

Pacific Glass Works

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Incorporated in 1862, the Pacific Glass Works began production the following year and was the first successful glass house on the West Coast. Like many pioneering operations, this one had many challenges, changes of personnel (including management), and owners. In 1876, Carleton Newman purchased the firm and renamed his combined business the San Francisco & Pacific Glass Works.

History

Pacific Glass Works (1863-1876)

The Pacific Glass Works was incorporated on October 2, 1862, with a capital of \$50,000. Robert Turner, John Taylor, Caleb S. Hobbs, George W. Post, C. Mitchell, H.D. Hudson, R.K. Pattridge, Francis Cutting, and G.S. Garwood were the original incorporators. Hobbs was the initial president with Taylor as vice president, John Archibald as secretary and treasurer, plus Joseph S. Garwood and H.G. Hudson as additional trustees along with G.W. Post as superintendent. The plant began with a single furnace and two pots, estimating a production capacity of 400 dozen bottles per day (Friedrich [2011]:25-29; Toulouse 1971:419-420; Zumwalt 1980:327).

Hinson & Kerr (1995) explained the beginning:

Dr. George W. Post saw the potential of a glassworks in San Francisco. In 1862, with the help of [Francis] Cutting and three other businessmen (John Taylor, Charles Kohler and a gentleman named Turner) he erected a small glass-making plant, or furnace, in the North Beach area of the region. When authorities raised objection to the location of the furnace, the investors moved their fledgling enterprise to the Portrero area and raised another \$100,000 capital for the project.

This original factory was described by the *San Francisco Evening Bulletin* (4/3/1863), noting that the firm “only occupied only a small portion of their land for the works, but it is contemplated by them to erect a second set of works if the capacity of the present set is found unable to supply the demand” (Friedrich [2011]:28).

According to the *California Farmer & Useful Sciences* (2/2/1863), the new firm had purchased ten acres at the Portrero (corner of Iowa and Mariposa Streets) by January 2, 1863, and had begun erecting structures. Because the new plant needed access to shipping for raw materials and delivery of manufactured containers, the California legislature introduced a bill to allow them to build a wharf at the Portrero (*San Francisco Bulletin* 2/7/1863).

Although the plant was completed by January 1, 1863, it did not blow its first production glass – catsup, pickle, mustard, and spice bottles – until June 16 – with about 30 workers in attendance. The plant made “bottles and jars for wine, beverages, whiskey, pickles, mustards, medicinals, patent medicines, and chemicals, together with some pressed glass” of “green” and black glass. Ads noted that the factory made its own molds and promised to create molds for any type of bottle (Friedrich [2011]:29-31, 34; Toulouse 1971:419-420; Zumwalt 1980:327).

On April 3, 1863, the *San Francisco Evening Bulletin* described what today would be called a “green” aspect of the business: Once in every 24 hours the furnaces are cleaned and the fires renewed, at which time, for about 2 hours the smoke escapes from the stack; at all other times the heat of the furnace is so great as to consume entirely all smoke as it is made” (quoted in Friedrich [2011]:2). The *Bulletin* reported an increase of capital from \$50,000 to \$100,000 on April 20, and, by June 4, the firm advertised more than 4,000 bottles on hand ready for delivery at any time.

Carlton Newman became the superintendent at some point during 1864, although we have not discovered how long he remained with the firm before he struck out on his own. Although the plant did not make colorless glass, the owners realized that lighter colored glass was desirable. To that end, the firm imported sand from Monterey (California) for “the lightest colored glass” and used small quantities of manganese to produce “a light yellowish or dark brown color” and arsenic “to bleach the glass” (Friedrich [2011]:35, 37).

By June 11, 1864, John Taylor was president with John Archibald as secretary and treasurer. Taylor, Robert Turner, Henry Hanssmann, Charles Kohler, and George S. Gilmore were trustees. The *Sacramento Daily Union* presented an unusual story on September 17. Kohler & Frohling, a local winery, had been paying eight-to-nine cents for “second-hand” bottles that were “ill assorted and irregularly supplied” – but the winery could now buy “new bottles, of uniform quality and shape” from the Pacific Glass Works for about six cents (Friedrich [2011]:41). The customer could then obtain new bottles for almost half the price of used ones!

The plant erected a new furnace and resumed production on May 10, 1865. By July 15, capacity had increased to the point where the factory made 32,400 bottles in one week. By that time, the number of pots had risen to five (Friedrich [2011]:35, 37, 42-45). An ad placed on October 11, 1865, named Giles H. Gray as president with Henry Hannsmann as secretary.¹ However, the 1866 San Francisco directory noted that “the works are at present run by Saulsbury, Kirk & Mordecai, who have leased them from the company.” (Friedrich [2011]:48-49; Toulouse 1971:420). Friedrich ([2011]:49) added a note that “Saulsbury, et al, ran the works from June 1863 through June 1866.”

Bennett & Co. – James C. Bennett, Charles Bennett, and Isaac Mordecai – leased the Pacific Glass Works on July 1, 1866, and had a new furnace completed – and planned to be in production on July 5. John Taylor & Co. (almost certainly the founding John Taylor and the other factory stockholders) became the sales agents for the entire output. The plant continued to manufacture the same large variety of bottles at the single furnace with seven pots but appear to have added cobalt blue to the mix – although green and black glass continued to be by far the dominant colors (Friedrich [2011]:49-53, 58; Toulouse 1971:420; Zumwalt 1980:327).

On July 27, 1866, the *Sacramento Daily Union* announced that “Otto Becker, secretary of the Pacific Glass Works, was taken to the State Prison to day [*sic*] for one year, for robbing his employers.” Although this was probably theft – robbery is taking money or possessions by force or threat of violence – it would be interesting to hear the details of Becker’s crime (although we have been unable to find them). The Pacific Glass Works increased its production of larger ware

¹ Toulouse (1971:419) claimed that Giles H. Gray was the president with Charles Kohler as vice president and John Archibald as secretary – but he thought they were the first officers. That is almost certainly incorrect based on newspaper articles copied by Friedrich.

in late 1868, expanding to five-gallon demijohns by April of the following year (*San Francisco Bulletin* 11/7/1868; *Sacramento Daily Union* 4/7/1869).

According to Zumwalt (1980:327), James C. Bennet and James Taylor acquired the company by 1870, but this may have been a misunderstanding of the relationship between Bennett & Co. and John Taylor & Co. Although Friedrich ([2011]:76) set 1870 as the year the factory began manufacture of the Victory jars, the first advertisement we have found was in the June 12, 1871, *Sacramento Daily Union*. Taylor advertised on November 9, 1871, in the *Daily Union* that the Pacific Glass Co. was “now prepared to receive orders [for] . . . a full supply of VICTORY JARS. Have also completed arrangements to manufacture MASON’S PATENT FRUIT JARS, with porcelain lined tops” (Friedrich [2011]:76).

On April 20, 1871, the *Daily Union* informed the public that Pacific Glass had raised the price of its products because of a large increase in the cost of soda ash from England. At the same time, Pacific Glass had improved its facility to manufacture more fruit jars to meet the increased demand for them. The article also discussed the use of the jars in preserving butter in the hot summer weather to fulfill a contract “to pack 40,000 pounds for the United States Subsistence Department.” An 1872 ad for the “THE ‘VICTORY’ RUIT [sic] JAR” included an illustration that did *not* match any of the actual jars (Figure 1).

On May 7, 1874, the *Bulletin* announced that John Taylor and Edmond Clarks remained respectively as president and secretary of the firm, with John Anderson, Albert Miller, R.K. Partidge, and Joseph De Forest as other members of the board. When Bennett died on December 23, 1874, Taylor & Pattridge (John Taylor and R.K. Pattridge) became the proprietors of the glass house. Although not mentioned in the intervening newspaper accounts, Pattridge was one of the original incorporators of the Pacific Glass Works. At this point, the ownership of the glass house becomes a bit confused. On February 4, 1876, John Taylor called a meeting of the stockholders of the Pacific Glass Works – an odd proposition considering that he had declared himself and R.K. Pattridge as proprietors a little more than a year earlier. The corporation was dissolved on March 31, 1876 (Friedrich [2011]:81).



Figure 1 – 1872 Victory Jar ad (Friederich [2011]:77)

The precise ownership is a moot point, however, since Carleton Newman, a former blower at the Pacific Glass Works, but by this time the owner of the San Francisco Glass Works, purchased the factory by May 19, 1876, when he placed an ad in the *Evening Post* noting that the two glass houses were now jointly called the San Francisco & Pacific Glass Works (Creswick 1987:272; Friedrich [2011]:82-83; Zumwalt 1980:327). See the section on the San Francisco Glass Works for more information.

Containers and Marks

Most of the products made by the Pacific Glass Works were unmarked. Only a few fruit jars carried the full company name. Toulouse (1971:419) claimed that the firm used its initials – “PGW” – on its bottles from 1863 to 1876, but we have found no evidence to support this logo.

PACIFIC GLASS WORKS (ca. 1869)

Roller (1983:273) discussed a jar embossed “PACIFIC GLASS WORKS S.F.” on the base and noted that the closure was uncertain “but may have been a waxed cork.” He added, “Only one of these jars has been reported, and it was without closure. The jar has a slight stopper well, and a glass bead around the lip”; he dated it 1863-1876. Creswick (1987:167) illustrated the jar and dated it ca. 1862-1876 (Figure 2). The Roller editors (2011:403) included measurements – 9 inches tall, 2.25 inches in diameter at the mouth, and 4.5 inches in diameter at the base. Laybourne (2014:366) valued the jar as “Unpriced” and agreed that only one example (broken) exists. We have suggested a probable date of ca. 1869 because this jar was probably a precursor to the Victory jar discussed below.



Figure 2 – Pacific Glass Works (Creswick 1987:167)

PACIFIC GLASS WORKS and **VICTORY** on reverse (1870-1876)

Toulouse (1969:231) illustrated a fruit jar embossed on the side with “PACIFIC GLASS (arch) / WORKS S.F. (inverted arch).” Patent dates of 1864 and 1867 were embossed on the

reverse of the jar. Toulouse dated the vessel ca. 1867 and noted that there was a variation that replaced “S.F.” with “SAN FRANCISCO.” He incorrectly noted the patent dates (see below) on the back *without* the word “VICTORY” – in reality (again, see below), “VICTORY” was an integral part of these jars. Under his “V” section, Toulouse (1969:317-318) correctly included the “VICTORY” embossing.

The jars were actually embossed “PAT^D FEB^Y 9TH 1864 (arch) / VICTORY / 1 (both horizontal) / REIS^D JUNE 22^D 1867 (inverted arch)” on one side and “PACIFIC (arch) / SAN FRANCISCO (horizontal) / GLASS WORK (inverted arch)” on the other. Roller (1983:374) noted that the glass lid was embossed with three concentric circles around a number (Figure 3) and that the Harris reissue was dated *January 22, 1864*, rather than June – as embossed on the jars.



Figure 3 – Glass lid (North American Glass)



Figure 4 – Victory jar (North American Glass)

“PACIFIC / SAN FRANCISCO / GLASS WORK” and “PACIFIC / S.F. / GLASS WORKS” (Figures 4 & 5). He suggested ca. 1860s-1870s as a production range and commented that the “1” below “VICTORY” was sometimes absent.

Roller (1983:374) added that Victory jars *without* the California embossing on the reverse were made for William W. Lyman by a currently unknown glass house and distributed in the East. The only jars made by the Pacific Glass Works included the factory name, and these could be found in two variations on the reverse – “PACIFIC / SAN FRANCISCO /



Figure 5 – Victory jar (North American Glass)

Creswick (1987:214-215) illustrated a series of ten jars, all marked “VICTORY” on the front – three with the Pacific Glass Works name on the reverse (Figure 6). She included both

“SAN FRANCISCO” and “S.F.” as well as a variation of the “SAN FRANCISCO” reverse with “1864” missing. The Roller update (2011:539) added two California variations – “PACIFIC GLASS WORK around SAN FRANCISCO” and “PACIFIC S.F. GLASS WORKS BUTTER JAR.” Leybourne (2014:454), however, did not include “BUTTER JAR” in the embossing and noted” Butter jar; Different shape, same lid size.”



Figure 6 – Victory jars (Creswick 1987:214-215)

Elbridge Harris received Patent No. 41,575 on February 9, 1864, reissued on January 22, 1867, to transfer to William W. Lyman by mesne assignment. These were the two patents noted on the jars. Lyman then received Patent No. 95,819 on October 12, 1869, stating that his patent was

an improvement in jars, such as are used for the preservation of fruit . . . the object being to make the packing close the joint with more certainty than heretofore, and relates especially to that class of jars in which the packing -or India rubber band is placed around the neck upon its outside surface, and the ledge of the cover setting down thereover, substantially in the manner seen in the patent granted to me as the assignee of E. Harris; February 9, 1864 (Figure 7).

McCann (2017:336) did not discriminate between the variations in embossing in his pricing, only by color, the cheapest (aqua) in the \$350-500 range. This suggests that surviving jars are scarce. Leybourne (2014:454) suggested \$400-600 for the aqua “WORK” variation, pricing the aqua color of all others “\$500 & up.” In North American Glass Auctions, the “WORK” variation was much more common than “WORKS.”

Dating the jars as a whole is fairly simple. Harris patented the design in 1864 and transferred the patent to William W. Lyman of West Meriden, Connecticut – probably upon the death of Harris – in January of 1867. Lyman then claimed his own patent for the design – giving credit to Harris – on October 12, 1869. As noted above, Friedrich ([2011]:76) claimed (without citation) that the Pacific Glass Works began production of the Victory jars in 1870, although the first ad appeared the following year. Unfortunately, he found nothing to explain *why* the jars, patented by Elbridge Harris of Baltimore – and typically featured in the East – were also manufactured in San Francisco.

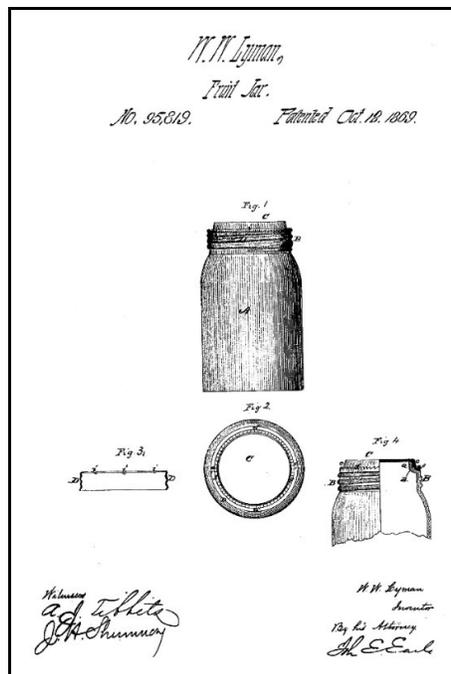


Figure 7 – Lyman 1869 patent

An 1870 beginning date begs the question: Why did the jars feature both Harris patent dates rather than the Lyman date? The simple and likely explanation is that in 1867, Lyman acquired the patent then sold or otherwise allowed the rights to the Pacific Glass Works in 1869 – before he received his own patent. McCann (2017:336) speculated: “Apparently Victory jar molds was [sic] shipped west to San Francisco where Pacific Glass Works added their name on the molds and manufactured the jars.” If this is correct, the process of shipping and altering the molds may have taken awhile. If Pacific Glass only received the rights, the plant still had to manufacture the molds.

The simple dating for the Pacific Glass Works Victory jars is therefore 1870 until the firm sold in 1876. It is likely that the plain jar, embossed only with the glass house name on the base, we made before the deal with Lyman, probably in 1869. The failure of that jar may have stimulated the Lyman agreement.

The next jar was probably the one noted by Roller (2011) marked “PACIFIC GLASS WORK around SAN FRANCISCO” – and that was probably only made in 1870, soon to be replaced by the next variation, the most common one – PACIFIC / SAN FRANCISCO / GLASS WORK – apparently made by the same mold maker who left the “S” of of “WORKS.” This variation included both jars with no mold number below “VICTORY” or a “1” in that location,

and these were probably used from 1870 until 1875 – about the time when the molds would have worn out. The final mold, apparently made by a machinist who understood plurals, had the extra letter (making the word “WORKS,” but it took more space, so the city was reduced to initials – “S.F.” – probably only used during 1875 and 1876. See Table 1 for an easier-to-read chronology.

Table 1 – Pacific Glass Works/Victory Jar – Probable Chronology

Variation	Dates
PACIFIC GLASS WORKS S.F. (base)*	ca. 1869
PACIFIC GLASS WORK around SAN FRANCISCO	ca. 1870
PACIFIC / SAN FRANCISCO / GLASS WORK	1870-1875
PACIFIC S.F. GLASS WORKS	1875-1876
PACIFIC S.F. GLASS WORKS BUTTER JAR**	1875-1876

* Only jar with a basemark; others were on the reverse.

** The term “BUTTER JAR” may or may not be included in the embossing.

Discussion and Conclusions

Thanks to Friedrich ([2011]), we have a detailed history of the Pacific Glass Works. Friedrich’s study was a presentation of sources – mostly newspaper articles – that he copied or reproduced, including a great deal of repetition but numerous historical details. Friedrich and the jar sources also provided the clues necessary for a reasonable chronology for the jars. It is very clear that the Pacific Glass Works typically did not mark its wares – aside from these fruit jars.

Acknowledgments

We wish to thank Greg Spurgeon for allowing us to reproduce photos from North American Glass and Doug Leybourne for letting us copy the drawings from the Alice Creswick books. Gratitude also to Wanda Wakkinen for proofreading.

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Last updated 10/8/2018

