

2003

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### Publication Info

Published in *The Proceedings of the South Carolina Historical Association*, 2003, pages 25-38.

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## From Cracked to Perfect Bottles Laurens Glass Works: 1910–1986

Fritz Hamer

Looking back fifty years in 1975, Hugh Morgan Sr. reflected nostalgically about the Laurens Glass Works where he had worked since 1925. Having observed a steady expansion of the plant over those years the retired employee reflected that, "Some of us old timers will miss a part of the new things that are on the way."<sup>1</sup> Indeed the Laurens plant had seen amazing growth since its founding in 1910. From renovated furniture factory building with an estimated workforce of fifty to seventy-five, it had grown into a major manufacturer of glass bottles and containers with employment at more than eight hundred by the early 1970s. Yet the rosy future that Morgan predicted proved illusory. By 1996 after mergers with several larger glass manufacturers over two decades, Laurens Glass would close its doors for good. This paper is an initial study—an overview of the founding of Laurens Glass, its labor-management relations, and its successful growth and expansion over the decades. For more than eighty years its well crafted soft drink bottles, its stable work force, and its many clients throughout the Southeast and beyond made it one of the premier manufacturers in the region. Unfortunately, in the 1970s, the success it had achieved was slowly but steadily being displaced by the advent of plastic containers.

Ironically, Laurens Glass almost failed before it really began. The company's early history is sketchy, however, since few documents about its origins remain. It started with great fanfare as the state's second glass bottle producer. Columbia had the distinction of having the Palmetto State's first—Carolina Glass Company—which had opened in 1902 initially to produce bottles for the controversial South Carolina Dispensary.<sup>2</sup> When this state monopoly was eliminated in 1907 the Columbia firm focused on soda, mineral water and medicine bottles. But for unknown reasons it closed in 1913. The Laurens project was the brainchild of a few prominent business and political leaders in the Laurens community led by Nathaniel Dial. A lawyer and businessman who seemed to epitomize the New South ideal of economic progress, Dial already had established a textile mill in Ware Shoals, a bank in Laurens, several power plants, and other entrepreneurial ventures in the upstate. Along with five other Laurens business leaders Dial formed a partnership with a capital investment of \$50,000 to "manufacture bottles, glass, glassware . . ." and other articles usually made by a glass factory. The new enterprise also planned to mine and quarry stone,

rocks, and the "products and by-products thereof."<sup>3</sup> Speculation remains regarding why these men chose to establish their plant in this particular upstate town, but there may have been at least two reasons. The essential ingredients for glass production are sand (silica), soda ash, lime, and feldspar. One of these, sand, naturally occurs in Laurens County. Marion and Lexington counties, in eastern and central South Carolina respectively, have high quality natural glass sand deposits.<sup>4</sup> It is also possible that they saw a chance to emulate Carolina Glass Company, which was still operating. When the first shift began in January 1911, local interest was high. A departure from the textile enterprises that had proliferated throughout the upstate by this time, Laurens Glass Works must have seemed an unusual attraction. Some of the earliest bottles produced went to the local Sanders Bottling Works, but the enterprise lacked sufficient expertise. By late 1911 the firm halted production because of persistent problems with the quality of its glass.<sup>5</sup>

Laurens simply seemed to lack workers with sufficient skills and knowledge to produce bottles that were of consistent quality. During this era glass making was as much an art as a science. Without skilled personnel to measure the raw materials accurately, the glass produced often shattered or cracked in the mold. And when the glass bottle came out of the mold—at several hundred degrees or more—it had to be slowly cooled in an annealing machine or *lehr*. No matter how well the raw ingredients were measured in the furnace, glass that cooled too quickly would crack or shatter as well.<sup>6</sup> It is unclear what the specific problems were during the first months of production at Laurens Glass, but it appeared that one or both of these problems existed. Consequently, while the plant remained out of production for a year, the investors recruited people who had the knowledge and experience to make a quality product. This meant that the southern owners looked north to production centers in Indiana, Ohio, Western Pennsylvania, and New Jersey where glass manufacturing had become a mature industry since at least the last quarter of the nineteenth century. Production resumed at Laurens Glass in early 1913 with better results. During the following two decades most of its clients came from the upstate and from other communities within South Carolina and contiguous states. Bottles were produced for mineral water producers such as Chick Springs in Greenville County and Harris Springs in southern Laurens County. Medicine bottles were also made for local druggists such as Orangeburg's Wannamacker Manufacturer.<sup>7</sup>

One of its first major soda drink bottle contracts was with Coca-Cola. Until 1899 Coke had been a fountain drink, but as the new century began a Chattanooga firm received permission to bottle the drink for distribution to a wider clientele. As a result, by 1915 Laurens became one of three southern firms to produce Coke



bottles. Contracts for Coke would be one of the firm's mainstays during its first decade of production. The business relationship with Coke would continue for the next seven decades. The upstate plant made several types of Coke bottles, ranging from the classic six-ounce hobble skirt shape patented in 1915 to the twelve-ounce and commemoratives made later in the century.<sup>8</sup>

Laurens Glass Works steadily grew over the next several years despite occasional setbacks caused by economic downturns or war. Before World War I the plant saw production cut back and work shifts reduced to one a day for periods of several weeks. During the post-war depression of the early twenties, the Laurens firm had to shut down production for several months but resumed work in early 1922.<sup>9</sup> In spite of slowdowns the reputation of its product did not appear to suffer. Contracts with Coke bottlers throughout the region continued to grow, while new clients in the Southeast, both big and small, sought the Laurens product. Laurens Glass bottles from the Holcombe collection show that southeastern bottlers of Frosty Root Beer, Dr Pepper (Waco, Texas), Pepsi (Eastern North Carolina), CheroCola (Columbus, Georgia), among many others, had contracts with the upcountry bottle manufacturer during the twenties and thirties. Smaller bottlers such as Game Cock Ginger Ale (Greenville) and the firm of Strawhorn and Seago (Greenwood) also ordered from Laurens Glass.<sup>10</sup>

To turn out bottles of enough quantity and quality required production and organization skills that Laurens Glass had acquired after its initial difficulties. Although some accounts claim that its glass blowers and their assistants made bottles by hand in the first decade of production, these claims are only partially accurate at best. Extant Laurens bottles show that until 1920 the body of the container was produced in a machine mold. Then the top portion where the lip and neck came together had to be tooled by hand. It is uncertain how many bottles could be made with this method. In 1911 it was estimated that in the first months of production the fledgling firm would soon produce "a cartload of bottles . . . daily." It is unclear how much this amount would have been. As late as 1922, after work had just resumed following several months of inactivity, bottle production was estimated at two hundred to two hundred fifty per day.<sup>11</sup> By 1925, when bottle production was completely mechanized, Laurens had at least one tank to mix and create the molten glass while two Lynch L.A. machines produced fourteen to sixteen bottles per minute. Production had increased so substantially by the following year that Laurens Glass claimed to produce twenty-five million soft drink bottles annually. While this may be an exaggeration, it is certain that the firm's production rate accelerated significantly during the twenties. It is likely that several million bottles were produced annually by the

middle of the decade.<sup>12</sup> Even as bottle production increased at significant rates after 1925 some procedures were still based on manpower. Hugh Morgan recalled that at this time Laurens Glass still used human power to pull the finished but still hot bottles through the long lehr machine to cool the containers gradually. Sometime later a machine-powered belt replaced the hand-pulled chains in the lehr. The plant continued to enhance its mechanization through the following decades while increasing its production volume by several magnitudes. Yet until the 1950s Laurens continued to mix the sand and the other ingredients by hand, measured in pounds per wheelbarrow load.<sup>13</sup>

Despite the Great Depression of the 1930s Laurens continued to thrive and even expand its operation. More tanks and new machines were added periodically to replace or upgrade old ones. By 1932 the Glass Works had three tanks and eight automatic machines. Later in the decade Laurens Glass made a large, new investment in more equipment at a cost of \$400,000, which probably included machinery for the new bottle labeling process, Applied Colored Labels.<sup>14</sup> This process enabled the firm to produce a label that was more durable and colorful than the label produced by the traditional paper label application and embossing process, which had been used up to that time. With this new ability the firm's growth was assured, especially after 1945. In 1946 over \$600,000 was invested to expand and add new equipment, including a new building with an additional furnace and more bottle making machinery. By the late 1950s Laurens Glass could not keep up with demand despite five furnaces and eight bottle-making machines. Thus in 1959 a second bottle plant opened in Henderson (North Carolina) followed by a third in Ruston (Louisiana) early the following decade. The firm's zenith appeared to have been reached in the late sixties when the national glass producing firm, Indian Head Glass, bought it out.<sup>15</sup>

While leadership and investment money were crucial to the success of the Glass Works, an experienced, skilled work force was just as important. In the wake of the glass quality problems in 1911 management hired many glass workers out of the glassmaking regions of the Midwest and Northeast. Fortunately, the Laurens Glass owners had the money and time to recruit the experienced labor they needed. Glassblowers, assistants, and other specialized workers from Illinois, Ohio, Pennsylvania and New Jersey were recruited while the plant remained inactive for about a year. William Bryant, the operating manager, came from Ohio and brought several more glass blowers and assistants with him. John Finkbeiner, a native of Germany, brought his wife and four sons from Clarion County in West Pennsylvania, another center of glass production. By 1920 Finkbeiner was superintendent of the Glass Works and had two sons, Albert and Rudolph, employed as glass blowers. His second eldest son,



Robert, brought his own young family with him to work in Laurens as a glassblower. George Creamer from Streator (Illinois) brought his glass knowledge to Laurens as well. Frank Barber from New Jersey served as a glass blower in Laurens and brought his wife with him from the Garden State.<sup>16</sup>

Just as important to the operation were the mold makers. Although Laurens purchased molds from factories in Toledo (Ohio) and other midwestern factories, these skilled mold makers had to make and revise the mold designs to suit each order and to repair them when necessary. One of the first in the groups of mold makers who came to Laurens was the Zupp family. Adam Zupp came from New York, where he probably learned the mold trade from his German-born father. He was probably recruited to join the fledgling upstate firm in 1913. It was in the Laurens Glass Works that he later taught his son, George, the trade. By the middle of the century the younger Zupp would teach the trade to the next generation of mold makers.<sup>17</sup>

The census data of 1920 seem to indicate that most, if not all, of the skilled work force came from the Midwest and East, while the laborers who unloaded the ingredients for glass making, loaded the finished bottles, and did other less skilled jobs were locals, and often African American. Thus while people like Finkbeiner and Zupp operated the skilled parts of the operation, African Americans like Martin Meadors, Chester Henry, and Ella Duckett from South Carolina made up much of the less skilled labor force. Nevertheless some whites like J. M. Rogers were in these positions as well. Although sixty-four years old, Rogers worked in the packing crew of the Glass Works preparing finished bottles for shipment.<sup>18</sup>

Despite the racial divide between skilled and less skilled labor, wages appeared higher than for comparable jobs in the upstate's major industry, textiles. In 1913 wages were "nearly equivalent" to those of each of the local textile mills. Although this is speculative, it is reasonable to assume that management had to compete with the textile industry to attract and keep the skilled workers necessary for a viable operation. This situation also seemed to apply to less skilled jobs. By the 1940s wages appeared better than for most textile occupations of equivalent status. Less skilled positions in the warehouse and loading section were able to attract Bill Mills, an African American, who began working there in 1939. Because everything was loaded into boxcars by hand, the hours were long and difficult. Yet Mills left only because of World War II. In 1946 he returned to the plant to resume his old job and remained there for the rest of his career, retiring in the late 1970s.<sup>19</sup>

Some families had two or three generations who worked at Laurens Glass. The Finkbeiners worked in both skilled and managerial positions up through the 1970s, as did the Zupp family. Many other employees without a generational connection

still remained there throughout their careers. Warehouse Manager Furman Parris started as a laborer at the plant in 1962 and stayed more than four decades, earning promotions until he became shipping manager. Ten years earlier Hugh Edwards had begun his career in the decorating department where ACL labels were baked on bottles. When Laurens stopped the production of soda drink bottles in the mid-eighties he had to change duties but remained at the plant until his retirement in the 1990s. Those workers interviewed agreed that throughout the last half-century of the firm's life, pay and working conditions were the best in the area.<sup>20</sup>

Women were also part of the work force. Until the late 1930s or 1940s they worked only in the office in what appear to have been secretarial positions. When the ACL process was introduced prior to World War II, women began to work in the decorating department. By 1946 they were integral to this process at Laurens Glass. Some women loaded bottles into boxes after the labels were applied. Others loaded unlabeled bottles into the ACL machines to have the markings applied. Some families had both spouses employed at the plant for several years. By the last year of Laurens Glass' operation, Melody Motes had put in twenty years at the plant. Her husband had worked there for thirty-four years. A brother-in-law had put in twenty-one, and her son, aged twenty-five, had worked several years for the company.<sup>21</sup>

This seemingly ideal work place for men and women nevertheless had a union organization at least as early as 1919. Officers for local Branch 35 of the National Glass Bottle Blowers Association included Dan Dowdy, president, and L. W. Higbe, vice president. By the 1940s there were two locals in the plant, which apparently represented the white and black workforce. In 1970 these branches were integrated in conformance with the era's integration in other sectors of southern society. How much impact the union had on labor-management relations during the plant's early decades is unknown. Nevertheless, by the middle of the century it had a significant role. The first documented strike in late 1951 lasted six weeks. Details are sketchy, but one cause appeared to be the Union's demand to represent all workers in labor contracts. Another issue concerned modernization. Bill Mills recalled that management tried to dismiss those on the work force who were deemed too inefficient to aid in the modernization of production at that time. The final agreement that ended the strike in early December was not disclosed. It appeared that management prevented the union from winning its demand for sole right to represent the work force in future negotiations. Workers, however, estimate that during the last two decades of the firm's operation more than 80 percent of employees were paid union members. Whether the strike forced management to stop dismissing workers as the plant modernized is unknown.<sup>22</sup>

Other job actions occurred in the sixties and seventies. In 1968 a seven-week strike ended in March after management agreed to pay increases for all employees. In the 1970s the Laurens firm stayed closed for five weeks when a national strike was called by the union over dual job responsibilities during the same shift. Management did not want employees to spend their entire eight-hour shift monitoring automatic machines that required little maintenance. They argued that this was too costly and that workers should do other jobs while they monitored the machines. The compromise eventually reached allowed workers a two-hour monitoring limit so supervisors could assign them to other duties during their eight-hour shift. One mold shop worker recalling this strike remembered that most of the work force opposed the job action, but since it was mandated by the national union, the local chapter had to comply.<sup>23</sup>

In any event, friction between management and labor was minimal most of the time. Various indicators suggest that relations were usually harmonious. After Nathaniel Dial and his original investors helped the Laurens firm get started, Dial's nephew, Albert Dial, assumed leadership of the firm. The younger Dial was the inspiration behind Laurens Glass. He led the reorganization and hiring of skilled workers from the Midwest and East and oversaw the firm's establishment in the glass bottle business before his premature death in 1928.<sup>24</sup>

Ernest Easterby succeeded the younger Dial, and he, too, became a force behind the glass plant's survival and early growth. Also a Laurens native, Easterby had progressed through the ranks and worked alongside Albert Dial. Once he assumed the leadership of the firm he remained its president for over forty years. He earned the respect of most employees at Laurens Glass. Those who worked under his regime until his death in 1974 remember his even-handed demeanor and encouraging comments on and off the production floor. Born in 1888, he had worked at the upstate firm from its early days and was an important collaborator with Albert Dial in resurrecting the fledgling firm after its initial failure in 1911. He relinquished his post as president in 1971 but stayed as chairman of the board until his death. The success of Laurens Glass under his long tenure indicated his sound managerial skills, which kept most confrontations between management and labor to a minimum.<sup>25</sup>

Some of Easterby's style had a practical purpose. Work inside a glass plant was dirty, dangerous, and hot, with molten glass sometimes at temperatures of nearly 3,000 degrees Fahrenheit. Flexibility in management was a necessity to maintain good morale. And with skilled workers it was important to keep them satisfied. One by-product of this flexible attitude can be seen in the whimsies or after-hour glass created on the production line. These idiosyncratic glass ornaments were fashioned during second and third shifts when management supervision was minimal or when



there was a break in production. It is uncertain when the practice began, but workers were producing such items in the early 1960s. Glass ashtrays, canes, various odd shaped design pieces, and long-necked objects formed while glass was still pliable were created by workers when they could do so and when they thought supervisors were not around. These items were taken home or given away to fellow workers. Robert Young, who worked in the mold shop for over thirty years, recalled that he sometimes made pieces of cast iron into a mold to make ashtrays and other glass trinkets. Sometimes his imagination went beyond simple designs and led to unexpected benefits for his employers. In the 1970s when the C. F. Sauer Company of Richmond, Virginia, was preparing to celebrate its centennial year of producing mayonnaise and other condiments, Young decided he would do a small batch of jars to commemorate this anniversary. He created designed molds with "Happy 100<sup>th</sup> Anniversary C. F. Sauer" embossed on the side. Six dozen were produced and sent to the regional manager in Greenville, South Carolina. When Sauer managers saw them they were so impressed that nearly fifteen hundred more were ordered. Although such independent action probably was unusual, whimsies continued to be made until the plant closed. And while some employees claimed that the firm's management knew of the practice, it rarely interfered and, if it did, the resulting reprimand was mild and without repercussions.<sup>26</sup>

Although whimsies represented the longest enduring piece of spontaneous creativity at Laurens, workers' talent earned some special contracts. During the decade of the sixties the upstate Glass Works was hired to make Coke bottles for an Israeli customer who ordered Hebrew script on one side of the bottle. Only a few remain today, and several of those working at the plant recall this order. About seven cases were made and they were delivered to Charleston, presumably for shipment to the Middle East.<sup>27</sup>

Perhaps the most prestigious order received by Laurens Glass Works was in 1963 and associated with one of the nation's greatest tragedies. As Vice President Lyndon B. Johnson prepared to welcome President John F. Kennedy for a Texas visit in November, he planned a reception for the nation's chief executive at his Texas ranch. Being a man who both respected and sought status, Johnson wanted soda club bottles made with the vice presidential seal inscribed on each bottle. Laurens Glass received an order for 2,400 Canada Dry Club Soda bottles with the stipulated seal. They were shipped to a Waco, Texas bottler for filling. But Kennedy was assassinated before Johnson's reception could occur. In the aftermath of this tragic event, the new President ordered all the bottles scrapped. Even though most probably were destroyed, a few survived and are highly desired by bottle collectors today.<sup>28</sup>

While these special contracts marked Laurens Glass Works as one of the nation's top bottle manufacturers, the importance of glass bottles in American stores and households started to decline as plastic bottles and other containers began to replace them in the mid to late seventies. As this trend accelerated and larger and larger conglomerates absorbed more bottling business, the upstate firm's place in the market declined.

Speculation surrounds the reasons for the 1968 sale of the family-run Laurens Glass to Indian Head, a larger, national firm in Wilmington (Delaware). Publicly Easterby claimed the merger gave Laurens better business opportunities. At the time he still claimed that Laurens Glass management would remain in effective control and the daily operations would remain the same. Reflecting on the merger years later, employees have offered other reasons. One suggested that the family-operated firm was losing its allure for the next generation of owners, its main shareholders. The merger was an ideal opportunity to get out of the business and make a good return on investments. Another explanation appears even more plausible. Having observed changes in the container business over time, Easterby realized that in another decade or so plastics would displace glass. He decided to sell to make the best return for the original investors before the glass market fell. Whatever the reasons, for the next decade production and sales remained good and thrived after Indian Head moved its headquarters from Wilmington to Laurens in 1974. But later Indian Head itself was absorbed. By 1990 Laurens had become a subsidiary of the container conglomerate, Ball-InCon, based in Indiana. In 1986, with plastic bottles now dominating the market, Laurens ceased glass soda bottle production and focused on glass jars and containers for foods and medicines.<sup>29</sup>

Ten years later Laurens Glass announced its closing. With glass beverage bottles virtually displaced by plastics, the attempt to find another niche in the glass container business seemed out of place for a firm that had made its name with soda bottles for so long. But the company's final demise stemmed from more practical business issues, namely old equipment, the plant's inability to expand and accommodate updated machinery, and transportation costs. Since the upstate firm was much further from major markets in the Northeast than was its Henderson plant, management decided it was more economical to keep the Henderson plant operating. Freight charges from Henderson to places such as Washington, D.C., and New York City were significantly cheaper.<sup>30</sup> By the time Laurens closed, its work force had already shrunk to half the size of its early-seventies maximum of over eight hundred. Today the complex still stands. All its furnaces and bottle machines are gone, however, and huge empty spaces now occupy the once busy factory floors. Although

Laurens Glass has been closed for less than a decade, few know its history or seem to remember its importance to the economy of the upstate. Much more needs to be done to unearth its rich heritage. Future study will hopefully shed more insight on the early history of Laurens Glass and its founders, the evolving relationship between management and labor, and production changes that turned the smaller upstate town into one of the Southeast's major glass bottle manufacturers. This overview is only a beginning to what is one of South Carolina's most unique industrial stories.<sup>31</sup>

#### **Acknowledgements**

The author wishes to thank the Holcombe family of Clinton, South Carolina, for planting the seed for this paper and aiding in the creation of the exhibition on Laurens Glass that opened at the South Carolina State Museum 6 April 2002. They have provided access to their large collection of Laurens Glass bottle and other artifacts as well as to extensive research they have done on the firm over the last three decades. Dr. Fred Holcombe, now deceased, began this work, and he and his son, Joe Holcombe, have been invaluable in putting this paper and the exhibition together. The author also thanks his colleagues at the State Museum and interns Lauren Roy of Columbia College, for reading through earlier drafts of this study, and Heather Carpini of USC-Columbia, for the time she spent sorting through dozens of bottles and identifying them by age and type.

#### **Note on Laurens Glass bottles**

The bulk of the bottles reviewed for this study was collected over more than two decades by the Holcombe family in Clinton, South Carolina, some eighty of which were borrowed for display in the SCSM exhibition, "Homeblown: Beverage Bottle of Laurens Glass Works, 1910–1996." The SCSM has a small bottle collection, which includes *Laurens Glass Works* (LGW) examples, but these date to 1939 and after. Today many bottles of the post-1940 production era can be found in flea markets and antique shops. Examples prior to 1939 are more difficult to find, especially those from the plant's first decade of production. This is, in large part, because Laurens Glass did not identify its bottles until 1919. Starting at this time until the early 1960s it affixed an embossed "LGW" on the base or corner-base of each bottle produced. In the sixties the bottle identification changed to distinguish Laurens-produced bottles from those of its branch plants in Henderson, North Carolina, and Ruston, Louisiana. These new marks were "L" for Laurens-produced bottles, "L\*" for those made in Henderson, and "L\*\*" for those that came from the Ruston plant.



## ENDNOTES

1. "Employee Describes Changes in Glass Making," *Totem Tales*, (Employee Publication of Lauren's Glass Co., Vol. 2, #1), May 1975, copy provided by Holcombe family, Clinton, SC.
2. For history of the Dispensary see John E. Eubanks, *Ben Tillman's Baby: The Dispensary System of South Carolina, 1892-1915*, (Augusta, Ga, 1950); Stephen Kantrowitz, *Ben Tillman and the Reconstruction of White Supremacy*, (Chapel Hill, University of North Carolina Press, 2000), 183-84, 187, 189-97.
3. For details about Carolina Glass see *Columbia: Its History, Resources, Development and Enterprise*, (Columbia, 1962) 21; on Dial's biography see Rebecca Dial, *True to his Colors: A Story of South Carolina's Senator N.B. Dial*, (New York, 1974); Yates Snowden (ed.), *History of South Carolina*, 4, (Chicago, Lewis Publishing Company, 1920) 8-9; *Charleston News and Courier*, 12 December 1940; Charter of Laurens Glass Works, 24 October 1910, S.C. Secretary of State's Office, file # 6330, S.C. Department of Archives and History (SCDAH).
4. B. F. Buie, "Industrial Minerals and Rocks," in *South Carolina Raw Materials*, (Columbia, SC, University of South Carolina Press, 1949) 117-18. According to Buie, Laurens Glass was using sand from Marion in the 1940s. In the following decade and later, according to retired employees who began working at LGW in the 1950s and 60s, all the raw materials for the plant came from other states, see Furman Parris interview with the author, Joe Holcombe and Paul Jeter, 11 October 2001, Clinton, SC, transcript on file, S.C. State Museum (SCSM). According to one Laurens County history, based on oral traditions, a Luther A. McCord, local photographer, took up prospecting in the county and "studied the pebbles, the sand, the rocks and quartz that he believed would make glass." With this knowledge he took the idea to some "progressive-minded business men" in Laurens who agreed and organized the Glass Works, see Louise McCord, *The Scrapbook: A Compilation of Historical Facts . . . of Laurens County South Carolina* (Laurens, Laurens County Historical Society and Laurens County Arts Council, 1982), 272-73.
5. *Laurens Advertiser*, 20 September 1911; I wish to thank Tom Savage of Columbia for his research in locating this information. The early problems that forced the initial venture at LGW to shut down are sketchy, but the plant was closed for a period and began production again in early 1913, see *Laurens Advertiser*, 8 January 1913.
6. For a detailed analysis of glass mixtures and the precision needed to produce quality glass see Samuel R. Scholes, *Modern Glass Practice* (Boston, Cahners Books, 1975), 1-2, 42-43; for the art behind glass making see Riley, *A History of the American Soft Drink Industry* (Washington, DC, American Bottlers of Carbonated Beverages, 1958), 105.
7. Recruitment of bottle blowers and assistants from northern states is based on "Employee Describes Changes in Glass Making," and on Laurens County Census, South Carolina, 1920, SCDAH; for restarting production see *Laurens Advertiser*, 8 January 1913. Information on early clients for Laurens are based on extant bottles in the Holcombe family collection and from discussions with Joe Holcombe and Paul Jeter along with notes compiled by Dr. Fred Holcombe and a check from Dr. J. G. Wannamaker Mfg. Co. to Lauren Glass Works, 15 April 1915 (original provided by Holcombe family). See also four Laurens Glass Ledger Books that list hundreds of mold numbers and the bottle brands for which Laurens produced bottles, originals in the collection of the SCSM. The State Museum is indebted to Robert Young, retired mold shop supervisor, for donating these to the museum in May 2002.

8. On early history of bottling Coke see Lawrence Dietz, *Soda Pop: The History, Advertising, Art and Memorabilia of Soft Drinks in America* (New York, Simon and Schuster, 1973), 28–31. It should be noted here that one enterprising businessman in Vicksburg, Mississippi, bottled Coca Cola on his own without Coke's permission in 1894, but only for a brief period of time, see Dietz, *Soda Pop*, 26–27. The author thanks Coca-Cola Archivist Philip F. Mooney for providing copies of letters between Coca-Cola Atlanta Offices and LGW during the first decade of production. See for example Albert Dial to Harold Hirsch (Coke), 29 August 1916; unsigned Coke administrator to LGW 18 September 1916.

9. *Laurens Advertiser*, 8 Feb. 1922, from "Glass Works" file, Laurens County Library; for slow down prior to World War I see *Laurens Advertiser*, December 1914 (nd), copy on file at the Laurens County Library.

10. These examples are just a few of the many bottles represented in the Holcombe collection for this period.

11. *Laurens Advertiser*, 20 September 1911, 8 February 1922; for growth and increase in bottle production later in the decade see *Laurens Advertiser*, 7 October 1926, 6 January 1927.

12. This estimate is based on the production numbers given in 1925 and extrapolating numbers of fourteen to sixteen bottles per minute per day, then a week to a year.

13. "Former Employee Describes Changes in Glass Making." The author is indebted to Paul Jeter of Columbia for his explanation of the hand tooled process and pinpointing when LGW fully mechanized bottle production; for details on early bottle production see *Laurens Advertiser*, 29 September 1911, and for increases in production in the following decade see *Laurens Advertiser*, 6 January 1927. For a concise chronological history of Laurens Glass mechanization from its beginning to 1970 see Julian H. Toulouse, *Bottle Makers and Their Marks* (Camden, NJ, Thomas Nelson, Inc., 1971), 324–26; for an idea on how much bottle production increased by the sixties with modern bottle machines (25 to 150 per minute depending on the size) see Scholes, *Modern Glass Practice*, 250; for a short but clear description of making bottles see "Making Glass Bottles," *The Indiana Historian*, (September 1995), 8–9. The author is indebted to Coca Cola Archives in Atlanta, Georgia, for sharing a copy of this. For an interesting account of early bottle production at Laurens Glass as told to the Laurens paper by the Finkbeiner sons in the retirement years see *Laurens Advertiser*, 7 September 1966.

14. *Glass Factory Year Book and Directory*, (American Glass Review, 1932), 79, Box 11, Warshaw Collection, Archives Center, Smithsonian Institution; for history of the new investments in the 1930s see *Charleston News and Courier*, 28 January 1946.

15. Toulouse, *Bottle Makers*, 325; *Charleston News and Courier*, 28 January 1946; for details on the Indian Head merger with Laurens Glass see *Laurens Advertiser*, 28 August 1968; on the announcement of the new plant to be constructed in Henderson see *Charleston News and Courier*, 18 December 1958.

16. Family Number 535, Clarion County, 1910 Pennsylvania Census, Pennsylvania State Archives. The author thanks Emily Murphy of the latter institution for locating this. For more about the early work force at LGW see "Employee Describes Changes in Glass Making"; for details about the Finkbeiner families and Frank Barber see District 64, 15 A Laurens County, 1920 South Carolina Census on file at the SCDH; for details about the family see *Laurens Advertiser*, 7 September



1966. The author is indebted to Elaine Martin of the Laurens County Library for passing this article on. For Creamer see *Laurens Advertiser*, 16 December 1914.

17. The author is grateful to Robert Young for the story of the Zupps. Young's story, however, does not fit with the 1920 census of the Zupp family, so I have used the data from the latter to piece together the background to the family, see Laurens County, 1920 South Carolina Census, 15. Young apprenticed under George from 1959 to 1963, based on interview notes compiled with Robert Young, 9 May 2002, Anderson, SC, copy on file with at the SCSM.

18. Unidentified newspaper clippings, 29 October 1919, 16 December 1914, "Glass Works" file, Laurens County Library. For examples of unskilled workers and their race at LGW see Laurens County, 1920 South Carolina Census, 14B, 15A on file at SCDAH.

19. Bill Mills interview with author and Joe Holcombe, 21 February 2001, Clinton, SC, transcription on file SCSM; for early comparison of wages of LGW with local textile plants in Laurens see *Laurens Advertiser*, 8 January 1913.

20. See Furman Parris interview; LGW workers Joseph C. Marler, William Burdette and Hugh Edwards interview with the author, Joe Holcombe, and Eddie Ive, 21 July 2001, Laurens, SC, transcripts on file at the SCSM, hereafter cited as LGW interview; other examples of long time service by Laurens employees see *Totem Tales*, May 1975, where Horace Garret, warehouse leadman, retired after forty-six years of continuous service.

21. For details about women employed at the plant see *Charleston News and Courier*, 28 January 1946 and *Laurens Advertiser*, 21 June 1996. Much more needs to be done to examine the role of women at LGW and how their duties evolved over the years.

22. On meeting of the local union in 1919 see *Laurens Advertiser*, 19 October 1919; for strike see *Laurens Advertiser*, 10, 15 November, 13 December 1951; see Parris interview and LGW interview for personnel recollections about strike actions. Although the records of the Glass, Molders, Pottery, Plastics & Allied Workers International Union in Media, Pa., the successor to the Glass Bottle Blowers Association, indicate that the Laurens local was not chartered with the national union until 1936 (see James H. Rankin [union president] to author, 26 March 2001, letter on file at the SCSM). The 1924 national convention of the Glass Bottle Blowers Ass., held in Atlantic City, New Jersey, shows that the Laurens' work force paid dues to the national organization, see *Minutes of the 48th Annual Convention of the Glass Bottle Blowers Association, July 7-17, 1924*, 86, 91, in Box 12, Warshaw Collection, Archives Center, Smithsonian Institution.

23. Details of this strike came from Robert Young interview, 9 May 2002.

24. See *Laurens Advertiser*, 15 March 1928, for Albert Dial biography. There is so little documentation about the early development of the firm that there is little more than Dial's obituary and circumstantial evidence to argue that he was the force behind LGW's early growth. But the fact that he was the leader of the company for these early decades indicates he was an important factor. Further research will hopefully document just how significant he was.

25. See Parris interview and Young interview for observations about Easterby's management style; for brief Easterby biography see Libby Rhodes, *Images of America: Laurens* (Charleston, SC, Arcadia Press, 2000), 71, and *Laurens Advertiser*, 8 May 1974.

26. See Parris interview, LGW interview, and Young interview for recollections on whimsy production. The many examples still extant are the only indications we have that this activity



existed. There are many varieties of these in the Holcombe collection, and other examples have appeared in auctions and flea markets.

27. LGW interview. The Holcombe collection has an example of this bottle.

28. See Vice President Lyndon B. Johnson to W. B. Matthews, Canada Dry, San Antonio, TX, 20 July 1963, original at Johnson Presidential Library, Austin, Texas, copy provided by Joe Holcombe. Two examples of this bottle are in the Holcombe collection and were exhibited at the SCSM from 2002 to 2003. One former employee told the author that before the bottles were shipped to Texas, members of the warehouse crew removed a box of empty bottles as keepsakes for some of the staff, anonymous interview, April 2002.

29. On Easterby's public explanation for the merger see *Laurens Advertiser*, 28 August 1968; for employee observations about the merger see Parris interview and Young interview; "Ball-In-Con Glass Packaging—Laurens," *South Carolina in Glass and US*, Vol. 1 October 1990, copy in possession of the author.

30. The author is indebted to Furman Parris for sharing the first explanation, see Parris interview, and Robert Young for sharing the second, see Young interview.

31. For details and date of the plant's last days see *Laurens Advertiser*, 21 June 1996, copy in "Glass Works" file, Laurens Public Library.