The T.C. Wheaton Companies

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It all began when Dr. Theodore C. Wheaton financed two entrepreneurs to start a glass house in 1888. When their business failed – almost immediately – he took over the enterprise, turning it into a highly successful concern – T.C. Wheaton & Co. The firm dropped the ampersand from its name in 1901 but continued hand production of its bottles and other products until 1937, turning fully automatic the following year. Beginning in 1960, increasingly larger firms took control of Wheaton, but the huge firm continues in operation in 2019.

Histories

T.C. Wheaton & Co., Millville, New Jersey (1888-1901)

Two local entrepreneurs (only recorded as Schull and Goodwin) began construction of the factory for the Schull-Goodwin Glass Co. but were delayed by the East Coast Blizzard of 1888. Eventually, they completed the plant but ran short of money. They approached Dr. Theodore C. Wheaton, a local physician and pharmacist. Wheaton loaned the pair \$3,000, then, on October 24, 1888, he gained a controlling interest in the new firm – now called T.C. Wheaton & Co. (Answers.com [2009]; Griffenhagen and Bogard 1999:105).

According to Pepper (1971:247), the plant began "in a small way with a 6-pot furnace operated by a dozen men and twice as many boys" (Pepper 1971:247). The factory produced homeopathic and screw-cap vials, laboratory glass, perfume bottles, pharmaceutical glass (including prescription bottles), and nursing bottles. Much of the factory burned on November 24, 1889, then Wheaton abandoned his medical practice by June 1890 to devote his full energy to the glass business (Answers.com [2009]). The firm introduced Red Star homeopathic vials in 1893 and the Red Star toothwash bottle in 1895 (Griffenhagen and Bogard 1999:105).

¹ Griffenhagen and Bogard (1999:105) set the date of Wheaton's acquisition and renaming at 1890.

In early 1894, Wheaton – until that time always an exclusive flint glass operation – erected a green glass furnace (Roller 1997). This second furnace was followed by a 12-pot furnace and a new building in 1896 (Answers.com [2009]). A single 12-pot furnace was listed as making "white flint druggists' and perfumers' bottles" in 1897. By September 1898, Wheaton used two furnaces to make colorless (flint) glass, with 20 pots and one continuous tank with more than 20 rings. The 20 pots continued to be listed until the change of name to the T.C. Wheaton Co. – dropping the ampersand – in 1901 (*National Glass Budget* 1897:4; 1898:3; 1900:11; 1901:11; 1902:11)

T.C. Wheaton Co., Millville, New Jersey (1901-1970) Wheaton Glass Co., Millville, New Jersey (1946-1970)

The Wheaton family incorporated in 1901 as the T.C. Wheaton Co. Wheaton entered the window glass market in 1903, the same year that two top executives left the company to form the Millville Bottle Co. – in direct competition with their former firm (Answers.com [2009]; Pepper 1971:247). See the Millville Bottle Works file for more information. In 1904, the T.C. Wheaton Co. operated two furnaces with 20 pots and one continuous tank with six rings. The plant made prescription and proprietary ware in colors (*American Glass Review* 1934:157).

In the first Thomas Register, in 1905, Wheaton was listed as making "perfumery." In 1907, the listing added prescription bottles plus ointment and massage cream jars (Thomas Publishing Co. 1905:103; 1907:159). Window glass manufacture produced low profits, so Wheaton discontinued the project in 1908, the year of another major fire. A third fire caused heavy damage in 1912 (Answers.com [2009]). In 1913, Wheaton used one continuous tank with 10 rings to make flint containers, one continuous tank with eight rings to make amber containers, and one furnace with 12 pots for mouth-blown ware. The plant made "medicine, beer and mineral water" bottles and vials (*Journal of Industrial and Engineering Chemistry* 1913:953).

The Thomas Registers still listed Wheaton as making prescription, perfume, and glue bottles, along with ointment and toilet cream in 1916. The listing changed in 1918 to "amber glass for chemicals, pharmaceuticals, etc.," although the jars remained the same (Thomas Publishing Co. 1916:660, 3783, 3785; 1917:730, 4106-4107; 1918:810, 4432-4433). After World War I, Wheaton resumed its growth, adding an etching facility for perfume ware along

with other buildings. A fourth major fire followed in 1925, and Wheaton purchased the Millville Bottle Works the following year (1926) – eliminating a competitor – although Wheaton operated the works under its own name for about the next four years (Answers.com [2009]; Pepper 1971:147).

In 1927, Wheaton made prescription bottles, vials, perfume ware and colored pressed ware at two furnaces with 21 pots and three continuous tanks with 18 rings. In addition, the plant made "tubing, opal ware, laboratory ware, glass door knobs, novelties and specialties" at one furnace with 12 pots and five continuous tanks with 27 rings. In 1937, the listing included "prescriptions and vials, perfume ware. Colored pressed ware" at two furnaces with 21 pots and three continuous tanks with 18, and that listing continued to at least 1944 (*American Glass Review* 1927:147; 1937:93; 1944:108).

By 1927, T.C. Wheaton was president with T.C. Wheaton, Jr., as vice president, W.A. Horton as secretary, Frank H. Wheaton as treasurer, J. Ward Krause as general manager, and W.C. Reeves as factory manager. Dr. T.C. Wheaton died on September 7, 1931, and his son, Frank H. Wheaton, who had joined the company in 1899, became president and chairman of the board of directors. By 1933, Wheaton was well known for its line of nursing bottles (*American Glass Review* 1927:147; Answer.com [2009]).

Although not a part of its normal production line, Wheaton, like many other glass houses, began beer bottle manufacture at the end of Prohibition in 1933. *Ceramic Age* (1933b:180) noted that the plant had "advanced [beer bottle] production schedule, recalling a large number of workers." It is currently unknown how long Wheaton remained in the beer bottle business or what kind (if any) mark was used.

Although most glass factories had advanced to machine methods, Wheaton was proud that it still blew all its bottles by hand in sizes ranging from 1/8 ounce to five gallons, although compressed air was used to expand the larger sizes. Aside from the pharmaceutical bottles, the plant had an extensive line of toiletry and perfume bottles, as well as glass knobs for antique furniture, lamp stands, and other household glass items. The 1933 factory covered 20 acres in size with two "modern pot furnaces" and four continuous tanks. The pot furnaces made it easy to change colors for different glass needs (Skerrett 1933:106-107).

The manufacture of certain bottles required specific skills and hand crafting. Some perfume and chemical bottles, for example, were sealed by glass stoppers that were hand ground to fit inside the necks of the bottles. The bottle neck, too, required the same technique, and the individual stopper and neck combination had to fit perfectly. In addition, some bottles were colored by a spray process after manufacture, and various other decorating techniques were applied. Eventually, Wheaton's glass stopper grinding department became the largest in the United States (Skerrett 1933:106-107; Toulouse 1971:258).

Despite Wheaton's pride in its hand production, Frank Wheaton, Jr., negotiated with the Hartford-Empire Co. to lease a machine in 1937. The experiment was a success, and the plant became fully automated the following year. During World War II, Wheaton designed and invented products such as waterproof seals, ring gauges, etc. for the military and received the Army-Navy "E" Award for its work (Answer.com [2009]; Pepper 1971:247; Toulouse 1971:258).

In 1946, Frank Wheaton, Jr., established a new company, the Wheaton Glass Co., "designed to function separately but in tandem with the older company." The firm became involved with plastics in 1950 and completed a new company complex in September 1951 that was so huge, it was nicknamed "the Pentagon" (Answers.com [2009]). Although the huge Wheaton complex continued to evolve and expand throughout the 1950s and 1960s, the two firms – T.C. Wheaton Co. and Wheaton Glass Co. – functioned in the tandem operations until a slight reorganization and renaming in 1970.

Wheaton Industries, Millville, New Jersey (1970-1996)

The *Camden Courier-Post* reported that Frank Wheaton, Jr., announced the merger of the Wheaton Glass Co. with the Wheaton Glass Co. to form Wheaton Industries on July 22, 1970. The following year, the firm opened Wheaton Village, a "period rendition of the original glassworks" (Anwers.com [2009]). The merger was much more complex, and the newspapers and other sources referred to the firm as both Wheaton, Inc. and Wheaton Industries during the entire 1970-1996 period.

Pepper (1971:248) noted that the factory had "recently [1971] established a handblowing shop which shares a building with an industrial electronics firm, so that the two may work together." Part of the reason for the return to mouth-blown glassware was the need for greater precision in blowing cathode tubes and other electronics glassware. Pepper noted that "the machine can afford to be careless about when producing throwaway bottles. Jersey blowers, from the 1850s until about World War I acquired great skill in precision blowing and this art is now [1971] being taught to young recruits."

The actual glass firm was listed as the Wheaton Glass Co., a Division of Wheaton Industries, in 1982. The firm maintained three manufacturing and decorating plants, all at Millville. The plants used I.S. and Lynch press machines to make a large number of containers, tableware, and other glass products. The listing remained the same in 1985 (*Glass Industry* 1982:62; Perrine 1985:50).

Although it was incorporated for much of the period, the complex organization remained under the control of the Wheaton family until 1996. However, things began to change with a major family dispute in 1991. The founder, Theodore C. Wheaton had operated the firm until 1931, when one of his sons, Frank H. Wheaton, became president. Wheaton was then succeeded by his son, Frank H. Wheaton, Jr., in 1966. In a major family squabble, Wheaton stepped down from the presidential position and was ousted as Chairman of the Board in 1991. Five years later, in another major family dispute, the Wheatons sold the business to Alusiusse-Lonza Holding, Inc.

Lawson Mardon Wheaton, Millville, New Jersey (1996-2019+)

In 1996, Alusiusse-Lonza Holding, Ltd., purchased Wheaton Industries, creating a division called Algroup (or Al-Group) Wheaton. By 2000, the unit had split into the Wheaton Glass Co., making "glass containers for cosmetics, private mold work" and Wheaton Glass Products, producing "flint, amber, opal and colored glass, blown containers and pressed ware, decorating, grinding, specialty items. Both operated plants at Millville, and the latter firm also had a plant in Flat River, Missouri. Both were divisions of Algroup Wheaton (National Glass Budget 2000:47).

Alcan, Inc., (aluminum) acquired Alusiusse (and, thereby, Wheaton) in 2001 (Answers.com [2009]). Although Alcan continues to own the glass tubing and plastics division, the firm created a new entity, Wheaton Science Products, in late 2006, also known as Wheaton Industries in 2010 (Wikipedia 2010). The *Montreal Gazette* reported on July 13, 2007, that Rio Tinto, a London-based giant, purchased Alcan. Despite all these changes, newspapers and other sources – including the glass logo tables – called the company Lawson Mardon Wheaton during this entire period – a name the firm still wears in 2019. This may merely be another case of parallel Wheaton firms.

Containers and Marks

Although not noted as such, Wheaton produced at least one form of glass insulator, the A.T.&T. "Bridle Wire" insulator. The insulators were not marked with any of the Wheaton markings (McDougald & McDougald 1990:143 – Figure 1). The factory was always a hand production center until Frank Wheaton introduced machines in 1937, and the plant went fully automatic the following year.

In 1970, Wheaton began manufacturing commemorative flasks. These were mouth blown somewhat in the style of the early to mid-19th



Figure 2 – Fake Pontil (eBay)

century flasks – although all were machine made. Many of those even sported a fake pontil scar on the base (Figure 2). By 1974, the plant had produced more than 1.5 million flasks. Wheaton issued at least 12 series that included Great Americans, Lunar or



Figure 1 – Bridle Wire Insulator (eBay)

Astronaut, Star, Christmas, Campaign, American Inventor, Early American Patriots, American Religious, American Military Leaders, American Writers, Evangelists, and Special Series (McKearin & Wilson 1978:700-704). In the following section, we have listed the marks alphabetically. For a chronological order, see Table 1 in the Discussion and Conclusions section.

TCW (1888-1901)

Toulouse (1971:492, 527) identified the "TCW" mark as belonging to T.C. Wheaton and dated its use "since 1888." Griffenhagen and Bogard (1999:128), however, dated the mark's use from 1888 to 1900. We have not yet seen an example of this mark. It may have been used by the original company from 1888 to 1901, but it is probably bogus. See the next two logos.

TCWCo (1938-1970)

Similar to the mark above, this, too, was dated "since 1888" by Toulouse (1971:44, 492, 527). Griffenhagen and Bogard (1999:128) dated this mark as used from 1888 and 1900 in one place and 1900 to 1920 in another. Where Toulouse failed to differentiate between the marks (see next entry), Griffenhagen and Bogard showed them as being used sequentially (Figure 3). A slight variation of the mark (T.C.W.-CO.) was shown on the table of glass trademarks compiled by Owens-Illinois in 1964, along with the Circle W (Berge 1980:83). The mark with the initials, however, was no longer present in 1982 (Emhart 1982:74-75).



Figure 3 – TCW CO (eBay)

Colcleaser (1966:25) showed a bottle that was either toiletry, perfume, of pharmaceutical embossed on the base with "T.C.W.CO." The mark was surrounded by an ornate border. Another bottle (Colcleaser 1966:26) was round and marked "T.C.W.CO. (arch) / 37 / U. S. A. (inverted arch)." A half-oval drug store bottle was embossed "T.C.W.CO. / K" (Colcleaser 1966:28).

Ring (1980:156, 288) listed two bitters bottles with the mark. A Baja California Damiana Bitters bottle was marked "T.C.W. CO. USA / R-316-W / 2-L-8" on the base. She listed Winder & Shearer as "sole proprietors and manufacturers," San Francisco. The second was Kinkel's Bitter Wine or Iron, marked "T.C.W.CO / H 804 W / U.S.A. with the "T.C.W.CO." in an arch. The bitters was prepared by E.F. Kunkel, Philadelphia, Pennsylvania. A T.C. Wheaton Co. catalog (undated) from the early 1920s illustrated variations of the mark on pages 12-14.



Figure 4 – TCW CO (eBay)

All marks included U.S.A. below the company name or a patent date (e.g. PAT. APR 18 / 98 on the base of a Red Star Oval bottle). In our sample, full punctuation was always present, and the "O" in "CO." was always



Figure 5 – TCW CO (eBay)

capitalized. Various letters or numbers may appear between "TCWCo" and "U.S.A."

Our sample revealed four variations of the mark, all embossed on the bases of machinemade bottles:

T.C.W.CO. / U.S.A. (both horizontal) (Figure 4)

T.C.W.CO. (slight arch) / U.S.A. (slight inverted arch) (Figure 5)

T.C.W.CO. / U.S.A. (arched so tightly that the two form a circle) (Figure 6)

T.C.W.-CO. (slight arch) / U.S.A. (slight inverted arch) (Figure 7)

Because our sample was entirely composed of machine-made bottles, we have dated this mark 1938-1970. However, if the same mark is found on a mouth-blown bottle, it should be dated 1901-1937.



Figure 6 – TCW CO

TCW&Co (1888-1901)

Griffenhagen & Bogard (1999:44, 128) claimed the TCW&Co mark was used after 1900 in one place but showed this mark as being used on Elixir of Life bottles from 1893 to 1900 in another. Fike (1987:114-115) also listed the mark as being used on Elixer of Life bottles but dated it "after 1888" following the Toulouse date for the similar mark without the ampersand. The mark was not shown by Toulouse (1971). Preble (2002:448) illustrated a single example of the "TCW&Co" logo and dated the



Figure 7 – TCW CO (Mary Bell Lockhart)

bottle 1888-ca. 1891. Although his rendition of the base was only drawn, his photo of the bottle showed that it almost certainly was mouth blown.

The logo (with a clear ampersand) appeared in an eBay photo of a mouth-blown, colorless, oval, drug store bottle, and we have examined a single other example of the mark (Figure 8). The logo could have been used any time between 1888 and 1901



Figure 8 – TCW&CO (eBay)

W in a circle (1946-ca. 1996)

Peterson (1968:45) mentioned T.C. Wheaton Co., Milville, N.J., and noted that "the successor, the Wheaton Glass Co., used a W in a circle" – but he gave no date. Toulouse (1971:527) stated that the mark was used "since 1946" – the date that Frank Wheaton formed the Wheaton Glass Co. Griffenhagen and Bogard (1999:129) dated the mark 1946-1971 (almost certainly using Toulouse as an end date). However, the Circle-W mark had a history of use from at least 1964 to 2005 (Berge 1980:83; Emhart



Figure 9 – Circle-W (eBay)

1982:75; 1996:49; 2005; Hanlon 1971:6-17; Powell 1990). Despite the later listings, the Circle-W mark probably disappeared in 1996.

Colcleaser (1965:34) showed a colorless Cal-Lac bottle with a continuous-thread finish and a swelled neck marked on the base with what he called a "'W' within a circle." The mark often appeared with "WHEATON, N.J." after 1970, so the only time it was apparently used exclusively was between 1946 and 1970. One characteristic, almost certainly intentional, helps separate this mark from the Circle-M logo used by the Maryland Glass Corp. In



Figure 10 – Circle-W

general, an "M" looks just like an upside-down "W." However, the Wheaton "W" had the central point (where two "Vs" come together to form the "W") raised upward, making the letter distinct (Figure 9). It is highly probable that a normal "W" as well as the raised point was only used prior to 1971, but the Raised-Point-W was used exclusively after that date (Figure 10).

WHEATON APOTHECARY PRODUCTS (ca. 1973-?)

Creswick (1987:143) illustrated a tall jar with a clamped-on glass lid that was embossed "WHEATON, N.J." on the base and "WHEATON APOTHECARY PRODUCTS SINCE 1888" around the top of the lid (Figure 11). She dated the jar ca. 1973, apparently tying it in with the commemorative bottles made during that time period (see above and below).

WHEATON FINE GLASSWARE (1980-1990s)



Figure 12 – Wheaton Fine (eBay)

Our sample included a single jar (from an ebay auction) embossed on the stippled base "WHEATON FINE GLASSWARE / NOT FOR CANNING" in a circle around the edge with "1,5L" in larger characters above "©" (Figure 12). The body of the jar was also stippled and covered with embossed designs of various fruits (Figure 13). The term "NOT

FOR CANNING" certainly identifies this container as a product jar. Wheaton Industries received Trademark No. 73,361,366 on April 26, 1983, claiming a first use on October 31, 1980 – providing a solid beginning date. The mark was probably used until sometime during the 1990s.

WHEATON GLASS CO. (1946-1970)

Toulouse (1971:527) claimed that the WHEATON GLASS CO. mark was used since about 1920. An eBay auction showed "WHEATON GLASS CO." in an arch above "N.J." (inverted arch) on the base of an elaborately decorated green bottle or vase (Figure



Figure 11 – Wheaton Apothecary (Creswick 1987:143)



Figure 13 – Fruit Embossing (eBay)

14). These were probably instituted at the beginning of the Wheaton Glass Co. era and discontinued with the 1970 reorganization.

WHEATON, N.J. (1970-2007)

Most (probably all) of the figural and commemorative bottles were embossed "WHEATON, N.J." (Figure 16). All had either Circle-C alone or both Circle-C and Circle-W logos,



Figure 14 – Wheaton Glass Co. (eBay)

certainly a copyright symbol. Some have copyright dates, e.g.,

usually below the Wheaton name – but a lone Circle-C could appear above it. The $\ensuremath{\mathbb{C}}$ was almost

AN FILE STORY

Figure 15 – Wheaton NJ (eBay)

"© 71 W H" on the front heel, and the earliest of these we have found was dated 1970. When both circles are present, either can be to the left. All of the bottles were machine made, including the ones with fake pontil scars. Examples

we have seen suggest that the mark was used only during the Wheaton Industries period, from 1970 to 2007, although the Circle-W probably disappeared in 1996. There were at least three variations:

WHEATON, N.J. (horizontal) (see Figure 15) WHEATON, / N.J. (both horizontal) (Figure 16) WHEATON (arch) / N.J. (horizontal) (Figure 16)



Figure 16 – Wheaton NJ (eBay)

WHEATON U.S.A. (1946-1970)

At least one canning jar was embossed "WHEATON (horizontal) / U.S.A. (inverted arch)" – and product jars carried the same logo (Figure 17). The logo was apparently only used on product or fruit jars from 1946 to 1970.

Stylized WI (1972-2019)

The trademark document described this logo as "the stylized letter 'W' with an extended middle point representing an 'I." Wheaton received Trademark No. 85385993 for the logo on August 1, 2012, claiming a first use on March 2, 1972. Although the mark was used for a long period, we have not seen it used on containers – although it was applied to paperweights (Figure 18).

Numbers (early 20th century)



Figure 18 – WI logo (eBay)

Pages 16-17 on the early-1920s Wheaton catalog showed "100" embossed on the bases of cork-finished, Round Metric Measure Bottles in both wide- and narrow-mouth configurations. However, the glass-stoppered variations of the same bottles are embossed "125" on the heels. These may be catalog numbers, but they may indicate the



Figure 17 – Wheaton U.S.A. (eBay)

capacity of the bottles in cubic centimeters. Both containers were available in 100 and 125 cc capacities.

Diamond I

The early-1920s Wheaton catalog (pages 28 and 31) also illustrated the Diamond-I mark of the Illinois Glass Co. on Signet Ovals, Lyric Ovals, and Carboys. The bottles must have been distributed by Wheaton under some contract with Illinois Glass. Illinois Glass had obtained the Owens Automatic Bottle Machine license for prescription (drug store) bottles in 1912. Since Wheaton was still making such bottles by hand, it may have been cheaper for Wheaton to have sold the Illinois Glass Company's ware. See the Illinois Glass Co. section for a discussion of that company.

Discussion and Conclusions

Because of its age, the Wheaton companies have a rich history with distinct name changes that help date the various marks applied by the factories. In almost all cases, we have assigned date ranges based on these name changes, backed by other date (e.g., copyright dates or listings for the marks in industry publications. See Table 1 for a chronology of the marks.

Table 1 – Manufacturer's Marks Used by the Wheaton Companies

Mark	Company	Date Range
TCW*	T.C. Wheaton & Co.	1888-1901
TCW&CO	T.C. Wheaton & Co.	1888-1901
TCWCO (mouth-blown)	T.C. Wheaton Co.	1901-1938**
TCWCO (machine-made)	T.C. Wheaton Co.	1938-1970
Circle-W	Wheaton Glass Co.	1946-1970
Circle-W + WHEATON	Wheaton Glass Co.	1970-1996
WHEATON GLASS CO.	Wheaton Glass Co.	1946-1970
WHEATON / U.S.A.	Wheaton Glass Co.	1946-1970
WHEATON, N.J.	Wheaton Industries	1970-2007

^{*} Probably bogus. Although Toulouse listed this, we have been unable to find an example.

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^{**} This entry is theoretical. All bottles we have seen with this logo were machine made.

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