

## Glenshaw Glass Co.

Bill Lockhart, Pete Schulz, Beau Schriever, Carol Serr, and Bill Lindsey

The Glenshaw Glass Co., Glenshaw, Pennsylvania, was a noted manufacturer of soft drink bottles prior to the Applied Color Lettering (ACL) era and from that time almost to the present. The company began to offer colored labels on its bottles soon after the process had been perfected for use on soda bottles in 1934. Although soft drink bottles were an important product, Glenshaw made a general line of containers, including fruit jars, liquor bottles, and containers for various types of food over its long history.

### History

#### **Glenshaw Glass Co., Glenshaw, Pennsylvania (1895-2004)**

According to Toulouse (1971:211), “two glassblowers from Pittsburgh, together with a hotel keeper and a retail merchant, decided to build their own glass plant” at Glenshaw, Pennsylvania, and formed the Glenshaw Glass Co. in 1894. Hawkins (2009:236) added that the founders were John Ferrell, John Stehle, John Altmeyer, and John Jacob Beck. The following year, they “erected a small tank with places for three glassblowers,” and John J. Meyer purchased a share in the firm in August (Hawkins 2009:236; Toulouse 1971:211). The company was a cooperative, and the two glassblowers were former employees of the “Tibby flint house in Sharpsburg, Pa.”<sup>1</sup> (Caniff 2005:7). See the Tibby Bros. section for more information on the Tibby companies.

The plant blew its first bottle on January 7, 1895, at a single 12-pot furnace. The company was called the “Glenshaw Glass Company, limited” (i.e., a limited corporation) in 1897, when it made flint, green and amber bottles at two tanks of four shops capacity. A listing for 1898 noted that the plant had two continuous tanks with seven rings (Hawkins 2009:236; *National Glass Budget* 1897:4; 1898:3). According to Toulouse (1971:211), the plant made flint, green and amber glass, in beverage bottles, proprietary medicines and packers. In 1900,

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<sup>1</sup> Sharpsburg is just south of Glenshaw.

the firm erected a new building across the road from the old one and operated from both locations (Hawkins 2009:236).

On May 19, 1903, the plant was destroyed by a fire, but the new factory was operational in only three weeks.<sup>2</sup> The plant made “prescription, liquor, proprietary and packers’ ware” at two continuous tanks and one day tank in 1904. By that time, the company had incorporated with J.J. Beck as president and J.J. Meyer as secretary, treasurer, and manager. A flood in March destroyed much of the previous year’s production, because many bottles had been stored outside – due to the 1903 fire damage. The company added an additional continuous tank (total of 12 rings) in 1905, making flint, green, and amber bottles (*American Glass Review* 1934:167; Hawkins 2009:237).

The Thomas Registers, which first listed Glenshaw in 1907, assigned a “capital rating” to each firm that can serve as a relative scale to observe how well the company was doing economically. In 1907, the plant was rated over \$50,000, and that did not increase to the “over \$100,000” level until 1917.<sup>3</sup> The company returned to the “over \$50,000” level in 1918 and remained there through 1920 (1907:160; 1917:730; 1918:810; 1920:827).

The plant installed three “Johnny Bull” British semiautomatic bottle machines (also called Ashley or United machines) in 1908. Glenshaw had 15 rings by 1911 and made bottles for beer and mineral water, bottles and flasks for liquor, packers’ and preservers’ jars and milk bottles in 1912. By 1913, Glenshaw operated United semiautomatic machines exclusively to make both narrow- and wide-mouth bottles, and the plant used three continuous tanks with 15 rings to manufacture a general line of “flint, green and amber” bottles (Hawkins 200:237; *Journal of Industrial and Engineering Chemistry* 1913:953; Toulouse 1971:211).

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<sup>2</sup> Hawkins (2009:237) provided the fire information. It is unclear whether both plants burned or just one. The reason for the short down time may have been because only one factory was destroyed. The other may have only required minor repairs – if any. There were no additional reports of two plants at Glenshaw. It is possible that the older plant burned and was never rebuilt.

<sup>3</sup> At this time, we only have access to Thomas Registers up to the year 1920.

Glenshaw bought a plant in Swedesboro, Maryland, in 1914 and made glass there until 1918.<sup>4</sup> In July 1916, Glenshaw ordered at least one O'Neill semiautomatic machine. The new machine “does away with one boy”<sup>5</sup>. In 1917, Glenshaw again experienced fire damage, this time remaining out of production for a year (Hawkins 200:237; *National Glass Budget* 1916:1; Toulouse 1971:212). None of the sources discussed the effect of World War I on Glenshaw. Glenshaw may have sold the Swedesboro factory or converted it to war production – or even may have sold the plant to pay for the fire damage to the Glenshaw operation. We simply do not know with current sources.

By 1927, Glenshaw made “flint and green beers and minerals, liquors, flasks, packers and preservers” by machine on two continuous tanks with six rings. In 1930, the listing changed slightly to “flint, emerald green, and green beers” made on three continuous tanks with eight rings. “Sodas” replaced “beers” in 1931 (*American Glass Review* 1927:133; 1930:89; 1931:82). Toulouse (1971:212) noted that Glenshaw continued some hand production until 1930, when the plant listed seven machines. Alois Berner became president that year, with S.B. Meyer as vice president and G.W. Meyer as secretary and factory manager. In 1931, the plant used eight machines (Figure 1). The plant at Glenshaw experienced another fire in 1932, but this one mostly damaged finished bottles and did not hamper production (Hawkins 2009:237).

Although the plant was listed as making beer bottles during Prohibition, it increased production in 1933 to prepare for Repeal (*Ceramic Age* 1933b:180 – Figure 2).<sup>6</sup>

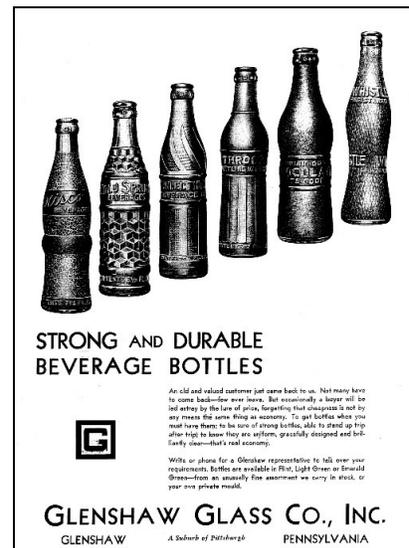


Figure 1 – Glenshaw soda bottle ad (*Glass Packer* 1932)

<sup>4</sup> Toulouse (1971:212) also noted a rumor that Glenshaw bought the Elmer Glass Co., Elmer, New Jersey, but could not confirm it. We have found no evidence for this sale.

<sup>5</sup> Since some employees were required to operate semi-automatic machines, the elimination of one person, in this case one of the numerous boys (under 18 and usually much younger) employed by the factory was a big issue.

<sup>6</sup> There was a veritable stampede of glass factories gearing up to make beer bottles after the repeal of Prohibition in 1933. It was one sure way of surviving the Great Depression.

The 1934 listing showed an increase in the line that included “flint, amber, emerald green and green sodas, minerals, fruit jars, wines and liquors, packers and preservers” made by ten machines at three continuous tanks with ten rings. G.W. Meyer assumed the presidency in 1939 (Figure 3). Glenshaw added a fourth tank in 1947, bringing the total of machines in operation to 14 – then added two more machines by 1952. With the establishment of a branch plant in Orangeburg, New York, in 1961, the firm added a fifth tank (*American Glass Review* 1934:93; 1944:101; Simson 1962:64; Toulouse 1971:212).



Figure 2 – Beer bottle ad (*Modern Brewery Age* 1940)

By 1982, Glenshaw had two plants (Orangeburg and Glenshaw), making “a general line of narrow neck glass containers, food, beverage, liquor industry in flint, emerald green, amber”



Figure 3 – Liquor bottle ad (*American Glass Review* 1940)

on 16 Individual Section (I.S.) machines (*Glass Industry* 1982:32). In late 1983, Glenshaw sold the Orangeburg plant to AR Glass, although the plant had been closed for several months by that time (*Pittsburgh Post-Gazette* 11/25/1983). In 1985, the Glenshaw factory made the same products listed in 1983 at three continuous tanks with six I.S. machines – reflecting the loss of the Orangeburg operation (Perrine 1985:24). The downsizing was caused by the influx of plastic bottles in the early 1980s and the institution of deposit laws in some states. G&G Investments, Inc., bought the

company in 1988, but the firm continued to operate under the Glenshaw name (Hawkins 2009:238).

In 1998, Glenshaw, one of the few remaining independent glass companies, merged with New Anchor, a firm formed in 1997, when G&G Investments purchased the eleven Anchor Glass Container Corp. plants after Anchor declared bankruptcy in 1996 – although the plant may have retained its Glenshaw identity (Owens-Illinois 2001). By 2000, the factory used four continuous tanks to make “flint and emerald green containers, stock and private moulds”

(*National Glass Budget* 2000:50). The plant closed due to bankruptcy on November 22, 2004, because of a natural gas shortage and damage by Hurricane Ivan (Caniff 2005:7; Roller 2005; Hawkins 2009:238). A new firm, Kelman Bottles, LLC, renovated the factory and began producing wine bottles in January 2007, although the firm undoubtedly made other glass items (Figure 4). William Kelman was a native of Scotland, and the plant remains open in 2015 (Simonich 2007; von Mechow 2015; Whitten 2015).



Figure 4 – Kelman at the factory (Simonich 2007)

## Containers and Marks

**G in a Square** (1904-2004, poss. 2007-present)

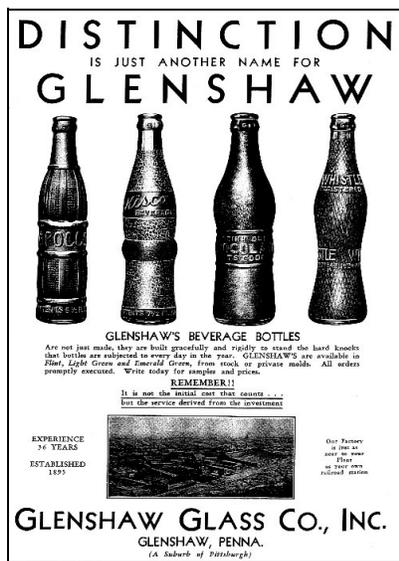


Figure 5 – Glenshaw ad (*Glass Packer* 1931)

Although Glenshaw did not register the G-in-a-Square mark until July 31, 1956 (#631,783), it claimed the first use of the logo in 1904. The mark was embossed on the bases of various types of bottles and jars and on the sides of the Glenshaw Mason jars and the Glenshaw Mason glass lids (Caniff 2005:6). Toulouse (1971:211-212), however, maintained that the mark was not used until 1932. Indeed, the earliest ad we have found with the G-Square mark was from July 1931 (Figure 5).

Industry publications showed the G-in-a-square mark in consistent use from at least 1964 to 2004 (Berge 1964:83;



Figure 6 – Square-G (Jay Hawkins)

Kelman may have resurrected the Square-G logo in 2007. We photographed a jar base with a Square-G mark and an apparent date code of “08” – likely 2008 (Figure 7). If this is correct, the mark continued in use from 2007 to the present.



Figure 7 – Square-G

### Fruit Jars (1940s-1950s)

Glenshaw made three – possibly four – different fruit jars. Three of these were Mason jars. The discrepancies in the dating between Toulouse and Creswick on one hand and Roller on the other are irreconcilable, and we have no evidence to support one or the other – or to offer different dates. We have therefore adopted a middle-way policy, suggesting ca. 1940s-1950s for all of the jars.

### G-Square Mason



Figure 8 – Square-G Mason (eBay)

Possibly, the earliest jar form was a round-cornered square in cross-section, embossed “SQUARE / {G in Square} / MASON ” (Figure 8). Toulouse (1969:139) called this jar the G Square Mason and dated it ca. 1930-1940. Roller (1983:335; 2011:484), however, claimed a manufacture in the 1940s-1950s period. Creswick (1987:124) agreed with the Toulouse dates (Figure 9). The Roller update (2011:484) added that bases on the Square-G Mason jars were embossed

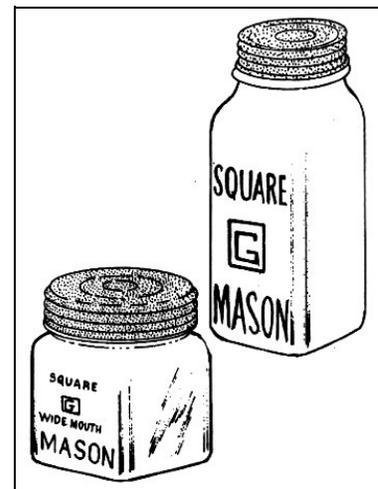


Figure 9 – Square-G Mason (Creswick 1987b:124)

with model (catalog) numbers 3043 (pints), 3044 or 4044 (quarts – Figure 10), and 3047 (half-gallons).

### G-Square Wide Mouth Mason

Roller (1983:335; 2011:484) added a similar jar embossed “SQUARE / {G in Square} / WIDE MOUTH / MASON” – also square in cross-section and dated it to the same 1940s-1950s period, while Creswick (1987:335) mentioned no dates but implied the same 1930-1940 time period as for the regular G-Square Mason (see Figure 9). The Roller update (2011:484) noted that bases of the wide-mouth variation were embossed 3045 (pints) and 3046 (quarts) on their bases.



Figure 10 – Square-G base (eBay)

### Glenshaw Mason



Figure 11 – Glenshaw Mason (eBay)

The final offering – round in cross-section – was embossed “GLENSHAW (in a round-cornered rectangle) / {G in a square} / MASON” (Figure 11). Toulouse (1969:134) dated the jars ca. 1959-1966. Roller (1983:140; 2011:215) added that the lids for these jars were embossed “GLENSHAW G MASON” on the underside. He dated the jars ca. 1940. Creswick (1987:58) used the ca. 1959-1966 period (Figure 12). According to Caniff (2005:6), the manufacturing life of the jar, itself, is unknown, but the glass lids were first

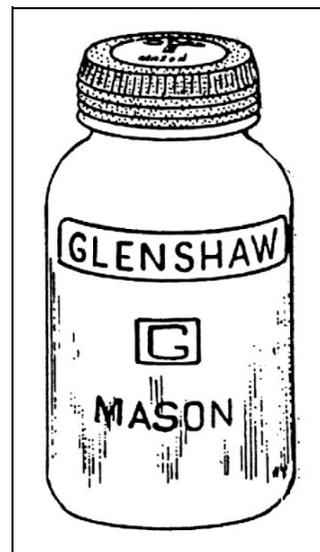


Figure 12 – Glenshaw Mason (Creswick 1987b:85)

produced in place of tin lids as a shortage measure during World War II. The lids were first released in April 1943.

## MALLINGER

Toulouse (1971:193) noted that Glenshaw made a Mason-style jar embossed “MALLINGER” on the side (round in cross-section) for the Samuel Mallinger Co., Neville Island, Pittsburgh – a manufacturer of opal liners – ca. 1931 to 1940. Creswick (1987:58) dated the jars ca. 1959-1966. Creswick (1987:85) virtually copied the Toulouse information but used a ca. 1931-1940 date. Neither, however, explained why Glenshaw was the choice. Surprisingly, neither of the Roller volumes seems to have addressed this jar, although Roller (2011:232) noted that Mallinger’s *Samco* jars were credited to the Knox Glass Bottle Co. and the Glenshaw Glass Co., but no one knows for sure who made the jars. We have not been able to find an example.



Figure 13 –  
G.G.CO. Hutch  
(Fowler 2015)

## G.G.Co. (1910-1916)



Figure 14 – G.G.CO. heelmark



Figure 16 – G.G.CO.  
finish

According to Hawkins (2009:239), the G.G.Co. mark was applied to the heels of Hutchinson-style sodas and other bottles by the Glenshaw Glass Co. He did not suggest a date range, but Hutchinson bottles were generally made between 1880 and ca. 1910. Zang Wood also has a machine-made Hutchinson bottle – used by a Pittsburgh soda bottler – with “G.G.CO.12” embossed on the back heel. The bottle is also noted on Hutchbook (Fowler 2015) and was machine made (Figure 13). We also have a machine-made, crown-finished soda bottle used by a bottler in Maine – embossed “G.G.CO.25” on the back heel (Figures 14-16).



Figure 15 –  
G.G.CO. bottle

Glenshaw adopted the British “Johnny Bull” (Ashley or United) machines in 1908 and began making soda and mineral water bottles. In 1916, the firm added at least one O’Neill machine. All of these were semiautomatics. The few bottles we have seen with “G.G.CO.” heelmarks were machine made in a style that was common between ca. 1890 and 1920.

The only other soda bottle maker with “G.G.CO.” initials was the Graham Glass Co. Initially operating as the Southern Indiana Glass Works, the firm adopted the Graham Glass Co. name in 1910. The Graham family brought in a “Johnny Bull” (Ashley) machine in 1905 and began experimenting with its own designs later that year. Graham machines were almost fully automatic by 1910 (see the section on the Graham Glass Co. for more information).

The bottles we have seen show no signs of the typical machine scars on their bases (Figure 17). This is an indicator of the Ashley (or United or Johnny Bull) machine. Since these machines blew the parison upside down, the mold left no basal scar (Lockhart et al. 2014).



Figure 17 – G.G.CO. base

Unfortunately, this description could fit machines used by either glass house. Both Glenshaw and Graham used Ashley machines. To further complicate the issue, the Graham machine was based on the Ashley operating principles, so it, too, blew the parison upside down – leaving no machine scar on the base.

Although Graham adopted the Ashley machines earlier (1905), the firm name did not become the Graham Glass Co. until 1910, and Graham initiated its complex code system in 1916, so the dates for Graham use of the G.G. CO. logo is restricted to the 1910-1916 period. Glenshaw first used the Ashley machine in 1908, so the use of the mark may have extended from 1908 to ca. 1920.

Although either firm *could* have used the G.G.CO. logo, we consider Graham the more likely choice. The marks were relatively scarce, so they were probably only used for a short period. The four-year 1910-1916 period fits perfectly into the Graham sequence, immediately prior to the adoption of the more complex Graham codes. Glenshaw, on the other hand, is

documented as using the G-Square mark from 1904 to the end of the company in 2004. There is no intuitive reason to assume that Glenshaw used another logo variation.

### **GGCo Monogram (ca. 1908-ca. 1920)**

We observed a colorless shoo-fly flask embossed on the side with a GGCo monogram surrounded by two embossed circles (Figure 17). “UNION MADE” was embossed between the circles in the upper half and “G.B.B.A. OF U.S. AND C.” in the lower half. A ribbon extended with “TRADE” to the left and “MARK” to the right. The flask was otherwise unmarked, although the horizontal seam just below the finish identifies it as being machine made. The lack of a basal machine scar, however, suggests the Ashley Machine as the production device (Figure 18).



Figure 18 – GGCo monogram

As noted on a 1986 commemorative beer bottle, the Glenshaw Glass Co. had a long history of union production (Figure 19). It is also possible that the Gaston Glass Co. made this flask (see



Figure 19 – Flask base

below), although we have not found evidence that Glaston used machines. In addition, we have found no evidence that Graham was a union shop; therefore, Glenshaw is the logical choice for the use of the GGCo monogram ca. 1908-ca. 1920. Regardless of the manufacturer, this was likely a one-time production, possibly as a salesman’s sample.

### **Possible Alternative Manufacturer**

#### **Gaston Glass Co., Gaston, Indiana (1902-1906)**

W.H. McIntire, J.P. Kandel, and F.M. Boyer incorporated the Gaston Glass Co. on October 22, 1901, at Gaston, Indiana. McIntire was president, with Kandel as vice president,

and Boyer as secretary and treasurer. The plant made its first ware on January 2, 1902. The factory produced “all kinds of flint flasks” and warned that “all orders subject to a strikes, accidents, etc.” (Roller 1994:35). Although a 1902 letterhead intimated that the plant was unionized (“subject to strikes”), a 1903 inspection report stated that the factory was not organized (State of Indiana 1904:65). The firm made prescription and liquor ware in 1904 but was out of business by 1906 (*American Glass Review* 1934:151). Unfortunately, none of the information included whether the plant used machines.

## Codes

### Date Codes

An interesting twist in dating crown-finished bottles was used by Glenshaw from 1935 to 1958. The plant embossed its distinctive G-in-a-square on the base of each bottle to identify itself as the manufacturer while embossing a single letter of the alphabet, on the reinforcing ring of the crown finish (Figure 20). Each



Figure 20 – Finish date code

letter was applied only for a single year beginning with “G” (Glenshaw) in 1935, “H” in 1936, “I” in 1937, etc. In 1953 (“Y”), the numeral “53” was also embossed on the base. The following year saw the end of the alphabet, so Glenshaw reverted to the beginning and used an “A” code in 1955. The firm continued to use both codes until 1958 (“D”), when the letter system was discontinued. Bottles manufactured after 1958 continued to use the two-digit date code on the base until the company closed (Sweeney 1995:75). Note that this date code system roughly coincided with the advent of the ACL process applied to soda bottles beginning 1934.

An example that used this dating system points out the danger in assuming that the embossing of two numerals (e.g., 42) indicates the date of manufacture – the normal type of date code embossed on soda bottles. A Whistle bottle manufactured by Glenshaw had a “Y” on the finish that indicated the year 1953. The opposite side of the finish, however, was embossed with the numerals “56” which could easily lead a researcher into selecting 1956 as the year of

manufacture. To further complicate the dating process, the number “42” was embossed on the base! The natural inclination would be to accept the embossed basal designation and assume the bottle was made in 1942, an eleven year discrepancy from the actual date of 1953 (Lockhart 2000, Chapter 2). The meaning of these additional two-digit codes is not known to us.



Figure 21 – Closeup of 1931 ad (*Glass Packer* 1931)

The initial “G,” however, may have been applied earlier. Advertisements by Glenshaw at least as early as July 1931 show drawings of Glenshaw soda bottles with “G” embossed on the reinforcing ring of the crown finish (*Glass Packer* 1931:314). It is thus possible that the “G” was used on bottles from 1931 (or earlier) until 1935, when the alphabetical dating code system began (Figure 21). Mike Elling discovered a bottle with the G-Square mark on the base along with “G1” and “33” on opposite sides of the reinforcing ring of the finish. This may also support the hypothesis that the “G” was used earlier.

## Liquor Codes

Beginning August 1, 1934, every manufacturer of liquor bottles had to emboss on each container the maker’s permit number, the year of manufacture, and the permit number of the buyer (i.e., the glass maker’s customer that intended to fill the bottle). In addition, the words “FEDERAL LAW PROHIBITS THE SALE OR RE-USE OF THIS BOTTLE” had to be embossed on the shoulder of each container. After November 1, 1934, all empty bottles imported into the United States to contain liquor had to have a similar permit and the federal warning label. As of January 1, 1935, any imported liquor had to be in bottles with permit numbers and the federal warning. The bottle manufacture’s symbol was allowed to be inserted between the permit number and the date code (*Glass Packer* 1924:502-503).

The Glenshaw Glass Co., Inc., was issued two numbers, #14 for the Glenshaw plant and #176 for the Orangeburg factory. Although the requirement for most of the codes – as well as the federal warning – was removed in December of 1968, the permit number still had to be

embossed on any bottle of eight-ounce capacity or more in front of “the last two digits of the year of manufacture” (Owens-Illinois 1969). The logo of the manufacturing company typically remained between the permit number and the date code.

## Color Print Labels

Although this topic is too broad to be sufficiently covered here, the glass industry adopted a form of baked enamel labeling for use on soda bottles in 1934 (Paul & Parmalee 1973:28; Riley 1958:145, 267). The process created colorful, elaborate labels, the successor to the embossed “specialty” bottle (also called proprietary or deco). Now, soda bottlers could advertise their products with one, two, three, or even four colors, although time, cost, and complications of the process made tri-color bottles unusual, and four colors rare. One or two colors, however, remain common in the 21<sup>st</sup> century



Figure 23 – Color label bottle (eBay)



Figure 22 – 1951 Color label ad (eBay)

The original process was called Applied Color Lettering (ACL) by the Owens-Illinois Glass Co. Liberty Glass Co., another major maker of soda bottles, named its process Lustro-Color. The Thatcher Mfg. Co. called its brand Pyroglazing (a term used today by milk bottle collectors to describe the process). Glenshaw simply called its baked enamel “Color-Prints” or “Color-Print Labels” and was advertising the process by at least 1938 (Figures 22 & 23). A 1949 ad (*American Carbonator and Bottler* 1949:13) suggests, “There’s one sure way to do it. Have your brand in a distinctive package with a distinctive label!” – then added, “The label’s in COLOR on the glass! Shoulder labels, too, to help your brand demand!”

## Discussion and Conclusions

The Glenshaw Glass Co. was active in the glass business for more than a century. During that time, it spanned the transition from mouth-blown bottles in multi-part molds through machine manufacture of glass bottles and into the era when plastic drink bottles became common. The company was one of the pioneers of the ACL process, offering it on soda bottles almost as soon as ACL first became used in 1934. Glenshaw used the same G-in-a-square mark, embossed on bottle bases, for at least a full century (1904-2004), possibly also from 2007 to the present.

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## Sources

### *American Carbonator and Bottler*

1949 "Keep the Sales Curve Up." *American Carbonator and Bottler* May:13.

### *American Glass Review*

1927 "Glass Factory Yearbook and Directory." *American Glass Review*, Pittsburgh, Pennsylvania.

1930 "Glass Factory Yearbook and Directory." *American Glass Review*, Pittsburgh, Pennsylvania.

1931 "Glass Factory Yearbook and Directory." *American Glass Review*, Pittsburgh, Pennsylvania.

1934 "Glass Factory Yearbook and Directory." *American Glass Review*, Pittsburgh, Pennsylvania. Includes reprint of the *Glass Trade Directory for 1904*. Commoner Publishing Co., Pittsburgh, Pennsylvania.

1944 "Glass Factory Yearbook and Directory." *American Glass Review*, Pittsburgh, Pennsylvania.

Berge, Dale L.

1980 *Simpson Springs Station: Historical Archaeology in Western Utah*. Cultural Resource Series No. 6. Bureau of Land Management, Utah.

Caniff, Tom

2005 "Fruit Jar Rambles." *Antique Bottle & Glass Collector* 22(5):6-9.

*Ceramic Age*

1933 "Heavy Bottle Production in South Jersey." *Ceramic Age* 21:180

Creswick, Alice

1987 *The Fruit Jar Works, Volume II, Listing Jars Made Circa 1900 to Modern*. Privately printed, Grand Rapids, Michigan.

Emhart Glass

1982 *Emhart Punt Marks*. Emhart, Zurich, Switzerland.

1996 *The Emhart Book of Punt Marks*. Emhart, Zurich, Switzerland.

2000 "Punt Marks."

<http://www.emhartglass.com/publications/onlinepublications/puntmarks/punt.pdf>

2005 "Punt Marks Guide" Emhart Glass Online. <http://www.emhartglass.com>

*Glass Industry*

1982 "Glass Manufacturers, Primary." *Glass Industry* 62(10):9-64.

*Glass Packer*

1924 "Liquor Bottle Regulations Summarized for Glass Packer Readers." 13(8):502-503.

1931 “Distinction is Just Another Name for Glenshaw.” Advertisement. *Glass Packer* 10(8):314).

Lockhart, Bill, Beau Schreiver, Bill Lindsey, and Carol Serr

2014 “The Ashley Semiautomatic Bottle Machine.” Historic Glass Bottle Identification & Information Website: Glassmaking and Glassmakers.

<http://www.sha.org/bottle/pdf/AshleyMachines.pdf>

Hawkins, Jay W.

2009 *Glasshouses & Glass Manufacturers of the Pittsburgh Region, 1795-1910*. iUniverse, Inc., New York.

*Journal of Industrial and Engineering Chemistry*

1913 “The Present Status of the Glass Bottle and Hollow Ware Industries in the United States.” *Journal of Industrial and Engineering Chemistry* 5(11):951-954.

*National Glass Budget*

1897 “Flint and Green Glass Review.” *National Glass Budget* 13(26):4-6.

1898 “Flint Bottle Factories.” *National Glass Budget* 14(18):3.

1916 “Big Demand for O’Neill Machines.” *National Glass Budget* 32:(8):1.

2000 *Glass Factory Directory of North American and U.S. Industry Factbook*. National Glass Budget, Hempstead, New York.

Owens-Illinois Glass Co.

1969 “Industry Liquor Bottle Permit Numbers: Glass Container Manufacturers Authorized to Manufacture Liquor Bottles.” Manuscript revised 8/22/69.

2001 “*Consolidation of the United States Glass Container Industry*.” Spreadsheet, Owens-Illinois Glass Co.

Paul, John R. and Paul W. Parmalee

1973 *Soft Drink Bottling: A History with Special Reference to Illinois*. Illinois State Museum Society, Springfield, Illinois.

Perrine, Lowell E.

1985 "Directory Issue 1985." *Glass Industry* 66(3):1-170.

Powell, Jerry

1990 "Who Made the Bottle?" <http://www.p2pays.org/ref/04/03222.pdf>

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.

Roller, Dick

1983 *Standard Fruit Jar Reference*. Privately published.

1994 *Indiana Glass Factories Notes*. Acorn Press, Paris, Illinois.

2005 "Glenshaw Glass Co." Dick Roller files.

2011 *Standard Fruit Jar Reference: 2011 Update*. Edited by Jerome McCann and Barry Bernas. Fruit Jar Annual/Phoenix Press, Chicago.

Simonich, Milan

2007 "Glenshaw Glass breaks mold: In two years, Shaler firm has rebounded from flood, bankruptcy." *Pittsburgh Post-Gazette*, May 24.

Simpson, H.E.

1962 "The Glass Industry – 1961." *Glass Industry* 43(2):63-67.

State of Indiana

1904 *Seventh Annual Report of the Department of Inspection of Manufacturing and Mercantile Establishments, Laundries, Bakeries, Quarries, Printing Offices and Public Buildings to the Governor 1903*. State of Indiana, Indianapolis.

Sweeney, Rick

1995 *Collecting Applied Color Label Soda Bottles*. Painted Soda Bottle Collectors Association, La Mesa, California.

Thomas Register of American Manufacturers

1907-1908 *Thomas' Register of American Manufacturers and First Hands in all Lines: The Buyers Guide*. Thomas Publishing Co., New York.

1917 *Thomas Register of American Manufacturers and First Hands in All Lines*. 9<sup>th</sup> ed. Thomas Publishing Co., New York.

1918 *Thomas Register of American Manufacturers and First Hands in All Lines*. Thomas Publishing Co., New York.

1920 *Thomas Register of American Manufacturers and First Hands in All Lines*. Thomas Publishing Co., New York.

Toulouse, Julian Harrison

1969 *Fruit Jars*. Thomas Nelson & Sons, Camden, New Jersey.

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

Von Mechow, Tod

2015 "Soda & Beer Bottles of North America: Bottle Attributes - Beer & Soda Bottle Manufacturers." <http://www.sodasandbeers.com/SABBottleManufBeerSoda.htm>

Whitten, David

2015 "Glass Factory Marks on Bottles." <http://www.glassbottlemarks.com/bottlemarks/>