In April 1864, the Red River expedition of Nathaniel Banks and David Porter was in a precarious situation. Failing in their attempt to secure the cotton fields of East Texas, Banks’ infantry and Porter’s ironclad gunboats now found themselves surrounded by Confederates at Alexandria, Louisiana. To make matters worse, due to low spring waters, Porter’s gunboats found themselves stuck about Alexandria’s Red River rapids.

The ten boats of Porter’s fleet represented the finest military vessels in the western theatre of the war. The issue was that the draft, or water required for passage, of these boats varied from a few feet to over six feet. At Alexandria, the water in the rapids was in some places only three or four inches deep. There was a narrow channel of slightly deeper water, about twenty feet wide, snaking its way through the upper and lower rapids.

Just when all seemed lost, a solution was proposed. The proposal came not from the navy, but from a lieutenant colonel in the 4th Wisconsin Infantry. His name was Joseph Bailey. Bailey had been a lumberman in Wisconsin and he thought back to a technique he had used there to get logs down the river. He proposed building a series of dams to raise the water at the rapids to a level that would allow passage of the boats.

The idea was ingenious but how to pull it off? Bailey proposed building what he called wing dams, one coming in from the shoreline on each side of the river near the lower rapids. The north side of the river was covered with large oak, pine and elm trees and from that side Bailey proposed a dam made of cut trees interspersed with chunks of limestone cut from the shore.
The south side of the river was relatively barren, and here Bailey proposed a different sort of dam. Cribs made of logs would be filled with a foundation layer of brush and then filled with whatever could be scavenged: stones from the fields and rivers, bricks from demolished buildings and machinery from a neighboring sugar house.

Many Union sailors and Alexandria residents mocked the effort, but in the first week of May as work began on Bailey’s dams, the water started to rise. By the second week of May, the Union navy was ready to give it a try. At Bailey’s urging, Porter ordered everything that could be removed from the boats taken off to lighten the vessels and reduce their draft.

Getting each boat through was tricky and the work began on May 9 with two of the boats with the shallowest drafts. As they made it through, Bailey and Porter had them set up below the lower rapids perpendicular to shore to act as auxiliary dams. By the morning of May 13, all of Porter’s boats had made it through both sets of rapids. Bailey’s ingenuity had saved the western fleet.

Bailey received thanks from Congress and a promotion to brigadier general. In his official report, Porter gave Bailey the highest praise: “This is without a doubt the greatest engineering feat ever performed…The highest honors the Government can bestow upon Colonel Bailey can never repay him for the service he has rendered his country.”

After the war, Bailey settled in Missouri and was so highly thought of that he was elected sheriff. On March 21, 1867, he arrested two brothers who got the upper hand on Bailey, shooting and killing him. He is buried at Fort Scott, Kansas.