

The Bibb Co., 1900
38th Street and First Avenue
Bibb City (Columbus)
Muscogee County
Georgia

HAER GA-12

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Heritage Conservation and Recreation Service
Department of the Interior
Washington, D. C. 20243

Bibb Company
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HISTORIC AMERICAN ENGINEERING RECORD

Columbus Plant of the Bibb Company

GA-12

Location: 38th Street and First Avenue,
Bibb City, Georgia (just north
of Columbus)

Construction date (main mill): Original section: 1900-1901
1st addition: 1916
2nd addition: 1920
(For dates of other buildings,
see Drawing #3, Bibb City site
plan).

Present owner: Bibb Company (Main Offices, Macon,
Georgia).

Significance: The main building of this operating
textile mill extends a remarkable
1010 feet east from a bluff over-
looking the Chattahoochee River.
Until 1954 an American system of
rope drive, turned directly by
water turbines, powered portions
of the original section of the main
mill. Much of the rope drive equip-
ment can still be seen in the pulley
house and rope tower. The town of
Bibb City, established in 1903,
surrounds the mill. The history of
the mill and village reflects a strong
paternalist management typical of many
rural Southern mills.

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Columbus Plant of the Bibb Company

The Bibb mill in Columbus, established in 1900, offers an interesting study in technological and social history. The mill employed, from 1900 to 1954, a system of mechanical rope drive to power equipment in its original building, despite Bibb's close association with the North Highlands hydroelectric development. The persistence of this type of drive through the 1950s adds interest to the company's responses to economic and technological changes within the textile industry.

Bibb City, established as the mill village in 1903 and still an incorporated city, strongly reflected the paternalist management evident in many rural Southern mills. Bibb's proximity to Columbus' urban mills provides a means of comparing the social history of the two areas; the authors were fortunate in having access to material on Bibb City which enabled them to draw preliminary, though superficial, conclusions.

This report is divided into four sections. The first deals with the general business history of the Bibb mill; the second with the power technology at the mill; the third considers workers' conditions at Bibb; the fourth places these conditions within the context of Bibb City and the paternalist mode of management

1. General History

The Bibb Company began operations in Macon, Georgia in 1876 as the Bibb Manufacturing Company. Hugh M. Comer of Savannah, with Major J. F. Hanson of Macon, both cotton merchants, established a textile mill in an abandoned freight house of the Central of Georgia Railroad. This early cooperation between Bibb and Central of Georgia continued throughout the history of both: Comer served as president of both companies from 1892 until his death in 1900, when Major Hanson took over both positions. [1] The close association of the textile company with the railroad allowed and encouraged the dispersed expansion characteristic of the Bibb organization. Bibb built and acquired mills throughout middle Georgia and the Central of Georgia network served them all, bringing in raw materials and transporting products to markets. The many mills consequently brought important business to the railroad.

One of Bibb's early ventures outside Macon was the plant at North Highlands, completed in 1900, and located on a bluff overlooking the Chattahoochee River just north of Columbus. [2] Many factors contributed to the choice of the North Highlands site. G. Gunby Jordan, president of the Eagle and Phenix Mills in downtown Columbus, joined Bibb at the start of the venture, providing local input. He realized that the Columbus location, with its concentration of skilled labor, was an asset. Jordan, however, was particularly interested in moving textile production outside the city. Taxes could be reduced by located at North Highlands. The labor disputes of the 1890s (see Eagle and Phenix Mills, HAER report 1977) also pressed Bibb to follow the rural model, so prevalent in the South,

of a company village clustered around an isolated mill. The increased influence over workers which this arrangement offered to management was very attractive [3] (see section 4, "Bibb City").

North Highlands offered more than isolation from disturbing influences in Columbus. Available water power in the city was dominated by the Eagle and Phenix complex (see Eagle and Phenix Mills and Water Power Development at the Falls of the Chattahoochee, HAER reports, 1977). At North Highlands, on the other hand, the natural channelization of the Chattahoochee at a substantial falls offered developers a potentially important water power site.

Advances in hydroelectric generation and transmission were central in the realization of this potential. Development of the site would make available much more power than could be used by one factory; the large investment required for dam construction at the site demanded a greater return than could be realized from one mill. The rugged terrain at North Highlands, however, precluded construction of any sort of canal along which industries could space themselves. [4] The technology of mechanical power transmission was inadequate for industrial development of the site.

Transmission of power by electricity solved this dilemma. The directors of Bibb Manufacturing formed the Columbus Power Company in 1897 to build a dam and two power houses (photos Bibb 1, CPC 2, and CPC 3). The smaller power house supplied mechanical power to the small Bibb mill via an American system of rope drive (see "Power Transmission," section). The larger station developed 3,000 kilowatts for sale by the Columbus Power Company, and supplied electricity to motors driving a European rope drive at the nearby Columbus Manufacturing mill. [5] This station soon became a major supplier of centrally generated electric power in Columbus (see North Highlands Plant of the Columbus Power Company, HAER report, 1977).

The original mill building, approximately 300 feet in length, housed 25,000 spindles for production of thread. The mill, devoted exclusively to thread production, was in full operation by 1901 [6] (Bibb Photos 1, 2a, 2b). The recently introduced automatic Draper looms, first appearing in Columbus at this time (see Eagle and Phenix Mills) reported an increased demand for yarn in weaving operations. The new spinning mill could look forward to excellent business from other Bibb mills and from the Columbus mills. [7]

All operations involved in preparing cotton for spinning were performed at the Bibb mill. [8] Opened bales passed to a picker room on the first floor, in an eastern portion of the mill (60 x 125 feet) enclosed by a wall on the basement and first levels. Picker machines cleaned cotton by beating and blowing, preparing a continuous uniform sheet of material to be fed into carding machines on the first and second floors. Cards completed the cleaning

process; their small still wires combed out fine impurities. Cotton left the cards in thick strands called card sliver. Roving machines on the second floor prepared the strands for the spinning operation by drawing out and slightly twisting the sliver.

The Bibb mill in its very early years used both mule-spinning machines (3rd and 4th floors), which required skilled labor and produced finer yarns, and ring spinning frames (4th floor). The latter machines, requiring less skill to operate, were widely replacing spinning mules in the United States during this period. [9] In Columbus, fine yarn production may have necessitated the use of mules during the first years of operation.

After the spinning process, further twisting (4th floor) prepared the yarn for winding. Filling yarn was wound onto quills (2nd floor); yarn for warp was wound onto ball warps (3rd floor). The company shipped the quills and ball warps to other mills for weaving.

In 1907 the Bibb Manufacturing Company expanded its product line, installing a small plant in one of its mills for production of cotton duck (used in tire manufacturing). This placed a greater emphasis on coarser yarns throughout the Bibb organization. In 1909 the company's directors decided the mule-spinning operations in Columbus, which produced fine yarn, were "impractical"; 9,000 ring spindles replaced the mules that year. [10]

The rapidly growing automotive industry brought with it an increasing demand for tire materials. The small duck plant evidently could not satisfy Bibb's market for Egyptian Sea Island square woven tire fabric. [11] Cotton cloth and cord for tire manufacture quickly became a major product of the entire Bibb organization; its production shaped expansion of the Columbus mill.

By 1910 Bibb was ready to expand its production of cotton duck. The company chose Columbus as the site for a new weave shed because of the "high skills" available in that city. [12] The bulk of Bibb's tire fabric production was now at the Columbus plant, though other mills soon adopted production. The new shed (today the opening and picking area; see Drawing #3, Bibb site plan) went into full production in 1912.

The Bibb company decided to enlarge the main mill at Columbus in 1915. The new addition, completed in 1916, extended the main building to a length of approximately 500 feet. The number of spindles increased to 48,000, enabling Bibb to expand its tire fabric output. The rope drive shafting did not extend beyond the original section; the addition was powered by large motors driving long rows of machinery via line shafting and belts. Electricity was purchased from the Columbus Power Company. [13]

The Bibb directors doubled the capacity of the Columbus plant during World War I as part of a general expansion of several Bibb mills. A new warehouse was completed in 1918 (photo Bibb 3 and Co. Drawing 3), and in 1920 a second addition to the main plant brought the mill to its present remarkable length of 1010 feet. The plant was devoted entirely to tire fabric production. The number of spindles increased to 125,000; 80 new looms and 48 warpers were also added. Bibb's Columbus mill was then considered the largest textile operation under one roof in the United States [14] (Bibb photos 4, 5, 6). The spinning floor, extending undivided the entire length of the building, was claimed to be the longest in the world at that time [15] (Bibb photo 7).

During the early 1920s changes in the tire industry required concomitant changes at Bibb's Columbus mill. Tire cord replaced duck in tire manufacture; the mill changed over from duck to cord production. The new process evidently could dispense with preliminary combing operations; carding machines could do all the necessary combing. In 1923 Bibb removed 114 combers from the Columbus mill to make room for additional spindles. [16]

World War I had generated a great demand for tire cord, and Bibb's expansions and improvements were partially stimulated by an inflated market situation. The postwar recession hit Bibb hard. The Bibb directors felt they had overextended themselves. The opinion of company president William D. Anderson was that "the Bibb has too much brick and mortar." [17] The Columbus mill was hard-pressed to find markets to support its great capacity and the situation intensified throughout the 1920s as tire manufacturers dealt with their own over-production problems. In order to cut down they stopped orders for cord from the textile mills. When the market for tires again improved, companies like Goodrich, Goodyear, and U. S. Royal (all customers of Bibb) built their own facilities for cord production, eliminating their dependence on outside suppliers. The Bibb Columbus plant felt this keenly. [18]

The Bibb Company sought to expand its product line to compensate for the contracting market for its product. By 1924 a second weave shed was completed south of the main mill, to which additions were made through 1932 (Drawing 3, Bibb site plan; Bibb photos 8, 9, 10). The looms installed there wove both solid and print apparel cloth. [19]

Although this addition shifted the emphasis toward cloth production at Bibb's Columbus mill, cord production was by no means eliminated (sections of the mill were set aside for cord looms until the 1950s) [20] During the late 1920s and 1930s a laboratory at the Columbus mill developed a patented "Heat Resistant Processed Cord." [21] The development was important because the cotton fibers in tire cord had a tendency to slip under tension. In addition to weakening the tire structure, slippage and rubbing of fibers

produced heat in amounts often capable of blowing out the tire. In the Bibb patented process, fibers were bonded together more tightly than ordinary twisting could accomplish, eliminating slippage and greatly reducing heat generation in final products. This was achieved by treating fibers with a hot solution of rosin, set into the fibers by steam. This so softened the gums in the cotton that twisting under compression and tension resulted in a much stronger bond when the gums were allowed to harden at the end of the process. [22]

This development in tire cord production did not diminish Bibb's commitment to widen its product line. The Depression years further reduced demand for independent suppliers of tire cord. In January 1931, Anderson announced to the Board of Directors a "revamping" of the Columbus mill. The company planned to install 1060 Draper 40-inch model-X looms to produce print cloth, sheeting, shirting and apparel fabrics. In 1932, the directors approved installation of 50,000 additional spindles to produce yarn for print cloth, and 941 more Draper 40-inch model-X looms. They cited the dwindling demand for tire cord as the reason for the move. [23]

This diversification throughout the 1930s, spurred by Depression contraction of Bibb's specialized market, resulted in a more broadly based product line at the Columbus mill which probably helped the company through the difficult years. [24] When World War II brought, once again, a great demand for tire cord, Bibb expanded its Meritas Mill (a Columbus mill established in 1911 and purchased by Bibb in 1937) for cord twisting. [25] The original Columbus mill, although probably increasing cord production, continued its expansion into cloth production.

The war greatly increased demand for the mill's woven products. The shortened work week of the Depression years disappeared (see section 3, "Workers and Working Conditions"); the mill now operated 7 days a week. Bibb claims to have been Georgia's largest war industry. Wide looms introduced in 1940 produced cotton duck, tenting, leggings, and other materials for defense products such as camouflage nets, life masks, and uniforms.

The demand for these products of course ended with the war, as did the tire cord boom. Moreover, the introduction of rayon cord, much cheaper than the natural fiber, made it unlikely that cotton tire cord would again be a major Bibb product. [26] In Columbus, Bibb's combination of wide looms and coarse fiber production left the mill in a good position to enter new markets. The wide looms installed in 1940 turned now to production of carpet backing, and Bibb yarn provided tufting for the carpet trade throughout the late 1940s and 1950s. [27]

Another outlet for Bibb yarn was sheeting, which had been a minor product of the Columbus plant since the 1930s. The post war years saw the introduction of king and queen sizes. Bibb installed more wide looms in 1946 expressly for

wide sheeting production. In 1947 Sears, Roebuck and Company approached Bibb, wanting a steady supplier of sheets and pillow cases. Bibb converted even more of the Columbus mill to supply its new customer. The company added a slahser room and a new weave area for production of bed-sheeting in 1949 [28] (drawing #3; Bibb site plan).

The product line of the mill has remained relatively stable since that time, after one last spurt of tire cord production during the Korean War. The demand for wider fabrics from clothing and linen manufacturers has spurred a trend toward wider looms. At Columbus, Bibb replaced the 40-inch model-X's in its basement weave room with the 90-, 100-, and 120-inch model-XL's which had gradually come to dominate the weave sheds (Bibb photo 11). The trend is still in evidence; in 1976 the company replaced 50-inch X-2 looms with 90- and 100-inch XL's [29] (Bibb photo 12). Shheeting remains the most important product of Bibb's Columbus plant. In the 1930s only cotton was run in the mill. Now, synthetics and cotton are blended in the picker house prior to carding; the mill runs very little 100% cotton. [30]

An interesting aspect of Bibb's history in Columbus has been the company's ability to adapt its equipment to changing market conditions. Bibb expanded into tire fabric production in the early 1900s, serving a seemingly specialized market. When the demand for cotton tire cord disappeared, however, Bibb turned its wide looms and coarse yarns to production of carpet backing and tufting. The wide looms installed during World War II enabled Bibb to take advantage of changing fashions in sheet production. This flexibility in both product and equipment eased the company's quest for new markets. The directors of the company were also insistent about expanding the product line to include apparel fabrics, aiding Bibb during "dry" periods in tire cord demand. These factors help explain the survival of this turn-of-the-century Columbus Textile mill.

2. Power Technology: The rope drive, 1901-1954.

The Bibb Manufacturing Company and the Columbus Power Company coordinated the construction of the original mill with that of the two power houses on the eastern bank of the Chattahoochee below the North Highlands bluff (see section 1, "General History"). The primary purpose of the smaller power house (No. 2) was to power the Bibb mill machinery via an American rope drive (explanation of American rope drive below), and to provide light and water for the mill and mill village [31] (for detailed description and history of the larger power house, see Hydroelectric Power Development at North Highlands, H.A.E.R. report, 1977).

The small power house was situated 40 feet below the larger one, 100 feet below the forebay (Drawing #3, bubble insert on Bibb site plan). A 15 foot steel feeder pipe carried water through the dam bulkhead and under power house No. 1 to two branch feeders, or penstocks (photo CPC 3). These fed into two wheel pits, each housing a dual turbine. The turbine pair in the western pit was used by the Columbus Power Company. The eastern pair turned the driving sheaves of Bibb's rope drive. A smaller single turbine, fed by a branch from the eastern turbines' penstock, drove a water pump, and a 3-phase alternating current Stanley generator of 150 kilowatt capacity for lighting the mill and Bibb City (for more detailed description of power house No. 2, see North Highlands report).

The rope drive powered carding and spinning operations in the oldest portion of the main mill from 1901 until it broke in 1954. The rope drive shafting never extended beyond this original section, nor did it ever power looms. [32] Electricity purchased from the Columbus Power Company drove all equipment in the later additions when they commenced operation. By 1954 the company had electrified the third floor of the original mill and areas on the other floors. [33]

The rope drive mechanism, installed by the Dodge Manufacturing Company in 1901, remained essentially the same throughout its 54 years of operation. The following description applies as well to the 1954 equipment as to the original installation, with certain modifications which will be noted. [34]

A drive shaft, direct-connected to the pair of horizontal turbines in the eastern wheel pit, turned a large driving sheave of 30 grooves; tow sheaves of 10 grooves each later replaced the original (date uncertain). [35] Transmission ropes ran up to receiving sheaves housed in a 4-story brick pulleyhouse (also serving as a machine shop) attached to the west end of the mill (Bibb photos 13, 14, CPC 3). The ropes were protected above and on both sides by a shed-like covering of sheet-iron (Bibb photos 2a, 15, 16). The covering was reinforced with lateral angle irons; these discharged rain toward the sides of the cover, preventing a steady flow toward the power house during storms. When installed, the main drive driving sheave carried over 6,000 feet of 1 1/2 inch manila rope. [36] When the system was altered to run on two drives of ten wraps each, the length of the two 1 1/2 inch ropes on the drive totalled 1/2 mile. [37]

The receiving sheaves in the pulley-house were elevated 60 feet above the driving shaft, and the main transmission ropes extended about 116 feet. The company employed the American system of continuous wrap; this was particularly suited for drives of so great a length. [38] One rope would continuously from the outside groove of each driving sheave up to the corresponding groove on the driven sheave, returned to the driving sheave, and continued in this way to the last groove of the receiving sheave. The rope then had to cross back to the outer groove of the driving sheave.

This was done by means of an idler pulley. The rope, coming off the bottom of the driven sheave, passed through a guide pulley to the idler (Bibb photo 17). This pulley was mounted on a cart on a horizontal track; counterweights hung from the rear of the cart. Movement of the weighted cart back and forth on the track, in response to changing tension in the rope, kept slack out of the system. The rope returned from the idler down to the driving sheave via a second guide pulley. [39]

The driven pulleys of the main transmission ropes turned the heavy 8 1/2 inch forged steel shaft (Bibb photo 18) which ran east to the rope tower between the pulley-house and the mill proper. [40] Here, driving sheaves, turning with the shaft, sent ropes to four receiving sheaves (Bibb photos 19, 20) mounted on wooden platforms several feet below the ceiling level of each of the first four floors of the mill. These sheaves also employed American wrap using 1 3/8 inch manila rope, and were equipped with an idler pulley and track similar to, but smaller than, the arrangement in the pulley house (Bibb photo 21). On each level the sheaves turned a drive shaft running lengthwise down one side of the mill, belted to a corresponding countershaft along the opposite side. Belts ran from these shafts to the individual machines. The driving sheaves at the base of the rope tower were mounted on quills, allowing disengagement of individual floors from the main shaft while others continued to run.

The elements in the power transmission system which gave Bibb engineers the most difficulty were the bearings of the shafting, which were subjected to much wear. The ropes themselves gave relatively little trouble. Electric tell-tales on each rope drive unit in the pulley-house and tower detected frazzles and frayings on the ropes.

This mechanism included a wooden lift bar extending horizontally across the loops of the drive just below the receiving sheaves. It was mounted several inches from the moving rope. The ends of the bar were attached to an electric signal mechanism. A frazzle hitting the bar at high speed jarred it, causing the ends to activate the electrical contact, setting off a signal in the power house. Electric push-buttons located on each floor of the mill could also signal trouble to the power house. For years the company employed a watchman in the power house 24 hours a day to receive the signal and, if necessary, shut down the system. By 1954 the electrical contact shut down the rope drive automatically. [41]

The Bibb Manufacturing Company electrified the later additions to the mill as they were built, at first using large motors to drive the line-shafting on each level. On the spinning floor, for example, V-belt pulleys on the shafts ran two frames each, using 3-inch wide 2-ply leather belts 63 feet in length. Electricity also powered the weave sheds from the commencement of their operations. [42]

The demonstrated feasibility of powering the mill operations by electricity, and the increasing age and wear of the rope drive, prompted studies in the 1940s and 1950s of the possibility of replacing the rope drive by electricity. In 1946 Bibb's plant engineer, H. S. Colbath, did a detailed report on the comparative efficiencies and costs of the rope drive and of a hypothetical generator. Colbath assumed the loss of power along the rope drive to the machinery shafting as 15%, the loss across the leather belts to the frames as 12%, being total kilowatt loss to 27% from turbine to machinery. Colbath found the total losses across an electrical system to be identical: 12% generator loss, 2% transformer loss, 1% line loss, and 12% loss at the motors, again 27% lost between the turbines and the machinery. The cost per kilowatt of the electrical system was 2/3 that of the rope drive. The company did not find this enough to justify the cost of scrapping the rope and drive and installing a generator. [43]

Another analysis of power cost to the mill, done in the same period, came to similar conclusions. This report additionally found that purchased electric power cost the equivalent of self-generated power, while saving the company the cost of generator purchase, installation, and rental of water rights from the power company. [44]

The Bibb management ultimately opted for purchased power, and electrification of portions of the original mill proceeded gradually. In 1952 the third floor was completely electrified. On floors 1 and 2, electricity powered more than half of the carding machines. On the 4th floor, 2/3 of the 55,168 spindles were electrified. [45] At this time plant engineers felt it necessary to further relieve the burden on the rope drive turbine by extending electrification. The company adopted portions of several proposals prepared by the engineers, removing 20% of the total load on the rope drive. Most of the motors for the conversion job were already in stock, or were shipped from other plants in the Bibb organization. The possibility of replacing the rope drive entirely was not considered. [46]

In September, 1954, an accident on the rope drive seriously hampered mill production. [47] A large babbitt bearing on the main drive shaft in the pulley-house seized as a result of a large crack inside the bearing. The drive shaft snapped; its westernmost part, with the large driven pulleys, rolled down the slope toward the power house (see Bibb photos 22, 23, 24, 25, for damage to rope drive).

Despite the small percentage of mill machinery actually powered by the rope drive, the partial shutdown was damaging due to the interdependence of different mill departments. The ring spindles on the 4th floor produced filling for the looms. The reserve stock of filling kept on hand would not be enough to compensate for the loss of the water-driven spindles. [48] It was therefore important to bring the affected areas of the mill back into production as quickly as possible. The company quickly dismissed the possibility of replacing the rope drive itself. After briefly considering installing its own generator, Bibb turned to the Georgia Power Company, which supplied the mill's other electrical needs, for the increased power required. [49]

The mill was back in full operation within 5 days. The company first installed large 600-volt motors to drive the line shafting as an emergency measure. The plan was to quickly replace this shafting with individual motor drive (suggesting that this arrangement was typical of other parts of the mill by 1954). By December the shafting was down; individual motors for the cards and small group drives for the spinning frames replaced them. [50]

The persistence of the Bibb rope drive into the 1950s is perhaps its most remarkable aspect. When the company initially installed it, such drives, although introduced decades earlier, were just becoming prominent. [51] Use peaked in the 1910s, when manufacturers considered rope drives to be the best form of transmission from the power source to the machinery. [52] A writer in 1927 noted that, although electric drive was replacing most alternative power transmission schemes, there were still "niches" in which rope drive was ideally suited (when small amounts of power were to be transmitted), and continued to be employed. [53]

After this, however, the advantages of individual drive gradually eliminated the practicability of rope drive transmission. The use at Bibb of a rope drive powered directly by water turbines nicely illustrates the appropriate utility and persistence, due to financial considerations and technological interdependence with mill operations, of an obsolete though once progressive technology surrounded by more modern methods.

The pulley-house and rope tower are valuable sources in industrial archeology. The broken drive shaft remains in the pulley-house (Bibb photo 22); driving sheaves rest at the foot of the tower (Bibb photo 26). Wooden platforms at floors 1, 2, and 4 hold the sheaves which turned the mill shafting, and the track, cart, and idler pulley for each sheave. The path of power transmission can be clearly traced. [54]

3. Workers and Working Conditions

Working conditions at the Bibb mill tended to parallel those of other Columbus textile mills. The original mill ran days only at first, then went to two shifts per day. The day shift, working from 6 a.m. to 6 p.m., had an hour off for lunch. The night shift ran 12 hours straight (Bibb photo 27). In 1933 the mill went to 3 8-hour shifts in the weave room. By 1938, all departments were in 8-hour shifts in compliance with NRA regulations. [55]

The Depression, and the steps taken by the Federal government to combat it, profoundly affected the mill and its workers. The drastic drop in demand resulted in a 3-day work week at Bibb. A resident of Bibb City at the time later described the inhabitants as hungry, with no money, and too little work at the mill to alleviate their difficulties. People were prepared to work for any wages. The Stevens Methodist Church of Bibb City organized a soup line, providing hot food and bread. [56]

The NRA in June 1933 established 8-hour shifts, a minimum wage (30 cents an hour), and time-and-a-half for overtime throughout the textile industry. [57] These regulations were not felt immediately in all areas of the country. A wave of union agitation swept the South; the workers of the Bibb mill participated with other textile workers in a general strike against Southern textile mills. [58]

An earlier strike in 1919, originating in Columbus and spreading to Bibb City, had involved demands for reduction from a 10 to an 8 hour day, 6 days a week. That strike was quickly broken, Bibb refusing all the strikers' demands. [59] In 1934 the main thrust of the organizing effort was again in Columbus proper. Bibb people did stay out for three weeks, however, either refusing or fearing to cross picket lines set up by organizers and sympathizers. [60] The situation became serious enough to merit the intervention of the National Guard in Columbus and Bibb City. The strike ended with no recognition of the union at Bibb. Later efforts of the Textile Workers Union of America to organize Bibb workers have failed. [61]

Throughout this period the mill operatives were white, of Anglo-Saxon descent, coming mostly from central and southern Alabama (these people constituted the bulk of the operatives at all the Columbus mill). [62] Those operatives at Bibb who did not reside in Bibb City boarded while working with families in the village, or at the Bibb Hotel. Many were seasonal workers, coming to Bibb for the winter months and returning to Alabama farms when work was available there. Often people came to Bibb hoping to save enough to buy a small farm. Many, of course, remained with Bibb, never returning to the country. [63]

Women had always worked in production at Bibb. When the mill operated on only two shifts, women were employed exclusively on the day shift. In the late 1930s and 1940s, women began to work on all three shifts, increasing their representation during World War II.

During the war years, when labor was scarce and the Bibb management felt that "you worked anything that you could get," [64] blacks were allowed to enter production work at the mill for the first time. Until then blacks had performed only menial jobs around the mill. The first blacks in actual textile operations worked at piece rates in the production of Heat Resistant tire cord. Soon admitted to hourly-wage work, they were confined to the opening and picking rooms. At this time only white women did drawing and combing, and all roving, spinning, and weaving operations were tended by whites only. [65] The Civil Rights movement of the 1960s resulted in blacks moving from only semi-skilled to skilled jobs throughout the mill, including some supervisory positions. At present more than 50% of the Bibb operatives are black. [66]

These changes in actual working conditions and in the racial make-up of the working force were typical of those throughout Columbus and the South. Bibb, however, was surrounded by its own mill village, and experienced the changes differently from the downtown mills. The presence of a well-defined and unified company village distinguishes Bibb from the other Columbus mills.

4. Bibb City .

The village surrounding the Bibb mill was an integral part of the Bibb plant at Columbus. Wooden dwellings for operatives, constructed and owned by Bibb, clustered around the main building from the start of operations (Bibb photo 28). The history of Bibb City reveals a strong paternalism on the part of the Bibb management, illustrating a phenomenon typical of many mills in the southern United States.

The village, established in 1903, was incorporated as Bibb City in 1909, when a Superior Court judge granted a petition for incorporation approved by 45 of the village's 47 registered voters. The petition was a response to agitation for annexation by the city of Columbus. [67] Bibb City again resisted annexation in 1971, when the governments of Muscogee County and the City of Columbus were consolidated. Bibb City retains its own municipal structure, and is the only portion of Muscogee County outside Columbus. [68]

The Bibb Manufacturing Company benefited from the incorporation of its village in several ways. The company avoided the higher taxes in the city of Columbus. Management was also able to maintain political control over the area with which it was directly concerned. The first mayor of Bibb City, Walter Rigby, was also superintendent of the mill; he was elected without opposition. This identity of mill and municipal management continued until 1939, when R. B. Newton, the last mayor/superintendent, left office. [69]

The physical profile of Bibb City retains much of the aspect it presented at the time of its incorporation. The irregular borders enclose ten north-south streets, and extend only two avenues east from the Chattahoochee River. The present population of 820 not quite doubles the number of residents in 1909. When incorporated, Bibb City contained 101 houses for operatives; this number had surpassed 300 by the 1930s. [70]

Paternalism was strongly evident throughout the Bibb Manufacturing Company's entire organization. Incorporated cities surrounded Bibb's Porterdale and Payne mills; at Taylor mill there was an unincorporated village. This followed a tradition, quite strong in the South, of establishing mills in a rural area and surrounding them with company villages. Other mills in Columbus, including Eagle and Phenix (an urban mill) and Columbus Manufacturing, also built housing for employees. [71] None of the Columbus mills seem to have attained the influence, nor generated the cohesive community, in evidence at Bibb City.

The paternalist principle involved a "contract" of sorts between employees and management. In exchange for low-rent housing, schools, and other essential services, the company expected, and was in a position to demand, loyalty to the company and conformity to company-defined standards of behavior. Actual practice undoubtedly produced many variations on this theme.

The Bibb Company took seriously its responsibility to its employees. It is probable that, although the mill was never unionized, the threat of agitation served to increase management sensitivity to the needs of the workers. The strength of Bibb's paternalist commitment is best expressed by the following excerpt from a Bibb pamphlet (circa 1940) referring to the policy throughout its organization:

"The ability of the company to house comfortably, substantially all of its employees, is an important factor. The encouragement of proper social life, the handsome and substantial school buildings, directed by the company and under supervision of State and Counties, play their part . . . Gymnasiums, natatoriums, clubrooms and auditorium facilities, and handsome debt-free churches are all elements which contribute to the intangible but very real values which are such an important characteristic of the members of the Bibb Family." [72]

Housing was the most basic service provided by Bibb for its employees. Dwellings were built to "hold the most people on the least land." Few of the original lots were over 40 feet wide. [73] The houses, most of which are still standing, were nonetheless pleasant, built on winding, tree-lined streets (photo Bibb 29). Size ranged from 4 to 10 rooms. The larger houses, built as duplexes, occasionally housed four families. Rent in 1904 was 25 cents/room/week. [74]

Electricity and water were supplied by the company for both the mill and its village from the generator and water pump in power house No. 2. By the 1930s electricity was provided to every home in the city, sold to customers by Bibb at 3 cents per kilowatt. Payment for electricity was taken directly from employees paychecks. [75]

In 1921 the company built a small nursery where children could play while parents worked at the mill. Schooling for older children was provided first by the mill alone from 1903-1904, in a one-story wooden building overlooking the river, then in cooperation with the Muscogee County School District. In 1919, when a new school building was completed, Bibb hired a Superintendent of Social Services and Schools to preside over Bibb City's educational and religious programs (the churches were also company built). In the 1930s Bibb operated a vocational school at the mill, in cooperation with the State Department of Vocational Education at Georgia Tech, through which operatives could prepare themselves for more highly skilled positions. [76]

Bibb sponsored a group life insurance policy for employees. The company itself was beneficiary of all the policies, and was to spend the payment on, or in behalf of, the next of kin. The policy was available for over twenty years; it was cancelled in 1946. [77]

The company also provided recreational services. The basement of the nursery housed a men's club for employees; the company provided meeting places for women's, girls' and boys' clubs and other organizations. Bibb donated a large bus for trips sponsored by these employee groups. In company-built Comer Auditorium, programs were presented for, and often by, residents. The company also employed an athletic director to coordinate the sports program. Tennis courts were built for employee use. Basketball and softball teams, for men, boys, and girls, played teams organized by other area mills. The Bibb Recorder, a company-wide newsletter published for about 40 years (last issue 1970), reported on the sports and social activities. [78]

This recitation of Bibb services well illustrates the central role the company must have played in employees' lives, providing employment, schooling, and opportunities for leisure activities. These services constituted only one aspect of the paternalist relationship. The company exchanged these services for the privilege of exercising greater control over employees' behavior.

Much of this influence was undoubtedly non-coercive in nature. Many workers might well have identified strongly with the company which so pervaded their lives, and developed a lively community spirit with fellow employees which tended to diminish identification with other mill workers in Columbus. [79] Yet conditions inherent in the very services provided by Bibb offered the company opportunities to discipline and coerce employees if it proved necessary.

Persons not working at Bibb could not live in Bibb City, and for many years company policy required that there be at least one worker per rented room per house if it was at all possible. If a man with a wife and two children wished to rent two rooms, both he and his wife had to work at the mill to qualify for mill housing. [80] A man displeased management at his peril; the loss of his job might also cost his wife hers, and the family their home. Few operatives could afford to risk such a disaster, and the discouragement of union activities could be quite effective under such conditions.

The housing situation also brought more personal problems under management influence. If a child was disruptive at school, the school supervisor spoke to the mill superintendent. Parents were then told that if they failed to discipline their children properly, they could lose their jobs. [81] The company thus hoped to influence social behavior of the employees. Older

residents reminisce about the high moral standards once evident in Bibb City, yet readily admit that the possibility of losing one's job kept many out of "trouble." For many years the city held a mayor's court, where the mayor presided as judge; when the mayor and mill supervisor were one and the same, employees were particularly vulnerable. [82]

Since the 1940s, several factors have diminished both the degree of company control and the strong community spirit at Bibb City. The New Deal era introduced government-imposed limitations on employers' control of the workplace (see section 3, "Workers and Working Conditions"). Also, the expansion of the company throughout the years outpaced the expansion of Bibb City; not all operatives could be accommodated in the village. Those employees housed independently of the company would be less subject to its pressure.

The dearth of available manpower during the high-production years of World War II led to introduction of blacks into actual production work at the Bibb Mill (see section 3, "Workers and Working Conditions"). No blacks had ever lived in Bibb City; none were to live there until the 1960s. [83] New black employees therefore increased the number of operatives not subject to direct pressure by the company. The presence of black employees also combined in the 1960s with the strong Civil Rights movement to strain the social and athletic programs sponsored by the company. Rather than accept racially mixed groups, the mill discontinued these services. [84]

In 1965, the Bibb Manufacturing Company sold the houses at Bibb City to any workers wishing to purchase their rented homes. The great majority chose to do so; unsold houses were then offered to other Bibb employees. The cost of upkeep to Bibb influenced the decision to sell. The move also represented to the company a break with the paternalist tradition which had so strongly colored Bibb's history. Bibb's relatively late scale of housing (North Carolina mills evidently sold their housing in the 1940s) symbolizes the strength of Bibb's commitment to paternalism, or what the company termed "enlightened industrial relations." [85]

Despite these many changes, Bibb City retains much of the flavor of its earlier years. The municipal and mill offices share one building. The present mayor is superintendent of spinning operations. The present treasurer of the city is paymaster of the mill. Most other city officials are either retired or active employees. Although most active workers do not live in Bibb City, over 40% of the residents are retired Bibb employees, [86] living on the winding streets laid out in 1903. The mill and the city together vividly preserve the aspect of an early twentieth century industrial village.

The Columbus area offers interesting examples of two types of Southern textile establishments. The Bibb Company, while contrasting with other Columbus mills, was representative of the general southern pattern of a rural mill surrounded by a company village. Concentrations of mills in urban areas such as those in Columbus (or Augusta; see H.A.E.R. Augusta reports, 1977) were more unique in the Southern Textile industry. These urban mills are important illustrations of the alternatives available to Southern manufacturers (see also Eagle and Phenix Mills, Muscogee Manufacturing Company and Water Power Development at the Falls of the Chattahoochee, H.A.E.R. reports, 1977).

The juxtaposition of Bibb City and Columbus underscores the contrasts in development of the textile mills in each city. In Columbus the urban environment made more available the essential services for which Bibb City operatives were dependent on the company, precluding the establishment of strong paternalist management. Programs of the type set up at Bibb were less in evidence; union agitation was more effective. As economic and social factors began to reshape employee/management relations, the Bibb Company was better insulated than other Columbus mills due to its strong ties with the mill village. When the changes finally took place at Bibb, however, they struck more deeply into the social, as well as the working, lives of the residents of Bibb City.

Footnotes

1. Information on the Bibb/Central of Georgia relationship from "Central of Georgia and Bibb Manufacturing Company: an 88 year partnership in progress," copy of article from Bibb Company files, Columbus (source of article not given). Hanson became quite influential in the southern textile industry. He was a founder-organizer of the Southern Cotton Manufacturers' Association; in 1897 he was appointed by President McKinley as one of the incorporators of the American International Bank, along with Andrew Carnegie and Cornelius Bliss. From Henry Pittman, "The Bibb Manufacturing Company: A Profile of Progress, People and Plants, circa 1955, p. 6, typescript history, Bibb Company Records (BCR), Macon, Ga.,
2. Construction of this mill accompanied an expansion program during which Bibb purchased new mills at Porterdale, Macon, Cordele and Reynolds. From "A Brief History of Bibb Manufacturing," copy of 3-page typescript, BCR, Columbus.
3. Jordan and Comer served together prior to this, on the Georgia Railroad Commission (Pittman, 6) and Jordan could have interested the Macon entrepreneur in the Columbus area. Although Bibb City is today by Columbus, in 1900 North Highlands was quite isolated.
4. This was the situation at the Eagle and Phenix site in downtown Columbus.
5. "Plant of the Columbus Power Company, Columbus, Georgia," Electrical World and Engineer (EW and E) 43 (23 January 1904), 1965-1968. The Columbus Manufacturing plant was built just south of Bibb at the same time, to take advantage of the newly developed power.
6. "Brief History of Bibb . . ."; Pittman, p. 27.
7. Eagle and Phenix was, for example, buying yarn from Bibb by 1902: Columbus Daily Enquirer 9 January 1902. See also Melvin Thomas Copeland, The Cotton Manufacturing Industry of the United States, N.Y. 1968, original publication 1917. Copeland (pp. 86-87) suggests that since the automatic loom doubled output per worker, the ultimate result was a rapid expansion of the industry, with manufacturers installing more looms than would have been possible before given the same size labor market. These larger mills generated increased demand for thread.
8. In the following discussion, location of machinery from Sanborn Insurance map 1928, sheet 28 (Map Collection, University of Georgia at Athens); descriptions of machinery function from "The Story of Cotton," 51-page pamphlet printed by the Bibb Manufacturing Company, Macon, circa 1940.

9. Lars Sandberg, Lancashire in Decline, Ohio State University Press, 1974, gives a clear account of the rise to dominance of ring spinning in the United States (13-48). The skilled mule spinners were often prominent in labor disputes; the lower skills required for ring spinning allowed manufacturers to pay lower wages and risk greater turnover. This may have contributed to the quick adoption of ring spinning in the U. S. This is suggested by Sandberg (63-64). Copeland, The Cotton Manufacturing Industry . . ., makes the same suggestion less pointedly (123-124).
10. Pittman, 34-35, 37.
11. Pittman, 34-35; The Bibb Recorder (company newsletter) 5 August 1966, from Bibb files, Macon.
12. "Brief History of Bibb . . .".
13. Pittman, 53-57; The Bibb Recorder, 5 August 1966; Nancy Telfair, A History of Columbus, Georgia 1828-1928, Columbus, Georgia, 1929, 227-228. At first there was some question about the type of power to be used in the new addition. Consideration was given to installing an independent steam plant to produce electricity before Bibb settled on centrally generated power. (By this time Bibb had sold the Columbus Power Company. See section 2, "Power Technology").
14. Telfair, 228; Pittman, 53-57; Industrial Index 29 (16 July 1924), special Columbus Number; "History of Bibb," typescript of dates, BCR, Columbus. Additions to the warehouse were made in _____ and _____.
15. "Brief History of Bibb."
16. The Bibb Recorder, 5 August 1966; Pittman, 79.
17. Pittman, 72-73.
18. "Brief History of Bibb . . ."; Oral History Interview with McAllister Isaacs, retiring manager of Bibb's Columbus plant, conducted by John Trotter, 15 October 1975, Oral History Collection, Columbus College Archives, Columbus, Georgia.
19. "Central of Georgia and Bibb . . ."; "History of Bibb", 1 page ditto typescript of dates, from Bibb Company, Columbus; Sanborn Insurance Map, 1929, Vol. 2, sheet 357, "Bibb City"; map by the Factory Association, Hartford Conn, "Bibb Manufacturing Company dwellings," 1923, 1930. The dates on the maps are ambiguous, because the maps were drawn and then retraced at a later date, with new buildings apparently sometimes added and sometimes not.

20. Map by the Associated Factory Mutual Fire Insurance Company, Boston, Mass., "Bibb Manufacturing Company, Columbus Mill," surveyed 4 January 1931. Tire cord production in the mill led a nomadic existence, beginning in the northern weave shed and moving from place to place in the main building before finally settling in the first floor, east, where cloth looms now operate.
21. Isaacs Interview, Isaacs, with a chemical engineering degree from Georgia Tech., worked on this process during the 1930s.
22. Taped interview with R. B. Griffin, treasurer, Bibb City, and Plez Johnson, mayor of Bibb City, conducted by John S. Lupold, 28 June 1977, Columbus College Archives; "The Story of Cotton," 45-48 adds more information on the process (U. S. patent No. 2103218). In 1940 Russel B. Newton, then superintendent of the Columbus Mill, was given the Modern Pioneer Award by the National Association of Manufacturers for his work in the H. R. tire cord process (see Pittman, for year 1948).
23. Pittman, 103, 107. Pittman claims that the 1931 purchase of the 40-inch Model-Xs was the first major purchase from Draper of the Model-X loom, which had been recently developed.
24. Isaacs Interview. The speculation on product line impact during the Depression was Isaacs'.
25. Pittman, 195-125, 131-140. Meritas is now known as the Anderson plant of the Bibb Company.
26. Information on the war years from, "Brief History of Bibb"; Pittman, 182; Isaacs interview. The Korean conflict actually brought another tire boom, in which the Bibb Company participated vigorously. However, it seems certain that by this time the Columbus mill's production of cloth overshadowed its tire cord production: see "A 91-year-old Bibb Enters New Era of Progressiveness", American Textile Reporter (1 May 1967) 15-17, 56-57.
27. Sources are contradictory on this point. "Brief History of Bibb . . ." states that the wide looms were introduced in the 1940s especially for the carpet and tufting trade. McAllister Isaacs stated that backing and tufting were not major products until the late forties and fifties. It would seem that, for whatever purpose the wider looms were purchased in 1940, they first produced materials for the war, and later carpet backing.

28. "Brief History of Bibb . . ."; Pittman, 167, also for year of 1947; Griffin/Johnson Interview. Griffin claimed that when the war ended, Bibb was supposed to have had 90% of all wide looms in Muscogee County.
29. "History of Bibb", typescript of dates, BCR, Columbus.
30. Isaacs Interview. More recent changes at the Columbus Mill include installation of air conditioning on the 1st, 2nd, 3rd floors of the main building (the windows are therefore closed with corrugated metal in-fills), the building of a quality control lab, and the introduction of a vacuum lint-control system for the carding and spinning areas, all in 1967-1968. From "History of Bibb" date sheet. These changes at Bibb undoubtedly reflect pressures felt by all manufacturers of cotton textiles.
31. "Plant of the Columbus Power Company . . .", E. W. and E. 23 January 1904; following description of the power house taken from this source.
32. Taped interview with Fred Vann, Bibb Company engineer, Columbus, conducted by John S. Lupold, 27 June 1977, Columbus College Archives. Vann was certain that the rope drive never went beyond the old portion of the mill, but was unsure about weaving operations. Mr. Ken Banker (personnel Manager, Bibb, Columbus) in a tour of the mill stated that weaving was never powered by the rope drive; insurance maps showing operations also support this claim (no looms were ever installed in the original section).
33. Vann Interview.
34. "Plant of the Columbus Power Company . . .", E. W. and E., 23 January 1904. In the following account, all references pertaining particularly to 1901 equipment are from this article; all pertaining to 1954 equipment are from the Vann Interview; the general description of the rope drive mechanism is compiled from both sources.
35. The E. W. and E. article states that in 1904 there were 30 wraps of 1 1/2 inch manila rope; the great expense of sheaves, and the fact that these wraps ran to the main drive shaft, suggest that there was one sheave of 30 grooves, although the article does not state this explicitly. In 1954, however, 2 sheaves of 10 grooves each turned the drive shaft.
36. Manila rope was, in 1905, "so common now as not to need commenting"; see George F. Willis, "A New Scheme in Power Transmission," Power 25 (March, 1905), 1948-1949. A later writer credited the introduction of flexible, strong manila rope as a key reason for the replacement of the belt drives by rope, noting advantages and disadvantages of each; see Reginald Troutschold, "Transmission of Power by Manila Rope,"

- Power 39 (12 May 1914), 666,670. The same year a writer questioned the generally accepted contention (in America) that manila was much more effective on these drives than cotton rope; see Henry D. Jackson, "Transmitting Power by Rope Drives," Power 46 (8 December 1914), 808-811.
37. Vann Interview.
 38. The continuous American wrap was suited to distances less than 35 feet and greater than 75 feet. Within that range, the European system, in which independent loops ran side by side in the grooves, was preferred; see Charles L. Hubbard, "Rope Drives Still Hold Their Place In Industry," Southern Power Journal (April, 1927, 48-52. A number of trade journal articles between 1904 and 1927 compared the merits of rope drive vs. belt and American vs. European wrap; see Troutschold, Willis, & Jackson articles (note 39), as well as Hubbard. The comparative discussion in Hubbard stresses the flexibility and great power available from the American system.
 39. Hubbard, "Rope Drives Still Hold their Place . . .", Southern Power Journal (April 1927), writes that the idler was an important aspect of the American system "as it causes the ropes to run without vibration, thus permitting the use of . . . lower grooves, lighter wheels and rope, so reducing friction and saving power."
 40. Following information from examination of equipment remaining in the rope tower; also Griffin/Johnson Interview.
 41. Griffin/Johnson Interview; Vann Interview. The automatic mechanism probably involved electrical disengagement of the governor, closing the wicket gates of the turbine. Vann stated that no ropes had broken since he had come to the mill in 1939. When a bad fray occurred, it often took 4 men 8 hours to hand-splice the rope.
 42. Griffin/Johnson Interview. At present equipment in the mill is run by individual motors.
 43. H. S. Colbath, "Analysis of Bibb Manufacturing Company, Columbus, Water Wheel Operation," 5 January 1946, BCR, Macon. The conclusion in the text is drawn because Bibb did not replace the rope drive with a generator; no specific recommendations were made in the report.
 44. "Analysis of Power Cost to Bibb," BCR, Macon. Again, no recommendations were included in the analysis; it simply presented its findings.
 45. J. S. Turner (agent, Columbus) to J. J. McKay, Jr. (Macon), 27 October 1952, correspondence in engineering files, BCR, Macon. Whether parts of this section were electrified before 1946, and when exactly motors were installed, remain undetermined. It seems the insurance company

- was pressing Bibb to make the change-over; they were uncomfortable insuring the rope drive; see Vann Interview. Bibb did not carry insurance to cover rope breakage; damage to shafts, pulleys, etc. were covered; see J. J. McKay, Jr. to H. S. Colbath, 21 October 1942, engineering files, BCR, Macon.
46. H. S. Colbath to J. S. Turner, 2 February 1952, H. M. Comer, controller to J. S. Turner 20 June 1952, J. S. Turner to H. M. Comer, 28 June 1952, H. S. Colbath to J. S. Turner, 26 June 1952. J. S. Turner to H. S. Colbath, 20 July 1952, engineering files, BCR, Macon.
 47. The following account of the accident from Vann Interview unless otherwise noted.
 48. Vann Interview.
 49. H. M. Comer to J. S. Turner, 24 September 1954, engineering files, BCR, Macon.
 50. Memo, 8 November 1954, J. S. Turner to H. M. Comer, 9 December 1954, engineering files, BCR, Macon. The total cost of the accident, including the electrical installations and production loss, plus scrapping parts of the rope drive, was \$110,000. All machines in the mill are now driven by individual motors.
 51. In addition to Willis' article in Power, 1905, (see note 39), see C. Boysen, "Rope Drives," Power 25 (March 1905) 143-144. Articles on rope drives were frequent between 1900-1930, as consultation with the Engineering Index for those years will reveal.
 52. Hubbard, "Rope Drives Hold Their Place . . .", Southern Power Journal, (April, 1927). Hubbard quotes a writer in the Engineering Magazine: 'No method of transmitting power from a central generating plant to the various departments of a manufacturing establishment is, perhaps, so efficient as that which employs light-weight, high speed manila ropes.
 53. Hubbard, (note 52); this article suggests that in 1927 rope drives powered by dynamos, and those powered directly by water turbines, were of equal importance. By 1954, direct water drive was more unusual.
 54. The power house itself is demolished. Between 1960-63 the Georgia Power Company tore down the 2 older power houses and built one larger power house for its generating equipment. See North Highlands Plant of the Columbus Power Company H.A.E.R. report, 1977.
 55. Sanborn Insurance Map of Columbus, 1907, sheet 28; Isaacs interview. It is interesting to note that in 1907, although Bibb was equipped with electric lighting, there was no night shift.

56. Isaacs Interview.
57. Pittman reports that William D. Anderson, president of Bibb during this period, served on the committee which developed the Textile Industry Code #1. Pittman, 61.
58. Griffin/Johnson Interview; Isaacs Interview.
59. Pittman, 63.
60. Isaacs Interview. Isaacs attributes the extent of the Bibb strike to fear of threats by organizers; he did not discuss demands at all. A person interested in exploring the labor difficulties at Bibb could consult Columbus newspapers for August 1934, the date given by Isaacs as the time of the strike.
61. Isaacs Interview. Fieldcrest (Muscogee Mills) is the only one of the Columbus riverfront mills successfully unionized.
62. All following information was covered in both Isaacs and Griffin/Johnson Interviews. Information exclusively from one or the other will be noted separately.
63. Isaacs Interview.
64. Griffin/Johnson Interview.
65. Ibid.
66. Isaacs Interview.
67. Columbus Daily Ledger, 1 February 1968.
68. The large exception to this statement is, of course, Fort Benning.
69. Griffin/Johnson Interview; Isaacs Interview; Columbus Daily Ledger, 1 February 1968; Pittman (39) writes that G. Gunby Jordan, involved in both Bibb and Eagle and Phenix, "had" Bibb City incorporated suggesting that Jordan was influential in the move. Jordan's experience with Columbus taxes and labor disputes at Eagle and Phenix, undoubtedly influenced his move to strengthen Bibb City's isolation and independence.

70. Conversation with Plez Johnson, conducted by J. B. Karfunkle, 17 August 1977; Columbus Daily Ledger, 1 February 1968. The dwellings enclosed by Porter Street just north of the main mill, and the Bibb Hotel, were torn down in the 1950s and 1960s to provide parking lots for the new office buildings (Drawing #3, Bibb City site plan).
71. Griffin/Johnson Interview; Telfair, 229.
72. "The Story of Cotton," Bibb pamphlet, p. 5.
73. Griffin/Johnson Interview.
74. Griffin/Johnson Interview; "Plant of the Columbus Power Company . . .". E. W. and E., 23 January 1904. The rent had increased to 40 cents/room/week in 1940; when the houses were finally sold by the company in the 1960s the rent was \$1.50/rrom/week (Griffin/Johnson). This is remarkably low rent for that time, although it probably reflects in part the relatively low wages received by operatives in the South.
75. Griffin/Johnson Interview. When residents began paying bills directly to the power company is undetermined.
76. Pittman, 24, 85, 96; Isaacs Interview. Isaacs taught mathematics at the vocational school 2 nights weekly in the 1930s.
77. Griffin/Johnson Interview.
78. Griffin/Johnson Interview; Isaacs Interview.
79. This is certainly the impression received from the interviews conducted and consulted; John Trotter, during his interview with Isaacs, states that he discerned a strong community spirit when speaking with Bibb City residents.
80. Griffin/Johnson Interview; Isaacs Interview.
81. Isaacs Interview. This example from the 1930s-1940s was given by a man (Isaacs) who was retiring superintendent of all Columbus operations.
82. Griffin/Johnson Interview. Bibb City residents now use the Muscogee County Courts.
83. Griffin/Johnson Interview. Only two black families have ever lived in Bibb City. Both moved there after the company sold the houses, and both have since moved away. Plez Johnson, present mayor of Bibb City, said that no serious trouble attended their residence in Bibb City.

84. Griffin/Johnson Interview; Isaacs Interview. It is unclear whether workers or management initiated the dismantling of the program, but the opinions of white management and white employees were probably identical on this issue. Isaacs voiced regret, in retrospect, that these programs ended. He claims that relations between the races at Bibb have demonstrated that the early fears of mixed groups unfounded.
85. Isaacs Interview; "The Story of Cotton . . .", p. 57. Isaacs stated that, when selling the mill housing, the company wished to "get away from the paternalist tag."
86. Griffin/Johnson Interview. It was suggested that a man and wife together, as spinners or weavers, could hope to earn better than \$20,000/year, and might want to live in a more fashionable area.

Bibliography

Manuscript and Typescript Sources:

- Engineering Files and Records, Bibb Company Main Offices, Macon, Georgia. Interesting for electrification studies, reports on 1954 rope drive accident (plus excellent collection of post accident photographs, some of which are reproduced for this report), and letters concerning company business.
- Pittman, Henry, "The Bibb Manufacturing Company: A Profile of Progress, People and Plants", circa 1955, unpublished typescript history of the Bibb Manufacturing Company, Bibb Company records, Macon, Ga. Valuable because, while most company records were not available to H.A.E.R. historians, they were available to Pittman. Good on expansion rationale and product line.

Interviews:

- Oral History interview with McAllister Isaacs, conducted 15 October 1975 by John Trotter, Oral History Collection, Columbus College Archives, Columbus, Georgia. Very interesting source for mill operations in the 1930's and 1940's, for working conditions, and for history of Bibb City.
- Taped interview with Fred Vann, Bibb engineer, conducted 27 June 1977, by John S. Lupold, Columbus College Archives, Columbus, Georgia. Helpful descriptions of rope drive and power transmission generally.
- Taped interview with R. B. Griffin and Plez Johnson (mayor, Bibb City), conducted 28 June 1977 by John S. Lupold, Columbus College Archives, Columbus, Georgia. Valuable for past Bibb Company policies and history of Bibb City.

Published Sources:

- Bibb Manufacturing Company, "The Story of Cotton", 51-page pamphlet. Excellent photographs of all Bibb mills, and articulation of the company's paternalist policies.
- Boyson, C., "Rope Drives," Power 25 (March 1905), 143-144.
- Hubbard, Charles L., "Rope Drives Still Hold their Place in Industry," Southern Power Journal (formerly Southern Electrician) (April, 1927), 48-52.

Jackson, Henry D., "Transmitting Power by Rope Drives," Power 46
(8 December 1914), 808-811.

Troutschold, Reginald, "Transmission of Power by Manila Rope," Power
39 (12 May 1914), 666,670.

Willis, George F., "A New Scheme in Power Transmission," Power 25
(March, 1905) 148-149.

These articles, representative of many other written between
1905 - 1930, serve a dual function; they help explain and illustrate.

Addendum

The Bibb Company, Columbus Plant
First Avenue at 18th Street
Columbus
Muscoogee County
Georgia

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GA,
108 - Col
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