

The Tibby Brothers, the Toledo Glass Co., and the Cryptic T Logo

Bill Lockhart, Beau Schriever, Bill Lindsey, Bob Brown, and Carol Serr

The Tibby Brothers opened their first glass factory at Pittsburgh in 1866, moving the plant to Sharpsburg, Pennsylvania, in 1872 and closing the Pittsburgh plant eight years later. The second generation incorporated the firm as the Tibby Brothers Glass Co. in 1904 and remained in business until ca. 1915. W.C. Tibby remained in the glass business as a principal in the Wightman Glass Co., restructuring the firm as the Tibby-Brawner Glass Co. in 1920. The firm remained in business until at least 1944. The Tibby Brothers were the probable users of the “T” logo on mouth-blown bottles, possibly continuing the mark into the Tibby Brothers Glass Co. period. The firm also embossed “TIBBY BROTHERS” on some early milk bottles. We have found no logos for Tibby-Brawner, and the firm was *not* the user of the “TB” mark.

A simple “T” logo was also found on machine-made bottles, each with a distinctive double-ring scar, made by the 1911 O’Neill machine. Since the Tibby Brothers never used machines, this was almost certainly the mark of the Toledo Glass Co., operated by Frank O’Neill and others from 1916 to 1920.

Histories

Tibby Brothers, Pittsburgh (1866-1880)

The plant established by James Tibby, Jr., along with his brothers, John, William, and Matthew, began operations on June 19, 1866, at 13 Wood St., Pittsburgh, Pennsylvania. Both John and William had worked in Pittsburgh glass factories since at least 1857, so the family was steeped in production experience. The factory originally fired a single 6-pot furnace but soon expanded to 10 pots. The main products made by the Tibby Brothers were prescription bottles and vials, although the plant also produced some catsup and beer bottles, along with milk and pickle jars and flasks. When the main office relocated to Sharpsburg in 1880, the brothers closed the Pittsburgh plant (Hawkins 2009:486-487; Roller 1997a).

Tibby Brothers, Sharpsburg, Pennsylvania (1872-1903)

In 1872, the Tibby Brothers constructed a single furnace plant with 10 pots at Sharpsburg, making the same product line as the original factory and added a second furnace in 1875. They added a third 10-pot furnace in 1881 (making a total of 30 pots) and made flint prescription vials and bottles. By 1883, the brothers claimed they made “all kinds of flint glass.” In December 1884, the firm joined with J.T.&A. Hamilton and W.H. Hamilton & Co. to reduce prices by cutting wages to its employees. The tactic was not effective in the long run. On April 6, 1888, an employee, Henry Biggerstaff, noticed a gas leak at one furnace and foolishly lit a match. The resulting explosion blew him 30 feet away and destroyed the furnace – which was rebuilt. Henry was not so lucky (Commonwealth of Pennsylvania 1882:57; Hawkins 2009:487-488; *Repository* 4/6/1888; Roller 1997a; *Wheeling Register* 12/14/1884).

The Tibby Brothers’ 1893 catalog showed that they offered 53 styles of prescription bottles with five finish options, as well as union (strap-sided) and shoe-fly (coffin-shaped) flasks. An 1896 ad provided some historical information about the firm and its operation, noting that the plant made “milk jars, catsups, beer, brandy, and flasks, etc.” The ad also showed an oval medicinal bottle with a TB monogram embossed in a circular plate on the front (Figure 1). In 1897, the flint bottle makers of the United States combined to form the American Flint bottle Manufacturers’ Association. The purpose of the group was to establish fixed prices and working conditions at the various factories. Only two companies, the W.H. Hamilton Glass Co. and the Tibby Brothers, refused to join (*New York Times* 1897).

TIBBY BROTHERS,
MANUFACTURERS OF ALL KINDS OF
FLINT PRESCRIPTION VIALS, BOTTLES, FLASKS, ETC.,
Office and Works, SHARPSBURG, PA.

In a branch of industry which requires special training of a high order, technical knowledge and expert skill, the firm of Tibby Brothers has been awarded a very large measure of support as manufacturers. They enjoy a reputation and trade thoroughly national in extent and eminently creditable. They established their business originally in 1806, at Twenty-second Street, Philadelphia, with one furnace and six pots. In 1839 they built a two pot furnace at Sharpsburg, Pa., and another of the same size in 1872, and a third in 1884. Their works now cover four acres of ground and give employment to two hundred and thirty skilled workmen. The specialties of the firm include a vast variety of flint prescription vials, pickle and milk jars, catsups, beer, brandy and flasks, etc. The production of the firm is ably assisted by their four sons, J. R. W., J. S., J. K. M. and W. C. Tibby, in the management, thus insuring young blood in the management of affairs. Mail and telegraph address, P. O. Box 2028, Philadelphia, Pa.

above requires the consumption of four hundred cases of coal, one hundred cases of sand, three cases of lime, thirty five cases of soda ash, and ten cases of saltpetre, making a total material of eleven thousand tons, while the product amounts to three thousand tons, value \$750,000. The labor for ten months amounts to \$200,000. Challenges and price wars are awarded in application, and orders of whatever magnitude receive immediate and satisfactory attention. The partners John, William and Matthew Tibby, are among the most prominent and popular glass-makers in the country. The

CITRATE MONOGRAM. MILK BOTTLE. BEER BOTTLE. MONOGRAM SQUARE. OVAL VIAL.

Figure 1 – 1896 ad (source lost)

The Tibby Brothers were listed in the “Flint Bottle Factories” category, making their products at three furnaces with 30 pots in 1897, and that number continued until at least 1902 (*National Glass Budget* 1897:7; 1898a:7; 1898b:3; 1900:11; 1901:11; 1902:11). The plant was

no longer listed in the city directories after 1901 but continued to be sporadically listed by other sources. The death of William Tibby, Sr., in 1903, leaving only Matthew as the surviving founder, heralded the chimes of change (Hawkins 2009:489).

Containers and Marks

T.B. (poss. 1880-1903)



Figure 3 – T.B. base

We discovered a colorless, mouth-blown whiskey bottle with a two-part finish in an Colorado antique store (Figure 2). The base was embossed “T.B.” in the center (Figure 3). The style and manufacturing technique suggest that the bottle was produced during the Tibby Brothers’ Sharpsburg years, possibly between ca. 1880



Figure 2 – Whiskey bottle

and 1903. This is the only example of the logo that we have seen, possibly because it was used infrequently or because the firm made generic bottles that do not appear frequently in collectors’ venues. It is possible, of course, that “T.B.” stands for “Tom Brown” whiskey or a distributor – although the size of the initials was more typically attached to manufacturer’s marks.

Tibby Brothers Glass Co., Sharpsburg (1904-1915)

The second-generation Tibbys incorporated as the Tibby Brothers Glass Co. in 1904, with William Tibby, Jr., as president (*American Glass Review* 1934:171; Mathues 1904:886). The company was listed in the Thomas Registers in 1905 and, by 1907, made prescription, beer, soda, wine, brandy, packers’ and preservers’ bottles and jars – last listed in 1914 (Thomas Publishing Co. 1905:104; 1907:161; 1909:202; 1912:482; 1914:532). This suggests that there was a slight shift in the product line from a strong reliance on prescription bottles to a more general category

after the ca. 1904 incorporation. The plant used three furnaces with 30 pots to make a “general line” of bottles in 1913 (*Journal of Industrial and Engineering Chemistry* 1913:954).

About 1913, the Tibby factory was described as “one of the few bottle factories where the ‘pot’ system rather than the ‘continuous tank’ was still in use.” The average shop consisted of three men and six boys, although there was no night shift as was the standard in the tank plants. Due to the excessive heat, the factory closed in the summer as well as for periodic floods. By this time, Tibby Brothers was a union shop, possibly earlier (Butler 1914:). The Tibby Brothers filed for corporate dissolution on May 6, 1915, although the factory certainly closed prior to that (*Pittsburgh Daily Post* 4/12/1915).

Containers and Marks

The identification of the T logos with the Tibby Brothers is more tentative than the marks associated with many of the other glass houses in our studies. Please see the Discussion and Conclusions section below for more thorough discussion. It seems likely that the original firm at Pittsburgh used no mark to identify its products. However, the T logo was probably adopted at some point after the Tibbys moved the plant to Sharpsburg and remained in use to the apparent end of the firm ca. 1915.

The Tibby Brothers made virtually all types of colorless glass at the Sharpsburg plant, including milk bottles by 1896 (Hawkins 2009:487-489). The Tibby-Brawner plant also made milk bottles and other flint containers. Giarde (1981:121) noted that no mark had been confirmed for the Tibby family on milk bottles; however, the firm embossed the name “TIBBY BROS.” on at least a few milk containers.

T (ca. 1880s-ca.1914)

The Bottle Research Group has recorded and/or photographed numerous examples of these “T” marks – always without serifs – on colorless, generic oval, round, or rectangular bottles and flasks. In all cases, the container has been mouth blown with a tooled finish. In addition, in his table “Glass Bottles of Undetermined Contents,” Herskovitz (1978:25) listed four Philadelphia Ovals with prescription finishes, all colorless, each with a “T” basemark. Since Fort Bowie (the Herskovitz location) closed in 1894, these were almost certainly mouth blown.



Figure 4 – T (Leadville Antique Mall; El Paso Coliseum)

Although not included in their report on the El Paso Coliseum collection (Lockhart & Olszewski 1993; 1995), the researchers recorded four bottles in their notes that were each embossed on the base with a single “T.” Three of these were oval with one-part “oil” finishes; the other was rectangular with a “patent” finish. All were colorless, generic, mouth-blown, and had cup-bottom bases. The researchers classified them as toiletry bottles. The dump was primarily used during the ca. 1910-1942 period.

In the Tucson Urban Renewal collection, we found the “T” on a mouth blown, colorless, one-part “rolled” finish, narrow-mouth bottle and on a colorless, mouth-blown flask

base. At the collection housed at the California Parks Division, we photographed and recorded one colorless, mouth-blown, rectangular medicinal bottle with a “T” on the base – as well as ones we have acquired and seen elsewhere (Figure 4).



Figure 5 – T (Ft. Riley)

When we studied the bottles from the Fort Riley (Kansas) privy, we discovered two identical flasks were each made with a two-part tapered finish and the single letter “T” – without serifs descending from the top bar – embossed in the center of a cup bottom base (Figure 5). Along with the two flasks, one chemical/medicinal bottle had a tooled prescription finish and a “T” – without serifs – on a cup bottom base (Figure 6) – all found in Level 2 (1885-1890s) (Lockhart et al. 2012:26).



Figure 6 – T (Ft. Riley)

Toulouse (1971) made no mention of this mark, but Hawkins (2009:490) noted that “use of a *T* on the bottom of clear glass liquor and druggist’s bottles are believed to be from the Tibby Brothers.” There is little question that the Tibby Brothers made all of the container types noted above (see the section on the company above). Because these marks appear in different levels of production quality, they were probably made over a long period of time. We suggest that the mark was used by the Sharpsburg factory between 1872 and ca. 1913.

In bottle research, we rarely ever find a “smoking gun” – absolute evidence. However, the circumstantial evidence in this case is virtually ideal; literally everything fits. The Tibby Brothers were open during the correct period; they made all the types of bottles we find; and they only made mouth-blown bottles. No other “T” glass house even comes close to fulfilling the necessary criteria; therefore, the Tibby Brothers were the probable users of the “T” logo (Lockhart et al. 2012:16-18).

There are a number of “T” marks that do not fit in the discussion below because they were different (size, placement, bottle colors not made by the Tibbys, and/or different time periods). We have discussed these in the Other T section.

TIBBY BROS (ca. 1880s-ca. 1914)

Giarde (1981:121) noted that “Tibby Bros.” (almost certainly in capitals) was used by the “Tibby Brothers Glass Works, Sharpsburg, Pennsylvania,” from ca. 1880 to 1904. Hawkins (2009:490) confirmed that the mark appeared on the bases of colorless “pint and half-pint flasks embossed with a sheaf of wheat on the side of the flask.” In Hawkins’ photo of a flask base (2009:487), “TIBBY BROS” appeared in a very slight arch with “PITTS PA” upside down below it (Figure 7).



Figure 7 – TIBBY BROS. (Jay Hawkins)

Early milk bottles made by the company were also marked “TIBBY BROS (arch) / MAKER (horizontal) / PITTSBURGH, PA. (inverted arch)” on the bases (Figure 8). The only examples we have seen were on tin-top milk bottles (Clapper 2009). Dairy Antiques (2016) noted two logos on the firm’s milk bottle bases: “TIBBY BROS. MAKER” and “TIBBY BROTHERS MAKER.”

Tibby-Brawner Glass Co., Punxsutawney, Pennsylvania (1920-at least 1944)

The Tibby-Brawner Glass Co. was first listed at Punxsutawney, Pennsylvania, in 1920. The firm was the successor to the Wightman Glass Co. that was listed at Punxsutawney in the Thomas Registers from 1915 to at least 1918 (*American Glass Review* 1934:171; Thomas Publishing Co. 1915:579; 1916:661; 1917:731; 1918:811; 1920:828; 1921:741). A succession of officers in the Wightman Glass Co. is revealing. The last Wightman (W.K.) was listed as president in 1916. The following year, James B. Phelan was president, and W.C. Tibby was the general manager. In 1918, Charles J.B. Swindell became president, H.O. Brawner was the vice president, and Tibby had become secretary and treasurer in addition to his managerial duties. These principals held the same positions the following year and were listed in the same relative positions in the Tibby-Brawner Glass Co. in 1920 (Roller 1997b).



Figure 8 – TIBBY BROS. (Jason Clapper)

In 1927, the plant made “prescriptions, vials, flint beers and minerals, patent, proprietary, liquors, flasks, packers, preservers, milk jars, perfumes and toilets a specialty” hand blown at one continuous tank with ten rings. That year, Tibby and Brawner bought out Swindell’s interest in the firm. The company changed the listing to “prescription and druggists ware, packers and preservers ware, bottle specialties, lettered ware, toilets and perfumes, private mold work” in 1928. The following year, the list was further altered to “druggists lettered prescription ware, bottle specialties, milk jars, toilets and perfumes, private mold work.” The listing remained the same until at least 1944 – including hand production only (*American Glass Review* 1927:145; 1928:149; 1929:104; Toulouse 1971:454).

A study from Pennsylvania State College (Shaw 1930:185) presented a cameo description of the firm. W.C. Tibby was president and general manager, and the corporation’s capital was \$20,000. One hundred fifty employees made bottles by hand at a ten-ring continuous tank. We have been unable to discover when the plant ceased operations.

Containers and Marks

We have found no bottles with the T logo or the embossed Tibby name that appear to have been made during the period when Tibby-Brawner was in business. The “TB” logo (discussed below) was probably too late (ca. 1970s or later) to have been made by Tibby-Brawner – and appeared on machine-made bottles.

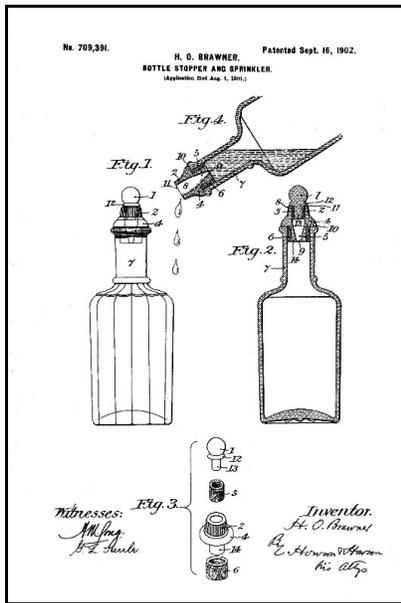


Figure 10 – Brawner 1902 patent

TB (placed to right of embossed arrow logo)

According to Whitten (2019), the Arrow-and-TB logo has been “seen on base of clear machine-made WATKINS TRIAL MARK extract/flavoring bottle, circa 1980s-1990s. Uncertain meaning.” Out of 35 examples on auction at eBay, only a single bottle – colorless with a continuous-thread finish and screw cap – was embossed with a symbol that could be construed as an arrow (pointing left) followed by “TB” in block letters then “7” (Figure 11). The resting point was lined with ||| marks, a fairly recent form of stippling. Since only one bottle in the sample had the “TB” logo, it probably represented a single order. However, since Watkins encouraged mail order, “TB” could equal Trial Bottle.

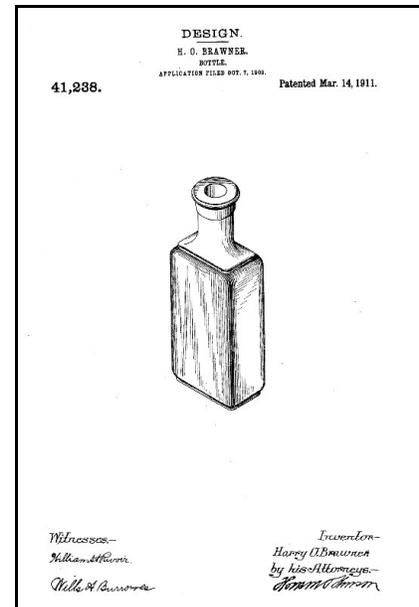


Figure 9 – Brawner 1911 patent

Harry O. Brawner applied for a design patent for a “Design for a Bottle” on October 7, 1909, and received Design Patent No.41,238 on March 14, 1911. A “footed” bottle with a raised shoulder, this style became quite popular (Figure 9). Brawner also designed several stopper and sprinkler patents between 1901 and 1906, some of which may have become popular – such as Patent No. 703,391 for a “Bottle Stopper and Sprinkler,” applied on August 1, 1901, and received on September 16, 1902 (Figure 10).

One corner of the “arrow” was much thinner than the other, suggesting that this was a symbol of either the glass house or of Watkins. The symbol does not seem to belong to Watkins, and a search of our foreign logo sources failed to find a similar symbol. The 2000 Emhart punt mark list *did* include a “TB” mark from Germany (Thüringer Bahälterglas from Schleusingen), but the “T” in the German logo was larger than the “B” (Figure 12). However, the type of stippling on the base suggests a manufacture in the mid-1970s or later, so Thüringer Bahälterglas is a better contender for the mark than Tibby-Brawner.



Figure 11 – TB (eBay)

Giarde (1981:121) listed “TB” as a mark used by the Tibby Brothers. Unfortunately, he did not explain his source. We have not seen an example of this mark on milk bottles, but an 1896 ad illustrated a TB monogram in a round plate on the front of a prescription bottle (see Figure 1).



Figure 12 – TB (Emhart 2000)

Toledo Bottle Co., Toledo, Ohio (1916-1920)

The *Glass Worker* reported on October 28, 1916, that the factory of the Toledo Bottle Co. would be in operation by the end of the year. Then ten-ring continuous tank was “worked by 10 O’Neill and Swetland machines making bottles.”¹ Frank O’Neill was president with W.H. Swetland as vice president and manager, C.E. Struble as secretary, G.J. Seiss as treasurer, and C.E. Kearns as sales manager. A. Huber replaced Swetland as vice president in 1918, and H.W. Edmonds became the factory manager (Paquette 2002:369; Roller 1997c).

The U.S. entry into World War I created problems for the factory, and various shortages reduced its profitability. Shortly after the end of the war, O’Neill closed the plant permanently. On October 14, 1920, Donald Pugh announced the reopening of the factory as the Tri-State Glass

¹ Since W.H. Swetland was president of the glass house, the term “O’Neill and Swetland machines” almost certainly referred to a single type of machine rather than two different ones. However, the plant may have used a mixture of O’Neill’s 1911 and 1915-patented machines – although the 1915s may not have been ready when the plant opened.

Co., but that firm may have never actually made glass. Still at the same location, the Buckeye Glass Co. began in February 1923, also under Pugh, and was apparently successful (Lockhart 2013).

Containers and Marks

T (machine made bottles)

Clint (1976:161) illustrated a mouth-blown, colorless, crown-finished Coors beer bottle embossed in the center of the base with a Circle T mark. He dated

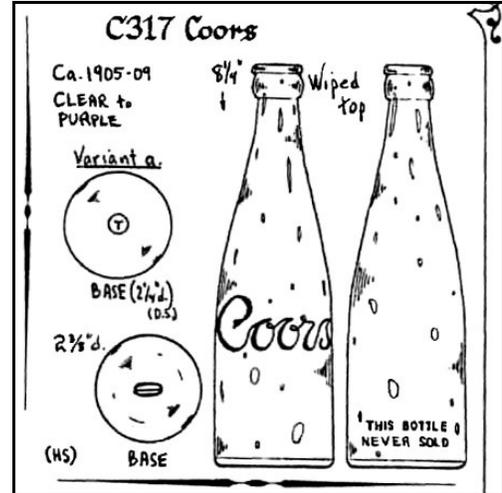


Figure 13 – Circle-T (Clint 1976:161)

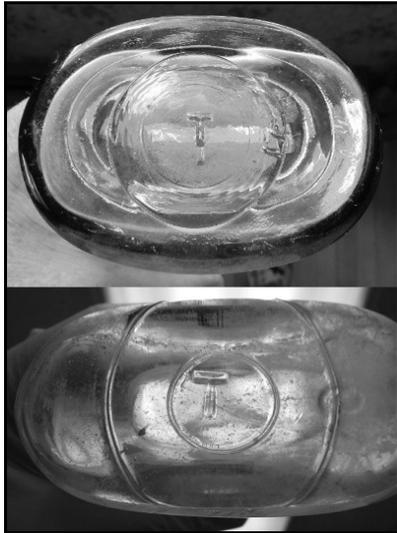


Figure 14 – Double-Circle-T (TUR)

the bottle 1905-1909 (Figure 13). When the Bottle Research Group studied the Tucson Urban Renewal (TUR) collection in 2006, we discovered a colorless flask with two concentric circles around a “T” mark embossed on the base, apparently machine made. The two marks are quite different. In Clint’s mark – as drawn – the “T” was centered in the circle with virtually no excess space.

In the TUR logo, however, the “T” was embossed in the center of the base and was surrounded by two concentric circles. In addition, we photographed the base of an oval drug store bottle with a “T” in the center of two concentric circles (Figure 14). In the collection housed at the California Parks

Division, we photographed and recorded a colorless, round packers’ bottle embossed “T / 8” on the base, with the “T” centered and the “8” below it – surround by two concentric circles, the inner one bisecting the “8” (Figure 15). Whitten (2019) added another example that he listed as “unknown . . . seen on base of aqua rectangular paneled prescription bottle, c. 1910-1930.” Because of the glass color, this bottle could not have been made by the Tibby Brothers.

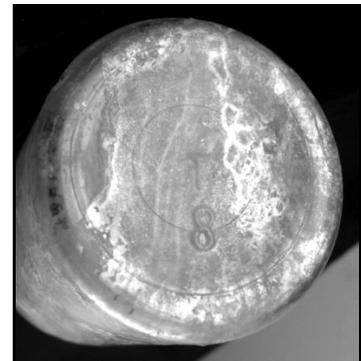


Figure 15 – Double-Circle-T (Cal. Parks)

These circles were the signature scars created by the 1911 O’Neill semiautomatic bottle machine (Lockhart 2013).² Although we have not discovered which model or models of machines were used by the Toledo Glass Co., there is no question that the plant operated O’Neill machines. Since the Toledo Glass Co. period coincides with the probable date range for the bottles known with the T logo and double-circle base scars, the firm is by far the best contender as the user of the T mark on such bottles. The only bottle in the sample that does not fit is the Circle-T logo reported by Clint from 1905-1909. Clint may have been incorrect about the date range or may not have recorded the second ring (thinking it was not a part of the mark) – or the bottle may not be related to the O’Neill bottles.

Discussion and Conclusions

The evidence presented above makes it pretty certain that the Tibby Brothers Glass Co. ceased operations ca. 1915. William C. Tibby apparently remained in the glass business, working with the Wightman Glass Co. by 1916. Although Tibby and H.O. Brawner were two of the principals in the Tibby-Brawner Glass Co., the connection with Charles J.B. Swindell is worth pursuing. The founding Swindell Brothers in 1878 were Walter and Charles Swindell. Charles J.B. Swindell was probably the son of the founding Charles.

Tibby-Brawner may have initially been the hand-production unit for the Swindell Brothers. In 1927, the Swindells advertised “Perfect and Brawner glass sprinkler tops” as part of their inventory and claimed both machine and hand production (*American Glass Review* 1927:145). The connection is unmistakable, although we cannot determine the exact relationship between the companies. Because the listing remained fairly constant until at least 1944, Tibby-Brawner likely remained heavily connected to the Swindells even after Tibby and Brawner purchased Charles Swindell’s interest in 1927.

“T” Logos on Mouth-Blown Bottles

Although containers with the small “T” marks could have been made by any company with that initial in its name, all examples we have seen were simple and embossed in the center

² For an in-depth discussion of the machine and the scars, see Lockhart 2013.

of the bases of generic, colorless glass containers. The types of containers are consistent with bottles known to have been made by the Tibby Brothers. Because of the connection with the Swindells, it is unlikely that the “T” mark continued to be used by Tibby-Brawner.

The majority of our limited sample could be classified as medicinal, drug store, or toiletry bottles. Because of the shift in products ca. 1904, that may limit the use of the mark on these bottle types to ca. 1880s-ca. 1904. By extension, the mark, itself, may only have been used during that period and may have been discontinued during the corporation years.

Bottles with larger “T” marks were almost certainly made by other companies. Tibby Brothers were very solidly identified with colorless glass, but the bottles with the larger “T” marks were made in aqua and amber. See the Other T section for more discussion about these.

TIBBY BROS.

There is no question about the user of this logo, of course, but it only appears to have been used sparingly – on tin-top milk bottles and some flasks. The mark may have been used during the last part of the “ownership” period (ca. 1880s-ca. 1914) or during the initial part of the “corporation” period (1920-at least 1944). We have seen or heard of very few examples.

TB

Although Giarde claimed that the “TB” mark may have been used on milk bottles, that was not confirmed by Dairy Antiques – so it was probably a bogus mark – although we located a single “T.B.” logo on a whiskey bottle from the ca. 1880-1900 era. Possibly more examples will appear. At least on Tibby Brothers ad illustrated a TB monogram, but there is no indication that it was actually used on any products. The more recent “TB” logo was certain used three decades or more after Tibby-Brawner closed and may have belonged to a product firm rather than a glass house.

“T” Logos on Machine-Made Bottles

A major problem with this identification centers around the machine-made bottles. We have found no evidence that the Tibby Brothers *ever* used a machine. In fact, references seem to

indicate that the family was somewhat anti-machine. Typically (possibly exclusively), machines only operated from continuous tanks – and the Tibby family *only* used pots. However, the double-circle or concentric-ring machine scar has been traced to the 1916-patent O’Neill bottle machines, and the Toledo Glass Co. was operated by a corporation under control of Frank O’Neill from 1916 to 1920. The initial, the machine scar, and the time period all fit together to name the Toledo Glass Co. as the user of the “T” logo on machine-made containers.

Acknowledgments

Our gratitude to Jason Clapper for sending us photos of the TIBBY BROS mark on milk bottle bases and to Wanda Wakkinen for proofreading.

Sources

American Glass Review

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

1928 “Glass Factory Yearbook and Directory.” *American Glass Review*, Pittsburgh, Pennsylvania.

1929 “Glass Factory Yearbook and Directory.” *American Glass Review*, Pittsburgh, Pennsylvania.

1934 “Glass Factory Yearbook and Directory.” *American Glass Review*, Pittsburgh, Pennsylvania. Includes reprint of the *Glass Trade Directory for 1904*. Commoner Publishing Co., Pittsburgh, Pennsylvania.

Butler, Elizabeth Beardsly

1914 “Sharpsburg: A Typical Waste of Childhood.” In *Wage-Earning Pittsburg, Part III, Industry*. Edited by Paul Underwood Kellogg, pp. 279-304. Survey Associates, New York.

Clapper, Jason

2009 "PA Pennsylvania Milk Bottles - Buy, Sell, Trade & Online Information Source."
http://jasonclapper.com/tin_tops.aspx

Clint, David K

1976 *Colorado Historical Bottles & Etc., 1859-1915*. Antique Bottle Collectors of Colorado, Inc., Boulder.

Commonwealth of Pennsylvania

1882 *Annual Report of the Secretary of Internal Affairs of the Commonwealth of Pennsylvania, Part II: Industrial Statistics, Vol. IX, 1880-81*. Lane S. Hart, State Printer and Binder, Harrisburg.

Dairy Antiques Site

2016 "Doug & Linda's Dairy Antique Site: Butter Churns, Milk Bottles & Cream Separators." <http://dairyantiques.com/>

Emhart Glass

2000 *Punt Marks* Emhart Glass, Zurich, Switzerland.

Giarde, Jeffery L.

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

Hawkins, Jay W.

2009 *Glasshouses & Glass Manufacturers of the Pittsburgh Region, 1795-1910*. iUniverse, Inc., New York.

Herskovitz, Robert M.

1978 *Fort Bowie Material Culture*. University of Arizona Press, Tucson.

Journal of Industrial and Engineering Chemistry

1913 "The Present Status of the Glass Bottle and Hollow Ware Industries in the United States." *Journal of Industrial and Engineering Chemistry* 5(11):951-954.

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

2012 *New Insights from the Bottles Excavated at the Fort Riley Hospital Privy*. Privately printed, Alamogordo, New Mexico.

Lockhart, Bill and Wanda Olszewski

1993 *The El Paso Coliseum Collection: A Study of 20th Century Bottles*. The County of El Paso, Texas and the University of Texas at El Paso.

1995 "The El Paso Coliseum Collection: A Study of 20th Century Bottles." *The Artifact* 33(3):1-91. (revised version of 1993 study)

Mathues, William L.

1904 *Report of the State Treasurer on the Finances of the Commonwealth of Pennsylvania for the Year ending November 30, 1904*. Commonwealth of Pennsylvania, Harrisburg. William L. Mathues, State Treasurer.

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.

New York Times

1897 "Flint Bottle Makers Unite." *New York Times* December 11, 1897.

Paquette, Jack K.

2002 *Blowpipes: Northwest Ohio Glassmaking in the Gas Boom of the 1880s*. Xlibris Corp., n.p.

Roller, Dick

1997a "Tibby Brothers History Notes." Dick Roller files.

1997b "Punxsutawney, PA History Notes." Dick Roller files.

1997c "Toledo, OH Historical Notes." Dick Roller files.

Shaw, Joseph B.

1930 *Ceramic Industries of Pennsylvania*. Pennsylvania State College Bulletin, Mineral Industries Experimental Station, No. 7. School of Mineral Industries, n.p.

Thomas Publishing Co.

1905-1906 *The Buyers' Guide: Thomas' Register of American Manufacturers and First Hands in all Lines*. Thomas Publishing Co., New York.

1907-1908 *Thomas' Register of American Manufacturers and First Hands in all Lines: The Buyers Guide*. Thomas Publishing Co., New York.

1909 *Thomas' Register of American Manufacturers and First Hands in All Lines: A Classified Reference Book for Buyer and Sellers*. Thomas Publishing, New York.

1912 *Thomas' Register of American Manufacturers and First Hands in All Lines: A Classified Reference Book for Buyer and Sellers*. Thomas Publishing, New York.

1914 *Thomas' Register of American Manufacturers and First Hands in All Lines: A Classified Reference Book for Buyer and Sellers*. Thomas Publishing, New York.

1915 *Thomas' Register of American Manufacturers and First Hands in All Lines: A Classified Reference Book for Buyer and Sellers*. Thomas Publishing, New York.

1916 *Thomas' Register of American Manufacturers and First Hands in All Lines: A Classified Reference Book for Buyer and Sellers*. Thomas Publishing, New York.

1917 *Thomas Register of American Manufacturers and First Hands in All Lines*. 9th ed. Thomas Publishing Co., New York.

1918 *Thomas Register of American Manufacturers and First Hands in All Lines*. Thomas Publishing Co., New York.

1920 *Thomas Register of American Manufacturers and First Hands in All Lines*. Thomas Publishing Co., New York.

1921 *Thomas Register of American Manufacturers and First Hands in All Lines*. Thomas Publishing Co., New York.

Toulouse, Julian Harrison

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

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

Wilson, John P. and Thomas J. Caperton

1994 "Fort Selden, New Mexico: Archaeological Investigations of the Latrines and Magazine, 1974-1976." *The Artifact* 32(2-4):i-ix,1-145).

Young, Robert K.

1914 *Report of the State Treasurer on the Finances of the Commonwealth of Pennsylvania for the Fiscal Year ending November 30, 1913*. Commonwealth of Pennsylvania, Harrisburg. Robert K. Young, State Treasurer.

1916 Report of the State Treasurer on the Finances of the Commonwealth of Pennsylvania for the Fiscal Year ending November 30, 1915. Commonwealth of Pennsylvania, Harrisonburg. Robert K. Young, State Treasurer.

Last updated 10/14/2019