Ice! Ice! Ice!!! Three Cargoes have arrived. 
The Lord be praised.

This advertisement in Wilmington’s Daily Herald newspaper was typical of southern adoration for the frozen delicacy so sought after during the hot summer months. In 1800, the thought of having enough ice to survive the sultry Wilmington summer was unimaginable. By 1830 ice used as a preservative was commonplace in the United States and many Americans, not just the wealthy, were able to enjoy more fresh milk, meat, fruits and vegetables as part of their diets. Businesses which made and sold perishable drinks were able to grow and thrive. Medical science developed ways to improve patient care. It became possible for the general population to imbibe an occasional mint julep and experience the joy of eating ice cream.

After the Revolutionary War, farmers, particularly from Virginia northwards, began experimenting with ice houses. During January and February ice was harvested from local ponds and brought to underground ice houses with the hope it would last through the warm season. In both Europe and the United States ice harvesting was generally performed for the use of the wealthy and landed gentry. George Washington was so interested in the preservation of ice that he regularly chronicled ice house experiments in his diaries. Thomas Jefferson’s 1802 ice house can still be seen at Monticello and the Governor of Virginia had an elaborate ice house at his palace in Williamsburg.

In cold climates, neighbors would band together to harvest ice for one another. Like a hog-killing or barn-raising, it was a community affair. Moving from farm to farm, residents would cut ice from ponds and store it on the premises. During the agricultural off-season, it afforded society the opportunity of companionship and togetherness. Whether stone, brick or a simple deep hole, these early ice houses were generally constructed underground. By the turn of the 19th century, pond and lake ice was shipped to larger towns situated in cooler climates.
and kept in ice cellars for summer sale, but nowhere was it more sought after than in the southern states and the tropics. A tremendous demand was certain, but the practice of getting a highly perishable winter product south during the hot summer months seemed insurmountable. After all, ice “cools” because like all solids, it must absorb heat for its conversion from solid to a liquid state. If material higher in temperature is placed in contact with ice, heat will be drawn from it and flow to the ice, creating a pool of worthless water.  

Frederic Tudor (1784-1864), a Boston merchant, is credited as the first to bring large scale natural ice supplies to the south. “It was something of a miracle, for then, just as now, the notion that it was possible to cut lake ice in winter in New England and sell it the following summer 1,500 miles away in a tropical climate, with no artificial refrigeration to prevent it from melting, was thought to be ridiculous.”

A dreamer, Tudor began hatching his schemes to sell ice in the West Indies in 1805. Initially, he thought he would have to secure monopolies in the tropics to prevent others from competing with him. Tedium negotiations with foreign governments, trade embargoes from 1807 to 1809, and the War of 1812 were major reversals to his plan and caused him unbearable financial hardships. However, the lost time and a few trips to Havana, Cuba, helped him think through what he needed to do to succeed. What was the most cost-effective way to get the ice out of the New England bodies of water and to port? What type of vessel could carry large loads of ice quickly and safely? What was the best insulator for the ice? How should drains be constructed so the ice would not sit in its own melted pool of water? Most importantly, he had to devise a plan for southern ice houses that would keep the ice cold during the hot distribution months. Finally, once the ice got to the individual consumer how were they going to keep it from melting in their homes and businesses?

The technology of harvesting ice grew exponentially as the trade increased. What was once a few men sawing ice on a frozen lake, pond or river became a major industrial enterprise. Nathaniel Jarvis Wyeth (1802-1856) of Boston, a partner with Tudor, is credited for increasing the scale and efficiency of harvesting natural ice. He invented a horse-drawn ice-cutter or plow in 1825 which revolutionized the business. Eventually about sixty different tools were commonly used for cutting and storing ice.

The process was labor intensive because the season
was very short. Commercial ice harvests took place during January and February when the natural ice formed. It took at least 100 men and ten or twelve teams of horses to fill a 25,000 ton icehouse. Large companies used as many as a hundred horses and employed twice as many men. Once the ice reached a thickness of 10 to 12 inches, work began by first scraping any snow that had accumulated on top of it. Depending on the particular season, the snow had to be scraped 6 to 8 times. Next, the ice field was lined off into squares by scoring parallel lines 22 inches apart, followed by horizontal lines also 22 inches apart. Thinner ice may have required a wider block such as 30 inches, but the norm produced an ice cake that was 22 inches square. Larger blocks would be too heavy to handle. An ice plow or ice cutter guided by skilled workers and pulled by teams of horses traversed the ice field over and over cutting about two inches each time until the cakes were sawn about two-thirds of the depth of the ice. Hand tools would then be used to break the cakes apart in standard size. A channel was created to float the cakes to the shore where they entered ice houses via an inclined elevator apparatus or shoot.  

"This shoot is set at a slight pitch toward the house, and the heavy cakes slide down into the house with great rapidity, one after another, covering the floor of the room in every direction. A force of men inside quickly catch them with pole-hooks and arrange them in a regular array until they cover the floor. Another tier is then made, and another, until the height of the shoot is reached. Operations are stopped long enough to close the trap at the entrance of the shoot. The trap leading to the next shoot above is opened; and the process is repeated until the house is full."  

The ability to harvest and store large quantities of natural ice was followed by the challenge of transporting it during the summer months and storing it in warm climates without too much of it melting. Frederic Tudor is credited for successfully transporting ice to the tropics and for building the first above ground ice house when he sent a shipment to Havana, Cuba in 1816 and built an ice depot there. Through experimentation he discovered that sawdust was the best insulator both onboard the ship and in the ice house. Rice shaft, tan bark and straw were also used. A liberal amount of sawdust was placed on the floor of the vessel or icehouse. Ice cakes were placed uniformly in layers or tiers and insulated in-between. Enough room was also left on the sides of the ice mound to insulate there. Ice houses had double walls. The space between them held the insulating sawdust.

"Saw-dust, straw and spent tan bark are among the best non-conductors of heat, and therefore the best material with which to cover ice on all sides to prevent its melting in hot weather. An ice house should be well drained, have a double floor, double walls at the sides and top, to be filled with sawdust or straw, including the door. Besides this straw should be spread on the floor for the ice to rest on; and straw a foot in thickness should cover the ice at the sides and on top of the heap."  

12 Tudor built his first brick ice house in Savannah, Georgia in 1819.  

In the early years ice was transported to northern ports, such as Boston, and stored in an ice house there until it was shipped south during the summer. As the business increased, attached ice houses, as long as city blocks, were built along the banks of the lakes, rivers and ponds. The Hudson River was a large supplier of ice. At the peak of the ice trade, Maine’s Kennebec River area became the largest supplier of ice.  

13 Ice was shipped south in two-or three-masted vessels. These schooners would dock along side northern ice houses where they would quickly be loaded with their frozen cargo. While elevators lifted the ice into the houses for storage, runs were constructed to take the ice out and onto the vessels. These runs, which looped down the exterior side of the ice house, quickly delivered the cakes to a runway and directly onto the schooner. Stevedores working with a lowering machine packed the ice into the hole. Getting the load settled just right was difficult task because the ice was sharp, heavy and not malleable. Sailors generally enjoyed sailing on ice trips because they afforded plenty of perishable foods, cold milk and other beverages.  

15 When the vessel reached its destination, it moored at an ice wharf and unloaded directly into a waiting ice house.  

"A significant part of Frederic Tudor’s ice trade was with the southern states. The principal consuming cities were Savannah and New Orleans. Others cities of significance were Wilmington, North Carolina; Charleston, South Carolina; Jacksonville and Pensacola, Florida; Mobile, Alabama; and Galveston, Texas."  

17 Tudor’s long relationship with southern port cities began in Charleston in 1817. He constructed an ice house there on Fitzsimmon’s wharf. This is also the first mention of Wilmington and the natural ice trade. “Notice is given to the inhabitants of Charleston that a permanent Establishment for the supply of this city with ice. It is now nearly completed. The ice house is intended for the supply of this city and Sullivan’s Island,
Taking ice at Cedar Grove, Maine. This 3 masted schooner was typical of the vessel that brought ice to Wilmington. Sarah W. Lawrence, *Tidewater Ice*, 104.

As the house was filled layer after layer (upward) the opening which the ice entered was progressively closed. Boards cut the width of the opening were inserted into slots on each side of the doorway studding. The space between was filled with sawdust or hay for insulation. *Scribners Magazine*
as well as Wilmington, Savannah and Augusta. The ice will, it is hoped be ready for sale by the first of the ensuing month. Next Tudor turned his attention to two towns with growing populations, Savannah (1818) and New Orleans (1820).

It is not known when the first ice house was constructed in Wilmington. During the 1820s and 1830s, Wilmington was a small backwater town located on a river with serious navigational problems. The Wilmington Advertiser lamented, “Why is it that here, where comfort, climate and health all demand the convenience of ice, soda fountains and public baths, we are destitute. These are to be obtained in smaller communities and poorer, where they are not so much required. Yet why are they not to be had here?” Within a year the same newspaper was advertising, “Ice! Ice! The Subscriber having purchased the cargo of ice just arrived from Boston in Schooner Splendid, is now ready to dispose of the same, in any quantities. The prices will be as follows: Families, regular subscribers: 3 cents per pound; Transient purchasers, 6 cents per pound; Bar Rooms or quantities of 100 pounds or over, $1 cents per pound. James Nichols at Ice House back of Barry & Bryant’s Ware House. If sufficient regular subscribers can be obtained, it will be delivered at their houses every morning.” By the late 1830s, Wilmington was on the verge of a renaissance, a complete make-over. With improvements the Cape Fear River was more easily navigated, steamboats heightened the economic value of the port and Wilmington had cornered the market on the first in-state railroad, the Wilmington and Raleigh, which opened in 1840. Wilmington began to grow by leaps and bounds and so did the natural ice trade.

Early ice merchants were the above-mentioned James Nichols and Dr. Purnell & Mr. Hewlett who advertised in 1839. In 1845, an ice house located in Quince’s alley, capable of holding 130 tons of ice, was advertised for rent. It is unknown if these early ice houses were erected solely for the purpose of storing and selling ice or if they were converted warehouses. In 1845, William Shaw, a pharmacist, and A. Paul Repton, a Baptist minister, advertised that they had “entered into an agreement to furnish ice to the inhabitants of Wilmington and the surrounding country during the spring and summer of 1846. “We pledge ourselves to do so without disappointment to any who may favor us with their contracts or customs.” Their ice house was located on Muter’s Alley, halfway between South Water and South Front streets. It still exists and is a little less than the third of the rear of the building still known as the Ice House.

By 1847, the scale of Frederic Tudor’s operation was impressive. From his company alone, 52,000 tons of ice were shipped down the coast to twenty-eight different towns. In one year, 258 vessels carried ice in this coast-long trade. The Wilmington Chronicle reported in 1850 that “Boston has exported, since January last, to the West Indies and Southern ports, 52,762 tons of ice.” At mid-nineteenth century Wilmingtonians took for granted summer supplies of ice. Like most Americans they had acquired the “ice habit.” Frederic Tudor’s prediction had come true—once people who endured sweltering summers became accustomed to cold drinks, they were hooked for life. Chilled drinks made with crushed ice became very popular. Picnics featured ice-cold lemonade. Breweries could operate year round, instead of the just the cold months, because refrigeration was necessary to prevent spoilage. Ice carts and wagons made daily deliveries to homes, hotels, saloons and eating establishments. Farmers could cool their produce and meats at the market house. Of great importance to Wilmington was the ice supplied to a growing seafood industry.

The “ice habit” transformed the American household and business. In the beginning, ice merchants sold their products from salesrooms located at or nearby the ice house. Shaw and Repiton advertised in 1846, we have “just received a cargo of Boston Ice. It will be sold from the Ice House in the morning, and at Shaw’s Drug Store, at all hours of the day, at half cent per pound.” Eventually ice merchants saw the advantage of delivering ice on regularly scheduled routes, and thus began the era of the beloved ice wagon. Frederic Tudor was also a pioneer in designing ice boxes. He brought carpenters along on his ice trips to build what were originally crude ice storage boxes. In the beginning, customers were disappointed at the rapidity of which their ice cakes melted once they got them home. The first shipment to Charleston in 1817 was advertised that ice should be used as a “necessity rather than a luxury”... that homes required “three to five pounds of ice daily depending on the quantity of articles to be kept cold.” The article went on to declare “there will also be made, at cost, at the ice house, a refrigerator, which may be called the Little Ice House. It is like a piece of furniture, and may stand in any part of the house. The cost will be from ten to fifteen dollars,
A crew of about eight men worked inside large commercial ice house during the filling process. They kept the floor (the top surface of the ice) smooth by chiseling off sharp edges and placed blocks into position while keeping the seams straight. The entire house was filled one layer at a time.

and will be found by use in families to be a great convenience. It may be made large enough to contain from one to three dozen bottles, and may be used for cooling wine, water, butter, fruit, etc. The quantity of ice wanted to keep this thing in constant operation will not exceed from three to five pounds of ice daily, depending on the quantity of articles to be kept cold. 

It was suggested that the consumer wrap the ice cake in blankets (which could be purchased at the ice house) for transporting it home. Despite claims of superior construction and performance, most ice boxes were built much the same. The outer casing was made of oak, pine, or ash. Inside they were lined with zinc, slate, porcelain, galvanized metal, or wood with a wall of insulation of either charcoal, cork, flax straw fiber, or mineral wool. The refrigeration system involved the flow of warm air which rises and is replaced by the cooler air near the top of the ice box where the ice was stored. If no one left the door open, a block of ice would last a day or two. As the ice melted it drained into pans which had to be emptied. It was a messy business that had to be attended to regularly. Ice boxes came in various styles and sizes. Wilmingtonians purchased their ice boxes from local hardware dealers who promised the latest styles, efficient construction and low prices. Nathaniel Jacobi Hardware Company sold ice boxes, ice balance scales, ice picks, ice cutters and ice tongs. Ice box companies went out of business by the 1930’s when the home electric refrigerator caused them to become obsolete.

The availability of ice made Americans healthier. The ability to cool perishable foods reduced the chance of disease. Great strides were also made in patient care. Suffering from a high fever in the heat of the summer became more bearable when the patient could be cooled down with ice. The Rock Spring Ice House, located on North Water Street, advertised in 1860 “Ice to sick and poor, free of charge, accompanied by their physicians certificate.” An October 27, 1878 Wilmington Morning Star article stated “The supply of ice here is very low, and several customers had to go away from the ice house without it yesterday. A supply is doubtless expected, and until its arrival the sick and suffering should have the benefits of the little on hand.”

By 1860, Wilmingtonians were accustomed to having ready access to natural ice. The Repiton and Shaw ice house on Muter’s alley was taken over by S.H. Martin & Company. Silas Hosmer Martin (1800-1861), a native of Maine, was port warden and the captain and owner of the prize schooner Albion. He sold the Wilmington Ice House to A.H. Van Bokkelen in 1854. Van Bokkelen (1824-1888) was a native of New York City who moved to Wilmington in 1844. He was Mayor of the city in 1866, President of the Chamber of Commerce for nine years, a bank officer, and one of the directors of the Wilmington &
Weldon railroad. His primary business was distilling turpentine. His obituary said “for many years he was known as the largest manufacturer of naval stores in the world.” As chairman of the Committee on Bar and River Improvements, Van Bokkelen was aware of the need for easy access to the port. Schooners that brought ice to Wilmington left with a cargo of turpentine. By the time he sold the ice house to John E. Lippitt in 1860, it had increased over threefold in length, consistent with the footprint of the building that survives today. Van Bokkelen was fortunate to get out of the ice business just before the Civil War.

John E. Lippitt (1833-1885) was left to suffer the ice embargo during the blockade of Wilmington. Lippitt’s father, Jeremiah (1789-1846), was a native of Providence, Rhode Island, and received his legal education at Brown University. Instead of practicing law he became a merchant in both Fayetteville and Wilmington. When he died at age 57 he was survived by seven sons. John E., the middle child, was 13 years old when his father died. In 1860, John E. Lippitt became an ice merchant when he purchased, from A.H. Van Bokkelen, land bounded by South Front, South Water, Dock and Orange streets. It included the Wilmington Ice House. A full page advertisement in the 1860 city directory suggests that 28 year old Lippitt was prepared to enter into a lucrative business full of promise. “Ice will be delivered at all hours of the day... At night (in case of sickness) ice can be had at my residence... orders for ice from any part of the State of North or South Carolina, will be promptly attended to: well packed and delivered at any Rail Road Depot or Steamboat landing.” During the summer of 1861 he sold the last shipment of ice he was to get until the end of the war. By 1862, he was probably dismayed at his choice of becoming an ice merchant.

Life in Wilmington changed dramatically during the war. The exportation of naval stores was replaced by cotton. Blockade runners, anxious to return with the lucrative cotton, brought in shipments of arms, munitions and other supplies needed by the Confederacy. A victim of the wartime embargo, the northern ice trade ceased to exist. John E. Lippitt had to close down his ice business. He advertised for rent “the large fire-proof warehouse with offices in front known as the Ice House, with an entrance on Dock Street.”

Lippitt’s loss was certainly shared by a populace used to the benefits of readily available ice. Townspeople were forced to relive the time when food spoiled overnight. This was complicated by the increased number of businessmen and entrepreneurs associated running the blockade and by the large number of servicemen stationed in the area. The lack of ice was dramatically felt during the 1862 yellow fever epidemic. The combination of a raging fever and hot summer weather was unbearable without ice. An 1864 editorial suggested, “Near many of our posts in this vicinity there are shallow ponds of good water, the very places where ice would be most likely to form under a moderate degree of cold. Suppose that our soldiers should be detailed to construct the proper sort of houses to save this ice for hospital use. It might be the means of saving many lives during the fervid heats of the Summer of 1864.”

It is no wonder that the ice trade made a quick comeback shortly after the end of hostilities. An 1865 advertisement read “Ice can be had at the Ice House on Dock, Between Front and Water streets, from 6 A.M. to 6 P.M. and on Sundays until 9 A.M.” John E. Lippitt was back into the ice business.

During the 1870s and early 1880s he was the primary ice dealer in the city. His massive three story ice house could accommodate a great quantity of ice. An 1873 advertisement bragged, “Keep Cool. Messrs. John E. Lippitt and Company have now landing two cargoes, consisting of 672 tons of ice, and there are two more vessels on the way to this port, with some 450 tons aboard. Not much prospect of an ice famine this summer.” It is no wonder that Lippitt was president of the Wilmington Market Company which contracted with the city to build a large city market. It was constructed from Front Street to Water Street and was conveniently located just across Muter’s Alley from his ice house. The market house sold all varieties of meat, seafood, fruits and vegetables which required large amounts of cooling ice. The 1884 Sanborn Insurance Map of Wilmington shows Lippitt’s Ice House with an ice way connecting it to the ice wharf. A thirty foot ice gig (for hoisting ice into the storage house) is shown between the two which allowed easy transfer of the ice from the schooner to the ice house.

John Edward Lippitt died on 31 December 1885. He was only 52 years old. After living through the ice blight of the Civil War, it may have been a blessing that he died before the onset of cheap, locally-manufactured ice. In 1885, W.E. Worth & Company opened the first artificial ice factory in the state.
1887 the plant, located at North Second and Campbell streets, produced twenty-four thousand pounds of ice daily. "Since the introduction of artificial ice in this city, the monopoly which then existed in the market for natural ice has been broken down." However, due to overwhelming demand, both locally and by rail, natural ice continued to arrive in Wilmington through the 1890s and as late as 1902. "The American schooner Albert T. Stearns arrived in port yesterday from Bathe, Me. The ice is for the icing stations of the Fruit Growers' Express and will be used in icing the refrigerator cars when strawberries begin to move to the northern markets."

By 1889, Lippitt's Wilmington Ice House was vacant. In the ensuing years it was used as a Fish or Fish and Oyster House and sometimes a restaurant. It was purchased in the 1940s by Roy C. Fergus of R.C. Fergus & Sons Wholesale Sea Food who remained there until the early 1990s. Robert M. Fales reminisced in his 1984 book, Wilmington Yesteryear, that "the old icehouse on Water street, which still stands, used to play an important role in the life of the city. It was here that New England ice blocks were stored in the days before ice was manufactured. My father would point to the big doors on the third and second floors and tell me that it was there that the ice blocks were deposited after they were transported to Wilmington." Dr. Fales, who died in 1996, may have been the last of the old-timers to grow up hearing the old-timers of his childhood talk about the natural ice trade. A fascinating part of American history, ice harvesting and natural ice export were seldom written about until recent years. In New England, no large houses built for storing natural ice exist today. The ice trade and its life changing benefits cannot be found in local history books. The old ice house on South Water Street, one of the few remnants of Wilmington's historic industrial waterfront, still stands. Although diminished, the building's survival into the 21st century is as unlikely as the 19th century transport of ice which was so appreciated during the hot hazy days of summer.

[Beverly Tetterton is the author of the History of the Temple of Israel 1876 - 2001 (2001). She also coauthored North Carolina Freedman's Savings & Trust Company Records (1992), North Carolina County Fact Books Vol. 1 & 2 (1998) and Strength through Struggle (1998). She has written numerous articles that were published in historical and genealogical magazines and has lectured and spoken to historical and private organizations throughout her career. Her name appears in the credits of many North Carolina published histories from the past twenty years. She has also been interviewed and appeared in televised biographical documentaries on Wilmington artist Claude Howell (2003) and city promoter Louis T. Moore (1997). Mrs. Tetterton served as chairman of Wilmington's Historic Preservation Commission for twelve years and is actively involved in the Historic Wilmington Foundation, the Old New Hanover Genealogical Society, author and editor for the Clarendon Courier, North Carolina Genealogical Society as an officer, member of the board and president, Lower Cape Fear Historical Society and is head of the Special Collections Department of the New Hanover Public Library. Along with her many scholarly works Mrs. Tetterton is known for her preservation efforts by singlehandedly convincing developers to reconsider destroying eighteenth century buildings, she has lain in front of bulldozers threatening ancient cemeteries and she has climbed into construction site refuse dumpsters to pull out accidentally discarded North Carolina probate records. She lives in Wilmington, North Carolina.]

WILMINGTON ICE HOUSE,
JOHN E. LIPPITT, Proprietor,
(Stenographer to A. H. VanDyke, Esq.)
56 & 25 Front St., and Dock between Front & Water,
WILMINGTON, N. C.

A constant supply of best quality
ICE
Will be kept on hand and sold at very low rates.
ICE WILL BE DELIVERED AT ALL HOURS OF THE DAY.
At night (in case of sickness) ICE can be had at any residence, in 40-lbs. between 4th and 5th Streets.
Orders for ICE from any part of the State of North Carolina or South Carolina, will be promptly attended to, well packed and delivered at any point in State between Salisbury and Wilmington.
Direct Orders to
"WILMINGTON ICE HOUSE."

Wilmington City Directory 1860 - 61
Advertisements from the William Reaves Collection, New Hanover Public Library.

1. *Daily Herald*, July 16, 1851, Bill Reaves Collection, New Hanover Public Library, hereafter cited as BRC-NHCPL.


3. According to the current *Merriam Webster Dictionary* icehouse is spelled as one word. The old spelling, ice house, is used in this article. Ice houses were originally called ice depots. The old standard spelling for icebox was also two words or ice box.

4. Ibid. pp. 76, 78.

5. Ibid. p. 77.


10. The apparatus is spelled shoot, not chute. Perhaps it is because the ice would shoot rapidly into the ice house upon reaching the door.

11. Hall, Henry. *The Ice Industry of the United States*, Washington, D.C.: US Government Printing Office, 1888. Illustrated descriptions of ice harvesting can be found in books, journals, magazine and newspaper articles. There are also numerous web sites which mention the ice trade. However, little has been written on southern ice houses and how they operated. This description by Henry Hall of how northern ice houses were filled is similar to the loading of a southern ice house.

12. *Wilmington Morning Star*, 7 January 1873, BRC-NHCPL.

14. Everson, Jennie G. *Tidewater Ice of the Kennebec River*. Freeport, ME: Published for The Maine State Museum, by The Bond Wheelwright, Co., 1970. The most detailed illustrated description of all aspects of the ice trade, including the harvesting process, tools, icehouses, companies and workers can be found in this book.

15. Ibid. p. 92-105, 121.


17. *America's Icemen*, p. 123.

18. Charleston S.C. Courier, 8 March 1817; *Wilmington Morning Star*, 2 June 1917, BRC-NHCPL.

19. Wilmington Advertiser, 14 July 1837, BRC-NHCPL.

20. Wilmington Advertiser, 10 August 1838, BRC-NHCPL.

21. Wilmington Advertiser, 1 March 1839; Wilmington Advertiser, 7 June 1839; BRC-NHCPL.

22. *Wilmington Chronicle*, 24 September 1845, BRC-NHCPL.

23. *Wilmington Chronicle*, 24 September, 1845, BRC-NHCPL.

24. Schenk, Nicholas W., *Schenk Diary*, transcribed by R.V. Asbury, Ida B. Kellam, Edward Tuberg; indexed by Bill Reaves, map by Merle Chamberlain, no date or publisher, c. 1905, part 3, page 6. The diary is more Nicholas Schenk's reminiscences of Wilmington during the 19th century. Using the diary and James Sprunt's *Chronicles of the Cape Fear*, Merle Chamberlain was able to prepare a map of the city complete with the location of mentioned buildings. Schenk pinpoints Repton's ice house along Muter's Alley.


27. *Wilmington Chronicle* 25 September 1850, BRC-NHCPL.

28. *Wilmington Chronicle*, 7 October 1846, BRC-NHCPL.

29. Charleston S.C. Courier, 8 March 1817; *Wilmington Morning Star*, 2 June 1917, BRC-NHCPL.

30. *The Wilmington Messenger*, 4 July 1897 and 18 May 1907 ; *Wilmington Dispatch*, 14 July 1920, BRC-NHCPL.

31. *America's Icemen*, 138-140.

32. *Daily Journal*, 20 April 1860, BRC-NHCPL.

34. *Tri-Weekly Commercial*, 17 January 1854, BRC-NHCPL.

35. *Wilmington Morning Star*, 14 August 1888, BRC-NHCPL.

36. New Hanover County Deed Book QQ page 290; Book VV page 288; 1860 Wilmington City Directory, *Daily Journal*, 21 April 1860. The ice house was originally three stories high. It was reduced to two stories during a twentieth-century fire. The only known photograph (Along the Cape Fear, by Susan Taylor Block, page 69) is a view from the other side of the Cape Fear River. It shows an imposing building, with a balcony and large doors on the third floor, situated next to the massive city market.


38. 1850 Federal Census of New Hanover County, page 423 [microfilm].


40. 1860-61 Wilmington City Directory

41. Thomas Fanning Wood Collection, Box 6, "Blair's Old Bleach Writing Tablet" page 46, University of North Carolina at Wilmington Special Collections. Wood writes of ice being raised to 20 [cents] by agreement between Lippitt's and Sherwood's Ice Houses.

42. *Daily Journal*, 20 September 1864

43. *Daily Journal*, 2 January 1864

44. *Herald of the Union*, 21 April 1865


46. Wilmington city directories, 1865, 1866-67, 1871, 1875, 1877-1878, 1881-1882. In the business part of the directories, John E. Lippitt & Company is listed as the only ice dealer in Wilmington, with the exception of B.H.J. Ahrens in 1877-1878. Ahrens built a new ice house nearby at South Front and Dock streets.

47. *Wilmington Morning Star*, 30 May 1873, BRC-NHCPL.

48. *Wilmington Morning Star*, 4 March 1880. The "new" city market replaced the old one located in the center of Market Street. It was three stories tall and had an additional story tower on Front Street. It can still be seen today with its tower removed and lowered roof, situated from Front to Water streets.
49. Sanborn Insurance Map, 1884. The use of gigs for hoisting ice into a storage house was described accordingly in an 1878 Knickerbocker Ice Company, Descriptive Price List: “...of simple construction, and at the same time effective, being great labor-saving and economical machines for filing houses...it will be seen that a pair of gigs are worked by one horse, the gearing being so adjusted that the horse hoists both ways [allowing twice as much ice to enter the storage house].”

50. Wilmington Morning Star, 8 May 1885; 17 March 1928, BRC-NHCPL.

51. The Wilmington Messenger, 19 July 1887, BRC-NHCPL.

52. The Wilmington Messenger, 16 March 1902, BRC-NHCPL.


57. America's Icemen, p. 80.