

What Are The Odds (A New CD Number?)

By Tod von Mechow

THE START OF IT ALL

It started with an email. I get many emails from fellow bottle collectors and potential collectors, asking for information about many types of collectible glass. I run a website, www.sodasandbeers.com, which often answers questions people may have about bottles, but sometimes the answers aren't found there, so folks email me. Many times the person has found something old which they believe is unique and valuable, but which often turns out to be a commonly available, modern Coke bottle or other mass-produced item. I hate to burst their bubble, so I try to be honest but encouraging with them.

A longtime acquaintance emailed me about a glass item that was found by his "wife's niece's husband" on their property, wondering if it was an insulator. I figured it was going to be one of thousands of common insulators, like Brookfield or Hemingray, that are found near old railroad rights-of-way. While collectible, they are not rare or expensive. I opened the photo attachment — it certainly was an insulator, but not one that I was familiar with. Perhaps this was something of value. I don't collect these, so I did some research by first consulting my reference books on older insulators. Unfortunately, I was unable to find any information on this particular one. I then searched online for any images that resembled this insulator, but to no avail. Clearly this was not a common insulator. Then I started looking at insulator patent records at 2 a.m. or so.

I did find two patents that were close to the insulator but not exact matches.

Out of ideas, I called a friend who had helped me with content on my website years ago, who I knew was an insulator expert and a researcher and historian like myself. I described the patents I had found, and he replied that there were no known insulators with those patents. He surmised that the insulator I was researching was possibly a Harloe. I decided to send him a picture of it while we were on the phone. After he opened the attachment, all I heard was, "Oh my God! OH MY GOD!" Then I knew this was something really good. He said it looked like the McGrory patent, under which prototype insulators were produced but there were no known examples.

THE INVENTOR

I'm always interested in the history of glass and bottles, so I began researching the origins of the McGrory patent. Thomas McGrory was born in Ireland around March 1827 and immigrated to the U.S. in 1848 at age 21 on the ship *Columbus*, possibly settling in Philadelphia around 1854, based on a contemporary reference. He married his wife, Mary Jane, in 1855. They had five children: Mary Ann 1856; Thomas Jr 1859; Eliza Jane 1862, Martha 1869, and Laura 1872.

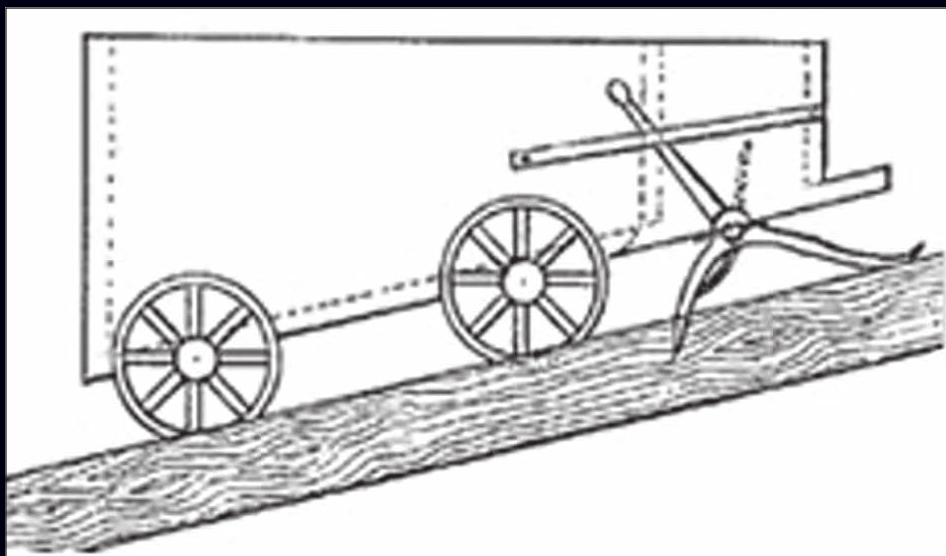
In 1859, oil was discovered in northwestern Pennsylvania. The first oil well was drilled by Colonel Edwin Drake that same year, and an oil boom followed. There was



What I expected



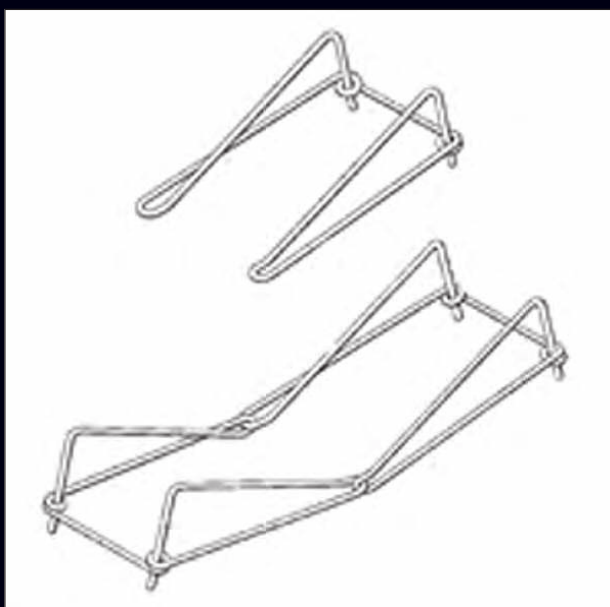
Thomas McGrory circa 1900



TOP: Thomas McGrory 1870
Coal Car Patent 104,332.

RIGHT: Thomas McGrory 1895
Door Stop Patent 525,507.

BELOW: Circular for the Philadelphia International Electrical Exhibition in 1884. (Library of Congress Collection)



a massive migration of speculators to the area, all hoping to make their fortunes in the oil business.

Census records in 1860 state that Thomas and family were living in Harmony Township, Venango County, in northwestern Pennsylvania, where Thomas worked as a farmer. His brothers John, James, and Charles were drilling for oil on the adjacent property. He entered his first real estate transaction in 1863, and it appears to be a sideline during the time he lived in Venango and afterwards. After 1863 he apparently moved to Fayette City, where he filed for his first patent, for a coal car, granted in 1870. After he left the area, also in 1870, there are later references describing productive oil wells on the "old McGrory farm" in Harmony Township.

Census records in 1870 show him working as an engineer in Line Lexington, Montgomery County, which is north of Philadelphia. This property was apparently next to a railway. He ran a queensware, ceramic and crockery shop in Norristown, Montgomery County, in 1875. In 1880, he moved to Philadelphia and became a real estate agent, which was his main livelihood until he passed away in 1917 at age 90. He was described as "deservedly popular in both social and business circles, where he has made hosts of friends by his honesty, push, sound judgment, and inflexible integrity."

His wife, Mary Jane, unfortunately passed away in 1876, and was later interred in the Laurel Hill Cemetery family plot in 1890. Later, Thomas married a widowed neighbor named Sophia Guy in 1887; she passed in 1931 and is buried in North Cedar Hill Cemetery with her first husband. Thomas and Mary Jane's children all passed before Thomas' death in 1917.

The year 1887 was a pivotal year for Thomas. Not only did he remarry, but he established his own real estate office at 2771 Kensington Ave. in Philadelphia. He also organized a car-building, heating, and ventilation company in Camden,

New Jersey, because he had patented a method for heating and cooling back in the year 1883.

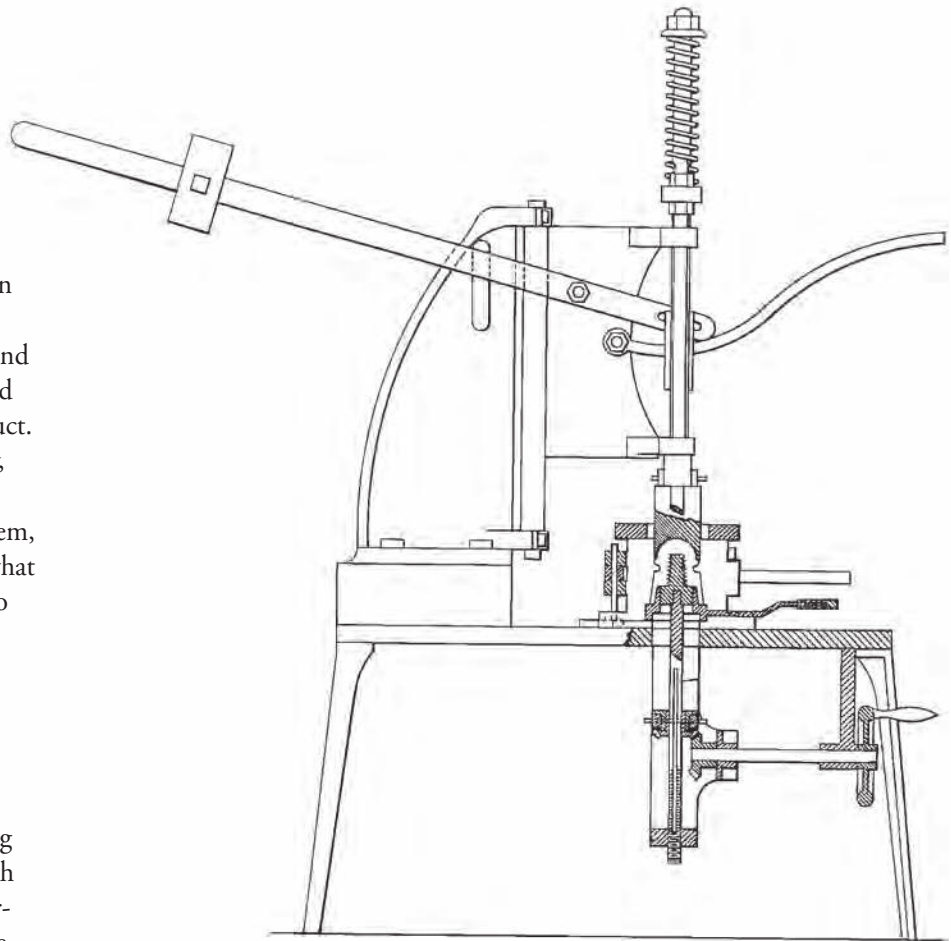
McGRORY PATENTS

I have no idea why a real estate agent would decide to patent an insulator. We do know that McGrory had experience in filing patents. So perhaps, he was just a creative individual with a mechanical mind who saw a problem and thought he could make a killing introducing a novel product. When living in the heart of coal country, he invented a coal cart. When dealing in real estate, he invented a ventilation system, and a door stop. I just cannot imagine what triggered him to come up with an idea to patent an insulator.

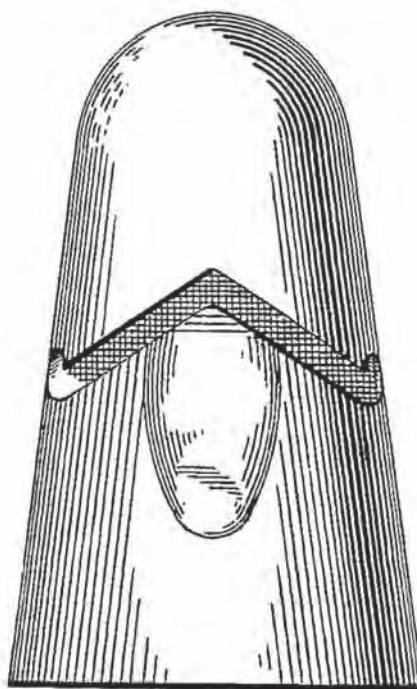
McGrory filed for his first insulator patent on December 14, 1883 (*Illustration A*). He states that his filing was for a lock wire insulator for telegraph wires. The insulator had an upwardly-projecting "V-shaped slot" to receive the wire, which was locked in place by "two upward bearing" grooves at either end of the "V." He does not claim that the "V-shaped opening" was his idea, as it was used before, but his design improved upon the overall configuration of the wire locking approach. McGrory was assigned Patent Number 293,901 on February 19, 1884 for his Lock Wire Insulator.

The main benefit of the locking insulators was the efficiency of installation and material savings, as no wrapping wires were needed to secure the telegraph wire to the insulator.

However, the practical implementation of McGrory's brainchild soon proved to be problematic. He did have some prototype insulators developed and we are lucky that these were described and illustrated in reports from the International Electrical Exhibition at Philadelphia, Pennsylvania which ran from September 2 to October 11, 1884. The following is a description of his insulators in *The Electrician & Electrical Engineer* edition of October 1884:



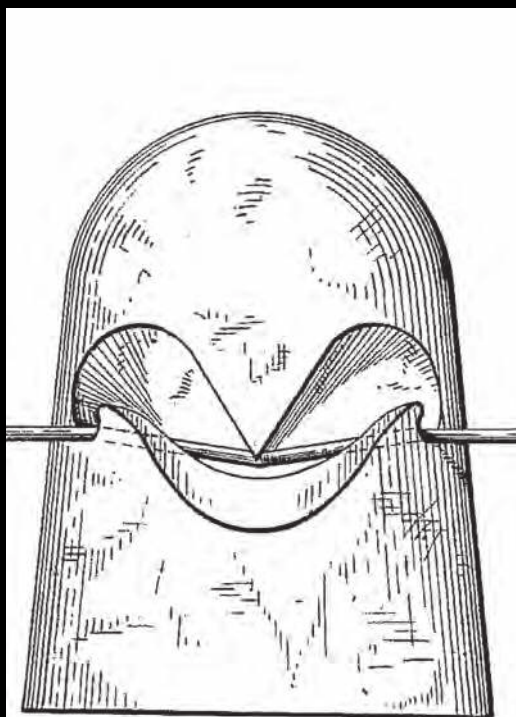
1885 Weyman Patent 310,484



1884 Patent 293,901 (*Illustration A*)



1884 Electrical World (*Illustration B*)



1885 Patent 323,055 (Illustration C)



Actual insulator (Illustration D)

"A collection of white glass insulators is shown by Thomas McGrory, manufacturer and patentee, called the lock wire insulator, from its peculiar form. By means of a crooked groove on one side, into which the wire is forced, it is held by means of the bend so made, on the same principle as by the well-known iron hook. The use of a tie wire is thus dispensed with. The glass has no screw thread for securing it to the pin."

An illustration with a nearly identical description to the above was found in the *Electrical World* trade journal for October 18th, 1884 (Illustration B). Another illustration, in the *Telegraphic Journal and Electrical Review* dated November 1, 1884, included the following comments:

"The inventor claims for them that once the wire is pushed into its place it can neither slip nor strain out. He also claims that one man can put up as many wires on this system as two can by tying or wrapping; and that it saves from 14 to 18 inches of wire per insulator. We do not, however, think that this insulator will commend itself to English electricians for many reasons."

These illustrations and the description point out some material flaws that would prevent commercial production and lackluster interest in his product. White glass refers to a form of lead or flint glass, which is softer and easier to manipulate than common green glass. Second, as described, there were no threads to secure the insulator to the pin. Third, as can be seen in the illustration, the opening for the upwardly-projecting "V-shaped opening" had to be widened to the point of not having enough tension to securely hold the telegraph wire in place. Finally, the sharp edges in the grooves would have been weak points and subject to breakage as the wires were forced into them. All of these issues were no doubt compromises made to actually mold the insulator in this configuration.

I suspect that McGrory got some practical advice from a glass engineer, during the

Philadelphia Exhibition, who gave him advice on how to manufacture his insulator and I believe that this advice may have come from George W. Weyman. Weyman was an experienced Philadelphia glass worker who held several patents for pressing glass granted during the previous decade. In an incredible coincidence, Weyman filed a patent for pressing glass insulators in the waning weeks of the Electrical Exhibition. This was to be his only insulator patent.

His Patent Number 310,484 focuses on the threaded die to form the threads for the pin to be set from the bottom of the pressing table. Additionally, the glass was poured into the mold from the top or dome side. A mold for the dome was then pressed down to form the insulator. This is the inverse of the typical insulator where the glass was loaded into the base of the molds and the pressing was done from the pin side. The patent also mentions removable mold sections that would have been necessary to mold the complex form of the McGrory insulator. I suspect that Weyman conveyed to McGrory his success in coming up with a mold to manufacture his insulator. Unfortunately, this would require McGrory to file an improvement to his 1884 Patent to make its manufacture possible.

Just days after the conclusion of the Exhibition, McGrory files his second insulator Patent on October 15, 1884. McGrory clearly states in his 1884 Patent filing that "This insulator is intended to cure the defects of my former patent." His "useful Improvements in Lock Wire Insulators," which now included other wires in addition to telegraph wires, was granted a Patent Number 323,055 on July 28, 1885 (Illustration C). The improvements basically changed the orientation of the "V-shaped groove" to a downward projection from the previous 1884 Patent, which had an upward projection. Another improvement was the rounding of the edges in the grooves, which would avoid breakage. Those changes can be clearly

(No Model.)

T. McGRORY.
INSULATOR.

No. 323,055.

Patented July 28, 1885.

Fig. 1.

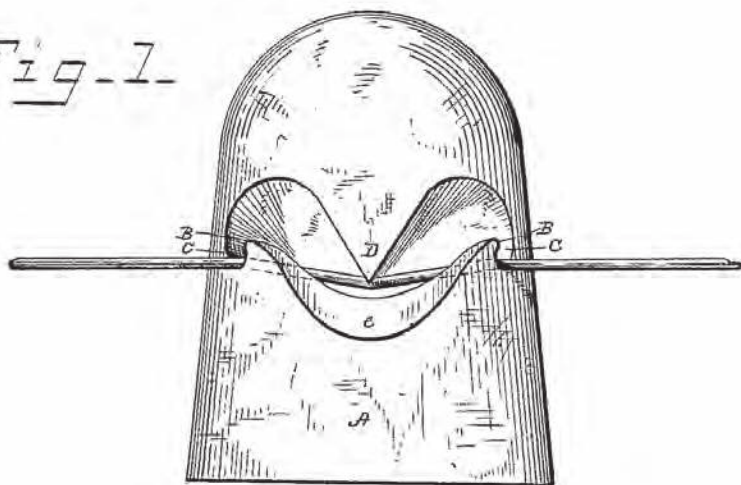
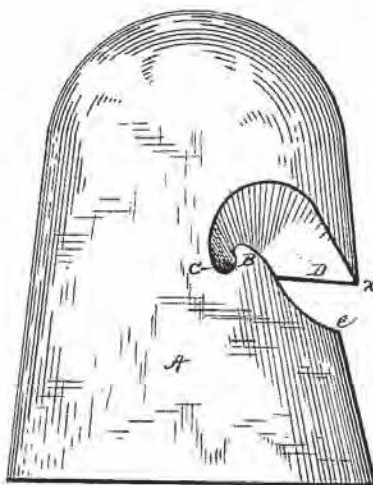


Fig. 2.



Full illustration
of the 1885
McGrory patent.

WITNESSES

Edwin L. Jewell.
J. J. McCarthy.

INVENTOR

Thomas McGrory
By *E. M. Alexander*
Attorney



seen when comparing the illustrations of the two patents.

Once I had completed the research, I emailed it to the family who found the insulator. My wife and I made arrangements to meet them at their home so I could see the insulator for myself.

THE FINDING

The old house, built in the 1840s, was on a busy main street that clearly was once a quiet rural road outside of Philadelphia. The property was narrow but very long, with remnants of old stone walls and a free-standing barn. There is a meadow behind it and a new fence at the rear. The family had at first been interested in buying the house next door, which was on the market, but a fortuitous conversation with the then-owner of this property led to their happy decision to buy it instead. Interestingly, the sale was brokered by the husband, who happened to be a real estate agent at the time, the same occupation as the inventor. The homeowners commissioned a survey, because they intended to sell an overgrown portion of their land to the owners of the property behind theirs and were not sure where their back property line was.

The proposed sale fell through, so they decided to clear away the thick vines and brush and neaten up the parcel. This turned out to be a very good move. The lady of the house (in contradiction to the email) saw a blue object in the debris, which fortunately had not been broken by the brush trimmer's metal blade. She had no idea what it was, but thought it was old and interesting. They texted family members in case any of them had any idea what it was, which is what led to

the email sent to me by my acquaintance. The spot where she found it certainly did not look like a dump, but there was other construction debris there, including a coil of wire and some bricks. The kids were amazed at finding things also, and got a metal detector to go on treasure hunts in the yard. In the three years they've lived in the house, they have found some old newspapers and other items, so perhaps there are plenty more treasures left to be found.

The homeowners renovated the barn, and discovered newspaper insulation dating back to 1900 in the walls. It seems likely that the barn was rented out or used as an apartment at some point.

We were looking forward to examining the insulator in detail, and spent some time sketching its features and photographing it. The insulator is a beautiful turquoise aqua, as seen in the photo of the family next to their barn. It was interesting to compare the drawings I'd found in the patent records to the real thing I held in my hands.

A deviation between the actual McGrory insulator (Illustration D) and the 1885 patent is the moving of the upwardly projecting "V-shaped opening" to be higher on the body, clearly necessary to allow room for the threaded pin. The mold used to press this insulator was duly complex even with the improvements, but it is clear that inverting the "V" was the genius behind making this more practical. The insulator is 4 ½ inches in height, and 2 5/8 in width at the base.

As can be seen in the illustration, the base flares out slightly. The threads are 1 ½ inches in height, which I believe is about ½ inch smaller than what is normal and likely due to the presence of the groove. The bottom of the "V" is 2 3/8 inches from the base and the top is 3 inches from the same starting point. The groove on the sides are 2 ¾ inches from the base. There is no visible embossing on it, but it is clearly the McGrory 1885 Patent.

The collector community has a new, interesting and currently unique insulator added to the catalogue. I have to assume this will be a new CD number.

CONCLUSIONS

The discovery of this insulator was a series of incredible coincidences. What are the odds that this family was looking to purchase the house next door, but a chance conversation with the owner of the current property changed their mind. The sale of the piece of land where the insulator was found, fell through, inducing them to clear it of overgrowth. The insulator was not shattered by the weed-whacker with the metal saw blade, and an uncle knew some bottle collectors who helped identify it so that it was not relegated to a drawer or box in the basement as an interesting relic that they found.

Although there was clearly a production run of McGrory 1885 insulators, it seems likely that it was limited since there is only one known. I suspect that McGrory had the insulator manufactured at one of the Philadelphia glasshouses. Weyman, who may have invented the mold to make this insulator, lived close to the Dyottville Glass Works, and the color of this insulator reminds me of period soda water bottles manufactured at that works. This design probably never caught on and, as previously mentioned, Thomas had a very busy year in 1887, and perhaps his interest in producing more insulators waned.

PHOTOS (previous page, clockwise from upper left):

The overgrown area, almost sold, where the insulator was found.

Survey sticks marking the property.

The lucky family with the insulator.

Looking towards the barn and house.



Angled view of the McGrory insulator.



An interesting look from the side.



A view of the back clearly showing the threads.

So how did this one-of-a-kind insulator end up in this family's backyard? Since the barn was once a living space, it probably had an electric wire running into it from the house. The insulator would have been used in the connection. The coil of wire and other construction debris found near the insulator is evidence of a later renovation of the barn. It was common practice to discard debris at the back of one's property in an overgrown area. Being an old dump digger, we would always search for these artifacts along the property lines and ditches on old farms.

In any case, the collector community has a new, interesting and currently unique insulator added to the catalogue. I have to assume this will be a new CD number, but that is yet to be determined. For me, I'll be on the lookout for one of the insulators that McGrory displayed at the Philadelphia Exhibition in 1884.

Editor's note: The author, Tod von Mechow, may be contacted at: todvon@verizon.net; website: www.sodasandbeers.com