



How Margaret Bagged Success

THE STORY OF THE YOUNG WOMAN WHO NOT ONLY STOOD UP FOR
HERSELF, BUT ALSO SOLVED PROBLEMS FOR EVERYONE.



A letter from the publisher



Dear Reader,

This playful book-series is a publication of AlligatorZone®, where students meet startups, an impact initiative as well as a community of life-long learners who explore the world through the eyes of the entrepreneurial problem-solver.

AlligatorZone® is proud to present this series of stories and related playful learning activities designed to surface the delightful conversationalist that lurks within each of us, and to shine a light on our charismatic side, while we explore the world of future careers, and perhaps find a calling, sooner than later. This activity book can be enjoyed by students of ages ten through the teens. In fact, any life-long learner will enjoy this book.

If you choose to read this book aloud, enunciate like your favorite TV newscaster, actor or YouTuber. If you post it online outside of AlligatorZone, tag @alligatorzone or even #alligatorzone. If reading aloud, slow down so that audiences of all backgrounds may understand you clearly. This exercise fine-tunes our personality, making people pause and listen when we speak. That's because the knowledge in this book series will appeal to most people, and this exercise powers up style with substance.

These stories and activities will make you look at the world through the eyes of an entrepreneur and observe opportunities to solve problems everywhere around you. Included with this story, is a set of questions to jog your thinking, and an activity for you to go on a journey of discovery, somewhat like an investigative journalist. After you read this book, you can continue learning about more lessons drawn from this book through additional programs offered by AlligatorZone online.

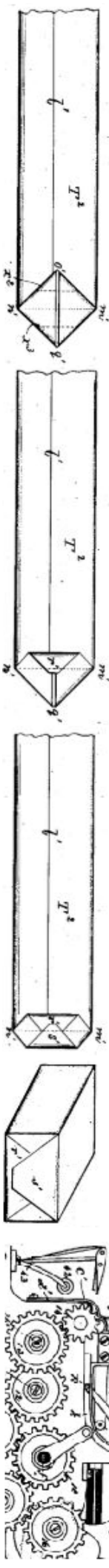
LIFE-LESSONS: With this activity-book and program, readers will understand, among other things, that

- opportunities to improve things and make a difference exist all around us
- industries require a variety of skills
- there is something to learn even from the most mundane things around us
- the world is an encyclopedia, when we don't hesitate to ask questions
- with practice, one can learn to ask the right questions and solve problems
- persistent efforts can accumulate to grand outcomes despite humble beginnings
- your voice matters
- even learning to think like a startup makes one a standout leader
- mindfulness is possible in everyday activities
- understanding a company and its leaders makes us better consumers and investors
- those who make a difference do it regardless of their circumstances, and
- curiosity, listening and observation are super-powers that we all have and can use everyday

Enjoy more advanced learning activities and collaborative learning that we bring to you by extending lessons from this book to an online environment as a member of AlligatorZone. Visit AlligatorZone.org for more.

Have fun with this story and activity.

Ramesh Sambasivan
Instructional Designer
AlligatorZone® Academy
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How Margaret Bagged Success.

(To be read aloud to an audience at home, in school, or online)



Once upon a time, a young girl named Margaret was born in York, Maine, in the United States. It was the year 1838. Those were times when it was common for children from poor families to work in factories. A few years after she was born, Margaret's family ran into difficulties. She and her brother went to work in a cotton mill in Manchester to contribute to her family's income.

Margaret was not just another child working in the factory. She was already known to build things such as kites and sleds for her brothers and played with them. Margaret would observe things around her and think of ways to make them better.

Once, in the cotton mill, Margaret had seen how a sharp piece of machinery, a steel-tipped piece called the flying shuttle, flew out of control and caused serious injury to a worker. When she learned that such incidents were common, not surprisingly, 12-year old Margaret had already designed a stop-motion device that shut down the machine every time the steel-tipped shuttle came loose from the looms. Sadly, there was nobody to guide Margaret about obtaining a patent for her invention. Mills across the country began using her device and prevented injuries to their workers, but Margaret did not profit from it.

As she grew up, she began working in a company that made paper bags. The designer and inventor within her was unstoppable. Margaret soon designed a machinery that made a new kind of paper bag with a box-shaped bottom so that the paper bag could stand upright and hold more things. This time, however, she kept notes of her designs, and prepared to file a patent. Unfortunately, there was one person in her factory, who observed her making a prototype. He stole her design and filed his own patent before she could.

Margaret put up a fight and took him to court. The person who stole her design argued to the judge that a woman could never have invented a machine. Margaret's notes and drawings proved without a doubt that the machine was indeed her invention. Margaret won the case and the patent was awarded to her in 1871. With the patent secured, Margaret found a business partner and started her own paper bag company.

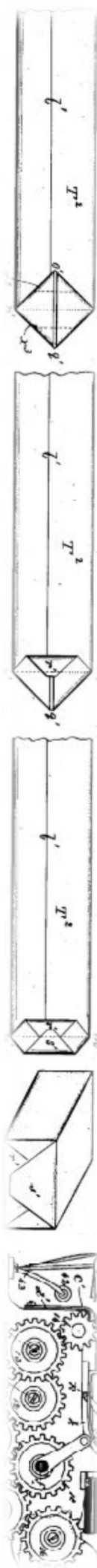
Margaret E. Knight had filed more than 20 patents by the time she died in 1914. The paper bag machine's model that was submitted to the U.S. Patent Office, is still on display at the Smithsonian Museum.

To this day, the trail-blazing self-taught mechanical engineer's design is being used to make the ubiquitous paper bag with a flat bottom that we often see being used to pack groceries in stores.

The paper bag designed by Margaret changed people's experience at the grocery stores when combined with technologies such as bar-codes and scanners used at the checkout in the grocery stores. Checkout clerks could pack food items faster into the paper bags by making them stand on their flat bottoms, without needing one hand to hold the bag open. A keen observation of the grocery bag with its flat bottom does remind one of the Japanese art form *origami*. The paper bag has since, undergone many more improvements.

People around the world are expected to spend a combined \$12.24 trillion on groceries next year. Margaret's invention made a big impact on shoppers' experience in how they carry groceries. Cities are however, becoming environmentally conscious with the usage of paper. A hundred years after Margaret's death, New York has a new law requiring stores to make customers pay extra for a paper bag in order to encourage shoppers to bring along their own reusable grocery bags. Despite that, the paper bag industry is expected to grow by leaps and bounds because it is used not just for groceries, but in other industries such as fashion, pharmaceuticals, and the confectionary industry.

12 year old Margaret showed us that there is an opportunity hidden in every unsolved problem. Even the mundane paper bag she designed very thoughtfully, has changed how people shop and made lives better. Margaret Eloise Knight is one of the foremost women inventors of our time. Her creation, the brown paper bag machine is a 19th century invention that has withstood the test of time.



Quiz your audience.

(Your audience could be a family member, a classmate, teacher or viewer).



Despite being a life-long inventor and a self-taught engineer, at what age did Margaret get her first patent? (Don't use a calculator).

Which Japanese art form would be useful if you were to redesign the paper bag?

Name a kind of toy that Margaret tinkered with and built during her childhood?

Name any industry other than grocery shopping, where paper bags are used to pack things for shoppers?

What helped Margaret prove to the court that she was indeed the inventor of the paper bag machine?

On her patent application, Margaret did not try to hide the fact that she's a woman inventor by using only her last name and first initial. Instead, she used her first and last name. What was Margaret's full name?

Next?

Continue to the next page for participating in a field activity, as part of the premium AlligatorZone plan. Not yet a premium member? Visit our website <https://alligatorzone.org>



AlligatorZone[®] Activity

(for life-long learners who are members of AlligatorZone)



1. The next time you see a brown paper bag, observe it. Taking care not to get any paper-cuts, open up the bottom part of the paper bag and look at the shape of the paper.
2. Imagine the way a machine would have to fold the brown paper and glue certain parts of it to form the bag.
3. Have you seen white paper bags? If so, where?
4. In your opinion, are there any aspects of a brown paper bag that could be improved? If, yes, what are they?
5. Do you see any markings or printed words on a brown paper bag? If yes, what are they?
6. Have you seen any unintended uses of a paper bag?
7. Can paper bags be made out of old newspapers and magazine pages?
8. Can such paper bags be used by stores?
9. Are paper bags classified by the weight or load they are meant to carry without falling apart?
10. In your observation, what characteristic of a paper bag makes people willing to reuse it?
11. Have you observed any brands use paper bags for advertising or distinguishing their brand?
12. What other structures of paper bags have you come across?
13. Summarize your findings and observations, and post them on AlligatorZone's online learning platform.
14. Share your findings by getting on a premium plan of AlligatorZone and learn collaboratively with a community of life-long learners.
15. Visit AlligatorZone.org for other more advanced learning activities and programs.

Not yet a premium member of AlligatorZone[®].
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Tips for a Parent, Teacher or a Mentor

(For mentors and coaches using AlligatorZone's Premium Plans)



Here are time-tested tips for mentors who may want to steer the learning at home or in class.

- 1) **Keep it simple.** If the suggested activity calls for going to a specific location, try slipping the field activity into a routine trip to a store or a mall, and make it an 'oh-by-the-way-let-us-stop-and-look' kind of detour on an errand, rather than making a special trip for it. The idea is to remove any semblance of pressure to perform and focus purely on the joy of learning something new in a shared experience for a student and the teacher.
- 2) **Go Improv.** Avoid planning and scheduling in advance. Our goal with the activities is to help children make learning a life-long pursuit and a hobby, not a checklist item that will result in angst until it is completed and cleared.
 - Where an activity involves having a conversation with a stranger at a facility or a manager, consider making it a walk-in experience.
 - This improv-like approach, we believe, teaches the child to be comfortable with uncertain outcomes ("Sorry, the manager is out sick.") and improvise. They learn to play the hand they are dealt in the project (just like in life). They learn to find alternative sources of information and piece things together.
 - We believe it helps them learn how to focus on things they can control and not worry about things beyond their control.
 - We believe that it teaches them to find insights amid chaos and stay focused on the task at hand despite distractions.
- 4) **Learning, not shopping.** We strive to design activities that do not require making purchases. We strive not to make field activities specific to any particular brand. Use on-site observation to complete the learning with your student. Do not make a purchase for this purpose.
- 5) **Feel free to make a script, if it helps.** If you prefer to schedule a meeting in advance with a store manager or supervisor, prepare a script and encourage your student to be a part of the initial phone request while you stay on the call. Let the student own the process. In our recent summer workshop under the coach's supervision and guidance we had the 11-year old student conduct a market research. He told us later that it was the first time he had left a voice message and his first time on a business call. The sense of accomplishment and the confidence gained, were priceless.
- 6) **Let the child lead the conversation.** If the student is not yet ready to speak and start a discussion on topics in our activities, try making it a 3-way conversation and keep it casual, referring decision-making to the child ("What do you think?" or "Does that sound reasonable?") so everyone knows that the student is in charge of the discussion. After the first few times we often see kids lead and handle conversations with aplomb. Let there be no pressure on the student to produce a certain result. Let there be no pressure to use big words or business jargon. If a store owner or employee uses industry parlance or acronyms, seek clarification so the child knows there are no dumb questions.
- 7) **Going off-script is perfectly fine.** Allow the students to find alternative sources of information *under your supervision*, and let them piece things together for their learning. They might find something on TV or Netflix, Youtube, Pinterest or TikTok (if they already use those sites and apps) and be able to connect the dots to fresh insights for improved findings.

Last, but not the least, no matter what, keep it light-hearted and make it a spontaneous and shared experience for both, you and the student.



Sources

(These are the publicly available sources used to compile this story)

Sources:

Please visit AlligatorZone's online learning community to see links to the sources used to pull this story together.

