

# Louis Braille

by Noah Remnick



Have you ever noticed when you step into an elevator that next to the buttons showing the floor numbers, there are small plates with a series of raised dots and bumps? Did you ever wonder what those bumps and dots mean and why they are there? When you run your fingers over those plates, you feel the ridges. When blind people touch them, they read the floor numbers. In a grid of six bumps, with two across and three down, a configuration of two raised bumps across the top and one down on the right side is the number 4; one dot on the top left side and two across the middle is the number 8.

Who invented this elaborate setup of bumps and dots that comprise an entire alphabet and numerical system that allows blind people to read with their fingers? Was it a distinguished scientist, or a brilliant author, or perhaps a famous artist?

Actually, this system, which is called braille, was created by a blind 12-year-old French boy and was named for him. Louis was not always blind. He became blind

by accident. Louis Braille was born on January 4, 1809 in a small country village near Paris called Coupvray. His father was a leather worker who made harnesses and other leather goods. One day, when he was just three years old, Louis was in his father's leather workshop. Like many young children, Louis enjoyed imitating his father. He was fiddling with an awl, a small tool with a round wooden handle and a sharp, pointed metal tip that is used to punch holes in leather. While he was playing, the awl slipped and poked Louis in the eye. A doctor treated the wound as best he could and patched the eye. But the eye became infected, and the infection spread to the other eye. Within a short time, young Louis was totally blind in both eyes.

In those days, many blind people became beggars or performers in sideshows. But Louis's parents refused to allow their son's disability to get in the way of his studies or his life. Louis attended school like his brothers and sisters, relying on his creativity, intelligence, and drive to overcome obstacles. To help him navigate the village, his father made him canes. The local priest taught him to use his other senses to learn: his hearing to distinguish the calls of different birds, and his sense of smell to identify different plants and flowers. Louis was one of the brightest students in his school.

In 1819, at age 10, Louis earned a scholarship to attend the Royal Institute for Blind Youth in Paris, the first school in the world devoted to blind children. For Louis, going to the school meant leaving his family and the village he knew well, where he felt safe. But Louis and his family knew the school offered him the best opportunity to get an education and lead a successful life. There he excelled in studying history, math, science, and grammar, but he proved especially gifted at music. Louis became an accomplished pianist and organist. He even got a paid job as an organist, playing in a small church near the institute.

The students at the school learned most of their subjects by listening to lessons. But there were a few books that the school's founder, a man named Valentin Haüy, had developed by printed raised, or embossed, letters. Reading that way was slow, and the books were large and heavy. But they were the only books available then for blind people. Louis Braille began to wonder: wasn't there a better way to allow blind people to read?

One day Louis learned about the work of a former French army captain named Charles Barbier. Captain Barbier had invented something called "night writing," a code of 12 raised dots and dashes that allowed soldiers to communicate with one another at night without using lights that would alert the enemy to their location. The soldiers could "feel" the messages with their fingers, and keep safe. The code

turned out to be too complex for the soldiers, but it inspired Louis Braille. Louis simplified the system, reduced the series of dots from twelve to six and eliminated the dashes. By the time he was 20, Louis published his first alphabet for the blind, a system he continued to work on and perfect.

And how did Louis create the dots he used in his revolutionary new system? He used an awl. The very tool that caused his blindness became the instrument that brought the opportunity for reading to Louis and generations of blind people to this day.

The world was slow to accept Louis Braille's innovation. Indeed, during his lifetime, his method was not widely accepted. Louis Braille died at the young age of 43 from tuberculosis, a devastating respiratory disease. He was buried in his home village of Coupvray.

In time, Braille's method became accepted around the world. "Braille" alphabets were created in languages spanning the globe. Today, we find them not only on elevator plates, but also on computers and cell phones. And the name Louis Braille stands for innovation, courage, and determination.

# Louis Braille

by Noah Remnick (Adapted by ReadWorks)



Have you ever looked carefully at the buttons that show the floor numbers in an elevator? Next to the buttons, there are small plates with some raised dots and bumps. Have you ever wondered why those dots and bumps are there? When you touch those plates, you can feel the raised surfaces. When blind people touch them, they can read the floor numbers. The dots and bumps are arranged in grids of six, with two across and three down. Two bumps across the top and one down on the right side is the number 4. One bump on the top left side and two across the middle is the number 8.

These dots and bumps are part of a special alphabet and number system that blind people can read with their fingers. Who invented this system? Was it a scientist, an author, or maybe an artist?

No, it was a twelve-year-old French boy named Louis Braille. The system of dots and bumps he created is called braille. Louis was born in 1809 in a French village called Coupvray. His father's job was making harnesses and other things out of leather. One day, when Louis was three years old, he was in his father's leather workshop. Louis liked to imitate his father. That day, Louis was playing with an awl. An awl is a small tool with a round wooden handle and a sharp, pointed metal tip. It is used to punch holes in leather. While Louis was playing, the awl slipped and poked him in the eye. A doctor treated the wound and patched the eye. But the eye became infected, and the infection spread to the other eye. Within a short time, Louis was totally blind in both eyes.

In those days, many blind people became beggars or performers at fairs and circuses. But Louis's parents would not let their son's blindness get in the way of his studies or his life. His father made him canes to help him get around the village. Louis went to school like his brothers and sisters. He

was one of the smartest students there. A local priest taught Louis to use his other senses to learn. Louis learned from him how to identify different plants with his sense of smell and how to identify the calls of different birds with his hearing. He used his intelligence, creativity, and determination to deal with problems.

At age 10, Louis earned a scholarship to go to the Royal Institute for Blind Youth in Paris. It was the first school in the world for blind children. Going to the school meant Louis would have to leave his family and village. He knew the village well and felt safe there. But Louis and his family knew the school gave him the best chance of getting an education and leading a successful life. He went to the school and did well there in history, math, science, and grammar. He was especially good at music. He learned to play the piano and organ very well. He even got a job playing the organ in a small church near the school.

The blind students learned mostly by listening to their lessons. But the school did have a few special books for the blind. They had been made by the man who started the school. The books were printed with embossed letters. These were letters raised off the page so that the students could feel them. Reading like that was slow, and the books were large and heavy. But they were the only books that blind people could use at the time. Louis began to wonder: wasn't there a better way for blind people to read?

One day, Louis learned about the work of a French army captain named Charles Barbier. Charles had invented something called "night writing." Night writing was a code of 12 raised dots and dashes that soldiers could feel with their fingers. It allowed soldiers to communicate at night without using lights, which would show the enemy where they were. Night writing turned out to be too difficult for soldiers, but it gave Louis an idea. Louis made the system simpler by using only half the dots and getting rid of the dashes. When Louis was 20, he published his first alphabet for the blind. He continued to work on and improve the system throughout his life.

How did Louis make the dots he used in his new system? He used an awl. The tool that caused his blindness became the tool that helped him and other blind people read.

The world was slow to accept Louis's innovation. During his lifetime, few people used his system. Louis got sick and died at the age of 43. He was buried in his home village.

Later on, Louis's system became used around the world. "Braille" alphabets were created in many different languages. Today, braille can be found not only on elevator plates, but also on computers and cell phones. And the name Louis Braille stands for innovation, courage, and determination.

# Louis Braille

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Have you ever looked carefully at the buttons that show the floor numbers in an elevator? Next to them are groups of raised dots. You can feel these dots with your fingers.

Why are the dots there? They are there to help blind people. Blind people read the floor numbers by feeling the dots. The dots are arranged in grids of six, with two across and three down. Every number has its own arrangement of dots. So does every letter in the alphabet.

Who invented this system of dots? Was it a scientist? Was it an author? Was it an artist?

No, it was a blind boy. His name was Louis Braille. He was born in 1809 in a village in France. He was not blind when he was born. He became blind by accident.

Here is how it happened. One day, when Louis was three years old, he was in his father's workshop. His father made things out of leather. Louis was playing with one of his father's tools. It had a round handle and a sharp metal tip. It was used to poke holes in leather. The tool slipped and poked Louis in the eye.

Louis was taken to a doctor. The doctor tried to make his eye better. But the eye became infected, and the infection spread to the other eye. Soon Louis was blind in both eyes.

In those days, many blind people became beggars. But Louis's parents did not want his blindness to get in the way of his studies or his life. He went to school like his brothers and sisters. He used his creativity, intelligence, and determination to deal with problems. To help him get around, his father made him canes. A priest taught him to use his other senses to learn. He learned to use his hearing to identify the calls of different birds and his sense of smell to identify different plants. He

was one of the smartest students in his school.

When Louis was ten years old, he started going to a different school. It was the first school in the world for blind children. It was in Paris, which meant he had to leave his family and village. He knew the village well and felt safe there. But Louis and his family knew this school was the best place for him. It would give him the best opportunity for having a good life. At the school he did well in many subjects. He did very well in music. He became good at playing the piano and the organ. He even got a job playing the organ in a church near the school.

The students at his school learned most of their lessons by listening. But there were a few books they used. These books were printed with raised letters in them. Blind people could read the books by feeling the letters. Reading that way was slow. Also, the books were large and heavy. But they were the only books for blind people. Louis thought there might be a better way for blind people to read.

One day Louis learned about something called "night writing." It was a code of 12 raised dots and dashes. It had been invented by someone who used to be an army captain. It was a way for soldiers to communicate with each other at night. It let them communicate without using lights that would show the enemy where they were. The soldiers could "feel" the messages with their fingers and keep safe.

The code turned out to be too difficult for the soldiers, but it gave Louis an idea. He made it simpler. He got rid of the dashes. He used just six dots instead of twelve. When he was 20, he published his first alphabet for the blind. The system he came up with is named after him. It is called braille. He continued to work on it and improve it.

How did Louis create the dots he used in his system? He used the same kind of tool that had poked him in the eye. The thing that had made him blind became the thing that made it possible for him and other blind people to read.

It took a long time for people to accept his system. Not very many people used it when he was alive. (Louis died of a lung disease when he was only 43 years old.) After a while, his system came to be accepted by people around the world. "Braille" alphabets were created for different languages. Now braille can be found in elevators as well as on computers and phones. And Louis himself is remembered for being creative, brave, and determined.

# system sys · tem

## Definition

### noun

1. a group of things or parts that work together as a whole.

*This is a large school system.*

2. a particular way or method of doing something.

*He's got a system for getting his office work done.*

*We need a better voting system.*

## Advanced Definition

### noun

1. a group of related things or parts that function together as a whole.

*There are twelve elementary schools in our city's school system.*

2. a human or animal body as a unit.

*toxic substances in his system*

3. an ordered set of doctrines, ideas, or principles.

*a system of ethics*

4. a particular method of procedure, organization, or classification.

*The books are organized according to a system.*

*The people are demanding a new system of government.*

5. organized, orderly methods; orderliness.



*The project needs system in order to succeed.*

## Spanish cognate

*sistema*: The Spanish word *sistema* means system.

## These are some examples of how the word or forms of the word are used:

1. The next time Jason went to Ho Tep Wildlife Reserve, on a camping trip with his dad, he made a poi
2. She also became a hero and an inspiration to people all over the nation who were fighting for racial equality, including Dr. Martin Luther King, a young pastor who would soon become a major civil rights leader. In response to Rosa's arrest, blacks in the city of Montgomery boycotted the public bus system for more than a year.
3. New York City is one of the densest cities in the world, with millions of people squeezed into a mere 303 square miles. Although it has the world's largest subway system, traffic can still be quite bad, particularly at rush hour.
4. When negative feedback occurs, an original effect is diminished. Both positive and negative feedback loops can occur in all kinds of Earth systems, not just in a system related to the climate. For example, the relationship between different species of animals is a kind of system as well. Periodically, the populations of certain animals will wax and wane.
5. This has been the largest environmental conservation project in the history of the United States. Much of it is designed to reverseengineer the canal system that was built in the 19th and mid20th centuries. Ecological indicators are showing some improvements. The crayfish population is up. Wading and migratory birds have improved their nesting habits.
6. Shasta Dam isn't the only dam in the area. It is just one part of the Central Valley Project, a huge system of dams and reservoirs that provides water to the farms in the Central Valley. This water system was initially conceived of in the 1870s, after people moved to the area in the 1850s. People flocked to California because of the gold rush, hoping to get rich by mining for gold.
7. Scientists believe that gold was formed by explosions in space. Dusts that contained metals, including gold, were spread by these explosions throughout the galaxies until they condensed into the solar system and planets where we now live. Because the core of the earth was hot and molten when the planet formed, almost all of the gold sank into the earth's core where we cannot reach it.
8. Hundreds of different species of coral make up the various structures composing the Great Barrier Reef. Within these structures, several ecosystems flourish. Ecosystems are complex systems that contain several species that interact with one another.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. What did Louis Braille invent?

- A. "night writing," a code that allows soldiers to communicate in the dark
- B. the modern piano and the organ
- C. the awl, a tool that is used to punch holes in leather
- D. an alphabet that allows blind people to read with their fingers

2. What does the author describe in the passage?

- A. the founding of the Royal Institute for Blind Youth in Paris
- B. how Louis Braille overcame the challenges posed by his blindness
- C. the history of blind people in France
- D. how Valentin Haüy created the first book for the blind

3. Louis Braille did not let his blindness hold him back in life. What evidence from the text supports this statement?

- A. "For Louis, going to the school meant leaving his family and the village he knew well, where he felt safe."
- B. "To help him navigate the village, his father made him canes."
- C. "Louis became an accomplished pianist and organist. He even got a paid job as an organist, playing in a small church near the institute."
- D. "Louis Braille died at the young age of 43 from tuberculosis, a devastating respiratory disease."

4. Based on the passage, what might be one reason that Louis proved to be a gifted musician?

- A. Priests trained him to sing as a boy.
- B. He inherited musical talent from his father, who was also a musician.
- C. The Royal Institute for Blind Youth is a strong music school.
- D. He had to rely on his hearing after going blind.

5. What is this passage mostly about?

- A. the invention of braille
- B. the use of the awl in leatherworking
- C. the Royal Institute for Blind Youth in Paris
- D. Captain Barbier and "night writing"

6. Read the following sentence: "Who invented this **elaborate** setup of bumps and dots that comprise an entire alphabet and numerical system that allows blind people to read with their fingers?"

What does "**elaborate**" mean?

- A. simple
- B. decorated
- C. complicated
- D. educated

7. Choose the answer that best completes the sentence below.

\_\_\_\_\_, Louis Braille's alphabet for the blind was not widely accepted, but today braille is used around the world.

- A. Even though
- B. Initially
- C. As a result
- D. Certainly

**8.** How did Louis Braille go blind?

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**9.** The books developed by Valentin Hauy were problematic. They were large and heavy, and reading them was a slow process. What was Louis Braille's response to the problems with these books?

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**10.** An awl both helped and hurt Louis Braille. Explain this statement using evidence from the passage.

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3. Louis Braille did not let his blindness hold him back in life. What evidence from the text supports this statement?

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\_\_\_\_\_, Louis Braille's alphabet for the blind was not widely accepted, but today braille is used around the world.

- A. Even though
- B. **Initially**
- C. As a result
- D. Certainly

8. How did Louis Braille go blind?

Louis Braille went blind after accidentally poking his eye with an awl, which caused an infection in his eyes.

**9.** The books developed by Valentin Haüy were problematic. They were large and heavy, and reading them was a slow process. What was Louis Braille's response to the problems with these books?

Braille's response was to try and come up with a better solution for blind reading.

**10.** An awl both helped and hurt Louis Braille. Explain this statement using evidence from the passage.

An awl hurt Louis Braille because an accident with an awl caused the young Braille to go blind; an awl helped Braille because it was the tool that he used to create the dots in his alphabet for the blind.