

A.R. Samuel, the Philadelphia Jar Maker

Bill Lockhart, Jim Sears, Beau Schriever, and Bob Brown

A.R. Samuel was apparently the first glass house devoted almost entirely to the production of fruit jars (although the firm made a limited run of flasks). Roller (1983:102) briefly examined the relationships between Samuel and several jar inventors – notably William T. Gillinder and Edwin Bennett – but most of those have not been fully explored. Samuel was the manufacturer of several types of fruit jars, most of which were advertised by the company.

Histories

A.R. Samuel and the Keystone Glass Works, Philadelphia (1863-1874)

In the October 1994 *Fruit Jar Newsletter*, Dick Roller provided a look at some of Adam R. Samuel's early experience:

According to an 1875 biographical article in *The Manufactories and Manufacturers of Pennsylvania of the 19th Century* (pp 293-294), Adam R. Samuel had been an apprentice at the Dyottville Glass Works, in Philadelphia . . . [Samuel] entered the firm of Sheets & Duffy, proprietors of the Kensington Glass Works, in Philadelphia. A general depression and a glassworkers' strike soon ended Samuel's connection with Sheets & Duffy.

In the Spring of 1859, Samuel began manufacturing fruit jars in one of the furnaces of the Kensington Glass Works, and was reported to have made 2,500 gross of fruit jars that year.

According to Roller (1983:425), Samuel began his apprenticeship with Dyottsville Glass Works ca. 1864 and remained there until 1839, when he moved to Duncannon, Pennsylvania, to work in the iron industry for Fisher, Morgan & Co. Roller placed his return to Philadelphia at 1848 but claimed he returned to the iron industry from 1851 to 1856. However, the 1850 and 1853 Philadelphia directories called Samuel a "glass blower" with his residence at Duke above Hanover. Roller placed Samuel with Sheets & Duffy at the Kensington Glass Works in 1856, and he was still blowing glass at the Duke St. address in 1858.

These three directory entries suggest that Roller was incorrect about Samuel's defection back to the iron trade. He may have had continuous glass employment from 1848 to at least 1858, instead. Samuel probably continued to produce jars at the Kensington Glass Works until he opened his own factory.

Adam R. Samuel began construction of the Keystone Glass Works at the corner of Howard and Oxford Streets in 1862; the plant actually began production on February 22, 1863. The following year, he built a 66' x 117' brick building two-and-one-half stories high at the site. In 1865, Samuel added another building, this time three stories tall and 25' x 117' in perimeter. He added yet another building in 1867, this one 33' x 100' – again three stories in height (Roller 1983:443; 1998). An 1870 Hexamer Survey map confirmed the location of the factory at the southeast corner of Howard & Oxford Streets, the only map confirmation for the location that we have found.

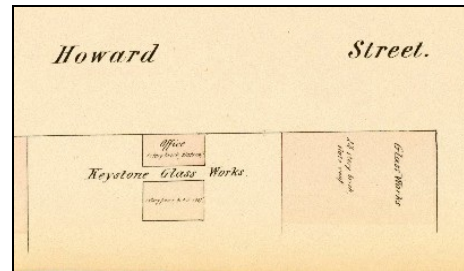


Figure 1 – Keystone Glass Works 1870 (Courtesy of the Free Library of Philadelphia, Map Collection)

Unfortunately, the map only showed the western edge of the property with little detail (Figure 1).

The plant was one of the earliest to make the manufacture of fruit jars a specialty, advertising Willoughby, Haller, Kline, Mason and Franklin fruit jars by 1867 (Figure 2). Freedley (1867:301) noted that:

Opposite to [the Gillinder & Bennett] works, is the extensive FRUIT JAR manufactory of A.R. SAMUEL, who is the only manufacturer in the country who makes this branch a specialty. He has control of five of the most popular patents, and a furnace that is capable of turning out from seven to ten thousand gross of jars per annum.

By 1870, Samuel had incorporated the business, although the source was unclear as to whether the corporate name was A.R. Samuel or the Keystone Glass Works. On page 740 of the October 1994 *Fruit Jar Newsletter*, Dick Roller noted that:

the 1870 Industrial Census of Philadelphia, Pa. listed A.R. Samuel, Keystone Glass Works., Mfr. of Fruit Jars, Capital: \$50,000, employs 60 men and 60 children, Payroll \$50,000 per year, active 10 months per year, Raw Material: 250 tons Soda Ash; 1,000 tons Sand; 8,750 bushels Lime; 2,500 tons Coal; 6,000 cords Wood. Annual Product: 100 gross Pint Jars - \$700; 9,000 glass Quart Jars - \$72,000; 4,000 gross Half Gallon Jars - \$48,000. Note the extremely small number of pint jars!

Samuel died on February 24, 1873, and his sons – William H. and John B. Samuel – were listed in the Philadelphia directory the following year (Roller 1983:443; 1998; 2011:648; McKearin and Wilson 1978:173).¹ The sons may have continued to operate briefly – possibly filling existing orders – but the *Legal Gazette* for March 27, 1874, listed the Keystone Glass Works up for an “Orphans’ Court Absolute Sale” on April 5. It was listed as “Very valuable property. Large Three-Story Buildings . . . with steam engines, boiler, ovens, &c., fronting on Oxford, Howard & Hope Streets . . . Estate of Adam R. Samuel, dec’d.” The Quaker City Dye Works ended up with the property, probably by winning the auction.



Figure 2 – A.R. Samuel 1867 ad (Freely 1867:298; Roller 1983:130)

By 1883, the firm of Grange & Co. operated the Keystone Glass Works, but the Grange factory was located at Frankford Creek, near Melrose and Whitehall. Although the plant carried the same name it was *not* the former Samuels factory. The Mason Fruit Jar Co. purchased the plant in 1885 continued in business until ca. 1905 (Roller 1898). See the section on the Mason Fruit Jar Co. for more information.

Haller & Samuel, Philadelphia (1862-1865)

Adam R. Samuel was listed as a “glass blower” at “Duke ab [above] Hanover” in 1853 and at “Duke bel [below] Cherry” in 1858, apparently making jars for his own firm for several

¹ For a biography of Samuel, see Roller (1983:425).

years at a furnace of the Kensington Glass Works (Roller 2011:676 – also see above). He was listed as dealing in “provisions” in 1860. The following year, Samuel offered “patent jars” – likely still produced at Kensington. Freedley (1867:301) provided an interesting set of dates in 1867 “In 1857, Mr. Samuel had but two competitors in the whole country, and even so late as 1859, it is estimated that there were not more than fifteen hundred gross made annually.”

This statement can be understood in two ways. The understanding obviously formed by Roller, who knew about the Freedley book (and by our first study), was that it was a generalized statement about the growth of the fruit jar industry. However, it could also suggest that Samuel was producing jars for sale as early as 1857. *If* the latter is correct, Samuel must have been blowing the jars at Kensington and selling them on his own. In many of these studies, we have shown glass firms leasing space in another glass house that was still in production, so there is no question that Samuel *could* have been making his jars at the Kensington plant.

William Haller joined Samuel in the firm of Samuel & Haller in 1862 as dealers in fruit at 459 N 2d (Philadelphia City Directory 1862; Roller 1983:44; 2011:648). The pair began operations together by July 17, 1862, when an R.A.O. Kerr advertisement in the *Altoona Tribune* noted that the Ladies Choice jars as “manufactured and sold by Haller & Samuel, sole agents” at Philadelphia. It is possible that Samuel actually made the earliest of these jars at the Kensington Glass Works. He may have mostly made jars for his own “provisions” business, listed in 1860. This idea is supported by an 1864 note in *Gardner’s Nightly* (1864) that “Haller & Samuel, Second Street, above Noble, bought a collection of fruit, put up in water only, of a very fine quality; also green corn on the cob, in airtight jars, the air being exhausted by an air pump of their own invention.” This suggests that the pair were selling “canned” fruit as well as jars.

Haller & Samuel remained at the same address in 1863, but the listing now called the business “fruit jars.” Although the business was in Philadelphia, Haller’s residence was at Carlisle, Pennsylvania. In 1864, the two were listed separately, with Haller selling “airtight jar covers,” with Samuel only as a “merchant” – although both remained at the same address. The pair were listed together again the following year, with the business noted as “airtight stoppers” – still at the same address. Samuel, alone, was a “glass manuf.” in 1866 and 1867 (Philadelphia Directories).

Although Samuel began construction of the Keystone Glass Works in 1862, the plant did not actually begin production until February 22, 1863 – *seven months* after Haller & Samuel were apparently selling Ladies Choice jars to a retailer at Altoona! Further, there is no evidence that the Keystone Glass Works ever made the Ladies Choice jars – although the plant likely made Haller’s other jar, the Ladies Favorite. The Ladies Choice jars were mostly sold in the Pittsburgh area, possibly made by Adams, Macklin & Co. However, Adams, Macklin & Co. reorganized ca. 1861 as Adams & Co. There is no evidence that Adams & Co. continued production of the Ladies Choice, so the timing was tight (Creswick 1987:86; Roller 1983:161).

Adams, Macklin & Co. of Pittsburgh also made the KEYSTONE jar that takes the same closure as the Ladies Choice (Caniff 2008:8; 2010:6; Roller 1983:180; 2011:277). Since the Ladies Choice jars were mostly sold in the Pittsburgh area, these may have been made by Adams, Macklin & Co. as well. Also see Lockhart et al. (2014) for a thorough discussion of Keystone, Ladies Choice, and related jars.

Despite Samuel’s previous connection with the Kensington Glass Works, he may have had difficulty finding a reliable glass producer for the Haller jars. Although Dr. Dyott made some jars at the Kensington Glass Works, they were not a major focus of the glass house. Similarly, the Adams factories produced some jars at Pittsburgh, but the firm primarily made tableware. Samuel may have reentered the glass business because of this empty niche in jar manufacture.

Haller’s connection with Samuel is unclear after the dissolution of the partnership. Haller apparently returned to Carlisle, Pennsylvania, where he designed what would become the Ladies Favorite jars. His re-connection with Samuel is also unclear, but, by 1869, Haller was a sales representative for the Keystone Glass Works. In his letter to Stephen R. Pinckney on April 30, 1869, Samuel mentioned that “Haller is out and will no doubt bring in some large orders” (Figure 3).

Yarnall and Samuels, Medford, New Jersey (1863)

Knittle (1927:361), Van Rensselaer (1969), Toulouse (1971:50-51), Pepper (1971:172), and McKearin and Wilson (1978:173) all placed Yarnall and Samuels of Philadelphia as buying

the Medford glass factory in 1863 but placing so much money into improvements that they had no operating capital left. The plant apparently never actually opened. By 1875, however, Yarnall & Trimble operated the Medford Glass Works, making various types of bottles and flasks (Pepper 1971:173).

McKearin and Wilson questioned whether the identification by the other authors of Adam R. Samuels (*sic*) as the partner is correct, although they offered no substitute. It is also possible that Samuels is actually a different person from A.R. Samuel.



Figure 3 – A.R. Samuel letterhead, April 30, 1869 (Ron Ashby collection)

William T. Gillinder and the Franklin Flint Glass Works, Philadelphia (1863-present)

Many earlier researchers attributed the Franklin Jar (discussed below) to the Franklin Flint Glass Works – an obvious connection, since William T. Gillinder was one of the inventors. Although subsequent research disclosed that the jars were made by A.R. Samuel, the factories were adjacent to each other, and the owners appeared to have a collegial rather than competitive relationship. Thus, a short history of Gillinder and his plant is relevant here.

William Thynne Gillinder, a British glass maker, migrated from England to the United States in 1855, opened his first glass plant at Baltimore, Maryland, and became friends with Edwin Bennett, a local potter. After his first venture failed, Gillinder moved to Philadelphia in 1861 and established the Philadelphia Flint Glass Works at Maria St. between 4th & 5th Streets. The plant made tableware (Wheaton Arts 1994).

Gillinder was forced to move the factory due to complaints about smoke damage by nearby residents. The new location was at Howard and Oxford Streets, diagonally across the street from the eventual location of A.R. Samuel's Keystone Glass Works, and Gillinder renamed this one the Franklin Flint Glass Works. The product line was again tableware. Two things soon occurred to create change for the firm and confusion for later researchers (Wheaton Arts 1994).

The year 1863 was a time of change. Edwin Bennett became worried about the proximity of Civil War battles to Baltimore – the home of his pottery – and moved to Philadelphia. Meanwhile, Gillinder had never recovered from the cost of relocation and was in financial trouble. Bennett became his partner, and the firm of Gillinder & Bennett was formed. In 1867, with the Civil War safely over, Bennett sold his interest to two of Gillinder’s sons – James and Frederick – and returned to Baltimore to resume his pottery. There is no evidence that Gillinder & Bennett ever manufactured any fruit jars. The firm now became Gillinder & Sons (Wheaton Arts 1994).

The senior Gillinder died on February 22, 1871. Although sources are unclear, the company apparently incorporated at this time, with all of the Gillinder children becoming stockholders. James and Frederick remained in charge. In 1901, the firm purchased a glass plant at Tacony, Pennsylvania, although some production continued at the antiquated Philadelphia factory (Wheaton Arts 1994). The firm remains in business in 2021 under the name Gillinder Glass. For a much more complete history, see Wheaton Arts (1994).

Related Patents

A.R. Samuel advertised a number of fruit jars in 1867 and 1868 and discussed others in 1869 letters. In addition, it is highly likely that the plant made Ladies Favorite jars, designed by Samuel’s partner and later employee, William L. Haller. The patents reviewed below will help in understanding the later discussions about the related jars.

Edwin Bennett, 1857

On September 1, 1857, Edwin Bennett received Patent No. 18,078 for an “Improvement in Sealing Cans.” Although this was Bennett’s initial patent, it was apparently unconnected with any fruit jars produced by A.R. Samuel. This was essentially a metal plate or cap attached to a cork stopper. Parts of the design, however, may have influenced Bennett’s later patents (Figure 4).

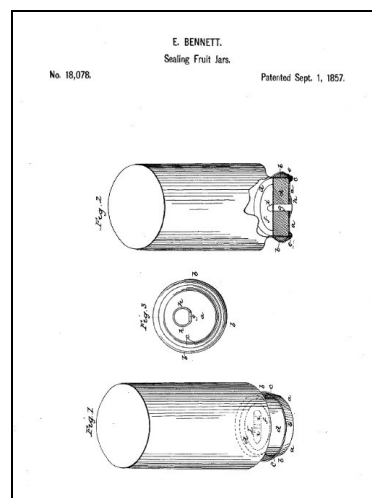


Figure 4 – Bennett 1857 Patent

James D. Willoughby, 1859

James D. Willoughby received Patent No. 22,535 for an “Improvement in Sealing Cans and Bottles” on January 4, 1859 (Figure 5). Willoughby resided at Carlisle, Pennsylvania, and

assigned the patent to C.M. Alexander of Washington, D.C. – a patent attorney (see Willoughby discussion below). The device consisted of four pieces: 1) a metal bottom plate with an upright screw; 2) a rubber gasket or grommet that fit over the screw; 3) a metal top plate that also fit over the screw above the grommet; and 4) a wingnut to tighten the assemblage. When screwed down, the two plates compressed the rubber grommet forcing it against the internal sides of the finish to create a seal (Figure 6).

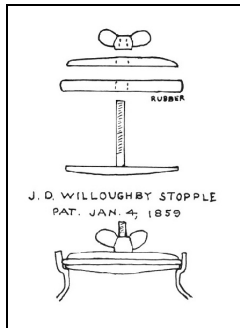


Figure 6 – Parts of the Willoughby Stopple (Toulouse 1969:330)

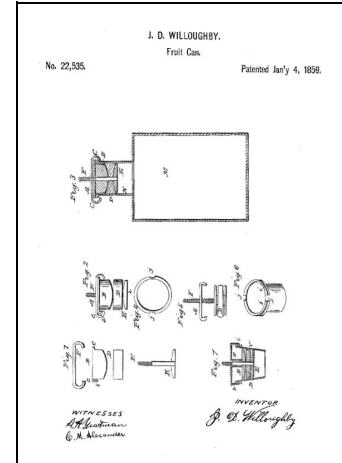


Figure 5 – Willoughby 1859 Patent

John M. Cooper and William L. Haller, 1860

John M. Cooper and William L. Haller received Patent No. 29, 544 for an “Improvement in Self-Sealing Fruit Cans” on August 7, 1860 (Figure 7). The vessel, itself, “could be made of glass or any other vitrified or mineral material, or it may be made of metal, such as tin.” The material for the closure was unspecified, but, in actual use, it was always made of cast iron. The cover was hemispherical in shape with a cast-iron yolk held in place by a wing screw in the center. Haller assigned his share to Cooper.

The device consisted of three cast-iron parts. The first was a rounded cap that fit over the *outside* of the finish. Inside the cap was “an india-rubber gasket” that fit against the outside of the finish.

Above this was a yolk, the lower ring of which encircled the cap, while the curved upper section held the final part – a wing screw – that pressed against the cap. As the screw was turned, the pressure against the cap forced the gasket against the outside edge of the jar’s finish (Figure 8).

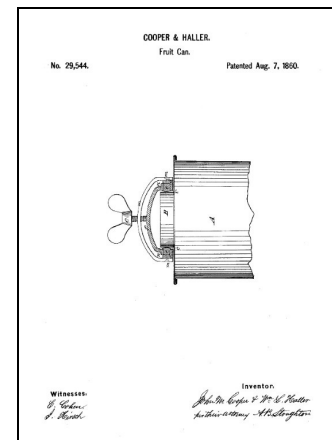


Figure 7 – Cooper & Haller 1860 Patent

This patent formed the basis for the jars embossed “H&S” as well as the initial Ladies Favorite jars. The jars were soon crowded out of the market by the much better closures of the Willoughby and Kline stopples.



Figure 8 – Cooper & Haller closure (North American Glass)

A. Kline, 1863

On October 27, 1863, A. Kline received Patent No. 40,415 for an “Improved Stopper for Jars and Bottles” (Figure 9). Kline noted that his “stopples” was tapered downward, like “the usual glass stopple of a salt mouthed bottle” with an “elastic band or ring of prepared caoutchouc or its equivalent” around the tapered end. The band seated against a ledge built into the throat of the jar. To seat the stopple, a person, “by his thumb and fingers forces the said stopple downward by a rotary motion “ which compresses the ring like a wedge, and thus produces perfectly airtight joints between the vessel and the core.” He noted that the stopple “could be made hollow if lightness or economy require it to be so made.”

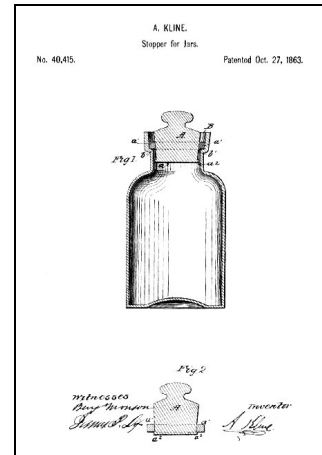


Figure 9 – Kline 1863 Patent

William T. Gillinder and Edwin Bennett, 1865

Almost a decade after Bennett’s initial patent, he was joined by William T. Gillinder in the creation of a more practical closure. The pair received Patent No. 49,256 for an “Improvement in Fruit Jars” on August 8, 1865 (Figure 10). They noted that the “glass cover, which has an annular groove . . . on its lower face . . . [was] of such a conformation as to have two shoulders and a central depression.” The cover was held in place by a “screw-cap” that fit into a continuous-thread finish. The overall shape was very reminiscent of the Mason jar, but the main difference seems to be that the 1865t lid sealed at the top of the finish; whereas, the Mason jar sealed at the shoulder. The

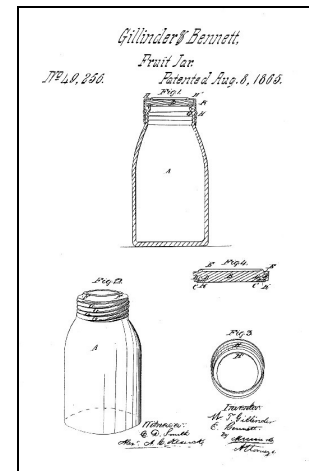


Figure 10 – Gillinder & Bennett 1865 patent

patent drawing was virtually identical to the drawing of the Franklin jar in A.R. Samuel's 1867 ad (Figure 11).

Edwin Bennett, 1866

Edwin Bennett received a patent (No. 52,379) for an "Improved Fruit Jar" on February 6, 1866. Despite the relationship between Samuel and Gillinder, Bennet apparently chose to use Adams & Co. at Pittsburgh to manufacture his jar and created Bennett & Fawcett to distribute the jars – again at Pittsburgh. Interestingly, the Kline, Adams, Bennett, and Willoughby closures all apparently fit the same jars. See the section on the John Adams Companies for more information.

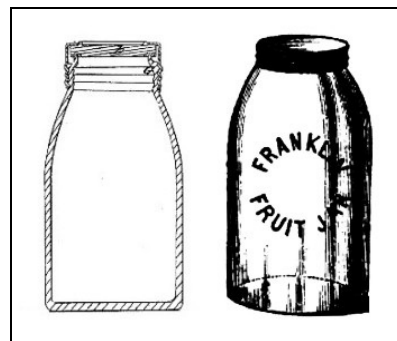


Figure 11 – Comparison of patent drawing with 1867 Samuel ad

William L. Haller, 1867

On February 5, 1867, William L. Haller received Patent No. 61,827 for an "Improvement in Fruit Jars" (Figure 12). Like Willoughby, Haller hailed from Carlisle, Pennsylvania. The container consisted of a

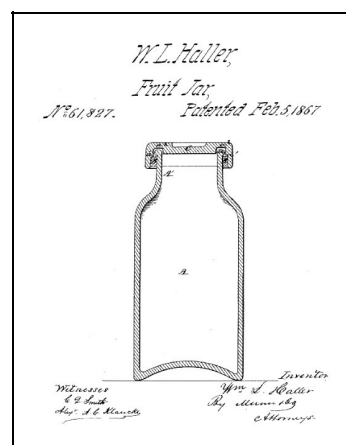


Figure 12 – Haller 1867 patent

fruit jar having a conical neck and glass cap, whose interior is shaped in conformity with the neck, so that a rubber ring on the outside of the neck may be tightly wedged between the latter and the cap, in order to adapt the cap to be snugly applied and to prevent the admission of air into the interior of the jar.

This patent date and Haller's name appears on lids for the Star jars (see below), made by the Keystone Glass Works from ca. 1868 to the 1870s.

William T. Gillinder, 1867

William T. Gillinder received Patent No. 71,605 on December 3, 1867, for an "Improved Apparatus for Forming Threads on Sheet-Metal Caps" (Figure 13). He assigned the device to

himself and Edwin Bennett. The patent was obviously for the purpose of creating lids for the jar he and Bennett had designed two years earlier.

It would be very helpful to know when these inventors applied for each patent. Prior to 1870, the patent office did not include the application date (although it was added to post-1870 patents). Gillinder may have applied for the machine patent on the same date as the partners applied for the jar patent. The actual patent dates rarely provide the complete picture.

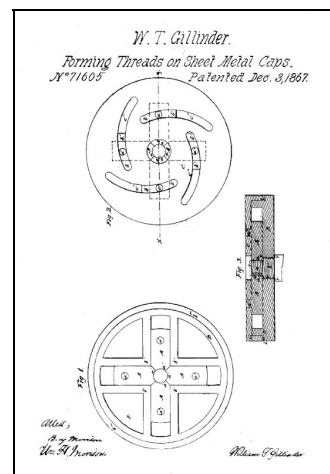


Figure 13 – Gillinder 1867 patent

William L. Haller, 1870

Haller received an additional patent (No. 98,586) on January 4, 1870. The closure of the jar consisted of a glass stopper that fit into the finish of the jar and was sealed against a rubber gasket by a continuous-thread cap that rested on a ledge inside the throat of the jar. The cap did *not* screw into threads on the jar. It threaded onto the stopper creating a compression of the gasket that forced the sides of the gasket to seal against the internal sides of the finish (Figure 14). Haller specifically noted that he was aware of the Willoughby stopple (discussed above) and that his invention was intended to “obviate the injurious effects which arise from oxidation or decomposition of the metallic bottom of the said Willoughby’s stopper.”

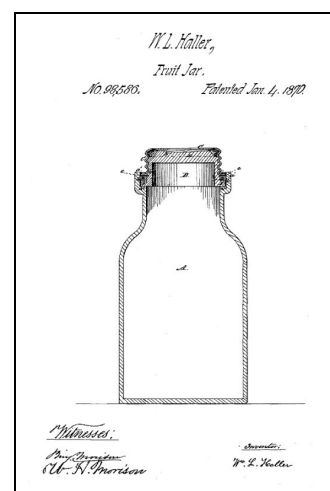


Figure 14 – Haller 1870 patent

Containers and Marks

Although some sources (see History section) state that A.R. Samuel exclusively manufactured fruit jars, the plant also made at least a few flasks. It is true, however, that fruit jars constituted the vast majority of products made by the Keystone Glass Works.

Fruit Jars

The 1867 A.R. Samuel ad featured five different types of patented fruit jars: Franklin, Haller, Kline, Mason, and Willoughby (see Figure 2). We have addressed these jars and others made by the Keystone Glass Works in alphabetical order below. Our discussion begins with the Franklin and Dexter series of jars. A few advertisements and letters help place the jars in a sequence:

- 1862 July 17 – R.A.O. Kerr advertised Ladies Choice jars in the *Altoona Tribune* “manufactured and sold by Haller & Samuel, sole agents” at Philadelphia
- 1867 Samuel advertised Willoughby, Haller, and Kline’s patented jars, along with Mason jars and Franklin Fruit Jars
- 1868 Samuel advertised Willoughby, Kline, and Franklin jars (Roller 1998 – ad in Philadelphia 1868 Business Directory)
- 1868 D.T. Wilcox (Fall River, Massachusetts, *Daily Evening News*, November 16) advertised “The Franklin or Dexter Fruit Jar, Something New! Best out!”
- 1869 In a series of three letters to Stephen R. Pinckney and William S. Carr, Samuel discussed the manufacture of Mason’s Improved, Dexter, and Star jars at the Keystone Glass Works
- 1871 A March 16 ad in the *Davenport Quad City Times* listed several jars made by A.R. Samuel, including the “Dexter.”

The Franklin and Dexter Series

Although the Franklin jars discussed below were made from patents by Edwin Bennett and/or William T. Gillinder, Roller (1983:102) discussed why Gillinder & Bennett could not have been the manufacturers:

It might seem obvious that these jars were made by Gillinder & Bennett, proprietors (c. 1863-1867) of the Franklin Flint Glass Works, of Philadelphia. But none of the advertisements, letterheads or directory listings for the Franklin Flint Glass Works mention fruit jars or the manufacture of “green glass.” Franklin seems to have been a maker of flint glass only – mostly fine tableware. I believe these jars were made by Adam R. Samuel in his fruit jar factory located diagonally across the street from the Franklin works. . . . The significance of the “Dexter” name has not yet been determined. These jars are found with several different mouth diameters.

Charles Gillinder (2006), the president of Gillinder Glass at the end of the 20th century, provided at least partial confirmation for Roller’s contention: “From its beginnings in 1861, when the firm produced ‘Plain, Moulded & Cut Flint Glass Ware in all its Varieties,’ to today’s lighting covers, Gillinders have produced glassware worth noting.” Welker and Welker (1985:55-56) stated that the plant initially made lamp chimneys and window glass then and added pressed glass in 1863. They did not note any fruit jar production.

A final confirmation came from the Wheaton Arts and Cultural Center (1994), the best history of the factories and life of William T. Gillinder that we have found. The site makes it *very* clear that Gillinder’s second plant, the Franklin Flint Glass Works, made a variety of tableware, but the earliest catalog and later listings failed to mention any of the jars designed by Gillinder or his partner (from 1863 to 1869), Edwin Bennett.

The reason this seeming over-explanation is important is because Creswick (see below) and other jar sources have credited Gillinder & Bennett with the manufacture of several jars that were, in fact, made by A.R. Samuel at the Keystone Glass Works. Although some of the other jars discussed below were made by various glass houses, Samuel was virtually the certain producer of the Franklin fruit jars.

FRANKLIN FRUIT JAR (1865-1868)

Toulouse (1969:120) described this jar as a “Mason shoulder seal” type “handmade round, ground lip, in blue-green and aqua.” Although he listed the maker as unknown, he

suggested the Franklin Flint Glass Co. as the manufacturer and ca. 1865 as the date. The patent, however, described a seal at the top of the lid.

As noted above, Roller (1983:129-130) presented an 1867 ad from A.R. Samuel that featured the Franklin jar. The drawing in the ad clearly depicted the same jar featured in the 1865 Gillinder & Bennett patent drawing (Figure 15; also see Figure 11). Although Gillinder & Bennett were manufacturers of glass tableware, Samuel actually made the jar. Roller described three metal lids:

1. Gillinder & Bennett Pat. Aug. 8 1865
2. Gillinder & Bennett June 2 1857 Oct 27 1857 Pat'd. Aug. 8 1865²
3. Gillinder & Bennett Pat'd Aug 8 65 Dec 3 67³

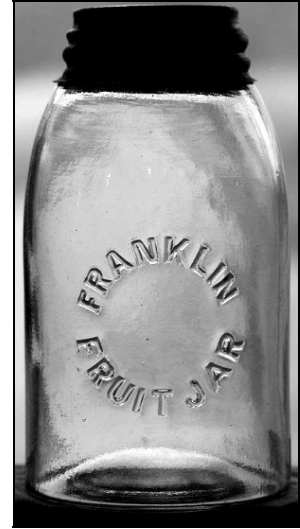


Figure 15 – Franklin Fruit Jar (North American Glass)

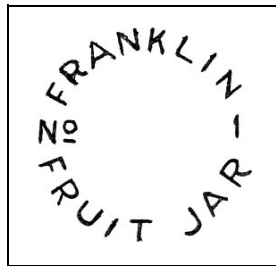


Figure 16 – Franklin No. 1 (Roller 1983:130)

Roller (1983:129) further stated that “the Franklin jar figure in the [1867] Samuel advertisement showed a screw cap with two wrench lugs on top. I do not believe that Franklin Fruit Jars were sold with glass lid and screw band closures, as they are often found in today’s collections.” Roller

(1983:129-130) also illustrated the Franklin No. 1 Fruit Jar and noted a

variation of the Franklin Fruit Jar that was “milk bottle-shaped” (Figures 16 & 17).

Creswick (1987:63) illustrated the same jar embossed on the side “FRANKLIN (arch) / FRUIT JAR (inverted arch)” (Figure 18). She also noted a

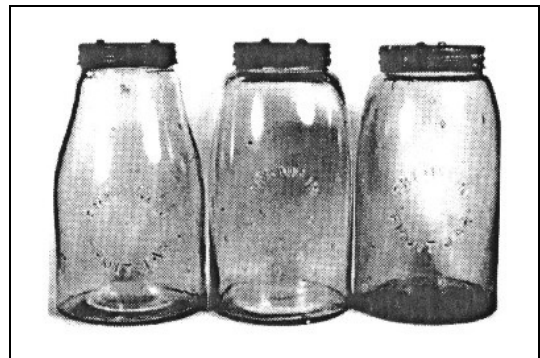


Figure 17 – Three shapes of Franklin jars – left is “milk-bottle” shaped (McCann 2012:155)

² The additional patent dates are for Patent No. 17,437 John L. Mason (June 2, 1857) and Patent No. 18,498 John K. Chase (Oct 27, 1857).

³ The final patent date – Dec 3, 1867 – was for Patent No. 71,605 to William T. Gillinder.

variation with “No 1” added but had no illustration for it. These were ground-lip jars, but, unlike Roller, Creswick noted two kinds of lids. The first was the same “unlined zink lid” with “two horizontal prongs on top.” She added two variations to the three claimed by Roller: an unmarked lid and one embossed “Franklin Fruit Jar.” Some jars were found with a screw band and a glass insert embossed “PAT^D AUG. 8TH 1865” in a circle (although Roller had said that glass lids were not correct).

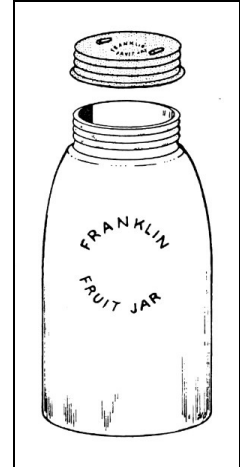


Figure 18 – Franklin Fruit Jar (Creswick 1987:63)

A final variation had “J.T. KINNEY / TRENTON / N.J.” inserted between “FRANKLIN” and “FRUIT JAR” (Figure 19).

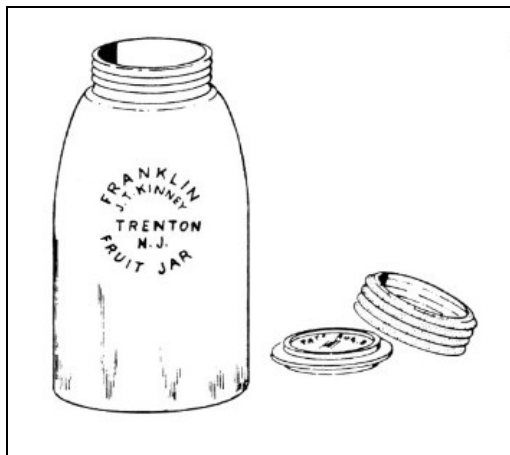


Figure 19 – Franklin Fruit Jar made for J.T. Kinney (Creswick 1987:63)

Roller (2011:200) noted that J.T.

Kinney was listed in the Trenton

city directories as a crockery dealer from 1865 to

1879. The new edition also included a Franklin Fruit

Jar with “R.W. KING DETROIT, MICH” inside

“FRANKLIN FRUIT JAR” with “90 JEFFERSON

AVE.” in the center. Creswick (1987:64) noted the

manufacturers of the jars as William T. Gillinder,

Philadelphia, Pennsylvania 1861-1863; Gillender &

Bennett, Philadelphia 1861-1930 (also called the

Franklin Flint Glass Co.); or Keystone Glass Works, Philadelphia. She attached no dates to the final company.

Roller (2011:201) also only agreed with the three lid variations in the 1983 book. The Roller editors also credited Jim Sears with stating that Lid #3 in the Creswick list was actually the #4 lid that was incompletely stamped. He also noted that the #3 was the most common lid style.

The configuration of the No. 1 lid described above deserves a closer look. The lid has two unusual characteristics. The most obvious of these are the two lugs on the top of the lid described by Roller (1983:129). Although these are small and may not have been very effective, they appear to have flattened sides, consistent with a use as wrench lugs (Figure 20). Sears

(Roller 2011:201) discussed four equally spaced vertical “bumps” on the sides of the caps perpendicular to the screw threads. Sears noted that Gillinder’s December 3, 1867, patent (No. 71,605) was

for a method of stamping a lid with a single stroke of a die. He claims that this will reduce the labor that had previously been needed to spin the lid on a lathe. While the patent depicts a die that would use four equally spaced studs to form the screw threads, it makes no claim that the four marks or bumps on the resulting lid would serve any purpose.

The majority of Franklin caps lack these manufacturing “bumps,” so they likely predate Gillinder’s 1867 patent (see also Figure 12 and the discussion about the patent above).

Gillinder and Bennett patented the Franklin Jars in 1865, so Samuel probably did not produce them prior to that date. Samuel advertised the Franklin Jar in 1867 and 1868, but the ad for “Franklin or Dexter Jars” in November of 1868 as a new jar (see below) suggests that the Franklin Dexter jar had replaced the Franklin by that time.



Figure 20 – Franklin jar lid with top projections and “bumps” in screw threads (North American Glass)

FRANKLIN DEXTER FRUIT JAR (1868-ca. 1871)

The Franklin Dexter jar, also aqua, was marked “FRANKLIN (arch) / DEXTER (horizontal) / FRUIT JAR (inverted arch)” (Figure 21). Toulouse 1969:120-121) described this jar in the identical terms that he used for the Franklin jar, except that the color was green. He noted that the lid was embossed “PAT OCT 24 1882.” As with the Franklin jar, he suggested the Franklin Flint Glass Co. as the possible manufacturer ca. 1865. After citing an 1882 lid, his reasoning seems odd – although the lid could certainly have been added long after manufacture.

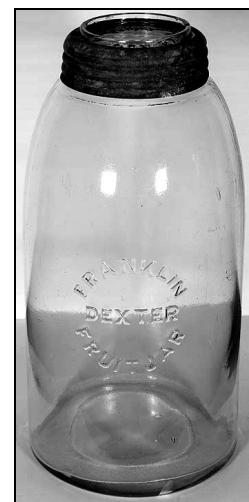


Figure 21 – Franklin Dexter jar (North American Glass)

Roller (1983:129) suggested that the Franklin Dexter Jar was the one advertised in an undated flyer for the “NEW FRANKLIN or DEXTER

JAR.” The illustration showed a jar embossed “NEW (horizontal) / FRANKLIN (arch) / FRUIT JAR (inverted arch)” on the front, but we know of no actual jar with that embossing. The new jar had a “glass cover with metal screw.” This supports Roller’s contention (above) that all Franklin Fruit Jars used the metal lids with no glass inserts. Unfortunately, the flyer did not name a manufacturer or distributor. Since the November 16, 1868, ad in the *Fall River Daily Evening News* also used the term “Franklin or Dexter Jar,” this sets the year of the transition as 1868.

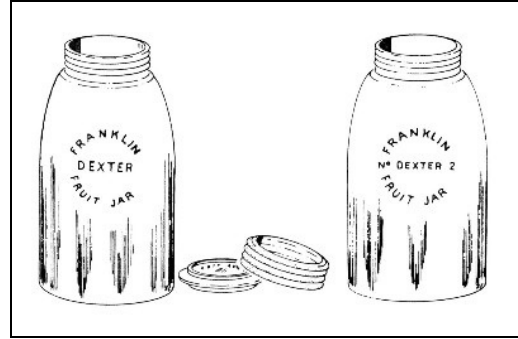


Figure 22 – Franklin Dexter jars (Creswick 1987:63)

Creswick (1987:63) illustrated the Franklin Dexter jar as well as a variation with “N°” to the left of “DEXTER” and “2” to the right (Figure 22). Both of these jars were identical to the Franklin Fruit jars (above) except for the additional embossing and use of the glass insert and metal screw band with “PAT^d AUG. 8th 1865” embossed in a circle on the insert (Figure 23). Creswick attributed the jars to the Gillinder firms and used the same date as she had for the Franklin.



Figure 23 – Lid from a Franklin Dexter jar (North American Glass)

Two very interesting letters from A.R. Samuel make it clear that he had discontinued the Franklin jar in favor of the Dexter jar in 1869 (Ron Ashby collection). The first, to Stephen R. Pinckney, on April 30, 1869, stated that Samuel was “making no Dexter jars now, & all I may hereafter make, I expect you of course to furnish the rings (i.e., the metal screw bands).” The second letter, written on May 1, 1869, to William S. Carr, confirmed that Samuel was “making no Dexter jars now nor expect to again this season, all rings I may need for the Dexter, I expect, Mason will be ready to furnish them.”

The two Samuel letters make it clear that Samuel had made Dexter jars not too long prior to the writing of the letters. He had advertised the Franklin Jars in the 1868 Philadelphia Business Directory – almost certainly published by mid-year – so the Dexter had to have been

pretty new by late April 1869. However, we suspect that these were the jars embossed “FRANKLIN DEXTER.” There was insufficient time between mid-1868 – probably the last ad for Franklin jars – and early 1869 to have made the transitional Franklin Dexter jar and then have had the Dexter jar in production. Thus, Samuel certainly made the Franklin jar and almost as certainly produced the Franklin Dexter jar (the “Dexter jar” he discussed in his letters). Since the Franklin Dexter jars are not notably rarer than the other jars in the series, production probably continued until the early 1870s.

DEXTER (ca. 1871-mid-1880s)

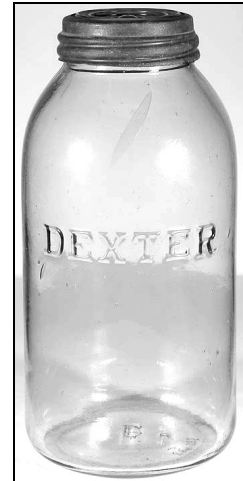


Figure 24 – Dexter jar (North American Glass)

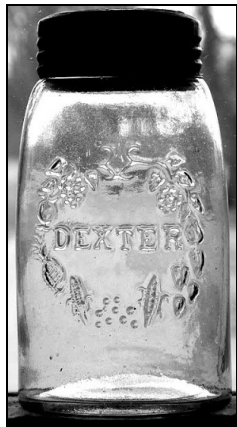


Figure 25 – Dexter ring-of-fruit jar (North American Glass)

Toulouse (1969:90-91) described two variations of the Dexter jar. One had only the name “DEXTER” embossed on the front (Figure 24), while the name was surrounded by embossed fruit on the other (Figure 25). Both were clearly the same jar as the Franklin and Franklin Dexter versions, and Toulouse continued to suggest the Franklin Flint Glass Works as the possible manufacturer ca. 1867.

Roller (1983:102) noted that the jar that was only embossed “DEXTER” was accompanied by the glass lid embossed “AUG 8TH 1865” held in place by the metal screw band (see Figure 22). He also noted the circle of fruit variation and the two lids described in the next paragraph.

Creswick (1987:43) also attributed the DEXTER to Gillinder & Bennett or the Franklin Flint Glass Co. (or Works). She illustrated the DEXTER in four variations:

1. “DEXTER” embossed horizontally on the side of the jar
2. “DEXTER” surrounded by a ring of embossed fruit (Figure 26)
3. same as #2 but different fruit
4. “DEXTER” (slight arch) / {ring of fruit} / “IMPROVED” (slight inverted arch) (Figure 27)

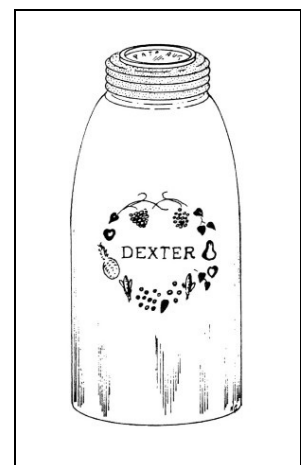


Figure 26 – Dexter ring-of-fruit jars (Creswick 1987:43)

The jars, themselves, were identical to the FRANKLIN jars described above. Both jars #1 and #2 were topped by the same lid as their predecessors, embossed “PAT^D AUG. 8TH 1865” in a circle (see Figure 23). The #3 pattern (the second of the ring-of-fruit jars) included a lid embossed “PATENTED (arch) / DEXTER / IMPROVED (horizontal) / AUG. 8, 1865 (inverted arch)” (Figure 28). The final lid on the Dexter Improved jar was quite different, embossed “DEXTER IMPROVED (arch) / PATENTED AUG. 8, 1865 (inverted arch)” around a Tudor Rose in the center (Figure 29).

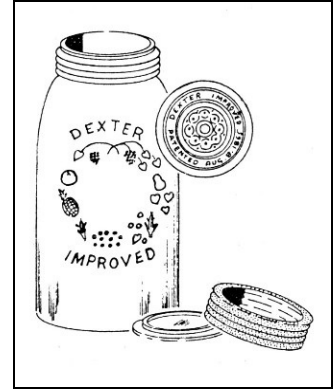


Figure 27 – Dexter Improved jar (Creswick 1987:43)

Roller (2011:161) added a variation of the circled fruit design with “DEXTER” ghosted in the ring of fruit. Cannif (2005:1276) added a new dimension to the search, when he noted that the 1885 Whitney Glass Works catalog listed “Dexter Quarts” in its fruit jar section (cited in Roller 1997). The line did not survive long enough for inclusion in the 1904 Whitney Glass Works catalog.



Figure 28 – Dexter Improved lid (North American Glass)

Our earliest ad that unambiguously mentioned the Dexter (without the Franklin) was in the *Davenport Quad City Times* for March 25, 1871. The ad did not use the word “new” – so the jars could have been made earlier.



Figure 29 – Second Dexter Improved lid (North American Glass)

However, the number of surviving Franklin Dexter jars suggests that they were made for several years (beginning in 1868), so 1871 is a reasonable assumption for the first year for the Dexters.

The above evidence piques some speculation about the timing for the Dexter jars. If Samuel made the Franklin Dexter jars until ca. 1871, he (or his sons) probably dropped the “Franklin” name at that point and made the jar that was only embossed “DEXTER.” These appear to be less common than the Dexter jars with the embossed fruit, so they were probably only made until the end of production at the Keystone Glass Works in 1874.

Since the Whitney Glass Works advertised the Dexter a decade later, Whitney probably introduced the new line of Dexter jars – with embossed fruit designs – soon after Samuel closed. A decade would have elapsed since Gillinder and Bennett patented the jars in 1865, so the jars would have still been under patent protection. With Samuel closed down, Gillinder would have likely sought another manufacturing venue – or Whitney may have approached Gillinder. Whitney then would have made the jars for at least another decade. See Table 1 for the progression of the Franklin Dexter jars.

Table 1 – Jars, Lids, and Manufacturers for the Franklin Dexter Series

Jar Label	Lid	Manufacturer	Date Range*
FRANKLIN	Tin (various embossing)	A.R. Samuel	1865-1867
FRANKLIN No. 1	Glass & Band – PAT ^D AUG. 8 TH 1865	A.R. Samuel	1867-1868
FRANKLIN DEXTER	Glass & Band – same	A.R. Samuel	1868-1872?
FRANKLIN DEXTER No. 2	Glass & Band – same	A.R. Samuel	1872-1874
DEXTER (horiz.)	Glass & Band – same	Whitney Glass Works	1875-1877?
DEXTER (fruit #1)	Glass & Band – same	Whitney Glass Works	1878-late 1880s
DEXTER (fruit #2)	Dexter Improved – plain	Whitney Glass Works	1884-late 1880s
DEXTER IMPROVED	Dexter Improved – Tudor Rose	Whitney Glass Works	1886-late 1880s

* All date ranges are best guesses. The only relatively solid date is the patent date of 1865.

Haller Patent Jars

William L. Haller was first involved in a patent with John M. Cooper in 1860, then received his own patents in 1867 and 1870. Each of these was different, and each was apparently used on one or more types of jars. The earliest of these may have formed the basis for the Keystone Glass Works.

H&S (cursive) (ca. 1863-ca. 1867)

Although the 1867 A.R. Samuel ad noted this as the “Haller Patent 1860,” the actual patent was issued to John M. Cooper and William L. Haller but was then assigned to *Cooper*. Despite the assignation, Haller – along with Adam Samuel – was apparently the guiding force behind selling the jars. Since lids for this patent were only stamped with Haller’s name, Haller must have acquired the rights back from Cooper at some point.

Toulouse (1969:155) dated a jar embossed “H&S” on the front ca. 1880-1900 but had no idea who made it. Roller (1983:159) described the closure as a “side seal, gasket compressed between bottom of cast-iron lid, inside of cast-iron thumbscrew yoke clamp and jar neck.” He noted that the lid was stamped “WILLIAM HALLER PATD AUG 7 1860” (see Figure 7). Roller cited variations in script (cursive) and block letters as well as one embossed “H&S PHILA” and noted A.R. Samuel as the manufacturer for Haller & Samuel.

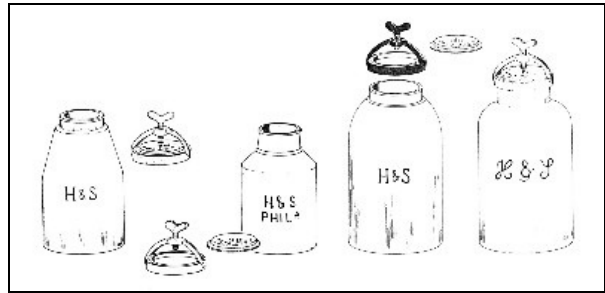


Figure 30 – H&S jars (Creswick 1987:78)

Table 2 – Variations in H&S Jars

Letter Variation	Jar Shape	Finish Configuration
H&S (block)	short body; gently sloped shoulder	indented from body; straight; bead rim
H&S (block)	taller body; gently rounded shoulder	indented from body; straight; bead rim
H&S (cursive)	tall body; sharply rounded shoulder	unclear; poss. vertical from body
H&S / PHILA ^{A*}	short body; steep shoulder	ring at shoulder/neck joint; gently tapered finish to bead rim

* Two dots under the “A”

Creswick (1987:78) illustrated four of these jars – each with a slightly different configuration – all topped by Cooper and Haller’s 1860 closure (Figure 30). Currently, there is no way to determine a production order, but all were embossed “H&S” – almost certainly to

represent Haller & Samuel. Creswick credited the Keystone Glassworks with the manufacture of these jars. Some jars were made with no embossing (Figure 31). See Table 2 for differences.

This was likely the jar that launched the Keystone Glass Works. Of course, this is pure speculation, but the timing all fits. A possible timeline could have looked like this:

- 1860 Cooper & Haller receive Patent No. 29,544; Haller assigns his share to Cooper
- 1861 Haller & Samuel buy the patent from Cooper and have Dyott make the jars
- 1862 Samuel begins construction of a glass house
- 1863 Samuel opens Keystone Glass Works and begins production of the H&S, Willoughby, and Kline’s jars
- 1865 Keystone Glass Works makes Franklin jars
- 1868 Samuel discontinues Haller (Cooper) patent jars



Figure 31 – Haller’s patent jar (North American Glass)

The 1862 Philadelphia city directory listed Haller and Samuel as partners and dealers in fruit. The pair remained in business until ca. 1865, vending fruit jars and airtight jar covers. The firm may have sold Cooper & Haller’s stoppers and certainly carried jars made by Samuel’s plant (Roller 1983:425; 2011:648).

Wm. L. Haller

From at least July 3-17, 1862, R.A.O. Kerr advertised Ladies Choice jars and cans “manufactured and sold by Haller & Samuel, sole agents” at Philadelphia in the *Altoona Tribune* (Figure 32). The jars were also advertised in the *Utica Evening Telegraph* (New York) as late as January 22, 1863 (Caniff 2008:8; Roller 1983:131, 160; also see Lockhart et al. 2014).



Figure 32 – Two styles of Ladies Choice jars (North American Glass)

Roller (1983:147) discussed and illustrated a jar with a similar name – “THE LADIES FAVORITE” with a drawing of a lady. Wm. L. Haller’s name appeared on the other side of the jar. The jar was sealed by a Haller’s stopper or a Willoughby stopple. Roller suggested A.R. Samuel as the manufacturer because of his connection with Haller in the fruit and jar sales firm. Although not discussed in any sources we have found, the Ladies Favorite may have replaced the Ladies Choice. It is also possible that Haller & Samuel sold Ladies Choice jars in the western half of Pennsylvania and Ladies Favorite jars to the east.



Figure 33 – Ladies Favorite with Haller’s closure (North American Glass)

Creswick (1987:77-78) illustrated and described a series of “Ladies Favorite” jars. The earliest of these was embossed “Wm L. HALLER (slight arch) / CARLISLE / P^A (horizontal)” in stylized block letters on one side and “THE LADIES FAVORITE (arch)” above a line drawing of a lady with outstretched arms, a hat, and a flowing full skirt. The skirt had a zigzag design. These jars had wide mouths and were originally made for the Cooper & Haller 1860 closure (Figure 33). These were followed by four other variations (Table 3).

Table 3 – Variations in Haller’s Ladies Favorite Jars

Font	Neck/Shoulder	Drawing	Stopper
Stylized	Rounded shoulder/short neck	Present; zigzag skirt	Cooper & Haller
Stylized	Rounded shoulder/long neck	Present; zigzag skirt	Willoughby
Stylized	Rounded shoulder/long neck	Present; pleated skirt	Willoughby
Stylized	Rounded shoulder/long neck	Present; pleated skirt	Willoughby
Block	Sharp shoulder/short neck	Absent	Willoughby

Roller (2011:228) noted that there were a total of five patterns for the lady on the reverse side of the jar. The Roller editors also noted two variations without the lady or the embossing on the reverse and one where the finish was “burst-off” and fire polished to form a “smooth lip” (Figure 34).



Figure 34 – Haller’s jar – no lady (North American Glass)

Apparently, Haller or Samuel realized the superiority of the Willoughby Stopple. The remainder of the jars were all made for the Willoughby (Figure 35). Next, the skirt changed from a zigzag design to pleats (Figure 36). One variation was embossed “J.D. WILLOUGHBY & Co. (slight arch) / NEW YORK (horizontal)” in place of the Haller name and location. Finally, the drawing was eliminated, and the font was reduced to simple block (Figure 37).



Figure 35 – Ladies Favorite with Willoughby Stopple (North American Glass)



Figure 36 – Variations in skirts (Creswick 1987:77)

Kline Jars

Most jars made for the Kline stopper lacked side embossing. The jars embossed “ARS” (A.R. Samuel) were exceptions. In addition, there were several variations in the stoppers, themselves. We have dealt with these three issues separately (below). It is interesting that the Bennett, Kline,

Adams, and Willoughby closures all fit into the same jar mouths.

Kline Jars without Side Embossing

Toulouse (1969:176) described the Klein jars as “handmade round, pressed laid-on-ring, in blue and blue-green” closed by a “glass stopper, with rubber ring seal, in tapered neck.” The sides were unmarked (Figure 38). The stopper was embossed “A.R. KLINE (arch) / PAT OCT

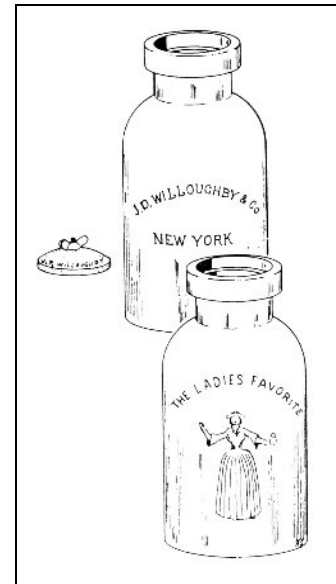


Figure 37 – Ladies Favorite from J.D. Willoughby & Co. (Creswick 1987:78)

27 1863 (inverted arch)” at the top of the stopper. He dated these ca. 1863, undoubtedly based on the patent date.

Roller (1983:183) noted that “A. Kline was only listed in the 1863 Philadelphia city directory. . . . He probably sold his patent rights to a glass manufacturer. Perhaps to Adam R. Samuel.” He added that “the term “USE PIN” on the stopper referred to the use of a pin pushed between the stopper and the gasket to allow entry of air into the jar for easier release of the stopper.” In addition, he added that “the two lugs on top of the stopper were used with a stick or other object to twist the stopper for seating or release.”



Figure 38 – Kline jar
(North American Glass)

Roller also noted two variations with stronger means of sealing. One used a jar with a continuous-thread finish that held the stopper in place by a zinc screw band. A second stopper had threads molded on its exterior to screw into embossed lugs in the neck of the jar (Figure 39). His final example was a hollow glass stopper with a hole in the bottom (see discussion below). The top was embossed “KLINE’S PATENT (arch) / 1 / OCT. 27, 63 (inverted arch).”

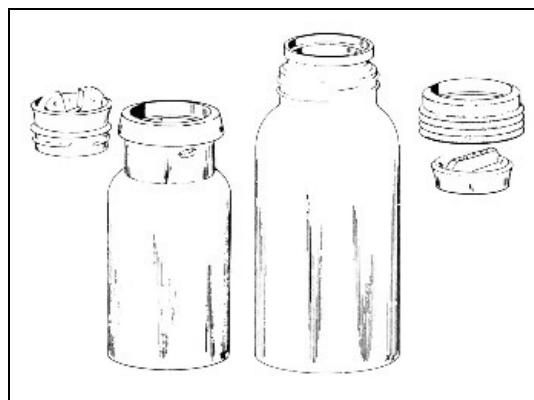


Figure 39 – Kline jars that used continuous threads
(Creswick 1987:96)

Creswick (1987:95-96) illustrated and/or described ten variations of jar/stopper combinations that were unembossed but were made for the Kline patented stopper. Most of the jars looked virtually identical with the jar embossed “ARS” (see below) and the Bennett’s jars made by Adams & Co. Of greatest interest were the three categories of stoppers, all bearing the same 1863 patent date (see stopper discussion below). Creswick (1987:95) also noted that a dress pin could be inserted between the stopper and the ring to release air when seating the stopper – as well as in opening.

These variations were also listed in Roller (2011:282-283). The Roller editors noted that one jar with the Category 2 stopper (see below) had a “solid bare iron pontil” scar on the base.

All three sources noted that the Kline jars were also made by Lorenz & Wightman of Pittsburgh (Figure 40). These were embossed “L&W” on the side of the jar (e.g., Creswick 1987:105). This may be a case where Lorenz & Wightman served the west, while Samuel served the east. Samuel continued to advertise the Kline Jar until at least March 25, 1871, when he included it in an ad (along with other jar types) in the *Davenport Quad City Times*. While it is possible that one of the glass houses made the jars prior to the other, Lorenz & Wightman was in business from 1863 to 1873 – roughly the same years that the jars were likely produced by Samuel.

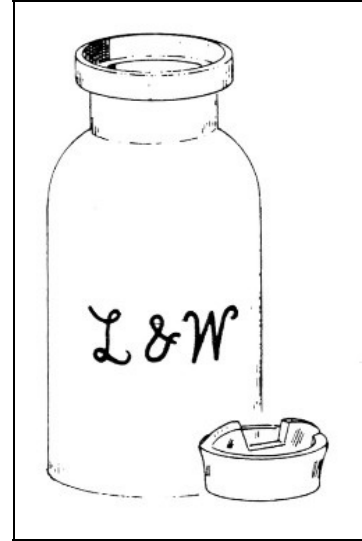


Figure 40 – Lorenz & Wightman Kline jar (Creswick 1987:105)



Figure 41 – “MANUFACTURED FOR” jars (North American Glass)

embossed proprietor jars, e.g., ‘N.O. FANSLER.’” North American Glass posted photos of three different styles of the “MANUFACTURED FOR” jars (Figure 41). The jars were embossed “MANUFACTURED (arch) FOR (horizontal):

1. N.O. FANSLER / CLEVELAND / OHIO
2. J.T. KINNEY / TRENTON / N.J.
3. H.F. WEST / CINCINNATI / OHIO

Toulouse

(1969:176) noted that jars with “KLINE’S, MADE FOR” were “reported but not verified.” Creswick (1987:95) illustrated one of these, manufactured for J.T. Kinney (see below). The Roller editors (Roller 2011:282) noted that “Most ‘KLINE’ stopper jars are unembossed on the side except for the *ARS* . . . L&W . . . and various styles of specially



Figure 42 – CK HALLE jar (North American Glass)

A fourth, similar jar was embossed “CK HALLE & C^o (arch) / 121 WATER ST (horizontal) / CLEVELAND O (inverted arch)” on the front (Figure 42).

Kline Stoppers

Category 1 may have been the earliest stopper variation. These were longer than any that followed and tapered downwardly – with a “juice hole” in the bottom center and a hollow inside. Each stopper fit into a slightly flared bottle throat with no ledge. One sub-variation was embossed “KLINE’S PATENT (arch) / OCT. 27. 63 (inverted arch)” with a number in a large circle in the center (Figure 43).

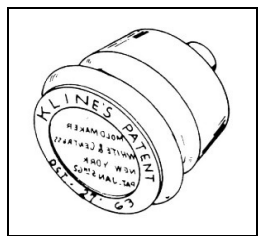


Figure 44 – Category 1, second variation (Creswick 1987:95)

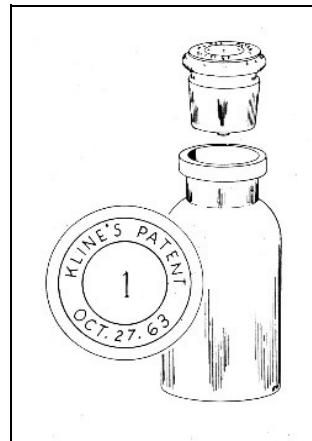


Figure 43 – Category 1 Kline stopper (Creswick 1987:95)

A second sub-variation had the same outer circle embossing with “MOLDMAKER / WHITE & CENTER SS / NEW YORK / PAT JAN 5TH 62 (all horizontal)” embossed in the center – to be read from inside the stopper (Figure 44). Creswick (1987:95) noted that “Jan. 5, 1862 was not an official patent



Figure 45 – Category 2 flat Kline stopper (North American Glass)

issue date. However, on January 5, 1869 a patent for a glass mold was issued to Homer Brooke, a moldmaker at White and Center Streets in New York City.” Homer Brooke received Patent No. 85,637 for an “Improved Glass-Mold” on January 5, 1869. The mold drawing, however, depicted a cavity for a bottle – not a stopper.

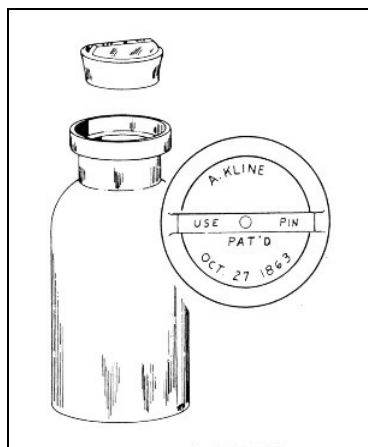


Figure 46 – Category 2 flat stopper with bottle (Creswick 1987:96)

Category 2 stoppers were simpler. These were tapered glass plugs that seated onto a ledge around the throat of the bottle. The simplest of these had a ridge across the top center with “USE A PIN” embossed on its top. A flat surface on one side of the ridge was embossed “A. KLINE (slight arch)” with “PAT'D (horizontal) / OCT 26 1863 (inverted arch)” on the other (Figures 45 & 46).

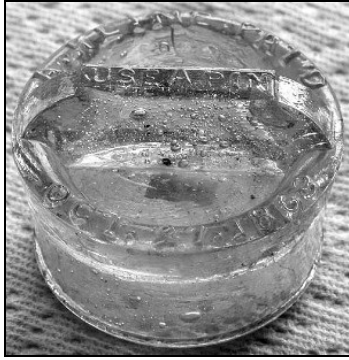


Figure 47 – Category 2 flat stopper with rim embossing (North American Glass)

A second variation was identical in shape but had the embossing on the upper rim of the stopper (Figure 47). A third had a wedge-shaped indentation in the center of the ridge to form two “ears.” The embossing was essentially the same, except the word “IMPROVED” extended across the indentation, leaving



Figure 48 – Category 2 “eared” stopper (North American Glass)

“USE” on the top of one ear and “PIN” on the other (Figures 48 & 49). The “A,” of course, was swallowed by the depression and “IMPROVED.” The final example had two inclined ramps on top to allow the stopper to be held in place by a simple wire clamp (Figure 50). The embossing for the final variation was not recorded (Creswick 1987:96).

Category 3 had two variations, each of which was a modification of Category 2 stoppers (see Figure 39). On one, the stopper, itself, was the flat-surface ridge style noted in Category 2, but it was held in place by a zink

screw band. The finish of the jar, of course, was modified to have a continuous-thread segment just below the part forming the depressed seat in the throat. The final style was the two-eared variation of Category 2 with continuous threads added to the lower part of the stopper. The stopper screwed into two lugs formed on the inside of the throat of the jar. See Table 4 for stopper variations.

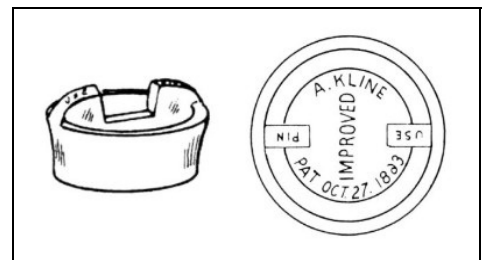


Figure 49 – Category 2 “eared” stopper (Creswick 1987:96)

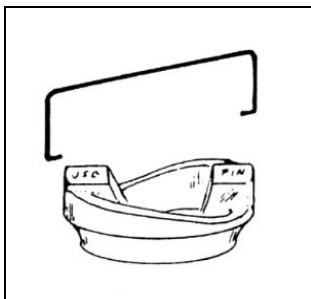


Figure 50 – Category 2 ramped stopper (Creswick 1987:96)

ARS (cursive) (1863-1868)

Knittle (1927:441) ascribed the ARS mark to A.R. Samuels (*sic*) but did not attempt to date the firm. Toulouse (1971:50-51) noted that the cursive ARS was used by the A.R. Samuels (*sic*) Glass Co. (as noted above, the correct name was Samuel – no “s” on the end – and the term

“Glass Co.” is *not* known to have been used). Toulouse noted that the cursive format was found on “a fruit jar, whose finish design is for the Willoughby stopple, patented January 4, 1859, thus placing the jar manufacture after that date.” He dated the mark ca. 1860 to 1870.

Table 4 – Variations in Kline Stoppers

Cat	Configuration	Embossing
1a	hollow, tapered, juice” hole in base; no ledge in throat	KLINE’S PATENT / OCT. 27. 63
1b	same as 1a	same plus “MOLDMAKER . . .”
2a	tapered glass plug; single ridge across top; ledge in throat	A. KLINE / USE A PIN / PAT’D / OCT 26 1863 (in depression)
2b	same as 2a	same but embossing is on rim
2c	tapered glass plug; ridge split to form two ears; ledge in throat	same but no “A”; IMPROVED” perpendicular to ridge
2d	tapered glass plug; 2 inclined ramps-wire clamp	unknown
3a	same as 2a but jar finish had threads for zinc band	same as 2a
3b	same as 2c but with threaded finish; 2 throat lugs	same as 2c

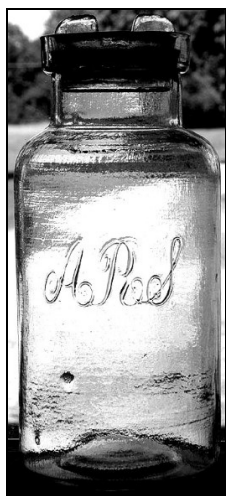


Figure 51 – ARS jar with Kline stopper (North American Glass)

Roller (1983:14) added that Samuel advertised that he was the “proprietor (owner) of the Kline jar” in 1869 (probably a typo for 1867). Creswick (1987:7) illustrated the jar with a Kline stopper but added no new information (Figure 51). Roller (2011:29) cited Jerry McCann as suggesting that the jars were made for Willoughby stopples (Figure 52). The Willoughby jar illustrated in Samuel’s 1867 ad was *quite* different from the jars with ARS embossing. The ARS jar, however, is virtually identical with the Kline jar shown in the ad (Figure 53).

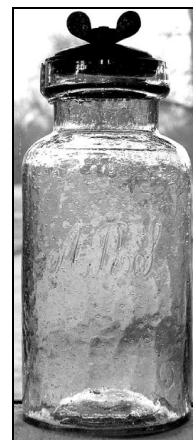


Figure 52 – ARS jar with Willoughby stopper (North American Glass)

Mason Jars

On November 30, 1858, John Landis Mason received Patent No. 22,168 for the jar that would bear his name for more than a century and a half. Although Mason jars were made in a bewildering variety of styles, the ones we will be looking at in this study are the types possibly used by A.R. Samuel. Of particular interest are Mason jars embossed with keystone symbols. Because Samuel's factory was called the Keystone Glass Works, there may be a connection between the keystone symbol and Samuel's plant. To assess the possibilities, we first need a review of keystone Mason jars.

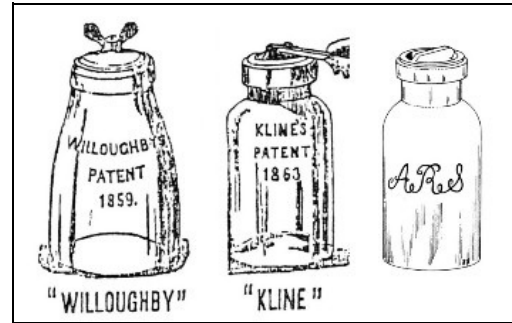


Figure 53 – Comparison of Kline and Willoughby jars in the 1867 A.R. Samuel ad and an ARS jar (North American Glass; Creswick 1987:7)

Toulouse (1969:207-208, 212) listed a few variations of Mason jars with keystone symbols and claimed that the manufacturer of the ones with no circle was the Mason Fruit Jar Co., Philadelphia, but noted, “This does not does not apply to any keystone in a circle.” He dated the jars ca. 1885-1900. Roller (1983:231) described these jars and noted that jars with both types of keystone logos (in a circle and with no circle) were “possibly made c. 1885-1900s by Mason Fruit Jar Co., Philadelphia, Pa.” He included an 1889 advertisement from the Mason Fruit Jar Co. depicting a jar embossed “MASON’S (slight arch) / {keystone} / PATENT / NOV. 30TH / 1858 (all horizontal)” on the front.

Creswick (1987:118, 124, 133, 143-144) illustrated and/or listed a total of 18 Mason jars embossed with keystone logos. Of these, only five showed the keystone in a circle; the remaining 13 had uncircled keystones. Most, however, were dated too late to have been made by A.R. Samuel.

MASON'S / {keystone drawing} KEYSTONE

The jar embossed “MASON’S / {keystone drawing} / KEYSTONE” with unlined zinc insert and screw band is probably the earliest Mason jar bearing a keystone emblem, and we attribute the jar to the Keystone Glass Works. The Roller editors suggested that:

this jar is a much earlier model than the later keystone embossed jars that were made by the Mason Fruit Jar Company of Philadelphia, Pennsylvania from 1885 to 1900. For one, the keystones on these jars and lids have a different shape from the later keystone used on jars and glass lids by the Mason Fruit Jar Company. The horizontal surfaces of the upper part of the keystone are arched on the earlier examples and not flat as seen on the later specimens.

A comparison between the “MASON’S / KEYSTONE” jar and one of the other styles shows the difference in the top bar (Figure 54). Roller’s evidence for the early date of the Keystone jars (Roller 2011:340-341) included:

1. A ca. 1870 photo of John L. Mason that included *this* style of jar.
2. The jar was advertised in *Godey’s Lady’s Book and Magazine* from January to June 1870.
3. Williams & Batterson advertised a “MASON’S KEYSTONE” jar, Rochester, NY, 1870.
4. John L. Mason applied for a patent for an “Improvement in Fruit Jar Covers” on February 14, 1870. He did not receive Patent No. 137,462 until April 1, 1873. The patent drawing shows a jar with the word “KEYSTONE” across the front (Figure 55).

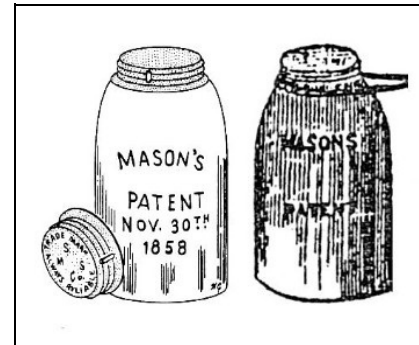


Figure 54 – Comparison of “MASON’S / KEYSTONE” and another “keystone” jar (eBay)

The Roller editors (2011:340) also noted the bases of the jars were embossed “PAT’D JAN 19 1869” and that a variation of the jar had a flat top on the keystone and an error base embossed “PAT^D JAN 19 1868.” The reference almost certainly derived from Dick Roller’s comment on page 239 of the October 1984 *Fruit Jar Newsletter*. Roller said that he had received “two reports of MASON’S (keystone) KEYSTONE jars with flat-top keystone figures.” It is thus likely that these jars were made in 1869, and the slightly arched top bar was very likely the eccentricity of a single mold maker.

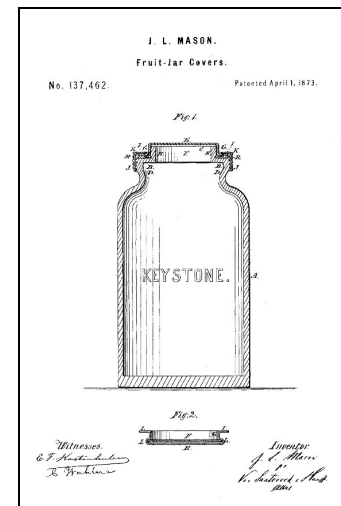


Figure 55 – Mason’s 1873 patent

Red Book listing #1737 associated the glass MASON FRUIT JAR CO. insert with the MASON'S / {keystone drawing} / KEYSTONE jar. A few of the #1737 jars have been reported with glass inserts on them, but those inserts were unmarked (Figure 56). The original zinc insert for #1737 is difficult to find, and collectors tend to match up a common glass lid with a keystone emblem. On page 17 of the November 1973 *Fruit Jar Newsletter*, Dick Roller explained:



Figure 56 – Mason's Keystone and Mason's Improved – both with keystone symbols (North American Glass)

Since these zinc lids would not often survive as long as the jars, a collector faced with a jar without a lid would readily assume the glass lid with MASON FRUIT JAR CO, PHILA around a keystone would be correct. These lids are easy to find, having been used on the MASON'S (keystone) IMPROVED, a later and much commoner jar.

We recommend that the next edition of the Red Book drop the association between the glass MASON FRUIT JAR Co. insert and the MASON'S / {keystone drawing} / KEYSTONE jar in listing #1737.

Mason's Improved

Mason's Improved jars were produced at many different locations, but the Keystone Glass Works was almost surely the first to manufacture these jars. Roller (1983:445) noted June 1869 as the earliest recorded date for Mason's Improved jars advertised to the public by any seller. On May 1, 1869, A.R. Samuel wrote to Stephen R. Pinckney, "My whole factory with the exception of one pot is on the Mason Improved." He added, "I am writing Mason today to hurry up with the rings & also to have heavier metal as I hear some already complain that the metal is too light. This is very important especially in the outset" (Figure 57). Samuel's letters show that he was already taking wholesale orders for Mason's Improved jars by April 1869 but also

indicate that he was corresponding with the inventor during the earliest days of Mason's Improved production.

The Keystone Glass Works was clearly a major producer of Mason's Improved jars. A.R. Samuel's letter to Stephen R. Pinckney on April 30, 1869, claimed that Samuel's "positive orders now on the Mason Improved amount to about 1800 gross." The following day, Samuel wrote to William S. Carr that

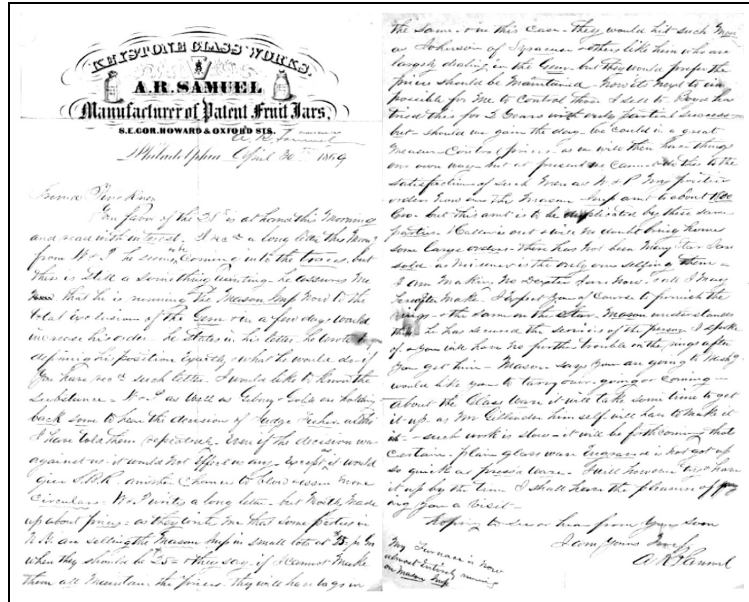


Figure 57 – Mason's 1869 letter to Stephen R. Pinckney (Ron Ashby collection)

W&P [Wisner & Palmer] . . . orders for 90 gross of Mason Improved . . . I am already committed to them by contract for 500 gross of Mason Improved with the privilege of 3000 . . . My whole factory with the exception of one pot is on the Mason Improved, and I am doing this in anticipation of Wisner's orders & that they may be shipped promptly.

Although we can be certain that many of the Mason's Improved jars in collections today originated at the Keystone Glass Works, we cannot say exactly which jars these are. Ironically, the only surviving Mason's Improved jar that identifies itself as manufactured at the Keystone Glass Works was likely made elsewhere. Collector Phil Alverez of New Jersey owns a colorless Mason's Improved jar that holds approximately four gallons and that is embossed on the reverse, "MANUFACTURED BY A.R. SAMUEL KEYSTONE GLASS WORKS PHILADA PA," (see SFJR #790e & Figure 58).



Figure 58 – Mason's Improved jar embossed "A.R. SAMUEL KEYSTONE GLASS WORKS" (Phil Alverez collection)

This would seem fairly definitive except that we have no other evidence that Keystone produced colorless glass. One interpretation is that this huge jar was used to advertise the normal size jars manufactured at Keystone rather than being a Keystone product itself. This jar and a colorless gallon Franklin Dexter Fruit Jar in Jerry McCann's collection could be products of the Franklin Flint Glass Works, which stood diagonally across the street from Keystone. The two plants had an almost certain working relationship.

We posit that the Mason's keystone jar that we described above with its unlined metal insert represents an economy version of the Mason's Improved jar with glass insert. Although the glass lid might seem to be an improvement over unlined metal, we see ample evidence that



Figure 59 – MASON'S IMPROVED jar (Jim Sears collection)

the first 1869 Mason's Improved jars predate the circa 1870 Mason's Keystone. Yet an unusual jar embossed "MASON'S / {keystone emblem} / IMPROVED" in Jim Sears' collection appears to have been made in an altered MASON'S / {keystone emblem} / KEYSTONE mold (Figure 59).⁴ We also note that this jar – unlike later ones – had the slightly arched top bar on the keystone emblem. This suggests that the short-lived Mason's Keystone jar proved unpopular and that the Keystone Glass Works reused at least one Keystone mold for the popular Mason's Improved.

While the MASON'S / {keystone emblem} / IMPROVED jar with embossing error is the only specific Mason's Improved variation we are willing to attribute to the Keystone Glass Works, its form gives us some clue about others. We note that the MASON'S / {keystone emblem} / IMPROVED bears a January 19, 1869, patent date on the base, and we suspect that many other Mason's Improved jars bearing this date also came from the Keystone Glass Works. We note that the 1869 date is not found on the #1736 MASON'S (keystone) IMPROVED jars (see Creswick 1987:124 and Figure 56), and we attribute #1736 to the later Mason Fruit Jar Company.

⁴ Vivian "Granny" Kath first reported this variation in her September 1996 column based on a rubbing from John Hathaway (Kath 2002:365). Hathaway's rubbing revealed the IMPROVED error, the base date, and the arched keystone, but Granny was left to wonder about the possibility of ghosting. Since Sears' jar is the same example that Hathaway reported, we would now like to clarify that the KEYSTONE ghosting is present but very faint.

MASON'S / PATENT / NOV. 30TH / 1858

While Samuel was certainly not the first to manufacture jars marked “MASON'S / PATENT / NOV. 30TH / 1858,” we are confident that he did produce some 1858 dated Masons. One of the five jars advertised by A.R. Samuel in 1867 was embossed “MASON'S / PATENT” – with both words horizontal – in the drawing on the ad. Although Creswick (1987:126) illustrated and discussed 12 jars embossed “MASON'S (slight arch) / PATENT (horizontal),” none of them had a horizontal “MASON'S” – and she listed all but one as being made “circa 1900-1915.” The exception was made even later. As was common during the late 19th Century, Samuel may have used a generic drawing for the 1867 Mason jar; the drawing was certainly much smaller and in a totally different style than the other four jars shown with it.

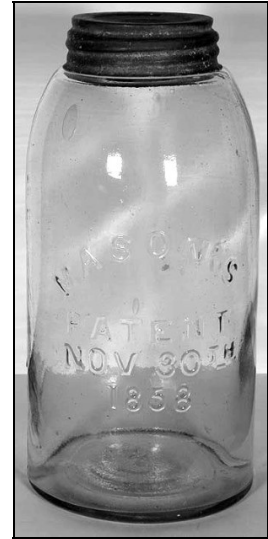


Figure 60 – “Beehive Mason jar” (North American Glass)

While we must allow for some artistic license on the part of the advertisement’s designer, we believe that the advertisement shows what collectors describe as a “beehive” shape Mason jar with an unlined cap. The 1860s “beehive” with sloping shoulders and a sharp corner at the base is essentially a Mason jar that happens to be the same shape as a Franklin Fruit Jar. Furthermore, some “beehive” Masons and some Franklin Fruit Jars share the same small star emblem on the base. We tentatively attribute the “beehive” style Red Book #1907 Mason jar with small star on base to the Keystone Glass Works (see Leybourne 2008:279 & Figures 60 & 61).



Figure 61 – Star base on “Beehive” Mason (North American Glass)

Creswick (1987:139) attributed her listing #1908 for an 1858 dated Mason jar with a small star on base to the John L. Mason Mfg. Co. of New York. We disagree with her attribution because we see no evidence that the Mason Mfg. Co. produced its own glass. Instead, we see from 1869 correspondence between Samuel and the Mason Mfg. Co. that Mason was producing metal dies and fittings for glass blown at Keystone.

Leybourne (2008:279) combined jars from Creswick’s listing #1908 under #1907 and also noted that the “beehive” midget #1907 occurs in colorless glass. The only reported colorless example of #1907 is currently in the collection of Roland Longerbeam of Virginia, and we believe that this colorless jar is too rare to represent a regular production jar. We posit that the unique colorless #1907 is some sort of sample or experimental version from the Franklin Flint Glass Works, while Keystone produced the aqua #1907.

Mason’s 1858 patent remained in effect during Samuel’s tenure at the Keystone Glass Works, and the factory would only have produced Mason’s patent jars at the behest of the patent holders. We



Figure 63 – Comparison of the Mason’s Keystone (left) and Mason’s Patent jar with ghosted keystone – arrows point to ghosted keystone emblem, letter “S” and letter “N” (Jim Sears collection)

have no reason to believe that Keystone continued to produce Mason’s patent jars continuously after 1867, but there is evidence that they resumed production at some later point. A quart MASON’S PATENT NOV 30TH 1858 jar in Jim Sears’ collection bears a strongly ghosted keystone emblem and word



Figure 62 – Mason’s Patent jar with arrows pointing to ghosted keystone emblem (Jim Sears collection)

“KEYSTONE.” Note that both the keystone emblem and the word KEYSTONE have been peened out entirely (Figures 62 & 63).⁵

This jar has an unmarked base and an ordinary “non-beehive” shape. Except for the ghosted markings, it would be indistinguishable from many other 1870s era Mason jars. Its existence suggests that Samuel reused at least one mold from the unpopular Mason’s Keystone jar to make Mason’s patent jars after 1870. Samuel likely needed to remove his keystone emblem because the 1858 patent’s owners generally prohibited manufacturers from adding their own logos. We believe that Mason’s patent jars bearing the unghosted keystone emblem are not products of the Keystone Glass Works but postdate the 1879 patent expiration.

⁵ Don Burkett originally reported this variation – and the ghosted keystone.

See Roller (1983:231) for a description of later Mason jars that bear a keystone emblem in a circle or without a circle. Roller concluded that these were “possibly made c. 1885-1900s by Mason Fruit Jar Co., Philadelphia, Pa.” He included an 1889 advertisement from the Mason Fruit Jar Co. depicting a jar embossed “MASON’S (slight arch) / {keystone} / PATENT / NOV. 30TH / 1858 (all horizontal)” on the front.

The logical possible sequence, therefore, is:

- 1867 Samuel’s Keystone Glass Works begins manufacture of a Mason’s Patent “beehive” style jar.
- 1869 Samuel introduce his “MASON’S {keystone logo} IMPROVED” jar as well as the “MASON’S {keystone logo} / KEYSTONE” jar.
- 1870 By this time, the “MASON’S {keystone logo} / KEYSTONE” jar was discontinued, and at least one mold had been altered to the words “MASON’S IMPROVED.”
- 1870 At some point after this date, Samuel adopted a “MASON’S PATENT NOV 30TH 1858” jar.

Star Jars (ca. 1869-1874 or later)

Roller (1983:339) discussed a jar embossed on the front with a “Star figure (encircled by fruit). The closure was a “side seal on high conical extension above jar threads, glass or metal lid and deep zinc screw band” (Figure 64). Roller suggested that the jars used four types of lids:



Figure 64 – Finish of a Star jar (North American Glass)

1. HALLER’S PATENT FEB 5TH 1867 embossed on top, green glass
2. Star figure embossed in center, zinc
3. HALLER’S PATENT FEB 5 67 in two lines stamped into top, zinc
4. HALLER’S PATENT FEB 5 ‘67 around star figure (all encircled by radiating lines) stamped into top, zinc (Figure 65)

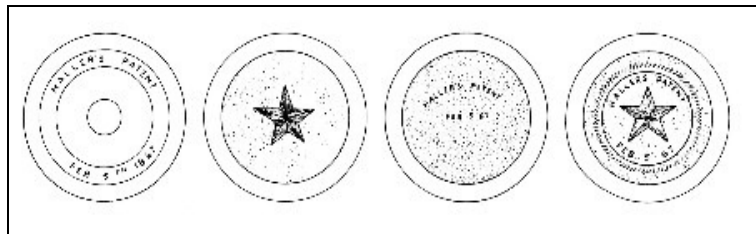


Figure 65 – Four variations of lids for Star jars (Creswick 1987:201)

A jar with the star surrounded by a ring of fruit (see below) had a lid with a different star than the one illustrated by Creswick (Figure 66).

Roller noted that A.R. Samuel could have been the manufacturer, citing Haller’s involvement with Samuel in the 1860s. Roller (1983:340) also noted two additional jar types – one with the word “STAR” embossed on the front, the other with “STAR” above a star figure – that he also attributed to Samuel. The latter jar also had a variation embossed “A LIEBENSTEIN & CO. (slight arch) / “DEALERS IN CROCKERY (arch) / 177 / RANDOLPH ST / CHICAGO / ILL. (all horizontal) / & GLASSWARE (inverted arch)” on the reverse face.

Creswick (1987-201) illustrated and discussed a series of jars with conical finishes above continuous threads – each with a “ground lip” (i.e., mouth blown into a mold then ground). These were made with three different styles of front embossing – all with finishes for Haller’s 1867 patent:

1. The word “STAR” horizontally on the upper front (Figure 67)

Creswick (1987-201) noted that “the patent called for a jar with a conical neck and glass cap whose interior is shaped in conformity with the neck. It makes no mention of the screw threads on the neck of the jar or the screw band used to hold the lid on the jar.”

2. “STAR” in an arch above a five-point star (Figure 68)

Some of these jars were embossed “PAT’D FEB 5 1867” in a circle around the outside of the base with a mold number in the center. She illustrated the number “37” with a reversed “3.” Creswick also included the “LIEBENSTEIN & CO.” variation described above.

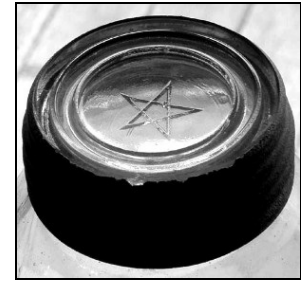


Figure 66 – Different star lid (North American Glass)

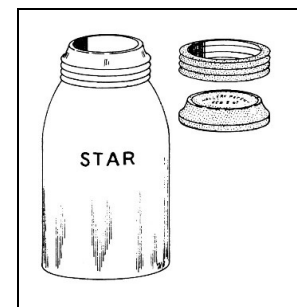


Figure 67 – STAR on jar (Creswick 1987:201)

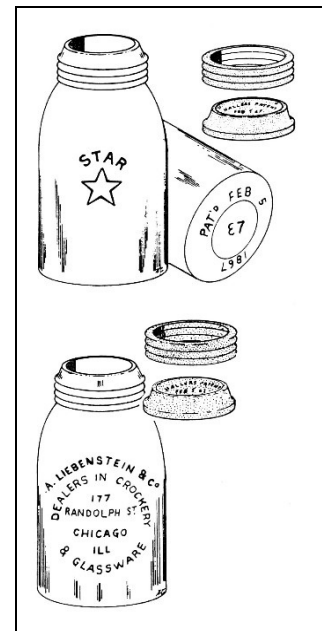


Figure 68 – STAR and star symbol, including Liebenstein & Co. (Creswick 1987:201)

3. A five-point star surrounded by a ring of fruit (Figure 69)



Figure 69 – Star symbol with ring of fruit (Creswick 1987:201)

The ring of fruit was similar (possibly identical) to the rings of fruit on some Dexter jars (Figure 70). Despite the obvious Haller finish – and probably because of the Dexter jar similarity – Creswick (1987:201) noted Gillinder & Bennett as the probable manufacturers of the star-plus-ring of fruit jar. She agreed with Roller that A.R. Samuel was the “possible maker” of the other star jars. Creswick also noted and illustrated the same four lids described by Roller and added one that was similar to Roller’s No. 4 but consisted of a glass lid and metal band.



Figure 71 – Unembossed jar with Haller 1867 lid (North American Glass)

The Roller update (2011:489) added an unembossed jar that is usually only identified if it is found with the Haller’s Patent lid. A series of photos on the North American Glass site also included a “Star” jar with no embossing on the sides. This one had the #4 lid on it, but neither the lid nor the jar had threads. Instead, the lid clamped onto a metal ring around the finish of the jar (Figures 71 & 72). This was likely a product jar.



Figure 70 – Star with ring of fruit jar (North American Glass)

The study also noted that J.&A. Liebenstein & Co. was enumerated at 177 Randolph St. in the 1867 Chicago City Directory, and A. Liebenstein & Co. was listed at a different address in 1872. Thus, the Liebenstein jar was likely made between 1867 and 1871. According to Ancestry.com (2013), A. Liebenstein & Co. – at 177 Randolph St. – was one of the firms destroyed in the October 13, 1871, Chicago fire. This solidly confirms the 1871 end date for the Liebenstein jar.

The study also noted that J.&A. Liebenstein & Co. was enumerated at 177 Randolph St. in the 1867 Chicago City Directory, and A. Liebenstein & Co. was listed at a different address in 1872. Thus, the



Figure 72 – Lid and finish of Unembossed jar (North American Glass)

Leybourne (2008:402) also noted a variation with the Liebenstein embossing ghosted. Apparently, Samuel had the Liebenstein molds altered after the 1871 fire. With the firm name peened out, the jars simply became one of the factory's normal sales items.

Samuel's April 30, 1869, letter to Stephen R. Pinckney mentioned that "there has (*sic*) not been many Star jars sold as Meidener is the only one selling them I expect you of course to furnish the rings [metal bands to hold down the glass lids], & the same on the Star." Samuel noted on May 1 to William S. Carr that "as soon as Mason can get ready to furnish rings for the Star jar, Mr. Meidner will send you order for 500 or 1000 gross."

This suggests that the Star jars – which were not in the 1867 or 1868 ads – were introduced in late 1868 or early 1869. Samuel likely continued to make these jars until the firm ceased operations in 1874. Because of the strong similarity between the circle-of-fruit motifs on both Dexter and Star jars, the Whitney Glass Works may have also produced the Star after Samuel's sons went out of business.

If prices are any indication of scarcity, the Star jar with the ring of fruit is by far the most common – as would be expected if it were the later jar in the series. The Liebenstein jar is the rarest in the sequence. All the other variations are at scarce – not generally available according to McCann (Leybourne 2008:402; McCann 2012:289).

Willoughby Patent

Toulouse (1969:330) described the Willoughby Stopple and illustrated the way that it worked (see Figure 6). He noted that the devise was stamped "J.D. WILLOUGHBY STOPPLE" (arch) / PAT. JAN. 4, 1859 (inverted arch)" but made no mention of any markings on the jar (Figure 73). No other source noted the word "Stopples" on the closure.

Roller (1983:385) described the same stopper (with the information stamped onto the top of the stopper) as well as one with the information stamped onto the wings of the nut (Figure 74). Both were

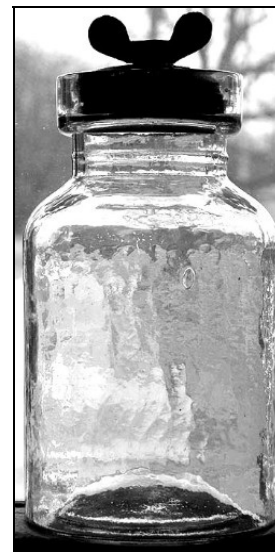


Figure 73 – Jar with Willoughby Stopple (North American Glass)

on unembossed jars. He also noted a jar embossed “J.D. WILLOUGHBY & Co. / NEW YORK” on one side and “THE LADIES FAVORITE” above a figure of a lady (see Figure 37). Although Willoughby was located in Carlisle, Pennsylvania, Roller discovered no listing for him in New York directories; the New York designation on the stopple remains unexplained.

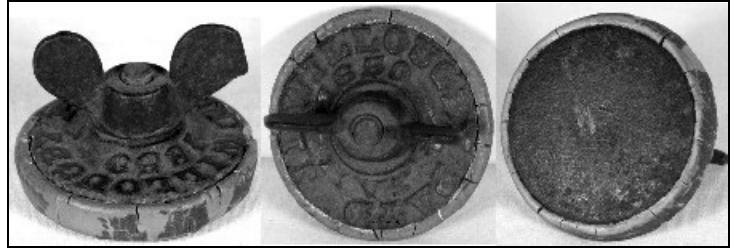


Figure 74 – Willoughby Stopples (North American Glass)

Roller (1983:385) dated the jars ca. 1860 and noted that “Bakewell, Pears & Co., flint glass makers, advertised the Willoughby Patent Fruit Jar for sale in May-September 1860 Pittsburgh newspapers.” He stated that the odd-shaped jars were probably the oldest. Lorenz & Wightman also made some of the jars, presumably embossed with “L&W” on the body, although Creswick (1987:105) illustrated the L&W jars with Kline stoppers (see Figure 40). Roller further noted that a gallon jar had a pontil mark on the base, and that a half-gallon jar had “three glass feet.”

Creswick (1987:223) illustrated and described seven different jars with four stopper variations. Although most of the jars had the typical shape also found in Kline and Bennett jars, two had more rounded shoulders culminating in a flat-ring finish with no apparent neck. These (Creswick’s No. 3016 and 3017) were very similar to the one illustrated in the 1867 A.R. Samuel ad (Figure 75). Both jars had high kick-ups, but only the latter had a pontil scar. The pontiled jar was topped by a Willoughby stopple with “J.D. WILLOUGHBY” stamped on the left wing of the wingnut and “PATD JAN 4 (arch) / 1859 (horizontal)” on the right wing. The stopple on the non-pontiled jar was stamped “J.D. WILLOUGHBY PATENTED JANUARY 4, 1859” on the top of the stopple – although she did not illustrate the configuration. These two were likely the jars made by Samuel at the Keystone Glass Works.

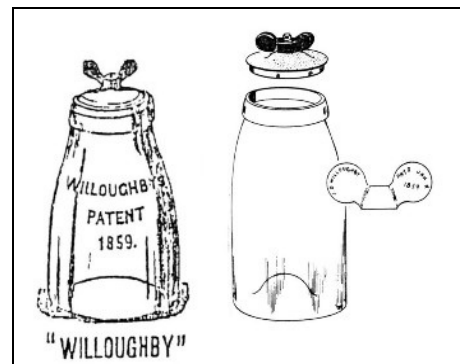


Figure 75 – Comparison of the Willoughby in the 1867 Samuel ad and the jar illustrated in Creswick (1987:263)

Creswick (1987:223) also illustrated other unembossed containers (of the “Kline” style) with three additional lid stamps on the top of the stopple. One was stamped “J.D. WILLOUGHBY (arch) above the wingnut and “2 3/8 (horizontal) / PATENTED JANUARY 4 1859 (inverted arch)” below it in small letters. Another was stamped “J.D. WILLOUGHBY’S / 1

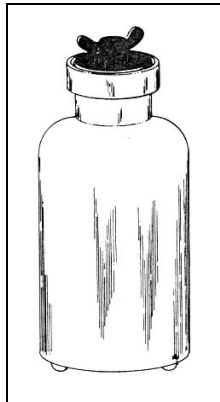


Figure 77 – Footed Willoughby jar (Creswick 1987:223)

1/4 (both arched) above the wingnut and “JAN / 59 (both horizontal)” below it in large letters (Figure 76). The final was identical to the first except the number was 2 1/4. A jar with a stopple of the final variation was also made with three “feet or pedestals” (Figure 77).

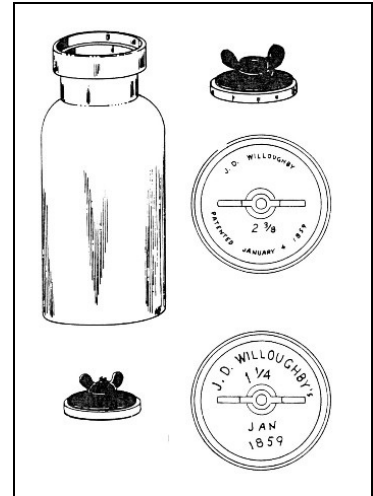


Figure 76 – Willoughby Stopples and jar (Creswick 1987:223)

Creswick (1987:223) noted that many glass houses made the Willoughby bottles including Lorenz & Wightman (Pittsburgh), Bakewell, Pears & Co. (Pittsburgh), Hall, Craven & Pancoast (Salem, New Jersey), John M. Moor & Co. (Salem, New Jersey), and A.R. Samuels [*sic*] (Philadelphia). She also claimed that the Willoughby Stopples was used on other jars of the period, including the Commodore and Haller jars – to which we add the ones embossed “ARS.” Roller (2011:554) noted that C.M. Alexander (assignee of the Willoughby patent) was a patent attorney who probably licensed the stopple to various glass houses. As noted above, a half-gallon example had three glass “feet,” and a three-quart jar had a “glass tipped iron bar pontil” scar on the base.

Flasks

A.R.S. (1863-1874)

Toulouse (1971:51) stated that “in most flasks it appears that the initials are Gothic and punctuated” (A.R.S.). He did not specifically date this mark, although he noted the company was in business from 1855 to 1871. McKearin and McKearin (1941:560-561) illustrated and described a clasp-hands calabash bottle embossed on one side with A.R.S. and attributed the mark to A.R. Samuels (*sic*). McKearin and Wilson (1978:173, 601) also noted and illustrated

the calabash bottle (Figure 78). Pepper (1971:80) also showed a photo of the bottle (Figure 79). Note that this indicates that Samuel made at least some containers other than fruit jars.

Discussion and Conclusions

Although Knittle, Toulouse, and Creswick all ascribed the manufacture of the Franklin, Franklin Dexter, and Dexter fruit jars to the Franklin Flint Glass Works based on the similarity of names and the patent for the jars being owned by the Gillinder family (proprietors of Franklin Flint Glass) and Edwin Bennett, evidence provided by McKearin and Wilson and by Roller make a really solid connection between the jars and A.R. Samuel. Samuel also used the ARS cursive mark on fruit jars and A.R.S. in block



Figure 79 – Clasp-hands calabash flask (Glassworks Auction)

letters on at least one calabash bottle. The fruit jar embossed with H&S is also pretty solidly identified with Samuel.

It is virtually certain that there is some temporal difference in the manufacture of the Franklin, Franklin Dexter, and Dexter jars and that the Franklin was made first and the Dexter last. The complexity of the fine embossing on some of the Dexter jars (embossed with intricate fruit patterns) suggests a later manufacturing technique than on the earlier, planer jars. We have also hypothesized that the circle-of-fruit jars were mostly made by the Whitney Glass Works. Future research should address methods to test this hypothesis.

We have probably only just begun to tap the potential information about William L. Haller and his jars. We know little for example about the involvement between Haller and Adam Samuel, although they were almost certainly involved in the jar embossed “H&S” – and possibly the sale of the entire Keystone Glass Works production between 1863 and 1865. We

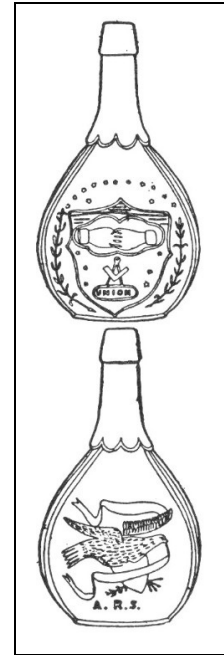


Figure 78 – Clasp-hands calabash flask (McKearin & Wilson 1978:601)

know nothing about why the pair dissolved their firm – although Samuel continued to make and advertised the Haller jar, and Haller worked for Samuel at the Keystone Glass Works by at least 1869.

We also know little about Haller’s involvement with the Ladies Choice jars that were marketed – at least briefly – by Haller & Samuel. Haller’s choice of terminology for his later jar – the Ladies Favorite – cannot be mere coincidence. The grammatically inept use of “Ladies Choice” – instead of the correct “Lady’s Choice” or “Ladies’ Choice” – had to have been intentionally repeated in the naming of “Ladies Favorite.” The possibilities are intriguing, but the evidence is scarce.

Kline jars provide another small mystery. The crudity of the ones embossed ARS suggest that they were some of the early jars produced by the Keystone Glass Works, but at least Lorenz & Wightman made jars with their logo. Either or both may have also made the generic jars, or they may have been produced at another currently unknown glass house. The sheer variation in the stoppers suggests a relatively long run of production. No one seems to know the manufacturing order of the jars by the different plants – although we have hypothesized that Lorenz & Wightman began production after Samuel discontinued the jars ca. 1868. It is also possible that both glass houses received contracts that were not exclusive and made the jars during approximately the same period. There was likely some temporal order to variation in stoppers, but we have no current way to broach that mystery.

Our hypothesis that Samuel began production of Mason jars in 1867 and used a generic form of the Mason’s Patent jars is currently only weakly supported. However, the connection between the Mason’s Keystone and Mason’s Improved jars (both with embossed keystone symbols) is strong, and we know that the Keystone Glass Works made Mason’s Improved jars by 1869. Future research should seek more advertisements for Samuel’s jars of all kinds.

The Star jars were almost certainly made by the Keystone Glass Works, although the last variation may have been produced by the Whitney Glass Works. The almost identical rings of fruit around the Dexter and Star jars simply cannot have been coincidence. Samuel’s letters show that he made the Star jars in 1869.

The Willoughby jars were apparently widespread, and there is probably no way to trace any of them specifically to Adam Samuel. However, the two with unusual shapes are a close match to the 1867 Samuel ad, so either or both may have been Keystone Glass Works jars. However, those jars were probably made during the earliest period for the Willoughby brand – before Samuel was in business. Overall, it is clear that A.R. Samuel made numerous fruit jars at the Keystone Glass Works. Beyond knowing *what* that plant made, however, is a vast world of missing pieces and speculation. The firm and the jars will provide a fertile field for future research.

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We are grateful for access to three letters that reside in the Ron Ashby collection. These letters provided the key to the Keystone Glass Works involvement with Mason’s Improved, Dexter, and Star jars. Thanks also to Doug Leybourne for allowing us to use the Alice Creswick drawings and to Greg Spurgeon for granting us access to the North American Glass photos.

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Appendix A

Probable Chronology for the Keystone Glass Works and its Jars

- 1857 Bennett's received his first patent.
- 1859 Willoughby received his patent.
- 1860 Cooper & Haller received their patent.
- 1862 RAO Kerr advertised Ladies Choice jars Pittsburgh – “made” by Haller & Samuel; construction began on the Keystone Glass Works.
- 1863 Production began at the Keystone Glass Works; the plant made the H&S jar to Cooper & Haller 1860 patent and probably introduced th Kline (ARS) and Willoughby patented jars. Kline received his patent. About this time, Gillinder opened the Franklin Flint Glass Works, and Gillinder & Bennett became partners.
- 1864 Samuel built a new building at Keystone, and the Ladies Favorite probably began production at this time.
- 1865 Gillinder & Bennett received their patent; Haller & Samuel dissolved. Samuel built another new building, and likely began production of the Franklin (Gillinder & Bennett) jars.
- 1867 Gillinder & Bennet dissolved; Bennet returned to Baltimore, while Gillinder ran the Philadelphia factory. Haller received another patent, and Gillinder was granted a patent for a machine to make lids. Samuel advertised Willoughby, Haller, Kline, Mason, Franklin Fruit Jars and constructed another new building. This was probably the year that the Keystone Glass Works began production of Mason's Patent jars.
- 1868 Samuel advertised Willoughby, Kline, and Franklin jars. He probably ended production of the Frankin jar and began making Franklin Dexter jars. The plant also probably ceased production of the Kline and Willoughby jars and introduced Star jars. This was also the likely year when the Keystone Glass Works made the Mason's Keystone jar with both the name “KEYSTON” and the keystone symbol embossed on the front.
- 1869 Letters show that Samuel manufactured Mason's Improved (which likely also had an embossed keystone log and replaced the Mason's Keystone jar), “Dexter” (probably actually Franklin Dexter jars), and Star jars.
- 1870 Haller received another patent, and Samuel incorporated.

- 1871 Gillinder died; Samuel made Dexter jars by this date.
- 1873 A.R. Samuel died, and his sons ran the firm
- 1874 Keystone Glass Works (Samuel's sons) closed.
- ca. 1876 Whitney Glass Works probably began making Dexter and Star jars.
- ca. 1883 Second Keystone Glass Works opened – operated by Grange & Co.
- 1885 Whitney Glass Works advertised Dexter jars.
- late 1880s About this time, Whitney probably discontinued Dexter jars.
- ca. 1901 Second Keystone Glass Works closed.

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