

## Margaret Knight

### Margaret Knight: From Paper Bag Factory Worker to Inventor

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Margaret Knight was an employee in a paper bag factory when she invented a new machine part that would automatically fold and glue paper bags to create square bottoms for paper bags. Paper bags had been more like envelopes before. Workmen reportedly refused her advice when first installing the equipment because they mistakenly thought, "what does a woman know about machines?" Knight can be considered the mother of the grocery bag, she founded the Eastern Paper Bag Company in 1870.

#### Earlier Years

Margaret Knight was born in York, Maine, in 1838 to James Knight and Hannah Teal. She received her first patent at the age of 30, but inventing was always part of her life.

Margaret or 'Mattie' as she was called in her childhood, made sleds and kites for her brothers while growing up in Maine. James Knight died when Margaret was a little girl.

Knight went to school until she was 12, and began working in a cotton mill. During that first year, she observed an accident at a textile mill. She had an idea for a stop-motion device that could be used in textile mills to shut down machinery, preventing workers from being injured. By the time she was a teenager the invention was being used in the mills.

After the Civil war, Knight began working in a Massachusetts paper bag plant. While working in the plant, she thought how much easier it would be to pack items in paper bags if the bottoms were flat.

That idea inspired Knight to create the machine that would transform her into a famous woman inventor. Knight's machine automatically folded and glued paper-bag bottoms – creating the flat-bottom paper bags that are still used to this very day in most grocery stores.

## Court Battle

A man named Charles Annan tried to steal Knight's idea and receive credit for the patent.

Knight did not give in and instead took Annan to court. While Annan argued simply that a woman could never design such an innovative machine, Knight displayed actual evidence that the invention indeed belonged to her. As a result, Margaret Knight received her patent in 1871.

## Other Patents

Knight is considered one of "the female Edison," and received some 26 patents for such diverse items as a window frame and sash, machinery for cutting shoe soles, and improvements to internal combustion engines.

A few of Knight's other inventions:

Dress and skirt shield - 1883

Clasp for robes - 1884

Spit - 1885

Numbering machine - 1894

Window frame and sash - 1894

Rotary engine - 1902

Knight's original bag-making machine is in the Smithsonian Museum in Washington, D.C. She never married and died on October 12, 1914, at the age of 76.

Knight was inducted in the National Inventors Hall of Fame in 2006.