

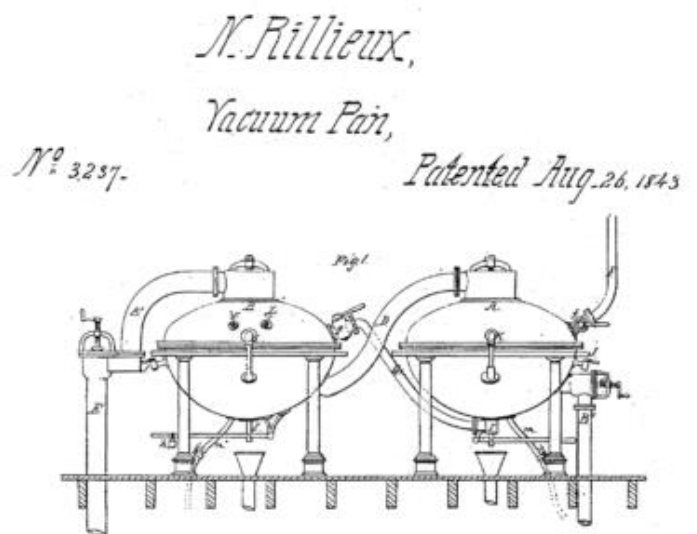
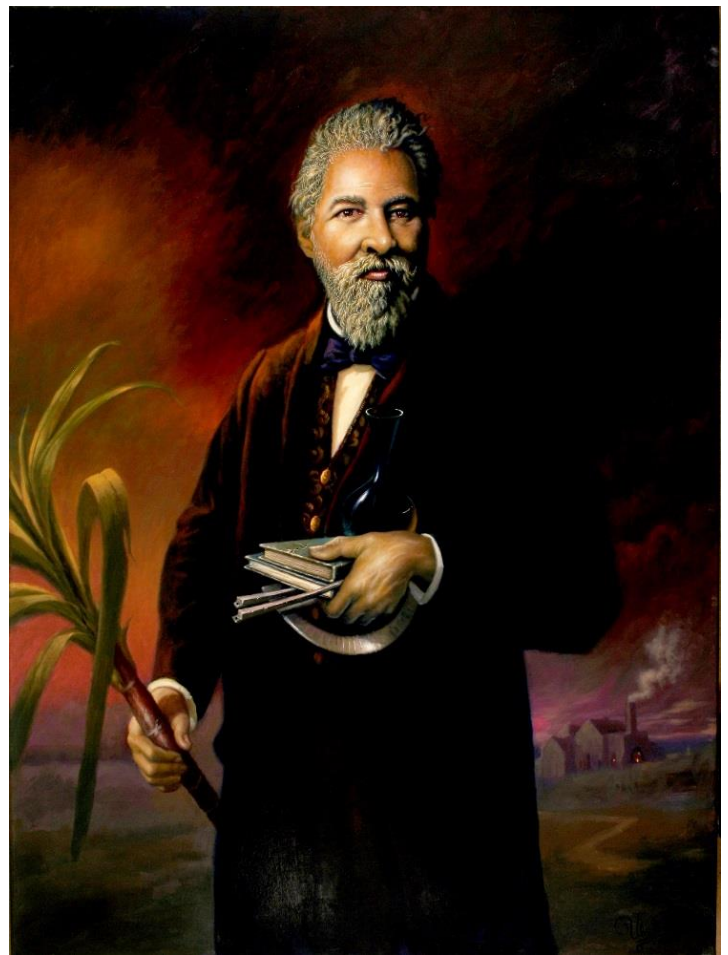
Spotlight: Norbert Rillieux

Norbert Rillieux (March 17, 1806-1894) was an inventor and engineer who created a device that revolutionized sugar processing. His multiple effect vacuum sugar evaporator, final version patented in 1846, made the processing of sugar more efficient, faster and much safer. The resulting sugar was also superior. His invention was eventually adopted by sugar processing plants around the world.

Born in New Orleans, his mother had been a free woman of color and his father a wealthy, white sugar plantation owner. Rillieux's great intelligence was noticed early in his life. Not able to receive an education in Louisiana, his father sent him to be educated in Paris, France at the École Centrale. He later taught engineering courses there. Rillieux also published many steam engineering papers.

After his studies, he returned to Louisiana and prospered for some time and was very highly regarded as a process engineer until the start of the Civil War. Rillieux then returned to France where he developed other interests. By 1880, he was more likely to be found in a library, translating Egyptian hieroglyphics than in a sugar mill.

Rillieux is widely considered to be one of the earliest chemical engineers whose grasp of the principles of thermodynamics and practical application to the sugar industry has been described as "revolutionizing the sugar industry as much as Eli Whitney's gin revolutionized the processing of cotton." His invention is still used in the production of sugar, condensed milk, glue and even in the petrochemical industry.



Complete the following activities based on your reading of the text.

1. **Word Scramble.** Unscramble the following letters of each item to create a word associated with Norbert Rillieux's life or invention.

A. A T M S E

A. _ _ _ _ _

B. G R U A S

B. _ _ _ _ _

C. I H A C E L M

C. _ _ _ _ _

D. T T P E N A

D. _ _ _ _ _

E. G N N E R E I E

E. _ _ _ _ _

F. M U C A U V

F. _ _ _ _ _

G. G H R O Y I P L H E C S I

G. _ _ _ _ _

2. **Art Analysis.** Look closely at the portrait of Norbert Rillieux done by artist Ulrick Jean-Pierre. What props did he include in his depiction of Rillieux that help us understand Rillieux's connection to the sugar industry? Name at least three.

a. _____ b. _____ c. _____

3. **Extend your learning.** Do some research on the internet to discover which foods, aside from typical sweets, contain sugar. For example, you might be surprised to learn that there are at least 10 grams of sugar in one cup of most commercially produced spaghetti sauces. List at least 5.

a. _____

b. _____

c. _____

d. _____

e. _____



Answer Key

- Steam
 - Sugar
 - Chemical
 - Patent
 - Engineer
 - Vacuum
 - Hieroglyphics
- Three objects depicting Rillieux's connection to the sugar industry may include the following: the sugar mill in the background, the stalk of cane in his right hand, the glass beaker atop the books in his left hand.
- Surprisingly, many brands of items like bread, baked beans, barbeque sauce, salad dressing and relish contain several teaspoons of sugar among their lists of ingredients.

