

Whiskey (and other) Barrels

by Donald Yates

As you know, the term Cooper referred to the art of making wooden barrels.

The craft of barrel making seems to go back five thousand years. The surname Cooper is very common, as indicated by any contemporary telephone directory, and indicates that there was a barrel maker by that family name at one time.

In the city directories of the 1800s, the profession of Cooper was often listed with the person's name as it was a very common and reliable profession.

Early coopers only needed a few simple tools to manufacture wooden barrels. Many European cooper factories were located in outdoor city markets, or under the arches of public buildings. This method allowed natural light to illuminate their work. American coopers usually worked indoors in barns with an open door for lighting.

The Roman Naturalist, Pliny, gives credit for inventing oak wine casks to the Piedmont people. These casks replaced their pottery jars and deer hide wine containers. Early Egyptian traders shipped wheat in oak barrels, held together with hoops. Since that time, nearly every commodity has been transported in wooden barrels.

Southern plantation owners shipped their cotton and produce to Northern cities in casks. Other regions shipped pears, apples, nails, beef, pork, fish, flour, sugar,

cranberries and laundry soap - almost anything - in wooden barrels.

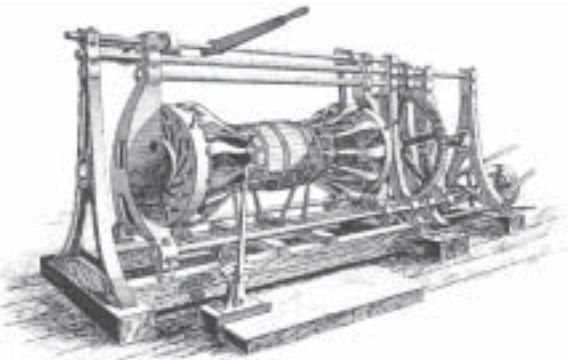
Beef and pork were shipped in brine in wooden barrels. The salt-cured meat would last several months before cooking and eating.

There were two kinds of barrel makers: Wet Coopers, who made wooden barrels for storing liquids using oak, chestnut or beech, while Dry Coopers made barrels for shipping dry merchandise. Pine or fir was usually used for these cheaper barrels.

During the 1600s, sailing ships were used to transport people and goods across the world's oceans. Every crossing from Europe to the United States took from six to eight weeks. The chance of getting spoiled meat and fish shipped in oak barrels that had been served and cooked on board the ship was great.

These dirty empty barrels were returned to the packers, where they were cleaned out and washed with water and lye - and good luck sterilizing anything. Then the barrels were again packed with salted meat and fish. If one didn't get sick the first time, the chances greatly improved the second time around.

Pre-cooking meat and fish products would have greatly increased their shelf life in the barrels as well as smoking the hams and fish.



Barrel crozing machine patented in 1883.

Later in the 1800s, meat was cooked and canned in metal containers. These were sterile and food could be safely stored for several years.

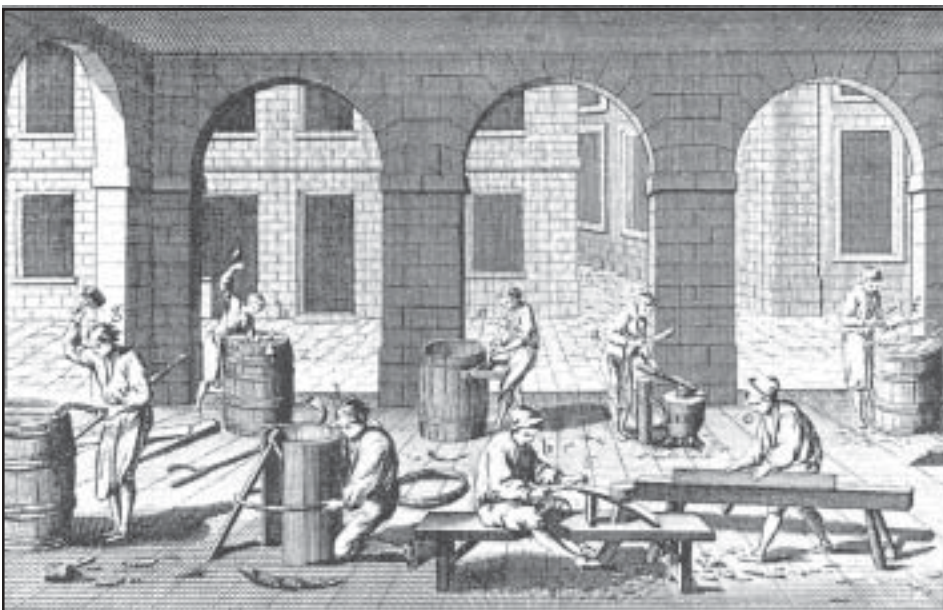
During the era of iceboxes, ice was cut from the frozen lakes and delivered by wagons to homes and other businesses that needed to cool their products or food. The temperature of an icebox was about 45 degrees if you were lucky. Any bacteria on fresh food were reduced to slower activity. In comparison, today's refrigerators are usually about 35 degrees and can be controlled.

Freezing of food and other products greatly reduced the activity of bacteria, keeping fresh food safe to eat for longer periods of time. Some bacteria would even die at these colder temperatures, but freezing was not available to the American consumer until 1950.

American brewers and distillers employed thousands of coopers, often right on their own premises. In 1865, breweries alone constructed five million beer barrels. Whiskey production at the same time was seventy million gallons. This was right at the end of the Civil War and the country was slowly shifting to a normal economy.

The West Indies rum and sugar trade also kept both American and British cooperages operating full-time for several decades. Ships left weekly for the Caribbean Islands and often brought back special treats as well as the sugar and molasses for making rum. Citrus fruit, including the world's best limes from Montserrat, were highly priced. Also the cargo holds were checked for extra sea turtles, one of the most prized foods. Citrus fruits were used in cooking as well as in many beverages. Punch recipes called for several varieties of citrus fruits. Ratafias were very popular and were often made with oranges, limes or lemons.

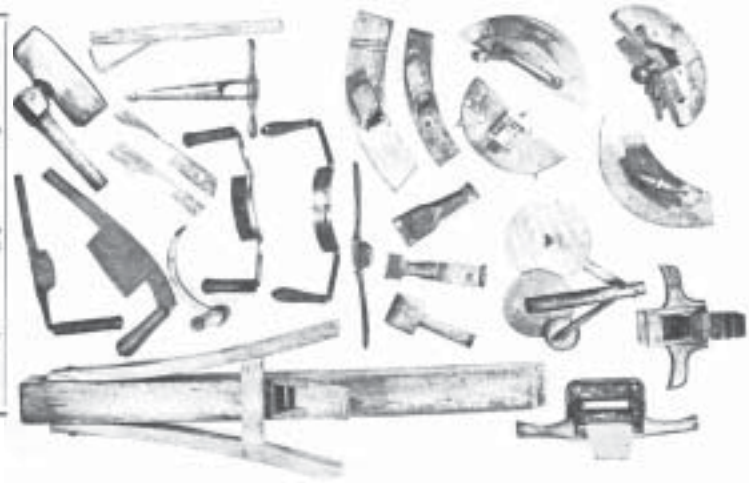
This continuous demand for wooden



European outdoor cooperage, circa. 1750. [Courtesy Dover Publications]



Advertisement for Monserratt Lime Juice from a New York druggist circular, 1902.



Various cooper tools. [Courtesy J.P. Bittner Antique Tool Auctions]

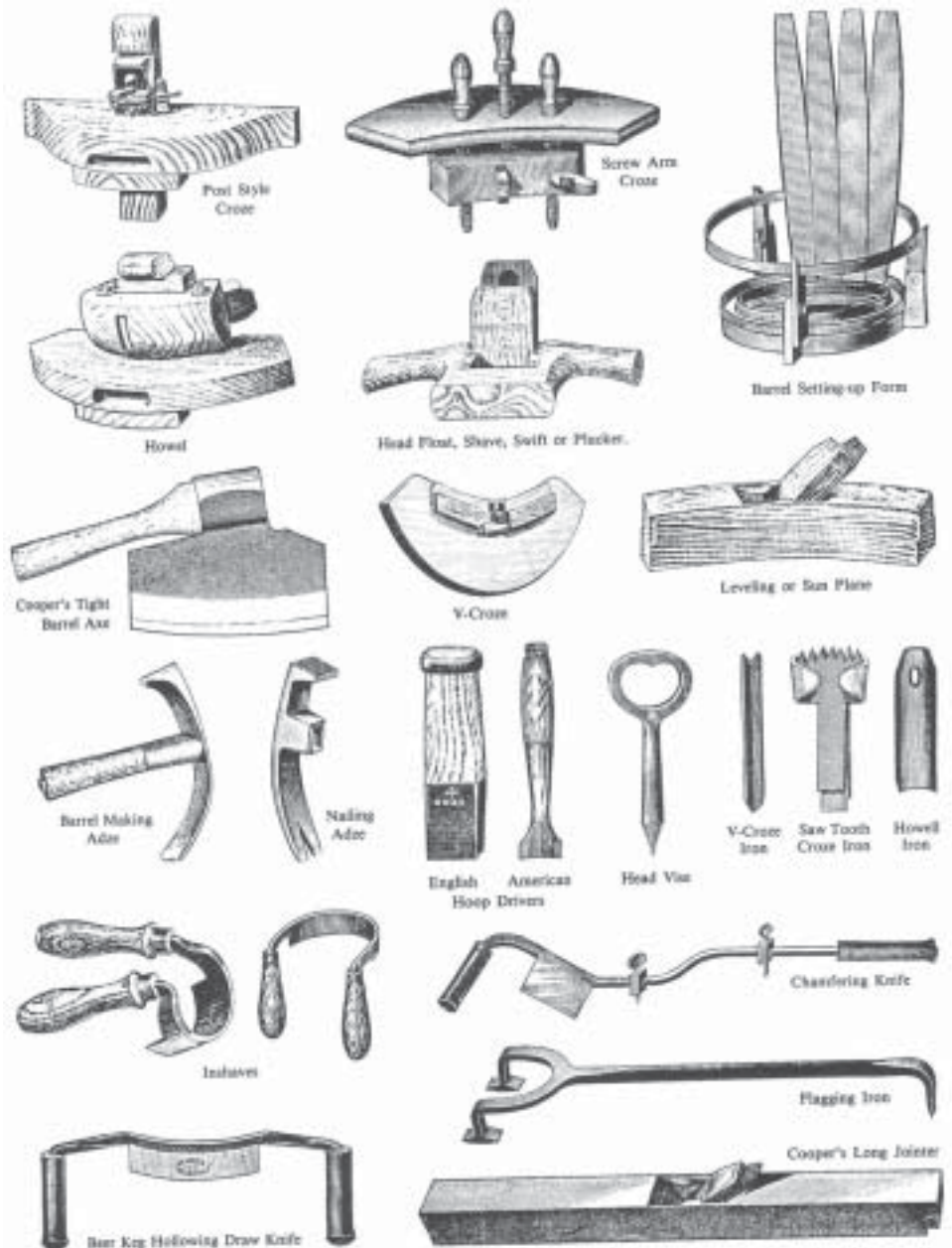
barrels eventually led to the automation of the whole industry. Over four hundred different barrel making machine inventions were patented in the United States between 1844 and 1883. Productivity advanced so much that by 1880, the cost of a barrel was 32 cents.

The top shelf barrel staves were those cleft with a curved froe. Each stave board was split naturally along its grain, making it less likely to warp at some time later after assembly. A side axe was used to taper the ends of rough staves. The next step was to go to the shaving horse, where they were further refined with a curved draw knife. A joiner plane was then used to achieve the correct side angle on each stave. This process produced the required watertight fit. Stave gauges were used as templates for the radius curve and end pitch on large storage vats and other containers, where an exact liquid capacity was specified.

Most work on stave joints was done by hand. After the joining process, the staves were set up in an assembly jig, and various sized truss hoops were used to pull everything together. Next, the inside surfaces were steamed with a cresset, or small stove fueled by wood shavings and sprinkled with water to generate the steam. The truss hoops were further tightened and the open ends were sawed off flush with the top.

The next procedure was to cut a chime or bevel around the top inner lip with a cooper's adze. Then a sideways curved plane, called a leveling plane, was used to run around the top edge and level it off for another procedure.

A wide shallow groove was cut inside just below the chime, beveled edge, using a howel plane. In the middle of this groove, a V-shaped groove was cut with a crooze to receive the barrel head. The same process



Factory-made cooper's tools, circa. 1880-1910.



Cooper shaving the bottom of a dry barrel.

was repeated on the bottom and the seams smoothed down with various knives. Then the iron hoops were pounded on producing a watertight barrel.

Around 1630, when the Pilgrims were just getting settled in New England, they were greatly disappointed when they opened the casks of beef, pork and fish and found them to be spoiled. Their salting methods were not effective enough to last for two months. Their butter and cheese was also shipped in oak casks and were spoiled and unfit to eat.

Their food shortage lasted for three years. They learned how to dig clams from the beach. Ocean fish was plentiful and an Indian, Squanto, taught the Colonists several methods of catching them. Oysters and lobsters were also plentiful. Any young boy could catch as many lobsters as he wished. These giant lobsters often weighed as much as twenty-five pounds. This is another case, where if man wasn't so greedy, there would still be twenty-five pound lobsters today.

Historian Johan Josselyn stated in his "New England Rarities" that they counted two hundred and three varieties of ocean fish and quickly developed a whole series of instruments and devices for catching them.

After the fish, the next major food source was corn, or maize. In the early days, it was eaten out of wooden hand carved trays, called trenches, with clam shells.

The corn was plentiful and the Colonists

adapted it into their diets. They learned from the Indians how to plant it, weed the rows, water it, harvest it, grind and cook it in many Indian methods. It was palatable and may have saved them from starvation.

Jonny cake, or journey cake, was also made from corn. For years, the colonists pounded the corn in stone mortars. Later, rude hand mills were developed, these were called Quernes, with vertical shafts fixed at the upper end, and were fastened at the lower end to a flat circular stone, which would rotate in a mortar. These were the first gristmills.

In 1810, gristmills were established all along the rivers of New England and the Western Reserve. The 1832 *Pennsylvania Gazette* identified thousands of grist mills, which used barrels of dried corn for their raw materials. After grinding, the corn meal and flour were transported to market, shipped by canal boat, packet steamer, and horse and wagon. *Way's Packet Directory* lists over one thousand Mississippi River packet river boats starting in 1848.

The 1832 *Pennsylvania Gazette* also identified thousands of cooperages. Almost every small town needed a cooper, as well as barrels and kegs.

Apple Cider Barrels

Apple cider was made in 1870 from the apple trees planted by Thomas Endicott, Charles Blackstone and other settlers. Historian Josselyn stated that apple cider was quite cheap. All of the Boston taverns served local apple cider in several

formulations, usually in a quart tankard.

Josselyn's recipe for apple cider is as follows: "Take a pile of raisins, stomp them and add cow's milk. Mix together and place in a Hippocras bag and hang it to drain. Put some of this liquid, as well as extract of cloves, into your stoneware bottle of cider and you will have a liquor that is superior to Passada, the Nectar of the Country."

Apple cider was originally made by pounding the apples by hand in wooden mortars. Often the pomace was pressed in baskets. Early mills were later formed with a hollowed out log, and a heavy weight or maul on a springboard. Cider soon became the favorite drink of the people and it was produced in huge quantities. In 1671, five hundred barrels were made of one orchard's apples. One small village of forty families made three thousand barrels in 1721. Most of the cider was allowed to ferment; they could have added yeast to prevent the formation of vinegar.

Even as far back as 1740, William Bennett stated that cider was very cheap and the people preferred it to malt liquor and beer. They paid about three shillings for a barrel of cider – which yielded thirty-two gallons. It was readily consumed, even by the children.

Apple cider was served at every meal and in the taverns. There was always a pile of full and empty cider barrels. Plus, the Colonists had learned to store barrels of apples in their larders for use until spring.

The demand for apple cider in the South



Kelley's Island North Quarry Cooper Shop Gang photograph, 1899. The cooper shop made wooden barrels to transport limestone from the quarry. [Ohio Memory Project]

was so great that apple orchards became the most valuable property. The ripe apples were transported by horse and wagon to the apple cider mills. The finished cider was put up in oak casks or barrels and then transported back to the markets and taverns. Every family stored their cider in barrels. Many ministers often stored forty barrels of cider for winter use.

Excerpt from the book, *Stage Coach and Tavern Days* by research historian Alice Morse Earle (Norwood Press, Norwood, Mass., 1900):

Apple cider could be found in every home in Maryland and Virginia. It was supplied to the local courts during their time of session. Many households used apple cider in large quantities instead of beer or metheglin (spiced mead), storing many barrels for daily consumption. Apple orchards were planted in New York State in 1720, and were cultivated with proper care. Labadist, Dankers traveled throughout New York and saw these fine apple trees.

Another great tasting variety of cider was pear cider, called Perry. It was made from pears and was often blended with apple cider. Other surplus fruit could also be added if available at the right time.

When cider was combined with rum, it created many of the most popular and intoxicating Colonial drinks. Stone Wall was near the top of the list of being the most potent. Boiling four barrels of apple cider into one barrel made Cider Royal. This was accomplished in a still, which preserved the alcohol content. P. T. Barnum loved to drink a cider called Gumption.

Ohio Barrels

In 1830, The Schooner DETROIT cleared Cleveland with 91 barrels of flour; 101 barrels of whiskey; 63 barrels of pork; 51 barrels of dried fruit; 24 barrels of apple cider; and 16 barrels of beef. These were probably typical for many shipments of food transported in barrels.

Captain Julius M. Carrington was born in Lexington, Michigan on October 17, 1841. He was an honored veteran soldier of the Civil War and a member of one of the pioneer families of Cleveland, where he was involved in commercial activities for a long period of time. His father was a prominent Michigan lumberman and cooper.

Julius' grandfather, Joel Carrington,

moved from Connecticut to Ohio in 1831, where he became one of the pioneer settlers of Brecksville. Later, he moved to Sanilac County, Michigan and later to Sand Beach, Michigan, where he died.

Mark Carrington, the son of Joel and father of Julius, was born in Connecticut on July 11, 1815. Mark was sixteen years old when his family moved to Ohio. There he learned to make wooden barrels, and in 1838, moved to Sanilac County.

That entire region of Michigan was covered with trees, and for many years, lumbering was the only industry other than hunting and trapping. Mark had an important pioneer role in the development of the lumber trader of Michigan. In the early years, he was also in the cooperage business about a mile south of Lexington.

There, Mark built a sawmill and cut lumber and manufactured barrels. Utilizing the lumber resources of Michigan as a member of the Carrington Pack Company, it was one of the prominent firms of that time.

Mark Carrington married Rhoda Ann Butler in February 1822 and had eleven children. He died in 1894 at the age of seventy-nine.

Nelson O. Newcomb, president of Lake Erie Provisions Company, was a prominent businessman for forty years.

Born on August 26, 1861 in Brecksville, Ohio, Nelson also represented some of the pioneer families of the county and the Western Reserve. His ancestry in the U.S.A. goes back to the Mayflower.

His father, Orlen W. Newcomb, was born in 1826 in Parkman, Ohio. Moving to Cleveland in 1867, he became a contracting teamster, driving wagons and horses for the firm of C. Beck and Company, Meat Packers.

Nelson completed high school and later worked for his father in the packing business. Later, he was one of the original founders of the Cleveland Cooperage Company, where he served as president through 1921.

Nelson Newcomb married Amelia Ziemer and they had three children.

Note how well the packing companies and barrel making companies worked together!

William Greif was one of the major industrialists of Cleveland and counted among its most outstanding citizens. He worked to establish it as great modern city. His parents were Vincent and Mary Greif.

The original Greif family, William's

grandparents, came to the U.S.A. with their families long before the Civil War. Here they hoped to raise their children with American opportunities, giving their children a good education in private schools.

Vincent learned how to make barrels in his early manhood. Being thrifty and industrious from his German background, he worked hard at the cooper trade and was easily able to support his family.

William was his oldest son, born in Cleveland on August 16, 1855. Growing up under the normal surroundings of American children, he received a good education by attending parochial schools. He graduated from the Union Business College in Cleveland.

At age twenty-one, in July of 1876, William started his own coal business. But after only one year in this business, he decided it was time to change his occupation and followed his father's business as a cooper. The endeavor was with minimum capital and facilities, yet he was very successful and his new business expanded continuously. It grew so fast that he needed additional managers and hired his second oldest brother, Charles, as the first one.

After incorporation, he added two more brothers, Louis and Thomas, as partners. The business continued to grow and was quite profitable. For forty years, William watched the business he made spread out until it became the largest barrel factory in the world. At the end of the forty years, it had twenty-six branches and provided



William Greif

W. Greif

employment for three thousand men with an annual production of 7,500,000 barrels and kegs. By 1906, William Greif was the sixth largest corporation director in the city of Cleveland. Today, Greif Brothers Company still operates paper mills in several southern Ohio cities.

In 1881, William married Mary Hitch and they had one daughter.



Street view in Lima, Ohio.
[J.W. Mock photo, 1887]

Coopers in Lima, Ohio (1887):

- Woolsey & Co. Barrels & Kegs, 78 employees
- Dr. S. A. Baxter Barrels & Kegs & Boxes, 8 employees

Coopers in Delphos, Ohio (1887):

- Delphos Union Stove Co. Barrels & Kegs, 23 employees
- Weyer & Davis Barrels & Kegs, 17 employees
- R.B. Harbison Barrels & Kegs, 31 employees

Coopers in Minster, Ohio (1887):

- F. Herkoff Brothers Barrels & Kegs, 40 employees

Coopers in Bellaire, Ohio (1887):

- Bellaire Barrel Works Barrels & Kegs, 16 employees

Coopers in Butler County, Ohio (1887):

- Anderson & Shaffer Flour Barrels, 11 employees
- Bentel & Margedant & Co., Barrels & Kegs, 78 employees
- J.F. Bender Brothers & Co., Barrels & Kegs, 33 employees
- John Donges & Co., Barrels & Kegs, 17 employees
- L. Deinzer & Son, Barrels & Kegs, 17 employees

Coopers in Cleveland, Ohio (1887):

John D. Rockefeller was born on July 8, 1839. He became president of the Standard Oil Company in Cleveland. In March of 1858, he formed a partnership

with M.B. Clark in the produce commission business. With good commercial sense, he went into the oil business at the right time.

The Standard Oil Refinery had a capacity of 29,000 barrels of oil per day. Their cooerage was the largest in the world and they produced nine thousand oak barrels a day.

Coopers in Union City, Ohio (1887):

- Ansonia Stave Co., Barrels & Kegs, 18 employees
- Union City Cooerage, Barrels & Kegs, 45 employees

Coopers in Defiance, Ohio (1887):

- George Dicus Barrels & Kegs, 15 employees
- Oconto Barrel Co., Barrels & Kegs, 40 employees
- Marshall & Greenlen Barrels & Kegs, 36 employees
- D.F. Holston & Son Barrels & Kegs, 65 employees
- Crowe & Hooker Barrels & Kegs, 53 employees
- John Rowe & Son Barrels & Kegs, 42 employees
- Trowbridge & Eddy Barrels & Kegs, 65 employees

Coopers in Erie County (1887):

- D.J. Brown & Co. Barrels & Kegs, 35 employees
- Kilbourne & Co. Barrels & Kegs, 20 employees
- J.M. Soncrant Barrels & Kegs, 21 employees
- G.B. Hodgeman Barrels & Kegs, 112 employees

Herman C. Baehr was the mayor of



The Butler County Courthouse



Herman C. Baehr

Cleveland from January 1910 to January 1912 and the first citizen of Cuyahoga County ever elected as County Recorder for three consecutive terms. Herman also had numerous and substantial achievements in business and public life to his credit.

Herman made oak barrels as a young man, before entering into other businesses. Herman's parents, Jacob and Magdalena Baehr, were born in Heidelberg, Germany. He and his brother Henry were their only family members to sail with them to America.

Henry settled in Cleveland and operated a bakery for many years.

Jacob, born March 13, 1824, was trained to be a cooper in Germany, as well as a master brewer and malter. His first employment was as a cooper making oak barrels for the growing pork industry. Later, he moved to Iowa and became a brewer for a few years before returned to Cleveland in 1866 to establish his own brewery and restaurant on West 25th Street, which he operated until he died in February, 1873 at the age of forty-nine.

Jacob and his wife had nine children.

Herman was born in Keokuk, Iowa on March 16, 1866. He traveled to Germany to learn the brewer's profession, graduating with the degree of Doctor of Medicine. When he returned, he was one of the first in Cleveland to employ completely scientific principles to the brewing of beer.

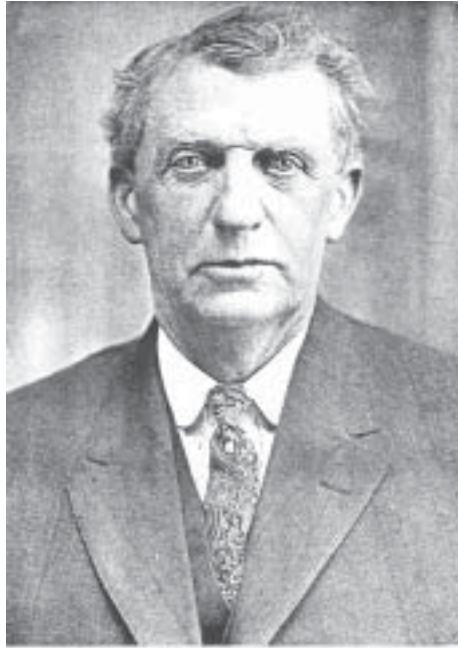
Herman married Rose Schulte on April 21, 1898. At the age of twenty-one, he took

command of the Baehr Brewing Company, which later consolidated with the Cleveland and Sandusky Brewing Company.

Henry Gilbert Renker president of the Ideal Products Company, was also one of the important business men of Cleveland.

Henry Renker, Sr., grandfather of Henry G., was born in Germany on September 19, 1808. He came to the U.S.A. as a youth and went to Mexico to operate a coffee plantation. While there, he married Bertha Schlecterway, who had also been born in Germany on January 21, 1811. From there, they headed north to Ohio, first to Lorain County then later to Cleveland.

Henry, Sr. established one of the early cooper shops in Cleveland, where he remained in the keg business for the rest of his life. Henry died on December 6, 1879; Bertha died ten years before him on October 3, 1869.



Julius Renker

Julius Renker, son of Henry and father of Henry G., was born in Brighton, Ohio on September 2, 1848 and remained there for most of his life. He learned the cooper's trade from his father, was actively associated with him and continued after his father died until 1886, when he became a contractor and a builder.

References:

The primary historical information in this article came from this book: *The Antique Tool Collector's Guide to Value* by Ronald S. Barlow, Windmill Publishing Co., El Cajon, Calif., 1985.

The Ohio history came from the books: *Historical Collections of Ohio* by Henry Howe, published by the State of Ohio, 1902 and *A History of Cuyahoga County and the City of Cleveland* by William R. Coates, published by The American Historical Society, 1924.



I think our luck is about to change!