

## **Whitall Tatum – Part I – Whitall Tatum & Co.**

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The history of the Whitall Tatum firms may be divided into four sections: The early companies, Whitall Tatum & Co., Whitall Tatum Co., and the factories after the sale to the Armstrong Cork Co. (and later to the Kerr Glass Mfg. Co.). Since we have discovered no glass manufacturer's marks for the early firms, we have included a brief history of those houses in Part I with Whitall Tatum & Co. Part II is comprised of the history and marks of the second major division, the Whitall Tatum Co. See the Armstrong Cork and Kerr Glass sections for more information on those glass houses both before and after their respective acquisitions of the Whitall Tatum plants.

One of the best-known manufacturers of prescription glassware was Whitall Tatum & Co. Once perhaps the largest manufacturer of flint container glass in the world, the firm produced a huge variety of bottles and jars over a long time span. In addition, most Whitall Tatum bottles were clearly marked with the company initials in a variety of styles from the last third of the 19<sup>th</sup> century until near the end of the 20<sup>th</sup> century.

[This study was originally published as Lockhart et al. 2006, but much of it – especially the history and fruit jar sections – has been greatly expanded.]

### **Histories**

Whitall Tatum & Co. had a long and involved history that went back to the cylinder window-glass house of James Lee, established in Millville, New Jersey, in 1806. Although many writers have referred to the evolving ownership of the operation, Toulouse (1971) and Pepper (1971:225-228) seem to have provided the most systematic chronologies based on primary sources; however, they contradict each other on several points. Although the factory originally made window glass, by 1820, it produced “carboys, demijohns, vials, druggists’ bottles, snuffs, chemicals, and the like” (Toulouse 1971:545-546). Von Mechow (2020) copied all the information on the firm from the Millville city directories from 1828 to 1922, clearly showing that the Toulouse information derived from those directories.

### **James Lee, Millville, New Jersey (1806-1814)**

James Lee built the Eagle Glass Works – his initial glass factory – at Port Elizabeth, New Jersey, in 1799. Moving to Millville, he established the area’s first glass house, soon called the Glasstown area, on the banks of the Maurice River in 1806 (the site of the American Legion Building in 1998). Lee apparently moved to the area because his wife, Deborah West Lee inherited a plot of land (part of a fishery) from a relative, Charles West. Although the plant initially only produced window glass, Lee added bottles in 1809. Although not substantiated, one source included tableware in the product list. Lee sold the business and moved to Bridgeton in 1814, where he built a sawmill and general store (Figgis 1919:152; James 1998:20; Harrison 2013; Pepper 1971:225; Sewell 2010; *Trenton Federalist* 1/13/1806; *True American* 3/3/1806).

### **Edward Carpenter, Millville, New Jersey (1814-1815)**

Edward Carpenter apparently purchased the glass house, Lee mansion, and considerable property from James Lee in 1814. However, Carpenter died late that year or early in 1815. The *Trenton Federalist* (1/2/1815) carried a notice for the public sale of a glass house and all the operating equipment at Glassboro, seven miles from Mantua Creek, property of Edward Carpenter, deceased. The notice added that “the purchaser of the Glass Works can be accommodated with the Lee Mansion” for rent. Sarah Carpenter, “Adm’rx.,” and Thomas Carpenter, “Adm’r” and Guardian,” were responsible for the sale.

### **Gideon Scull, Jr., & Co., Millville, New Jersey (1815-?)**

Figgis (1919:152) noted only that Lee’s plant “passed into the hands of Gideon Scull” – but included no date. James (1998:20) added that “Gideon Scull opened a second, less successful, window glass operation eight years later” – or about the same date, 1814. Harrison (2013) agreed with the date but argued that Scull “produced only hollowware.” No one included an end date for the plant. Toulouse (1971:545) confused the name as Gideon Smith, a name repeated by McKearin & Wilson (1978:90), and Pepper (1971:225) only mentioned window glass in connection with Scull. Toulouse (1971:545) also claimed that the plant used two furnaces in 1820, one with seven pots, the other with eight. Unfortunately, he did not connect this information with a name. The plant was using clay molds.

The actual firm was called G. Scull, Jr. & Co., and the factory was the Millville Glass Works. Scull advertised in the *Washington Whig* for teams to haul wood on November 4, 1816, and for sloop hauling wood on January 20, 1816.

### **Nathaniel Solomon, Millville, New Jersey (?)**

According to Figgis (1919:152), “Nathaniel Solomon managed [the Millville factory] for a company of blowers but made a failure in 1829.” Toulouse (1971:545) picked up the failure date but apparently misread his notes as Nathaniel & Solomon. Pepper (1971:225) and McKearin & Wilson (1978:90) mentioned Solomon but included no dates. Solomon is somewhat of a mysterious figure; no sources that we have found added any other information about him or the “company of blowers.”

### **Burgin & Wood, Millville, New Jersey (1827-1830?)**

According to Pepper (1971:225) (repeated by Sewell 2010), Dr. George Burgin, Richard L. Wood, and Joel Bodine operated the plant in 1827, changing names when Bodine left the firm in 1829. If the reference is correct, this would have been the first brush with glass manufacture for Joel F. Bodine, the head of the well-known Bodine clan of Bridgeton and Williamstown, New Jersey. For more about the family, see the section on the Bodine Glass Companies. Pepper only mentioned the three owners – rather than naming the company – so Bodine may have been a silent partner in Burgin & Wood.

Figgis (1919:152) noted that “Burgin and Wood took over the plant in 1830” – although Toulouse (1971:545) placed the date a year earlier. The Millville city directories listed Burgin & Wood as “drugt. & apoths.” located at “29 & 57 N. 3d” in 1828 and 1829 but did not mention glass production. The obituary of William M. Burgin (*American Bottler* 1908:64) suggested that “the firm [i.e., the druggist operation] was first organized in Millville NJ about the year 1820 under the name of Burgin, Wood & Fowler which arrangement continued for several years being succeeded by the new firm of Burgin & Wood.” It is highly likely that both of these were pharmacies and that Burgin & Wood never actually operated the glass house or only ran it briefly in 1830. Sewell (2010) placed the transition to Burgin & Wood in 1829, and suggested that they operated the plant until 1833.

The original druggist firm was formed by Dr. George H. Burgin, Richard L. Wood, and William C. Fowler. When Fowler left the business, it became Burgin & Wood (*American Bottler* 1908:64) – although it seems that Joel Bodine was briefly a partner (see above). See the section on Burgin & Sons in the B volume for more information about the family’s later involvement in glass production.

### **Burgin, Wood & Pearsall, Millville, New Jersey (1830-ca. 1833)**

According to Figgis (1919:152), “in 1833, the name was changed to Bergin Wood & Pearsall” (repeated by Pepper 1971:225). McKearin & Wilson (1978:90) chose 1829, and Toulouse (1971:545) dated the firm 1830-1833. The city directories supported Toulouse on this one, listing Burgin, Wood & Pearsall as “drugs & glass manufacturers” at 29 N 3d in 1830 and 1831. There was no listing in 1932, but the name had changed the following year. See the section on Burgin & Sons in the B volume for more information about that family. Sewell (2010) supported the Figgis date of 1833.

### **Burgin & Pearsall, Millville, New Jersey (1833-1836)**

While Figgis (1919:152) claimed a name change to Burgin & Pearsall in 1836, both Toulouse (1971:545) and the directories placed the transition at 1833. The directory only listed the firm in 1833, but Toulouse suggested that it continued until 1836. The Burgin obituary (*American Bottler* 1908:64) added:

In 1835, the firm which was now known as Burgin & Pearsall purchased at sheriff’s sale an old glass factory located at what was then known as Franklin and Cherry Streets in Philadelphia but now known as Girard and Montgomery Avenues the present location of the plant.

The obituary missed the transition from Burgin, Wood & Pearsall in 1833 but noted that Burgin’s firm sold to Scattergood & Haverstick “ten or twelve years” after the origin of Burgin & Wood ca. 1820. Although that is a few years shy of the actual sale date, it is now in the ballpark. Once Burgin & Pearsall (the name of the firm when it sold out to Scattergood & Haverstick) purchased its new glass house in Philadelphia, the firm ceased to be of interest for this study. See the section on Burgin & Sons in the B volume for more information.

### **Scattergood, Booth & Co., Millville, New Jersey (1836-1838)**

Toulouse (1971:545) and Pepper (1971:225) both noted that Scattergood, Booth & Co. replaced Burgin & Pearsall from 1836 to 1838. The directory partially supported the two, listing Scattergood, Booth & Co. as both “bottles, demijohns, &c., 68 N 3<sup>rd</sup>” in 1837. Figgis (1919:152) confirmed the Toulouse and Pepper dates but called the firm the “Scattergood and Booth Co.” William Scattergood partnered with Thomas Booth and possibly at least one other person – the typical setup when “& Co.” was used in the name of an operating company. According to an ad in *The Glass Packer*, (November 1925), the company, itself, traced its existence to 1836 – the Scattergood, Booth & Co. period.

### **Scattergood, Haverstick & Co., Millville, New Jersey (1838-1844)**

Figgis (1919:152) noted Scattergood, Haverstick & Co. as beginning in 1844, and Toulouse (1971:545) said 1838 to 1844. The directories listed the company from 1839 to 1844 as “bottles and demijohns, &c,” “Bottle Glass Factory Agents, Phoenix Works,” and “Vial and Bottle Manufacturers” – located at 68 N 3<sup>rd</sup> St. The directories also called the factory the “Phoenix Vial and Bottle Works.” Apparently, G.M. Haverstick purchased Booth’s share of the firm in 1838, generating the change in names. Haverstick invited his brother-in-law, John M. Whitall, to join the firm (apparently the “& Co.”) on New Year’s Day 1838 (Pepper 1971:225; Toulouse 1971:545). According to Toulouse (1971:546), the factory first began using brass molds in 1840, iron molds by 1845.

Von Mechow (2020) reported soda bottle embossed on their bases with “PHOENIX GLASS WORK, PHIL.” in a circle around the outside edge – probably in a Rickett’s mold. He dated the marks ca. 1838-1857. That would include this period – the earliest date when he discovered a reference to the Phoenix Glass Works – and would extend to the opening of Whitall Tatum & Co. See the Other P section for more information.

### **Scattergood & Whitall, Millville, New Jersey (1844-1846)**

Figgis (1919:152) and Toulouse (1971:545) placed Scattergood & Whitall from 1844 to 1845. The directories first listed the firm as “Vial and Bottle Manufacturers” at 70 N. 3<sup>rd</sup> St. in

1845 and extended the enumeration to 1846. When Haverstick retired in 1844, the firm became Scattergood & Whitall. Scattergood retired in 1845, creating yet another name change (Pepper 1971:227; Toulouse 1971:545; Wikipedia 2020).

### **Whitall & Brother, Millville, New Jersey (1845-1848)**

Figgis (1919:152) dated Whitall & Bro. from 1845 to 1850. Toulouse (1971:545) slightly disagreed, placing the end date at 1848. The *Bridgeton Chronicle* (12/27/1845) posted a notice that Scattergood & Whitall had “dissolved by mutual consent, Scattergood having withdrawn from the concern,” on November 24, 1845. On the same day and with the same notice, “John M. Whitall, having associated with his brother, J.F. Whitall, will under the firm of Whitall & Brother, continue the manufacture of Druggist’s Glassware, Carboys, Demijohns, Porter Bottles, Mineral Water Bottles, &c.”

The 1846 city directory listed Whitall & Brother as “druggists & glassw.” at 70 N. 3<sup>rd</sup> St., switching only to “glass manufacturers” in 1949 – at 138 Race St. The Whitall ad noted the plant as the “Phoenix Glass Works, every description of Vials, Bottles, Jars, Carboys, Demijohns, &c.” Pepper (1971:225) and Wikipedia (2020) stated that a brother, Israel “Franklin” Whitall, joined John Whitall in 1845, upon the retirement of Scattergood. The Race St. address was a new warehouse, built to accommodate the increased rate of business.

On November 4, 1848, the *Newark Daily Advertiser* reported “a most daring attempt at robbery [actually burglary]” at the Phoenix Glass Work. The intruders broke into the “counting room” and used black powder in an attempt to blow open the safe. The explosion attracted attention from adjacent people, so the would-be burglars fled without being caught. The next change actually occurred in 1848.

### **Whitall, Brother & Co., Millville, New Jersey (1848-1857)**

With the addition of Edward Tatum in 1848, the brothers renamed the firm Whitall, Bro. & Co. – although it may have been called Whitall & Brothers for a short period during 1848 and 1849. The company bought a second Millville factory – at an area called Schetterville – about 1853. Frederick and Phillip Schetter had opened the plant in 1832, but the business failed, and

Lewis Mulford, a local banker, joined William Coffin, Jr., and Andrew K. Hay (Hay & Co.) to purchase the factory at a sheriff's sale in 1844.

Mulford did not feel that the business was sufficiently profitable, so he approached John Whitall in 1853, hoping Whitall would buy the factory to add it to his existing firm. When Whitall refused, Mulford cornered the local firewood market, forcing Whitall to import wood from Virginia to stoke his furnaces. The tactic only took one year. The Whitalls purchased the Schetterville factory in 1854, and the company thereafter operated both factories. The original plant became known as the Glasstown plant or the Upper Works; the newer plant was called the South Millville plant or the Lower Works (Lefebvre 1949:89; Pepper 1971:225-228; Toulouse 1971:545). The *West Jersey Pioneer* reported the Mulford & Co. purchase on November 19, 1853 – although the firm continued to have problems procuring fuel at that point. So, the story of the firewood tactic may have been apocryphal.

### **Whitall Tatum & Co., Millville, New Jersey (1857-1900)**

In 1857, Franklin Whitall withdrew from the firm, and Edward Tatum (John Whitall's brother-in-law) moved into his place, causing the partnership to become Whitall, Tatum & Co. – and it remained so for the rest of the century (Lefebvre 1949:89; Pepper 1971:227-228). Pepper (1971:228) claimed that Whitall Tatum began making “flint glass” (i.e., colorless glass) in 1863 and built a “new flint glasshouse at South Millville” in 1864. However, she claimed that the company used “William Leighton's formula for lime glass” which actually used no decoloring chemicals. Pepper (1971:232) stated that “the flint glass was of extraordinary clarity and brightness, especially considering its intended use for fairly expendable bottles. . . . Sand for the flint glass was brought in by rail from Ohio where washing was done on a large scale and more economically than Whitall Tatum could have done at the time.” Despite her claims, all identifiable bottles we have seen were solarized purple, a sure indicator of manganese used as a decolorizer in the glass. However, marked bottles only appear to have been made from about the late 1870s or early 1880s.

Horner (1985:98) placed the date of Whitall Tatum's first flint glass manufacture at 1862 (almost certainly the process described by Pepper) and noted that it met with “only partial success.” The lack of complete success led to the building of the new flint glass house in 1864.

It was not until 1870, however, that “the progress in that branch of the business has been quite rapid.” “Glass formulae” used by Whitall Tatum included 10 ounces of Manganese Dioxide for a 500-pound batch of “Lead Glass” and four ounces for a 200-pound batch (Horner 1985:101). This is more in keeping with observed Whitall Tatum colorless pharmacy bottles. By at least 1876, the plants were called the Phoenix Flint-Glass Works and the Phoenix Green-Glass Works (Whitall Tatum & Co. 1876).

The company operated one continuous tank and 13 furnaces in 1886. Eight of the furnaces made flint glass; four furnaces and the tank worked on green glass; and the final furnace manufactured chemical ware and druggist’ supplies. At that point, it was the largest glass plant in the U.S., with almost 1,500 employees (*American Glass Worker* 1886:2). In 1893, the firm installed a small continuous tank – 20 tons (Toulouse 1971:546).

In 1897, Whitall Tatum used 83 pots to make flint bottles, and the number increased to 110 in 1898. A September 1898 listing of flint glass companies, however, noted that the plant used eight furnaces with 72 pots and five continuous tanks with 53 rings. The number remained at 110 pots in the regular listings through 1902. The plant used 40 pots to make “green” glass between 1900 and 1902 (*National Glass Budget* 1897:7; 1898a:7; 1898b:3; 1900:11; 1901:11; 1902:11).

That the operation specialized in glassware for druggists, chemists and perfumers probably reflects the fact several of the early owners were Philadelphia pharmacists (Shoemaker 1890; Toulouse 1971:545). This was not true of the Whitalls and Tatums. It did, however, provide them with a business compatible with their religious beliefs. Both families were devout Quakers, who “did not believe in war, nor in litigation, nor in the manufacture or sale of intoxicating liquors.” As a result they refused to manufacture liquor bottles of any kind (although this was to change later) – then one of the mainstays of most bottle makers (*Friends’ Intelligencer* 1896).

### **Plates on Pharmacy Bottles**

Since an important element of their trade consisted of bottles embossed to identify local druggists, some background on that market is worth discussion. Pepper (1971:230) noted that

“as early as 1868 Whitall Tatum began making lettered plate ware.” She explained that “some customers could not afford an individual mold cut for about \$400, [so] Whitall Tatum devised an inset lettered plate that cost only about \$2 to \$10.” This suggests that Whitall Tatum adapted the use of plates on bottle bodies, but the story is more complex than that. In 1867, James J. Christie patented a “glass bottle mold fitted with a removable panel that was inscribed with the name and address to be molded in the bottle.” Christie made flint glass bottles in Baltimore, Maryland. Whitall Tatum began using the plates in 1868 (Griffenhagen & Bogard 1999:36). The authors noted that “the molds were polished daily, and ‘the letters ventilated so that they stood out in clear relief,’” although they failed to cite their quote.

Tatum (1900:20330) supported the date from a perspective only 23 years removed. After discussing the introduction of the French Square,<sup>1</sup> he noted that:

this was followed about 1867 by the appearance on the market of lettered bottles, that is bottles bearing on one side in raised letters the name and address of the pharmacist, accompanied in some cases by devices, monograms, etc. The lettering was known as a plate mold. This consisted of a metal plate made of varying sizes to fit the various molds used in casting bottles of different shape [he noted the *American Druggist* as his source].

According to Griffenhagen and Bogard (1999:36), bottles with embossed letters had been used in the United States since at least 1809. Donut-shaped plates around the outside edges of bottle bases were invented by Henry Ricketts in 1821 (Jones & Sullivan 1889:48-49). Jones and Sullivan also noted that “an official starting date for plate moulds in the United States is a patent of 1867” – obviously referring to the Christie patent noted above.

Christie actually received two patents for the plate idea. He received his first, No. 72,368 for an “Improved Glass Bottle

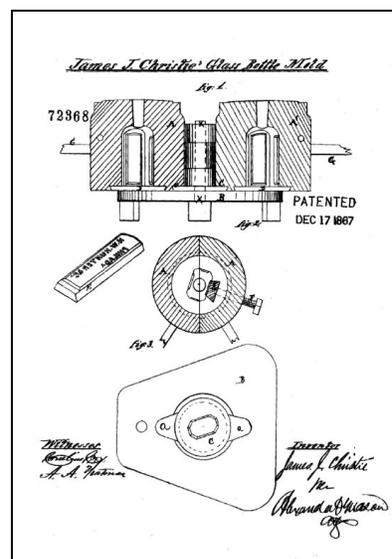


Figure 1 – Christie 1867 patent

<sup>1</sup> The French Square was introduced sometime after 1850, and many were made by William McCully & Co. (Griffenhagen & Bogard 1999:35).

Mold” on December 17, 1867 (Figure 1). Christie termed the important part of his device a “movable panel or slide” (what we now call a plate, plate mold, or slug plate) that could be bolted into either side of the typical side pieces of the mold or to the baseplate. He further noted that “any desirable description upon them can be used, instead of using a different mold for every new style of bottle which is to be molded.”

Christie’s second patent, No. 132,897, was for an “Improvement in Glass Bottle Molds,” and he received it on November 12, 1872 (Figure 2). The improvement was for two wedge-shaped sliding panels that slid into the plate of his earlier invention. This enabled even less area that had to be remade for different embossing. We have found no evidence that this second invention was very popular.

Although peripheral to this study, there is empirical evidence that plates were used on the bodies (rather than the bases like Ricketts-type molds) of soda water bottles at least as early as 1850. We have seen bottles produced by the Union Glass Works of Philadelphia, for example, that were embossed with plates for the San Francisco soda water firm of Lynde & Putnam that operated only in 1850 and 1851 (Markota and Markota 1972:53). There are numerous other examples of soda bottles with embossed plates prior to the 1867 patent. Boley & Co., Sacramento, California, for example used bottles with plates during the 1849-1862 period. Delahanty, Skelly & Co., also of Sacramento, used similar bottles from 1854 to 1864 (Schulz et al. 1980:125, 136).

### Laboratory Glass

In addition to pharmacy bottles, the company manufactured laboratory ware for chemists and druggists, perfume bottles, nursing bottles and other druggists’ sundries, as well as various glass and rubber implements used by physicians. Toward the end of the century the operation was touted as “probably the largest flint-bottle works in the world,” having “thirteen flint-furnaces, in addition to five green-glass furnaces and a green-glass tank.” The firm

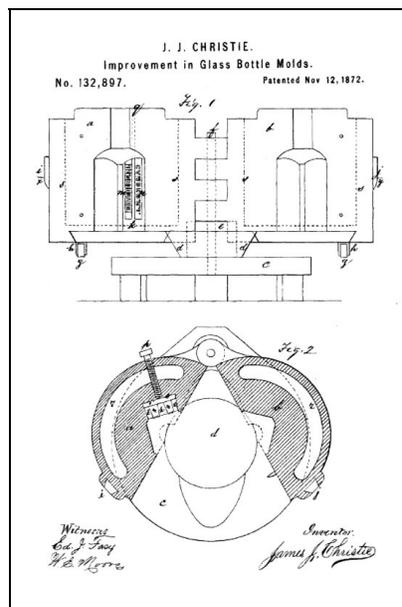


Figure 2 – Christie 1872 patent

employed “from 1500 to 1900 employees, according to the demand for their goods” (Depew 1895:282)

## **Containers and Marks – Pharmacy Bottles**

Toulouse (1971:544) claimed that the WT&Co manufacturer’s mark was used by the company “until 1935.” As shown below, this is incorrect. Patent dates are also neither reliable nor accurate. Although a bottle embossed with a patent date or number cannot have been used prior to the year that the patent was assigned, any individual container, bearing the patent date, might have been made later. However, it is unlikely that a patent date would continue to be embossed on a bottle after the patent had expired. Thus, a bottle with a patent date embossed on the base (or elsewhere) was probably made no later than ca. 14 years after the patent date, although baseplates with patent dates would certainly have been used until they wore out or the model was discontinued. According to Griffenhagen and Bogard (1999:38), Whitall Tatum & Co patented at least ten designs for medicine or pharmacy bottles alone during the 1878-1898 period. See Table 1 for a list of Whitall Tatum pharmacy bottle patents we have found.

We examined a total of 228 Whitall Tatum marks on bottle bases in our initial study and have observed literally dozens since. Our sources included eBay auctions, our personal collections, archaeological databases, and entries in books that either illustrated or thoroughly described marks by the company (Bethman 1991; Elliott & Gould 1988; Miller 1999; Pollard 1993; Preble 2002; Ring 1980). Each of these researchers provided date ranges for the use of individual prescription bottles or, in some cases, for the specific drug stores. By consolidating these date ranges for individual bottles, we perceived a better picture of the overall use range of a specific variation of the Whitall Tatum marks. In addition, the Whitall Tatum catalogs from 1876, 1880, 1887, 1892, 1896, 1898, 1900, 1902, 1909, 1924, and 1937 were helpful in establishing the relationship between catalog numbers and embossed digits as well as related data. Until our first publication of this study, Bethman (1991:78-79) has been the best source for dating Whitall Tatum bottles. Indeed, we have used his dates as a baseline for this study. Our original study (Lockhart et al. 2006) went into great detail about how we determined the dates for each individual basemark variation. We have reduced these into shorter, easier to follow summaries.

**Table 1 – Whitall Tatum & Co and Whitall Tatum Co. Patents**

Style Name	Appl. Date	Patent Date	Patent No.	Logos	Company
Millville Round	January 12, 1878	January 22, 1878	D10,407	W.T.&Co.	W.T.&Co.
Double Phil. Oval	April 12, 1878	May 7, 1878	D10,675	W.T.&Co.	W.T.&Co.
Keystone Oval	October 29, 1880	January 18, 1881	D12,139	W.T.&Co.	W.T.&Co.
Septagonal bottle	October 29, 1880	January 18, 1881	D12.140	W.T.&Co.	W.T.&Co.
Seal Oval	November 14, 1887	January 24, 1888	D18,021	W.T.&Co.	W.T.&Co.
Rounded Square Recessed	February 6, 1889	April 2, 1889	D18,997	W.T.&Co. (number) (letter)	W.T.&Co.
Ointment Pot	March 13, 1890	April 15, 1890	D19,762	W.T.&Co. (number) (letter)	W.T.&Co.
Manhattan Oval	October 31, 1891	January 5, 1892	D21,285	* * * W.T.&Co. (letter) U.S.A.	W.T.&Co.
Manhattan Ointment Pot	May 6, 1892	June 7, 1892	D21,612	Unknown	W.T.&Co.
Ointment Pot	May 6, 1892	June 21, 1892	D21,628	W.T.Co. (number) (letter)	W.T.Co
Knickerbocker Oval	October 30, 1894	December 11, 1894	D23,874	* * * W.T.&Co. (letter) U. S. A.	W.T.&Co.
Penn Oval	March 29, 1897	January 18, 1898	D28,182	Unknown	W.T.Co.

This sample gave us a good look at bottles in use between at least 1880 and the early 1920s. Marks on these bottles were sometimes embossed horizontally and sometimes slightly arched depending on the shape of the bottle base. On prescription bottles, all marks were found on bases. Many of the colorless bottles were solarized (often artificially by collectors) to a light amethyst color, and it may be that all of them would change color if exposed to ultra-violet radiation. It is clear that the use of manganese extended for the full time period when the W.T.&Co. or W.T.Co. marks were used.

A few generalizations provide a basic guideline (see Table 2 for a more specific dating guide to Whitall Tatum pharmacy bottles):

1. A major division between marks occurs with mouth-blown vs. machine-made bottles. Mouth-blown bottles are marked with either the “W.T.&Co.” or “W.T.Co.” logo. Machine-made bottles are marked “W / T” in an inverted triangle.
2. The ampersand (&) was used in the mark during the pre-incorporation period from the 1870s to 1900, although the baseplates were probably used until they wore out. Bottles following the January 1901 incorporation lack the ampersand.
3. “U.S.A.” may have become part of the mark in the 1880s, but it was not generally used until sometime after 1890. This may reflect a Whitall Tatum entry into the international market. Whitall Tatum advertised an office in “Sydney, N.S.W.” (New South Wales, Australia) at least as early as 1904 (*National Glass Budget* 1905:11).
4. Three stars accompanying the mark were used infrequently. If they had any specific meaning, we have yet to discover it. These were generally used between ca. 1890 and ca. 1901, although a few examples exist with the “W.T.Co” mark, indicating a manufacture after 1901.
5. The use of a capital or lower-case “o” in “Co” was apparently a random variation at the whim of the engraver. The lower case appears a bit more commonly in earlier bottles, while capitals are overwhelmingly dominant in later ones.
6. Letters and single-digit numbers accompanying the marks are probably mold codes, cavity codes, or identifiers of production groups. It is worth noting that in the 1937 Whitall Tatum catalog, single- and double-letter codes were used to identify all models of pharmacy bottles. Although that system may have been used previously, it was never recorded in the earlier catalogs. We have not been able to detect a notable pattern for letter/number use, nor are they helpful for dating purposes.

7. Although Griffenhagen & Bogard (1999:36) claimed that Whitall Tatum “began making high quality letter plate ware . . . with company initials blown into the base of each bottle” (our emphasis) in 1868, our best evidence suggests that the plants began using basemarks in the late 1870s.

**Table 2 - Chronology for Whitall Tatum Prescription Bottles**

Mark	Dates - Pat	Dates - Bethman etc
W.T.& Co.	1880, 1881, 1888	mid-1870s- late 1890s
(letter or number) W.T.&Co.	1888	ca. 1883-ca. 1895
W.T.&Co. (letter or number)	1878	1880-1895
W.T.&Co. (letter) U.S.A.	1881	ca. 1890-1894
W.T.&Co. U.S.A.	1898	ca. 1896-1901
W.T.&Co. (letter or number) U.S.A.	1878, 1891, 1892, 1894	ca. 1890-1901
(letter) W.T.&Co. U.S.A.		1890-1896
W.T.&Co. U.S.A. (letter)	1878	1889-1890
* * * W.T.&Co. (letter) U.S.A.	1892, 1894	early 1890s-1901
* W.T.&Co. * Pat Info * U.S.A.†	1894, 1898	ca. 1894-1901

Mark	Dates - Pat	Dates - Bethman etc
W.T.&Co. * * * (letter) U.S.A.		mid-1890s-1901
* * * (letter or number) U.S.A.	1892, 1894	early 1890s-1901
* * * W. T. & Co. (letter) U.S.A.		early 1890s-1901

† The marks with stars at the side (or sides) appears in varying formats: stars to the left; U.S.A. to the left, stars to the right; stars to the left, U.S.A. to the right; and stars on both left and right. In all cases, there are three stars.

### **An Important Note About Sources**

Virtually all the sources (except catalogs and ads) used to date the Whitall Tatum marks are books about local/regional drug store/pharmacy bottles written by and for collectors. They were never intended as vehicles to date manufacturer's marks. Each of these sources has compiled the available data to produce date ranges for the individual businesses in a specific state or region. These date ranges were usually intended to reflect the length of time a business was open based on existing sources.

In cases where the authors found more than one bottle used by a business, we have usually attempted to determine a range for that type of bottle – not for that type of mark – using a variety of characteristics such as embossed addresses or name of the proprietor, local advertising, and other bottles with similar styles. In all cases, these date ranges should be considered approximate.

It is important to note that the best information available does not necessarily reflect the entire date range for a business. Thus, for example, an unusual date range (i.e., one that does *not* fit in with other known ranges for a mark) most likely indicates that historical information for the drug store in question is incomplete. It usually does *not* indicate that the date range for the mark needs to be questioned.

A hypothetical example might better explain. Let's say a drug store was in business from 1885 to 1907 with a total of two known owners, and that two different types of bottles, both mouth blown, have been discovered by the author of the study. The author might date one bottle from 1885 to 1891, based on the proprietor's name embossed on the plate. The other one, the author would date 1892 to 1907 because no owner's name appears. If this second bottle had the "W.T.&Co." mark (used before 1902), then a date range of 1892 to 1907 would *not* indicate that the bottle was made after 1900.

It is, of course, also possible that W.T.&Co. marks extended for the first few years into the corporation era. This may have been caused by the employees continuing to use the older molds until they wore out (a common practice in the glass industry). Thus, occasional W.T.&Co. marks may have extended to ca. 1903 or so. Possibly future research will clarify this possibility.

**W.T.&Co.** [mid-1870s-ca. 1890]

According to Bethman (1991:79), "This embossing dates from mid-1870s-1890." It was certainly the earliest mark used by the company (Figure 3). Griffenhagen and Bogard (1999:130) dated the mark 1868-1903, but they did not address the variations. Their beginning date is probably too early, while the end date is a mistaken date for the company name change at incorporation. The composite dates from our sources mostly fall between 1880 and 1890. None of our sources extend back to the 1870s, but a large post-1880 sample indicates that the unaccompanied mark was probably not used much after 1880, although the mark was still used occasionally after that date. Examples of the logo include "PAT. NOV. 17, 80"; "PAT. APLD. FOR / W.T.&CO."; and "JAN. 18 '81" below the mark as well as "PAT. JAN. 24 88" *above* the logo. Although most usage of this mark probably ceased by the mid-1880s, the 1888 patent extends the range to mid-1870s to late 1880s. Richard M. Atwater applied for a patent for a bottle on November 14, 1887, and received Design Patent No. 18,021 on January 24, 1888 (Figure 4).

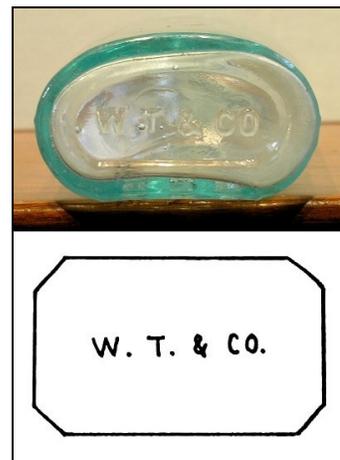


Figure 3 – Logo (Bethman 1991; Lynn Loomis collection)

**(letter or number)**

**W.T.&Co.** [ca.1883-ca. 1895]

Bethman (1991:735) illustrated two examples of this variation, both with a “P” above the logo. He dated the bottles ca. 1887 and ca. 1892. He also included a variation with the patent date (“PAT JAN 24 ‘88”) embossed above the letter A, both above the logo. Other ranges date into the 1890s, and we have observed two examples (N and 1) with the letter/number above the “W.T.&Co.”

Preble (2002:458) showed a variation with a single star below “W.T.&Co.” and dated the drug store between 1895 and 1900. Although a series of three stars was used on marks dating from the early 1890s to 1901 (see below), this is one of only two examples we have found with a single star. It is possible that the mark was intended to have three stars, but two were filled with “dope” (mold lubricant) – a common occurrence – and were too indistinct to be noticed.

**W.T.&Co.**

**(letter or number)** [ca. 1880-1895]

Bethman (1991:79) dated this mark “1889-1893” and only found letters included in his sample, a capital “O” in “CO.” (Figure 5). We have found letters ranging from A-P and AA-AO with numbers from 1-9 (including one marked “9.”). All but two of the marks we have found contained the lower-case “o”; the remaining two used capitals. We found an interesting engraver’s error when we examined the Tucson Urban Renewal collection at the Arizona State Museum in Tucson, Arizona. This bottle base has “W.T.& Co. / AO” embossed on the base in mirror form (Figure 6).

Elliott and Gould (1988:196) showed an interesting variation with “PAT. JAN. 22 78” between the W.T.&CO. and the accompanying letter – including one example marked CN, the

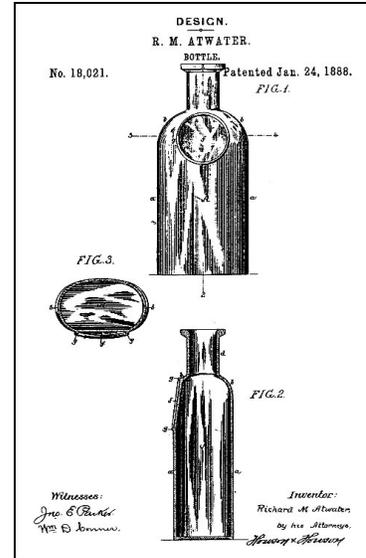


Figure 4 – Atwater 1888 patent

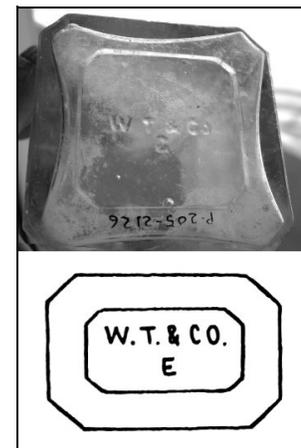


Figure 5 – Logo (Bethman 1991; Cal. State Parks)

only case we have found with two letters that were not in the “A” series. Bethman (1991:597, 608) also added one marked “PAT. 5 MO 7 78.”<sup>2</sup> Based on our total sample, we amend the date range to ca. 1880-1895 but suggest that the middle-to-late end of the range (1885-1895) is the most likely.

Preble (2002:578) illustrated the only known example of this mark with a single star embossed above the logo. He dated the bottle ca. 1881. A series of three stars in conjunction with the “W.T.&Co.” logo were found on bottles that dated from the early 1890s to 1901. Only one other example of a single star associated with the mark is known, also from Preble (see above). As discussed above, the other two stars may have been present but too indistinct to be noticed.

**W.T.&Co.**  
**(letter) U. S. A.** [ca. 1890-1894]

Bethman (1991:79) noted that “this marking dates from about 1891-1894” (Figure 7). Our sample included letters B through K and AM, one with a patent date of JAN 18 81.

**W.T.&Co.**  
**U.S.A.** [1896-1901]

Although Bethman (1991:79, 730) did not note this configuration in his discussion of the marks, he illustrated a single example that he dated ca. 1896 (Figure 8). Other examples were recorded by Elliott and Gould (1988:196, 207), Pollard (1993:254), and Ring (1980) as well as in our collections and on eBay. Griffenhagen and Bogard (1999:130) dated the inclusion of USA



Figure 6 – Reverse Logo (TUR)

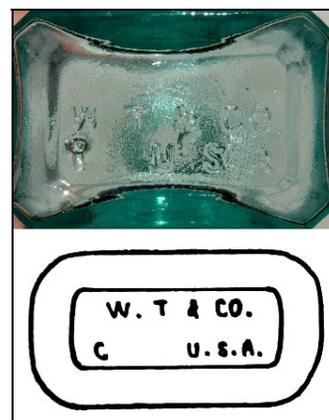


Figure 7 – Logo (Bethman 1991; eBay)



Figure 8 – Logo (Bethman 1991; eBay)

<sup>2</sup> The Double Philadelphia Oval was patented on May 5, 1878, and that is almost certainly what was intended.

from 1890 to 1903 but did not address the variations. In our observations, these were likely made between 1896 and 1900, although the style could have been used earlier.

**W.T.&Co.**

**(letter or number)**

**U.S.A.**

[ca. 1890-1901]

Bethman (1991:79) included this with the mark discussed below. However, we have listed it separately because it is a notable difference, even though both marks date to the same period. The mark was likely introduced ca. 1890 and used until Whitall Tatum incorporated in January 1901 (Figure 9). Bethman (1991), Elliott and Gould (1988:190-207), Ring (1980:84, 198, 487), Schulz and Schulz (1990:311, 313-314, 319, 329) all listed examples. Most marks contained a capital “O” in “CO.,” but a single example had a lower-case “o” and the number “4.” Those with capital “Os” included letters from A to Y or the numbers 1, 8, and 901.

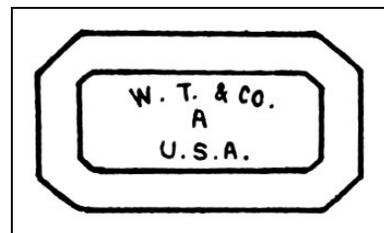


Figure 9 – Logo (Bethman 1991)

Bottles marked with this logo included several patent dates: “PAT. JAN. 22 78”; “PAT. FEB. 24, 1891”; “PAT. JAN. 5 1892”; or “PAT. DEC. 11 1894.” – although bottles with no patent dates are common with this pattern. Patent dates were usually embossed below “U.S.A.,” but Elliott and Gould (1988:196-197) listed four examples with the patent date between the “W.T.&CO.” and the single letter. In three of these, the pattern is “(letter) U. S. A.,” a format otherwise unrecorded. In two other examples, the patent date is between “W.T.&CO.” and “U.S.A.” with a “J” at the very bottom. All of the variations noted in this paragraph carry a patent date of “JAN. 22 78.” All of the exceptions were dated between the 1880s to early 1890s [we suggest late 1880s].

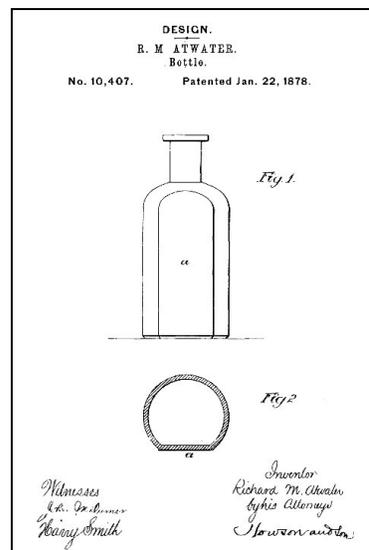


Figure 10 – Atwater 1878 patent

It is notable that some bottles used during the late 1880s-1890s carry a patent date for 1878. The January 22, 1878, patent

was for the Millville Round Prescription bottle (Whitall Tatum & Co. 1887). Richard M. Atwater received Design Patent No. 10,407 on January 22, 1878 for a bottle design that would become the Millville Round (Figure 10). While patent dates provide an absolute not-used-before date, they may also not be reliable as initial use dates because they probably were embossed on the bottles for the entire 14-year life of the patent.

**(letter)**

**W.T.&Co.**

**U.S.A.** [1890-1901]

Elliott and Gould (1988:195) listed a single example – “A / W.T.&CO. / U.S.A.” – which they dated ca. 1880-1881. Although Bethman (1991:79, 618, 327) did not list this as a variation, he illustrated two examples with AD and AE above the logo and U.S.A. below it. He dated the bottles 1890-1896. Schulz and Schulz (1990:323-324) report this mark (below “PAT JAN 27 88”) on three bottles from a California pharmacy that began operation in 1892 and continued into the 20th century. Letters included were “B” and “C.” The Elliott and Gould dates are too early and may indicate an incomplete history of the drug store.

**W.T.&Co.**

**U.S.A.**

**(letter)** [1889-1890]

This is another subvariation that was unlisted by Bethman (1991:79, 755), although he showed a single example of the mark with “PAT JAN / 22 78” between the “U.S.A.” and the letter “A.” He dated the bottle 1889-1890.

**\* \* \***

**W.T.&Co.**

**(letter)**

**U.S.A.** [early 1890s-1901]

Bethman (1991:79) stated that “this base embossing was used from the mid-1890s to 1901. The same embossing exists without the ‘stars.’” Our sample included bases from

Bethman (1991), Preble (2002:), Elliott and Gould (1988), and Pollard (1993). Letters under the W.T.&Co. logo included A-D, G, and R with patent dates of “JAN 5 1892” and “DEC. 11 1894” or none (Figure 11). Miller (n.d.:16) added a slight variation with stars, “W.T.&CO. / U.S.A.” but no capital letter below the logo. He dated the bottle 1890s.



Figure 11 – Logo (eBay)

**W.T.&Co.**

\* \* \*

**(letter)**

**U.S.A.** [mid-1890s-1901]

Bethman (1991:666) included a single example of this configuration with the letter B. He dated the bottle ca. 1899. Preble (2002:e.g., 629, 687) offered five more illustrations of the mark with date codes ranging from 1895 to 1915. The end date, of course is too late for the W.T.&Co. mark. It should be noted that the date ranges are for individual drug stores and were not intended as ranges for the marks.

\* \* \*

**(letter or number)**

**U.S.A.** [early 1890s-1901]

Bethman (1991:79) noted that bottles with this style of base marking dated to the “mid-to-late 1890s.” Although he did not include the letter or number in his discussion, he almost certainly meant the mark that included those digits (Figure 12). Elliott and Gould (1988:194) and Pollard (1993:244, 252), however, showed this style along with a patent date of January 5, 1892. The patent date was always below the U.S.A. Other examples came from Miller (n.d) and Preble (2002) and we have one with the December 11, 1894 patent.

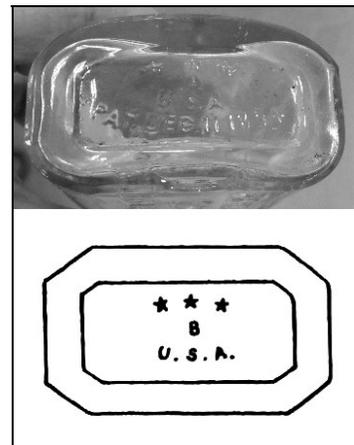


Figure 12 – Logo (Bethman 1991; eBay)

\* \* \*

**W. T. & Co.**  
**(letter) U.S.A.**

[early 1890s-1901]



Figure 13 – Logo (eBay)

Preble (2002:e.g., 694) showed three examples of this mark (Figure 13). He dated the range of two drug stores using the mark at 1891-1909 and the third at 1905-1909. Since the “W.T.&Co.” mark could not have been used after 1901, a reasonable date range is early 1890s-1901. Preble (2002:467) also illustrated two examples of a variation that had the same configuration without the “W.T.&Co.” with a date range of 1890-1896.

### Logos with Stars on One or Both Sides

Miller (1999:195) illustrated a single bottle with the stars embossed vertically to the left of “W.T.&Co. / A / U.S.A.” (Figure 14). The date range for the bottle was 1898-1900. Preble (2002) listed four variations with stars beside the marks, including the configuration illustrated by Miller:

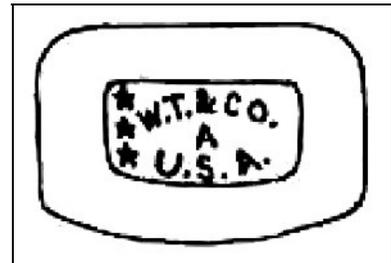


Figure 14 – Logo (Miller 1999:195)

1. “W.T.&Co. / (letter) / U.S.A.” with three vertical stars to the left – Preble (2002:465,503, 505) listed three examples of this mark. He dated them between 1894 and 1898 with one example dated 1908 to 1909. The latter date range is too late for the mark. This mark should be dated from the mid- to late 1890s.
2. “W.T.&Co. / (number)” with “U.S.A.” vertically to the left and three stars in a vertical line to the right – Preble (2002:430, 634) showed two examples of this mark with date ranges of 1898-1899 and 1894-1909. We assign the mark a range of late 1890s-1901.
3. “W.T.&Co. / (letter)” with three stars in a vertical line to the left and “U.S.A.” vertically to the right – Preble (2002:485, 493, 519, 581) illustrated four examples of this mark. The combined date ranges extend from 1894 to 1902 with a single outlier to 1915. Our suggested date range for the mark is mid-1890s-1901.

4. “W.T.&Co. / (letter)” with three stars in a vertical line to both the left and right sides. Preble (2002:442) showed only a single example of this mark with a date range of 1900-1906. Since the ampersand was only used until 1901, we assign this mark a date range of ca. 1900-1901. This mark may be an engraver’s error, in which case, the logo was probably intended to have “U.S.A.” on one side.

With two exceptions, we have only found these marks on bottles in conjunction with patent dates. All but one of the patent dates was December 11, 1894. The remaining date was January 18, 1898. It is thus likely that none of the bottles with stars on the side were made prior to 1894. Since all had the “W.T.&Co.” basemarks, the end date is certainly 1901. The bottles with no patent dates appear to also be Knickerbocker Ovals, the jars patented in 1894.

### **Design Patents**

Bethman (1991:89-91, 93) reproduced some of the pages from the 1895, 1898, and 1904 Whitall Tatum catalogs. Other patent dates came from the Whitall Tatum 1902 catalog. Some of the drawings and descriptions included patent dates for specific styles (see Table 1).

Many of these (including Millville Rounds, Knickerbocker Ovals, Manhattan Ovals, Seal Ovals, and Penn Ovals) were shown in the 1902 catalog. Many others (including Kinckerbocker Ovals, Manhattan Ovals, Manhattan Ointment Pots, and Bronx Ointment Pots) also appeared in the 1909 Whitall Tatum catalog. The implication is that bottles embossed with patent dates of 1878 and 1888 were being used 15-25 years later, and dates of 1892 and 1894 were still listed fifteen years later. However, even though the *style* of bottle may have continued, it is unlikely that the patent date remained embossed on the bases beyond the 14-year active period.

### **Other Markings, Colors, and Other Container Types**

Whitall Tatum made cobalt blue glass bottles from at least 1876 (Pepper 1971:230). According to collectors who dug bottles at the Whitall Tatum factory, cobalt blue bottles found at the site contained no markings on the bases. However, at least one cobalt blue bottle was marked “W.T.Co. / U.S.A.” Although Toulouse (1971:544-547) claimed that Whitall Tatum began making “opal [milk] glass” at “the first oil-fired, small day tank built at ‘Glasstown’” in



Figure 15 – Acme Nursing

1893, Pepper (1971:230) cited the Whitall Tatum catalog from 1876 as including opal in its list of colors. This indicates that the company was making white opaque glass by at least that date. At least as early as 1875, the firm offered prescription ware in an amber-yellow color for light-sensitive ingredients (Griffenhagen & Bogard 1999:35). By 1934 (ad in the *Glass Packer*), the company stated, “W.T. bottles come stocked in Crystal Clear Flint, Rich Amber, Light Green, and Emerald Green.”



Figure 16 – Acme Nursing

## WT&Co monogram



Figure 17 – Acme Nursing (WT 1880 catalog)

During the last quarter of the 19<sup>th</sup> century and the early 1900s, Whitall Tatum offered “turtle” nursing bottles<sup>3</sup> embossed with an elaborate WT&Co monogram surrounded by an eight-point star. The monogram was in the center of a round plate on the front side of the nurser, with “ACME NURSING” above the monogram and “BOTTLE” below it (Figures 15 & 16). The bottle was intended to be placed beside the baby, the nipple connected to it with a long, rubber tube, allowing the mother to be free from holding the bottle for the infant (Figure 17).

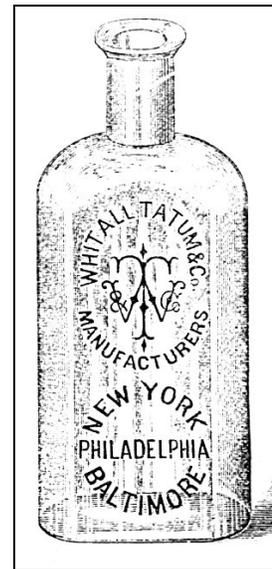


Figure 18 – Monogram (WT 1876 catalog)

<sup>3</sup> “Turtle” is a collectors’ term for the oval nursing bottles with a flattened area on the back side so that they could lie on their backs. Some of these could also stand on the normal base; others were rounded so that they could only lie on the reverse side.

Although the Acme nurser was not offered in 1876, the catalog showed illustrations of very similar monograms (Figure 18). It is virtually certain that these never appeared on the prescription bottles illustrated, but the drawings were almost certainly the prototype for the monogram that appeared on the Acme bottle. Because the monogram included the ampersand, it was probably removed from any bottles produced after the 1901 company reorganization that dropped the ampersand. The Acme nursing bottles appeared in Whitall Tatum catalogs from 1880 to at least



Figure 19 – Royal Nurser (Jay Hawkins)

1902. In 1902, however, the Acme had lost its position in first place to the Handy nurser (Whitall Tatum 1902). We will address the Handy Nurser in Part II.

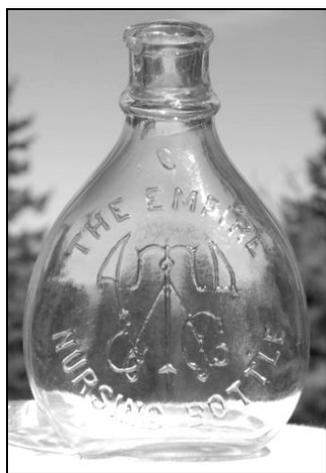


Figure 20 – Empire Nurser (eBay)

Another very similar bottle, the Royal Nurser, was embossed on the front with the monogram between “ROYAL (arch)” and “NURSER (inverted arch)” (Figure 19). We have not found this bottle in the catalogs, so it was probably used for a short period and can only be dated 1880s-1901. Another, upright, nurser was embossed “THE

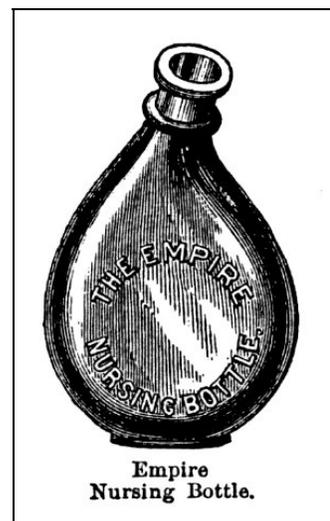


Figure 21 – Empire (WT 1880 catalog)

EMPIRE (arch) / NURSING BOTTLE (inverted arch)” on the front with a different WT&Co monogram in the center (Figure 20). The Empire appeared in the 1880 Whitall Tatum catalog and may have been produced until the end of the century – although the bottle featured at an eBay auction had a different neck from the one in the 1880 catalog (Figure 21).

## Laboratory Ware and Other Goods

According to collectors, few perfume bottles were marked with makers’ logos – although Whitall Tatum did place its logo on a few – like the one embossed “WT&CO / 976” (Figure 22). It may have been an unofficial policy of Whitall Tatum as well as others, to leave perfume

bottles unmarked, as in the tradition of many ‘fancy’ glassware, cut glass, and tableware items. From the point of view of most of the earlier glass companies, it seems to have been considered undesirable from an esthetic standpoint to clutter up the “grace” and “beautiful design” of this type of glass with a mark or lettering on the base. It is also possible that the small size of the bottle played some part in the decision to leave the bases unmarked.



Figure 23 – Tatum 1888 patent

Charles A. Tatum applied for a patent on December 1, 1887, and received Design Patent No. 18,005 on December 3, 1888, for a “Design for a Bottle or Jar Cover” (Figure 23). The actual bottle, illustrated in the 1892



Figure 22 – WT Perfume (eBay)

and 1896 Whitall Tatum catalogs (1896:26), looked almost exactly like the one patented in 1892 by Francis Underhill. It was generally called an ointment jar. Capped with Tatum’s dome-shaped cover, it was listed as a tooth power bottle. The bottle appeared as late as the 1902 catalog.

## Other Druggist’s Ware

The company expanded its line to include larger bottles for druggists’ supplies (known as shop furniture) in 1870. A department for druggists’ sundries was opened in 1876, and the company added perfume bottles in 1878 (historical addendum to 1880 catalog). By 1927, the product list included “ampules, oiler glasses, jellies, tumblers, ointment pots, hospital goods, graduates, tubing, opal ware, pressed and blown laboratory glass [and] funnels” (*American Glass Review* 1927:109). It is currently unknown whether any of these (except insulators and laboratory glass – discussed elsewhere) were marked with a company logo.

Richard M. Atwater applied for a patent on April 22, 1878, and received Patent No. 213,606 for an “Improvement in Marking Bottles” on March 25, 1879 (Figure 24). The bottles involved were called Tinctures and Saltmouths, and their two primary characteristics were a plate with strongly embossed letters and ground glass stoppers. Atwater’s patent was intended to “render the raised letters and figures on glass bottles more legible, and such ornament as are in relief as more distinct, by grinding the faces of such letters, figures, and ornaments.” Atwater’s idea was quite effective.

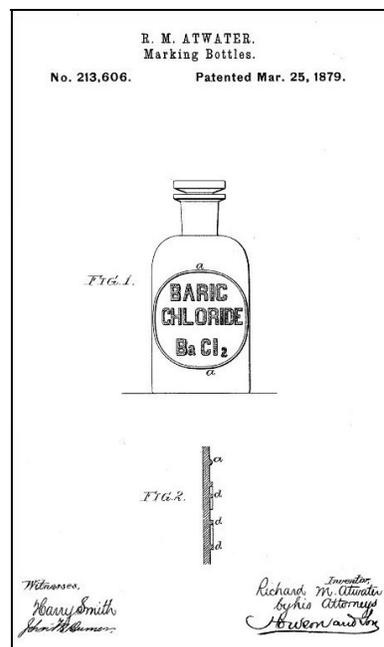


Figure 24 – Atwater 1879 patent

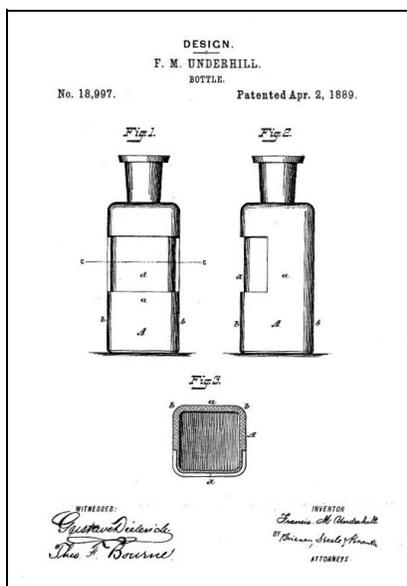


Figure 25 – Underhill 1889 patent

Francis M. Underhill designed a bottle for Whitall Tatum that appeared in the 1900 catalog as “Rounded Square Recessed Ware.” Underhill applied for the patent on February 6, 1889, and received Design Patent No. 18,997 on April 2 of that year (Figure 25). Although we have not discovered a separate patent, “Round Recessed Ware” appeared in the same catalog. The jars were made to receive a paper label that was then sealed with a glass cover that was glued into place. These were shelf or display bottles, and they came in sizes of two ounces to a half gallon (full gallon in the rounded format). These were still offered in the 1924 catalog

(page 26), although the rounded squares were called tincture bottles, and the round ones were called Saltmouth bottles.

## MANHATTAN OVAL [after 1891]

Giarde (1980:136) attributed this mark to Whitall Tatum and dated it “from 1891.” He offered no further information except that the mark “may not have been used at all on milk bottles” – and it certainly was not. The 1892 catalog called the Manhattan Oval a “new prescription bottle” and claimed that the bottles were “of a new and very handsome design, and

are so shaped that no angles are presented, all the corners being rounded. The Moulds are arranged to take the same lettered plates that are used for French Square Prescriptions and Philadelphia Ovals.” Sizes ranged from ½ ounce to 32 ounces. The bottle design was patented on January 5, 1892 (Bethman 1991:88, 91). However, Whitall Tatum claimed the mark had been used since September 1891 (Griffenhagen & Bogard 1999:38). Thus far, we have not actually seen this mark on Whitall Tatum bottles. It is important to note that the use of the logo does not necessarily indicate that it was embossed on bottles. The term “use” probably indicated that “Manhattan Oval” was used in ads or catalogs or stamped on boxes.

### **W.T.&Co.**

**(single or double letter)**

**U.S.A.**

[ca. 1890-1901]

Miller (1999:88) showed a dose glass with this mark and an “AN.” Dose glasses with the logo plus letters B, S, Q, AH, AN, and AM have been offered on eBay (Figure 26). The mark was likely used from about 1890 to 1901, the same time period as similarly-marked prescription bottles.



Figure 26 – Dose Glass

### **Food and Milk Bottles**

Whitall Tatum also made a limited line of food bottles. These included catsup bottles, pickle jars, honey jars, mustard bottles, and maple syrup bottles. Although these may have often been unmarked, Zumwalt (1980:436) showed photos of pickle jar bases embossed “W.T.&Co. / 1” – a mark used by the company prior to 1901. Although Zumwalt dated the jars as “circa late 1860’s to early 1870’s, the mark is similar to that claimed by Bethman (1991:79) as being used from 1886 to 1893. Bethman’s mark, however, used a letter instead of a number. It is highly likely that Bethman’s dates are roughly correct for these food bottles as well. Marks found on ware other than pharmacy bottles are consolidated in Table 3.

**Table 3 - Chronology for Other Whitall Tatum Marks**

Mark	Bottle Type	Dates
W.T.&Co. (number)	Pickle Jars	1870s-ca. 1890
W.T.&Co. (3- or 4-digit number) (letter)	Jars and Ointment Pots*	early 1890s-1901
W.T.&Co. 3- or 4-digit number) (letter) U.S.A.	Tooth Powder Bottles	ca. 1890-1901
W.T.Co. (double letter) U.S.A.	Dose Glasses	ca. 1890-1901

\* All of these that we have seen have threaded finishes.

The Crystal Milk Jar, patented September 11, 1888, was offered in the 1892 and 1896 catalogs (Figure 27). The jar came complete with a glass lid that used tension in a wire arrangement (similar to the lightning

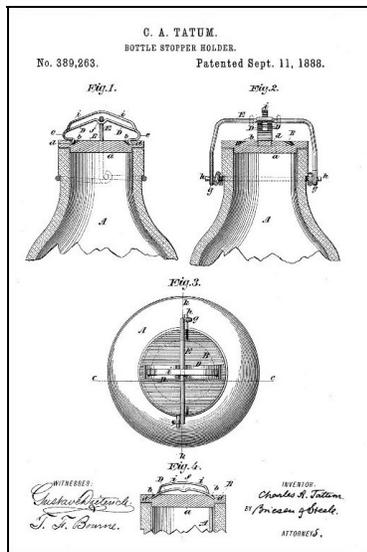


Figure 28 – Whitall 1888 patent

stopper) to seal the lid. The patent was for the “Bottle-Stopper

Holder” (i.e., the closure and finish) of the milk bottle. Charles A. Tatum applied for the patent on February 4, 1888, and received Patent No. 389,263 on September 11 of that year (Figure 28). This container used a spring system somewhat different from the Lightning Fastener to hold a metal cap in place. These were made in at least quart and pint sizes and had “W.T.&Co.” embossed on the base (*The Milk Route*. 2006:1-2).



Figure 27 – Crystal Milk Jar (WT1896 catalog)

Giarde (1980:137) noted that Whitall Tatum & Co. was “attributed to be the manufacturer of pre-1900 Thatcher milk bottles.” He further noted that “it has been opined, and probably with some accuracy, that the Thatcher mould was but altered to produce the Crystal Milk Jar.” Indeed, the Crystal Milk Jar bears a close resemblance to the Thatcher jar. However, Giarde never directly claimed that he or any of his informants had actually seen a Whitall Tatum mark on a milk bottle. We have not been able to find an example.

## Fruit Jars

Fruit jars were also a part of the company’s offering from an early date. Roller (1997) cited an 1859 billhead that did *not* include jars. A decade later, however, an October 1869 letterhead mentioned the Whitall or Millville Patent Atmospheric Air Tight and other fruit jars.

The plant began using Kelly & Samuel’s fruit jar grinding machine to grind the lip or rim of continuous-thread fruit jars ca. 1876. The 1876 Whitall Tatum catalog (page 47) illustrated the Millville Improved jar, showing it with a WT&Co monogram in the center (Figure 29). These sported a continuous-thread finish, requiring the grinding of the rim. The catalog

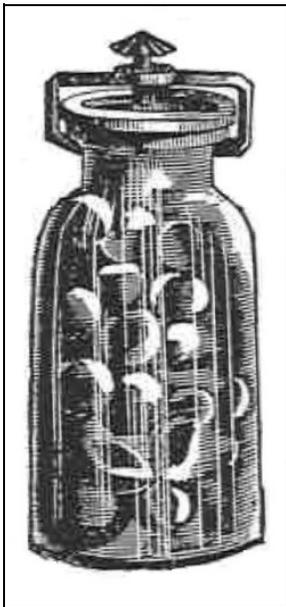


Figure 30 – Millville Atmospheric (WT 1876 catalog)

also depicted the Millville Atmospheric Fruit Jar (page 48), noting that “the jar has been in use about fifteen years with steadily increasing satisfaction” (Figure 30). In 1878, the firm still advertised both the jars, but the 1880 catalog only illustrated and described the Millville Atmospheric Fruit Jar. An 1887 ad illustrated the Millville Atmospheric Fruit Jar and the Millville No. 3 Fruit Jar (Roller 1997). Only the Millville Atmospheric Fruit Jar appeared in the 1892 catalog, and the 1896 catalog only listed “Brandy Fruits” – a very different container type – under the fruit jar category.



Figure 29 – Millville Improved (WT 1876 catalog)

## MILLVILLE

Toulouse (1971:217) listed a mouth-blown jar with a glass lid held in place by a wire-bale arrangement. The side was embossed “MILLVILLE / PAT JUNE 18 1861.” Toulouse noted that the jar was covered by patent No. 32,594, issued to John Whitall on that date. Whitall applied for the patent on June 18, 1861. This is probably a misunderstanding, possibly for the jar described in the next paragraph. None of the later researchers discussed a jar with this marking.

### MILLVILLE FRUIT JAR, Domed Lid (early 1860s)

Roller (1983:252; 2011:378) described a jar embossed on the front with “MILLVILLE (arch) / FRUIT JAR (inverted arch).” The finish included the shallow groove described in the Millville Atmospheric Fruit Jar section (below). The glass lid was slightly domed and was embossed “WHITALL’S PATENT (downward arch) / JUNE 18<sup>TH</sup> 1861 (upward arch).” The lid was held in place by a wire yoke clamp with a thumbscrew. Roller noted that the jars “look like the jar and lid in the patent drawing and are probably the oldest of the

‘Millville’ family of jars” We concur.

Creswick (1987:158) illustrated the jar but failed to include a date range (Figure 31). These jars are so rare that we have been unable to find an example online.

John M. Whitall received Patent No. 32,594 for a “Fruit Jar” on June 18, 1861. The patent drawing showed a grooved finish (similar to those of a grooved-ring, wax-sealer fruit jar) with a sealing ring in the groove. The jar was topped by a domed glass lid held in place with a rounded clamp that held onto the jar’s finish (Figure 32).

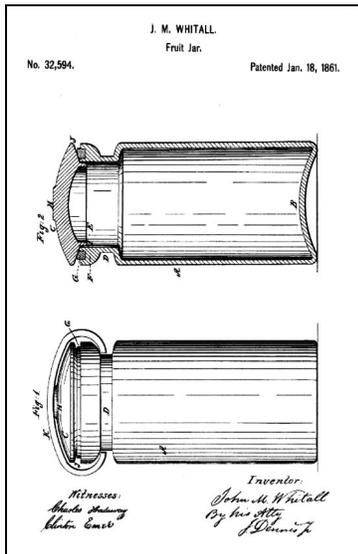


Figure 32 – Whitall 1861 patent



Figure 31 – Millville Fruit Jar (Creswick 1987:158)

**MILLVILLE FRUIT JAR, Hollow Stopper (ca. 1865)**

Roller (1983:252; 2011:378) described a second jar embossed on the front with “MILLVILLE (arch) / FRUIT JAR (inverted arch).” He had not seen a stopper but suggested the one from J.M. Whitall’s April 11, 1865, patent – which proved to be correct. Roller (1983:380) illustrated



Figure 34 – Millville jar (Glass Discoveries)

and described a variation that was identical but lacked embossing on the jar. The finish was a collar with a deeply recessed ledge, reminiscent of the cap-seat in the Common-Sense milk bottle. The hollow stopper was made of glass with a protruding section on top. This upper section terminated in a ground opening that was plugged with a cork, in effect creating a second, smaller container. The inside base of the stopper was embossed “J.M. WHITALL’S (arch) / APRIL 11 (horizontal) / 1865 (inverted arch).”<sup>4</sup> The base of the jar was unmarked, and Roller provided no date range (Figures 33 & 34).

Creswick (1987:158, 220) illustrated and discussed both variations. The patent (No. 47,238), as noted by Creswick, had been issued to John M. Whitall on April 11, 1865 (Figure 35). Whitall devised the “stopple” to avoid the need for a metal clamp to hold down the lid. He explained:

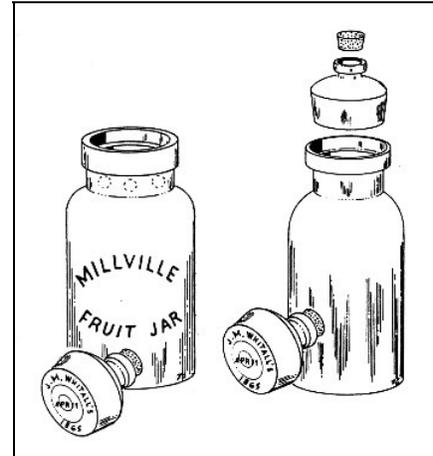


Figure 33 – Millville Fruit Jar (Creswick 1987:158; 220)

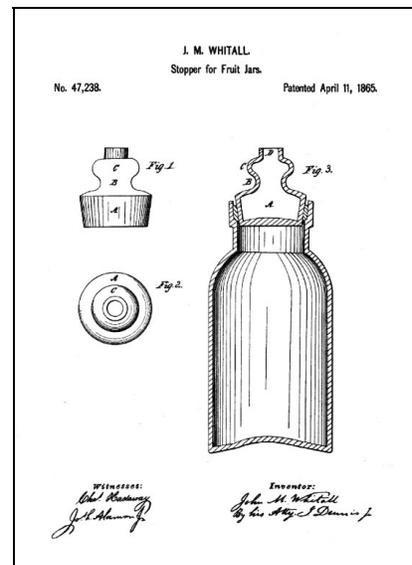


Figure 35 – Whitall 1865 patent

<sup>4</sup> This was the embossing shown in the drawing; the text include the word “PATENT.”

I have made a hollow stopple with an opening at the top, and of sufficient capacity to hold cold water to keep the stopple cool after it is inserted, and condense the steam from the hot fruit while it is cooling, so that the pressure of the air on the outside of the stopper, when the outside of the jar contracts by cooling and condensation, will hold the stopper in, so as to dispose with the metal strap or other devices heretofore to hold in the stopper or hold on the cover.

To form the actual seal, a “rubber packing” was placed between the stopple and the mouth of the jar, resting on the recessed ledge. Creswick (1987:220) also illustrated the same jar with no embossing on the side with the stopple embossed as described above. Although the idea was quite clever, the jar apparently was never popular. Leybourne (2014:347-348) noted several minor variations of these jars.

### MILLVILLE ATMOSPHERIC FRUIT JAR (mid-1860s-1880s)

Toulouse (1969:217-218) illustrated the embossing on this jar as “MILLVILLE (arch) / ATMOSPHERIC (horizontal) / FRUIT JAR (inverted arch)” on the front and “WHITALL’S PATENT (arch) / JUNE 18<sup>TH</sup> 1861 (inverted arch)” on the reverse. The lid had the same embossing as the reverse. Toulouse dated the jar ca. 1862 but noted that the patent information on the reverse was incorrect and belonged to a different jar. The actual patent for the Millville Atmospheric (No. 36,853) was issued to Thomas G. Otterson on November 4, 1862 (Figure 36). Toulouse was incorrect in this assertion and was probably confused by the shape of the cast-iron clamp. The Whitall patent clearly called for a slight groove in the top of the finish to take an India-rubber ring (used to affect the seal). The groove was lacking in the Otterson patent.

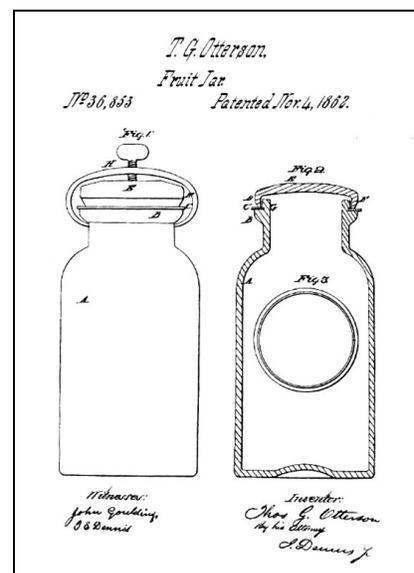


Figure 36 – Otterson 1862 patent

Although Roller (1983:251) compressed the first two variations into one entry, there were actually three important variations of the Millville Atmospheric Fruit Jar, each of which was marked on the sides as described above from Toulouse. The finish of each jar was made

with a shallow groove for an India-rubber ring as described in the patent. The jars differed only in the types of lids and the shoulder shapes.

**Variation 1** (mid-to late 1860s)

Roller (1983:251-252; 2011:377) noted that “jars with sharply-rounded shoulders, domed lid and curved clamp are probably older than the slope-shouldered flat lid and clamp jars more commonly found [i.e., Variation 2 discussed below].” His justification for the claim was that “the patent drawing

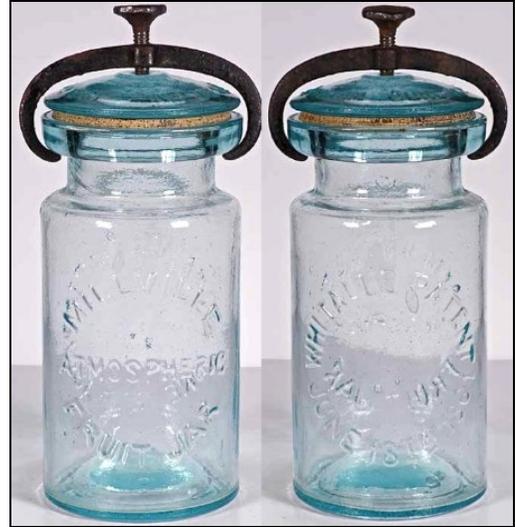


Figure 37 – Atmospheric V1 (North American Glass)



Figure 38 – Lid (North American Glass)

showed a jar with sharply-rounded shoulders and a domed lid.” The “sharply-rounded shoulders” appear almost squared, the lid was slightly domed, and the cast-iron clamp was distinctly curved (Figure 37). As described by Toulouse (above), the lid bore Whitall’s 1861 patent date (Figure 38). We concur with this being the first in the Atmospheric series, probably replacing the two Millville Fruit Jars discussed above during the mid-to late 1860s and being themselves replaced by the Variation 2 jars by ca. 1870.

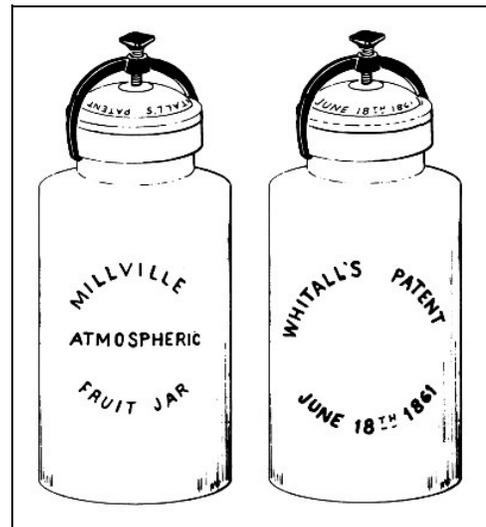


Figure 39 – V1 (Creswick 1987:158)

Creswick’s (variation (No. 2183) was topped by a domed glass lid and the embossing described above (Figure 39). The clamp was curved to fit the dome lid, and the shoulders of the jars were sharply abrupt or squared. The base was unmarked (Creswick 1987:158).

### Variation 2 (ca. 1869-ca. 1880)

As noted above, Roller (1983:251-252; 2011:377) collapsed both of the first two variations into one discussion. Variation 2 included the same embossing on both the jar and the lid. The three notable differences were to more rounded (rather than squared) shoulders, a flat lid, and a bracket-shaped (⌌) clamp. These were more common and were probably used from ca. 1869 to the late 1880s.

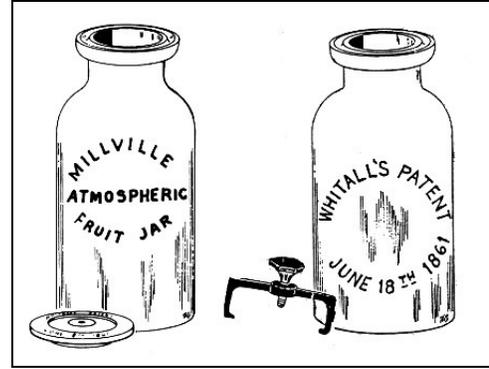


Figure 40 – V2 (Creswick 1987:158)

Creswick (1987:158) discussed this second variation (No. 2181) with a flat glass lid as having shoulders that were sometimes rounded and sometimes more steeply sloped (Figures 40 & 41). The base was embossed “W.T.&Co. (arch) / U.S.A. (inverted arch)” or a mold number or a star. Where the earlier jar was only produced in aqua color, Variation 2 was made in aqua, amber, and a few cobalt blue. A sub-variation (No. 2182) was identical, except that the “6” in “1861” was reversed.

Caniff (2001:7) illustrated the jars and cited a Dick Roller blurb that this Variation 2 jar appeared in a ca. 1869 advertising pamphlet, the earliest mention of the jar. This style lid was illustrated in the 1876 Whitall Tatum catalog (page. 48 – see Figure 30), although the jar was shown with no embossing. The catalog noted that the jar had “been in use about fifteen years” or 1861, the year of the patent. This should be taken with a grain of salt; it likely indicates that the *closure* was first used during the initial patent year – rather than this specific jar style. The same drawing appeared in the 1880 catalog (page 50) and the 1892 catalog. By the 1896 catalog, the Atmospheric was gone. Caniff (2001:8) also added that at least two of the slope-shouldered Atmospheric jars “were obviously made for the packer trade.” These had no side embossing, only the “W.T.&CO. U.S.A.” basemarks. A few embossed half-gallons were made of amber glass.



Figure 41 – V2 (North American Glass)

## Half-Pint Jar

Roller (1983:251) described a half-pint fruit jar that was only marked on the front with “MILLVILLE” in an arch and embossed “HITALL’S PATEN” in an arch on the reverse (Figure 42). The jar was sealed with an iron yoke clamp with a thumbscrew, the same flat closure used on the larger sizes of Variation 2 jars. He noted that “these half-pint jars were made from cut-down pint MILLVILLE ATMOSPHERIC FRUIT JAR molds.” Creswick (1987:159) added that the jar was embossed “W.T.&Co. U.S.A.” on the base (Figure 43). Caniff (2001:7) amended that some had the company embossing, while others had unmarked bases. Roller (2011:376) cited Jerry McCann as adding that “half quart” examples exist – pint jars made from cut-down quart molds with exactly the same embossing as the half-pint jars.



Figure 42 – ½ pint (North American Glass)

Caniff (2001:7) added that a “good number of the square-shouldered MILLVILLE ATMOSPHERIC half-pints were discovered in a university in Pennsylvania” about 1971. He wondered if they were “made at the same time as the other “older” MILLVILLE ATMOSPHERIC jars, or might they have been specially made some year later, from an old pint mold” as a museum jar? He reached no conclusion.

The Roller editors (2011:376) cited Jerry McCann that many of the half-pint jars have been found with lids that had three large holes ground in the top to accept glass or rubber stoppers made from Millville Atmospheric lid molds. The jars then became “Woulff bottles,” named for Peter Woulff, a British chemist who devised the containers to eliminate outside air while collecting gases. However, the editors placed this description under the MILLVILLE IMPROVED heading. This was probably an oversight; the jars had the 1861-patent lids, *much* more likely on these half-pints rather than the screw-top Improved jars.



Figure 43 – ½ pint (Creswick 1987:159)

### Variation 3 (1880s)

Roller (1983:252; 2011:377) showed Variation 3 as having the same rounded shoulders as Variation 2 but with a different lid. The flat glass lid was held in place by a “two-piece, riveted, sheet metal clamp” embossed “WHITALL’S PATENT (arch) / MILLVILLE NO. 3 (inverted arch).” He presented an undated ad that illustrated and discussed the new fastener



Figure 44 – V3 ad (Roller 1983:252)

(Figure 44). The ad noted that “the newer jars are the same as the older jars, but the new lid has one side of the central boss relieved to accept the rivet head of the clamp” (quoted in Roller 1983:252). He suggested that the jars were made ca. 1880s – and we agree.

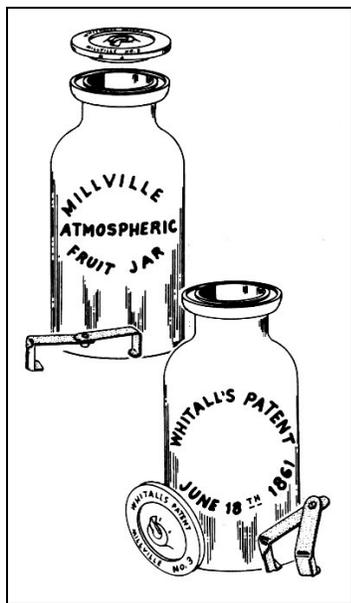


Figure 45 – V3 (Creswick 1987:158)

Creswick (1987:158) described the fastener as “consisting of two hooked strips, loosely connected together with a pivot pin” and illustrated the jar, dating it ca. 1884 (Figure 45). She noted that the new design had been patented in 1884 by Albert Tatum. Tatum applied for this patent on November 19, 1883, and received Patent No. 292,386 for a “Fastening for Fruit Jar Caps, &c.” on January 22, 1884 (Figure 46).

He assigned the patent to himself, Francis M. Underhill, James Whitall, Robert P. Smith, William H. Nicholson, and John Mickle. Caniff (2001:6-8) also illustrated many of the variations and noted that the last known advertisement for the jars was in 1891. Caniff (2001:7) added that The Millville No. 3 jar first appeared in the 1886 catalog – which fits with the patent date. The catalog also stated that the jars could “be made in blue glass on special order.”

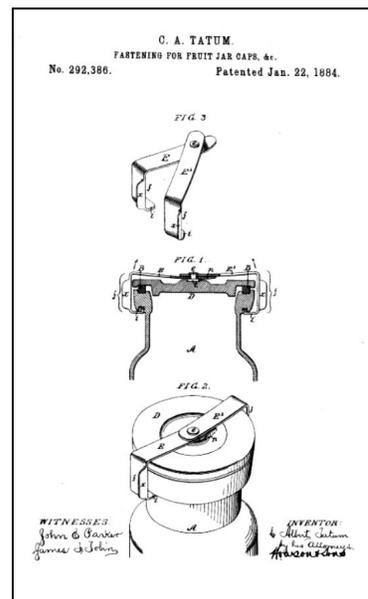


Figure 46 – Tatum 1884 patent

**MILLVILLE IMPROVED** (ca. 1871-ca. 1879)

Although Toulouse (1969:215) called the closure a “glass lid and metal screw-band top seal,” Roller (1983:251; 2011:378) described this jar as having a “straddle-lip top seal, glass lid and metal screw band” – in other words a Mason jar finish and closure. The side of the jar was



Figure 48 – Improved (North American Glass)

embossed “MILLVILLE (arch) / {WTCO monogram} / IMPROVED (inverted arch).” The insert was embossed “WHITALL’S PATENT (downward arch) / JUNE 18<sup>TH</sup> 1861 (upward arch)” around an embossed cluster of grapes in the center – despite the obvious fact that the finish and closure had nothing to do with the Whitall patent (Figure 47). He noted that the jar was shown in an 1878 ad but was not illustrated in the 1880 Whitall Tatum catalog.



Figure 47 – Improved lid (eBay)

Creswick (1987:159) illustrated this mouth-blown jar with a continuous-thread finish and the accompanying glass insert and screw band (Figures 48 & 49). The base was unmarked, and Creswick did not attempt to set a date range. The Millville Improved Jar was illustrated on page 47 of the 1876 Whitall

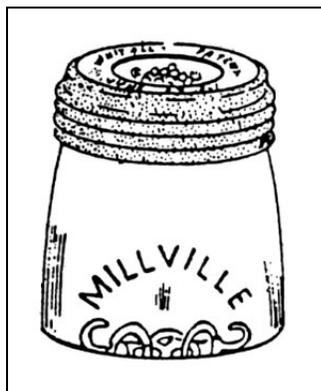


Figure 50 – ½ pint (Creswick 1987:159)

Tatum catalog (see Figure 29), but neither that illustration, the drawing in Creswick, nor photos of the jar show an ampersand in the monogram – even though the jar clearly was made many years prior to the 1901 ampersand deletion. The jars were probably made from ca. 1871, when the original Mason jar patents expired until ca. 1879.

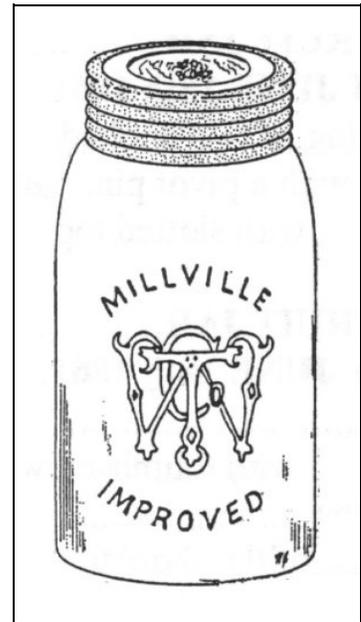


Figure 49 – Improved (Creswick 1987:159)

Roller (1983:251) and Creswick (1987:159) both discussed and/or illustrated a second half-pint jar (see the Atmospheric section above for the first one) that was also embossed “MILLVILLE” on the front with the upper ca. 1/4 of the WTCO monogram used on the Millville Improved jar on the reverse (Figure 50). Like the jar described above, this was almost certainly made from a cut-off one-pint mold. The base was apparently unmarked.

Table 4 places the Whitall Tatum fruit jars in a chronological order, as well as including all of the Leybourne variations.

**Table 4 – Whitall Tatum Fruit Jar Variations**

Front Emb.	Reverse Emb.	Closure Type	Closure Emb.	Date Range
MILLVILLE / FRUIT JAR	None	Slightly dome-shaped glass lid / squared iron yoke clamp w/ thumbscrew	WHITALL’S PATENT / JUNE 18 <sup>TH</sup> 1861	early 1860s
MILLVILLE / FRUIT JAR (or none)	None	Hollow stopple with cork plug	J.M. WHITALL’S / APRIL 11 / 1865	ca. 1865
MILLVILLE / ATMOSPHERIC / FRUIT JAR	WHITALL’S PATENT / JUNE 18 <sup>TH</sup> 1861	Dome-shaped glass lid / crescent iron yoke clamp w/ thumbscrew	WHITALL’S PATENT / JUNE 18 <sup>TH</sup> 1861	mid- to late 1860s
MILLVILLE / ATMOSPHERIC / FRUIT JAR	WHITALL’S PATENT / JUNE 18 <sup>TH</sup> 1861	Flat glass lid / squared iron yoke clamp w/ thumbscrew	WHITALL’S PATENT / JUNE 18 <sup>TH</sup> 1861	ca. 1869-ca. 1880
MILLEVILLE (half pint)	HITALL’S PATEN	Flat glass lid / squared iron yoke clamp w/ thumbscrew	WHITALL’S PATENT / JUNE 18 <sup>TH</sup> 1861	ca. 1869-ca. 1880
MILLEVILLE / WTCO monogram / IMPROVED	None	Glass insert with metal screw band	WHITALL’S PATENT with grape cluster (ctr)	ca. 1871-1879

Front Emb.	Reverse Emb.	Closure Type	Closure Emb.	Date Range
MILLEVILLE / top part of WTCO monogram (half pint)	None	Glass insert with metal screw band	WHITALL'S PATENT / JUNE 18 <sup>TH</sup> 1861 with grape cluster (ctr)	ca. 1871-1879
MILLVILLE / ATMOSPHERIC / FRUIT JAR	WHITALL'S PATENT / JUNE 18 <sup>TH</sup> 1861	Flat glass lid & metal fastener (two hooked strips)	WHITALL'S PATENT / MILLVILLE No. 3	1880s

## HOUSEHOLD W.T.CO. FRUIT JAR

Although Whitall Tatum & Co. entered the fruit jar market in 1861 and continued to sell its products into the 1880s, possibly as late as 1891, it had discontinued advertising the jars prior to the 1901 name change. However, Creswick (1987:86) discussed and illustrated a jar embossed “HOUSEHOLD (arch) / W.T.CO. (horizontal) / FRUIT JAR (inverted arch) on the front. The jar had an unembossed glass lid held in place by a flat metal strip attached with a thumb screw (Figure 51). She dated the jars ca. 1857 to 1938 but noted that “two jars are presently known” (as of 1987).

These two jars do not fit with any other known Whitall Tatum pattern and present us with an enigma. The sealing mechanism was very crude for a jar with a logo that should fit a post-1901 period, and the shape of the jar was too tall and thin to be practical as a fruit jar. With only two examples known, the jars were either very old, or few were made, or both. The shallow groove at the top of the finish, “for a rubber gasket” according to Creswick, is reminiscent of the January 18, 1861, John M. Whitall patent for a fruit jar – with a similar grooved ring – the Millville Atmospheric jar used throughout the 1861-1880s period.

We suggest that this jar was the prototype for Variation 3 of the Millville Atmospheric Fruit Jar with the lid embossed “WHITALL'S PATENT MILLVILLE No. 3,” made to fit

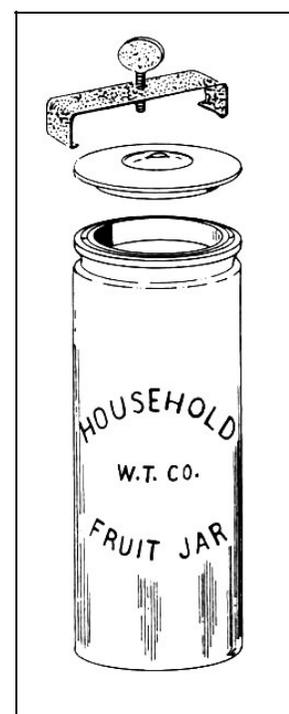


Figure 51 – Houselold jar (Creswick 1987:86)



Although we have not discovered the exact embossing noted by Toulouse, North American Glass contributed photos of several of these museum jars and lids held in place by cast-iron clamps. Even though the lids for most of these were patented in 1895, the bases exhibited distinct pontil scars – a hangover from much earlier techniques. The jars had no seams, and the use of the pontil appears to be applied to keep from marring the sides of the jar in any way (Figure 55). Caniff (2001:8) added that the base had “the look and feel of being lightly fire polished.” By 1896, 22 sizes of the jars were available.



Figure 56 – Early lid (North American Glass)

The pre-1895 glass lids were embossed “WHITALL TATUM & CO. PHILADELPHIA NEW YORK” and used the same type of thumb screws as the Millville Atmospheric lids. Directly below the thumb screw, the single ring for hanging the display item was visible through the tops of the lids (Figure 56).

Glass lids made to the 1895 patent were embossed “WHITALL TATUM & CO. PHILADELPHIA NEW YORK” around the outside edge of the lid, with “PAT. JUNE 11<sup>TH</sup> 1895” on the slightly domed inner section. The two rings on the inside of the lids (to suspend the display item) were clearly visible through the tops of the lids. The only photos we have found of the 1895-patent lids all had the 1903-patent clamps, although the older clamps were almost certainly used with those lids between 1895 and 1903 (Figures 57 & 58). Although museum jar production continued until at least 1924, we will deal with post-1901 jars in Part II of this series.

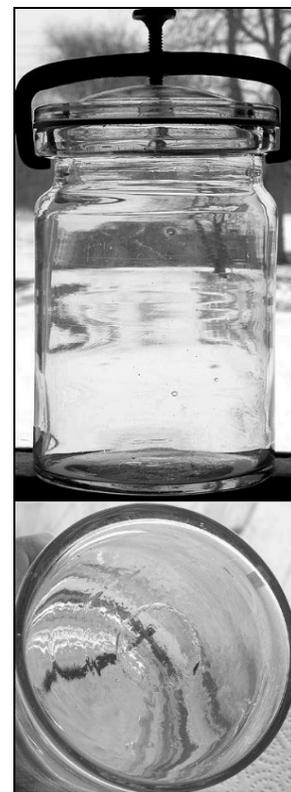


Figure 55 – Early jar (North American Glass)



Figure 57 – Later jars (North American Glass)

## Other Whitall Tatum Jars

Whitall Tatum offered a variety of other types of jars, some advertised consistently throughout the tenure of the firm and some periodically. Most of these carried typical marks used by the company.

### W.T.&Co.

(number) [late 1870s-ca. 1890]

We found this mark on pickle jars from Whitall Tatum, and it may grace other food jars made by the company. It may have been used as early as the late 1870s until about 1890. Pickle jars and other food containers were offered in both the 1876 and 1880 catalogs.

### W.T.&Co.

(3- or 4-digit number)

(letter) [early 1890s-1901]

We discovered this logo variation on a Phenix (Whitall Tatum spelling) Ointment Pot marked “W.T.&Co. / 681 / D / PAT JAN 1 1889” and observed the same patent date on an amber jar (Figure 59). The identical configuration appeared, along with a patent date of “APR 15 1890,” on a jar made of opal or milk glass. These were machine-made salve jars with non-continuous-thread finishes. The numerals indicated catalog numbers. The January 1, 1889, date was for Design Patent No. 18,836. John Whitall Nicholson and Joshua W. Gaskill applied for the patent for a “Design for a Glass Ointment-Pot” on November 18, 1888, and assigned the patent to the Whitalls and several others – apparently directors of the company at that time (drawing missing from patent).



Figure 58 – Later lid & base (North American Glass)

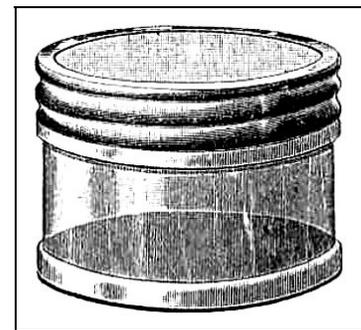


Figure 59 – Phenix Ointment Pot (WT 1896 catalog)

Other similar jars made of opal or milk glass had the shoulder and heel bands of the Nicholson & Gaskill jars and were topped with domed lids with acorn-shaped spires. These were embossed “WHITALL TATUM & CO. (arch) / PHILA. & N.Y. (inverted arch)” on the bases with a single letter (B and C in our sample) in the center (Figure 60). Our only dating for these is the last half of the 19<sup>th</sup> century.

Christian W. Meinecke applied for a patent for a “Design for a Pot or Jar” on March 13, 1890, and received Design Patent No. 19,762 on April 15 of the same year. The body of the pot was octagonal (he called it “polygonal” – probably so that the same patent would cover

any number of sides), although the base and shoulder were both circular. The jar was topped by a continuous-thread finish. Meinecke called these “Pomatum-Pots.”

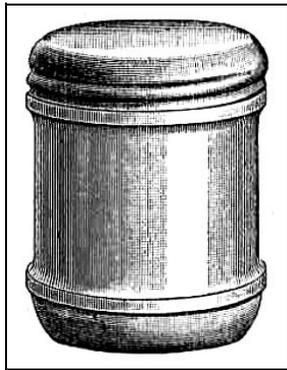


Figure 61 – Phenix jar (WT 1896 catalog)

Although we have not seen an example of the patent date on a jar yet, the Whitall Tatum catalogs from at least 1896 to 1902 noted the Manhattan Ointment Pots (page 25), patented June 7, 1892 (Figure 61). Francis M. Underhill applied for two patents on May 6, 1892, both for

ointment pot designs. One design had bands around both the shoulder and heel, and Underhill received Design Patent No. 21,612 for that jar on June 7 (Figure 62). The other design lacked the bands but was otherwise identical, and Underhill received Design Patent No. 21,628 for that one on June 21. The simpler design was apparently never offered in Whitall Tatum catalogs.

Buchner et al. (2007:237-238) found an amber jar embossed “W.T.CO. / 1212 / M” on the base and a milk glass jar embossed “W.T.CO. / 1225 / A” on the base. The amber



Figure 60 – Jar (North American Glass)

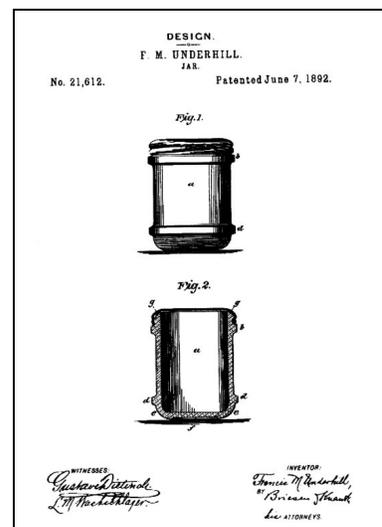


Figure 62 – Underhill 1892 patent

container was a one-ounce Bronx Ointment Pot (available in both amber and “opal”). These were tall pots with rounded heels and screw lids, offered in sizes from one-half to four ounces. The milk glass jar was a four-ounce Morris Ointment Pot (also offered in both amber and opal – i.e., milk glass). The Morris pots were shorter, with sharper heels and screw lids. These, too, ranged in size from one-half to four ounces (Whitall Tatum 1909:29).

Whitall Tatum’s 1880 catalog (pp. 25, 68) only showed jars with fitted lids – none with continuous thread finishes. Unfortunately, the 1887 and 1892 catalogs were limited in scope and did not show short jars, such as the ones described above. However, specimen jars had no threaded lids, and the only fruit jars listed were “for corks.” Glycerine Jelly jars were the only items listed with continuous thread finishes and “nickel-plated screw caps” (Whitall Tatum catalog 1892). By 1896, however, the catalog offered Phenix ointment pots (with the patent date “JAN 1 1889”), Millville ointment pots, and Manhattan ointment pots (Whitall Tatum 1896). These jars and ointment pots, therefore, probably became available from Whitall Tatum sometime between 1892 and 1896. Opal or milk glass jars could have been made at least as early as 1876.

Jars of this type were made by press molding, a technique used as early as the late 17<sup>th</sup> century. In this technique, glass was dropped into a mold, and a plunger was depressed into the center to force the glass to conform to the molded sides. The plunger was withdrawn, and the two (or more) part mold was opened to remove the final product. In this technique, the inside of the container does not conform to the outside (unlike blown bottles) and, instead, retains the shape of the plunger. External mold lines often resemble those of machine-made bottles, even in hand-pressed products (Jones & Sullivan 1989:33-35).

The process, of course, advanced from hand pressing to semiautomatic to fully automatic machines, although we have not found a specific chronology for this. Presumably, it followed the same broad dates as other machine development. Although neither Toulouse, the historical section of the 1880 catalog, nor Bethman addressed pressed-glass machines in connection with Whitall Tatum, empirical evidence shows that the technique was used to form this type of jar.

W.T.&Co.  
 (3- or 4-digit number)  
 (letter)  
 U.S.A.

[ca. mid-1890s-1901]

Elliott and Gould (1988:192) showed a single example of a Hawaiian bottle that was embossed “1020 / A.” The authors dated the bottle “late 1890’s or early 1900’s.” Bottle No. 1020 in the 1902 Drug, Perfume & Chemical Bottles catalog from Whitall Tatum was a two-

ounce tooth wash bottle that sold for \$6.25 per gross (Figure 63). The drawing in the catalog exactly matched the photo in Elliott and Gould. It is safe to say at this point that three- or four-digit numbers embossed on Whitall Tatum bases were catalog numbers. Since the basemark included the ampersand, Whitall Tatum must have offered this design prior to the 1902 catalog, possibly as early as 1897 – since the style did not appear in the 1896 catalog.

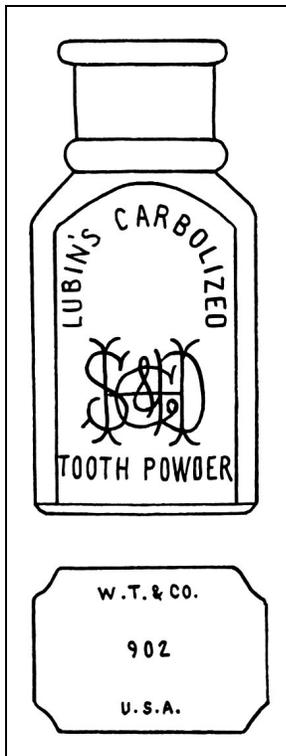


Figure 64 – Tooth Powder (Bethman 1991)

Two other tooth powder bottles with three-digit numbers (453, 491) and the same pattern of logo have been offered on eBay. Both matched the shape shown in the 1902 catalog. No. 453 contained 2 ¼ ounces; No. 491 had 6 ½ ounces. They were otherwise identical.

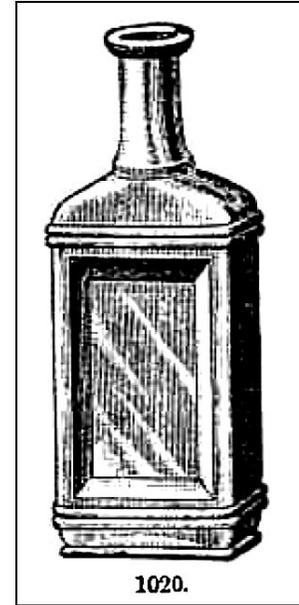


Figure 63 – Tooth Powder (WT 1902 catalog)

Bethman (1991:680) illustrated three tooth powder bottles with this type of mark. The central number was 902, and he dated the bottles 1898-1903 (Figure 64). The bottle was shown in the 1896 catalog put out by Whitall Tatum (Figure 65). The bottle was described in two variations, both two-ounce. One had an “Acorn Cap,” the other an “L.4 Slip Cap” (although the meaning of the designation is



Figure 65 – Acorn cap (WT 1896 catalog)

Buchner et al. (2007:237) excavated three examples of a milk-glass tooth powder “box” embossed “W.T.CO. / 643 / A” on the base. Whitall Tatum offered these round boxes with a choice of plain lids or ones lettered “Cold Cream” (both with continuous threads) for \$9.00 per gross. They also sold these boxes in ½- and 2-ounce sizes (Whitall Tatum 1919:30).

**H.B.CO. (and other) Cobalt Blue Poison Bottles** (prob. 1880s-1917)

Toulouse (1971:243) tentatively attributed the “H.B.Co.” mark to the Hagerty Brothers & Co. and dated it “circa 1880 to 1900 if true.” He noted that the company was first listed as Hagerty Glass Works (1849-1874) and as Hagerty Brothers & Co. from 1885. Lacking the ampersand, the mark remains in question. Griffenhagen and Bogard (1999:124) dated the mark at 1880-1920 and also attributed it to the Hagerty Brothers, almost certainly following Toulouse (at least for the early date).



Figure 66 – H.B.CO. Poison (eBay)



Figure 67 – Stopper (eBay)

Although Toulouse failed to state the type of bottle bearing the mark, his identification of the Hagerty brothers probably indicates it was a medicinal bottle of some sort (their primary product). On eBay (and other venues), we have frequently encountered various sizes of cobalt blue poison bottle.

The have all been round in cross-section and embossed with a basket weave design punctuated with small crosses at every intersection of the lines (Figure 66). One side was bare for a paper label, and the bases were embossed “H.B.CO.” in the centers. Each was topped with a squared, one-part finish

	In 1 gross assorted	For Corks.	Stoppered.
boxes.....	\$ 8 50		
½ ounce.....	3 75	\$11 00	
1 “.....	5 00	12 00	
2 “.....	6 25	13 00	
3 “.....	7 75	16 00	
4 “.....	9 25	19 00	
6 “.....	11 25	22 50	
8 “.....	14 00	27 00	
16 “.....	22 00	40 00	

THE SAME DISCOUNT AS ON FLINT-GLASS.

Figure 68 – Poison bottles (WT 1876 catalog)

and sealed with a cork-wrapped stopper (Figure 67). The stoppers were covered with four-sided pyramids to alert anyone opening a bottle in the dark that he or she was dealing with a poisonous substance. In addition, each stopper was embossed with the word “POISON” on each side and at the top.

The 1876 catalog from Whitall Tatum & Co. listed and illustrated similar bottles although Whitall Tatum did not use the “H.B.CO.” mark on any other bottles that we can determine (Figure 68). It is likely that the initials indicate a distributor or medicine company rather than a glass house.

Colcleaser (1965:61) showed two cobalt blue, machine-made poison bottles embossed on the bases with H.B.CO., almost certainly the same bottle type described above. The bottle type, however, was not listed in the 1898 Hagerty Brothers catalog, although the catalog illustrated similar bottles with glass stoppers in blue glass (Hagerty Brothers & Co 1898:13-15). The bottles, frequently listed on eBay, may have come from a later (or earlier) catalog.

The stopper for the bottle, however, was clearly the one patented by Charles A. Tatum on July 1, 1884 (Figure 69). Tatum applied for Patent No. 15,120 on January 31, 1884. The drawings show an almost exact match for the stopper on the cobalt blue jars. These stoppers were offered by Whitall Tatum in the 1887 catalog and listed as “New Stoppers for use in bottles containing Poison.” The bottles were made of “Blue Glass” and were “covered with sharp points in such a manner as to make it impossible for the stopper to be removed from the bottle without the fingers coming in contact with the points” (Whitall Tatum & Co. 1887:25). According to Griffenhagen & Bogard (1999:94), the bottled design was apparently never patented.

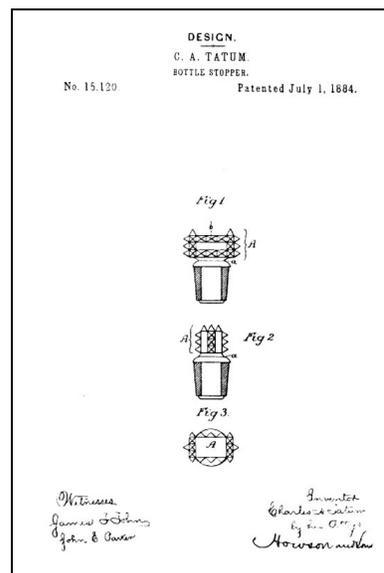


Figure 69 – Tatum 1884 patent

The exact bottle design was illustrated in the Whitall Tatum catalog for 1887 in the “Blue Ware” section. Whitall Tatum & Co. (1887:24) added:

These are especially useful in preventing a wrong use of Liniments, and for the various poisonous articles, as Laudanum, Corrosive Sublimate, Oxalic Acid, Oil of Vitriol, etc., which are likely to be kept in the family medicine closet.

The frequent accidents in the use of POISONS have made a demand from well-appointed apothecary stores for a bottle which shall protect patients from danger of mistakes both night and day – by the *touch* as well as *sight* – in the use of poisonous preparations.

We have met this demand by a new line of bottles of a *deep cobalt blue* color. The surface is also covered with sharp *diamond-shaped points*, tastefully arranged. It would not be easy to make any mistake with these bottles in use.

By the 1892 catalog, neither the bottles nor stoppers were still identified by the word “new.” It is thus virtually certain that these bottles were made by Whitall Tatum beginning ca. 1887, and the “H.B.Co” embossed on the base indicated a chemical or pharmaceutical company rather than a glass house. The stopper was listed until at least 1902, but the bottles continued in the catalogs until at least 1909 (Whitall Tatum Co. 1909).

### Possible User

Sean Feeny suggested that “the Patent for this design was given to Joseph Harrison in 1871” (Figure 70). That *may* connect the latticed poison bottle design with Harrison Brothers & Co. The brothers operated the Harrison Brothers Chemical Works, producing acids and paints. However, the firm name included an ampersand – missing from the “H.B.CO.” initials on the bottle bases. Of course, that lack was identical on the Toulouse suggestion that the bottles were made by Hagerty Brothers & Co. The Joseph Harrison connection, however, is *very* tenuous. Harrison’s bottle was adorned with spikes rather than latticework – an unlikely match. According to Griffenhagen

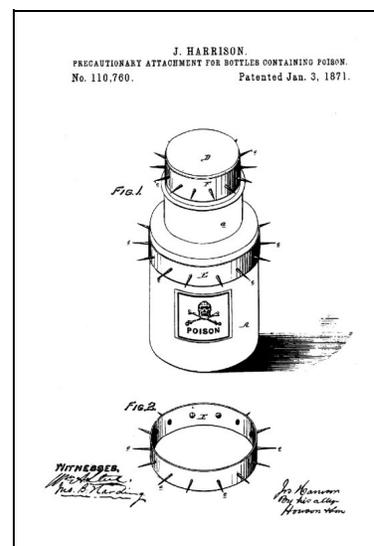


Figure 70 – Harrison 1871 Patent

& Bogard (1999:94), Harrison's patent was the first of the distinctive poison bottle shapes. In addition, the Harrison family names were John, Thomas, Michael, and George – *not* Joseph.

### **Harrison Brothers & Co., Philadelphia, Pennsylvania (1833-1917)**

In 1793, John Harrison became the first producer of sulfuric acid in the United States. His sons, Thomas Harrison, Michael L. Harrison, and George L. Harrison, continued the business after his death in 1833 as Harrison Brothers & Co. The Harrison Brothers Chemical Works manufactured various forms of acid, leads, and paints at various locations throughout Philadelphia, settling at Grays Ferry in 1865. E.I. du Pont de Nemours & Co. purchased the factory in 1917 (Helmer 2017).

### **Discussion and Conclusions**

With the exception of a couple of early owners, the first segment of Whitall Tatum history is mostly complete. Similarly, both the identification and dating of the manufacturer's marks from the firm are as accurate as current data would allow – and they will probably not change much with future research.

The final mark – “H.B.CO.” – however, remains in contention. The patent by Charles Tatum and the inclusion of identical poison bottles in the Whitall Tatum catalogs makes it almost certain that the firm produced the bottles. The identification of the user, however, is not as strong as we would prefer. Our best choice is Harrison Brothers & Co. – even though the mark did not include an ampersand (&). Perhaps future research will discover a better connection between the Harrison Brothers and the bottles – or find an entirely different match.

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## Sources

### *American Bottler*

1908 "Obituaries." *American Bottler* 28(6):64. [June 15]

### *American Glass Review*

1927 "Glass Factory Yearbook and Directory." *American Glass Review*, Pittsburgh, Pennsylvania.

### *American Glass Worker*

1886 "Trade Notes." *American Glass Worker* 1(21):2.

### Bethman, David

1991 *The Pioneer Drug Store: A History of Washington State Drug Stores and Their Bottles*. Privately printed, n. p.

### Buchner, C. Andrew, Eric Albertson, Carl E. Brown, and N.C. Kaplan

2007 *Lamar Terrace Treasure: Data Recovery Excavations at Site 40SY695, Memphis, Tennessee*. Panamerican Consultants, Inc., Memphis, Tennessee.

### Cannif, Tom

2001 "Fruit Jar Rambles." *Antique Bottle & Glass Collector* 17(9):6-9.

### Colcleaser, Donald E.

1965 *Bottles of Bygone Days*. Privately Published, Napa, Cal.

### Creswick, Alice

1987 *The Fruit Jar Works, Vol. I, Listing Jars Made Circa 1820 to 1920's*. Douglas M. Leybourne, N. Muskegon, Michigan.

### Depew, Chauncey M.

1895 *One Hundred Years of American Commerce*. D.O. Haynes & Co., New York.

Elliott, Rex. R. and Stephen C. Gould

1988 *Hawaiian Bottles of Long Ago*. Hawaiian Service, Inc., Honolulu, Hawaii.

Figgis, W.W.

1919 "History of Glass, Ancient and Modern." *Western Druggist* 41(7):11-152.

*Friends' Intelligencer*

1896 "A Quaker Firm's Rules." *Friends' Intelligencer* October 10, 1896: 687.

Giarde, Jeffery L.

1980 *Glass Milk Bottles: Their Makers and Marks*. Time Travelers Press, Bryn Mawr, California.

Griffinhagen, George and Mary Bogard

1999 *History of Drug Containers and Their Labels*. American Institute of the History of Pharmacy, Madison, Wisconsin.

James, Nancy Van Doren

1998 *Images of American Millville*. Arcadia Publishing, Charleston, South Carolina.

Hagerty Bros. & Co.

1898 "Catalog." Haggerty Bros. & Co.

Harrison, Charles

2013 *Cumberland County, New Jersey: 265 Years of History*. History Press, Charleston, South Carolina.

Helmer, Madeleine

2017 "Tracking the Evolution of Industry at 34th and Grays Ferry." Hidden City.

<https://hiddencityphila.org/2017/03/tracking-the-evolution-of-industry-at-34th-and-grays-ferry/>

Horner, Roy

1985 *Tempo, the Glass Folks of South Jersey*. Privately printed. Revision of the 1969 edition. [includes a reprint of the 1883 Cushing and Sheppard history of the Whitall Tatum & Co. Glass Works]

James, Nancy Van Doren

1998 *Images of American Millville*. Arcadia Publishing, Charleston, South Carolina.

Jones, Olive and Catherine Sullivan

1989 *The Parks Canada Glass Glossary for the Description of Containers, Tableware, Flat Glass, and Closures*. Parks Canada, Ottawa.

Leybourne, Douglas M.

2014 *The Collector's Guide to Old Fruit Jars: Red Book 11*. Privately published, North Muskegon, Michigan.

Lefebvre, Marcel

1949 "Glass in the Indian Country." *Glass Industry* 30(2):88-91, 117.

Lockhart, Bill, Carol Serr, David Whitten, Bill Lindsey, and Pete Schultz

2006 "The Dating Game: Whitall Tatum & Co." *Bottles and Extras* 17(3):57-69.

Markota, Peck and Audie Markota

1972 *Western Blob Top Soda and Mineral Water Bottles*. Highlands Printing and Publishing Co., North Highlands, California.

McKearin, Helen and Kenneth M. Wilson

1978 *American Bottles & Flasks and Their Ancestry*. Crown Publishers, New York.

*The Milk Route*

2006 "The Crystal Milk Jar." *The Milk Route* 310:1-2.

Miller, Michael R.

1999 *A Collector's Guide to Arizona Bottles & Stoneware: A History of Merchant Containers in Arizona*. Privately Printed, Peoria, Arizona.

Miller, Thomas

n.d. "St Clair Co., Illinois Blown-in-the-Mold Prescription and Medicine Bottles, 1870-1920." Unpublished manuscript for the Metro-East Antique Bottle and Jar Club.

*National Glass Budget*

1897 "Glass Directory." *National Glass Budget* 12(42):7.

1898a "Flint, Green and Cathedral Glass Factories of the United States and Canada in Operation." *National Glass Budget* 13(38):7.

1898b "Flint Bottle Factories." *National Glass Budget* 14(18):3.

1900 "Complete List of Glass Factories in the United States and Canada." *National Glass Budget* 15(48):11.

1901 "Complete List of Glass Factories in the United States and Canada." *National Glass Budget* 17(1):11.

1902 "Complete List of Glass Factories in the United States and Canada." *National Glass Budget* 17(52):11.

1905 "Whitall Tatum Company" Advertisement. *National Glass Budget* 20(45):11.

Pepper, Adeline

1971 *Glass Gaffers of New Jersey*. Scribner's Sons, New York.

Pollard, Gordon

1993 *Bottles and Business in Plattsburgh, New York: 100 Years of Embossed Bottles as Historical Artifacts*. Clinton County Historical Association, Plattsburgh.

Preble, Glen R.

2002 *The Rise & Demise of Colorado Drugstores 1859-1915 - A Prescription For The Bottle Collecting Habit*. Antique Bottle Collectors of Colorado, Inc., Denver, Colorado.

Ring, Carlyn

1980 *For Bitters Only*. Nimrod Press, Boston.

Roller, Dick

1983 *Standard Fruit Jar Reference*. Acorn Press, Paris, Illinois.

1997 "Millville, NJ History Notes." Dick Roller files.

2011 *Standard Fruit Jar Reference: 2011 Update*. Edited by Jerome McCann and Barry Bernas. Fruit Jar Annual/Phoenix Press, Chicago.

Schulz, Jeanette K. and Peter D. Schulz

1990 Embossed California Bottles from the IJ89 Block, Sacramento. *Papers in Northern California Anthropology* 4:307-369.

Schulz, Peter D., Betty J. Rivers, Mark M. Hales, Charles A. Litzinger, and Elizabeth A. McKee

1980 *The Bottles of Old Sacramento: A Study of Nineteenth-Century Glass and Ceramic Retail Containers, Part I*. California Archaeological Reports, No. 20. Department of Parks and Recreation, Sacramento, California.

Sewell, Steve

2010 "Millville's First Glassworks." *Antique Bottles.net* [Jan 23]

<https://www.antique-bottles.net/threads/james-lees-glasstown-millville-new-jersey.41063>  
7/

Shoemaker, Robert

1890 "The Olden-Time Apothecary." *Pharmaceutical Era* 4(23):21.

Tatum, C. A.

1900 "One Hundred Years of Achievement in American Glass Manufacture. *Scientific American Supplement* 1208:20329-20330.

Toulouse, Julian Harrison

1969 *Fruit Jars*. Thomas Nelson & Sons, Camden, New Jersey.

1971 *Bottle Makers and Their Marks*. Thomas Nelson, New York.

Von Mechow, Tod

2020 "Soda & Beer Bottles of North America: Bottle Attributes - Beer & Soda Bottle Manufacturers." <http://www.sodasandbeers.com/SABBottleClosures.htm>

Whitall, Tatum, & Co. or Whitall Tatum Co.

1876 *Whitall, Tatum, & Co.; Proprietors of the Phoenix 1876*. Milleville, New Jersey.

1880 [1971] *Whitall, Tatum, & Co. 1880*. American Historical Catalogue Collection. Pyne Press, Princeton.

1887 *Annual Price List. Whitall, Tatum & Co.* Philadelphia, Pennsylvania.

1892 [n. d.] *Edited Reprint 1892 Annual Price List, Whitall, Tatum & Co.* Edited by Shirley R. Bailey, Milleville, New Jersey.

1896 *Whitall Tatum & Co.* Philadelphia, Pennsylvania. {Lloyd Library & Museum}

1902 [1967] *Drug, Perfume and Chemical Bottles, 1902*. (Whitall Tatum Company) Edited by D. James, Antiques Research Publications, Chattanooga, Tennessee.

1909 *Annual Price List*. Whitall Tatum & Co., Philadelphia, Pennsylvania.

Wikipedia

2020 "John M. Whitall." [https://en.wikipedia.org/wiki/John\\_M.\\_Whitall](https://en.wikipedia.org/wiki/John_M._Whitall)

Zumwalt, Betty

1980 *Ketchup Pickles Sauces: 19th Century Food in Glass*. Mark West Publications, Fulton, California.

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