

Women Inventors

Madam Walker

Sally Fox

Martha Coston

Patsy Sherman

Bette Graham

REUBEN MUÑOZ / Los Angeles Times

Part 1: Martha Coston

By SUSAN CASEY

Martha Coston of Philadelphia was only 21 in 1847 when her husband, Benjamin, an inventor for the Navy, unexpectedly died of pneumonia.

While they had shared an active social life in Washington, D.C., and she counted many prominent people as her friends, it was up to Coston to support herself and their four small children. She wrote in her autobiography, "Signal Success," that a woman like herself had to be "ready to fight like a lioness, if need be, to put food in the mouths of her children."

Her efforts began when she found a notebook with her husband's ideas for signal flares. His aim was to use them to communicate ship-to-ship or ship-to-land. Coston liked the idea but when she got the models he had created, she discovered that the signals didn't work.

That's when she decided to give it a try.

At first she worked unsuccessfully with several chemists. Then while watching a fireworks show, she realized that the signals might be able to work using the technology of fireworks. She sought the advice of experts

in that field.

Bingo! In 1859, just before the Civil War, she patented a system of red, white and green "Pyrotechnic Night Signals." John Quincy Adams, sixth president of the United States, witnessed her patent application. The U.S. Navy bought the rights to the signals for \$20,000 and awarded her the contract to manufacture them. During the war, when ships were in trouble or in heavy fog, they set off one of her signals. So did people who were shipwrecked. She is credited with saving the lives of many people.

Coston gained a second U.S. patent in 1871, and also patented her signals in England, France, Holland, Denmark, Italy and Sweden. She sold the signals to navies, shippers and yacht clubs around the world. She traveled widely, lived to be 68 and never remarried.

Tuesday: Madam C.J. Walker

Kids, March is Women's History Month. This year's theme is "Women Sustaining the American Spirit." For more information, visit www.nwhp.org/whm/themes/themes.html.

Susan Casey is author of "Women Invent! Two Centuries of Discoveries That Have Shaped Our World," from Chicago Review Press. This story will be on The Times' Web site at www.latimes.com/kids.