

## Eli Whitney

Historians believe that one of the greatest pioneers in the birth of automation, American inventor, pioneer, mechanical engineer, and manufacturer

Eli Whitney. Best remembered as the inventor of the cotton gin. He made his first violin when he was only 12. Eli started college when he was 23,

in 1788. He left for Georgia and got his first look at cotton business. He graduated from Yale in 1792, and went to Savannah, Georgia to teach and study law. After he graduated he went south to tutor the children of

a wealthy plantation owner. He taught school for five years. Eli Whitney

made and sold nails during the Revolutionary war. In 1798 Eli obtained a government contract to make 10,000 muskets. In 1812 he was given another

contract for 15,000 muskets .He built the first firearms factory to use mass production methods. When Eli Whitney built his first factory in 1798,

he allocated a great deal of his precious resources to providing housing

for his workers as well as ensuring that they were well off financially.

This consideration marked his entire career as an industrialist. He wanted

to "employ steady sober people," tied to his factory and part of a community of industry. He intended to create a self-sufficient village,

producing goods, and populated by well educated, happy workers, Whitneyville.

He also affected the industrial development of the United States , in manufacturing

muskets but most of Whitney's own guns parts do not in fact interchange.

Nevertheless, Eli Whitney is a figure whose history is fascinating, and whose impact in New Haven can not be overstated. He translated the concept

of interchangeable parts into a manufacturing system, giving birth to the

American mass-production concept. Whitney saw that a machine to clean the

seed from cotton could make the South prosperous and make its inventor rich. He set to work at once and within days had drawn a sketch to explain

his idea; 10 days later he constructed a crude model that separated fiber

from seed. By 1793 he designed and constructed a machine called the cotton

gin, that quickly separated cotton seed from the shortstaple cotton fiber.

The first cotton gin was a wooden box that spun around a drum and picked

the cotton seed with wire hooks. Cotton Gin, machine used to separate the

fibers of cotton from the seeds. Before the invention of the cotton gin, seeds had to be removed from cotton fibers by hand; this labor-intensive and time-consuming process made growing and harvesting cotton uneconomical. The cotton gin allowed the seeds to be removed mechanically and rapidly from the cotton fibers, making cotton production economical and leading to dramatic growth in the United States cotton industry. This expansion contributed to an increase of slave labor in the United States.

Whitney's cotton gin, also called a saw gin, consisted of a cylinder to which a number of sawlike teeth were attached. As the cylinder revolved, the teeth passed through the closely spaced ribs of a fixed comb. When cotton was fed into the gin, the teeth caught the cotton fibers and pulled them through the comb. The seeds, which were too large to pass between the ribs, were left behind, ( This principle, with virtually no modifications, is still employed in modern automatic saw gins used to process the bulk of the U.S. cotton crop).After perfecting his machine he filed an application for a patent on June 20, 1793; in February 1794 he deposited a model at the Patent Office, and on March 14 he received his patent. Whitney's gin brought the South prosperity. Whitney entered into partnership with the plantation manager, Phineas Miller, to manufacture cotton gins at New Haven, Connecticut. A disastrous factory fire prevented the partners from making enough gins to meet the demand, and manufacturers throughout the South began to copy the invention. but the unwillingness of the planters to pay for its use and the ease with which the gin could be pirated put Whitney's company out of business by 1797. When Congress refused to renew the patent, which expired in 1807, Whitney concluded that 'an invention can be so valuable as to be worthless to the inventor.' He never patented his later inventions, one of which was a milling machine the other ground gravel used in road production. His genius as expressed in tools, machines, and technological ideas made the southern United States dominant in cotton production and the northern states a bastion of industry. He had one sister- Elizabeth, and two brothers- Benjamin and Josiah. In 1817 he married Henrietta Frances Edwards of Bridgeport, Connecticut. They had three daughters and one son. Eli Whitney died in 1824 of natural causes. There is a award this day which is for distinguished accomplishments in improving capability within the broad concept of orderly production. The person receiving this Award should

be presently in a top management position, active personally in the development of ideas, concept of process, associated with engineering, responsible for proven concepts, with wide recognition in the area of mass production and generating greater productivity