

## The brilliant lady who invented the automatic dishwashing machine.

Josephine Garis Cochran (sometimes spelled Cochrane) (1839-1913) is largely unknown now, but she should be declared the patron saint of the modern busy family. For in 1886, she patented the first commercial dishwasher.

Cochran wanted a machine that would save time washing dishes, and would prevent broken crockery. She was convinced that there had to be a mechanical solution to the tedium of dishwashing. Josephine grew up in a family of engineers, but finding no one that could or would invent such a machine, she vowed, "If nobody else is going to invent a dishwashing machine, I'll do it myself."

So she invented a contraption of gears, belts, and pulleys that could take a cage filled with over 200 dirty dishes, and would re-appear a few minutes later with the dishes as clean as if they had been hand-washed. Her machine, unlike others that had been attempted, was the first to use water pressure rather than scrubbers to clean the dishes. It also had fitted racks to hold the dishes and cutlery in place.

Once her patent application, under the name of "J.G. Cochran" was approved, the next challenge was production. "I couldn't get men to do the things I wanted in my way until they had tried and failed in their own," Josephine later explained. "And that was costly for me. They knew I knew nothing, academically, about mechanics, and they insisted on having their own way with my invention until they convinced themselves my way was the better, no matter how I had arrived at it."

In 1886, with the aid of a young mechanic named George Butters, she set to work in a woodshed behind her home bringing the first prototype to life.

Once she had the patent and a machine, she had to sell the dishwashers. Although she wanted to sell directly to women, as they would appreciate how much drudgery the machine eliminated, because very few households in the 19th century could afford to pay over \$100 for an appliance, her main customers were large hotels and restaurants.

She was successful at sales, but it was very difficult to challenge the mores of the 19th century, to enter these establishments on her own. When discussing selling to a large hotel, she described it as "almost the hardest thing I ever did, I think, crossing the great lobby of the Sherman House alone. You cannot imagine what it was like in those days...for a woman to cross a hotel lobby alone. I had never been anywhere without my husband or father—the lobby seemed a mile wide. I thought I should faint at every step, but I didn't—and I got an \$800 order as my reward."

In 1893, she exhibited her dishwashers at the Columbian Exhibition World's Fair in Chicago, and the orders came pouring in from schools, colleges, hospitals and other large institutions. Her product, the Garis-Cochran Dishwasher was a success.

With the assistance of her business partner, George Butters, they opened a factory in 1898, Cochran's Crescent Washing Machine Company. At first the dishwashing machines were used primarily by large businesses and institutions, but decades later, Cochran's invention eventually evolved into the appliance considered essential by millions of householders today.

Cochran died of a stroke in 1913, a very successful businesswoman. Her company was bought out in 1926 by the Hobart Corporation which produced appliances under the KitchenAid brand. In 1986, KitchenAid was acquired by Whirlpool.

Josephine Garis Cochran was inducted into the National Inventors Hall of Fame in 2006. In 2013, on the 100 year anniversary of her death, the country of Romania (a country with which Cochran had no connection) issued a postage stamp in her honor, an indication of just how widespread her influence was.