Two Hundred Years on the Erie Canal

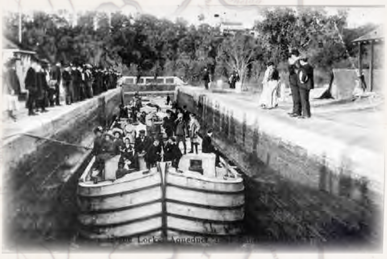
1817-2017

See the online exhibit at
NYHeritage.org

"Yankee Ingenuity"

The intricate balance and operation of locks, culverts, aqueducts, stop gates and waste weirs was critical to the success of the Erie Canal. Construction crews also relied on what has come to be known as "Yankee ingenuity" -- the ability to examine a problem and figure out a solution with the tools and resources at hand. Essentially, canal engineers and construction crews invented ways to build a canal as they worked.

Locks were built to raise and lower ships between areas of different water levels along the canal.
Passenger Boat in Lock 22
Image from Town of Clifton Park History Collection



The most difficult engineering challenge was the Niagara escarpment at Lockport. It was essentially a 75 foot high wall of rock cliff and no lock had been designed that could handle that kind of lift. Nathan Roberts designed an ingenious **"flight of five" locks** to handle the lift in segments. The locks have undergone extensive renovations in recent years and are a popular tourist site.
Image from the New York State Archives

As mid-western grain was off-loaded at Buffalo, there was a need to find a way to safely store it. The invention was the **grain elevator** and it was so efficient that it led to the rapid growth of American agriculture.
Image from the New York State Archives

Aqueducts were built to carry the canal over rivers and roads.
Boats on the Erie Canal Aqueduct at Rexford, NY
Image from Town of Clifton Park History Collection

In 1841, Albany resident Squire Whipple designed and built a weigh lock for weighing canal boats in Utica. His patented **iron truss bridge** became the standard used for bridges across the Erie Canal, several of which still stand today.
Whipple Truss Bridge
Image from Carleton College

Culverts allowed the water to flow underneath roads.
Culvert along the Erie Canal in Cohoes, NY
Image from the Grems-Doolittle Library Photograph Collection

Watermark:
Map of proposed Canal from Lake Erie to the Hudson River, 1817
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