



# TALES FROM THE LAB

## BREAKTHROUGH:

### INVENTING THE AUTOMATIC DISHWASHER

**J**osephine Garis Cochrane didn't set out to improve women's lives.

A wealthy socialite of the late 1800s, Josephine lived in a grand house in Shelbyville, Illinois, with her husband, William, a merchant and popular local politician. She threw lavish parties, dining on fine china that had been handed down for generations in her family.

Only one problem vexed Josephine: Her servants became careless with her precious china. They chipped it while scrubbing it in the sink. *That would not do!*

**“ ONLY ONE PROBLEM VEXED JOSEPHINE: HER SERVANTS BECAME CARELESS WITH HER PRECIOUS CHINA. ”**

Josephine took over the dish washing herself. Standing at the kitchen sink, she wondered, “Why doesn't somebody invent a machine to wash dirty dishes?” Then, “Why don't I invent such a machine myself?”

Josephine had only a high school education, but she came from a family of engineers and inventors. She began to sketch out a design.

#### EVERYTHING CHANGES

Shortly after Josephine got her idea, William unexpectedly died, leaving his 44-year-old widow deeply in debt. Her dishwasher idea was no longer a luxury. It was her future livelihood.

Josephine threw herself into her work. In a shed behind her house, she measured dishes, designed racks, figured out how to make water spray, and began hammering together a working model.

She wanted a mechanic to help her, but few men took her seriously. Finally, she found George Butters, a railroad mechanic, who helped Josephine build her machine—and it worked!

In 1886, Josephine patented the Garis-Cochran Dish-Washing Machine. In early models, the water was pumped by hand. Inside, specially designed dish racks rotated past the streams of hot sudsy water and hot rinse water. The heat helped the dishes dry. Later, larger models could be motorized. At peak capacity, they could wash and dry 240 dishes in two minutes.

Friends and neighbors admired her invention. One introduced her to the manager of Chicago's famous Palmer House hotel, who bought dish-washing machines for his hotel.

But it wasn't easy for a woman to build a business in the late 1800s. Josephine had never been anywhere without her husband or father, and now she had to approach hotel managers by herself. In those days, it was unthinkable for a lady to even cross a hotel lobby without a man escorting her.

One day, she went to the Sherman House hotel in Chicago, requested a moment of the manager's time, and sat down in the ladies' parlor to wait. When it was time for the meeting, she had to cross the hotel's grand lobby—alone.

It was one of the hardest things Josephine ever did. “The lobby seemed a mile wide,” she recalled. “I thought I should faint at every step, but I didn't—and I got an \$800 order as my reward.”

By the early 1900s, Josephine's company was thriving. Her invention changed the way everyone washed dishes.

The impact on women's lives was profound. One newspaper in 1892 predicted that Josephine would be forever “enshrined in the grateful heart of womanhood.” And men's hearts, too.

