

Thomas Alva Edison (1847-1928) The Wizard of Menlo Park

In 1877, an American, Thomas Alva Edison, made a recording on a little machine which he had invented, and played it back to himself. Although he knew that he would hear them, he was astonished just the same when his own words were spoken back to him. It was a historic moment, so you may think that he took something very important – a famous passage of literature, for example, for his first recording. Nothing of the sort; the words that came back to him were «Mary had a little lamb!»

The date of Edison's invention was August 12, 1877. But it was not until November 17 of that year that news of it came to the world in an article in a magazine called *Scientific American*. In December, Edison gave a demonstration of his *talking machine* in the office of the magazine and news of it spread very quickly.

Recorded and Played Back

The first phonograph was not at all like a record player of our time. It not only looked very different, it both recorded and played back, so that in this sense it could be said to have resembled the present day tape recorder.

As you listen to the records of today, you no longer have to turn a handle to keep the machine going, but this is just what had to be done with the Edison machine. It was a tinfoil phonograph, for the recording was made on tinfoil, which was put around a metal cylinder. By turning a handle, the cylinder was made to rotate while a needle cut a groove into the tinfoil.

As the cylinder was only nine centimeters long and ten centimeters in diameter, and as the groove cut by the needle was large and very rough, you would get only a few seconds of recording and it was very bad. But all the same it was a great step forward, a step that was to lead to the modern science of sound-recording.

Edison's machine was kept in England for many years at the Science Museum in London, but was later sent back to America in return for a model which was put in the museum in the same place.

Edison's Electric Lamp

Next Edison became interested in the invention of an electric-light bulb for lighting streets and buildings by electricity instead of by gas.

First he learned that platinum wire, which would melt in the open air and give a light of five candle-power, would give a light twenty-five candle-power and burn a little longer in an all-glass bulb. This vacuum bulb was Edison's first real step towards his success.

In trying to find a small carbon conductor which could last for a long time the inventor had carbonized a lot of various things. One day he saw some cotton thread. He took it, made a loop out of it and placed it in a nickel mould, which was then placed in the furnace. He then fitted it into a pear-shaped glass bulb, pumped out the air, turned on the current, and watched to see for how long it would burn. It burnt for forty-five hours.

It had taken Edison and his assistants thirteen months to produce the incandescent lamp, but he already knew, he said, that success awaited it. «If it will burn forty-five hours, there is no reason why it should not burn for a hundred hours,» thought Edison excitedly.

The Man behind His Inventions

Thomas Alva Edison was born on February 11, 1847, in Milan, Ohio. Tom, or Al, as his family called him, was one of those children who are always asking «Why?» He did not leave it there. If he had an idea he had to try it.

Once, when he was six, he tried to hatch out some goose eggs by sitting on the nest. When the father asked him what he was doing, the boy answered that if the mother goose could hatch eggs, so could he, since he was much larger. On another occasion, he was nearly drowned when he dived into the canal and swam under a barge to examine its structure.

At seven Al entered school but left it after three months, because the teacher thought that he was a dull boy. His mother then became his teacher. The boy loved books and he had a wonderful memory. Before he was nine he was collecting things. He kept them all in a special place in the cellar. His mother gave him a book on science and he began to study it. It gave him ideas for all kinds of experiments.

One day he learned that balloons could fly because they had gas in them. So he thought he would fly too. He took a great dose of soda. He was sure he would fly at once. But the result was that soon he lay on the ground sick, and it seemed to him the world was going round him.

Edison began to work when he was twelve years old. His first job was a newspaper boy on a train.

World Famous Scientists

On his first coming to Detroit in 1859, he visited the library in that town and was strongly impressed by the rows and rows of books. He decided that he would read all the books and then he would know everything in the world. Measuring off the shelf he decided to read a foot of books every week.

One winter night as Edison was selling his newspapers he did not hear the conductor's call «all aboard». The train started, the boy caught the hand-rail of the last car and was dragged along. The conductor seized him by the ears and pulled him up into the car. The boy suddenly felt that something had happened to his ear. From that moment Edison began to grow deaf.

The newspaper boy soon decided to produce his own newspaper, and he did so each day while travelling on the train. He published his paper in the baggage car. The paper was about the size of a handkerchief. He gathered news, printed and sold the newspaper all by himself, spending the money he got on books and experiments.

He also had a small laboratory in the baggage car of his train where he carried out experiments when he had the time. Nobody knew what he was doing there and the boy kept records of all his experiments. He was very careful but one day a bottle of phosphorus fell to the floor and set the car on fire. The conductor threw the boy, his newspapers and his *laboratory* off the train. Edison's career with the railway ended.

One day Edison saved the life of a child playing on the railway. The father of the child, a telegraphist, gave Edison lessons in telegraphy, and the next five years Edison worked as a telegraphist in various cities of the United States and Canada.

As usual, he spent all his free time experimenting. Many of Edison's most important inventions were made at his laboratory at Menlo Park, New Jersey, twenty-five miles from New York City. His laboratory was full of batteries, chemicals and a great number of instruments.

The inventor experimented from morning till night. Quite often he had no time to have breakfast or dinner. All his inventions were the result of endless work. He sometimes made thousands of experiments.

He slept very little making one of the hard benches his bed place. For months he slept no more than one or two hours a day. Yet he found time to read and he read not only scientific books but was fond of Shakespeare and Tom Paine as well. He had over 10,000 volumes in his home.

Edison continued to work all through his long life and attributed his success not so much to genius as to hard work – «Ninety-eight per cent perspiration and two per cent inspiration,» as he liked to say.

Edison's inventions include the phonograph, or gramophone, the megaphone, the cinematograph, the improved lamp of incandescent light, many greatly improved systems of telegraphic transmission and numerous other inventions.

Questions

1. What is Thomas Alva Edison famous for?
2. What can you say about the childhood of Thomas?
3. What do his inventions include?
4. When and where did Edison give a demonstration of his talking machine?
5. What was Edison interested in?
6. When did Edison begin to work?
7. Where did he have a laboratory?
8. Describe the laboratory of Thomas Alva Edison.
9. What is a famous saying of Edison?
10. Find participles in the text and explain their usage.
11. Find the examples of the Passive Voice used in the text.