

Albert Dart and his Remarkable Water Wheel By Jean Luddy

When Albert Dart came to Rockville in the early 1850s, he became part of a new wave of entrepreneurs and developers interested in new opportunities in this flourishing mill village. Several successful textile mills were already operating along the banks of the Hockanum River in the northeastern part of Vernon. The mills of Rockville had originally been founded and funded by local businessmen and farmers. As the industrial development expanded in the area, new opportunities awaited ambitious men who understood finance and textile production.

Born in 1823, Albert Dart grew up in Tolland before moving to Somers to learn the blacksmithing trade. By 1842, he had opened a shop in Rockville. His career path changed when he decided to purchase the Windermere Mill property after the mill burned in 1844. Dart later sold the property to an out-of-state company with the understanding that he would be hired to build a new factory. (TCJ 6/3/1882)

Emboldened by his success, Dart looked closer to home for his next project. Two potential mill sites along the Hockanum River looked promising. One lay downstream between the Leeds Mills and the New England Company factory. The other property was located farther up the river at the top of the waterfall by Paper Mill Pond. (Abbott, p 117)

Starting in 1855 and finishing in 1869, Dart set about developing the two sites. Modern brick and stone mills were built. Dams and mill races were excavated to channel water to provide power to the new factories. Once the mill complex on the lower end of the Hockanum was completed, Dart sold it to a manufacturing company. He then turned his attention to the more challenging property by the falls near Paper Mill Pond. (Abbott, p 117))

As the water from the Hockanum River leaves Paper Mill Pond, it descends over a series of jagged rock formations. This rugged and steep land lies alongside one of the earliest roads into Rockville from Tolland. As a young man in 1823, William Cogswell walked from his Tolland home to seek work at the area's first textile mill, the Rock Mill which was located further along the Hockanum River. He described the area near the waterfall.

“At this point, a stranger pursues his way cautious and slow- the trees on the north side of the road cluster together and overhang the narrow pass, also the south. Here the Hockanum ran under an overhanging ledge crowned with ancient hemlocks, completely shutting sunlight from the road.... At this point the traveler would hold on to the shrubs and look down the steep one hundred feet, and now and then catch a glimpse of the cataract.” (Cogswell, p 1)

In 1862, Dart purchased the property along with the water rights. Over the next 7 years he transformed the area by erecting three factory buildings. In addition to determining where to place the new mills, Dart had to design a dam and canal system that would provide sufficient power to three separate buildings. (Abbott, p 120)

“To make best use of a limited amount of land and maximize the available waterpower, he built a feeder canal with a short headrace going to each of the projected three mills. It was apparently his intention to retain control of the canal, allowing each mill to draw off only a stated portion of the water.” (Abbott, p120)

Before starting construction on the first two mills, Dart sold the land and then became the building contractor.

Dart's first mill, built in 1865, housed the Carlisle Thread company. Located along Main Street near the corner of Prospect Street, this mill was sold in 1874 to Samuel Fitch whose company made stockinet, a fabric used to line rubber boots. [now the Daniel's Mill building.] (Vernon & Historic Rockville, p 32)

In 1867, Dart's second mill at the corner of Grove, Main and Brooklyn streets was complete. The first owner, the E. K. Rose Company, made silk sewing thread. When this company failed in 1868, Hiram and Alvah Belding purchased the mill for their silk thread company. The Belding Brothers company became a leading manufacturer of silk threads, remaining in Rockville for many years. [Amerbelle Company was the last textile company to occupy this building.] (Vernon & Historic Rockville, p 31)



By 1868, construction of Dart's last mill on the site was underway. The most distinctive and scenic of Dart's mills, the Stone Mill, stands five stories high, visible from the center of the city. The Hockanum River flows rapidly through a stone arch at the base of the building into a mill pond that was used for power by the American Mill. Unlike with his previous mill projects, Dart did not sell the building or the water rights. He rented the factory space to a variety of businesses. Dart recognized that this manufacturing complex would need a significant amount of water power. To make this happen, Dart designed a massive water wheel. When completed it was called the largest in the country. Other mill owners and builders came to view Dart's wheel. (Abbott, p 122)



In May of 1869, a reporter from the *Tolland County Journal* visited Albert Dart to describe the new factory and innovative wheel for local readers.

“These three mills are or will be supplied with power from the same source: the great wheel which hangs caged in the massive wheel-house upon the north of the main building. To form a correct idea of the immensity of this “revolving lumber yard”, one must go around it and look away through it or get above it and peer at the bottom of the wheel pit. In diameter it is 55 feet, with a 7 feet 2 inches face. It contains over 35,000 feet of lumber, and 12 tons of iron work in one form or another. It has 192 buckets, breast, the water reaching the buckets at about $\frac{1}{4}$ to 11. The shaft is live oak 4 feet in diameter...

So nicely are the bearings adjusted, so accurate is the mechanism of the wheel itself, that it revolves with a variation of but about $\frac{1}{8}$ of an inch in its entire circumference, while its revolutions occasion no perceptible jar or tremble in any part. The capacity of the wheel is about 250 horse power or more than sufficient to carry 30 sets of woolen machinery. It appears to be the most thoroughly built, being braced and counter-braced with such a network of iron and wood as to make it for firmness about equivalent to solid iron itself. The cost of the wheel and wheelhouse was over \$12,000.” (TCJ, 5/8/1869, p 2)



The reporter noted that Dart hired several local companies to construct components of the water wheel. “It was made by Messrs. Burt & Putnam of this town whose always excellent reputation as wheelwrights has, by this achievement reached the pinnacle of fame. The castings were made at Murless’s foundry and finished at J. J. Snyyer’s machine shop and the forgings were by Pat Hurley; so that the wheel may be said to be altogether a home production, reflecting no little credit upon the skill of the Rockville mechanics.” (TCJ, 5/8/1869, p 2)

Sadly, the cost of Dart’s water wheel caused him to fall into irreversible financial difficulties. A few months after the glowing newspaper article, Dart was forced by his creditors to curtail his business endeavors and later faced a bankruptcy trial. (Abbott, p 123)

In addition, questions were raised about public works projects that he had approved while serving as a selectman in Rockville. A committee investigated the accusation that these improvements to roads and bridges during the 1850s and 1860s benefited his mill properties. The committee found no evidence of impropriety, but Dart felt that his reputation was ruined. (Abbott, p 123) He retired from business and social life. After a long illness, he died in 1882 at the age of 59 years. (TCJ, 6/3/1882, p3)

Dart’s water wheel was used for power for a period, then was later replaced by a large turbine. (Symonds, p 8)

In spite of his difficulties at the end of his business career, Albert Dart left his mark on Rockville. The impressive water wheel has vanished, but his three mill buildings remain prominent landmarks by the waterfall. Like many of his contemporaries, Dart was willing to take

financial risks to grow his business. Many industrial entrepreneurs came from a background in the trades. Dart used his skills to design an innovative way to power three factories simultaneously.

At present, his factory buildings are undergoing renovation for future uses. One can imagine that Dart would applaud the project and would hope that the renovated mills will bring positive economic benefits to Rockville.

Sources Cited:

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Captions for photos;

#1 Photograph taken in 1868 or 1869 shows the Stone Mill under construction with left wing done and the upper floors nearing completion.

#2 Laborers use wheelbarrows to bring building supplies up the ramp as workers survey the progress on the mill from the upper levels.

#3 The Stone Mill photographed from Brooklyn Street.