

Gilchrist Jar Co.

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Considering that the Gilchrist Jar Co. was only in production for three years – with the Improved Gilchrist Jar Co. making lids for about a year later – and no jars at all – we have a remarkable amount of information about these firms, associated companies, and their products. The Gilchrist Jar Co. was formed to market jars produced around the invention of Ruth A. Gilchrist, although the firm picked up the Doolittle jar as well. All began well and fizzled with remarkable rapidity – as was all too common in the glass trade.

Histories

The two glass factories connected with the Gilchrist Jar Co. and other glass houses at Elmer, New Jersey, were known as the Lower Works and the Upper Works.

The Early Lower Works, Elmer, New Jersey (1885-1900)

Beginning as the Elmer Window Light Co. in 1885, the firm was called the Elmer Glass Co. by 1887, a window glass firm. The company failed in early 1888, and a new group purchased the plant, continuing to make windows. The new group also ceased operations in June 1892, and John B. Getsinger leased the plant in December of 1895, refurbishing the works to make bottles. The Getsinger Glass Mfg. Co. operated the factory until September 1896, when Deyo, Goodwin & Co., a New York firm took over the business. The plant used three day tanks with six rings. An 1897 ad for the Elmer Glass Co. noted that the firm made green and amber soda and beer bottles (Pepper 1971:298; Roller 1998a). We have found no evidence that any of these firms used a manufacturer's mark.

In January 1899, William Strang, by this time owner of the factory, declared voluntary bankruptcy. By April, the Isaac Sturr Glass Co. had taken over, using two day tanks with nine rings and one continuous tank with six rings. Sturr, too, lost the plant to a sheriff's sale in January 1900. In April, the Gilchrist Jar Co. purchased the property (Roller 1998a). Again, none of these appear to have used logos.

The Upper Works, S.M. Bassett Glass Co., Elmer, New Jersey (1896-1897)

Samuel M. Bassett headed a new corporation, organized in April 1896 with a capitalization of \$50,000. The S.M. Bassett Glass Co. built a new plant at the “upper” end of Elmer and blew its first bottles on July 3. The plant began with a single day tank but was soon operating a second day tank with a total of 15 rings between the two. It never used a mark that we can find. The Gilchrist Glass Co. leased the plant by February of the following year (Pepper 1971:298; Roller 1998a).

Gilchrist Jar Co., Elmer, New Jersey (1898-1901)

The Upper Works

William E. Sharp, Charles F. French, and Thomas P. Curley incorporated the Gilchrist Jar Co. on December 14, 1897, with a capital of \$75,000 to manufacture the jars patented by Ruth A. Gilchrist in 1895 (see the Containers and Marks section for a discussion of the jars and the patents). This begins a period in the life of the Gilchrist firm that is very unclear. Under the heading “Elmer’s New Jar Works,” *Commoner & Glassworker* reported on March 26, 1898, that “a new ware shed has just been completed at the Bassett’s Glass Works at Elmer, N.J., that will hold 6 carloads of ware. The machinery for the Gilchrist Jar Co., at the same place, has been received there, and the plant will soon be in operation” (quoted in Roller 1998a). Although a storage shed seems an unlikely place to work, the Gilchrist Jar Co. seems to have set up operations there for its first year in business, making “tops” – although it is unclear whether that meant the glass immersers “inserts” or zinc caps to be used on the Gilchrist jars. Roller (1983:138; 2011:214) interpreted this information to mean that “the jars were first made in 1898 at the S.M. Bassett plant, while caps [glass inserts or zinc lids?] were made by the Gilchrist Jar Company in a shed next door.” The actual article in *Commoner & Glassworker* (8/11/1899) claimed that the Gilchrist Jar Co. “had a building on the premises with necessary dies, etc. for making the tops” (Quoted in Roller 1998a).

Commoner & Glassworker noted that the Bassett plant was “not in operation” in January 1899, although it is unclear whether this meant that the plant was closed for the transition to the Gilchrist firm or that Bassett had gone out of business. On January 29, the Gilchrist group had

increased its capital to \$100,000. On August 11, 1899, *Commoner & Glassworker* reported that the Gilchrist Jar Co. had purchased “all the stock, etc.” of the S.M. Bassett Glass Co. The Bassett firm had been making the jars for Gilchrist since “about two years ago” or ca. August 1897. This may mean that the jars – first patented by Ruth A. Gilchrist in 1895 – were made by Bassett prior to the actual incorporation of Gilchrist Jar. Since the period was “about” rather than a dated time, it may just mean that Bassett began making the jars when Gilchrist incorporated in December 1897 or that production of the jars had begun when the plant opened in 1896 (Roller 1998a; Secretary of State 1914:264). Someone certainly made the Gilchrist jars by 1895 – see the discussion in the GJCo monogram section below.

Gilchrist Jar increased in capital to \$500,000 on August 11, 1899, and took over Bassett’s battery jar business by August 18. By September 8, 1899, the board had elected W.E. Sharp as president, S.M. Bassett as vice president, Charles F. Lumb as secretary, and W.D. Boyer as treasurer.¹ The business office was located at 524 Drexel Bldg., Philadelphia, and Bassett managed the plant. By September 16, the Atlas Glass Co. sued the Simonds Mfg. Co. – manufacturer of the Power’s machines used by the Gilchrist Jar Co. – over patent infringement just about the time new machines arrived at the Gilchrist plant. The plant had one machine operating in October and planned to have two more installed soon. By January 1900, the factory had two continuous tanks with 15 rings and was making green and amber fruit jars – some of which were shipped to England (Roller 1983:139; 1998a; Secretary of State 1914:264).

The Atlas Glass Co. had listed the Gilchrist Jar Co. and Swazee Glass Co. as co-defendants with the Simonds Mfg. Co. in its lawsuit by February 1900, but the suit was dismissed by the court. The center of the uproar was a bottle-blowing machine invented by John J. Power. On October 16, 1893, Power applied for a patent for an “Apparatus for Molding and Blowing Glass Bottles.” He received Patent No. 522,671 on July 10, 1894. The machine operated on the same principles as the ones invented by Charles E. Blue and assigned to the Atlas Glass Co. Blue received eight patents between December 1894 and 1899 for a machine that used a parison mold that was inside the blow mold. After the parison was blown, the parison mold dropped down, and the final bottle was blown in the encasing mold (Lockhart & Bernas 2014).

¹ Although we have found no supporting evidence, Bassett may have been paid for the factory in Gilchrist stock. Bassett and his son were certainly stockholders.

Since Power both applied for and received his patent prior to the ones received by Blue, there was no contest with the Blue patents. However, Blue previously had problems caused by two British inventions, both also patented in the U.S. – James R Windmill (Patent No. 416,389 – December 3, 1889) and Dan Rylands (Patent No. 416,376 – also on December 3, 1889). Blue circumvented any infringement issues by buying both patents for the Atlas Glass Co. (Lockhart & Bernas 2014).

Since Atlas could not claim infringement on the Blue patents, it sued the Simonds Mfg. Co. for infringing on the Windmill and Rylands patents. Unfortunately for Atlas, patents only protected the inventions for seven years at that time, so the Windmill and Rylands patents had expired in 1896 – no longer covering the inventions. The case was thrown out.

The American Flint Glass Workers Union organized both plants of the Gilchrist operation in April. With a total of 10 operating machines, Gilchrist was the largest union plant producing fruit jars in the U.S. Gilchrist management announced that it would cease hand production to use its ten machines exclusively as soon as it filled “a small blown order” – but one of the tanks burst the following month. Despite its problems, Gilchrist secured the patent rights to the Doolittle jar in May 1900 and planned to begin production of the jar as soon as the new tank was completed (Roller 1998a; West Publishing Co. 1900:338-343).

By June 1900, the plant was making Doolittle and Gilchrist jars along with machine-made battery jars, Chow-Chow bottles, and other containers (with no known marks) – and S.M. Bassett and his son, Carl, sold their interests in the firm to the other stockholders that month. The stockholders formed a new corporation – the Eastern Glass Co. – in August to take over the Power’s machines from the Simonds Mfg. Co.² Business at the Elmer plants was so good that the firm intended to extend production through the summer. In September, however, the firm experienced “labor difficulties” with pressers, and the New York Jar Co., a New York City jobber, sued Gilchrist Jar in October for selling defective products (Roller 1983:139; 1998a).

On top of its other difficulties, Gilchrist’s creditors began foreclosing. The Cumberland Glass Co. forced the Gilchrist Jar Co. into receivership – with S.P. Foster (a local banker) as

² It is unclear whether Eastern Glass was intending to manufacture the machines or simply to act as a sales agent.

receiver – in early December, and the plant shut down by the middle of month (Roller 1998a). The firm obviously made a successful product – but was less adept in its business practices. See the section on the Cumberland Glass Co. for more information on that firm.

Foster began selling the assets and placed the factory up for sale on Wednesday, February 13, 1901. The sale included Power's and Ripley machines used by the plant (Roller 1998a). According to the *Elmer Times* (2/15/1901), Ruth Gilchrist, "inventor of the Gilchrist jar, was present and bought the Gilchrist jars, Gilchrist caps and several machines for making lids." Gilchrist successfully bid on the machinery for making the lids. An unnamed party purchased 17,000 battery jars and 1,200 gross of Doolittle jars without lids, but the Power's machines were withdrawn from the sale because the only bid was for \$125 each. The Novelty Glass Mfg. Co. purchased the factory to make insulators (Roller 1998a).

Toulouse (1969:132; 1971:225-226) stated that Gilchrist was sued on the grounds of patent infringement and lost. He claimed that the firm went bankrupt as a result of the suit. Roller (1983:139), however, noted that the December 1900, a strike and financial problems had forced the company out of business. It is likely that the lawsuit – as well as the burst tank – also played a part, although we agree that Roller's assessment point to the major causes.

The Lower Works

By April 1900, the Gilchrist Jar Co. had purchased the Elmer Glass Works (known locally as the Lower Works) from I.O. Sturr. The firm used two continuous tanks with 15 rings, and commenced production by May (Roller 1998a). Gilchrist lost this plant at the same time as the Upper Works.

Improved Gilchrist Jar Co., Elmer, New Jersey (1901-1902)

In late April 1901, the Improved Gilchrist Jar Co. was incorporated by "Philadelphia people" – including C.C. Warwick and S.W. Groome – with a capital of \$500,000. The group was unrelated to the earlier Gilchrist Jar Co., with Frank Gibson as the only New Jersey backer (at Bridgton). Ruth Gilchrist, the inventor of the jars, was also involved and planned to move to Elmer for awhile, possibly permanently, along with her son, John (Roller 1998a).

The firm leased the old Elmer Glass Co. – the “lower” works. The new plant made lids on the old machines that Gilchrist had purchased when the original firm went out of business, while the Atlas Glass Co. at Washington, Pennsylvania, produced the jar bodies for both Gilchrist and the Doolittle jars. By April 1902, the Sterling Glass Co. incorporated and moved into the “lower” works with the Improved Gilchrist Jar Co. and the Jersey Metal Co. (making Mason jar lids). We have not discovered any relationship between these firms; they may have just shared the facility. Although uncommon, this setup was used by several other glass houses. This was apparently the last entry for Gilchrist (Klingensmith 1999; Roller 1983:139; 1998a).

Ruth Gilchrist After 1904

Once the Gilchrist Jar Co. was formed in 1898, Ruth Gilchrist lost at least some control of her invention. On May 4, 1901, the *Elmer Times* called her “the owner of the patents,” so she still retained control at that point. She was also intimately involved with the Improved Gilchrist Jar Co. in 1901 and 1902. When the second Gilchrist corporation ceased operations in early 1902, she may have sold the rights to the Hazel-Atlas Glass Co., who continued making the jars, or they may have reached some kind of royalty agreement (see below).

However, Gilchrist continued inventing (see the GJCo Monogram section below), culminating in a glass lid patented April 12, 1904. She attempted to market the new jars herself. On July 12, 1906, she wrote a letter to the Rau Brothers of the Fairmount Glass Works of Indianapolis, Indiana, describing her all-glass, quick-acting cap and fruit jar. She queried the firm about their prices to manufacture the jars in 1,000 to 10,000 gross lots. Gilchrist claimed that she had been stricken with a serious illness eight months earlier, and she offered to sell the patent rights to the jar. She wrote the letter on stationery from the Hotel Weldon, Weldon, Pennsylvania, just northeast of Philadelphia.

Apparently receiving an unsatisfactory reply from the Raus – or none – Gilchrist wrote the Ball Bros. on August 3, 1906. She sent them a sample of the all-glass lid and jar and offered to sell them the patent rights. She was still living at the Hotel Weldon. There appears to be no physical evidence (i.e., jars with the Gilchrist 1904 lids) that Gilchrist was successful in these efforts.

Containers and Marks

The two major products of the Gilchrist Jar Co. were the Gilchrist jars and, later, Doolittle jars. The first style of Gilchrist jar was made in 1895, and production continued (at the Hazel-Atlas Glass Co.) until at least 1904. As early as June 2, 1898, Gilchrist jars were sold by firms at Buffalo, Albany, and Wanamaker, New York, Philadelphia, Boston, and Springfield, Massachusetts, and both Hartford and New Haven Connecticut (*Independent* 1898:30). The firm began to make the Doolittle jars in 1900 and continued until the plant ceased operations in 1901. We address the jars below in alphabetical order – with Doolittle first.

Doolittle

The Doolittle jars were all based on patents taken out by Irvin P. Doolittle. Doolittle took out three U.S. patents (one reissued) and was responsible for one in the name of Alexander L. Schram in Canada (see more about Schram in the Schram Glass Co. section).

Doolittle Patents

1. January 2, 1900

On March 31, 1899, Doolittle applied for a patent for a “Cover-Fastening for Fruit Jars or Similar Vessels” and received Patent No. 640,182 on January 2, 1900. Shortly after Doolittle received the patent, he discovered a flaw in it and apparently never had any jars made for production. Doolittle described his invention, and, in his second patent, discussed the major problem with it:

Each of the locking-clips of this patent comprises a pair of horizontally-swinging arms connected together at their outer ends by a cross-bar or thumb-piece and pivoted at their inner ends to a pin which passes directly through an opening formed in the marginal portion of the glass cover. This construction, while forming a satisfactory look and seal, is liable to cause breakage of the glass cover where the pivot-pins of the clips pass through the cover, owing to the strain exerted upon the latter in forcing the clips into their locked position.

2. June 12, 1900

Doolittle applied for another patent for a “Cover-Fastening for Fruit Jars &c” on February 26, 1900, and received Patent No. 651,500 on June 12 of that year (Figure 1). Doolittle’s second patent was intended to overcome the problem of breaking the glass cover caused by his original design. The drawing showed a wire extending across the lid, joining the two clips to relieve the strain on the glass.

3. December 24, 1901

Doolittle received another patent – No. 689,543 for a “Cover-Fastening for Fruit Jars” on December 24, 1901 (Figure 2). He had applied for the patent on September 26 of that year. In this final patent, Doolittle described the problems inherent in his first two as well as noting his remedy in the third:

The fastenings shown in each of my said patents are objectionable in certain respects. In that of the earlier patent the clip is pivoted to the cover by a pivot-pin, which passes through a hole extending entirely through the ear on the glass cover. The hole weakens the ear, so that great difficulty is found in connecting or riveting the clip to the pivot-pin without breaking the ear. The ears also frequently break in the use of the jars. The fastening of the second patent avoids this objection, but is itself open to the objection that it requires the use of a yoke or spanner, which extends across the cover and holds the pivotpins in recesses in the ears. This materially increases the cost of the fastening and detracts from its appearance.

The object of the present invention is to produce a fastening which will possess the advantages of the type referred to, but which will be free from the objections incident to the patented devices, and which is exceedingly simple and can be produced at a minimum cost.

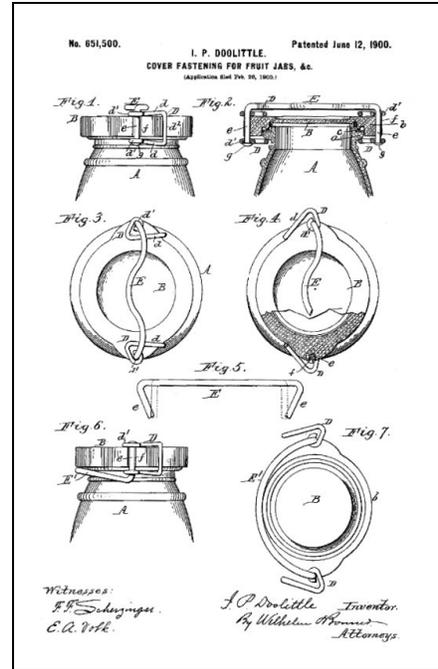


Figure 1 – Doolittle’s second 1900 patent

4. December 23, 1902

On December 23, 1902, Doolittle received Reissue No. 12,065 for a “Cover-Fastening for Fruit Jars or Similar Vessels.” This was reissue of the January 2, 1900, patent.

5. December 3, 1901

Alexander L. Schram received Canadian Patent No. 73,980 on December 3, 1901. This was virtually the 1901 U.S. Doolittle patent. Doolittle received a total of three Canadian patents that paralleled the U.S. Patent, but the December 3, 1901, patent was the only one embossed on a jar lid.

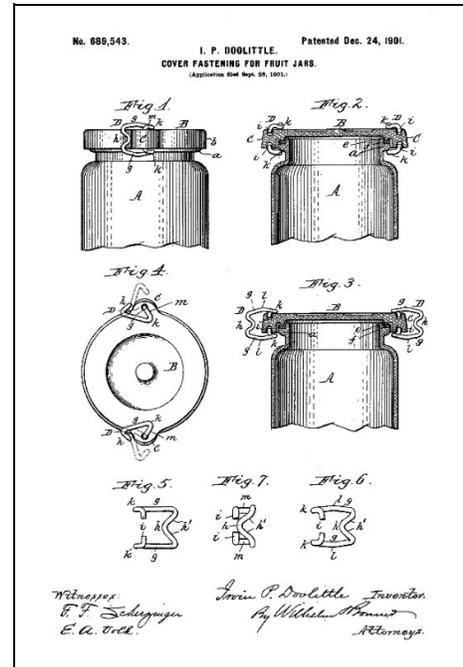


Figure 2 – Doolittle’s 1901 patent

Doolittle Jars

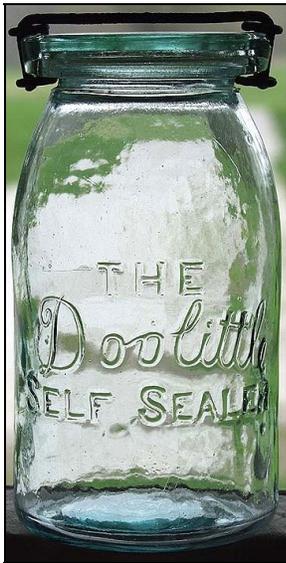


Figure 3 – Doolittle jar – GJCo (North American Glass)

Toulouse (1969:95) noted a jar embossed “DOOLITTLE” horizontally across the front with a “glass lid held by two spring clips permanently mounted on the lid, and tightening by rotating to bring an arm under a finish ledge.” Although Toulouse claimed that the jars were mouth blown, the other sources identified them as machine made. Toulouse (1969:95), Roller (1983:106-107), and Creswick (1987a:47-48) identified at least nine variations of the jar/lid combination. See Table 1 for variations, probable manufacturers, and possible dates.

Our research suggests that these jars divide into three groups according to probable manufacturers. The first consisted of only a single jar type – embossed “THE / Doolittle (cursive) / SELF SEALER” on the front and GJCo monogram on the base.



Figure 4 – Doolittle lid (North American Glass)

The lid was embossed “PATENTED (arch) / JANUARY 1 / 1900 (both horizontal)” and had a supporting wire strung across the face of the lid – the only lid with this feature (Figures 3-6). Despite the patent date, the wire was only used on the June 12, 1900 patent. This was also the only jar with the GJCo monogram. The manufacturer was almost certainly the Gilchrist Jar Co. from 1900 to 1901. Roller (1983:106) agreed with this assessment, although Creswick (1987a:47) believed that a Canadian or U.S. glass house – possibly the Elmer Glass Works – made the jars for Gilchrist (see discussion below).

Table 1 – Doolittle Jar Chronology

Side Embossing	Color	Lid – Patent Dates	Manufacturer	Date Range
THE Doolittle SELF SEALER*	Aq	Jan 2 1900	Gilchrist Glass Co.	1900-1901
THE Doolittle SELF SEALER**	Aq	Jan 2 & Jun 12 1900	Atlas Glass Co.	ca. 1901
THE Doolittle SELF SEALER	Aq	Jan 2 & Jun 12 1900	Atlas Glass Co.	ca. 1901
Doolittle	Aq C	Jan 2 & Jun 12 1900	Atlas Glass Co.	ca. 1902-1904?
Doolittle †	Aq C	Jan 2 & Jun 12 1900	Atlas Glass Co.	ca. 1902-1904?
Bare	Cl	Dec 3 1901	Sydenham Glass Co.	ca. 1902
Bare ††	Cl	Dec 3 1901	Sydenham Glass Co.	ca. 1902
DOOLITTLE	Aq C	Jan 2 & Jun 12 1900	Sydenham Glass Co.?	ca. 1903-1907?
DOOLITTLE	Aq C	Jan 2 & Jun 12 1900 & Dec 24 1901	Sydenham Glass Co.?	ca. 1903-1907?
DOOLITTLE †	Aq C	Jan 2 & Jun 12 1900	Sydenham Glass Co.?	ca. 1903-1907?

* GJCo monogram on base and stabilizing wire on lid

** Ghosted GJCo monogram on base

† Slots in finish

†† Square in cross section



Figure 5 – Doolittle finish
(North American Glass)



Figure 7 – Doolittle cursive jar
(North American Glass)

Co. (Canada) made the jars. A subset of jars embossed “Doolittle” in cursive had slots in the lid and finish that had to be aligned to clamp the cap to the jar (Figure 9). Lids for these were embossed “‘Doolittle’ (cursive) / PATENTED JAN 2 & JUNE 12 1900 (both arches) / MATCH / COVER AND / SLOTS (all horizontal)” (Figure 10).

The second group was probably made by the Atlas Glass Co. We have included in this group the other jar embossed “SELF SEALER” but without the basal monogram and the two jars only embossed with “Doolittle” in cursive (Figures 7 & 8).

The lids for all of these were embossed “‘Doolittle’ (arched cursive) / PATENTED (arch) / Jan 2' & June 12. 1900 (cursive in an inverted arch),” even though the lid was made to Doolittle’s 1901 patent. Roller (1983:106) claimed that the manufacturer of the jars was uncertain but suggested that it was “very possible” that the Doolittle Glass Co, Pittsburgh, made them (see the discussion below). Creswick (1987a:47-48) believed that Sydenham Glass



Figure 6 – Doolittle GJCo jar
(Creswick 1987a:47)

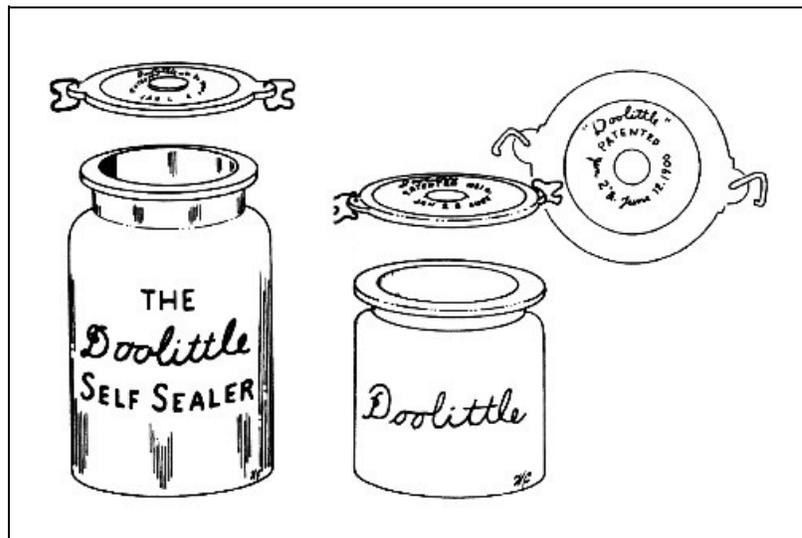


Figure 8 – Doolittle jars by Atlas (Creswick 1987a:47-48)

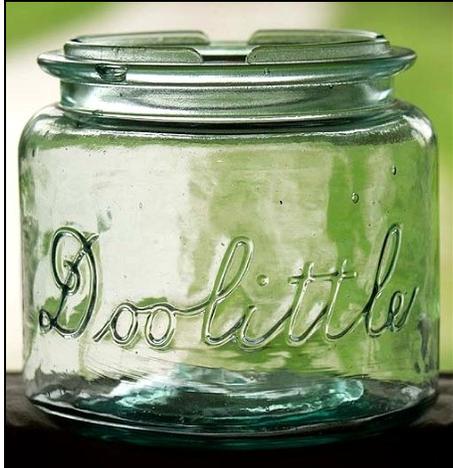


Figure 9 – Slotted Doolittle jar (North American Glass)

We agree with Roller (1983:106) and Creswick (1987a:47) that the largest group of jars was made by the Sydenham Glass Co. These include the two types with unmarked sides and



Figure 10 – “Match Cover” lid (North American Glass)

the ones embossed “DOOLITTLE” – including the ones with slots on the rim. The lids on the otherwise unembossed jars (one round in cross-section, the other square) were embossed “Doolittle (arched cursive) / PATENTED / DEC 3 – 1901 (inverted arch)” (Figure 11). Since this was the Canadian patent date, there is no question about these being made in Canada.

The jars embossed on the front with “DOOLITTLE” in block letters had three types of lids. One lid was the same as the ones in the second group with “Dec. 24, 1901 (inverted arch)” below the other two patent dates. Another was embossed “Doolittle (arched cursive) / PATENTED (arch) / JAN 2 & JUNE 12 1900 (cursive in an inverted arch).” The final lid was embossed “‘Doolittle’ (cursive) / PATENTED JAN 2 & JUNE 12 1900 (both arches) / MATCH / COVER AND / SLOTS (all horizontal).” This lid had a circular paper insert inside the lid that was reproduced by both Roller and Creswick (Figure 12). All of these lids were actually made to Doolittle’s 1901 patent. See the Discussion and Conclusions section for a justification of our choices of dates and manufacturers.

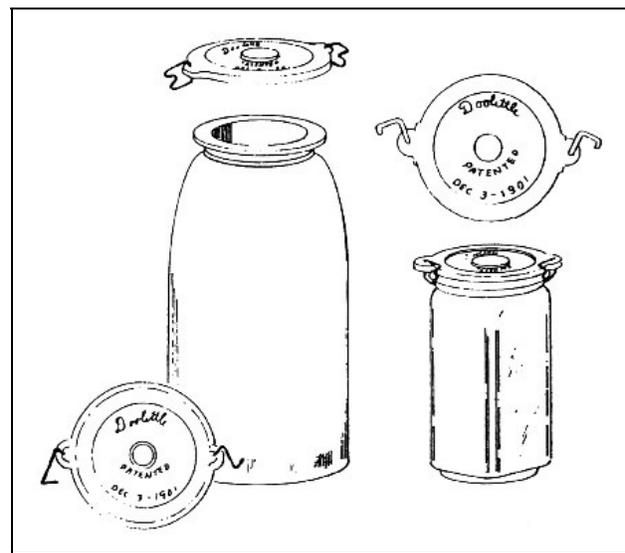


Figure 11 – Canadian Doolittle jars (Creswick 1987a:47)

GJ monogram

Toulouse (1969:132-133) noted shoulder-seal, continuous-thread jars embossed with a GJ monogram that he attributed to the Gilchrist Jar Co., Wilkes-Barre Pennsylvania – although the firm was located at Elmer, New Jersey, with offices in Philadelphia and other cities. The colorless jars were mouth blown, and he claimed the Elmer Glass Co. as the manufacturer. He identified Ruth A. Gilchrist as receiving Patent No. 536,870 for the jar lid on April 2, 1895 as well as Design Patent No. 24,337 for the same lid on May 28 of that year. He also claimed that the monogram was used on a jar embossed “MASON’S (arch) / {GJ logo} / PATENT / NOV 30TH / 1858 (all horizontal).

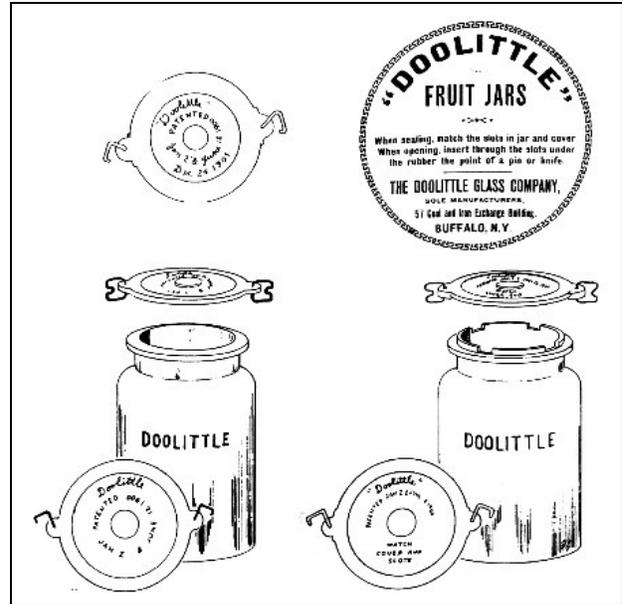


Figure 12 – DOOLITTLE jars (Creswick 1987a:47)

Roller (1983:233; 2011:353) illustrated this monogram on the Mason jar describe by Toulouse; however, he noted that the jars had “been attributed previously to the Gilchrist Jar Co. [obviously meaning Toulouse] . . . but no documented evidence has been found that they ever made Mason’s Patent jars.” Creswick (1987a:141) illustrated the jar and suggested that the Elmer Glass Works may have made it for the Gilchrist Jar Co. of Wilkes-Barre, Pennsylvania (Figure 13). She almost certainly picked up the town name from Toulouse. We have not seen Wilkes-Barre connected with jar production from any other source.

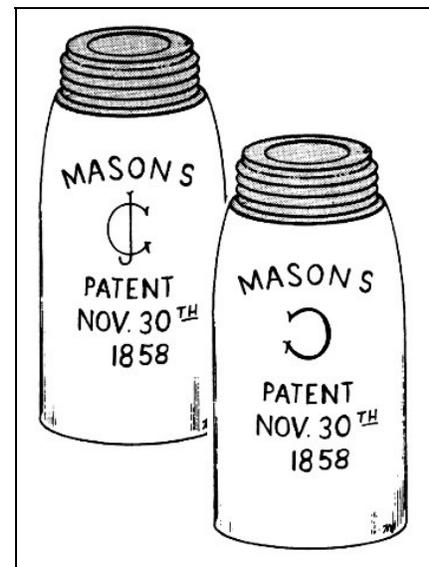


Figure 13 – GJ monogram (Creswick 1987a:141)

Creswick (1987a:141) also illustrated and discussed a similar jar with a reversed “G” in place of the GJ monogram. She added that “some of the GJ jars show where the reversed G was corrected and the J added.” Although we share Rollers skepticism, the question remains: If not Gilchrist, then whom? We

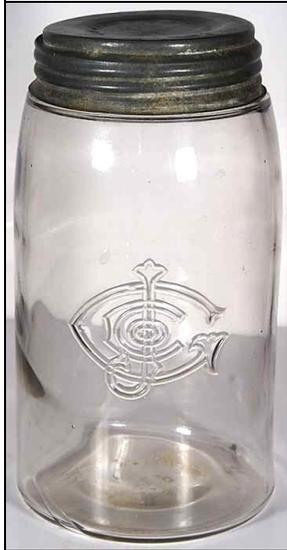


Figure 14 – GJCo monogram – double line (North American Glass)

have not discovered another logical choice for “GJ” initials. Of course, this monogram could be “JG” opening up the field to a “J” Glass Co. Although a few firms like the Jeanette Glass Co. briefly made fruit jars, we have found no evidence linking a “J . . . Glass” firm to Mason jars. See the Discussion and Conclusions section for more speculation.

GJCo monogram, Co in center

Toulouse (1971:132-133)

described the GJCo monogram on the same jars as noted for the monogram above but added no other information. Roller (1983:138-139; 2011:213-214) and Creswick (1987a:71; 1987b:57) divided the jars into two types, one with the GJCo monogram in a single-line format, the other with double lines (Figures 14 & 15). They listed the jars in colorless and aqua glass, both mouth-blown and machine made (Figure 16), with two lid styles. One lid had “GILCHRIST FRUIT AND FOOD JAR” stamped into the zinc cap and an opal (milkglass)



Figure 17 – Gilchrist cap (North American Glass)

liner embossed “PAT. APRIL 2ND 1895 PAT MAY 28TH 1895” with a central conical “immerser” extending into the jar (Figures 17 & 18). The other was a one-piece aluminum screw cap with “THE KEYSTONE JAR THE GILCHRIST JAR CO PATENTED JULY 1898 PURE ALUMINUM” stamped on top



Figure 15 – GJCo monogram – single line (North American Glass)



Figure 16 – Mouth-blown & machine-made rims (North American Glass)



Figure 18 – Gilchrist immerser (North American Glass)

with a dome immerser an integral part in the center. Roller noted that the aluminum caps were made by the Improved Gilchrist Jar Co., while the Atlas Glass Co. made the jars. This reference to “The Keystone Jar” makes no sense, unless the Improved Gilchrist Glass Co. intended to rename the Gilchrist Jar when used with the new lid.

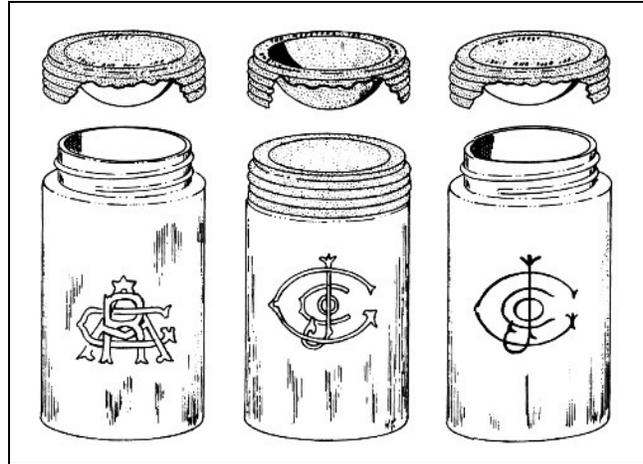


Figure 19 – Gilchrist jars (Creswick 1987a:71)

Creswick (1987a:71; 1987b:57) illustrated the jars (Figure 19) and suggested that four glass houses may have made them:

1. S.M. Bassett Glass Co. (for Gilchrist Jar Co.) – ca. 1898
2. Gilchrist Jar Co. – 1899-1900
3. Atlas Glass Co. (for Improved Gilchrist Jar Co.) – 1901-1902
4. Hazel-Atlas Glass Co. – 1902-1907

See the Discussion and Conclusions section for more on dating, manufacturers, and chronology.

The Ruth A. Gilchrist Patents

The Gilchrist jars (both the one with the GJCo monogram and the one with the RAG monogram – discussed below) were based on three patents taken out by Ruth A. Gilchrist and one from William A. Sharps.

April 2, 1895

Ruth A. Gilchrist applied for a patent for a “Food Preserving Jar” on July 30, 1894, and received Patent No. 536,870 on April 2, 1895. Her design was actually for a

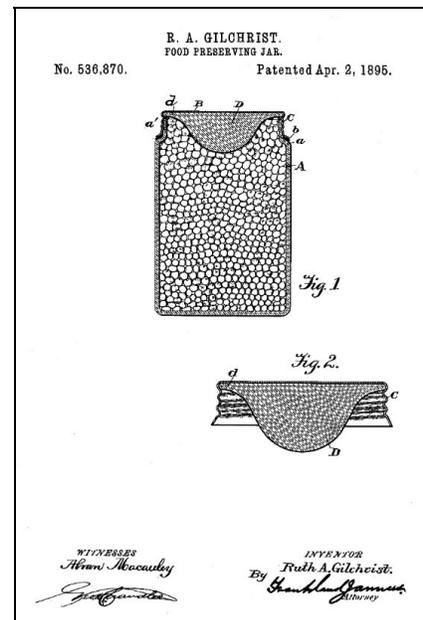


Figure 20 – Gilchrist April 2, 1895 patent

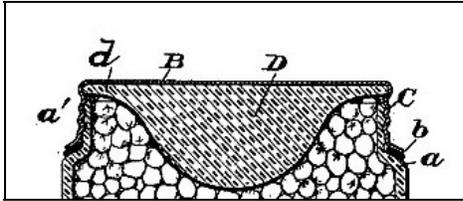


Figure 21 – Closeup April 2 patent

curved insert or immerser, held by a metal screw cap, to expel air from the top of the jar and seal the food tightly inside. The insert was to be made of “porcelain or other like non-corrodible material” and appears to have been solid in the drawing (Figures 20 & 21). Gilchrist resided at Wilkes-Barre, Pennsylvania.

May 28, 1895

On April 12, 1895, Gilchrist applied for a “Design for a Lining for Preserve-jar Covers.” She received Design Patent No. 24,337 on May 28 of that year. The design in the drawing was essentially the same as her first patent, but the insert was convex on both sides – in her terms, “hollow in the pendant” – rather than solid (Figure 22). Both of these 1895 patent dates appeared on the glass liners used for the Gilchrist jars. All of the milkglass (opal) immersers apparently used this patent; each of them was embossed with both 1895 patent dates.

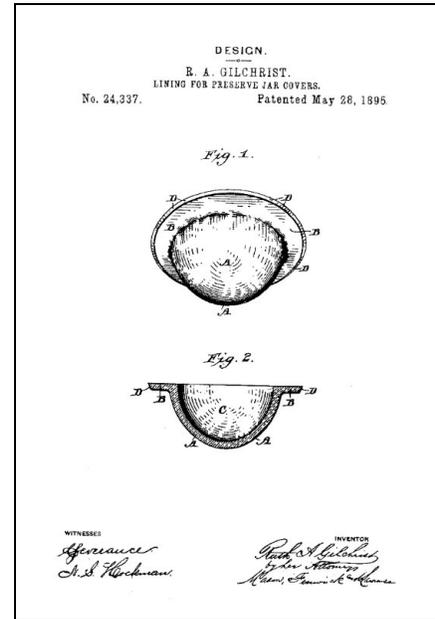


Figure 22 – Gilchrist May 12, 1895 patent

July 5, 1898

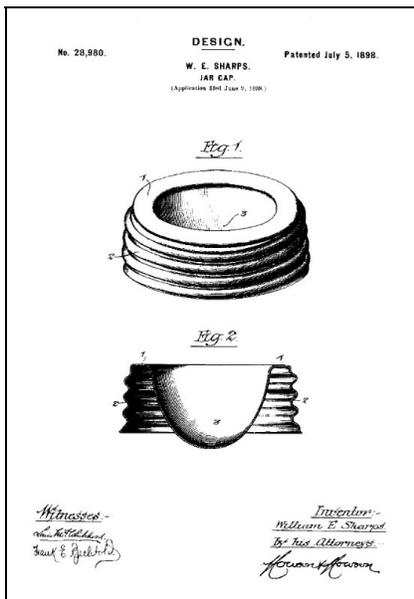


Figure 23 – Sharps 1898 patent

An exception is an invention by William A. Sharps. Sharps applied for a patent for a “Design for a Jar-Cap” on June 9, 1898, and received Patent No. 28,980 on July 5 of that year. The lid appears to be virtually identical to the Gilchrist patents (Figure 23). Although not specified in the design patent description, the lid appears to be made of metal in a single-piece construction. As Sharps described it, “the essential features of the design are a flat rim, from the outer edge of which depends a threaded flange, while from the inner edge of the rim depends a deep rounded central cup.” The aluminum lids that accompany some of the Gilchrist jars

were stamped with the “JULY 1898” Sharps patent date and had no glass liner. Even though Sharps did not assign the patent to Gilchrist, the Gilchrist Jar Co. or the Hazel-Atlas Glass Co. must have acquired the patent rights at some point. Unfortunately, we have not seen an example or photo of the aluminum lid.

May 1, 1900

Gilchrist applied for another patent on January 9, 1900, for a “Design for Cap or Cover for Preserve Jars.” She received Design Patent No. 32,610 on May 1. This was essentially the same as the Sharps cap described above but with a conical downward projection instead of a convex one and a non-continuous thread on the cap. This cap was apparently never used.

March 5, 1901

On January 19, 1900, Gilchrist applied for another patent for a “Design for a Cover for Preserve Jars.” She received Design Patent No. 34,168 on March 5. Although the patent description never specifically said so, this design seems to be for a one-piece metal cap that was an almost exact match for the Sharps 1898 patent. This patent, too, appears to never have been used.

April 12, 1904

Gilchrist filed for her final patent on February 21, 1903, and received Patent No. 756,956 for a “Preserve Jar and Cap Therefore” on April 12 of the next year (Figure 24). This was essentially the same conical shape as her 1900 design – although it was a letters patent instead of a design patent, and it was to be made from “glass, earthenware, or metal.” McCann (2016:185) reported a single jar embossed with the GJCo monogram on the front and “PATENTED” on the base that had a lid made to this patent. The colorless all-glass lid was embossed “PATENTED APRIL 12TH 1904.”

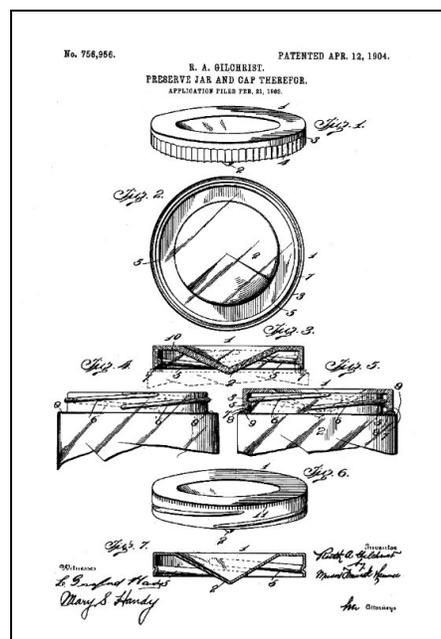


Figure 24 – Gilchrist 1904 patent

GJCo monogram, split Co

Only Toulouse (1969:132; 1971:225) offered this variation (Figure 25). In his latter book, he noted that all variations were used ca. 1895-1900. No other source mentioned this mark, and it probably does not exist. As we have noted elsewhere, Toulouse received much of his information through a network of collectors assembled by May Jones. Most correspondence was carried out via hand-written letter – leaving tremendous room for error.

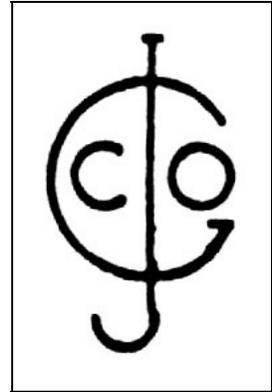


Figure 25 – GJCo monogram (Toulouse 1971:225)

RAG monogram



Figure 26 – RAG monogram (North American Glass)

monogram above (see Figure 17). Roller included an illustration from a ca. 1898 Gilchrist flyer (Figure 27). The latter Roller volume added a variation of the jar embossed “PATENT APPLIED FOR” on the base.

Toulouse (1969:133) and Creswick (1987a:71; 1987b:57) only noted that this was an alternate monogram used by Ruth A. Gilchrist (Figure 26). According to Roller (1983:303; 2011:443), the monogram was used on jars made in 1898 by the S.M. Bassett Co. and in 1899-1901 on jars made by the Gilchrist Jar Co. The jars were mouth blown in aqua and pale green glass, and the lid had “GILCRIST FRUIT AND FOOD JAR” stamped into the zinc cap and an opal (milkglass) liner embossed “PAT. APRIL 2ND 1895 PAT MAY 28TH 1895” with a central conical “immerser” extending into the jar – as did the first lid described for the jar with the GJCo

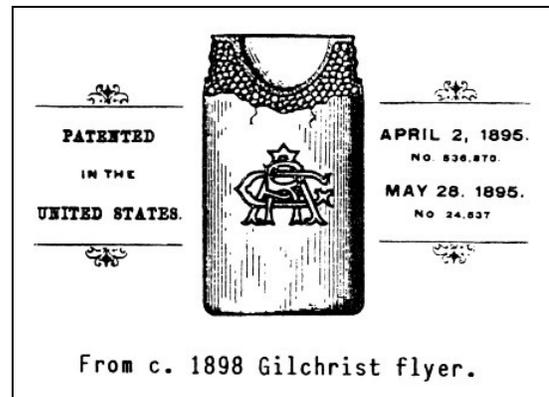


Figure 27 – Gilchrist ca. 1898 flyer (Roller 1983:303)

Discussion and Conclusions

Because our dating and assignment of manufacturers for both Doolittle jars and Gilchrist jars varies somewhat from those of the previous researchers, we present a detailed explanation of our reasoning below.

Dating the Doolittle Jars

The following discussion is presented to justify our choices for the manufacturers of each section of Doolittle jars.

SELF SEALER with GJCo monogram (1900-1901)

The first Doolittle jar type – embossed “THE / Doolittle (cursive) / SELF SEALER” on the front and having the GJCo monogram on the base – was almost certainly made by the Gilchrist Jar Co. From at least June 7, 1901, Gilchrist advertised itself as “sole manufacturers” of the jar embossed “Doolittle (cursive) / SELF SEALER” – made by machine (Figure 27). Gilchrist received the rights to manufacture the jar in May 1900 but was out of business by early 1901. The plant almost certainly made the jars during parts of those two years.



Figure 28 – Gilchrist ad for Doolittle jars (Roller 1983:107)

Other Jars with Cursive Doolittle Side Embossing (1901-ca. 1904?)

Although Roller (1983:106) claimed that the manufacturer of the Block-letter DOOLITTLE jars was uncertain, he said it was “very possible” that the Doolittle Glass Co, Pittsburgh, made them. Roller (2011:168) cited the June 15, 1901, issue of *Commoner & Glassworker* as stating that “the Doolittle Jar Co. will soon have their jars on the market. The bodies are being made at the Atlas Plant at Washington, Pa., and the glass fittings at the Frank” Glass Co.

The early Roller volume (1983:106) noted that Doolittle purchased the Frank Glass Co. in 1901 and installed two Teeple-Johnson machines to make the jars. On July 11, 1901, the *American Machinist* (1901:51) announced that the Doolittle Jar Co., with T.C. Perrine as president, a new Pittsburgh corporation” and planned to remodel a Wellsburg plant but hoped to build a new factory at Pittsburgh. The later Roller volume (2011:169) stated, however, that the proposed deal – apparently both of them – fell through (see the discussion of the Frank Glass Co. in the section on the Flaccus Family Holdings, Part I for more information).

It is pretty clear that the Doolittle Glass Co. never made anything (with the possible exception of the tie wires). According to Hawkins (2009:177), the Doolittle Glass Co. was only listed in the Pittsburgh city directories during 1901 (1329 Park Bldg.) and 1902 (810 Empire Bldg.) – at office locations (almost certainly sales offices) rather than factories.³ Similarly, the company had offices at Buffalo, New York, in 1900 and 1901 (Roller 2011:167). The firm was “newly incorporated in May 1901, when J.P. Doolittle (vice president) and Eugene Coste (general manager) were in Pittsburgh looking for a plant to make the Doolittle jars. In February 1902, Doolittle “paid a visit to Clarksburg, Mannington, Grafton, Fairmont and other West Virginia towns with a view to seeking a location for a plant for manufacturing a newly patented fruit jar.” Coste was back in Pittsburgh that month, but we have found nothing more about the firm (*American Machinist* 1901:54; *Home Furnishing Review* 1902:113; *Illustrated Glass & Pottery World* 1902:13).

Tom Caniff provided information to the Roller editors (2011:169) about three variations of the Doolittle SELF SEALER. The first one was described above, and it was followed by one with the same side embossing but with a ghosted GJCo monogram on the base. The final example had a bare base. Caniff noted that each side embossing on all three examples that he had seen was slightly different (Figure 29). This means, of course, that there were at least three molds made for this jar type. At least two were used by the Gilchrist Jar Co. It is likely that both were purchased in the bankruptcy sale and shipped to the Atlas Glass Co. for continued production under the auspices of the Improved Gilchrist Glass Co. Atlas probably made the third mold, and made jars for Gilchrist during 1901 and 1902.

³ Most sources called the firm the Doolittle Glass Co., but some said the Doolittle Jar Co. This was almost certainly the same company.

With our current sources of information, the picture becomes very dim. Since U.S. jars up to this point had the word “Doolittle” in cursive embossing, it is logical that jars made by the Hazel-Atlas Glass Co. (formed from the merger of the Hazel and Atlas Glass Companies) would have continued to use the same format. Thus, Hazel-Atlas is the likely manufacturer of the other two variations that were only embossed “Doolittle” (in cursive) on the sides. How long Hazel-Atlas continued production of the jar is currently unknown. The fact that the cursive jars – like the block-letter jars – were made in both plain-rim and slotted rim variations suggests a possible parallel manufacture in the U.S. and Canada.

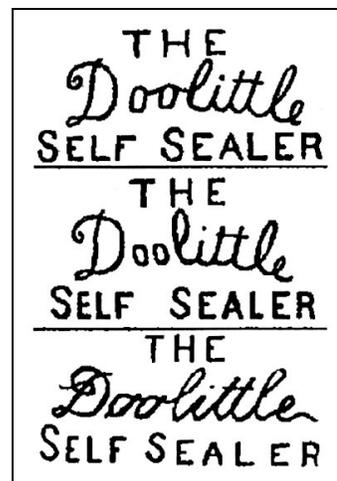


Figure 29 – Doolittle variations (Roller 2011:169)

Jars with Block-Letter Side Embossing and No Side Embossing (1901-ca. 1907?)

Since Doolittle was a Canadian resident who returned to Canada after what was apparently a bad business experience in the U.S., nearly everyone agreed that some of the jars were made in Canada by the Sydenham Glass Co. King (1988:103) quoted Irwin P. Doolittle’s obituary in the January 13, 1910, *Wallaceburg News*: Doolittle was “interested while here in the introduction and manufacture of the Doolittle fruit jar placed on the market by the Sydenham Glass Co.”

The lids on the jars with no side embossing each had the Canadian patent date – leaving virtually no doubt that they were made in the northern nation. Roller (2011:168) noted that the “sloping shoulder, narrow-mouth, unembossed” jars with the Canadian patent dates on the lids are the ones most commonly found in Canada.

We have included the jars with block-letter side embossing because they had the greatest variation in lids and the only lid with the 1901 patent date. Since neither of these characteristics fit any of the earliest jars, these become a likely choice for the ones made by Sydenham. Although we have no direct evidence, Canadian jars may have been made much later than their American counterparts. Roller (2011:168) stated that these jars are found in Canada but explained that by saying that they “were probably shipped there from the United States.” This is, of course, possible. If these block-letter DOOLITTLE jars were made in the U.S., the big

questions are by whom, how long, and why don't we have any other information? Of course, the last two of those questions apply equally to Canada.

The next question revolves around when Canadian production stopped. Sydenham Glass was in business until 1913, so manufacture could have continued until then. However, Doolittle's 1910 obituary used the words "interested while here" (see above) to describe his involvement with the jars. This implies that he was no longer there, although it gives us no clue as to when he left. It is therefore a safe bet that the jars were discontinued prior to 1910, so we have arbitrarily chosen ca. 1907 as a probable end date. It is strange that we have so many variations of these jars but so little information about production after ca. 1902.

A final curiosity is the slotted finishes on some jars with both cursive "Doolittle" and with block-letter "DOOLITTLE" side embossing. These slots do not fit any Doolittle patent, and none of the jar sources made any attempt to explain this phenomenon. Oddly, none of the typical jar sources mention the slotted variation of the cursive "Doolittle" jars – although there are photos of at least three examples on North American Glass auctions (see Figure 9). These may have been later jars, made in the U.S. (cursive format) and Canada (block-letter format). Of course, all of them may have been made by a single manufacturer.

Dating the GJCo and RAG Monograms

RAG Monograms (1895-ca. 1898)

McCann (2016:185) provided the key to dating the monogrammed jars. He stated that "all of the **RAG** and some of the dual line **GJCo** have ground tops [i.e., mouth blown]. All single line **GJCo** jars are machine made." Since all of the jars with RAG monograms were mouth blown, they were likely made first. Since Gilchrist lived at Wilkes-Barre, Pennsylvania, a missing part of this study is how the production of her jars moved to Elmer, New Jersey. – ca. 120 miles to the southeast. The story of how the invention of a single individual at Wilkes-Barre migrated to a corporation composed of William E. Sharp, Charles F. French, and Thomas P. Curley in Philadelphia, then moved to a factory – the Gilchrist Jar Co. – at Elmer, New Jersey, has to be significant.

In order for a RAG-monogrammed jar to have “PATENT APPLIED FOR” embossed on its base (as noted by Roller [2011:443]), it had to have been made between July 30, 1894 – when Gilchrist applied for her first patent – and May 28, 1895, when she received her second, since both the April 2 and May 28, 1895 patent dates appeared on each jar lid. This would be the earliest jar in the sequence. The Gilchrist Glass Co., however, was not formed until December 14, 1897 – two and one-half years later – so there was no reason for the GJCo monogram until that time. The jars with the RAG monogram, therefore, must have been made between at least May 1895 and December 1897 – although use of the molds probably continued until they wore out – possibly into 1899. The Gilchrist Jar Co. was still advertising the “RAG” jars at least as late as 1898 (*Boston Cooking School Magazine of Culinary Science* 1898 – Figure 30).



Figure 30 – Gilchrist jar ad (*Boston Cooking School Magazine of Culinary Science* 1898)

Both Creswick (1987a:71) and Roller (1983:303; 2011:443) suggested the Elmer Glass Works and S.M. Bassett as early makers of the Gilchrist jars, both the ones with the RAG monograms and those with GJCo monograms. However, the town’s “lower” plant – the Elmer Glass Co. – made window glass until 1895, when John B. Getsinger leased the factory to make bottles. His business failed the next year and was superseded by Deyo, Goodwin & Co. Aside from the fact that the later Gilchrist Jar Co. was located at Elmer, there is no intuitive reason to assume that Getsinger made any Gilchrist jars.

Roller (1998a) discovered that the Bassett Glass Co. (Elmer’s “upper” plant) made jars for Gilchrist for about two years prior to the sale of the plant in mid-1899 or about the middle of 1897. Since the Bassett plant began blowing glass on July 3, 1896, the factory *could* have made the jars that early. This leaves at least a year unaccounted for (at least May 1895 to at least July 1896). This is an important year. Who made the Gilchrist jars? What kind of economic force commissioned their manufacture? Did Ruth Gilchrist have the money to market her own invention? If not, who did?

Roller (1998b) provided part of the answer, when he noted that a “flyer by Ruth A. Gilchrist, 39 Hanover St., Wilkes-Barre, PA, included an article on ‘the Gilchrist Patent Fruit & Food Jar’ from the July 1895 *The Inventive Age*, and a cut of the RAG jar.” This means that Ruth Gilchrist was selling the jars embossed with her initials from Wilkes-Barre (possibly out of her house) by at least July 1895. Unfortunately, any glass house in eastern Pennsylvania, southern New York, or all of New Jersey could have made the jars.

Dual-line GJCo-Monogrammed Jars (1897-ca. 1904)

Dual-line GJCo-monogrammed jars were both mouth blown and machine made, so they were logically made next. The mouth-blown jars could have been made by the Bassett plant for the Gilchrist Jar Co. as early as the inception of the company in 1897. Gilchrist Jar, itself, made the jars from its start of production in 1899 – prior to the installation of the first machine in October – although some mouth-blown jars would have been made into 1900 and possibly later. Likely, the machine-made, dual-line variation was produced at Gilchrist Jar from October 1899 until the plant ceased operation in late 1900, possibly as late as January 1901 – although some could have been made earlier by the Bassett plant.

With the demise of Gilchrist Glass, the molds were almost certainly shipped to the Atlas Glass Co. and used until they wore out, probably by ca. 1904. Roller (1983:139) decided that the “jar figured in the 1904 Hazel-Atlas Glass Co. brochure seems to show dual-line lettering” (Figure 29). This was probably one of the old molds still being shown in the catalog.

Single-line GJCo-Monogrammed Jars (1902-1904+)

The single-line monogrammed jars – all machine made – would thus be last and only made by the Hazel-Atlas Glass Co. in 1902 or later.⁴ We have found no evidence for the jars made after 1904, although it is possible that Hazel-Atlas continued production for a few more years. See Table 2 for a chronology.

⁴ The Hazel and Atlas Glass Companies merged to form the Hazel-Atlas Glass Co. in 1902. See the Hazel-Atlas section for more details.

The white milk-glass lids (and a rare aqua variation) were used with both the RAG-monogrammed jars and those with the GJCo monograms. These lids were certainly used from 1895 to the end of the first Gilchrist Jar Co. in 1901. They were probably revived and offered by the Hazel-Atlas Glass Co. from 1902 to 1904 or later. The all-aluminum lids were probably only made by the Improved Gilchrist Jar Co. briefly in 1902. On March 7, 1902, the *Elmer Times* reported that the “New Jersey Metal Co. shipped their lidmaking machinery to the old Elmer Glass Works this week, where they are now set up and ready to run.”

As noted above, McCann (2016:185) reported that a single colorless all-glass lid was embossed “PATENTED APRIL 12TH 1904.” This was very likely one of the sample lids that Ruth Gilchrist had made in her attempts to induce one of the large jar manufacturers into producing her 1904 invention. The lid was almost certainly on an older jar.

Table 2 – Gilchrist Jar Chronology

Monogram	Mfg. Tech	Lid	Maker	Dates
RAG	Mouth	Zinc & Glass	unknown	1895-1896
RAG	Mouth	Zinc & Glass	Bassett Glass Co.	1896-1898
GJCo	Mouth	Zinc & Glass	Gilchrist Jar Co.	1898-1900
GJCo	Machine	Zinc & Glass	Gilchrist Jar Co.	1899-1901
GJCo	Machine	Aluminum	Improved Gilchrist Jar Co.	1901-1902
GJCo	Machine	Zinc & Glass	Hazel-Atlas Glass Co.	1902-1904+
GJCo	Machine	Glass	unknown	1904

GJ Mason Jars

Although Toulouse and Creswick assigned the GJ monogram on Mason jars to the Gilchrist Jar Co., Roller was more hesitant because he had not found any evidence linking Gilchrist to Mason jars. Nor have we. As discussed above, the big problem with questioning this identification is coming up with an alternative explanation for the initials GJ *or* JG. It is possible that another glass house made the jars for Gilchrist – either before or after the period

when the Gilchrist Jar Co. made its own jars. It is also possible that GJ or JG indicated a wholesaler or jobber rather than the manufacturer.

JG could also indicate John Gaynor. These mouth-blown jars could have been made by Gaynor during the ca. 1903-ca. 1912 period, when the plant made fruit jars using hand methods. While this may be a stretch of the imagination, it is probably not more elastic than the Gilchrist Jar explanation. An even better choice would be John Giles. When he left Giles-Clough, Giles was listed under his own name (J.S. Giles) for two year before initiating the second Safe Glass Co. Roller (1998c) listed a “wooden fruit jar shipping box labelled J.S. GILES MASON JARS UPLAND, IND. with figure of MASON’S PATENT NOV. 30TH 1858 jar held by cartoon characters.” While the description did not include the monogram, it does show that Giles made Mason jars *of the correct type* during the period. See the Giles-Clough section for more information.

Acknowledgments

Our gratitude to Greg Spurgeon for granting the use of the North American Glass photos and to Doug Leybourne for letting us reproduce the drawings from the Alice Creswick books. Thanks also to Wanda Wakkinen for patient proofreading.

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Last updated 10/16/2015