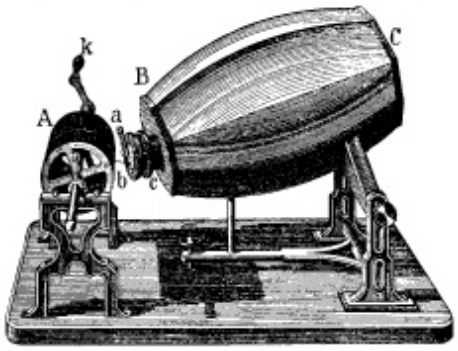
Hands On Learning
with Reading Museum Service

PHONOGRAPH H13

How many times a day do you hear a recorded piece of music? Perhaps on the radio, on the television, in a shop, on your personal music player or computer - everywhere! But if you wanted to listen to music 150 years ago, you would have needed to play an instrument or watch a live performance. In the second half of the nineteenth century this began to change. The invention of the phonograph meant that people could listen to pre-recorded pieces of music and spoken word whenever they wanted.

The phonograph in the box dates from about 1900. The cast iron base and the key on the side have been made in the art nouveau style, which was popular from about 1880 to 1910. It was made in America by the Columbia Phonograph Company, which is still making music today as Columbia Records. The word phonograph is Greek, meaning 'sound writer'.





Phonautograph.

BC, barrel with opening at *C*; *c*, brass tube with membrane and style at *b*, and movable piece *a*, by which the position of the nodal points can be regulated; *k*, handle to turn cylinder (*A*) covered with lampblacked paper.

The first type of phonograph was invented in 1857 by the Frenchman Édouard-Léon Scott de Martinville. It was called the phonautograph - but it could only record sound. It had no function to play back the sound. There is a picture of the phonautograph on the left. It has a large barrel to collect the sound waves and a pig's bristle, which vibrated and made an inscription on the black cylinder, marked with a captial A on the picture on the left. As the phonautograph could only create a visual impression of sound it was used by scientists to study the pattern of sound waves.

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In 1877 American inventor Thomas Alva Edison unveiled his phonograph, which recorded and replayed sound. The picture on the right shows Edison with his phonograph. People were amazed to hear sound played back from a machine. Edison took the phonograph to a magazine called *Scientific American* who reported that:

Mr. Thomas A. Edison recently came into this office, placed a little machine on our desk, turned a crank, and the machine inquired as to our health, asked how we liked the phonograph, informed us that it was very well, and bid us a cordial good night!

The user of the phonograph spoke into the funnel and the vibrations were recorded with a needle onto the cylinder, which was bought separately and slid over the black tube. Then the user turned the key, which rotated the cylinder to play back the sounds through the funnel.



At first, Edison used a cylinder made from tinfoil to record the sounds, but by 1886 the cylinders were wax coated. The cylinders were called 'records' because that is exactly what they did! At first, a recording could only be replayed a couple of times before it wore out. The owner could either take it back to the shop and partially exchange it for a new one, or have the top layer shaved away so that a new recording could be made. By the turn of the century, Edison had created a cylinder called Amberol, which was made from celluloid and could withstand hundreds of playings. The cylinders were still quite fragile to transport and were sold in containers lined with a soft, furry material to protect them. The picture on the right shows an Edison Amberol record container from 1910.



The phonograph enabled people to make their own record at home (see advertisement on the right from 1913). But only the rich could afford to buy one.

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Emile Berliner, a German born American, invented the Gramophone in 1887. This played sound from a disc, rather than a cylinder (see the picture on the right). The sound information was etched into the surface of the disc in a spiral shape. The needle followed the spiral and read the vibrations from the sound information. These discs could be mass-produced with ease and were cheaper to buy. But they could only be used to play pre-recorded sound, rather than make recordings.

Berliner founded The Gramophone Company in America in 1889 and in Britain in 1897. The design changed and improved over the years in the same way as the cylinder phonograph had. Competition between the two was strong.

Today, it is rare to see a phonograph or gramophone, although the shape might seem familiar. That is because of the image below, which has been used as advertising for the well-known music company HMV since the early 1900s.

HMV stands for His Master's Voice, which was the name of a painting by British artist Francis Barraud. The original painting showed Nipper the dog listening to sound coming from a cylinder phonograph. Barraud tried to sell the painting to phonograph companies, but nobody was interested. Emile Berliner was. He wanted to buy the painting on the condition that it was repainted with Nipper listening to his disc-playing gramophone. So Barraud repainted it and Berliner used the painting on all the advertising for his Gramophone Company with the slogan ' look for the dog'. In 1921 The Gramophone Company opened its first HMV shop in London. Since then it has gone from strength to strength.



Original painting with Nipper listening to a phonograph



Repainted painting with Nipper listening to a gramophone

hmv
get closer

The current logo