

LEQ: What is a canal?



This painting shows Lockport, New York on the Erie Canal. This painting by John Krimmel (1786-1821) is courtesy of Wikimedia Commons.

LEQ: What is a canal?
A man-made waterway.



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Moving West



Notice that six horses pull the Conestoga Wagon, and also notice the curved center and the sharply angled ends of the vehicle. This image was created in 1883 by Newbold Hough Trotter (1827-1898). This image is courtesy of Wikimedia Commons.

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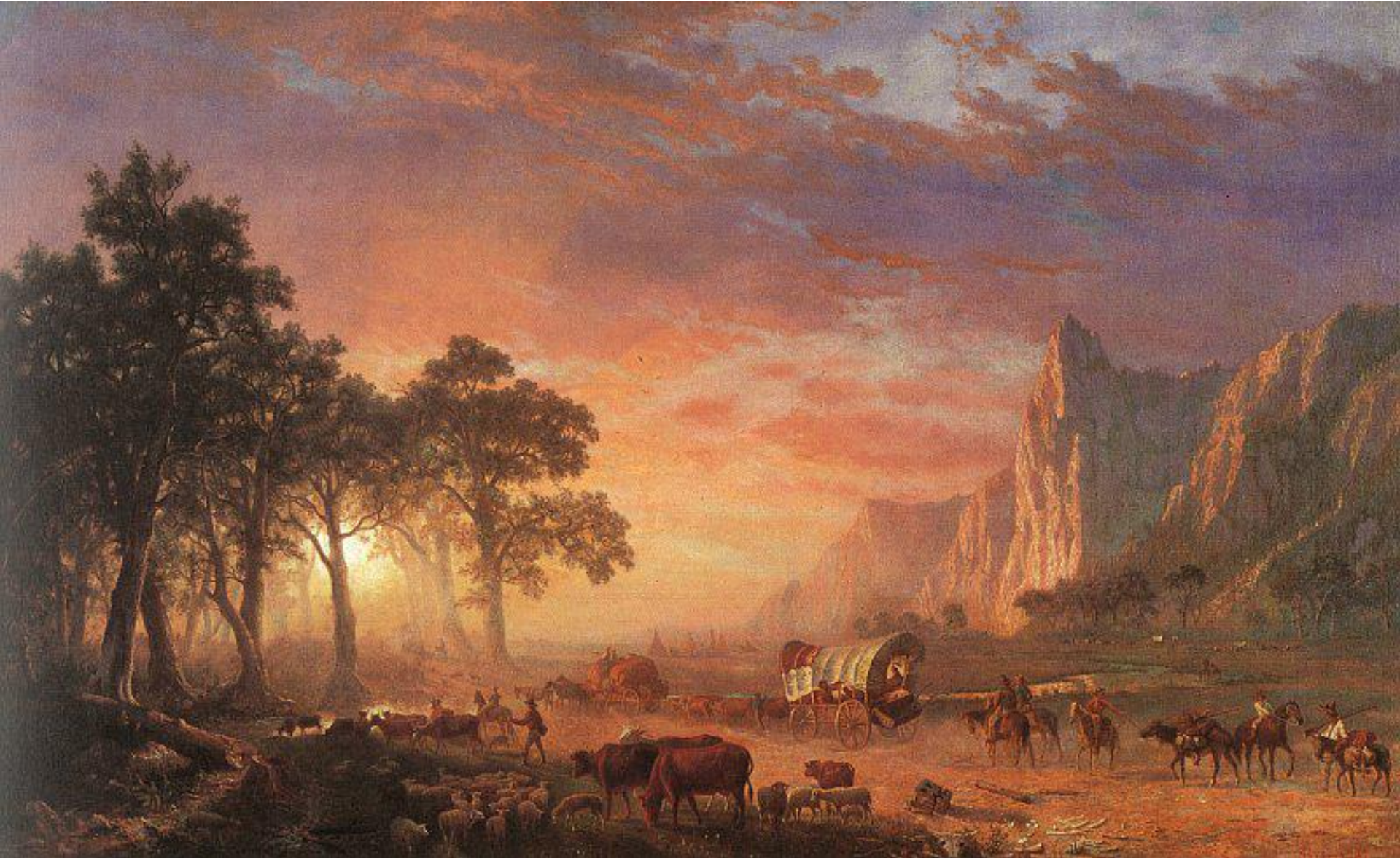
This painting shows Lockport, New York on the Erie Canal. This painting by John Krimmel (1786-1821) is courtesy of Wikimedia Commons.

During the early history of the United States, the frontier continually moved westward.



A frontier is land or territory that forms the farthest area of a country's settled region. This image of a ranch house at the National Ranching Heritage Center is courtesy of Wikimedia Commons.

Many pioneers had a dream of owning inexpensive land with rich soil. Many Americans had worn out their soil and needed to find new fertile land.



At this time, many of them did not know about soil preservation, and erosion frequently occurred. So when they needed new land, they simply packed up and moved. This painting is courtesy of artofmanliness.com.

Newly arrived immigrants and American citizens moved west, lured by rich soil and cheap land.



This image shows the Sylvester Rawding family in front of their sod house in Nebraska. The cow is on a hillside which forms part of the roof of the house. This image is courtesy of the Library of Congress.

Conestoga Wagons, developed by Pennsylvania's German Americans during the Colonial era, carried everything the families owned.



The Conestoga wagons, such as this one were frequently used for carrying freight on the National Pike. This image, taken in the early 1900s, is courtesy of the Library of Congress.

The pioneers' survival depended on the long handled ax and the rifle.



The Pennsylvania/Kentucky Long Rifle is considered to be American because of its uniquely long barrel. The top weapon is percussion fired, and the bottom weapon is fired by a flintlock mechanism. is courtesy of Wikimedia Commons.

In 1775, the year of the Battles of Lexington and Concord, Daniel Boone led a group of 30 lumberers from Virginia and across the Cumberland Gap,



The Cumberland Gap was a natural pass through the Appalachian Mountains. This painting by George Caleb Bingham (1811-1879) is courtesy of Wikimedia Commons.

By 1800 about 20,000 settlers traveled this rocky, primitive trail, known as the Wilderness Road, to settle south of the Ohio River.



The Wilderness Road is shown in Orange. This image is courtesy of Wikimedia Commons.

Other settlers made their way to the Northwest Territory over rough wagon roads.



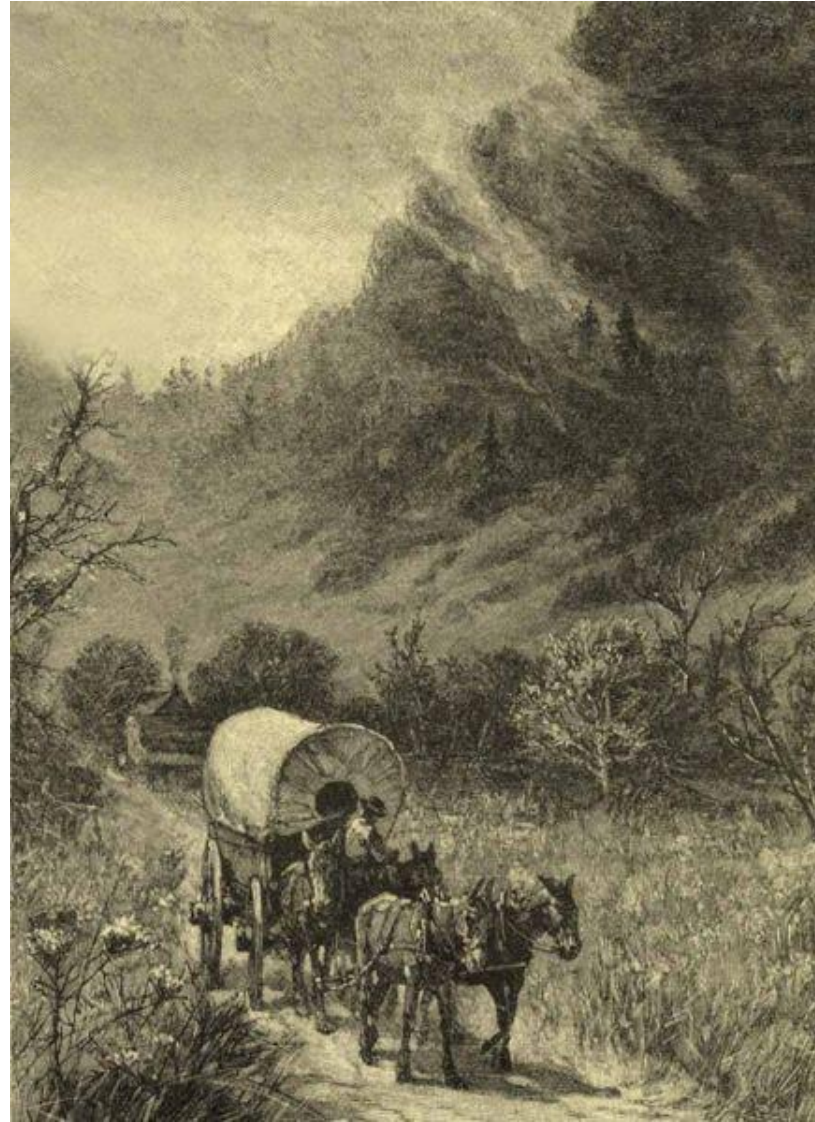
The Northwest Territory included all of the states of Ohio, Indiana, Illinois, Michigan, and Wisconsin, and part of the State of Minnesota. This image is courtesy of Wikimedia Commons.

Then they loaded their belongings on flatboats and floated down the Ohio River.



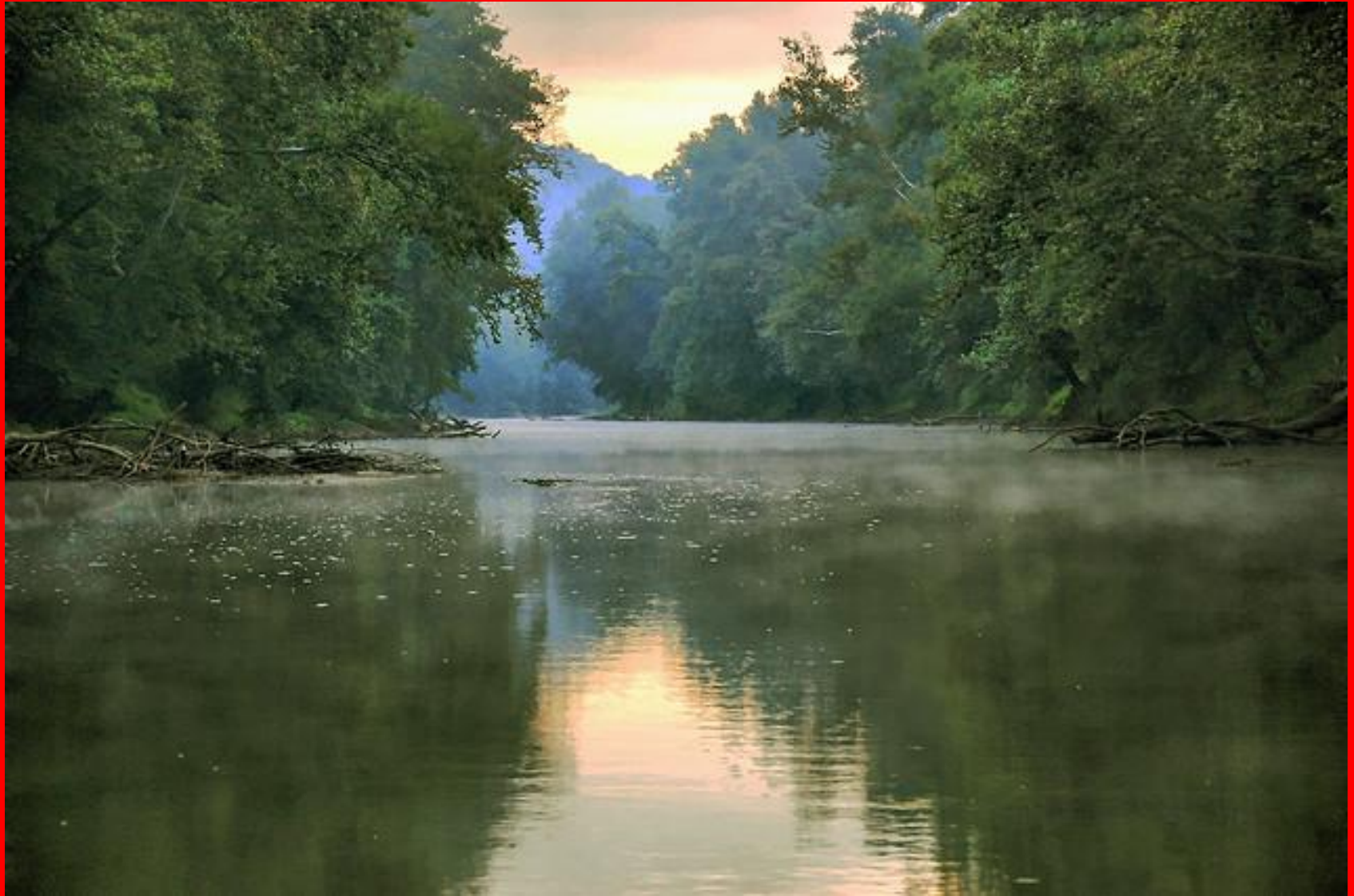
This image shows a flatboat on the Ohio River circa 1788. This image was created by Alfred R. Waud (1828-1891). Notice how it was steered using the long rudder at the rear (stern), and long poles at the bow (front). This image is courtesy of bergen.org.

The Lincoln family, who lived in Virginia in the 1700s, heard Daniel Boone's stories of rich soil in Kentucky.



They heard that Kentucky's blue-green grass, clear streams, and land could be purchased for 40 cents an acre. This image of a wagon on the Wilderness Road is courtesy of the Library of Congress, and of Wikimedia Commons.

In 1782 they followed the Wilderness Road into Kentucky and settled along the Green River on more than 2,000 acres.



The Green River is 384 miles long and is a tributary of the Ohio River. This image of sunrise along the Green River is courtesy of flickr.com.

In 1816 the Lincolns crossed the Ohio River to the north, and settled at Little Pigeon Creek in Indiana.



After moving from Kentucky, Abraham Lincoln lived in Indiana from 1816-1830. This is a reproduction of his home at the Lincoln Boyhood National Memorial. This image is courtesy of Wikimedia Commons.

In search of richer farmland, in 1830 the Lincolns again moved farther west to Illinois.



Abraham Lincoln lived in the small village of New Salem, Illinois. He ran a store there until his business failed. This image is courtesy of brettbergerara.com.

Westward travel on roads, trails, and waterways increased dramatically.



Americans needed reliable transportation systems. People wanted to get raw materials to factories and goods to market using cheap, speedy transportation. This image, "The Latest Village Scandal" was painted by Edward Lamson Henry (1841-1919). It is courtesy of womeninamericanhistory19.blogspot.com.

In New York and Pennsylvania road building companies constructed many private roads called turnpikes.



This image shows Old Mohawk Turnpike Toll Bridge in New York State. This image, taken circa 1870, is courtesy of schenectadyhistory.org.

When travelers on the roads paid a toll, the charge for using the road, the toll keepers turned the pikes aside to let them continue.



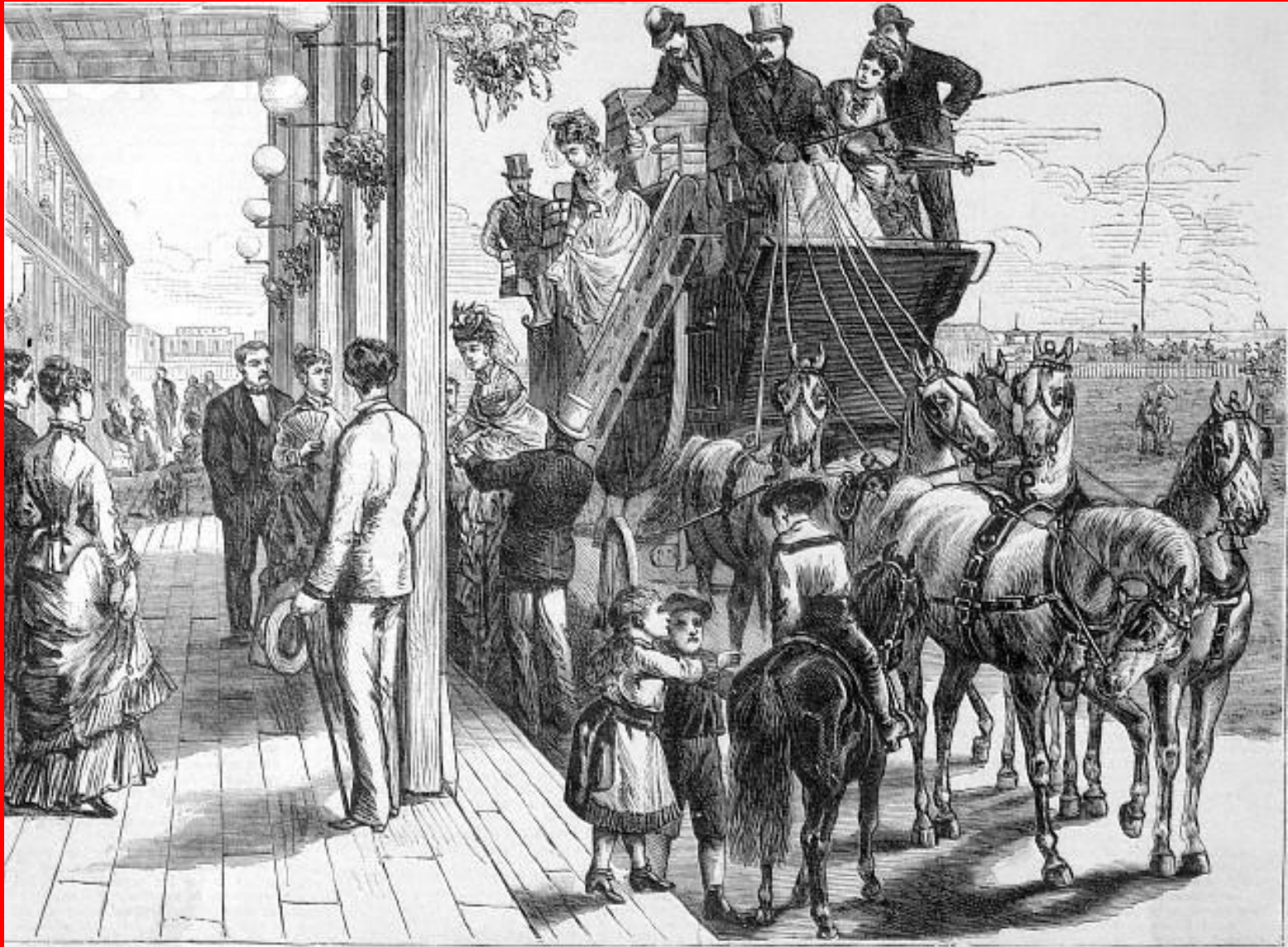
In America in the 1800s, most of the “pikes” were actually just long poles acting as a gate. This image is from Harrison Williams’ *Legends of Loudon County, Virginia*. This image is courtesy of bluemontva.org.

The toll money paid for building the roads.



Many turnpikes had crushed stone or macadam, that would help with water drainage, and enable the road to last longer. This image painted circa 1823 is courtesy of janeaustensworld.wordpress.com.

Turnpikes connected a number of cities in the East and led to major rivers in the West.



Taverns were constructed along turnpikes which allowed travelers to stop and rest. This image is courtesy of stagecoachdays.blogspot.com.

In 1806 Congress approved U.S. government funds to build the National Road which led to the West.



Better transportation to the West would help an area's population grow, and then they could apply for statehood. Also the price of goods would be cheaper because moving them was less costly. This image is courtesy of Wikimedia Commons.

The National Road with a crushed stone surface and large stone bridges connected Cumberland, Maryland, with Wheeling, Virginia (now West Virginia).



This is one of the large stone "S" bridges on the National Road. Bridges seldom crossed bodies of water on the National Road at an angle of 90 degrees. The "S" shape fixed this problem, and at the same time forced drivers to slow down. This bridge is located east of Old Washington, Ohio. This image is courtesy of Wikimedia Commons.

From the day the National Road opened, it was crowded with people moving West.



This is a detail from the National Road Museum located near Zanesville, Ohio. It shows a Conestoga Wagon crossing one of the “S” bridges. This image is courtesy of touring-ohio.com.

The National Road made it possible for people to travel in all kinds of weather.



Tunnels allowed visitors to not have to climb mountains, and they also provided shelter in inclement weather. This is a tunnel for the National Road near Wheeling, West Virginia. This is now the location of a bike path. Notice that this tunnel is only one lane, however. This image is courtesy of ohiobikeways.net.

The crushed stone allowed water to drain so that wagon wheels were not stuck in mud, ruts, and potholes.



The macadam was placed on top of earth that had been compacted. This image is courtesy of janeaustensworld.wordpress.com.

Travelers on the National Road had fewer problems with dust and mud than travelers on other roads.



The bridges on the National Road were wide enough for two vehicles to pass. This image is courtesy of the National Park Service.

Taverns and Inns along the road provided food and rest for travelers.



The Mount Washington Tavern, along the National Road, is now a museum. This image is courtesy of the National Park Service.

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This painting shows Lockport, New York on the Erie Canal. This painting by John Krimmel (1786-1821) is courtesy of Wikimedia Commons.

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A man-made waterway.



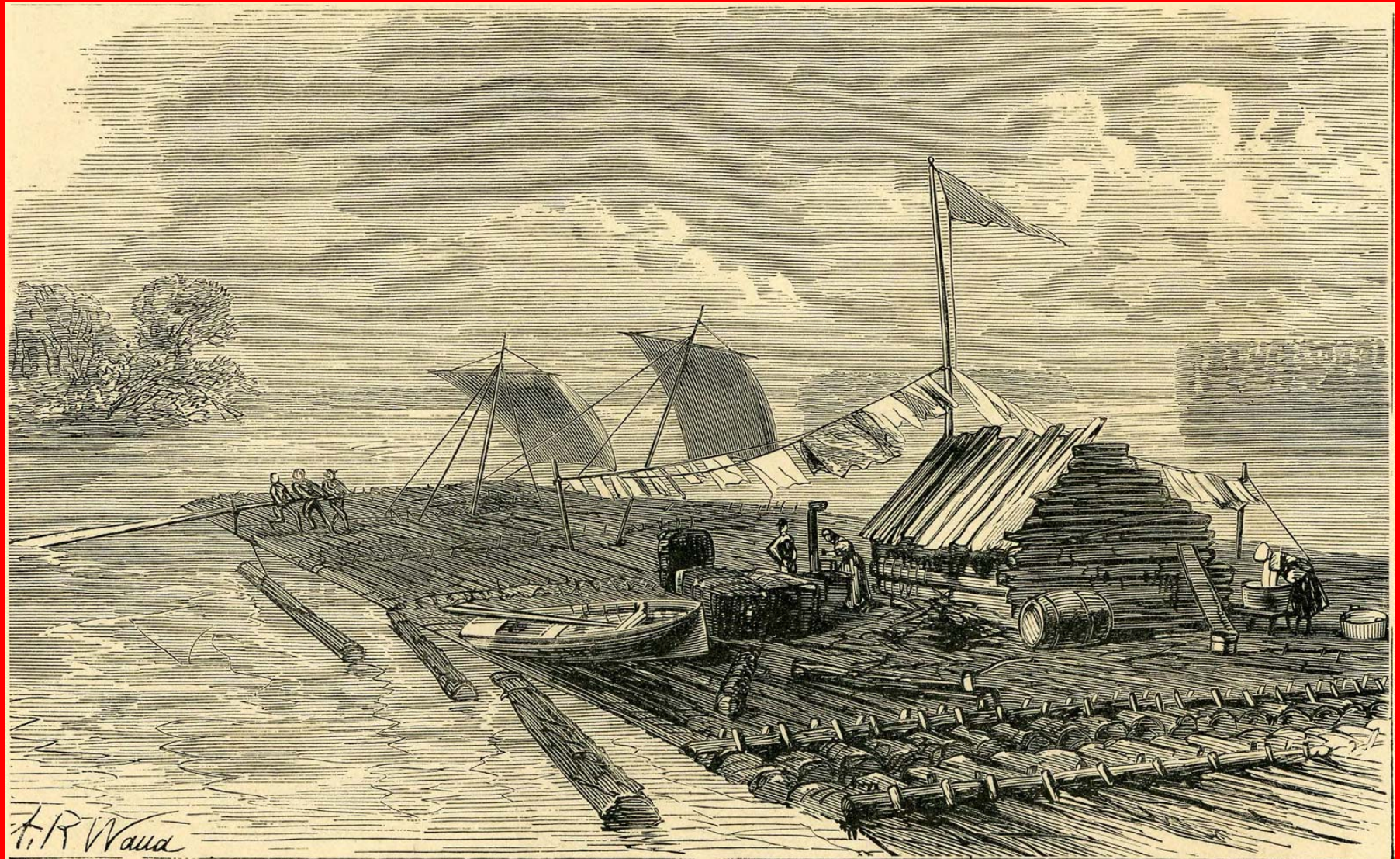
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Even though the number of roads increased during the early 1800s, rivers remained the nation's most important method of transportation.



This image of New York City by Nicolino Calyo (1799-1884), an Italian born American artist, is courtesy of womeninamericanhistory19.blogspot.com.

Before the 1820s most travelers sailed, floated, or poled their way downriver on flatboats and rafts.



A large log raft such as the one shown here, would be made from trees cut down in the forests of Minnesota and Wisconsin. When the raftsmen reached their destination, they would sell the wood and walk back upriver. This image by Alfred Waud (1828-1891) was created in the 1800s. It is courtesy of steamboattimes.com.

Getting back upriver against the current, however, proved challenging.



A flatboat on the Ohio River. This image by Alfred Waud (1828-1891) was created in the 1800s. This image is courtesy of steamboattimes.com.

Teams of horses slowly pulled boats upstream, often against currents.



This is an image of horses pulling boats in France. This drawing by Decamps was produced circa 1876. This image is courtesy of etsy.com.

They moved so slowly that travelers could leave the boats and walk along the shoreline as fast as the boats were moving.



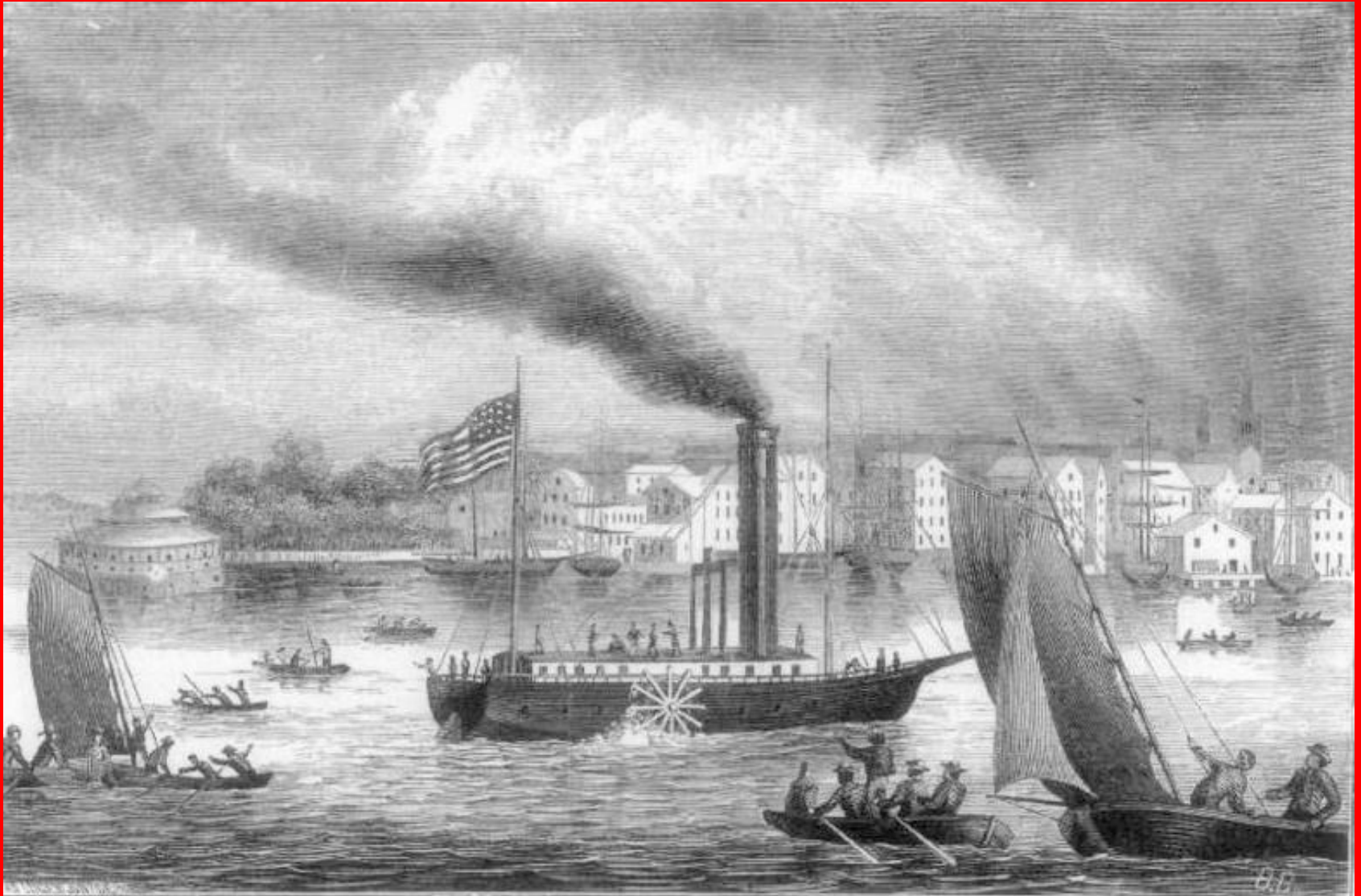
No this isn't America in the 1800s, it's Russia in the 1800s. These people don't have horses pulling the boat upstream, they are actually doing it themselves. This painting, titled "Burlaks on the Volga," was created by Efimovitch Repin (1844-1930) circa 1870. This image is courtesy of Wikimedia Commons.

Eventually steam power replaced sails/wind power.



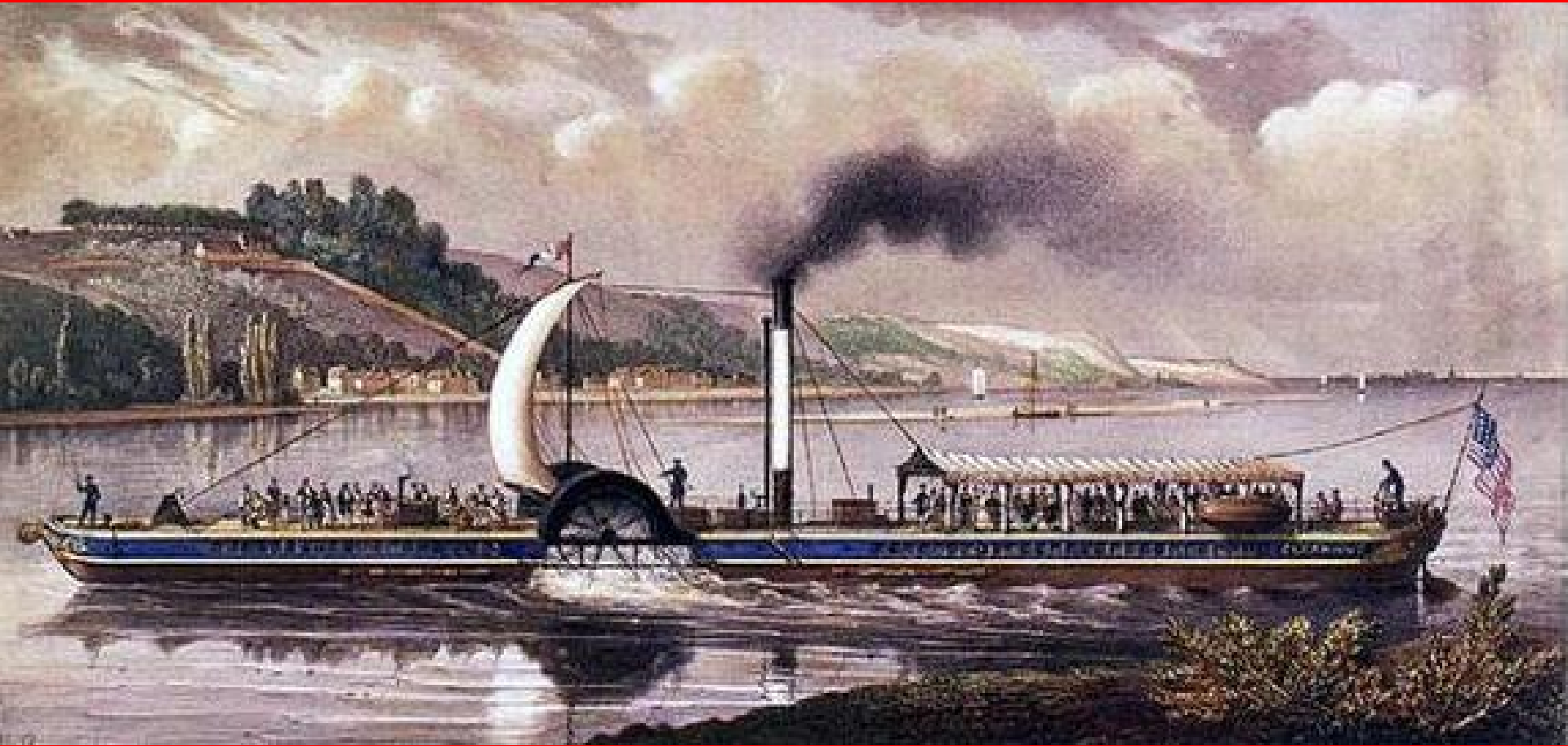
This painting by George Catlin (1796-1872) depicts a steamboat at St. Louis, Missouri circa 1834. This image is courtesy of steamboattimes.com.

Pennsylvanian Robert Fulton incorporated other people's designs for a steamboat and built his own called the *Clermont*.



Robert Fulton (1765-1815) was born in Pennsylvania. The *Clermont* was the first vessel to demonstrate the usefulness of using steam propulsion for commercial river transportation. This image is courtesy of Wikimedia Commons.

Fulton's steamboat traveled 150 miles upriver from New York City to Albany in for what that time was an amazing 32 hours.



The trip in 1807 had the Clermont moving upriver at almost five miles per hour. This view of the Clermont shows it also using a sail to help to propel it along the Hudson River in 1813. This image is courtesy of the New York Public Library.

Before long, steamboats carried people and goods along the Mississippi River and the Great Lakes.



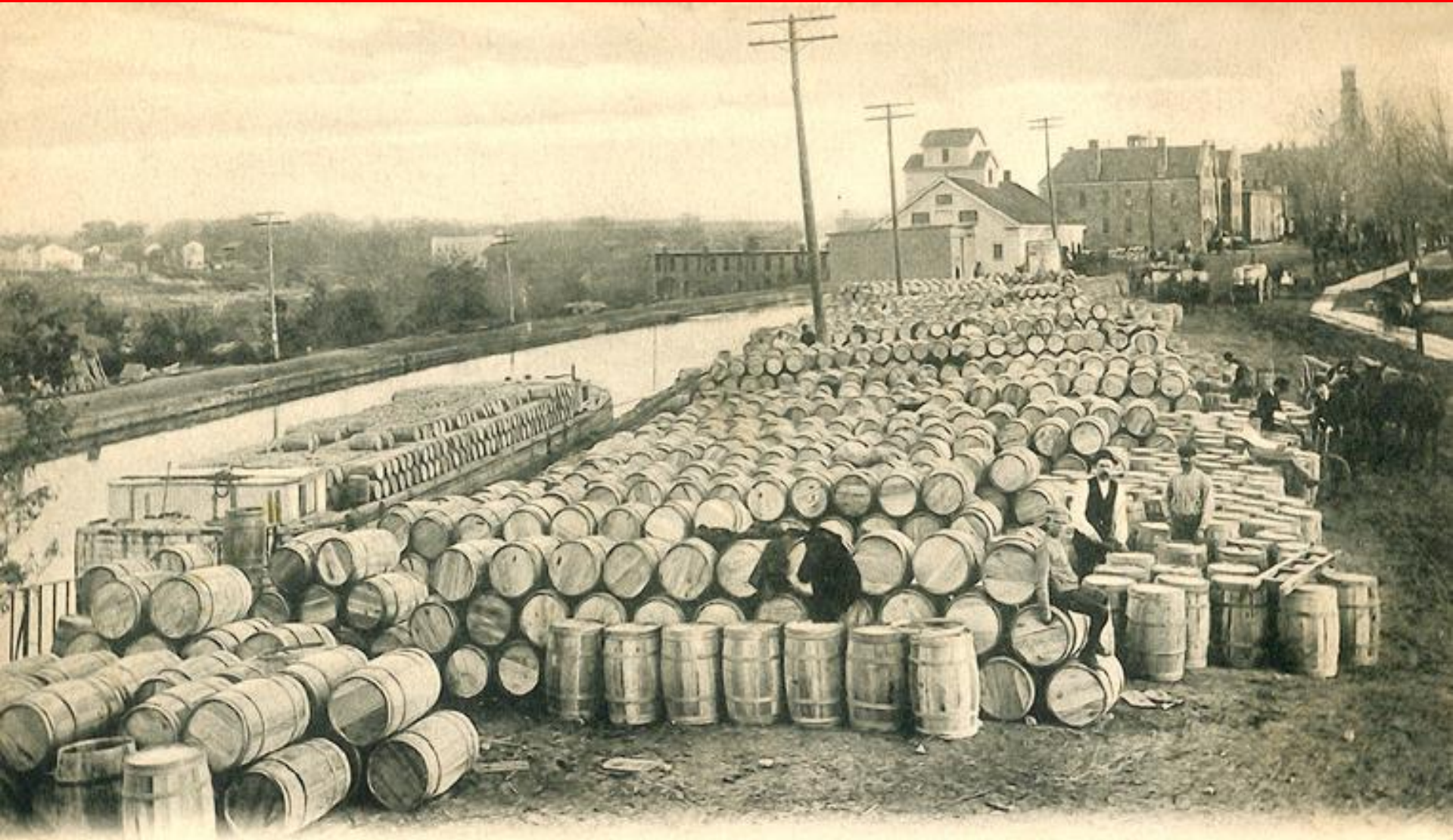
In "Moonlight Encounter on the Mississippi," the man on the raft had not noticed that his lamp had gone out on the mast, and he is trying to signal the steamboat that he is in front of them. This image by John Stobart (1929-) is courtesy of steamboattimes.com.

A canal is a channel dug out and filled with water to allow boats to cross land.



This image titled "View on the Erie Canal" by John William Hill (1812-1879) shows a portion of the Erie Canal in 1829. This painting is courtesy of the Smithsonian Institution.

Shipping goods on canals was much more efficient than using roads.



This image from 1906 shows thousands of barrels of apples awaiting transportation on the Erie Canal. Even today, transporting freight on the Erie Canal costs a tenth of what it does for that same freight to be carried on a road by a truck. This image is courtesy of eriecanal.org.

It took four horses to haul a 1.5 ton load on a good road.



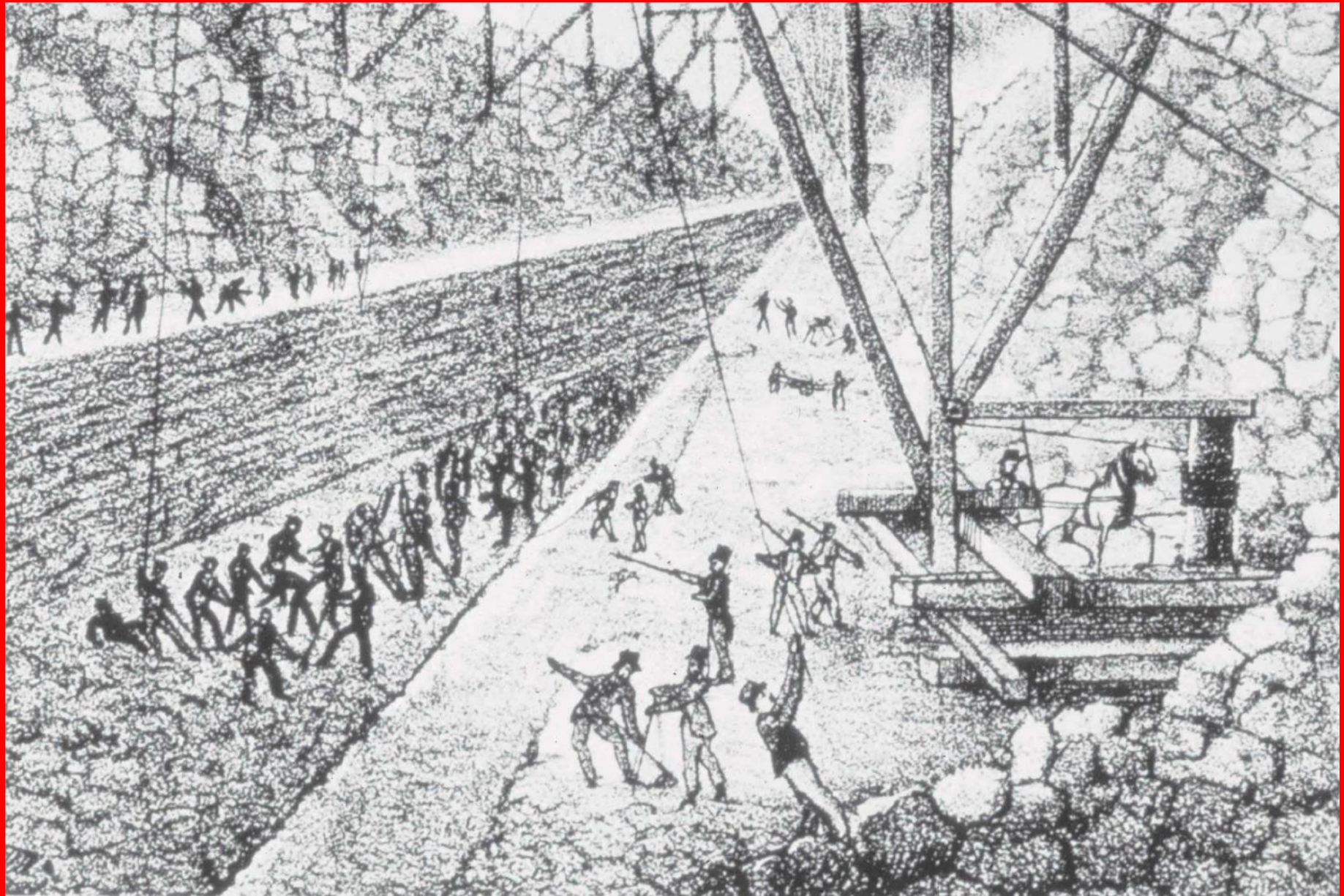
This is a mountain wagon or express wagon, possibly carrying money or a gold shipment. The freight is well protected by the four armed men. This image is courtesy of lindbergice.com.

However, two horses could pull a canal boat loaded with 50 tons.



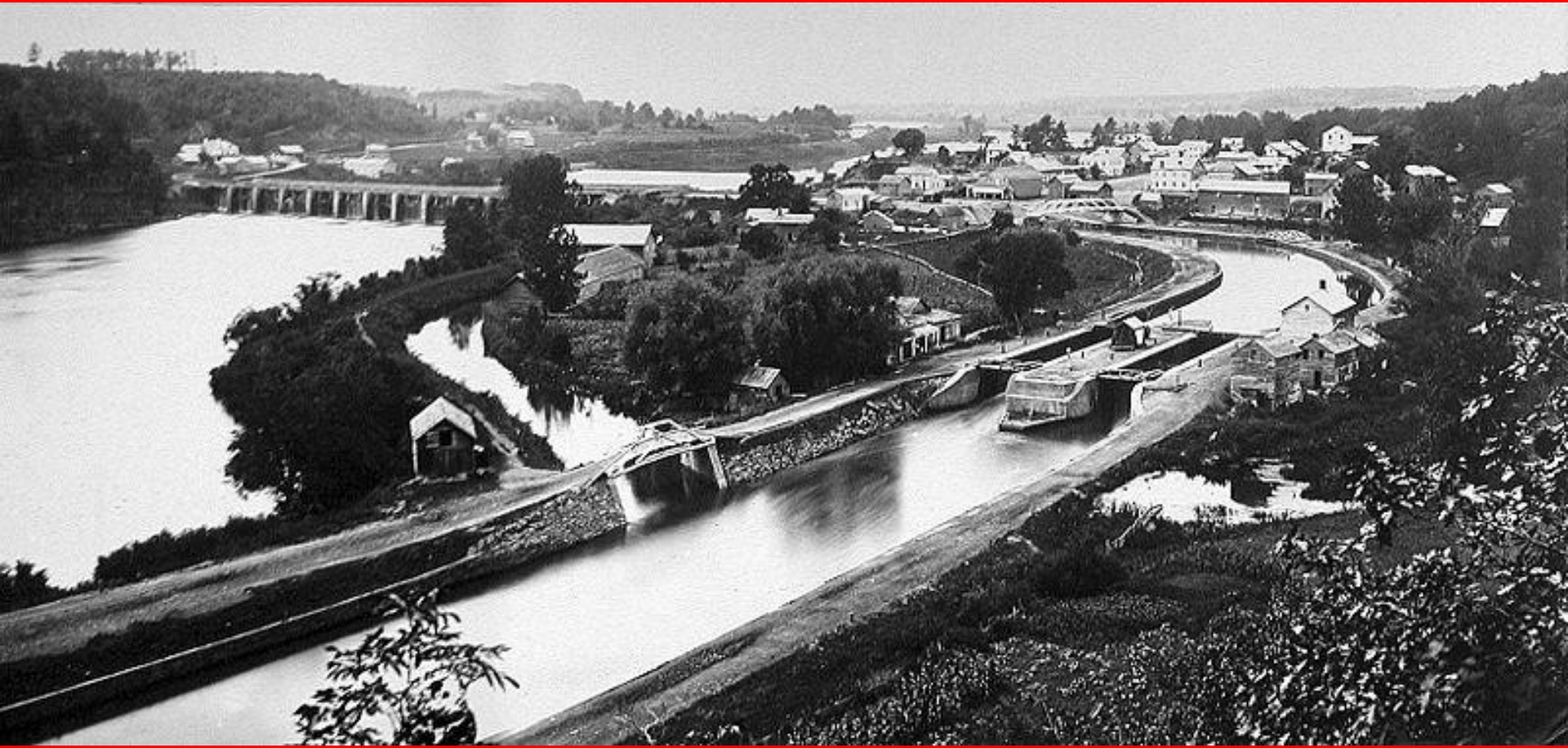
On the right is a grain boat on the Erie Canal. The two horses in the foreground are pulling the boat in the left background. The two horses in the left background are pulling the boat in the right foreground. When they pass each other, the tow ropes need to be thrown over the opposing boat. This image from 1883 was illustrated by J. David Williams. This image is courtesy of asu.edu.

As a result, a period of canal building began.



The construction of the Deep Cut on the Erie Canal near Lockport, New York. This image is courtesy of irishexaminerusa.com.

Canals connected natural waterways, allowing boats and barges to travel between those bodies of water.



This photograph shows a stone aqueduct of the Erie Canal as it crosses the Mohawk River near Rexford, New York. This image from the early 1900s is courtesy of Wikimedia Commons.

New York's governor, De Witt Clinton dreamed of connecting the Great Lakes with New York City.



Once connected to New York city, goods could be shipped across the Atlantic Ocean. This image by Rembrandt Peale (1778-1860) was painted circa 1823. This image is courtesy of Wikimedia Commons.

When President Thomas Jefferson was approached about giving money for the Erie Canal, he replied that the project was “little short of madness.”



Jefferson thought the technology to complete the project, including digging through mountains would not be available for another 100 years. This image is courtesy of eriecanal.org.

The United States Congress also rejected giving money to the Erie Canal, so the State of New York funded it.



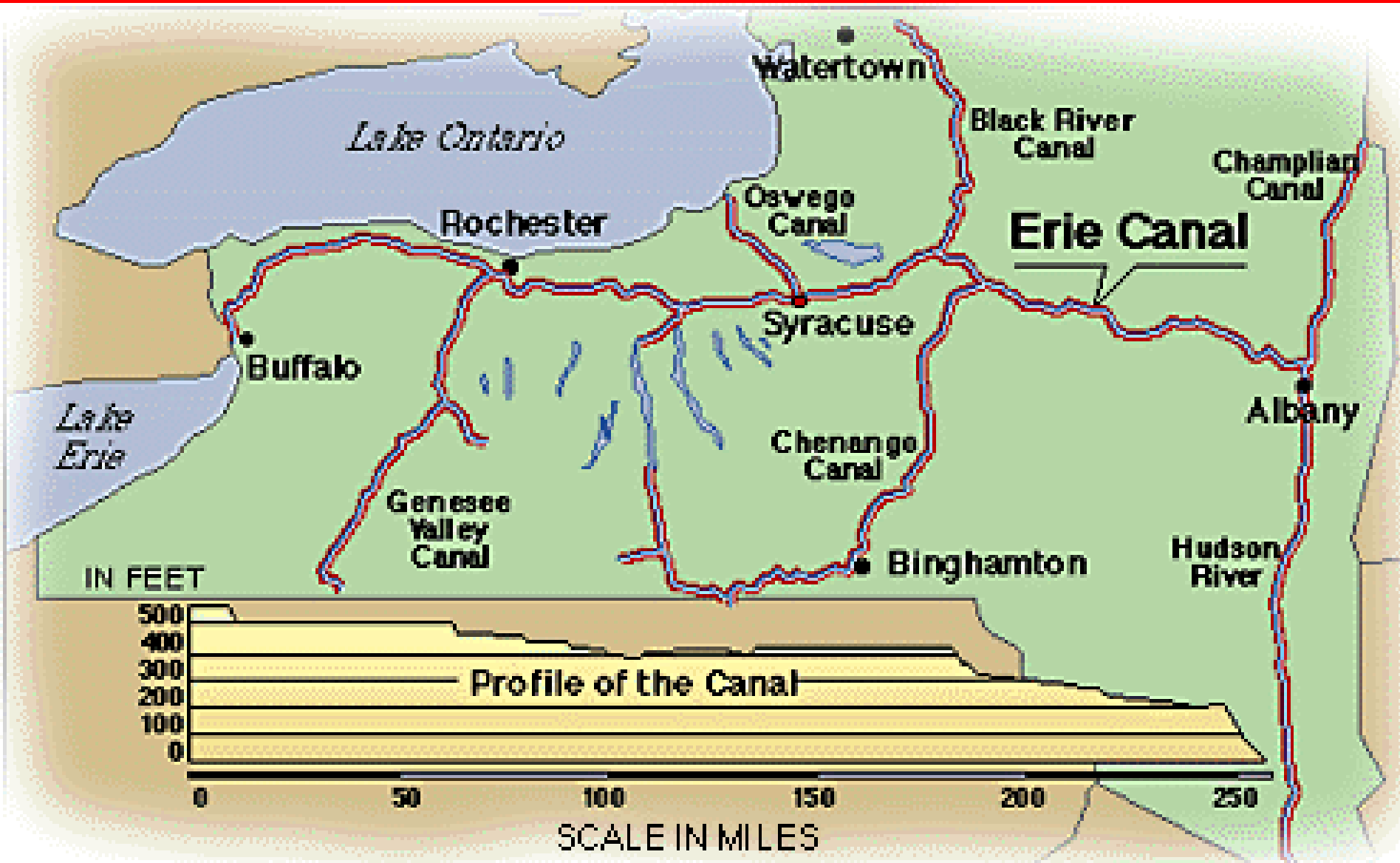
Construction on the Erie Canal began in 1817. The canal connected the Hudson River with Lake Erie. This image is courtesy of eriecanal.org.

After the canal was finished, a freight barge named the *Seneca Chief* traveled the Erie Canal starting at Buffalo, located on Lake Erie.



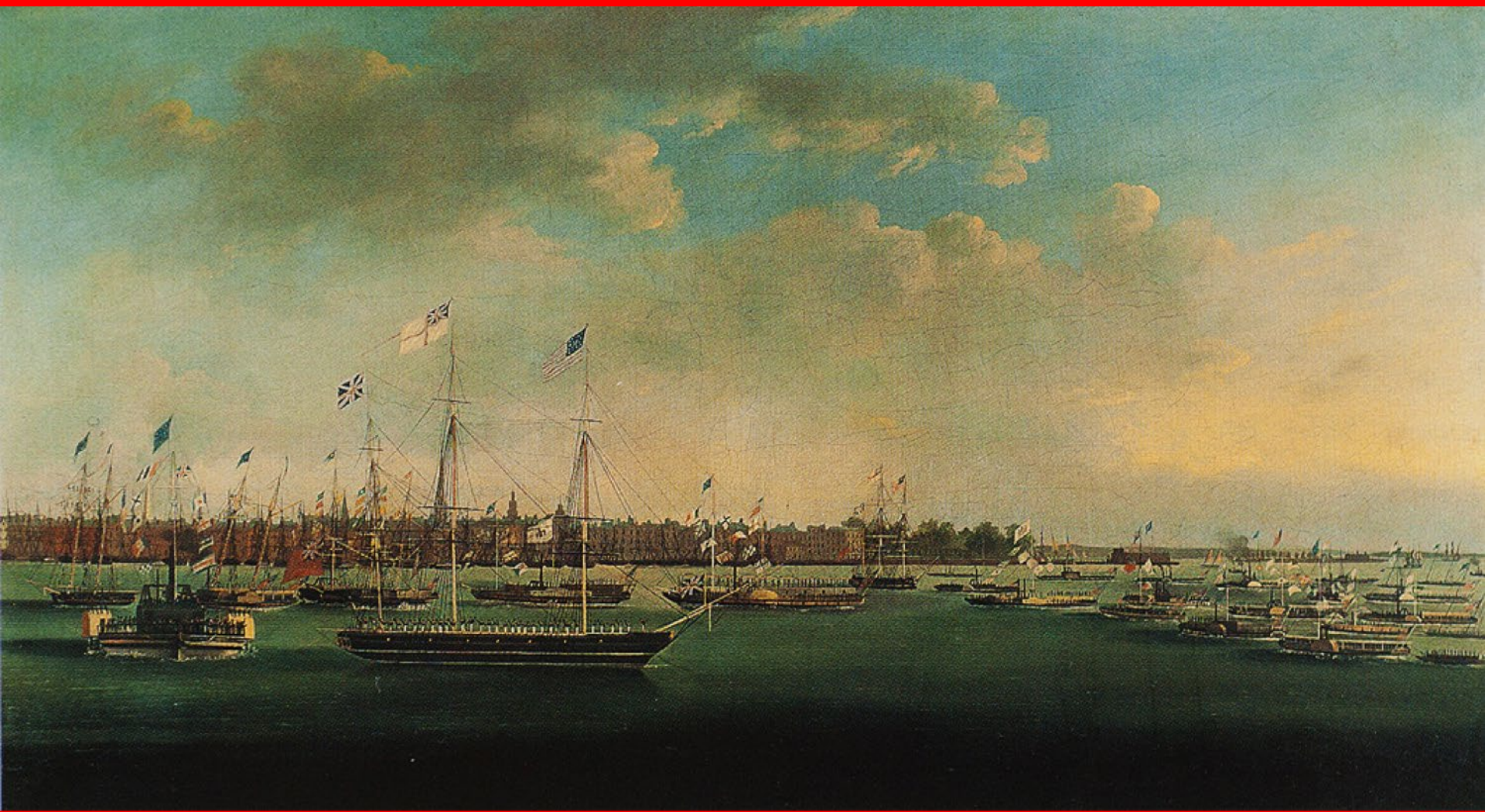
Governor DeWitt Clinton and other dignitaries traveled the Erie Canal from Buffalo to New York City in October, 1825 on the *Seneca Chief*. This image is courtesy of lowbridgeproductions.com.

The *Seneca Chief* continued east along the Erie Canal to Albany on the Hudson River.



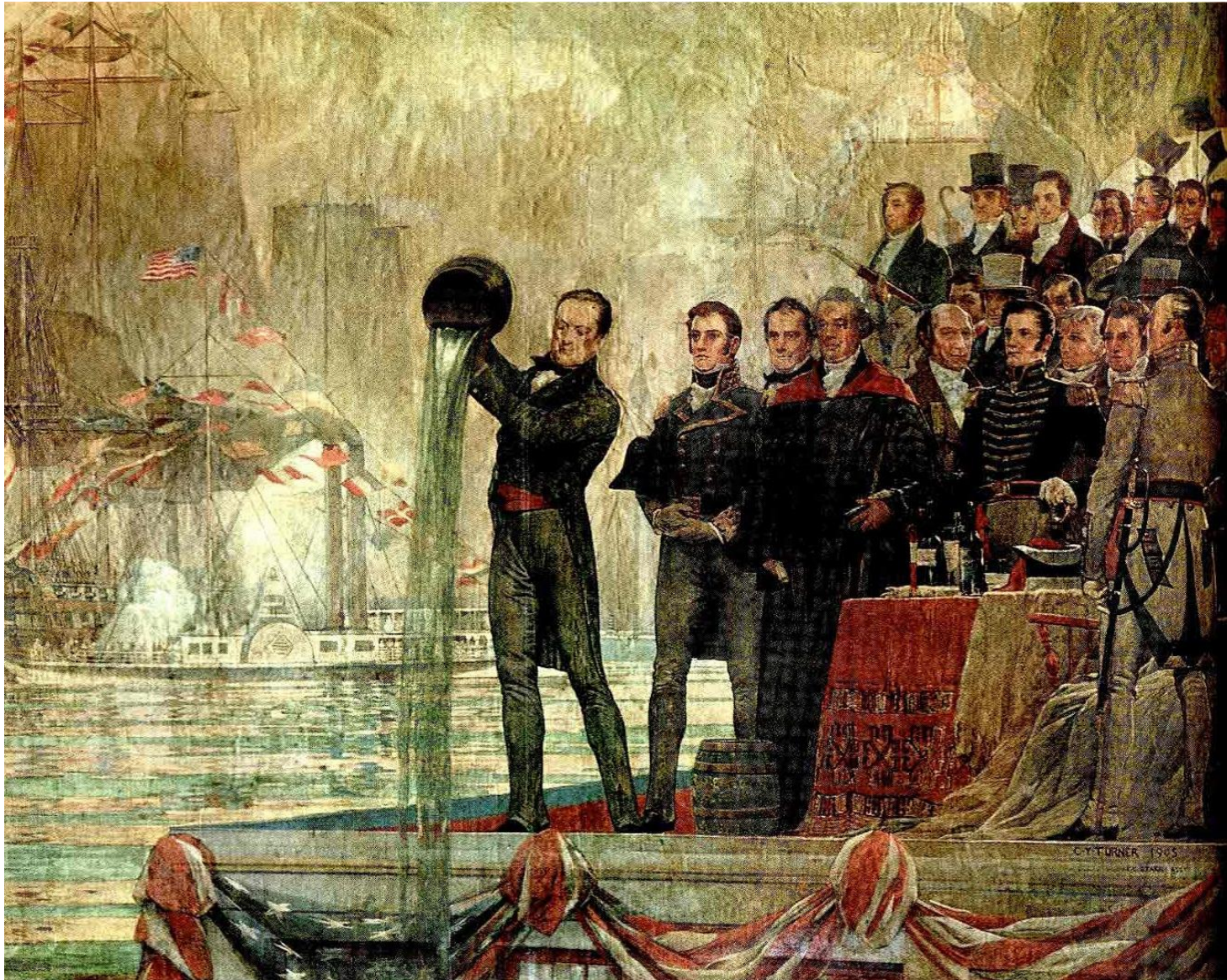
This is another map showing the Erie Canal route from Buffalo to Albany. This image is courtesy of nygeolog.

The *Seneca Chief* continued its journey down the Hudson River to New York City.



“The Erie Canal Celebration, New York, 1825,” shows boats welcoming the *Seneca Chief* to New York Harbor. Manhattan Island is in the background. This image, by Anthony Imbert, was painted circa 1825-1826 and is courtesy studyblue.com.

In New York Harbor, Governor Clinton proudly poured a kegful of water from Lake Erie into the Atlantic Ocean to celebrate.



The act of pouring water from Lake Erie into the Atlantic Ocean was known as the “Wedding of the Waters.” This image is courtesy of in.thepastlane.com.

By 1830 New York State stood to make a huge profit from canal tolls ----
--even after paying for the cost of building and maintaining the canal.



The Erie Canal cost approximately \$7 million to build, and took eight years, from 1817-1825. The Weighlock House in Syracuse, New York was constructed in 1907. It would weigh the canal boats in order to decide what toll to charge them. This building now houses the Erie Canal Museum. This image is courtesy of shorpy.com.

The canal lowered the cost of moving a ton of goods from 30 cents a mile (by land) to less than 2 cents a mile (using the canal).



This postcard of the Erie Canal section in Buffalo, New York, was created circa 1908. This image is courtesy of eriecanal.org.

The Erie Canal speeded up settlement of the Great Lakes region, and became the easiest, quickest, and cheapest way to send goods from the Northeast to the West.



This image shows the *Seneca Chief* making its maiden voyage down the Erie Canal in 1825. The *Seneca Chief* was the flagship of the packet boats on the canal at that time. This image is courtesy of fhwa.dot.gov.

Before the Erie Canal was constructed it took six weeks for someone to travel the 363 miles from Albany to Buffalo.



This image shows the area near the Erie Canal. It was created from 1828-1829 by French artist Jacques Milbert. This image is courtesy of oldprintshop.com.

After its completion, those using the Erie Canal could now travel the 363 miles from Albany to Buffalo in six days.



This map shows the present route of the Erie Canal. This image is courtesy of Wikimedia Commons.

New York City grew tremendously as it became the major center for goods being shipped to and from the Great Lakes.



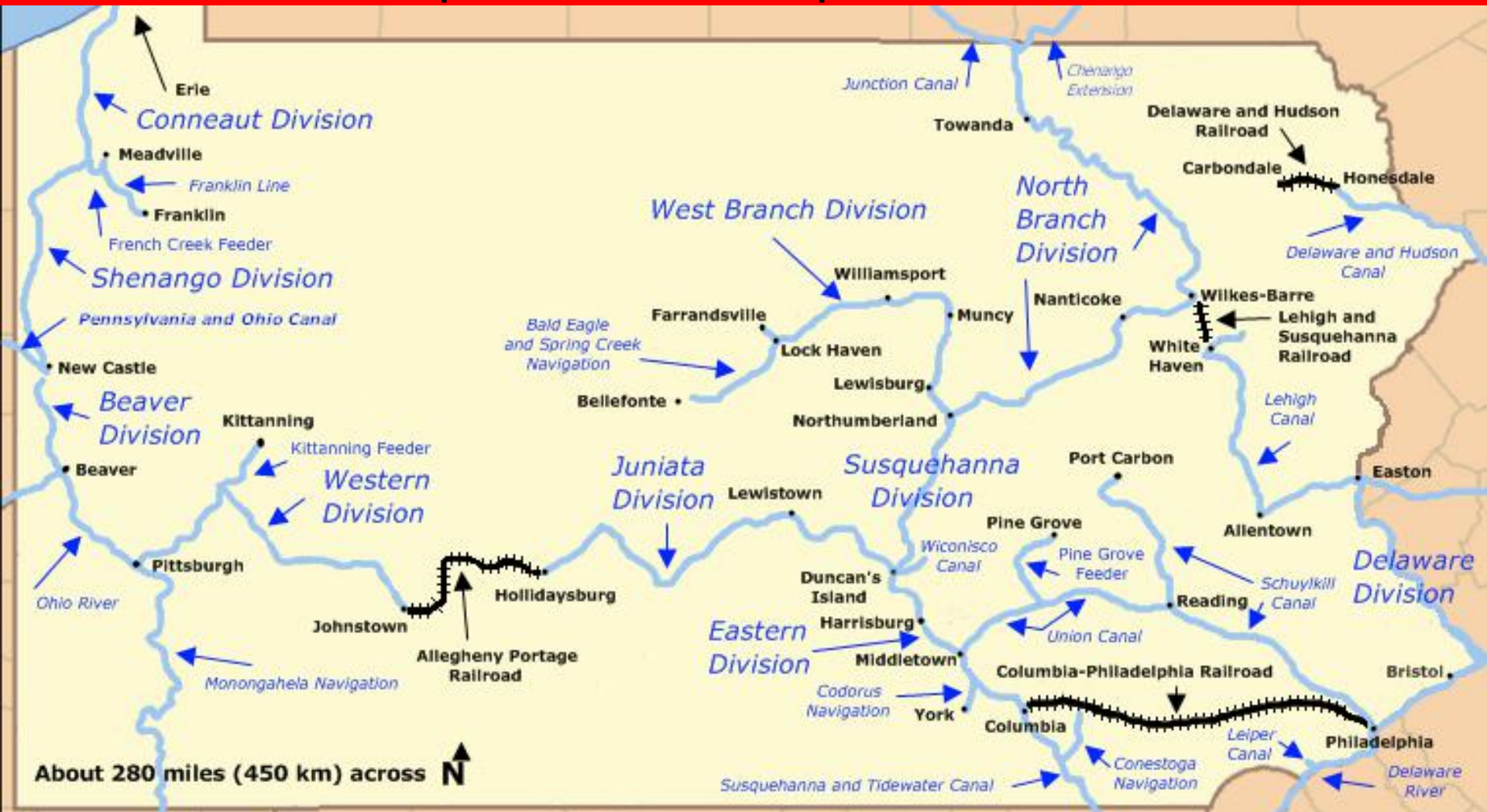
This image shows Broadway in the foreground, and the East River and New York Harbor in the background. This painting was based on a drawing by J.W. Hill in 1848, and it was updated in 1855. The tallest structure in the right background is Trinity Church. This image is courtesy of latinamericanstudies.org.

The success of the Erie Canal inspired other canals to be constructed in the United States.



As its name implies, the Chesapeake and Ohio Canal connected the Chesapeake Bay with the Ohio River. This image showing a boat on the C&O Canal was created circa 1900-1928. It is courtesy of Wikimedia Commons.

Pennsylvania had a system of waterways connecting Philadelphia with other parts of the state.



A map connecting Pennsylvania Canals with Philadelphia. Later, four railroads were also added to help the system. The Pennsylvania Canal System was established in 1826, the year after the Erie Canal opened. This image is courtesy of Wikimedia Commons.

In Ohio and Indiana, canals linked the Great Lakes with the Ohio and Mississippi rivers.



This image shows a section of Indiana's Wabash and Erie Canal near Delphi, Indiana. This image is courtesy of Wikimedia Commons.

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