

History of
Carnes Company

448 S. Main Street
Verona, WI 53593

www.carnes.com

608-845-6411

email: carnes@carnes.com

Today the Carnes Company is a major manufacturer of HVAC products for the commercial construction market, but few people know the complete history of this Verona, Wisconsin firm.

Wilbur R. (Bill) Carnes began to manufacture and sell his first products near the end of 1939. Bill and his family lived on the east side of Madison, Wisconsin near Lake Monona. His first employee was hired in January, 1940. Prior to starting the company he took a leave of absence from his position as a chemical salesman and developed a method to take metal shavings out of the oil coolants that he was selling. His first products were sump tank cleaning machines that were manufactured for use in machine shops, including the Rock Island Arsenal in Illinois. These machines helped to solve oil filtration problems. Bill would sell a unit and then would build it in his shop, which was located at 2066 Helena Street in Madison. These machines had 100, 150, or 200 gallon tanks that were placed on wheels. They had centrifugal baskets with filters to remove steel chips from the coolant used in milling machines, which allowed the coolant to be used over and over. Bill later designed his own vacuum pump for these machines.

After World War Two there was a shortage of electric motors for the sump cleaners, so Carnes shifted to the development of water heaters for the dairy industry. Bill developed an interest in spinning metal, which led to prototype work for the Trane Company. Bill designed a round diffuser that was used on the bottom of round space heaters that Trane was marketing at the time. Bill had an automatic spinning lathe designed to produce this product.



Figure 1 Original Carnes "Factory" on Helena Street in Madison

Due to lack of space Bill moved his operation of 25 employees to a larger (10,000 square feet) building in Verona in May of 1950. This is the current location of Carnes Company Headquarters. The original building was made of concrete block and had living quarters in the front section.



Figure 2 Original Carnes Verona Plant

As the business expanded he built another building with an office and an attached spinning shop. The building was built at an angle to the original building, although it is not known why it was constructed this way.



Figure 3 Verona Office and Shop

Bill began to produce spinnings for other companies, such as Titus, which is a competitor of Carnes. The company expanded its product offering with lines that included grilles, registers, and diffusers.



Figure 4 Early Spun Diffuser and Carnes Diffuser-Light

In the mid 1950's Carnes began to manufacture Centrifugal Spun Ventilators using the spinning technology that Carnes had developed. This same basic technology, much improved, is used today for the manufacture of the Carnes Spun Ventilator products.



Figure 5 Spinning Aluminum

The largest metal spinning contract that Bill secured was for the Oak Ridge Project in Tennessee making components utilized in the uranium enrichment process required to produce nuclear weapons. Carnes manufactured large donut spinnings that required welding two large aluminum sheets together and then spinning them across the welds without breaking the welds. These were so large that a special under slung trailer had to be used to ship them.

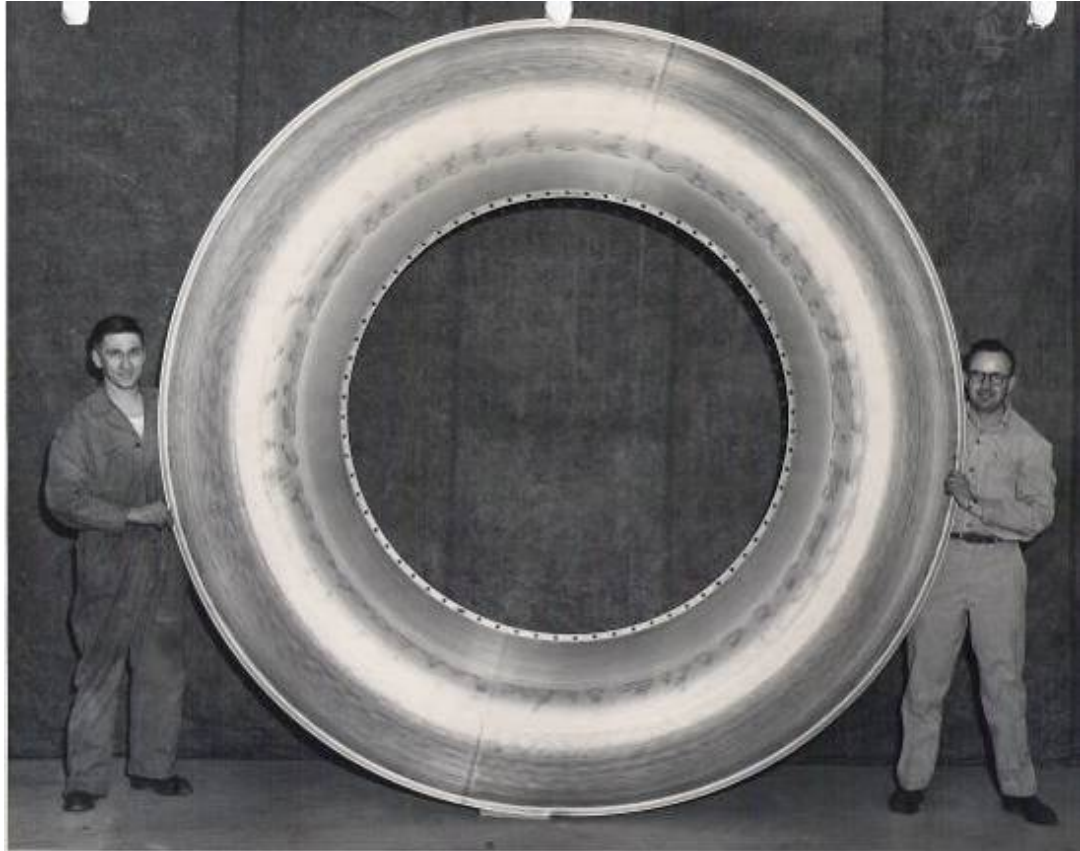


Figure 6 Large Donut Spinning

By the mid 1950's the Verona plant exceeded 216,000 square feet.



Figure 7 Aerial View of Verona Plant – Approximately 1954

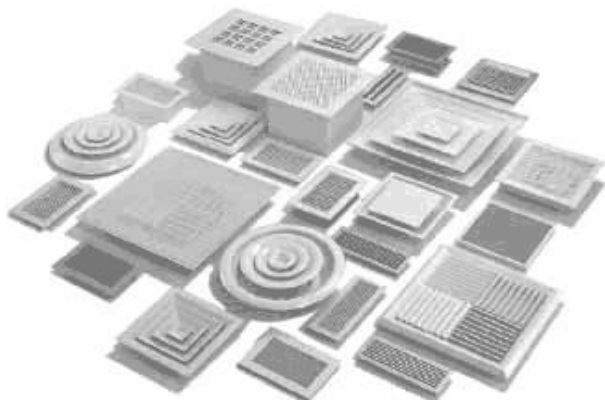
In 1955 Bill sold the sump tank portion of the business to Bob Troller, an engineer who worked at Carnes. In 1957 Bill sold Carnes Company to Dings Magnetic Separator Company for over a million dollars. He then started another company named Senrac, which is Carnes spelled backwards. Senrac manufactured louvers and dampers, and Bill sold these product lines to Wehr a couple years later. Bill Carnes then turned to city politics and was elected a Madison alderman in 1962.

In 1958 Carnes Company consolidated with Wehr Steel and was renamed Wehr Corporation. In 1965 Carnes expanded by adding a second 110,000 square foot building in Sanford, North Carolina. During the 1960's Carnes was the largest employer in the city of Verona with approximately 450 employees in Verona, and an additional 90 in Sanford. Carnes also operated a plant near Montreal known as Vapor-Carnes in conjunction with Canadian interests. During this time Carnes acquired the first electro-deposit paint system in the industry to provide a superior painted finish in two available colors. This system is still in use today.

In the early 1970's Carnes expanded again with a leased facility just off of the Madison capital square to fabricate metal parts and assemble the energy recovery products, including energy recovery systems of up to 80,000 CFM. From 1976 to 1981 the energy recovery products were spun off into a separate company called Energy Recovery Company, or ENRECO, located in Germantown WI. The lease to the Madison plant ended in 1987, and the products manufactured there were split between the Verona and Sanford plants, with the energy recovery systems being manufactured for Carnes by B & T Mechanical on Jonathon Street in Madison, whose building Carnes eventually leased for 5 years after the owners retirement.

In 1987 Wehr Corporation was renamed Venturedyne, Ltd. Carnes is currently a division of Carnes Company, Inc., located at the Venturedyne headquarters in Pewaukee, WI.

Many industry leading products have been developed and produced over the ensuing years, including a complete line of diffusers, registers, grills, louvers, centrifugal and axial fans, VAV terminal boxes, electric steam humidifiers, and energy recovery wheel products. Many of Carnes' innovative products and sales tools were among the first of their type to be introduced in this country, and a number of them were patented. Examples include the disposable cylinder electric steam humidifier, the patented electronic sales representative ordering system, the patented energy recovery ventilator, and the patented centrifugal fan design still being produced today.



Carnes facilities support this dynamic product development with complete test capabilities, such as a sound laboratory, and an AMCA Registered Laboratory for Fan Air Performance.



Carnes production capabilities are often on the leading edge of the industry as well. Automated parts fabrication, robotic welding and assembly, and advanced metal drawing capabilities have been utilized for many years at Carnes.

The Carnes employees are exceedingly loyal to the company. Over 25 employees have been with the company for more than 40 years, In fact, as of this year, one employee has been employed with Carnes continuously for 55 years!

Carnes products are installed in buildings around the world, helping to keep people comfortable while providing an aesthetically superior architectural environment and conserving precious energy.

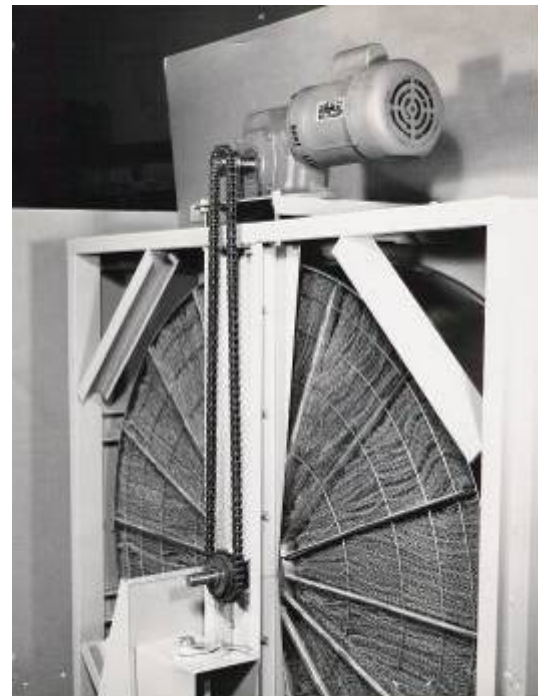


Figure 8 Early Carnes Thermo-Wheels



Figure 9 Modern Carnes Heat Recovery Wheel



I would like to thank Tom James for providing the information that I relied on in writing this history and for editing it extensively; and also Mark Miller for reviewing and commenting on it.

Jeffrey G. Boldt, P.E.
Chapter Historian
Madison Chapter – ASHRAE
boldtig@KJWW.com
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