



VICTORIAN INVENTIONS

THE TELEPHONE

WATSON: It's hard to believe that I helped to make the first ever version of a device which is so much a part of our lives that - why - it's like it's always been there. My name's Thomas Watson, and what I helped to create was the very first telephone...

WATSON: Oh, Mr Bell, here's the apparatus you asked me to make...

BELL: Thank you, Watson.

WATSON: I was working for a man called Alexander Graham Bell. He knew a lot about sound...but he didn't know how to build anything electrical, and I did. We needed both things, because - you see - how a telephone works is that when you're speaking into it, it converts the sound of your voice into electricity...And when you're listening, it's busy converting electricity back into sound. We got the first big break by accident.

WATSON: So - I know what it's made of, it's all magnets and wires, but what's it supposed to do?

BELL: You've got the two units?

WATSON: Here.

BELL: What's it supposed to do? Well...this spring... When the two units are connected, I'll push the spring back and forward against this bit. Right?

WATSON: Yes...

BELL: And that should make the spring in the other unit move backwards and forwards.

WATSON: Right...

BELL: And you've got the long wire?

WATSON: Right here.

BELL: Connect one end of the wire to this unit. Just there.

WATSON: Like so?

BELL: That's it. And the other end to the other unit.

WATSON: OK.

BELL: And now take that unit into the other room... Careful - mind the wire there...

WATSON: So, if I get it, you're going to waggle the spring at your end, and that should make the spring at my end waggle without me touching it?

BELL: That's it.

WATSON: I won't ask what for.

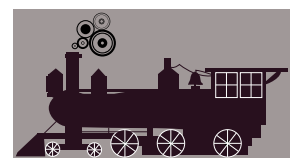
BELL: Good. Right, I'm pushing the spring. Anything happening?

WATSON: No.

BELL: Maybe the spring's stuck at your end. Give it a flick with your finger. Do that again.

WATSON: I'm doing it now.

BELL: I can hear the twang of the spring at your end, coming out at this end!





WATSON: That's not what was supposed to happen, but it was actually much better than what was supposed to happen. The sound of the spring at my end had been converted into electricity, and the electricity had run along the wire, and had been converted back into sound at the other end. Mr Bell worked away at the apparatus, we tried this and we tried that...

BELL: Is the wire connected?

WATSON: Yes.

BELL: All right, let's try once more.

BELL: Do you understand what I say?

WATSON: Yes.

BELL: We've done it! It works!

WATSON: It's stopped working!

BELL: OK, I'm coming down...

WATSON: Now if I just try to reconnect this wire to here...

BELL: What happened?

WATSON: It broke again... see, just here.

BELL: Can't you make anything properly?

WATSON: It was your design I made it to. Anyway, your voice was really muffled, I could only just understand.

BELL: We'll patent it anyway.

WATSON: But it doesn't work.

BELL: Look, there's any number of people who could patent something like this any moment. We have to be first.

WATSON: Mr Bell was a sharp businessman, and by patenting the device it meant that no one else could make it, even if they invented a version of their own. If Mr Bell owned the patent, only he could sell the device and make money from it. And Mr Bell was sure right. Because just two hours after he took out the patent, someone else tried to take out the same patent, and was turned away. So, now all we had to do was make a telephone that actually worked...

BELL: Is the wire connected?

WATSON: Yes.

BELL: All right, let's try once more.

WATSON: Yes, all right.

BELL: Mr Watson, come here, I want to see you.

WATSON: Good god, he's done it

BELL: Mr Watson, can you hear me? I said I want to see you.

WATSON: Mr Bell! Mr Bell! You've done it!

WATSON: It had worked! Sure it was nothing like any telephone you'd know. But it was a working telephone. Later that year, Mr Bell offered to sell the patent to a company called Western Union for \$100,000...but they turned it down. Then, just two years later, the chairman of Western Union was heard to say that the patent for the phone would have been a bargain at 25 million.

