

Tin-Tops: The Pioneers of Milk Bottles

By Alex Prizgintas

Milk — a household staple found in most every home. From a baking ingredient to having a cup of it with your cereal, milk and its related dairy products hold a nostalgic place in our hearts. Interestingly, its consumption has been steadily decreasing across the United States, with nearly thirty seven percent less being consumed today compared to fifty years ago. The primary reason for this plummet, among many factors, is the substitution of milk with other popular beverages, such as protein drinks and juices. The decline can also be coupled to the development of products suitable for individuals who are lactose intolerant, like almond and oat milk. Regardless of this decline, it has certainly come into contact with all of us at some point in our lives.

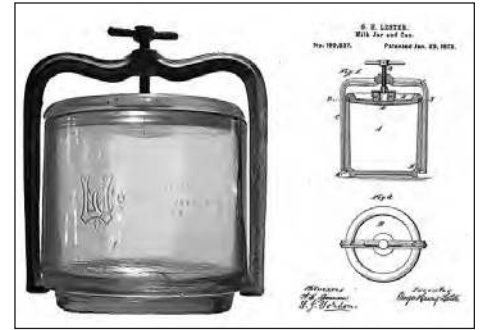
While milk's legacy is indeed popular, the backstory of how it has been packaged and marketed has evolved throughout time. It is often sold today in cardboard containers, but some of us may remember the glory days when dairy farms operated fleets of trucks through neighborhoods and delivered milk in glass bottles.

The milk bottle has a sentimental value to those who grew up during its use, but its history is far more intriguing. Apart from the select locations across the country

that experimented using amber, green, and cobalt-blue examples, the majority of bottles were clear and came in two varieties: embossed and pyroglazed. This was the case for most of the twentieth century, but in the period between 1880 and 1900, the milk bottle was still a new technological advancement within the dairy farming market. Milk bottle collectors value the bottles made during this time due to their unique shapes, crude embossings, and innovative tin closures that have become known by many in the bottle collecting community as the revered “tin-top.” In a world where milk bottles seem ubiquitous, the tin-top presents itself as a distinctive historical detail.

Before discussing tin-tops, it is important to understand the primary purpose of the milk bottle. It needed to be an efficient, sanitary, and appealing way to transport milk over short and, sometimes, long distances.

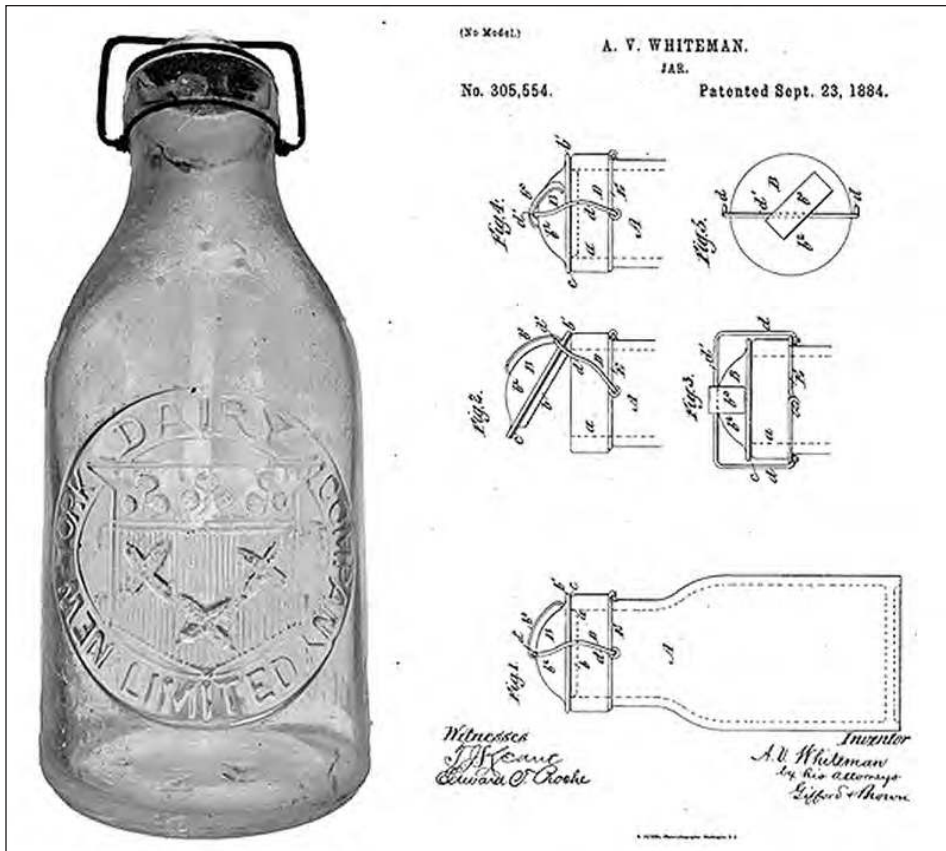
The history of transporting milk greatly predates the first patented milk bottle. In fact, as is the case with a great deal of the country's dairy history, one of the first instances of transporting milk occurred in Orange County, New York when Thaddeus Selleck successfully shipped 240 quarts of milk by rail from Chester to New York City in the spring of 1842.



On January 29, 1878, George Henry Lester succeeded in inventing the United States' first patented milk jar. With its glass lid and large metal closure, the Lester Milk Jar hardly resembles contemporary milk bottles. (Courtesy of the author)



An oddly-shaped bottle with the initials “A. C. M. Co.” embossed in script. This abbreviation has only been attributed to the Alex Campbell Milk Company, which claimed to be the first to sell milk in experimental glass bottles in 1878. Could this be one of those experimental bottles? One may never know, but the information certainly leaves room for this possibility.



In 1880, the Warren Glass Works produced the first standard-shaped milk bottle in the United States. One of the bottle's earliest customers was likely the New York Dairy Company Ltd., a joint venture operated by the Orange County milk dealers Alex Campbell and Dr. R. R. Stone between 1878 and 1880. Pictured here is one of those bottles but it features A. V. Whiteman's dome-shaped closure patented in 1884. As a result, this example was likely used after Stone left the business by 1881 and Campbell had complete control over the New York Dairy Company Ltd name. (Courtesy of the author)



ABOVE: By 1881, the jointly led New York Dairy Company Ltd. split into two companies. Dr. R. R. Stone established the New York Milk and Cream Co. which operated independently until 1896 while Alex Campbell retained the New York Dairy Company Ltd. name, which eventually became the Alex Campbell Milk Company, until its demise in 1919. (collection of Chester Faber)

RIGHT: Doctor Hervey D. Thatcher's "milk protector" is considered by many as a revolutionary artifact in the history of milk bottles. (Corning Museum of Glass)



Selleck's ambitious endeavor, in partnership with the Erie Railroad, would establish a lucrative market with the help of another Orange County resident. In the early months of Selleck's business, milk was shipped in wooden, pyramid-shaped churns without any refrigeration. This method worked well enough during the moderately cool spring days, but the oppressive summer heat threatened to spoil milk that was awaiting shipment by rail.

Jacob Vail, a farmer from Goshen, wanted to take advantage of shipping his milk to New York City. He experimented with cooling the milk before it was shipped, hoping it would solve the problem of spoilage. In the fall of 1842, Vail tested his hypothesis by fitting a wooden hogshead jug with a coil made of one-inch lead pipe. Ice was placed inside the lead coil and, as the fresh milk was poured into the jug, the cooled coils would reduce the temperature to a more stable level for transportation. When the milk was shipped to New York City, even on hot summer days, Vail's cooling technique kept the milk sweet and refreshing.

Vail was one of the first to discover the significance of refrigerating dairy products. He also invented the ancestor of the modern-day milk can. Soon, milk cans of all sizes replaced wooden churns and became the popular method of transporting milk in a market largely dominated by farmers during the first thirty years after Selleck's 1842 success.

However, as the materials used to make these cans evolved from wood to tin, the control of this market gradually shifted to the dealers, the middlemen who purchased the milk wholesale from farmers and retailed it to consumers. While the farmers were in control of the production of milk, the lack of economic infrastructure in New York's rural countryside, coupled with their inability to effectively organize as one milk-producing body, allowed the terms of milk sales to gradually shift in favor of the dealers.

These dealers grew disingenuous and were fixated on making a profit by steadily reducing the price of milk paid to the farmers while simultaneously raising the cost to the public. In the early 1870s, farmers had little to no means of consigning their milk elsewhere, due to the evolving methods of transporting and selling milk independently. The “take-it-or-leave-it” ultimatum left farmers with no alternative but to submit to the stranglehold of the milk dealers.

The decision over who could sell milk to the public instigated a century of prolonged conflict between New York’s rural dairy farmers and metropolitan milk firms, but this uneven playing field would soon be challenged by a fresh marketing innovation. It is hard to determine who and when the first glass jars were used to transport milk in the United States. Even in the early 1870s, farms such as Tuthill’s Dairy in the rural Orange County village of Unionville, N.Y., were recorded to have used glass jars with ground lips and open-pontiled bases. Jars like these were made in limited numbers and are thus rarely seen, but that would soon change in 1878.

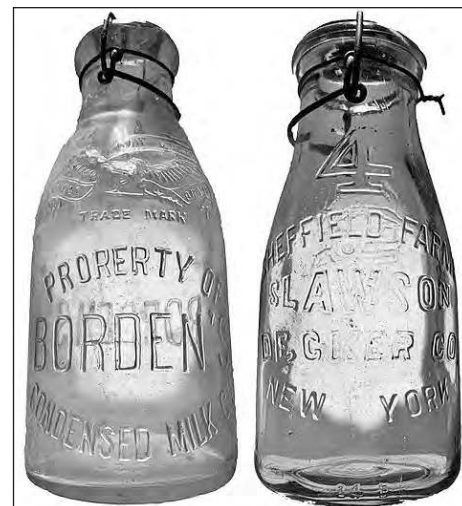
At the same time when New York City’s milk dealers advanced their devious tactics on rural farmers, George Lester of Brooklyn submitted a design for the country’s first patented milk jar. In his application, filed a year earlier in 1877, Lester claimed that his jar would alleviate the job of cleaning the tin can that was “corroded” by the milk.

Lester’s jar hardly resembles a characteristic milk bottle. Some of its distinguishing features include a wide “fruit jar” appearance and a metal clamp used to secure the loose glass lid that was separated from the jar by an “elastic” gasket. Few Lester milk jars survive today and, while it is hard to determine why they did not succeed, a possible answer is the jar’s clamp which, if overtightened, would crack the lid and render it useless.

It is seemingly possible that Lester’s milk jar would have enjoyed some success had its closure been more carefully designed. However, the seeds of another more innovative closure were planted just weeks before Lester’s patent was accepted. On January 11, 1878, the prominent Brooklyn milk dealer Alex Campbell is said to have been the first dealer to sell milk in experimental glass bottles. A verified example of this bottle has yet to surface among milk bottle collectors, but the greater significance of this event is Campbell’s keen interest in glass bottles, an interest that few other milk dealers of the time seemed to share. According to the records of Orange County bottle historians Toni Knipp and Chester Faber, which have been supplemented by period newspaper articles, Campbell engaged in a partnership with fellow New York City milk dealer and doctor R. R. Stone in the period between 1878 and 1880. Stone, an advocate for marketing healthy, pure milk in a period when adulteration was all too common, was likely intrigued by Campbell’s experimental milk bottle and foresaw a future of consigning untampered milk in clean, clear glass bottles.

Records indicate that the company formed between the two businessmen was known as the New York Dairy Company Limited and their main creamery was located in the Orange County town of Monroe, N.Y. In 1880, the New York Dairy Company Limited was one of the first to receive the groundbreaking Warren milk jar. Easily recognized today as the ubiquitous standard-shaped milk bottle, the Warren milk jar featured many improvements in comparison to the Lester jar. The most important of these was a lid, made of either glass or tin, that would be secured by a wire clamp. No longer did consumers have to worry about over-tightening the closure on their bottles.

The New York Dairy Company Limited partnership appears to have been short-lived. By 1881, R. R. Stone was operating



TOP: Due to the high costs of maintaining milk bottles, New York’s milk dealers were among the first to use them in their businesses. Both Borden’s and Sheffield Farms had controlling interests in the New York milk trade until the October 1916 milk strike, when thousands of regional farmers halted shipments of milk to New York City due to the unfair practices of these dealers. (Courtesy of the author)

MIDDLE: L. L. Campbell was one of many milk dealers who owned a creamery in Orange County yet sold his milk in New York City. His connection to the local region can be corroborated through newspaper articles such as this advertisement from a 1913 edition of the New York Tribune. (Courtesy of the author)

BOTTOM: Charles Beakes’ milk firm was not as powerful as a company like Borden’s, but it grew to be a dominating business by the 1920s and operated numerous creameries throughout Orange County. (Courtesy of the author)



TOP: Outside research was needed to verify this Jas. C. Rider tin-top as an Orange County milk bottle. The bottle was indeed used by James Rider, who operated a creamery in Central Valley, N.Y. Pictured is his ice-house, which was used to harvest ice in order to cool his dairy products. (*Woodbury Historical Society, courtesy of the author*)

MIDDLE: Only through acquiring the Corn & Clover Farm Dairy bottle, a known example from Florida, N.Y., was I able to link this Thos. J. Taylor bottle to Orange County. The story was enhanced through the discovery of a newspaper interview where Taylor discussed Orange County's dairy history and his life as a farmer there. (*Courtesy of the author*)

BOTTOM: Bottles like this example from W. H. Kelley are desired by collectors for their promotional slogans that read "Pure Orange Co. Milk." (*Courtesy of the author*)

his own business, the New York Milk and Cream Company, which continued to use tin-top milk bottles at its Orange County creameries until its closure in 1894. Alex Campbell, on the other hand, continued to use the New York Dairy Company Limited name through the 1880s and, later, the formidable Alex Campbell Milk Company name until his business was acquired by Borden's in 1919.

With bottles like the Warren milk jar now in full production, struggling dairy farmers were presented with an appealing alternative. Instead of wholesaling their milk to dealers who often failed to pay fair prices, the farmers could retail the milk themselves in these glass bottles. However, when this innovation was still new in the 1880s, many farmers chose to stick with the milk dealers instead. As a result, in the period after the Warren milk jar was patented, most of the milk bottles were sold to the dealers themselves.

The bottle's first customers often justified its use through the antithesis of George Lester's logic: not that the milk would damage its environment but that the vile environment would "contaminate the milk with an assortment of debris," an observation made by Dr. Hervey D. Thatcher who, in 1885, invented his revolutionary bottle known affectionately as the "milk protector." Thatcher's milk bottle may have been popular but, apart from its elaborate cow embossing and glass lid, it differed little from the Warren milk jar.

In fact, throughout the 1880s and 1890s, numerous manufactures such as T. B. Howe and F. K. Ward continued to invent new milk jars, but what they all shared in common were their characteristic tin-tops. In the days before the more convenient cardboard cap, tin-tops were a common sight on milk bottles, especially those that traveled long distances by train. Even after the cardboard cap seat for the milk bottle was patented in 1889, tin-tops continued to be popular until the turn of the twentieth century.

As mentioned before, the earliest tin-top milk bottles were used by the dealers themselves and studying these bottles provides great insight into the complex society of metropolitan milk firms that once populated New York and New Jersey. When Borden's entered the fluid milk business in 1885, they became an aggressive customer of the new tin-top bottles, followed by their close competitor Sheffield Farms. Below these larger dealers, an array of less-powerful businessmen flooded the New York dairy market with tin-top bottles. The majority of these early bottles were made by the Thatcher Manufacturing Company, the brainchild of Dr. Thatcher, that would soon dominate the production of milk bottles.

Other popular names found on the bottoms of these early tin-tops include J. B. Brooke, Climax, and Empire, all companies that were either involved in the manufacturing or distribution of these wonderful antique gems. Regarding the names of the dealers embossed onto the bottles, unearthing their roots is a facet of what makes collecting them so fascinating. Some businesses, such as the Beakes Dairy Company or L. L. Campbell's Clover Farm Dairy can be accurately attributed to Orange County through the aid of period newspaper articles and invoices. Other bottles, however, require additional research and even some luck to complete the story.

Around three years ago, I was surprised to see an early tin-top milk bottle embossed with the name "Jas. C. Rider" in the windowsill of a home in Passaic, New Jersey. I had traveled to this home because a Craigslist advertisement had been posted a few days earlier describing a large collection of New Jersey milk bottles for sale. While I was hoping to find some more contemporary New York City milk bottles with possible connections to Orange County, I was excited to see this rare example.

J. C. Rider was a familiar name to me. In fact, his creamery and ice pond were

located in my hometown of Central Valley, N.Y. Previously, all records indicated that Rider used milk cans. For a fair price, I acquired the milk bottle and intended to search its Brooklyn address over various digital newspaper archives. These archives are a bottle collector's best friend; from advertisements to the personal information of a company, period newspapers can help to substantiate the history of a bottle and, in addition to strengthening its value, allows the researcher to connect with a bottle on a deeper level.

It only took me five minutes to find an article from a Brooklyn newspaper corroborating the address on the bottle with Rider's business in Central Valley. To date, I know of only one other Jas. C. Rider bottle that sold on eBay a few years ago, but its connection to the region, a connection made through research, is far more valuable and meaningful to me.

One of my favorite tin-top stories involved both research and assistance from another milk bottle. I was very excited when a package arrived at my door for the early Corn & Clover Farm Dairy milk bottle from Florida, N.Y. Upon receiving the bottle, I noticed something odd. Instead of the embossing "Florida, NY," the name "Thos. J. Taylor" was present instead.

I was disappointed that the bottle lacked a town name, but its name still matched the name of the farm and thus earned a spot among my prized milk bottles from southern Orange County. Two years passed, during which I was searching for milk bottles from New York City on eBay and came across a tin-top that captured my attention since it shared the name "Thos. J. Taylor." At the time, I could find no connection to Orange County from this bottle, which had a Staten Island address.

I did not think that the matching names were a coincidence and, for a reasonable price, I acquired the bottle. The story came full-circle one year later when, while researching some details for an article that I was writing in Marist College's Hudson

River Valley Review, I came across an 1883 interview between a reporter and Staten Island milk producer Thomas J. Taylor. Taylor was an "old milk producer from Florida, N.Y." Taylor's interview described the history of the Orange County milk trade from his perspective which, while not offering any groundbreaking facts, was both fascinating to read and heartening to confirm.

It's amazing to think how, through one bottle purchased years ago, a wealth of information unraveled to further complete the complicated puzzle of Orange County's interesting dairy farming history.

Only a decade after the Warren milk jar was invented in 1880, the tin-top milk bottle had become a symbol of cleanliness in a world dominated by filth and adulteration. Its image was used on envelopes, letterheads, and newspaper advertisements by companies who sought to take advantage of the industry's latest innovation and the market's desire for purity and freshness.

The tin-top bottles that have been discussed all feature the names of milk dealers who owned creameries and, sometimes, farmland in Orange County, N.Y. However, a more desirable tier of bottles above this first grouping are the "advertisement" tin-tops or those that promote their product through association to Orange County. These examples often feature embossed slogans such as "Pure Orange County Milk" and are highly prized by collectors.

But these phrases were not the only ways in which these bottles displayed the cherished Orange County name. The Orange County Milk Association traces its origins to the acquisition of Thaddeus Selleck's pioneering milk shipping business in 1844. The new company built a dominant reputation among New York City's clientele and, with a quality product that benefitted from efficient shipment by rail, the association steadily grew.

By 1861, the business established itself as a corporation with offices in New York



TOP: The Orange County Milk Association was one of the county's most revered milk shipping businesses and their tin-top bottles are among the region's most recognizable. (Courtesy of the author)

MIDDLE: Legitimate bottles from the Orange County Milk Co. are highly valued by collectors, despite their plain appearance. This example would have once featured a tin closure but, likely due to a century of deterioration, has lost it to time. (Courtesy of the author)

BOTTOM: Often confused for the Goshen variety, Henry Chardavoyne's Orange County Milk Company was located south of Goshen in the village of Unionville, N.Y. Chardavoyne used many bottle variants and among his most desirable is this example with a Howe closure that opens to the side. (Courtesy of the author)



TOP: Bottles from Deer Park Farms are the only examples known from Orange County to feature a New York City address and their local village name of Port Orange, N.Y. (Courtesy of the author)

MIDDLE: Tin-top milk bottles from local farms such as John Pierce Hull's Maple Hill Farm are an anomaly in the world of early milk bottles. While most tin-tops traveled by train between Orange County and New York City, Hull only delivered milk near his dairy, located in Middletown, N.Y. (Courtesy of the author)

BOTTOM: As glass milk bottles became a preferred method of transporting milk, the tin-top was a popular sight at creameries scattered across Orange County, such as this one. The tin-top would pave the way for a century of milk bottle use that, although greatly limited, continues to this day. (Ontario and Western Railroad Historical Society)

City, followed in 1870 by the construction of a large brick building in Orange County's city of Middletown used for manufacturing condensed milk. The period after the Middletown plant's opening coincides with the association's earliest tin-top milk bottles, which clearly advertise condensed milk.

While these bottles are sought after by collectors, the association's arguably most popular examples are embossed Orange County Milk Association around the image of a keystone. Used on bottles manufactured by J. B. Brooke, Thatcher, and the Atlantic Bottle Company, the slug plate embossing remained in use until the association's sale to the Beakes Dairy Company in 1899. This has made their bottles among the most recognizable in Orange County.

A similar company that incorporated Orange County into its name was the Orange County Milk Company. The story behind its name is far more intriguing and, like many of these tin-tops, required diving deeper into more research. The Orange County Milk Company, much like the Orange County Milk Association, had its main plant in Goshen and, although little is known of its operation, the business did use tin-top milk bottles.

This Orange County Milk Company should not be confused with the business of the same name operated by Henry S. Chardavoyne; his business was located seventeen miles south of Goshen in Unionville, N.Y., but is often mistaken for the Goshen creamery since Chardavoyne bottled soda there.

He may well have been a cunning entrepreneur, but Chardavoyne's heart was in dairy farming, something that began when he was born in 1865 on his family's farm in Sussex County, New Jersey. He became fascinated by the rapidly expanding milk industry and, by 1895, his Orange County Milk Company became a member of the Brooklyn Milk Bottlers' Protective Union.

The Chardavoyne name became prominent within southern Orange County. The Chardavoyne barn still stands today off Chardavoyne Road in Warwick and a large creamery was erected in Unionville around the 1920s for his company. Not surprisingly, Chardavoyne took advantage of the tin-top innovation but, unlike the Goshen Orange County Milk Company which featured plainly embossed bottles, Chardavoyne's are among the county's most artistically designed. Its images of rolling hills, and even an Ayrshire cow, make it one of the few milk bottles from Orange County to prominently feature embossed images.

Chardavoyne was also the only dairyman from Orange County known to have used the unusual Howe tin-top closure. Unlike normal tin-top closures that open upwards and then to the side, the Howe closure, patented in 1888, opens directly to the side and is held in place with bailing wire that grips the lip of the bottle. This style of closure is arguably easier to use than the conventional tin-top but, regardless of this fact, new ideas and concepts were increasingly being patented each year in relation to the milk bottle.

The tin-top bottles that have been featured thus far have almost all shared one crucial detail: their connection to New York City through an embossed address. That, however, is about to change as we look at the most unusual group of tin-tops, those that feature regional town names.

Since most tin-tops would have traveled between fifty to sixty miles between Orange County and the city via train, it is hard to assign any one reason as to why these local bottles featured tin-tops, but I have a few plausible theories. In rare cases, tin-top bottles from Orange County with New York City addresses feature the town name of the company's creamery. This is the case with tin-top bottles from Deer Park Farms; although displaying a New York City address of 782 Amsterdam Avenue, the bottle also tells us that the

company's milk "depot" was located in Port Orange, N.Y.

Situated just north of the confluence between the Basher Kill and the Neversink River in Orange County's western region, Port Orange was once a bustling village served by the New York, Ontario and Western Railroad's Port Jervis and Monticello Branch. Milk from this creamery would have likely been loaded onto awaiting NYO&W milk cars at Port Orange, where it would first travel to the branch's connection with the railroad's main tracks in Summitville, and then would head south towards eager customers in New York City.

Apart from the town name, the Deer Park Farms bottle still conforms to the tin-top "stereotype" of possessing a New York City connection, but the same cannot be said about a bottle in my collection from J. P. Hull's Maple Hill Farm. John Pierce Hull had no connection to New York City and, despite using tin-top bottles, he only delivered milk locally in the vicinity of Middletown, N.Y.

Hull was born in Shohola Falls, Pennsylvania on November 27, 1830, and operated a successful logging operation at Lebanon Lake in Sullivan County until 1899, when he purchased farmland just north of Middletown. Hull passed away in 1904 and his son, Brunson, took over the prosperous new business. In 1906, Brunson purchased a new automated milk bottle "filler" that could simultaneously fill sixteen bottles with milk, making his creamery one of the most sanitary and modern in Middletown. Brunson's (or Bronson, depending on the bottle's variation or misspelling) tenpin-shaped milk bottles with large embossing are one of Orange County's most iconic and, although not featuring tin-tops, were in heavy use until Hull sold his milk route to Middletown dairyman Charles Brunkhurst in the early 1920s.

The pressing question remains: why did John Pierce Hull, an independent dairy

farmer from Middletown with no business in New York City, use a tin-top milk bottle. The same question can be applied to the relatively small but notable group of dairies including Cornwall's Kenridge Farm, Walden's Colonial Dairy, and the Port Jervis Dairy Company that, despite only consigning milk to their regions, used tin-top bottles.

Without proper documentation, no definitive answer will likely arise for this question, but my theory stems back to the days when the Warren milk jar was still fresh on the market. As stated earlier, the milk bottle offered a promising alternative to farmers who were at the mercy of milk dealers. But when it was invented, the cost of establishing bottling facilities and the means to transport these bottles caused farmers to unwillingly retain their relationships with milk dealers.

However, when dairymen like J. P. Hull entered the business around 1900, the tin-top had been in use for two decades and some farmers were likely more tempted to make the switch from wholesaling their milk to the dealer to bottling and selling their milk directly to their community. Ultimately, these farmers were the pioneers of local milk bottle usage and led a swift expansion of regional milk routes that sprouted across Orange County.

The tin-top would not survive to see this growth since, after 1900, the cardboard milk cap eliminated the cumbersome nature of the metal closure. The turn of the twentieth century is considered to be the apex of Orange County's dairy production, a time when around 2,900 farms delivered milk, butter, and other products to their communities. A growing number of these farms, seeing the ability to capitalize on the local marketplace, used milk bottles and, by 1930, cities such as Middletown and Newburgh featured more than seventy dairies that used milk bottles, not counting the variations that existed among each dairy.

The milk bottle was an important advancement that allowed dairy farmers to become independent, and the tin-top was a necessary prelude to a more complete history of the bottle's intriguing introduction into the dairy farming industry.



WANTED
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