

Part 4. Timeline in the Development of Home and Household Items

Note: the italic letters at the end of each entry refer to the references.

- c. 1610** Self-regulating oven invented by Dutchman Cornelius Drebbel, 1572-1634. *DID WWWS*
- 1679** Pressure cooker invented by Frenchman Denis Papin, 1647-1712. *BEST SAID*
- 1733** Patent for flying shuttle, which led to automatic weaving, granted to Englishman John Kay, 1705-c.1764. *STF SAID*
- 1740** Franklin stove, invented by Benjamin Franklin, 1706-1790; originally called the Pennsylvania fireplace. *STF*
- 1758** An early artificial refrigeration method that used ethyl ether as a refrigerant developed by Scot William Collins for general use. *STF*
- 1761** Cast steel scissors made for domestic use by Englishman Robert Henscliffe. *STF*
- 1764** Spinning jenny invented by Englishman James Hargreaves, 1720-1778; provided multiple spinning into several threads of wool, cotton, or flax. *MWBD STF WWWS*
- 1769** Water-powered spinning machine invented by Englishman Richard Arkwright, 1752-1792. *BDPE WOI*
- 1774** Spinning mule invented by Samuel Crompton, 1733-1827. *DID WWWS*
- 1775** Patent for a flushing toilet granted to Englishman Alexander Cumming. Three years later Englishman Joseph Bramah, 1748-1814, made improvements on the Cumming design and successfully manufactured flush toilets in 1778, internationally labeled a Bramah. *BF03 SAID*
- 1779** Spinning mule that could draw out and give a final twist to cotton fibers invented, leading to the manufacture of high quality thread and yarn by Englishman Samuel Crompton, 1753-1827. *STF*
- 1785** Successful power loom built by Englishman Edmund Cartwright, 1743-1823. *STF*
- 1795** Method of hermetically sealing food in glass containers and placing them in boiling water, which led to development of canning procedure and industry, invented by Frenchman Nicolas-Francois Appert, c. 1750-1841. *DDI MWBD STF*
- 1797** Washing machine patented by Nathaniel Briggs of New Hampshire. *AOAA*
- 1799** Clothes dryer with hand-cranked cylinder invented by Frenchman Pochon. *BF03*
- 1801, 1803** Refrigerator using ice invented by Thomas Moore, Baltimore, MD. *AOAA CLAA FFFR RI*
- 1805** Jacquard loom for figured weaving invented by Frenchman Joseph Marie Jacquard, 1770-1840. He developed punched cards for controlling its operation. Punched cards were

later used by Englishman Charles Babbage, 1792-1871, for calculators and by American Herman Hollerith, 1860-1929, to feed data into census machines. *DDI STF*

1809 Canning of foods, first in glass and later in metal cans, invented by Frenchman Nicolas-Francois Appert, c. 1750-1841, first widely used in the home, then became commercially important (see 1795, 1804). *BDPE GI MWBD*

1810 Method developed for processing or preserving food in sealed jars immersed in boiling water for an extended time, after 14 yr. of experimentation. Frenchman Nicolas-Francois Appert, c. 1750-1841, claimed French prize for his work. *CLAA SI WWWS*

1810 Machine for making shoes, which attaches the sides to the soles, invented by French-Englishman Marc Isambard Brunel, 1769-1849. *STF*

1825 Use of tin cans for preserving foods patented by Thomas Kensett. *CLAA YA1911*

1830 Patent issued in France to Frenchman Barthelemy Thimonnier, 1793-1857, on a sewing machine that used two threads. *STF HT MWBD*

1832 Power knitting machine put in operation in Cohoes, NY, by Egbert Egberts, Timothy Bailey, and his brother. *FFFR*

1832 Lock-stitch sewing machine invented by Walter Hunt, 1796-1859 (he preceded Howe by 12 yr. but did not get patent). *NC19:245 WWWW*

1832 Improvements on hand chain pump used on farmstead and in home invented by Hiram Avery Pitts, 1799 -1859. *MEA NC13:251*

1833 Washboard consisting of a corrugated surface used for scrubbing clothes patented in USA. *STF*

1846 Practical lock-stitch sewing machine invented and patented in USA by Elias Howe, Jr., 1819-1867 (see 1832). *FFFR HFP STF*

1847 Safety razor using a guard of comb teeth invented by Englishman William Samuel Henson, 1805-1888. *STF*

1849 Safety pin, involving bent wire that acts as a coil-spring and prevents the pin from slipping, invented by Walter Hunt, 1796-1859, USA. *MWBD STF*

c. 1850 American churns with wooden paddles manufactured for making butter. *FTA*

1850s Ether-compressor that could be used for making ice and cooling food developed by Scot James Harrison, Glasgow, who emigrated to Australia. *FH*

1850 Sewing machine that would sew leather and upholstery continuously invented (pat. 1851ff.) by Isaac Merritt Singer, 1812-1875. *NC4:433 NC30:544 NCJ:180*

1851 Practical successful sewing machine for home use invented by Isaac Merritt Singer, 1811-1875, Boston, MA, who introduced the foot treadle and in 1899 the electric motor drive. *BF82 FFFR NC30:544 STF*

1851 Washing machine using a rotating cylinder, hand operated for home use, invented by James T. King, USA. *STF*

1852 Discovery of "coal oil," or kerosene distilled from coal tar, which was initially used for lamps (see 1957). *CLAA FFFR*

- 1853** Potato chips first made, by George Crumb in New York. *STF*
- 1855** Can opener invented by Englishman Robert Yeates. *BF03*
- 1857** Hand-operated sewing machine, patented in 1859, led to the White Sewing Machine Co., Thomas H. White, 1836-1914, followed by his son Windsor T. White, 1866-1958.
NC21:350 NCC:317 WWWW
- 1857** Oil lamp for burning kerosene developed and merchandized by A. C. Ferris and Co. *FFFR*
- 1858** Can opener patented in the USA by Ezra J. Warner, Waterbury, CT (see 1855). *STF*
- 1858** White sewing machine invented by Thomas H. White, 1836-1914. *NC21:350*
- 1858** Threaded-top glass Mason jars for home canning invented by John Mason, 1832-1902, NY. *BDPE CLAA STF YA1975*
- 1859** Invention and patent of an electric range by George B. Simpson, Washington, DC. (see 1896). *FFFR*
- 1859** Rotary-motion washing machine made by Hamilton E. Smith, Philadelphia, PA (patented in 1858). In 1863 he secured patent protection for self-reversing attachment (see 1851). *FFFR*
- 1860** Electric lamp using carbon filament made of paper produced; patented by Englishman Joseph W. Swan, 1828-1914, leading to development of an incandescent light (see 1879, 1880). *BDHT BF03 DNB EB MWBD WOI*
- 1865** Washing machine patented by Laroy S. Starrett, 1836-1922. *DAB NC18:428*
- 1865** Coffee percolator patented by James H. Nason, Franklin, MA. *FFFR*
- 1867** Typewriter invented by Christopher L. Sholes, 1819-1890, with co-inventors Carlos Glidden, 1834-1877, and Samuel W. Soule, in Milwaukee, WI. The rights were sold to E. Remington & Sons Co., Ilion, NY, in 1873, and it became well known as the Remington typewriter. *BDPE FFFR GI*
- 1869** Suction vacuum cleaner invented by Ives W. McGaffey, Chicago, IL. *FFFR*
- 1870** Rotary can opener invented by William Lyman, USA. *SAID*
- c. 1870** Simple butter worker developed, used to expel whey from the butter. *FTA*
- 1872** Preservation of food in jars for home use invented. Amanda T. Jones, 1835-1914, invented a vacuum method patented in 1873 and formed Women's Canning and Preserving Co., Chicago, IL, in 1890. *AWT BDPE IAJ NC7:547 WITCD*
- 1872** Mail-order firm started by Aaron Montgomery Ward, 1843-1913, issuing first catalog in 1874. *AIE EWB WWWW*
- 1873** Boiling of milk for infant feeding advised by Dr. Abraham Jacobi, New York, NY. *MP*
- 1874** Pressure cooker originally invented in 1679 by Frenchman Denis Papin, 1647-c. 1712, became commercially available with patent issued in 1902. *EB CLAA YA1954*
- 1876** Successful home carpet sweeper patented and introduced by Melville R. Bissell, 1843-1889, USA. *BF03 NC7:163 STF*

- 1876** Telephone patented by Alexander Graham Bell, 1847-1922. *EB HFP*
- 1879** Joseph W. Swan, 1828-1914, England, patented an experimental incandescent light bulb using a thread filament, demonstrated the following year (see 1860, 1880). *BEST BF03 DNB EB MWBD WOI WWWS*
- 1879** Glass milk bottles for home use made by Louis P. Whiteman, Warren Glass Works, Cumberland, MD. *FFFR*
- 1880** Incandescent light bulb with carbon filament patented (first demonstrated in 1879) by Thomas A. Edison, 1847-1931, Menlo Park, NJ, with commercial production beginning immediately. Joseph W. Swan and Thomas A. Edison, working independently, are generally given credit for invention of the incandescent light bulb. Together they formed United Electric Light Co. in 1883 to develop and produce the incandescent light bulb (see 1879). *BEST BF03EB FFFR HT WOI*
- 1882** Electric clothes iron patented by Henry W. Seely, NY. *STF*
- 1885** Patent filed for the first commercially produced dishwashing machine, by Josephine G. Cochran, 1842-1913, USA. *AWT BDHT BF03*
- 1887** Screen door invented and patented by Hannah Harger, Manchester, IA. *WITCD*
- 1889** Electrically driven sewing machine produced by Singer Manufacturing Co., Elizabethport, NJ (Isaac M. Singer, 1811-1875). *BF82 NC30:544*
- 1891** Crown cork cap for bottles invented by William Painter (USA) and produced in 1892 by Crown Cork & Seal Co., Baltimore, MD. *BF03*
- 1891** Domestic electric stove and oven built by the Carpenter Electric Manufacturing Co., MN. *BF03 STF*
- 1891** Clothing zipper invented by Whitcomb L. Judson, ??-1909, USA. *BDHT STF*
- 1893** Improved method of home pasteurizer invented by Howland C. Freeman. *MP*
- 1893** Electric bread toaster marketed in England by the Crompton Company (see 1909, 1919). *STF*
- 1894** Power loom invented and built in USA by James H. Northrop, English American. *STF*
- 1896** Electric stove, a one-ring coil that provided uniform heat, invented/patented by William S. Hadaway, Jr., New York, NY (see 1859). *FFFR*
- 1898** Ironing board with legs produced by J. R. Clark Co., USA. *STF*
- 1899** Motor-driven vacuum cleaner invented by John S. Thurman, General Compressed Air Co., St. Louis, MO. *FFFR*
- 1900** Hershey chocolate bar produced by Milton S. Hershey, 1857-1945, USA. *BF03 NC33:23*
- 1900** Cellophane (based on development of viscose rayon) invented by Englishman Charles F. Cross, 1855-1935. *BEST HT*
- 1901** Successful engine-powered suction vacuum cleaning device invented by Britisher Hurbert Cecil Booth, 1871-1955. *BF03 DNB GEA STF*

- 1902** Bakelite, a synthetic resin, invented by Leo H. Baekeland, 1863-1944, with manufacturing unit becoming a part of Union Carbide and Carbon Co. *HT*
- 1903** Industrial fabrication of artificial silk (viscose rayon) by C. H. Stearn and F. Topham. *HT*
- 1903** Lightweight electric iron introduced by Earl Richardson, Ontario, CA. *GEA*
- 1903** Decaffeinated coffee developed by German Ludwig Roselius, marketed in 1906 as Sanka (sans caffeine), introduced in USA in 1923 where it was often called decaf. *BF03 PA*
- 1904** Self-contained household mechanical refrigerator using ammonia exhibited by Brunswick Refrigerating Co. *GEA*
- 1905** Domestic portable vacuum cleaner produced by Chapman and Skinner in San Francisco, CA. *STF*
- 1907** Self-contained electric-driven washing machine marketed by Thor Corp., developed by Hurley Machine Co. of Chicago, IL, patented in 1908. Patent granted to Alva J. Fisher of Chicago in 1910 for a drive mechanism for washing machines. *BF03 FFFR STF*
- 1908** After purchasing the rights of the upright model of a vacuum sweeper from James M. Spangler, William Henry Hoover, 1849-1932, inaugurated the Electric Suction Sweeper, the beginning of the Hoover Cleaner Co. *BDPE BF03 GEA NC27:266 WWWW*
- 1908** Practical motor-driven home washer for laundry introduced. *CLAA YA1960*
- 1909** Electric toasters marketed by General Electric Co., Schenectady, NY, patented by Frank Shallor, General Electric Co. Charles Strite of McGraw Electric Co., Stillwater, MN, patented a prototype of a pop-up toaster in 1919, and registered the name Toastmaster in 1926 (see 1926). *FFFR GEA STF WABI*
- 1910** Light bulbs with tungsten filament and vacuum-filled nitrogen developed by Irving Langmuir, General Electric Co. *GEA*
- 1913** Cylinder-type vacuum sweeper produced by Swedish company later known as Electrolux. *BF03*
- 1913** Domestic refrigerator for home use invented by Fred W. Wolfe, Jr., Ft. Wayne, IN, named Domelre, marketed by Domestic Electric Refrigerator Co., Chicago, IL. *BF03 GEA*
- 1913** Electric dishwasher marketed by Walker Brothers, Philadelphia, PA, with full-scale production by Hotpoint and others in 1930. *GEA*
- 1915** Pyrex developed by Jesse Littlebon, Corning Glass, NY. *GEA*
- 1915** Calrod developed by Charles C. Abbot, General Electric Co., widely used in household and industrial heating applications. *GEA*
- 1916** Delco units for producing electricity for light and power invented by Charles F. Kettering, 1876-1958, of the Dayton Engineering Laboratories, Dayton, OH. In 1919 Delco was purchased by General Motors Corp. *WWWA*
- 1917** Process for flash-freezing food in small packages for retail invented and developed by Clarence Birdseye, 1886-1956, leading to the formation of General Seafoods Co., and later General Food Co. *GEA MWBD STF WWWW*

- 1919** Rotary dial telephones with switching systems installed by Bell System. *GEA*
- 1924** Domestic spin-dryer for clothes manufactured by Savage Arms Corp., NY. *BF03*
- 1926** Pop-up toaster for domestic use manufactured and marketed by McGraw Electric Co. Minneapolis, MN. *PA*
- 1926** Vacuum sweeper with a beater bar introduced by Hoover Cleaner Co. (William H. Hoover, 1849-1932). *BDPE BF03*
- 1926** Household gas-absorption system refrigerator (not requiring electricity), called the Electrolux, patented in Sweden by Electrolux Servel Corp., introduced by Electrolux Refrigerator Sales Co., Evansville, IN. *FFFR GEA*
- 1927** Electric iron with an adjustable temperature control introduced by Silex Co., with thermostat devised by Joseph Myers. *GEA*
- 1927** Wall can opener invented and produced by Central States Manufacturing Co., St. Louis, MO. *BF03*
- 1927** Garbage disposal unit for kitchen cleanup, developed by John W. Hammes, Racine, WI, introduced by Emerson Electric Co. *GEA*
- 1930** Electric food mixer known as Mixmaster, introduced by Sun Beam Co., USA. *STF*
- 1934** Invention and patent of nylon by Wallace H. Carothers, 1896-1937, at Du Pont Co., Wilmington, DE. The product led to numerous applications followed by industrial manufacture in 1939. *BDPE GEA MWBD HT*
- 1935** Rural Electrification Administration (REA) established by executive order of the president, approved by Congress in 1936 and incorporated into the USDA in 1939. *ASABECaI CLAA RS(2007)*
- 1935** Clothes dryer invented by J. Ross Moore of North Dakota, with design sold to Hamilton Manufacturing Co. *GEA*
- mid-1930s** Washing machine to wash, rinse, and extract water from clothes invented by John W. Chamberlain, Bendix Corp. *GEA*
- 1936** Fluorescent lighting introduced to the public by General Electric Co., USA, developed by many people; originally called Geissler tubes, based on the original research of German Heinrich Geissler, 1814-1879 (see 1910). *BF03 MWBD PA WOI*
- 1936** Plexiglass (polyvinyl methacrylate) developed by Rohm and Haas Co., Philadelphia, PA, used as a substitute for glass. *GEA*
- 1938** Teflon (tetrafluoroethylene) used in the manufacture of cookware and numerous industrial applications, discovered by Roy J. Plunkett, Jr., 1910-1994, produced commercially by DuPont Co. beginning in 1948. *BDPE GEA PA WWWW*
- 1938** Microwave oven to cook food patented by American Percy L. Spencer, 1894-1970, manufactured for the commercial market by Raytheon Co., USA, in 1947, known as the Radar Range, introduced for broad domestic use in 1965. *BDPE BF03 PA STF*
- 1938** Soluble instant coffee, called Nescafé, successfully produced by Swiss company Nestle, introduced in the USA. *BF03 PA STF*

- 1938** Electric sterilamp introduced by Westinghouse Electric and Manufacturing Co., Bloomfield, NJ, to reduce the germ population by bactericidal ultraviolet rays. *FFFR*
- 1946** Tupperware, a pliable synthetic polymer, developed by Earl S. Tupper at DuPont Co. He formed Tupperware Corp. and produced considerable kitchenware. *BDPE*
- 1947** Microwave developed by Percy Le Baron Spencer, 1894-1970, Raytheon Corp., with countertop models marketed in 1967. *BDPE GEA PA WWWW*
- 1947** Top-loading automatic laundry washer introduced by the Nineteen Hundred Corp., marketed under the Kenmore label. *GEA*
- 1947** Mass-produced, low cost window-mounted air conditioner developed based on the work of Henry Galson. *GEA*
- 1948** Velcro fastener idea advanced by Swiss Georges de Mestral, 1904-1990, originally for clothes but rapidly applied to many uses, patented in 1957. *BDPE STF*
- 1952** Automatic coffee maker (pot), known as percolator, invented by Russell Hobbs. *GEA*
- 1953** High density polyethylene used to make dishes, soft plastic materials, bottles, and numerous industrial uses. *GEA*
- 1954** Geodesic dome patented by Richard Buckminster Fuller, 1895-1983, used for Dymaxion House which was originally introduced in 1927 with a pole-type structure. The geodesic dome was used for numerous applications. *MWBD WWWW*
- 1963** Self-cleaning electric stove ovens introduced by General Electric Co. *GEA*
- 1963** Touch-tone telephones introduced commercially by Western Electric Co. *GEA*
- 1967** Beginning of era incorporating microprocessors in household appliances. *GEA*
- 1974** Bar codes for identification of products introduced at a supermarket checkout in Troy, OH. *PA*
- 1979** Bagless, cyclonic vacuum cleaner patented by James Dyson, England, produced commercially in 1993. *BF03*
- 1983** Vacuum cleaner robot invented by Japanese company Automax in cooperation with Honda. *SWABI*