Patents Issued to William Beach Fenn Part 1 of 2

By Barry L. Bernas

Overview

Available records show William Beach Fenn was born on December 7th, 1858 in Brookfield, a small municipality within Litchfield County, Connecticut. His parents were William Alexander Fenn and Clarissa (Clara) D. Beach. A little over seventy-one years later, he died in Port Washington, New York on March 9th, 1930. [1]

According to his obituary, one of the primary pursuits throughout his lifetime involved inventing

> "…machines to cut down the waste of human labor."

In excess of two-hundred patents were attributed to him in a fifty year segment of his life.[2]

My review of the records of his innovations at the United States Patent and Trademark Office turned up at least four periods of time which encapsulate his primary creative themes. Initially, William B. Fenn was concerned with improvements to carpentry tools. Except for some brief excursions, his next focus seemed to deal with the glass industry. These enhancements occupied Mr. Fenn's mind from 1896 through 1906.[3] Between 1907 and 1914, his center of attention shifted to the sterilization of food for its proper preservation. For a short timeframe before the United States entered World War I, he sought to make the harvesting of corn or coring and peeling of fruits by machine much easier. And finally, his sights returned once again to food sterilization by the1920s.

It is the second segment, or the one that ran from 1896 through 1906, that will be the center of attention for this article. Whether it was designing tableware that came apart or closures for containers used by food packers, Mr. Fenn left us with a multiplicity of patented items to admire, collect, display and discuss.

To tell this intriguing tale, I will first present a drawing of the patent issued to William B. Fenn. Beside this sketch, a picture of an actual production model will be shown, if one has been reported. In the event a specimen hasn't been found, an extract from an advertisement or product catalog will be substituted instead. Thereafter, I intend to list a brief description of the innovation using the words of Mr. Fenn. These excerpts were taken from the text of the actual letters patent paperwork he forwarded for approval. I'll close out the discussion on a specific patent with data about when the article was first marketed for sale, again if I could determine whether it was promoted at all. This approach will enable you to see how Mr. Fenn's original concept was changed or modified, if it was, by the manufacturers who produced and sold it.

Water Bottle - Patent Five

At the age of thirty-eight, William B. Fenn was living outside of Wilkes Barre, Pennsylvania in the hamlet of Dorranceton. From there several days before November 10th, 1896, he sent off his fifth application for a patent. This one was for a water bottle that came apart. A drawing of his idea can be seen on the left in **Figure 1**.

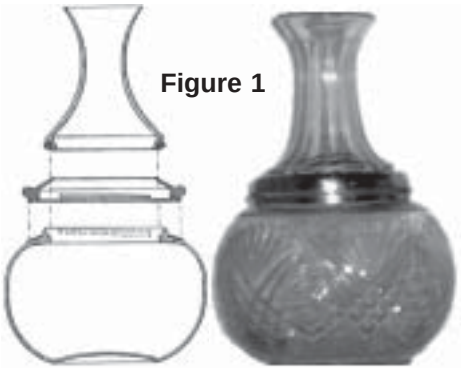

Figure 1

This utilitarian container had a simplistic appeal. As Mr. Fenn stated in his application for letters patent,

> "…This invention relates to water-bottles…the object thereof being to provide an improved device…which consists of a plurality of parts…being detachably connected and adapted to be separated whenever desired for cleaning and other purposes…"

The feature of detachability would be a central theme of his for years to come. As you will see, he would apply it to a successful line of tableware early in the next decade.[4]

The left-hand container in Figure 1 was held together by a

> "…annular coupling ring or band…provided on its inner surfaces with…inclined shoulders or projections…"

As you can see from the extract, the slanted features on the band met corresponding ones on the finish of the water bottle at the top of the bowl. A tight fit was supposedly achieved by bringing the inclined lugs together over and under one another.[5]

However, over time, this cumbersome mechanism for closing was simplified. As opposed to the slanted projections on the exterior of the bowl's top section and the inside of the ring, a continuous thread was applied to both parts of the water bottle. This change enabled the band to fit over a corresponding feature on the finish of the bowl and more easily tighten down.

The right-side picture in Figure 1 shows how William B. Fenn's 1897 idea evolved over a six year period to become a Royal patterned separating water bottle with a paneled neck. This example was advertised for sale in late 1903 by the Perfection Glass Company of Washington, Pennsylvania.[6]

William B. Fenn remained in the Dorranceton area up through the first week in May 1897 and possibly a bit longer. Next, he moved to New York City. The 1898 *City Directory* there listed him as a carpenter. The following year, his occupation was carried in the same document as a pattern maker. At the turn of the century, the new edition of the *City Directory* showed him as the secretary for the Perfection Bottle Company.[7]

Water Bottle - Patent Eight

A bit before February 7th, 1900, Mr. Fenn requested his eighth patent. The topic of this submission was once more a water bottle. A sketch from the application can

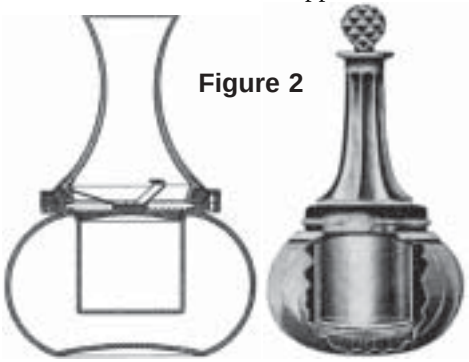

Figure 2

be seen in **Figure 2**.

In the write-up, William Beach Fenn penned the purpose for his new request. It read.

"…The present invention is in the nature of some specific improvements in the line of the invention shown and claimed in my Patent No. 579,867, dated March 30, 1897. The improvements consist, essentially, in a new and useful coupling device between the neck and the bottle proper and also in a novel ice-receptacle to be used in connection with the bottle…"

One factor to note about the far left bottle in Figure 2 is that it still didn't have a continuous thread on the bowl's finish or on the interior of the coupling ring. Here is how Mr. Fenn's patent application described the

"…new and useful coupling device…" on this innovation.

"…Connecting the neck with the bottle proper is a coupling composed of a band, having at its upper end an inwardly-tapering flange, which engages the lower outer portion of the neck. Mounted inside this band is an expansible ring, having three peripheral spirally-inclined surfaces, which engage the inner sides of the band above mentioned. This ring is further provided with three outwardly-projecting studs, which project through three slots, cut through the sides of the band…(A)n outer ring (is) mounted on the outside of the band and provided with three vertical slots, adapted to engage the studs on the expansible ring. The lower edge of this ring is bent under the lower edge of the band in order to remain a permanent fixture thereon…"

If this was the actual upgrade that was produced, the new coupling device seemed to me to be several levels more complex than the original 1897 edition itself![8]

Of note, the screw band on the Royal motif water bottle seen on the right in Figure 1 didn't appear in a sales promotion until February 7th, 1901. So it took William B. Fenn another year or so to realize one more enhancement was needed to the closure for his carafe.

I couldn't find an advertisement for the left-hand bottle in Figure 2. Nonetheless, a February 21st, 1900 sales pitch did mention it in the textual portion.[9] Based on this information, I presume William B. Fenn's eighth patent was produced for sale. Unfortunately, an example of one hasn't been identified as of yet.

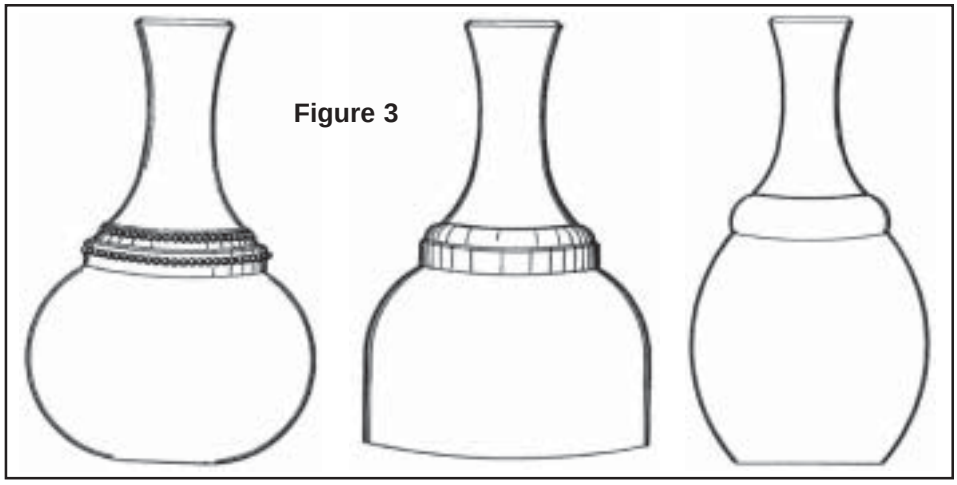

Figure 3

The decanter on the right-side in Figure 2 was promoted by the Perfection Glass Company in their initial sales advertisement and in a later product catalog.[10] Called a chilling bottle, it appears to have been modeled after Mr. Fenn's February 7th, 1900 patent request.

Water Bottle Designs - Patents Nine, Ten and Eleven

Early in the following month, William B. Fenn submitted three new designs for a carafe from Winfield, New York. Personnel at the United States Patent Office began to process each of these on March 7th, 1900.[11] The motifs can be seen in **Figure 3**.

The far left model has the same profile as the similarly positioned example in Figure 1. In addition, the connecting band carries outer features (two rows of beads) which suggest it held together the water bottle by the original closure methodology explained in William Beach Fenn's 1897 patent.[12] Why this design was considered to be a new one remains a mystery to me.

The middle version in Figure 3 has the same top section as its mate to the left but shows a different outer shape (bell or domed) to the bowl. The coupling band on this version appears to be the improved edition with a continuous thread. I say this because the outer motif looks just like the one on the right-hand specimen in Figure 1. If accurate, his factor would make this example a new design.

The final rendition on the right looks like an adaptation of its left-side cousin. The neck is a little thinner and the bowl is elliptical or oval in contour. However, the joining mechanism is without external features. How it coupled both halves of the water bottle together is unknown.

Other than my observations, I have no other information to indicate these profiles were ever produced.

Tableware - Patent Fourteen

On December 23rd, 1902, workers at the United States Patent Office started to process another patent submission by William B. Fenn. This one was for a sectional molded vessel. Now living in Washington, Pennsylvania, here is how he described this concept in the application.

"My invention is applicable to all kinds of vessels made by molding or blowing and particularly to vessels which for one reason or another are preferably made in parts to be joined together. Among the objects of my invention are the following; first, to provide a vessel having a small orifice or orifices in the head thereof, which head may be made integral with the neck; second, to provide means by which one part of a vessel may be packed inside of the other part for convenient and safe transportation; third, to provide means by which vessels having small openings may be thoroughly cleaned from the inside. Other objects of my invention are to provide special means for joining the sections of a two part vessel in such a way as to dispense with rubber or other soft packing, and to provide superior means for attaching the two parts of a sectional vessel. The invention also consists in various improvements in the construction of the parts and the mode of handling and assembling the same…"[13]

Four different separating pieces of tableware were depicted in the above application for letters patent. The first one, described simply as a glass vessel by Mr. Fenn, can be seen on the left in **Figure 4**.

Clearly a cruet, this item was first advertised for sale by the Perfection

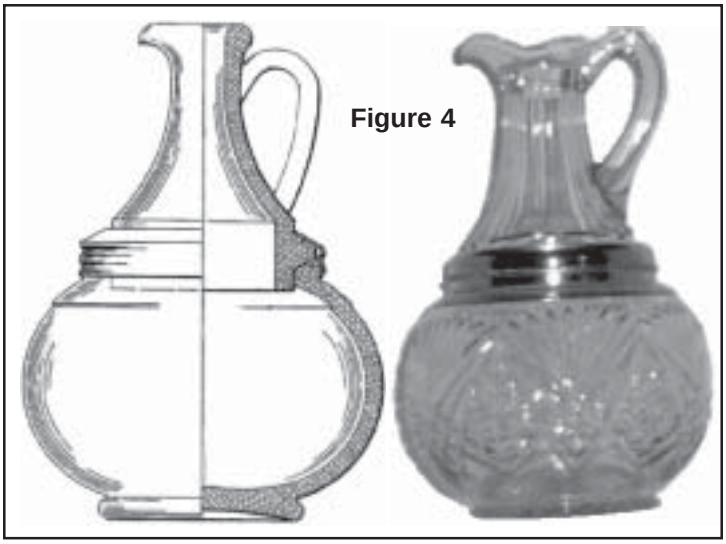
Figure 4

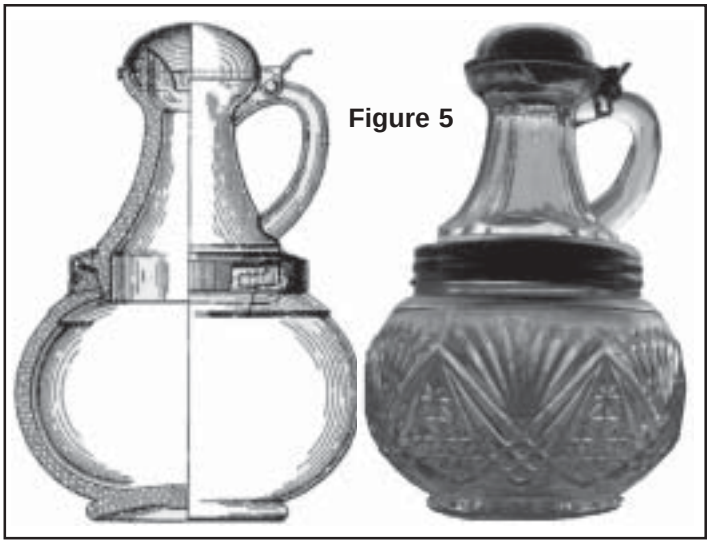
Figure 5

Manufacturing Company of Washington, Pennsylvania on October 23rd, 1902.[14] On the right in Figure 4 is an actual example of the patented article.

Of interest, this model was used by William B. Fenn in his patent request to satisfy objective number two in the opening quotation. By unscrewing the band, the top part of the cruet could be inverted inside the bowl, resting on the top edge of its annular bead. The coupling ring could then be tightened down, preparing the vessel for shipment. Many of the detachable tableware pieces made by the Sterling and Perfection Glass Companies of Washington, Pennsylvania had this same capability.

Another household essential was sketched in the same application. Seen on the left in **Figure 5**, this syrup jug was held together by a bayonet fastening device vice a screw band. On the right in the same box is a picture of one pattern (Royal) of a syrup container made to the specifications of patent fourteen. It appeared for the initial time in the same October 23rd, 1902 promotion as the cruet in Figure 4.[15]

The last two pieces of domestic ware from William B. Fenn's first December 23rd, 1902 patent request were identified by him as a salt or pepper box and a sprinkling bottle for liquids. These can be seen in **Figure 6** from left to right, respectively.

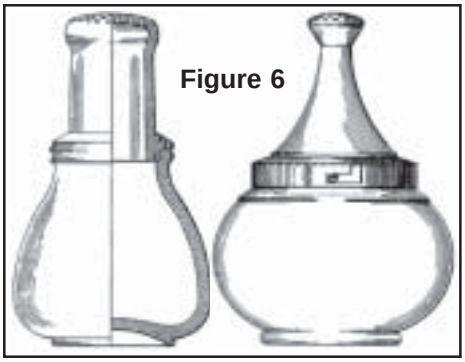
Figure 6

Both items weren't advertised and most likely were never produced.

Tableware - Patent Fifteen

On the same day patent fourteen was requested, William B. Fenn sent off his next application for another sectional glass vessel. A drawing of this concept can be seen on the left in **Figure 7**.

In his own words, Mr. Fenn outlined the purpose of this invention in the next excerpt.

> "My invention relates particularly to the form of vessels for containing liquids which are practically closed and have small squirt orifices, or spraying openings, for discharging the liquid in small quantities. The principal object of my invention is to provide a vessel of this kind which may have an integral top or discharge end, and yet have convenient means of filling the vessel. Another object is to allow of {*sic* – for} convenient manufacture of the article, and convenient access to the entire inside of the vessel for purposes of cleaning, etc…"[16]

Called a squirt bottle in sales pitches, one style that was manufactured is shown on the right in the same Figure 7 box.

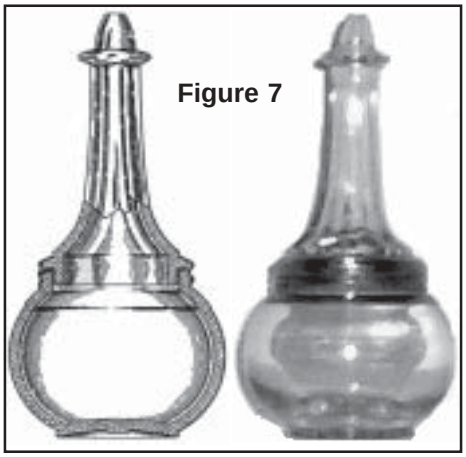
Figure 7

The Perfection Manufacturing Company sponsored ads for this bottle as early as October 23rd, 1902. It also appeared in the first Perfection Glass Company promotion on August 20th, 1903.[17]

Glass Pressing and Blowing Machine - Patent Sixteen

Personnel at the United States Patent Office filed William Beach Fenn's sixteenth patent request on January 20th, 1903. It was for a glass pressing and blowing machine. In that document, Mr. Fenn presented the principal objects of his invention in the following manner.

> "…The principal objects of my invention are, first, to provide a machine which is automatic or semi-automatic in action to remove the glass from the press dies to the blowing dies or molds and automatically introduce the blast of air necessary for the blowing process as the glass is placed therein; second, to make a machine which carries on the two processes of pressing and blowing a quantity of glass at one and the same time; third, to make a machine which automatically removes the blown article from the mold when finished; fourth, to produce a machine which is easily and economically operated by means of compressed air or other fluid, to operate the pressing and blowing molds; fifth, to provide a machine which itself insures a proper pressure upon the glass and the proper introduction of a regular air pressure in the blow mold; sixth, to make a machine of automatically regulated speed and means for preventing too heavy pressure on the glass through carelessness of the workmen; seventh,

to provide for the automatic introduction and cut-off of the air blast during the blowing process and the correct timing of the introduction of the blast; eighth, to provide a machine which requires no manual handling of the material after it is placed in the first mold; ninth, to provide for the automatic and continuous placing and removing of a succession of blowing molds in place to receive the glass, and the automatic release of the vessel when finished; tenth, to provide means for insuring a gradual application of pressure and the ready and rapid return of the presser head afterward…"[18]

As early as October 25th, 1902, word of William B. Fenn's mechanical invention was being circulated in glass trade journals.[19] But it wasn't until five months later that a more extensive description of it was carried in a daily newspaper from Washington, Pennsylvania. According to the drafter of this report, Mr. Fenn's glass machine was made in the machine shops of the Northrup and Washington Manufacturing Company of Washington. It could turn out ware in capacities from one pint to two quarts, making fifteen to twenty articles per minute. This device was tested in the local Sterling Glass factory and then shipped to the Republic Glass Manufacturing Company's plant in Moosic which is situated in the northeastern part of the Commonwealth between the cities of Wilkes Barre and Scranton. Other similar machines were being built for installation at the Sterling Glass works.[20]

The front elevation of this machine can be seen on the right in **Figure 8**. On the left is a close in, cutaway view of the blow

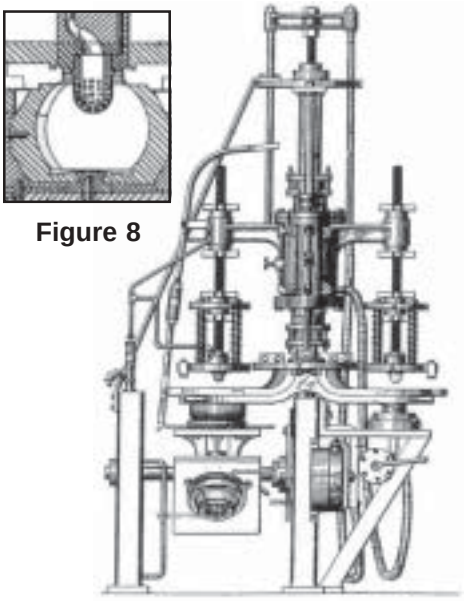

Figure 8

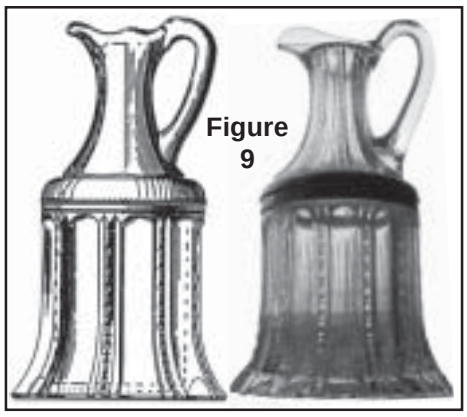

Figure 9

head and the blow mold from the same mechanical device. You will note that this section of the machine blew the spherical bowl for tableware pieces made to William Beach Fenn's patented ideas.

Cruet Design – Patent Seventeen

Another submission by Mr. Fenn began the approval process at the United States Patent Office on April 21st, 1903. It was a design for a cruet.[21] The profile of this item is depicted in **Figure 9** on the left. The Colonial motif on the right-side model was how this item looked when it was offered for sale.

The earliest promotion for this style of cruet appeared in the May 28th, 1903 edition of *Crockery and Glass Journal*.[22]

Jar Closure - Patent Eighteen

A few days before June 1st, 1903, William B. Fenn forwarded to the United States Patent Office the design in Figure 10. According to him, this concept

"…relates to means for closing and sealing jars, bottles and other like vessels and particularly to the kind of jars used for preserving fruits, etc., requiring an easily removable seal. Its objects are to provide a closure which avoids any contact of metallic parts with the contents of the jar, to provide for the use of a glass or non-metallic parts to provide means for inducing differential pressure upon the packing or seal and a closure easy of manipulation and accurate in its working, and without liability of getting stuck in place."[23]

An air tight seal was achieved by placing a packing ring on the lip of the container shown in **Figure 10**. The channel or groove on the bottom of the insert fits over the ring. A metal clamp with two sets of prongs on the inner skirt held the insert in place and engaged two inclined lugs on the outer finish of the container. By turning

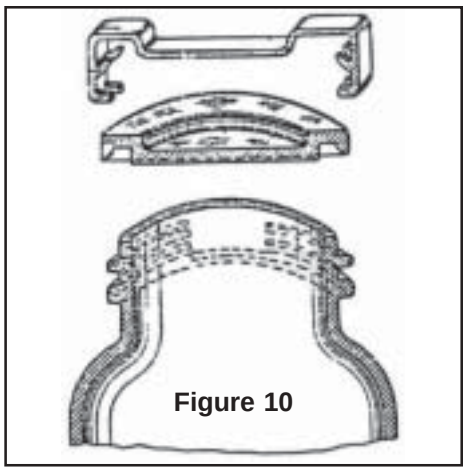

Figure 10

the clamp, the insert pressed down on the ring creating the "differential" pressure needed to close the jar.

Unfortunately, I've found no data to suggest this patent was ever used on a product jar.

Jar Closure - Patent Nineteen

Nine days later on June 10th, 1903, employees of the United States Patent Office started to process Mr. Fenn's second patent request for a jar closure. The top diagram in **Figure 11** was taken from the above

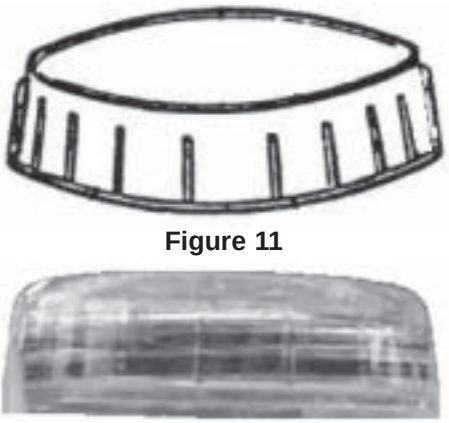

Figure 11

paperwork.

Instead of sealing on the lip or shoulder of the container, his innovation achieved air tightness on the outside of the jar's finish. A vertical packing ring which was internally and externally threaded was screwed down onto the vessel's threaded area. Next, an all glass internally threaded cap was tightened down over the rubber ring. This process plus the inclined inner skirt of the cover and the same feature on the jar's finish acted in unison to achieve the seal. [24] The bottom picture in Figure 11 is the initial production model of this screw cover.

First noted in a June 11th, 1903 report, this type of cap, in at least six other outer designs, would be made continuously

through 1908. At a minimum, this all glass cover sealed the machine made SIMPLEX in a diamond and FLACCUS BROS. STEERS HEAD FRUIT JAR embossed packing containers.[25]

Jar Closure - Patent Twenty-One

William Beach Fenn sent off another jar closure idea about a month and a half before he departed the Borough of Washington. Displayed in **Figure 12**, it is best described in his words.

"…My invention relates particularly to means for closing glass bottles, fruit jars and the like, and for effectually sealing the same, and the provision of a glass closure cap easily removable from and attachable to the jar. The principal objects of the invention are, to provide a closure in which the contents of the jar are not brought in contact with any metal or any packing which is pervious or may be attacked by acids, etc., and to provide simple and cheap means for attaching the jar cap in such a manner as to create considerable pressure on the packing and to avoid any contact between the cap and glass of the jar…"

Using many of the now familiar phrases from his June 1st and 10th filed requests; I believe William B. Fenn was moving toward an all glass internally threaded screw cap that would fit on a Mason jar with a standard screw type style of finish. However, this prototype model of sealer was far from simple as the below description from the patent submission reveals.

"…The neck of the jar is…made with a taper form, that is, slightly conical, and is provided with the circumferential spiral groove arranged in the form of a female screw thread, and in this groove I place a wire ring, which is made normally of less diameter than the jar neck, and provided with slightly downturned {*sic* - down turned} ends, which being sprung over the jar neck snaps into the groove therein, the ends of the groove in the neck being sunk below the general contour of the neck so that the ends of the wire do not project to catch on anything, and the wire ring forming a taper thread progressively of greater diameter as it proceeds downward on the neck of the jar. The cap is provided with a similar screw thread groove to engage the wire, and at the top is provided with an annular retaining groove in which the packing, composed of lint and some form of impervious wax is seated…(T)he screwing of the cap on the ring will compress the packing in its place and that the cap is not in contact with any glass portion of the jar but only with the packing and the ring and it will be evident that because of the sloping form of both the cap and the neck, the cap is easily placed in position and provides a very secure and powerful fastening and heavy pressure upon the packing." [26]

To the best of my knowledge, this concept was never manufactured.

Salt Cellar - Patent Twenty-Two

The last idea from Mr. Fenn's Washington period was forwarded to the United States Patent Office just a few weeks before be left the Borough without notice. On October 9th, 1903, government personnel in the City of Washington, District of Columbia started to process his mailed application for a patent on a salt cellar. According to the article's description from this package, it could be applied to

"…vessels for containing ground or granulated material such as salt, pepper, sugar, etc., and particularly to means for readily emptying the contents from such vessels and preventing them from caking inside the same…"[27]

Figure 13 has a drawing of a salt shaker on the far left. Looking closely at the sketch, I direct your attention to the two panels adjacent to the interior walls of the container. These downwardly pointing appendages are attached to the bottom of the top section of the vessel. By rotating the glass top in place, these curved parts swivel as one inside of the shaker, breaking up the caked or lumpy contents into smaller granules so that each can pass through the holes in the top. This is how William Beach Fenn accomplished one of his objectives for this patent.

Grouped together in the middle is a picture of an actual pepper and salt shaker made to the specifications of patent twenty-two. You will note that the salt model on the left is slightly shorter than its pepper counterpart to the right.

Next to the middle group on the right-side is a sketch of a sugar sifter from Mr. Fenn's patent request and subsequent ads for it. Aside from the attached handle, it used the same design techniques as the salt shaker (left-side and middle left).

The first advertisement for all of the examples in Figure 13 was carried in the September 17th, 1903 issue of the *Crockery and Glass Journal*. Submitted by the Perfection Glass Company, the same sales pitch appeared in the next four editions of the *Journal*.[28]

Part 2 of 2 will follow in another issue of *Bottles and Extras*.

BLB

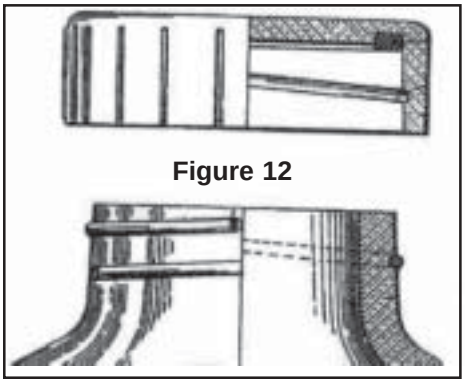

Figure 12

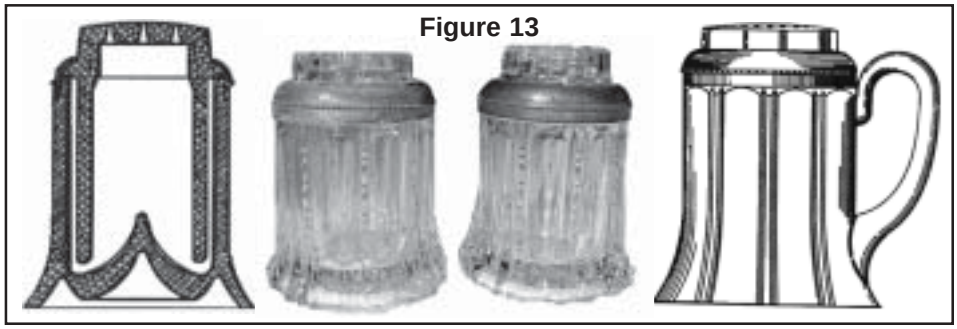

Figure 13

Endnotes:

[1] www.familysearch.com, Compact Disc #62, PIN #7629; Family History Library Film 1254838, NA Film Number 0838, Page Number 438B and *Port Washington News*, March 13, 1930. The second source indicated the first name of Mrs. Fenn was Clara and not Clarissa as was stated in the first reference above. Regrettably, I couldn't locate a photograph of William Beach Fenn for this article.

[2] *Port Washington News*, March 13, 1930. In the United States Patent and Trademark office, I was only able to find evidence of sixty-four patents being issued to William Beach Fenn between 1883 and 1929. The figure of two hundred patents was mentioned prominently in Mr. Fenn's obituary from the above source. This total

may have been a simple eulogistic embellishment on the part of the grieving drafter. If it wasn't, I cannot account for the remaining one hundred and thirty-six or so patents.

[3] During the timeframe for this article, there were other patents requested by William B. Fenn. These weren't mentioned in this article because I considered them to be exceptions to his glass industry oriented interests. These outside of the norm concepts were for: two raisin seeders; two handles for sad-irons; a sheet glass making apparatus; a metallic can; a machine for making fibrous packings; lath and facing tiles; building brick or block and facing thereon; a machine for exhausting air from preserving vessels and a ring for sealing jars and the like. These innovations plus the ones shown in this article were all submitted to the United States Patent Office between November 10, 1896 and April 16, 1906. In addition, there are references to at least three other patents being requested during the same period. However, I've not been able to locate any other records on them.

[4] "The William B. Fenn Patented Water Bottle, Made For Perfection," Barry L. Bernas, *Bottles and Extras*, Summer 2004, pgs. 17-19 and "More Tableware from Fenn," Barry L. Bernas, *Bottles and Extras*, Fall 2005, pgs. 59-62. Both articles discuss other pieces of separating tableware made to patents issued to William Beach Fenn.

[5] UNITED STATES PATENT OFFICE. WILLIAM B. FENN. OF DORRANCETON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO DUANE HOWARD, OF CORTLAND, NEW YORK. WATER-BOTTLE. SPECIFICATION forming part of Letters Patent No. 579,867, dated March 30, 1897. Application filed November 10, 1896. Serial No. 611,617. "Granny Kath's Kitchen," Vivian S. Kath, *Antique Bottle & Glass Collector*, June 1994, pgs. 50-52. In her column, carried in the second reference, Mrs. Kath asked a mechanical engineer to review the coupling mechanism on William B. Fenn's water bottle patent of March 30, 1897. He indicated the band and inclined flanges would be cost prohibitive. In his opinion, a better means of fastening the neck and bowl together was by "…A flat flange and flat gasket on the top section, a threaded neck on the jar; and a rolled band with full threads for fastening the two together…" Eventually, Mr. Fenn came to the same conclusion.

[6] "The William B. Fenn Patented Water Bottle, Made For Perfection," Barry L. Bernas, *Bottles and Extras*, Summer 2004, pgs. 17-19 and "More On Perfection," Barry L. Bernas, *Bottles and Extras*, December 2000, pgs. 10-11. Workers at the Perfection Glass factory weren't the only ones to have turned out a water bottle in the pattern shown on the right in Figure 1. Starting as early as December 1901 and continuing up to August 1903, hands from the Novelty Glass Works and then Sterling Glass Company made the same style of carafe. Both of these Washington, Pennsylvania-based firms were predecessor organizations to the Perfection Glass Company. The water bottles made by these two glass makers were marketed by the Perfection Bottle Company, originally of Wilkes Barre, Pennsylvania and later of Washington, Pennsylvania. After relocating to the Borough of Washington, the name of this jobber was changed to the Perfection Manufacturing Company. This newly titled organization continued to advertise the same article until it was absorbed also into the Perfection Glass Company.

[7] *Trow's Directory of the Boroughs of Manhattan and Bronx, City of New York*, Trow's Directory, Printing and Bookbinding Company, 21 University Place, Manhattan, City of New York, 1898 (for the year ending July 1, 1899), pg. 397; Ibid, 1899 (for the year ending July 1 1900), pg. 383 and Ibid, 1900 (for the year ending July 1, 1901), pgs. 406 and 1050. There is evidence that William B. Fenn was associated with E. D. Beckwith in a venture called the Perfection Water Bottle Company in late 1899 and early 1900. This firm was initially located in Little Falls, New York before moving to New York City. Regrettably, I could find no record of this company in the Little Falls newspaper - *The Evening Times* - between September 14, 1899 and January 8, 1900. Likewise, the Perfection Water Bottle Company wasn't carried in the 1899-1900 Little Falls *Directory*. The Perfection Water Bottle Company and Perfection Bottle Company of New York City were likely one and the same firm. As I've interpreted the data, it was the predecessor to the Perfection Bottle Company of Wilkes Barre, Pennsylvania.

[8] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WINFIELD, NEW YORK, ASSIGNOR TO EZRA D. BECKWITH, OF LITTLE FALLS, NEW YORK. WATER-BOTTLE. SPECIFICATION forming part of Letters Patent No. 664,472, dated December 25, 1900. Application filed February 7, 1900. Serial No. 4,335. I can't account for William B. Fenn requesting this design patent from Winfield, New York vice New York City.

[9] *The Jewelers' Circular-Weekly*, February 21, 1900, pg. 62.

[10] *Crockery and Glass Journal*, August 20, 1903, pg. 4 and *The Evolution of Table Glass*, an undated but circa August to October 1903 publication by the Perfection Glass Company of Washington, Pennsylvania.

[11] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WINFIELD, NEW YORK, ASSIGNOR TO EZRA D. BECKWITH, OF SAME PLACE, DESIGN FOR A WATER-BOTTLE. SPECIFICATION forming part of Design No. 32,426, dated April 3, 1900. Application filed March 7, 1900. Serial No. 7,727; UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WINFIELD, NEW YORK, ASSIGNOR TO EZRA D. BECKWITH, OF SAME PLACE. DESIGN FOR A WATER-BOTTLE. SPECIFICATION forming part of Design No. 32,427, dated April 3, 1900. Application filed March 7, 1900. Serial No. 7,728 and UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WINFIELD, NEW YORK, ASSIGNOR TO EZRA D. BECKWITH, OF SAME PLACE. DESIGN FOR A WATER-BOTTLE. SPECIFICATION forming part of Design No. 32,428, dated April 3, 1900. Application filed March 7, 1900. Serial No. 7,729. I can't account for why William B. Fenn requested these design patents from Winfield, New York vice New York City.

[12] *Crockery and Glass Journal*, February 1, 1900, pg. 26. This announcement carried a sketch of a separating water bottle made to Mr. Fenn's March 30, 1897 patent. The coupling band had two rows of beads on its outer surface. The textual comments about this feature indicated it unscrewed. However, the drafter's words didn't mention a continuous thread on the bowl's outer finish or on the inside skirt of the band as the technique. Thus, I believe, but can't yet prove, that the inclined protrusions from William B. Fenn's 1897 patent were still on the advertised water bottle drawn in the above reference.

[13] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. SECTIONAL

MOLDED VESSEL. SPECIFICATION forming part of Letters Patent No. 755,223, dated March 22, 1904. Application filed December 23, 1902. Serial No. 136,414.

[14] *Crockery and Glass Journal*, October 23, 1902, pgs. 16 and 25.

[15] *Crockery and Glass Journal*, October 23, 1902 pg. 25. I've never come across a piece of Mr. Fenn's patented separating ware that was coupled by a metal band with a "bayonet fastening" device on it.

[16] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. SECTION GLASS VESSEL. SPECIFICATION forming part of Letters Patent No. 768,440, dated August 23, 1904. Application filed December 23, 1902. Serial No. 136,415.

[17] *Crockery and Glass Journal*, October 23, 1902, pg. 16 and Ibid, August 20, 1903, pg. 40.

[18] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. GLASS PRESSING AND BLOWING MACHINE. SPECIFICATION forming part of Letters Patent No. 767,807, dated August 16, 1904. Application filed January 20, 1903. Serial No. 139,852.

[19] *Commoner and Glassworker*, October 25, 1902, pg. 5 and *China, Glass and Lamps*, October 25, 1902.

[20] *The Washington Reporter*, March 26, 1903, pg. 1.

[21] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. DESIGN FOR A CRUET. SPECIFICATION forming part of Design No. 36,876, dated April 12, 1904. Application filed April 21, 1903. Serial No. 153,711.

[22] *Crockery and Glass Journal*, May 28, 1903, pg. 29.

[23] *Fruit Jar Patents Volume III 1900-1942*, compiled by Dick Roller, Acorn Press, Paris, Illinois, December 1996, pgs. 150-152. UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. JAR-CLOSURE. SPECIFICATION forming part of Letters Patent No. 758,515, dated April 26, 1904. Application filed June 1, 1903. Serial No. 159,398.

[24] *Fruit Jar Patents Volume III 1900-1942*, compiled by Dick Roller, Acorn Press, Paris, Illinois, December 1996, pgs. 154-156. UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. JAR-CLOSURE. SPECIFICATION forming part of Letters Patent No. 759,168, dated May 3, 1904. Application filed June 10, 1903. Serial No. 160,830.

[25] *Crockery and Glass Journal*, June 11, 1903, pg. 26; *Perfection Glass Company, One of Many Glass Houses in Washington, Pennsylvania*, Barry L. Bernas, 239 Ridge Avenue, Gettysburg, PA 17325, 2005, pgs. 45-46, III-XVIII and XXX-L.

[26] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. JAR-CLOSURE. SPECIFICATION forming part of Letters Patent No. 769,600, dated September 6, 1904. Application filed September 16, 1903. Serial No. 173,420. "Cataloging a Russell UHL-Patented Glass Screw Cap," Barry L. Bernas, *Bottles and Extras*, Spring 2004, pgs 29-33. In this article, I speculated that this patent was the inspiration for one issued later on December 5, 1905 to Russell Uhl, a former partner of William Beach Fenn.

[27] UNITED STATES PATENT OFFICE. WILLIAM B. FENN, OF WASHINGTON, PENNSYLVANIA. SALT-CELLAR. SPECIFICATION forming part of Letters Patent No. 768,439, dated August 23, 1904. Application filed October 9, 1903. Serial No. 176,382.

[28] *Crockery and Glass Journal*, September 17, 1903, pg. 40; Ibid, September 24, 1903; Ibid, October 1, 1903; Ibid, October 8, 1903 and Ibid, October 15, 1903.

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