

# **De Steiger Glass Co. and the “Twister” Blowers**

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Although the De Steiger family only operated its glass house at LaSalle, Illinois, for five years (1878-1883), the plant left a rich heritage in bottles and jars embossed with its “DeSGCo” and “DSGCo” logos. In addition, the plant made the first turn-mold bottles produced in the U.S. When Albert A. Paddon gained control of the factory after the De Steiger bankruptcy in 1883, he apparently continued to use the De Steiger family name but discontinued embossing the logos on his products. After fires and misadventures, Paddon apparently closed the plant in 1893.

Two of the De Steiger brothers patented several jar closures and some other items, but only two actual jars achieved production. Joseph L. De Steiger and Edward A. De Steiger patented the “Imperial” in 1886, and jar was produced for some years by the Illinois Glass Co. The “Columbia” – patented in 1896 by Joseph De Steiger – was more popular and was made by both Illinois Glass and the Whitney Glass Works.

## **Histories**

### **Phoenix Glass Co., La Salle, Illinois (1867-1878)**

The earliest glass operation at La Salle, Illinois, was an unnamed bottle factory that apparently began ca. 1860. The plant was unsuccessful, but virtually nothing else is known about it. The second factory at La Salle, the Phoenix Glass Co., opened in 1867. The firm was originally a cooperative that manufactured window glass. The group incorporated ca. 1870 and remained in business until 1878 (Baldwin 1877:542; Bruce Etheridge, personal communication 2007; *Past and Present* 1877:302; Toulouse 1971:167).

### **De Steiger Glass Co., La Salle, Illinois (1878-ca. 1889)**

The De Steiger family was listed at Peru, Iowa, in the 1850 census, with Francis (father), Ann Elizabeth (mother), and three children. The family had apparently migrated to the U.S. from Switzerland in 1845. Francis was fairly well off for the time with \$1,500 in property. The

family continued to produce children until the Francis died sometime between 1860 and 1870, and Ann Elizabeth moved the now five children to St. Louis (von Mechow 2012).<sup>1</sup>

Toulouse (1971:167) speculated that the family had worked for the St. Louis Flint Glass Works until the factory began having an “economic slowdown” prior to going out of business in 1880. However, none of the family was listed in the glass business in the 1870 census. Phillip De Steiger, his mother, and his three brothers moved from St. Louis to La Salle, along with Adolph C. Schultz and William F. Modes in the fall of 1878 and organized the De Steiger Glass Co. The firm built a bottle plant then purchased the earlier Phoenix Glass Co. window factory (American Biographical Publishing Co. 1883:622; Link n.d.; von Mechow 2012).

Phillip R. De Steiger, 33, was the oldest brother, listed as “Glass Manf.” in the 1880 census. Joseph, 22, was a “Clerk in Glass Factory,” and Edward A. was a “Bookkeeper” – probably also with the family firm. Another brother, Augustus or “Gus” (listed as Eugene in the 1880 census) was a lumber dealer, apparently not involved in the glass business (von Mechow 2012). Phil. – as he wrote his name – experienced a little excitement in 1879. On April 11, the *Harrisburg Daily Independent* noted that

Tuesday evening Mr. Philip De- Steiger President of the De Steiger bottle works, was attacked by the tramps, and was only saved from being robbed and pummeled by drawing his revolver and informing the roughs that he would kill the first one that advanced a foot nearer.

The family was almost immediately at odds with the Bottle Blowers’ League, which the *City of La Salle* (1882:4-5) described as “an organization which has persistently stood in its own light for years, and caused a great deal of trouble and immense loss to the proprietors of glass factories by the strict observance of arbitrary rules adopted for the supposed protection of the membership.”

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<sup>1</sup> Tod von Mechow did a great job of tracing the family. As was common with the older censuses, the enumerators were terribly inexact with the names – noting the family as Stiger in 1850, Styger in 1860, Steger in 1870, and finally (correctly) De Steiger in 1880. The mother, Ann Elizabeth, was enumerated in later censuses as Elizabeth but was listed in the La Salle city directory as Ann.

Although the firm continued to make window glass, there was also a distinct emphasis on containers. John Davis became the manager in 1879. The plant apparently served a local Illinois and St. Louis market – at least initially – making beer, soda, prescription, and mineral water bottles, along with at least some flasks. The De Steigers also made bottles for two local breweries as well as the city’s distillery (*City of La Salle* 1882:4; Farnsworth & Walthall 2011:60, 62; Link n.d.; *National Glass Budget* 1909:4; Toulouse 1971:167).

Although this is mostly speculation, the plant may have been formed with a view toward supplying Anheuser-Busch with export beer bottles. Although history is silent about the connection between the De Steiger family and William Modes, they were all at St. Louis in the 1870s, and Modes was part of the De Steiger firm in nearby La Salle. Modes had been the manager of the Mississippi Glass Co., a major supplier of beer bottles for Busch. By the late 1870s, Busch was already having trouble finding a sufficient supply of export beer bottles. De Steiger became an early supplier for Busch, so this may have been both the impetus for the formation of the La Salle factory and a means of convincing a capitalist (possibly Adolph C. Schultz)<sup>2</sup> to finance the operation.

In the summer of 1880, the disputes with the Bottle Blowers’ League culminated when the De Steigers discharged all the old employees and imported “a number of German bottle blowers . . . despite the combined efforts of the German Government and the League to prevent it” (*City of La Salle* 1882:4). This likely occurred during the summer break. All glass factories typically shut down during the summer because of the heat and to allow time for repairs and improvements. It would have been the perfect moment. The workers were no longer needed, and the summer break gave them plenty of time to find new jobs – so they would not be around to cause trouble when the plant reopened.

With the union workers eliminated, the De Steigers had built a Sieman’s continuous tank during the summer and fall of 1880 – “to further facilitate and economize labor.” According to the *City of La Salle* (1882:4), this was the first continuous tank used in the U.S. “with the exception of one at Poughkeepsie, N.Y., lately destroyed by fire.” (*City of La Salle* 1882:4). The *City of La Salle* (1882:5) explained that:

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<sup>2</sup> Although Schultz was connected with De Steiger in the beginning, we have not found any association between him and either La Salle or St. Louis.

probably the principal reason why these tanks have not heretofore been used in this country is that the glass-blowers' organizations have forbidden their members to do night work, with the view of preventing over-production, and as the heat must be maintained at all times for the preservation of the tank the gain in other respects would be more than counterbalanced by the enforced loss of time. Aiming to protect themselves, the glass-blowers have actually stood in the way of progress in their own branch of art.

The *City* (1882:5) added that “the members of the Bottle Blowers' League and former employees have expressed great indignation at this action of the De Steiger Glass Company.”

### **Export Beer Bottle Manufacturing**

The 1870s comprised an interesting and intense period in the history of bottle manufacture. Valentine Blatz commissioned the first 26-ounce export beer bottle in 1873, and both the sale of bottled beer and the manufacture of export beer bottles skyrocketed the following year and for at least the next decade. Initially, the Mississippi Glass Co. (under the management of William Modes) and Lindell Glass Co. plants primarily served the Anheuser-Busch brewery at St. Louis. By the late 1870s, however, the two glass plants were overwhelmed by the virtually insatiable need for bottles by the brewery (Lockhart et al 2009).

Adolphus Busch sought beer bottles from other sources, including two Pittsburgh plants – the American Glass Works and Cunningham & Ihmsen – and even imported bottles from Germany. The De Steiger factory became part of that trend early, and export beer bottles became a major product of the firm by at least late 1879 (Farnsworth & Walthall 2011:60, 62; Lockhart et al 2009; Plavchan 1969:75). According to Baron (1962:243), De Steiger claimed beer bottles as its specialty, possibly making beer bottle production the primary reason for opening the business. The De Steigers advertised their beer bottles in the *Western Brewer*<sup>3</sup> from at least 1879 to March 1883 (Wilson & Caperton 1994:70).

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<sup>3</sup> Wilson and Caperton (1994:70) recorded all beer bottle advertising in the *Western Brewer* between 1883 and 1890 as well as samples from issues between 1878 and 1882.

## “Twister” Blowing

The manufacture of “twister or turn ware” was an important development. The turn-mold or paste-mold process began with the application of a lubricant – called “paste” – to the inside of a hinged, two-piece mold.<sup>4</sup> The gaffer (i.e., a highly skilled master glass blower) blew the bottle into the mold, then twisted or turned it around to remove traces of the mold seams (Figure 1). Turn-mold bottles were made in Europe prior to 1865 (Jones & Sullivan 1989:31; Switzer 1974:23-25), although how early production began has not been determined. For a thorough discussion of the turn-mold process, see Lindsey (2014).



Figure 1 – Turn-Mold Bottle Characteristics (Lindsey 2014)

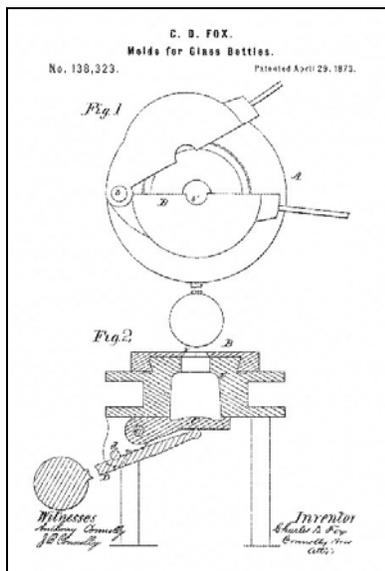


Figure 2 – Fox 1873 Patent

Although an attempt to design a mold for a seamless bottle was patented in the United States by C.D. Fox on April 29, 1873 (Pat. No. 138,323), it was *not* a turn-mold design (Figure 2). Fox patented another device for making seamless wide-mouth containers or tableware on June 7, 1881, but it, too, did not use turn-mold technology. Despite the assertion by Toulouse (1969:532) that “several United States patents were granted in the 1870s and 1880s for ‘seamless bottles’ with and without turn molding,” we have been unable to find any other patents until the June 14, 1887, patent for a process to emboss baseplates with the turn-mold system (No. 364,840) by William F. Models and the December 13, 1898, patent for a paste mold (No. 615,910) by Christian Z.F. Rott and Theodore C. Steimer (Figure 3). Steimer assigned his part of the patent to Rott.

<sup>4</sup> Although the term “two-piece” mold appears often in the literature, it is slightly misleading. There was an actual two-piece mold that was used in the earlier days of molded bottle blowing, although this simple style was almost completely replaced by a mold with two side pieces and a baseplate, prior to the introduction of the export beer bottle. The baseplate could be in post or cup form, but post-bottom molds were the most common for beer bottle production during the late 19<sup>th</sup> century.

Because of the bottle boom in the late 1870s-early 1880s:

Blowers were so scarce that it was a very difficult matter to keep places filled, and so hard pressed was the De-Steiger (*sic*) company at La Salle that it was compelled to procure workmen from Germany and Sweden, their coming having been the advent of the twister or turn ware makers (*National Glass Budget* 1909:4)

This statement was written more than 30 years after the fact *by* a pro-American labor publication, so it is incomplete. While the labor shortage was certainly an issue, the disputes between the De Steigers and their workers was also part of the picture. German and Swedish laborers were also probably more culturally compatible with the De Steiger's German background and the attitudes of the new workers toward the relationship between labor and management may have coincided more closely. It would also be interesting to discover whether the skills in "twister" blowing was a happy accident or was intended in the hire.

Written in the summer of 1882, the American Biographical Publishing Co. (1883:622) noted that the De Steiger Glass Co. was "the only manufacturers of export turned-mold beer bottles on this continent . . . the first to introduce them into this country." It is clear that the German and Swedish immigrants, imported by the De Steiger Glass Co., were the first "twister blowers" in the United States. As cited above, De Steiger imported these gaffers in 1880. This confirms the ca. 1880 date initially set by Toulouse (1969:532) and hence accepted by others (e.g., Newman 1970:72; Jones & Sullivan 1989:31).

The introduction of turn-mold bottles created a demand that grew beyond the tenure of the De Steiger family. As noted below, two turn-mold plants could rightly claim to be descendants of De Steiger Glass: A.A. Paddon and the Streator Bottle & Glass Co. (using the

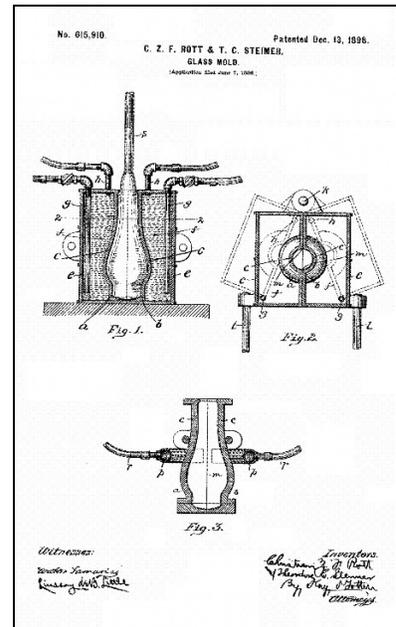


Figure 3 – Rott & Steiner 1898 patent

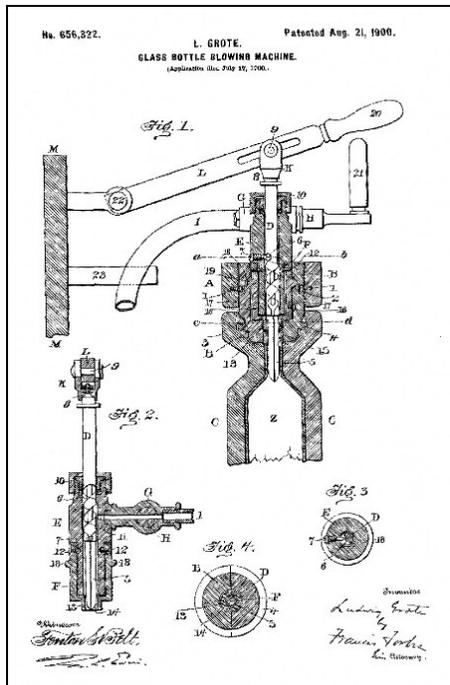


Figure 4 – Grote 1900 patent

applied for a patent for a “Glass-Bottle-Blowing Machine” on March 5, 1900, and received Patent No. 656,322 on August 21 of the same year (Figure 4). He assigned the patent for his “turned” bottle machine to the Grote Bottle Machine Co., Jersey City, New Jersey. He was followed by Carl Leistner, also of London, who applied for a patent for a much more complex turn-mold machine on August 31, 1901, and received Patent No. 704,055 on July 8 of the following year (Figure 5). The machine age had arrived for the turning process, and production continued until ca. the 1920s (Newman 1970:72).

former De Steiger blowers). The procedure became so associated with wine containers that wine in turn-mold bottles was imported to the U.S. as late as the 1980s. Despite the popularity in the wine industry, turn-mold bottles had no advantage over other bottles except the lack of seams – wiped out in the turning process. Even that value was offset by the horizontal striations caused by the paste used to allow the bottles to turn within the molds. Unless the paste was changed *very* frequently, it caused the striations as it became dirty.

Turn-mold production continued into the 20<sup>th</sup> century.

Ludwig Grote of London, England,

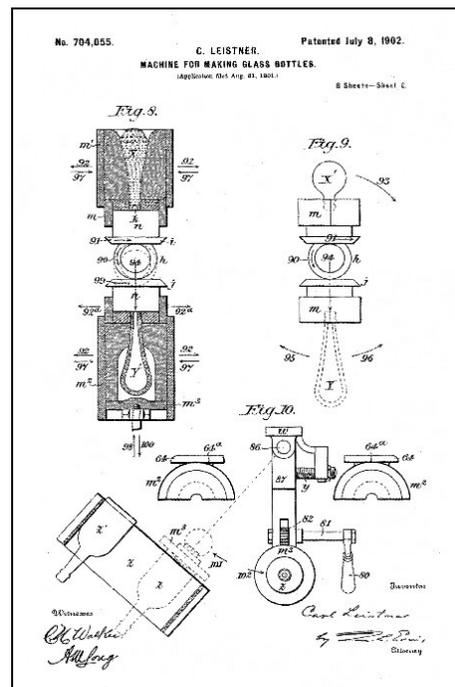


Figure 5 – Leistner 1901 patent

### The De Steiger Plant in the Early 1880s

A fire destroyed the plant in 1881, but it was rebuilt with two “factories” (almost certainly the original two – one for bottles, the other for window glass). By the summer of 1882, the plant employed 260 men and boys and made \$450-500,000 worth of bottles and window

glass annually. Their Seimans continuous tank was only the second ever built in the U.S. and was the only one still operating at that time. The firm was probably a corporation from the beginning, with Philip R. De Steiger as president in 1882 and Augustus F. De Steiger as secretary-treasurer. The family was described as “full of energy and pluck” (American Biographical Publishing Co. 1883:622-623; von Mechow 2012).

By at least December 13, 1882, De Steiger billed itself as “Manufacturers of Window Glass Ware, Fruit Jars, etc.” with “Phil. R. De Steiger” as president. The firm had become a corporation by at least September 1882, with a capital stock of \$50,000. As president, Phillip arranged a \$10,000 loan with the First National Bank of Peru (Illinois) on September 21, 1882 (Bradwell 1884:141-142; von Mechow 2012).

The De Steigers were apparently in financial trouble during this period. In addition to the new debt, the firm had defaulted on old obligations. On December 22, 1882, the First National Bank of Peru received two judgements against the De Steiger Glass Co. – for \$35,050 and \$5,325. The same day, the sheriff of La Salle County “levied upon a large amount of real estate as the property of the De Steiger Glass Company and the same advertised for sale” (Smith 1889:114-115; von Mechow 2012).

In addition, the De Steigers had received three loans on September 21, 1882, for a total of \$10,000 from Edward C. Hegeler and a fourth loan for \$4,500 – also from Hegeler – on November 20 of that year. When Helgeler entered his plea to the Circuit Court for a judgement on December 30, 1882, it was denied in favor of the bank. Hegeler filed suit against the bank, claiming that he made the loans to the De Steigers base on “false and fraudulent statements of the De Steiger Glass Company as to its financial condition and upon the delusive and fictitious credit given it by said First National Bank of Peru.” He noted that the glass firm had been insolvent prior to January 10, 1882, the date of the last loan the De Steigers received from the bank. Hegeler took his complaint all the way to the Illinois Supreme Court but was denied (Hegeler 1890:6-51). Hegeler even included a De Steiger letterhead with a financial statement (Figure 6).

Interestingly, the notes to Hegeler were signed by Phil. R. De Steiger, E.A De Steiger, A.F. De Steiger, J.L. De Steiger, W.F. Modes, Chas. C. Modes, George Modes, and May E.

Burton. This shows that the Modes family was more deeply involved than just having William Modes as the plant manager. His son, Charles, was also involved in later glass houses. We have been unsuccessful in determining the relationship between William and George Modes – nor have we found other sources for the connection between May E. Burton and the glass firm.

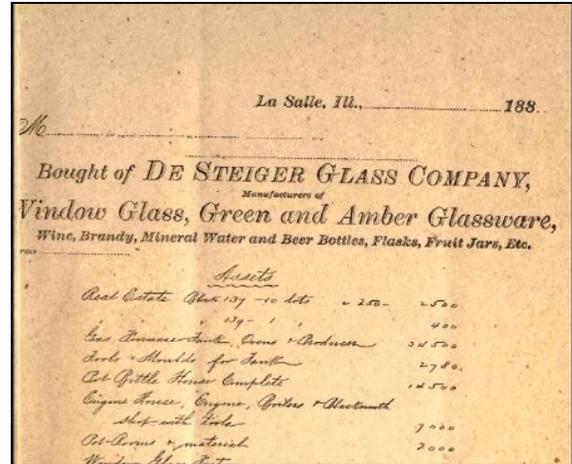


Figure 6 – De Steiger letterhead (Hegeler 1890)

As a result of the judgements, the glass house was sold at a sheriff’s sale during mid-April of 1883. The First National Bank of Peru purchased the property. This corresponded with the end of advertising in the *Western Brewer* in 1883, heralding the termination of beer bottle production at the plant (Smith 1889:114-115; Wilson and Caperton 1994:70). Despite the sale, Phillip R. De Steiger remained listed as president of the family corporation in 1883, with A.F. De Steiger as secretary/treasurer and William F. Modes as superintendent. The other two brother also remained connected with the glass works (La Salle and Peru Directory 1883).

The Bottle Blowers’ League continued to agitate against the De Steigers. The League “tried all manner of inducements and explanations” to convince the German blowers to join the union and strike against the De Steiger plant, but the agitators had little or no success. In 1883, other glass houses complained that La Salle was undercutting the market and demanded a reduction. The De Steigers refused and continued what was apparently a massive production (McNeill 1887:375).

This apparent continuation of De Steiger manufacture requires some comment. Although we have no historical justification for this speculation, the First National Bank – almost certainly previously in collusion with the De Steigers – may have allowed the family to continue to operate the business under First National’s control. This may have been an attempt on the part of the bank to recoup some of its losses. It otherwise seems strange that the bank would purchase a failed business and former creditor. Hegeler’s accusations seem to be confirmed by the bank’s actions. It is also possible that the factory closed prior to the sheriff’s sale and never reopened.

A devastating fire destroyed both De Steiger “factories” on the morning of November 5, 1883 (*Decatur Review* 11/7/1883). The fire certainly marked the end of the De Steiger family tenure as glass makers at La Salle. Modes likely abandoned the De Steigers after the fire. According to Toulouse (1971:168, 532), Modes moved to the Streator Bottle & Glass Co., Streator, Illinois, at this time, along with 60 or more De Steiger employees, “many of them German ‘twister blowers.’”<sup>5</sup> Modes went on to be a noted name in container manufacture for the remainder of his life.

During the 1880s, Joseph and Edward De Steiger designed fruit jars – both together and separately – and continued to turn out additional ideas until 1900. There is no evidence to suggest that the De Steiger plant actually produced any containers of the family design, although the Illinois Glass Co. made jars based on both the 1886 and 1896 De Steiger patents. See the Patents and Fruit Jar sections for details.

### **A New Owner**

On January 31, 1884, the *Pottery & Glassware Reporter*, stated that “both the window & bottle glass factories at LaSalle, Ill., have been leased from the receiver by a Mr. Padden [*sic*], of Chicago, who will put them in order and start them up after a while.” On February 28, the same source noted that “Wright & Co. are about to start the DeSteiger works . . . They will make window glass” (quoted in Roller 1997). Rebuilding of the burned factory commenced on February 4, 1884 (*Decatur Herald* 2/9/1884).<sup>6</sup>

Albert A. Paddon was a relative (probably a brother or son) of Stephen Paddon. The firm of Stephen Paddon & Co. was established at Chicago in 1875 and remained in business until at least 1899. According to *A Business Tour of Chicago* (1887:159-160), the company was

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<sup>5</sup> The area where the group settled in Streator became known as “Twister Hill.” With this move, the manufacture of turn-mold bottles transferred – at least temporarily – from De Steiger to Streator.

<sup>6</sup> We have been unable to discover what – if any – connection Wright & Co. had with the Paddon family. The only Wright & Co. in Chicago at that time appears to have owned a series of stables. There was also no further mention of the Wright & Co. at La Salle. It is probable that Wright & Co. took charge of the window glass plant alone – and soon failed.

“chemical and drug importers, glass-makers’, soap-makers’ and paper-makers’ supplies, and manufacturers of glass bottles.” Located at La Salle, the factory employed “about 180 hands, all kinds of bottles, chiefly those required by bottlers of wine, ales, cider, etc., being the article of manufacture.” This describes primarily turn-mold bottles.

The 1887 report makes it clear that Albert A. Paddon purchased (possibly after a period of leasing) the De Steiger plant early in 1884 as a representative of Stephen Paddon & Co. Yet another fire destroyed the two “glass ovens” at the company in 1885 (Link n.d.). The plant was apparently rebuilt and in production again in time to be listed in the 1886 Glass Factory Directory, using “one green furnace” (Toulouse 1971:168). This seems to indicate that the plant retained the De Steiger Glass Co. identity at this point and was apparently producing bottles again – especially turn-mold bottles. The business was listed in the Green Bottle, Hollow-ware & Fruit Jar Factories section of the 1889 factory listing as De Steiger & Co. (Roller 1997).

### **The Union Fights Back**

However, 1889 also heralded a major challenge by the bottle blowers union. Union activity began in 1846, but it did not make large inroads until the Glass Bottle Blowers Association affiliated with the Knights of Labor in the 1870s. At that point, unionization spread rapidly. Strikes during the 1880s stabilized the glass industry with standardization of wages and conditions. This created a great deal of tension between union and non-union factories (Fones-Wolf 2007:8-10; 14-15).

The De Steiger plant’s nonunion stance created (or revived) an enmity with the Glass Bottle Blowers of the Knights of Labor in 1889. General Charles Adams lured away 52 German glass blowers from the La Salle plant to the newly opened Colorado City Glass Co. at Colorado City, Colorado. The men arrived on May 4, 1889 (*Weekly Gazette* 5/4/1889). As noted above, 60 De Steiger workers had transferred to Streator in 1885, so the La Salle plant must have imported new German workers for the rebuilt plant – or possibly lured some of them back from Streator.

The Knights of Labor apparently engineered the migration of the German blowers away from De Steiger in 1889, as this was discussed in the Annual Session of the Bottle Glass Blowers

that year. De Steiger was undercutting the price of turn-mold ware, and W.F. Modes complained that Streator “could not compete with La Salle, and that they could not run any longer the way they were running.” The bottles were “costing too much to make” (Koebert 1889:33-34).

This apparently led to the union raid on De Steiger in hopes that the factory would be forced to close. However, the plant hired “blockers” – i.e., glass workers who “travel from one scab factory to another accepting places to blow, and then as soon as their fires go out, they hunt places in union factories to block or gather” (Koebert 1889:13, 33-34). With the help of these “blockers,” the plant survived the 1889 labor hiatus.

However, A.B. Koebert (1889:33) traveled to La Salle to collect information. He reported that workers were:

making very poor ware. Their workmen being mostly all blockers from Streator, with a few scabs picked up at Minneapolis and La Cross, and were shipping no ware but in small lots . . . . I also find that they are making beers and water bottles with the Baltimore seal, and I think it would be wise for the District at the coming session to take some action, and try and have those tools withdrawn from that factory. . . . They also make a good deal of lettered champagne ware.

Koebert (1889:33) suggested sending “a stranger to the La Salle people” to gather more information. He felt he was ineffective “as everyone down there seems to watch me.” Even though we do not know the results of this second level of cloak-and-dagger intrigue, it must have been effective. The workers at De Steiger went on strike in October 1891 (Roller 1997).

An interesting connection in this entire story of intrigue is that Edward C. Modes, another son of William F. Modes, worked at the Colorado City Glass Co. It seems a bit too coincidental that Modes’ father was the main complainant against the La Salle factory, and the workers were lured to Colorado. Add that both Streator and Colorado City were union plants, and both had connections with Adolphus Busch, and this takes on the guise of a conspiracy.

**Albert A. Paddon, La Salle, Illinois (1889-1893)**

The strike must have been settled favorably. On November 26, 1891, the *Pottery & Glassware Reporter* noted that A.A. Padden (*sic*) was building a new furnace. The plant had been manufacturing a “general line of green glass bottles” (quoted in Roller 1997). By 1892, the letterhead of the firm was “ALBERT A. PADDON, Manufacturer of Turned-Mould Bottles and Lettered Ware” (Figure 7). The main office was in Chicago, but the factory remained at La Salle.

Paddon had also apparently made peace with the Colorado Glass Co. – but only temporarily. On May 23, 1893, George A. Ranney testified that

Albert A. Paddon had shipped a carload of bottles to Manitou, Colorado, on February 4, 1893. Paddon had contracted with the Colorado City Glass Co. on January 17, 1893, to furnish “six thousand gross of quart appollinaris [*sic*] bottles at an agreed price of five dollars per gross” to be delivered to the Manitou Mineral Water Co. The bottles were “to be finished for No. 9, corks and were to be made without any ‘choke’ in the necks thereof” (Colorado City Glass Co. 1893; State of Colorado 1893:2-4).

The Manitou Mineral Water Co. rejected the bottles upon receipt for two main reasons. First, the bottles were “of defective corkage.” In other words the necks were partially blocked by “chokes” – bulges of glass within the bottle necks – that interfered with the proper seating of the corks. Second, “some of said bottles were to [*sic*] small and some too large” – a frequent complaint about mouth-blown bottles (Colorado City Glass Co. 1893).

It is obvious that Paddon had remained associated with Stephen Paddon & Co.; he deposited the money received for the shipment of bottles in the aforementioned firm’s account (State of Colorado 1893:5-6). Albert continued with Stephen Paddon & Co. after the demise of the La Salle glass operation. He was noted as assessing soda prospects (the chemical – not the

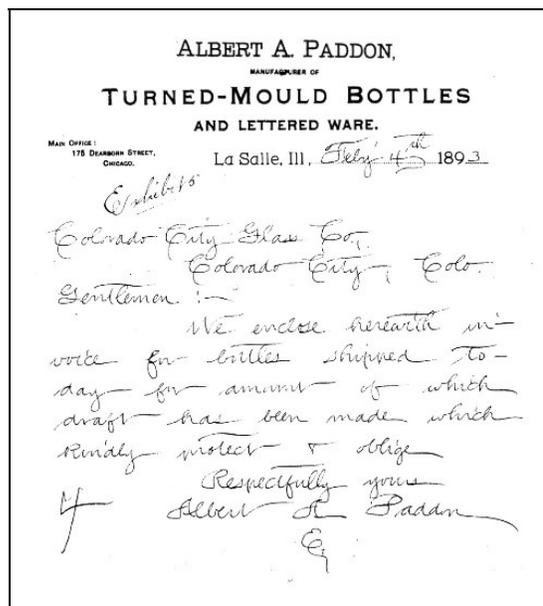


Figure 7 – Albert A. Paddon letter

soft drink) in Wyoming as the western agent for Stephen Paddon & Co. in 1897 (*Paint, Oil and Drug Review* 1897:24) and probably remained with the firm as long as it continued in existence.

## **The End**

The closing of the De Steiger plant is debatable. Although the De Steiger family involvement ceased in 1883, the plant operated under the De Steiger name until at least 1889, although it probably made bottles as A.A. Paddon & Co. during the same period. Paddon remained in business until he lost the lawsuit of 1893, but we have found no direct evidence for any further operation of the plant after that time. Since 1893 was the year for one of the periodic “panics” (depressions), it is highly likely that the lost suit, combined with the economic downturn, forced the La Salle glass business to cease operations at some point during the year. Rydquist (2002:4) noted that De Steiger was last listed in the *National Bottlers Gazette* in 1896, and Bruce Etheridge (personal communication 2007) stated that the De Steiger “bottle plant burned in 1899,” although that may refer to the building, itself, a few years after production had ceased.

## **De Steiger Glass Co., Buffalo, Iowa (1880-at least 1882)**

In 1880, the De Steiger Glass Co. of La Salle bought the local glass works at Buffalo, Iowa. The plant had been erected in 1874 by Wilkinson & Co., then sold to Henry Dorman in 1876 (Larson 1983:33, 43; People of Scott County n.d.), but we have been unable to find the name of either the factory or the original owner. The *Iowa State Gazeteer and Business Directory* of 1882 listed a “DeSteiger Glass Co.” at Buffalo (Labath 2006). Larson (1983:37) published an apocryphal story about the gaffers at the factory, told by Ferdinand Bald (at the age of 89):

Those glass blowers were beer bottle blowers[,] too. Someone would come in and ask them to blow them a bottle. They’d say they would if the person would take the bottle to the brewery (only a short distance away, owned by John Bartberger) and get it filled up. When the person would agree they’d blow a gallon bottle and insist they fill it.

Unfortunately, we have found no further information about this branch of the company. It is highly likely, however, that the Ohio branch closed either in late 1882, when the De Steiger Glass Co. went bankrupt at La Salle or in late 1883, when the La Salle plant burned and the company failed.

### **Columbia Fruit Jar Co. (ca. 1901?-ca. 1912)**

As will be discussed below in the patent and container sections, Joseph De Steiger received a patent in 1896 for a jar design that ultimately was used in the production of the Columbia line of fruit and packers' jars. Although Joseph did not immediately assign the patent to anyone, he apparently made arrangements with the Illinois Glass Co. to manufacture the jars by 1901. The jars continued to be produced into the teens.

The Columbia Fruit Jar Co. was in business by at least 1904 with four adult male employees. It is likely that Joseph De Steiger – probably with brother Edward and possibly other family members – founded the firm to make the steel hardware for the Columbia fruit jars. The company was last listed (erroneously as the “Columbus” Fruit Jar Co.), still at La Salle, in 1912 (Caniff 2012:43). The De Steiger brothers – at least Joseph and Edward – remained in La Salle until the early 20<sup>th</sup> century, probably until their respective deaths.

## **De Steiger Patents**

Previous literature (e.g. Toulouse 1971:168) only listed two patents filed by the De Steigers and provided little discussion. The real patent history is much more interesting. Oddly, William E. Marlett received Patent No. 433,901 on August 5, 1890, for “A Device for Operating the Doors to Elevator Shafts” and assigned the patent to the four De Steiger brothers. This may indicate that the family had expanded into other areas of manufacture at the end of the glass operation.

### **Fruit Jar – November 27, 1883**

Joseph L. De Steiger applied for a patent for a “Fruit-Jar” on May 17, 1883, and received Patent No. 288,983 on November 27, 1883 (Figure 8). The jar had embossed lugs on the outside

of the neck that fit into internal ridges on the cap. Apparently, no actual jars were ever made to the patent.

### Fruit Jar – February 20, 1886

Edward A. De Steiger designed a very different type of “Fruit-Jar” – with a complex lid held in place by a wire wrapped around a central post or “center-pin.” The wire rode on ramps (“two arc-shaped ridges”) built into the lid, and the wire ends slid into grooves on the jar finish. De Steiger applied for the patent on September 1, 1885, and received Patent No. 336,800 on February 20, 1886 (Figure 9). The lid is reminiscent of the Otterson & Voorhees March 3, 1885, patent (No. 313,229) that was used on Woodbury Jars (Woodbury Glass Works), although there are significant differences. The De Steiger jar, however, was apparently never made.

### Fruit Jar – April 20, 1886

On February 4, 1886, just 16 days before Edward received the patent described above, Joseph L. De Steiger and Edward A. De Steiger filed for a “Fruit-Jar” patent. They received Patent No. 340,428 on April 20, 1886 (Figure 10). Although the patent was for the jar, their description centered around the closure. The brothers moved Edward’s ramps (from the February 1886 patent) from the top of the lid to the sides. A groove at the neck-finish juncture of the jar held a bent-wire device that fit against the two inclined ramps – that the De Steigers called “inclined lateral

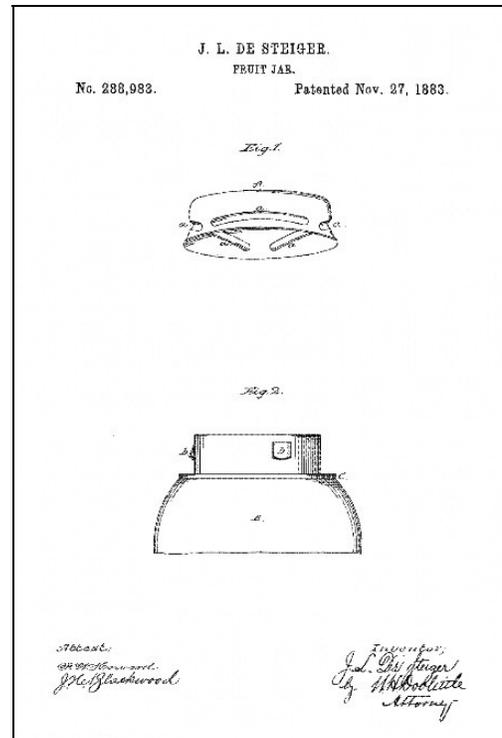


Figure 8 – De Steiger 1883 patent

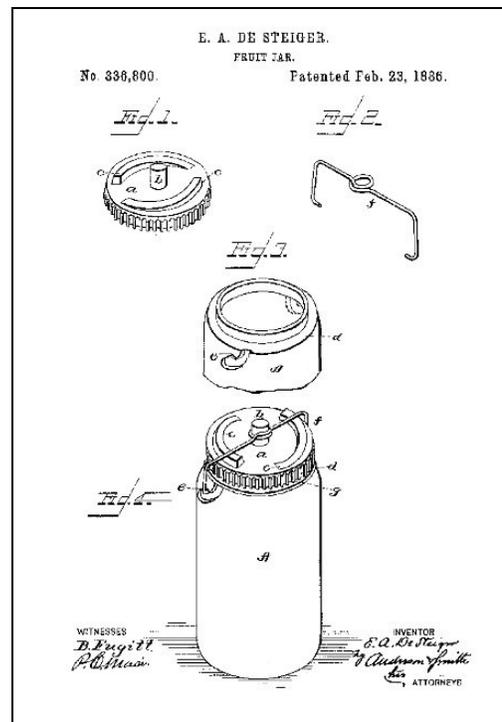


Figure 9 – 1<sup>st</sup> De Steiger 1886 patent

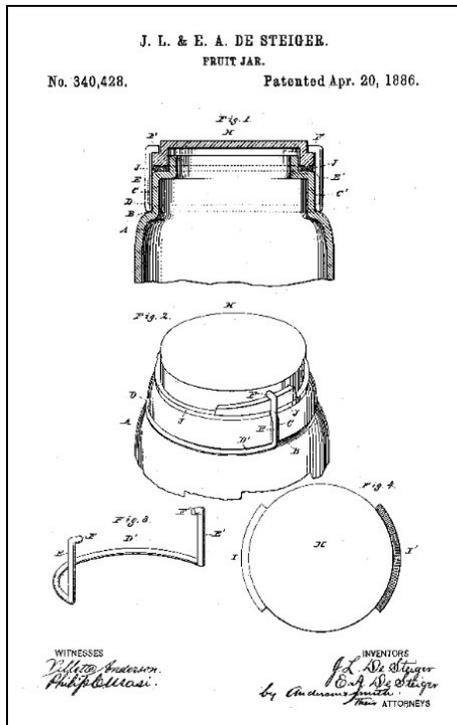


Figure 10 – 2<sup>nd</sup> De Steiger 1886 patent

peripheral flanges” – that were molded into the lid. As the lid was revolved clockwise, the wire device rode up the ramps, fastening the closure securely. The patent was apparently only used for the manufacture of a single type of jar – called the

Imperial (see Fruit

Jars section below). The patent was also discussed by Toulouse (1969:461).

### Closure – February 26, 1895

Eight years after the receipt of the patent used on the Imperial jars, Joseph and Edward applied for a very different patent for a “Jar or Bottle Cover or Fastener.” They applied on June 15, 1894, and received Patent No. 534,864 on February 26, 1895 (Figure 11). In this closure, a wire clamp held the lid onto the jar or bottle top. We have found no evidence that the patent was ever applied to an actual jar or bottle.

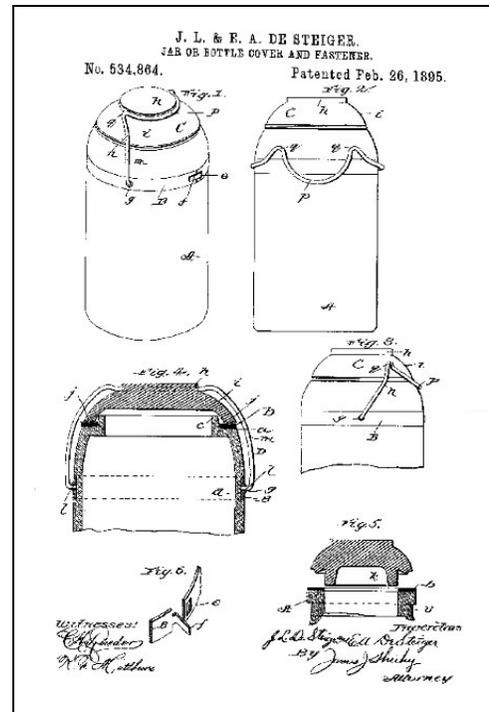


Figure 11 – De Steiger 1895 patent

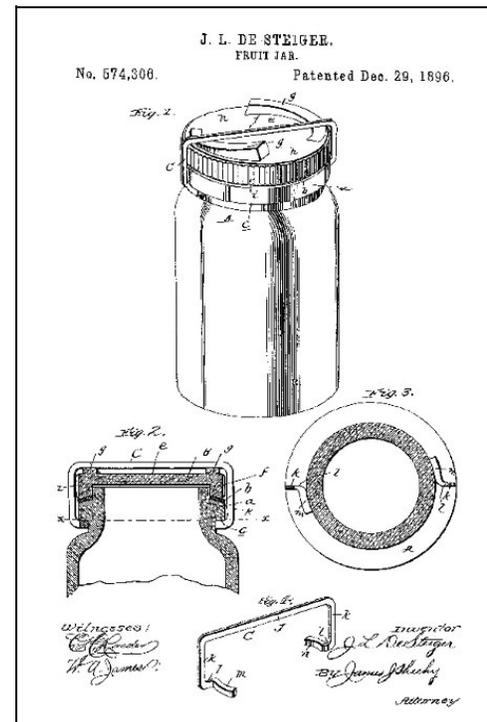


Figure 12 – De Steiger’s 1896 patent

## Fruit Jar – December 29, 1896

On March 14, 1896, less than a month after the brothers' 1895 closure patent, Joseph De Steiger applied for another "Fruit-Jar" patent. He was awarded Patent No. 574,306 on December 29, 1896 (Figure 12). This design combined some of the features of Edward's 1886 patent (e.g., ramps on the top of the lid) and the clamp used on the 1895 patent to form a practical closure, where a wire device was attached to a groove in the finish and rode up the ramps at the top of the lid to affect the closure. This patent was used on the Columbia line of fruit jars (see Fruit Jars section below) and was also discussed by Toulouse (1969:461).

## Closure – October 4, 1898

Joseph and Edward filed yet another application on May 11, 1897, for a "Jar or Bottle Fastener." They must have received a rejection (or became impatient), because they renewed the application on July 28, 1898. It was not until October 4, 1898, that the brothers received Patent No. 611,958 (Figure 13). This lid was quite different from the earlier patents, although the closure still relied on a wire clamp to hold the glass lid onto the jar finish. Again, we find no evidence that this patent was used on an actual jar.

## Closure – January 2, 1900

On April 29, 1899, the brothers designed an improved clip for their 1896 closure and received Patent No. 640,332 for a "Jar Closure" on January 2, 1900 (Figure 14).

Although the clip may have been used to hold one of the earlier lids, the patent date does not appear on any jars we have found.

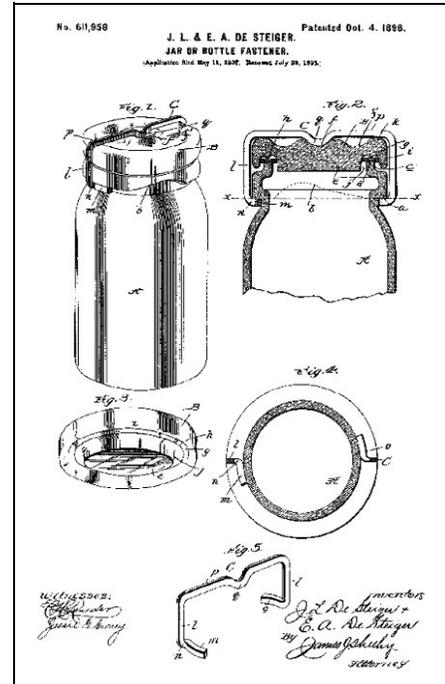


Figure 13 – De Steiger's 1898 patent

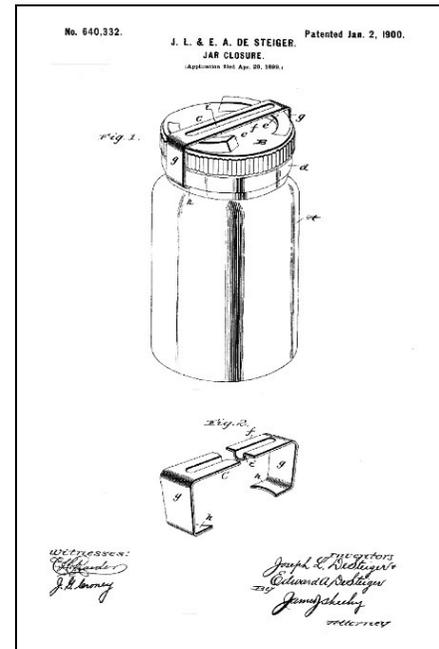


Figure 14 – De Steiger's 1900 patent

## Jar Lid Wrench – March 5, 1907

Joseph filed his final jar-related application (in his name only) on May 3, 1906, for a “Fruit-Jar Wrench” and received Patent No. 846,016 on March 5, 1907 (Figure 15). This is the last known connection between the De Steiger family and the glass industry.

## Machine Screw – September 14, 1909

On August 5, 1908, Joseph applied for a patent for a “Machine-Screw.” He received Patent No. 933,831 on September 14 of the next year (Figure 16).

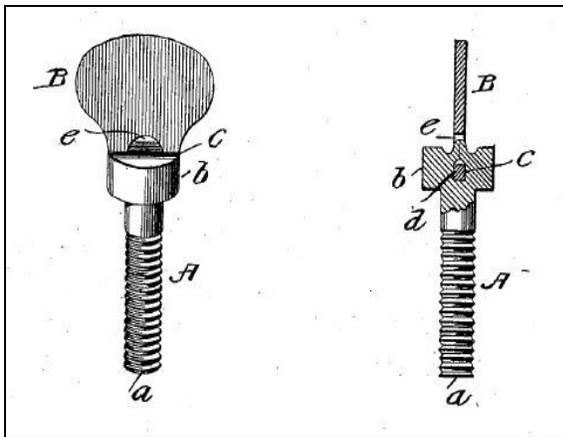


Figure 16 – De Steiger’s 1909 patent

## Necktie Retainer – April 16, 1918

Because Joseph De Steiger spent a significant part of his life involved with the manufacture of glass bottles, the final patent is certain the strangest one. De Steiger applied for a patent for a “Necktie Retainer” on August 27, 1917, and received Patent No. 1,263,214 on April 16, 1918 (Figure 17). Anyone who has ever worn

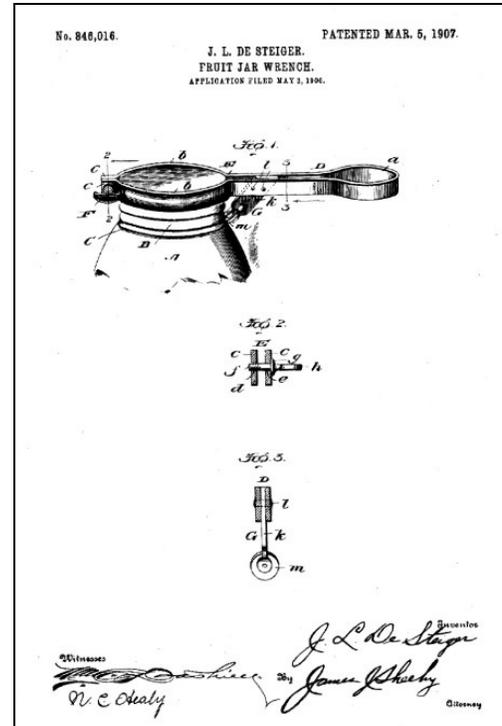


Figure 15 – De Steiger’s 1907 patent

His design is quite well

known today. A regular machine screw with a squared slot was fitted with a “finger-piece” that extended above the screw, so that the screw could be tightened or loosened by finger pressure alone.

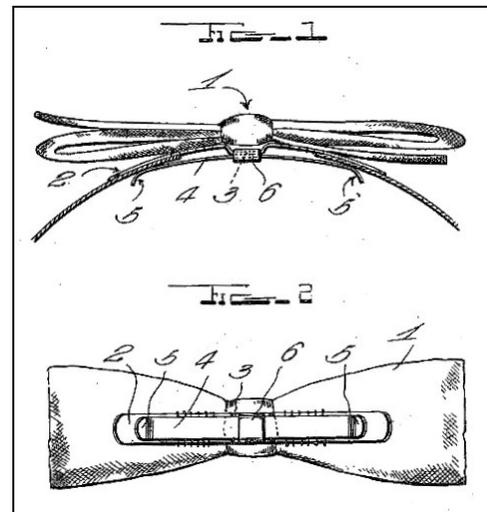


Figure 17 – De Steiger’s 1918 patent

a clip-on bow tie will recognize this invention instantly. One of the authors wore such a bow tie (to avoid learning to actually *tie* any kind of tie) when forced to “dress up” during his K-12 years in the 1950s and early 1960s.

## Containers and Marks

One of De Steiger’s customers was Anheuser Busch. Plavchan (1969:75) noted the following from Anheuser Busch records:

Prior to 1886 the main source[s] of beer bottles for the Anheuser-Busch Brewing Association were four glass works: the Mississippi Glass Co. and the Lindell Glass Co. of St. Louis; the Pittsburgh City Glass Co. of Pittsburgh, Pennsylvania; and the DeSteiger (*sic*) Glass Co. of LaSalle, (*sic*) Illinois.

Busch (who actually ran the Anheuser Busch operation) probably preferred the two nearby St. Louis companies, established respectively in 1873 and 1874, to supply bottles to the brewery. However, the “Pittsburgh City Glass Co.” could only have referred to Cunningham & Ihmsen, a firm already established, when the export beer bottle was invented in 1873. The Pittsburgh glass house was certainly one of the earliest suppliers, if not the first. Busch probably added De Steiger by late 1879 or early 1880.

De Steiger was also one of the first glass houses (at least in the “West” – i.e., from Pittsburgh to St. Louis) to use round plates on the sides of bottles. Farnsworth & Walthall (2011:72) traced the incidence of round plates on bottles used in Illinois. They noted that Patent No. 19,162, received by Lancaster Thomas on June 23, 1868, was for the adaptation of plates to round bottles, although actual use by glass plants did not begin until the mid-1870s (Figure 18). They illustrated three champagne beer bottles with

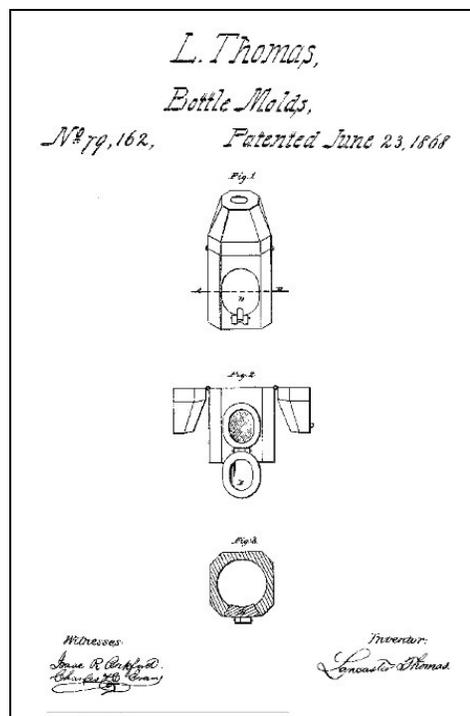


Figure 18 – Thomas 1868 patent

embossed round plates, one of which could only have been used during the late 1870s. De Steiger may thus have been the first Illinois glass house to use round and horseshoe-shaped (or tombstone) plates on the fronts of soda and beer bottles to identify the bottlers.

## Turn-Mold Bottles

Although it is likely that De Steiger was the first American company to make turn-mold bottles, the bottles, themselves, are very difficult to date. Examples have been found in 1880s contexts, and these were likely made by either De Steiger or Streator. Unfortunately, the manufacturing technique creates no attributes for dating individual bottles. With at least one break, De Steiger apparently made turn-mold bottles until ca. 1893, obviously reviving production under A.A. Paddon. Since wine bottles were a major turn-mold product, De Steiger may have been a previously unacknowledged wine bottle manufacturer – although we have only discovered a single reference (noted above) to “lettered champagne ware” in 1889. It is repla virtually certain that turn-mold bottles did *not* replace lettered ware; embossed bottles were almost certainly made for the entire tenure of the firm.

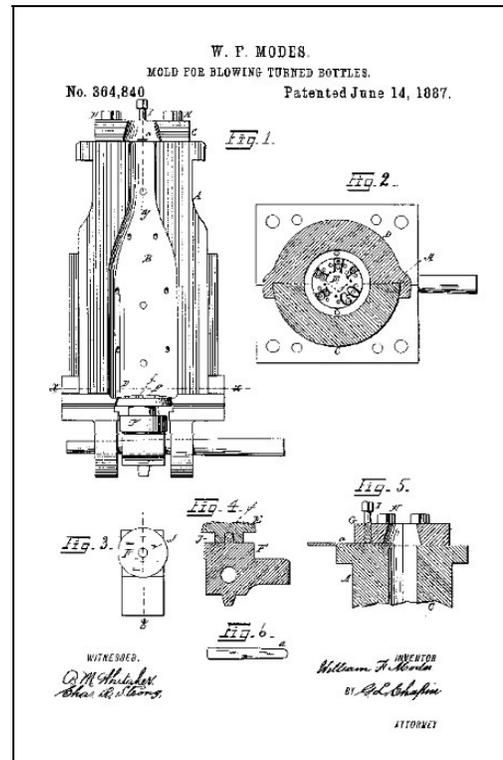


Figure 19 – Modes 1887 patent

As noted in the history section, the Streator Bottle & Glass Co. also produced turn-mold bottles immediately after the hiatus of the Swedish blowers when the De Steiger family went bankrupt. In addition, foreign turn-mold production continued. Hermann Heye, a German glass house, even used a technique where the blowers could emboss either the initials or the company name on bases during the turn-mold operation. However, most of the Heye bottles were generic. The German firm exported bottles of various kinds to the U.S. from at least the 1850s to the 1880s (see Lockhart et al. 2008).

William F. Modes, formerly with De Steiger, applied for a patent for a “Mold for Blowing Turned Bottles” on January 31, 1887, and received patent No. 364,840 on June 14 of that year (Figure 19). Modes’ device consisted of a revolving plate on the base that allowed a bottle to be turned in the mold while retaining the basal embossing. This patent, of course, was too late to have been used by the De Steiger family and was more likely applied by the Streator Bottle & Glass Co.



Figure 20 – DeSGCo logo (Farnsworth & Walthall 2011)

### DeSGCo or DESGCo (1878-ca. 1882)



Figure 21 – Soda bottle (Farnsworth & Walthall 2011)

Farnsworth & Walthall (2011:60, 62) discussed the DeSGCo mark that has previously been unrecorded in any literature we have reviewed. The researchers noted that DeSGCo “appeared to be the preferred maker’s mark during [De Steiger’s] first several years of business in the late 1870s.” They further speculated that “perhaps the different maker’s marks were intentionally applied to different categories of bottles,” although they favored the early use hypothesis. The firm apparently only embossed the logo on the heels of soda and beer bottles.

Most of the marks were punctuated with three periods – De S.G.Co. – and had a lower-case “o” in “Co.” (Figure 20). Two examples of the marks had a capital “E” in “DE” – but that was



Figure 22 – DESGCo logo (Farnsworth & Walthall 2011)

certainly the exception, possibly an engraver’s error (Figure 21 & 22). With the exception of the “o” in “Co.,” lower-case letters were virtually never used in *any*

manufacturer’s marks. A mold maker in a hurry (or daydreaming or hung over) might have easily engraved the capital letter. All of these marks reported by Farnsworth & Walthall were horizontal.

The lack of this mark in other literature may further indicate that the De Steigers initially sold their bottles locally (i.e., Illinois, St. Louis, and nearby locations in other surrounding states). The upset caused by the De Steigers' nonunion activities apparently did not begin until the mid-1880s, probably because the firm was not yet selling on a large enough scale to irritate union officials. It is thus likely that the DeSGCo mark was only found on early, local bottles.

### **DSGCo** (ca. 1878-ca. 1883)

It is clear that the DSGCo mark was the primary logo used by the De Steiger Glass Co. throughout most of its existence. Jones (1966:16) misidentified the mark as belonging to Duncan Sons Glass Co. but admitted that was only a guess. Jones (1968:16) later speculated that the company might be the Dawes Manufacturing Co. or John L. Dawes, Sons & Co. (in business in Pittsburgh sometime prior to 1894) but again acknowledged that she was unsure. Toulouse (1971:167) only reported the mark on beer bottles and dated it "circa 1879 to 1896," the entire duration of the De Steiger Glass Co. Hutchbook (Fowler 2014) included a single example of a Hutchinson soda or beer bottle embossed "D.S.G.Co." on the base and "Ben Doll (in mixed-case letters) / LA SALLE / ILLs" on the front.

Thus far, we have only discovered DSGCo marks on beer bottles, Hutchinson bottles, liquor flasks, bitters bottles, patent medicine (or tonic) bottles, and fruit jars. Although Giarde discussed the mark in connection with milk bottles, it is highly unlikely that De Steiger made any milk containers. Although this needs more research, we hypothesize that the use of all variations of the DSGCo logo ceased when the De Steiger family lost the business.

### **Beer Bottles**

Bottle studies by Ayres et al. (1980:unnumbered page), Brose & Rupp (1967:90), Herskovitz (1978:8), Jones (1966:7; 1968:16), Lockhart and Olszewski (1994), Mobley (2004), Wedel and Walker (1992:168, 203, 205), and Wilson (1981:114) all illustrated or described the DSGCo mark on beer bottle bases. The marks fit one of two patterns: 1) DSGCo in an arch at the top of the base (Figure 23); or 2) DSGCo in an inverted arch at the bottom of the base (Figure 24 & 25).



Figure 23 – DSGCo base (Kingston, NM)

In all cases where punctuation was present, the periods were evenly

interspersed between the letters –

rather than the more typical spacing

with punctuation immediately

following the letter. On some beer

bottles with the first variation, the

post bottom is so small that the arch

almost forms a circle. Although we

have not found a current way to test

this hypothesis, the difference between the arched logo with

numbers and the inverted arch with letters may indicate the two

plants – at La Salle and Buffalo. It is even possible that De

Steiger adopted the simpler initials (D.G.Co.) when the firm

acquired the Buffalo plant in 1880.

Our observation of the Tucson Urban Renewal collection

revealed both marks on export beer bottle bases with a variety of

applied, two-part finishes with sharp-edged lower rings (Figure

26). This suggests that De Steiger ceased making beer bottles (at

least the generic type for the export trade) by the early 1880s.

Two-part finishes on export beer bottles were intended for use

with wired-down corks. Historic and empirical data explored by

The first variation has been recorded with accompanying numbers ranging from at least 4 to 71 in the center of the base or occasionally no number. The second variation was always accompanied by letters, the sample ranging from B to O, as well as RBB and XI, again in the center of the base. The first variation included punctuation; in the

second, punctuation was sometimes present and sometimes absent.



Figure 24 – Export beer bottle (Farnsworth & Walthall 2011)



Figure 25 – DSGCo base (Farnsworth & Walthall 2011)



Figure 26 – Finish with sharp lower rings (Farnsworth & Walthall 2011)

Lindsey (2014) and Lockhart (2006; 2007) suggest that lower rings of the finishes with sharp edges (whether in wedge or flared forms) were generally used on earlier bottles. Empirical evidence, from Fort Stanton, New Mexico, and the Tucson Urban Renewal (TUR) project suggests that sharp-edged lower rings were being actively phased out by ca. 1880, although some were still made (e.g., Carl Conrad bottles) as late as 1882 and probably into 1883. This end date coincides perfectly with the termination of beer bottle production at De Steiger in late 1882 or early 1883.



Figure 27 – Finish with rounded lower rings

Although there is no firm date for the initial use of two-part finishes with rounded lower rings, they were probably not used until the late 1870s and continued in production until ca. 1915 (Figure 27). All two-part finishes with sharp-edged lower rings were applied to the end of the neck. Applied finishes were the industry standard for export beer bottles until at least 1896. Tooled finishes began to be used on some body-embossed beer bottles by ca. 1890 but were uncommon until ca. 1895. Tooled finishes completely dominated the industry by ca. 1900.

At least some of the beer bottles were made with one-part, rounded finishes (see Figure 24). The eBay example had the initials in the inverted arch format. On export beer bottles, this type of finish was made for Lightning finishes, a stopper held in place by a wire bale that would “swing” the stopper to the side for drinking (Figure 28). These were used between 1875 and ca. 1915 (Lockhart 2007).

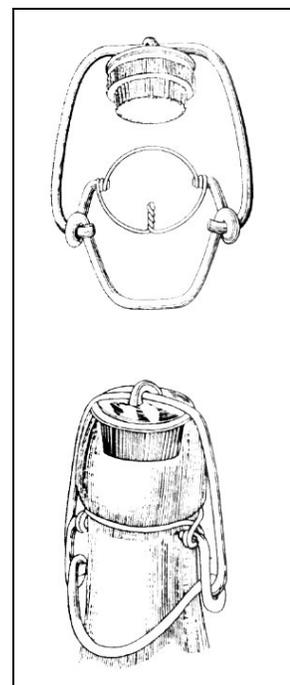


Figure 28 – Lightning stopper (Lief 1965:16)

### **Fruit Jars**

Creswick (1987:48) illustrated a grooved-ring wax-sealer fruit jar in either aqua or lime green with the second variation of the DSGCo mark (i.e., the inverted arch) and a number 4 in the center of the base (Figure 29). Roller (1983:110) described these wax sealers but noted the colors as green and amber. Roller (2011:173) included all three colors – amber, aqua, and green.

Also see the fruit jar section below. The fact that the De Steigers advertised as fruit jar producers in 1882 (see history section) makes the identification of these fruit jars virtually absolute.

### Other Bottle Types



Figure 30 – DSGCo flask (Farnsworth & Walthall 2011)

Ring (1988:[15]) listed a “D.S.C.CO” mark (in an inverted arch) on the base of a Millard’s Paris Bitters bottle.

This is very likely a misreading of the DSGCo mark; the “tail” or serif on the letter “G” was often unclearly embossed. The bottle was square in cross section and amber in color. We have also discovered an example of a square bottle on eBay in light aqua color.

Freeman (1964:109) listed a single flask embossed DSGCo. An eBay auction showed a shoo-fly flask in light aqua color embossed on the base with “D.S.G.Co.” (inverted arch) and “1” (including the upper serif) in

the center. This and the wax sealer described above are the only examples we have seen of the inverted variation accompanied by a number instead of a letter or letters, as in the beer bottle examples. Farnsworth & Walthall (2010:548) noted three variations of a shoo-fly flask embossed with a “quilt” design all over the body and a sheaf of wheat in the center (Figures 30 & 31).

In addition, Farnsworth & Walthall (2010:135, 189, 208, 548, 630) recorded the horizontal mark on a single square tonic bottle and a patent medicine bottle (Figures 32 & 33).

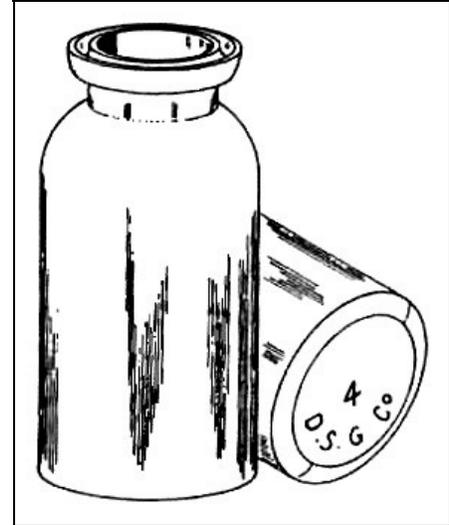


Figure 29 – Wax sealer (Creswick 1987:48)



Figure 31 – DSGCo flask (Farnsworth & Walthall 2011)



Figure 32 – DSGCo logo (Farnsworth & Walthall 2011)

They also noted both the arched and inverted arch logos on several champagne beer bottles. An eBay auction included a photo of a aqua barrel mustard jar with a fully punctuated, inverted-arch logo on the base (Figures 34 & 35).

### Milk Bottles



Figure 34 – Barrel mustard (eBay)

Giarde (1980:34) discussed the DSGCo mark in connection with dairy containers and noted that the mark “was not confirmed on milk bottles during research but the De Steiger family was connected to fruit jars which improves the possibility the company engaged in the manufacture of wide mouth dairy containers at some point in time.” We have found no other reference to milk bottle production and consider it unlikely. Even though the later De Steiger firm was in business until ca. 1896, this was still the early period of milk bottle production, and virtually all dairy containers were still patent protected and

thus made by few companies. No De Steiger patents were connected to milk bottles or milk jars.



Figure 33 – Patent med bottle (Farnsworth & Walthall 2011)



Figure 35 – DSGCo (eBay)

Giarde (1980:35) went on to state that “suggestions that the DSGCo mark might be that of Duncan Sons Glass Company in the East cannot be totally rejected but seems unlikely.” Although there was a John Duncan’s Sons connected with Lea & Perrins sauce bottles, this company was never associated with milk bottles to our knowledge. The meaning of this reference is very unclear. Even though Giarde (1980:35) stated that the identification “cannot be

totally rejected,” it is totally irrelevant, unless someone actually *finds* a bottle. Although Giarde discussed the possibility, the presence of the mark on so many beer bottles, and documentary evidence presented above makes the identification of De Steiger as the user of the DSGCo mark almost absolute.

### Fruit Jars Designed by the De Steigers

As noted in the patents section, the De Steiger patents were used on a limited variety of fruit jars. None of these could have been actually manufactured by the De Steiger family. The De Steigers had been bankrupt by 1883, three years before the earliest De Steiger patent was actually used on a jar. There is no evidence that the later firms, still using the De Steiger name, made any fruit jars.

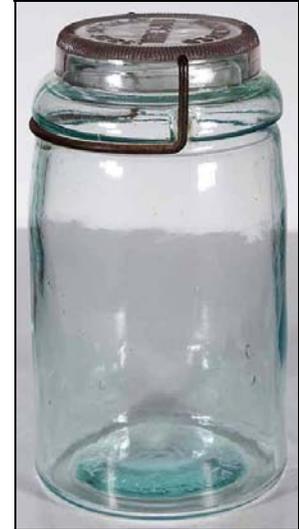


Figure 36 – Imperial jar (North American Glass)

#### IMPERIAL (ca. 1896-ca. 1891)

Toulouse (1969:158) listed a jar embossed “THE / IMPERIAL” on the side, with “PAT. APRIL 20<sup>TH</sup> 1886” on the lid.<sup>7</sup> He correctly identified the patent as belonging to J.L. and E.A. De Steiger, but he did not know who made the jars (Figures 36 & 37). Roller (1983:162-163) addressed the same jar (with no “THE” above “IMPERIAL”) and several variations with the patent date on the lids. Of great significance, he illustrated a drawing of the jar as it appeared in the 1901 Illinois Glass Co. catalog. He noted that Illinois Glass made the jars from ca. 1898 to 1901, possibly late 1880s-1896 by the De Steiger Glass Co.



Figure 37 – Imperial base, lid, & finish (North American Glass)

<sup>7</sup> No other source noted “THE” in conjunction with one of these jars.

Creswick (1987:42, 88-89) illustrated and discussed several jars with the word “IMPERIAL” embossed on the body, base, and/or lid, along with the patent date,

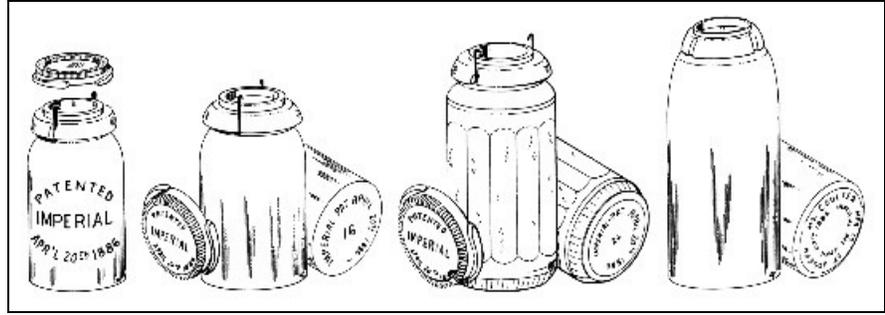


Figure 38 – Imperial jar (Creswick (1987:42, 89



Figure 39 – Delicious Crushed Fruits (North American Glass)

usually “PATENTED IMPERIAL APRIL 20<sup>TH</sup> 1886” (Figure 38). The jars were made for some specific customers as well as generic versions (Figures 39 & 40). The Roller group (2010:251252) listed a total of a dozen variations of the jar/lid combination, mostly private labels, and used the same 1898-1901 date range. Both the 1898-1901 date range. Both the 1896 and 1899 Illinois Glass Co. catalogs listed the Imperial jars, but they were no longer included in the 1903 Illinois Glass catalog (Illinois Glass Co. 1896:93; 1899:141; 1903). The jars were thus certainly made by Illinois Glass at least by 1896, probably earlier and made until ca. 1901.



Figure 40 – Habicht, Braun & Co. base & lid (North American Glass)

### COLUMBIA (ca. 1900-ca. 1911)

Toulouse (1969:71-72) discussed two versions of the COLUMBIA jar, one with “COLUMBIA” on the side and the December 29, 1896, patent date on the lid – the other with both the name and patent date on the lid. He claimed that the Cumberland Glass Co. originally made the jars and dated the jars ca. 1896-1900. Both the attribution and the date were incorrect – see below.

Toulouse (1969:164) also discussed a square Johnson & Johnson jar with “COLUMBIA” and the patent date embossed on the base. He dated the jar 1900-1913 and claimed Cumberland

Glass as the manufacturer because Cumberland was known to have made jars for Johnson & Johnson. Caniff (2012:41-42) illustrated Johnson & Johnson paper labels on both round and square Columbia jars and noted that they appeared in publications by Johnson & Johnson until 1913.

Roller (1983:92) discussed the same jar, noting that the containers were made by “several glass houses, including Whitney Glass Works, Glassboro, N.J. (1904), and Illinois Glass Co., Alton, Ill. (1898-1911).” In addition, he illustrated an Illinois Glass Co. trade card for the jars. He also listed a lid embossed “COLUMBIA PATENT APPLIED FOR.” Our catalog research suggests that he was correct about the manufacturers (see below).

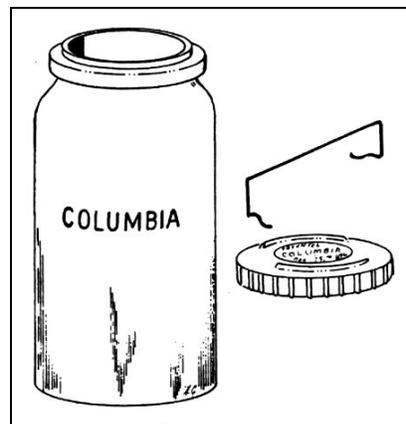


Figure 41 – Columbia jar  
(Creswick 1987:33-34)

Creswick (1987:33-34) also showed the COLUMBIA, “PATENTED DEC 29<sup>th</sup> 1896” – a patent held by the De Steiger brothers. She described four variations of the jar, three of which only had the COLUMBIA name on the lids. The other was embossed “COLUMBIA” on the side (Figure 41). None of these were marked with the DSGCo logo. The lids illustrated by Creswick are obviously the ones shown in the patent documents. The various jars were made in colorless, aqua, and amber hues.

Creswick noted that the jars were made by the Whitney Glass Works and Illinois Glass Co. Roller (1983:92) also discussed the Columbia jars/lids and included an undated Illinois Glass Co. trade card that featured the Columbia and noted that the jars were made in pint, quart, and half-gallon sizes. He dated the jars late 1890s to 1910s “by several glasshouses, including Whitney . . . and Illinois Glass.”

In addition to the Columbia jars, the 1896 patent was used for a square jar made for the Wilford Hall Laboratories at Port Chester, New York. The firm name was embossed on the side of the jar, and Creswick (1987:222) noted that it was made from Patent No. 574,306, issued to Joseph L. De Steiger on December 29, 1896 (see Figure 12). Roller (2010:140) noted several variations, including three made for Johnson & Johnson and added that some of these jars were machine made – as well as the earlier ones that were mouth-blown into molds and hand finished.

The Columbia jars, with the name embossed on the body, appeared in the 1899 Illinois Glass Catalog and the regular sections of the 1906 and 1908 catalogs. The bottles also appeared in the “Machine Made Bottles” section of both 1906 and 1908 – in a large variety of sizes – without the name embossed on the side. In a possible typo, the machine jars were called the “Tall Columbian Jar” and “Squat Columbian Jar.” Although the squat variation was only available with the “Dunkley Tops,” (see below), the tall ones could be made with “Phoenix” closures (Illinois Glass Co. 1899:141; 1906:223, 285; 1908:223, 285).

By 1911, the “Columbia Preserve” was only offered in the machine-made – unembossed – variation (Putnam 1965:220). The embossed jars may be dated pretty reliably from ca. 1896 to ca. 1908, based on Illinois Glass data. The generic, machine-made ones were likely produced between ca. 1906 and at least 1911.<sup>8</sup> Both of these were too late to have been made by the De Steiger family.

The drawings in the 1906-1911 Illinois Glass Co. catalogs featured the “COLUMBIA PRESERVE” with “DUNKLEY GLASS CAP,” a different type of lid and clamp from the drawings on the Illinois Glass trade card (Roller 1983:92; 2010:140) and from the De Steiger patent drawings. Samuel J. Dunkley applied for a patent for a “Jar” on March 30, 1900, and renewed the application a year later, on March 13, 1901. He received Patent No. 673,048 on April 30, 1901, and this appears to be the lid in the catalogs. Although the ramps are missing from the Dunkley patent, it otherwise appears very similar to the De Steiger 1900 patent – that was applied for in 1899. Dunkley had also received an earlier patent (No. 533,282) on January 29, 1895, but that one may have never been used.

The Columbia jar also appeared in the 1904 Whitney Glass Works catalog. Whitney noted that “these jars are exceedingly popular wherever they have been used, being very neat and attractive, and the glass lid preventing contact of the contents with anything but glass” (Lohman 1972:62). The drawing in the Whitney catalog showed the original De Steiger lid, ramps, and clamp (Figure 42).

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<sup>8</sup> Oddly, we could not find the Columbia jar in the 1903 Illinois Glass Co. catalog.

The use of the jar may have outlasted the patent – which would have expired in 1910, although the lack of patent protection may have sounded the death knell for the Columbia Fruit Jar Co. At that point, anyone could have made both the lid and the clamp. However, the design may have merely run its course in popularity and have fallen into disuse. Herb & Myers Co. of Sandusky, Ohio, advertised a close-out sale on “Columbia Jars, Self Sealers” on August 2, 1912, very likely signaling the end of the brand (Caniff 2012:43).

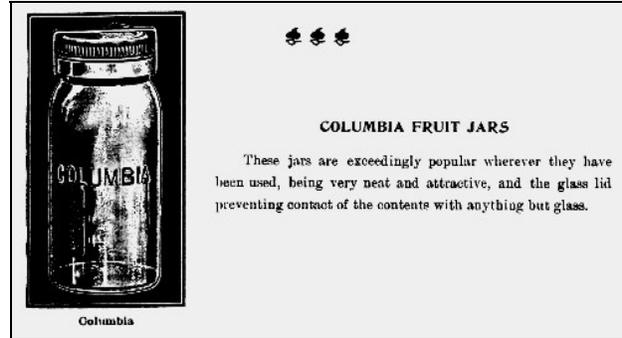


Figure 42 – Columbia jar (Lohman 1972:62)

However, Caniff (2012:43) illustrated and described a jar embossed on the side with the name of the Dupont-Young Corp. of Boston. The lid was clearly the De Steiger closure, and it bore the December 29, 1896, patent date. The “COLUMBIA” name, however, did not appear on the jar. The Dupont-Young Corp. did not use that name until at least 1915 and declared bankruptcy in 1920. An era was at an end.

## Discussion and Conclusions

The history of the firm may be divided into six periods (as shown in Table 1), although the earliest two firms only produced window glass from 1860 to 1878. The De Steiger family period (1878-1883) was apparently the time of greatest diversity, with the manufacture of window glass, fruit jars, and bottles. The De Steiger bankruptcy was followed by at least three years of either no production or only that of window glass. Beginning ca. 1886, the plant probably only made bottles and continued in the same vein until it closed ca. 1893.

The firm name apparently remained the De Steiger Glass Co. after Paddon purchased the plant in January 1884. The factory continued to be listed under the De Steiger name until 1889. Apparently, Paddon began using only his own name on company correspondence about the time of the 1889 strike and operated under his moniker until the plant closed ca. 1893.

**Table 1 – La Salle Glass Factory History**

Factory/Company Name	Owner/Operator	Dates	Comments
Unknown	Unknown	1960-1867	Window glass
Phoenix Glass Co.	Unknown	1867-1878	Window glass
De Steiger Glass Co.	De Steiger family	1878-1883	Window glass; bottles; fruit jars
De Steiger Glass Co.	A.A. Paddon/Wright & Co.	1884-1885	Window glass
De Steiger Glass Co.	A.A. Paddon	1886-1889	bottles
Albert A. Paddon	A.A. Paddon	1889-1896	bottles

The evidence provided by Farnsworth and Walthall (2010) makes it reasonably certain that the “DeSGCo” logo was only used during the very early period of the glass house, probably only 1878-1880. It seems equally probable that this mark was used only on a local/regional scale. The configuration was always horizontal in the Illinois sample, and this was the only logo the Illinois researchers found on blob-top soda bottles.

As discussed above, the firm only advertised export beer bottles from 1879 to 1883, and the manufacturing characteristics – especially the sharp lower rings on the finishes – suggest the same date range. All of the other bottles that can be historically dated were also made during approximately the same period – especially the Illinois bottles reported by Farnsworth & Walthall. It is therefore highly likely that the DSGCo logo – regardless of configuration – was only used from ca. 1879 to late 1882 – January 1883 at the earliest.

Thus far, all reported export beer bottles were amber in color, and beer bottles seem to have been made in far greater quantities than other types of glassware marked with the DSGCo logo. Beer bottle marks fall into two variations:

1. DSGCo in an arch at the top of the base
2. DSGCo in an inverted arch at the bottom of the base

Both the arched variation and the inverted arch appear in roughly equal quantities in our limited sample. It is possible that one was used by the La Salle factory, and the other was the logo of the Buffalo plant. At this point, we cannot present any evidence for this hypothesis, other than the presence of two distinct marks, one accompanied by numbers, the other by letters. Both the arch and inverted arch were also used on other bottle types. The horizontal logo appears on other bottle and flask styles but not on export beer bottle bases.

Although the De Steigers made turn-mold bottles from ca. 1880 to the end of 1882 (possibly in January 1883), and the later firm made similar bottles from ca. 1886 into the 1890s, there is no way to trace any specific bottle to either of these plants. In addition, the Streator Bottle & Glass Co. produced turn-mold bottles beginning in 1883, and Hermann Heye made similar containers in Germany during the period and exported many to the U.S. The Heye bottles tend to be green in color, rather than aqua or amber, but there is currently no way to distinguish any of the American-made turn-mold bottles.

### **Acknowledgments**

We would like to thank the Davenport Public Library, Davenport, Iowa, for furnishing information on the De Steiger branch in Buffalo, Iowa, and Laura Frizol, director of the La Salle Public Library, La Salle, Illinois, for information on the La Salle factory. Our gratitude also to Bruce Etheredge, LaSalle County Historical Society, Utica, Illinois. As always, our thanks to Doug Lebourne for the use of the Alice Creswick drawings and to Greg Spurgeon for permission to reprint photos from North American Glass.

### **Sources**

American Biographical Publishing Co.

1883 *United States Biographical Dictionary and Portrait Gallery of Eminent and Self-Made Men, Illinois Volume*. American Biographical Publishing Co., Chicago.

Ayres, James E., William Liesenbien, Lee Fratt, and Linda Eure

1980 "Beer Bottles from the Tucson Urban Renewal Project, Tucson, AZ." Unpublished manuscript, Arizona State Museum Archives, RG5, Sg3, Series 2, Subseries 1.

Baldwin, Elmer

1877 *History of La Salle County, Illinois*. Rand, McNally, Chicago, Illinois.

Baron, Stanley

1962 *Brewed in America: A History of Beer and Ale in the United States*. Little, Brown, Boston.

Bradwell, James B.

1884 *Reports of the Decisions of the Appellate Courts of the State of Illinois*. Vol. 14. Chicago Legal News Co., Chicago.

Brose, David S. and David W. Rupp

1967 "Glass Bottles from the Custer Road Dump Site." *Michigan Archaeologist* 13(2):84-128.

*Business Tour of Chicago*

1887 *A Business Tour of Chicago: Depicting Fifty Years' Progress; Sights and Scenes in the Great City; Her Growing Industries and Commercial Development, Historical and Descriptive; Prominent Places and People. Episodes in Useful Lives, and Local Reminiscences*. E.E. Barton, Chicago.

Caniff, Tom

2012 "Fruit Jar Rambles: Columbia Fruit Jars." *American Bottle & Glass Collector* 29(1):41-43.

*City of La Salle*

1882 *City of La Salle, Historical and Descriptive, with a Business Review*. A.L. Hennessey, La Salle, Illinois.

Colorado City Glass Co.

1893 *Colorado City Glass Co. v. Albert A. Paddon*. District Court, Denver.

Creswick, Alice

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

Farnsworth, Kenneth B. and John A. Walthall

2011 *Bottled in Illinois: Embossed Bottles and Bottled Products of Early Illinois Merchants from Chicago to Cairo, 1840-1880*. University of Illinois, Urbana. Studies in Archaeology No. 6, Illinois State Archaeological Survey.

Fones-Wolf, Ken

2007 *Glass Towns: Industry, Labor, and Political Economy in Appalachia, 1890-1930s.* University of Illinois Press, Urbana.

Fowler, Ron

2013 "Hutchinson Bottle Directory." Seattle History Co., Hutchbook.com.  
<http://www.hutchbook.com/Bottle%20Directory/>

Freeman, Larry

1964 *Grand Old American Bottles*. Century House, Watkins Glen, NY.

Giarde, Jeffery L.

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

Helegler, Edward C.

1890 "*A Protest Against the Supreme Court of Illinois and Also Against Its Legal and Moral Doctrine as Expressed in and Illustrated in Connection with the Case of Edward C. Hegeler vs. the First National Bank of Peru*". Open Court Publishing Co., Chicago.

Herskovitz, Robert M.

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

Illinois Glass Company

1896 *Illustrated Catalogue and Price List Illinois Glass Company: Manufacturers of Bottles and Glass Containers of Every Kind*. Illinois Glass Company, St. Louis. {Lloyd Library & Museum}

1899 *Illustrated Catalogue and Price List, Illinois Glass Company*. Illinois Glass Co., Alton, Illinois.

1903 *Illustrated Catalogue and Price List Illinois Glass Company: Manufacturers of Bottles and Glass Containers of Every Kind*. Illinois Glass Company, St. Louis.  
Reprinted by Larry Freeman, 1964.

1906 *Illustrated Catalogue and Price List Illinois Glass Company: Manufacturers of Bottles and Glass Containers of Every Kind*. Illinois Glass Company, St. Louis. {Bill Lindsey Collection}

1908 *Illustrated Catalogue and Price List Illinois Glass Company: Manufacturers of Bottles and Glass Containers of Every Kind*. Illinois Glass Company, St. Louis.

Jones, May

1966 *The Bottle Trail, Volume 6*. Nara Vista, New Mexico.

1968 *The Bottle Trail, Volume 9*. Nara Vista, New Mexico.

Jones, Olive and Catherine Sullivan

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

Koebert, A.B.

1889 "Proceedings of the Thirteenth Annual Session of the Bottle Glass Blowers of District Assembly No. 143, K. of L." Atlantic City, New Jersey.

*La Salle and Peru Directory*

1883 *La Salle and Peru Directory*. Cushing, Thomas & Co., Chicago.

Labath, Cathy

2006 "From the Iowa State Gazeteer and Business Directory 1882."

<http://ftp.rootsweb.com/pub/usgenweb/ia/scott/history/1882buf.txt>

Larson, Ronald D.

1983 *Buffalo: Then and Now*. St. Paul Lutheran Church, Davenport, Iowa.

Lindsey, Bill

2014 "Historic Glass Bottle Identification & Information Website."

<http://www.sha.org/bottle/index.htm>

Link, Christine

n.d. "The Last of the deSteigers." Uncited article at the LaSalle Public Library, LaSalle, Illinois.

Lockhart, Bill

2006 "The Bottles of Fort Stanton." Currently unpublished manuscript for Fort Stanton report.

2007 "The Origins and Life of the Export Beer Bottle." *Bottles and Extras* 18(2):49-57, 59.

Lockhart, Bill and Wanda Olszewski

1994 "Excavation and Analysis of a Nineteenth Century Bottle Pit in San Elizario, Texas." *The Artifact* 32(1):29-49. [Note that data cited comes from the actual record sheets]

Lockhart, Bill, Pete Schulz, Carol Serr, and Bill Lindsey

2009 "The Dating Game: Marks used by the Mississippi and Lindell Glass Companies." *Bottles and Extras* 20(1):34-43, 56-58.

Lockhart, Bill, Carol Serr, and Bill Lindsey

2008 “The Dating Game: Hermann Heye Glassfabrik.” *Bottles and Extras* 19(1):57-59, 62.

Lohmann, Watson M.

1972 *1904 Whitney Glass Works Illustrated Catalog and Price List with Historical Notes, 1900-1918*. Privately published, Pittman, New Jersey.

McNeill, George L.

1887 *The Labor Movement: the Problem of To-day: the History, Purpose and Possibilities of Labor Organizations in Europe and America; Guilds, Trades-Unions, and Knights of Labor; Wages and Profits; Hours of Labor; Functions of Capital; Chinese Labor: Competition; Arbitration; Profit-sharing and Co-operation; Principles of the Knights of Labor; Moral and Educational Aspects of the Labor Question*. M.W. Hazen Co., New York.

Mobley, Bruce

2004 Dictionary of Embossed Beers.

<http://www.one-mans-junk.com/beerbottlelibrary/1.htm>

Newman, T. Stell

1970 “A Dating Key for Post-Eighteenth Century Bottles.” *Historical Archaeology* 4:70-75.

*National Glass Budget*

1909 “The Export Beer Bottle.” *National Glass Budget* 25(7):4.

*Paint, Oil and Drug Review*

1897 “The Wyoming Soda Deposits.” *Paint, Oil and Drug Review* 24(6):24.

*Past and Present*

1877 *The Past and Present of La Salle County, Illinois*. H.F. Kett & Co., Chicago, Illinois.

People of Scott County

n.d. *Scott County Heritage*. Scott County Heritage Book Committee, Davenport, Iowa.

Plavchan, Ronald J.

1969 "A History of Anheuser-Busch, 1852-1933." Doctoral dissertation, St. Louis University.

Putnam, H. E.

1965 *Bottle Identification*. Privately printed, Jamestown, California.

Ring, Carlyn

1988 *Up-Date For Bitters Only, Las Vegas, 1988*. Privately published.

Roller, Dick

1983 *Standard Fruit Jar Reference*. Privately published.

1997 "La Salle, IL History Notes." Dick Roller files.

2010 *Standard Fruit Jar Reference: 2010 Update*. Edited by Jerome McCann and Barry Bernas. Fruit Jar Annual/Phoenix Press, Chicago.

Rydquist, Peter

2002 "Common Glasshouse Maker's Marks on Beer and Soda Bottles." *The Patomac Pontil*. September:2-5.

Smith, Edwin Burrill

1889 *Reports of the Decisions of the Appellate Courts of the State of Illinois*. Vol. 28. Callaghan & Co., Chicago.

State of Colorado

1893 "Depositions of George a. Ranney and Albert A. Paddon." [Taken at Cook Co., Illinois by Commissioner Mate B. Brewster.

Switzer, Ronald R.

1974 *The Bertrand Bottles: A Study of 19th-Century Glass and Ceramic Containers*. U. S. Dept. of Interior, National Park Service, Washington.

Toulouse, Julian Harrison

1969 "A Primer on Mold Seams, Part 1." *Western Collector* 7(11):527-535.

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

von Mechow, Tod

2014 "Soda & Beer Bottles of North America: Bottle Attributes - Beer & Soda Bottle Manufacturers." <http://www.sodasandbeers.com/SABBottleManufBeerSoda.htm>

Wedel, Dale L. and Danny N. Walker

1992 "Artifacts and Faunal Remains." In *Archaeological Survey and Test Excavations at Fort Fred Steele State Historic Site*, edited by Mark E. Miller and Dale L. Wedel. Project Number WY-12-90. Office of the Wyoming State Archaeologist, University of Wyoming, Laramie, Wyoming.

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).

Wilson, Rex

1981 *Bottles on the Western Frontier*. University of Arizona Press, Tucson.

Last updated 1/5/2015

