

Figure 1. Letterhead for stationery of the Crescent Machine Company. The stationery is among the many Crescent Machine Company items in the author's collection.

A Short History of the Crescent Machine Company Part I: 1894 to 1920

by Keith S. Rucker

Introduction

y personal interest in the Crescent Machine Company began in the mid 1990s. While I was volunteering at the Georgia Agrirama (Georgia's official Museum of Agriculture and Historic Village), located in my hometown of Tifton, Georgia, a new piece of woodworking machinery was acquired by the museum for the historic site's "variety works," the steam-powered and line-shaft driven woodworking shop. The "new" machine—a large, heavy-duty combination machine that consisted of a band saw, table saw, and jointer all mounted on a single base and powered from a single power source—had the name Crescent Machine Company, Leetonia, Ohio, cast into the base in raised letters. Later on, I would discover that Crescent called the machine a "Universal Wood-worker," and due to its unusual configuration, it was one of the most distinctive machines ever made by Crescent.

After discovering this machine, I wanted to find out as much as I could about the machine and the company that made it. When my initial searches for information yielded little results, I embarked on a personal quest to find and acquire as much information on this manufacturer of woodworking machinery as possible.

Over the course of the next ten years, I managed to assemble an extensive library of original literature produced by Crescent, as well as many other historical pieces of information (Figure 1). This data has allowed me to construct a history of the manufacturer from its humble beginnings in the 1890s through its unprecedented growth during the first two decades after the turn of the last century, its struggle of just surviving the great depression, and its ultimate takeover in the post-World War II economy by a large industrial conglomerate, which eventually resulted in the disappearance of the Crescent name as it was merged into other brands owned by the same parent company. During Crescent's life, it managed to become a major manufacturer and a well-respected name in the woodworking-machinery industry.

In addition to collecting information on Crescent, I have also managed to collect many of the machines made by the company over the sixty years they were in operation. The machines in my personal collection are the cast iron beasts that rolled off Crescent's line over a period of sixty years. Owning and using so many of these machines has provided me with insight regarding the true quality of the machines, how they were made and, more important, how easily they can be restored.

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This history of the Crescent Machine Company is my first real attempt to share the results of my research to date. I doubt that I will ever quit collecting information on Crescent and adding to my database, but I feel that the time is right to publish what I know and have learned. If any reader has information to add to this account or wishes to dispute what is written here, I invite correspondence on the subject.

The Birth of a Company

The 1934 catalog for Crescent Woodworking Machinery describes the company's beginnings:

The Crescent Machine Company began operations at Leetonia, Ohio, in 1893, with a very limited capital and an abundant ambition. Backed by a firm determination to build a product that would give universal satisfaction, the Crescent line of wood working machinery was established.¹

Much of Crescent's literature throughout the years credit 1893 as the year that the company began operations. However, it appears that this claim may be somewhat of a stretch; no proof has yet to be discovered that can trace the company back before 1894. In fact, the oldest document concerning the creation of the Crescent Machine Company found to date is an announcement published by the founding fathers in August, 1894:

ANNOUNCEMENT

We wish to inform our friends that co-partnership relations have been entered into by Elmer Harrold, F. H. Grove and C. G. Wilderson, for the establishing of a manufacturing machine shop, under the firm name of the Crescent Machine Co.

Arrangements have already been made for a suitable grounds, with switch facilities, and the construction of buildings, etc., will be at once begun.

It is the intention to engage in a general line of machine shop work, and in all probability the manufacturing of Saw Mills; also to grind and corrugate Grist Mill Rollers.

We hope to be in operation by November 1st, and shall be pleased at any time to have our friends call and see us.

Will be located on West Street, Columbiana, Ohio, near Handle Factory.

Respectively,
Elmer Harrold,
F. H. Grove,
C. G. Wilderson.
Columbiana, Ohio, August. 1st, 1894²

The 1894 announcement makes it doubtful, at best, that Crescent Company actually began in 1893 as so much of its sales literature suggests. Perhaps the three partners were working together before entering into a formal relationship, but if that is the case, no proof has yet to surface to prove that point one way or another.

The initial announcement stated that the company would be located in Columbiana, Ohio. While this was probably the intention, fate intervened, and the company put down its roots in nearby Leetonia, Ohio. One week after the original announcement, *The Leetonia Reporter*, the small village's weekly newspaper, reported that the "Leetonia Board of Trade will make an effort to have the works locate here."

A week later, a front page story in *The Leetonia Reporter* gave in detail an account of the deal worked out to entice the new company to locate its business in Leetonia rather than Columbiana. In exchange for locating in Leetonia, the Leetonia Board of Trade donated a site, picked out by the owners of Crescent, for the new business.

The three partners selected a tract of land located on Front Street, with railroad tracks on the rear of the property, and the Electric Light Works next door. The owner of the land agreed to sell it to the Board of Trade for a cash price of \$350. Within a few days, all of the necessary arrangements were made, and land was purchased on behalf of the Crescent Machine Company. In addition to purchasing the land, the Board of Trade agreed to do the necessary site preparation on the property where the plant would be built. The site preparation, consisting of fill work, was estimated to cost an additional \$200 to \$250. Thus, Crescent Machine Company would call Leetonia, Ohio, its home.

Once it was settled that Leetonia would be the home of Crescent, work on the new machine shop progressed very quickly. Plans were to erect a new building, 37 feet by 70 feet, at an estimated cost to Crescent of between \$2,500 and \$3,000; the building was projected to be completed in time to commence operations around November 1, 1894.4 On September 7, 1894, barely one month after the partners announced they would be creating the new company, the fill work on the new site was complete, and the job of erecting the building was about to begin.5 Three weeks later, the frame of the new building had been erected and the roof was under construction.⁶ By October 26, The Leetonia Reporter reported that "A large crescent has been placed in the position on the roof of the Crescent machine shop" and that it had a "very unique appearance."7 Finally, in mid-November 1894, the Crescent Machine Company opened for business, delayed a few

weeks from its original projected completion date only because an order of pulleys for the shop's line shafting was delayed in delivery.⁸

Understanding why Crescent got started is another story all together, and to tell that story, one must first understand the political and financial climate of the day. During the 1880s, industry in the United States was booming, and economic growth was exploding due to increased industrialization, expansion of railroads, and increased foreign investment. As so often happens after a period of fast economic growth, financial downturns soon follow. By the early 1890s, the U.S. economy was heading for a depression, which culminated in what historians refer to as the "Panic of 1893." During this time, more than fifteen thousand U.S. companies, including several major railroads, and more than five hundred banks failed. The poor economic times resulted in nearly 18 percent of the U.S. workforce being unemployed.9

Elmer Harrold, Clint Wilderson, and Frank Grove were among those unemployed due to the economic downturn. All three had previously held positions at the Enterprise Company, a manufacturer of sawmills and steam engines located in Columbiana, Ohio. Rather than just giving in to their situation—and to take advantage of their strong background in manufacturing—the trio decided to gamble on their futures and open a small machine shop, which they named the Crescent Machine Company.

While some sales literature suggest that Crescent might have made woodworking machinery from its earliest days, no real evidence has emerged that details any woodworking machinery made by Crescent before 1897. When the company was founded around 1894, it was announced that the Crescent Machine Company would "engage in a general line of machine shop work, and in all probability the manufacturing of Saw Mills" as well as "to grind and corrugate Grist Mill Rollers." 10 Considering that the founders were all expert machinists, more than likely the new company spent its early days finding its niche to manufacture a product. But in order to make ends meet, they spent a considerable amount of their time catering to the needs of the community. For example, one account says that much of the work done during the early years was mainly odd jobs-anything from dressing a cross-cut saw to making custom iron castings.11 To provide extra income in 1896, at the height of the bicycle craze of the day, an advertisement in The Leetonia Reporter indicates that Crescent was even selling "Stormer" bicycles. 12 An 1897 reference to the company indicated that the shop

had made a pattern for a boiler front for a local manufacturer. ¹³ Other advertisements from the time indicate that the Crescent Machine Company was even a dealer of typewriters, which at that time were newly invented office gadgets that intrigued many businesses. Even as late as 1900, well after it was established as a manufacturer of woodworking machinery, the Crescent shops made a special order clay crusher, weighing nearly four tons, for a nearby pottery company. ¹⁴

The Founding Fathers

Born near Columbiana, Ohio, on January 23, 1864, Elmer Harrold was the twelfth and youngest child born of Samuel and Susan Crumbacher Harrold (Figure 2). In the late 1800s, the Harrold name was well known as being strongly connected to industry in the areas around Leetonia, Ohio. Some accounts suggest that, along with his brother, Albert, and his brother-in-law, Jacob Nold Detwiler, Elmer Harrold was a co-founder of the Enterprise Manufacturing Company of Columbiana, Ohio, a manufacturer of steam engines, boilers, and saw mills. While there is no doubt that Harrold was



Figure 2. Photo of Elmer Harrold appearing in the November 22, 1908 issue of The Pittsburgh Dispatch.

COURTESY OF THE LEETONIA COMMUNITY LIBRARY associated with Enterprise, if it is true that he was a co-founder of the company, he would have only been about fourteen years old at the time, making this claim somewhat questionable. It was at Enterprise, however, where Elmer began his career working in and learning about the machinery business. Another one of Elmer's brothers, Samuel Harrold, was also involved with Enterprise. He, along with Albert, later split off from Enterprise to form the Harrold Tool Company, makers of hand tools such as wrenches and screwdrivers.16

In 1888, Elmer Harrold married Sarah Nold. Sarah's family was, in the late 1800s, well tied to industry in the areas

around Columbiana and Leetonia, Ohio. In addition to the area's lumber industry, the Nold family had interests in the Enterprise Company where Elmer worked. After marrying, Elmer and Sarah had two children, a son, Ellsworth, and a daughter, Martha. Well known as an inventor, Harrold had at least fifteen patents issued in his name. While most of his patents related to woodworking machinery, a few were related to one of his favorite hobbies—photography. Harrold invented a special exposure meter that helped photographers determine the best settings for their cameras based on lighting. (After his retirement from Crescent, Harrold ran a small business where he sold these meters, advertising for them in photography periodicals.)

In addition to his photography hobby, Harrold was fascinated with astronomy. His interest was great enough that Harrold eventually purchased an entire observatory and moved it to a specially built building on his property. The cornerstone of the observatory was a custom-made telescope, which was said at that time by some to be one of the finest privately owned telescopes in the United States. Using his photography skills, Harrold studied the heavens and photographed astronomical phenomenon and even contributed scientific articles on astronomy in such journals as *Scientific American*. Harrold later donated the entire observatory to Mount Union College after his daughter graduated from the institution in 1919. Nearly ninety years after his donation, the telescope is still in use at Mount Union College.

Elmer Harrold's primary co-partner in the Crescent Machine Company, Clinton G. Wilderson, was born in Canton, Ohio, on March 10, 1870, a son of Charles and Susan Bair Wilderson of Columbiana, Ohio. Upon graduation from Columbiana High School in 1889, Wilderson began a journey that would prepare him well for the company he would later form. He first went to work for the Enterprise Manufacturing Company of Columbiana, Ohio, where he learned the trade of machinist, and later worked as a moulder for the Buckeye Engine Company of Salem, Ohio. Wilderson married Ella N. Betz, also of Columbiana, Ohio, on March 29, 1893. The couple's only child, Myrna, was born September 16, 1899.

The third original co-partner in Crescent was Frank Harrold Grove, a nephew of Elmer Harrold. Born in 1871 or 1872, he was a son of Valentine and Anna Harrold Grove (Elmer Harrold's sister). Little is known about the early life of Grove. He was a high school classmate of Wilderson at Columbiana High School and worked with both Harrold and Wilderson at Enterprise before co-founding Crescent.²⁰ While Grove was definitely an early player in the formation of Crescent, his tenure in the new venture was short. In August 1895, only a year after Crescent was founded, Grove disposed of his interest in the Crescent Machine Company and moved to

nearby Columbiana, Ohio, where he went back to work for Enterprise as the company's superintendent.²¹ Grove would later leave his mark on the industrial world when he founded the National Rubber Machinery Company, which became a major manufacturer of machinery for the automotive tire industry.²²

The Birth of the Crescent Band Saw

The first real evidence of a woodworking machine made by Crescent was a band saw, created in early 1897. Crescent Machine Company was located close to the Mellinger and Nold Planing Mill. Another prosperous company in Leetonia, the Mellinger and Nold Planing Mill, was owned by the family of Elmer Harrold's wife, Sarah Nold Harrold. This company specialized in architectural mill work, such as windows, doors, and siding for houses, as well as practically anything else made of wood, including household furniture.²³ Networking with family led to Crescent's first woodworking machine.

John Royer, a cabinetmaker who worked at the nearby planing mill, needed a band saw. But, rather than purchasing one from a company that specialized in making band saws, Royer decided to build one on his own. Along the way, he enlisted the help of Crescent.²⁴ Once the saw was complete, Royer needed a blade fitted for his saw. However, Royer did not know how to weld the blade. At that time, most band saw blades were extremely unreliable. Blades frequently broke, either from constant flexing or from the failure of the weld that held together the two ends of the blade. Royer requested the help of Wilderson and Harrold to make a blade for his new machine.²⁵

Wilderson and Harrold both knew very little about welding but were willing to try. After much experimenting, they discovered a welding compound that would allow them to weld the blade together. They soon realized that the welding compound and the procedure they used were superior to others on the market.²⁶ Because this new welding compound had potential as a successful new product, Crescent began to market it. The compound was considered to be so valuable that, at any one time, only one person besides the company owners at Crescent knew the ingredients.²⁷ For many years to come, each Crescent band saw sold included a special clamp and tongs kit that allowed the owner to weld blades using the proprietary Crescent welding compound.

In addition to the welding compound, Crescent also speculated that the band saw designed by Royer—a



Figure 3. A circa 1897 20-inch Crescent band saw that is branded with the Silver Manufacturing Co. name cast into the base.

Owned and restored by Keith Rucker.

band saw that improved upon band saws currently on the market—might have a potential that Crescent could exploit. Using the Royer saw as a model, Crescent started experimenting with designs of band saws with even more improvements until they were satisfied with a model that they would manufacture.

The Silver Connection

By July of 1897, Crescent had perfected the design of the new band saw to the point that the partners were confident enough to begin limited production. *The Leetonia Reporter* announced that two of the earliest "band-saw machines" produced by the Crescent Machine Company had shipped to nearby Salem, Ohio. One of the machines went to E. E. Cook, the other to

the Silver Manufacturing Company.²⁸ Silver Manufacturing Company, a well-established company only a few miles up the road from Crescent in Salem, Ohio, manufactured tools and machinery for the blacksmith and carriagemakers' trades. The quality of the Crescent band saw machines must have impressed Silver; two weeks later, Crescent received an order from Silver for an additional thirty machines.²⁹

For at least the next ten years, a symbiotic relationship existed between Crescent and Silver. Because Silver had the customer base and advertising channels that Crescent lacked and Crescent had the manufacturing and engineering capabilities to manufacture machinery that Silver's clientele needed, the two companies benefited from each other's strengths. While Crescent spent its early years building its own customer base, it appears that many of the company's early machines were sold through the Silver channels.

Several band saws, clearly Crescent-made machines based on the design, have surfaced in recent years that were branded as being made by Silver rather than Crescent (Figure 3). Some of these very early models—designs made by Crescent before 1900—were made by Crescent with the Silver Manufacturing name cast into the base of the machine. Other Crescent band saws, mostly of improved designs made after 1900, have been discovered with Crescent name ground off the casting (but still readable) and a separate metal tag attached with the Silver Manufacturing Company name on it. Exactly how long this relationship between Crescent and Silver existed is not known, but by 1911, advertising by Silver featured a different model than those made by Crescent, suggesting that Silver was no longer selling the Crescent-made machines. While it is not known exactly when or why this relationship ended, there is no question that the affiliation between Crescent and Silver helped generate the sales volume that Crescent needed to establish itself in the woodworking machinery industry.

Expanding the Lineup of Crescent Machinery

The original Crescent band saw was a small 20-inch machine. (A band saw's size is determined by the diameter of the wheels.) The early success of this first Crescent band saw persuaded Harrold and Wilderson that a demand for woodworking machinery existed. Strategically, though, the partners concluded that if Crescent were to have an impact in the market,



Figure 4. An advertisement that appeared in the December 1897 issue of Carpentry and Building showing the design of the first Crescent band saw.

the product line must be expanded from a single band saw to a complete line of band saws, especially larger models. Immediately Crescent began experimenting with new designs to fill this niche. This conviction changed the company's focus from a general machine shop to a manufacturer of machines for the woodworking industry.

In September of 1897, only two months after beginning development of the new models, Crescent had the first of these new and larger band saws ready for production. By the time the machines were ready to ship, the company received orders for at least four of the larger machines. Of those initial orders, one was shipped to Corinth, Mississippi, and another went to Louis E. Rectin, a large machinery dealer in Cincinnati. The Leetonia Reporter commented concerning the shipment to Cincinnati, "This house has an extensive southern trade, and as the machine is destined to be sent eventually to Georgia, the present sale may be the entering wedge of a large business for our local industry." 32

The earliest advertisement for Crescent woodworking machinery found to date is an advertisement appearing in *Carpentry and Building*, December 1897 (Figure 4). The advertisement featured a drawing of the 20-inch Crescent band saw and indicated that Crescent was marketing band saws in three different sizes and with options for both foot- and belt-powered machines. Compared to the larger and heavier Crescent band saws that would become the standard design in

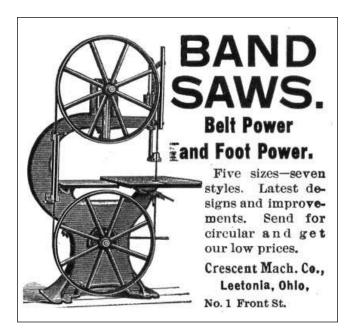


Figure 5. Ad appearing in the March 1899 issue of Carpentry and Building magazine showing the design of Crescent's larger 32-inch band saw.

years to come, the band saw in the ad was very light. It consisted of a two-piece frame that bolted together where the bottom wheel bearing mounted; the bottom section was an open-frame pair of cast iron legs and the top a C- shaped frame that held the top wheel.³³

While the total number of these early band saws manufactured is unknown, some reported orders of

Crescent machinery during 1897 and 1898 were to W. H. Mullins of Salem, Ohio; two machines to Pittsburgh³⁴; one band saw to S. M. York of Cleveland, Ohio³⁵; and six machines to Silver & Deming of Salem, Ohio.³⁶

With the sales of band saws increasing month by month, Crescent realized that in order to establish themselves as a manufacturer of woodworking

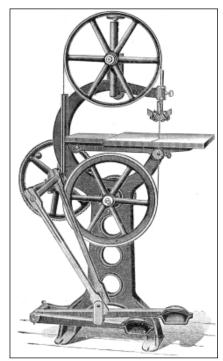


Figure 6. Engraving of the "New Foot Powered Band Saw" shown in the March 1899 issue of Carpentry and Building.

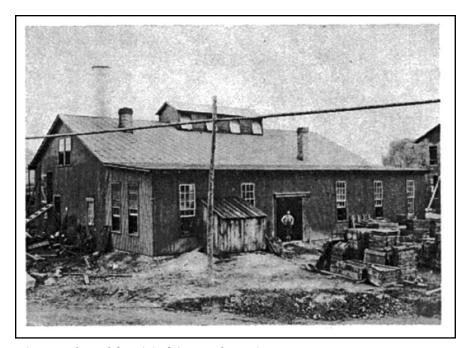


Figure 7. Photo of the original Crescent factory in 1898.

Image obtained from the program for the Crescent "Old Timers Banquet," held November 18, 1948.

machinery, the company must expand its product line to machines other than band saws. As the company tinkered with new ideas and improvements to the standard types of woodworking machinery, Harrold and Wilderson's engineering capabilities were put to the test. For example, in February 1898, *The Leetonia Reporter* divulged that Crescent had designed and built a lathe. Shipped to Canton, Ohio, this machine represents the first documented piece of woodworking machinery made by Crescent outside of its line of band saws.³⁷ The immediate success of this machine, however, is questionable; Crescent did not offer any models of lathes in advertisements or catalogs until 1929, more than thirty years after this first reference to Crescent designing a lathe.

A major milestone for Crescent occurred in January 1899, when Crescent's trade expanded to the overseas market; the company shipped the first of many machines to Europe. An order for a band saw was placed and shipped to Adoplhe Janneseens in Paris, France. At the time, this was headline news: *The Leetonia Reporter* wrote: "The Crescent People are to be congratulated on the fact that their work is being so widely known; and the citizens of our town will be pleased and proud because goods manufactured here are meeting with appreciative encouragement both in America and Europe." ³⁸

The band saw shipped to France was the first Crescent export, and for many years to come, exports would make up at least a portion of Crescent's trade. In September 1899, Crescent exported two band saws: one to Russia and the other to Holland.³⁹ Later that year, in December, three more machines were exported—one to South Africa one to Rotterdam, Holland, and another to Monamadura, East India.⁴⁰

As to the line of machinery being made by Crescent, an advertisement in the May 1898, issue of *The Wood-Worker* indicated that Crescent manufactured band saws in three different sizes with both belt- and foot-power models. ⁴¹ By March of 1899, advertisements indicated that the line had been expanded to five different sizes and seven styles (Figure 5). ⁴² One of the new introductions to this line at this time was an improved version of the 20-inch band saw that had the option of being foot-powered (Figure 6).

A news release in the March 1899, *Carpentry and Building* gives details about the foot-powered machine:

In this progressive age of machinery it might appear to some that foot power devices would gradually become unpopular, and doubtless to those who have always been accustomed to using power machinery the advantages of machines driven by foot power would not be readily apparent. To the thousands of mechanics who are doing their work by hand, however, and who are seeking devices for expediting their labors, the foot powered band saw shown is likely to prove of more than ordinary interest.⁴³

A Growing Company

anufacturing of the early Crescent woodworking machines between 1897 and 1899 occurred at the original Crescent factory on Front Street in Leetonia, the same location that Crescent built in 1894 when the company began operations (Figure 7). Sanborn Fire Insurance maps from 1898 show the Crescent factory as being a single building consisting of a machine shop and a woodworking shop (Figure 8).

With the introduction of new machinery designs and increased sales, by 1899, the Crescent Machine Company's production expanded to a point where the company was outgrowing its Leetonia facilities on Front Street. Crescent began an expansion that included an attachment to its building to house a new and larger foundry. In June 1899, work began on the addition.⁴⁴

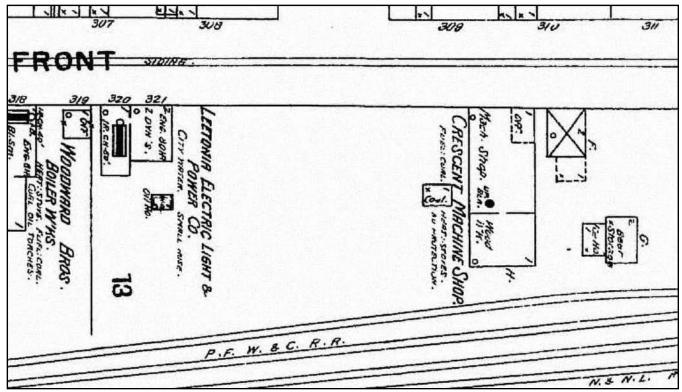


Figure 8. A map showing the location and configuration of the Crescent factory in 1898. Note that at this time, the Crescent factory consisted of only a single building located on Front Street.

SANBORN FIRE INSURANCE MAP, LEETONIA, COLUMBIANA COUNTY, OHIO, PUBLISHED BY SANBORN MAP COMPANY, JUNE 1898. IMAGE OBTAINED THROUGH THE OHIO PUBLIC LIBRARY INFORMATION NETWORK.

Because Leetonia was located in a part of Ohio that produced iron, Crescent was able to purchase some of the new foundry equipment from nearby companies. One key piece of equipment needed for pouring castings in the new foundry was a cupola, a specialized furnace used to melt metal or iron. At first, Crescent made a deal with the Salem Iron Company in nearby Salem to purchase an old cupola that was no longer being used.46 That cupola was moved to the site of the new foundry. Shortly after making that deal, for some reason, Crescent decided to instead purchase a new cupola.46 One problem that Crescent had to deal with was that the site where the cupola needed to be placed frequently had problems with spring flooding.⁴⁷ To relieve the cupola from the impact of the flooding, cement-like cinder—a by-product of the manufacturing of iron—was obtained from the nearby Grafton furnace and used to build the site up to a higher ground.48 Completed in late August 1899, operations then began in the new foundry building.49

As the Crescent Machine Company continued to grow, Harrold and Wilderson realized that while their personal strengths were in designing and building machinery, they lacked the business skills needed to run the company successfully. They needed a person capable of running the company's day-to-day business

operations. They found this person in Wilber G. Bess. Bess, an African American, was born in 1879, in Salem, Ohio, to William E. and Josephean Bess. He was a graduate of the Salem Business College in Salem, Ohio, one of the largest and most respected business schools in eastern Ohio at the time.

Bess turned out to be just what Crescent needed. Indeed, one historian argues that "[Bess] had more business sense than both Wilderson and Harrold put together." For many years to come, Bess served as office manager and bookkeeper for Crescent, keeping the business operations of this busy manufacturer running smoothly.

At that point in American history, an era of Jim Crow laws, Crescent's decision to entrust an African-American with such critical matters as its business operations demonstrates an unusual fortitude. At the turn of the twentieth century, many Americans considered that African-Americans as a group were not capable of such important work. No matter what others thought, at Crescent, Bess was a key part of management, trusted, accepted, and well liked by Crescent workers.

As the demand for machinery made by Crescent increased, so did their workforce. When hiring new employees, Crescent generally started them at low

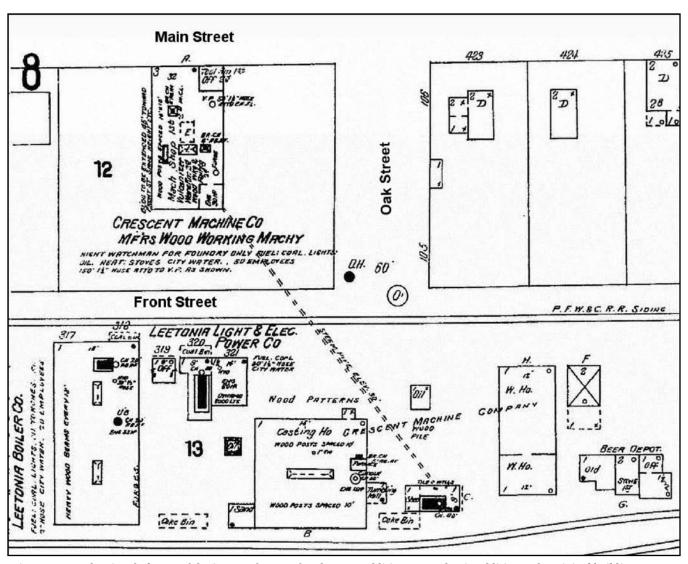


Figure 9. Map showing the layout of the Crescent factory after the 1901 additions. Note that in addition to the original building on Front Street, the Crescent factory had been expanded to include a foundry next door to the original building as well as a machine shop located between Main and Front Streets.

SANBORN FIRE INSURANCE MAP, LEETONIA, COLUMBIANA COUNTY, OHIO, PUBLISHED BY SANBORN MAP COMPANY, AUGUST 1903. (IMAGE OBTAINED THROUGH THE OHIO PUBLIC LIBRARY INFORMATION NETWORK).

wages and increased the pay as the employee gained experience. In 1899, a gentleman by the name of Joe Worman was hired by Crescent. He left behind a notebook stating he "started to work for the Crescent Machine Company in December for \$0.90 per day but will be paid more if I am worth it." Six months later he was making \$1.25 per day.⁵¹

About the same time that Crescent made improvements to its factory in the late 1890s, the company also began to experiment with a new technology—electricity. When Crescent selected a location in Leetonia, the company built its factory next door to the Leetonia Lighting Company. While it is unknown if the decision for Crescent to locate there was influenced by the fact that the power plant was so close, or if Crescent just

took advantage of the situation, it was not long before the company was installing electric lights throughout the plant. Crescent soon ran into a problem though. With electricity being such a new invention, the power supply was used almost exclusively for electric lighting. Because most customers did not need power during the daylight hours, the Leetonia Lighting Company only generated electricity during the dark hours of the day. Particularly during the winter months when the days were shorter, the Crescent factory needed lighting inside its buildings up until around 10 o'clock in the morning and again from around 2 o'clock on in the afternoon, a time period outside the operation hours of the Leetonia Lighting Company. To resolve this problem, Crescent decided to purchase a dynamo (an electrical

generator) in the fall of 1900 to produce electricity for lighting. Undoubtably, this dynamo was driven by a steam engine, much like the rest of the machinery in the Crescent plant.⁵²

In 1901, a milestone in the history of woodworking machinery occurred. Crescent became the first manufacturer in the woodworking industry to develop, produce, and market a machine with an electric motor as its primary power source. In 1901, Crescent advertised a direct-motor drive-band saw, which at the time was a totally new concept. 58 Until then, all machinery was powered from belts linked to overhead line shafts that, in turn, were powered by either steam engines or water wheels. Throughout the early 1900s, Crescent continued to offer options for motor-powered machines even though it was not until the second decade of the twentieth century that electric-powered machines became common place in the factories and workshops across the country. While introduced with little fanfare and considered at the time by most to be a novelty, the incorporation of electric motors to woodworking machinery would soon become an industry standard, illustrating the forward-thinking, engineering of the Crescent Machine Company.

While the company was rapidly growing and becoming a respected name in woodworking machinery, its growth did not come without some pains; many of the workers in the factory felt that they were not being financially rewarded for the company's early success. While the company did not have an organized labor union at the time, in February 1901, the moulders in the Crescent foundry quit work for a brief period of time due to what they considered to be poor pay. Fortunately for Crescent, less than a week after the strike began, a compromise was reached between the workers and management, and the men went back to work.54 This was just the first of many strikes to be held at the Crescent factory during its years of operation, the last one ultimately contributing to the demise of the company.

Even with the Crescent management having to deal with the occasional labor problems, business was growing briskly. By 1901, the company once again found its factory too small. To help resolve the space problem, Crescent decided to build a new machine shop on property obtained from the Quinn family and located on the south side of Main Street in Leetonia. The plan was to move the machine shop and offices to the new location but keep the current foundry, located on Front Street, where it was, and

expanding its size by moving some foundry operations into the vacated machine shop.⁵⁵ In May 1901, to make room for the new Crescent buildings, an existing house on the new property was sold and moved.⁵⁶ Soon, construction began on the new property for a new machine shop, a three-story high frame building.⁵⁷ By August 1901, the building was completed, and in a two-week period, the machinery was moved to the new building (Figure 9).⁵⁸

In October 1901, when the company moved its machine shop to the new property, Crescent also relocated its office to the new building.⁵⁹ With this move, the address of the Crescent Machine Company changed from No. 1 Front Street to 224 Main Street.

As Crescent continued to have success with its line of band saws, the company also began to refine and add to its line of machinery. After the 1901 factory additions, the additional space allowed the company to manufacture two totally new types of machines. Advertisements from September 1901 indicate that Crescent was now offering jointers and table saws for sale (Figure 10).60 In March 1902 The Leetonia Reporter gave details about Crescent again adding to its lineup when the company designed and tested a new jumbo band saw and found it to be ready for production.⁶¹ This new machine was the 40-inch combination band saw, featured in detail in the 1903 Crescent catalog. While this large saw was capable of both ripping and re-sawing lumber, its success must have been limited since it was only featured in the 1903 catalog; by 1904, it was no longer being advertised.62

While Crescent was adding to its line of machines and sales were increasing, labor relations once again became a problem. In May 1902, not happy with their pay, Crescent foundry workers decided to strike. Unfortunately for these workers, things did not turn out quite like their first work stoppage a year earlier. This is an account of the incident in *The Leetonia Reporter*:

As near as we can figure out by information from both sides the situation at the Crescent foundry is somewhat mixed, and the men are not just so sure of what position they are in. On Thursday morning the men sent Foreman Ball into the office to notify the management of their demands. Not being prepared on the instant to give an answer, the foreman was sent back to the men, asking them to go to work and that the answer of the company would be given in the evening. The men did not go to work, but sent the foreman in again a short time after, demanding an immediate answer to the demand. The men were then informed that they could either go to work for that day or come to the office and get their money



Figure 10. The first advertisement detailing the addition of new types of machinery, including jointers and saw tables, manufactured by Crescent. The ad appeared in Carpentry and Building (September 1901).

and accept their discharge. All but the foreman and three men refused to go to work.

Above are the facts, and the company claims there is no strike, but that the men were discharged. The men, on the other hand, claim there is a strike, as they had stopped work before being discharged. It matters little, and the men acted unwisely, to say the least. They belonged to no union and were in no way organized; both essential elements in making demands. Then the taking of such snap judgment on any company is not calculated to excite sympathy with fair-minded people. Not but that the men should have what they asked for, but it was an awful poor way to go about to secure it.⁶³

While the 1902 strike was an ugly mark in Crescent's history, the problem was resolved quickly, and the men returned to work, with most employees returning in their previous positions.

Crescent continued to grow, and its line of machines grew as well. By 1903, the Crescent line had expanded from the first band saw to include several other types of woodworking machines. In 1903, the lineup for band saws included the large 40-inch combination band saw, and smaller models in 36-, 32- and 26-inch sizes. The company also offered a "band sprue saw" (for cutting the "sprues" or metal tabs left on metal castings where the molten metal was poured into moulds) and a smaller 20-inch band saw, powered by either foot or by belt.

Besides the band saws, Crescent offered a combination table saw with optional horizontal borer as well as 8-, 12-, 18- and 24-inch jointers.⁶⁴

While the introduction dates of the newer machines outside of the line of band saws is not currently known, it would be a fair guess that these were added gradually about the same time that Crescent expanded its factory in 1901 and its production capacity grew.

As Crescent continued to add new machines to its line, its reputation for building quality machinery became better known, and to make room for additional production, the company steadily needed more space. In October 1903, Crescent again expanded its factory by adding to its machine shop. ⁶⁵ By 1904, Crescent received new boilers with more steam power to accommodate larger engines to power the factory ⁶⁶ and erected a new brick boiler and engine house for its foundry on Front Street. ⁶⁷

The 1904 Crescent catalog shows the same line of machinery as in 1903 but with the 40-inch combination band saw omitted. Production of the 40-inch band saw ceased most likely because sales were poor. In that year, Crescent introduced even more options for electric motors on its machines. The catalog states, "Since electrically driven machinery is becoming more popular each year, we have arranged to furnish individual motor drives for any of our machines and invite correspondence on the subject." In November 1904, an announcement in *The Wood-Worker* magazine detailed the introduction of yet another new machine to the Crescent lineup, the No. 3 Universal Saw Table.

A New Corporation and a New Factory

In 1905, two major milestones mark Crescent Machine Company's history. First, on September 1,

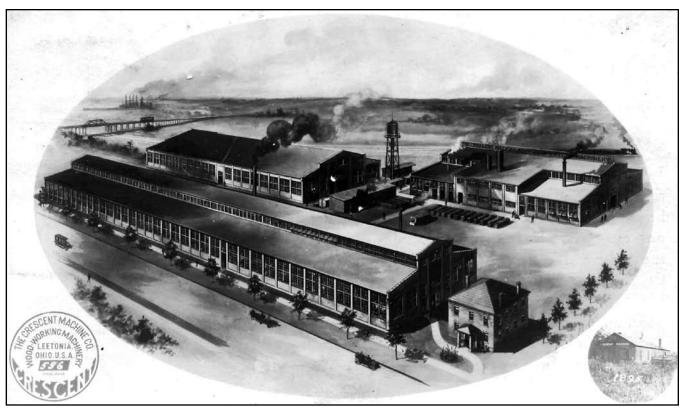


Figure 11. Postcard dated 1911 showing the new Crescent Factory built in 1906. The back of the post card reads: "See how we have grown since 1895. No amount of push, energy, perseverance or drudging could have caused such an expansion if our customers hadn't appreciated the splendid quality put into CRESCENT machines. We made the machines just as good as we could and they became so popular we had to have additional facilities to satisfy the demand."

From the collection of Keith Rucker.

1905, articles of incorporation were filled with the Ohio Secretary of State's office to formerly incorporate the Crescent Machine Company. The articles stated:

Said corporation is formed for the purpose of carrying on the business of a foundry and machine shops, for the purchasing and overseeing the necessary real estate, buildings, machinery, tools, fixtures, supplies, for the manufacturing and selling products of said foundry and machine shops, including iron and steel castings, machinery and generally to carry on a manufacturing factory in wood, iron and steel products.⁷⁰

The new corporation was capitalized at \$50,000, divided into 500 shares of \$100 each. The incorporators of the Crescent Machine Company were Elmer Harrold, Clinton G. Wilderson, Robert C. Harrold, Ella G. Wilderson (Clinton's wife), Wilber Bess, and S. R. Fellows.⁷¹ Papers subsequently filed with the Secretary of State's office indicate that Clint Wilderson was designated as the president.⁷²

Further shortages of manufacturing space created Crescent's second milestone of 1905. Business for Crescent had grown to the point where, once again, the current factory did not have the production capability to

keep up with demand. Limited in options for expanding in its current location, Crescent desperately needed new facilities. To accommodate the needs of the company's growth—and to increase production—Crescent petitioned the Leetonia City Council to vacate Oak Street, the street located between Main and Front Streets, to make way for another Crescent shop. Crescent argued that since the company already owned all buildings and lots on either side of the street in question and that the street was not heavily used, the vacation would cause little problem for the community. Several other property owners in the vicinity were against the proposition, but after much consideration, the city council finally voted to vacate the street and turn it over to the Crescent Machine Company for new construction purposes.⁷³

A couple of weeks after its first petition to the city council, Crescent once again went to the board, asking for a right of way to construct a new railroad switch from the Erie siding, which would cross Front Street to provide access to the Crescent yards. In December 1905, the city council granted an ordinance for this purpose. The Syspring 1906, everything appeared to be shaping up for Crescent to begin constructing its latest expansion.

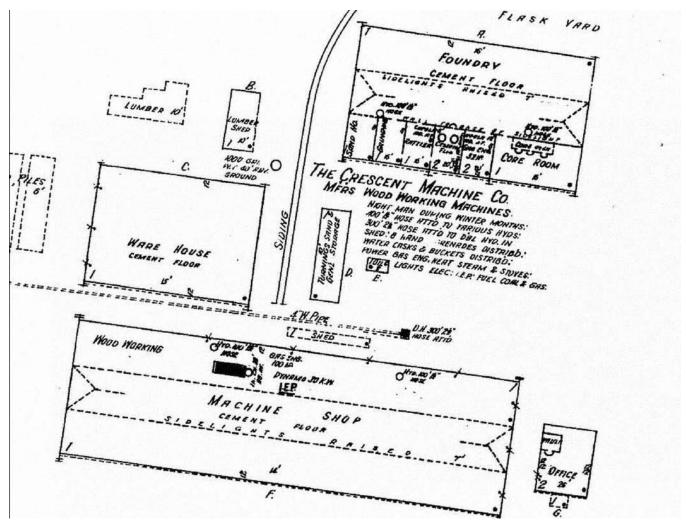


Figure 12. Sanborn Fire Insurance Map dated 1910 showing the layout of the new Crescent factory. Sanborn Fire Insurance Map, Leetonia, Columbiana County, Ohio, Published by Sanborn Map Company, July 1910. Image obtained through the Ohio Public Library Information Network.

But in March 1906, Crescent shocked the Leetonia community and announced that rather than build on the Oak Street property—as originally planned—the company would instead move the entire factory to a new location, an eleven-acre site at the "East End" of Cherry Fork Street on the border of the Leetonia village in Fairfield Township. An interview with Elmer Harrold published in *The Leetonia Reporter* stated the following:

It is well known and has been apparent to citizens generally for a year or more that the increasing business of the company requires that they secure more land and build larger and more modern shops. It is also well known that they have been endeavoring to secure contiguous real estate to their present holdings. It was for this purpose that council vacated a portion of a street for them a few weeks ago. They could not secure any more land on the west because of the Leetonia boiler shops. They succeeded in getting some on the east but not enough, as parties

"jacked up" the price way beyond what they could consider. Likewise on the South. Of course there is no outlet north. So, they did about the only thing left for them to do, buy on the outside of the corporation where they could get plenty of room.

Plans now are under way for building extensive new shops, though details have not yet been decided upon. It will, however, be a modern plant in every particular and the buildings all constructed of fire proof material. They expect to be in their new shops and in fairly good shape by next fall.

The old shops are realty of the company has not yet been disposed of, and there is nothing definite under consideration as to what will be done with them. Mr. Harrold stated, however, that portion of Oak Street recently vacated and granted to them will be cleared off and put in same condition as it was, and properly conveyed back to the town for street purposes.⁷⁵

Within a few weeks of announcing plans to construct their new factory, the Crescent Machine Company broke ground. In May of 1906, *The Leetonia Reporter* reported the following:

Noldville, the east end suburb in which the new Crescent shops are to be located, is a busy hive of industry now. The well that was drilled for gas or water, has proved to be all that could be desired for good pure water. Men and teams have been busy grading, and brick and other building material is being rapidly gathered together on the grounds. The work will be pushed along as rapidly as the weather will permit and workmen be employed.⁷⁶

As the new factory began to take shape, it was apparent that it would be an imposing structure. One full block long, it included a foundry for making castings. Strategically for Crescent, the new location was ideal. Later catalogs boasted that the "location affords unusual advantages, the following materials being produced plentifully within a radius of about one mile: lumber, natural gas, sand, coal, coke and pig iron."⁷⁷

The new location had another strategic feature: the new Crescent factory was located alongside the railroad a few feet outside the village corporation line, just enough to prevent Leetonia from collecting taxes on the new structure. As one might imagine, this method of saving money in taxes looked good to Crescent but not that great to the village of Leetonia. With this move by Crescent, the city would be losing tax revenue. For years afterward, a love-hate relationship existed between Crescent and Leetonia. Leetonia loved the fact that Crescent was there providing much needed jobs to the local and surrounding residents as well as pumping money into the local economies, but at the same time, the village really wanted to get the lost tax dollars back.

Even though friction existed between Crescent and the village at the time, in August 1906, the Leetonia Board of Public Affairs agreed to Crescent's request to extend city water mains to the new factory. However, while the village would provide water to the factory, a service it could charge for, Leetonia refused to provide sewage service to the Crescent plant since Crescent did not pay city taxes! The many attempts to incorporate the area Crescent occupied into Leetonia all failed due to heavy resistance from Crescent, local homeowners, and the very powerful Pennsylvania Railroad. Not for another sixty years, in 1966, was Leetonia successful in incorporating into the village limits the building that once housed the Crescent factory and surrounding areas. So

By November 1906, the new factory was nearing completion (Figures 11 and 12). As Crescent moved into

the new factory, its production never had to actually stop.81 The company's strategy for moving production machinery was quite straight forward. One by one, Crescent would move a single machine and its operator to the new factory. As each machine was moved, the machine's operator could help in the transfer. In the new factory, once the machine was in place and hooked up to the line shaft, the worker was back to work. This process—repeated over and over again until the entire factory was moved—meant continued production throughout the entire shift.82 The move to the new facilities was mostly complete by Christmas 1906, with the machinists all working there at that time. The foundry, however, was delayed. A special crane was needed to handle the flasks used in casting iron. The foundry continued working in the old factory until early 1907 (Figure 13).83

Several editions of Crescent catalogs published during the first two decades of the 1900s give us a snapshot of how Crescent machines were made:

All the machines are produced in large quantities at a time. A large lot of castings, made in the Crescent Foundry Department, are continuously carried in stock; these are machined up in lots from twenty five to several hundred at a time, according to their size, this system resulting in an enormous saving in the cost of production, as well as in a high standard of quality in the finished article. It is the only way by which duplicate parts can be furnished for repairs, when necessary.⁸⁴

Interestingly, some historians have compared the Crescent method of manufacturing to that of the assembly line pioneered by Henry Ford for his Model T car—only on a smaller scale.⁸⁵

One of the benefits Crescent realized from moving its shops to a new location was the abundant space on the eleven-acre site. In August 1907, to take advantage of this empty land, Crescent constructed an athletic field, for the workers to play sports. In America at the time, the most popular sport was baseball. After a ball diamond was made, the worker-players ordered new team outfits and started regular games. Two teams were created from Crescent workmen. One team consisted of the single men, the other married men. The single men called their team "The Kids," and the married men were the "Foxy Grandpas." In the autumn of 1907, people from all over Leetonia spent their Saturday afternoons watching baseball courtesy of the Crescent Machine Company.86 Most of the games played were reported in the weekly newspaper, and throughout the fall of 1907, the "Foxy



Figure 13. This photo from 1906 showing the Crescent "Foundry Crew," the workers who cast the iron that Crescent machines were made from. IMAGE OBTAINED FROM THE LEETONIA OHIO COURIER (JULY 21, 1966).

Grandpas" seemed to have the upper hand on "The Kids" with only a single game being reported to have been won by the younger employees.⁸⁷ The Crescent workers also put together a company team, made up of the best players at Crescent, which played baseball against other companies in the area that fall. All of the games Crescent played against other company teams, as reported in the local newspaper, were won by the Crescent team.88

Continued Growth

Inroughout the first decade of the 1900s, The

L Crescent Machine Company continued to grow and prosper. With all the space in its new factory, the company's manufacturing capabilities increased dramatically. Taking advantage of this new situation, Crescent continued to add new machinery to its line as quickly as new machines could be developed. By 1906, Crescent's catalog indicated that several new machines had been added to its traditional offerings of band saws, saw tables, and jointers. New introductions included Swing Saws Band Saw Blades The Crescent Machine Co., 206 Main St., Leetonia, Ohio, U. S. A.

Figure 14. Advertisement from the July, 1909 issue of Carpentry and Building detailing the "Crescent Variety Wood-Worker."

Crescent Variety Wood-Worker, showing Saw-Table

a unique "Panel Band Saw," designed to cut the inside of a circle in a large panel. Other new machine in this catalog was the "Angle Band Saw," a specialized band saw mainly used in the shipbuilding industry that was capable of tilting the upper wheel in such a way that the machine could cut at adjustable angles rather than the standard 90 degree square cut.89

Other changes included the re-naming of the combination saw table, now called the no. 2 saw table. Three new designs of saw tables, the nos. 1, 3, and 4, were also added to the line.90

The 1907 catalog featured four more new machines, including a single spindle shaper, four sizes of swing cut-off saws,

an 18-inch disk grinder, and a 26- x 8-inch surfacer.91 In the 1908 edition of Crescent's catalog, even more machines were introduced, including a double-spindle shaper, a planer and matcher, a boring machine and 18- and 24-inch planers.92

By 1909, even though Crescent had only been in its new factory a little more than two years, the bustling company had once again outgrown its production space. To make yet again more room, a new warehouse was added to its factory grounds to accommodate the growth.93 Machines introduced in 1909 included the "No. 5 Slid-

> ing Top Saw-Table," the "Variety Wood Worker" (a combination machine built on the frame of a jointer advertised as containing a jointer, borer, saw-table, pole rounder, shaper and emery grinder) (Figure 14), and the nos. 324 and 424 planer and matchers.

> By 1910, the expansion of the lineup of machinery had finally slowed down a bit. The catalog published that year detailed only minor changes to the machinery being offered. The panel band saw, introduced around 1906, had been discontin

ued, but to make up for lack of new introductions, Crescent instead announced several new features for its existing line of machines including variable feed options for its planers and improvements to its 20-inch band saw.⁹⁴

Operator safety was also beginning to become a priority in the design of the Crescent machines. Safety guards were introduced for both jointers and table saws. A significant new feature in the 1910 catalog was the addition of a round safety head for jointers. This is what that catalog had to say about this new option:

A cutter head of cylindrical shape, such as the one shown in our illustration, is appropriately called a Safety Head, as distinguished from the common type of square head. The main advantage is that they are safer to the operator. In case of a hand getting in contact with the knives on a Safety Head, a flesh wound would be about the limit of the injury; while with a square head the hand usually drawn in, resulting in the loss of fingers or part of the hand. It is to minimize the extent of the injury that the Safety Head is recommended.⁹⁵

Throughout 1910, business was still brisk for the Crescent Machine Company, with the company often working a second shift through the night.⁹⁶ By the spring of 1911, because sales continued to expand requiring increased production, Crescent was again in a situation where the company was in need of more space in the factory. A decision was made to add another shop, a 90 x 112-foot brick building, to be used as a wood working shop and as a storage building for patterns (Figure 15).⁹⁷ Ground was broken for the building in April 1911 and completed later that year (Figure 16).⁹⁸

As had happened in the past, with the company adding more production space in their factory, Crescent once again took advantage of the additional manufacturing space by adding to its line of machinery. The 1912 Crescent catalog shows several new features being added to its line. New types of machines included a 30- x 6-inch surfacer and a post borer; additions to its current line of machinery included 16- and 20-inch jointers and $5\frac{1}{2}$ - and 6-foot swing saws. 99

Safety also continued to be a priority for Crescent. In the 1912 catalog, for the band saws the company offered as an option a special set of pressed steel guards.

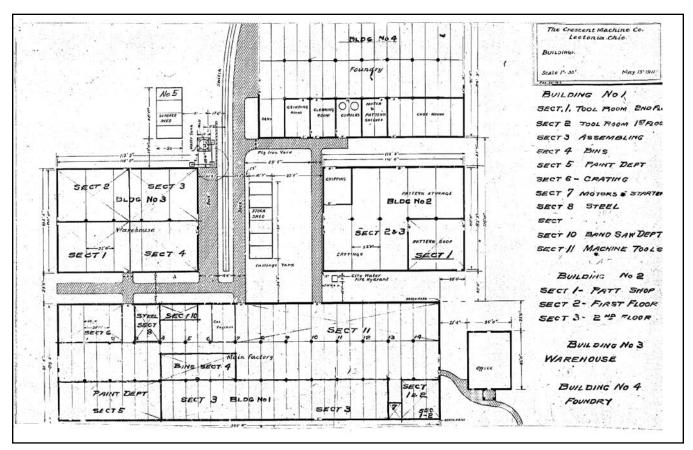


Figure 15. Blueprint of the Crescent Factory from which the 1911 expansion was made. The new addition is titled "Bldg No 2" on the drawing.

COURTESY OF THE LEETONIA COMMUNITY LIBRARY)

Several pages in the catalog detailing both descriptions and pictures were dedicated to introducing these new guards. Drawings of the guards show them with an embossed sunburst pattern logo, as well as the company's name around the edge. ¹⁰⁰ This unique artwork was protected by a U.S. Design Patent, issued on June 3, 1913, and the guards themselves were granted a patent a little over a month later on July 22, 1913. (Several examples of these special guards have been seen on Crescent band saws, and if any band saw can be found with the guards, this logo helps date the machine to this time period.) While the band-saw guards were introduced with much fanfare, for some unknown reason they appear to have been discontinued from the Crescent line when the 1916 catalog was published. ¹⁰¹

In 1912 Crescent introduced one of the most innovative machines that the company ever included in its line—the Crescent Universal Wood-Worker. While it was not listed in Crescent's 1912 catalog, several advertisements for the Universal Wood-Worker are dated 1912, including a postcard showing the machine, postmarked December 16, 1912. Does const Crescent catalogs stated that the next year's catalog would be available in December of that year, it would indicate that the Universal Wood-Worker was developed sometime after the 1912 catalog was issued, but before the 1913 catalog was published. In the 1913 catalog the Universal Wood-Worker is shown in great detail.¹⁰³

The Universal Wood-Worker was a combination machine that includes a band-saw, jointer, shaper, horizontal borer and saw table all mounted on a single base. The Universal Wood-Worker also included such optional attachments as a knife grinder, a disk grinder, an emery wheel, a hollow chisel mortiser, a re-saw gauge, a tennoner and a panel raiser (Figure 17).¹⁰⁴

While Crescent introduced several models of the Universal Wood-Worker over the years, the 1913 catalog introduced only the models 51-59. Each of these models is similar in basic construction but differs by the size and configuration of the individual machines on the unit. For example, one could configure a Universal Wood-Worker with either a 8-, 12- or 16-inch jointer or 26- or 32-inch band-saw. Some models could also be ordered with no band-saw at all.¹⁰⁵

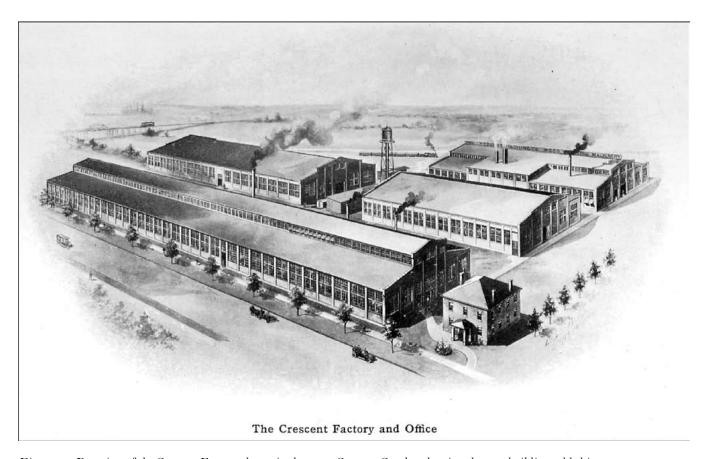


Figure 16. Drawing of the Crescent Factory shown in the 1913 Crescent Catalog showing the new building added in 1911

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Most of the machines at this time were powered through wide flat belts from an overhead line shaft that was constantly turning. In order for the operator to be able to power a machine on or off, he needed a way to engage and disengage the machine from the line shaft. This was often accomplished by a "tightloose" pulley arrangement. One pulley was fastened

FOUR MEN CAN WORK ON IT AT ONE TIME, EACH INDEPENDENT OF THE OTHER STRONG, DURABLE. CONVENIENT THE No. 51 CRESCENT UNIVERSAL WOOD WORKER WILL SAVE MONEY FOR YOU. GIVE IT A CHANCE

Figure 17. Postcard postmarked December 1912 advertising the new Crescent No. 51 Universal Woodworker. Reverse of card reads: "The No. 51 CRESCENT Universal Woodworker will take care of more of your work than any other tool you can install. It combines 26 in. band saw, 8 in. jointer, reversible single spindle shaper, saw table and borer. Various attachments bay be added. Four men can work on it at one time. With this machine you are independent of outside sources for your supply of wood work."

"tight" to the main drive shaft on the machine and a second pulley of the same size and directly next to the tight pulley would have a bearing in it that allowed it to turn "loose" on the same shaft. By shifting the belt, which was under constant power from the line shaft, from the loose pulley to the tight pulley, the machine could be easily powered on and off by the operator. A

major feature in the 1913 catalog was the introduction of self-oiling loose pulleys, now standard on all machines, simplifying the maintenance of machines and no doubt increasing the life the bearings in the loose pulleys. ¹⁰⁶

By 1914, the Crescent catalog indicated that new features for that year included the 26- x 8-inch surfacer being remodeled and changed to variable friction feed, as well as improvements to the fenders on band-saws. This catalog also introduced the new models 101-112 of the Crescent Universal Wood-Worker. These models of the Universal Wood-Worker were similar to the models 51-59 except that they were a bit lighter duty and less expensive. 107

A World War

usiness for the Crescent Machine ${f D}$ Company continued to grow at a steady pace until the outbreak of World War I in 1914. Until that point, Crescent had enjoyed a substantial export market to countries throughout the world. With a large percentage of the residents in the Leetonia area being either first or second generation German immigrants, the company had many connections in Germany with the result that some of its best customers were in that country. At the outbreak of the war, Crescent had several train cars loaded with machinery for export to Germany. When the restrictive export sanctions were placed on Germany by the United States government, those train car loads of machinery were soon returned to the Crescent factory. Unfortunately for Crescent, the world hostilities had a negative

influence in its overseas business. For the duration of the war, practically all exports stopped. For the first time in the company's history, business was declining, and for a period of time, Crescent was forced into a four-day work week.

While the World War initially presented problems for Crescent, demand for war-related supplies increased rapidly, and new opportunities began to develop for other manufacturers across America. To support the war effort for England and France, Crescent received orders to make shell casings, an event that briefly made business look brighter. When England and France discovered that Crescent had done considerable business with Germany before the war, and that the company—through its employees—had close ties to the country, those countries refused to do business with Crescent. 108

To add to Crescent's woes, in May 1916 the workers in the foundry decided to go on strike. According to reports, about fifteen employees were out of work during this period. Fortunately for all, especially Crescent, a conference between a representative of the company and the men settled the strike quickly, and the men returned to work. 109

In 1917, America entered the world war. While much of the local news at this time focused on the boys being shipped "over there" for military service, conditions at Crescent Machine Company improved. Even though England and France suspected Crescent to be a supporter of Germany, Crescent Machine and its employees supported the country's overseas war effort wholeheartedly. Frequently, with Liberty Loans and War Stamps, Crescent employees contributed to the Allies' war efforts. Crescent itself contributed to the many events conducted to raise war funds. Once the allied countries realized that Crescent was in support of the war, overseas contracts resumed. For the remainder of the war, Crescent produced shell casings, doing its part in the national war effort. This had a major impact on the profitability of the company, and for the first time since the beginning of the war, men were once again working full shifts. With the additional work and income for the company, wages for the workers at Crescent began to rise. 110 With many of the myths being dispelled concerning alleged sympathies toward Germany, orders once again were coming in at a steady pace.

However, just when Crescent thought it finally had all of its problems related with Germany behind it, in April of 1918 the company was forced to fire its longtime foreman. The following is the account of the incident that appeared in *The Leetonia Reporter*:

Last Saturday afternoon William F. Wendel, general foreman of the Crescent Machine Company plant was called into the office, paid off and dismissed from further service with the company. At the time no explanations were given or received. Since then the company has let it be known that it was because of alleged charges against Mr. Wendel of pro-German sympathies and disloyal utterances.

The Crescent workmen have been very loyal in their support of all Liberty loans and other war activities, and have taken the lead in the industrial community. It is alleged that in their efforts the men were not supported by Mr. Wendel, as they thought they ought to be, and trouble began to brew. It culminated Friday afternoon in an open rupture between Mr. Wendel and a workman, in which Mr. Wendel is charged with making some very disloyal remarks. All the workmen became very greatly incensed, and a conference between them and company officials followed, resulting in Mr. Wendel's immediate dismissal.

Mr. Wendel stoutly denies the most serious language attributed to him in the Friday fracas, and also denies in detail most of the rumors that are and have been floating around the community for the past several months. Admitting he has not seen his way clear to buy Liberty bonds or War stamps, he points with pride to the help and aid given the Red Cross, Y.M.C.A., K. of C. and all other war activities inaugurated in the community. He also says he has been strickly (sic) neutral on the war question.

The reporter personally interviewed all interested parties and the above are the facts, with small details omitted.

The announcement was a surprise to many, as Mr. Wendel has always been a good citizen from his youth up, and had the respect of the entire community. He was public spirited and active in many good works. When a lad of sixteen, he started to learn the machinist trade with the Crescent company in the old original shop on Front street, and after serving two years was made the first foreman. Since then he has climbed the ladder with them, from building to building, until after serving them thru all the hardships and prosperity for the past twenty years or more, he finally was made general foreman, which position he has held for the past five years, and is said to have been always competent trustworthy and defficient (sic).¹¹¹

While no doubt exists that during the First World War Crescent had its fair share of challenges, the company did manage to overcome them. Crescent added to and improved its line of machinery during this time. The 1916 catalog featured two additions to the Crescent

line: a hollow-chisel mortiser and a four-inch bench top jointer. Moreover, the catalog also indicates that improvements were made to their saw guards. 112 New machines introduced in the 1918 catalog included a cut-off table saw and a 40-inch-angle band saw. Other new features for that year were spreaders on saw-tables, hinged guards for band saws, belt guards for swing cut-off saws and options for a direct motor drive on planers and jointers. 113

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Notes

- Crescent Wood-Working Machinery for Small Shops: 1934
 Catalog (Leetonia, Ohio: The Crescent Machine Company, 1934), 1.
- 2. "Announcement," The Crescent Machine Co., August 1, 1894. Columbiana, Ohio.
- 3. The Leetonia Reporter, August 9, 1894, 1.
- "The Machine Shop Coming," The Leetonia Reporter, August 17, 1894, 1.
- 5. The Leetonia Reporter, September 7, 1894, 1.
- 6. The Leetonia Reporter, September 28, 1894, 1.
- 7. The Leetonia Reporter, October 26, 1894, 1.
- 8. The Leetonia Reporter, November 16, 1894, 1.
- 9. Lee I. Niedringhaus. "The Panic of 1893," The Museum of Financial History, http://www.financialhistory.org/fh/1998/61-1.htm (accessed June 4, 2004).
- 10. "Announcement."
- 11. John S. Worman, letter written to Dick Downing on February 13, 1987, regarding the history of the Crescent Machine Company, 1.
- 12. The Leetonia Reporter, April, 10 1896, 8.
- 13. The Leetonia Reporter, December 10, 1897, 5.
- 14. The Leetonia Reporter, October 12, 1900, 5.
- 15. Sam Detwiler. "The Enterprise Co." e-mail sent to the Old Woodworking Machines Web site (www.owwm. com) concerning the history of the Enterprise Company. December 15, 2003.
- Wilmer Detrow Swoope phone conversation with Keith Rucker on May 12, 2003, regarding the family history of the Harrolds.
- 17. Elmer Harrold, "Another Explanation." Scientific American (October 21, 1916, n.s, 115): 365.
- 18. "The Clarke Observatory Telescope," http://raider. muc.edu/ph/Activities/Clarke/Clarke2.html (accessed December 3, 2003).
- 19. The Leetonia Reporter, April 24 1931, 1.

- Dana M. Batory. Vintage Woodworking Machinery, Volume Two. (Mendham, N.J.: The Astragal Press, 2004), 138.
- 21. The Leetonia Reporter, August 9, 1895.
- "National Rubber Machinery Started Out as One-Man Shop," *The Ledger*, Columbiana, Ohio. Date unknown.
- 23. Worman, 1.
- 24. Worman, 1-2.
- 25. Worman, 1-2.
- 26. Worman, 2-4.
- 27. Batory, 139.
- 28. The Leetonia Reporter, July 30 1897, 5.
- 29. The Leetonia Reporter, August 13, 1897, 5.
- 30. The Leetonia Reporter, August 20, 1897, 5.
- 31. The Leetonia Reporter, September 24, 1897, 5.
- 32. The Leetonia Reporter, October 1, 1897, 5.
- 33. Carpentry and Building XXI, no. 12 (December 1897): iii.
- 34. The Leetonia Reporter, October 8, 1897, 5.
- 35. The Leetonia Reporter, December 3, 1897, 5.
- 36. The Leetonia Reporter, February 11, 1898, 5.
- 37. The Leetonia Reporter, February 11, 1898, 5.
- 38. The Leetonia Reporter, January 27, 1899, 5.
- 39. The Leetonia Reporter, September 22, 1899, 5.
- 40. The Leetonia Reporter, December 1, 1899, 5.
- 41. The Wood-Worker XVII, no. 3 (May 1898): back cover.
- 42. Carpentry and Building XXI, no. 3 (March, 1899):iii.
- 43. Carpentry and Building XXI, no. 3 (March 1899): xv.
- 44. The Leetonia Reporter, June 2, 1899, 5.
- 45. The Leetonia Reporter, June 9, 1899, 5.
- 46. The Leetonia Reporter, June 16, 1899, 5.
- 47. The Leetonia Reporter, June 23, 1897, 5.
- 48. The Leetonia Reporter, June 30, 1899, 5.
- 49. The Leetonia Reporter, August 18, 1899, 5.
- 50. Worman, 5.
- 51. Worman, 5.
- 52. The Leetonia Reporter, October 19, 1900, 5.
- 53. Herman Hjorth. *Machine Woodworking*. (The Bruce Publishing Company, 1952), 15.
- 54. The Leetonia Reporter, February 1, 1901, 5.
- 55. The Leetonia Reporter, May 10, 1901, 5.
- 56. The Leetonia Reporter, May 3, 1901, 5.
- 57. The Leetonia Reporter, July 12, 1901, 5.
- 58. The Leetonia Reporter, August 30, 1901, 5.
- 59. The Leetonia Reporter, October 11, 1901, 5.
- 60. Carpentry and Building (September 1901): viii.
- 61. The Leetonia Reporter, March 16, 1902, 5.
- 62. Crescent Wood-Working Machinery: 1903 Catalog (Akron, Ohio: Werner Publishers, 1903), 1-24.
- 63. "The Crescent Strike," *The Leetonia Reporter*, May 23, 1902, 1.
- 64. Crescent Wood-Working Machinery: 1903 Catalog, 1-24.
- 65. The Leetonia Reporter, October 9, 1903, 5.
- 66. The Leetonia Reporter, May 20, 1904, 5.
- 67. The Leetonia Reporter, July 29, 1904, 5.
- Crescent Wood-Working Machinery: 1904 Catalog (Akron, Ohio: Werner Publishers, 1904), 1-24.
- 69. Batory, 142.
- Ohio Secretary of State, "Articles of Incorporation of The Crescent Machine Company." Records of Incorporation vol. 113 (September 6, 1905), 6.
- 71. Ibid.

- 72. Ohio Secretary of State, "Appointment of Agent," January 10, 1950.
- "Street Vacated To Accommodate Improvements by Crescent Machine Company," The Leetonia Reporter, November 17, 1905, 1.
- 74. The Leetonia Reporter, December 22, 1905, 5.
- "Will Move—Crescent Machine Shops to Locate in East End," The Leetonia Reporter, March 2, 1906, 1.
- 76. "Improvements Progressing," *The Leetonia Reporter*, May 11, 1906, 1.
- 77. Crescent Wood-Working Machinery: 1910 Catalog, 5.
- 78. Worman, 7.
- "Public Affairs—Board Will Extend Water Mains to New Crescent Machine Shops," The Leetonia Reporter, 3 August 1906, 1.
- 80. Batory, 143.
- 81. The Leetonia Reporter, November 30, 1906, 5.
- 82. Worman, 7.
- 83. The Leetonia Reporter, December 22, 1906, 5.
- 84. Crescent Wood-Working Machinery: 1910 Catalog, 5.
- 85. Worman, 3-4.
- 86. "Crescent Ball Game," *The Leetonia Reporter*, August 30, 1907, 1.
- 87. The Leetonia Reporter, September 6, 1907, 1.
- 88. The Leetonia Reporter, September 20, 1907, 5.
- 89. Crescent Wood-Working Machinery: 1906 Catalog.
- 90. Ibid.
- 91. Crescent Wood-Working Machinery: 1907 Catalog.
- 92. Crescent Wood-Working Machinery: 1908 Catalog.
- 93. Crescent Wood-Working Machinery: 1910 Catalog, 5.
- 94. Crescent Wood-Working Machinery: 1910 Catalog, 3.
- 95. Crescent Wood-Working Machinery: 1910 Catalog, 49.
- 96. The Leetonia Reporter, January 28, 1910, 5.
- 97. The Leetonia Reporter, March 10, 1911, 5.
- 98. The Leetonia Reporter, April 14, 1911, 5.
- Crescent Wood-Working Machinery: 1912 Catalog, (Boston, Massachusetts: Griffith-Stillings Press, 1912), 3.
- Crescent Wood-Working Machinery: 1912 Catalog, 27-28.
- Crescent Wood-Working Machinery: 1916 Catalog (Boston, Massachusetts: Griffith-Stillings Press, 1916).
- 102. Postcard featuring the Crescent no. 51 Universal Wood-Worker postmarked December 16, 1912 (Philadelphia: Chilton Co.).
- Crescent Wood-Working Machinery: 1913 Catalog, 93-112.
- 104. Ibid.
- 105. Ibid.
- 106. Ibid.
- 107. Crescent Wood-Working Machinery: 1914 Catalog.
- 108. Worman, 9-10.
- 109. The Leetonia Reporter, May 26, 1916, 5.
- 110. Worman, 9-10.
- 111. "Crescent Boss Was Dismissed," The Leetonia Reporter, April 19, 1918, 1.
- 112. Crescent Wood-Working Machinery: 1916 Catalog, 3.
- 113. Crescent Wood-Working Machinery: 1918 Catalog (Cleveland, Ohio: The Calvert-Hatch Company, 1918), 3.