Go to first half of book

Card, tabletop, and very small presses

In the 1830s, several American presses already were made specifically for card printing. They were followed by other specialist printing devices that were intended to bypass the conventional printer and appeal directly to businessmen: for printing and numbering tickets, dating documents, and marking crates, for example. By the 1870s presses were made not only for shopkeepers, but for amateur printers and for children. Most amateur presses cost under $50—some as little as 50 cents—and produced mediocre printing. The emphasis was on simplicity and portability. Small though they were, most of the presses at first took regular printer's type because nothing else was available. By about 1880, a special brand of short type was supplied with some of the toy presses.

"Rail presses" (a modern term) were, in their time, the simplest of all: tiny cast-iron presses capable of printing no more than a few short lines on a card. They were often sold in one or two dollar "outfits" consisting of the press, an inking roller, tweezers, ink cans, and boxes of type—all in miniature. Rail presses were produced until early in the twentieth century when they were superseded by even lighter presses made of tin-plated sheet metal, often brightly decorated. These new presses were made to print with the rubber type included in the outfits, and were not strong enough for printers' lead type.

Presses are listed alphabetically, by common name.

Ace press

1991.800

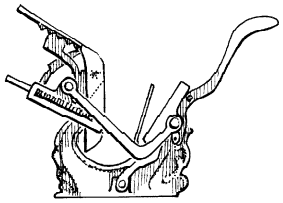
Children's tin-plate rotary press for rubber type, made by the Superior Marking Equipment Company, Chicago, mid-20th century. Height 6, width 10-1/2, length 16.

❖ The Superior Marking Equipment Company, or SMECO, has made a series of lightweight children's presses as by-products to its line in office stamps and markers. The Cub press (below) is a smaller edition of the Ace.

Given by R. Stanley Nelson, 1991

Baltimorean No. 10

1992.0608.01



Self-inking lever press made by J. F. W. Dorman, Baltimore, about 1880. Stenciled on platen back, “Baltimorean No. 10.” Single inking roller (missing). Black with painted gold decoration. Height 9, width 7, length 13; chase 2-1/2x4.

❖ J. F. W. Dorman (see above, p. 30) produced a very popular range of hand lever presses. They were copied closely by several other manufacturers, notably Baumgarten of Baltimore and Sigwalt of Chicago. Dorman's Baltimorean and Baumgarten's Baltimore No. 10 presses are very similar, with small differences in the casting and paint.

Given by Alan Darby, 1992

Baltimore No. 10

1992.0608.02

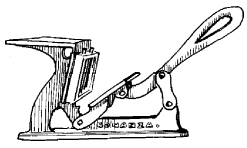
Self-inking lever press with original box, made by Baumgarten, Baltimore, after 1890. Cast in platen back, “BALTIMORE.” Roller missing. Height 9, width 7, length 13; chase 2-1/2x4.

❖ Baumgarten & Co. produced a line of presses exactly parallel to Dorman’s, but used the name Baltimore instead of Baltimorean, and made minor changes in the castings.

Given by Alan Darby, 1992

Bonanza

23864.3



Rail press, maker unknown, 1880-1900. Marked “Bonanza”’ in casting. On a Museum-made base. Height 7, width 4, length 11-1/2; chase 2x3-1/2

❖ Rail presses were simple cast-iron toys, sold through novelty dealers for about one dollar. They took full-size or, later, half-length printer’s type. Rail presses were produced in large numbers and variety between about 1880 and 1900, when they began to give way to presses made for rubber type. The rail-press makers are usually unknown.

Given by John C. and James C. Draper, 1973

Bonanza, advertisement

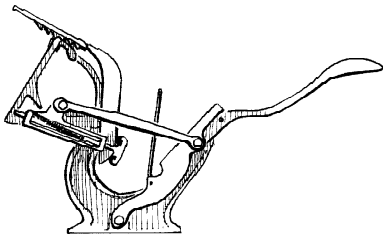
1992.367.4

Advertisement for Bonanza rail presses, published by the Aetna Card Company

Collected 1990

Caxton

1992.531



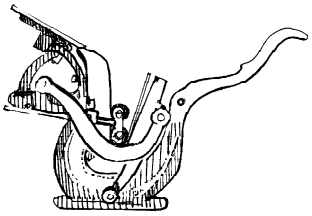
Two-roller self-inking lever press made by Curtis & Mitchell, Boston, about 1876. Old green paint; marked "Caxton Press" in casting behind platen and "C. & M." on body casting; stamped "109" on platen edge. Length 23, height 14-1/2, width 9-1/2; 4x6 chase.

❖ Edward Curtis and Edward Mitchell were Boston printers, onetime typefounders, and suppliers of printers' goods. From 1875 they introduced a range of presses, mostly aimed at the amateur market, and continued production through the 1880s.

Given by William H. Colver, Jr., 1992

Chicago

1992.16



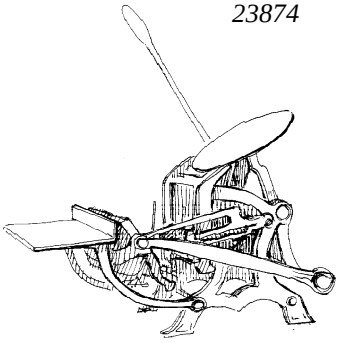
Lever press made by Sigwalt, Chicago, about 1910. Length 15, height 9-1/2, width 6-1/2; chase 3-3/4x2-1/2.

❖ John Sigwalt (1836-1924) started his working life in the sewing machine business, then became a dealer in ticket stamps and seals. In 1899 he began producing small printing presses, copies of various popular models. His Chicago, a copy of Dorman's Baltimorean, was on the market by 1910.

Given by Elizabeth Harris, 1973

Columbian No. 3

23874



Self-inking lever press made by Curtis & Mitchell, Boston, after 1875. Feedboard and grippers replaced in Museum. Height 24, width 23, depth 35; chase 8x12.

❖ The Columbian, introduced in 1875, was the largest of Curtis & Mitchell's amateur presses. It was sold with a hand lever like this one, to be attached on either side, or—at the top of the line—a treadle and flywheel. The Columbian cost around $60.

Given by Mrs Hugo Thomsen, 1974

Comit press

19991

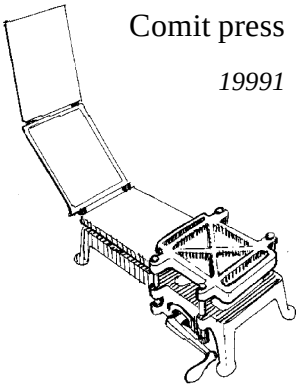


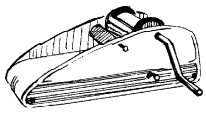
Table-top flatbed platen proofing press, late 19th century. Chase 6-1/4x9-1/4; height 8, width 10-3/4.

❖ The little Comit (or Comet) press was sold and perhaps made by Robert Menamin, a publisher and printing equipment dealer, as a quick proofing press for wood engravers. Its bed is pushed under the platen by hand, and the platen is lowered by a crank-operated eccentric shaft. This particular press is alleged to have been used by missionaries in China.

Found in the collections, 1948

Cub

94.383.01



Children's tin-plate rotary press for rubber type, made by Superior Marking Equipment Company, Chicago, mid-twentieth century. Height 3-1/2, width 6-1/2, length 8-1/2.

❖ This is a smaller edition of the Ace press, above.

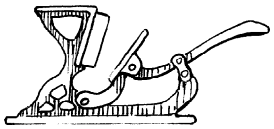
Given by Barbara Suit Janssen, 1992

Daisy

1988.823.2

Rail press with original wooden box and printing outfit, maker unknown, about 1885. Height 4, width 3 1/2, length 9; chase 1-1/2x2-3/4.

Given by Penny Speckter, 1988



❖ This press, the next press, the Bonanza (p.38), and the Favorite (p.42) were probably made by Ives, Blakeslee of New York (later Ives Blakeslee Williams). The company dealt in novelties and was the principal distributing—and perhaps manufacturing—company for rail presses at the end of the nineteenth century. Their line included the Boss, Favorite, Daisy, Leader, and other very similar rail presses.

Daisy

24232

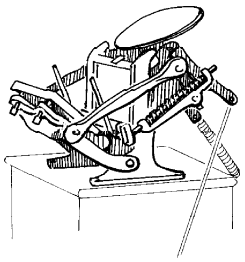
Rail press, maker unknown, about 1885. Museum-made base. Height 4, width 3-1/2, length 9; chase 1-1/2x2-3/4.

Given by William Miner, 1976

Dunkerly

1992.262

Self-inking bench-top foot-lever press, made by William Dunkerly, New York, 1873 or later. Incomplete (missing treadle and link, inking-roller connections). Height 13, width 12, length 15; chase 4x6-1/4.

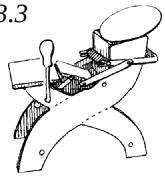


❖ Walter and William H. Dunkerly produced a line of amateur printing presses, starting with this “Dunkerly” in 1873. By 1880 the press was made in larger sizes, renamed “King,” and sold by wholesalers such as W. Y. Edwards. The Dunkerly brothers may also have originated the rail presses that became popular later in the century. These, too, were distributed through wholesalers.

Given by Mr. and Mrs. Stan Harris, 1992

Elm City

1988.823.3



Tin plate press in original cardboard box with accessories and instruction sheet, 20th century. Height 11-1/2, width 6-1/2, length 11-1/2; bed frame 2-1/4x3-3/4

Given by Penny Speckter, 1988

Favorite

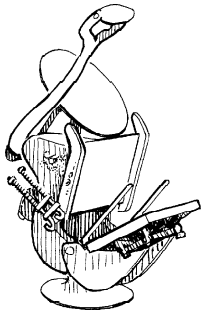
1988.823.1

Rail press sold by Ives Blakeslee, New York, with type and accessories in original box, which is marked "IB." About 1885. Height 6, width 4, length 11-1/2; 2x3-1/2 chase.

Given by Penny Speckter, 1988

Golding Official No. 3

1991.379



Self-inking lever press made by William Golding, Boston, 1873-1900. Traces of gold decal decoration. Height 29-1/2, width 16, depth 16; chase 5x7-1/2.

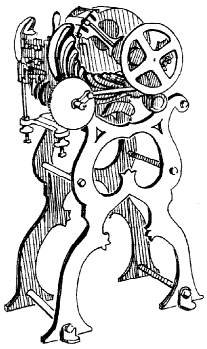
❖ The Official series ran from little hand-inking presses with 2x3 platens up to full-size jobbers. The Official No. 3 was one of the most popular models, and was copied over the years by other manufacturers.

See also Golding's Official No. 6, a full-size platen jobber, above, p. 32

Given by Dr. and Mrs. Howard K. Ammerman, 1991

Gordon Firefly

23054



Self-inking card press made by George P. Gordon, New York, after 1852. Original maker's label. Height 49, width 24, length 24; chase 3x4-1/2.

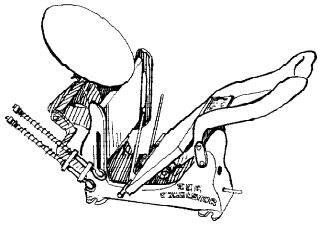
❖ Though Gordon is most famous for his platen jobbers, he made several presses specifically for card printing. The Firefly, patented in 1852, printed on a roll or a long strip of paper and then chopped the paper into card lengths. Two sets of inking rollers circulated continuously around the cylindrical ink surface. The type formed a segment of the cylinder, and was driven against the platen after each passage of the rollers, twice for every complete revolution.

The Firefly was said to print 8,000 or more impressions per hour. This specimen was modified before it came to the Museum, its original crank replaced with a belt wheel.

Given by Benjamin, Samuel, Harding, and Thomas Rees, 1969

Kelsey Excelsior 5x8

1980.23.1-32



Self-inking lever press made by Kelsey Press Company, Meriden, Connecticut, mid-twentieth century. Missing chase, rollers. Height 18, width 12, length 23; chase 5x8.

❖ William A. Kelsey started making inexpensive presses for amateurs in 1872, as a calculated challenge to the three existing amateur presses: the Novelty, Cottage, and Lowe. Kelsey's Excelsior became the longest-lasting press on the market, continuing in production from Meriden until 1990. Its basic mechanical form—a toggle lever—was settled by 1874, though the style of the body changed many times over the next 100 years. Another long-lasting feature of the early press was a chase with closed bottom in the form of a tray, to save the amateur from pied type.

Given by Curtis H. Barker, 1974

Kelsey Excelsior Mercury 3x5

1995.283

Self-inking lever press made by Kelsey Press Company, Meriden, Connecticut, about 1970. Height 14, width 9, length 17; chase 3x5.

❖ This press was acquired from the manufacturer around 1973 by the Museum Docents for public demonstration on a hand cart.

Transferred from the Museum Docents Program, 1995

Kelsey press pattern drawings

1990.670.15
1990.670.16

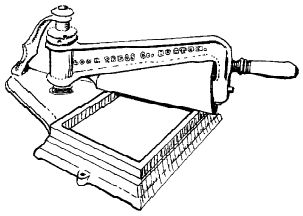
Pattern drawings for Kelsey presses on linen, and blueprints of drawings, 1896-1932

❖ In this collection is a total of 78 drawings, many brittle and damaged, showing parts of various presses made by the Kelsey Company. All but two were made between 1896 and 1900. The exceptions are dated 1932.

Given by the Kelsey Company, 1990

Lowe No. 2

1988.650.03 (23851)



Lowe press No. 2 with iron cone, made by the Lowe Press Co., Boston, about 1860. Height 9, width 14, length 27-1/2; chase (Museum-made) 10-3/4x6-3/4.

❖ The Lowe cone press, invented and patented by Samuel W. Lowe of Philadelphia in 1856, was advertised as a cheap press for amateurs and tradesmen. Within two years Lowe had sold the company to other parties who continued to manufacture the press from Boston and Philadelphia for at least ten more years. The press had a self-closing frisket (omitted in the drawing), and was made with bed sizes from 3x4 to 19x23. The smaller sizes sometimes had wooden, not iron, cones.

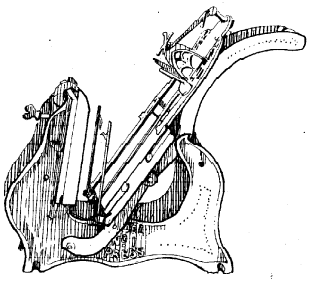
The press was originally lent to the Museum under the catalog number 23851.

Given by Joseph Hennage, 1988

Photographs 73.5648-33, 73.5648-29, 89.4892-9, 89.4893-19

Model No. 1

Accession no. 89797



Hand-inking lever press, made by William Clark and Joshua Daughaday, Philadelphia, 1876. With patent card feeder, but lacking an ink plate.

❖ The Model press was invented and patented in 1874 by William Clark, Philadelphia, who went into business for its production with Joshua Daughaday, a publisher. The press was intended for tradesmen and amateurs (including children), two groups outside the ordinary printing trade. It came in a range of sizes and models, from hand-inking card presses to full-sized job presses, and was produced well into the twentieth century.

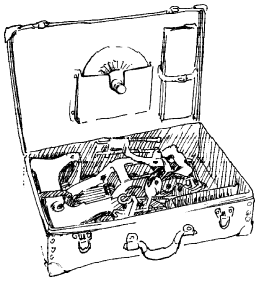
In his second patent submission of 1876 Clark used this particular press as the model to demonstrate his card feeder.

Transferred from the Department of the Interior, 1926

Photograph 69.544

Portable aluminum press

1980.730.1-13



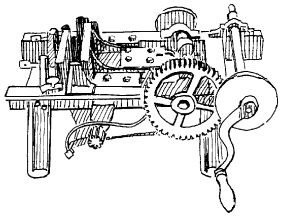
Aluminum press, disassembled and packed in a small suitcase. Maker unknown, made about 1940. Platen 5x8.

❖ This press was cast in moulds for the Kelsey Excelsior, but was not cast by the Kelsey Company itself. It was made for clandestine military use in World War II, and came to the Museum under the name "Spy press."

Given by Richard N. Weltz, 1979

Smith card press

9289



Iron tabletop card press, probably made by R. Hoe & Co., after 1848. Height 17, width 24, length 29; chase 5x6-1/2.

❖ William Smith patented this press for card and label printing in 1842. The patent rights were acquired by the Hoe Company in 1848. In original form the press was self-inking, and had an automatic card drop.

The early history of this specimen is unknown. It came to the Museum under the name "Star card press."

Purchased from John A. Lant, 1901

Photographs 93.12826, 93.12827, 93.12828

Galley proof presses and hand cylinder presses

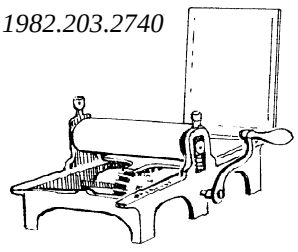
A proof is a trial print made in order to check the composition of type while it is in the galley, and before it is sent to press. Until the 1840s, an old press might be set aside as a proof press or—more often—a proof was made by placing a sheet of paper over the type and pressing the back of it with a wooden block or proof planer. Sometimes the type was damaged in the process. A great improvement over planing was the simple galley proof press, or roller proof press, introduced by the Hoe Company in 1844. It consisted of a heavy iron cylinder guided by rails to roll at type height across a bed of type. The press was devised by Stephen Tucker, a Hoe employee, who had watched a Boston printer make proofs by placing two type-high iron bars on each side of the inked type, covering the type with paper, and running a clean roller over it all.

The Hoe proof press was so successful that dozens of different models were made by the Hoe Company and their competitors. By the end of the century, various motorized and automatic forms were available.

The hand cylinder press had a different origin, but nearly the same form as the galley proofer. It was the simplified and hand-powered version of the flatbed cylinder machine, and was known in several models from the mid-nineteenth century.

Adams Cottage Press No. 4

1982.203.2740



Hand cylinder press made by the Adams Press Company, New York, about 1862. Marked in casting “Patented March 19 1861.” Bed 11-1/2x13

❖ The Adams Cottage Press was patented by Albert Adams in 1861, and manufactured by Joseph Watson operating as the Adams Press Company, New York. The press was advertised as a portable do-it-yourself press for amateurs and businessmen, but its portability soon appealed to the armies of the Civil War. This particular press arrived at the Museum with a traveling chest of

type with the painted words, “HEAD QUARTERS ARMY OF POTOMAC. / NO. 6 / PRINTING DEPARTMENT.” (Catalog no. 1982.203.2739).

Purchased in 1982

Photographs 89.4893-24, 89.4893-30, 89.4894-37, 89.4895-9, 89.4895-15

Challenge proof press

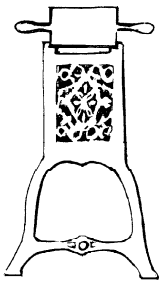
1995.214.64

Bench-top roller proof press (no stand), made about 1900. Width 10-1/2, length 30; cylinder diameter 9, bed 10x31. Cast letters “Challenge” on end of bed.

Found in the collections

Johnson proof press

23657



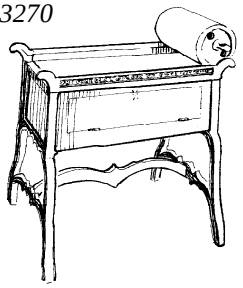
Roller proof press made about 1860, by the Johnson Type Foundry, Philadelphia. Height 41, width 21, length 38; bed width 9-1/4, cylinder diameter 7

❖ This slender proof press has a cupboard below the bed, and fine cast-iron filigree ends.

Given by Alan E. Anderson, 1972

Chandler & Price proof press

23270



Roller proof press made by Chandler & Price, Cleveland, Ohio, about 1900. Height 41, width 24, length 4, cylinder diameter 9.

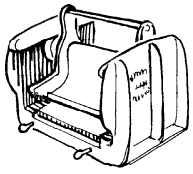
❖ This galley proof press has the name of the manufacturer cast into the sides of the iron bed, and a wooden cupboard beneath it.

Given by Alan Dietch, 1971

Photograph 74.8423

Vandercook rocking proof press

23750



Rocking proof press made by Robert O. Vandercook, 1908. Side casting: "VANDERCOOK PRESS PAT APLD FOR." Missing feed table. Height 13, width 13, length 18-1/2.

❖ Robert Vandercook's famous line of cylinder proof presses started in 1908 with this odd little rocking proofer. The cylinder—in reality, a segment of a cylinder—is geared on both sides to tracks on the bed. Wheels at the axis of the cylinder run under shelves on the frame to hold the cylinder down against the type.

Given by the Vandercook Division of ITW Inc., 1973

Printing machines

The nineteenth century saw the printing press develop from a simple wooden device into a fast power machine.

The point of mechanizing printing, always well understood, was to print faster for less. But it was not enough to make a faster printing press unless all the other elements of printing were upgraded to match it. For example, if a press printed so fast that its inking rollers melted, then the roller composition must be changed. And fast presses were more expensive, so the edition must be larger to reduce the unit cost of printing.

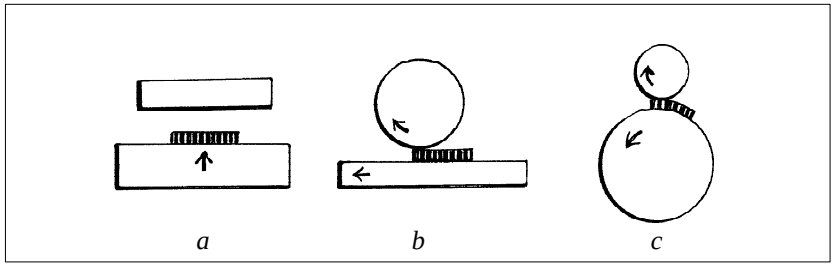
In London in 1814 a German engineer, Friedrich Koenig, unveiled at the offices of the *Times* the fastest printing machine that had been seen on earth. Koenig's flatbed cylinder machine was years ahead of the field, if only because no other publication had a circulation large enough to justify the cost.

The first attempt to mechanize printing in America came in 1824 when Daniel Treadwell of Boston added gears and power to a wood-framed platen press. Treadwell's machine inspired Isaac Adams and Otis Tufts, among other press builders. The bed-and-platen press, as this class of machine was called, was about four times as fast as a hand press. Its speed was limited by the fact that the motions of its flat bed and flat platen were reciprocal, rather than rotary: travelling back and forth, with a stop at each end. But its work was considered to be of high quality, and it kept a place in fine book printing throughout the nineteenth century.

American flatbed cylinder machines, following European models, also made their appearance in the 1820s and became the workhorses of newspaper and larger job offices. Type was still supported on a flat bed which had to move back and forth, but the impression cylinder could turn continuously, speeding up the paper feeding operation. Typically, flatbed cylinder presses delivered a thousand sheets per hour, printed on one side.

By the middle of the century, successful rotary or type revolving machines were on the market. On these presses the type itself was wrapped around a cylinder, which turned

against the impression cylinder. All motions were now rotary except for the feeding and delivery of sheets of paper. The largest such presses were nearly 40 feet long and 20 feet high, and achieved speeds of 20,000 sheets per hour. By the 1870s even greater speeds were attained by much smaller rotary presses that printed from a roll, or web, of paper instead of sheets, then perfected the paper (printed it on the other side), and finally cut it into sheets. Several web perfecting presses were exhibited in the Centennial Exposition of 1876. And by the end of the century, rotary web perfecting machines in city newspaper offices would print, cut, and fold 50,000 12-page papers an hour.



Impression systems on type printing machines
a. Bed-and-platen
b. Flatbed cylinder
c. Rotary

Adams bed-and-platen press, report

1987.79

Report No. 91, House of Representatives, 34th Congress 1st Session, 1856, on the petition of Isaac Adams for the extension of two patents. Five printed pages.

❖ This report concerns patents taken out by Isaac Adams in 1830 and 1836 for bed-and-platen power presses. Richard M. Hoe and Daniel Treadwell, among others, testified on Adams's behalf, and the patents were duly extended to 1864. Hoe and Adams later became rivals for the same share of the trade, and argued over patent rights. All was settled in 1859 when Isaac Adams sold his entire business to the Hoe Company. Hoe continued the production of Adams's bed-and-platen presses for several years.

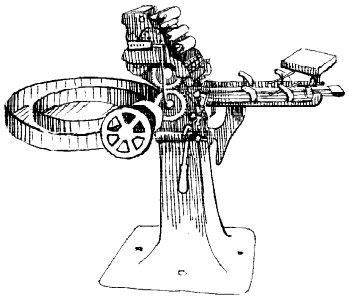
Purchased, 1985

Harris envelope press E1

24363

Fast rotary envelope press, model E1, made by the Harris Automatic Press Company, Niles, Ohio, 1896. Height 51, length 59, width 37.

❖ The Harris Automatic Press Company was set up in 1895 by two brothers. Charles Harris was the inventor, Alfred the business genius of the company. Their company was built on the brothers' invention of a fast automatic feeding mechanism devised for the local newspaper, the *Niles Independent.*



In 1896 a new press was built to match the feeder. The E1, the first successful fast automatic press in America, handled 250 sheets a minute. The Museum's specimen is an early model, designed for single-color printing of cards and envelopes. Later the feeding mechanism was improved to handle sheets for multicolor work, and the circular wooden tray that received the printed work was replaced with a straight-line rack. Curved stereotype plates were mounted on the type cylinder, or ordinary printer's type was locked onto it by means of special beveled furniture. The press would print up to 15,000 sheets per hour.

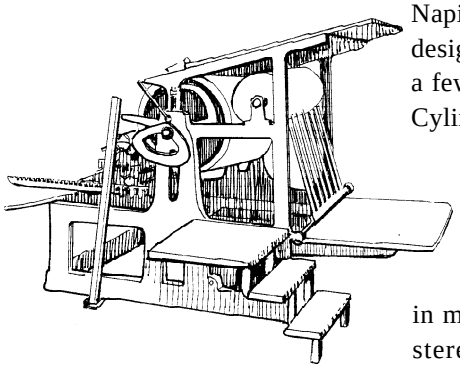
The Harris brothers also made rotary lithographic presses, using

stone cylinders. In 1906 they produced their most famous rotary press, the Harris offset press (see below, p. 58).

Given by the Harris Corporation, 1976

Hoe large cylinder press

22944



Large cylinder single-revolution flatbed press no. 82, made by R. Hoe & Co., New York, about 1879. Bed 19x25.

❖ The first flatbed cylinder presses seen in the United States were English Napiers, imported in the 1820s. Robert Hoe copied a Napier in 1829, and produced a large cylinder press of his own design in 1830. Originally his press was to be manpowered, but a few years later it was converted to steam. The Single Large Cylinder proved to be the Hoe Company's longest-lasting press.

The drum cylinder press was advertised for fine book and newspaper work. But cylinder presses had a reputation for breaking the brittle stereotype plates used in the publishing trade. So, until electrotyping was introduced in mid-century, publishers preferred to protect their valuable stereotypes with the slower, safer, Adams bed-and-platen machine, and the cylinder press was left with the job and newspaper work.

This model would print better than 1,000 impressions an hour. It cost around $1,500 in 1879, when it was bought new by the Washington printers Judd & Detweiler.

Given by Judd & Detweiler, 1968

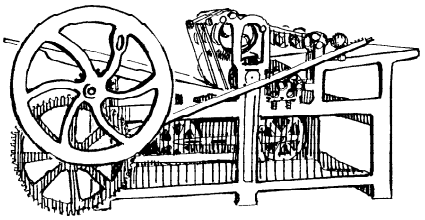
Photographs 73-6422 (detail), 74-8419, 74-8420, 74-8421

Hoe Railway press

22375

Flatbed stop-cylinder cylinder press, made by R. Hoe & Co., after 1862. Crank handle missing. Bed 31x46.

❖ The Railway press, introduced in 1862, was designed for newspapers of medium circulation. Its name derived from the fact



that the bed was carried back and forth on a four-wheel truck running on two strong rails, an arrangement based on presses built by the French engineer, Marinoni. The Railway was a "country press" made to be turned by hand, delivering up to 800 impressions per hour. It was built in Hoe's Boston plant, and cost $1,350 new. Printed newspaper sheets were normally carried around the press on cloth tapes and delivered by mechanical sheet flyers. For posters with large wooden type and no gutter space on the page for the tapes, the sheets were "flown" by press boys.

Given by Mr. and Mrs. Wayne Robinson, 1971

Photograph 74-8431

Kelly B Automatic press

24903

Flatbed cylinder jobbing press, made by the American Type Founders Company, Elizabeth, New Jersey. Height 52, length 63, width 55, on a base plate 72x37. Bed 19x22-1/2.

❖ The Kelly Automatic Job Press, Style B (affectionately known as the Kelly B) succeeded the Harris Automatic press as the most popular fast press among American job printers. It was invented by William B. Kelly, a salesman for the American Type Founders Company, and produced by the ATF from 1914. The press had excellent feed, ink distribution, and registration systems, and printed sheets 14x22 at a rate of 3,500 impressions per hour. It was not advertised publicly until 1923, by which time the press already had a loyal following and some 2,000 Kelly B's had been sold. In the 1920s it was joined by Kelly No.2, Kelly Automatic Jobber, and Kelly Style A, but none of them replaced the original Kelly B in popularity.

This press was used in the Artcraft Printing Company of Philadelphia.

Given by Renato Di Lauro, Jr., 1978

Lithographic presses

Lithography, invented in 1796 by the Bavarian Alois Senefelder, was a method of printing that demanded an entirely new kind of press. Prints were made from blocks of stone, and because the stone was both flat and rigid it required perfectly even pressure across its surface—something that could not be achieved with a platen press. But the stone was also brittle and easily broke under too much pressure, such as the narrow line of extreme pressure under a turning cylinder. One solution was to use a leather-covered scraper bar about two inches wide, which was drawn across the stone to give a moving band of pressure. Later the stone was replaced with a metal plate that could be printed at a conventional cylinder press.

At first Senefelder experimented with platen and cylinder presses. Then he tried rubbing the stone with a piece of polished wood—the precursor of the scraper press, which was to dominate the next fifty years. The earlier scraper presses—the pole presses—were large devices in which the scraper was on the end of a long pole, pivoted from the top. The scraper was pulled through an arc across the stone. By 1820 scraper presses were much smaller, and there were even portable models.

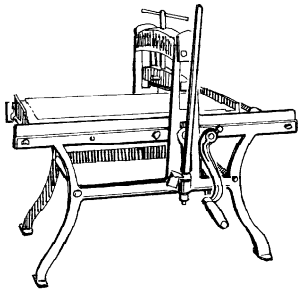
The lithographic hand press of the nineteenth century survived into the twentieth century, but in a new role. As commercial lithographic businesses converted to faster machines, they built libraries of images stored on stone. When an image was needed for production, a proof would be taken at a hand press and then offset, or transferred, to another stone or plate for printing. Hand presses became known as transfer presses. This was a modification of the transfer method of printing on tin that had been practiced since the 1860s: a series of color impressions was taken (in reverse order) on to a sheet of varnished paper, then the paper laid face down on tin plate and pressed. In transfer printing, the intermediate surface—paper—is destroyed in the course of the process.

Offset printing in the modern sense—printing on paper—was developed around 1903 by Ira Rubel. At the time, commercial lithographers used flatbed cylinder machines, the

cylinder being covered by an elastic tympan sheet. According to legend, printers often observed that an impression taken accidentally on the tympan sheet and transferred to the back of the next sheet of paper was clearer than a print taken direct to paper. Rubel built a machine on the observation. An almost identical process using an intermediate rubber-covered cylinder had been used by European tin printers since 1877, but there was apparently no connection between that and Rubel's invention.

Hand press, Fuchs & Lang

21024



Lithographic hand press model 2, no. 6828, made by Fuchs & Lang, Rutherford, New Jersey, about 1905. Bed 23x28.

❖ This press is typical of the hand presses known to many lithographers today as transfer presses, but originally used for direct printing. Presses of this pattern were known in the United States from the 1870s, or earlier. The leather-covered scraper in its adjustable support hangs over the stone, which is covered with an oiled tympan sheet of thin metal. Lowering the long lever raises the press bed to bring stone and scraper together. Then the crank is turned to draw the bed and stone under the pressing scraper.

Fuchs & Lang set up shop in 1870 as suppliers of bronzing powders, and were building machines by 1893.

Given by Piedmont Label Company, 1961

Photograph 73.330

Hand press, Robert Mayer

22669

Lithographic hand press, made by Robert Mayer, New York, early 20th century. Missing tympan. Height 48, length 60, width 50; bed 26x36.

❖ The manufacturer's label on this press reads "Parks Press built by Robert Mayer & Co New York."

Given by Kirby Lithographic Company, Inc., 1965

Photograph 74.8417

Hand press, Robert Mayer

23604

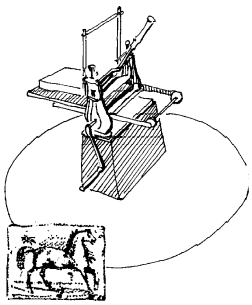
Lithographic hand press, made by Robert Mayer, New York, early 20th century. Recent overall grey paint. Height 48, length 60, width 42; bed 26x39

❖ This press is similar to no. 22669, above, and bears the same manufacturer's label.

Given by W. Bradley Edelblut, 1972

Hand press (miniature)

24170



Miniature lithographic hand press made by Benjamin J. Warner, about 1850, with a lithographic stone to scale, and a print from the stone. Press made of wood, steel, brass,and ivory, mounted on a wooden plinth on a circular wooden base. Height (without mounting) 5, width 3-3/4, length 4; stone 1-1/2x1-1/4.

❖ Benjamin Warner, the London watchmaker who made this press, also made two miniature steam engines that he exhibited at the 1853 Crystal Palace exposition in New York. Warner's delicate lithographic press is of a top-lever style known in England around 1840. The scraper was forced down by an eccentric wheel on the lower end of the lever. The sides of the model are moulded brass, the handles and wheels are of turned ivory, and the bed is black velvet. The scraper is suspended by rubber bands, not original and now dried out. The stone, which is too thick to fit under the scraper, carries the image of a prancing horse. The press has been enthroned by a later owner on the circular wooden base of a nineteenth century glass display dome, and the glass itself is now missing. The dome base is nailed onto a three-footed, veneered circular block.

The family of Mrs. Jones, the donor, descends from Benjamin Warner. In 1976 Mrs. Jones also gave Warner's two miniature steam engines to the Museum's Division of Mechanical and Civil Engineering.

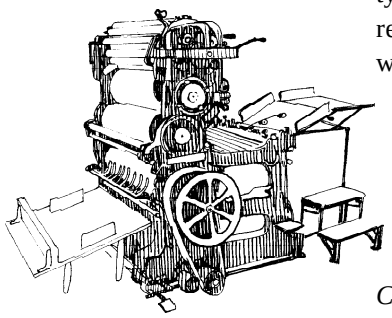
Given by Mrs. Ellen R. Jones, 1976

Offset press: Harris S4L

22080

Single color sheet-fed rotary offset press, series S4L no. 101, built by Charles and Alfred Harris, and sold to the Republic Bank Note Company, Pittsburgh, Pennsylvania, in July 1906. Cylinder 34 wide.

❖ The Harris Automatic Press Company was the maker of several successful fast automatic rotary presses, both letterpress and lithographic. Their first offset press, a development of their type press S4, was among several offset presses produced in quick response to Ira Rubel's press of 1903 (see below). Serial no. 101 was the first production model of the new line.



The Harris S4L cost $4,000, and printed about 3,000 22x30 sheets per hour. Harris presses were soon the leading offset presses in the United States.

Given by The Harris Intertype Corp., 1966

Citation "With a Chip on my Shoulder," an unpublished talk by H. A. Porter given to the Detroit Litho Club, 14 December 1950 (copy in the files of the Division of Graphic Arts)

Photographs 22080, 74.8422

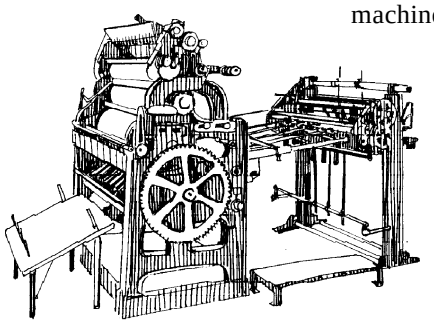
Offset press: Rubel

23002

Sheet-fed rotary offset press, built in 1903 by Ira Rubel, Nutley, New Jersey. Cylinder 36 wide.

❖ The Rubel offset press was the earliest of several rotary offset machines produced in the first decade of the twentieth century. It was invented in 1903 by Ira Washington Rubel, the owner of a small paper mill and lithographic shop in Nutley, New Jersey. No businessman himself, Rubel formed a partnership early in 1906 with a Chicago lithographer, Alex Sherwood, setting up the Sherbel Syndicate as a monopoly to distribute the press. Sherbel presses were built for the syndicate by the Potter Printing Press Company of Plainfield, New Jersey. The syndicate failed later that

year, and the press was redesigned and sold as the Potter offset press, becoming the chief rival to the Harris offset press. Eventually (1926) the Potter and Harris companies were consolidated. Rubel himself went to England to promote his machine in 1907 and died there in 1908, at the age of 48.



This model was operated in Rubel's plant in New York in 1904. In 1905 it was bought by the Union Lithographic Company of San Francisco for $5,500 and shipped to California. It waited out the San Francisco earthquake and fire on a wharf in Oakland, and was put to work in 1907. The maximum speed of the press was about 2,500 sheets per hour, and the sheet size was 28x34.

Given by H. S. Crocker Co., Inc., 1969

Citation. Western Printer & Lithographer, August 1952; "With a Chip on my Shoulder," an unpublished talk by H. A. Porter given to the Detroit Litho Club, 14 December 1950 (copy in the files of the Division of Graphic Arts).

Photographs 72.894, 72.895, 72.896 (all from original photos of press in shop); 22080, 74.9422

Offset press, Harris Seybold, miniature

20396-a

1/20 scale model of Harris-Seybold 4-color sheet-fed offset press, about 1950. Height 7-1/2, length 32-1/2, width 9-1/2

Given by Lithographers National Association, 1953

Photograph 16350

Offset press, ATF Chief, miniature

20396-b

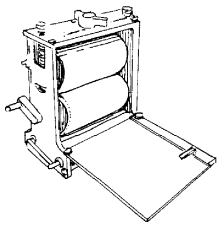
Scale model of 1-color offset press, about 1950. Height 4-5/8, length 5-3/4

Given by Lithographers National Association, 1953

Photograph 69.666

Offset press, portable

24879



Small aluminum press, dismantled and boxed, with accessories and instruction booklet. Made about 1940. Assembled press height 11, length 14, width 10-1/2; box 13 high, 12-1/2 wide and deep

❖ This little press was made for underground use in the Second World War; it came to the Museum under the name "X press." There is no maker's name on the press or its accessories, but the anonymous instruction booklet is printed on paper with the eagle watermark of the U.S. Government.

Given by Lt. Col. Charles T. R. Bohannan, 1978

Photographs 79.17945-11A, 79.17945-14A

Copperplate presses

Cylinder presses for printing engraved copper plates are recorded from the sixteenth century, and the form has not changed in principle to this day. Copper engraving is an intaglio process, which means that the image in incised into the plate and the printing ink held in the incised grooves. This demands a different system of printing from relief forms such as type. In the copperplate press, pressure is supplied between a rolling cylinder and a flat bed carrying the copper plate. The cylinder provides a line of great pressure travelling across the plate, sufficient to force paper down into the plate to reach ink lying in the engraved lines. Copperplate presses were mechanized during the nineteenth century. Later in the century photogravure was introduced—the photomechanical version of the engraving process—and then rotogravure, which is photogravure printed at high-speed rotary presses. On the rotary press the plate is wrapped around a second cylinder, instead of lying on the flat bed.

Intaglio printing is represented in this collection by hand presses. Some larger machines are represented in the patent model collection.

D-Cylinder etching press

1995.0214.003

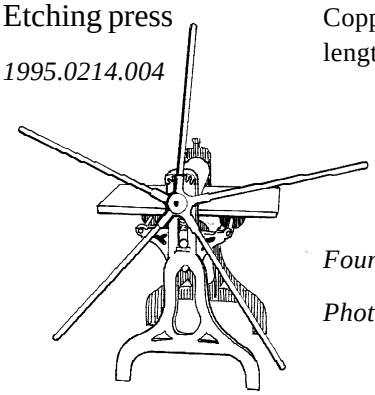
Copperplate press made by M. M. Kelton's Son,about 1900. Bed length 34, width 12; cylinder diameter 6.

❖ The short cutaway bed on this press is wired for heating. The press bears the Bureau of Printing and Engraving property tag number 538. The Kelton name is cast in the frame.

Transferred from the Bureau of Printing and Engraving, 1963

Etching press

1995.0214.004



Copperplate press, without maker's name, late 19th century. Bed length 40, width 18, cylinder diameter 7

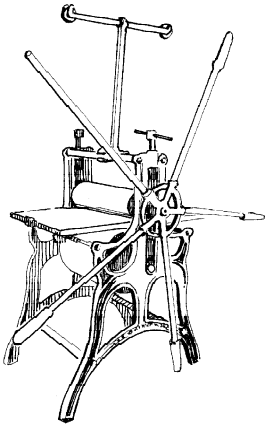
❖ This simple star-wheel press has handsome castellated ornamention on the frame-tops. The press was used for many years as a proofing press in the Division of Graphic Arts shop.

Found in the collections

Photograph 74.8430

Kelton press

22684



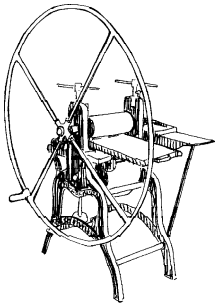
Copperplate press with pulleys and frame to lift blankets, about 1900. Marked in the casting "Kelton Machine Co. 76 South 8th St. Brooklyn N.Y." Bed 20x48; cylinder diameter 6, length 20

Given by Jacob Kainen, 1969

Photographs 88.17687-4, -9

Kelton D-cylinder

1984.698



D-cylinder copperplate press, with attached inking table and hanging counterweight for the bed return. Late 19th century. Bed (working part) 14x20-1/2, cylinder diameter 6.

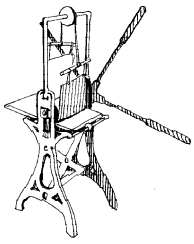
❖ This press is said to have come from Louis Prang's workshop.

Given by Mr. and Mrs. C. Charles Smith, 1984

Photographs 84.9594-8, 84.9594-12

Copperplate press, miniature

1990.0524.1



A miniature copperplate press with blankets and blanket-lifting pulleys, made of brass and mounted on a wooden base. Early 20th century. Height 9-1/2, width 4, length 8.

❖ Mr. Clifford Firmbach, an employee of the Bureau of Engraving, was given this little working press on his retirement. It was one of three similar models at the Bureau.

Given by Clifford Firmbach, 1990

Braille printers

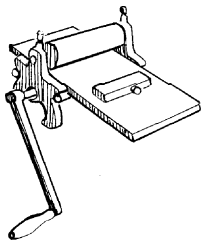
Blind people are said to have devised tactile writing systems for themselves since ancient times, using common materials like beads or knotted string. In 1786 the first books for the blind were embossed on paper at the Paris Institute for the Young Blind. After that, a variety of systems was proposed, usually by the sighted and invariably proving better for reading than for writing because they called for the use of a printing press—the embossing could not be done by hand. In the 1820s Louis Braille, a young blind student at the Institute, devised a dot system that could be written as easily as it could be printed. Braille's writing was produced with a hand-held point, which was very easy to push into paper. A related system was that of prick type, in which punches for the letters of the alphabet were made out of pin points stuck in the ends of pieces of wood.

Braille's system was adopted in France in 1854, and spread to other countries. It is now the major blind writing system around the world, but still not the only one. In its most portable form, a braille kit consists of a slate (a metal guide plate), and a stylus (a blunt metal needle in a wooden handle). There are also braille typewriters, and braille embossing presses of all sizes.

Since reading, writing, and printing systems for the blind cannot be separated in the same way that they are for the sighted, "printing" is here understood very broadly. Other items of printing for the blind in the Graphic Arts collection, including printed and embossed material, are listed in the separate *Checklist of Printing for the Blind*.

Braille printer

1985.476.1-5



Small flatbed cylinder press for braille printing, with four boxes of double-ended braille/roman type, late 19th century? Some type marked "Allain Guillaume & Cie." Metal label on one type box: “Imprimerie pour aveugles / B.S.G.D.G. / systeme Ernest Vaughan / Directeur des Quinze-Vingts / Hachette & Cie. Paris”. Press unmarked except “6131” in the casting on both sides, and “CID” stamped under bed. Iron cylinder 2-1/4 diameter, wooden bed 8-1/4x20. Overall press height 10, width 8-3/4, length 20.

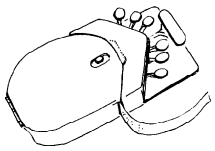
❖ The wooden type boxes with this press served the dual purpose of storage and chase. The lid on one side could be removed to expose the roman-letter end of the type, for composition. That lid was then replaced, the box flipped over, and the lid on the other side removed to expose the braille end for printing. Two wooden blocks fixed on the press bed held the type box firmly in place.

The donor was given this printing set in the 1940s by a religious organization. Parts of psalms are still set (in English) in the type boxes.

Given by Ralph R. Hellerich, 1985

Banks Pocket Brailler

19610



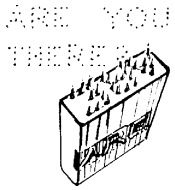
Pocket brailler invented by Alfred E. Banks, California, 1941. 7-1/2x4-1/2x1-1/4 high.

❖ This handy copper, brass, and steel brailler produces a single line of braille on a narrow strip of paper. It was the first of three models made by the inventor before production was taken up by the IBM Company.

Given by Dr. A. E. Banks, 1945

Prick type

83.481.1



Prick-type writing kit consisting of a wooden box, a printing guide in the box lid, 54 pieces of prick type, and two blank types.

❖ Prick type is forward reading on the block, producing a backward impression on paper to be read forwards from the other side of the sheet. Commonly, ordinary Roman letters were carved into the other end of each piece of type, so that the blind writer could identify the letter without touching the pin points. In this commercial set, the identification letters are on metal strips let into the sides of each piece. There are figures, punctuation, twelve logotypes for common combinations such as THE, TO, and ING, and blanks for word spacers. The alphabet is incomplete.

Purchased in 1983

Braille slates and styluses

13866-70,
81.509.569
81.509.600

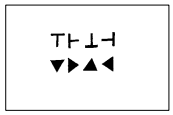
A group of braille writing slates consisting of a Perkins Model 24 interlining desk slate, about 1918; Perkins Model 1 four-line aluminum pocket braille slate; Perkins Model 2 six-line aluminum braille slate; Perkins Model 13 nickel slate on a Model 23 wooden board; grooved aluminum writing card and two grooved fiber writing cards; four braille styluses.

Given by the Perkins Institution for the Blind, 1925

Arithmetic board

13895

1 2 3 4
5 6 7 8



Wooden board with 60 pieces of double-ended mathematical type, made at the New York Institute for the Blind, Pelham, New York, about 1900

❖ This arithmetic writing system used five kinds of type, each with a different sign on the two ends. The holes on the board are square, giving each piece of type eight possible positions.

Given by Perkins Institution for the Blind, 1925

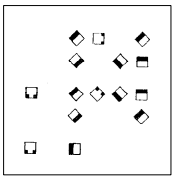
Arithmetic board and pamphlet

13896.0
13896.1

3/7
3/14

= 3/7 x 14/3

= 2



Taylor octagonal arithmetic board, with sample pieces of type and an accompanying pamphlet "How to write Arithmetic and Algebra by means of the Joint Type Method" (London, 1919). Invented by the Reverend W. Taylor and made by the National Institute for the Blind, London.

❖ This English arithmetic writing system used just two kinds of square type, each with different designs on the two ends. The holes in the metal board were made in the shape of eight pointed stars, to receive the type in sixteen different positions (eight for each end). Thus, thirty-two different signs were possible.

Given by Perkins Institution for the Blind, 1925

Swedish slate and stylus

16261

Slate for braille and pencil writing, with a stylus, made about 1880. Wood, brass, and steel; 10-3/4x3-1/2.

❖ This finely-made apparatus was used for many years by the donor. It consists of a wooden board on which are mounted two metal slates, side by side. The brass 1-line braille slate has an arrangement for shifting it down by a line without removing the paper. The larger steel slate is for pencil writing. It has a sliding guide, and two hinged flaps to uncover the upper or lower thirds of an italic letter-slot.

Given by Regina Anderson, 1930

Copying and duplicating devices, stamps, and rubber type

Copying presses and duplicating devices were tools for the letter-writer and the office. Their function was to make record copies of written documents, such as letters and bills, but they were also used to make multiples for distribution—of school tests, for example.

Thomas Jefferson worked with Robert Peale to make a writing instrument out of a pantograph with multiple connected pens, which he used to make duplicates of his correspondence. He also acquired a copying press made by the English engineer, James Watt. The copying presses that were common in offices later in the nineteenth century followed the Watt line. An original letter, freshly written but dry, was placed between slightly moist sheets of thin paper and pressed in a portable screw press. The result was that some of the writing ink was picked up on the moist paper. The writing was reversed on this copy and, like the original, would be slightly blotted, but could be read from the back of the sheet. This method was common in the middle of the nineteenth century and well into the twentieth.

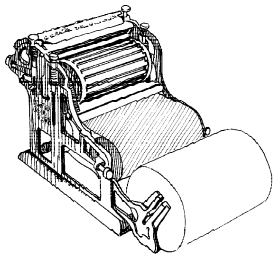
From the 1850s various other methods of producing multiples were devised. Some of them were based on the stencil principle, and they are known as the duplicating processes. They came into their own in filling the production gap between handwriting and printing. For example, a hundred copies of a church news sheet, or a local advertisement, would be too many to write by hand, too few to send to a printer.

Seals are ancient devices carrying the authority of signatures on legal documents, but in the nineteenth century they, too, became daily tools of the business office in the form of hand stamps. And after the introduction of caoutchouc, or rubber, in the middle of the century, rubber stamps made their appearance—the ancient seals re-made in modern material for modern uses. Rubber stamps were irresistible to children, and by the end of the century, special sets were being made as toys.

Other duplicating devices, including more mimeographs and multigraphs, are in the Museum's Mechanisms Collection, and several seal presses are in the Numismatics Collection.

Automatic Rotary Printer No. 6A

1983.841



Cast-iron rotary press for rubber type. Made by Cincinnati Time Recorder Co., early twentieth century. Marked in casting "Pat'd Oct. 11 1904." Height 8-1/2, width 8-1/2, length 16.

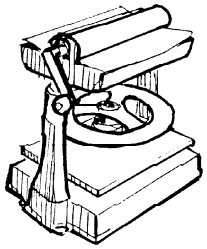
❖ The Automatic Rotary Printer took short rubber-stamp type, which was fitted in metal slots arranged around the press cylinder. The type was inked with stamp-pad ink, and printed on a roll of paper. The press was made with a dual purpose—office use, and children's play. With the young printers, at least, it was popular for half a century.

Given by Robert Vogel, 1983

Photograph 84-12077

Bailey copying press, with accessories

24911



Copying press with dampening apparatus; height 16-1/2, width (not including handle) 19-1/2, depth 12-1/2; platen 10-1/2x15.

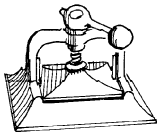
❖ Bailey's copying press has a built-in paper dampening trough and roller. A drawer in the base of the press holds sheets of copying paper made by Swayze & Bailey of Washington, D.C., and several rubber-coated "copying pads" to cushion the impression.

Given by Edward G. Schumacher, 1978

Photographs 79.17945-17A, 79.17945-20A

Copying press, miniature

224.282.68



Black iron screw-type copying press, 19th century. Height 3-1/2, length 4, width 2-1/2; platen 2-3/8x1-3/4. Handle and lower end of screw broken.

❖ Mrs. Roberts gave this press to the Museum's Division of Political History (costume section) in 1959, and it was transferred to the Division of Graphic Arts in 1980. Its earlier history is unknown.

Given by Mrs. Alfred Roberts, 1959

Copying press

1995.0214.001

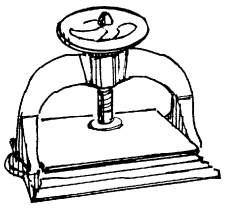
No. 5 copying press, made by the Illinois Iron and Bolt Company, Carpentersville, Illinois, about 1890. Height 14, width 19, depth 11; platen 10x15.

❖ This handsome red and black copying press is decorated with gold and green filigree decal, as well as the gold decal monogram "I I & B C" and figure 5. The Illinois Iron and Bolt Company won a prize for their presses at the Chicago Exposition in 1893.

Found in the collections

Copying press

1995.0214.005

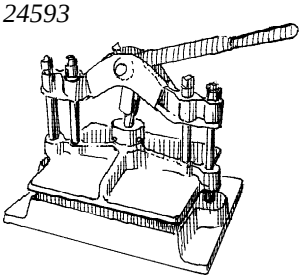


Cast-iron copying press, no manufacturer's name, made about 1900. Traces of gold decorative paint over black enamel. Height 14, width 12-1/2, length 18; platen 10x13.

Found in the collections

Copying press

24593



Cast-iron copying press, with a toggle lever (partly broken), 20th century. Height 12-1/2, width 12-1/2, depth 8-1/2; bed 8x9.

❖ Room 201 of the Dunham Elementary School was installed, with this press, in the exhibition "A Nation of Nations" in the National Museum of American History, 1976.

Given by Dunham Elementary School, Cleveland, Ohio, 1977

Mimeograph No. 3

21871

Edison Mimeograph No. 3, made by A. B. Dick Company, Chicago, about 1885. Height 5, width 11, length 13.

❖ The A. B. Dick Company was established in 1884 to exploit the stencil duplicating inventions of A. B. Dick and Thomas Edison. The process used a waxed paper, which was converted into a stencil by writing on it with a steel stylus. The little Edison No. 3 was one of the early models. It has a flat bed and a hand-inking roller, and could turn out about 300 impressions per hour.

Given by A. B. Dick Company, 1965

Mimeograph No. 16

21682

Edison Mimeograph No. 16, made by A. B. Dick Company, Chicago, about 1902. Height 5-1/2, width 13-3/4, length 20-1/2

Given by Mrs Byrd Trenham, 1963

Multigraph

23342

Gammeter Multigraph No. 4 with a separate bank of type, made by The American Multigraph Company, about 1908. Multigraph (on table) total height 47, width 29, depth 19. Type bank height 11-1/2, width 19, depth 10.

❖ The Multigraph was an office printing machine invented by H. C. Gammeter, a typewriter salesman, in 1902. The machine printed either from short type with a specially shaped body, which slid into slots on the printing drum, or from curved plates. The impression was made with printing ink or, for a better facsimile of typewriting, through a ribbon.

Given by Richard Stevans, 1971

Papyrograph

1988.823.4

Desk-drawer papyrograph with a package of copying paper in original wrapper, made by Eugenio de Zuccato, 1876-79. Papyrograph height 3, width 12, length 18

❖ The papyrograph was a stencil duplicating system devised and patented by Eugenio de Zuccato in Britain and the United States from 1874. Writing was done in caustic ink on a lacquered sheet of thin paper. The ink attacked the lacquer, creating a porous stencil. The stencil sheet was then used with a pad saturated with writing ink to produce multiple copies of "hand written" letters.

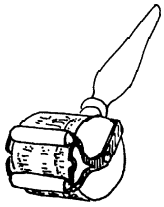
This papyrograph was built into a desk drawer-shelf, and bears a brass label with the patent date 4 January 1876. One of the letters duplicated can still be read on the blotter, and is dated "New York, March 20 1879."

Two models for Zuccato's patents for copying machines of 1879 are also in the collection (see the separate list of patent models).

Given by Penny Speckter, 1988

Printing wheel

1992.608.5



Printing wheel made by Sheplar & Co, Chicago, from a patent reissued in 1876; maker's label pasted on cylinder ends. Carries rubber plates advertising the Webster Cox dry goods store in Seaford, Delaware. Two fabric covered-inking rollers (third roller is missing). Length 13; cylinder diameter 4-1/2, length 6-1/4.

❖ Printing wheels were common tools of public advertising in the late nineteenth century, though they are largely forgotten now. They consisted of short cylinders with a handle and inking apparatus. Around the cylinder were letters, either individually or as a plate, and made of wood, metal, or some moulded material such as rubber. The printing wheel was used to put the merchant's mark on crates and packages, or, in larger sizes, on walls, fences and sidewalks. This wheel carries its advertising in the design of a footprint.

Given by Alan Darby, 1992

Office stamp

1979.5

Percussion stamp with seal, about 1900. Height 11 length 6-1/2, width 2-1/2.

❖ The seal reads "Walthall Printing Works, Richmond, Virginia," the name of the shop from which the seal was collected in 1979.

Given by John A. Bland, 1979

Rubber stamps

1992.226

Rubber stamp sets, 1880-1920; 24 items.

❖ This collection of boxed rubber stamp sets includes some made for children and some for general use.

Given by Penny Speckter, 1992

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