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History of the Kunz Family in the Brewing Industry in Manitowoc, Wisconsin

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The material herein is a shorter form of a work of the same name by the late Frederick Kunz which is now located in the Manitowoc Public Library. Brewing, as well as malting, grain storage and small grain agriculture, has been an important part of the history of Manitowoc County that still goes on. This is the main reason for choosing this topic as a 1992 monograph. Edward Rappe, a Lincoln High School Social Studies teacher, edited the original document to make this monograph. Mrs. Paula Kunz graciously gave her permission to reprint and edit the original article written by her husband.

KUNZ FAMILY ARRIVAL IN AMERICA

When people emigrate from their homeland, as past patterns would indicate, they usually follow relatives, friends or neighbors. As you will see by the groups of Kunz relatives who came to the United States they fol-

lowed this common pattern.

The first of the family to come was Gottfried Kunz, the oldest child, and his sister Elizabeth, the second oldest child of Michael and Dorothea (Schaille) Kunz. Gottfried was born in 1830 at the homestead at Wolfsmuehle, Birkenlohe, Kreis Schwaebisch Gmuend, Wuerttemberg, Germany. Their forbears were flour millers. Gottfried and Elizabeth emigrated from the province of Wuerttemberg, Germany, crossed the Atlantic and landed at the Port of New York in May of 1853. They continued their journey to Cleveland, Ohio where they settled. I have not been able to determine why they selected Cleveland.

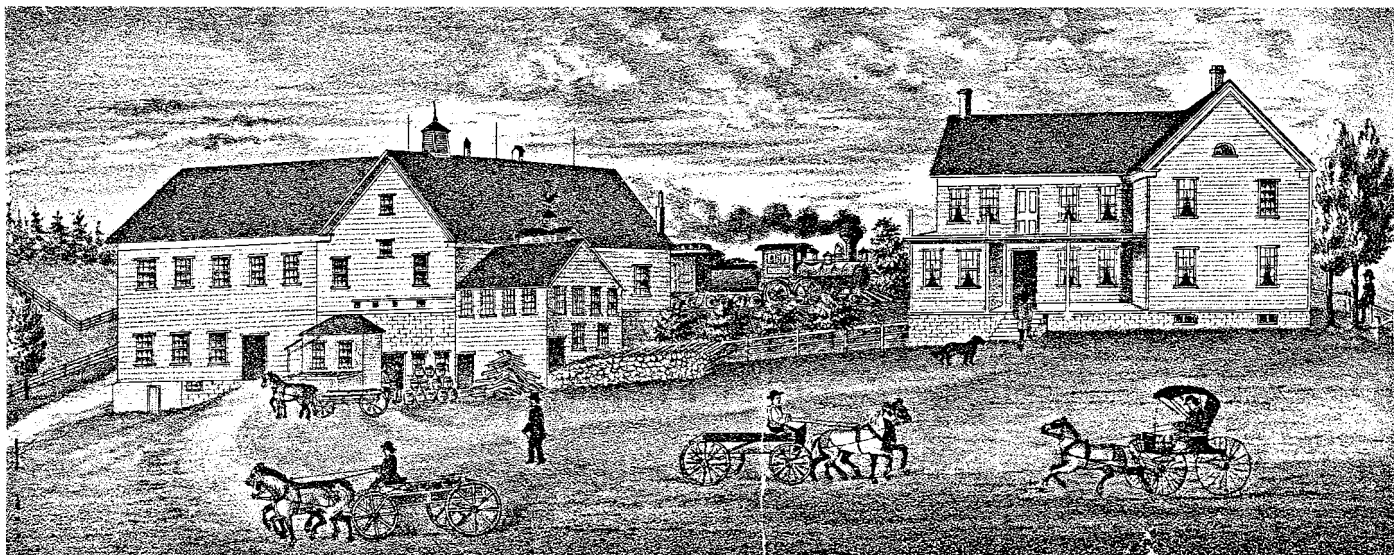
The second group of Kunz family members to emigrate to the United States came in 1854. They were cousins but the exact relationship is not known. Johannes (John) Heinrich Kunz, his wife, Barbara (Bareiss) Kunz, and their daughter, Rosine who was about one and one half years old

landed at the Port of New York in May of 1854. They journeyed on to Manitowoc County, Wisconsin, and they bought 160 acres of land from the Menasha Land Company in the Rosecrans-Cooperstown area where they settled.

In 1857 Gottfried Kunz left Cleveland, Ohio, and journeyed to John Kunz's home in Rosecrans-Cooperstown where he bought a half interest in John's land. Several months later in 1858, Gottfried resold his interest in John's land to John and moved to Branch Mills (Branch), Wisconsin, several miles to the south.

KUNZ BRANCH MILLS BREWERY

In 1858 Heinrich George Kunz emigrated from his family home in Untergroeningen, Kreis Schwaebisch Gmuend, Wuerttemberg, Germany. He was the third Kunz cousin to emigrate to the U.S. He landed at the Port of New York in May of 1858 from whence he journeyed to Cleveland, Ohio. There he married Elizabeth,



Gottfried Kunz brewery and residence at Branch Mills, Wisconsin. The name Branch Mills was later shortened to Branch, Town of Manitowoc Rapids. The brewery was founded in 1858. This illustration is from the Illustrated Historical Atlas of Manitowoc County, Wisconsin by G. V. Nash, 1878. Gottfried died in 1878.



Gottfried Kunz (left) owner of the brewery at Branch and his cousin H. George Kunz (right) who was his Master Brewer. H. George Kunz moved to Manitowoc where he operated the old Hottelmann brewery with Christian Scheibe. The men are in their I.O.O.F. regalia about 1865. The I.O.O.F. records for this period and place were destroyed in a fire..

Gottfried's sister. They then continued their journey to Branch Mills, Wisconsin where, in 1858, H. George assisted Gottfried in building Gottfried's brewery. This was the first Kunz brewery in the Manitowoc area. H. George became the first Master Brewer of the new brewery.

Heinrich George Kunz was the oldest son of Johannes Ambrosius Kunz and Sophie (Stegmaier) Kunz. Johannes was a brewer and the owner of the Kunz Brauerei "zum Lamm" in Untergroeningen. The Kunz family who remained in Germany still own and operate Lammbrauerei, Untergroeningen. He had four surviving brothers all of whom were Master Brewers—Johann Jakob Friedrich, Friedrich, Karl Georg, and, the youngest, my grandfather, Louis.

H. George Kunz continued as Master Brewer of the Gottfried Kunz brewery at Branch Mills until 1860 when he moved to Manitowoc with his family. In Manitowoc, he took employment with Johann Roeff's of the Roeff's brewery which was located about where the statue of Abraham Lincoln is located at Manitowoc Lincoln High School. As children, we played in an old, abandoned cellar of

the brewery.

H. GEORGE KUNZ BREWERY

About 1864-65, H. George Kunz bought the Charles Hottelmann brewery on the northwest corner of 9th and Marshall Streets. The Hottelmann brewery, founded in 1849, was the first brewery in Manitowoc. On purchasing the brewery H. George took Christian Scheibe as a partner. Some months later, H. George bought Mr. Scheibe's interest in the business. Mr. Scheibe moved to Centerville, Wisconsin where he engaged in the brewing business for himself.

H. George, apparently, had not been well for some time and in April of 1872 he suddenly passed away at the age of 42. Gottfried Kunz bought the brewery from H. George's widow, Elizabeth who was also Gottfried's sister. As far as I can determine, Gottfried did not operate the brewery. After about a year, he sold it to Friedrich Pautz, a well-known local teamster.

In 1871 Louis Kunz II, my grandfather, emigrated from the family home in Untergroeningen at the age of 17 following his brother and cousins. He arrived at the Port of New



Reproduction from an old newspaper photo showing the Kunz, Bleser & Co. brewery in 1885 when it was operating in the building leased from Mr. John Schreihart at Main (later 10th) and Washington Streets. The building had been built by William Fricke and his son Charles about 1865, and is one of the last breweries standing in Manitowoc. (Left to right - front row) Mr. Daniel Bleser with the Derby, Dan Bleser, Jr., George Co. Kunz, ??, Louis C. Kunz. (Left to right - 2nd row standing on ground) ??, Charles Christoff, (cellar foreman), Philip Pitz (beer collector). Back row and men in buggies not identified.

Orleans in May of that year. He stayed in New Orleans several months then made his way north via the Mississippi River in the company of two Eulberg brothers. I do not recall where grandfather said they disembarked, but I do recall that the Eulberg brothers remained at Portage, Wisconsin. The brothers founded the Eulberg Brewing Company there some time later. Grandfather continued his journey to Milwaukee arriving there one week before or after the great Chicago Fire beginning on October 7th. Grandfather worked in Milwaukee for a while before coming to Manitowoc late in 1871 or early 1872. He was the last of the Kunz family to come to the Manitowoc area.

My grandfather, Louis, was employed in the brewery by his brother H. George upon his arrival in Manitowoc. There he met John Schreihart who was also an employee. Upon H. George Kunz's death Grandfather and Mr. Schreihart continued to work at the brewery for Mr. Pautz, the new owner.

In 1876, Grandfather Louis married Anna Mary Kunz, daughter of Elizabeth Kunz. They resided in the upstairs apartment of the Karl Gelbke residence at 905 Hancock Street. At that time there was only one other building on the south side of Hancock between 9th and Main (later 10th) Streets. This was the August Schmidt residence at 917 Hancock Street which is now occupied by Kenneth Schmidt, a grandson. The Gelbke house is likewise still occupied.

In 1877, Father, George C. Kunz, was born at 905 Hancock Street. About this time Grandfather Louis decided that it was important to learn how to produce pale-colored barley malt in order to be able to brew pale-colored beer so he took employment with the Phillip Best (later Pabst) Brewing Co. of Milwaukee.

SCHREIHART & KUNZ, BREWERS

Gottfried Kunz passed away in 1878 at the age of 48. About this time Grandfather Louis completed his work and studies at the Best Brewing Co. He took employment as the Master Brewer at the Gottfried Kunz Brewery at Branch Mills. In 1880, Grandfather moved to the John Schreihart Brewing Co. at the corner of Main (later 10th) and Washington Streets. This was the same John

Schreihart who had worked with him at the H. George Kunz Brewery. Mr. Schreihart had acquired the William Fricke Brewing Co. in 1878. This is the only brewery building still remaining today in Manitowoc. In 1884 Grandfather became a partner of Mr. Schreihart changing the name to Schreihart & Kunz, Brewers.

KUNZ, BLESER & CO., BREWERS

In the meantime, Mr. Schreihart had made plans to visit his home in Duerngruen, Austria. He, therefore, leased the brewery to Grandfather for five years from 1885 - 1890. Grandfather took as a partner a long-time, good friend, Daniel B. Bleser, and they conducted their new enterprise as Kunz, Bleser & Co., Brewers. Their first beer was called "Export" Lager.

Mr. Schreihart returned from his visit to his home in Austria; and, in 1890 at the termination of his lease with Grandfather, Mr. Schreihart returned to the brewing business. In the meantime, Grandfather and Mr. Bleser had negotiated with the Grotch & Seidel brewery principals to buy their brewery which was the original Hottelmann Brewery. Thus in 1890, Grandfather Louis and Mr. Bleser continued operating Kunz, Bleser & Co., Brewers in their new headquarters.

In 1894 my father, George C. Kunz, left for Germany in the company of Mr. & Mrs. Henry C. Stolze. Mr. Stolze some years later became one of Manitowoc's most prominent Mayors. Father matriculated at the world famous Braunschweig Polytechnikum where he studied beet sugar technology. After completing his studies he worked in the beet sugar



An old Kunz, Bleser & Co. advertising poster from about 1885.

industry in Magdeburg, Stralsund and Stettin, Germany.

Father returned to the United States in 1904 after an absence of ten years. He took employment with the well known Kilby Co. of Cleveland, Ohio. This firm was famous for the construction of beet sugar mills and refineries. At the time the company was erecting two mills and refineries at Mt. Clemens and Menominee, Michigan to which plants father was assigned. After the sugar beets were harvested, it was customary to prove the guaranteed capacity of the plants before any money was paid for them. When the plants were started up this was referred to as a "Campaign." Father was one of several men who were responsible for this proof of guaranteed capacity.

NEW KUNZ, BLESER & CO., BREWERY, 1905

In 1905 Grandfather Louis and Mr. Bleser built a new brewery on the site of the old Charles Hottelmann plant. Only one building of the old plant

remained in use and this subsequently became part of the Bottle House. The original one-story building was enlarged to two stories.

It might be well to mention that when Mr. Hottelmann built Manitowoc's first brewery in 1849, the brewery cellar was located to the rear of his house and immediately south of the present Eagle's Club House. In those days there was little or no mechanical refrigeration. Mr. Hottelmann's house at 1208 South 8th Street (lots 5 & 8 of block 318) was a distinguished landmark which was razed, unfortunately, only a few years ago to provide a parking lot. The house and the brewery cellars were located on and in a high hill. The entrance to the cellars was from the 9th Street side. The cellar occupied lots numbered 3 and/or 6 of block 318 now 1209 and 1213 S. 9th Streets. The house and cellars were connected by a staircase according to Dr. George Simon and Mr. Sylvester Schmelzer who used to live in the old Hottelmann house.

As my father told me, and his father told him, the brewing of the wort (the liquid grain extract) was brewed at the plant on the north side of Marshall Street between 9th and Main (10th) Streets. The wort was filled into huge wooden casks, bunged (sealed) and

then rolled south on 9th Street to the brewery cellar where it was fermented to beer and was barreled (packaged). Barrels for delivery to the customer at that time were usually in sizes of halves (15 1/2 gallons), quarters and ochtels. Sometime later an Ice House was erected on the northwest corner of 9th and Marshall Streets at which time the 9th Street cellar was abandoned. The Ice House served until the new Kunz, Bleser & Co. brewery was built in 1904-5.

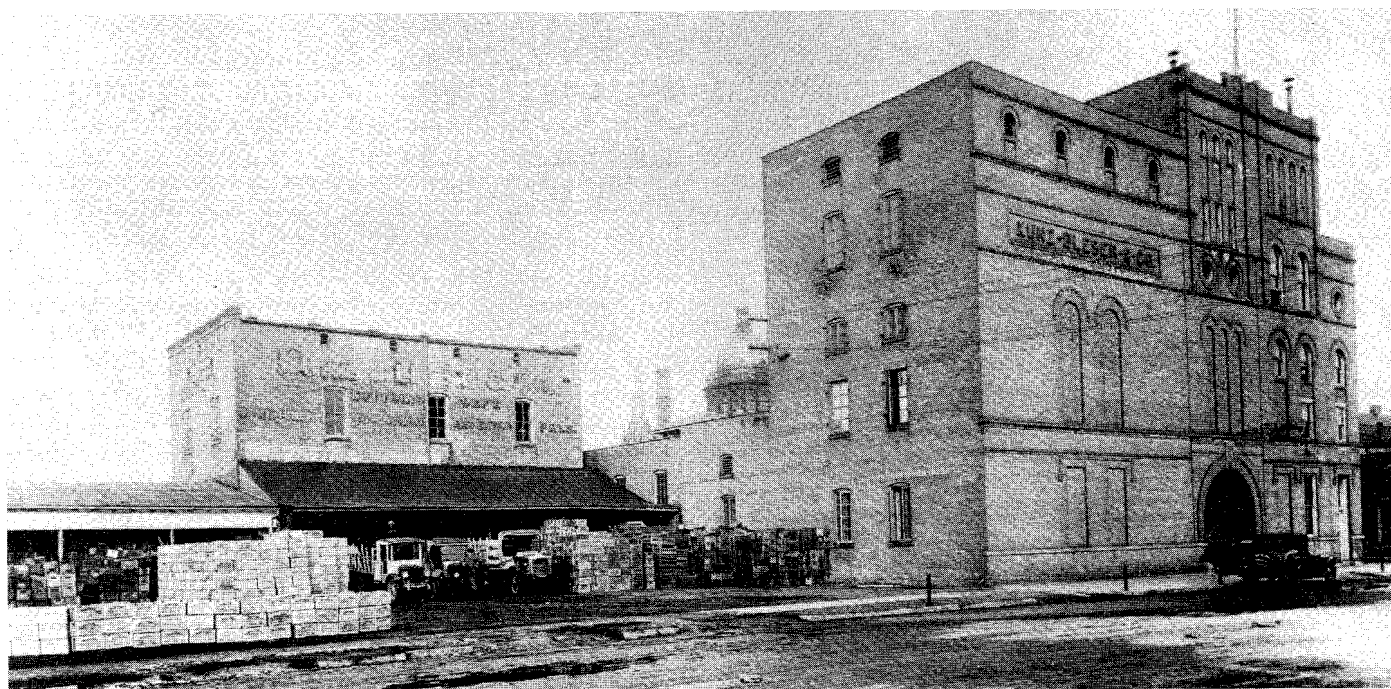
Father, George C. Kunz, left the Kilby Co. and took the position of Master Brewer and Plant Manager of the new Kunz, Bleser & Co. brewery. At this time three distinct beers were brewed, a premium pale-colored beer known as "Dortmunder," a standard dark colored beer known as "Hofbrau" and another standard beer known as "Extra Pale."

PROHIBITION

A new era was now about to begin. World War I had just come to an end. By 1919 minority interests had succeeded in enacting the Volstead Act which prohibited the sale of alcoholic beverages in the United States of over one-half of one percent alcoholic content. The smaller brewers were forced out of business; the few that remained would fall by the wayside in the next

fourteen years. The criminal element were enticed by the opportunity to manufacture and sell whiskies which normally had an alcoholic content of 50 percent, wine which varied between 10 and 20 percent and beer about 3.0 to 4.5 per cent. People now seemed to focus their attention on alcoholic content, something the "Do-Gooders" had not considered. The public seemed to become entranced by alcohol and began to drink almost anything with alcohol in it to see how much they could drink.

Beer was considered a beverage of moderation, and so it is. Legal beer had to be brewed in the normal fashion and then the alcohol had to be removed by distillation from about 3.5 to 4.0 percent down to less than one-half of one percent. The resulting product had such a bad flavor that it was almost impossible to drink. This is not to say that the flavor was due to alcohol but simply that the process of removing the alcohol ruined the flavor. Consequently, the public soon began to drink without regard to how a beverage tasted. Those who lived through this era experienced the "noble" experiment until April of 1933 when Franklin Roosevelt who ran on the so called "Wet" ticket was elected President and Prohibition was abolished.



Kunz, Bleser & Co. brewery showing the brands they produced on the brick side of the Bottling Dept.—"Dortmunder," "Hofbrau," and "Extra Pale." Beer was sold by the wooden keg in half barrels (fifteen and a half gallons), quarter barrels (seven and three quarters) and ochtels. This was the common amount used in small towns and in the country. Only in the large cities were full barrels (31 gallons) commonly used. Note the courthouse chimney with the new addition and the steeple of the First Reformed and Evangelical Church in the background.

MANITOWOC PRODUCTS COMPANY

To try to cope with the new ban on beer production of the 1920s, changes were made locally. Kunz, Bleser & Co. and the Schreihart Brewing Co. joined Rahr Malting Company interests to form a new firm known as the Manitowoc Products Co. The Schreihart Brewing Co. was revamped to make dairy products—ice creams, cheeses and butter. Excellent products were made but little profit. The Kunz, Bleser & Co. brewery was used to produce near beer and soda pop. Again products producing little profit. Rahr Brewing Co. had ceased to operate as a brewery shortly before national prohibition.

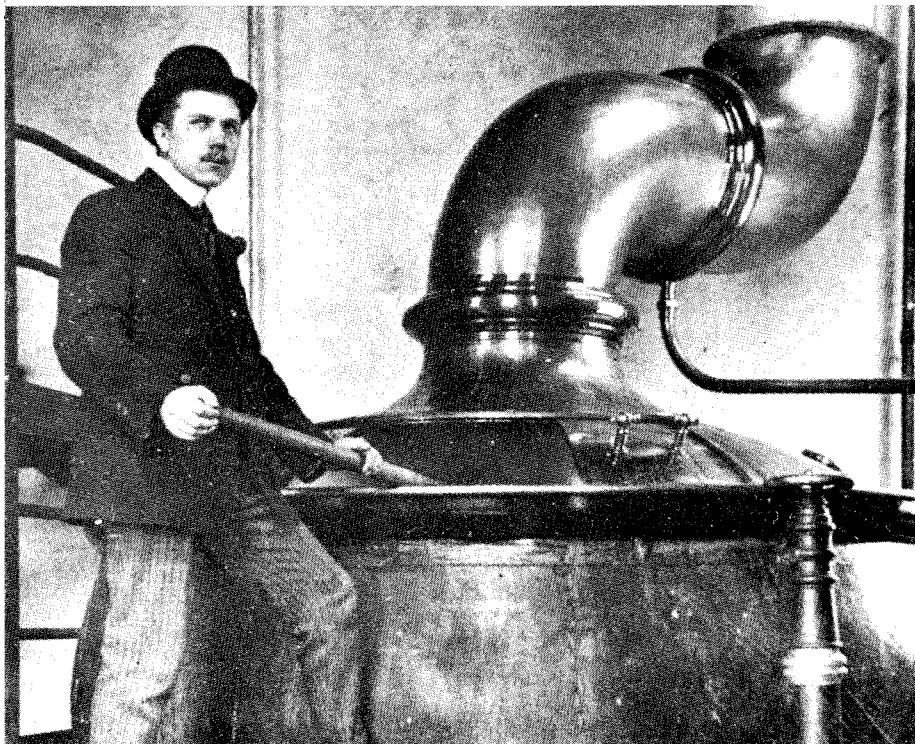
KINGSBURY BREWERIES COMPANY

About 1924 the Manitowoc Products Co. name was changed to the Kingsbury Breweries Co. At this time a licence was obtained to brew another type of near beer which was somewhat more palatable than the current near beers. It was supposed to be the best "spiking" near beer on the market. Spiking meant the addition of alcohol to the near beer to glamorize it. It did nothing to improve the flavor. Unfortunately unlawful elements were now producing alcohol for "spiking." The other businesses—dairy products and soda pop—were now discontinued. Business began to improve with the reputation of the Kingsbury Pale near beer being the so-called "best spiking near beer."

LAKE SHORE PRODUCTS CORP.

Meanwhile father, George C. Kunz, was devising a means whereby the homeowner could brew his own beer at home and consume it there—much like a housewife cooking and preserving. This was legal as long as the homeowner did not try to sell his product.

Father left Manitowoc Products Company and started the Lake Shore Products Corp., a malt extract business. The first plant was a mile or two north of Sheboygan off the lakeshore road. It was small and allowed him to start production quickly. The Sheboygan plant continued for a year until Father bought the Schwarzenbart Soda Pop plant from Charles Stephani, at 1011 Franklin Street, Manitowoc. The business was only



Mr. Zaremba, a friend of George C. Kunz, from Germany breaking up the hops with a wooden paddle. The hops were put in the copper kettle in a bundle from a bale. Mr. Zaremba stayed in Manitowoc for a year or so then returned to Germany. The copper kettle was made by Goetz & Floden of Chicago, Illinois.

intended to supply malt extract in this area not on a national scale. Father's health had been slipping and it was necessary for him to curtail his activities. Father appointed John Becker and sons, members of the well-known and respected family who operated a grocery store and tavern on West Hamilton Street, as Sales Agents for Manitowoc County. They were an excellent choice.

To enable the homeowner to simplify the brewing process, Father pioneered in this country the brewing of a brewer's malt extract. Father simply brewed regular brewer's wort and concentrated it atmospherically to about twice the normal gravity and then packaged it in five gallon cans. This was literally the first stage of a normal brewery operation except that the malt extract was about twice as heavy.

He showed people how to ferment the extract as was done by the brewer. Six to seven gallons of water were used to dilute the five gallons of malt extract to the proper gravity for fermentation. To this brewer's yeast was added at the ratio of about one half pound per barrel of beer (31 gallons). In those days most basements or cellars had ground floors and were about

50 degrees Fahrenheit which insured a proper fermentation temperature. After about 6 to 7 days of fermentation, the primary fermentation was completed and the beer was ready to package in bottles. In those days the standard beer bottle contained about 12 ounces and a case, 24 bottles. When the beer was ready to be bottled, it was decanted from the fermenter to another vessel to separate the principal yeast from the beer. Then, a level teaspoon full of granulated cane or beet sugar (no difference) was calculated per bottle and added to the fermenting beer. Enough yeast remained suspended in the beer to conclude the secondary (final) fermentation which is necessary to produce the carbon dioxide gas which carbonates beer in the bottle. The properly filled bottles of beer were immediately capped or crowned and left to stand in the cool cellar for a week to ten days or until the secondary fermentation was completed.

The switch from regular brewing to using an extract at home required an educational task of monumental proportions but it was accomplished. The idea was a success. Most, but certainly not all, people became quite adept at producing a very good glass

of beer. They took pride in trying to outdo one another in the quality of the beer they brewed.

Father brewed a Brewer's extract as opposed to what was known as a "Home Brewers" extract. Two elements distinguished the resulting products. Father used brewers' yeast as is normal and produced an extract that produced a good glass of beer. "Homebrew" used bakers' yeast (Fleischmann's) and an extract that was concentrated to eighty percent solids. In many cases bombs were produced by the use of baker's yeast, the beer did not have a good head of foam and the flavor resulting from the eighty percent solids concentrated wort was very poor. Needless to say, it required considerable education to produce a "short course" Master Brewer but it could be and was done.

At the time father operated the plant in Manitowoc, I was a sophomore in high school. I worked there after school, weekends and during summer vacations. The plant operated night and day seven days a week. I now had enough training to

do the brewing.

The malt extracts manufacturing business grew considerably in Wisconsin. Father was one of the founders of the Wisconsin Malt Extracts Manufacturers Association with headquarters in Milwaukee. He became the first treasurer of the Association. Two or three times a month meetings were held in Milwaukee. I got to meet many people from throughout the state— primarily small brewers. In 1927 I became a member of the Master Brewers Association of America, District, Milwaukee. As time went by, I visited some of the other malt extract plants in Wisconsin.

In the meantime Father leased a brewery in Wausau, Wisconsin (plant #2) and one somewhat later in La-Crosse (plant #3) to manufacture malt extracts. For a year after I graduated from high school in 1927, I took over the complete plant operations in Manitowoc.

WAUSAU MALT PRODUCTS CORP.

A friend of mine from Chicago, Gus-

tav Luttringhaus, joined me and we formed a new company, the Wausau Malt Products Corp. of which I became President and Master Brewer. Mr. Luttringhaus became Vice President and Office Manager. We expanded the business but the political situation seemed to be changing. By the fall of 1932, it appeared Prohibition might end and normal beer production in the brewing industry might resume. Father thought it would be best for me to discontinue operations and enroll in the first, regular brewing course at the United States Brewers Academy in New York City. My education, training, and experience at home in brewing was of considerable value to me and made my school work easy and enjoyable. After graduation as a Master Brewer in the spring of 1933, I returned home to Manitowoc.

Father had discontinued the brewing of malt extracts which in retrospect was a mistake. Our local plant consisted of a Brewhouse and Boiler plant. We had no cellars, bottle shop, engine room or refrigeration.



25th Anniversary gathering of the Kunz, Bleser & Co. brewery employees and guests, June 1, 1910 at Silver Creek (later named Silver Creek Park). From left to right are William Echtermacher, guest; Martin Hablewitz, county driver on Wayside route; Erwin C. Kunz, peering out from the second row was an office worker and younger son of Louis Kunz; George Christoff, bottle shop foreman; Joseph Buschek, cellar worker; Christ Lipper, brewery carpenter; Hugo Plantico, bottle house worker; Matt Isselmann, county driver on Valders-St. Nazianz route; Herman Moneig, city driver; Louis Kunz, founder of Kunz, Bleser & Co., Brewers; Fred C. Schultz, former bookkeeper; Charles Christoff, cellar foreman; Phillip Pitz, beer collector; Daniel B. Bleser, co-founder; Daniel C. Bleser, office worker and older son of Daniel B. Bleser; Herman Holdorf, in charge of barn and horses; Francis Stirn, head bookkeeper; William Boeder, wash house, cooper shop and cellar worker; Anton Bonk, wash house, cooper shop and cellar worker; Benjamin Strupp, night watchman; John Herzog, county route driver; J. Fred Wilke, chief engineer; George C. Kunz, master brewer and plant manager. Present but not on the picture were Elmer J. Bleser, office worker and younger son of Daniel B. Bleser, co-founder, Josephine Bleser and Frederick Kunz, accompanied by their mothers..

We also did not have the space, in terms of property, to build these facilities. The Wausau plant was reopened by its owners. All we had left was the LaCrosse plant which we were able to lease. We were faced with a considerable rehabilitation job, but we were fortunate to obtain the services of our cousin, Franklin C. Kunz, who was a first class mechanic and could get the job done. However, we soon discovered that obtaining new equipment was virtually impossible.

REPEAL OF PROHIBITION

In 1933 on the repeal of Prohibition we were faced with another new situation. The big brewers were in the driver's seat so to speak. There were very few manufacturers of brewing equipment left in this country. Most of the brewery equipment builders had gone out of business or changed to other lines of business. The big brewer had first call on new equipment. The small brewer had to wait until the big brewers orders were filled first. We lost more than a year getting

back into limited operations. Because of the delay in obtaining equipment, we could only produce draught beer.

At this time, a new Master Brewers' association was formed in LaCrosse known as the Upper Mississippi Valley Master Brewers Association. I was appointed Treasurer. Father's health had taken a turn for the worse and we were forced to abandon brewing operations. He passed away the following year in 1935.

Grandfather, Louis, had been recalled from several years of retirement to become the President again of Kingsbury Breweries Co. The firm had faltered badly since Repeal. There was no way of saving it. Grandfather passed away in his early eighties in 1936.

In addition to stopping the regular production of beer there were two other major results of Prohibition. There was a sharp reduction in the number of breweries throughout the United States. Many brewers could not afford to start over again. Only the large companies continued. This

caused a limiting of the variety of flavors of beer offered to the public from the many small, regional and local breweries of pre-Prohibition days.

As to the breweries of Manitowoc, none remain operative. Kunz, Bleser & Co. which became the Kingsbury Breweries Co. during prohibition was acquired by the Heilemann Brewing Co. of LaCrosse, Wisconsin, about the early 50's, as I recall, but was razed in the early 60's. The only brewery buildings remaining standing today are those of the William Fricke brewery later known as the John Schreihart Brewery at the corner of 10th and Washington Streets. At one time Manitowoc boasted five breweries, but Kunz, Bleser & Co. Brewers, John Schreihart Brewery and William Rahr Brewery were the principal ones in Manitowoc based on longevity and size. Now the community has to import its beers from Milwaukee and points east and west. Many jobs have been lost along with businesses. Our society is in a con-



Kingsbury Brewery (formerly Kunz, Bleser & Co. brewery) on the northwest corner of Marshall and 9th Streets, Manitowoc in the late 1950's or early 1960's. The brewery was purchased by Heilemann several years before it was razed in 1963. Frederick Kunz is standing in the foreground in this photo.

stant state of flux and it seems that there is little, if anything, that we can do to alter this. The moral of the story is "change is constant." Because beer contains a small amount of alcohol, naturally, it is now considered by some to be a hazard to health. There are always those who will hazard their health by the lack of good judgment in drinking, eating, ad infinitum.

A FOOTNOTE ON BREWERY CONSTRUCTION

Until recent times most, if not all, breweries were built on the gravity-flow principle as opposed to current practice which involves building the entire brewery on one floor. The Kunz, Bleser & Co. brewery was built on this gravity-flow principle.

Incoming brewing materials were received and transported by a bucket elevator to storage. From general storage the malt was transported to the top floor of the brewhouse where it first travelled through cleaning reels and ancillary equipment prior to entering a "weighing" hopper. Here, such things as nails, sticks, stones and other foreign material were removed. The malt then passed to and through a 2-roller Columbia Malt Mill

which ground it to the proper size.

From the malt mill some of the ground malt was passed to the cooker and mash tun (tub) on the floor below. The cooked malt then passed on to the mash tun on the next lower floor. Another cooker on the same floor received the rice and corn grits, adjuncts, which subsequently were also discharged to the mash tun depending on the type of beer being brewed.

After the mash in the mash tun was processed, the wort or extract formed from the brewing materials was then filtered off and discharged to the kettle beneath where the hops were added. After the wort was processed in the kettle it was discharged to a hop jack which separated the spent hops from the wort. This was the end of the process following the gravity-flow principle.

To use gravity again the wort was now pumped from the first or ground floor to the top floor of the brewery to a room which contained the hot wort tank where insoluble suspended solids were allowed to settle. The supernatant wort was then processed over the Baudelot Cooler which consisted of a series of copper pipes, horizontally arranged, over which the wort cascaded into a "kuehlschiff" (cool ship), a container holding the

cooled wort. Chilled water running through the pipes was the cooling medium for the wort. As I recall the wort was cooled from about 180-190 degrees Fahrenheit to about 40 degrees. This was the end of the Brewhouse process.

The cooled wort from the Brewhouse was then discharged by gravity flow to the fermenters in the Cellars. I might add that the process now became a "biological" one inasmuch as the wort was now pitched with Brewer's yeast at a rate of one half pound of wet, thick yeast per barrel (31 gallons) of wort. In about a week or ten days the primary fermentation was completed and the beer (not wort anymore) was discharged to the secondary fermenters on the ground floor by gravity flow. When the secondary fermentation was completed, another two to three weeks, the beer was discharged to the filters where it was completely clarified of all suspended matter, primarily yeast. The filtered beer was then carbonated by a carbonator on the same floor and discharged to the lager (storage) beer cellar on the floor below to await packaging in kegs or bottles.