

**A Readers' Theater Adaptation of Emily Arnold McCully's *Marvelous Mattie: How Margaret E. Knight Became an Inventor*
by Nicki Stohr**

©*Marvelous Mattie: How Margaret E. Knight Became an Inventor* by Emily Arnold McCully, published by Farrar, Straus and Giroux Publishers.

Characters:

Charlie	Narrator 1	Narrator 6
Jim	Narrator Boy	Narrator 5 Worker
Mother	Mattie's Dadwin	Narrator 6

Narrator 2: This script comes from the biographical picture book, *Marvelous Mattie: How Margaret E. Knight Became an Inventor* by Emily Arnold McCully.

Narrator 1: Mattie Knight lived in a little house in York, Maine, with her widowed mother and older brothers, Charlie and Jim. They were poor, but Mattie didn't feel poor because she had inherited her father's toolbox.

Narrator 3: When she thought of things that could be made with the tools, she drew them in a notebook labeled *My Inventions*. Her brothers called the sketches Mattie's brainstorm.

Narrator 6: Mattie made a whirligig for Charlie, a jumping jack for Jim and a foot warmer for her mother because she sat up late on cold nights sewing in order to earn a living.

Narrator 5: One spring, Charlie and Jim said,

Charlie: Won't you make us a special kite?

Narrator 4: Mattie sketched a few kites with different shapes and struts. She picked the best one and set to work on it.

Mother: What's Mattie doing now?

Jim: She had a brainstorm

[Mother shook her head.]

Narrator 3: Mattie was a strange girl, she was happiest with her pencil, her jackknife, and her hammer.

Narrator 1: Mattie and the boys took the finished kite to Ward's Hill. Jim ran with it into the wind.

Mattie: Faster!

Narrator 4: The kite trembled briefly, took a dive, then it rose on a sudden gust.

Charlie: Yahoo!

Narrator 2: The kite soared higher and higher.

Town Boy: Who made that?

Charlie: Mattie made it.

Town Boy: She didn't! A girl couldn't make that!

Narrator 6: The following winter, Mattie made sleds for Charlie and Jim, and they won every race down Ward's Hill. Four boys asked Mattie to make sled for them to race.

Mattie: It'll cost you a quarter apiece.

Narrator 5: The boys agreed, and every afternoon after school Mattie worked on the sleds. She gave the money to her mother, but the family was still poor.

Narrator 1: When Mattie was eleven, Mrs. Knight gathered the children together.

Mother: I've heard there are jobs in the textile mills in Manchester, New Hampshire. The boys and I will work, and Mattie will go to school until she is twelve. The company will rent us a house.

Narrator 4: Manchester was a brand-new town. With her family gone for thirteen hours every day, Mattie was lonely.

Narrator 2: After school, while she waited for them to come home, she liked to explore the complex of mills, but the overseers chased her from the spinning and weaving rooms.

Narrator 3: One day, she heard a tremendous roar coming from a building. She went inside and saw that men were building a huge iron machine. Mattie opened her notebook and began to sketch.

Mr. Baldwin: Have you lost your way, little miss?

Mattie: This is a machine shop, isn't it?

Mr. Baldwin: Well, what does a young girl want here?

Mattie: I love machines!

Mr. Baldwin: I guess you must. Our shop usually repairs looms, but we've been asked to manufacture this a locomotive.

Mattie: What's it for?

Mr. Baldwin: Why, for the railroad! This is the *General Washington*. It will haul cars on the New York Central lines."

Narrator: Mattie had lots of questions for Mr. Baldwin and he graciously answered them. Mattie felt very much at home in the machine shop. She told her family what she'd discovered.

Mother: Whatever will this lead to?

Narrator 5: When Mattie turned twelve, she went to work in the mill, rising with the four-thirty bell in the morning and trudging home to the seven-thirty bell at night. One day, a shuttle shot off the end of a loom and slammed into a girl's head. The injured girl was Rebecca, who lived next door to Mattie's family.

Overseer: Out of the way!

Narrator 6: Rebecca was carried out while the looms clattered on and the other girls tried not to lose their threads. Nothing ever halted production.

Factory Worker: Horrible! It's the fault of the machines!

Narrator 3: After work, Mattie walked home with her family. She went over and over the sequence of events that had led to the accident. She pictured the shuttle, what it was supposed to do, and how it had gone wrong. A machine was an invention and could always be improved.

Narrator 2: That evening, there was a vigil for Rebecca. A weaver said it wasn't uncommon for threads to snap, making missiles of the shuttles. Mattie sat scribbling in her notebook. Suddenly, an idea took shape. A metal guard attached to the box plate would stop a shuttle that had run off the track. It was simple. If only she could try it out!

Narrator 1: Mattie showed her notebook to Mr. Baldwin.

Mr. Baldwin: My goodness! These are the drawings of a real inventor and I think your solution is right! I'm going to take it to the boss.

Narrator 4: The head engineer was impressed and showed Mattie's idea to one of the mill owners. A few weeks passed. Rebecca got better. Then, one day, workmen arrived and began installing metal guards on all the looms in every mill in Manchester.

Narrator 5: The guards worked just as Mattie had designed them to do. Never again would someone be hurt by a runaway shuttle.

Mother: Oh, Mattie, I'm so proud of you!

Mr. Baldwin: You ought to own a patent on your idea.

Mattie: What's a patent?

Narrator 2: He explained that inventors registered their ideas with the government to protect them from being stolen.

Narrator 1: Once patented, an idea could be sold or the inventor could manufacture the device herself.

Mr. Baldwin: But I guess they wouldn't give a patent to a little girl.

Narrator 3: Mattie worked in the mill for a few more years. Cotton prices fell and production slowed. Mattie turned eighteen.

Mattie: I want to look for a better opportunity.

Mother: I will miss you but I know you must go.

Narrator 2: Mattie moved away from home and worked in several different factories. Then, after the Civil War, she heard of a job in Springfield, Massachusetts. It was in a factory that mass produced paper bags that used to be made by hand.

Narrator 3: Its machines cut paper from long rolls, then folded and pasted each length shut at the bottom, like an envelope. But the bags didn't stand upright, and the grocers had to use one hand to hold them open for filling. Bulky items tended to split the bags.

Narrator 1: In Springfield, Mattie shared a room with Sadie, who worked in a shoe factory. Mattie had not been working in the bag factory for a very long when a man mentioned that he knew someone who was trying to invent a better machine that could cut and glue a square-bottom bag. Such a machine would

make a far better product. Soon, Mattie heard about others who were trying to invent an improved machine.

Narrator 1: Mattie decided she must try to invent one herself. She set up a workshop in the basement of her rooming house and sketched possible improvements on the bag machine.

Sadie: It's past bedtime. Whatever are you doing?

Mattie: Inventing.

Sadie: Well, you're not like any girls I ever knew!

Narrator 2: Mattie explained what she was working on. Sadie took to checking up on her new friend.

Sadie: "How is it coming along?"

Mattie: We'll see.

Narrator 3: To find out what came out of Mattie's late nights read *Marvelous Mattie* by Emily Arnold McCully.