

Women's History

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The Ice Lady

Nutrition as we know it, in large part is due to Mary Engle Pennington who was a bacteriological chemist. At the turn of the 20th century, Pennington developed methods of handling, packaging, and preserving foods, for as people moved to cities, items formerly picked from backyard gardens needed to be shipped long distances. Food contamination was a major health issue, mainly due to unsanitary handling procedures and to spoilage from unseen bacterial growth.

Pennington's work was devoted to keeping foods fresh and safe to eat from the farm to the city. She researched chilling temperatures that would prevent bacterial growth and preserve food quality. She created scientific standards for food storage and transportation of perishables, especially milk, poultry, eggs, and fish, but most importantly, ice cream. She designed refrigerated railroad cars and freezers, as well as refrigerator-freezers for the home. Today's commercial refrigerated and frozen food sections, are a direct result of her innovations. The egg carton is her design.

At the age of twelve, Pennington found a chemistry book at her library. It introduced her to the unseen world atoms and molecules in which we live. She was instantly fascinated and hooked on this invisible world. When eighteen, she entered the University of Pennsylvania, where she completed the requirements for a bachelor degree of science. However, the university did not grant degrees to women. For her academic studies, she was awarded a "certificate of proficiency." She was encouraged by some of her professors to stay at Penn where she eventually earned, and was awarded, her Ph.D. She then did postdoctoral research at Yale.

Recruited by the U. S. Department of Agriculture (USDA) in 1905, Pennington worked for the passage of the first, 1906 Pure Food and Drug Act, which led to the formation of the Food and Drug Administration (FDA). In 1908 she became Chief of the Food Research Lab for the FDA.

In 1919, President Hoover awarded her the Notable Service Medal. The American Society of Heating, Refrigeration and Air-conditioning Engineers recognized her in 1923 as the foremost American authority on home refrigeration. She received the Garvan Medal in 1940, and in 1947 she was elected fellow by the American Society of Refrigerating Engineers. In 1959 she was the first woman elected to the Poultry Historical Society Hall of Fame. In a ceremony, I was privileged to attend in 2002, Mary Engle Pennington was inducted into the National Women's Hall of Fame at Seneca Falls, New York.

Sources

National Women's Hall of Fame

Journal of Chemical Education

Women in Chemistry

http://chemheritage.org/women_chemistry/food/pennington.htmlWhen