

OYSTER RIVER DAM on the Mill Pond

The **Durham Falls Dam** (Dam No. 071.03), also known as the Mill Pond Dam is an Ambursen Dam.

It was a gift to the Town of Durham by Edith Congreve Onderdonk. It was constructed in 1913 to replace the last of a series of timber dams which had stood at the site since 1649.



timber dams until 1912-(Stackpole-History of Durham)



Oyster River Dam built 1913 (private photo-Andrea Bodo)

1913 ...the current concrete dam was constructed

Mrs. Edith Angela Congreve Onderdonk, gave the funds to the Town of Durham to honor the memory of her step-father, Hamilton Smith. It was to maintain the beauty of the Millpond where/ her family chapel and cemetery stood, and also to continue to supply water power to the adjacent Jenkins Mill. She was known for her extreme generosity to the university and the town of Durham



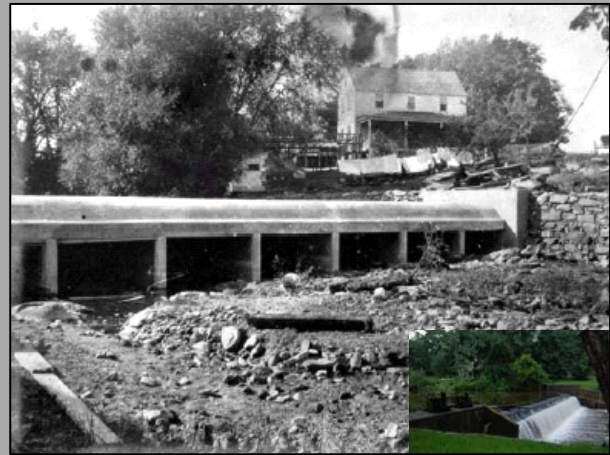
When the Mill Pond Dam was being rebuilt by Mrs. Onderdonk about 1913

1913 poured concrete dam – Daniel Chesley Co



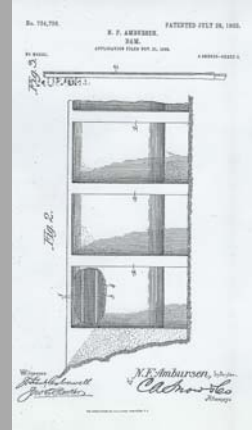
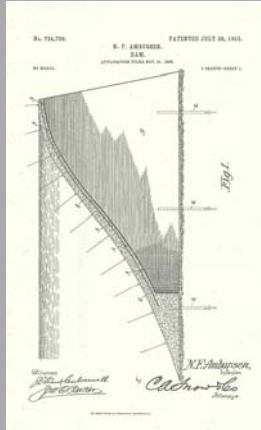
COURTESY





AMBURSEN DAM (patent)

The OR dam is New Hampshire's earliest known example of an Ambursen dam, a type of dam that relies on a series of evenly-spaced concrete buttresses, anchored in the bed of the river, to support a slanted upstream apron. The apron terminates at a slightly overhanging downstream lip beyond the crest or apex of the apron. The lip of the dam precipitates the stream flow in an even sheet of water beyond the toes of the buttresses which, especially in early examples of this dam type, have no infill between them and are thus exposed to view whenever water is not passing over the crest of the apron. Although Ambursen dams attained nationwide popularity during the early to mid twentieth century, only six others have been identified thus far in New Hampshire. The Oyster River dam is the only one intact.



Daniel Chesley – (builder of the Oyster River Dam)

The present dam was built by **Daniel Chesley** of Durham, a noted stone mason and contractor, who pioneered in the use of concrete in this area.

Although he initially specialized in granite masonry, Chesley became adept in the use of concrete in the early 1900s. Chesley is recorded as the contractor who built the bridge immediately downstream from the Durham Falls dam in 1907-8. (now Rte 108) In addition to his success as a contractor, Daniel Chesley was a successful farmer and attained recognition as a public servant. He served on the board of selectmen of Durham, as a state representative, and as a state senator in 1913-14. In the Senate, Chesley was chosen as chairman of the committee on towns and parishes and was a member of the committees on military affairs, agriculture, the state hospital, and fish and game.

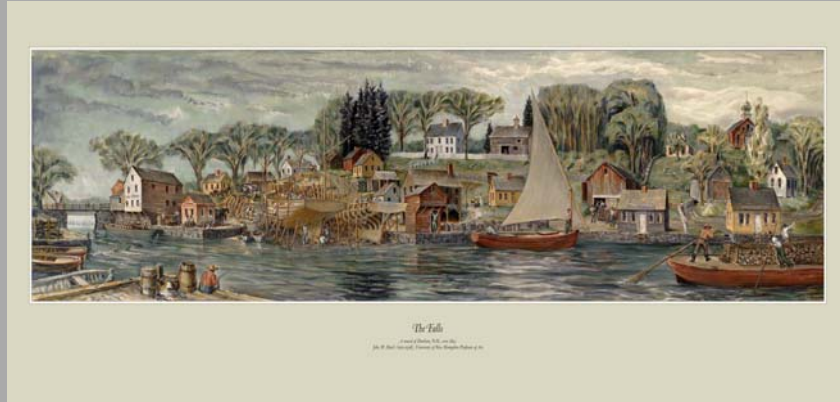


Prof Charles Elbert Hewitt (engineer for the Oyster River Dam)

The dam was probably built under license. The engineer of record for the dam was Professor Charles Elbert Hewitt, the first head of the Dept of Electrical Engineering at the nearby New Hampshire College of Agriculture and the Mechanic Arts, now the **UNH**.

Charles Elbert Hewitt was born in Hanover, New Hampshire, in 1869 . He earned a B.S. degree from the New Hampshire College of Agriculture and the Mechanic Arts in 1893 after the institution had moved from Hanover to Durham. Hewitt went on to earn an M.M.E. degree from Cornell in 1895. Principally an electrical engineer, Hewitt worked for an electric motor company from 1895 to 1897, then established C. E. Hewitt and Company, electrical engineers and contractors, in New York City. Hewitt and Company manufactured electrical equipment, including some devices of Hewitt's own invention. Hewitt joined the faculty in Durham in 1908 as a professor of electrical engineering and head of the electrical engineering department. In 1915, the college was divided into three divisions—agricultural, arts and sciences, and engineering—and Hewitt was appointed dean of the engineering division. In the same year, Hewitt introduced a practical, two-year curriculum in agricultural and industrial engineering to supplement the regular four-year curriculum. In 1918, Hewitt was placed in charge of the training of large numbers of soldiers who were sent to the college for instruction

EARLY DURHAM c.1820
on the FALLS - OYSTER RIVER DAM



– original painting John Hatch – permission to use given by Maryanna Hatch

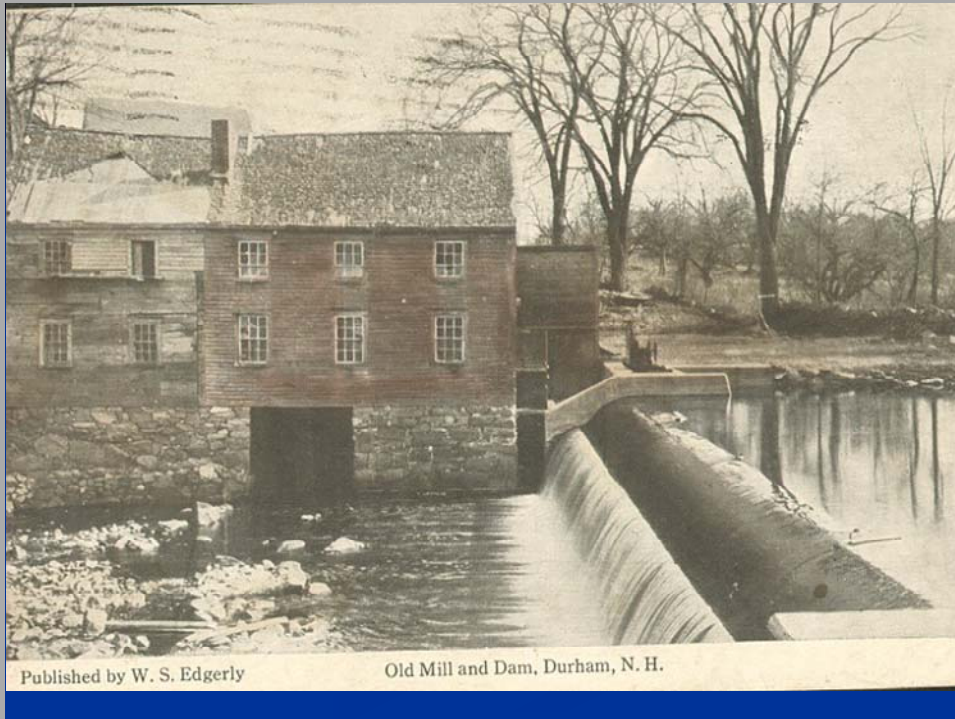


Jenkins Mill/timber dam/Rundlett, fFrost at Rte 108 from the General Sullivan House..... photo Durham Historical Assoc

The site long remained in the possession of Hill descendants and members of the **Woodman** family. By 1735, the dam at the fall-line supported a sawmill and a gristmill. In the mid-nineteenth century, **Samuel Rundlett** secured the mill privilege on the northeast end of the dam and built a combined sawmill and gristmill in 1860; this building stood until the early 1900s

Members of the **Jenkins** family acquired the property on the southwest end of the dam before 1800, erecting a building that served as a grist mill in the 1850s and was used as a machine shop in the 1890s, with a tannery nearby if not under the same roof. The Jenkins family continued to adapt this building throughout the first half of the twentieth century, using it as a cider mill and an automobile machine shop

The Jenkins Mill at the OYSTER RIVER DAM were the subjects of artistic photographs, post cards, and artwork during the first half of the twentieth



1955

The **Jenkins Mill** eventually collapsed from decay and the weight of snow, reportedly about 1955. Its dry-laid stone foundations remain today at the south end of the dam, and the dam's waste gates formerly regulated the flow of water to the turbines of the mill.

Landmark Victim of Time, Elements

DURHAM, April 29—The old Jenkins Mill, one of the last remaining marks of old Durham's commercial activity, has joined the many historic landmarks which one by one have disappeared, the victims of rotting time. The Mill, which stood on the south side of the Oyster River Falls, was a picturesque reminder of an almost forgotten era when Durham was a promising trading and industrial center.

Last year the roof of the Mill began to sag dangerously, and an attempt to repair it was made. But the sills of the building had rotted, and it was impossible to save the structure from collapse.

Under the weight of the winter snow the roof sagged more and more, and finally collapsed. The whole weakened structure succumbed to the force of spring winds and rain and fell into the river which had supplied it with power for so many years.

Staff Photo by Jim Mc
Only a pile of rotting boards and a stone foundation remains of this historic landmark

1975

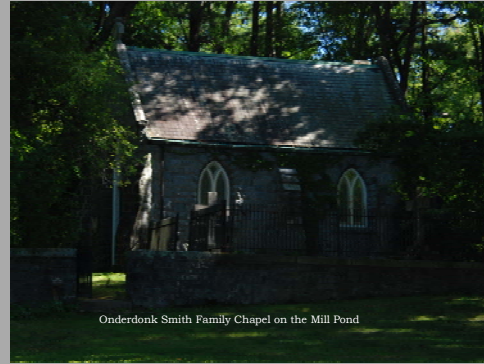
Town of Durham & NH Fish & Game repair DAM, construct FISHLADDER



HAMILTON SMITH (Edith Onderdonk's stepfather) and connection to the Town of Durham



photo: History of Durham



Onderdonk Smith Family Chapel on the Mill Pond

Hamilton Smith II (1840-1900), the step-father of Edith Angela Congreve Onderdonk, was himself a leading benefactor of the New Hampshire College of Agriculture and the Mechanic Arts and the town of Durham. He was a descendant of Quaker Joseph Smith (great grandfather of his father Valentine Smith) who bought a parcel of land along the Oyster River in the mid 1600's. Hamilton Smith II was born in Louisville Kentucky on July 5, 1840. It was Martha Hall's death five years later that resulted in Smith being sent to Durham to live with his grandfather, Valentine Smith. In 1854, after graduating from Durham Academy, the younger Smith moved to Cannelton and worked in the engineering and accounting departments of his father's company, the Cannelton Coal Mines. He moved to southern California in 1870 to manage the Triumfo mines which led to his distinction as the authority on hydraulic mining in the state. His book "Hydraulic" is in the Dimond Library. Smith was a mining expert and became interested in high explosives. He founded the Vulcan Powder Works. Opposition from farmers over debris from hydraulic mining led to injunctions. Smith moved to New York and then, in 1881, became a consultant for a mine in Venezuela owned by the Rothschild family. Five years later, Smith formed a partnership with a Mr. de Crano and they founded the Exploration Co. Limited of London. It was there that he married the widow Alice Congreve. From London, Smith traveled to South Africa where he helped found two companies, the Consolidated Deep Levels and the Transvaal and General Association Limited. Smith was also involved in the London stock market where he introduced such mine securities as the Alaska Treadwell, the Alaska United and the Alaska Mexican Gold Mining Companies. The Smiths returned to New York in 1886. In 1889, Hamilton Smith retired to Durham and on December 2, 1890, he bought the house known as the Red Tower—later student housing—which he built into a 70-acre estate which went down to the Mill Pond. He also bought a lot across the street (where St. George Church is now located) and built a house. At some point, the house was moved to Ballard Street and then later, became the rear of what is now Schofield House.

He endowed a scholarship at the college, and his bequest funded much of the cost of constructing the college's Hamilton Smith Library in 1907. His step-daughter, Edith Angela Congreve (Mrs. Shirley) Onderdonk, donated \$16,000 toward the construction of Smith Hall, a women's dormitory that was named in memory of her mother, Mrs. Hamilton Smith.

With no children of his own, (his step-daughter was Edith Angela Congreve) Smith became very attached to his dogs. He even had a little cemetery in his backyard.

It was his dog, Hannah, in fact, that led to his death.

On July 4, 1900—the day before his 60th birthday—Smith was in a boat on Little Bay with his sister and two of his dogs, Hannah and Joy. When Hannah fell in the water, Smith dove in to save her. The shock was too great for his heart, however, and when his sister jumped in after him, it was too late. She swam with him to what is now Sandy Point only to find he had died.

In his will, Smith left the university \$10,000 to use to help build a library. A \$10,000 bequeath made when he was alive created the Valentine scholarship, the first UNH scholarship for non-resident students. The \$16,000 gift in his memory from his wife helped fund Smith Hall, the university's first dormitory. And money from his estate—about \$120,000—was used to build the first part of Congreve Hall.

On June 3, 1907, the Hamilton Smith Library was dedicated. It was used until what is now the Dimond Library was built in 1958.



view of Oyster River Dam from Oyster River side of Rte 108 bridge-photo by Andrea Bodo



Andrea Bodo - Durham Historic District/Heritage Commission
Dick Lord – president Durham Historical Association
sources:, Stackpole History of Durham, Durham Historic Association ,NHDHR, UNH and www.