Factory Life in the 1800s

It was 4:30 a.m. when Eliza Adams woke up to the ringing of the bell on Monday morning. How she longed to stay in her dream world! She was dreaming about the picnic with Susan and Harriet out in Dracut the day before. But the bell meant that it was time to get up and go to work. This was not at all the way that it had been only last year back on her parents’ farm.

Walking to the Mill Yard

Soon she was walking out the door of her boardinghouse with her two friends. They were heading for the entrance of the Hamilton Mills, it was only a little more than a hundred yards away. The first two buildings they saw as they came around a corner were long, low brick buildings. The one on the left was the store house. Both raw cotton and finished cloth were stored here. The one on the right was the counting house. The mill offices were in the counting house, and it was also where Eliza was paid at the end of each month. She liked that. Last month Eliza had earned almost $10.00, after paying room and board.

Around the store house and the counting house stood enormous red, brick buildings. They were shining brightly in the light of the rising sun. There were eight of them, and each was five stories high. The whole group of buildings formed a huge rectangle. In the center was a courtyard about the size of a football field. It was inside those five-story buildings that Eliza and her friends made the famous Lowell cloth.

Eliza, Susan and Harriet walked across a bridge over the Hamilton Canal at 5:30 that morning. The canal delivered the water to power the machines in the mill. On the far side of the canal, between the store house and the counting house, was a large iron gate. The gate was closed each morning at 5:35. If you were late to work you had to go through the countinghouse, and be in trouble. Eliza was proud that this had never happened to her.

Nathan Picks

As they walked past the gate, Eliza looked to her left at another large building. This was the picking house, where her brother Nathan worked. Huge bales of cotton are brought from the store house and opened there. Picking is the first step in making cloth from cotton. . The cotton from the bale is all tangled up, with a lot of dirt and debris mixed in. Nathan worked at a machine called a picker. He fed the cotton into the machine, which has large metal spikes on rollers. This picks the cotton apart, while an air current blows the loosened cotton into the air. This way, the dirt and twigs fall to the ground. Small wonder, thought Eliza, that Nathan looks like a rag doll at the end of the day. The last part of Nathan’s job was to wind the clean loose cotton onto wooden spools. The cotton ends up in sheets 3 to 4 feet wide called laps.

Susan Cards

The three young women entered the courtyard, and headed in separate directions. They promised one another they would meet back at the boardinghouse at noon for dinner. Susan headed for a mill on the left, number two, where she worked as a carder. She almost ran into Nathan, who was pushing a cart into the mill. There were 6 or 8 of the laps Nathan had made hanging from the cart. Susan helped Nathan unload the laps next to the machine where she worked. It was called a card. Susan studied the carding machine in front of her. It was really not one machine at all, she decided, but a series of rollers with fine metal teeth. Susan picked up a lap from the cart, and slowly fed it into the rollers. She was very careful not to get the sleeve of her dress caught in the teeth. She knew that if her sleeve got caught, her arm would be gone before they could turn the machine off. This very thing had happened to Ann Graham just last month. Susan shuddered at the memory. Susan watched the metal teeth on the rollers as they brushed and straightened the cotton fibers. It reminded her of brushing her hair. After the cotton went through one set of rollers, it entered another set, and then another. It looked softer and smoother after each brushing. The fleecy sheet formed a soft, untwisted cord about the size of light rope. This was called a sliver. She watched as the sliver slowly came off the end of the card into a round can about three feet high.

Susan picked up a piece of sliver and pulled lightly. It broke easily in her fingers. She knew that these soft cords were not strong enough to be used in weaving. The slivers would be taken next to a machine which would combine several pieces into one even piece. This piece, called roving, would also be stretched out, so that it was thinner than sliver. But that was not Susan’s job. She went back to the front of the card and carefully fed another lap into it.

Harriet Spins

As Susan continued her work, Harriet was busy a short distance away in mill number four. Harriet worked as a spinner, and tended two spinning frames. Harriet had been a carder once, but after Ann Graham’s accident, she decided to get a different job. She had been happy to get a job spinning because the pay was higher. Harriet looked carefully at a spinning frame and shook her head slowly. She could not believe how rapidly it spun the roving into thread. The machine had several rows of spindles, and on each spindle was a bobbin. As the machine ran, the roving was twisted at high speed, and then wound onto the bobbin as finished thread. As the bobbins were filled, she replaced them with empty ones. Harriet knew that the bobbins would next be taken into the room next door. There they would be wound onto spools and used to weave cloth. That wasn’t her job, though. She went back to loading roving on the frame, and daydreamed about the picnic in Dracut the day before. She could still taste Eliza’s deep dish apple pie!

Eliza Weaves

Eliza was not thinking about apple pie just then. She was in Hamilton mill number six, across the courtyard from Harriet. She was looking with dismay at the power loom in front of her. The warp threads were a tangled mess! Eliza worked as a weaver, tending four power looms. The looms wove together the threads which Harriet had so carefully spun. But the looms did not work when the warp threads were crossed, like they were right now.

Eliza decided that she had better calm down, or she would never get her threads straightened out. She

looked around the noisy weave room. There were nearly 300 looms, and they made a frightful racket! It was hard to think straight, but Eliza could see that there was not a loom fixer anywhere in sight. She would have to fix the loom herself. Eliza looked carefully at the loom. There were 2000 warp threads coming off a large round spool called a warp beam. Each one passed through a little hole, like the eye of a needle. The loom made the threads go up and down. When half of the threads were up and half of the threads were down, there was an opening between them. The loom automatically threw a piece of wood called a shuttle between the two sets of warp thread. The shuttle carrried a single strand of thread called the weft thread. Back and forth went the shuttle. Up and down went the warp threads. As if by magic, finished cloth appeared on the other side. It was kind of like the hand loom Eliza had at the farm, but so much faster and so much noisier. How could she straighten her warp threads? Eliza had seen other weavers run their fingers carefully through the threads, 3 or 4 at a time, and she decided to do the same thing. The first time she did it, one of the threads broke, so she had to tie it together. But after a few tries, the loom was ready to go. Eliza felt very pleased with herself. “I don’t need Mr. loomfixer, after all,” she thought. Noontime finally came. The bells rang loud and clear. Thousands of machines fell silent, and hundreds of women and men stopped work and headed toward their boardinghouses. The smell of freshly cooked meats, potatoes and vegetables filled the air. Eliza hurried along with the rest. She couldn’t wait to tell her friends about her accomplishment.