

## **Episode 133 Confederate Powder Production**

**<http://civilwar150.longwood.edu>**

When the Civil War began, the South was lacking one of the critical necessities for fighting a protracted war: sufficient supplies of gunpowder. Just before the war broke out, some gunpowder was confiscated from Federal arsenals scattered throughout the South and a bit more was bought from Northern gunpowder producers willing to do business. As many expected the war to consist of one cataclysmic battle, lack of powder was not a pressing concern as the troops rushed to fight. But after the first Battle of Bull Run, it became obvious to both sides that they needed to be prepared for a much longer war. Confederate president Jefferson Davis set out to address the need to keep his armies supplied with the weapons and ammunition of war.

Producing gunpowder on a large scale was not going to be an easy task for a largely agrarian nation that would soon be blockaded. It was going to take determination and ingenuity to get the job done and Davis found the perfect man in George Washington Rains. Born in North Carolina and educated at West Point, Rains later taught chemistry at West Point and then became president of an iron works company in New York. When the war became imminent, Rains rushed back to join the Confederacy and was assigned to the Ordnance Bureau. His scientific and industrial background made him a natural choice for the task of producing the Confederacy's gunpowder.

Beginning in the summer of 1861 Rains made an extensive tour of the South to determine what resources were available and to scout a location for a production facility. He eventually decided on Augusta, Georgia. The city had several things in its favor. It was likely to be secluded from the front lines of war, it had good connections to several railroads, it had a

thriving canal with good, pure water and an ample supply of workmen. By the fall of 1861, Rains had created a plan for the facility and work had begun. The Confederate Powder Works would consist of numerous buildings set on both sides of the canal in such a way that the raw materials were received on one end and the finished powder was boxed and shipped on the other end. The concept was a precursor of the modern assembly line.

Powder production began in April 1862 with a little over 6,000 pounds of powder and rose steadily through the spring of 1863. To create the facility, Rains had little more to go on than a pamphlet from Waltham Abbey, the famous powder production facility in England. He found that in several cases he did not have the ability to duplicate the English process and was forced to improvise. In spring of 1863, he developed a completely novel way to mix the ingredients of gunpowder using steam. After implementing this improvement, powder production increased dramatically. From 84,000 pounds in April 1863, production jumped to over 160,000 in May 1863.

All told, Rains and his men produced over 3 million pounds of various types of powder between April 1862 and April 1865. Many claimed that the powder produced in Augusta was the equal of any in the world. About two-thirds of the total produced was for artillery and the rest was for various small arms. While the powder produced in Augusta found its way all over the Confederacy, the main recipients were the arsenals at Richmond, Virginia and Charleston, South Carolina. While historians may continue to debate the various reasons for the South losing the Civil War, it appears that lack of good gunpowder was not among them.