



50 Things  
You Didn't Know You Didn't Know  
About Pens

50 things you didn't know you didn't know about pens....

## The History of Pens

### **The word 'pen' means feather**

The word 'pen' comes from the Latin, penna which translates as 'feather' in English. This word was chosen due to the use of feathers to make quill pens from the 8<sup>th</sup> to the 19<sup>th</sup> century. Penne pasta is so-called because the shape resembles the pointed part of a quill pen.

### **The very first pens were made from hollow bones and kitchen knives**

It is thought that cave paintings were created using a sharpened stick whose main purpose was skinning and cutting meat. The stick would have been dipped in a primitive ink made from berries or soot mixed with animal fats or human saliva. Hollow bones were also used to create an airbrushing technique where hands and other objects were used as stencils.



### **Examples of ink from Biblical times still exist today**

The Dead Sea Scrolls were discovered in the 1940s in a collection of caves and contain an extensive collection of religious writings that have been dated between the 3<sup>rd</sup> century BC and the 1<sup>st</sup> century AD. They were written with three different types of ink; two of which were black and the third, red. The black inks were made from several ingredients including carbon soot from olive oil lamps whilst the red ink contained mercury sulphide, also known as cinnabar from which vermilion pigment is obtained.



## **Goose feathers from living birds make the best quills**

The strongest quills come from living birds and are most commonly goose feathers. Additionally, the feathers of swans, turkeys, crows, owls, eagles and hawks can be used. Jane Austen favoured a crow's feather as it produced the finest work. The quill feathers come from the left wing of the bird so that the shaft curves most naturally for a right-handed person. Each bird has between two and twelve suitable feathers for quills.

## **Quill pens were truly disposable**

Quill feathers would only last for about a week. American president Thomas Jefferson was such a prolific writer that he bred his own flock of geese for their quill feathers.

## **Reliable fountain pens are a relatively new invention**

Pens that hold their own ink supply have existed for more than a thousand years. However, until the late 19<sup>th</sup> century these were very unreliable. Lewis Waterman, an American salesman designed the first commercially successful fountain pen in 1884.

## **The first fountain pens cost a day's wages for a skilled tradesman**

Waterman's early fountain pen models retailed for \$2 (\$50 today) and each came with a five year guarantee. By 1901, Waterman's pen company was selling 350,000 pens a year with an annual turnover equivalent to in excess of \$17.5 million today.

## **The oldest fountain pen still in existence dates from 1702**

The pen was made by Nicholas Bion, who was a French royal instrument maker. Whilst he wrote about them in a treatise, he is unlikely to have been the inventor of the first fountain pen which weren't made commercially viable until Lewis Waterman's inventions in the 1880s. Some of the earliest examples of these Waterman pens are still in existence today with one example dated from between 1883 and 1884.



## **The first self-filling fountain pen was invented in 1901**

Early fountain pens made use of an eye-dropper to fill the barrel of the pen with ink. This could often be a messy process, and so the turn of the twentieth century saw



the invention of several self-filling designs which included the button filler from the Parker Pen Company and the lever filler from Schaeffer.

### **Soldiers in the First World War used ink pellets for letters home**

Ensuring sufficient supplies of ink for soldiers in the trenches of the First World War was a challenge until the Parker Pen Company invented the Trench Pen. This ingenious device held small pellets of ink which could be mixed with water in the lid as required thus ensuring that men far from home could keep in contact with their loved ones.

### **To be 'in the red' originates from the use of red ink in accountancy practices.**

The expression comes from the United States of America; during the Great Depression of the late 1920s. As a colour, red denotes something unwanted is happening in business and is seen elsewhere in expressions such as 'red tape'.

### **The ball point pen was invented by a Hungarian journalist**

Lazlo Biro, like Lewis Waterman before him, grew impatient with leaky pens and decided to create a pen that used a thicker ink that would also dry more quickly such as he had seen in the newspaper industry. Together with his brother George, who was a chemist, Biro invented the first ball point pen in 1938.

### **Ball point pens were first sold in New York in October 1945**

The Reynolds ball point pen retailed at \$12.50, the equivalent of \$120.00 today. A daring and flamboyant marketing strategy resulted in 8000 pens being sold on the first day bringing in \$100,000 for the Reynolds Company.



### **The oldest pen company still in operation today is the Waterman Pen Company**

The Waterman Pen Company has been in existence since 1884 and whilst it is now owned by Newell Rubbermaid, it is still producing fountain pens more than 120 years later. There are other stationery companies who have been in existence for

longer but who do not specialise in pens, such as Faber-Castell who were founded in 1761.

### **It was very common for pens to be marketed specifically at men or women**

The launch of a range of ball point pens by Bic for women sparked uproar in 2012, but this practice was very common in the early days of the fountain and ball point pen. Pens designed specifically for women tended to be smaller and lighter for carrying in a handbag in addition to being available in a wider range of colours.

### **Children in England are granted a pen licence at school**

At many primary schools in England, children who are ready to graduate from a pencil to a pen may be issued with a pen licence. This highly coveted certificate and accompanying pen is presented to a child who is able to write legibly using text that is 'joined-up' and that makes use of appropriate punctuation and other writing related techniques. This can be when the child is as young as seven (year 2) but is more commonly awarded from year 4 upwards (ages 8 and 9) depending on the school's policy.

## The Science of Pens

### **The first inks were made from a range of materials including soot and donkey skin gelatine.**

Indian ink dates from more than 5000 years ago and came from China, not India. By 1200 BC, the recipe included different natural colorants to allow the writer to highlight significant parts of the text.

### **It is likely that blue or black ink is our default colour choice as these were the first colours available.**

By 400 AD, the ink recipe had changed to a composite of gum, iron-salts and nutgalls (a growth caused by wasps on oak trees). This stable form of ink continued to be used for many centuries. The colour of the ink turned from a bluish-black to a dull brown colour that can be observed on many old documents.

### **A ball point pen can last for up to five miles of text**

Claims made by the first supplier of ball point pens in the 1940s, suggested that they would not need refilling for two years as the pen was capable of producing 3000 pages of written text. This proved to be an effective marketing strategy, but little more with the average early ball point producing closer to 100 pages of text. When the Parker Jotter was launched in 1954 it accurately claimed to be able to produce 28,000 feet or five miles of text. This together with its reliability has ensured its success ever since.



## **Ball point pens may never have been a success without an endorsement from the Royal Air Force.**

The Biro brothers began manufacturing and selling their ball point pens in Argentina. News of the invention reached the Royal Air Force in Britain who were seeking an ink pen that could write at high altitudes. Biro's biggest financial backer, Henry Martin purchased the rights from Biro and began supplying the British Royal Air Force with ball point pens. The big advantage of the design included the amount of ink that it could hold as well as it being unaffected by climatic conditions. The US War Department were very impressed and sought the help of companies such as Eversharp and Schaeffer to produce something similar or better in August 1944.

## **The best way to transport a fountain pen on an airplane is either completely full or completely empty of ink.**

It is also wise to store the pen upright with the lid on and to wait until the plane has reached its cruising altitude before beginning your latest writing project. This is because the change in air pressure as the plane ascends could cause a leak.

## **A pen exists that can write in space**

Rumours circulated that whilst NASA was investing huge sums of money in a pen that could write in space, the Russian cosmonauts were using pencils for their written communications. Whilst it might seem that the Russians had the most obvious solution to the problem, NASA were concerned about pencil sharpenings and broken leads floating around inside the space shuttle. Whilst NASA did not pay for its invention, the Fisher Space Pen was developed in 1967 and 18 months later,



## **A pen exists that can write underwater**

In addition to being suitable for use in space, the Fisher Space Pen is also able to write underwater due to its hermetically sealed reservoir that uses compressed nitrogen to force the ink out at a pressure of nearly 35 pounds per square inch. The pen has a shelf life of 100 years and is able to produce more than 30 miles of text.

## **A person with a fear of pens suffers from dimnaliphobia**

Pete Barrow, a journalist with the Huddersfield Daily Examiner, reported in June



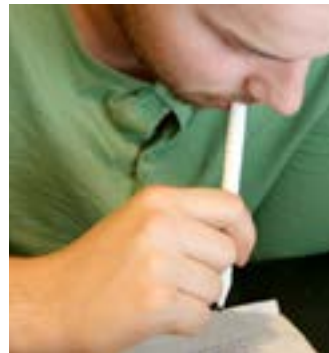
2011 that Senegalese footballer Demba Ba is a sufferer of dimnaliphobia and this was the cause of a disagreement about the player's reticence to sign an auto-graph at West Ham's end of season party in the previous month.

### **Pen spinning may be beneficial to learning**

Pen spinning may seem like a distraction in the classroom, but for kinaesthetic learners who learn by doing, completing such tasks whilst reading and reviewing new learning may actually help with the retention of new information.

### **Chewing a pen can be beneficial if you suffer from stress**

Patti Wood, an expert in body language explains on her website that when we are under stress we tend to breathe less frequently and therefore take in less oxygen. This can have a detrimental effect on our glucose levels. Our glands can be fooled by the action of chewing into releasing a surge of insulin in anticipation of a meal. This can lead to an increase in heart rate and therefore oxygen and glucose to the brain, thus improving how we feel under stress.



### **Methylated spirit may be the answer to getting ink out of clothes**

A cotton wool bud dipped in methylated spirit or rubbing alcohol should be applied to the ink stain to lift the ink from the garment. This may take the application of several soaked cotton wool buds before the stain will disappear. To finish, a cotton wool bud dipped in water should be applied to remove any traces of methylated spirit from the garment.

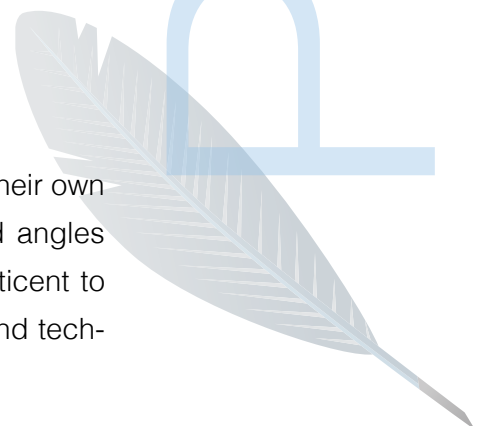
### **Research suggests that chimpanzees in the wild create their own improvised pens**

Scientists in Senegal have observed chimpanzees sharpening sticks into tools for 'writing' onto large flat leaves. Female chimps were observed making apparently symbolic marks onto the leaves before passing them to male chimps who would then act on the information imparted as if being given a list of chores to complete.

## **The Making of Pens**

### **A fountain pen nib took up to four months to break in**

Each writer as well as having their own unique handwriting markers, has their own technique for using a fountain pen with different levels of pressure and angles used by each person. For this reason, many fountain pens users are reticent to share their pens as the metal nib will have adapted to the writing style and technique of the pen's owner.



## **Pen clips are a relatively recent invention**

The clip for attaching a pen to a shirt pocket first became popular in the 1920s although these were often an additional attachment to the pen rather than built in to the design. Pen manufacturers, including the Parker Pen Company advertised as a feature that certain pens met with US military regulations that the pen clip must not be visible below the button down flap of the uniform shirt pocket.

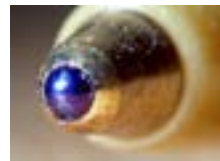


## **The introduction of Lucite revolutionised the life expectancy of a fountain pen.**

In its thirty years of manufacture the Parker 51 made more than \$400 million of sales making it the most widely used fountain pen in history. It was made from Lucite rather than Permanite which was resistant to the corrosion caused by the alkali nature of many new inks such as Quink and later Superchrome ink.

## **The success of the ball point pen manufacturing process may be due to technology developed as part of the War Effort in the 1940s.**

Prior to the 1940s it was impossible to make ball bearings that were small and consistent enough in size; it was simply too expensive to make a machine to create these vital components which rendered the ball point pen project defunct.



During the Second World War, machinery that was made for small ball bearings for weapons solved this problem. Once these machines had been designed and built, they had a secondary purpose and whilst they were very expensive initially, once developed there was no limit on production. The key was creating a balance between the socket and the ball of the pen; too much metal holding the ball would mean that the writer would have to hold the pen perpendicular to the page, but without enough metal the ball would fall out. In addition, there had to be enough space between the ball and the socket for the ink to reach the rotating ball. None of these hurdles deterred Reynolds, and production began in early October 1945, making use of surplus 1 millimetre ball bearings that had been manufactured as part of the war effort.

## **The small hole found in the side of a ball point pen has a very important purpose.**

The hole found in the side of disposable ball point pens, such as the Bic Crystal is known as a vent hole and ensures that the air pressure remains the same both inside and outside of the pen. Without the vent hole, it is possible that the ink would not flow as freely to the ball point as a vacuum could develop.



## Famous Pens

### **American presidents usually sign important documents with several pens**

When American presidents sign important legislation bills, often 20 or more pens are used so that the moment of signature is captured repeatedly. Afterwards, each pen is usually given as a gift to those who have worked towards the creation and passing of the bill. This tradition began with President Truman who it is believed used simple Bic ball point pens to sign his bills. 114 pens were used for the signing of the Civil Rights Act by President Lyndon B Johnson in 1964 and all were purchased by the President himself.

### **The signing of the Marriage Register has to be done with a special pen.**

Whilst a new fountain pen might seem the perfect gift for the happy couple on their wedding day, they will be unable to use it to sign the Marriage Register. In Great Britain, not only does the Certificate of Marriage require completion using the Registrar's pen filled with specialist archival ink, but no photographs are permitted at the actual moment of signing.

### **The world's biggest pen measures 5.5 metres long**

The Guinness Book of Records lists the 37.32kg pen as the world's largest. It is engraved with scenes from Indian Mythology and was made by Acharya Makunuri Srinivasa from Hyderabad, India. It was authenticated as the record holder in April 2011.



### **The world's smallest pen can paint lines 40 nanometres thin**

To understand the scale of this, by comparison a human hair is 100,000 nanometres wide. The scientists who developed this technology in 2005 identify their 'nanofountain- probe' as different to previously existing nano-pens as it is able to hold its own ink supply.

### **The world's most expensive pen will cost you \$1.47 million**

The Aurora Diamante Fountain Pen is encrusted with 2000 diamonds and has a gold nib. Its Italian designer and manufacturer only produce one of these pens each year to add to its remarkable collectability.



### **The bestselling pen of all time is the Bic Crystal ball point pen.**

Bic sold their 100 billionth Bic Crystal in September 2006 and it has been in production since 1950. It is estimated that 14 million Bic Crystal pens are sold every day, which is enough for a new pen for every man, woman and child on earth every 16 months.

### **The biggest collection of pens is found in Germany**

Angelika Unverhau hails from Dinslaken and has a collection of more than 220,000 ball point pens from 146 countries around the world. Her collection began as a childhood hobby but has become a serious past time over the last 20 years. Her ball point pen collectors club meet twice a year to trade pens.

### **The technical term for a lover of pens is a pennaphile**

Despite an increasing technological dominance in written communication, sales of fountain pens are on the increase and there are dozens of vintage pen collector associations throughout the world.

### **Pen lovers can enjoy the history of pens at The Pen Museum in Birmingham, England**

The Pen Museum is housed in an old pen factory in the Jewellery Quarter of Birmingham which has a rich heritage for pen historians. In the 19<sup>th</sup> century, more than 75% of penned writing was created with a pen made in Birmingham.



## Pens with other purposes

### **It is possible to save a person with a ball point pen**

In medical dramas and films it is not uncommon to see a person unable to breathe dramatically rescued with the plastic tube of a ball point pen. Medical experts (whilst not advocating the practice) acknowledge that a biro tracheostomy is technically possible although any small tube, placed in the correct part of the trachea would suffice as a temporary solution.

### **A dress made from 1200 ball point pens was created in 2011 to celebrate the 60<sup>th</sup> anniversary of the Bic Crystal.**

The designer, Annette Carey, said it took 640 hours to create the dress which weighs 8 pounds and is valued at £10,000.



### **James Bond has made use of a series of pens as weapons**

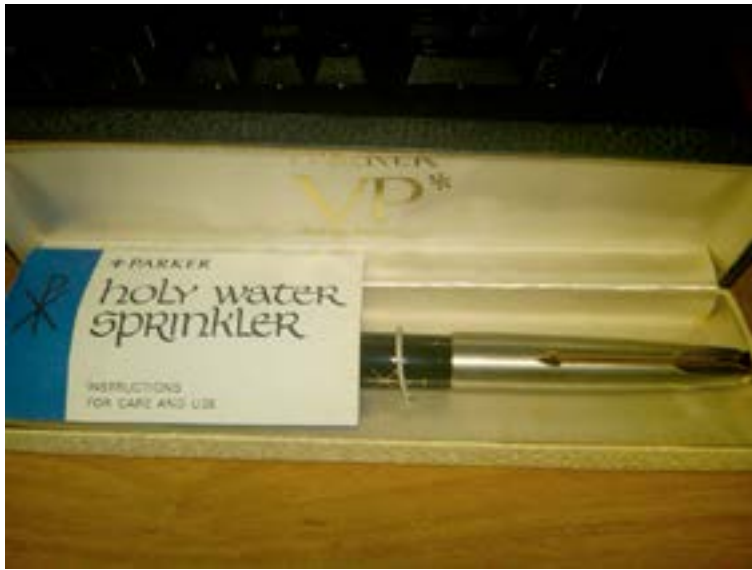
In four of the James Bond films, 007 makes use of an adapted pen as a weapon. These included pens loaded with explosives (seen in *Never Say Never Again* and *Goldeneye*) and pens that contained poison (seen in *Octopussy* and *Moonraker*).

### **An early version of an ink eraser was the unlikely cause of death for a teenage office worker in 1909**

Before correction fluid and ink eraser pens, ink was removed with a sharp metal tool. The 15 year old office worker from New York was trying to escape kisses for his birthday from some female stenographers when he fell onto his ink scraper.

**The Parker Pen Company experimented with pens that served other purposes.**

These alternative pens included a holy water sprinkling dispenser for Catholic Priests and a pen that dispensed saccharin tablets for those looking to trim their waistlines.



**Fountain pens are not considered as potential weapons on aircraft**

Despite their pointed nibs, there are no restrictions concerning travelling with fountain pens within the cabin of an aircraft. Bottled ink however, has to comply with the usual restrictions and limits for liquids.

**The record number of pen spinning moves in a minute is 66**

Daniel Muß broke the world record in September 2009, in the am Weserwehr Beer Garden in Drakerburg, Germany. Daniel had only been spinning pens for two years having watched a feature on the hobby on the Guinness World Records Television programme.

**An upcycling website lists garden sprinklers and cotton spool caddies amongst its recycling projects for unwanted ball point pens**

Alongside society's obsession with technology, lies an increased sense of responsibility for the environment. The ball point pen industry is no exception in considering how to reduce waste and encourage consumers to make better choices for the environment. [www.curbly.com](http://www.curbly.com) has several projects aimed at reusing disposable pens.

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