

## Eli Whitney

1765–1825

Eli Whitney was an American inventor born on December 8, 1765 in Westborough, Massachusetts. He invented the cotton gin and originated the idea of interchangeable parts. Whitney was one of the founders of American industry.

During the American Revolution, Whitney worked at his father's nail-manufacturing workshop and displayed his mechanical abilities. On a trip to South Carolina, he met the widow of Revolutionary War general, Nathanael Greene. Whitney visited Mrs. Greene's plantation in Georgia. Whitney met Phineas Miller who was the plantation manager and Mrs. Greene's future husband, and Whitney's future business partner.

Whitney observed that the tiring process of removing cotton seeds from the cotton fiber by hand slowed production. In 1793 he invented the cotton gin, a machine that removed seeds from cotton. The cotton gin had a wooden drum with hooks. The hooks pulled the cotton through a mesh screen and separated the seeds from the fiber. Many historians think the invention contributed to the preservation of the African slave system in the South because the cotton gin made cotton production much faster and more profitable. Slavery was the fuel for this profitable business.

Whitney's most important contribution to America was his idea for mass production of interchangeable parts for guns. Whitney received credit for this idea, although the idea was that of a French gunsmith, Honore' Blanc. There also is proof some interchangeable musket parts were produced in Bedminster, New Jersey, during the Revolutionary War.

Wherever the idea originated, Whitney's use made the greatest impact on American industry. In 1798 Whitney built ten guns with the same parts and mechanisms. He took them apart and put them back together in front of an impressed United States Congress. As a result, Congress chose to make all military weapons with interchangeable parts. This meant faulty guns could be repaired easily, rather than discarded or repaired with hand-made parts. The technology of manufacturing products with interchangeable parts became important in many other industries. It was the standard method of mass production during the nineteenth and twentieth centuries. Henry Ford, for example, used mass-production techniques to make his famous Model Ts affordable.

Now very successful, Whitney settled down and married Henrietta Edwards. They had four children. On January 8, 1825, Whitney died of prostate cancer. He left his weapons store to his two nephews, Eli Whitney Blake and Philo Blake. His son, Eli Jr., took over in 1841 and partnered with Samuel Colt to create the “Whitneyville Walker Colts” guns for the Texas Rangers.

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### Discussion Questions:

1. What was the purpose of the cotton gin?
2. How did the cotton gin affect slavery in the South?
3. Why was the idea of interchangeable parts for guns significant?
4. What industries benefited from the innovation of interchangeable parts?

### **Open-Ended Question**

5. What might have happened to slavery if the cotton gin had not been invented?