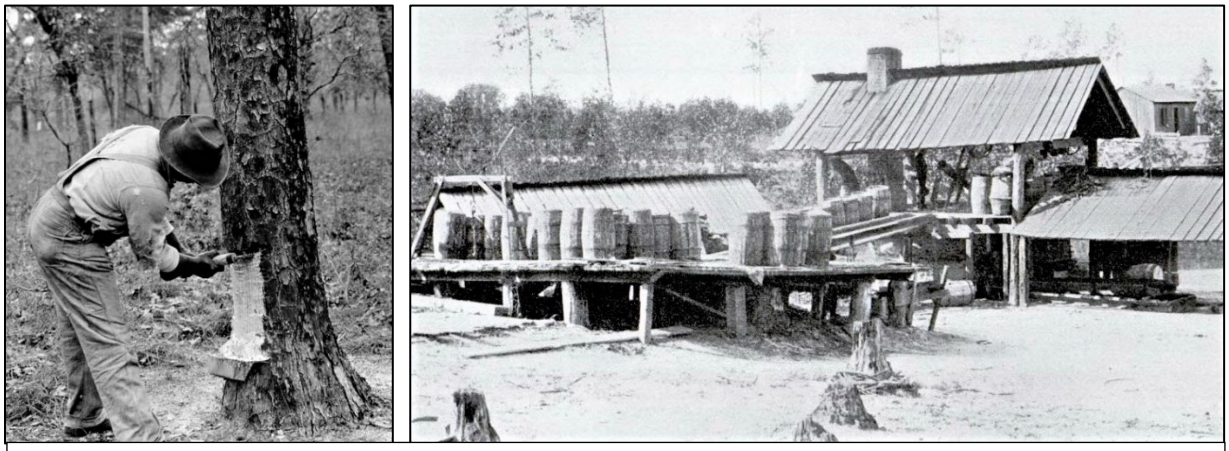
The boxing technique frequently caused the death of the pines and much of the longleaf pine forests in that region were destroyed by the process.

Processing the gum resin—As barrels of resin were collected, the were shipped to distilleries where the resin was converted into turpentine and rosin. Smaller stills could be located at larger turpentine operations. Such two-story distilleries were common because the furnace needed to have a lower level, underneath a vat that held about 10 barrels of raw gum. Once the fire was lit and the gum began to boil, the turpentine separated into a pure vapor and water mixture which rose into a condensing tube, and the liquid rosin remained. The rosin was conveyed through a screening and filtering process to remove wood chips and other impurities. The turpentine and water vapor moved through a separate system where pure turpentine was obtained and barreled.



On the left a worker is scarifying the cambium layer of the pine tree trunk to stimulate resin flow—a process called "chipping" using a tool called a "hack." On the right is a small still for producing the turpentine and rosin. The turpentine was stored in wooden barrels. These products helped drive the economy of the South for centuries.

The cup and gutter system—To overcome the pine mortality problems caused by the application of box technique of gum collection, in 1900, the system was modified by application the cup and gutter system of gum collection. No longer was a box cut into the base of the trees, a gutter and cup were attached to provide for collection the gum. This method was less injurious, and the tree could still be used for lumber production.

Because of its need for large numbers of workers, mostly Black, turpentining had its roots is slavery. Even after the Civil War, the workers' economic and social environment did not improve significantly. The institutions of convict leasing and debt peonage rose in wake of emancipation. These problems were intrenched in the Southeastern states but as turpentining developed later in the Western Gulf Region, workers were better treated.

By the early 20th century, practices for chipping trees improved in allowing the pines to be used for lumber following turpentining. Even after the less impactful cup and gutter system was introduced, the level of destruction continued. Harper (1937) described the impact of turpentining on over 9.5 million acres of longleaf forest in northeastern Florida: "The returns

from naval stores may not compensate for the loss in high-grade lumber in large trees… These results do not permit …an unqualified recommendation to turpentining before cutting."

Numerous lumbermen reported that turpentining was hard to justify economically and turpentining in the West Gulf Region was never a large industry when compared to that of lumbering.

Although lumbermen began to see little financial benefit gum turpentine operations—the timber was much more valuable—and they continued to decline. The pine stumps left behind by lumbering became the basis for a new industry—wood naval stores.

Wood naval stores operations

Millions of acres of "stumpscapes" provided a basis for an important, albeit short-lived, wood naval stores industry (Barnett and Carter 2017).

Landscapes such as this were common on millions of acres of cutover longleaf pine forests. A massive naval stores effort began to extract the stumps and transport them to distilleries where they would be converted into valuable naval stores chemicals.

In 1921, Hawley (1921) laid out the potential for extracting, transporting, chipping, and distilling resin-rich stumps of old-growth longleaf and slash pines as a commercial means of producing turpentine and rosin. In 1951 alone, a total of 2,500,000 tons of pine stumps were processed (Black and Minch 1953).

Unlike gum naval stores operations, which demanded a lot of hand labor, wood naval stores extraction required a more organized and industrialized effort. Methods to collect and transport were developed, and agents of large distilleries worked across the region buying stumps from

landowners. The agents were well received because the stumps hindered most uses of the land and owners gained some economic return from their cutover land.

Drilling holes with a hand auger to place dynamite to break up longleaf pine stumps. Later bulldozers were equipped with prongs to break the stumps for recovery and transport.

Rustville: the home of the Company program

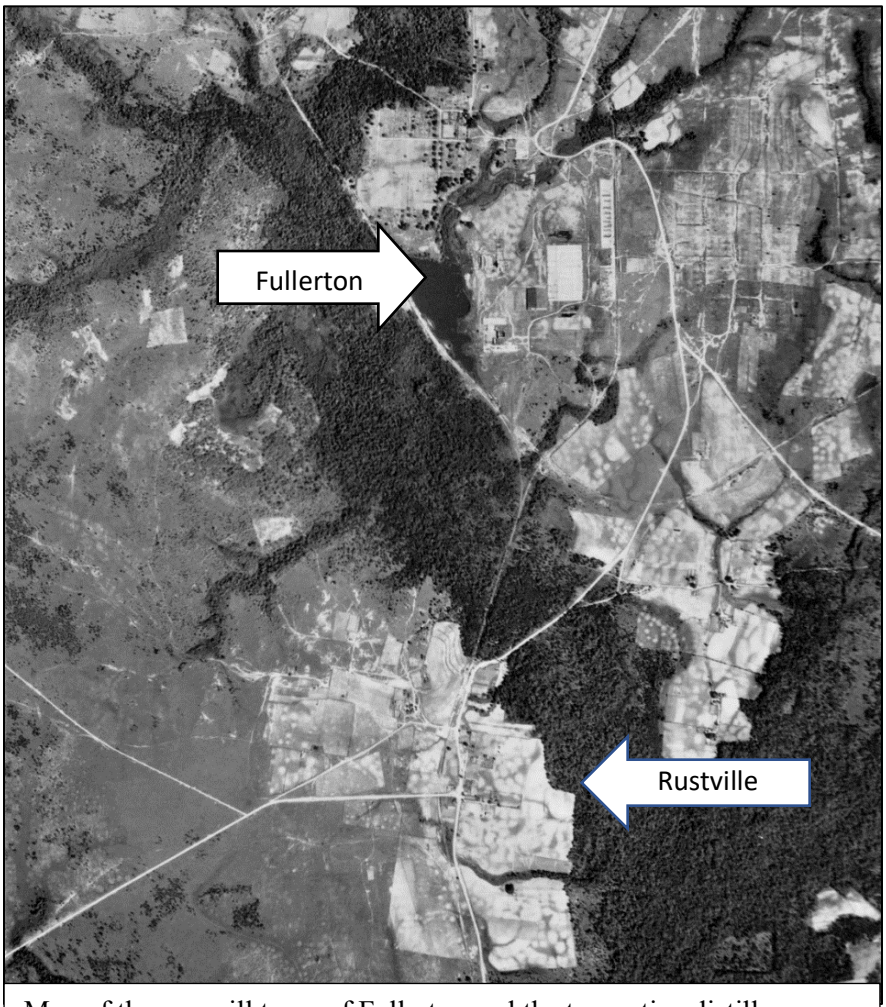
As the Gulf Lumber Company facilities were being developed in the town of Fullerton, the company decided to work the pines for turpentine before they were harvested for lumber. The company also needed a location to house many of its woods' workers. To meet these needs, a site, called Rustville, was developed two miles south of the town on the Gulf and Sabine Railroad. Here a facility would be developed to distill the gum resin and provide housing for the turpentining workers. In contrast to the dismal worker conditions that typically occurred in the southeastern states (Barnett 2019), Block (1996) describes the conditions at Rustville in 1908 for the workers as: "…about 129 neat, new cottages were erected and nicely arranged for the operatives. A good commissary and meat market were also built. A pretentious church and schoolhouse, size 38 by 80 feet, was built and furnished for the colored people, and a public school has been granted by the parish board of education."

"The church and schoolhouse are painted white and are centrally located to be used by the people of color from both the turpentine and mill quarters. In front of the commissary is a beautiful little depot on the Gulf and Sabine Railroad, where all the trains stop. A building has been erected for a cold drink and ice cream stand for the benefit of the many colored people who are on the place…"

Labor used in the turpentine facility was mostly Black workers who came from turpentine operations in North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi. The manager was A. Pridgen, a well-known veteran of the turpentine industry (Block 1996).

Rustville as described as one of the largest and best arranged and equipped turpentine distilleries in Louisiana. In what is described as the "main orchard" was 50 crops (505,000 boxes) with an average daily output of 15 barrels of turpentine spirits and 45 barrels of rosin. On the payroll of the main Rustville camp, there were 225 to 259 workers (Block 1996). The plant was named after Paul D. Rust, the secretary of the Gulf Lumber Company and principal individual in the turpentine department of the company.

Rustville, too, housed many of the woods' workers, called flatheads, who were responsible for cutting timber for the sawmill. These workers were typically Black. Some of these workers may have lived in camps established along the tram lines to harvest timber. At such camps provisions from the commissary and other services would have been provided since workers' families would have lived in these camps.



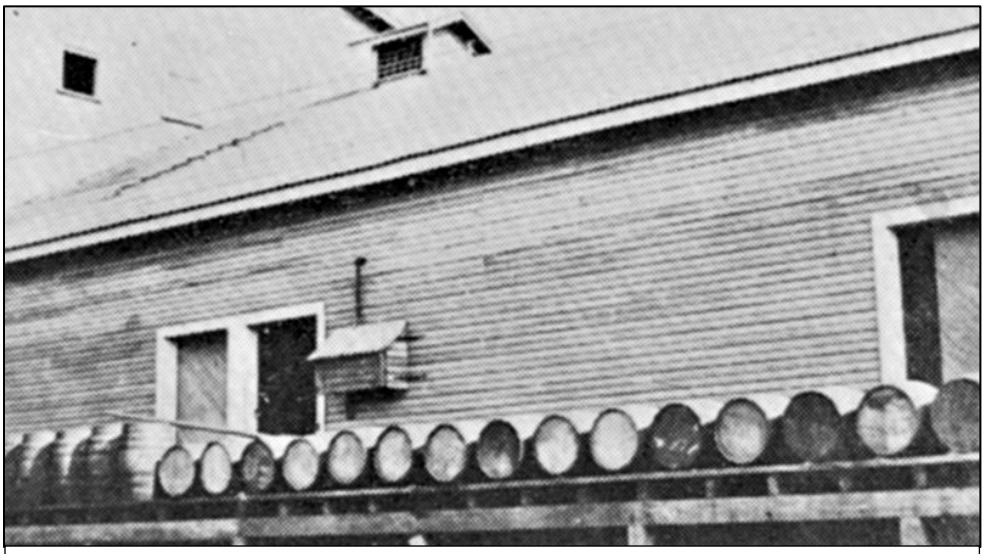
Map of the sawmill town of Fullerton and the turpentine distillery located south at Rustville.

At Rustville, housing, commissary, school, medical, and church facilities were provided for both the Black mill workers and the woods and turpentining crews. At the time segregation was the law and required that these facilities were provided separately from those of the White employees.

Turpentining practices

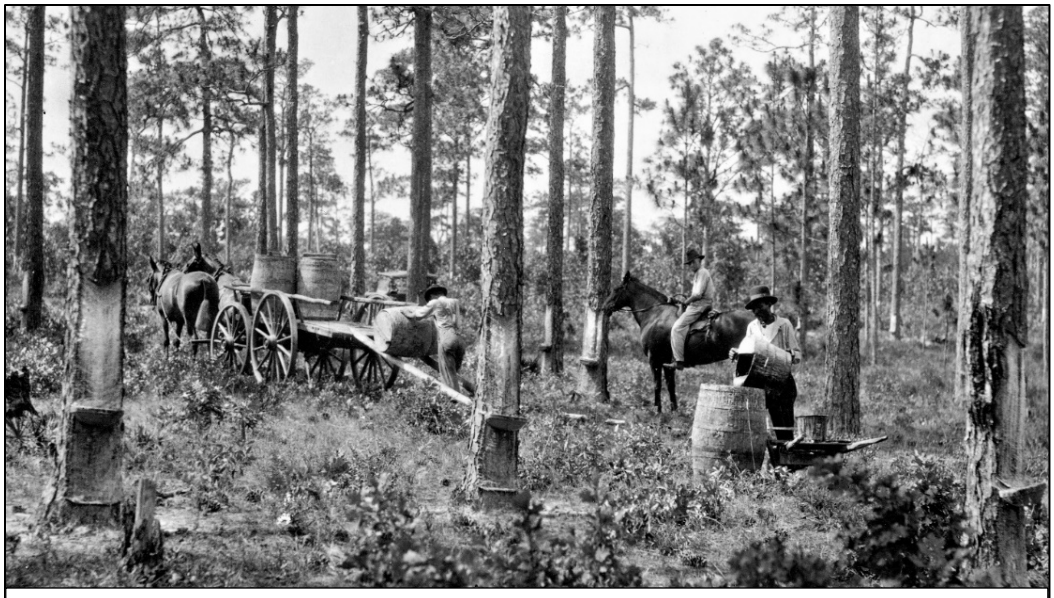
Although the individual scarified trees at Rustville are described in places as "boxes" there is ample evidence that the cup and gutter system of collecting the gum resin was used. First, in the early 1900s it had become known a system that was less harmful to trees. Second, there are sites around Rustville where the ground is covered with pottery fragments, indicating that clay cups were used. When this method is used the scarified locations on the tree are normally called "faces."

To support turpentining operation the mill manufactured the barrels needed for storing and shipping turpentine and rosin. After the closure of the turpentining program, barrels were still needed for the alcohol production facility.



Barrels manufactured at Gulf Lumber Company for use in the turpentining and alcohol production operations.

There is no information on how long turpentining operations lasted at the Gulf Lumber Company. The value of lumber was much greater and there is evidence that most lumber companies began to reduce the amount of timber used in turpentining because the margin of profit was low. At the Gulf Lumber Company, the shift to alcohol production coincided with the demise of turpentining (Block 1996).

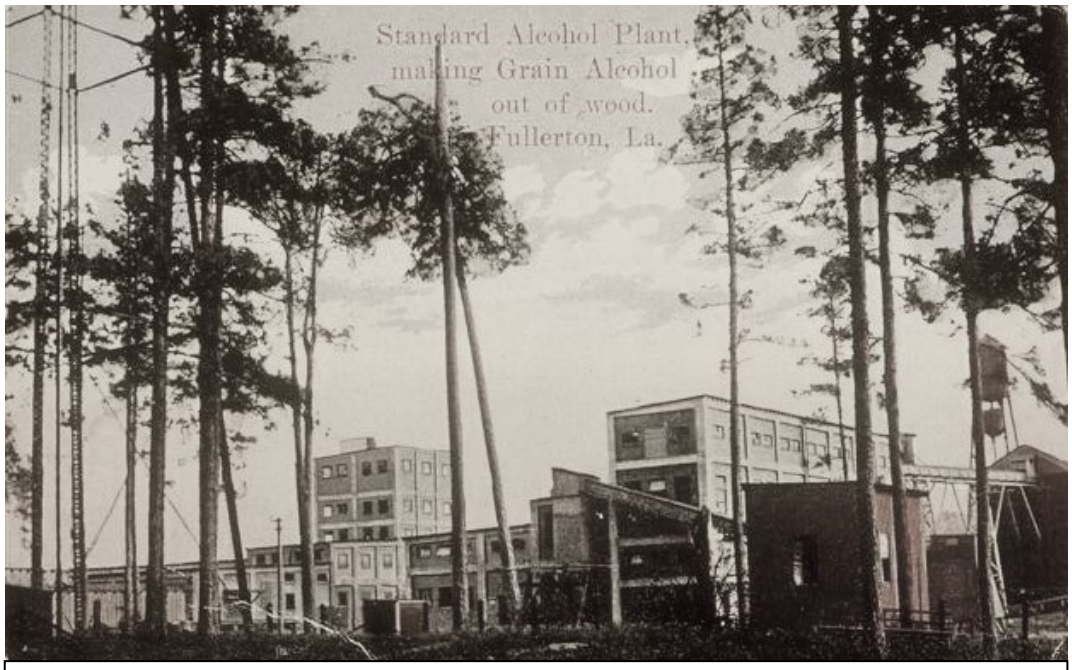


A typical gum naval stores operation in the 1920s. One worker is emptying a bucket of gum resin collected from the cups attached to the trees. Another is loading a barrel of the resinous material on a wagon to take to the distillery. A woodsrider is there to assure that the procedures are followed, and quotas are met (photo from Florida State Photographic Collection).

ALCOHOL PRODUCTION

Several years after the sawmill began an alcohol production plant was built just north of the mill. This was the only alcohol plant in Louisiana where wood chips and sawdust were successfully converted into pure alcohol of the "drinking liquor" variety (Burns 1970). Refuse from the mill that had no bark on it was ground into small chips and sent by conveyer belt to a huge fuel house where it was stored for use. The ground wood was treated in glass-lined vessels where sugar was extracted and used to make alcohol.

The plant was of reinforced steel and concrete and was built to minimize destruction in case of an explosion. The building was five stories high with an underground basement. Beside the main building in a well-fenced enclosure there was an office building and two bonded warehouses.



This is a postcard photo of the alcohol plant and adjacent buildings. In 1924, the plant closed, the machinery sold for scrap, and the skeleton building remained for many years until the Army, during World War II, reduced it to rubble teaching soldiers how to use explosives.

Prohibition caused problems because all the manufactured alcohol had to be guarded in bonded warehouses and shipped in sealed barrels inside locked boxcars. It costs 30 cents per gallon to make and sold for 50 cents per gallon, plus a two dollars per gallon federal tax. It was a money maker and was apparently financed by foreign capital. Waste products were redistilled into a molasses-type feed for livestock (Burns 1970).

A favorite story among old-timers was how disappointed many folks were after a train carrying alcohol barrels wrecked one day. Many men rushed to the wreck, fruit jars in hand, hoping to collect some alcohol, but they had to return empty-handed. Not a single barrel had sprung a leak.

TOWN OF FULLERTON

The town of Fullerton began to be developed in 1907 with the establishment of the Gulf Lumber Company. As was typical for such sawmill towns created to support lumbering operations, in addition to employment for logging and milling crews, housing, medical care, educational capability, churches, and a commissary had to be provided—towns were created where none had existed. The nature of these supporting services varied with the attitudes to the owners of the mill. The residences of Fullerton were fortunate in that S.H. Fullerton provided his town with significant amenities. Portions of the town, the management sections, were provided with sewage, water, a bathroom, a porcelain-lined bathtub, a lavatory, and a kitchen sink—these serves were unusual in sawmill towns (Block 2010). All residential homes were provided with electricity and water through facets.

The town was also unusual in that Rustville, about two miles southwest, was established to support the turpentining operation—it served as a suburb to Fullerton. The Rustville population was largely Black, and services were provided there for all the town's Black workers. Approximately one third of the mill's employees were Black.

Census records indicate that the population of the town reached about 4,000 at its peak and contained three churches, a fine high school, one to the largest and neatest hotels (Des Pines) of the state, an up-to-date hospital, a dozen stores, a swimming pool, theater, and recreation park (Block 2010).

Water supply

Of prime importance was the water supply needed for the mill operations and the town's functioning. The supply was described as an artesian well 900 deep with water standing even with ground level. The large log pond was fed by perennial stream. Water was pumped into two water towers that supplied the mill and the town. Water, too, was pumped through a swimming pool with bath facilities and was collected in pools behind weirs where water could be released into the log pond when needed—the alcohol plant used over two million gallons of water daily in its operation.

Fullerton was one of only a few cities in Louisiana that had a public swimming pool. It was located across from the hotel. It was a modern concrete structure with diving boards and a constant stream of fresh water flowed through the pool to the mill pond.

Water mains were laid through all portions of the mill and town with hydrants at suitable intervals and laterals with faucets to each house.

Housing

As required at the time, the housing provided was segregated by race. Block (2010) described the cottages for White management employees in sizes according to the number or rooms. They were either 6 or 7 rooms, and each home was provided with sewerage, water, a bathroom, a porcelain-lined tub, lavatory, and kitchen sink—certainly unusual for the time! It is not clear that all white housing had all these facilities, most likely only the professional workers.

Cottages for the Black employees consisted of 3 rooms—two 16 x 16, a kitchen 10 x 16, and a porch 7 x 20 feet with water and electricity provided to each house. They were painted in a variety of colors.

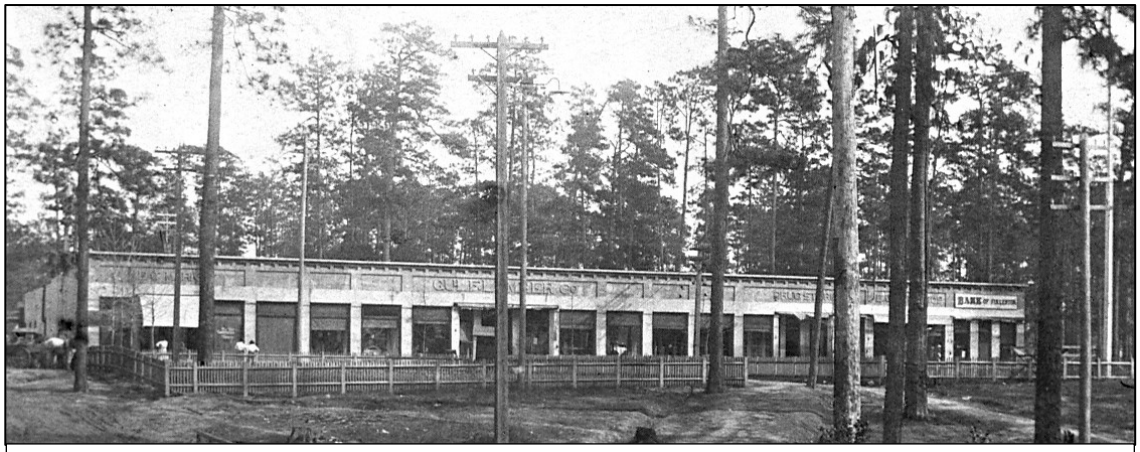
A street scene showing a portion of residences showing the type of structures provided. Likely taken early in the life of the town due to the lack of plant development around the homes.

The Commissary

Typical for sawmill towns was a centrally located commissary. Not typical was the scope of the Fullerton commissary. The facility consisted of a large-reinforced concrete and steel building which covered an entire block in the center of the town (Burns 1970). The prices were fair, and the quality of the goods was excellent. Included in addition to the typical dry goods and groceries, in the commissary was a market, drug store, bank, and telephone office. The market carried a wide variety of fresh and canned food shipped in by rail, but local farmers supplied much of the fresh vegetables and meat.

The drug store dispensed the usual medicinal supplies and the luxuries of ice cream and “pop” from its soda fountain. Small businesses such as bakeries, dairy, picture shows, and barber shops were leased to individuals, but they were kept under company supervision (Burns 1970). Ice was available in blocks to be purchased by the pound for home iceboxes.

An additional commissary was provided for the workers at Rustville.



The Commissary was large concrete and steel structure that provided much of the resources needed to support to operation and functioning of the town of Fullerton.

Hotel Des Pines

In addition to the necessary business and facilities, Fullerton could boast with pride several additional progressive features. One of these as the Hotel Des Pines, valued at $150,000 and described as “more like a Colorado mountain resort hostelry than anything else” (Burns 1970).

Postcard showing the photo of the Fullerton Hotel, the Des Pines. The building burned a couple of times and had to be built.

Newspaper reporters in the 1920's exclaimed over its ritzy plumbing and hot water and baths with every room. Service in the dining room was exceptional. Diners were served individually, not like the boarding house type meals served in typical sawmill hotels. A national magazine carried an account of a sumptuous eight-course meal served to the general manager of Boykin Lumber Company and his sales staff during a visit to Fullerton (Burns 1970).

Hospital

A large two-story hospital was provided for its employees and their families. The workers paid a nominal monthly fee for all the medical care they might need. The company hired the doctors and nurses, and each family member could visit the hospital as often as necessary without any additional expense beyond the $2.50 monthly fee. Single workers paid only $1.50 per month. The hospital was well equipped for the time.

A postcard showing the Fullerton hospital and some of the worker housing.

Schools

Schools were provided in Fullerton for the White students and in Rustville for the Black students. While no information is available about the Rustville schools, those provided for Fullerton were of good quality. There were both elementary and high school facilities. Here many children received their complete education from first grade through high school because Fullerton had a remarkably stable workforce (Burns 1970). Most sawmill towns only provided education through the 6th or 7th grade.

It is impressive that music and art lessons were available for the students.

The Fullerton elementary (front) and high (back) schools. These were well built and maintained structures.

Fullerton did not have a public library, but there were collections of books in the schools that the children could check out and take home to read.

The Fullerton High School class of 1927. The students were well dressed for a sawmill town in the rural South during the early 20th century.

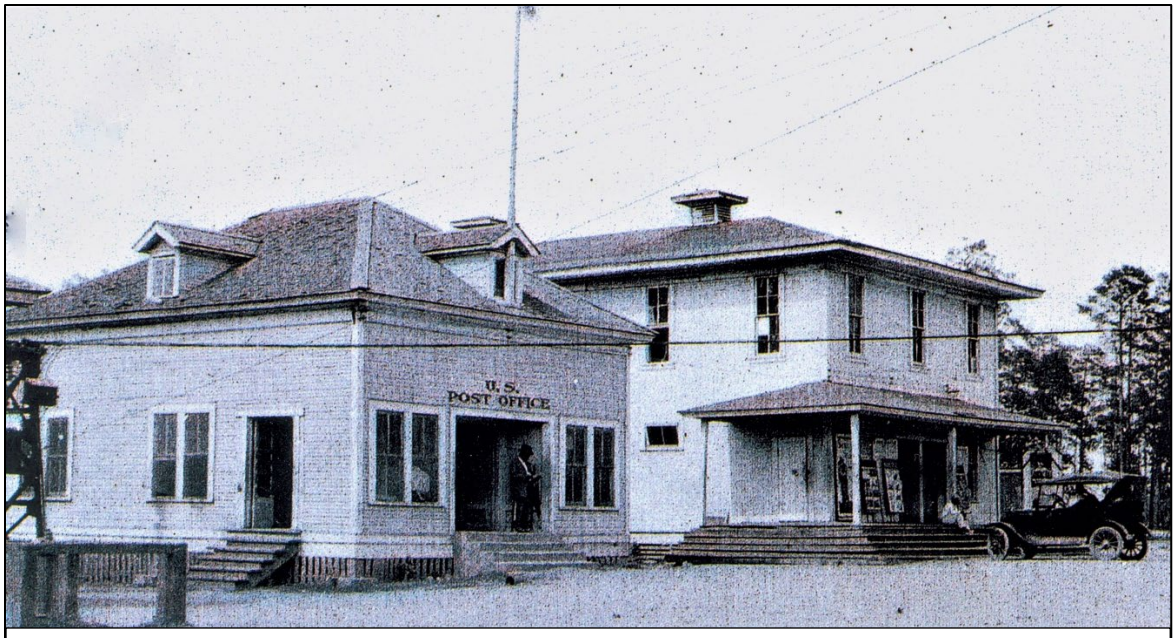
Churches

The company provided churches for both White and Black workers and their families. In the white section there were two houses of worship, a Protestant and a Catholic. The Protestant services were conducted by four different denominations which took turns on regular Sundays. Ministers from nearby Baptist, Methodist, Presbyterian, and Christian congregations delivered the sermon on their appointed Sunday. But the Sunday School was a forerunner of today's ecumenical movement, it was a joint effort for all the children (Burns 1970).

This photo of the Protestant church was taken following a winter snow. After closure of Fullerton, the building was moved to the town of Pitkin.

Post office and theater

Two significant buildings in the town were the post office and the theater. Although the post office was a critical resource for the town, the theater contributed to the social life of the community. Rarely was a theater a component of a rural sawmill town and Fullerton was proud to have such a resource.



The post office (left) and theater (right) were important contributors to the business and cultural aspects of the town.

THE PEOPLE OF FULLERTON

Compared to other rural towns in the South during the early 20th century, especially sawmill towns, Fullerton was exceptional, and its residents realized it. This became obvious 33 years later when in 1960 annual reunions of past residents began at the old Fullerton mill site. Within two years, over 1,000 individuals began returning annually to meet old friends and to focus on the remarkable life they had experienced at Fullerton.

The following series of photographs tells some of the history of Fullerton that made the town unique.

Several aspects of the life in Fullerton were unusually good for a sawmill town. For example, schools were provided for students through the 12th grade and the quality of education in these schools was good. The classes included French and Latin. The school colors were maroon and white.

Photo of the participants in the Fullerton Reunion taken in about 1961. This illustrates the interest and dedication of the past residents to the town of Fullerton.

Teachers (front) with student delegates to the State Older Boy Association competition held in Alexandria in 1922. Particularly note their professional appearance.