-finished, machine-made bottles.

26 S Series (with or without underline)

Although this mark is occasionally enumerated in archaeological reports, it has yet to be addressed in print. This is actually a group of date/plant codes embossed on the bases of Select style soda bottles (cf. Lindsey 2006 for a discussion of the bottle style) between 1920 and 1930. The marks are found mostly (possibly only) on emerald green (or forest green) and amber bottles, and all are machine made with probable Owens scars.⁹ Although there are some exceptions, the majority of these marks are underlined.

Although more data are needed, and a larger sample would be helpful, we may nonetheless make some general statements about this series of marks. As with the 16 S series, the “S” marks in this group are the most common. Bases of these bottles are consistently marked with a two-digit number followed by a single letter, although the marks in the S series fall into four configurations: 1) number - letter, underlined; 2) number letter (no dash, still underlined); 3) number - letter (no underline); and 4) number letter (no underline). Our recorded S series marks extend from 26 (1926) to



Figure 14: 29S Underlined Basemark
[Lockhart]

30 (1930), and, as noted above, these are far more likely to be underlined than not [Figure 14]. The S series marks are horizontally embossed across the center of the base. The “S” almost certainly represents the Streator plant.

The N series marks are usually in the #4 configuration with no dash and no underline, although there are exceptions [Figure 15]. These range from 1925 to 1930 with a single exception that was recorded as N 20. The apparent 1920 date may simply be an anomaly or it may be a case of misrecording.



Figure 15: 25N Underlined Basemark
[Lindsey – Bottle House]

Like the S series, N series marks are usually embossed across the center of the base. The “N” indicates the Newark plant. As with the previous series, these are much less common than the “S” marks.

A.B.Co. / X / 30N

We have seen a green base embossed with A.B.Co./X/30N [Figure 16]. Although it would be nice to find a complete bottle, this one may be a transition bottle from the older ABCo logo to the newer {numeral} {letter} mark (see 16 S Series below). It may also be a case where an old baseplate was reused with a new mark added to it. A similar base was used by the Root Glass Co., also with a 1930 date code [Figure 17]. By that time, Root, too, was under Owens control. Whether these “X” marks are connected in some way is currently unknown.



Figure 16: ABCo with X and 30N Date Code
[Serr]



Figure 17: Root Mark with X and 30 Date Code
[Lindsey]

Who Used Which Marks?

Chessman and Abbott (1991:26-28) presented compelling evidence that Edward H. Everett was the primary power behind

American Bottle. While Adolphus Busch was a powerful figure (as Chessman & Abbott also noted), his focus was on beer; bottles were only important as a mode of conveyance to move his brew from the brewery to the customer. As a result, Everett converted his home factory in Newark, Ohio, into the primary plant of the company devoted to manufacturing bottles with the new fully automatic machinery.

Although machine production did not begin until 1905, by 1909, the Newark plant operated 27 machines. The Streator plant only had a dozen machines during the same year with two others being installed (*National Glass Budget* 1909:1). The Streator plant already maintained a few semiautomatic machines acquired prior to the merger. Both factories included some hand shops prior to 1914 (Chessman & Abbott 1991:32). It is unlikely that these hand units contributed a significant amount of production in the later years of their use.

The remaining plants, with the exception of a possible machine at Belleville, Illinois, were operated by hand. Even though Toulouse (1971:32) indicated that hand blowing continued for the entire tenure of the company (noting, for example, 12 tanks for hand blowing in 1915, a year prior to the sale of the factories to Owens), that was refuted by other information (see history section). All the plants except Streator and Newark (and Busch's St. Louis factory, withdrawn by at least 1908) had ceased operation no later than 1913.

We may extrapolate answers to some heretofore unexplained quandaries from the above information, although other questions will probably remain unanswered. We will probably never discover, for example, why virtually none of the pre-1916 machine-made bottles from American Bottle were embossed with *any* sort of company identification. Although members of this group have examined literally hundreds (probably thousands) of beer bottles, we have only discovered two that were machine made and contained the AB-connected mark. We have found no machine-made bottles with the ABCo mark (with the possible exception of the Clicquot Club and "X" bottles discussed above). With those very few exceptions, all bottles marked with logos from American Bottle were mouth blown.

It is well known that molds on the Owens machines were difficult to change;

therefore, it was not profitable to make small quantities of bottles. Thus, smaller companies ceased having their names embossed on bottles. Most bottles made by Owens machines in the first half of the 20th century were generic. This, however, does not explain why American Bottle failed to mark baseplates with their logo. It is possible that the bottles were originally unmarked because of the rush to begin production, and the practice, once set in motion, may merely have continued.

A previously unexplained phenomenon centers around why we find date codes in the 6 - S (probably indicating the Streator plant) and 6 - B (probably indicating the Belleville factory) series, but we have yet to find a single coded bottle from the 1905-1915 period, embossed with an "N" mark that would indicate Newark.¹⁰ It is certain that the Newark included hand production in its inventory, and virtually all known bottles with the "S" and "B" codes were hand made. Why the flagship plant neglected to mark its bottles is currently unknown.

Another quandary centers around the marks, themselves. Why did American Bottle use two marks, with one sub-variation? To date, we have only discovered the ABCo mark, embossed horizontally across the central or upper section of the base (or in a single case, in an arched format) or on the heel and the AB-connected mark that is usually either embossed across the central or upper basal sections or occasionally on the heel (the latter, usually on soda bottles). A scarce sub-variation of the AB-connected mark includes the abbreviation "Co."

We suggest a new hypothesis that explains the variation and distribution of the marks. This explanation is based on the well-known ego of Adolphus Busch (see Hernon & Ganey 1991:1-83). Although this is speculation, it is possible that Busch demanded a slightly different mark for his two factories. Even though it would be the mark of the American Bottle Co., it would still clearly identify his plants. In addition, the AB-connected mark would also signify Adolphus Busch.

The hypothesis that the AB-connected mark belongs to the former Busch factories also explains the Toulouse misidentification of the mark as belonging to the Adolphus Busch Glass Mfg. Co. Toulouse belonged to the bottle research network established by May Jones during the 1960s. Jones wrote letters to glass manufacturers and

bottle makers throughout the world and solicited information from virtually every bottle collector she could find.

Jones (1963:[7]) published a letter she received from a Mr. Carroll of Anheuser Busch. Carroll warned Jones that their records had been "destroyed in a fire early in the 1900s." In answer to her question about the AB-connected mark, he stated, "It is my assumption, and this is not based on actual fact that the brand [AB-connected] refers to the Adolphus Busch Glass Co. rather than the American Bottle Co." Many of the Toulouse identifications of marks were based on the best opinions of people in the glass industry and the Jones collector network. In the case of the AB-connected mark, Carroll's guess was the best one known. However, based on our current information, it is *much* more likely that Carroll's ideas about the mark were from the successor to the Adolphus Busch plants, the Belleville and St. Louis plants of the American Bottle Co.

This hypothesis also identifies the Busch St. Louis plant as the user of the AB-connected Co mark. Because the plant was only a part of the American combine from 1905 to ca. 1908, we would expect to find few bottles with the mark. Indeed, bottles with the mark are quite scarce. Shortly before Busch joined the American Bottle group, the St. Louis factory burned. The fire damage was so extensive that Busch had to rebuild the plant. Thus, the St. Louis factory may not have been in production until 1906.

This still leaves unexplained why we find date codes in the 6 - B series with ABCo marks. If the Busch plant used the AB-connected mark, then 6 - B date codes should only be found in conjunction with that mark. At this point, we have little solid evidence. Few studies have matched the date codes with the manufacturer's marks. We need more evidence. However, 6 - B date codes are also found with ABCo marks. The only explanation (assuming the hypotheses are correct) is that the Belleville plant concurrently used both manufacturer's marks. Marks with the "S" code do not follow this pattern; they are only associated with the ABCo mark. This area needs more study.

We have also discovered a bottle with A B Co on the base and 11-S on the heel. What makes the mark interesting is that the S is superimposed over a B. This may indicate that different plants traded molds when needed. It is also possible that the

original mold maker produced the error.

These explanations fail to address one pertinent issue: Where are the marks from the Massillon factories? Both Reed & Co (R&Co) and Massillon Bottle & Glass Co. (MB&GCo) used manufacturer’s marks prior to their inclusion in the Ohio Bottle Co. If the “B” marks equal Belleville (or Busch), and the “S” marks indicate Streator (as we have assumed), why are there no marks for the Massillon plants? We have no answer. It is likely that many, possibly all, the ABCo marks with no accompanying date/plant codes were made at the Massillon plants.

Table 1 below combines the above information into a composite.

Empirical Testing

From March 20 through March 24, 2006, the BRG examined thousands of bottles (140 boxes) from the Tucson Urban Renewal (TUR) collection at the Arizona State Museum. A total of 69 bottles in the collection were marked on the base with one of the American Bottle Co. logos *and* accompanied by a date code on the heel.¹¹ We recorded both attributes.

Recording the TUR collection revealed a previously undocumented variation of the ABCo mark, this one in an arched format on the base, accompanied by the heelmark (date code) “7-B.” Date codes associated with the horizontal ABCo mark included 6-B through 9-B; 6-S through 11-S (including 0-S, the 1910 mark); and S11. Elsewhere, Lockhart (2004c:51) recorded

the shift in 1911 to the letter “S” preceding the two-digit date code. This was only practiced by Streator (the Belleville factory had long since closed) and ceased in 1914 with the elimination of hand production at the remaining two plants (Streator and Newark). Although a few of the later date codes were recorded with no dash (-), the majority include dash (“S-12”) rather than the “S12” format.

In contrast, the AB-connected mark (with one exception) only appeared with a “B” series, heel code extending from 6-B through 9-B. We listed a single “8-5” code in conjunction with the mark. This, however, was probably a mis-recording of a heel code that was very indistinct. The “5” could have been either an “S” or a “B” – although the “B” fits in better with the other recorded date codes for the mark. The single example of the AB-connected-plus-Co mark in the TUR collection had a “6-B” date code on its heel. The only other available example of the AB-connected-plus-Co mark we have observed also bore the “6-B” code on its heel.

All this brings to the fore some interesting ramifications. First, the AB-connected mark is only associated with date codes to 1909. This supports a 1909 closing date for the Belleville plant. The AB-connected mark is the only American Bottle mark found on machine-made bottles. Even though we have found no historical evidence to support machine production, we hypothesize that the former Busch plant in Belleville actually used some form of

machine technology and embossed the AB-connected mark on some of those bottles.

The virtual exclusion of “S” codes associated with the AB-connected mark supports the idea that the logo was used at the Belleville plant. That identification is even further supported by the rarity of the AB-connected-plus-Co mark, in our sample only associated with a “6-B” date code. This is consistent with a use by the Busch St. Louis plant and the withdrawal of that plant from the combine as early as 1907 (certainly by 1908). Thus, the AB-connected series is only present with “B” codes, almost certainly indicating Belleville.

However, both Belleville and Streator appear to have used the ABCo mark. This mark is found with both the “B” series and “S” series date codes. As with the AB-connected mark, the “B” series only extends from “6-B” to “9-B.” However, the “S” series extends from “6-S” to “11-S” as well as one marked “S11.” As indicated above, we have evidence that the numbers were reversed in a series that extended from “S-12” to “S-14.” Findings from the TUR collection indicate that the reversed number/letter series began in 1911. This suggests that Streator used the “S” date/plant codes from 1906 to 1914.

It is strange that the company that originated the idea of date codes never used it on machine-made bottles until 1916. The Root Glass Co., for example began using date codes in 1909. Others picked up the idea in the teens. However, the Belleville

Table 1 – American Bottle Co. Plants, Marks, and Dates (1905-1916)

Plant Location	Dates	Mark	Date Code Style
Newark, Ohio (former Edward H. Everett Co.)	1905-1916	None	None
Streator, Illinois (former Streator Bottle & Glass Co.)	1905-1914	ABCo (on mouth-blown bottles)	6-S to 11-S; S-11 to S-14
Streator, Illinois (former Streator Bottle & Glass Co.)	1905-1911	ABCo Heelmark*	6-S to 11-S
Belleville, Illinois (former Adolphus Busch Glass Mfg. Co.)	1905-1909	AB-connected and ABCo	6-B to 9-B
St. Louis, Missouri (former Adolphus Busch Glass Mfg. Co.)	ca. 1906	AB-connected Co.**	6-B
Massillon, Ohio (former Reed & Co.)	1905-1913	ABCo	None
Massillon, Ohio (former Massillon Bottle & Glass Co.)	1905-1913	ABCo	None
Wooster, Ohio (former Wooster Glass Co.)	Closed in 1905	None	None

* These have been frequently recorded as SABCo mark.

** This identification is hypothetical.

factory seems to have abandoned the practice in 1909, and the Streator plant phased out the date codes more gradually. "S" codes become less common after 1911.

This may be connected with the lack of embossed labels on the machine-made bottles. Breweries and soda bottling works may only have been interested in the number of round trips for bottles that were distinctly theirs. The more generic, paper-label bottles could have been reused by any company; therefore, the plants may have been uninterested in tracing round trips through date codes.

An Alternative Possibility

One other connection may be salient. We found a Reed & Co. base in the TUR collection marked R&Co (arch)/38/087. A similar configuration showed up on a bottle marked AB(connected). Co./B 21/05. The TUR collection also contains one bottle embossed A. B. CO. (in an arch)/088/43 and one with A B CO (horizontal) /3/088. From their rarity and the crudity of manufacture, we deduce that the AB-connected-plus-Co. marks were only used for a short time. Therefore, the former Reed & Co. plant at Massillon, Ohio, possibly used the AB-connected-plus-Co. mark during the 1905-ca 1907 period, then switched to the ABCo mark.

Machine-Made Beer Bottles

A possible explanation for the lack of machine-made bottles with American Bottle Co. marks requires a bit of background information. According to Krebs and Orthwain (1953:24, 26), Anheuser Busch was annually bottling about 100,000,000 bottles of beer by the mid-1890s. Even allowing about 30 round trips per bottle, that equals more than three million individual bottles used per year by a single (albeit the largest) brewery. A decade later, when the American Bottle Co. emerged from the Ohio Bottle Co., bottle sales were greatly increased. Most beer bottles were generic and used paper labels for product identification.

Although we cannot (at this time) produce direct evidence, it is very likely that American Bottle used its automatic machines to produce an enormous quantity of unembossed beer bottles. It is important to remember that the Owens machine had one dramatic flaw: it was only "successful in large production runs" (Miller & Sullivan 1984:86). The entire machine had to be shut down to change the mold on a

single arm. Thus the machine was at its best when producing generic bottles – such as unembossed export beer bottles.

With such a large market for generic beer bottles, the company likely concentrated its machine efforts to filling the demand. Since the bottles, themselves, were generic, American Bottle did not waste the effort required to emboss marks on either the heel or the base. The demand for mold codes, embossed catalog numbers, and date codes to track bottles would not be felt until many years in the future. The much smaller market for the more expensive embossed beer and soda bottles was filled by mouth-blown products. To test this would require examining a large number of unembossed bottles to see if they showed the distinct Owens scars on their bases – which only American Bottle was licensed to produce, at least until 1916.

However, this fits with other styles of early bottles made by the Owens machine and may even have been an early hallmark. Charles Boldt Glass Mfg. Co., the Owens Bottle Co., and the Illinois Glass Co., the only three licensees allowed to make whiskey bottles, produced primarily unembossed bottles (i.e., no embossing on the sides of the containers) during the early years of the 20th century. The same may be said for catsup and grape juice bottles made by the Owens company. Thatcher, however, made embossed milk bottles with Owens machines, and Illinois Glass applied embossed labels to its medicinal bottles.

American Bottle certainly had the capacity to manufacture machine-made bottles. The Newark plant had 28 Owens machines that made "beer, malt and water [i.e., soda] bottles." Every 24 hours, the machines made "210 gross of pint beer bottles and 165 gross of quart beer bottles." The Streator plant had 24 machines. According to the 1914 report, the 17 six-arm machines "each . . . produces 140 gross of quart beer bottles and 170 gross of pint beer bottles in 24 hours." The seven ten-arm machines "make 150 gross of quarts or 230 gross of pints in 24 hours" (*Journal of Industrial and Engineering Chemistry* 1914:864).

Conclusion

The American Bottle Co. was a major producer of beer bottles and a lesser manufacturer of soda bottles during the 1905-1916 period. When the Owens Bottle Co. became the majority stockholder in American Bottle in 1916, changes in style

of production occurred. Probably due to impending National Prohibition, beer bottle production declined (dramatically after 1920, when such bottles were primarily used for near-beers), and soda bottle production increased.

Only two plants used the Owens Automatic Bottle Machines (the former Everett factory in Newark, Ohio and the former Streator Bottle & Glass Co. operation at Streator, Illinois), although all plants maintained hand production. All but the Newark and Streator plants had closed (or, in the case of St. Louis, been withdrawn from the combine) by 1913. Hand production decreased at the two major plants until it ceased in 1914.

The plants used two major manufacturer's marks, AB-connected and ABCo. Empirical evidence suggests that the AB-connected mark was used exclusively by the former Adolphus Busch plants at Belleville and St. Louis. Upon the withdrawal of the St. Louis plant ca. 1907, only Belleville used the mark. The ABCo mark was used by Belleville and the other plants, except Newark, which apparently used no manufacturer's marks.

American Bottle Co. retained its identity after the Owens Bottle Co. became the majority stockholder in 1916. Although the other plants were closed, Streator, and Newark used a new heel code to identify individual factories, combined with date codes (e.g., 16 S 3 for Streator). The plants used the new system, primarily on side-embossed bottles, until 1929, although use of the mark dramatically decreased after ca. 1918 due to the adoption of paper labels by the soda industry and the reduction (and eventual end) of beer bottle production during Prohibition.

A final basemark style (e.g., 26 S – with or without an underline) was used on otherwise unembossed bottles from ca. 1925 to 1930. Letters in these marks identified surviving American Bottle Co. plants (Streator and Newark), and the two-digit codes indicated the date of manufacture. These marks are found almost exclusively on Select-style soda bottles in emerald green and amber colors. Use of the mark extended into the first year of production (1930) of the new Owens-Illinois Glass Co.

References:

Ayres, James E., William Liesenbien, Lee Fratt, and Linda Eure
1980 "Beer Bottles from the Tucson

- Urban Renewal Project, Tucson, AZ." Unpublished manuscript, Arizona State Museum Archives, RG5, Sg3, Series 2, Subseries 1, Folder 220.
- Belleville News-Democrat*, December 27, 1998.
- Casi's Coke Collection
2006 Casi's Coke Collection. <http://www.cokebottles.de/homer2.htm>
- Chessman, G. Wallace and Curtis W. Abbott
1991 *Edward Hamlin Everett: The Bottle King*. Robbins Hunter Museum, Granville, Ohio.
- Commoner & Glassworker*
1908 "Pith of the Week's News: All the New of the Glass Trade Compiled on Condensed form for Quick Reading." *Commoner & Glass Worker* 26(48):1.
1909 "Effect of Prohibition Movement." *Commoner & Glassworker* 27(38):2.
- Feldhaus, Ron
1986 *The Bottles, Breweriana and Advertising Jugs of Minnesota 1850-1920, Volume 1: Beer, Soda, Household*. North Star Historical Bottle Collectors Association, Minneapolis, MN.
- Fowler, Ron
1998 *Ice-Cold Soda Pop 5¢: An Illustrated History of Oregon Soda Pop Bottling*. Privately published, Seattle, Washington. [Revised version of the 1981 edition]
- Heron, Peter and Terry Ganey
1991 *Under the Influence: The Unauthorized Story of the Anheuser-Busch Dynasty*. Simon & Schuster, New York.
- Hopson, Kathy
2000 "Company Profiles: The Clicquot Club & Frostie Rootbeer." *Soda Pop Dreams Magazine* 3(3).
- Jones, May
1963 *The Bottle Trail, Volume 3*. Nara Vista, New Mexico.
- Johnson, Virgil S.
1971 *Millville Glass: The Early Days*. Delaware Bay Trading Co., Millville.
- Journal of Industrial and Engineering Chemistry*
1914 "The Present Status of the Glass Bottle Industry in the United States." *Journal of Industrial and Engineering Chemistry* 6(10):864-865.
- Kane, Ruth
1978 *Wheat, Glass, Stone and Steel: The Story of Massillon*. Privately published, Massillon, Ohio.
- Krebs, Roland and Rercy J. Orthwein
1953 *Making Friends is Our Business: 100 Years of Anheuser-Busch*. Cuero Press, n. p.
- Kroll, Wayne, L.
1972 *Wisconsin Breweries and Their Bottles*. Privately Published, Jefferson, Wisconsin.
- Lindsey, Bill
2006 "Historic Glass Bottle Identification & Information Website." http://www.blm.gov/historic_bottles/index.htm
- Lockhart, Bill
2003 "Exploring the Chronology of Soft Drink Bottles from El Paso, Texas, Part 2: Embossed, Machine-Made Bottles from El Paso's Three Largest Bottlers." *The Artifact* 41:21-45.
2004a "The Dating Game: The AB-Connected Mark." *Bottles and Extras* 15(2):16-17.
2004b "New Insights: The Adolphus Busch Manufacturing Mark." *SHA Newsletter* 37(1):34-35. (Society for Historical Archaeology)
2004c "The Dating Game: Liberty Glass Co, Lamb Glass Co., and Updates." *Bottles and Extras* 15(4):48-51.
2006 "Buck Glass Co.: A Manufacturer of ACL Soda Bottles." *The Soda Fizz* 4(4):12-15.
- Miller, George L. and Tony McNichol
2002 "Dates for Suction Scarred Bottoms: Chronological Changes in Owens Machine-Made Bottles." Paper presented at the 2002 SHA meetings, Mobile, Alabama.
- Miller, George L. and Catherine Sullivan
1984 "Machine-made Glass Containers and the End of Production for Mouth-Blown Bottles." *Historical Archaeology* 18(2):83-96.
- Miller, Michael R.
1999 *A Collector's Guide to Arizona Bottles & Stoneware: A History of Merchant Containers in Arizona*. Privately Printed, Peoria, Arizona.
- Minton, Lee W.
1961 *Flame and Heart: A History of the Glassblowers Association*. Merkle.
- Mobley, Bruce
2004 *Dictionary of Embossed Beers*. <http://brucemobley.com>
- Moody's Investors Service
1932 *Moody's Manual of Investments: American and Foreign*. Moody's Investors Service, New York, New York.
- National Glass Budget*
1904a "Massillon's Bottle Industry." *National Glass Budget* 20(8):9.
1904b "Glass Business Slow in Massillon." *National Glass Budget* 20(23):6.
1904c "Wooster Factory Shut Down." *National Glass Budget* 20(24):4.
1904d "Additional Fires Lighted at Massillon." *National Glass Budget* 20(28):10.
1904e "Big Bottle Company Organized." *National Glass Budget* 20(8):10.
1904f "The Owens Bottle Machine." *National Glass Budget* 20(15):1.
1904g "The Ohio Bottle Combine." *National Glass Budget* 20(19):8.
1904h "Increasing Beer Bottle Output." *National Glass Budget* 20(32):5.
1904i "The Blowing Machine as a Depressor of Prices." *National Glass Budget* 20(18):1.
1905a "An Owens Machine at Newark." *National Glass Budget* 20(50):6.
1905b "Busch Factory Idle." *National Glass Budget* 20(39):6.
1905c "Valuable Properties Acquired by the \$10,000,000 Trust Just formed." *National Glass Budget* 21(16):1.
1905d "The Owens Bottle Machine." *National Glass Budget* 20(45):11.
1905e "Owens Machines at Newark." *National Glass Budget* 21(9):8.
1905f "The Wooster Bottle Plant." *National Glass Budget* 21(28):9.
1905g "The American Bottle Company." *National Glass Budget* 21(15):9.
1905h "The American Bottle Co." *National Glass Budget* 21(16):1.
1905i "Apprentices Not Wanted." *National Glass Budget* 21(30):4.
1909 "Steady March of Progress." *National Glass Budget* 9:1.

1916 "Status of American Bottle Co." *National Glass Budget* 31(40):1.

Pacific Bottler

1930 "Southern Glass Company Liquidated, Plant Dismantled." *Pacific Bottler* 48(11):24.

Peters, Roger

1996 *Wisconsin Soda Water Bottles, 1845-1910*. Wild Goose Press, Madison, Wisconsin.

Plavchan, Ronald J.

1969 "A History of Anheuser-Busch, 1852-1933." Doctoral dissertation, St. Louis University.

Reed, David W.

1980 Interview on November 18 at Massillon Historical Society.

Riley, John J.

1958 *A History of the American Soft Drink Industry: Bottled Carbonated Beverages, 1807-1957*. American Bottlers of Carbonated Beverages, Washington, D. C.

Rydquist, Peter

2002 "Common Glasshouse Maker's Marks on Beer and Soda Bottles." *The Patomac Pontil*. September:2-5.

Samuelson, Peter

2006 "Established 1851, W. H. Jones & Co., Boston, Massachusetts, and Their Walking Bear." *Antique Bottle & Glass Collector* 23(5):10-11, 14-16.

Scoville, Warren C.

1948 *Revolution in Glassmaking: Entrepreneurship and Technological Change in the American Industry, 1880-1920*. Harvard University Press, Cambridge, Massachusetts.

Smith, Michael David

1989 *Texas Glass: An Illustrated History of the Three Rivers Glass Company 1922-1937*. Atwood Printing, New Braunfels, Texas.

Toulouse, Julian Harrison

1971 *Bottle Makers and Their Marks*. Thomas Nelson, New York.

Walbridge, William S.

1920 *American Bottles Old & New: A Story of the Industry in the United States*. Owens Bottle Company, Toledo, Ohio.

Footnotes:

¹ The first license went to Baldwin-Travis, a firm that almost immediately merged with Thatcher Mfg. Co. – to make milk bottles.

² Note that this is an inference by the authors.

³ Toulouse (1971:399) placed the date at September 7, 1905.

⁴ This is not quite correct. Owens acquired the controlling stock in 1916.

⁵ Another article, however, stated that the Reed plant had only one furnace (*National Glass Budget* 1904g:8).

⁶ The timing is interesting. The earliest known American Bottle date code is 1906, and all known American Bottle Co. date codes are on mouth-blown bottles. Thus, we have no way of empirically dating the beginning of production for Owens-machine bottles. Clearly, the machine was operational in late 1905, but 1906 may be a more practical beginning date for Owens machine use. According to Riley (1958:106), machine production of soda bottles did not actually begin until 1907. Since beer bottles were the main production output from the Owens machines, Riley may be correct, and soda bottle manufacture by Owens machine was delayed.

⁷ Mobley updated his website at some point and revised his search system. We were unable to duplicate the results in 2006. A bit of spot checking Mobley's site showed that many marks that still exist in his current system do not show up in the same search parameters that we used in 2004. Accordingly, we have left the data in this report. We do not know whether or not the Mobley bottles actually contain periods with the mark.

⁸ This should be taken as it is intended – speculation. With such a small sample, a 1907 date code could surface in the future.

⁹ As the Owens system became better developed, the distinctive scars lost their distinctiveness. The "feathering" gradually disappeared, leaving no way to tell the Owens scar from that of other automatic machine marks on narrow-mouth bottles.

¹⁰ This changed after the Owens Glass Co. gained control of the American Bottle Co. stock in 1916. After that point, Streator, and to a lesser extent, Newark, embossed date and manufacturer's codes of 16 S 1 or 16 N 1 formats on the heels of returnable bottles.

¹¹ Others were embossed with one of the logos but no accompanying numbers or letters.