

# FASCINATING FACTS

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## THE THAMES FROST FAIRS



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Personal, historic and military interest.  
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Welcome to this issue of Fascinating Facts. Now retired, with a background of journalism, literature production, international public relations, and ex editor of a leading industry publications, I now have the time to combine my abilities and share my interests in historic facts, especially in connection with military matters. While I have written most of the articles in the Scarletman I am happy to accept ideas and contributions from readers; giving them credit for their work. The Scarletman is free issue e-magazine therefore if you would like to circulate copies further then I am happy for you to create a wider readership of those with a similar interest to mine.

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### **EASTER EGG FACTS**

The first chocolate factory in Britain started production in 1657

The first chocolate Easter egg was produced in Bristol in 1873 by Fry's, chocolate company.

According to Guinness World Records, the worlds biggest chocolate Easter egg weighed 15,873 pounds. At over 34 feet tall it was taller than a giraffe and heavier than an elephant. It was made in Cortenuova, Italy.

Decorated with gold leaf and white flowers and taking three days to make, the worlds most expensive chocolate egg sold for £7,000 on 20th March 2012.

British people spend an average of £299 million on 80 million chocolate Easter eggs every year.

The origin of the traditional 'crocodile finish' on Easter eggs is to disguise minor imperfections that would otherwise be obvious on a smooth chocolate shell.

Although Cadbury made their first chocolate eggs in 1875 it wasn't until 1923 that a creme filled egg was released. It didn't stick around for very long and disappeared from shelves. Nearly 50 years later it was reintroduced and named Cadbury Creme Egg in 1971.

Over 500 million Cadbury's Crème eggs are made in a year. If they were piled on top of each other, they'd be ten times higher than Mount Everest!

Of the £415 million spent on chocolate, Easter eggs represent 10% of annual chocolate spend in the U.K. The average child in the UK eats around eight chocolate eggs for Easter.

The largest Easter egg hunt involved 9,753 children and over half a million eggs. The UK is joint fourth in the world league of chocolate eating, based on weight per capita, behind only Switzerland, Germany and Austria.

A typical chocolate egg has around 1,000 calories. So eating eight eggs consumes approximately 8,000 calories about the same as the total recommended calorie intake for an entire week. On average, each person in Britain eats almost 9.5 kg of chocolate per year.

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Easter-Eggs.jpg: Lotus Head from Johannesburg, Gauteng, South Africa derivative work: SMasters, CC BY-SA 2.5, via Wikimedia Commons

The practice of decorating eggshells is quite ancient, with decorated, engraved ostrich eggs found in Africa which are 60,000 years old. In the pre-dynastic period of Egypt and the early cultures of Mesopotamia and Crete, eggs were associated with death and rebirth, as well as with kingship. Decorated ostrich eggs, and representations of ostrich eggs in gold and silver, were commonly placed in graves of the ancient Sumerians and Egyptians as early as 5,000 years ago. These cultural relationships may have influenced early Christian and Islamic cultures in those areas, as well as through mercantile, religious, and political links from those areas around the Mediterranean.

### TRINITARIAN SYMBOLISM

Eggs in Christianity carry a Trinitarian symbolism as shell, yolk, and albumen are three parts of one egg. According to many sources, the Christian custom of Easter eggs was adopted from Persian Nowruz tradition into the early Christians of Mesopotamia, who stained them with red colouring "in memory of the blood of Christ, shed at His crucifixion".

Sociology professor Kenneth Thompson stated that the spread of the Easter egg throughout Christendom, seems to have come from Persia into the Greek Christian Churches of Mesopotamia, thence to Russia and Siberia through the medium of Orthodox Christianity. From the Greek Church the custom was adopted by either the Roman Catholics or the Protestants and then spread through Europe.

### STAINED EGGS

In addition to dyeing the eggs red, the early Christians of Mesopotamia also stained Easter eggs green and yellow. The association between eggs and Easter most likely arose in western Europe during the Middle Ages as Catholic Christians were prohibited from eating eggs during Lent, but were allowed to eat them

when Easter arrived. The folk custom of Easter eggs among the continental Germanic peoples may have stemmed from springtime festivities of a Germanic goddess known in Old English as *Eostre* (namesake of modern English Easter) and possibly known in Old High German as *Ostara*. The use of eggs as favours or treats at Easter originated when they were prohibited during Lent.

### DOOR-TO-DOOR BEGGING

A common medieval English practice was for children to go door-to-door begging for eggs on the Saturday before Lent began. People handed out eggs as special treats for children prior to their fast.

### FABERGE EASTER EGG

The Third Imperial Faberge Easter egg was created in the workshop of Peter Carl Fabergé for the Russian tsar Alexander III and presented to his wife, Maria Feodorovna, on Orthodox Easter of 1887. Created in Louis XVI style it consisted of a solid 18K gold reeded case resting on a gold "annulus" (ring) with waveform decorations held up by three sets of corbel-like legs which ended in lion's paws. Joining these legs are festoons of roses and leaves made in a variety of coloured gold alloys and joined in the middle of each side by matching cabochon sapphires, above which is a gold bow decorated with tiny diamonds, and the front of the egg has a single larger diamond in an old-mine diamond clasp which, when pressed, releases the egg's lid to reveal its surprise. Lost for many years, it was rediscovered in 2012.

The Christian Church officially adopted the custom, of eggs as a symbol of the resurrection of Jesus, with the Roman Ritual. The first edition of which was published in 1610 but which has texts of much older date, containing among them Easter Blessings of Food, one for eggs, along with those for lamb, bread, and new produce. "Lord, let the grace of your blessing come upon these eggs, that they be healthful food for your faithful who eat them in thanksgiving for the resurrection of our Lord Jesus Christ, who lives and reigns with you forever and ever."

In the Orthodox churches, Easter eggs are blessed by the priest at the end of the Paschal Vigil (which is equivalent to Holy Saturday), and distributed to the faithful.

### SYMBOLISM AND CUSTOMS

Some Christians symbolically link the cracking open of Easter eggs with the empty tomb of Jesus.

As a symbol of resurrection: while being dormant it contains a new life sealed within it.

Similarly, in the Roman Catholic Church in Poland, the so-called 'swieconka' -blessing of decorative baskets with a sampling of Easter eggs and other symbolic foods - is one of the most enduring and beloved Polish traditions on Holy Saturday.

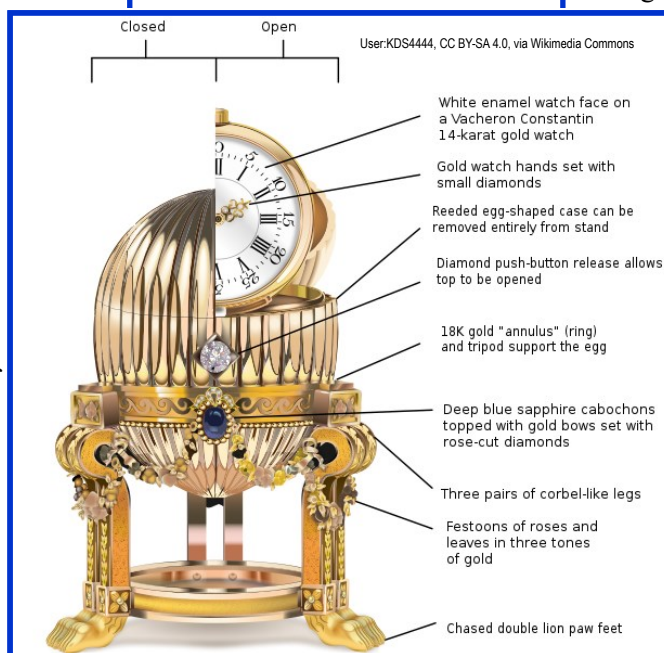
During Paschaltide, in some traditions the Pascal greeting with the Easter egg is even extended to the deceased. On either the second Monday or Tuesday of Pascha, after a memorial service people bring blessed eggs to the cemetery and bring the joyous paschal greeting, "Christ has risen", to their beloved departed.

### DYED EGGS

In Greece, women traditionally dye eggs with onion skin and vinegar, which are known as kokkina avga and some times served along the centreline their braided loaf of bread.

In Egypt, it is traditional to decorate boiled eggs during Sham el-Nessim holiday, the Eastern Christian Easter.

At Passover, Jews place a hard-boiled egg on the Passover ceremonial plate and the celebrants eat hard-boiled eggs dipped in salt water as part of the ceremony.



# THAMES FROST FAIRS

I suppose one of the most obvious indicators of a warming planet is the River Thames and the frost fairs in some winters, starting at least as early as the late 7th century and continuing less frequently until the early 19th century. But most were held between the early 17th and early 19th centuries during the period known as the Little Ice Age, when the river froze over most frequently. During that time the winter was more severe, the river was wider and flowed slower, further impeded by the 19 piers of the medieval Old London Bridge which were removed in 1831.

## MOST SEVERE FROST

At its peak, in the mid-17th century, the Thames froze about one year in ten except for four winters between 1649 and 1666. From 1400 until the removal of the medieval London Bridge in 1831, there were 24 winters in which the Thames was recorded to have frozen over at London. Some of the recorded frost fairs were in 695, 1608, 1683–84, 1716, 1739–40, 1789, and 1814. During the Great Frost of 1683–84, the most severe frost recorded in England the Thames was completely frozen for two months, with the ice reaching a thickness of 11 inches in London. Solid ice was also reported to extend for miles off the coasts of the southern North Sea.

## LITTLE ICE AGE

One of the earliest accounts of the Thames freezing comes from AD 250, when it was frozen solid for six weeks. In 923 the river was open to wheeled traffic for 13 weeks. In 1410, it lasted for 14 weeks.

The period from the mid-14th century to the 19th century in Europe is called the Little Ice Age because of the severity of the climate, especially the winters. In England, when the ice was thick enough and lasted long enough, Londoners would take to the river for travel, trade and entertainment, the latter eventually taking the form of public festivals and fairs.

AD 695 was first known frost fair on the River Thames when the river froze

over for six weeks. Vendors set up booths on the frozen river in which they sold goods.

The first recorded frost fair for which the term "frost fair" was used was in 1608. with many lighting fires stay warm, and the most celebrated frost fair occurred in the winter of 1683–84.

## KING CHARLES BUYS CARD

For sixpence, Croom the printer sold souvenir cards written with the customer's name, the date, and the fact that the card was printed on the Thames; he made £5 pounds a day (10 times a labourer's weekly

wage). King Charles II bought one. King Henry VIII travelled by sleigh from central London to Greenwich along the river in 1536, Queen Elizabeth I frequently took to the ice in 1564, to "shoot at marks". Boys played football on the ice. Beilby Porteus, Bishop of London, took residence at Fulham Palace in 1788, and recorded that the Thames was so completely frozen over, that he walked on it from Fulham to Putney. In January 1789, melting ice dragged a ship, anchored to a riverside public house, pulling the building down and causing five people to be crushed to death.



## THE FROST FAIR OF 1683.

**Text at top: An exact and lively map or representation of booths and all the varieties of shows and humours upon the ice on the River Thames of London during that memorable frost in the 35th year of the Reign of his Sacred Majesty King Charles the 2nd**

**Summary of the text at bottom:**

**The stalls representing The Duke of Yorke's Coffee house. The roast beef booth, The half way house, The Bear garden Shire booth, The Music booth, The Printing booth. The Lottery booth, The Horne Tavern booth, The boat drawn booth with a horse, The Drum Boat booth. Also boat drawn on wheels, the bull baiting, the chair sliding in the ring, the boys sliding, the nine pin playing. the sliding on skates, the sledge drawing, coals from the other side of the Thames , the boys climbing upon the tree in the temple garden to see the bull baiting, the toy shop, and at the very top London Bridge.**

**FEELING HUNGRY?  
WANT A SNACK?  
NOT WITH THESE!**

There's food and exotic food. Also recently, the price of food has gone up but have you ever wondered what the most expensive food might cost?

**KOBE BEEF**

Kobe is a special type of beef from Wagyu cattle. To qualify as Kobe, the cattle must be born, raised, and processed within Japan's Hyogo Prefecture in western Japan. They are fed a grain rich diet to add to their higher fat content and tender texture. The resulting meat must have both a high marbling rating and meat quality rating to get the Kobe designation. Standards so strict that only 3,000 to 4,000 head of Kobe cattle come to market each year! In the United States, Kobe beef can cost £40.00 per ounce. At a restaurant an ounce of Kobe beef will cost £60.00 !

**WHITE TRUFFLES**

White truffles, edible spores of a type of underground fungus, also known as Alba truffles, are one of the most expensive truffles in the world. They have a strong, earthy oak and garlic flavours and are primarily found in the Piedmont region of Italy, and parts of Croatia and Slovenia. To grow the truffle fungi have a special relationship with tree roots in order to grow. The fungi helps the trees to gather water and minerals, and the tree feeds the truffle with sugars. They are so rare that an ounce of white truffles could cost £200.00.

**BLUEFIN TUNA**

Bluefin tuna is highly prized Japanese, staple of sushi and sashimi. with a rich, buttery flavour and tender texture. Its popularity has led to overfishing in the Atlantic, Pacific, and Indian Oceans, and it is now an endangered species. A 212 kg bluefin tuna sold for £215,000 at auction in Tokyo in January 2023 or £1,010 per kilo! In a sushi restaurant, a single pieces of bluefin tuna could cost between £8 and £60.

**KOPI LUWAK COFFEE**

Kopi luwak coffee is made from coffee beans that have been eaten and excreted by Asian palm civets, a type

of wild cat-like animal native to Indonesia. Inside the civet's digestive tract, the beans are fermented and partially broken down. The coffee is then harvested from the faeces of the civet, washed and roasted.

The coffee is said to have a rich, smooth flavour with hints of chocolate and caramel. One of the most expensive coffees in the world, due to the labour-intensive process of collecting the beans and their limited supply. A pound of these beans cost £450 and a cup could run you £80.

**DENSUKE WATERMELON**

Densuke Watermelon, also known as black watermelon, is a rare and unique melon that is only grown on the island of Hokkaido in northern Japan. It is known for its distinct black rind, crisp red flesh, and exceptional sweetness. The flavour is often described as having a hint of strawberry or honeydew melon.

Grown in the volcanic soil of Hokkaido, which is rich in minerals and nutrients, they require a cool climate and plenty of water. Hand-picked when fully ripe, they are then washed and packaged for shipment. Only 10,000 are grown each year, which accounts for their exceptional price of £200 each

**SAFFRON**

Made of the dried stigma of the saffron crocus flower, saffron has a unique slightly bitter, floral, honey Grown primarily in Iran, it is a common ingredient in Iranian, Moroccan, and Indian dishes. Used in risotto, paella, and bouillabaisse recipes. Saffron is the most expensive spice in the world by weight, due to the labour-intensive process of harvesting the stigma.

Each crocus flower only makes three strands of saffron, and they must be removed one at a time using tweezers. Saffron retails between £8 and £16 per gram.

**BELUGA CAVIAR**

Beluga Caviar is the most expensive caviar which comes from the beluga sturgeon, a large fish which often weighs 600 lbs. But the largest recorded weighed 3,463 lbs! The popularity of beluga caviar has resulted in it now listed as a critically endangered species resulting on its prices to soar. U.S.-raised farmed beluga caviar will cost £655.00 an ounce

**RUBY ROMAN GRAPES**

A rare grape Ruby Roman grapes are exclusively grown in the Ishikawa Prefecture of Japan, on the west coast of Honshu island. Known for their large size these plump grapes have a deep red colour and thick skin with individual grapes often weighing up to 20 grams each.

Very sweet with a rich, fruity flavour compared to wine grapes, they are carefully tended by farmers, who limit the number of grapes per vine to ensure the highest quality. Hand-picked when fully ripe they are carefully packed and shipped to markets around the world.

Priced by category, with "superior" bunches going for £70 to £110, and "special superior" bunches costing between £140 to £ \$180 and £350. The rarest of the "premium" Ruby Roman grapes can go for £790 per bunch!

**MATSUTAKE MUSHROOMS**

Matsutake mushrooms are highly prized and can also be found in China, Korea, and the Pacific Northwest of the USA. Harvested in the autumn they are one of the world's most expensive mushrooms with a strong, earthy aroma and a firm, meaty texture. Foraged from the roots of red pine trees the roundworm damaging the pine trees has led the price to skyrocket. These special mushrooms can cost as much as £787 per pound!

**IBERICO HAM**

Iberico ham, also known as Jamón Ibérico, is a cured ham from Iberian pigs and produced in Spain and Portugal. It has a complex, nutty flavor with hints of acorns, herbs, and spices and is served in thin slices and eaten on its own, so the flavour can shine through.

The pigs roam freely, and feed on an acorn-heavy diet. After processing, the meat is salted, dried, and aged for up to three years. Due to the time involved in making it, a single leg weighing between 13 to 17 lbs can cost between £400 £3,500

**FOOTNOTE**

Many of these pricey ingredients are not pantry staples, except perhaps saffron and truffles. The rest are one-time indulgences for foodies who value the experience of trying something new—regardless of cost. With ingredients this expensive, they're not the domain of the amateur cook

# 60 million bricks to build London's elevated railway

With my family living around Deptford and Rotherhithe in London in the 1930's I was quite familiar with what they referred to as the 500 arches as we had to pass under them many times to go shopping or visiting.

These structures carry the former London and Greenwich Railway line and consists of 851 semi-circular arches and 27 skew arches or road bridges. It is the longest run of arches in Britain, and also one of the oldest railway viaducts in the world, as well as being the earliest example of an entirely elevated railway line.

## PARLIAMENTARY APPROVAL

Built between 1834 and 1836, the original viaduct had been widened for 1.95 miles of its length between Corbett's Lane and London Bridge on the south side to accommodate the trains of the London and Croydon Railway and London and Brighton Railway, in 1842 and also for 2.65 miles on the north side to accommodate the South Eastern Railway main line in 1850 which is Grade II listed.

The proposal for a railway from London to Greenwich, was built on a viaduct to avoid numerous level crossings over the many streets in the south of London. Engineer Colonel George Thomas Landmann, and entrepreneur Georg George Walter formed a company in 1831, which obtained Parliamentary approval in 1833. The original intention had been for the line to

descend to ground level after crossing the Grand Surrey Canal but this was opposed by Parliament, and so it remained elevated as far as Deptford Creek on the River Ravensbourne, where there was a bascule bridge.

Work started on the foundations in February 1834, and in places they had to hand dig down 24 feet to obtain a firm foundation for the arches.

## 60 MILLION BRICKS

Contractor Hugh McIntosh, used 60 million bricks 400 navvies. Using more than 100,000 bricks per day, created a shortage for other building activities in London. The bricks were all made at Sitingbourne and transported to the site by barge.

As originally constructed the viaduct included a 'pedestrian boulevard' where users could walk for a penny toll, but this was quickly replaced by an additional running line. The viaduct included the stations of London Bridge, Spa Road, Bermondsey which closed in 1915, and Deptford. A further station at Southwark Park was opened in 1902, but closed in 1915.

## SIGNAL BOX PRECURSOR

Corbett's Lane Junction, became one of the first major railway junctions in the world with a policeman stationed at the junction to control movements of the trains. He was situated on a wooden tower on the viaduct to give him better visibility. The 'Corbett's lane lighthouse', as it was known. This became the precursor of the modern signal box.

During 1838 and 1839 the London and Croydon Railway (L&CR) constructed a junction with the viaduct leading to its own 800-foot viaduct. In 1845 the viaduct was widened for the addition of two further lines for 2.65 miles (4.26 km) on the north side to accommodate the South Eastern Railway main line. This work was completed by 1850. The SER later constructed a link from this structure leading to its Bricklayers Arms branch line.

## LOW COST HOUSING

The London and Greenwich Railway directors originally envisaged using the arches for low cost housing, but these plans were soon dropped. Possibly because of the vibration and noise of the overhead trains. The arches are now extensively used for light engineering workshops, scrap dealers, and lockups. In recent years, with insulation, some of the arches have been used for fashionable restaurants and nightclubs.

## 150 YEAR LEASE

In February 2019, Network Rail completed the £1.46 billion sale of a commercial property portfolio to Telereal Trillium and Blackstone Property Partners 'The Arch Company' on a 150 year lease. The portfolio consists of 5,261 rental spaces across England and Wales that Network Rail judged are not essential for running the railway. The portfolio is concentrated in the London area – 60% by number of rental spaces. Most properties are converted railway arches and 70% by number of rental spaces. The portfolio generated £83 million of rental income in 2017-18, with the top 100 tenants making up 24 per cent of expected revenues.

## UK - 5,200 RAILWAY ARCHES

There are more than 5,200 railway arches across the country which have historically provided affordable workspace for a wide range of businesses. In the past they were more for industrial use but as times change the use changes from restaurants, hair dressers, fashion shops and some are hired out for speciality events. Sixty per cent of these arches in the UK are in London, and they are typically clustered around key urban centres and near major transport hubs.

Railway Arches, St Thomas St, Bermondsey



Nigel Chadwick, CC BY-SA 2.0, via Wikimedia Commons

## SAGRADA FAMILIA STARTED 1882 & STILL BUILDING!

On 19 March 1882, construction of the Sagrada Família began under architect Francisco de Paula del Villar. One year later Villar resigned and Gaudí took over as chief architect, transforming the project using his architectural and engineering style, combining Gothic and curvilinear Art Nouveau forms. He devoted the remainder of his life to the project, and is buried in the crypt. At the time of his death 44 years later less than a quarter of the project of the world's largest unfinished Catholic church was complete.

### PRIVATE DONATIONS

Relying solely on private donations, construction progress was interrupted by the Spanish Civil War. In July 1936, FAI anarchists set fire to the crypt and partially destroyed Gaudí's plans. In 1939, Francesc de Paula Quintana took over site management, and was able to continue using the material saved from the fire. Construction resumed in the 1950s and passed the midpoint in 2010. It was anticipated that the building will be completed by 2026, the centenary of Gaudí's death, but this has now been

delayed due to the COVID-19 pandemic. After a visit to the Vatican in 1872, Bocabella returned from Italy with the intention of building a church inspired by the basilica at Loreto. The apse crypt of the church, funded by donations, was begun 19 March 1882, on the festival of St. Joseph, to the design of the architect Francisco de Paula del Villar, whose plan was for a Gothic revival church of a standard form.

### RADICAL CHANGE

The apse crypt was completed before Villar's resignation on 18 March 1883, when Antoni Gaudí assumed responsibility for its design, which he changed radically. Gaudí began work on the church in 1883 but was not appointed Architect Director until 1884.

The central nave vaulting, right, was completed in 2000 and the main tasks since has been construction of the transept vaults and apse. Since 2006, work concentrated on the crossing and supporting structure for the main steeple of Jesus Christ as well as the southern enclosure of the central nave, which will become the Glory façade. Computer-aided design has allowed stone to be shaped off-site by a CNC milling machine, instead of being hand carved.

The stone initially used came from the Monserrat mountains but the

SBA73 from Sabadell, Catalunya, CC BY-SA 2.0, via Wikimedia Commons



Detail looking up to the roof in the nave. Gaudí designed the columns to resemble trees and branches.

deeper they quarried the more fragile was the stone, so in 2018, the stone type needed for the construction has been imported from Brinscall, Chorley England.

The main nave was covered and an organ installed in mid-2010, allowing the still-unfinished building to be used for liturgies. The church was consecrated by Pope Benedict XVI on 7 November 2010 in front of a congregation of 6,500 people. And a further 50,000 people following the mass outside. Over 100 bishops and 300 priests distributed Holy Communion. Mass is celebrated at the basilica every Sunday and holy day of obligation, .

### 140 YEAR BUILD

Chief architect Jordi Faulí announced in October 2015 that construction was 70 percent complete and had entered its final phase of raising six immense steeples. The steeples and most of the church's structure were planned be completed by 2026, the centennial of Gaudí's death; Visitor entrance fees of €15 to €20 finance the annual construction budget of €25 million

After a wait of more than 140 years, five central towers of Barcelona's famous Sagrada Família basilica will at last be finished.



Maksim Sokolov (maxergon.com), CC BY-SA 4.0, via Wikimedia Commons

## COANDA EFFECT FROM AIRCRAFT TO HAIR DRYER

From drying ones hair with a towel to a blow dry hair dryer and now a hair dryer using an air phenomenon first demonstrated by Thomas Young in a lecture given to The Royal Society in 1800. Then in 1910 Romanian inventor Henri Coandă, recognised the practical application of the phenomenon in aircraft design.

Put simply the Coandă effect is tendency of a jet of fluid or air, emerging from an orifice to follow an adjacent flat or curved surface and to entrain fluid or air from the surroundings so a region of lower pressure develops."

### HENRI COANDĂ

Henri Coandă identified the effect during experiments with his Coandă-1910 aircraft. Coandă noticed that the airflow was attracted to nearby surfaces. The effect was described as the "deviation of a plain jet of a fluid that penetrates another fluid in the vicinity of a convex wall". The first official documents that mention the Coandă effect were two 1936 patents by Henri Coandă. This name was accepted by the leading aerodynamicist Theodore von Kármán, who had a long scientific relationship with Coandă on aerodynamics problems.

### HAIR DRYERS

In market research Dyson found common issues with the existing hair tool market. Dyson used this phenomenon by creating a spinning vortex of air around the cylindrical shaped barrels of the hair dryer. The barrels attracted the hair through the airflow, encouraging hair to wrap itself around the barrel and curling it through the use of the air vortex. This research took approximately 500 prototypes to perfect the curling barrels featured on their styler. Over 103 engineers worked to solve the nation's hair drying issues, Dyson



The C-17 Globemaster III has externally blown flaps with part of the engine flow passing through flap slots to be turned over the top surfaces by the Coandă effect.

put £100 million into developing the Supersonic and, subsequently, the Air Wrap, and a further £100 million into its three hair laboratories A month after launch it became the UK's best-selling hairdryer.

### AIRCRAFT

The Coandă effect has applications in aircraft, where air moving over the wing can be "bent down" using flaps and a jet sheet blowing over the top curved surface of the wing. This flow from a high-speed jet engine over the wing increases lift. The experimental McDonnell Douglas YC-15 and the Boeing C-17 Globemaster III, also employs the effect.

On the NOTAR helicopter the conventional propeller tail rotor is replaced with a Coandă effect tail. Following the work of Coandă on applications of his research, John Frost of Avro Canada also spent considerable time researching the effect, leading to a series of "inside out" hovercraft, unlike a traditional hovercraft design, where air is blown into a central area, and directed down with the use of a fabric "skirt". Only one of Frost's designs was ever built, the Avro Canada VZ-9 Avrocar a vertical takeoff and landing (VTOL) aircraft developed by Avro Aircraft Ltd. as part of a secret United States military project carried out in the early years of

the Cold War. Two prototypes were built as "proof-of-concept" test vehicles for a more advanced U.S. Air Force fighter and also for a U.S. Army tactical combat aircraft requirement. Avro's 1956 project for the U.S. military was a larger-scale flying saucer based on the Coandă effect and intended to reach speeds between Mach 3 and Mach 4. Project documents remained classified until 2012.

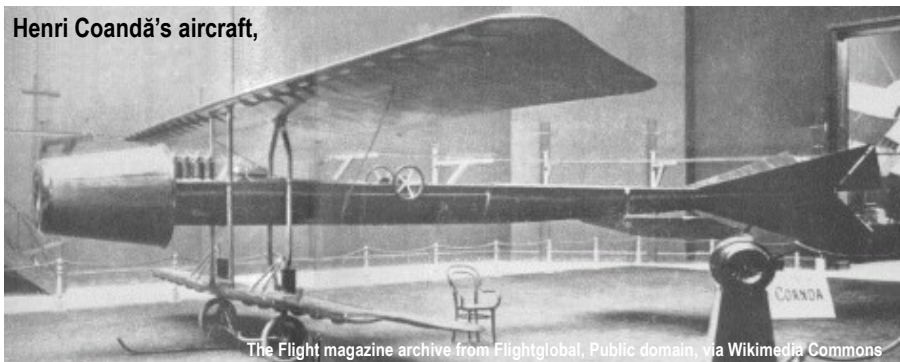
### AUTO RACING

In Formula One automobile racing, the Coandă effect has been exploited by the McLaren, Sauber, Ferrari and Lotus teams, after the first introduction by Adrian Newey (Red Bull Team) in 2011, to help redirect exhaust gases to run through the rear diffuser with the intention of increasing downforce at the rear of the car. Due to changes in regulations set in place by the FIA from the beginning of the 2014 Formula One season, the redirection of exhaust gases to use the Coandă effect has been negated.

### SIMPLE EXPERIMENT

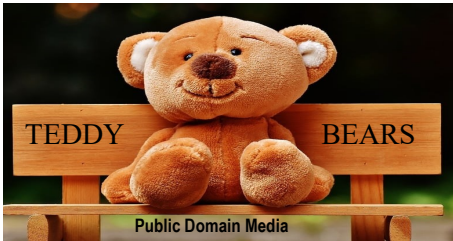
The Coandă effect can also be demonstrated by placing a can in front of a lit candle, such that when one's line of sight is along the top of the can, the candle flame is completely hidden from view behind it. If one then blows directly at the can, the candle will be extinguished despite the can being "in the way".

Henri Coandă's aircraft,



The first Avrocar was readied at the factory in 1958





## THE BEGINNING

The first teddy bears were made of flannel and bear fur by Jill Craigie, an American artist, in 1888.

The modern recordable teddy bear was created in 1902 by Berliner Karl Storz. He patented his idea in 1905 and began selling them commercially from his store aptly called "Teddies".

In 1902 Charles Fenton received a U.S. patent for his design of an Anthropomorphic Plush Toy - which we now know as our beloved teddy bear!

In 1902 a British company created the first commercially produced teddy.

The name "teddy bear" was first used in 1903 when toy dealer Edward Bear made stuffed animals at his shop in New York. He called them "teddies."

## MANUFACTURE

It can take up to eight hours for a Teddy Bear's stuffing to fully expand once it has been stuffed with cotton batting and latex fibres – making them very resilient when hit.

A 100 per cent polyester fibre is used to make most teddies as it's soft enough to be gentle on the skin but strong enough not to tear easily.

Bears were not always soft and cuddly –in medieval times, they were used as mascots by warring factions due to their tough skin. As England emerged victorious from several wars due to their love of this furry friend they began manufacturing larger-size plush toys known today as grizzlies!

Production of a cotton teddy bear takes approx. 68 kilograms of fabric.

## SALES

In 2004, more than 36 million teddy bears were sold in the U.S.! Over 90 per cent made in China.

In 2013, the average American spent about \$220 on teddy bears each year.

There are more than 500 types of Teddy Bears on sale at any time.



Early 1900's bear thought to be made by Morris Michtom, donated to the Smithsonian Museum of Natural History by Theodore Roosevelt's grandson, Kermit Roosevelt Jr., in 1964

## RECORD BREAKERS

The biggest collection of teddy bears is held by Istvánné Arnóczki of Hungary Her collection now comprises 20,367 items in her village Teddy Museum

The smallest commercially available teddy bear measures 9mm in height and was made by Cheryl Moss of South Africa in 2003.

The largest teddy bear was made in Mexico in April 2019 and measures 19.41 m tall. Made with the same materials as a commercial teddy bears but it includes a tiara, dress, eyes and nose.

The most expensive teddy bear was Steiff's 'Louis Vuitton' teddy bear made in 2000 measuring 45 cm. It sold at Christie's, Monaco for £1,978,000.00

The most expensive antique teddy bear was a 1905 Steiff bear named Teddy Girl which was sold by Christie's, London on the 5th December 1994 for £110,000 to Japanese businessman Yoshihiro Sekiguchi founder of the Izu Teddy Bear Museum in Ito, Japan where she now lives..

In December 2009, a new record was set for the most teddy bears sold in one day - more than 5 million bears!

## OLDEST

The oldest known recordable teddy bear was made in 1887 and belonged to a soldier named Albert Lasker, who brought it back from France after the war ended.

## COMFORT/GIFTS

Teddy bears are one of the most popular holiday gifts. They are often given as Valentine's Day gifts because they symbolise love and loving care.

Teddy bears have even been used in medical research. A study showed that when children receive teddies as gifts, it can lead to increased levels of happiness.

Teddy bears have been dressed up since 1905 and originally served as part-time animal companions to sick children during hospital visits.

Teddy bears have featured in many movies and T.V. shows, including The Godfather, Forrest Gump, and How the Grinch Stole Christmas and not to forget Paddington

## GENERAL

In 1944, President Franklin D. Roosevelt created the National Foundation for the Preservation of Fur-Bearing Animals (now known as The Humane Society) to help preserve bear populations worldwide. In 1978, US Congress passed legislation designating Dec. 26th as Recordable Teddy Bear Day in honour of this influential animal advocate!

Hedge fund manager Paul Greenwood bought his teddy bear from the Steiff Festival Auction in 1999. Greenwood had a huge collection of luxury teddy bears. Later, when he was convicted of fraud in 2010, all his soft toys were sold at an auction held at Christie's showroom.

In Europe, Russia, and China, giving a bear without mentioning its name first is considered bad luck. This is why many Russian teddies have names such as Vladimir or Natasha inscribed on them!

The Teddy Bear is the greatest addition to the toy market. The love for teddy bears has transcended generations and geographical boundaries. From Greatest Generation to Gen Z, these stuffed toys have been loved by people all around the world.



We see them everywhere. They are the basis of our shelter. Humans have used clay to create pottery since at least 18,000 BC. But the earliest mud brick use dates back to 9,000 BC in Turkey at the site of Jericho and are still used in some countries today.

### UNFIRED BRICKS

The process of making bricks begins with clay, a component of sedimentary rock commonly found on floodplains, riverbanks, or where bodies of water used to be. What makes clay special is that it becomes plastic and mouldable when wet but becomes hard and durable when fired.

Also known as unfired brick, or air-dried brick, mud bricks are made from mud, sand and water mixed with a binding material such as rice husks or straw.

From around 5000–4000 BCE, mudbricks evolved into fired bricks to increase strength and durability. Nevertheless, in some warm regions with little timber available to fuel kilns, mudbricks continue to be in use. Mud bricks are the standard of vernacular architecture in some warmer regions such as Africa and western Asia. In the 20th century, the compressed earth block was developed using high pressure as a cheap and eco-friendly alternative to obtain non-fired bricks with more strength than the simpler air-dried mudbricks.

### ANCIENT WORLD

The 9000 BCE dwellings of Jericho were constructed from mudbricks, bedded with mud.

The Great Mosque of Djenné, in central Mali, is the world's largest mudbrick structure. It, like much of Sahelian architecture, is built with a mudbrick called Banco, a recipe of mud and grain husks, fermented, and either formed into bricks or applied on surfaces as a plaster like paste in broad strokes. Which must be reapplied annually. In some cases, brickmakers extended the life of mud bricks by putting fired bricks on top or covering them with stucco.

Fired brick making was brought to Britain by the Romans, but fell into decline after their departure and it

was not unusual for bricks to be re-used from rundown buildings or excavations. The earliest known post-Roman bricks date from the early-thirteenth century, when Flemish bricks were imported. The quality of British brick making rose to an adequate level and the numbers of imported bricks declined. However, it was not until the early-fifteenth century when a large number of Flemish and Dutch craftsmen came to settle in England that the quality of English bricks increased. During this period, all brickmakers travelled to the construction site to make bricks from the local clays.

### TYLERS CITY GUILD

From the 1380s, the craft was regulated, first by church guilds and then by specific guilds of tylers (or brickmakers). The oldest of these which still survives is the Worshipful Company of Tylers and Bricklayers, founded in 1416 and Chartered by Queen Elizabeth I in 1568. Following the Great Fire of London in 1666, Charles I designated that all new buildings in the city be built of fireproof materials.

The Tylers' Guild did not have enough members to undertake the work, so relaxed their admission regulations and trained people from the provinces to make bricks. This led to an explosion in the industry and many hundreds of brick makers and builders set up business as itinerant brickmakers.

Mechanisation came to brickmaking in the 1820s and with improved transport infrastructure, canals and railways, permanent brickyards we

were established producing thousands of bricks per day with a smaller workforce than by hand craft system.

### MECHANISATION

By 1850 the majority brick making was mechanised and small country yards, unable to invest in machinery, could not compete and closed..

By 1914 there were no more than fifty travelling brick makers in the British Isles and today there are no itinerant brickmakers. All brick manufacture is carried out in established brickworks.

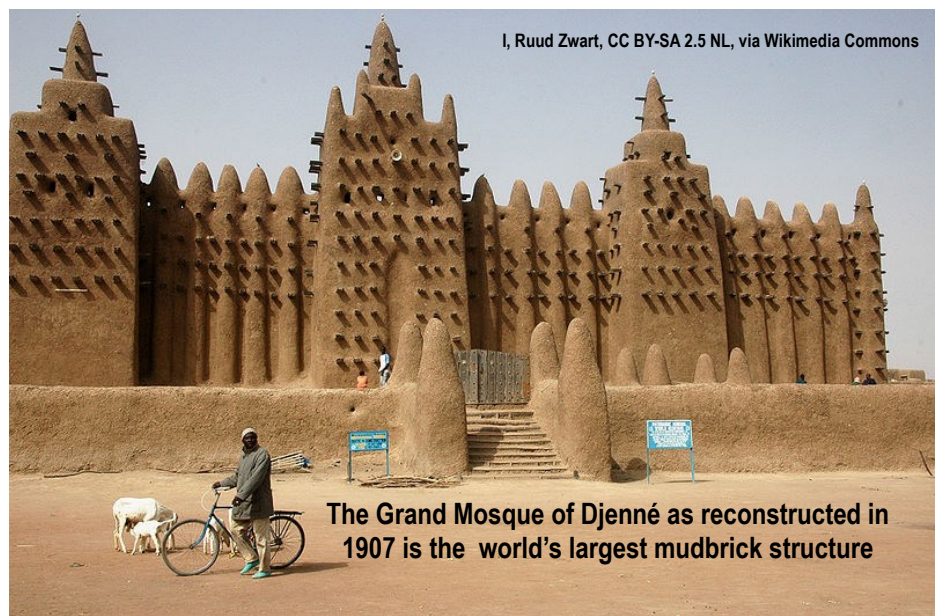
Brick dimensions differed across the country but by the early-nineteenth century they were manufactured to a statute. This required that the length should be twice the width; 9 by 4.5 inches.

Bulmer Brick and Tile Co Ltd has existed since the 1450's although tiles and bricks from the 1350's have been found on land surrounding the yard.

### BRICK COLOURS

The colour of a brick is determined by the chemical composition of the clay, the fuel used to fire it and the levels of oxygen available during the firing process. Iron oxide gives the brick a red colour while very high levels of iron oxide gives a blue colour. Limestone and chalk added to iron in the brick gives a buff/yellow colour and no iron or other oxides gives a white coloured brick.

Colours and textures of finished bricks depends on the type of clay in an area and the weather conditions and fuels used to fire them – different regions have different traditional bricks which depend on the local clay.



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The Grand Mosque of Djenné as reconstructed in 1907 is the world's largest mudbrick structure