

Woodbury Glass Houses

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A wholesale druggist in Baltimore, Lewis M. Green incorporated the Woodbury Glass Works at Woodbury, New Jersey, in 1881, to produce bottles for his own goods. Soon, the plant expanded production to include other bottle and jar types and became a general manufacturer rather than just a feeder for Green. In 1901, the firm renamed itself the Woodbury Bottle Co. Woodbury remained a hand-production operation for its entire tenure, closing its doors in 1916. Although Woodbury rarely used a manufacturer's mark, it embossed a distinctive monogram on some fruit jars, impressed its name on others, and marked a very few prescription bottles with "WGW."

A completely separate operation, the Woodbury Glass Co., opened a plant at Parker, Indiana, in 1894. When the Parker factory burned in 1904, the firm moved its operation to Winchester, Indiana. Woodbury purchased a plant at Shirley, Indiana, in 1910 but sold it in 1915. After the Winchester factory burned in 1919, the company rebuilt, but the Thatcher Mfg. Co. purchased the company in 1920. The only mark known for the firm was a "W.G.CO." logo on milk bottles.

Histories

Two separate glass firms, each with a different set of officers and locations several states apart, used the Woodbury name during the same general period of time. Although the Woodbury Glass Works was open in New Jersey sooner (1881-1916), and the Woodbury Glass Co. remained in business a bit longer in Indiana (ca. 1894-1920), the two firms were apparently unrelated.

Woodbury Glass Works, Woodbury, New Jersey (1881-1901)

Lewis M. Green established a wholesale drug business at Baltimore, Maryland, in 1866. In 1870 or 1871, he built a factory in Woodbury, New Jersey, with his son, George, as the manager and the sole agent in 1872. Green made several medicines, including Dr. A. Boschee's

German Syrup, Ague Conqueror, Green's Dyspeptic Medicine, and other brands (Fike 1987:164, 224). Bottles of these tonics sold for \$1 each, and Green became wealthy enough to build his own glass factory to manufacture bottles for his products (Pepper 1971:195-197, 199).

On March 12, 1881, George G. Green, Israel C. Voorhees, Belmont Perry, Daniel M. Parker, Christian A. Madden, John Runge, Charles F. Marshall, George H. Christ, William R. Connelley, Adam H. Knight, John McClearnan, George G. Green signed the Articles of Incorporated that brought the Woodbury Glass Works to life. Green was president with Voorhees as secretary and treasurer and Christian A. Madden as superintendent. The firm began with a capital of \$30,000 (*Glouster County Democrat* 3/17/1881).

An actual architect, Paschal Madara, planned the factory – probably one of the few glass houses that were architecturally designed during the 19th century. Superintendent Madden installed a continuous tank that ran well for a single season, then “succumbed to a plague of accidents.” Madden ordered a second tank built, but it collapsed. I.C. Voorhees died unexpectedly on October 16, 1882, to be replaced as secretary by C.C. Voorhees, possibly a son (certainly a relative) (*Glouster County Democrat* 10/19/1882; 8/2/1883; Pepper 1971:197).

During at least part of its time in business, Woodbury had its molds made by Charles Yockel of Philadelphia. In a letter dated October 11, 1881, the company ordered a six-ounce prescription mold and five different ink molds. Since the letter did not mention manufacturer's marks, these bottles would have had none. The plant advertised making “All Kinds of Green Hollow-Ware” (Tyson 1971:35).

Madden resigned and was replaced by Jacob Pease in December of 1882. Pease returned to the older pot system and ordered the tank razed on January 20, 1883. The furnace and pots were soon completed and in production. The new glassware was so successful that the firm built a second furnace with four annealing ovens in 1883. The second bottle furnace allowed the plant to produce both green and flint glass. The factory made most of the bottles for Col. Green's laboratory but sold some products to other venues. Green also organized the Standard Window Glass Works at Woodbury in 1882 and built a second furnace for that plant in 1883 (Pepper 1971:197-199; Toulouse 1971:539).

Pease left the manager position in 1885, but the newspaper was unclear about his replacement. The *Glouster County Democrat* announced on July 9 that Frank Pierce replaced Pease. However, the same paper noted almost a month later (August 6) that the replacement for Pease was Thomas C. Duffield. C.A. Madden, the plant's original superintendent, replaced Duffield on September 1, 1891. Although the terms for the position changed over time, it was almost certainly the same job.

However, when the *Democrat* cited W. Hanley Becket as the new General Superintendent of the factory on January 9, 1896, it apparently referred to a new position. Madden continued as plant manager until he had a crippling accident ca. 1907. When Madden died on June 5, 1917, his obituary explained that when Madden was disabled, "it was during one of his midnight trips of inspection over the place that he stumbled over a platform and fell and received injuries which made him an invalid for the remaining days of his life." After ten years of inactivity, Madden succumbed to pneumonia (*Woodbury Daily Times* 6/6/1917).

Woodbury continued to operate two furnaces until at least 1889, then, at some point, the plant converted to continuous tanks. By 1895, however, a third, small "factory" (i.e., furnace) was also in production. George G. Green continued to be the major stockholder, but the blowers owned the remaining stock. By 1897, the firm operated two 60-ton continuous tanks, one ten-ton tank, and one seven-ton tank. Three of these were almost certainly the ones that had been described in 1895 (Roller 1997).

Toulouse (1971:539) stated that the company made fruit jars in both flint and green glass. In 1897, the plant used 18 pots to make its products,¹ but that had decreased to 11 pots by the following year. A different 1897 glass factory list noted that the factory had "two furnaces and two tanks in operation, total capacity 32 pots, making green bottles." The number remained steady until 1900 but had dramatically risen in 1901 to 62. It remained at 62 in 1902. A September 1898 flint glass list noted that the plant had two furnaces with 20 pots and two continuous tanks with six rings (*National Glass Budget* 1897a:7; 1897b:4; 1898a:7; 1898b:3; 1900:11; 1901:11; 1902:11). Woodbury Glass Works became the Woodbury Bottle Works on May 24, 1901.

¹ The actual number listed in 1897 was 183 pots, but that was certainly a typo. Since the number listed from 1900 to 1902 was 18, this number is almost certainly correct.

Woodbury Bottle Works, Consolidated, Woodbury, New Jersey (1901-1916)

According to an anonymous article (*Antique Bottle & Glass Collector* 2005:5), “on May 24, 1901, the Woodbury Glass Works was deeded to the Woodbury Bottle Works Consolidated, who continued to operate until 1916.” The *National Glass Budget* (1902:11) added that Woodbury used 18 pots in 1902. The reorganized firm recognized the need to modernize its technology. According to the *Woodbury Daily Times* of November 22, 1902, “the bottle blowing machine which was given a trial at the Woodbury Glass Works this week has not proven a success and was taken out this morning.”

The factory manager, C.A. Madden, was so popular with the workers that the union presented him “a Masonic charm set wish [*sic*] a cluster of diamonds” as a token of their appreciation (*Woodbury Daily Times* 1/2/1903). In 1904, the Woodbury Bottle Works used six continuous tanks with 42 rings to make prescription, liquor, and proprietary ware. George G. Green remained the president and treasurer; E.E. MacIntire was secretary and C.A. Madden continued manager (*American Glass Review* 1934:159). See above for a description of Madden’s subsequent accident and death.

According to the *Thomas Register*, the plant made green glass and fruit jars in 1905. The 1907 edition was more specific, listing prescription, beer, soda preservers, brandy and packers’ bottles (*Thomas Publishing Co.* 1905:104, 577; 1907:159). The *Journal of Industrial and Engineering Chemistry* (1913:953) noted that the plant made glass at six continuous tanks with 47 rings, producing a general line of bottles.

The Chancery Court ordered the sale of the works, and a public auction was set for June of 1916, and newspapers published notices for the sale of the Woodbury Bottle Works at public auction in at least February and June of 1916. On March 2, 1916, the *Woodbury Daily Times* listed the assets of the business that were part of the sale, including “12 Glory Holes, 1447 Moulds, 100S pair Finishing Tools, 254 Blank Plugs, 27 pair Crown Finishing Tools, 2599 Pontees or Snaps” and “General line of manufactured glassware including wine bottles, whiskey bottles, flasks, ovals, panels beers and sodas.”

Neither Roller (1997) nor the *Antique Bottle & Glass Collector* (2005:5) could find any record that the sale had actually taken place. However, the reprinted 1904 glass company list noted that the Woodbury Bottle Works was out of business in 1916 (*American Glass Review* 1934:159). Thus, sold or not, the works certainly ceased operations at that time.

Patents

The Woodbury jars (see below) were secured by a series of patents begun by Thomas G. Otterson in 1884 but followed by Otterson and others during the next two years. All but one were very slight improvements, the exception using a continuous-thread finish and screw cap to fasten down the glass lid, replacing the ramped finish and clamp of all the earlier inventions. See Table 1 at the end of this section, arranged in order of the patent *application* – rather than issue date. In most cases, the application date is the more important of the two because it shows when the invention was ready for use rather than the date the patent was issued – which could sometimes be *years* later.

Thomas G. and John H. Otterson, November 25, 1884

Thomas G. Otterson and John H. Otterson applied for a patent on June 12, 1884, and received Patent No. 308,571 for a “Cap or Cover for Jars or Cans” on November 25 of that year (Figure 1). The patent drawing clearly shows the type of jar closure used by Woodbury. The closure consisted of a glass lid with a threaded stud rising from the center. A metal clamp had a hole through which the stud fit and two ends bent in such a way as to engage two helical embossed segments at the base of the finish. The purpose of the cap on the threaded stud was to “secure the clamp.” Unlike the following patents, the stud did not include a vent hole.

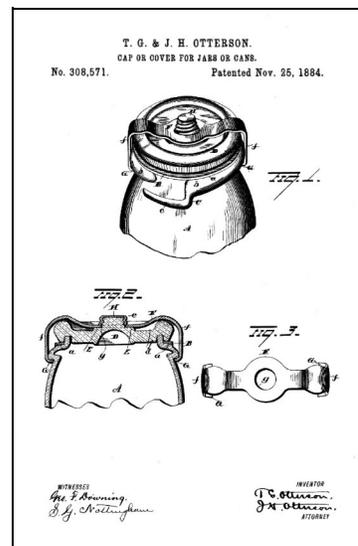


Figure 1 – Otterson & Otterson 1884 patent

Thomas G. Otterson and Cornelius C. Voorhees, March 3, 1885

Thomas G. Otterson teamed up with Cornelius C. Voorhees to devise this improvement. The two applied for a patent on December 29, 1884, and received Patent No. 313,229 on March 3, 1885, for the “Glass Can-Cap” (Figure 2). This improvement was only slight – the addition of a vent hole or perforation through the stud of the glass lid. The patent drawing showed the perforation, gasket, and small cap and described the screw cap as “fitting on the stud and performing the double function of protecting the valve and securing the yoke.”

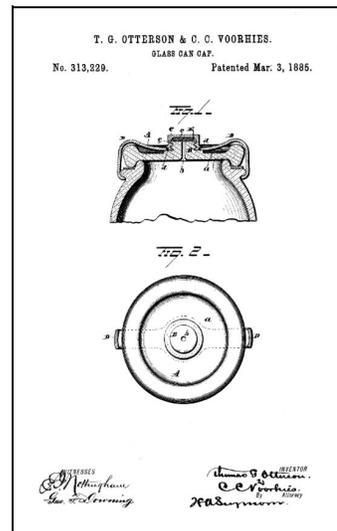


Figure 2 – Otterson & Voorhees 1885 patent

Thomas G. and John H. Otterson, March 16, 1886

The Otterson brothers applied for another patent on December 2, 1885, and received Patent No. 338,185 for a “Fruit Jar” on March 16 of the following year (Figure 3). The patent drawing showed a larger perforation, a continuous-thread finish on the jar, and the metal screw cap. The combination of the continuous-thread finish and screw cap to fasten the glass lid to the jar was the most dramatic improvement in the series of patents.

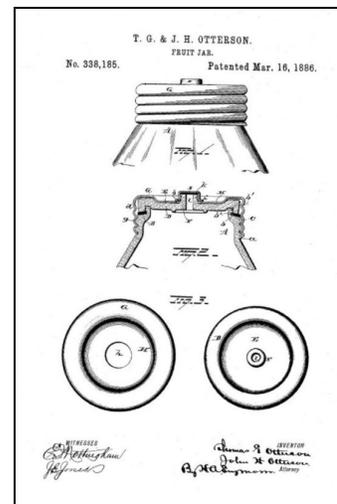


Figure 3 – Otterson & Otterson 1886 patent

Thomas G. Otterson and Cornelius C. Voorhees, June 29, 1886

This was a reissue of the Otterson and Voorhees patent of 1885. Renumbered as Reissue Patent No. 10,741, the reissue date was June 29, 1886 (Figure 4). Otterson and and Voorhees applied for the reissue on March 3, 1885. Although the patent drawings were identical, the letters used to identify certain parts were changed, and the written description of the closure had undergone significant alterations, apparently clarifying certain issues prescribed by the patent office.

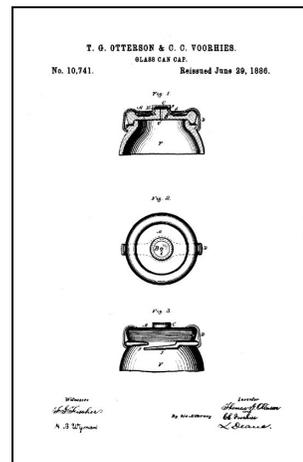


Figure 4 – Otterson & Voorhees 1886 Reissue

Henry M. Guild – February 2, 1886

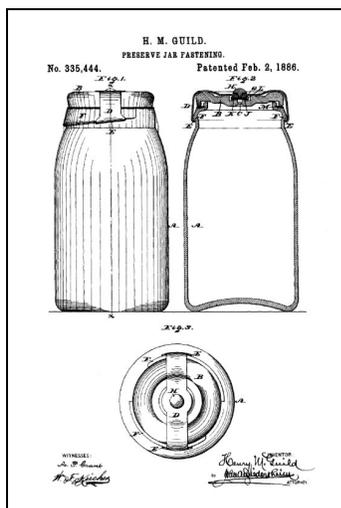


Figure 5 – Guild 1886 patent

Henry M. Guild applied for a patent on June 26, 1885, and received Patent No. 335,444 for a “Preserve-Jar Fastening” on February 2, 1886 (Figure 5). Obviously based on the Ottersons’ 1885 patent, the main change was the use of a pin or button instead of a screw cap to seal the vent hole in the glass lid. The patented lid was used on a jar embossed “HAMILTON” on the front. Since Guild listed his residence as Woodbury, there is no intuitive reason for the choice of name for the jar. See HAMILTON in the Containers and Marks section below.

P. Kennedy Reeves, May 25, 1886

P. Kennedy Reeves filed for a patent on September 29, 1885, and received Patent No. 342,384 for another similar closure on May 25, 1886 (Figure 6). This invention was essentially the same as the original Otterson one, but the stud had no threads, and a second clamp – attached to the main clamp – swivelled into place to cover the vent hole. We found no evidence that this closure was ever used

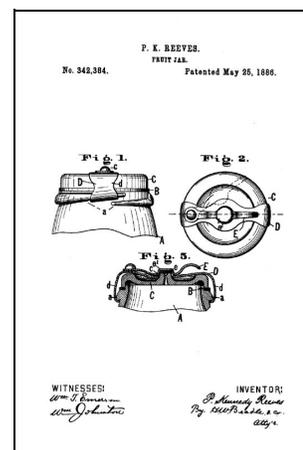


Figure 6 – Reeves 1886 patent

Thomas G. Otterson, February 7, 1888

On September 14, 1886, Thomas G. Otterson applied for his final patent connected with this series of closures and finishes. He was issued Patent No. 377,687 for a “Preserve-Jar Fastening” on February 7, 1888 (Figure 7). This patent was virtually identical to the one described above, issued to Henry M. Guild. Essentially, Otterson only made a tiny adjustment to the plug, but it was sufficient to result in the assignment of a new patent. We have found no indication that Woodbury made any lids connected with this patent.

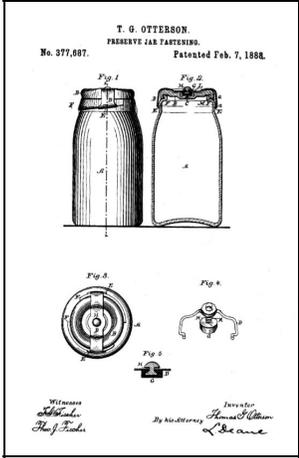


Figure 7 – Otterson 1888 patent

Table 1 – Patent Order by Application Date

Application	Patent	Number	Inventors	Attributes
Jun 12, 1884	Nov. 25, 1884	308,571	Otterson & Otterson	ramp finish, glass lid, threaded stud, clamp, no hole, screw cap
Dec 29, 1884	Mar. 3, 1885	313,229	Otterson & Voorhees	hole in threaded stud
Jun 26, 1885	Feb 2, 1886	335,444	Guild	depression instead of stud; button instead of cap
Sep 25, 1885	May 25, 1886	342,384	Reeves	swivel clamp to hold button
Dec 2, 1885	Mar 16, 1886	338,185	Otterson & Otterson	CT finish & screw cap
Apr 2, 1886	Jun 29, 1886	R 10,741	Otterson & Voorhees	Reissue of 1885 patent
Sep 4, 1886	Feb 7, 1888	377,687	Otterson	Second clamp to hold button

Containers and Marks

The plant was originally built to make bottles for George G. Green's patent medicines, although the factory made other bottles as well. The company produced several kinds of fruit jars, the "Woodbury Sterilizer" and a "milk sterilizing and storage bottle" (*Antique Bottle & Glass Collector* 2005:5).

WGW

Toulouse (1971:539) suggested that the "WGW" mark was used by Woodbury from ca. 1882 to 1896 or later. Toulouse (1971:509) noted a "UDCo (arch) / WGW (inverted arch)" mark. He suggested that "UDCo" indicated the United Drug Co., and "WGW" could mean Woodbury Glass Works, 1882-1896. He offered no date for the mark.



Figure 8 – WGW (eBay)

Woodbury probably only used the logo when it was requested by a customer. The only example we have found was on the base of a prescription bottle embossed "JOHN W PERKINS & CO" (arch) above a complex line drawing of a mortar with the words "OIL," "JWP&C," "DRUGS," and "PAINTS" in different parts of the mortar, followed by "PORTLAND / ME." The base was embossed "WGW" – although the "G" was partially obliterated by a double stamp (Figures 8 & 9).



Figure 9 – WGW (eBay)

Fruit Jars

Our sources noted three different brands of fruit jars ascribed to Woodbury Glass: Advance, Hamilton, and Woodbury. As discussed below, the first is unlikely. The second, Hamilton, is discussed below and in the Discussion and Conclusions section. The Woodbury jars were certainly the firm's primary fruit jars.

The various sources described and/or illustrated three variations of Woodbury fruit jars, another that may have been a butter jar or baby formula sterilizer, and a nurser/sterilizer. All were mouth blown, and all the possible butter/sterilizer jars were embossed on the bases with the Woodbury Glass Works name and a one- or two-digit number. There were also three variations in the closures for the jars.

On April 11, 1884, the *Bridgeton Evening News* announced that “the Woodbury Glass Works have bought a patent jar from J.B. Wilson, of Clayton.” This was almost certainly Patent No. 32,805 received by John B. Wilson of Williamstown, New Jersey, on July 9, 1861 with a note that it was antedated to June 0, 1861. The “0” was almost certainly intended to be “10” or “20.” The Moore Brothers originally used the patent to make the Air-Tight Fruit Jars (see the section on the Moore Brothers for more information). Our searches online and in Roller (1983) failed to produce any other jars or closures received by J.B. Wilson (or any other Wilson) between 1861 and 1885.

ADVANCE

Although Creswick (1987a:3) suggested that both the Camden Glass Co. and the Woodbury Glass Works made the Advance jars, Roller (1983:354; 2011:510) only identified Camden as the manufacturer. Why Creswick included Woodbury, we do not know, but we addressed the jars in the Camden section.

HAMILTON

Roller (1983:147) and Creswick (1987:78) both attributed a jar embossed HAMILTON on the front to the Woodbury Glass Works (Figures 10 & 11). The Roller update (2011:229), however, listed W.H. Hamilton & Co. as the maker. The lid was similar to the ones used on the Woodbury jars described below and was embossed “PATD FEB 2 1886.” The patent (No. 335,444) was issued to Henry M. Guild of Woodbury (see the Patent section



Figure 10 – Hamilton
(North American Glass)



Figure 11 – Hamilton base
(North American Glass)

above). A jar listed on eBay was embossed “Z” on the base. Both earlier authors likely chose Woodbury Glass as the maker because Guild lived in Woodbury – although Guild did not assign the patent to the Woodbury Glass Works – or anyone else. We agree that W.H. Hamilton & Co., Pittsburgh, Pennsylvania, made the jars (see Hamilton section and Discussion and Conclusions below).

WOODBURY

The Woodbury Glass Works offered a total of three designs of the “WOODBURY” line. All three can be classified both by embossing (side and/or base) and slight differences in the patented closure. A similar design was used as a nurser. On April 4, 1885, the *Glouster County Democrat* announced that Woodbury was producing “the new jars, patented and turned out in large quantities. The new jar is called ‘The Woodbury’ and is the most perfect jar made.”

WOODBURY (1885-1886)

Probably the oldest of the three fruit jar designs offered by Woodbury was a jar that was simply embossed “WOODBURY” on the side and “WOODBURY GLASS (arch) / WORKS / {number} (both horizontal) / WOODBURY, N.J. (inverted arch)” on the base (Creswick 1987:224; Roller 1983:388; ;2011:557; Toulouse 1971:333) (Figures 12, 13 & 14). The earliest closure was described by Toulouse (1971:333) as a:

Glass lid with a central threaded stud for a cap whose sole function was to hold the iron yoke, which passed over the stud by having a hole for that purpose. The stud was not vented, as later, nor did the cap have a gasket. The yoke engaged helical lugs on the neck of the jar.

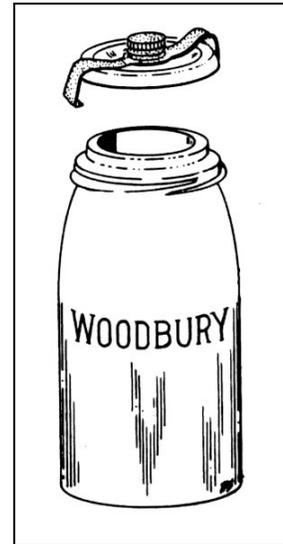


Figure 12 – Woodbury (Creswick 1987:224)

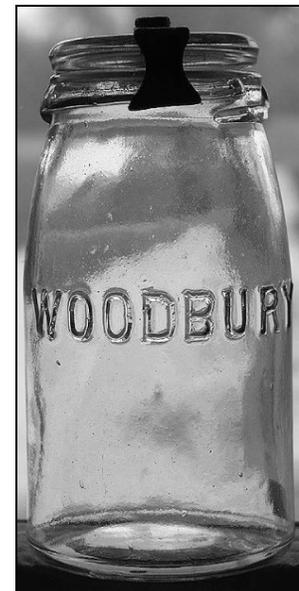


Figure 13 – Woodbury (North American Glass)

Only Toulouse described this variation with the unvented stud, but he failed to include any embossing on the glass lid or stamping on the clamp (Toulouse used the word “yoke”). Tom Caniff (personal communication 11/1/2009) stated that he had never found or heard of a Woodbury lid without the perforation. See the Otterson November 25, 1884, patent information (above). Toulouse dated this first closure variation “circa 1884-1885 only.”

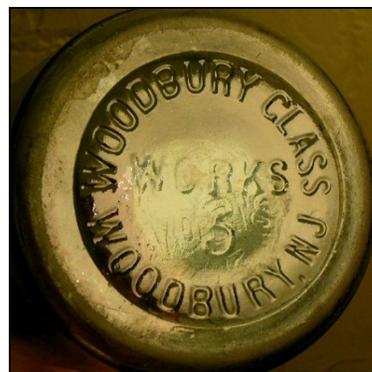


Figure 14 – Woodbury base (eBay)



Figure 15 – Woodbury lid (North American Glass)

Toulouse’s second closure – the only one we have found – was identical except that the central stud was perforated to allow steam to escape during the boiling process in canning. The lid now had a small metal cap and gasket to cover the perforation in the center (Figure 15). This vented lid was certainly used on this type of jar. Toulouse (1969:333-334) dated this variation “circa 1885-1886 only.” Both the clamp and the mini-cap were stamped “PAT NOV 25 84, MAR 3 85.”² The lid was embossed “PAT^D NOV 25TH 1884, MAR 3^D 85.” See the Otterson and Voorhees March 3, 1885, patent (above).

WOODBURY WGW monogram (1885-1886, prob. longer)

The Woodbury Glass Works received Trade Mark No. 12,583 for the word “WOODBURY” in combination with the MGW monogram on September 15, 1885. The company claimed a use since 1885 (Creswick 1987:225; Roller 1983:388; 2011:557). This suggests that the jars were not made prior to that year.

A second jar variation was embossed “WOODBURY” above an elaborate WGW monogram on the side (Creswick 1987:224; Roller 1983:388; Toulouse 1969:333-334). Like the first variation, this had both the Woodbury name and number embossed on the base in the same

² There is no trace of the patent dates on the clamp in the various North American Glass photos – although the dates show clearly on the cap. Only Toulouse suggested the stamp on the clamp.

configuration (see above). These have been described only with the perforated closure type that was also found on the “WOODBURY” jar with no monogram (Figures 16 & 17). Although Creswick dated this variation as 1884-1885, it is likely that



Figure 17 – Monogram lid (North American Glass)

the jar was made for a longer period. It seems likely that these jars were made from the same molds as the original style with the embossed monogram added below “WOODBURY.”

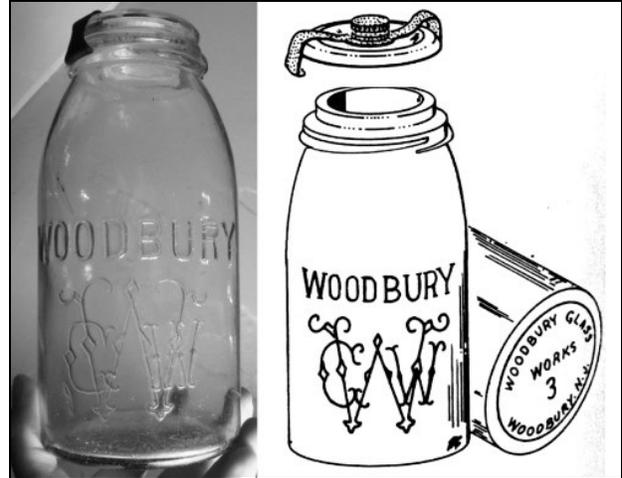


Figure 16 – Monogram jar (eBay; Creswick 1987:224)

WOODBURY IMPROVED (1886-1900)

Toulouse (1969:334), Roller (1983:388; 2011:557-558), and Creswick (1987:225) also described and/or illustrated a jar embossed “WOODBURY / IMPROVED / WGW monogram” on the front (Figures 18 & 19). Toulouse place the monogram between “WOODBURY” and “IMPROVED” – but he may have confused this jar with the straight-sided butter or sterilizer jar. All Improved fruit jars we have seen had the monogram below “IMPROVED.” This jar had a threaded finish. A half-pint sub-variation was marked the same but was shaped as if the pint mold had been cut in half. The configuration of the basal embossing changes slightly, removing “WORKS” from the center: “WOODBURY GLASS WORKS (arch) / {number} / WOODBURY, N.J. (inverted arch)” (Figure 20).



Figure 18 – Woodbury Improved (Creswick 1987:225)

The closure to fit this third variation had an almost identical glass lid with the perforated stud and cap, but this was held in place by a metal screw cap that covered most of the lid but had a circular opening through which the stud protruded. The glass lid was embossed with patent dates of March 16, 1886, and June 29, 1886. Toulouse (1969:334) dated the final jar ca. 1886-1892, even though he had noted that the second variation was the most commonly found as of the time of his writing.

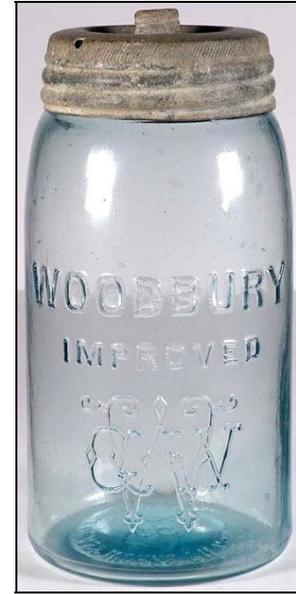


Figure 19 – Woodbury Improved (North American Glass)



Figure 20 – Baseplate (eBay)

Creswick (1987:225) noted that the lid was embossed “PAT^D NOV. 25TH ’84, MAR. 3^D ’85, MAR. 16 ’86, JUNE 29 ’86.” The mini cap had patent dates of November 25, 1884, and March 3, 1885, or the WGW monogram, and the zinc cover was stamped “THE WOODBURY IMPROVED PATENTED NOV. 25. 84. MAR 3. 85. JUNE 29. 86 MAR. 16. 86.” (Figure 21). She dated these jars ca. 1886-1892. We find it

very unlikely that the mini cap was ever stamped with three dates.

An eBay seller photographed and described a slightly different (and much more probable) combination – the only one we have found. The cover was stamped “THE WOODBURY IMPROVED (arch) / PATENTED NOV. 25 84, MAR. 3 85, JUNE 29 86, MAR. 16 86 (inverted arch).” The min-cap was stamped on top with the same fancy WGW monogram as on the jar. The glass lid was embossed with the same patent dates as the cover: “PAT^D NOV. 25TH ’84, MAR. 3^D ’85, MAR. 16 ’86, JUNE 29 ’86” without the jar name.



Figure 21 – Improved lid (North American Glass)

Table 2 – Woodbury Jars

Front Embossing	Base Embossing	Date Ranges
1. WOODBURY	WOODBURY GLASS / WORKS / {number} / WOODBURY, N.J.	1884-ca. 1887
2. WOODBURY / WGW monogram	WOODBURY GLASS / WORKS / {number} / WOODBURY, N.J.	1885-ca. 1890s
3. WOODBURY / IMPROVED / WGW monogram	WOODBURY GLASS / WORKS / {number} / WOODBURY, N.J.	1886-ca. 1900
4. WOODBURY / WGW monogram / IMPROVED*	none	1886-ca. 1890s?
5. WOODBURY WGW TRADEMARK STERILIZER	741 or 742	ca. 1890s-ca. 1900

* This jar had straight sides and may have been a butter jar or sterilizer.

** These jars were used to sterilize infants' formulas.

Table 3 – Woodbury Lids

Lid Characteristics	Embossing (small cap)	Dates	Jars*
Center stud (no hole); band clamp**	none	1884-ca. 1885	#1
Center stud (with hole); band clamp	PATD NOV. 25 1884 MAR 3 ^D 85	1885-ca. 1890s	#1 & 2
Center stud (with hole); screw cap	March 16, 1886, and June 29, 1886†	1886-ca. 1890s	#3
Center stud (with hole); screw cap	WGW monogram	1890s-ca. 1900	#3, #4 & #5

* In order found in Table 1

** This variation was only listed in Toulouse (1969:333); probably does not exist.

† This variation was only listed in Creswick (1987:225); it may not exist. However, Ashley Morton discovered a cap in Arizona embossed with all four patent dates.

Roller (1983:389; 2011:558) and Leybourne (2001:389) described a very different jar. This was embossed “WOODBURY / WGW monogram / IMPROVED” on the side – in half-pint, pint, and quart sizes. The sides of this jar were vertical from heel to finish, and Leybourne speculated that it may have actually been a butter jar or sterilizer. This variation had the monogram in a different order than on the fruit jar. Like the sterilizer described below, this jar had graduated measurements embossed on the reverse. Although this jar used the same closure as the Woodbury Improved fruit jar, the lid was unmarked, and none of the sources made any comment about the basal embossing. Roller (1983:389; 2011:558) also noted a variation of this jar with the monogram below “IMPROVED” (same position as the fruit jar), but this was not included by Leybourne. We have not found an example.

WOODBURY STERILIZER (ca. 1890s-ca. 1900)

Roller (1983:389; 2011:558) and Leybourne (2001:389) both described a jar advertised in 1894 as “The ‘WOODBURY’ STERILIZER,” a jar used to sterilize formula for infants (Figures 22 & 23). The illustration in the ad showed that the jars were embossed on the side with “WOODBURY (arch) /

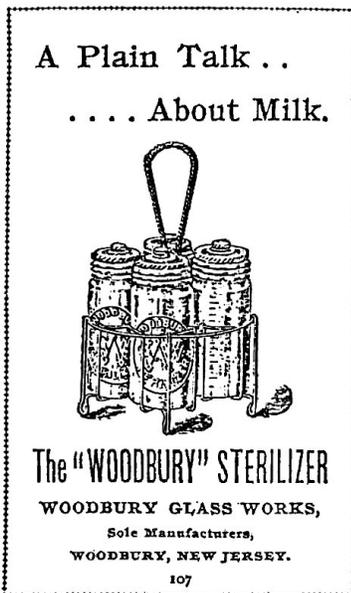


Figure 23 – Sterilizer ad (Roller 1983:389)

WGW monogram / STERILIZER (inverted arch)” in a circular plate mold. Although not shown in the ad, the words “TRADE” and “MARK” were embossed above and below the monogram. The reverse was embossed with “½ pint, pint & quart measurements, ounce graduations” (Leybourne 2001:389). The cover for the jars was made in three parts:

- 1) a glass lid with a threaded stud extending upward in the center with a hole in the center of the stud to allow gasses to escape during the sterilizing process, embossed – PAT. NOV. 25, 84. MAR 3, 85. MAR 16, 86. JUNE 29, 86.



Figure 22 – Woodbury Sterilizer (North American Glass)

2) a threaded zinc cover that held the glass lid in place; a hole in the center of the cover through which the stud extended, stamped – PAT. NOV. 25, 84. MAR 3, 85. MAR 16, 86. JUNE 29, 86. A possible variation include all the same dates and “WOODBURY IMPROVED” (on a Woodbury Improved jar offered on eBay).

3) a small zinc cap that threaded onto the stud to close off the vent hole – stamped GWG monogram (same as embossed on fruit and sterilizer jars)

The sterilizer jars were sold in sets of four with a wire holder. Milk could then be immersed in boiling water to sterilize it and could be stored for later use.

Woodbury Glass Co., Parker, Indiana (1893-1904)

Woodbury Glass Co., Winchester, Indiana (1904-1920)

Woodbury Glass Co., Shirley, Indiana (1910-1915)

The *Indianapolis Journal* (5/28/1893), announced that the Woodbury Glass Co., Parker, Indiana, had incorporated on May 27, 1893, with a capital of \$10,000. The factory at Parker was apparently in full operation by December 29, when the *Muncie Morning News* noted that “the Woodbury people are preparing to build another bottle house.” Although these references are unclear about whether the firm built the plant or purchased an existing unit, the *Indiana State Sentinel* added on October 4 of the next year that the “Woodbury Glass Company, one of the most successful glass companies in the gas belt, has taken hold of the new glass factory and will increase its size about one-half and will make one of the best factories in the country. . . . This is the best deal for Parker City of the year.” On September 3, 1895, the *Indianapolis Journal* mentioned “the Woodbury Glass Company, of Parker, which owns and controls two of the largest bottle plants in the State.” The combination of the above sources leads us to believe that Woodbury purchased an existing glass house initially – then built a second plant, both at Parker. *If* this is correct, the firm must have closed the older plant soon after.

A typed, unsigned manuscript, apparently from 1950s (Anonymous n.d.), may help explain: “In the year 1892 gas wells were discovered in this vicinity. . . . A glass factory and a furniture store were built using gas as their fuel.” This may have been the second plant noted above. The manuscript continued: “Another glass factory was built near the furniture factory

and was known as the Woodbury Glass factory.” It further explained the why Woodbury moved: “Later, because of lack of oil the Woodbury Glass Company move to Winchester, thirteen miles away.”

On July 16, 1894, George E. Leggett – a mere bookkeeper the year before – became president of the corporation. By 1898, the plant operated two furnaces with 20 pots and two six-ring tanks. Green remained president with Samuel B. Beckett as secretary, but William H. Beckett replaced Samuel by 1900 (*Bridgeton Evening News* 10/13/1898; Ingenweb.org n.d.; *National Glass Budget* 1898b:3; *Woodbury Daily Times* 11/22/1900). The *Trenton Evening Times*, on January 31, 1902, announced that “the Woodbury glass works, incorporated March 15, 1881, wit han [*sic*] authorized capital of \$30,000, has filed notice of dissolution.” The announcement must have been in error, however. On May 28, 1903, the *Indianapolis Journal* included an article that refuted the one in the *Times* – but made no sense:

The charter of the Woodbury Glass Company expired on May 27. At a meeting of the directors, held a few days previous, it was decided to extend the term of existence of the company, which has been forty years, to fifty years, or ten years longer. The stockholders of the company are George E. Leggett, Charles W. Moore, William Miller, and John D. Carter.

In order for the dates to agree, the Woodbury Glass Co. would have opened in 1863 – 30 years prior to its actual formation. Possibly, the reporter misunderstood, and the firm had chartered for ten years (an number that matches reality) and chose to extend for 40 years.

The Parker plant was still listed as operating one continuous tank with seven rings and two day tanks, making prescription, proprietary, and packers’ ware in 1904. George E. Leggett was the president with C.M. Moore as secretary and and F. Carter as manager (*American Glass Review* 1934:155). The factory burned to the ground later that year (Roller 1994:84).

The company built a new plant in Winchester, Indiana, and opened up before the end of 1904. The factory made flint (colorless) prescription, proprietary and packer ware (Ingenweb.org n.d.; Roller 1994:116; Toulouse 1971:539). The firm remodeled the plant in 1907, including an eight-ring tank, new lehrs, producers, and a complete mold and machinery

shop. A 1907 letterhead indicated that the factory used a trade mark that consisted of the letter “W” in a horseshoe (although we have never seen that mark on glass). G.E. Leggett was president with W.E. Miller, L.M. Kimmell, and M.L. Sommers as directors. By 1908, the plant had one 12-ring tank and one 8-ring tank. Leggett remained president with L.M. Kimmell as secretary, J.G. Leggett as treasurer, and M.L. Sommers as superintendent. The company added preservers to the list by 1909 and expanded by purchasing the Indiana Bottle Co. at Shirley, Indiana, in September of 1910 (*Commoner and Glassworker* 1908:5; Roller 1994:116; 1996a; *Greenfield Daily Reporter* 9/30/1910; Thomas Publishing Co. 1909:200).

The Winchester plant made a general line of bottles in 1913 (*Journal of Industrial and Engineering Chemistry* 1913:952). By 1915, Woodbury was operating three continuous tanks with 24 rings. The plant was listed as making flint prescriptions, vials, proprietary, liquors, and flasks by both machine and hand methods. On May 17, 1915, the *Bridgeton Evening News* commented that the Woodbury Glass Co. had recently sold its Shirley, Indiana, plant to the Sheldon Glass Bottle Co. Sheldon-Foster closed the plant before 1920 (see the section on the Sheldon-Foster Glass Co. for more information on the firm). The *Plain Dealer* remarked on September 28, 1915, about a visit to the Winchester plant where “they saw milk bottles, the kind we now see in the restaurants, in the making” – the first evidence we have found for dairy container production. In a final report for 1915, the October 31, 1915, edition of the *Sunday Telegram* noted that “the Woodbury Glass Company . . . which formerly was a hand blown factory exclusively, is now equipped with machines.”

By at least 1916, the plant advertised milk bottles and called its process “Long-Life” (*Milk Dealer* 1916:101). By the end of that year, the plant had installed “another new machine on which a flowing device is being worked. In June 1917, the factory moved to the next level, testing out a Lynch “No Boy” machine (*Woodbury Daily Times* 12/5/1916; 6/26/1917). But, disaster struck on July 17, 1917, when the Woodbury plant was “almost totally destroyed by fire today with a loss of at least \$100,000. . . . origin of the fire is a mystery. . . . loss was fully covered by insurance (*Elkhart Times* 7/17/1917).

The firm began rebuilding the factory almost immediately, but the plan included new officers. By February of 1919, I.T. Axton was president with George C. Clark as vice president and general manager, and Luther Kimmell secretary and treasurer (*Bridgeton Evening News*

10/16/1917; *Richmond Palladium* 2/5/1919). However, in September 1919, the Thatcher Mfg. Co. announced that it was taking over Woodbury and three other glass factories. Thatcher obtained the controlling stock of the Woodbury Glass Co. in 1920 (Roller 1996a; *Wall Street Journal* 1920).

Containers and Marks

W.G.CO.

Dairy Antiques (2016) identified the Woodbury Glass Co. as the user of the “W.G.Co.” logo on milk bottles – and we agree. The site also added “8 MINN in a triangle” and “No. 8 SEALED” as other Woodbury milk bottle marks. As noted in the history section (above), Woodbury made milk bottles by at least 1915 and continued production until the sale to the Thatcher Mfg. Co. in 1920.

In 2005, at the California State Parks collection, the Bottle Research Group recorded three milk bottles, all from the same Jersey Farm Dairy at Fresno, California, two embossed with a heel mark of “8 / W.G.CO.” – the other lacking the “8” (Figure 24). Each bottle had either nothing to the right of the mark or had a 2 or a 3, and all had an “8” inside the ejection ring on the base. An eBay auction offered a milk bottle embossed with “No.8 one pint, 8 Minn, T 8 W.G.Co.” All of these bottles were machine made. The inconsistency of reports as “M.G.CO.” and “M.G.Co.” may indicate real differences, or may be just a lack of careful reporting.



Figure 24 – WGCo (eBay)

Although most milk bottle plants of that time period obtained a Massachusetts seal, required to sell milk bottles in the state after 1909, there is no record that Woodbury did so. When New York instituted a system that required a logo or initials plus an assigned number for milk bottle manufacturers in 1910, it sparked a system where the mark + number identifier soon became national in scope. The State of Wisconsin issued the number “8” to the Woodbury Glass Co. by at least 1916 (*Stevens Point Journal* 1916). Woodbury used the number “8” embossed on

milk bottle heels or in the ejection scars on bases. As noted by Dairy Antiques, Woodbury used the “8 / MINN” in the Minnesota triangle logos (Lockhart et al. 2017).

Discussion and Conclusions

Although the name for the Woodbury Glass Works at Woodbury, New Jersey, is self explanatory, the reason for a similar name, Woodbury Glass Co., at Parker, Indiana, is a complete mystery. The Parker firm began 12 years after the founding of the plant at Woodbury, and there were no duplications of any of the officers or incorporators of the two companies. They appear to have been totally unrelated. Why, then, would the Indiana firm adopt the name Woodbury? We have found no explanation and no grounds for speculation.

The Woodbury name and WGW monogram appear to have only been embossed on the Woodbury fruit, butter, and sterilizer jars. The three types of Woodbury fruit jars (four, counting the Woodbury Improved half-pint) and the sterilizer jars bore the company name on the side, company name and location on the base, and/or WGW monogram. Similarly, each of the three styles of Woodbury lids may be identified and dated by their embossed patent dates. As of this writing, we have only found a single prescription bottle embossed with a “WGW” manufacturer’s mark. This suggests that the “WGW” logo was rarely used.

The only remaining mystery surrounds the “HAMILTON” jar. Even though both Roller and Creswick credited the Woodbury Glass Works with the production of the jars, W.H. Hamilton & Co. announced in January 28, 1886, that it was introducing two new jars – the Hamilton Jar and the Guild Jar. The jars were mostly identical, but an improvement was available only on the Hamilton Jar. We have not discovered any jar embossed “Guild.” The Roller update (2011:229) identified W.H. Hamilton & Co. as the only manufacturer of the “HAMILTON” jar.

The only remaining question is whether Woodbury actually produced any of the Hamilton jars. Roller (1983:147) claimed that Woodbury *could* have been the maker of the jars but was uncertain. That doubt suggests that the identification was based solely on Guild’s residence in Woodbury. Since these jars do not appear to be common, they were probably not produced for any extended period. It is therefore *very* likely that Hamilton was the only maker.

However, Guild's residence in Woodbury may have an interesting story behind it. The unquestioned similarity between the Guild jar and the Otterson patents strongly suggests that Guild based his idea upon that of Otterson. In addition, the timing simply cannot have been accidental. Otterson and Voorhees received the patent for their improvement with the vent hole in the glass lid on March 3, 1885, and Guild applied for his very similar patent on June 26 of that year – just 3 and a half months after the Otterson jar hit the market. Was Guild connected with the Woodbury factory? Or did he merely buy one of the jars for his wife then come up with his idea for improvement? We may never know.

The Woodbury Glass Co. adopted the "W.G.CO." milk bottle logo ca. 1916 and only used it until the sale to Thatcher in 1920 period. It was likely usually accompanied by the number 8. There is no evidence that Woodbury used any other mark or used "W.G.CO." on any other bottles or on milk bottles prior to ca. 1916.

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