

There are some things we use every day. Can you imagine a world without zippers to fasten clothing? Have you ever wondered about the layout of the keyboard of a typewriter, which we see every day on the computer? These are just two of the many inventions which have made our lives easier. Maybe that's why we don't think about them very much!

The Zipper

Whatever did we do before the invention of the zipper?

In 1893 the world's first zipper was produced in Chicago. Although the inventor claimed that it was a reliable fastening for clothing, this was not the case. The Chicago zipper sprang open without warning, or jammed shut, and it swiftly lost popularity. Twenty years later a Swedish-born engineer called Sundback solved the problem. He attached tiny cups to the backs of the interlocking teeth, and this meant that the teeth could be enmeshed more firmly and reliably.

At first, zippers were made of metal. They were heavy, and if they got stuck it was difficult to free them. Then came nylon zippers which were lighter and easier to use, and had smaller teeth. The fashion industry liked the new zippers far better because they did not distort the line of the garment or weigh down light fabrics. They were also easier for the machinists to fit into the garment.

Meanwhile, a new fastening agent made its appearance at the end of the twentieth century: velcro. Velcro is another product made from nylon. Nylon is a very tough synthetic fibre first developed in the 1930s, and bearing a name to remind the hearer of the two places where it was developed: NY for New York and LON for London. Velcro is made with very small nylon hooks on one side of the fastening which catch tiny looped whiskers on the other side of the fastening. It is strong and durable.

Velcro is used on clothing, luggage and footwear. It is quick and easy to fasten and unfasten, and has taken a large part of the zipper's share of the market. It is also used in ways a zipper cannot be used – for instance as an easily changed fastening on plaster casts, and to hold furnishing fabrics in position.

The Typewriter and the Keyboard

The keyboard of the modern typewriter is laid out in a most odd fashion. Why would anyone place the letters on the left side of the top row of the keyboard in the order QWERTY? The answer is simple: to slow the typist down. But first, let's consider the history of the typewriter itself.

In the 1860's a newspaper editor called Christopher Sholes lived in Milwaukee, USA. Sholes invented the first of the modern typewriters, although there had been patents for typewriter-like machines as early as 1714, when Queen Anne of England granted a patent to a man called Henry Mill for a machine which would make marks on paper "so neat and exact as not to be distinguished from print". In 1829, across the Atlantic in Detroit USA, William Austin Burt took out a patent on a typewriter-like machine, four years before the French inventor Xavier Projean produced his machine designed to record words at a speed comparable to someone writing with a pen.

So the typewriter was not a new idea, although there had not been a successful realisation of the idea before Christopher Sholes' machine. His typewriter became very popular, and soon people learned to type very quickly – so quickly, in fact, that the keys became tangled. On manual typewriters, the characters were set on the end of bars which rose to strike the paper when the key was pressed. In the first models, the keys were set alphabetically. When a quick typist tapped out a word like federal, it was very likely the adjacent e and d keys would become entangled.

Sholes, therefore, set about finding ways to slow the typist down. He looked for the letters which were most often used in English, and then placed them far away from each other. For instance, q and u, which are almost always used together in English, are separated by five intervening letters. The plan worked, and the typist was slowed down a little.

When computers came into use in the latter part of the twentieth century it was suggested that the keyboard should be rationalised. After all, there was no longer any need to avoid clashing manual typewriter keys. One new board included keys which produced letters which frequently occur together in English, like 'ing' and 'th' and 'ed', so the word thing would take two strokes to write instead of five. Although this made perfect sense, people found it very hard to learn to use a new keyboard, and the idea was dropped. It is unlikely that the keyboard will ever be changed: as we approach the twenty-first century the voice-activated computer, already in an advanced state of development, is becoming more and more accessible. It is very likely that we will soon have machines which take dictation as we speak to them, and the keyboard will be used for corrections.

From the information in the reading passage, classify the following events as occurring:

- A. before the nineteenth century
- B. during the nineteenth century
- C. in the first half of the twentieth century
- D. at the end of the twentieth century

Write the appropriate letters **A-D** in boxes **1-6** on your answer sheet.

1. Sundback's zipper
2. the development of nylon
3. the development of velcro
4. the development of the first typewriter-like machine
5. The first appearance of Sholes' typewriter
6. the development of the voice-activated computer

Questions 7-9

TRUE if the statement is true

FALSE if the statement is false

NOT GIVEN if the information is not given in the passage

7. The first zipper was successful as a fastener.
8. Nylon was used a lot during the Second World War, 1939-1945.
9. The first typewriter's keyboard was different from the modern keyboard.