

*The Metropolitan
Museum of Art*

GUIDE TO THE
COLLECTIONS

Prints

COVER: Enlargement showing the technique of etching: detail of Christ Preaching, by Rembrandt. Bequest of Mrs. H. O. Havemeyer, The H. O. Havemeyer Collection, 29.107.18

BACK COVER: Enlargement showing the technique of engraving: detail of The Martyrdom of St. Lawrence, by Cornelis Cort (1533-1578), after Titian. The Elisha Whittelsey Fund, 49.97.537

2072
The Metropolitan Museum of Art
Guide to the Collections

PRINTS

By A. Hyatt Mayor, Curator

Prints are made by preparing a surface to receive ink in a design that is then pressed onto paper or cloth. A print is therefore a picture that may exist in many originals. Since most prints have survived in several impressions, all great print collections cover the printmaking of the world, with varying emphases, whereas each great collection of paintings or sculpture differs from the others because it is incomplete and at least partly local. So, if you describe any representative print collection, you must describe printmaking in general.

The oldest devices for repeating a design are based on the principle of the rubber stamp or typewriter key (the relief process), in which the raised parts of the stamp print the design. Thus ancient Mexicans stamped patterns on their bodies, and Roman potters stamped firm names on the handles of wine jars. Why did Roman publishers not ink the familiar potter's stamp to print books? Because antiquity thought that mass production depended on the hands of many slaves—in this case scribes—and not on labor-saving machinery, and because papyrus was too ridged to print on evenly.

The idea of papermaking started with the ancient Chinese, who matted animal hair into felt by treading it in shallow puddles. Shortly after A.D. 100 they began to felt vegetable fibers into paper. In time they used this smooth, tough, and cheap surface for mul-

Relief: Woodcut



1. Virgin and Child,
German, 1430-50



2. Page from *The Apocalypse*,
Flemish, 1430–50

tipling holy pictures and prayers, then playing cards and bank notes, by printing from wood planks in which the white parts of the design had been gouged out, leaving the rest of the wood raised to receive ink for pressing onto the paper.

During the early Christian centuries, Europeans cut similar blocks to stamp patterns on linen cloth. European woodcutting developed a subtlety that found its ideal medium after about 1400 (1), when paper mills, which had been introduced through Spain by the Arabs, began to produce paper plentifully and cheaply. Most early single-sheet woodcuts perished by being tacked to walls like calendars, sewed to pilgrims' hats, or tossed away like today's matchbooks. Too few survive to reconstruct their beginnings.

Bound volumes, however, stayed safely on library shelves to tell the story of book illustration. Around 1450 or so Netherlanders were publishing block-books (2) by carving words and pictures on a long plank of wood, laying a strip of paper on the inked relief, and printing by rubbing the back of the paper. The paper strip, printed on one side only, was pleated into pages exactly as in Chinese books.

In the 1450s Gutenberg and his associates made the printing of words (but not pictures) more flexible by assembling cast metal letters, as the Chinese had also previously done, and forcing this inked metal hard against the paper in a press like the winemaker's screw press. In about 1460 a printer in Bamberg reassociated text and pictures by hand-stamping woodcut illustrations in spaces left blank on pages of type. Very soon printers all over the Continent were planing wood blocks to the same thickness as the metal type and were printing text and pictures together at one pressing.

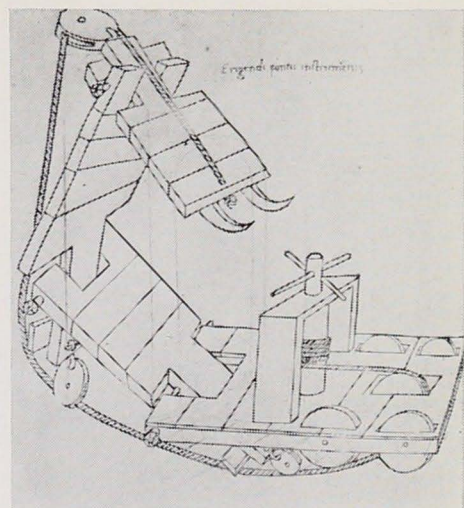
The stimulus of the literate section of the public sent the European woodcut to unheard-of heights through book illustrations. Printers began by selling mostly unillustrated texts to schoolboys—always reckless consumers—then to priests and lawyers. When they had glutted these markets in the 1480s resourceful publishers saved themselves from bankruptcy by catering to the general public's and the

3. Woodcut from Savonarola's
On the Ten Commandments
(Florence, 1495)



2/13/64 - M.M.A.

scientist's inexhaustible appetite for illustrations. Woodcuts enlivened more books in the vernacular than in Latin—romances of chivalry and household prayer books in Paris, popular devotional books in South Germany, medical and astronomical treatises and Italian literary classics in Venice. In Florence Savonarola kept the town in an uproar with the first illustrated propaganda pamphlets (3). But it was the scientist who profited most by the printing of text and pictures, because the botanist who studied the great German herbals, or the engineer who constructed military hardware from the first do-it-yourself manual (4), could collaborate with another man at a distance by referring to an identical picture, on an identically numbered page of text. Each man could know, for the first time in history, precisely what the other was discussing. Modern descriptive sciences would be unthinkable without the exactly duplicable word and picture.



4. Woodcut from Valturius's *On Soldiering* (Verona, 1472)

Woodcuts continued to serve the scientist and the general reader until about the 1580s, when the demand for more minute detail made it worthwhile to run each page through a screw press for the text and then a roller press for the copperplate. The copperplate, or intaglio, processes all use a principle opposite to that of the relief process. A polished metal plate is incised with grooves or pits that catch greasy printer's ink. The whole plate is then wiped, cleaning the smooth, unworked areas. Damp paper is pressed against the inked plate by running both between two heavy rollers. The squeeze forces the softened paper into the grooves to pull out the ink.

For many centuries before printing was invented metal objects had been ornamented by plowing grooves with the sharp point of a graver. Engraving, the oldest metal print process, started on the Rhine around the 1430s when some silversmith multiplied an engraved design on a box top or paten by inking and printing it (5). Because engraving began among silversmiths, many early engravings record craftsmen's designs, and ornament prints henceforth disseminated fashions in metalwork, furniture, architecture, and textiles from country to

Intaglio: Engraving

5. Design for a paten, by the Master E. S., German, 1466. Detail





6. Virgin with an Apple, by Schongauer (1445–1491)

country almost as quickly as magazines do today.

Early engravings have survived in greater proportion than early single-sheet woodcuts because, being more expensive and mostly smaller, more engravings were pasted inside books. The first German engraver whose work still exists in quantity is Martin Schongauer, whose prints (6) were widely copied in wood carvings, stained glass, and paintings. He expressed the delicacy of the dying Gothic by engraving in sinuous concentric sweeps. This comes naturally as the engraver pivots his copperplate on a hard pillow, revolving the plate with his left hand against the steadily held graver that thus plows out a segment of a circle.

A decade or so after Rhenish silversmiths had begun to print engravings, the Florentines followed suit, often copying German work. They made a local specialty of ornamenting boxes, crosses, etc., with silver plates engraved in the niello technique. In niello plaques the engraved lines are filled with a black sulphur mixture, thus making effective decorations by contrasting figures in bright silver with a dark background of close crosshatching. Before filling the grooves with sulphur, the silversmiths often printed their little plates on paper. Out of this there developed a miniature style called the "fine manner." Florentine engravers came close to painters like Filippo Lippi and Botticelli in their "broad manner," shading with parallel lines as subtly as the Florentine draughtsmen and even printing with gray ink to imitate the delicate bloom of silverpoint drawings.

The most influential print ever made in Florence was the *Battle of the Ten Nudes* (7) by Antonio Pollaiuolo, head of the foremost Florentine workshop and one of the first artists to investigate bones and muscles by dissecting cadavers. Some time around the 1460s he summed up his anatomical studies by engraving ten bodies that look more flayed than naked, varying their complex actions to compose a course of instruction in artistic anatomy. This was the first of hundreds of prints that taught Europe the great Italian specialty of drawing the nude. In 1543 artistic anatomy was standardized for



7. Battle of the Ten Nudes, by Pollaiuolo (1429–1498)

8. Battle of the Sea Gods (right half), by Mantegna (1431–1506)



9. The Four Horsemen of the
Apocalypse, by Dürer
(1471–1528)

good by the woodcuts that John of Calcar drew for Vesalius's *Anatomy*.

While Pollaiuolo in central Italy was founding the surgical tradition of artistic anatomy, Andrea Mantegna in northern Italy revived the simplified, balanced, and grand anatomy of Roman statuary. He engraved seven large copperplates (8) with a passionate authority that makes them the first prints that cannot look old-fashioned. By 1475 Mantegna was hiring professional engravers to reproduce his drawings, which were often copied by other artists. He directed his engravers away from craft conventions and toward the basic achievement of pictorial effect, just as Titian and Rubens did later on when they hired engravers to copy their paintings for advertisement.

Mantegna, Pollaiuolo, and indeed practically all early printmakers contributed to the complex art of Albrecht Dürer, who developed the resources of all the graphic techniques of his time and was the only artist to create memorable works in both the Gothic and Renaissance styles (9). He made his mark in his twenties, when he started his Apocalypse woodcuts from suggestions in the illustrations of the Cologne Bible of 1480, and amplified the crude hints into visions so powerful that they still exhaust this theme for art. He may have cut his earliest wood blocks himself, for they are the first that follow exactly the quirks of a personal draughtsmanship. He later trained other woodcutters to autographic faithfulness and made the woodcut into the first print technique to come close to the instinctiveness of freehand drawing. Before Dürer, woodcuts, like a child's coloring book, had been outlines to guide the water-colorist, but he introduced a black-and-white "color" too satisfying to daub with paint. He was the first great artist to initial and date woodcuts, perhaps because his AD stands for *Anno Domini* (Year of Our Lord) as well as Albrecht Dürer.

Etching and drypoint

Dürer experimented with the new art of etching, the most widely used intaglio process, which had been invented when Augsburg armorers began to dec-





10. A Knight, and a Lady Holding Pansies, by Cranach (1472–1553)

11. Woodcut from Petrarch's *On Good and Bad Fortune*, by Weiditz (working 1500–1536)



12. Death and the Plowman from *The Dance of Death*, by Holbein (1465?–1524)



orate armor by painting a design in wax on steel and letting acid erode away the uncovered metal. In about 1500 the armorers adapted this invention for printmaking. Instead of gouging out grooves laboriously with a graver, they coated an iron plate with wax, scratched through this ground with a needle, and let the acid eat the grooves into the metal. Dürer made only six etchings because acid corroded iron too raggedly to suit his exact style.

He made the first painterly drypoints, scratching a copperplate with a stout needle that removed no metal but plowed a furrow flanked by ragged ridges of copper. The ridges catch a smudge of ink that prints a furry blur for a few impressions until the

projections wear down and shrink the smudge to a mingy scratch. He made only two drypoints, probably because he was too practical to work long at a process that yields so few returns.

Dürer used the graver for 96 of his 104 prints on metal. Starting from Schongauer's simple rhythms, he elaborated sweeps, dots, flicks, and crosshatchings into a complexity that rendered steel, flesh, glass, fur, or any texture. The graver was his best tool for cutting those striking outlines that make his details startle until they distract from the whole. As the first wizard of engraving he became the model for all who followed in this deliberate and grammatical technique.

From about 1500 to 1550 the sundering of West-

ern Christendom excited Germans to produce the most imaginative of all woodcuts. Lucas Cranach at Wittenberg, the political capital of the German Reformation, combined religious zeal with the sensuous and eccentric elegance of a provincial court (10). Hans Weiditz pictured the hubbub of the marketplace around whose boundaries the hobgoblins howl (11). Hans Baldung (about 1476–1545) expressed more than any other printmaker the obsessive originality of German art when it escapes from Latin control. In the southern German banking center of Augsburg, Hans Burgkmair (1473–1531) drew with a more Italianate roundness and balance than even Dürer. Still nearer Italy, at Basel, Hans Holbein adapted the miniature woodcuts of Venetian books with an exquisite lucidity that affected all Europe (12). In copperplate work the German “Little Master” engravers—Altdorfer, Aldegrever, Pencz, and the Beham brothers—refined Dürer’s skill by engraving miniature plates still more compact than Holbein’s woodcuts.

Dürer’s most brilliant follower in engraving was Lucas of Leyden, a Dutch prodigy who began in his mid-teens to make engravings that were copied as far away as Italy. In 1520 Lucas, in a hurry to publish a portrait of the recently dead Emperor Maximilian (13), saved time by a combination of techniques that was to become standard practice for most copperplate work. He quickly etched most of the picture and then resorted to the slow graver for the delicate modeling of the face and hands. The etched lines blend with the engraved lines because he used copper, which acid bites more neatly than it does the iron that had served for the earliest etchings. Most 17th- and 18th-century “engravings” are actually etchings, done in a calculated, geometrical style, and finished by using the graver to touch in the delicate tones and soften transitions of light and dark. “Engraving” often denotes a style rather than a technique.

During his last ten years Lucas of Leyden abandoned his silvery adaptation of Dürer’s engraving in order to imitate the simpler, more unified manner of Marcantonio Raimondi. This northern Italian en-



13. Emperor Maximilian, by Lucas of Leyden (1494–1533)

14. Mercury, by Marcantonio (c. 1480–c. 1530), after Raphael





15. *The Young Shepherd*, by
Campagnola
(1482?–1515)



16. Woodcut from Boiardo's
Orlando Innamorato
(Venice, 1545)

Stipple and chiaroscuro

17. *Diogenes*, by Ugo da Carpi
(c. 1460–c. 1525),
after Parmigianino



graved designs by Raphael and his group of fresco painters in Rome from about 1510 until the Sack of Rome in 1527. This collaboration of painter and engraver established the typical Italian print as the reproduction of a painting in which nudes strike athletic poses. Marcantonio's workshop produced hundreds of engravings that carried Italian Renaissance figure drawing and composition into the north of Europe, where they ousted the Gothic style in a revolution as drastic as that of the fauves around 1905.

Marcantonio perfected a clear, simple, and unobtrusive style (14) that modeled forms with intelligent lucidity and was impersonal enough for him to teach to the engravers who gathered around him. Thanks to the example of his team, most engravers from about 1520 until the 1880s worked in production lines so drilled to a common style that you cannot tell where one man ended his stint on the copper and another began. After about 1525 no outstanding painter ever again mastered the exacting art of engraving. This devolved to workshops of specialists who collaborated in copying other men's paintings and drawings until the invention of the photographic halftone in the 1890s took away their livelihood.

Venice, which had less violent ups and downs than other Italian states, for centuries produced prints under the sway of its sumptuous school of painting. One of the last of the inventive engravers, Giulio Campagnola, rendered Giorgione's soft twilight by stabbing the copperplate with swarms of dots that cluster or disperse to gather forms out of dusk (15). In the 18th century English etchers adopted this stipple technique to reproduce sentimental paintings, while the French shaped the dots into lines to imitate chalk drawings. But in Venice, as in Germany, woodcut became the great 16th-century medium. In 1516 Ugo da Carpi took out a patent for "a new way of printing in light and shade" by cutting a separate wood block for each tone (17). Ten years before, Cranach had printed color woodcuts to imitate German drawings in black ink and

white paint on tinted paper. A black key block carried the complete ink drawing, while the highlights were gouged out of a second block in color. This method produced few prints, whereas the Italian method produced masterpieces for three centuries. The Italians imitated wash drawings by combining several shades of a single color, each shade incomplete in itself but all fitting together like pieces of a jigsaw puzzle. They called their method *chiaroscuro* (light-dark). These plain areas of color expressed the uncluttered grandeur of Italian design.

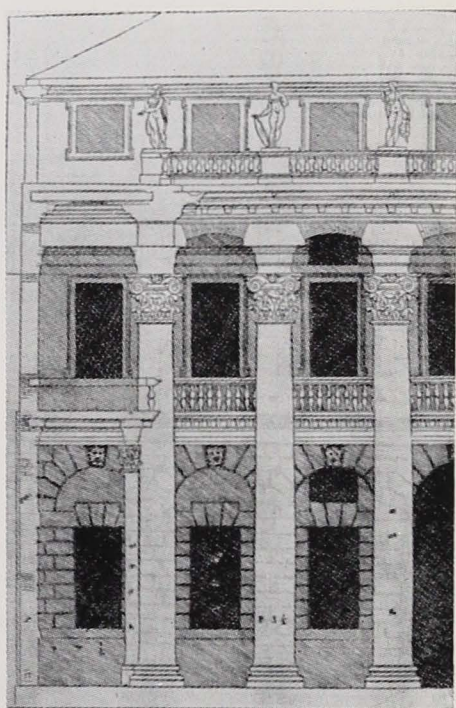
In Ugo da Carpi's time Titian began to transform woodcut with the splendor of his imperial energy. In 1549 he drew his master print, *Pharaoh's Army Drowned in the Red Sea* (18), with strokes as spacious as the tapestry expanse of this vast woodcut. Titian's ardent rhythms gave life to the smallest Venetian book illustration, just as Botticelli's swift grace somehow moves through the Florentine books of the 1490s. The Venetian printers profited by their cheap sea freight and their island freedom from papal censorship, unbroken until the Clementine Index of 1596, and created the book as we know it today: dealing with all subjects, comfortable to hold in the hand, with a modern title page, numbered leaves, an index, and illustrations (16) that harmonize with the legible type and express the spirit of the text. Venetian books were imitated—even counterfeited—throughout the world. In 1501 Aldus Manutius began the first series of pocket classics, which have continued ever since. The first publications written and illustrated by architects were printed in 1537 by Serlio, in 1562 by Vignola (in Rome), and in 1570 by Andrea Palladio (19). These books taught the world how to build in the classical style.

Not far away, in Parma, Francesco Mazzuola, called Parmigianino, took time off from his painting to sketch on copper with the etching needle (20). His easy, exquisite etchings carried the mannerist ideal of grace across the Alps, and became models for elegance in the 18th century. Following his example, most of the great Italian baroque painters also etched with unfettered originality.

20. *Virgin and Child*, by Parmigianino
(1503/04?–1540)



18. *Pharaoh's Army Drowned in the Red Sea*, by Titian
(1477–1576). Detail



19. Woodcut from *Four Books of Architecture* (Venice, 1570), by Palladio
(1518–1580)





21. Cleopatra, by Mignon
(working 1537–1540),
after Penni

22. Summer, after Bruegel
(1520?–1569)

When the Sack of Rome in 1527 drove many less established Italians to seek work in the palace that François I was building at Fontainebleau, they celebrated their escape from the restraints of their elders by developing mannerism with a libertine extravagance. Their cold, elegant, and sexy acrobatics were reproduced in slapdash copperplates (21) that have inspired French official art ever since. Similarly, the decorations Jacques Androuet Ducerceau (about 1510–1580) engraved from Italian adaptations of antique stuccos reappear on French wall panels until about 1900. In 1515 a Paris printer published an illustrated booklet to celebrate the Emperor Charles V's coming of age. This was the first of three centuries of sumptuous picture books (25) commemorating the processions, funerals, and operas that French kings, and then princes in all Europe, staged to dramatize their power.

The turmoil of the later 16th century cut artistic



Iulius, Augustus, nec non et Iunius Aestas.

AESTAS

Adoles

centis, imago

Frugiferas aruis fert Aestas torrida messeis.



FRANCISCVS SNYDERS
VENATIONVM FERARVM FRVCTVVM ET OLERVM PICTOR ANTVERPIE
Ant. van Dyck pinxit et grav. apud J. H. Neeffs sculp.

opportunity in Italy and eventually stopped creation in Germany. But when Antwerp rose, through the new economy based on money instead of land, Flemish publishers began to scatter prints through the new-found seaways. Europe, South America, and even India wanted long series of Biblical scenes, moral allegories, and pictures that instructed wherever the Latin captions could be read, a need that brought forth a special kind of artist who made drawings exclusively for engravers to copy. But, as in the past, the best designers for prints were painters such as Pieter Bruegel, who worked for engravers as a sideline (22).

When Anthony van Dyck commissioned various engravers to copy some 200 portraits of famous men, he started nineteen of the coppers by etching them himself with a brilliant new freedom. His originality must have displeased, for after a very few impressions most of his fresh etchings were finished—in every sense—by professional engravers (23, 24). At the time only Rembrandt showed signs of appreciating these revolutionary etchings, but in the 1860s they exploded, like time bombs, to

23, 24. Franz Snyder, by Van Dyck (1599–1641); the same etching, finished by Neeffs

25. Woodcut from *Entry of Henri II into Paris . . . 1549* (Paris)



become the models for British and American portrait etchers.

Before etching could predominate over engraving, it needed some technical refinements, which were brought to it by Jacques Callot (26). He coated his copperplates with the pliant lutemaker's varnish of mastic and linseed oil, which allowed the needle to move more freely than did the old brittle ground. More important, by sticking tighter to the copper, the new ground kept the acid from leaking in underneath to spoil the plate by accident. This dependability encouraged an etcher to risk months of work in elaborating a large copper. On this new ground Callot scratched with an *échope* (27), a steel rod honed on an angle to an oval cutting edge. He rotated this varying edge to make a line widen or narrow, imitating the tapering line that the graver cuts as it gradually sinks into the metal and then gradually rises out of it (28). Callot also enriched copperplate effects by etching some lines shallow and delicate and others deeper and darker. Callot passed on his technical methods and his fascination with daily life to Abraham Bosse in Paris. In 1645 Bosse published the first adequate instructions for etching, which printmakers followed for a century and a half. Bosse also made etching counterfeit engraving so convincingly that by the end of his life the graver had dwindled to a mere finisher for etchings. It mostly remained an accessory tool until the revival of pure engraving in London and Paris in the 1920s.

Under Louis XIV, French 17th-century prints were well made and official. The last great pure engraver, Robert Nanteuil, engraved portraits (29) with a delicate intricacy that never distracts from his appraisal of persons. He and his school portrayed few of the writers and artists who interest us today, because portrait prints were then commissioned by candidates for the civil service to flatter bigwigs who might help a young man to enter politics. The only outstanding French printmaker to escape from courtly regulations was Claude Lorrain, who went to Rome and etched the twilight Campagna in exquisite gradations of dusk (30).

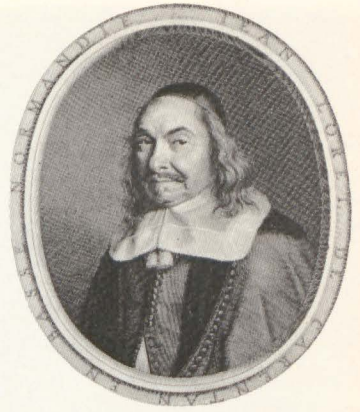


26. Etching from *Balli di Sfessania*, by Callot (1592-1635)

27, 28. The *échope* and the graver from *On Etching and Engraving* (Paris, 1645), by Bosse (1602-1676)



No etcher has ever evolved so intricate and refined a technique as Rembrandt, though his virtuosity passes unremarked because he always subordinated it to the subtlest imagination in all printmaking (31, 32). As an adolescent he started to etch vignettes of beggars, thumbnail portraits of his family, and blatant studies of himself in fancy dress, mouthing at the looking glass. By the time he was 31 he had made 150 of these little exercises—half of his work by number, though far less than half in interest. In mid-career his lucrative portrait painting took much of his time, but even then he managed to give at least an equal effort and a more secret part of himself to etching. He gradually achieved a black-and-white as deep and glowing as colors by using more and more drypoint. When he was about thirty-five to forty-five he etched over two dozen landscapes of the power of the hills, or of Holland, flattened under the height of the sky. From his forties until he stopped etching in his late fifties he



29. Jean Loreet, by Nanteuil
(1623–1678)

30. Time, Apollo, and the
Seasons, by Claude
Lorrain (1600–1682)





31. Faust in His Study, by Rembrandt (1606–1669)

made portraits and visions from the Bible that strike home with the intensity of their stillness. He grew gradually from rambunctious flamboyance to penetrating quietness by scrutinizing people and by studying his collection of prints by Mantegna, Marcantonio, Dürer, Lucas of Leyden, and others. His etchings are as complete as his paintings and as intimate as his drawings. He made them with such love that a head or hand from any corner gains power by enlargement, and each square inch astonishes with a fresh invention of lines and tone. Other artists repeat a formula or two, but not Rembrandt, who saw each time differently because he lost himself in looking until he became what he saw, then discharged his vision with the shorthand of instinct. His early etchings influenced other artists of his time, but as he became unique he became inimitable.

Rembrandt so dominates our idea of the Dutch 17th century that we neglect many other painters who etched admirably, such as Jacob van Ruisdael (1628/29–1682), with rugged groups of oaks, and Adrian van Ostade, whose little scenes of beggars and daily life (33) resemble Rembrandt's early work done with more delicacy. The only Dutch etcher strong enough to influence Rembrandt's maturity was mad, solitary Hercules Seghers, at least one of whose plates Rembrandt took and reworked. Se-

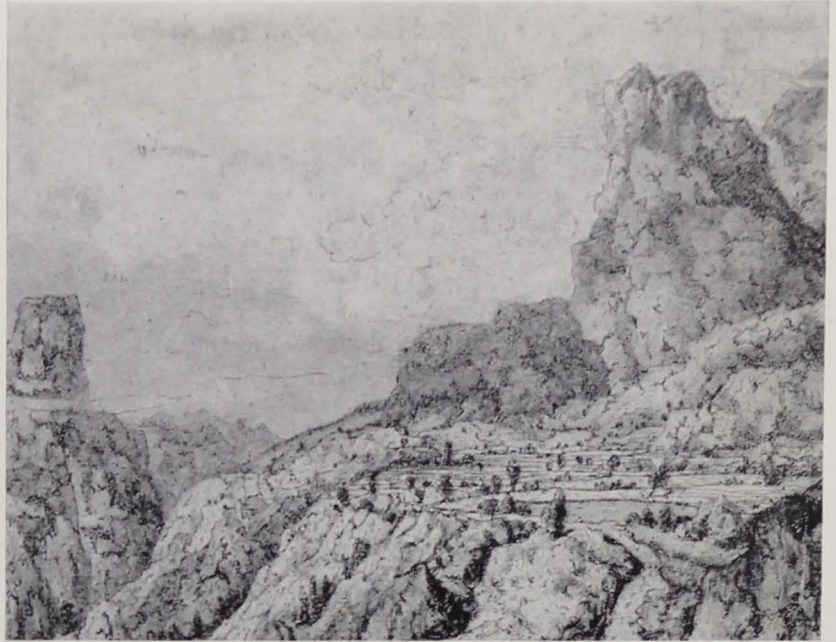


32. The Agony in the Garden,
by Rembrandt



33. The Fisherman, by
Van Ostade (1610–1685)

34. Rocky Landscape with a Plateau, by Seghers (c. 1590–c. 1645)



ghers printed his etchings of ruins and fractured lunar gullies (34) in tints of lavender and verdigris.

Mezzotint

35. Colonel Tarleton, after Reynolds (1723–1792)



Effects of light and dark interested the whole 17th century: Rembrandt achieved a deep yet penetrable darkness by a technique beyond most etchers' skill. Yet in Amsterdam, while he was perfecting his dark prints, a smooth range of tones from white to absolute black became every printmaker's possibility through the invention of mezzotint by Ludwig von Siegen (1609–after 1676). This German army officer pricked the copper with a spiked roulette until the roughness caught ink everywhere to print a solid black. Then he highlighted by scraping and burnishing down to smooth the copper. If he scraped a part too light he could easily darken it again by re-roughening the metal. This flexible technique was ideal for reproducing paintings in which the outlines disappear in shadows. England took so heartily to mezzotint that it became known elsewhere as the English manner. Through handsome mezzotints the paintings of Sir Joshua Reynolds (35), Romney, Gainsborough, and others permeated the whole 18th-century world, and even provided models for itinerant American painters to adapt for their home-made portraits.

William Hogarth's violent moralities were the first English prints that circulated internationally (37).

Hogarth satisfied the taste for series of pictures to read that was started by Bruegel and his fellows and has now been debased into the comic strip. Hogarth also etched pretty little cards (36) for tradesmen to hand out as advertisements for their merchandise. For a century European merchants and craftsmen had been issuing decorated cards and billheads that add a personal note to the long history of designs printed for the use of craftsmen. English potters and metal founders began in the 1770s to illustrate their wares in the first mail-order catalogues. In the 19th century these illustrated trade catalogues took the place of the earlier craftsmen's ornament prints in disseminating designs from place to place.

One of the most prolific of all English etchers was Thomas Rowlandson, who learned his lively drawing in Paris and later returned the influence there



36. Innkeeper's trade card, by Hogarth (1697–1764)

37. *The Toilet Scene*, from *Marriage à la Mode*, after Hogarth

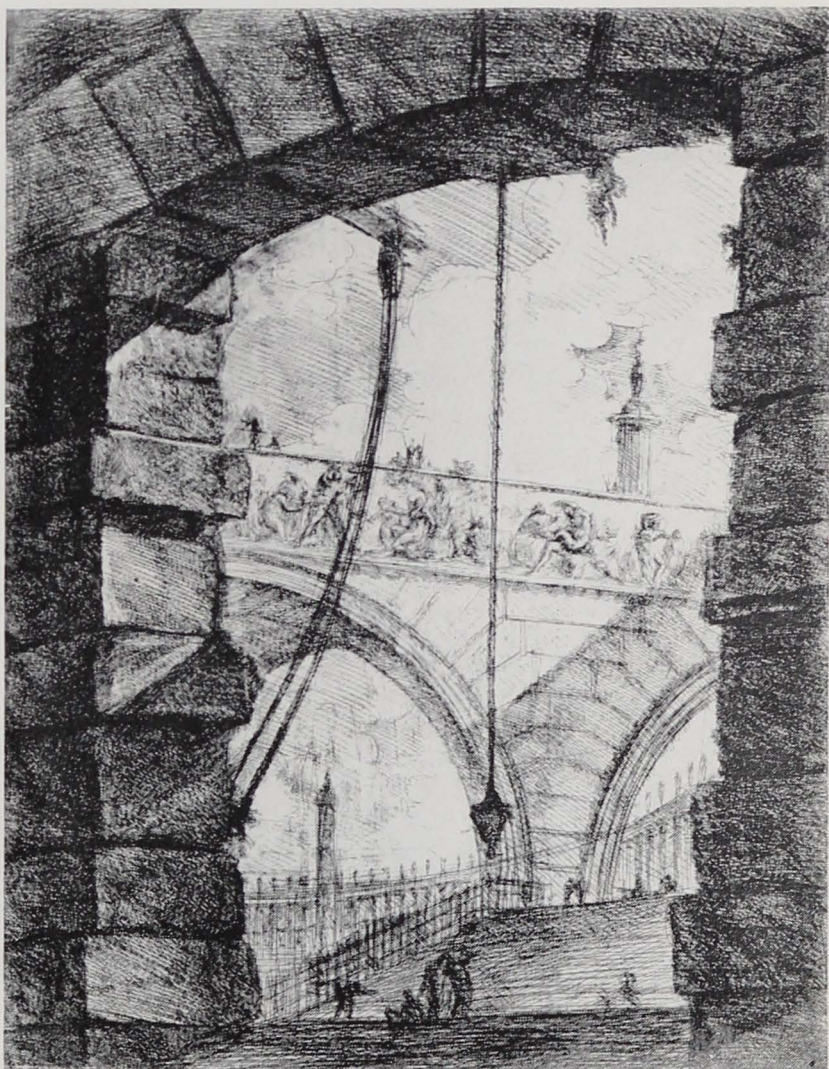




38. *The Successful Fortune Hunter*, by Rowlandson (1757–1827)

to Directoire printmakers through his freshly water-colored prints of the high jinks of fishmongers and countesses, bullyboys and tarts (38). His precise contemporary, William Blake, might have lived on another planet, of private visions and intense poetry (41). He published his pictures and poems by etching them in relief following instructions received from his dead brother in a “visionary imagination.” After studying anatomy in the flat from copybooks rather than from the living model, he swirled the body like seaweed into any pattern imagined by his impeccable sense of layout. The fame of this supreme painter-poet extends exactly as far as the English language.

Venice trained the greatest of all architectural etchers, Giovanni Battista Piranesi, who still hypnotizes with his saturnine dreams of Rome in ruin. Like most etchers, he altered some of his plates in a series of states, or impressions (39, 40) that show progressive stages of work. While an etcher or en-

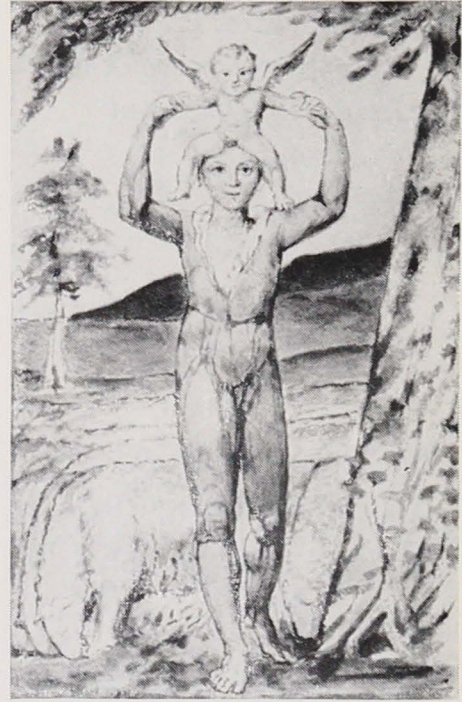


39, 40. *Prison*, first (left) and later state, by Piranesi (1720–1778)

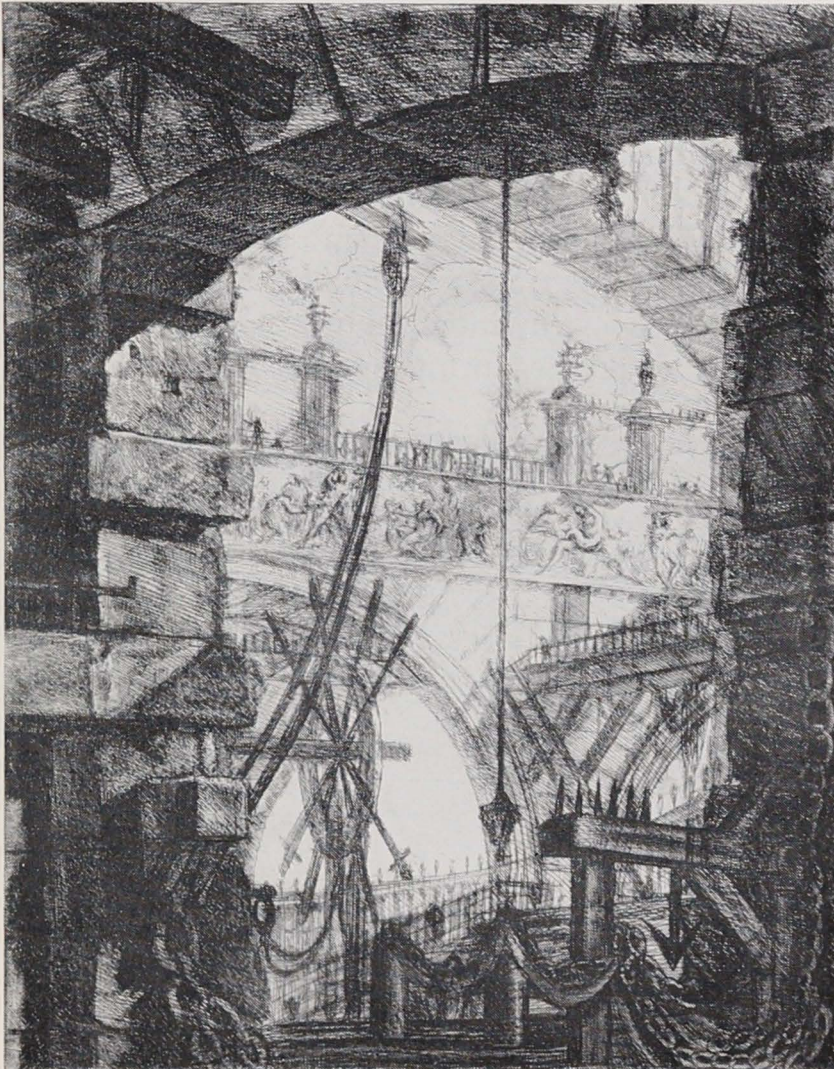
graver is incising his negative image of bright copper lines he often wants to see how his drawing in shining metal will turn out in black ink. He then prints a proof to study the current state of his work. Woodcutters and lithographers print fewer states than etchers or engravers because they see their work all the time in the proper contrast of black lines on pale wood or stone.

Much 18th-century etching owes its sprightliness to the prints of two Venetian masters, Antonio Canaletto (1697–1768) and Giovanni Battista Tiepolo (43). The paper always sparkles through Canaletto's clean, long, trembling parallels and Tiepolo's airy halftones made with twiggy little scraggles. These Venetians understood the saying that if an etcher were paid by the square inch he should get least for the dark parts.

The exacting idlers of the 18th century demanded that book illustration be adroit and witty, and they enjoyed seeing airy etchings evaporate like cloud-



41. Etching from *Songs of Innocence and Experience* (London, 1789), by Blake (1757–1827)



42. Etching after Piazzetta
(1682–1754) from Tasso's
Jerusalem Delivered
(Venice, 1745)



lets on a page. We imagine the connoisseurs of the *ancien régime* reading a page of pale type that ends in the tiny sparkle of an irregular etching. Although this formula prevailed in France from the 1750s until the Revolution, the French did not invent it, but scaled it down from the massive folio of Tasso's *Jerusalem Delivered*, which appeared in Venice in 1745 with etchings after Giovanni Battista Piazzetta (42).

The example of Canaletto and Tiepolo gave a gauzy freshness to the etchings of Honoré Fragonard (44) and Gabriel de Saint-Aubin (1724–1780). François Boucher (1703–1770), the most prolific pictorial inventor of the mid-century, learned to etch with delicacy and precision when, as a young man, he copied many of Watteau's drawings for the first publication that ever illustrated an artist's complete works. Most 18th-century French prints were scenes of gallantry large enough to make an effect in frames on the walls of a small salon. Many were printed in colors by intricate techniques. These exquisitely elaborated prints required the collabora-



43. Scherzo, by Tiepolo
(1696–1770)



44. Bacchanal, by Fragonard
(1732–1806)

tion of several artists—a painter to invent the picture, an etcher to copy most of it onto copper, an engraver to give a smooth finish, an ornament designer to arrange a border, and finally a letter engraver to engross the caption. The composite had to harmonize as if it were the inspiration of a single man. The most observant recorder of aristocratic gallantry was Jean-Michel Moreau *le jeune*, who gave us our clearest image of French high society just before it collapsed in the Revolution (45).

At the end of the 18th century the old, but forgotten, process of aquatint was reinvented, and it then revolutionized etching. Aquatint gets its name because it prints a tone as even as an ink wash. The copper is first etched in the usual way in lines to define the areas for tones. The tones are then etched either by dusting the bare copper with rosin, whose specks keep off the acid and become caps for microscopic peaks of metal, or else by covering the plate with a ground mixed with sugar, whose grains admit acid that erodes microscopic pits. Both methods roughen the copper as if it were sandpaper to catch the ink in a continuous scattering. English etchers of landscapes and views elaborated this process to its utmost, but it produced its masterpieces of the imagination in the hands of Francisco Goya.

Goya started his etchings with lines whose sensuous translucence derived from Tiepolo and the 18th century and then covered them with aquatint haunted by the driving shadows of the 19th. He struck the full romantic attitude of intransigent individuality in 1799 when he put his 80 aquatint *Caprichos* on sale in a perfume and liquor shop because Madrid, unlike Paris or London, had no print dealers. The *Caprichos* became Goya's first works to make an impression outside Spain. Young Delacroix copied some, and French lithographers pirated others. Goya probed into deeper tragedy when he began his 80 *Disasters of War* (46) soon after the outbreak of the Peninsular War in 1808. The face-to-face fighting between rocks and in doorways, the dismembering reprisals, the famine that sank on thousands—all these agonies and excitements came

Aquatint



45. Engraving after Moreau *le jeune* (1741–1814) from *The Monument of Costume* (Paris, 1777)

46. Y No Hai Remedio
 (“Cornered”), by
 Goya (1746–1828)



into focus in Goya’s eye, which transmuted experience into art with the expressive erudition of the Italian baroque. Goya did not limit himself to propaganda against the French invaders, or even against war itself, for he saw man as doomed to be the wolf of men.

A few years before he died as a political exile in Bordeaux he made four big lithographs of bullfights, inventing a “color” for lithography as rich as any in painting (47). At 77, when most artists refine what they have discovered when young, Goya broke through into nothing less than the style to which lithography has repeatedly returned.

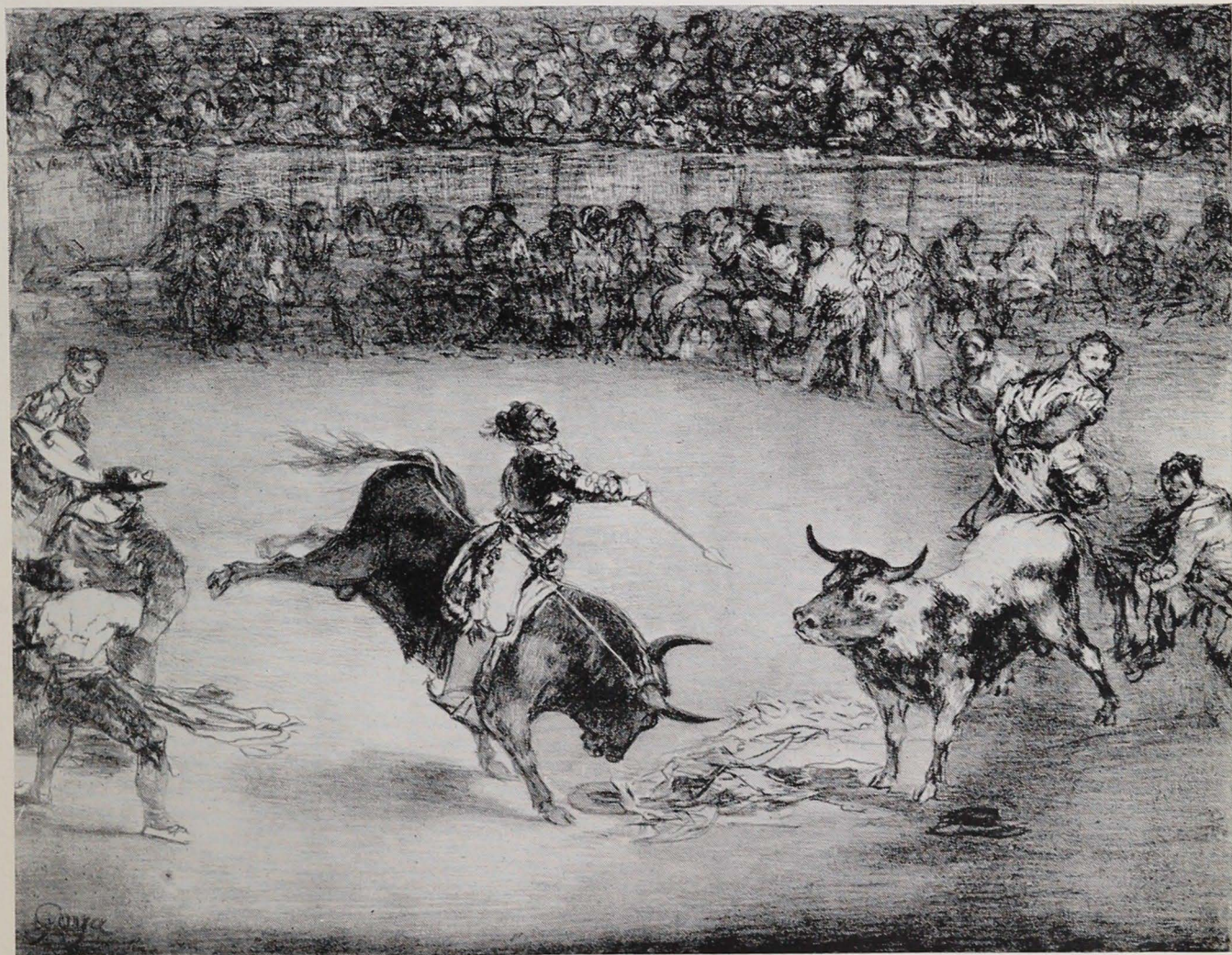
Lithography

Lithography was invented in the late 1790s in Munich by Alois Senefelder (1771–1834), who wanted a cheap way to print words and, later, music. He wrote in grease on limestone (*lithos* is Greek for “stone,” *graphein* means “to write or draw”), washed the stone with weak acid and gum arabic, sponged it with water, and rolled it with greasy printer’s ink. Where water soaked in, the stone rejected the oily ink, which left the roller and stuck to the stone only where the grease had marked. A sheet of paper pressed against the stone then absorbed the printer’s ink that had been rolled onto the stone. To avoid

writing in reverse on the stone, Senefelder wrote in grease the right way around on paper, pressed the grease from the paper onto the stone, and then printed as though he had marked the stone directly. Whether drawing on transfer paper or on the stone itself, lithography proves a godsend to artists, for it leaves all technical cookery to the printer and frees the artist to concentrate on his specialty—drawing. Lithographs therefore vary in effect as spontaneously as drawings, and more widely than any other prints.

One of Senefelder's associates took the process to London, where in 1801 Benjamin West (1738–1820) drew the first lithograph signed with a still familiar name. In Philadelphia lithographs were being made by 1814, though the earliest identified example dates from 1819. Yet these promising starts did not distract English and American artists

47. *El Famoso Americano*,
Mariano Ceballos, by Goya





48. Aristide Bruant, by
Lautrec (1864-1901)

from the copperplate until after 1900. The one conspicuous painter who made lithographs, James Abbott McNeill Whistler (1834-1903), had lived in Paris among painters who drew on stone, though even he put more effort into his etchings. In general, however, English and American lithographers followed the copperplate engraver in copying the inventions of painters. Thus the thousands of lithographs published by Currier & Ives and other firms lack personal draughtsmanship, however deeply they appeal to our nostalgia. It was the French who realized that the stone gives a painter his most direct method of printmaking. Some of the best-known works by Delacroix, Corot, Lautrec (48), Bonnard, Vuillard, and Picasso are lithographs.

49. Rue Transnonain, by
Daumier (1808-1879)

The real hero of lithography is Honoré Daumier, whose 4,000 lithographs probably outnumber those made by all other good painters put together. At 26 he already drew political caricatures incisively enough to land him in jail (49). Shortly after his release, poverty chained him for life to the daily *Charivari*, for which he turned out a lithograph every four or five days for 45 years. He satirized the





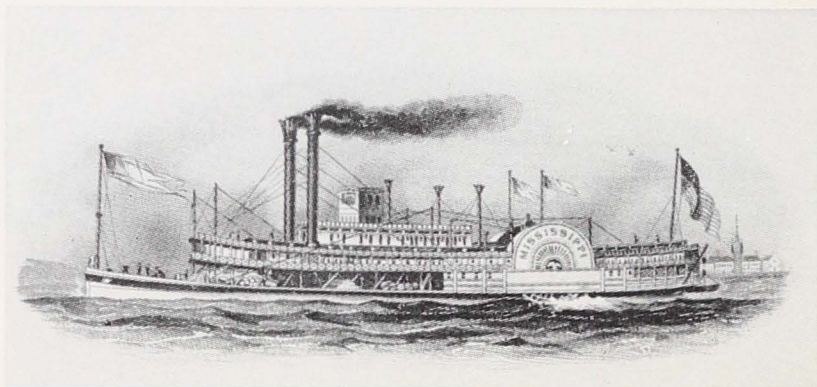
50. The Fruits of Bad Dramatic Training, by Daumier

foibles of the bourgeoisie until his old age, when the weakening of the Second Empire allowed him to return to politics with devastating nightmares. When young, he carefully stippled and shaded from pearl to soot. As he learned to draw more simply and boldly, and as the growing circulation of *Charivari* cheapened the paper and presswork, he adventured, with Olympian exasperation, into line. He never got lost in the technical tricks of printmaking because, always longing to paint, he attacked the stone as though it were the canvas that he could not afford. Brute recklessness of despair drove him to invent more than did any other artist of his century, and to hunt subjects for the Parisians' amusement in the café, the kitchen, the bedroom, the milliner's, the laundry, the office, and the theater (50). Thus his lithographs uncovered a world at home for progressive French painters from Manet to Bonnard.

Bank notes and wood engraving

The great American technical contribution to printmaking came in 1806 when Jacob Perkins published a pamphlet in Newburyport describing how to print bank notes that were impossible to forge—until the invention of photomechanical reproduction. He used an extremely complicated machine to etch intricate swirls in a block of soft steel. He discovered how to caseharden this block without marring the surface. A soft steel roller then passed over the hardened block with enough pressure to force the soft steel into the etched grooves of the block. This roller, casehardened in turn, pressed its relief design down into a large copper or soft steel printing plate, exactly repeating the image as many times as needed. It thus became commercially possible to print the first huge editions of complex and precisely identical designs (51). By this process New York and Philadelphia printed postage stamps, bank notes, and bonds for the world.

51. Specimen of engraving by the Bureau of Engraving and Printing, Washington, D.C., 1876

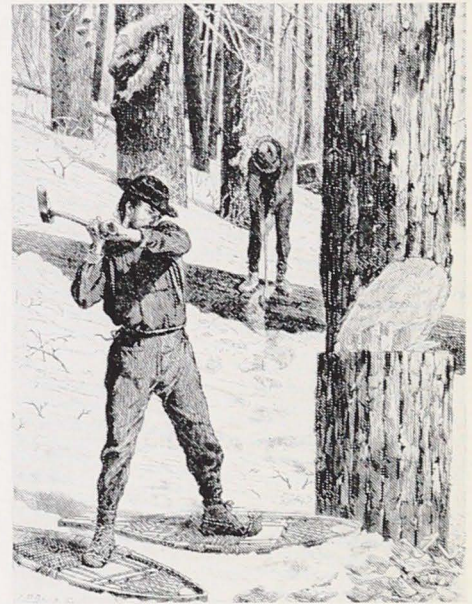




52. Wood engraving by Bewick (1753–1828) from *History of British Birds* (London, 1804)

While English and American artistic printmakers conserved old-fashioned techniques, the popular press revolutionized magazine and book illustration. Thomas Bewick realized the possibilities of turning the old wood block on end and making a wood engraving instead of a woodcut. The traditional woodcut was printed from a plank in which the fibers of the grain ran across the picture. To sink a groove that will print white, the knife must cut from each side toward the center of the groove. Bewick used instead the end grain of smooth, hard boxwood, and engraved his picture into the fibers, which stood up like pins in a cushion. He cut a white line simply by pushing the graver as though he were plowing an intaglio line out of metal. If two grooves lie side by side, the knife edge between will print an extremely fine black line that will not break down because the row of upright fibers stands up as strong as a fence. One printing press, at one stroke, could now produce text interlarded with illustrations of exquisite detail (52). Bewick's quarter-turn of the block enabled the 19th century to print as many pictures as all the previous centuries of mankind, for it started pictorial journalism: *Punch* was founded in 1841, *The Illustrated London News* in 1842, *L'Illustration* and *Die Illustrierte Zeitung* in 1843, and *Harper's Weekly* in 1857. Most old news illustrations interest us mainly as documents, but one is charmed by an artist's vision in Winslow Homer's pictorial reporting of American life at the time of the Civil War (53).

53. *Lumbering in Winter*, by Homer (1836–1910)



English wood engravers, and Continental engravers trained by them, illustrated volumes of prose and poetry that provided the new bourgeoisie with inexpensive books as brilliantly illustrated as the



54. Program cover, by
Beardsley (1872–1898)

costly copperplate books that had been one of the privileges of the old aristocracy. In Germany the nervous, crackling wood engravings by Adolf Menzel (1815–1905) for the life of Frederick the Great (1840) started the publication of many books with imaginative pictures. In Paris during the 1840s Daumier, Gavarni, and other artists drew witty comments on the life of the times, or else vignettes to great works of literature. The English poems and novels of the 1850s and 1860s fuse in our memory with the exquisite, melancholy illustrations created for them by the pre-Raphaelites. In the 1880s wood engraving became soft and misty in the United States, but survived only for limited editions after the 1890s, when the photographic halftone achieved similar shades of gray more quickly and cheaply.

The demand for illustrations supported artists who specialized in drawing for the wood engravers and later for the photomechanical processes. In the 1880s when the photographic linecut—the “zinco” of comic strips—became capable of reproducing pen drawings cleanly, the Spanish draughtsman Daniel Vierge (1851–1904) in Paris started a style of electric thin line that took hold among American illustrators, while in London Aubrey Beardsley composed in swirls of solid black and fronds of dots that were imitated in Vienna and Russia (54).

Photography



55. Lady Ruthven, by Hill (1802–1870)

After photography had been invented in 1839 the illusions of realistic painting looked less miraculous. Some painters, such as David Octavius Hill in Edinburgh, used the camera to make pictures (55) that we enjoy more than their paintings. On the whole the best early photographers were men who earned their living by the camera, though occasionally an amateur such as Julia Margaret Cameron (1815–1879) broke through routine practice with fresh effect in her soft-focus portraits. Since about the 1890s many photographers, like most painters, no longer fulfill commissions but make pictures as their fancy dictates. When an exploratory eye directs the camera the result can uncover a fresh aspect of the world (56).

While photography early shook the painter’s con-



56. Two Towers, by Alfred Stieglitz (1864–1946)

confidence, it hardly affected the printmaker until the 1890s, when his work began to be taken over by the photomechanical processes such as the zinco and the halftone. Then photography rerouted printmaking more than it did any other craft by impoverishing the drudging bulk of printmakers who had always lived by supplying factual pictures. Photographers, not printmakers, now get the commissions to record fashions, natural history, famous faces, buildings, and news events.

Most artistic prints today are by painters who like to make pictures that many people can afford. Just as the modern painter goes after his effect by any means whatsoever, the modern printmaker invents and combines techniques until one often cannot guess how a print was made. Artists with vigorous personalities benefit by this, for most of the great prints of the past were created by painters who broke away from the habits of professional printmakers. But uninventive artists—always the majority—can no longer rely on documentary interest to lend their work the charm that delights us in many old photographs and prints. The modern printmaker (57) has no choice but to stake everything on his bare personality—win all or lose all.



57. Abstraction, 1946,
by Stanley William
Hayter (1901–)

The Print Department was founded in 1916 after Harris Brisbane Dick, a prominent print collector, bequeathed a large estate, whose income then bought many basic masterpieces. In 1921 George Coe Graves gave some superb etchings by Rembrandt and Van Dyck, and in 1924 Charles Allen Munn bequeathed a distinguished collection of American prints. In 1919 Junius Spencer Morgan gave his fine Dürer woodcuts when the Museum purchased his Dürer engravings. Rembrandt etchings and many other prints of supreme beauty came to the Department in 1929 with the H. O. Havemeyer Collection, bequeathed by Mrs. Havemeyer, and from the magnificent gift of Felix M. Warburg and his family. From 1916 to 1946, under the brilliant curatorship of William M. Ivins, Jr., the collection was enriched with fine examples of practically every variety of printed picture.

NOTES ON THE ILLUSTRATIONS

- | | | | |
|---|--------------|--|-------------|
| 1. 13 x 9 ⁷ / ₈ in. Gift of Felix M. Warburg and his family, 1941 | 41.1.40 | gift of George Coe Graves, 1920 | 20.46.13 |
| 2. 10 ¹ / ₄ x 8 1/16 in. Bequest of James Clark McGuire, 1931 | 31.54.169 | 32. 4 5/16 x 3 5/16 in. Gift of Felix M. Warburg and his family, 1941 | 41.1.15 |
| 3. 3 ³ / ₄ x 3 7/16 in. Dick Fund, 1925 | 25.30.20 | 33. 4 7/16 x 6 9/16 in. Gift of Felix M. Warburg and his family, 1941 | 41.1.207 |
| 4. 7 x 7 ¹ / ₄ in. Dick Fund, 1926 | 26.71.4 | 34. 4 3/16 x 5 7/16 in. Dick Fund, 1923 | 23.57.3 |
| 5. 1 ³ / ₄ x 1 ³ / ₄ in. Dick Fund, 1922 | 22.83.10 | 35. 24 ¹ / ₂ x 15 ¹ / ₂ in. Bequest of Charles Allen Munn, 1924 | 24.90.700 |
| 6. 9 13/16 x 4 13/16 in. Dick Fund, 1937 | 37.3.5 | 36. 6 ³ / ₈ x 6 ³ / ₈ in. Gift of Sarah Lazarus, 1891 | 91.1.46 |
| 7. 15 ¹ / ₈ x 23 3/16 in. Purchase, Joseph Pulitzer Bequest, 1917 | 17.50.99 | 37. 15 ¹ / ₄ x 18 ¹ / ₄ in. Dick Fund, 1932 | 32.35(11) |
| 8. 11 9/16 x 15 ³ / ₈ in. Rogers Fund, 1920 | 20.88.1 | 38. 12 x 9 in. The Elisha Whittelsey Fund, 1956 | 56.567.16 |
| 9. 15 ¹ / ₄ x 11 in. Gift of Junius S. Morgan, 1919 | 19.73.209 | 39. 21 ³ / ₈ x 15 ³ / ₄ in. Rogers Fund, 1941 | 41.71.1(8) |
| 10. 9 9/16 x 7 ¹ / ₄ in. Dick Fund, 1926 | 26.106.4 | 40. 21 ³ / ₈ x 15 ³ / ₄ in. Dick Fund, 1937 | 37.45.3(22) |
| 11. 3 ⁷ / ₈ x 6 ¹ / ₈ in. Dick Fund, 1932 | 32.20.8 | 41. 4 ³ / ₄ x 3 7/16 in. Rogers Fund, 1917 | 17.10.28 |
| 12. 2 ¹ / ₂ x 2 in. Rogers Fund, 1919 | 19.57 | 42. 2 ³ / ₄ x 8 ³ / ₈ in. Dick Fund, 1937 | 37.36.1 |
| 13. 10 ¹ / ₈ x 7 ⁵ / ₈ in. Gift of Mortimer L. Schiff, 1919 | 19.53 | 43. 8 15/16 x 6 15/16 in. Dick Fund, 1939 | 39.58.3 |
| 14. 12 ¹ / ₈ x 8 1/16 in. The Elisha Whittelsey Fund, 1949 | 49.97.120 | 44. 5 ⁷ / ₈ x 8 ³ / ₈ in. Rogers Fund, 1922 | 22.58.12 |
| 15. 5 3/16 x 3 1/16 in. Dick Fund, 1934 | 34.38.5 | 45. 16 ¹ / ₄ x 12 ⁵ / ₈ in. Purchase, 1934 | 34.22.1 |
| 16. 1 ¹ / ₂ x 2 ¹ / ₂ in. Dick Fund, 1937 | 37.37.22 | 46. 5 ¹ / ₂ x 6 ¹ / ₂ in. Dick Fund, 1932 | 32.62.17 |
| 17. 19 ¹ / ₈ x 13 15/16 in. Rogers Fund, 1922 | 22.73.3-19 | 47. 12 ¹ / ₂ x 16 in. Gift of Mrs. Louis H. Porter, 1946 | 46.103 |
| 18. 15 ¹ / ₂ x 22 in. Dick Fund, 1927 | 27.54.96(10) | 48. 10 ¹ / ₂ x 8 ¹ / ₄ in. Dick Fund, 1923 | 23.30.3(7) |
| 19. 11 ³ / ₄ x 8 ¹ / ₂ in. Bequest of William Gedney Beatty, 1941 | 41.100.126 | 49. 14 ¹ / ₄ x 17 ³ / ₈ in. Bequest of Edwin de T. Bechtel, 1957 | 57.650 |
| 20. 3 ⁵ / ₈ x 2 ¹ / ₄ in. Dick Fund, 1933 | 33.19.2 | 50. 9 ³ / ₈ x 8 ¹ / ₂ in. The Elisha Whittelsey Fund, 1962 | 62.650.382 |
| 21. 16 3/16 x 12 9/16 in. The Elisha Whittelsey Fund, 1949 | 49.97.604 | 51. 4 5/16 x 7 5/16 in. Bequest of Charles Allen Munn, 1924 | 24.90.1828 |
| 22. 6 15/16 x 11 5/16 in. Dick Fund, 1926 | 26.72.23 | 52. 1 ⁷ / ₈ x 3 ¹ / ₄ in. Gift of Mortimer L. Schiff, 1917 | 17.20.30 |
| 23. 9 ¹ / ₂ x 6 ¹ / ₂ in. Gift of Harold K. Hochschild, 1940 | 40.63.1 | 53. 11 ³ / ₄ x 8 ³ / ₄ in. Dick Fund, 1930 | 30.75.2(3) |
| 24. 9 ¹ / ₂ x 6 ¹ / ₂ in. The Elisha Whittelsey Fund, 1949 | 49.95.2752 | 54. 9 x 7 in. Gift of Mrs. Bessie Potter Vonnah, 1941 | 41.12.88 |
| 25. 8 ¹ / ₄ x 5 ¹ / ₄ in. Dick Fund, 1928 | 28.95 | 55. 8 11/16 x 6 ³ / ₈ in. Gift of Alfred Stieglitz, 1933 | 33.43.220 |
| 26. 2 15/16 x 1 ⁷ / ₈ in. Dick Fund, 1928 | 28.98.29 | 56. 12 ⁷ / ₈ x 9 ⁷ / ₈ in. Alfred Stieglitz Collection, 1949 | 49.55.19 |
| 27, 28. 5 5/16 x 3 ¹ / ₄ in. (plate). Dick Fund, 1930 | 30.48.9 | 57. 5 ¹ / ₄ x 3 ¹ / ₂ in. Gift of the estate of John Taylor Arms, 1955 | 55.621.81 |
| 29. 10 ¹ / ₄ x 7 3/16 in. Rogers Fund, 1920 | 20.13.4 | | |
| 30. 7 ¹ / ₄ x 9 15/16 in. Dick Fund, 1927 | 27.5.6 | | |
| 31. 8 3/16 x 6 9/32 in. The Sylmaris Collection, | | | |

