Consolidated Fruit Jar Co.

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

The patents for the Mason fruit jars were almost certainly the most valuable and important patents in fruit jar history. As these began to expire in the early 1870s, Louis R. Boyd, John L. Mason (the original patent holder and inventor of the Mason jars), and two others formed a corporation to renew the patents and retain control of the Mason fruit jars. Incorporated in December 1871, the Consolidated Fruit Jar Co. manufactured the tinned-steel lids and screw bands for the jars and authorized various glass houses to actually produce the glass containers. Consolidated sold the fruit jar rights to the Hero Glass Works about 1883.

History

Consolidated Fruit Jar Co., New York, New York (1871-1980s or later)

The Consolidated Fruit Jar Co. incorporated on December 12, 1871, as a combination of the Sheet Metal Screw Co., the Mason Mfg. Co., and several individuals. The new firm had a capital of \$500,000. Roller (1983:446) noted Louis R. Boyd as representing the Sheet Metal Screw Co., rather than the New York Metals Co., as claimed by Toulouse. Boyd was the primary stockholder with \$197,500 (39.5%) of the subscription. John L. Mason, Stephen R. Pinckney, and William S. Carr represented the Mason Mfg. Co. with \$137,000 (27.4%) of the subscription. Henry E. Shaffer had \$65,000 (13%) of the total, and Henry C. Wisner was a corporate member but had no stock (Roller 1983:446).

The new firm claimed 66 Warren St., New York – the former Sheet Metal Screw Co. location – as its first home, but the office moved to 49 Warren St. the following year. The actual plant was situated on the Raritan River at New Brunswick, New Jersey. It is interesting that the

¹ According to Toulouse (1971:123-125), four companies consolidated to form Consolidated: 1) Mason Mfg. Co., making lids; 2) New York Metals Co., operated by the well-known Louis Boyd – also making lids; 3) Payne & Co. (Mason's first partner); and 4) Jersey City Glass Works, making jars. This transformation took place ca. 1867. The Roller version is almost certainly correct.

drawing of the plant (Figure 1) in the ca. 1891 catalog traces the founding of the plant to the date of Mason's 1858 patent. Boyd was president, with Harry E. Shaffer as secretary. Initial products included "Mason, Boyd's Porcelain Lined, Queen, Mason's Improved, and Other Fruit Jars" (Roller 1983:446).

Prior to the consolidation, there had been a strong competition between the principle companies, with little cooperation. Boyd controlled the

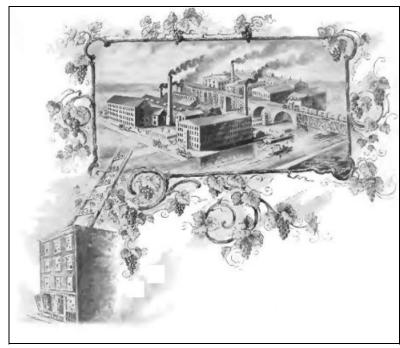


Figure 1 – New Brunswick plant (Consolidated Fruit Jar Co. ca. 1892 catalog)

old patents, but he was constantly pushed by the Hero Glass Works – another firm that made closures for screw-top containers. Mason had lost control of his earlier patents, but he kept on inventing – creating new issues for Boyd. Shaffer's Queen jars were *very* similar to Mason jars, adding another complicating factory. The situation was very complex.

The impending expiration of the early Mason jar patents changed their attitudes. John L. Mason had received the patent for his famous jar in 1858. The patent expired in 14 years – 1872 – and that would allow any glass houses to manufacture the jars without paying any royalties to the patent holder. Mason had already been edged out of his former firm, losing control of the patent rights. See the section on the Mason Fruit Jar companies for details about earlier firms.

As owner of the Sheet Metal Screw Co., Boyd controlled all five of Mason's original patents, but the patents could only be renewed by the original patentee – John L. Mason. To retain control of the patents – and the lucrative royalties – Boyd needed Mason. As a result, the two formed an uneasy alliance that included the others. Boyd reassigned the three 1858 patents to Mason in 1872 – in exchange for \$5,000 – and Mason was able to renew them for seven years (Roller 1983:447).

Although the Consolidated Fruit Jar Co. did not make fruit jars, the company controlled various Mason patents and thus controlled who was allowed to make them. Old jealousies and disagreements resurfaced almost immediately, and the various partners entered into agreements that landed several groups in court. Although Consolidated was able to retain full rights of the patents, this was clearly not a compatible group (see Roller 1983:447 for more details).

Reminiscent of his experience with the original Mason Mfg. Co., Mason had been removed from the firm by May 31, 1873. Consolidated registered the CFJCo monogram as a trademark on April 23, 1878, with first use claimed at April 3 of that year (Figure 2). The firm also registered "Boyd's Porcelain Lined" on September 19, 1878, claiming as a first use date of February 1870 – its use by the Sheet Metal Screw Co. (Roller 1983:447).



Figure 2 – CFJCo trademark (Consolidated Fruit Jar Co. ca. 1892 catalog)

Consolidated also applied to register the term "Mason's Fruit Jar" on April 12, 1877. This led to a prolonged battle with the patent office. On September 20, 1878, a patent examiner sustained the verdict of the patent office that Consolidated should *not* be granted the trade mark citing its reason:

When all such rights cease by the expiration of the patents, the public will succeed thereto and no one can be prevented from manufacturing and selling Mason's fruit jars and stamping them as such. Now that the extended patents under which applicants manufacture are about to expire, to give to them a monopoly for thirty years longer in the use of the name by which such patented articles are known would be a fraud upon the public. The Office has hitherto refused to record such names as trade marks and the courts both in England and in this country have declined to extend protection to their use (U.S. Patent Office 1878:270.

The Examiner finally concluded that "no one can claim protection for the exclusive use of a trade mark or trade name which would practically give him a monopoly in the sale of any goods other than those produced or made by himself" (U.S. Patent Office 1878:270). According to Roller (1983:447), however, Consolidated finally won the trade mark on October 8, 1879.

According to Toulouse (1971:124-125) the Clyde Glass Works was the largest manufacturer of Mason jars for Consolidated and was the heaviest hurt when Consolidated sold the jar concession to the Hero Fruit Jar Co. about 1883. While there is little doubt that Clyde was a major manufacturer for Consolidated (probably *the* major manufacturer), there is no documentary evidence that presumed sale ever took place (see Discussion and Conclusions section for more on the debate). Henry C. Weisner became president of Consolidated in 1885. On February 7 of that year, an oil car on a train crossing the elevated bridge above the Consolidated factory was ignited during a collision, dumping flaming oil on the plant. The resulting fire destroyed the entire holding. The factory was almost immediately rebuilt (Roller 1983:447).

In 1886, Consolidated finally overstepped its bounds, when it sued the Bellaire Stamping Co. for infringement on its patents. Consolidated claimed that Bellaire had infringed on Reissued Patent No 9,909, issued on October 25, 1881, assigned to Consolidated by Lewis R Boyd. The original patent, No. 88.439 had been issued for improved mode of preventing corrosion of metallic caps on March 30, 1869. The patent superseded Patent No 117,236, issued to Taylor & Hodgetts on July 18, 1871. The U.S. Circuit Court noted that:

The use of a non corrodible lining was not new with Taylor & Hodgetts. It is shown in the patent granted to B.W. Lewis, February 12, 1856. The lining there was tin but that is not a material difference. It was tin in the cap described in the original application of Taylor & Hodgetts. J.K. Chase's patent October 27, 1857, shows and describes a screw cap of thin metal spun to shape and identical in all respects except the glass lining with the fruit jar caps made and sold in the market under the Boyd patent. Boyd's improvement on the Taylor & Hodgetts cap consisted in combining the screw cap of Chase with the glass lining plate of Taylor & Hodgetts, which was the equivalent of Lewis' tin lining embodied also in the cap described in Taylor & Hodgetts original application. Now, if the Chase patent and Taylor & Hodgetts patent had each been valid and in force when Boyd made his improvement that improvement must have been held to be *nothing more than an ingenious attempt to evade both those patents* and quite within the range of the skill of a competent mechanic but without anything of invention and therefore not patentable [our emphasis].

The judge therefore ruled that "the Boyd patent reissued to the complainant as his assignee was invalid for the reason that the improvement therein described was not patentable." Boyd had been holding an invalid monopoly on his jar cap for 17 years. The playing field was now open.

Consolidated continued to make lids until 1907, although it had begun to diversify its products much earlier. The New York corporation dissolved in 1924, and a new one was formed immediately in New Jersey (Roller 1983:448; Toulouse 1969:345; 1971:123-125). Although Roller (1983:448) noted that the company was still in business in 1983, we have found no indication that it survived into the 21st century.

Containers and Marks

Although the Consolidated Fruit Jar Co. did not actually manufacture glass, it controlled the patents for the Mason jars (Figure 3). As a result, the firm required the glass houses it supported to emboss the CFJCo monogram on various jars and lids.

- C - (ca. 1875-1878)

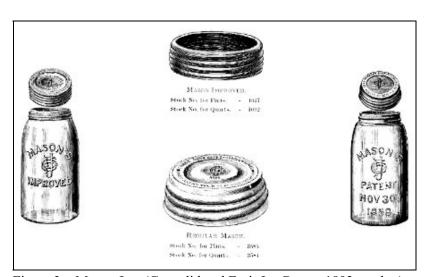


Figure 3 – Mason Jars (Consolidated Fruit Jar Co. ca. 1892 catalog)

Toulouse (1969:60) originally claimed that Consolidated "appears to have used a 'C' on the bottom of the jar" from 1867 to 1871. Later, Toulouse (1971:124) was less certain, noting: "There is some indication that the first trademark was a 'C' on the bottom of the jar." Other sources failed to substantiate his claim.

Roller (1983:232) illustrated a "C" with a small, solid arrow or triangle on both ends (Figure 4) between an arched "MASON'S" and "PATENT" but did not know the maker. He noted that one jar had a



Figure 4 – C logo (Roller 1983:232)



Figure 5 – C logos (Creswick 1987:146)



Figure 7 – "Closed" brackets or arrows (North American Glass)

an illegible ghosting below the "-C-" and that a variation had "DUPONT" in an oval on the reverse side. The illustration in Roller showed a serif on the upper termination of the "C" Creswick (1987:146) illustrated two variations or the logo (Figure 5).

Roller (2010:350-351)

listed three types of logos on the jars as "- C - or _ C _ brackets filled in or _ C _ brackets outlined only." Based on photos from North American Glass, the "- C -" logo is the one with a hyphen on



Figure 6 – Hyphen logo (North American Glass)



Figure 8 – "Open brackets or arrows (North American Glass)

both sides (Figure 6). The "_ C _" designation likely indicated the arrows or triangles (2011:351). The older Roller drawing (see Figure 1) showed the "filled in . . . brackets" (Figure 7). A North American Glass auction showed an example of the "brackets outlined" logo (Figure 8). Figure 9 shows a comparison of the three logos drawn from North American Glass examples.

All the photographs from North American Glass showed an upper serif on the "C," and Figure 6 may have also had a lower serif or a flared lower end. The editors noted that one variation of the

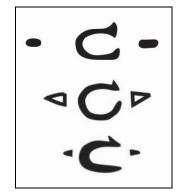


Figure 9 – Three C logo styles

hyphen logo had a "2" basemark, and one of the jars with the Dupont oval on the reverse had a "3" on the base (Figure 10). The "filled in" triangles or arrows had three basal variants:

- 1. 1286 or G295 on aqua pints
- 2. 1X or 2X on quarts
- 3. 1X, 2X, or 3X inside a large G on quarts (Figure 11)



Figure 10 - 3 basemark (North American Glass)



Figure 11 - 1X in G base mark (North American Glass)

The Roller editors (2011:350)

noted that in the June 1988 issue of the *Fruit Jar Newsletter*, Dick Roller discussed his long-held belief that these jars were made for the Consolidated Fruit Jar Co. prior to 1871. Jim Sears identified the "unrecognizable ghosting" noted in the 1983 book as the CFJCo monogram. The editors speculated that the lines or triangles on either side of the "C" may have been used to cover up the monogram. We would like to add that the "C" on these jars is very similar in shape and style of serif to the "C" in the CFJCo logo that stands for "Consolidated" (Figure 12).

There are two apparent difficulties with the Roller editors speculation. First, if the "C" logos were used *prior* to the CFJCo monogram, the monogram would be *over* a ghosted "C" logo – not the other way around. Second, the logo would have been used *after* 1871 but prior to 1878, when the firm first registered the CFJCo monogram. It is likely that Consolidated first had Mason jars made with no markings, then

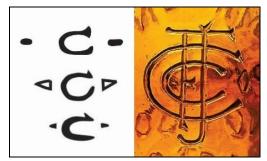


Figure 12 – C logo and CFJCo monogram

added the "C" logos, probably as late as 1875 or 1876, since these jars are not common, and finally included the CFJCo monogram in 1878.

The ghosting, however, is intriguing. A comparison of a jar with a "C" logo and one with a CFJCo monogram show that there is insufficient space between "MASON'S" and "PATENT" for the monogram – unless the ghosted monogram extended into the word

"PATENT" (Figure 13). In fact, a search of markings on between "MASON'S" and "PATENT" showed virtually no logos that would have fit in the space taken by the "C" logos. The mystery continues.

Mason's Improved



Figure 14 – C logo on Mason's Improved (Creswick 1987:121)

Creswick (1987:121) illustrated a jar embossed "MASON /-C-/ IMPROVED" on the front and claimed that in at least one variation, the "-C-"



Figure 13 – Jar comparison (North American Glass)

was ghosted over the CFJCo monogram. The base of that jar was embossed "H8C" (Figure 14). She further claimed that the maker was the Hazel Glass Co. As usual, she did not explain the reason for her choice. Unlike the Roller drawing Creswick made no serif on the "C." Roller (2011:337) noted that Vivian Kath had reported the variation with the ghosted monogram and "H8 / C" on the base. We have been unable to find an example of this jar. This may a misunderstanding of the Mason's Patent jars described above, or Creswick may have had

access to a jar or jars that we have not been able to locate.

Dupont

Roller (1983:232) only noted a variation with "**DUPONT** in oval on reverse." Roller's illustration of the Dupont oval had the "N" reversed (Figure 15). Creswick (1987:135) illustrated a jar with the Dupont oval and noted that it was found with and without the CFJCo logo. Roller (2011:364) noted that there were pint, quart, and half-gallon sizes of Mason's Patent jars with Oval-Dupont logos on the reverse. The editors stated that Vivian



Figure 15 – Dupont oval (Roller 1983:232)

Kath had reported variations with 1X or 2X inside a G, both with backwards "Ns" in the word

Dupont. The 1X variation illustrated on North American Glass had the backwards "N" – although two other photos – without "X" basemarks – showed normal "Ns" (Figure 16).

Roller (1988:424-425) discussed the Dupont jars known at that time. He noted them as "very scarce." He discussed the logo. Dupont registered "DU PONT" in an oval (No.133,238) on July 20, 1920, adding that "DU PONT" had been used continuously since 1802 but the oval logos had only been used "on gelatinous explosives" since May 1909. Other Dupont records confirm the 1909 date. Roller drew three conclusions from the variations of the jars:



Figure 16 – Dupont ovals (North American Glass)

- 1. The Dupont jars were made at several points in time as shown by the different base markings.
- 2. They were probably not used as packer jars because they were made in three sizes.
- 3. They were not made much later than the 1880s or 1890s because of manufacturing techniques.

We should address these conclusions individually. Point 1 may only indicate that different glass houses made the jars. If Toulouse was correct that the Clyde Glass Co. was the major producer of CFJCo jars, then the typical letter/number base code would *only* indicate Clyde. That type of code does not appear on jars made by any of the other firms that marked their CFJCo jars with logo or company name. This *may* reflect three different orders, but they were not necessarily at radically different time periods. If the orders went through Consolidated, the firm would have sent them on to one of the glass houses making jars. Even if the orders were a year (or even less) apart, they could still have gone to different glass houses.

Point 2 is almost certainly correct. Glass jars seem to be unlikely containers for gunpowder. The fact that these jars were "very scarce" increases the likelihood that they were used as something besides packers. Once packers are eliminated, what is left? These may have been used in-house for some substance that was necessary but needed in small quantities, or these may have given to management or employees as incentives or keepsakes. We completely agree with Point 3. It is highly unlikely that these jars were made after 1909.

No one seems to have hazarded a guess as to the meaning of the Dupont logo on these jars, although Dupont Industries still uses the logo that was embossed on the fruit jars. Dupont began making black powder for blasting and gunpowder in 1802. The firm eventually branched out into synthetic fibers, paints, dyes, cellophane, and numerous other products. In 1880, the company began making dynamite to replace the older (and more dangerous) blasting powder. The firm remains in business in 2014 (Dupont 2014). Unfortunately, the company history gives no hint as to why the firm would have its logo embossed on fruit jars during the 1870s and 1880s..

CFJCo monogram

As noted in the history section, Consolidated registered the CFJCo monogram as a trademark on April 23, 1878, with first used claimed at April 3 of that year. Thus, the mark could not have been used during the first seven years when the firm was in business. Unless one of the "C" jars discussed above was made for Consolidated during those early years, there is no way to discern a jar made for the company from 1871 to 1877. Creswick (1987:258) claimed that the first use was in 1877, although that was probably a typographical error. The correct date is 1878 (Cox 1892:389). Toulouse (1971:123-124), however, suggested that the CFJCo monogram was embossed on fruit jars from 1871 to 1882. Roller (1983:220, 232) also dated the jars ca. 1870s to 1880s.

The source books seem to have mostly ignored variations in the logos – although Creswick (1987:122-123) illustrated logos with both a round and diamond-shaped "o" – more about those in a moment. The "F" had serifs on all three terminations as well as one at the "corner" – although these could be faint on some worn molds. The "J" had a serif at the top that extended well above the top bar of the "F" in some cases but was right at the bar on others. The larger "C" had a very distinct serif at the upper termination and occasionally had a squared or slightly flared end on the lower one. The smaller "C" had a much lesser serif in the upper termination that often faded out on worn molds.

The "o" in "Co" appeared in four distinct formats (Figure 17):

- 1. A typical round "o" found in most fonts.
- 2. A diamond-shaped "o" (vertically stretched in at least one example)
- 3. An "o" in a horizontal oval shape
- 4. An "o" in a vertical oval shape



Figure 17 – Variation of "o" in "Co" (North American Glass)

The vast majority of all CFJCo monograms on eBay or North American Glass had a round "o" in "Co." Our largest sample was composed of Mason's Patent jars, and those had the widest variation, with round, diamond-shaped, and vertical ovals on the front, vertical ovals, vertical diamonds, and one very large round "o" on the reverse logos (Figure 18). All Clyde jars in our sample had a round "o" in "Co" – although some jars not marked "CLYDE, N.Y." also had the round "o." The Whitney variation had a slightly vertically oval "o." All of the large-letter butter jars also had a round "o" in "Co" - although the small-letter variation had a diamond-shaped "o."

Queen jars in our sample that were embossed "THE / CFJCo monogram / QUEEN" had a diamond-shaped "o" – but those with the logo on the reverse had a horizontal oval "o" in "Co." Creswick (1987:181) showed all Queen jars with the diamond-shaped "o." The variation of the Mason's Patent jar with both the CFJCo monogram *and* the Hero Cross also had a vertically elongated oval "o." If the Creswick drawing (1987:141) is correct, the A.&D.H. Chambers variation also had a vertically elongated "o" as did the IGCO variation in Roller (1983:230; 2011:348). It is probable that



Figure 18 – Very large "o" variation (North American Glass)

these variations are more indicative of individual mold makers than of glass houses or time periods, although future research with a larger sample of jars should address this issue.

MASON'S PATENT NOV 30th 1858 (1878-ca. 1883)

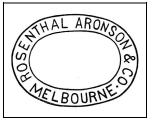


Figure 19 – Melbourne embossing (Roller 1983:232)

Toulouse (1969:62) listed three variations of the jar embossed "MASON'S (arch) / CFJCo monogram / PATENT / NOV 30th / 1858." Roller (1983:230, 232) included examples embossed "CLYDE, N.Y." on the reverse and "I.G.C" on the base. These were made by the Clyde Glass Works and the Illinois Glass Co.,

respectively. Roller (1983:232) also included a Mason's Patent jar embossed "ROSENTHAL ARONSON & CO. / MELBOURNE" in an oval frame on the reverse (Figure 19) and noted that these were made for export to Australia. He included a 1906 ad from a Sydney, Australia, firm – that showed a drawing of the jar with the CFJCo monogram (Figure 20).

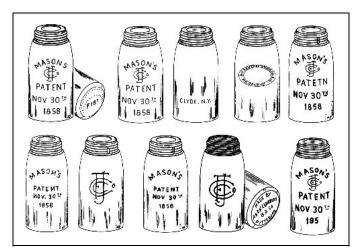
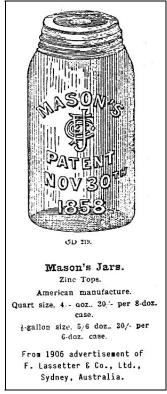


Figure 21 – Mason's Patent variations (Cresweick 1987:131, 140-141)



Creswick Figure 20 – Australian ad (Roller 1983:232)

140-141)

illustrated seven jars with the monogram and Mason's Patent. Variations included a lack of the apostrophe in "MASON," one with "CLYDE, N.Y." on the reverse, a dotted half-moon shape on the base, different sizes of embossing, jars with the CFJCo monogram on the reverse — including one embossed "MADE BY (arch) / A.&D.H. CHAMBERS (slight

arch) / 8.6SA (horizontal) / PITTSBURG (inverted arch)" on the base, and one with each "N" reversed (Figure 21). Roller (2011:351) included a ghosted CFJCo monogram, bases with crosses (Figure 22), and a ghosted "IMPROVED" through the word "PATENT." Bases of the jars were embossed with a variety of letters and numbers, usually beginning with a capital letter (Figure 23). Each of these jars was mouth blown (ground rim) and sealed with a glass insert in the top of a metal screw lid (Figure 24).



Figure 22 – Crosses on bases (North American Glass)



Figure 23 – Base numbers (North American Glass)

Some Mason jars were marked with both the CFJCo monogram and the Hero cross with no letters (see Hero Fruit Jar Co. section). These should be dated ca. 1883-1885 and were made by Hero rather than any glass house connected with Consolidated (Toulouse 1971:124). These almost certainly were made using molds obtained from Consolidated (Figure 25). Creswick (1987:143) included a variation missing the "1858" (Figure 26).



Figure 24 – Ground rim (North American Glass)



Figure 25 – CFJCo monogram *and* Hero Cross (eBay)

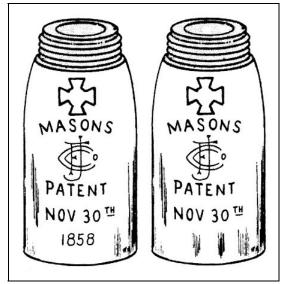


Figure 26 – Monogram & Cross (Creswick 1987:143)

Lids

Roller (1983:232) described two variations of the zinc lids:

1. "TRADE MARK BOYD'S PORCELAIN LINED (arch) / PAT^D MAR. 30. 58 JUNE 9.63 MAR. 30. 69 EXT^D MAR. 30 72 (inverted arch)" around the CFJCo monogram – all stamped into the top of a metal lid (Figure 27). A milkglass liner inside the top of the metal lid was embossed "CONSOLIDATED FRUIT JAR COMPANY NEW YORK" around the monogram (Figure 28).



Figure 27 – Mason's Patent lid 1 (North American Glass)

2. "★ TRADE MARK BOYD'S PORCELAIN LINED ★ (arch) / PAT^D JULY 1871 MAR 30 1869 REISSUED OCT 25 1881 (inverted arch)" around "TRADE" / CFJCo monogram / "MARK" – all stamped on top of the metal lid (Figure 29). The milkglass liner was marked as in #1 above. Some of these had a vertical metal rod soldered to the side of the lid for easier opening and sealing.



Figure 28 – Porcelain liner (eBay)

Roller (1983:232) noted that the patentees mentioned on the two lids were:

John L. Mason – November 30,1858

John K. Chase – June 9, 1863

Lewis R. Boyd – October 25, 1881

William Taylor & Charles Hodgetts assigned to Lewis R. Boyd – July 19, 1871



Figure 29 – Mason's Patent lid 2 (North American Glass)

MASON'S IMPROVED (1878-ca. 1883)

The Mason's Improved jar was based on Patent No. 102,913, American Glass) issued to John L. Mason on May 10, 18710. The basic improvement was to replace the old, one-part zinc lid with a glass insert that sat atop the jar rim and was held in place by a metal screw band. For more information, see the section on the Mason Mfg. Co.

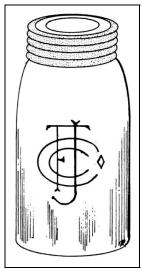


Figure 30 – CFJCo on reverse, Mason's Improved (Creswick 1987:121)

All major sources
(Toulouse 1969:61; Creswick
1987:119, 121-123; Roller
1983:220; 2011:335-337) include
variations of jars embossed
"MASON'S (arch) / IMPROVED
(horizontal)" on the front and the
CFJCo monogram. All of these
jars were mouth blown (ground
rims) and many included
basemarks with letters and
numbers (although none of the



Figure 31 – Trade Mark top front; CFJCo reverse (North American Glass)

major sources recorded those). Variations included:



Figure 32 – Trade Mark bottom front; CFJCo reverse (North American Glass)

1. "MASON'S /
IMPROVED" with
CFJCo monogram on
reverse (Figure 30)
2. "TRADE" (to left)
and "MARK" (to right)
above "MASON'S" on
front; monogram on
reverse (Figure 31)
3. "TRADE MARK"
below "IMPROVED"

on front; monogram on



Figure 33 – Whitney variation (North American Glass)

reverse (Figure 32)

- 4. "IMPROVED" over ghosted "JAR"; monogram on reverse; "H. BROOKE MOULD MAKER N.Y. on base
- 5. Monogram below "IMPROVED" with "MANUFACTURED AT (arch) / THE / WHITNEY GLASS WORKS / GLASSBORO N.J. (all horizontal)" on the reverse (Figure 33)
- 6. Monogram between "MASON'S" and "IMPROVED" with or without CLYDE, N.Y. on the reverse (Figure 34)



Figure 34 – Clyde variation (North American Glass)

7. "TRADE MARK" above
"MASON'S"; monogram between
"MASON'S" and "IMPROVED"
(Figure 35)
8. "TRADE MARKS" above

8. "TRADE MARKS" above
"MASON'S"; monogram between
"MASON'S" and "IMPROVED"
(Figure 36)

The Clyde Glass Works made some of these jars and embossed both the CFJCo



Figure 35 – Trade Mark top; CFJCo front (North American Glass)

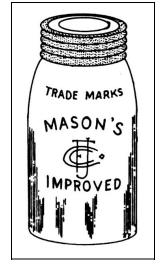


Figure 36 – Trade Marks variation (Creswick 1987:123)

monogram and "CLYDE / N.Y." on many of them (see the section on Clyde Glass Works for more information). In 1877 and 1878, the

Whitney Brothers, Glassboro, New Jersey, and the Cohansey Glass Mfg. Co., Bridgeton, New Jersey, both offered Mason jars with CFJCo trimmings, but Roller (1983:447) did not know whether the jars bore the CFJCo monogram. Creswick (1987:122) illustrated a four-gallon example embossed with the

Whitney name.

Mason's Improved Butter

Jar

Toulouse (1969:61-63)

discussed a MASON'S IMPROVED BUTTER JAR with the CFJCo logo embossed between "IMPROVED" and "BUTTER." He noted that "there were several of these butter jars, generally used to hold butter water tight for spring-house cooling and ice-chests." Creswick (1987:119) illustrated three variations of the butter jars. Two were embossed "MASON'S (arch) / CFJCo monogram /

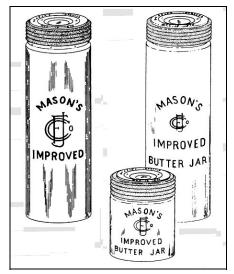


Figure 37 – Butter jars (Creswick 1987:119)

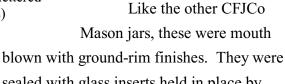


Figure 38 – Large & small lettered jars (North American Glass)

IMPROVED / BUTTER JAR (all horizontal)" on the front. The other was the same but without the words "BUTTER JAR" (Figure 37). Roller (2011:339) added that there were small- and large-lettered variations (Figure 38). The jars were made in various sizes (Figures 39 & 40).



Figure 39 – Small jar (North American Glass)



sealed with glass inserts held in place by metal screw bands. The glass inserts on all the examples we have seen were embossed "MASON'S IMPROVED (arch) / MAY 10 1870." Some of the metal bands had small metal tabs soldered to the sides to act as "grippers" for sealing and unsealing the lids (Figure 41). At least some bases were embossed with letters and numbers – for example, "E364" or "H273" (Figure 42).



Figure 41 – Insert & band (North American Glass)



Figure 42 – Butter jar base (North American Glass)

Summary of Manufacturers

Toulouse (1971:123-124) claimed that the Jersey City Glass Works was one of the incorporators of the Consolidated Fruit Jar Co., although that was not substantiated by any other source. He noted (1971:124) that "Consolidated never made any fruit jars, although we have no exact record as to what the Jersey City Glass Works had done

on the glass side. They did not give up their separate identity as a glass maker." *If* Jersey City Glass made any jars for Consolidated, it did not use a manufacturer's mark.



Figure 40 – Tall jar (North American Glass)

Roller (1983:230; 2011:348) and Creswick (1987:140-141) listed three manufacturer's of the Mason's Patent jars: Illinois Glass Co., A.&D.H. Chambers, and the Clyde Glass Works. Only Clyde and the Whitney Glass Works were reported as making Mason's Improved jars. These firms should be addressed individually.

The I.G.C^o Variation (prob. ca. 1878-1880)

I.G.C°

Figure 43 – I.G.C° basemark (Roller 1983:230)

Roller (1983:230) originally recorded this logo on a Mason's Patent jar with the CFJCo monogram (Figure 43). The Roller update (2011:348) discussed the Illinois Glass Co. variation. Although Dick Roller had identified the Illinois firm in 1983, Jerry McCann disputed that claim. McCann observed that

there is no evidence that this jar was made for the Consolidated Fruit Jar Company. It does not have the usual letter/number base as seen on other CFJCo embossed jars. It is possible that the base mark is for the Independent Glass Company of Pittsburgh, Pennsylvania."



Figure 44 – IGCo and I.G.C° basemarks (Lockhart et al. 2012:22-23)

The argument seems convoluted. The presence of the CFJCo monogram almost certainly indicates that the jar was made for Consolidated. The statement was probably intended to read that "there is no evidence that this jar was

made by the Illinois Glass Co." Lockhart and his associates (2012:22-23) noted several early medicinal bottles that were virtually identical, although some were embossed "I.G.Co." on their bases, and at least one other had an "I.G.C" basemark (Figures 44 & 45). While the "I.G.Co." variation of the logo is far more common, we have found no evidence to suggest it was used by any glass house except the Illinois Glass Co.



Figure 45 – Medicine bottle (Lockhart et al. 2012:22)

Independent Glass Co. opened in 1880 and primarily produced lamp chimneys on a single 10-pot furnace for its entire existence. The firm leased the plant to the Crystal Jar Co. from 1881 to 1884. On December 1882, William H. Blunt received a patent for a fruit jar and assigned the patent to Independent. The plant closed in 1888 and probably made the fruit jars until that date (Hawkins 2009:285-287). There was no record of *any* production of product jars or other fruit jars, and Hawkins did not note any logo for the firm. While the Independent Glass Co. (1880-1888) was open at the very end of Consolidated's tenure, it is far less likely as the fruit jar maker than the long-term Illinois Glass Co.

The Illinois Glass Co. opened in 1873 and remained in business until it merged with the Owens Bottle Co. in 1929 to for the Owens-Illinois Glass Co. The firm used the "IGCo" logo from ca. 1880 to ca. 1915 (Lockhart et al. 2005). Information noted above (Lockhart et al. 2012:22-23) suggests that the "I.G.C" was also used by the Illinois Glass Co. It is possible that the mark with the elevated "o" was the first one used by the firm, possibly from ca. 1878 to 1880.

The A.&D.H. Chambers Variation (1878-ca. 1883)

The firm of A.&D.H. Chambers grew out of Chambers & Agnew about 1852. The Pittsburgh plant was a major producer of bottles and jars until 1889. A.&D.H. Chambers used an "A.&D.H.C." logo on most of its containers, but the firm also embossed the full company name on whiskey bottles and fruit jars. Although the whiskey bottles were made earlier, the fruit jars were produced from the 1860s to the 1880s. Apparently, the brothers only made a single Mason's Patent jar for Consolidated (Figure 46 – also see Figure 21), unless the plant made others with no identifying manufacturer's mark (Lockhart et al. 2013:27).



Figure 46 – A.&D.H. Chambers basemark (Hawkins 2009:123)

Clyde Glass Works Variations (1878-ca. 1883)

Toulouse (1971:124) called the Clyde Glass Works "the largest of the makers of Mason jars" for Consolidated. Unfortunately, the only identification for the manufacturer was the



Figure 47 – Clyde Mason's Patent jar (North American Glass)

location name – Clyde, N.Y. – on the reverse side of the jars (Figure 47 – also see Figure 21). Clyde was the only glass house to leave its mark on both Mason's Patent and Mason's Improved jars (Figure 48).

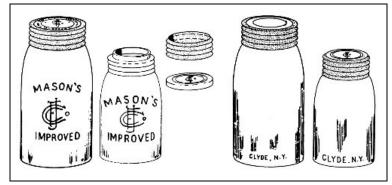


Figure 48 – Clyde Mason's Improved jar (Creswick 1987:122)

Although the factory was probably known as the Clyde Glass Works much earlier – possibly as early as 1827 – the business was not incorporated under that name until 1895. By the time Consolidated opened in 1871, Southwick, Reed & Co. ran the Clyde plant. When the factory was rebuilt after a disastrous fire in 1878, Ely, Reed & Co. was the operating firm. The group again changed to Ely, Son & Hoyt in 1880 and remained under that name until the 1895 incorporation. Thus, Ely, Reed & Co. and Ely, Son & Hoyt were the operating entities during the 1878-1883 period when the jars embossed with "CLYDE, N.Y." and the CFJCo monogram were produced (see the section on the Clyde Glass Works).

Whitney Glass Works Variation (ca. 1883)

Roller (1983:447) reported that the Whitney Bros, of Glassboro, New Jersey, advertised Mason jars with CFJCo trimmings in 1877 and 1878, but he did not know whether the jars bore the CFJCo monogram. Creswick (1987:122) illustrated Mason's Improved jars embossed with the Whitney Glass Works name on the reverse side (Figure 49). Although the Bottle Research Group has not fully explored the Whitney companies yet, the earliest ad we have found for the Whitney Glass Works was 1883. Prior to that, the firm was called the Whitney Bros. (Wilson and Caperton 1994:70). It is thus likely that the Whitneys only made the marked jars for a very short period, possibly only in 1883.

Queen

There were several versions of the Queen jar (all different from a square variation made for the A.G. Smalley Co. – see that section). All four sources – Creswick (1987:181), Roller (1983:299-300; 2011:437-439), and Toulouse (1969:255-256) – dealt with the jars. All of these jars were mouth blown, with continuous-thread finishes and ground rims. They were sealed with glass inserts held in place by metal screw bands. See Table 1 for a chronology.



Figure 49 – Whitney Mason's Improved jar (Creswick 1987:122)

Table 1 – Queen Jar Variations

| Variation | CFJCo | Date Range |
|--|---------|--------------------|
| THE QUEEN PAT. NOV. 2 1869 | none | 1869-ca. 1870 |
| THE QUEEN | none | ca. 1870-ca. 1878 |
| THE QUEEN with Lyman patents | none | ca. 1870-ca. 1878* |
| THE QUEEN (front); CFJCo monogram (back) | reverse | 1878-ca. 1880 |
| CFJCo monogram below THE QUEEN | front | 1878-ca. 1880 |
| THE CFJCo monogram QUEEN | front | ca. 1880-ca. 1883 |

^{*} This was probably an error mold only used for a brief period.

THE / QUEEN / PAT. NOV. 2 1869 (1869-ca. 1870)

Toulouse (1969:256) briefly discussed this variation. The side of the jar was embossed "THE / QUEEN / PAT. NOV. 2 1869 (all horizontal)." According to Roller (1983:300; 2011:439), "This uncommon form of the Shaffer Queen jar has been found with the mold numeral '1' on the base, and may represent the earliest form of Queen jars." Creswick (1987:181) illustrated the jar and remarked that the variation was scarce (Figure 50). Harry Shaffer received Patent No. 96,490 for a fruit jar on November 2, 1869, and this was the basis

for the Queen jars (Figure 51). Shaffer developed his own firm in Rochester, New York, to market these jars, then became one of the incorporators of the Consolidated Fruit Jar Co. in 1871. This variation was apparently only produced shortly after Shaffer received the patent. Shaffer also received Reissue No. 4,460 for the same patent on July 4, 1871.



Figure 50 – The Queen 1 (Creswick (1987:181)

THE QUEEN (ca. 1870-ca. 1878)



Figure 52 – The Queen 2 (North American Glass)

These jars were embossed "THE / QUEEN" on the front and

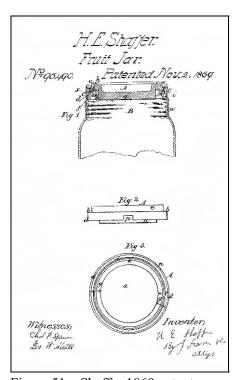


Figure 51 – Shaffer 1869 patent

"PAT NOV 2 (arch) / 1869 (inverted arch)" on the base (Figures 52 & 53). Toulouse (1969:256) suggested that these and the ones described above were made by either the Rochester Glass Works or the Hitchens Glass Works at nearby Lockport, New York. He said that many collectors believed that the Hero Glass Works made the jars, but the November 2, 1869, patent date did not appear on any Hero products.

Roller (1983:299; 2011:437) illustrated an ad for the Queen jar from Shaffer in the 1871 Rochester city directory (Figure 54). He added that "Shaffer Queen lids have a 1" long notch on the underside to allow air to enter the jar for easier opening." He noted three styles of lids used on the jars:

- 1. QUEEN JAR PATENTED NOV. 2. 1869 embossed on the top (Figure 55)
- 2. PATD NOV. 2ND 1869 embossed on the top
- 3. unembossed lid (Figure 56)



Figure 54 – 1871 Queen ad (Roller 1983:299)



Figure 55 – Queen jar lid (North American Glass)



Figure 53 – Queen base (North American Glass)



Figure 56 – Queen jar lid (North American Glass)

Creswick (1987:181) added (North American Glass) that the "9" in "1869" on the base was sometimes reversed. She added two other lids: 1) PATENTED NOV. 2 1869; and 2) PATD NOV 1868 (error). Creswick

(1987:181) further stated that the patent office reissued the patent to Shaffer on July 4, 1871, along with Design Patent No. 3,806 on December 21, 1869, for the lid. Although none of the sources elaborated on the time these were made (except to say ca. 1869), it is likely that these jars were made between 1869 and 1878.

THE QUEEN surrounded by letters in a circle (ca. 1870-ca. 1878)

This jar was embossed "PAT^D DEC 28^{TH} 1858 (arch) / THE / QUEEN (horizontal) / PAT^D JUNE 16^{TH} 1868 (inverted arch)" on the front (Figure 57). Toulouse (1969:255) could not find suitable patents for this jar – noting that the patent for December 28, 1858, was for a wax sealer – and he was confused about the dates and maker. Despite these unusual dates, the jar was recognizably the same as the other two Queen jars described above.

Roller (1983:300; 2011:439) added that the lid was embossed "PATD DEC 28 1858 & JUNE 16 1868" on top (Figure 58). He also noted that W.W. Lyman was the patentee and stated



Figure 57 – The Queen 3 (North American Glass)

that "these jars and their closures are like the Shaffer Queen jars and closures But, for some unknown reason, they are marked with Lyman's patent dates." Creswick (1987:181) illustrated the jar and suggested Cunninghams & Ihmsen, Clyde Glass Works, A.&D.H. Chambers, and Thomas Wightman & Co. as manufacturers

- obviously identifying these with the Consolidated Fruit Jar Co. She noted Lyman's patent No. 22,436 of December 28, 1858, and his reissue of the same patent on June 16, 1868 (Figure 59).

This mystery has only lightly been addressed. Some other jars with Lyman patents used the same style of embossing as are found on this variation of The Queen (e.g, Creswick 1987:110 – Figure 60). However, none of the Lyman jars used the 1858 and of the original Queen.

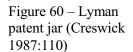




Figure 58 – Queen 3 lid (North American Glass)

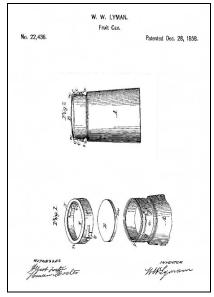


Figure 59 – Lyman's 1858 patent

1868 patent dates. Shaffer's other jars – the Champion and the King (Figure 61) – used a different form of embossing, much more reminiscent

By at least 1866, A.&D.H. Chambers advertised the Lyman Patent Jar, and the factory also made at least one variation of the Mason's Patent jar with the CFJCo logo (Lockhart et al. 2013:27-28). Although that connection is quite tenuous and may be spurious, it is the only one we have found. We will probably never know the real answer, but it seems likely that the same machine shop made molds for both Shaffer and

Lyman, and they were probably made by the same glass house (the Chambers plant?). A

hungover – or still drunk – machinist could have gotten the instructions mixed up. But the mystery remains.

THE QUEEN with CFJCo monogram (1878-ca. 1883)

Consolidated had Queen jars made in at least three formats, all depending on where the CFJCo monogram was embossed. All three variations had "THE QUEEN" on the front, the November 2, 1869, patent date on the base, and the CFJCo monogram prominently displayed.



Figure 61 – Champion & King jars (Creswick 1987:28, 95)

THE QUEEN (front); CFJCo monogram (back) (1878-ca. 1880)



Figure 62 – CFJCo Queen variations (Creswick 1987:181)

NOVEMBER 2ND 1969" stamped along the top edge (Figure 63).
Roller (2011:437) only noted this as a variation of THE / QUEEN jar.
Although Creswick illustrated all

Toulouse (1969) missed the CFJCo Queen series, but Creswick (1987:181) illustrated this variation along with two others (Figure 62). The jar was embossed "THE / QUEEN" on the front, with "PATD NOV 2 (arch) / 1869 (inverted arch)" on the base. She noted two variations in the glass inserts: 1) QUEEN JAR (arch) / PATENTED NOV 2 1869 (inverted arch)" with the CFJCo monogram in the center; and 2) "TRADE MARK QUEEN JAR PATD MAY 23D 1871" around the CFJCo monogram in the center. The metal band had "-.- THE QUEEN -.- C.F.J.Co. PATENTED



Figure 63 – Queen metal band (North American Glass)

three variations as having a diamond-shaped "o" in "Co," North American Glass photos show the "o" in this variation as being oval (Figure 64). The jar was probably made from an older Queen mold with the monogram added to the back.

THE QUEEN CFJCo monogram (1878-ca. 1880)

Roller (1983:300) mentioned this variation but did not go into any detail. Creswick (1987:181) illustrated the jar but added no information (see Figure 50). The Roller update (2011:438) only noted this as a variation. This *may* have been made from an older mold with the CFJCo monogram added below "THE QUEEN" – but the placement of the words seem a bit high compared to the older jars.

THE CFJCo monogram QUEEN (ca. 1880-ca. 1883)



Figure 64 – Queen with CFJCo monogram on reverse (North American Glass)

Roller (1983:300) discussed this variation, embossed "THE / CJFCo monogram / QUEEN" on the front of the jar, with "PATD NOV 2 (arch) / 1869 (inverted arch)" on the base (Figure 65). He noted two variations in the glass inserts and metal bands (also discussed in the first variation above). Roller further noted that Shaffer was one of the incorporators of the



Figure 65 – Queen jar, front CFJCo monogram (North American Glass)

Consolidated Fruit Jar Co. in 1871 and that he had transferred all patent

rights to the new firm in exchange for stock. He added that "the May 23, 1871 date [on the lid variation] referred to the registration date for 'Mason's Improved' trademark, for reasons unknown."

Creswick (1987:181) illustrated this variation along with two others, although she added no additional information (see Figure 60). Roller (2011:438) featured this as the primary type but noted that variations had either an unembossed base or a "J 54" basemark. At least one other base shown on a North American Glass auction had a basal embossing of "B-53" (Figure 66). The "o" in "Co" on these jars was diamond shaped.



Figure 66 – B 57 base (North American Glass)

Gem

There were numerous jars called the Gem (e.g., Creswick 1987:66-70), and Consolidated was one of the companies that offered the jars. Consolidated's version had THE GEM in an arch above the CFJCo monogram (Toulouse 1969:125; Creswick 1987a:69; Roller 1983:135 – Figure 67).

Toulouse (1969:125) explained that "this jar is one of the indications that Hero had taken over the Consolidated assets about 1882, since it combines the Hero-owned GEM with the Consolidated-owned monogram." His example had a Hero lid. Roller (1983:135) countered the Toulouse ideas:



Figure 67 – Gem jar (North American Glass)

The manufacture of these jars has been attributed to the Hero Glass Works, Philadelphia, Pa., solely on the basis of THE GEM on the jars. However, there are none of the customary Hero patent dates . . . on these jars.

Creswick (1987:69) remained neutral, only noting that the "maker of this jar with the Consolidated Fruit Jar Company monogram is unknown. Possible maker could be the Whitney Brothers of Glassboro, N.J." She illustrated the jar but did not explain her choice of the Whitney Brothers as the manufacturer (Figure 68). The Roller update (2011:209) added that "these jars have the typical 'CFJCo' base mold markings." Jerry McCann further added that:

these jars are generally found in Ontario, Canada, suggesting that they were made in Canada or marketed in Canada. The style of base is consistent with that found on Rutherford & Company (Ontario) 'GEM' jars. GEM became the generic term used in Canada to describe fruit jars or as Canadians called them 'sealers.' Thus, it would make sense that an improved style of 'CFJCo' would be called THE GEM in Canada rather than MASON'S IMPROVED."

We agree that McCann's explanation makes the best sense for an otherwise mysterious jar.

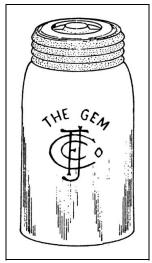


Figure 68 – Gem jar (Creswick 1987:69)

Tin Can

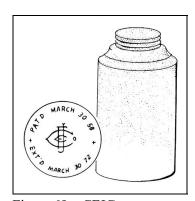


Figure 69 – CFJCo can (Creswick 1878:27)

Creswick (1878:27) illustrated a tin can with a lid embossed "+ PAT'D MARCH 30 58 + (arch) / CFJCo monogram (center) / "EXT'D MARCH 30 72 (inverted arch)" (Figure 69). She noted that a paper label showed that the can held tea. John L. Mason received

Patent No. 19,786 on March 30, 1858, and the patent was extended until 1872. She thought that the Mason Mfg. Co. could have been a possible maker. We feel that the Consolidated Fruit Jar Co. – a producer of tinned-steel items – was a much more likely manufacturer.

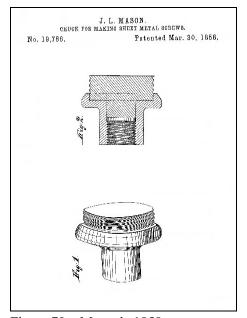


Figure 70 – Mason's 1858 patent

The patent was for a "Lathe Chuck for Making Sheet Metal Screws." The main improvement in the patent was for rounded grooves and threads to avoid tearing the sheet metal

on the sharp edges. Mason had noticed that the lids were formed better on temporary wooden chucks and duplicated the wooden imperfection on the metal chucks to improve the final product (Figure 70).

Discussion and Conclusions

Although not a manufacturer, the Consolidated Fruit Jar Co. was an important purveyor of Mason and other jars during its decade-long period in business between 1872 and 1882. Table 2 shows the three probable phases of Consolidated logos. The final logo – the CFJCo monogram – was used from 1878 to 1882 on a variety of jars including:

Mason's Patent Nov. 30 1858 Mason's Improved Mason's Improved Butter Jar The Queen The Gem CEJCo tin can

Table 2 – Probable Phases of Consolidated Marks

| Marks | Possible Dates | |
|-----------------|----------------|--|
| No logo | 1872-ca. 1875 | |
| "C" logos | ca. 1875-1878 | |
| CFJCo monograms | 1878-1882 | |

There were several variations of the CFJCo monogram, but there is currently no way to assign these to specific glass houses or time periods. At least four companies (Clyde Glass Works, Whitney Glass Works, A.&D.H. Chambers, and Illinois Glass Co.) made jars for the Consolidated Fruit Jar Co. from 1878 to 1882, but we have no way to define specific dates for each company's manufacture of the jars for Consolidated using current methods. The variations of each type of jar are very complex, although we have attempted to make some chronological distinctions in the analyses above.

Although not completely certain, the jars with the "- C -" logos were probably also used by Consolidated – likely during the ca. 1875-1878 period. This was probably an intermediate evolution that led from jars with no mark to identify Consolidated and the better-known CFJCo monogram. Future research should further address this logo.

The All-Important Sales Date

The date and circumstances of the sale of the Mason jar patent rights from Consolidated to the Hero Glass Works is important – even vital – *if* it ever occurred. Indeed, the date is missing from Roller's (1983:446-448) three-page history of the firm and Creswick's (1987:121) discussion! We can find no documentary evidence that there even *was* such a sale. Toulouse (1969:345) seems to have provided the original circumstantial evidence:

The appearance of both the Hero Cross and the CFJCo monogram on the same jar about 1882 announced the end of Consolidated, for the placing of the cross *above* [his emphasis] the word "MASON'S and the monogram in the usual place between it an "PATENT" would indicate that the cross had been placed on an old Consolidated mold. The changing of Hero's name to the "Hero Fruit Jar Company" two years later—an exact following of Consolidated's name except the first word, seems to indicate that Hero had taken over Consolidated's business.

Nothing in any of these histories indicates any special occurrence that would have precipitated such a sale. The only date in the histories of major import was the disastrous fire of February 7, 1885, that destroyed the Consolidated plant. But, even then, the factory was rebuilt, and business resumed. The ca. 1892 catalog (see Figure 3) still showed the CFJCo monogram on Mason's Patent and Mason's Improved jars and on lids. We have no way to tell whether the catalog drawing reflected continued use or just old illustrations.

From the standpoint of Hero history, an 1882 date seems even less likely. The firm apparently foundered in 1882 and was sold at a sheriff's auction on February 5, 1883. Unless the occurrence was a sudden precipitation, it seems like an unlikely time to purchase the most important patents in fruit jar history! However, Salmon Rowley found new backers and incorporated the Hero Fruit Jar Co. on March 29, 1883, then resumed production on April 3 of

that year (Roller 2011:671). This timing combined with the Toulouse notion that the new Hero name "was an exact following" of the Consolidated moniker suggests that 1883 would be a much more likely date for the purchase of the Mason jar rights.

Toulouse (1971:124) provided additionl information to support his claim for an 1882 date by noting that "the Hero cross was unlettered in the first two years, 1882-84, while the company was still the Hero Glass Works, and lettered HFJCo in the four wings after 1884." At that time, he assumed that the name change occurred in 1884. However, the same logic will support an 1883 date. The addition of the letters to the cross would not necessarily have happened immediately upon the incorporation. It may have taken a year or more before the idea occurred to anyone. We will continue to use the 1883 date in this study.

However, at least one of the Toulouse assumptions may be blown into a faulty mold. Our assessment of existing bottle/jar literature shows that Toulouse – like all other researchers – made numerous guesses and assumptions to fill in gaps in the actual evidence. Unfortunately, he did not tell us which of his dates were based on evidence or historical knowledge and which were his best guesses. His dating of the Hero logos seems to be based on guesses.

The Hero cross was embossed on jars in two forms, one with "H," "F," "J," and "Co" in each of the four "wings" and the other with no letters. Toulouse assigned great significance to the empty cross, assuming it was used at the end of the Hero Glass Works period. Although there are exceptions, glass houses usually changed logos to commemorate some event. We can find no event during the 1880-1883 period that would justify creating a new logo. The first significant event was the creation of the Hero Fruit Jar Co. in 1883.

The Toulouse idea is predicated on the belief that there were two distinct logos – one with letters, one without. Numerous Hero crosses have only faint letters, and only some of the letters are visible in others. It is possible that there was only one Hero cross, and it was always *intended* to have letters. Why would the letters be missing? There are at least two reasons. First, any given mold that was made in a hurry could have the letters missing. Second, the letters were the smallest embossing on the jar, therefore the most likely to fill up with lubricant – creating faint or missing characters. Both of these conditions would create a jar with no lettering in the cross – without any temporal connection. In support of Toulouse, however, there are also

numerous examples where the empty "wings" are very clear, showing no evidence of letters or distortion.

One final assumption must be challenged. Toulouse assumed that Hero purchased one or more sets of molds *from* Consolidated. Since Consolidated did not make its own jars, it did not necessarily own its own molds and almost certainly did not own *all* of the molds used to make its jars. Hero could have purchased a set of molds from any of the other manufacturers, especially if that glass house was no longer making Mason jars for Consolidated. If Hero succeeded Consolidated, it is surprising that we do not find Hero Crosses embossed on ghosted CFJCo monograms.

Regardless of the reason, it is clear that *something* happened. It may or may not have involved a purchase. The Hero Fruit Jar Co. certainly began making Mason Patent fruit jars at some point, likely from the inception of the new firm in early 1883. This may even be the reason why Rowley was able to acquire new backers after the demise of the Hero Glass Works. The jar sources (e.g., Roller 1983:448; Toulouse 1969:345; 1971:123-125) stated that the market opened up for Mason jars in 1886 and that Hero began to phase out its production of the jars. That only leaves three-plus years for Hero to have manufactured a huge amount of jars. The inception date could therefore not have been later than 1883.

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