# FRANKLINSVILLE MANUFACTURING COMPANY 1306 Andrew Hunter Road, Franklinville, NC

Owner: Randolph Heritage Conservancy, Inc. (a North Carolina nonprofit corporation)

#### In General

The "Randolph Manufacturing Company" was organized in March, 1838. It was the second textile mill in the county, building on the success of the Cedar Falls mill partnership which had begun operations in a converted wooden grist mill in 1836.

The factory at Franklinsville was built on property belonging to Elisha Coffin, an antislavery activist who named the surrounding village for Jesse Frankin, a former N.C. Governor and Congressman remembered for his crucial vote to keep slavery out of the Northwest Territory (now Ohio, Indiana and Illinois).

The Randolph Manufacturing Company, after being chartered by the legislature in 1838, was the first corporation ever to conduct business in Randolph County. An earlier Randolph Manufacturing Company, chartered in 1828, failed to attract enough stockholders to begin operations. The stockholders named in the charters of each company are substantially different, so it is unclear whether the 1838 company is an outgrowth of the 1828 incorporation.

From the beginning Franklinsville stockholders planned to conduct operations on a much larger scale than was done at Cedar Falls. The three story, 40 by 80-foot "Factory House" was the first building built in the county textile manufacturing purposes, and was probably one of the first ten in the state. It was also one of the first brick structures in the county, and was certainly the largest building in Randolph County when completed.

The Franklinsville factory also had the first looms in the county, and thus was the first "integrated" manufacturing operation (the first to manufacture cotton in all stages "from bale to bolt" of woven cloth.)

The community surrounding the factory was the largest urban area in Randolph County before the Civil War. It was incorporated as the municipality of Franklinsville by the state legislature in 1846 and was the first mill village in the state to become an official city or town.

In 1851, during a period of labor unrest following the famous missionary crusade of Abolitionist preachers Crooks and McBride, who formed a Wesleyan church in Franklinsville, the factory building was destroyed in a fire. It was immediately rebuilt on the original massive stone foundation and the surviving three-foot thick brick walls of the first floor.

In 1858 the rebuilt Franklinsville factory was purchased by the stockholders of the reorganized "Cedar Falls Company," the first multi-property holding company in the county. During the war the Cedar Falls corporation operated both factories to spin cotton and weave coarse sheeting. In what appears to be the first integrated apparel manufacturing operation in the state, the Company produced cotton underwear, or "shirts and drawers" for soldiers, under contract to the state.

Unlike most North Carolina factories, the operations of those in Randolph county were not suspended after the war. The Franklinsville factory was reorganized in 1872 to weave "seamless" (tubular) cotton bags, which it continued to produce until 1915. The factory itself was regularly expanded and remodeled. It is estimated that approximately ten percent of the original 1838 factory remains today; that approximately sixty percent of the 1851 factory remains; and that approximately eighty percent of the present-day factory complex was built before 1900.

An unusual aspect of the Franklinsville factory is that the 1978 bankruptcy of Randolph Mills, Inc., had the unintended consequence of preserving some uncommonly antique machinery. Oldest of those preserved are 1892 "Opener-Feeders" and a 1903 picker-lapper. Several pre-1912 Saco-Pettee slubbers survive, and of the machinery purchased in the circa-1915 reorganization, two Saco-Pettee carding machines and sixteen Draper "E-model" looms exist.

Most important, however, is the survival of a huge amount of documentary evidence about the appearance, equipment and operation of the factory over its 140-year career. Several owners and stockholders over the years have been photographers, and an extensive record of the appearance of the factory, the community, and its residents was made. Even motion pictures from the 1930s exist.

The current unattractive appearance of the Franklinsville factory gives few clues to its honored place in the rich history of textile manufacturing in North Carolina.

Only Randolph, Alamance and Cumberland counties had five or more factories before 1860.

Those around Fayetteville were burned by Sherman in 1865, and neither factories nor early housing survives. Several early houses survive in Edwin Holt's 1836 Alamance Village, but the factory was destroyed thirty years ago. Isolated early structures still exist in Alamance, but the heyday of its industry began in the 1880, and the majority of its material dates from that time.

Of the very first North Carolina factory, the 1813 Michael Schenk mill in Lincoln County, nothing survives. The 1818 Rocky Mount Mill on the Tar River in Edgecombe County continues in operation, but only the home of its owners the Battle family survives from before 1880. The oldest surviving North Carolina factory is the 1836 Salem Manufacturing Company, now converted to the "Brookstown Inn" at Old Salem. No early mill housing exists there.

In Randolph County, portions of the walls of the 1848 brick Cedar Falls factory survive in the predominantly 20th-century structure. The 1850 Columbia factory in Ramseur is intact, though neglected. The 1846 Island Ford factory in Franklinville and the 1848 Union factory in Randleman have both been destroyed. Isolated antebellum structures survive in connection with all four of the other Randolph factories, but only in the original Franklinsville village are there examples of the complete tier of worker and supervisor and mill owner's housing, together with cultural buildings such as the Masonic Lodge and the 19th century factory. Franklinville is the most complete example of an antebellum mill village in North Carolina, a fact which has been recognized by is inclusion of the National Register of Historic Places. It is the oldest surviving water-powered textile mill in North Carolina, and one of the oldest in the South.

#### In Particular

From March 21, 1859, the Franklinsville Manufacturing Company had been a whollyowned subsidiary of the Cedar Falls Company, under the supervision of George Makepeace. Ten looms designed to weave seamless cotton bags were installed in April, 1872, and ten more were installed in July, 1874. George Makepeace having died in December, 1872, the mill was now under the management of Samuel Walker. The Cedar Falls Company had sold the mill to the Randleman Manufacturing Company on July 28, 1875, but less than a year later, on the Centennial day of July 4, 1876, the partners Hugh Parks, Benj. Moffitt and Eli N. Moffitt bought the property for \$24,500. Hugh Parks was then the Mayor of Franklinsville and the primary owner of the Island Ford mill downstream. On January 26, 1877, the three partners formed a corporation, contributing \$30,000 of capital in shares valued at \$500 each. The first stockholders meeting was held March 28, 1877, at which Hugh Parks was elected President, Benj. Moffit Secretary- Treasurer, and Eli N. Moffitt, director. The new capital was used to modernize the mill's equipment.

At some undisclosed time the 1852 gable roof was replaced by a flat roof with paneled brick parapets. This was undoubtedly done to qualify for insurance protection by one of the Factory Mutual insurance companies based in New England. The Factory Mutual companies had determined that the wooden trusses of gable roofs were fire hazards, and promoted replacement by flat roofs built with "slow-burn," or solid tongue-and groove decking, construction. A separate tower for stairs was another requirement of the Factory Mutual companies, as the old open stairways inside the mill could act as chimneys during a fire. "Up until 1892 all the roving and yarn were carried in bags, up and down the steps, by boys; but after the tower was built and the elevator installed, the task was made much lighter." Besides new stairs and an elevator, the tower also supported a wooden water tank feeding the new sprinkler system.

The one-story Baling Room housed the printing, sewing, baling and shipping operations of the mill. The Baling Press was operated by the rope-drive pulleys punched through the walls of the mill and separate Baling Room wing. A two-story Wheel House or Engine House was added to the mill in July 1882. This wing was much more elaborate architecturally than the old mill, having brick quoins at each corner and gothic-style hood moldings over doors and windows. The Wheel House provided space for a new water wheel and the first steam boilers and engine, which were installed and started for the first time on November 24, 1882. "In October 1896 J.E. Duval started the first dynamo in this mill, and then tallow candles and kerosene lamps became a thing of the past," wrote the corporate secretary. But the boilers and draft stack of 1882 proved inadequate to handle both the increased production of the mill and the new technology of the 1890s. "In 1897 a new engine room, 19x36 feet, an addition to the boiler room and a new smoke stack were built, and a new boiler and engine were installed and started on Thanksgiving Day, November 25, 1897, by Benajah T. Lockwood of Providence, R.I." The original steam engine installed by the Franklinsville Manufacturing Company in 1882 had been purchased from the William A. Harris Company of Providence, Rhode Island. Harris had worked with the original George Corliss company before starting his own factory, and specialized in large mill engines using the highly-efficient Corliss valve gear. The original engine had a 14" diameter piston with a 36" stroke; its flywheel was 11 feet in diameter. On July 29, 1897, the Franklinsville company ordered a new engine having an 18" piston, 42" stroke, and 13-foot flywheel designed to carry a 24" leather belt to power the mill's lineshafting. After installation the engine was used continuously until December 23, 1920, after which the mill was renovated for electrical drive.

The mill's original power undoubtedly came from one or more wooden water wheels, probably of the breast (or "pitch-back") type. The type of "new" water wheel installed in 1882 is unknown. In the major expansion of the mill of 1899, a 44-inch Leffel turbine wheel was installed and started August 14, 1899. The dynamo which provided lighting in the mill was run by this wheel until 1901, when a separate steam engine was installed for that purpose. In 1909 the old water wheel and water house was torn out, and a 285-horse power horizontal turbine wheel was installed by D.J. Heiston and Jake Lindemuth of the S. Morgan Smith Company of

York, Pa. After conversion of the mill to electric drive in 1920, the turbine was used as back-up power for emergency pumps until about 1940.

In 1915 the corporate secretary wrote, "Some months ago Hugh Parks, Jr., saw the destiny of seamless bags, and after visiting Baltimore and New York, decided that the best thing to do was to make a complete change and to manufacture sheetings instead of bags. It was decided to build an addition (52x73) to the weave room and install 160 looms, for weaving sheetings, and the necessary preparatory machinery. In January, 1916, all the bag looms were thrown out; and the last bag was woven by Arthur Ellison on January 30, 1916. Arthur Ellison gave up his position in the weaving room January 30, 1916; when Hugh B. Buie was put in charge of the room. The last bags (22 bales) were shipped November 16, 1917 for the account of Amon Green & Co., Baltimore, Md., to Carleton Dry Goods Co., St. Louis, Mo. These bags were sold April 19, 1915.

Hugh Parks served as chief executive officer of both mills until his death in 1910. His control of the social and economic fabric or the community was benign but absolute. The mills continued under the control of Parks' son Hugh Jr. until 1923, when stockholders led by Governor Worth's grandson Herbert Jackson engineered a sale of both companies to David and John Clark, sons of Chief Justice Walter Clark.

John W. Clark moved to Franklinville and served as superintendent of manufacturing. David Clark, of Charlotte, was the President of the new corporation, Randolph Mills, Inc. During World War II John W. Clark received special permission for extensive remodeling and repair of the 100-year-old facility. Steel girders and I-beams recycled from other buildings were used to create a new support structure for the mill, completely independent of the exterior brick walls. The Opening, Picker and Card Rooms were expanded into the court yard between the old wings by bulldozing the intervening hills. At this time production was reorganized between the upper "Franklinsville" mill and the lower "Randolph" mill; cotton preparation and spinning operations were consolidated in the upper mill, with weaving and shipping done at the lower mill.

The Clarks continued and expanded the system of paternalistic control, providing a movie theater, public library and parks for the workers. In the 1960's Randolph Mills employed 550 workers out of the town's population of 750. Beyond small-scale domestic craftsmanship, the two factories were Franklinville's only source of employment, tax revenue, commerce, and housing. John W. Clark's death in 1969 brought an almost immediate end to the historic integration of manufacturing, housing and commerce, for Clark's heirs could not afford to continue providing these activities. Much of the mills' housing stock and unrelated property was sold off in the early 1970's. Both textile mills ceased operations in 1977, and in 1978 the town's oldest business, the flour mill, was closed. Randolph Mills, Inc. filed for bankruptcy reorganization in 1979. A considerable portion of the town of Franklinville was accepted on the National Register of Historic Places as a historic district in 1985.

By Mac Whatley 22 October 2008

#### The Architectural Chronology of the Franklinsville Manufacturing Company

by L. McKay Whatley March 28, 2007; revised Feb. 7, 2009.

The Franklinsville Manufacturing Company is the oldest water-powered cotton textile factory still standing in North Carolina. The only other comparable antebellum North Carolina industrial structure standing is at Cedar Falls one mile above Franklinville on Deep River, where a portion of the water-powered 1846 factory remains. The Salem Manufacturing Company, built in 1836 as a steam-powered mill, still stands in Winston-Salem, NC, but has been renovated to serve as the Brookstown Inn, a bed and breakfast facility. No evidence of its manufacturing heritage remains in the building. The Franklinsville factory was built in 1838, rebuilt in 1851, and substantially enlarged in 1899, 1915, 1938, 1944, and 1957. Evidence of its early industrial history remains all over the building, even in its present dilapidated condition.

The Franklinsville Manufacturing Company is moreover the only one of the three which retains its surrounding mill village. No more than a single house or two remain at either Salem or Cedar Falls, while in Franklinville more than 30 antebellum structures remain, from worker, supervisor and owner residences, to kitchens, outbuildings, and the 1850 Masonic Lodge. In no other place in the state is it possible today to gain an idea of the physical structure of an antebellum mill village. The mill and the surrounding village were placed on the National Register of Historic Places in 1985. Looking from the perspective of the broader South, only the 1840 Graniteville factory and village in Graniteville, SC, is comparable, and it is listed by the Department of the Interior as a National Historic Landmark.

The Franklinsville Manufacturing Company deserves broader recognition as a pivotal structure in the history of the Industrial Revolution in the South. What follows is a chronological analysis of the construction and alteration of the structure of the building, together with a functional analysis of its use in processing cotton fiber "from bale to bolt".

## The Cotton "Mill" or Factory.

The earliest structures on the site date to the summer of 1838, when the stone foundations were laid for a 40-by-80 foot 3-story-tall brick building. No picture exists of this building, but I assume that it was almost identical to the wooden Island Ford Manufacturing Company mill which was built half a mile downstream in 1846. That would mean its original gable roof featured a clerestory monitor allowing daylight into the attic space and making it functionally useable. When this building was destroyed by fire in 1851 it appears that the fire started in the "dressing room," where hot starch was applied to the warp yarn before weaving, and this was on the top floor of the building.

After the fire, the factory was rebuilt within a year. It certainly used the massive original stone foundation, which is still partly visible in the tail race under the 1915 weave shed. Examination of the earliest photographs of the mill, from 1874 and 1876, shows a distinct color change in the brickwork above the first floor windows. At that point the original walls used five courses (approximately 30") of brickwork, and changing above that point to four courses. My conclusion is that the original 1838 walls largely survived the fire of April 18, 1851 and were re-used in the subsequent reconstruction by building atop them starting at a point above the first floor windows. Relatively small-size 6x6 sash were used in the 1851 building (which must match the original size, if the first floor was not entirely reconstructed). Instead of the more elaborate clerestory roof, a simple open-frame gable roof was reconstructed, with the bell housed in a cupola above the northern end.

Around 1882 the gable roof was flattened to remove the wooden A-frame trusses which the Factory Mutual Insurance Companies considered a fire hazard. Brick parapet walls replaced the gables and cornice, and a slightly-inclined metal roof drained water south towards the tail race. A stair tower added in 1892 allowed the removal of open stairs inside the factory, the addition of an elevator, and the addition of a large wooden reservoir tank under the bell cupola to service the first sprinkler system. In 1899 the original factory was doubled in size by a 40x80-foot addition to the east or riverfront. The original east wall of the 1838/1851 factory was demolished and interior columns added to create 80x80-foot floor areas on all three floors. In 1915 a 50x75-foot weave shed was added over the tail race to the south of the 1899 addition, and around 1952 a three-story wing was added on the north adjoining the stair tower for office space, a yarn testing laboratory, toilets, and a new freight elevator.

#### The Weave Room

The factory building housed almost all of the manufacturing processes, each located in its own department known as a "Room," whether or not actually located in separate rooms, floors or buildings. The Weave Room was always on the ground floor of the mill, where the powerful reciprocating motion of the looms had the least effect on the structural integrity of the building. As early factories discovered to disastrous effect, having the looms on upper floors created a risk of sudden structural collapse as the mechanical motion of the looms built up a harmonic vibration in the building. From its inception the Franklinsville factory was planned as an "integrated" factory, which meant that it possessed every aspect of the cotton manufacturing process from bale of raw cotton to finished bolt of cloth. The original machinery was purchased from northern makers, and was in operation by March, 1840, under the supervision of George Makepeace of Norton, Massachusetts.

From 1840 to 1872 the Franklinsville weave room housed "Plain Looms," or two-harness looms weaving heavy plain sheeting. This sheeting product was further cut and sewn into undershirts and drawers for the state Quartermaster during the Civil War. In 1872 looms from the Lewiston Machine Works of Lewiston, Maine were installed to weave seamless bags. These looms wove 19-inch-wide cotton tubes; every 42 inches the tubular sides were woven together to form the bottom of a bag, and the weaver used a knife to cut each bag loose from the loom, thus forming the mouth of the next bag. The first automatic Draper 28-inch wide "E" model looms were purchased and in operation in

December, 1909. In 1915 all the bag looms were replaced by Draper "E" model sheeting looms which remained until all weaving was relocated to the Lower Mill in 1932, and only yarn preparation remained here.

The Courier of March 10, 1932, reported that "The machinery of Randolph Mills, Inc., has been so arranged and adjusted, consolidating the work of both mills so as to save work, time, and cost, making them among the best mills in North Carolina. Mill No. 1 was formerly known as Franklinville and was once noted for the manufacture of seamless bags, but later sheeting. Mill No. 2 was known as Randolph and often referred to in the community as Island Ford Mill and was noted for its good quality sheeting. Both of these mills were operated under separate companies. About eleven years ago these mills passed under the management of one company, Randolph Mills, Inc. By the arrangement these mills will be operated as one unit. All of the cloth is finished at Mill No. 2, consisting of fancy outings, bleached sheetings, and novelty goods."

Besides looms the Weave Room also required several related procedures. The "Drawing-In" process, consisted of two wooden racks near a window where workers used tiny metal hooks to draw each individual warp thread through the harness comb in particular patterns. The Warper consisted of several free-standing pieces, a wooden or metal rack holding numerous bobbins of warp yarn, and a device to pull each end through a comb and either wind them into balls (for wholesale warp yarns sales) or on the wooden drums used in the Slasher.

#### The Card Room

The Card Room occupied the second floor, with a variety of processes. Cotton laps entered the second floor on a mechanical conveyor from the Picker House which was carried on an elevated wooden ramp between the buildings. This conveyor was evidently rebuilt numerous times, and is shown on many drawings and photographs of the building. One such reconstruction was recounted in The Courier newspaper of September 5, 1907: "W. C. Jones has the contract for building an automobile chute to convey laps from the lapper house of the Franklinville Mfg. Co. to the card room. It is constructed on a novel plan by Mr. Jones and will prove a great convenience to the card room help." Several workers interviewed in the 1980s told of riding on this conveyor between the buildings as children; it was remembered with the fascination of a roller coaster amusement park ride. As they entered the card room the lap rolls were racked, waiting to be placed on the delivery end of a carding engine. The laps would feed through the card, where revolving drums covered with tiny wire bristles would comb the cotton and align the fibers in a uniform direction. Until February 1907, the output of the carding machines were combined into "sliver" (about the thickness of a candy bar) by a railway head system before being coiled in a tall metal or fiber can. When Saco-Pettee "revolving flat top cards" were installed at that time, the railway heads were eliminated. Some of these carding machines survived until the closing of the mill in 1978.

The cans of sliver from taken from the cards to the drawing frames, where multiple ends of sliver were combined or "doubled;" "drawn", or stretched; and slightly twisted to form a thicker, more uniform length of 'roving" or "roping" (about the size of a finger) which was again coiled in a can. The cans of roving were then taken to a roving frame, the first procedure in spinning yarn. For more than 100 years the roving process involved three separate machines, "Slubbers," "Speeders" or Intermediates, and "Fine" or "Jack

Frames," the finishing procedure. Each machine took ends of roving and progressively doubled and stretched them over and over, again and again until the final roving (the thickness of a pencil) was wound on a wooden bobbin. Improvements in the process gradually combined the three machines until the entire process could be handled by the slubber alone; some of the slubbers installed in 1911 remain in the mill.

The bobbins were removed from the roving frame (or "doffed") and taken upstairs to the third floor spinning room. When the stair tower was added on the north end of the building in 1892, it included machinery which allowed the roving bobbins to be piled into a wheeled cart and rolled up to the spinning room via an elevator. Until that time, the bobbins were loaded into sacks and carried up the stairs by young boys.

The third floor was the spinning room, where the roving was doubled, drawn and twisted even more by the high speed drag action of a tiny metal ring hooked over the yarn end. Two slightly different types of spinning frame produced different weights of yarn here: "warp" yarn was finer, and used for the lengthwise strands woven on the looms. "Weft" yarn, commonly called "filling," was wound directly on special wooden bobbins called 'quills' which fit into the shuttles used on the looms. One of the original duties of a weaver was to stop the loom and put a new quill in a shuttle when the yarn ran out. After the invention of the Northrup loom in 1896, the quills were loaded into revolver-shaped 'batteries' on the loom, which automatically swapped an empty quill for a full one. Special machines which were probably also located in the spinning room were Spoolers and Twisters. A Spooler took yarn from one bobbin and wound it onto another type of bobbin. A Twister took multiple ends of yarn and twisted them together to make stronger, thicker products such as sewing thread, twine, or even rope. The mill had both.

### The Baling House

Several other processes must have been housed in the original mill at unknown locations, but eventually were housed in their own separate wing, called the Baling House. That originally free-standing one-story brick structure was built in 1883 and located between the mill and the Picker House. It housed a printing press, which printed brand names on the seamless bags; sewing machines to hem around the mouths of each sack; a baling press, which squeezed the air out of stacks of bags so they could be easily shipped as bound bundles; and warehouse storage space. In February 1884 the mill's first "Slasher" was installed in this space. A Slasher is similar to the Dressing Machine that probably caused the 1851 fire; it is a large machine where warp yarn is pulled off wooden drums through a vat of hot liquid starch, dried as they wrap around moving copper drums heated by internally by live steam, and then wound onto metal warp beams for use on the loom. It is a hot, humid and messy but essential process, as unsized warp yarns will otherwise break in the rough mechanical motions of weaving. The slasher room in the Baling House was expanded in 1888 and 1900, when the entire structure was raised to two stories with a gable roof. When weaving operations were consolidated at the Lower Mill in 1932, the slasher was moved down there. Part of the Card Room was located in the first floor of the Baling House, the second floor became known as the Warper Room, and also housed Abbott Winders.

#### The Picker House

The other original structure on the site is the 1838 stone picker house, three walls of which survive in the enlarged picker house at the extreme western side of the mill building. The Picker house was the location of cotton opening and cleaning, which means that it was the location of the greatest concentration of cotton dust, lint and dirt in the entire mill. The opening/ picking/ lapping process involved pulling apart the compressed cotton fibers with rotating steel saws and blades. The process and the dusty atmosphere combined to create an extreme risk of explosion and fire in any picker house, so the dangerous process was always kept separated from the mill. Here in Franklinville the Picker House was originally about 80 feet from the factory, and was built of stone so that it was more sturdily fireproof than a brick building, and could be rebuilt without the cost of brick-making. The 1838 picker house was a simple one-story 34x40-foot building with a shed roof which sloped to the south. The building remained unchanged until 1887, when a 17x40-foot, 1-story brick wing was added to the west. No picture exists of the roof for this expanded picker house.

In the general mill expansion of May, 1899, the one-story, 40x40 picker house was expanded with a second floor, and covered with a metal shed roof sloping to the south. A dust house, a brick and frame tower about ten feet square, was added to the south at this time. Dust houses were essentially large chimneys connected to a ductwork system; the draft created by the dust house tower sucked dust particles out of the opening and lapper rooms. This original dust house was demolished when the last expansion of the picker house took place, evidently in the early 1950s. A 40x40, 2-story brick wing was added on the south side of the original picker house, and extended over the site of the head race feeding the original water wheel. It is unclear from the records whether the head race was entirely filled in at this time, or whether drain tiles were inserted in the canal bed to create a storm sewer feeding into the tail race. The picker house addition was used as an opening room, for spare parts storage, and as a waste house where cotton waste, yarn ends and rags were ground up and baled for eventual reprocessing. In the 1950s a huge new combination opening room/ picker house was created between the picker house addition and the wheel house, which incorporated the old steam engine and boiler rooms.

#### The Wheel House

The entire reason to locate the factory at this spot on Deep River was to take advantage of the potential for water power, so a water wheel had to have been part of the original construction of the mill. Little is known about the original prime movers of the Franklinville factory. It is probable that the first wheel was a large wooden breast wheel, as that form of water wheel was usually found in New England textile mills. The earliest written reference to any Deep River factory wheel comes in 1848, when a reporter mentions the two metal breast wheels installed in the rebuilt Cedar Falls factory. The wheel in Franklinville was probably covered at least with a shed to protect it from ice, but it is not clear what, if any, structure covered the water wheel until July, 1882, when the capital stock of the corporation was increased by \$20,000 to allow construction of a two-story "Wheel House." A new water wheel was installed in the basement of the Wheel House at that time, together with the mill's first steam engine on the first floor. The 87-horsepower Corliss mill engine was ordered from the William A. Harris Company of Providence, Rhode Island, and had a flywheel eleven feet in diameter.

In 1882 a Boiler Room was added to the south of the wheel house, together with a 69-foot-tall brick chimney flue for the boiler. The boiler was fired and the steam engine operated for the first time on November 24, 1882. In 1895 a third story was added to the Wheel House, and a set of twisters was installed to make sewing thread for selvages. An electric dynamo was attached to the water wheel in the fall of 1896, and in October the first electric lights were installed in the mill. (The superintendent noted that "then tallow candles and kerosene lamps became a thing of the past.") In 1897 the boiler room was expanded, a taller smokestack was erected, and a new engine house was built to house a bigger 150-horsepower Harris Corliss engine ordered in July. That engine was started for the first time on Thanksgiving Day, Nov. 25, 1897. Its 13-foot-tall flywheel turned continuously until December 23, 1920, when electric motor drives were installed in the mill. In July, 1921 the steam engine was sold; but it still exists, in Godwin, North Carolina, and its granite bedstones are still in place in the crawl space under the floor of the opening room.

A new water wheel and dynamo were purchased in July, 1899, and on August 14th a 44-inch Leffel turbine wheel was started for the first time. This may have been the first turbine water wheel in the mill. The electric light plant was enlarged in 1901, and powered by a separate steam engine. In November of that year a new dam was completed and the water supply system of head race and tail race was enlarged. In 1909 the entire wheel house was remodeled to house a 295-horsepower S. Morgan Smith horizontal turbine wheel with rope drive. The two steam engines in the mill were evidently replaced by individual electric motor drives after 1920, when a separate coalfired Boiler House and General Electric steam turbine Generating Shed was built across the road. The water wheel was used for some purposes until around 1932; the iron casing is still in place under the floor of the mill, although the runner and flywheel appear to have been removed. When the new opening and picker house was built in the 1950s, the head race seems to have been channeled into concrete or terra cotta drain tiles, which funnel water through the empty turbine case and into the tail race. The tail race originally drained through concrete tiles into the river, but these at some point became stopped, and water began to pond under the weave shed.

#### Since 1940.

During World War II a steel frame was installed in the Mill and Baling House using second-hand steel with the special permission of the War Department. This steel frame now provides the structural support for most of the building, and allowed Randolph Mills to demolish several load-bearing brick walls to create an open floor plan at ground level for a greatly-expanded card room. An air compressor wing was the last addition, about 1970. The mill operated until Christmas, 1977, when it closed for the holidays. Unexpectedly the employees were informed in January that they were laid off, although work continued at Mill #2 until Easter of 1978. Randolph Mills, Inc., entered bankruptcy soon thereafter, and both mills were shut down. The assets of the corporation were gradually sold off, until the mill property was purchased (for its hydropower assets) by William H. Lee in 1985. Mr. Lee gradually emptied the mill of its antique equipment, now merely valued as scrap metal, and sold the mill to the Randolph Heritage Conservancy in 1994.