Hands On Learning

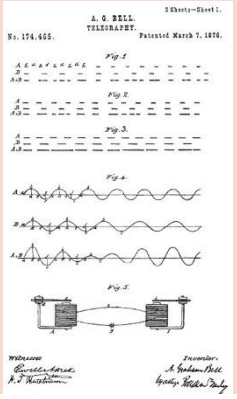
with Reading Museum Service

TELEPHONE AND HEADSET H161

We wouldn't think twice about picking up the telephone and having a conversation with a friend - even if they were on the other side of the world. 100 years ago it would have taken two weeks to send a message that far by post and then there was a two week wait for the reply! The telephone has really changed the way we communicate. Most people couldn't imagine living without them. However, at the time of their invention some journalists wrote that telephones were an amusing toy, but there was no real future for them!

Many people contributed to the development of the telephone, but Alexander Graham Bell is agreed to have been the first to patent the invention and claim it as his own.



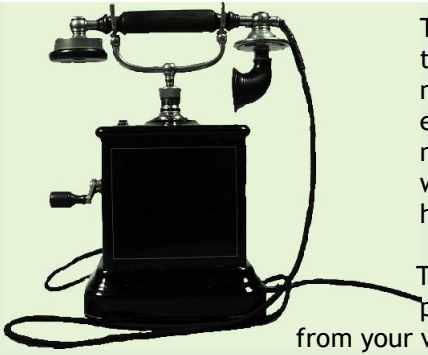


A. G. BELL.
TELEGRAPHY.
No. 174,465. Patented March 7, 1876.

In 1876 he managed to submit an application for the patent just hours before his rival Elisha Gray and a few weeks before Thomas Edison. This picture shows Bell in 1876 speaking into his newinvention and the image below shows the patent signed by Bell at the bottom.

The first words ever spoken over the telephone were not veryexciting or monumental! Bell said to his assistant, who was inanother room, 'Watson, come here, I want to see you'.
Imagine if it were you - what would you have said?

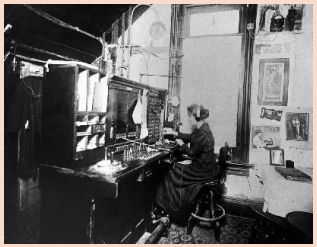
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This telephone dates from about 1910 and was made by a Danish company in the town of Horsens. Can you find their name printed on the box? The handle on the side needed to be turned a few times to generate power at the beginning and end of each call. The small button on the top was pressed down at the same time. The mouth-piece (the microphone) and ear-piece (receiver) are made from bakelite, which was an extremely popular plastic material used for hundreds of electrical and household items in the early twentieth century.

There have been many scientific developments since Bell's first model but the basic principle remains the same. When you speak into the mouthpiece the sound waves from your voice are carried by an electrical current along a wire and into the receiver of the other person's phone. There is a device in the receiver called a diaphragm, which vibrates with the flow of electrical current.The vibrations are stronger or weaker depending on whether loud or soft soundsare made. These vibrations cause air to move and create new sound waves andthe listener hears the words of the speaker.





Think about a modern telephone - what is missing on thistelephone from 1910? The buttons for the numbers! It wasn't until the 1920s that numbers appeared on telephones. If you wanted to call somebody before that date you needed to lift the handle, speak directly to the telephone exchange and ask the operator to connect you.
The operator sat in front of a large board and put aplug into the hole for the person you wanted to call, literally connecting your wires. The operator used a headset, like the one in the box, to speak tothe caller. Both hands were needed to move the plugs around, so this headset is 'hands free'. The huge plug on the end of the headset wire connected the operator to the caller so that they could ask 'which number please?'. Sometimes they would leave their wire plugged in and listen to people's conversations! This picture shows a woman operating a telephoneexchange board.
How do we know when someone wants to speak to us? We hear a ringing sound.When the operator connected the line, they would also apply a high voltage, which triggered the bell to ring. This now happens automatically.

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Look how far telephones have come in just over 100 years.

