



## Transcript English for "Deutsche Erfindungen"

Hello, this is Christine from Mindmap your German, and today this video will be about German inventions. And you'll see, most of the inventions you see here - it's just a selection, of course - you all know them, and presumably almost all of them are important to your life. We take a close look at things.

Let's start with book printing. Printing was invented by Johannes Gutenberg. We had that in another video. Johannes Gutenberg was a goldsmith and also took care of inventing book printing. He published the first printed Bible and because, and this was the special thing about it, because printing opened up the possibility of reproducing texts, i.e. copying them, the possibility of reading was also introduced for the common people. So, it was possible for ordinary people to read books from then on, which of course led to more and more people being able to read. And as a result, the so-called literacy was increased and promoted.

The second story I have here is the phone here. The phone - everyone thinks Graham Bell invented the phone. But that's not true. Philipp Reis, a German, invented the telephone as early as 1859, and there was only one small problem: Philipp Reis did not apply for a patent on it. And Graham Bell then evolved, and in 1875 Graham Bell then filed the patent for the phone, and that's why the phone was officially his invention. The funny story is: Philipp Reis also tested, of course, and the first sentence spoken through this new phone was, and quite funny: the horse does not eat cucumber salad. I have no idea why exactly this sentence was taken. Maybe it's the sound, maybe

certain letters are included, but it was exactly that sentence.

We go to the computer. As you may know, the computer was developed by Konrad Zuse as early as 1938, so very, very soon. Why did Konrad Zuse develop a computer in the first place? He had no desire to constantly calculate everything manually, so he quit his job, opened a workshop in his parents' living room and developed, invented, further developed, built computers there. And the first computer in the world came on the market in 1941, so incredibly early. You can imagine that these computers were so large that they filled the entire living room of Konrad Zuse's parents, and that his parents unfortunately had one less room to live in.

The next section here is the chip card. The chip card was invented by two men whose names you probably haven't heard yet, and I haven't either, and they were called Dethloff and Gröttrup, which are also quite difficult to pronounce. They have developed data memories, i.e. the ability to store data on a small chip and have reduced these data memories to the size of a small confetti. Confettis are these colorful pieces that you throw through the air at carnival. This small chip, which you can now also find on all cards, is made of silicon and contains all the information you need. And because it is so small, it can be used in plastic cards, which has been done since 1968.

We're going to medicine. Bacteriology Maybe the name Robert Koch told you something. In 1870, Robert Koch discovered that bacteria are responsible for fatal and very serious diseases. And because he finally found out, treatments and therapies were then also possible, and the science of bacteriology was founded. So, more and more research has been done and more and more developed and new medicine has been developed.

Speaking of medicine. We'll move on to the aspirin, I'm sure you know that. Aspirin is a drug for headaches, among other things, not only, but among others, and this aspirin has been around since 1897, and it was invented by Felix Hoffmann. It was a breakthrough for Bayer. Bayer - you may know these green aspirin packs in Germany. Bayer is the manufacturer, and aspirin is a combination of salicylic acid and acetic acid. And Felix Hoffmann has found that this combination works quite well against certain diseases. And now aspirin is one of the most well-known drugs in the whole world. This

is also available in other countries, under other names, but it is always this aspirin.

A final point for medicine: the coronavirus or COVID vaccine is also an invention, and quite a new one. Maybe you remember. At the beginning of 2020, the world was different, because the world got coronavirus. We're not talking about how it all started and how it went on, just so much: the company Biontech in Mainz - you've probably heard the name before - has been researching since then, so, they've been researching before. But they did intensive research from then on, let's say, and after only twelve months, in early 21, they developed a vaccine against COVID, against coronavirus. They've gotten awards for it, and, you know the coronavirus story, you've probably also been vaccinated, maybe, maybe, probably, probably, and in any case, this vaccine has probably been a boon to a lot of people.

We go to technology, transport, but above all not only. The plane. Otto Lilienthal is the inventor of the aircraft, 1894. Otto Lilienthal did experiments with aircraft in Berlin. He has raised a hill from 15 meters and has always let his devices fly from there and has found that the planes work all the better, the, yes, not more curved the wings are, but the functioning depends on the curvature of the wings. So he invented the first glider. By the way, you can still visit this mountain, this hill of 15 meters, nowadays if you want to. Now you're going to say, yes, but what about the Wright brothers? Quite simply, they installed the motors. The Wright brothers installed the engines in these gliders, the gliders, and from then on there were motor planes.

We go to the motorcycle and the car. I'm sure the two names Gottlieb Daimler and Carl Benz mean something to you. In 1885, Gottlieb Daimler invented the motorcycle. He basically took something like a bicycle, i.e. a two-wheeled vehicle, and installed an engine. Then he thought: if this works in a motorcycle, then it might also work in other means of transport. He built an engine into a carriage, which gave rise to the car, and into a boat, which gave rise to the motorboat. At the same time, however, Carl Benz did exactly the same things. So, Carl Benz also developed an engine, developed a car and so on, and Carl Benz was a bit smarter and faster. Carl Benz has applied for the patent. So, Carl Benz has secured the patent. And funny thing is that Carl Benz made the first trip with his family in the new car, which was the first car in the world. You can imagine how people all looked. People were very very skeptical of course. From 1908,

practically after more than 20 years, there were already more cars, then of course the accidents increased. More and more has happened on the road, and then liability insurance for cars was introduced. Yes, and you know what happened. The horse-drawn carriages decreased; the cars increased.

I still have the dynamo for you. Werner von Siemens developed the in 1866, and electric current was generated by this dynamo. In 1881, 15 years later, Werner von Siemens developed the first tram. So actually 13 years later, but in 1881 the first track was opened. And now comes records. The route was 2.5 kilometers long in Berlin. This tram ran 20 kilometers per hour fast, and the journey took exactly 10 minutes. Better than nothing.

We're going to the light bulb. The light bulb was invented as early as 1854, and not by Thomas Edison, as everyone thinks. Thomas Edison was only clever enough to apply for a patent in 1879 and thus secured the invention. The inventor of the light bulb was Heinrich Göbel, and it was a German, and he was a watchmaker. And he tested, tried, everything possible, and invented the light bulb.

We are going to a highly complicated topic. Science. The Relativity Theory by Albert Einstein. With this theory of relativity, Albert Einstein discovered that time is dependent on moving bodies. It's insanely complicated, and because everything is so complicated, not only the theory of relativity, but everything else Einstein did, he got a Nobel Prize, and we didn't because we didn't understand it.

We're going to nuclear fission. Penultimate point. Nuclear fission was discovered by Otto Hahn in 1938. He has made attempts and fired uranium with neutrons. Barium was formed, and energy was released. That's the short version. It's also highly complicated, and Otto Hahn probably deserved 50 Nobel Prizes for it. But the use of these nuclear fission results goes in a peaceful direction and in a non-peaceful direction. This made nuclear power plants possible for the production of energy and the atomic bomb, which of course was not quite so peaceful. That's the negative part of the whole thing.

And at the end I have the MP3 format, which you probably know from music on the

Internet. The MP3 format was developed by the Fraunhofer Institute in Erlangen in 1988, and the aim was to reduce music data through this file format. And these researchers managed to reduce the file size for music so much that you could easily exchange, share, download, upload music afterwards and since then, you know Walkmans, you know MP3 players, you know iPods and so on, these are all media that then used this technology. So a revolution.

And this is my information for today. I hope they were interesting to you. If you need more information, write to me on my website. I look forward to seeing you, even if you want to work with me. Transcriptions in German and English are also available on my website, and I wish you a nice day, have fun learning German and see you soon. Bye.