

*engraving and printing*

# TIMELINE



1470



2013

## FIFTEENTH CENTURY

### 1420-30

“Printed engraving: Silversmiths and armorers begin reproduce decorative engravings from metal plates.”

[www.wsu.edu/~khaas/resources/printmaking-primer.pdf](http://www.wsu.edu/~khaas/resources/printmaking-primer.pdf)

### 1430S

“The earliest engravings were produced in Germany in the 1430s...”

[http://www.metmuseum.org/toah/hd/engr/hd\\_engr.htm](http://www.metmuseum.org/toah/hd/engr/hd_engr.htm)

“Playing card engravings in Europe.”

<http://historicgames.com/gamemakers/cardmaking.html>

### MID 1400S

“Printing from a metal engraving was introduced a few decades after the woodcut, and greatly refined the results. Restricted at first to goldsmiths and armorers, it soon became the most popular form of serial reproduction. The earliest dated printed engraving is a German print dated 1446, “The Flagellation,” and it was in Germany that early intaglio printing developed before passing to Italy (Mantegna, Raimondi, Ghisi) and the Low Countries (Lucas van Leyden, Goltzius, Claesz, Matsys). From makers of playing cards the metal engraving technique passed to artists where it probably reached its apex in the hands of Albrecht Dürer in the 16th century.”

<http://www.ivc.edu/academics/schoolFA/arhistory/Documents/art2526projects/durer/historicalcontext.htm>

“First attempts at producing maps via engravings.”

<http://www.broward.org/library/bienes/lii14009.htm>

“Master of the Playing Cards, (flourished c. 1430–50), anonymous German artist who is one of the most important of the early engravers in the Rhineland. He is known for a set of playing cards (60 remain) that are distinguished for the manner in which the technique of soft-ground engraving has been handled, as well as for an exquisite use of line and the realistic observation evident in the human figures, plants, and animals that have been depicted. Some of the decorative devices employed have been stylistically related to those used by the printer Johannes Gutenberg.”

<http://www.britannica.com/EBchecked/topic/464429/Master-of-the-Playing-Cards>

## THE SECOND HALF OF 15TH CENTURY

“This time period is characterized by a humanistic treatment of subject matter and an emphasis on rational space, proportion, and perspective, the Renaissance style, which has by this time flourished in Tuscany, makes its way to northern Italy. These developments are inspired by visiting artists such as Paolo Uccello (ca. 1396–1475)—who travels to Venice earlier in the century, contributing mosaics to the Cathedral of San Marco—and Donatello, who produces among other commissions the earliest significant equestrian monument in the new Renaissance style, the Gattamelata, during his ten-year stay in Padua from 1443–53. An important school of painting develops in Padua, of which Andrea Mantegna (1430/31–1506) is the chief exponent. Mantegna is among the first artists of the Renaissance to produce images that combinemythological subject matter with a style based on the study of ancient art; his prints, accessible by a wide audience, are especially vital in the dissemination of Renaissance ideals.”

[http://www.metmuseum.org/toah/ht/?period=08\\*ion=eustn#/Key-Events](http://www.metmuseum.org/toah/ht/?period=08*ion=eustn#/Key-Events)

### 1465

“Drypoint engravings are invented by the Germans. (Drypoint lines are simply scratched into a plate with a sharp point.)”

[http://inventors.about.com/od/pstartinventions/a/printing\\_3.htm](http://inventors.about.com/od/pstartinventions/a/printing_3.htm)

### 1472

“The first maps known to have been printed from copper plates were two Italian editions of the geographer Ptolemy.”

[http://www.copper.org/education/history/60centuries/industrial\\_age/coppereng.html](http://www.copper.org/education/history/60centuries/industrial_age/coppereng.html)

## MID 15TH CENTURY

“The preference of metal and intaglio processes in general arose in the mid fifteenth century (Gascoigne 5c). Gascoigne suggests that the reason for the rise was artistic. As designs became more complex, artists tired of constantly carving away the white areas of the print. Metal engravings are black line, meaning the line one carves is the line that will be black in the printed page. In this respect, black line engraving, which is all intaglio engraving, is much closer to the process of drawing. In relief engraving, the artist/engraver has to think in reverse of the drawing process. Gascoigne’s position is intriguing. Though I am inclined to think engravers were not so lazy as he suggests. All engraving processes are highly labor intensive whether black or white line. The decline of wood engravings may have been more of a decline in illustration at this time, and a changing aesthetic sense in the market. Before the big workshops and illustration boom one printer noted at the end of the eighteenth century that “illustration was so seldom used that the preparation of even a small woodcut was of much moment to all concerned. ...the printer, designer, and engraver talked over the matter with as much deliberation as if about to produce a costly national monument” (De Mare 42). With illustration a rarity, intaglio printing, with all of its practical problems, was preferred because it could yield more detail than wood cuts. Those who wanted illustration could afford to use a more difficult printing method, but that was about to change.”

<https://pacer.ischool.utexas.edu/html/2081/1391/1-streus-02-wood-engraving.html>

## 1480

“Marcantonio Raimondi (ca. 1480–before 1534) is born near Bologna. His successful career as an engraver includes a close partnership with the painter Raphael, whose works Raimondi reproduces. He also copies many of the graphic works of the great German master Albrecht Dürer, and after Raphael’s death in 1520, the works of his follower, Giulio Romano.”

<http://www.metmuseum.org/toah/ht/?period=08&ion=eustn#/Key-Events>

## 1494

“Painter, printmaker, and theoretician Albrecht Dürer (1471–1528) leaves his native Nuremberg for the first of two journeys to Italy, where he admires works of classical antiquity as well as that of contemporary masters such as Andrea Mantegna and Giovanni Bellini. Dürer’s sensitivity to Italianate form, his attention to classical proportion and perspective, and his prolific output as both a painter and graphic artist make him the most influential German artist of his time. An intimate of humanist scholars and court painter to emperors Maximilian I and Charles V, Dürer plays a vital role in the dissemination of Italian Renaissance ideas in central Europe, and advances the notion of the artist as creator rather than mere artisan.”

<http://www.metmuseum.org/toah/ht/?period=08&ion=euwc#/Key-Events>

## SIXTEENTH CENTURY

“Altdorfer’s skill as a graphic artist entitles him to a place among the so-called Little Masters, a group of 16th-century German engravers noted for their expert execution of designs on a small scale. His prints include an outstanding series of 9 etched landscapes and a set of 40 engravings collectively called *The Fall and Redemption of Man*.”

<http://www.ibiblio.org/wm/paint/auth/altdorfer/>

## CA. 1510

“Engraver Marcantonio Raimondi (ca. 1480–before 1534) is active in Rome, where for the next decade he reproduces the works of Raphael. The close collaboration of the two masters results in some of the finest prints of the period, many of which promote a revival of mythological subject matter derived from the study of ancient art and literature.”

<http://www.metmuseum.org/toah/ht/?period=08&ion=eusts#/Key-Events>

## 1500S-1800S

“The overwhelming majority of maps produced between the mid-sixteenth and mid-nineteenth centuries are engravings, normally on copper [plates].”

<http://www.maphistory.info/understanding.html>

## CA. 1543

“The first school of painting is established at the Convento Grande de San Francisco in Mexico City by the friar Pedro de Gante (1486–1572). The friars, many of whom are trained artists, use engravings, woodcuts, and other images brought from Spain, to teach painting to the Indians.”

<http://www.metmuseum.org/toah/ht/?period=08&ion=canm#/Key-Events>

## SEVENTEENTH CENTURY

“The maps in the ‘Maps, Atlases, Charts, and Globes from the Lawrence H. Slaughter Collection at The New York Public Library’ exhibit (from the late 1990s) were printed by copper engraving in the 17th and 18th century.”

<http://legacy.www.nypl.org/research/chss/epo/mapexhib/print.html>

### 1606

“Antonio Tempesta (1555–1630), an artist of Florentine birth, creates 150 etched [Intaglio] illustrations for the *Metamorphoses* of Ovid. The series is one of several that Tempesta produces between the last decade of the sixteenth century and the end of his life. His oeuvre, including over a thousand prints, is characterized by the strong influence of Netherlandish masters encountered during the artist’s stay in Rome.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=eustc#/Key-Events>

### 1611

“Jusepe de Ribera (1591–1652), a painter and printmaker of Valencian birth, is active in Italy, where he remains for the entirety of his career. He is greatly influenced by Caravaggio and his Northern followers in Rome, and several years later settles in Naples, where his patrons include the ruling Spanish viceroys. Though Ribera’s style reflects the artistic events of his adopted home, the artist remains aware of his Spanish origins, often signing his works with his place of birth, as in a fine late work, *The Holy Family with Saints Anne and Catherine of Alexandria* (34.73).”

<http://www.metmuseum.org/toah/ht/?period=09&ion=eusi#/Key-Events>

### 1620

“British nobleman Thomas Howard, second earl of Arundel, discovers Anthony van Dyck (1599–1641), a precociously gifted young painter, at work in the studio of Peter Paul Rubens in Antwerp, and shortly thereafter brings him to London. Van Dyck’s stay, though brief, wins him great acclaim among the English nobility. The artist then travels to Italy and France before returning in 1627 to Antwerp, where he works until late 1631. He settles permanently in England in the following year, with a short return to Flanders in 1634–35. Religious works—such as the early altarpiece *Saint Augustine in Ecstasy* (1628) for the Church of Saint Augustine in Antwerp—are well represented in van Dyck’s oeuvre; however, it is as a portraitist of consummate skill, sensitivity, and unrivaled refinement that he is chiefly famed. Also a gifted etcher, he compiles a series of prints, called the *Iconography*, depicting his most illustrious contemporaries.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=eowl#/Key-Events>

### 1627

“Florentine etcher Stefano della Bella (1610–1664) dedicates an early print, the *Banquet of the Piacevoli*, to Prince Giovanni Carlo de’ Medici. This wins the artist a stipend with which he travels to Rome in 1633, remaining there (with occasional visits to Florence) for six years. Della Bella’s many drawings of this period illustrate his lively and naturalistic approach to a wide range of subjects:

public events and festivities, urban views and landscapes, architecture and ancient ruins. He resides in Paris from 1639 to 1650, returning to Florence in the 1650s to work once again at the Medici court. In their inventiveness and freedom of expression, his prints—over a thousand of which are known—and countless drawings influence Italian as well as French artists.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=eustc#/Key-Events>

### 1631

“Rembrandt van Rijn (1606–1669) leaves his native Leiden and settles, for the remainder of his life, in Amsterdam. Already prolific as a painter, draftsman, and etcher of many subjects, Rembrandt secures his fame in Amsterdam with the dramatic appeal of his portraits and tronies, bust-length figural compositions—usually incorporating elaborate or exotic costume—drawn or painted from life but not intended as portraits. Rembrandt’s greatest aspiration—the depiction of historical scenes—bears abundant fruit in compositions that fuse his gift for narrative with a virtuosic sensitivity as a portraitist. Foremost among these are the group portraits of *The Anatomy Lesson of Dr. Tulp* (1632, Mauritshuis, The Hague) and the so-called *Night Watch* (1642, Rijksmuseum, Amsterdam), painted at the peak of the artist’s fame. From this point onward, Rembrandt’s works are increasingly pensive and painterly in their execution. The artist’s preoccupation with life drawing may be seen in the many studies and self-portraits he executes throughout his career. In addition to portraits and histories, Rembrandt produces genre scenes and landscapes; his rounded mastery of several media, combined with extraordinary descriptive ability, make him the greatest Dutch artist of his century, a title acknowledged in his own lifetime in the Low Countries and beyond.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=euwf#/Key-Events>

### 1633

“Graphic artist and native of Nancy, Jacques Callot (1592–1635) produces *Great Miseries of War*, two print series depicting the carnage and suffering he witnesses during the Thirty Years’ War. Of less emotional intensity but lacking none of the immediacy of this series are works he produces between 1612 and 1621 for the Medici in Florence. Callot’s directness and descriptive abilities over a wide range of subject matter—from witty depictions of court festivals and scenes from the Italian *commedia dell’arte* to frank and often moralizing portrayals of human brutality—influence many Northern artists, including La Tour, Watteau, and Rembrandt.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=euwf#/Key-Events>

### 1693

“Nationalism and scientific enterprise fuel new artistic undertakings in Sweden. Erik Dahlberg compiles and publishes a volume of copperplate engravings depicting old buildings and other national antiquities. Also published around this time is an album devoted to the plants of Sweden, issued by Olof Rudbeck and poetically titled *Campus Elysii* (i.e., the Elysian Fields). Rudbeck is active in the great university city of Uppsala, where he designs a famous anatomy theater

crowned with a distinctive cupola in addition to bridges and houses.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=eue#/Key-Events>

### 1698-LATE 1700S

“As the text printing industry progressed, so too did music printing. The next major step was the use of moveable type. Of course we know that the completion of the Gutenberg Bible in 1455 using moveable type (it took three years to complete printing of 200 copies!) marked the turning point in making printing of text a commercially viable process. The use of moveable type for printing music however yielded less that satisfactory results in the early years and at least in the US, freehand music engraving (see below) was favored from around 1698 till the late 1700’s. European printers on the other hand, spent significant time and energy in the refinement of music typesetting such that by the late 1700’s American printers were able to import excellent font sets from the Caslon foundry in London.”

<http://parlorsongs.com/insearch/printing/printing.php>

## EIGHTEENTH CENTURY

“The Copperplate-engraved trade cards were in full swing. Used from bankers to chimney-sweeps. This was in response to realizing that businesses old signs are old and antiquated compared to the new engraved trading card.”

Jury, David. *Graphic Design before Graphic Designers: The Printer as Designer and Craftsman*. London: Thames & Hudson, 2012. Print.

### 1702

“Multi-colored engraving invented by German Jakob Le Blon.”

[http://inventors.about.com/od/pstartinventions/a/printing\\_3.htm](http://inventors.about.com/od/pstartinventions/a/printing_3.htm)

### 1721

“William Hogarth (1697-1764) publishes the South Sea Scheme, a satirical engraving treating a contemporary financial scandal. It is the first of many moralizing subjects that mark the career of this pivotal figure in the founding of the English school. In addition to his merits as a painter, he asserts and encourages throughout his career the independence of artists from the confines of patronage by publishing engravings after his own paintings. The best known of these is *A Rake’s Progress* (1735), an episodic series illustrating the demise of a corrupt young man.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=euwbn#/Key-Events>

### 1725

“Berhard Siegfried Albinus of Leyden in the Netherlands asked the Dutch artist and engraver Jan Wandelaar to assist him with a new painstakingly accurate anatomy text. Twenty-eight years were spent producing two books devoted to muscular and skeletal anatomy. The full length plates’ graceful poses and lush backgrounds owed much to the *Fabrica*, but the work was original, unprecedented in accuracy and beautifully engraved.”

<http://www.ami.org/medical-illustration/history-of-medical-illustration.html>

### 1735

“British artist William Hogarth creates the engravings of *A Rake’s Progress*.”

[www.wsu.edu/~khaas/resources/printmaking-primer.pdf](http://www.wsu.edu/~khaas/resources/printmaking-primer.pdf)

### 1740

“The young Giovanni Battista Piranesi (1720–1778) arrives in Rome. The wide scope of Piranesi’s education in his native Veneto includes engineering, theatrical set design, and engraving. During his formative years he also develops a keen interest in architecture, particularly that of classical antiquity. While in Rome, Piranesi produces the imaginative yet meticulously studied etchings of architectural monuments that place him among the greatest topographical engravers of all time.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=eusts#/Key-Events>

### 1761

“While resident in the spa town of Bath, locus of a wealthy clientele, Thomas Gainsborough (1727–1788) exhibits for the first time at the Society of Artists in London. He settles there in 1774, already honored with a founding membership in the Royal Academy and possessing a solid reputation for his ability to capture on canvas the great beauties of the age. While best known for portraiture of outstanding sophistication and assured fluidity of execution, Gainsborough is also a skilled landscapist and draftsman, and experiments with the graphic media of soft-ground etching and aquatint. Despite the fact that he never visits the Continent, he studies closely and takes inspiration from the French Rococo and Dutch and Flemish masters of the previous century, especially van Dyck. At his death in 1788, his contemporary and some-time rival Joshua Reynolds eulogizes him by stating, “If ever this nation should produce genius sufficient to acquire to us the honourable distinction of an English School, the name of Gainsborough will be transmitted to posterity, in the history of Art, among the very first of that rising name.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=euwbs#/Key-Events>

### 1762, JUNE

“London bans hanging signboards. This leads businesses to implement cards with the old signboards printed on the card. This was done by the copperplate engraver.”

Jury, David. *Graphic Design before Graphic Designers: The Printer as Designer and Craftsman*. London: Thames & Hudson, 2012. Print.

### 1772

“The influential engraver Giovanni Volpato (1740–1803) moves to Rome, where he opens a porcelain factory that specializes in the production of small statues after classical Roman models. In the same year, he publishes the ‘*Principj del disegno tratti dalle più eccellenti statue antiche*’. An important proponent of Neoclassicism, Volpato inspires a generation of Roman engravers.”

<http://www.metmuseum.org/toah/ht/?period=09&ion=eusts#/Key-Events>

## 1794

British engraver and poet William Blake prints ‘Songs of Innocence and Experience’.

[www.wsu.edu/~khaas/resources/printmaking-primer.pdf](http://www.wsu.edu/~khaas/resources/printmaking-primer.pdf)

## 1770-1820

Majority of commercial board games published were printed from engravings.

<http://historicgames.com/gamemakers/brdgamemaking.html>

# NINETEENTH CENTURY

## 1814

“The Bourbon monarchy is restored in Spain with the fall of Napoleon. Ferdinand VII (r. 1814–33), an absolutist ruler, revokes the Spanish constitution and launches a reign of terror. Brought before the reinstated Inquisition for his pledge of allegiance to Napoleon, painter Francisco de Goya y Lucientes (1746–1828) demonstrates his loyalty to the Bourbons in two paintings, *The Second of May 1808* and *The Third of May 1808* (both Museo del Prado, Madrid), both commemorating Spain’s uprising against the French regime. Goya continues his account of the atrocities of war in a series of eighty-five prints called *The Disasters of War* (1810–20; published posthumously).

<http://www.metmuseum.org/toah/ht/?period=10&ion=eus#/Key-Events>

## 1820

“Copper metal plates were primarily used up to this point. A copper plate could be used several hundred times to produce a print, by which time the image quality would have deteriorated due to wear of the soft metal. Reworking of the plate would then be necessary by the engraver to improve the quality. Copper, being a soft metal, was easier to engrave than steel allowing the artist more freedom in the effects that could be produced. Also, being soft, the engraved lines were not as fine or hard edged as possible with steel. These two effects tended to allow a richer, warmer feel to good copper engraved prints when compared to those printed from steel plates.”

<http://www.antiqueprints.com/Info/engraving.php>

## 1822

“Steel-plate engravings start being used to illustrate books. Soon after, steel engravings became the primary method of producing illustrations for annuals” because the steel allowed for finer detail and allowed for more impressions before losing quality.”

<http://bookhistory.ischool.utoronto.ca/annuals/technologicalAdvances.html>

## 1825-1830

“Audubon’s 1826 journal recounts his journey to England, Scotland, and France to arrange for the publication and sale of the *Double Elephant Folio Birds of America* (1827–38). The journal was first published, together with journals from 1827, 1828, and 1829, as part of the section titled “*The European Journals*” in *Audubon and His Journals* (Boston: Charles Scribner’s Sons, 1897). In editing Audubon



and His Journals, Audubon's granddaughter Maria Audubon freely altered his prose, changing punctuation, spelling, vocabulary, and sentence structure and sometimes omitting entire sentences or paragraphs. The text of the selections from the 1826 journal printed here has been prepared, following the guidelines described above, from a microfilm copy of Audubon's manuscript (the original of which is in private hands). In six instances, Audubon's entries for a given date have not been reproduced in this volume in their entirety; omitted material is indicated by a line of three asterisks. No manuscript version is known to be extant of the last journal selection included in this volume (at 192.1-27); it is reprinted here without alteration from *The 1826 Journal of John James Audubon*, edited by Alice Ford (Norman: University of Oklahoma Press, 1967)."

<http://www.loa.org/volume.jsp?RequestID=135&ion=notes>

### 1826

"Audubon prepares to leave for England; he sailed on April 25, arriving in Liverpool in July. Over the course of the next year, Audubon traveled throughout England and Scotland exhibiting his paintings and soliciting subscriptions for his *Birds of America*. Along the way he met William Lizars in Edinburgh, an engraver who admired his work and agreed to publish it. The first ten paintings for *Birds of America* were engraved and printed by Lizars. However, with Lizars' workers on strike and the quality of the engravings deteriorating, Audubon was forced to find another man to take over the publication. In 1827 he met Robert Havell Sr. in London. He and his son agreed to finish publishing Audubon's project. After much miscommunication between husband and wife caused by the slowness of overseas mail, Audubon decided to return to the United States with the dual purpose of appeasing his wife and collecting more specimens to make his book more exhaustive. This time he would travel down the East Coast into the Florida Keys, drawing waterfowl along the way. He returned to America in 1831, making his way down the coast through South Carolina. In Charleston he met the Reverend John Bachman, who would become a lifelong friend. After Audubon finished *Birds of America*, he and Bachman began a work cataloging the land mammals of North America."

[http://pabook.libraries.psu.edu/palitmap/bios/Audubon\\_\\_John\\_James.html](http://pabook.libraries.psu.edu/palitmap/bios/Audubon__John_James.html)

### 1842

"The American Art-Union is founded as an annual lottery open to anyone who purchases a membership; the prizes are the paintings purchased each year by the Union. All members receive an engraving each year of a popular painting. The Art-Union is enormously successful in supporting American artists and helps to develop a taste and market for American subject matter among the middle class. It is forced to cease after a court decision outlaws it as a lottery."

<http://www.metmuseum.org/toah/ht/?period=10&ion=na#/Key-Events>

### 1852

"James Merritt Ives, of New York, joined the firm as head bookkeeper; five years later, he became a full-partner. Ives persuaded Currier to adopt a new kind of print, the undramatic representation of the places and pleasures of life, but

he also improved the firm's printing process and modernized its marketing techniques. Together, Currier and Ives combined the art of illustration and the science of merchandizing to produce nearly 95 percent of all lithographs in circulation.”

<https://journals.ku.edu/index.php/amerstud/article/viewFile/2835/2794>

### **JULY 11, 1862**

“The Treasury Secretary is authorized to engrave and print notes at the Treasury Department. This legislation is viewed as the enabling act for work performed by what later becomes the Bureau of Engraving and Printing.”

<http://www.moneyfactory.gov/historytimeline.html>

### **FEBRUARY 25, 1863**

“The National Currency Bureau and the position of Comptroller of the Currency are created. The new bureau is responsible for the regulation of national banks and the issue of National Bank Notes and, nominally, includes the printing and engraving operations thus far handled by Clark.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JUNE 1863**

“Clark's operation begins work on the production of coupon bonds, popularly known as “five-twenties” (bonds that mature in 20 years, but could be called in by the Government for redemption in 5). Using plates engraved by private firms, the bonds are the first securities printed by the Government. Production of the bonds actually predates the production of currency at the Treasury.”

<http://www.moneyfactory.gov/historytimeline.html>

### **MARCH 1866**

“The Bureau of Engraving and Printing begins producing revenue stamps to be placed on boxes of imported cigars.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JULY 1869**

“The Bureau of Engraving and Printing begins engraving and printing the faces and seals of United States Notes, Series 1869. Prior to this time, United States Notes were produced by private bank note companies and then sent to the BEP for sealing, trimming, and cutting.”

<http://www.moneyfactory.gov/historytimeline.html>

### **MAY 1873**

“The Bureau of Engraving and Printing participates for the first time in an international exposition in Vienna, Austria, exhibiting a framed display of engravings that earns the BEP its first of many subsequent awards for its workmanship.”

<http://www.moneyfactory.gov/historytimeline.html>

### **1874**

“American painter Mary Cassatt (1844–1926) settles in Paris. Her cosmopolitan upbringing and early travels allow her access to studies with such masters as

Jean-Léon Gérôme (1824–1904) and Thomas Couture (1815–1879), and she exhibits at the Salon for the first time in 1868. By the mid-1870s, her style becomes less Academic, and she exhibits with the Impressionists in 1880, 1881, and 1886. Cassatt later displays her refined draftsmanship and graphic technique in paintings and prints—particularly of maternal scenes—markedly inspired by the Japanese aesthetic. In her later years, she acts as advisor to several American friends in purchasing old master and nineteenth-century French avant-garde art; among them is Louisine Havemeyer (1855–1929), who bequeaths nearly 2,000 paintings and art objects from her collection to the Metropolitan Museum in 1929.”

<http://www.metmuseum.org/toah/ht/?period=10&ion=euwf#/Key-Events>

### **JUNE 20, 1874**

“For the first time, Congress allocates money specifically to a “Bureau of Engraving and Printing” for fiscal year 1875.”

<http://www.moneyfactory.gov/historytimeline.html>

### **AUGUST 15, 1876**

“Congress passes an appropriation bill that directs the Internal Revenue Service to procure stamps engraved and printed at the Bureau of Engraving and Printing, provided costs do not exceed that of private firms. As a result, the BEP begins producing almost all revenue stamps in fiscal year 1878.”

<http://www.moneyfactory.gov/historytimeline.html>

### **MARCH 3, 1877**

“Congress mandates that the engraving and printing of notes, bonds, and other U.S. securities be performed at the Treasury Department provided the work can be done as cheaply, safely, and perfectly as by private firms. This legislation effectively establishes the Bureau of Engraving and Printing as the exclusive printer of Government currency and other security items.”

<http://www.moneyfactory.gov/historytimeline.html>

### **OCTOBER 1, 1877**

“The Bureau of Engraving and Printing takes over the entire production of United States Notes and National Bank Notes.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JANUARY 30, 1878**

“The Milligan steam-powered press is brought into the Bureau of Engraving and Printing for trials and eventual production. The procurement of additional automated presses and their expanded use leads to opposition by organized labor.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JANUARY 1880**

“The Bureau of Engraving and Printing enters into a contract for five additional Milligan presses. These automated flatbed presses, put into production later in November, are initially used to print the backs of United States Notes, backs of National Bank Notes, and revenue stamps for beer, cigars, and tobacco.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JULY 1, 1880**

“The first building constructed specifically for BEP operations is completed at the corner of 14th Street and B Street (Independence Avenue).”

<http://www.moneyfactory.gov/historytimeline.html>

### **JANUARY 1888**

“Electric lighting is installed in the Bureau of Engraving and Printing building, although gas illumination remains in operation until 1900.”

<http://www.moneyfactory.gov/historytimeline.html>

### **1888**

“Mexican illustrator José Guadalupe Posada (1852–1913) opens his first print shop in Mexico City to illustrate and publish newspapers and broadsheets.”

<http://www.metmuseum.org/toah/ht/?period=10&ion=ca#/Key-Events>

### **AUGUST 1891**

“The Bureau of Engraving and Printing begins producing some revenue stamps on automated surface printing presses to increase production speed. Relief printing of revenue stamps will last until 1899, when legislation restricts the use of automated presses.”

<http://www.moneyfactory.gov/historytimeline.html>

### **FEBRUARY 21, 1894**

“The Post Office Department formally awards the contract for postage stamp production to the Bureau of Engraving and Printing. Private printers are to begin turning over all postage stamp dies, rolls, and plates to the BEP.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JUNE 11, 1894**

“The printing of postage stamps by the Bureau of Engraving and Printing begins.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JULY 1, 1894**

“The agreement between the Postmaster General and the Treasury Secretary for the Bureau of Engraving and Printing to produce all postage stamps officially goes into effect. The first BEP-printed stamp to be issued is the 6-cent President Garfield. The bulk of postage stamp production is accomplished on automated flatbed printing presses.”

<http://www.moneyfactory.gov/historytimeline.html>

### **JULY 1899**

“To meet the demand for war-related securities, the Bureau of Engraving and Printing operates three shifts through the summer months. A major reason for the increased hours is the congressional requirement for most securities to be printed on hand presses.”

<http://www.moneyfactory.gov/historytimeline.html>

# TWENTIETH CENTURY

## 1900

“José Guadalupe Posada (1852–1913), a Mexican printmaker, begins production of popular broadsides depicting images of social and political relevance, and continues the work up until the time of his death.”

<http://www.metmuseum.org/toah/ht/?period=11&ion=ca#/Key-Events>

## APRIL 1900

“The first issue of postage stamps in small booklets is produced.”

<http://www.moneyfactory.gov/historytimeline.html>

## MARCH 2, 1903

“The Bureau of Engraving and Printing begins production of currency notes for the Philippines, a U.S. possession at the time. It is the first time the BEP produces currency other than U.S. paper money.”

<http://www.moneyfactory.gov/historytimeline.html>

## AUGUST 22, 1903

“The Bureau of Engraving and Printing ships the first order of Philippine currency. To avoid confusion with U.S. notes, the Philippine notes are smaller in size. The more cost-effective dimensions will be adopted in 1928 for all U.S. paper money.”

<http://www.moneyfactory.gov/historytimeline.html>

## FEBRUARY 1908

“The Bureau of Engraving and Printing begins manufacturing postage stamps in coil form. The first coils are made by pasting sheets together by hand prior to perforating and coiling.”

<http://www.moneyfactory.gov/historytimeline.html>

## JUNE 1, 1911

“Bureau of Engraving and Printing personnel design and construct a paper-wetting machine that uniformly dampens paper prior to printing. The new machine is an improvement over doing the work by hand.”

<http://www.moneyfactory.gov/historytimeline.html>

## JUNE 30, 1912

“A machine for laundering currency notes is designed and constructed by the Bureau of Engraving and Printing and put into operation at various Treasury facilities. Money washing will be discontinued in 1918 due to problems with paper content and feel.”

<http://www.moneyfactory.gov/historytimeline.html>

## SEPTEMBER 1912

“Offset printing is first used in the Bureau of Engraving and Printing for the production of checks, certificates, and other miscellaneous items.”

<http://www.moneyfactory.gov/historytimeline.html>

## **JUNE 30, 1914**

“Created by Bureau of Engraving and Printing mechanical designer Benjamin Stickney, the world’s first rotary web-fed intaglio press, the “Stickney press,” begins printing, gumming, and perforating postage stamps in one continuous operation using rolls of paper.”

<http://www.moneyfactory.gov/historytimeline.html>

## **NOVEMBER 1914**

“The Bureau of Engraving and Printing produces revenue stamps using offset presses. The change from intaglio is made to fulfill short-notice, increased stamp orders.”

<http://www.moneyfactory.gov/historytimeline.html>

## **APRIL 1, 1920**

“The Bureau of Engraving and Printing begins making intaglio plates using the electrodeposition method devised by Engraving Division Superintendent George U. Rose, Jr. The process is faster and cheaper than the traditional transfer method.”

<http://www.moneyfactory.gov/historytimeline.html>

## **1924**

“German artist Otto Dix (1891–1969) records the horrors of trench warfare in a book of etchings called *The War*. Like fellow veteran George Grosz, Dix devotes his art to stinging social commentary, focusing on the social negation of disabled ex-soldiers in paintings such as *War Cripples* (1920). When *The Trench* (1923), a depiction of decomposed corpses, is shown at the Wallraf-Richartz-Museum in Cologne, public outcry forces the museum’s director to resign.”

<http://www.metmuseum.org/toah/ht/?period=11&ion=euwcm#/Key-Events>

## **JANUARY 1925**

“The “High-etch” method for making offset plates is developed by Bureau of Engraving and Printing personnel. An important contribution to the graphic arts industry, this photo-mechanical process etches the background of a design rather than the design itself and increases the life of the plate.”

<http://www.moneyfactory.gov/historytimeline.html>

## **1927**

“Hayter founded Atelier 17 (Paris, 1927–40; New York, 1945–50; Paris, 1950–) as a workshop for experimental intaglio printmaking. Hundreds of artists who worked at Atelier 17 tried engraving but most found the medium too disciplined and indirect. Engravers there included John Buckland-Wright (1897–1954), Dorothy Dehner (b 1901), Gabor Peterdi (b 1915), Sue Fuller (b 1914), André Racz (b 1916), Ian Hugo (1900–1984) and Mauricio Lasansky. Hayter’s personal engraving style, based on improvisation and chance, influenced Jackson Pollock, who made seven engravings with Hayter in 1944–5. Hayter’s experimental approach and his bringing together intaglio printmaking and abstraction were major influences on European and American printmaking in the 1940s and 1950s.”

[http://www.moma.org/collection/details.php?theme\\_id=10958&ion\\_id=To26324](http://www.moma.org/collection/details.php?theme_id=10958&ion_id=To26324)

## 1957

“Tatyana Grosman (1904–1982) establishes Universal Limited Art Editions (ULAE), a printmaking workshop, in West Islip, New York. ULAE sets the standards for a postwar printmaking renaissance in the United States.”

<http://www.metmuseum.org/toah/ht/?period=11&ion=na#/Key-Events>

## JULY 1957

“The Bureau of Engraving and Printing begins producing currency on high-speed rotary presses that print notes via the dry intaglio process. Paper distortion caused by wetting is now completely eliminated and sheet sizes increase from 18 to 32 subjects. The first notes printed by this process are Silver Certificates, Series 1957. Issued in October, these notes will also be the first to bear the wording ‘In God We Trust.’”

<http://www.moneyfactory.gov/historytimeline.html>

## 1965

“Crown Point began in 1962 as a print workshop, but started publishing prints in 1965 with etching portfolios by Richard Diebenkorn and Wayne Thiebaud. It functioned as both workshop and publisher until 1971 when Brown formed an alliance with the New York publisher, Parasol Press. In that year Crown Point Press moved from Brown’s Berkeley basement to a loft space in downtown Oakland, and --through Parasol Press-- began working with New York artists Sol LeWitt, Brice Marden, and others who would later be seen as key members of the Minimal art movement.”

<http://www.crownpoint.com/page/history>

## 1964

“Sculptor, lithographer, etcher, and painter Giacomo Manzù (1908–1991) completes portals (Porta della Morte) with relief sculpture for Saint Peter’s Basilica at the Vatican in Rome. The sculptural program includes ten episodes explaining the Christian concept of death.

<http://www.metmuseum.org/toah/ht/?period=11&ion=eust#/Key-Events>

## C.1970

“Intaglio printmaking branched in two distinct directions c. 1970: artists who made their own prints, and those who worked collaboratively. Printmakers who made their own prints became associated with ‘academic’ printmaking. Most contemporary engraving falls in this category. Publisher-financed collaborative printmaking, involving well-known painters working with master printers, favoured complicated, innovative and expensive processes but produced little in the way of engraving. Since engraving is image-oriented rather than process-oriented, solitary, technically demanding and time-consuming it has no need of a collaborative situation. One artist who worked collaboratively, Frank Stella, updated Hayter’s approach by combining engraving with computer-generated imagery, relief, aquatint and etching in enormous, multiplate prints produced at Tyler Graphics in the 1980s.”

[http://www.moma.org/collection/details.php?theme\\_id=10958&ion\\_id=To26324](http://www.moma.org/collection/details.php?theme_id=10958&ion_id=To26324)

## **JANUARY 1977**

“Water-wipable inks are formulated for web- and sheet-fed intaglio presses. The new inks, first used for postage stamp production, eliminate the need for environmentally hazardous solvents and reduce the quantity of wiping paper used to remove excess ink from printing plates.”

<http://www.moneyfactory.gov/historytimeline.html>

## **1981**

“Pyramid Atlantic art center is established. They currently offer lectures on intaglio printmaking.”

[http://www.pyramidatlanticartcenter.org/art\\_center/mission\\_and\\_history.html](http://www.pyramidatlanticartcenter.org/art_center/mission_and_history.html)

## **1983**

“Minnesota Center For Book Arts is established. They currently offer lectures on intaglio printmaking.”

## **SEPTEMBER 1991**

“A web press is delivered to the Bureau of Engraving and Printing to increase currency production. The new press prints currency from a roll of paper, versus individual sheets, and prints both sides of the notes in a single pass. The first notes produced on this press will be issued in July 1992.”

<http://www.moneyfactory.gov/historytimeline.html>

## **LATE 20TH CENTURY**

“In the late 20th century many American printmakers were using engraving in combination with other intaglio techniques, including Peter Milton (b 1930), who combined elegant burin work with photosensitive ground, aquatint and lift-ground etching in his black-and-white prints. Pure engraving at the end of the 20th century had moved beyond the earlier formalist focus on line per se to focus on figurative imagery with a renewed interest in rich tone.”

[http://www.moma.org/collection/details.php?theme\\_id=10958&ion\\_id=To26324](http://www.moma.org/collection/details.php?theme_id=10958&ion_id=To26324)

# **ENGRAVING TODAY**

## **JUNE 10, 2005**

“The Bureau of Engraving and Printing produces its final run of postage stamps, printing the 37-cent Flag on the Andreotti gravure press.”

<http://www.moneyfactory.gov/historytimeline.html>

## **DECEMBER 3, 2005**

“‘Super Orloff’ presses, capable of producing up to 50-subject currency sheets, are installed.”

<http://www.moneyfactory.gov/historytimeline.html>

## **JULY 2008**

“The Bureau of Engraving and Printing installs its first laser pantograph machine for the production of intaglio plates.”

<http://www.moneyfactory.gov/historytimeline.html>



**SEPTEMBER 7, 2010**

“The first Large Examining Printing Equipment (LEPE) line is installed to process 50-subject sheets of currency.”

<http://www.moneyfactory.gov/historytimeline.html>

**SPRING, 2013**

**DESIGN TO TOUCH IS RELEASED!**