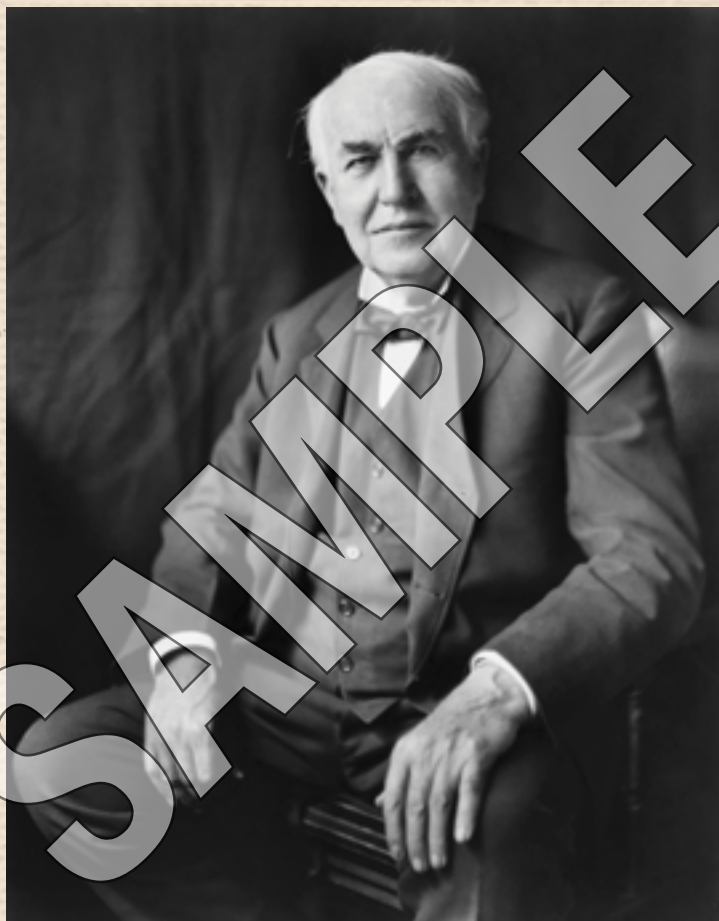
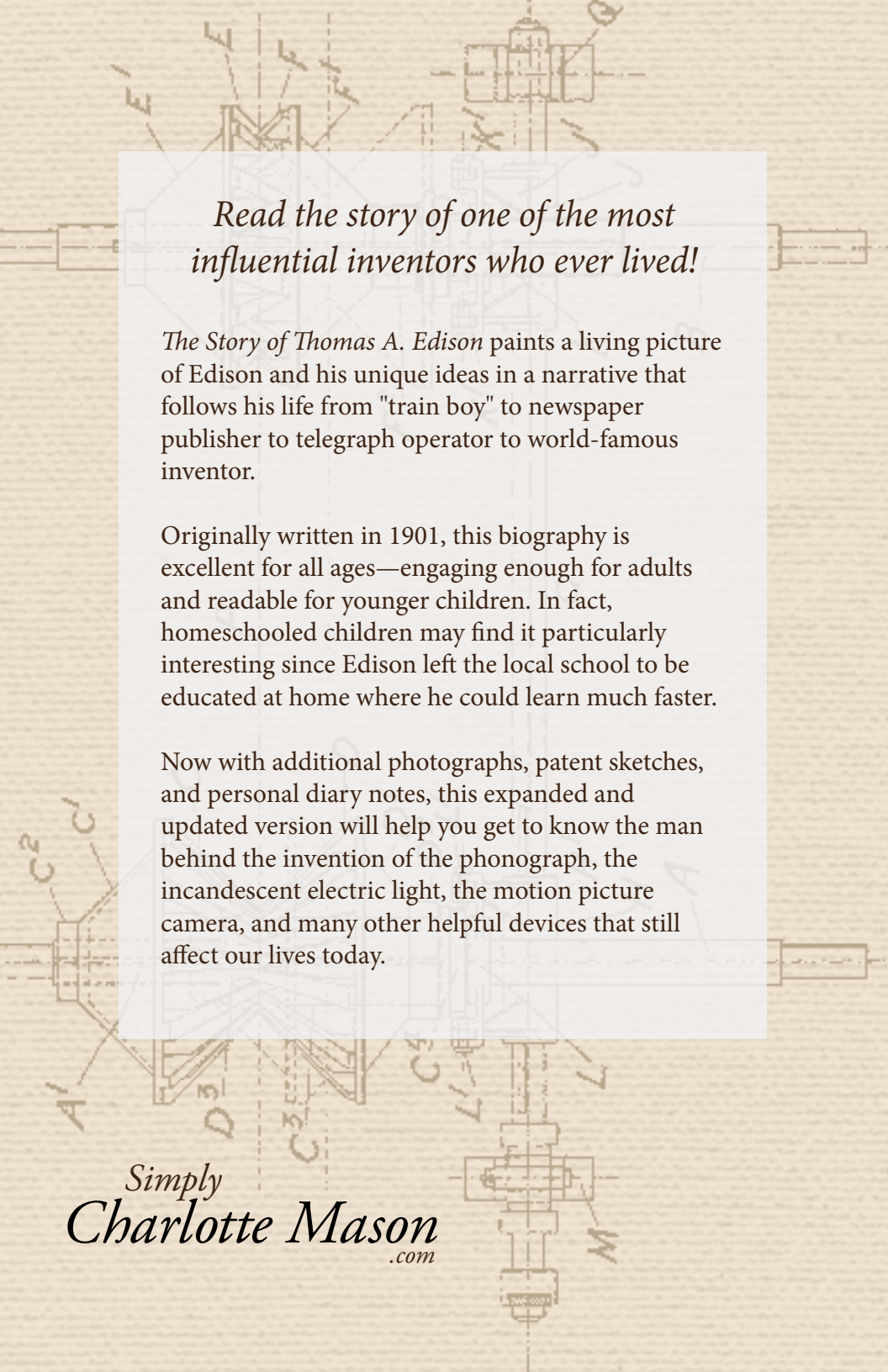


Simply Charlotte Mason presents

The Story of Thomas A. Edison



by Frances M. Perry
from *A Book for Young Americans*



*Read the story of one of the most
influential inventors who ever lived!*

The Story of Thomas A. Edison paints a living picture of Edison and his unique ideas in a narrative that follows his life from "train boy" to newspaper publisher to telegraph operator to world-famous inventor.

Originally written in 1901, this biography is excellent for all ages—engaging enough for adults and readable for younger children. In fact, homeschooled children may find it particularly interesting since Edison left the local school to be educated at home where he could learn much faster.

Now with additional photographs, patent sketches, and personal diary notes, this expanded and updated version will help you get to know the man behind the invention of the phonograph, the incandescent electric light, the motion picture camera, and many other helpful devices that still affect our lives today.

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The Story of Thomas A. Edison

*by Frances M. Perry
with Afterword by Sonya Shafer*

The Story of Thomas A. Edison

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Chapter 1

Early Years

Often in America the children of humble parents have become distinguished men. Some have gained respect by their wise management of public affairs; some are honored because they led our armies to victory; and some are admired by reason of the beautiful stories and poems which they have written. A few men have earned the gratitude of the people by adding to the comfort and happiness of everyday life through their wonderful inventions. Of these last, Thomas Alva Edison is one of the best known examples.

This great inventor may well be called a “self-made” man. His parents were humble people with only a few acquaintances and friends. The father was a hardy laboring man, who came from a family that worked hard and lived long. Mr. Edison made shingles with which to roof houses. He made good shingles, too. At that time this work was not done by machinery, but by hand. Mr. Edison employed several workmen to help him. He was industrious and thrifty.

When Thomas Edison was born, on the eleventh of February, eighteen forty-seven, the shingle-maker lived in Milan, a village in Erie county, Ohio. His home was a

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Birthplace of Thomas A. Edison

modest brick cottage on Choate avenue. The house was built on a bluff overlooking the valley where the Huron river flows, with the canal beside it.

In harvest time the little village was a busy place. All day huge farm wagons drawn by four or six horses rumbled along the dusty roads, carrying grain to the canal. For the farmers from far and near brought their grain to Milan to send it by canal to Lake Erie. Often as many as six hundred wagon loads of grain came to the village in a single day. The narrow canal was crowded with barges and sailing vessels which were being loaded with it.

Little Thomas Edison was not content to watch this busy scene from his home on the hill. At a very early age he went with the older boys to have a closer view. He soon learned to go about the village, and, when he was no

Early Years

older than many children who are never allowed outside of the nurse's sight, he trotted about along and felt very much at his ease among the farmers and rough workmen.

Thomas was a serious looking child. He had a large head covered with a wayward shock of hair, which would not curl nor even part straight. He had a broad, smooth forehead, which was drawn into wrinkles when anything puzzled him. His big eyes looked out from beneath heavy brows, with wonder in childhood, with keenness when he grew older. Whenever his brow scowled, his thin lips were pressed tightly together. Even when the child smiled his chin looked very square and firm. The strangers who noticed him said, not, "What a pretty child," but, "What a smart-looking boy!"

The father believed that the best thing he could do for his son was to train him to be industrious. The mother had been a school teacher. She considered an education an important part of a boy's preparation for life. Both parents began early to do what seemed to them their duty towards their son. His father required him to use his hands. His mother taught him to use his head.

He was an eager pupil. An old man in Milan remembers seeing Edison, when he was a youngster in dresses, sitting upon the ground in front of a store, trying to copy the store sign on a board with a piece of chalk. He went to school very little. He could learn much faster at home, where he did not have to go through the formality of raising his hand every time he wanted to ask a question; he wanted to ask a great many.

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When Edison was still a mere child, a railroad was built through Milan. Then the farmers used the railroad instead of the canal for shipping their grain. For that reason there was less business in Milan than before the road was built. Many families that had done work in connection with the canal moved away. The place became so dull that Mr. Edison found it hard to make a living there. Accordingly, when Thomas was seven years old, Mr. Edison moved his family to Port Huron, Michigan.

Mr. Edison once said that his son had had no childhood. We have seen that as a child he was a little “sobersides,” too busy getting acquainted with the world around him to care for play. As he grew older, his face lost its solemn look. He became an active fun-loving boy. But he differed from other boys in that he found his “fun” in doing things which most boys would have called work.

Chapter 2

Youthful Business Ventures

When Thomas, or Alva (he was called by his middle name during his boyhood) was twelve years of age, his father considered him old enough to earn his own living. He was therefore willing to have him take a position as train boy on the Grand Trunk Railroad.

Young Edison was just the person to enjoy a train boy's life. He was fitted to make a success of the business. Forward and self-confident, he had a pleasant, jovial manner which made him popular with strangers. He was quick-witted enough to say just the thing about his wares to amuse or interest the passengers. And he sold enough newspapers and sweetmeats to clear a good profit.

Besides, he was shrewd and self-reliant. Finding that the sale of papers depended on the news they contained, he looked them over carefully before buying, and soon learned to judge accurately the number he could sell.

The Civil War was then going on, and when there was exciting war news, papers were in great demand. One day he opened the paper and found an account of the

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battle of Pittsburg Landing. He said to himself, "I could sell a thousand of these papers, if I had them, and if the people at the stations only knew there had been a battle." Here were two big "ifs," but the boy promptly made up his mind how to overcome them.

He went to the telegraph office and sent dispatches to the towns at which his train stopped, announcing that a terrible battle had been fought. He felt sure that the news would spread rapidly through the villages, and crowds would be at the stations waiting for the papers.

He then went to the newspaper office and asked the business manager to sell him one thousand copies of the *Detroit Free Press*, on credit. The manager refused curtly. Nothing daunted the boy sought the office of the editor, Mr. W. F. Story. "I am the newsboy on the Grand Trunk Railroad, from Detroit to Port Huron, and I should like to have one thousand copies of today's *Press*, containing the account of the battle," he said blandly. "I have no money to pay for them, but I am sure I shall be able to pay you out of the proceeds of the day's sale."

The editor looked at him in surprise. "And where do you expect to find purchasers for so many papers?" he asked. When he heard what the youth had done to secure his customers, he smiled and gave him an order for the papers.

Edison was not mistaken; he found his papers in such demand that he was able to raise the price first to ten cents, then to twenty-five cents. He made what seemed to him a fortune out of the day's work.

Youthful Business Ventures

Profit in money was not, however, all that Thomas Edison gained from his experience as train boy. The busy, varied life he led was in many ways an education to the active, wide-awake boy. While attending to his work he gave it his undivided attention. But when he had finished it, he dismissed it from his mind and interested himself in other things.

He learned a good deal about the country through which he traveled every day. Most boys are thoroughly well acquainted with the one town in which they live, but he knew Detroit as well as Port Huron, and was familiar with the geography and business of the country and villages between those cities.

His train was a mixed train, made up of freight and passenger cars. The newsboy considered himself a very important part of that train. He knew it from engine to caboose, and was on good terms with all the trainmen. Indeed, he felt an interest and pride not only in “my train,” but in “my road,” as he called the Grand Trunk Railroad. He knew its officers, its trainmen, its station agents, the telegraph operators, and even the trackmen. He could always be depended upon for the latest railroad news either in the nature of business or personal gossip.

Finding that others were as much interested as he in what was going on along the road, but were slower in finding it out, he decided to print a railroad newspaper. He got some old type from the office of the *Detroit Free Press* where he had made friends, and set up a printing office in the corner of a freight car. One half of the car was

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fitted up as a smoker, and the newsboy took possession of the unused half. There, when he had nothing else to do, he worked hard on a paper of which he was proprietor, editor, business manager, reporter, and printer.

He issued his paper weekly and called it *The Grand Trunk Herald*. It was a small paper consisting of two sheets printed on one side only. It was poorly printed, and the grammar and punctuation were often faulty, but it contained much that was of interest to those who were connected with the railroad. Besides such business items as changes in time, the connections made with the train by stage coaches, and announcements of articles lost and found, it was filled with current railroad news and observations by the editor, which give us a good idea of the character and habits of the boy. Here are some extracts from the *Herald*:

“Heavy shipments at Baltimore; we were delayed the other day at New Baltimore Station, waiting for a friend, and while waiting took upon ourselves to have a peep at things generally; we saw in the freight house of the G. T. R. 400 barrels of flour and 150 hogs waiting for shipment to Portland.”

“John Robinson, baggage master at James Creek Station, fell off the platform yesterday and hurt his leg. The boys are sorry for John.”

“No. 3 Burlington engine has gone into the shed for repairs.”

“The more to do the more done. We have observed along the line of railway at the different stations where

there is only one Porter, such as at Utica, where he is fully engaged from morning until late at night, that he has everything clean and in first-class order, even on the platforms the snow does not lie for a week after it has fallen, but is swept off before it is almost down, at other stations, where there is two Porters, things are *vice-versa*.”

“Premiums. We believe that the Grand Trunk Railway give premiums every six months to their engineers who use the least wood and oil running the usual journey. Now we have rode with Mr. E. L. Northrop, one of their engineers, and we do not believe you could fall in with another engineer more careful or attentive to his engine, being the most steady driver that we have ever rode behind (and we consider ourselves some judge having been railway riding for over two years constantly) always kind and obliging and ever at his post. His engine we contend does not cost one fourth for repairs what the other engines do. We would respectfully recommend him to the kindest consideration of the G. T. R. officers.”

The good-natured self-importance of the young editor, with his pompous editorial “We,” is amusing. But though the reader may smile at the fourteen-year-old boy’s recommendation of the experienced engineer to the attention of the railroad officer, he feels that the writer must have been a sensible boy and that he knew what he was talking about. Edison’s remarks about the well-kept station house show the boy’s appreciation of order and punctual attention to duty. What he has to say is sensible and sincere, and it is not surprising that he

found readers.

He had over three hundred subscribers for his paper, at three cents a copy. Of course the readers of the *Herald* were all railroad men.

This little sheet gained some notoriety, however, and was mentioned in a London paper as the only newspaper in the world published on a train.

Edison's success with the *Herald* induced him to undertake to print a paper of more general interest. His second paper was called *Paul Pry*. In this paper Edison used great freedom in expressing opinions of men and things. On one occasion a personal paragraph in his paper so angered a reader, that, seeing the editor near the river, he gave him a good ducking. This severe punishment dampened the youthful editor's enthusiasm for journalism, and he gave up the business a short time after the occurrence.

Chapter 3

Study

A boy who writes his ideas for others to read is pretty sure to be interested in reading what others have written. This was the case with Edison. He realized that there was a good deal in books that was worth knowing. He had no one to guide him in selecting his reading, but that did not trouble him. Life seemed long, and books were very little things. There was surely time enough for an industrious person to read them all. He determined to begin with the Free Library of Detroit.

He picked out a shelf of particularly large, wise-looking books and commenced reading. Among these books were: Gibbon's *Decline and Fall of the Roman Empire*, Hume's *History of England*, Burton's *Anatomy of Melancholy*, and Newton's *Principia*.

A large part of the contents of these books was too advanced for the understanding of the young reader. Nevertheless he kept cheerfully at the task he had set for himself, until he had finished all the books on a shelf fifteen feet long.

He had learned a great many interesting facts from this difficult reading. But perhaps the most valuable lessons the experience taught him were about books. He

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had discovered for himself that it was both impossible and undesirable to read all books; that some had in them very little that was of value to him, and were not worth the time it took to read them, while others deserved the closest study. In fact he had become something of a critic, and was able to judge for himself whether a book would interest and help him. He did not stop reading when he had finished the shelf, but henceforth he chose his books with more care.

Some of the books that he read troubled him, because he could not wholly understand them, and he was always on the lookout for some one who knew enough to explain the difficulties to him. Other books filled his mind with new ideas and made him think very hard. An old chemistry excited him so much that he could think of nothing but the wonderful statements it contained about even such simple things as air, water, fire. He was curious to experiment with some of the strange elements mentioned in it, such as oxygen, nitrogen, and hydrogen. Thomas Edison was not the boy to sit still and wonder when his curiosity was aroused. He thought it would be a fine thing to have a workroom or laboratory, all fitted out with materials and implements for making chemical experiments, and he determined to have one.

His first step towards the realization of this ambition was to get acquainted with a chemist. The next, was to buy such second-hand apparatus as he could with the money he had saved, and get a few of the cheaper chemicals. These he arranged neatly in the corner of the

Study

freight car which was his newspaper office. The little bottles with their glass stopples and mysterious contents were exceedingly precious to him, and lest some one should meddle with them, he pasted poison labels on all of them.

In his rude little laboratory the inventor made his first experiments. He found this a very fascinating pastime. He was willing to work hard, dress poorly, and eat plain food for the sake of his laboratory. Without a teacher, with only a book to instruct him, he experimented until he had learned the properties and powers of many chemical substances.

He had accidents occasionally, for although he was careful, he worked under disadvantages on the jolting train. One day a bottle of phosphorus fell from its shelf and broke. The contents set the floor on fire. The fire was put out before it had done much injury; but the conductor was excited and angry. He said he would have no more of the dangerous stuff on his train. To be very sure that he would not, he threw the remaining bottles out of the car, and hurled after them not only all of the laboratory furnishings, but even the printing press. The owner protested with some spirit against the destruction of his property, whereupon the conductor seized him and pushed him out of the car.

Edison had learned in his rough-and-tumble life not to cry over spilt milk. It was discouraging to see the possessions he had collected with so much pains scattered by the roadside. But as soon as he had his fists unclined

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the plucky fellow was ready to forgive the hasty conductor. “The old chap got a bad scare,” he said to himself. “After all it’s a wonder he didn’t throw my traps overboard long ago.” And he went to work picking up what was left of his printing shop and laboratory, planning the while where he would re-open his shop. He decided that his father’s cellar would be the safest place. Before many days, he had made good his loss by new purchases and had begun work on a larger scale than ever.

Chapter 4

A Change of Business

Edison took up his train duties promptly, without any evidence of ill-feeling towards the conductor who had treated him so harshly. A few weeks after that unpleasant occurrence, the train stopped one morning at Mount Clemens, to take on some freight cars, which were waiting on the side track.

As usual, the train boy, with his papers under his arm, was peering about the station house to see what was going on. Suddenly, as he looked around the corner, he saw the two-year-old son of the station agent, playing on the track, while the heavy freight car that was being backed down to the train, was almost upon him. Without a second's hesitation, the newsboy threw his papers to the ground and plunged forward to save the child. With one flying leap he seized the boy and cleared the track, falling on the gravel beyond, just out of reach of the wheels of the car. The baggage-master, who saw the act and thought that both boys would be killed, gave a shriek which brought every one around the station to the spot.

When the child's father heard the story, he felt so grateful to the brave boy that he would have been glad to give him a rich reward. He was a poor man, however,

and could not express his thanks in money. But there was one thing he could do, to better the boy's fortune. He was a good telegraph operator; he would teach young Edison telegraphing, and get him a position where he could earn twenty-five dollars a month. Taking the boy's hand, he said, "You have saved Jimmy's life, Al, and I'd like to show you how I feel about it. I haven't anything to give you, but if you'll stop off here two or three nights in the week I'll teach you to telegraph and get you a good job."

Edison's face lighted up with pleasure. "I don't want any pay for pulling Jimmy out from under that freight car," he said loftily. "But I would like mighty well to learn to telegraph. Nothing better! If it suits you we'll begin tonight."

The lessons were commenced at once and Mr. Mackenzie, the agent, found his work as instructor really pleasant at first. His pupil came regularly and made such surprising progress that it was a great satisfaction to teach him. But after a few days the train passed and "Al" did not get off. This happened several days in succession. Mr. Mackenzie felt disappointed. "I declare he's like all the rest of them," he mused. "I thought he had some grit. But I've always noticed that when a boy is so quick and learns so fast, he never keeps at it." He was mistaken, however, that time.

That very evening when the train came in, young Edison swung himself off with a beaming face. He carried a small package neatly tied up, which he was eager to show his friend. It proved to be a tiny telegraph

A Change of Business

instrument which he had made at a gunsmith's shop in Detroit. It was so small that it could be placed on a small envelope, yet it was perfectly complete, and worked well when tested.

The young student in telegraphy had not lost interest, but he had come to the place where he could get along without a regular teacher. He was used to doing things in his own way and at his own time, and having received a good start from Mr. Mackenzie, was able to go on without much further help from him. He had made friends with many of the telegraph operators along the railroad. He now visited their offices to practice his art. He found them all interested in his progress and ready to give him a word of advice when he needed it. In three months' time he had so thoroughly mastered the business that Mr. Mackenzie said the boy knew enough to teach him.

He was not satisfied with being able to work the instrument, to send and receive messages. His inquiring mind wanted to discover how the instrument worked and why. He immediately began to experiment with electricity in his cellar laboratory.

With the help of a friend he constructed a short telegraph line of his own. At first he tried to obtain a current from a very curious dynamo. He had noticed the sparks that may be produced by stroking a cat. Half in fun, and half in earnest, he got two large black cats and tried with much rubbing to create an electrical current, but was obliged to resort to the ordinary battery.

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Edison gave up his position as train boy and spent most of his time at the Western Union Telegraph office in Port Huron. When there was more work to do than usual, or when one of the regular operators was not at his post, Edison was hired to work for a short time. He did good work and was soon given a regular position at a salary of twenty-five dollars a month, with the promise of additional pay for extra work.

Chapter 5

The Boy Telegraph Operator

Edison worked faithfully in his new position. He did extra work and did it well. But he waited in vain for the extra pay that had been promised him for taking long reports and working out of hours. When he found that the man who employed him did not keep his word, he gave up his position. Mr. Mackenzie soon got him a situation as night operator at Stratford, in Canada.

So far as ability to send and receive messages went, Edison was perfectly capable of filling the place. But he was by no means the slow, faithful, unquestioning, obedient agent to leave in charge of a telegraph office at night. He was a mere boy, only fifteen years of age, and had had no training in working under orders. He could not obey regulations which seemed to him useless, and he sometimes thought he could improve on the directions given him. There was no danger of his neglecting his duty through idleness, but he might neglect it while working out some pet notion of his own.

The manager of the circuit realized that the night operators might be tempted to shirk their work, and so

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he required them to telegraph a signal to him every half hour in order that he might be sure they were awake and at their posts. Edison's signal was six.

This was a wise regulation, but Edison did not appreciate the necessity for it. He found it a great bother to keep his eye on the clock and leave his reading or some experiment that he was working out in the quiet hours of night, to report that stupid "six" every thirty minutes. He wondered if he couldn't make a machine attached to the clock that would save him the trouble. After a good deal of thinking and experimenting, he fitted up an instrument that could telegraph "six" as well as he could.

This was a great relief to him, and he felt free to do what he liked with his time without much fear of discovery. He even left the office and made expeditions about town.

One night while he was away, the manager tried to call him up but could get no response. He thought this odd as Edison was more punctual with his signals than any other operator on the line. He waited, then tried again and again, with no better success, though the signals came with their accustomed regularity. He made an investigation, and the young inventor received a severe reprimand for his clever contrivance.

His next offense came near having serious results. He had orders to deliver messages to trains before reporting them back to the dispatcher. One evening, because it seemed easier to do so, he reversed the order and returned the message before delivering it. Then he heard

The Boy Telegraph Operator

the engine bell ring for the train to start. He jumped up in a hurry, but when he got to the platform, the train was well in motion. The message was an order for the train to wait at the switch until a special had passed. He ran frantically after the train hoping he might catch it at the freight depot, but he could not overtake it.

He ran swiftly back to telegraph his error to the dispatcher, only to learn that it was too late to warn the other train. Now because of his disobedience two great trains were rushing towards each other on the same track. That was a terrible hour for the poor boy. There were chances that the engineers would see each other's engines in time to prevent a wreck; but there were chances that they would not. It was frightful to think of the misery and loss he might be responsible for.

The watchfulness of the engineers prevented a collision. When the special came thundering up the track safe and sound, Edison knew that the danger was over. His disobedience had brought no harm to others, but he felt sure that he would hear more of it.

Nor was he mistaken. The superintendent called him to his office and frightened him with threats of imprisonment. He left town on the next train without even collecting the money due him for his services.

His experience at Stratford had been unfortunate perhaps, but he was a better operator because of it. He had not only gained in skill, but had learned the importance of obedience in little things.

He spent a few weeks at home out of work. One day

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when he was down by the St. Clair river, watching the ice which was breaking and piling up across the stream, word came that the electric cable between Port Huron and Sarnia, the Canadian city on the opposite side of the river, had been broken by the ice jam. There was no bridge; the ferryboat could not run on the ice-blocked river; with the cable broken all communication between the places was stopped.

Edison saw a locomotive standing on a track near by, and a thought struck him. He jumped aboard her and whistled a greeting to Sarnia, making short toots for the dots and long toots for the dashes. He repeated his message several times. At last the trained ear of the old operator in Sarnia recognized the familiar signals of the Morse alphabet, and with the help of an engine whistle, sent a reply across the impassable river.

This little incident was very much talked about. People began to say that Thomas Edison was most ingenious.

Good telegraph operators were hard to get, and Edison was not long without a position.