

Crystal Jars and the Crystal Glass Co.

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During the late 19th century and early 20th century, at least five jars were embossed with the name “CRYSTAL.” While five companies are likely responsible for manufacturing these jars, there is not a simple one to one correlation between the jars and companies. One of those had a patent number that clearly placed it as a product of the Hero Glass Works, and one other was advertised by the Crystal Glass Co. of Pittsburgh and had a patent date tying the jar to the Pittsburgh firm. A third variation had the same patent date – also tying the jar to the Pittsburgh Crystal Glass Co. To increase the complexity of the issue, the Independent Jar Co. – located just three blocks away from Crystal Glass – also made the same Crystal jar.

Earlier researchers were ambivalent about the makers of the final two jars. At least six glass companies wore the Crystal name. Although two of these made tableware, at least four were involved in the manufacture of bottles and jars. Our task was to discover the manufacturers of the final jars.

Crystal Jars

As noted in the abstract, the major jar sources listed five containers embossed with the word “CRYSTAL” on the front. Since Pittsburgh’s Crystal Glass Co. was the certain manufacturer of at least one of the jars, our discussion begins with a jar patented by Edwin Bennett, one of the brothers involved with Crystal Glass.

Bennett’s Jars

Edwin Bennett designed a series of jars embossed “BENNETT’S PATENT,” “BENNETT’S No. 1,” and “BENNETT’S No. 2.” The initial jar was likely manufactured by Gillinder & Bennett at Philadelphia in 1866 and 1867 (Figure 1). Adams & Co. almost certainly made the No. 1 and No. 2 jars between 1867 and 1870. The line was apparently discontinued when the Bennett brothers closed their pottery factory and converted it to a glass house – the Crystal Glass Co. See Adams & Co. in the “A” section for more information.

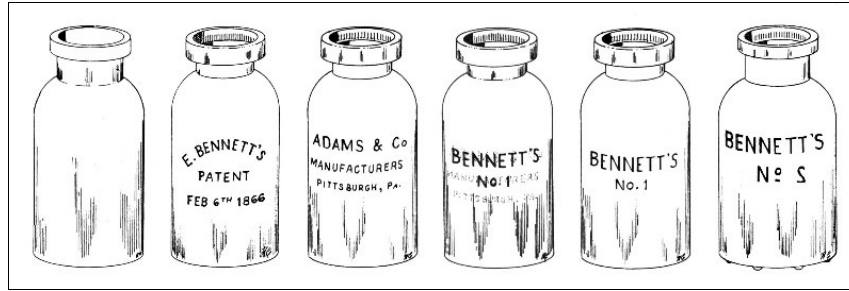


Figure 1 – Bennett’s jar series (Creswick 1987:2, 17)

CRYSTAL (ca. 1873-1883)

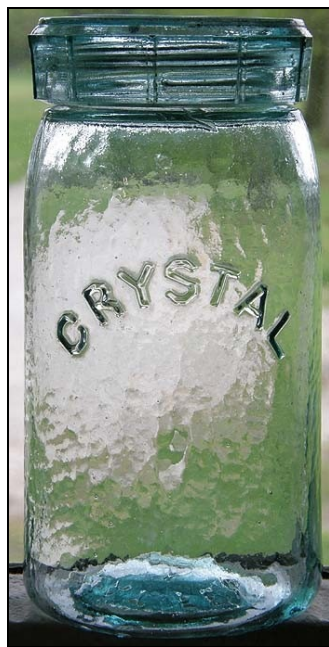


Figure 2 – Crystal jar (North American Glass)

The jars embossed “CRYSTAL” in an arch on the front face were also embossed “PAT. NOV. 26. 67.” on the resting point of the base and “PAT FEB 4 73” around an “A” in the center of the base (Figures 2 & 3). The letters on the resting point of the base served the same purpose as embossed “feet” – to hold the jar above the surface of the pan during the canning process and let the hot water circulate under the base. The “feet” also aided in cooling. The patents belonged to the Hero Glass Works, and we discuss the jars in more detail in that section.



Figure 3 – Crystal base (North American Glass)

CRYSTAL JAR (ca. 1879-1882)

Toulouse (1969:83) listed the “CRYSTAL JAR” but believed it to be a product of the Consolidated Fruit Jar Co. and dated it ca. 1879. Roller (1983:97) discussed the jar in greater detail. These had the word “CRYSTAL” in an arch, with “JAR” horizontal, both embossed on the front (Figure 4). Roller showed

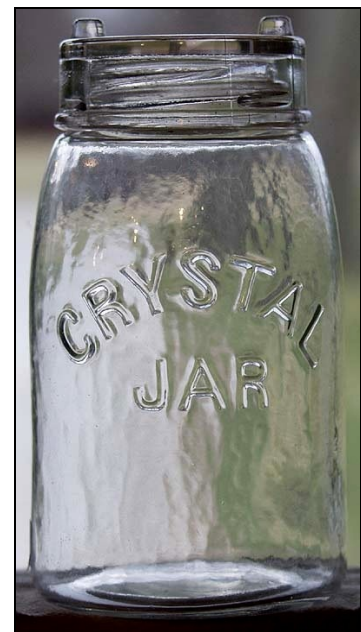


Figure 4 – Crystal Jar (North American Glass)

ads from the Crystal Glass Co. that illustrated these jars for use in both canning and dairy containers (Figure 5). He dated the jars made by Crystal ca. 1879-1882 and 1885-1888 – with no jars made by the firm in 1883 or 1884. The Independent Glass Co. of Pittsburgh made the Crystal Jars during the 1882-1884 period. Crystal apologized for failing to meet the demand for the jars in 1884 but noted that their jars were superior to any that were made by other manufacturers.



Figure 5 – 1880 Crystal Jar ad (Roller 1983:97)

Creswick (1987a:38) illustrated four jars embossed “CRYSTAL (arch) / JAR (horizontal)” on the front, one with a reversed “S” (Figure 6). One of these had gently sloping shoulders and a smaller mouth. All were mouth blown (ground rim) and had a “Mason shoulder seal/glass cover” (Figure 7). Each lid had internal embossed lugs to engage the continuous-threads on the

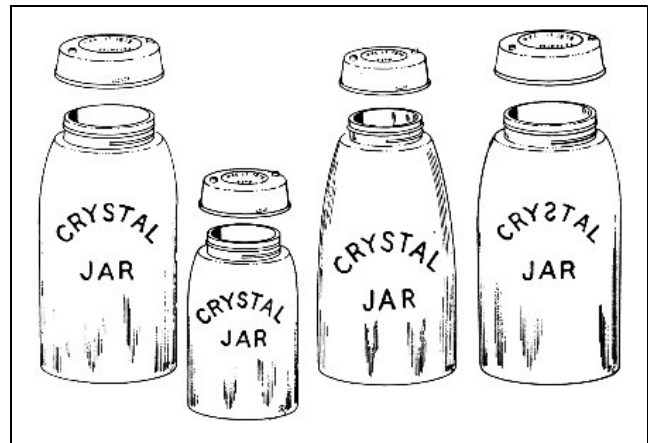


Figure 6 – Crystal Jars (Creswick 1987a:38)



Figure 7 – Shoulder seal (North American Glass)

finish and two posts or tabs extending above the top of each lid allowing a screwdriver or other long object to be used to apply extra pressure for opening and closing the cap. The lids were embossed “PATENTED DEC 17 1878”; “PAT DEC 17 1878”; or “PAT^D DEC 17 1878,” and at least one had solarized to an amethyst hue (Figure 8). At least one of these lids was used on a straight-sided jar with no side embossing (Figure 9).

The Roller editors (2011:152) noted that “‘CRYSTAL’ jars are notorious for having finish areas of slightly different diameters which means that any given size of



Figure 8 – Crystal Jar lids (North American Glass)

‘CRYSTAL’ screw cap would not interchange. Also, pint size jars have narrow mouths.” In addition, some unembossed jars needed “a specially shaped glass screw cap with a shoulder on the underside to press the gasket down on the straddle lip sealing surface.”

The Crystal Glass Co. advertised the Crystal Jar by at least June 5, 1879, in the *Crockery & Glass Journal*. On March 2, 1882, the Independent Glass Co. advertised the Crystal Fruit Jar in the same journal – with an illustrated example. On the same *page*, the Crystal Glass Co. advertised the Crystal Milk Jar. Independent Glass had made the Crystal Jars by at least July 28, 1881, according to the *American Pottery & Glassware Reporter*. By January 3, 1884, Crystal Glass was advertising “Crystal Fruit Jars, Crystal Milk Jars, Crystal Pickle Jars” along with tableware and lantern globes in the same journal. The Independent Glass Co. also continued the ads for the Crystal Jar – including the December 17, 1878, patent date – to at least the January 31, 1884, edition (Hawkins 2009:141; Roller 1997a).

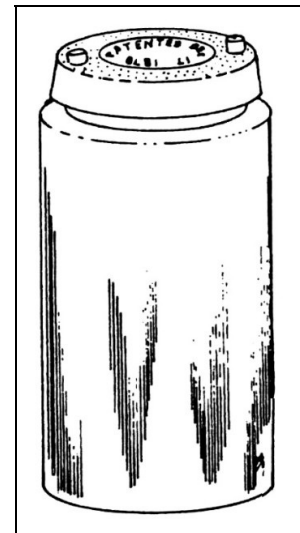


Figure 9 – Unembossed jar with Crystal lid (Creswick 1987a:38)

On January 22, 1885, the *American Pottery and Glassware Reporter* noted that the “Crystal Glass Co. . . . will continue the manufacture of the Crystal Jar this year They will devote almost exclusive attention to [these jars].” Various sources used the terms “resume” and “continue” in connection with Crystal’s jar production in January of 1885, suggesting that production had ceased earlier. It is possible that Crystal ceased production of the jars in early 1882 and subbed the actual manufacture to the Independent Glass Co. – although both firms advertised the products. Production by Independent ceased with the January 1885 resumption of jar making by Crystal, although the failure of pots at the Crystal plant delayed manufacture until

March. A January 9, 1885, Independent Glass Co. ad touted the Independent Jar but no longer mentioned the Crystal Jar (Roller n.d.).

Crystal Milk Jar

The Crystal Glass Co. advertised the Crystal Milk Jar in quart and half-gallon sizes by September 1880. These jars appeared and “functioned for all intents like a glass-topped fruit jar with a wire bail [i.e., a wire carrying handle attached to the continuous-thread lid]” (Hawkins 2009:141). On November 11, 1880, the *American Pottery and Glass Ware Reporter* included an ad for the Crystal Milk Jar – a container that was virtually identical with the Crystal fruit jar but with a wire handle (Roller 1997a). On March 2, 1882, the Crystal Glass Co. advertised the Crystal Milk Jar in the *Crockery & Glass Journal* and still advertised the jar at least as late as January 3, 1884 (Hawkins 2009:141; Roller 1997a – Figure 10).



Figure 10 – March 2, 1882, ad (Roller 2011:152)

The authors of the Dairy Antique Site (2014) noted that “a special threaded glass lid was used for the milk jars that had two round glass lugs with a metal bail handle attached to them.” This use of glass lugs was different from the lids used on the fruit jars. They further stated that “one complaint by dairymen was although the bail handle made it easy to carry the jar, the bail also made it difficult to pack the jars closely in shipping boxes, especially if there was a lid on the box.” Finally, the researchers had

came across an article in an 1879 magazine that told of a dairy in New Jersey that was using the Crystal jar . . . to deliver milk to homes. . . . Unfortunately the name of the dairy was not identified. The article said that the jars used by the New Jersey dairy were fitted with a carrying handle much like the bail on a pail. We have never heard of a Crystal jar embossed with a dairy name.

Along with the 1882 ad noted above, Roller (2011:152) noted a mention of the Crystal Dairy Jar in *Dairy Farming*, a book written for the 1880 London Dairy Exposition and cited an ad in the *Dairyman's Manual* of 1892. This suggests that the jar continued to be made four years after both the Crystal Glass Co. and the Independent Glass Co. had closed – although the date could be a typo. The book noted that Jerry McCann had provided a Crystal Jar with a lid embossed “PURE –C&C – CREAM MILK WARRANTED surrounding “CLEVELAND (arch) / OHIO (horizontal) / PAT'D DEC 17 1878 (inverted arch).” The lid had a wire-bale handle attached to embossed “knobs” (Figure 11).



Figure 11 – Crystal Milk Jar lid (Roller 2011:152)

Jelly Jar

Creswick (1987a:38) added information on a jelly jar with a lid embossed “PATENTED JULY 28 1874 CRYSTAL” apparently in a circle around the top of the lid. This was a colorless tumbler, and the patent was assigned to the Crystal Glass Co. by Mark J. Bennett (see patent section below). She described the process of using the lid:

After the glass was filled, and the cover in place, a gummed paper label was placed around the jar covering the joint between jar and lid. The label, printed with the names of fruits, could be marked to show the contents of the glass.

On April 17, 1875, the Crystal Glass Co. advertised the “‘Crystal’ Jelly Tumbler, Glass Cover, M.J. Bennett’s Adhesive Combined Air-Tight Register Label for Fruit Jars & Jelly Glasses” in the *Crockery Journal* (Roller 1997a). Hawkins (2009:141) essentially agreed on all points (Figures 12 & 13).



Figure 12 – Jelly jar (eBay)

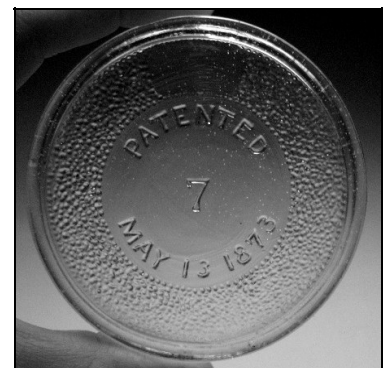


Figure 13 – Jelly jar lid (eBay)

CRYSTAL JAR CG (ca. 1879-1882)

Toulouse (1969:83-84) discussed a jar marked “CRYSTAL (arch) / JAR / CG (both horizontal)” on the front and a lid embossed “PATENTED DEC. 17, 1878” (Figure 14). He speculated that the jar was made by the Consolidated Fruit Jar Co. and speculated counter-intuitively that “‘CG’ may stand for Consolidated Glass” – a name that was never used by the firm. Roller (1983:97-98) also noted the jar but listed the maker as unknown. Creswick (1987a:38) illustrated two examples (Figure 15). The Roller editors (2011:152) considered the “CG” jar to be a variation of the Crystal Jar described above. They noted both “CG” and “C•G” variations. Photos from North American Glass show the “CG” with and without punctuation.

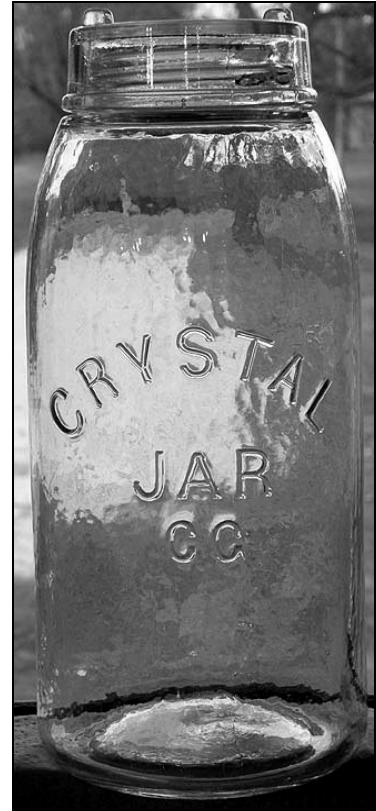


Figure 14 – Crystal Jar CG (North American Glass)

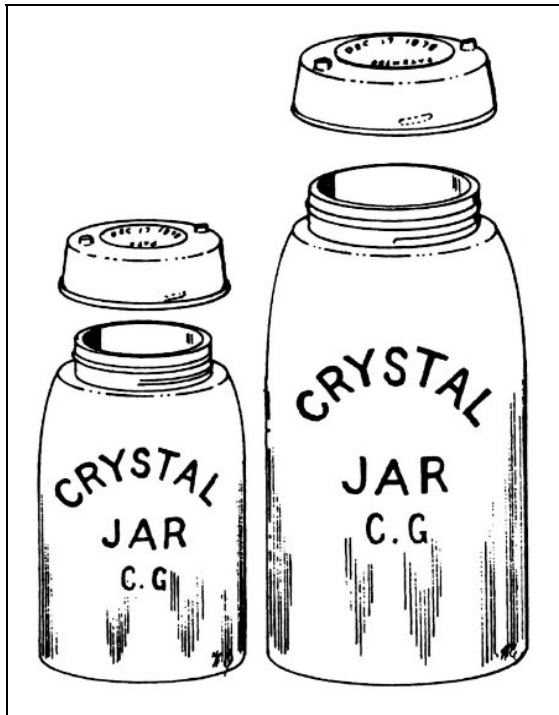


Figure 15 – Crystal Jar CG (Creswick 1987a:38)

Aside from the addition of “CG” below “JAR,” these appear to be identical to the Crystal Jar made by the Crystal Glass Co. of Pittsburgh and are found with the same lids. Creswick stated that these were made by the Crystal Glass Co. of Pittsburgh, and the embossing on the lids supports that assertion – although we suggest that Crystal made the “CG” jars beginning in March 1885 to distinguish ones made by Crystal from those produced by Independent Glass. Leybourne (2008:118) added a variation with the “J” in “JAR” over a ghosted reversed “J.”

MASON'S CRYSTAL JAR

Toulouse (1969:84) noted a jar embossed “MASON’S (arch) / CRYSTAL / JAR (horizontal)” on the front. He suggested that the jar was made for the Consolidated Fruit Jar Co. as “probably Consolidated’s answer to the CRYSTAL of Hero’s Rowley, or vice versa.” As noted above, this is highly unlikely. Roller (1983:98) added a CRYSTAL MASON and assumed that the Crystal Glass Co. (Pittsburgh) was the manufacturer. This was separate from the *Crystal MASON* described below, and it may have been a misunderstanding of the MASON’S CRYSTAL JAR. Examples sold at the North American Glass auction had typical Mason shoulder seal lids (Figure 16). With one exception, the curvature of the shoulders in the three types of jars (CRYSTAL JAR, CRYSTAL JAR CG, AND MASON’S CRYSTAL JAR) were virtually identical. Creswick (1987a:38) illustrated an example, noted that it was a “Midget pint,” and dated it ca. 1878-1882, although she did not specify a manufacturer (Figure 17).

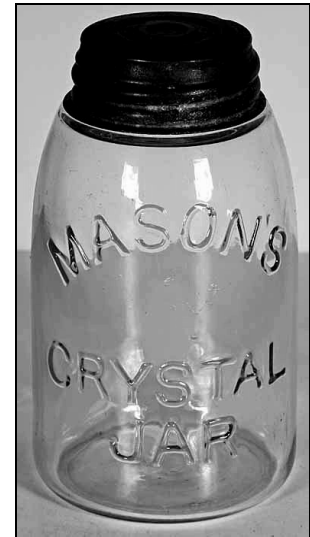


Figure 16 – Mason’s Crystal Jar (North American Glass)

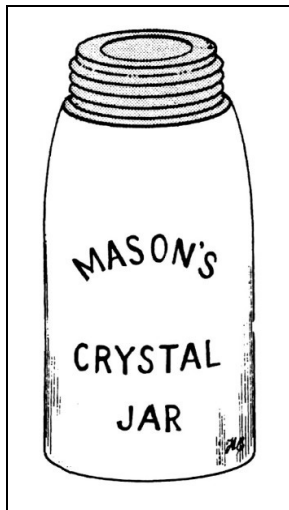


Figure 17 – Mason’s Crystal Jar (Creswick 1987a:38)

Although the company identification is less certain than with the other Crystal jar types, the Mason’s Crystal Jars were probably produced by the Crystal City Glass Co. at Bowling Green, Ohio. Of the Crystal glass houses, the Crystal Glass Mfg. Co. at Camden, New Jersey, is the only one of our possibilities not specifically listed as making fruit jars – so we have eliminated it. The Canadian Crystal Glass Co. probably made the jars described below, and they were not in business long enough to have made comparatively large quantities of the Mason’s Crystal Jars. The Pittsburgh Crystal plant – certainly the manufacturer of the Crystal Jars – was already successful with that product and had no reason to try another one – although the possibility cannot be entirely ruled out. The final possibility was the Crystal City Glass Co., listed by Paquette (2002:150) as making pint Mason jars. It is certainly possible – maybe even probable – that Crystal City also made the jars in other sizes.

***Crystal* MASON**

Roller (1983:98) noted that jars embossed “*Crystal* (upwardly slanted cursive) / MASON (horizontal)” had a “smooth lip” – i.e., machine made – and that the closure was “uncertain, probably bead seal, zinc screw cap.” He added that “these are very scarce jars” but did not know the maker. Although the earlier study included a variation with “CRYSTAL” in capital letters, this was retracted in the 2011 update and probably was either confused with the MASON’S CRYSTAL JAR described above or simply did not exist. The Roller update (2011:153) used the same entry for the italicized “*Crystal*.” Creswick (1987a:38) discussed the jar but did not illustrate it. She described the lid as the same Patented Dec. 17, 1878, one used by the Pittsburgh Crystal Jar Co. and claimed that the jars were mouth blown (ground lip). Although Roller did not state a size, Creswick claimed that the jar was “midget pint.” Creswick (1987b:40) provided an illustration of the jar, showing a later-style probably tin lid and a bead-seal, continuous-thread finish (Figure 18).

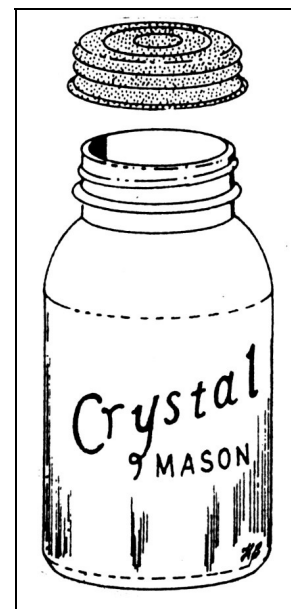


Figure 18 – *Crystal* Mason (Creswick 1987b:40)

These jars were probably made by the Crystal Glass Co. at West Minister, British Columbia. The factory made fruit jars, and the firm was very short lived – 1906-1908 – accounting for the scarcity of the machine-made jars. In addition, the embossing format – upwardly slanted cursive first word, followed by horizontal block capitals – was very common in Canada. See the section on Consumers Glass Co.

Histories

Crystal City Glass Co., Bowling Green, Ohio (1888-1892)

The Crystal City Glass Co. incorporated in November 1887, with Solon L. “S.L.” Boughton as the president, Henry Newland as vice president, Frank Boughton (son of S.L.) as secretary, and John R. Hankey as treasurer. The firm capitalized at \$25,000. None of the officers were glass makers, so they hired Jacob Bonshire, a former supervisor at Adams & Co.

(Pittsburgh) and other factories, as plant manager. They began construction of the factory in mid-April 1888 and blew the first bottle on July 22. The plant had five three-ton continuous tanks that produced pint Mason jars, flasks, bottles, and druggists' sundries (Paquette 2002:149-150).

The company's non-union employees went on strike in February of 1889, causing a reorganization of the plant. Bonshire resigned and was replaced by Leonard Strickel. Oddly, the plant preferred small orders to large ones. Boughton told reporters that "there is better profit on small [orders]" (Paquette 2002:150-151). Problems with the natural gas supply and a decline in general glass prices placed the firm in financial trouble during the winter of 1889-1890. Strickel resigned to be replaced by Alfred A. Thurstin, but the financial decline continued through the next winter, forcing the plant to close on March 16, 1892. The plant reopened in the spring of 1893 but closed again on June 27 – never to reopen. John Giles purchased the plant and its equipment on September 2, 1893 (Paquette 2002:152-153). This period beginning in 1893 was known as the Panic (i.e., depression) of 1893, when numerous businesses failed.

Crystal Glass Co., Ltd., New Westminister, British Columbia (1906-1908)

Although Toulouse (1971:36) and Creswick (1987b:158) dated the Crystal Glass Co., Ltd., from 1907 to 1910, King (1987:118), the Canadian expert, noted dates of 1906 to 1908. The company was incorporated on June 14, 1906, with a capital of \$150,000, using the former American Can Co. facility at 772 Brunette St., New Westminister, British Columbia, as the factory. The plant consisted of two corrugated-iron buildings, each 200 feet in length and 90 feet wide. Donald Lamont managed the factory and had a continuous tank built with six rings. About 100 workers made flint glass at the tank. Although the plant produced fruit jars and wide-mouth ware by machine, beer, soda, wine, and brandy bottles were all mouth blown. The first fires were lit in early July 1907. The plant made ca. 2,500 fruit jars and a similar amount of beer bottles each day. E. Cook was the president, with N.M. Garland as vice president and J.S. Henderson as secretary and treasurer. The plant closed in 1908 (King 1987:118-120). Toulouse (1971:36) noted that the factory was listed as making "flint glass in all lines."

Crystal Glass Works, Pittsburgh (1868-1870)

According to Hawkins (2009:140, 462), Frank Semple and George W. Fry operated the Crystal Glass Works as Semple & Fry from 1868 to 1869. In addition, Semple, Henry Clay (H.C.) Fry (George Fry's brother) and John D. Reynolds operated the Crystal Flint Glass Works. The two plants displayed their goods at the Merchants Hotel on Smithfield St. Semple & Fry made French Flint Glassware.

Both of the Fry Brothers left their respective firms in 1869. The new partnership of Semple, Reynolds & Co. (Frank Semple and George D. Reynolds) apparently operated both plants from 1869 to 1870. The Crystal Flint Glass Works was located at the intersection of Josephine and 18th streets in Birmingham (a Pittsburgh suburb). Plunkett & Co. had taken over the Crystal plant by at least 1872, but the Crystal Glass Works apparently became the Crystal Glass Co., operated by the Bennett family (Hawkins 2009:462). It is unclear whether the Crystal Glass Works was the factory situated beside the Bennett pottery or whether this was a second location (see next entry).

Crystal Glass Co., Pittsburgh (1870-1890)

Daniel Bennett, William Bennett, and Mark J. Bennett (Daniel's son) founded the Crystal Glass Co. at Birmingham (later part of Pittsburgh) in 1870.¹ By 1871, Daniel was the president, with William as secretary and treasurer, Mark as the business agent, and John Henderson as the factory manager. The plant was on Washington St., between S. 16th and S. 17th Streets. The Bennetts previously manufactured pottery at Birmingham as Bennett & Brothers from 1844 to 1869, although the firm was originally at East Liverpool, Ohio. The brothers located the glass plant at the old pottery factory – possibly immediately beside it – and made Crystal fruit jars and milk jars that were actually fruit jars with wire-bale lids – along with tableware and lamp chimneys (Hawkins 2009:139; Roller 1997a).

In 1876, the factory used two furnaces and 20 pots to produce tableware (*Crockery and Glass Journal* 1876:15). The plant was noted on Warren St., between S. 16th (Franklin) and S.

¹ Roller (1983:97) place the founding date at 1869.

17th (Franklin), but this was a change in street names – not a relocation. Although no researchers suggested a reason, the Independent Glass Co. made the Crystal Jars – apparently on contract with the Crystal Glass Co. – from 1881 to 1884. Crystal leased the factory to King, Son & Co. in August 1884, when the King plant burned to the ground. Crystal continued to sell its own products as well, and the King group moved out in January of 1885.² Crystal resumed production of Crystal Fruit Jars in March (Hawkins 2009:142; Roller 1983:97; Roller 1997a).

Thomas Evans & Co. leased the Crystal plant from August 1885 to February 1886. In February, the plant returned to fruit jar manufacture, and Crystal converted at least part of the factory to colored tableware by April of 1886. By 1887, however, the plant was only listed as making tableware. When the Farmers & Merchants Bank of Pittsburgh’s South Side failed in 1888, both Crystal and Independent became insolvent. Crystal sold the factory to W.C.E. Succop for \$21,000 on February 11, 1890. Succop razed the glass plant and converted the property to dwellings (Hawkins 2009:142; Roller 1983:97; 1997a).

Patents

Edwin Bennett received Patent No. 52,379 for an “Improved Fruit Jar” on February 6, 1866. This was the beginning of glass designs by the Bennett family – at that time potters – and dealing with glass houses to make the jars may have been the impetus that spurred the family to leave the pottery business and open the glass factory. See the Adams & Co. section in the “A” volume for more information about these earlier jars.

Jonathan Haley, July 30, 1872

Jonathan Haley received Patent No. 130,039 for an “Improvement in Glass Presses” on July 30, 1872. He assigned the patent to the Crystal Glass Co., Pittsburgh. Although Haley’s description is ambiguous about the intended products to be made on the press, it appears to have been aimed toward tableware (Figure 19).

² Although Hawkins noted that Crystal sold its products while King, Son & Co. leased the plant, he could not determine *where* the firm was making them. It seems likely that Crystal was only selling items from its warehouse along with jars made by the Independent Glass Co.

Mark Bennett, July 28, 1874

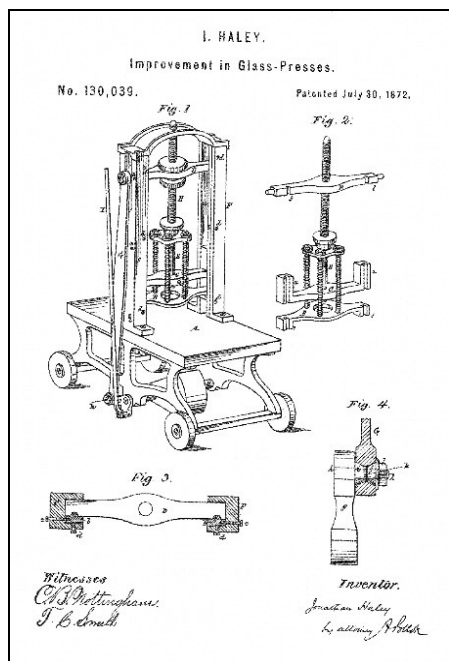


Figure 19 – Haley’s 1872 patent

Mark J. Bennet filed for a patent on July 15, 1874, and received Patent No. 153,529 just 13 days later, on July 28 of the same year. The patent was for a “an Improvement in Jelly Glasses or Tumblers.” The straight-sided glass had a “slip top or cover” with “a sealing-strip applied on the outside of the

tumbler.” He used a “regular label, bearing on one side the names of all fruits or vegetables usually put up in such glasses” that was “coated on the reverse side with mucilage, shellac, sealing-wax, or other adhesive material” to affix the label under the cover. The label acted as a seal between the lid and the glass while indicating the contents (Figure 20).

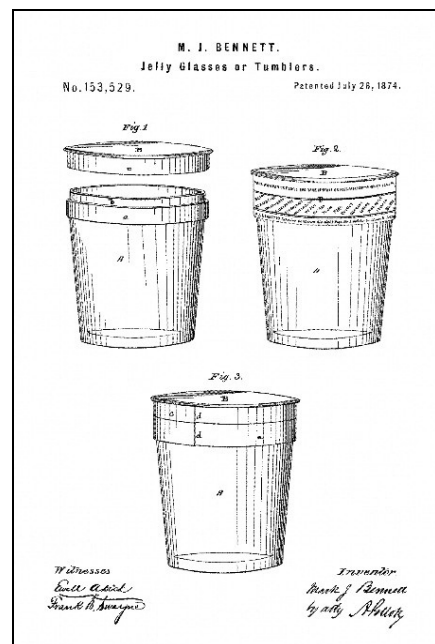


Figure 20 – Bennett’s 1874 patent

Daniel Bennett, December 17, 1878

On July 19, 1878, Daniel Bennett filed for a patent for an “Improvement in the Manufacture of Glassware.” He received Patent No. 210,984 on December 17, 1878. According to Roller (1983:97) the patent was for a press mold to make lids for the Crystal fruit jar. This was the patent date that accompanied the jars (Figure 21).

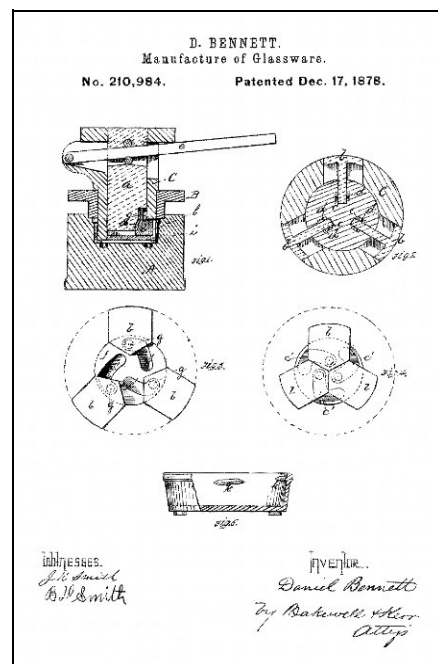


Figure 21 – Bennett’s 1878 patent

Crystal Glass Mfg. Co., Camden, New Jersey (1886-1888)

A.C. Lamar built a glass factory on Front Street, below Kaighn Ave. on February 11, 1886 (Roller 1997b). The Crystal Glass Mfg. Co. was incorporated on April 30 of that year with a capital of \$20,000, \$10,000 of which was subscribed by the incorporators. The firm increased its capital stock to \$30,000 on August 11, 1887 (New Jersey State Library 2014). The president in 1886 was J.R. Runge, with P. Strang as treasurer, and A.C. Lamar as secretary. The plant included six buildings, two of iron and four wooden frame structures. These had been “fitted up with all the latest improved machinery requisite for the business.” The main building had one large smokestack and 12 smaller ones. The plant made “wine, beer, Weiss beer, porter and mineral water bottles, pickle jars and various kinds of green and amber bottles; also flasks and demijohns. This firm makes bottles in private moulds for the trade in the New England and adjacent States” (Prowell 1886). The Whitney Glass Works purchased the Crystal Glass Mfg. Co. in 1888, but a fire destroyed the factory on March 29, 1889 (Pepper 1971:170; Roller 1997b).

Independent Glass Co., Pittsburgh (1880-1888)

Plunkett & Co., apparently consisting of F.T. Plunkett and Michael Ward, operated a glass works at the corner of 14th and Breed Streets, on Pittsburgh’s South Side, by at least 1877. The plant was sold at a sheriff’s sale about August 1, 1880, to a Mr. Dunlap. Although the exact mechanism is unclear, the Independent Glass Co. had taken possession of the factory by at least September 9.

Michael Ward and Henry F. Voigt (a cashier at Farmers & Merchants Bank) were the principals of the Independent Glass Co. The firm primarily made lamp chimneys, but it contracted with the Crystal Glass Co. in May 1881 to produce the Crystal Jars. By August, the plant devoted its entire production to the jars, although the factory had resumed making lamp chimneys and lantern globes by March 1882. As was often the case in the 19th century, an operating firm, Voigt, Ward & Co., had charge of the Independent Glass Co. When Ward invented a glass press in 1882, he assigned half the patent to Voigt, and William H. Brunt – secretary for the firm – assigned his 1882 jar lid patent to Voigt, Ward & Co. (Hawkins 2009:286). See patent section below for details.

The factory made “bubble tumblers” along with jars and chimneys at a single 10-pot furnace. By at least June 23, 1881, the *Crockery & Glass Journal* reported that Independent Glass was “busy on orders from the Crystal Glass Co.” Independent Glass made the Crystal Jars until the end of 1884 and made its own Independent Jars by at least April 17 of that year. The plant made the jars as well as lamp chimneys until it closed for the summer in May of 1887 and never reopened. Voigt was charged with embezzlement in 1888 in connection with the failure of the Farmers & Merchants Bank. He was arrested and jailed. The Independent Glass Co. Factory was sold at a sheriff’s sale in January 1889 (Creswick 1987a:90, 268; Hawkins 2009:286-287; Roller 1983:162, 167-168; n.d.).

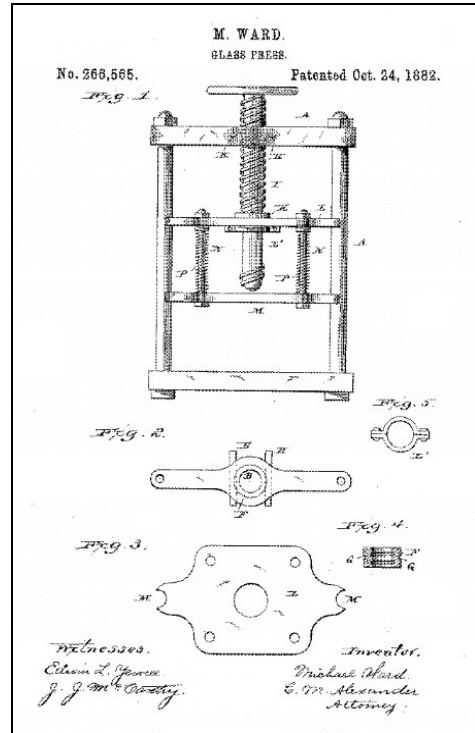


Figure 22 – Ward’s 1882 patent

Patents

Michael Ward, October 24, 1882

On July 27, 1882, Michael Ward applied for a patent for a “Glass-Press.” He received Patent No. 266,565 on October 24 of the same year. He assigned one-half of the rights to Henry F. Voigt. The press was intended to make “female screw-threads in articles of glassware, such as fruit-jars and the like.” This was undoubtedly used for making lids for both the Independent Jars (Figure 22).

William H. Brunt, December 12, 1882

William H. Brunt filed for a patent for “Screw Thread for Uniting Articles of Glass and Crockery Ware”

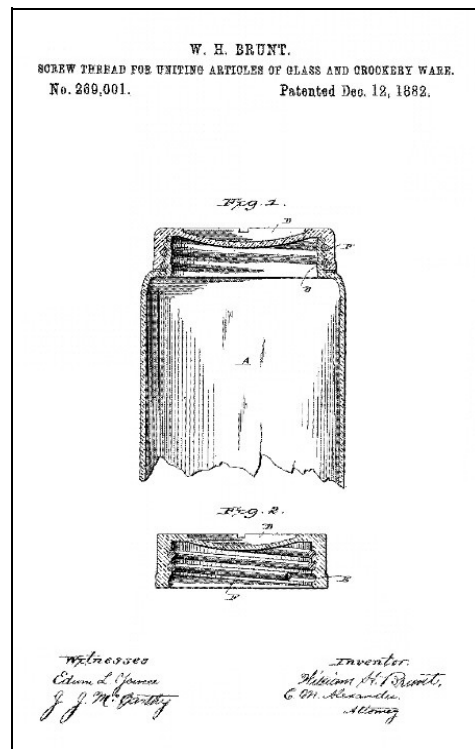


Figure 23 – Brunt’s 1882 patent

on October 24, 1882, and received Patent No. 269,001 on December 12 of the same year (Figure 23). A unique feature of this lid was a wire spiraling through the continuous threads that prevented the “disagreeable gritting which results from the rubbing together of glass surfaces” (Figure 24). Brunt was the secretary for the Independent Glass Co., and he assigned the patent to Voigt, Ward & Co. This was the patent date embossed on Independent Jar lids (Roller n.d.).



Figure 24 – Wire in Independent Jar lid (North American Glass)

Containers & Marks

Independent Jar

Toulouse (1969:159) listed a jar embossed “INDEPENDENT” in an arch on the front. He noted variations in flint and aqua colors. The glass screw cap was embossed “PAT OCT. 24 1882.” He noted that the jar was made by the Independent Glass Co., but the patent was the same as on the lids of the Franklin-Dexter jars. Other sources, however, noted that



Figure 26 – Double-stamped lid (North American Glass)

the Franklin-Dexter lids were embossed “PAT^D AUG. 8TH 1865.” Toulouse noted a variation embossed “INDEPENDENT (arch) / JAR (horizontal)” made by the same firm (Figure 25). No other source mentioned a jar embossed “INDEPENDENT” without “JAR.”

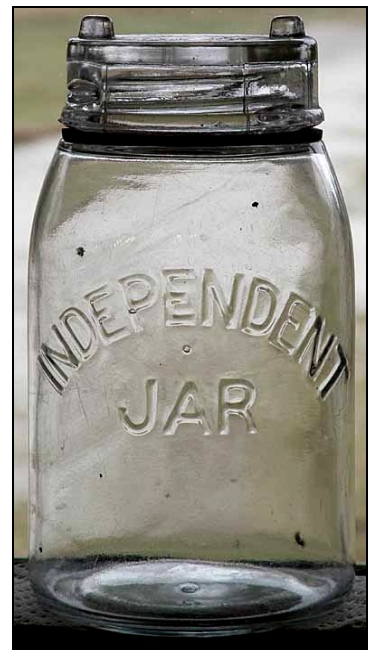


Figure 25 – Independent Jar (North American Glass)

Roller (1983:157) agreed that the shoulder-seal glass lids were embossed with the October 24, 1882 patent date, but he attributed it to Michael Ward’s patent of that year (see patent discussion below). Some of the lids were double-stamped – even though they were



Figure 27 – Independent Jar (Creswick 1987a:90)

apparently all made on the Ward press (Figure 26). Creswick (1987a:90) illustrated the jar and noted that some of the lids were cobalt blue (Figures 27). The Roller editors (2011:256-257) noted a single example of quart jar in cobalt blue as well as a colorless pint jar with a cobalt blue lid (Figures 28 & 29). Two interesting variations were embossed “CCC” horizontally on the front and “GREAT (arch) / AMERICAN (horizontal) / COUGH DROPS (inverted arch)” in a round plate, also on the front (Figures 30 & 31). They also noted two variations with no embossing on the jars. All of these had caps with the October 24, 1882, patent date.

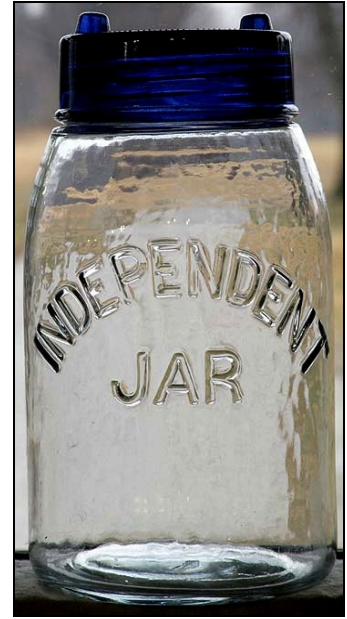


Figure 28 – Independent Jar (North American Glass)



Figure 29 – Cobalt blue lid (North American Glass)

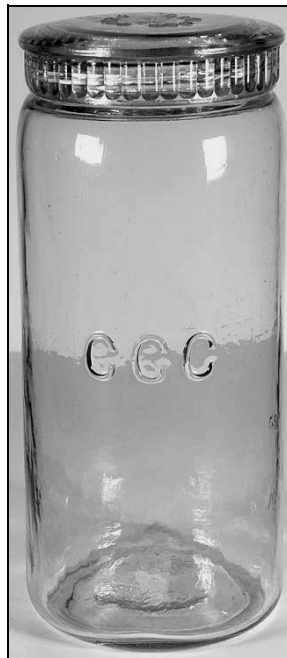


Figure 30 – CCC jar (North American Glass)

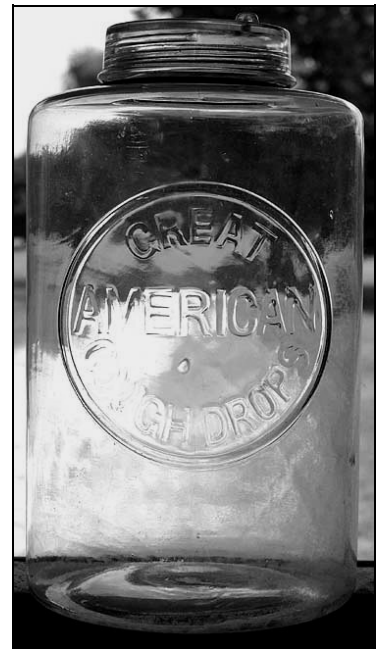


Figure 31 – American Cough Drop jar (North American Glass)

Discussion and Conclusions

As noted in the sections above, we have assigned manufacturers to all five variations of the Crystal jars. Also, as noted above, the jar embossed “CRYSTAL” with no other words had patent dates that indicated a manufacture by the Hero Glass Works, so that will be discussed in the Hero section. The other four variations require additional discussion.

CRYSTAL JAR

The combination of the patent date – consistently embossed on Crystal Jar lids – and illustrated advertisements leave no question whatsoever that these were made by the Crystal Glass Co. at Pittsburgh. However, we question Roller’s dates for Crystal Jar manufacture, and two tables (Table 1 and Table 2) summarize the details of events and jar production to help clarify some issues. The fact that two different glass houses made the jars further complicates the situation.

Table 1 – Probable Manufacturers of Crystal Jars

Jar Variations	Factory	Location	Date Range
CRYSTAL	Hero Glass Works	Philadelphia	ca. 1873-1883
CRYSTAL JAR	Crystal Glass Co.	Pittsburgh	1879-1884*
CRYSTAL JAR	Independent Glass Co.	Pittsburgh	1881-1884
CRYSTAL (Milk) JAR	Crystal Glass Co.	Pittsburgh	1879-1884; 1885-87
CRYSTAL (Jelly Jar)	Crystal Glass Co.	Pittsburgh	1874-1884; 1885-87
CRYSTAL JAR CG	Crystal Glass Co.	Pittsburgh	1885-1887
MASON’S CRYSTAL JAR	Crystal City Glass Co.	Bowling Green, Ohio	1888-1892
Crystal MASON	Crystal Glass Co.	New Westminster, British Columbia	1906-1908
INDEPENDENT JAR	Independent Glass Co.	Pittsburgh	1884-1887

* Crystal Glass Co. may have ceased production of the fruit jars in 1881.

Table 1 – Crystal Jar Timeline

Date	Event
December 17, 1878	Daniel Bennett received Patent No. 210,984 for a press-mold to make Crystal Jars
June 5, 1879	Crystal Glass Co. ad for Crystal Jars
1879	Crystal Milk Jar used by a dairy in New Jersey
May 1881	Crystal contracted with Independent Glass Co. to make Crystal Jars
September 1880	Crystal Glass Co. ad for Crystal Milk Jars
March 2, 1882	Crystal Glass Co. ad for Crystal Milk Jars
March 2, 1882	Independent Glass Co. ad for Crystal Jars
January 3, 1884	Crystal Glass Co. ad for Crystal fruit and milk jars
January 31, 1884	Independent Glass Co. ad for Crystal Jars
August 1884	King, Son & Co. leased Crystal Glass Co.
January 1885	King, Son & Co. lease ended
March 1885	Crystal Glass Co. resumed production of Crystal Jars
August 1885	Thomas Evans & Co. leased the Crystal Glass Co. plant
February 1886	Thomas Evans & Co. lease ended
April 1886	Crystal Glass Co. resumed production of Crystal Jars
1887	Crystal was only listed as making tableware
1888	Crystal Glass Co. ceased production

Roller used dates of 1879-1882 and 1885-1888 for the production of the jars by Crystal, with the Independent Glass Co. making the same jars from at least July 1881 to late 1884. The dates for the Independent Glass Co. production are solidly supported by historical advertising and articles. Various sources show that Crystal Glass made both the fruit jars and milk jars during 1879. Meanwhile, Crystal licensed the Independent Glass Co. to make the Crystal *fruit* jars by at least July of 1881. Roller (1997a) noted ads from Crystal Glass for the milk jars on March 2, 1882, and for *both* milk and fruit jars on January 3, 1884.

This suggests that Crystal had sublet the production of fruit jars to Independent Glass in mid-1881 but had resumed production of those jars at some point – at least early 1884 and was making glassware until at least May 1 of that year. The plant certainly stopped manufacture of the jars during the period between early August of 1884, when King, Son & Co. leased the plant and January of 1885, when Crystal resumed its own production. Milk jar manufacture continued until at least March 1882 and either resumed in January 1884 or had remained during that entire period. None of the sources suggested milk jar production by the Independent Glass Co.

It seems likely that the demand for the jars was so great that the Bennett family sublet production of the jars to the nearby Independent Glass Co. to augment the supply – while continuing its own production at least until 1882. Although we have *no* data for 1883, Independent Glass became the sole producer from mid-1884 to the end of the year. When Crystal resumed production, the firm must have retracted the permission to the Independent Glass Co. Roller's (1983:97; 2011:152) phrasing – “Crystal had expressed regret for not being able to meet the demand for their jars in 1884 but stated that their own jars were better than they could get from other manufacturers” – suggests that Crystal was *only* out of production of the jars for the one-year period when King, Son & Co. leased the plant. Thus, the first phase of manufacture of both types of jars extended from 1879 to 1884.

The second period in question was from August 1885 to February 1886, when Crystal leased its plant to Thomas Evans & Co. Roller seemed to believe that Crystal continued production during that period, although we can find no supporting evidence for any manufacture during that time. It seem likely that Crystal Jars were off the market during this six-month period – unless the Independent Glass Co. resumed production, or Crystal Glass sold previously manufactured jars that were stored in a warehouse. It seems logical that Crystal resumed manufacture of the jars after February 1886 and continued until the firm apparently discontinued jar production in 1887. Hawkins (2009:142) noted that “whenever the Crystal Glass Co. was operating the works, they continued to produce the Crystal fruit jar and their jelly glass tumblers.”

The jars embossed “CRYSTAL / JAR / CG” were almost certainly made by the Pittsburgh Crystal Glass Co., since they had the same patent date on the lids. In 1884, Crystal claimed that the jars produced at its own factory were superior to the Crystal Jars made by

“other” plants – a direct stab at the Independent Glass Co. It is thus possible that the “CG” jars were made after Crystal resumed production in March 1885. The “CG” would have distinguished the Crystal Glass Co. jars from those made by the Independent Glass Co. Unfortunately, we have no historical documentation to support this idea.

INDEPENDENT JAR

Each Independent Jar lid was embossed with the October 24, 1882, patent for a jar manufacturing machine. However, the earliest date we have found for actual production of the jars was April 17, 1884, apparently in anticipation of the Crystal Glass Co. resumption of manufacture of the Crystal Jars. Independent Glass made the Independent Jars until the factory closed in mid-1887.

MASON’S CRYSTAL JAR

Our identification for this factory is probably the least solid of any in this study. These jars were made in sufficient quantities that a dozen or so examples have been auctioned by North American Glass. Thus, we eliminated the Canadian Crystal Jar Co. as being in business for two short a period (less than two years) and because they made jars by machine. The Crystal Glass Mfg. Co. at Camden, New Jersey, was also only in production for about two years and was listed as making a variety of bottles but no fruit jars. The Crystal Glass Co. at Pittsburgh is well documented for the Crystal Jar – as discussed above – and was unlikely to have made this different model. This leaves the Crystal City Glass Co. of Bowling Green, Ohio – 1888-1892 – a firm that made pint Mason jars. Although this identification is very circumstantial, it remains the best choice of the available glass houses. The Pittsburgh plant, however, may not be completely eliminated.

***Crystal* MASON**

Three lines of evidence lead to the identification of the Crystal Jar Co. at British Columbia as the manufacturer of the *Crystal* Mason Jar. First, the factory was listed by its major historian as making fruit jars. Second, these jars are scarce, and the Canadian factory was in business for less than two years, making products only from mid-1907 to some point in 1908.

Finally, the embossed format – upwardly slanted initial name above the second name in block capitals – was commonly used on Canadian fruit jars. There is one major flaw in this identification. Contemporary wisdom suggests that the bead seal (found on this jar) was first used ca. 1910 – at least two years after the closure of the Canadian Crystal factory. Our identification should therefore be taken as tentative. Alternatively, the jar could have been made later by the Consumers Glass Co. – a firm that made many jars with upwardly slanted embossed labels.

Crystal and Independent Jar Lids

The similarities between the lids of the Crystal Jars and Independent Jars is unmistakable (Figure 32). Externally, they are virtually identical, although the Crystal Jar lid has internal lugs, where the Independent Jar lid has continuous threads. The Crystal Jar lid also lacks the wire insert. It is apparent that Ward and Brunt based their ideas for the press and lid for the Independent



Figure 32 – Crystal & Independent jar lids (North American Glass)

Jar directly from the Crystal Jar lids – that their factory was making for Crystal Glass. This could even have created a breach between the two firms and caused Crystal to withdraw the contract that allowed the Independent Glass Co. to make the Crystal Jar.

Future Research

Future research should concentrate on the two Mason variations. It would be helpful to find a source that specified Mason jars in connection with the Canadian firm and any documentary evidence – like ads – to tie in the Crystal Mason and Mason Crystal Jars to these (or any other) glass houses.

Acknowledgments

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