



## Chronology of Papermaking

The chronology below includes currently accepted dates (all A.D.) for the outlined processes, products or inventions. As historical research is continually being performed, these dates may alter as new information becomes available. Please contact the PITA Office ([info@pita.co.uk](mailto:info@pita.co.uk)) if you consider any changes or additions should be made to the information shown.

- 105 Ts'ai Lun, Han dynasty Privy Councillor in China, announces invention of paper.
- 106 Paper used in place of coins for placing in tombs of dead – start of 'spirit money'.
- 589 First mention of use of toilet paper in China.
- 610 Papermaking introduced to Japan.
- 751 Papermaking introduced to Samarkand (now Uzbekistan).
- 793 First paper made in Baghdad, Persia (modern day Iraq).
- 800 Earliest use of paper in Egypt.
- 900 First paper made in Egypt.
- 969 First mention of paper playing cards.
- 1035 A Persian traveller, visiting Cairo, noted sellers of vegetables, spices and similar, using paper as a wrapping material – the first recorded use of 'packaging'.
- 1100 Papermaking introduced to Morocco.
- 1150 Papermaking introduced to Spain – the first time it was practiced on mainland Europe.
- 1276 Papermaking introduced to Italy - earliest mention of Fabriano mills.
- 1309 First use of paper in England.
- 1337 Earliest recorded use of gelatine as sizing agent in Europe.
- 1348 Papermaking introduced to France, near Troyes.
- 1390 Papermaking introduced to Germany, at Nurnberg.
- 1420 Papermaking introduced to Kashmir, India.
- 1450 Johann Gutenberg establishes book printing in Europe.
- 1476 William Caxton establishes first printing press in England.
- 1486 First English book printed on paper with which coloured inks were used in illustrations.
- 1491 Papermaking introduced to Poland.



- 1495 Papermaking introduced to England, by John Tate, in Hertfordshire.
- 1508 Earliest use of paper for book printing in Scotland.
- 1540 Introduction of hammer glazing as a finishing technique. (Developed in Germany).
- 1576 Papermaking introduced to Russia (Moscow).
- 1586 Papermaking introduced to The Netherlands.
- 1591 Papermaking introduced to Scotland.
- 1634 Jerome Lanyer granted a patent for flocking – on cloth, leather, etc.; it was applied to paper soon after.
- 1636 Outbreak of plague in England traced to importation of linen and cotton rags for papermaking.
- 1665 Earliest English patent for papermaking – for ‘blew’ paper as used by sugar-bakers.
- 1666 Decree in England that dead should be buried in woollen shrouds only, so that textiles made from carbohydrate fibres could be used as raw material for papermaking.
- 1680 Hollander beater developed.
- 1690 Papermaking introduced to America, by William Rittenhouse, in Pennsylvania.
- 1690 First recorded paper mill in Ireland (Nicholas Dupin, Dublin).
- 1694 Bank of England established; soon after the bank started issuing banknotes.
- 1706 Earliest recorded mention of a paper mill in Wales (Halghton, Flintshire).
- 1757 Wove paper invented by James Whatman and used by John Baskerville, the printer.
- 1765 Schäffer commences research on using vegetable fibres for papermaking.
- 1783 Joseph Michel Montgolfier invented first practical balloon – made of paper.
- 1790 Invention of Hydraulic Press by Bramah, England.
- 1793 A church is constructed out of paper in Hop, Norway. Sized with vitriol, curdled milk and egg white, it could hold 800 people and stood for almost 4 decades.
- 1799 First paper-machine, developed by Nicholas-Louis Robert, is patented in Revolutionary France.
- 1800 Original Society of Papermakers founded – the first organised union of papermakers in Britain.



- 1800 Matthias Koops receives patent for using straw, wood and deinked of paper as raw materials – all these processed were performed at his Neckinger Mill in London.
- 1801 John Gamble receives an English patent pertaining to a paper-machine, a development of the work of Robert.
- 1803 Papermaking introduced to Canada.
- 1804 First commercial paper-machine installed at Frogmore Mill, Hertfordshire. (Now the site of The Paper Trail).
- 1805 Second commercial paper-machine installed at Two Rivers Mill, Hertfordshire.
- 1806 Henry Fourdrinier takes out patent for paper-machine.
- 1806 Patent issued to Ralph Wedgwood for his “Stylographic Writer” – taken as the invention of carbon paper.
- 1807 Rosin-alum sizing developed by Moritz Friedrich Illig, in Germany.
- 1809 John Dickinson invents the cylinder mould paper-machine.
- 1817 First paper-machine erected in America, by Thomas Gilpin. (Dickinson cylinder mould).
- 1819 Sir William Congreve, playwright and inventor, submits designs for watermarks with security features for English banknotes.
- 1820 Thomas Crompton invents the heated steam cylinder to allow paper to be dried on-machine.
- 1823 Gypsum (calcium sulphate) first used as filler.
- 1825 Phipps invents the Dandy Roll.
- 1825 First paper-machine in India.
- 1827 First Fourdrinier paper-machine in America.
- 1827 First coated (‘enamelled’) paper produced and patented, by John George Christ, in England.
- 1829 John Dickinson patents incorporation of running thread into paper as a security device.
- 1830 Earliest commercially-made sandpaper.
- 1830 Invention and patent of the ‘knotter’ for removing knots and lumps, by Richard Ibotson, England.
- 1839 William Joynson patents ‘affixing letters, figures or devices’ to a roll, with the intention of producing watermarks on-machine.
- 1840 Development of postage stamps, in England.



- 1840 Friedrich Gottlob Keller receives patent for grinding wood to make pulp.
- 1843 Lemuel Wright uses a single large, steam heated cylinder for drying paper (the forerunner of the Yankee).
- 1848 Invention of light-and-shade watermarks (by W.H. Smith, England).
- 1850 Invention of flame retardant paper by Ebart.
- 1851 First paper made from chemical wood pulp (soda process), by Hugh Burgess and Charles Watt.
- 1852 Endless wire developed for the paper-machine.
- 1853 First fully-printed banknotes issued in England.
- 1855 Egyptian mummies imported into USA; the wrappings were to be used as raw materials for papermaking.
- 1855 Contribution to the Royal Society of Arts journal proposes the use of cow dung as a raw material for papermaking.
- 1856 Thomas Routledge receives his first patent for production of pulp from esparto – the first viable commercial alternative to using rags as a source of fibre.
- 1856 First English patent issued for corrugated paper.
- 1857 Benjamin C. Tilghman and Richard Tilghman commence experiments that will ultimately lead to the sulphite pulping process.
- 1857 Joseph Gayetty introduces first commercial toilet paper, in USA.
- 1867 A song ‘The Age of Paper’ sweeps the London music halls.
- 1869 Paper coffins first used in USA.
- 1870 Invention of corrugated cardboard box.
- 1872 Inauguration of The Paper Makers’ Association of England Wales, Scotland & Ireland; the first such association in the UK.
- 1874 Invention of first automated cardboard box making machine.
- 1875 Development of multi-ply paper machine with separate Fourdrinier sections.
- 1879 First use of satin white pigment in paper coating.
- 1884 Kraft (sulphate) pulping process invented by Carl F. Dahl.
- 1885 First manufacture of vegetable parchment in USA.



- 1895 Church built from paper in Downham-in-the-Isle, Ely, UK; appears to have lasted half a century.
- 1896 First use of electricity in a paper mill.
- 1903 First patent issued for manufacture of articles from moulded pulp.
- 1904 Invention of single-use disposable paper plates.
- 1906 First paper milk bottles manufactured.
- 1908 Invention of hygienic disposable paper cups.
- 1908 Suction couch patented by Millspaugh Ltd.
- 1920 Technical Section of The Paper Makers' Association of England Wales, Scotland & Ireland formed.
- 1921 Final private banknotes issued in the UK (Somerset Bank, Fox, Fowler & Co).
- 1925 First use of calcium carbonate as paper filler.
- 1937 First use of soy protein as coating binder.
- 1947 Fluorescent Whitening Agents (FWAs) or Optical Brightening Agents (OBAs) first used.
- 1947 Introduction of styrene-butadiene latex as paper coating binder.
- 1948 Development of Refiner Mechanical Pulp (RMP). (It was commercialised in the 1960s).
- 1949 The Paper Makers' Association of England Wales, Scotland & Ireland becomes the British Paper & Board Makers Association.
- 1950s Adaptation of froth flotation, from the ore industry, to paper deinking.
- 1952 Polyvinyl Alcohol (PVOH) first used as binder in coated paper.
- 1954 Invention of Carbonless Copy Paper (or No Carbon Required paper) by the National Cash Register Company, USA.
- 1958 First commercial installation of an Inverform unit (St Anne's Board Mill, Bristol).
- 1974 The British Paper & Board Makers Association becomes the British Paper & Board Industry Federation.
- 1975 The Technical Section becomes the Technical Division of the British Paper & Board Industry Federation.
- 1979 First TMP refiners installed in the UK (St Anne's Board Mill, Bristol).
- 1982 Formation of the Paper Industry Technical Association from the Technical Division.



- 1984 Development of shoe press by Voith.
- 1994 The British Paper & Board Industry Federation becomes The Paper Federation.
- 1999 The Paper Federation becomes the Confederation of Paper Industries (CPI).
- 2010 First on-line curtain coater added to a board machine (BM3, Mayr-Melnhof, Frohnleiten, Austria, by Voith)