

Intl  
Printing  
Museum

THE ERNEST A. LINDNER COLLECTION OF ANTIQUE PRINTING MACHINERY

Vance Gerry  
Ernest A. Lindner

**THE  
ERNEST A. LINDNER  
COLLECTION  
OF**

**Antique  
Printing  
Machinery**

**VANCE GERRY · THE WEATHER BIRD PRESS · PASADENA 1971**

## INTRODUCTION

The printing industry is well into its second phase of major technological change. Some of these changes are revolutionary, and proposals for the immediate future are so breath-taking that nineteenth century innovations seem archaic by comparison. However, the cylinder press and the typesetting machine were certainly as dramatic to their time as the computer and cathode-ray tube are to ours when it is remembered that printing technology remained practically unchanged from the time of Gutenberg until 1800.

The Ernest A. Lindner collection is one of the largest assemblies of antiquated printing machinery in the United States. Standing third to the Ford and Smithsonian institutional collections, the Lindner collection is a personal one. Over a period of years Ernest Lindner has unearthed these pieces in backwoods printshops, country newspapers and some shops where this equipment was still in everyday use.

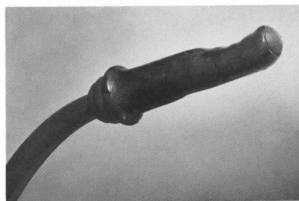
The tools of industry are society's most readily discarded objects, and because of this it is to our advantage and Ernest Lindner's credit that this glimpse of the printer's technological past has been preserved.



**THE ERNEST A. LINDNER COLLECTION OF ANTIQUE PRINTING MACHINERY**

**22 x 33 IMPERIAL HAND PRESS, CIRCA 1828**

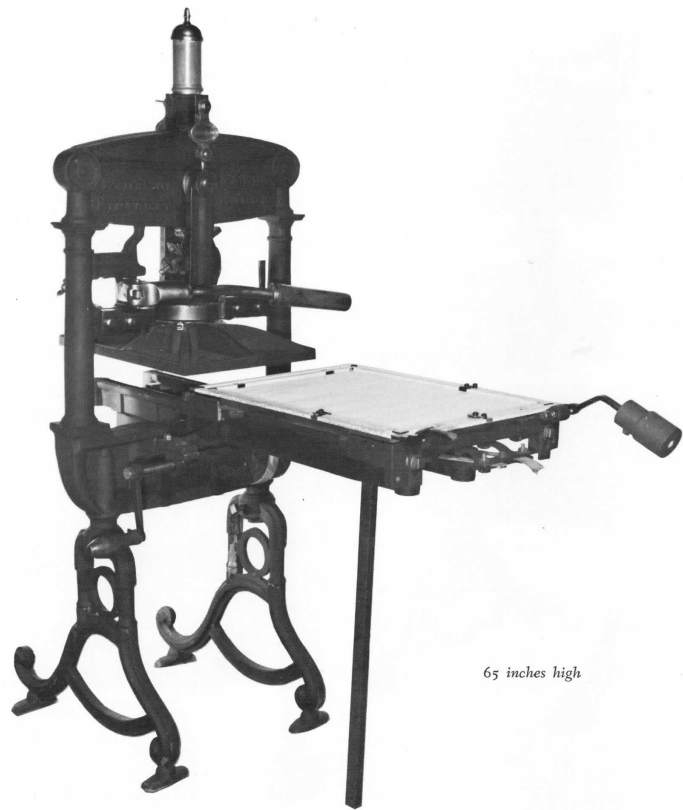
Cope, Sherwin & Company designed and built the Imperial press in Shoreditch, London, for only a short time. It is believed that Cope was related to R.W. Cope, the inventor of the Albion press. Although the Imperial shares a number of similarities with the Albion, the Imperial is the more powerful press due to its leverage system which is influenced by Stanhope. A leaf spring raises the platen of the Imperial while the Albion employs a coil spring located in its cap. These presses are still found working in England, albeit often converted to bookbinders' requirements. This Imperial had been owned by the same family since it was new and was still printing posters in Long Sutton, England, as late as 1970.



*Impression handle: 133 years wear.*



*70 inches high*



*65 inches high*

**14 x 19 ALBION HAND PRESS, 1829**

The Albion press is the invention of Richard W. Cope who is thought to have assisted George Clymer, maker of the Columbian press. Cope's press shows little of Clymer's influence. Cope eliminated bizarre decoration, used a toggle instead of a beam for leverage, and employed a spring instead of a counter-weight to raise the platen.

Cope died in 1828, only eight years after the introduction of his press. J. & J. Barrett were Cope's executors and carried on his business under the direction of John Hopkinson, Cope's foreman. This press was made in Finsbury, London, and "Cope's Exors." is cast onto the staple.



**14 x 19 ALBION HAND PRESS, 1832**

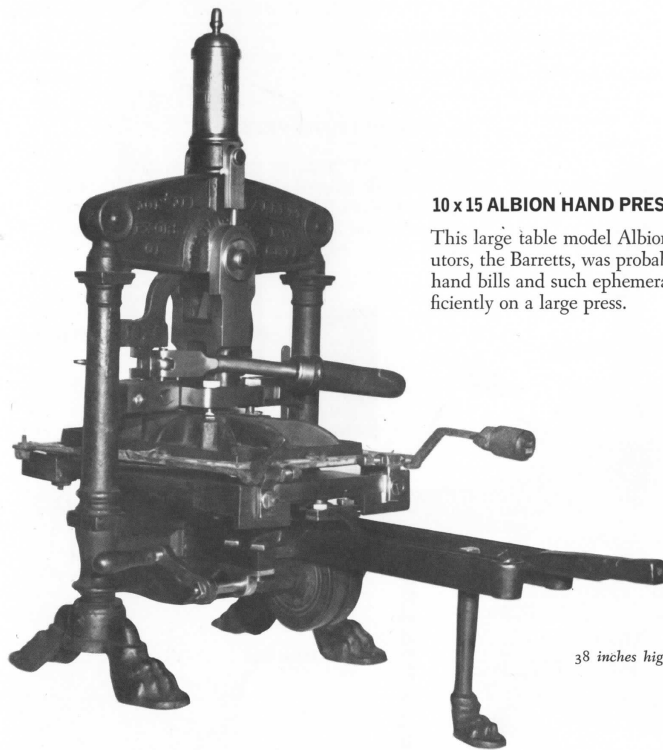
John Hopkinson improved Cope's Albion which had a tendency to wear or break at the crucial point of its linkage. Hopkinson's superior engineering of the fulcrum eventually made the Albion one of the most popular presses in England and Europe. As late as 1940, Dawson, Payne & Elliot of Yorkshire, were manufacturing Albions only slightly modified from Hopkinson's design.



*Maker's identification*

The Albion was the major competitor of the Columbian hand press (See page 10). By 1832, the Barretts seem to have sensed the potential of the Albion and had their full name, *J. & J. Barrett, Exors.*, cast onto the staple.

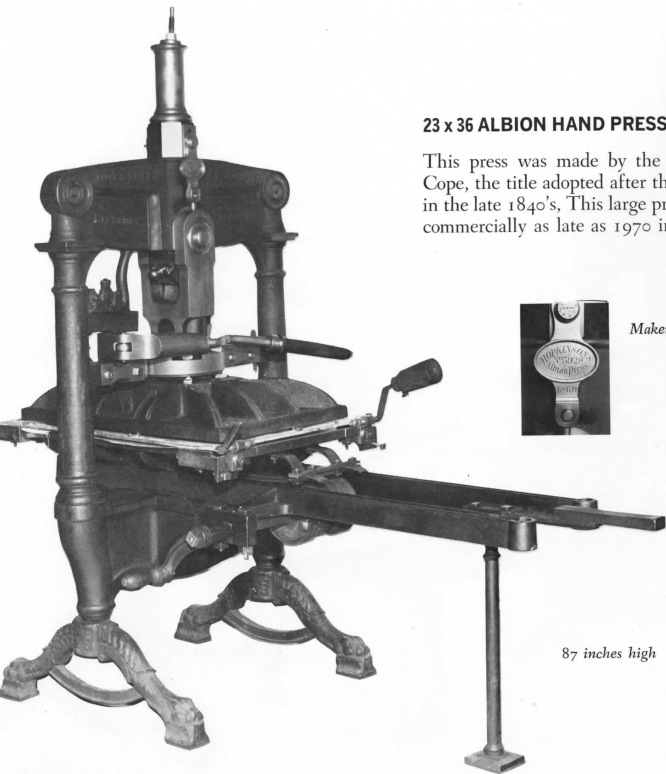
*65 inches high*



**10 x 15 ALBION HAND PRESS, 1839**

This large table model Albion, made by Cope's executors, the Barretts, was probably designed for printing hand bills and such ephemera as couldn't be done efficiently on a large press.

*38 inches high*



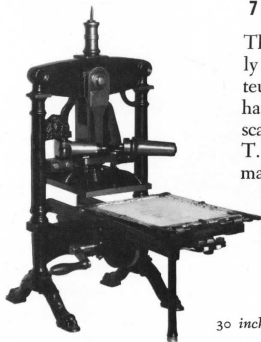
**23 x 36 ALBION HAND PRESS, 1860**

This press was made by the firm of Hopkinson & Cope, the title adopted after the Barretts left the firm in the late 1840's. This large press was still being used commercially as late as 1970 in Wem, Shropshire.



*Maker's identification plate on piston link.*

87 inches high



**7 x 10 ALBION HAND PRESS, 1862**

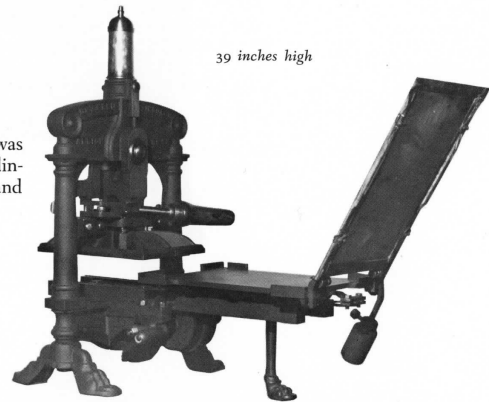
This press is probably the smallest Albion made. Easily operated on the kitchen table, it was used by amateurs and, no doubt, propagandists. Today this size hand press is still much favored by amateurs, however, scarcity limits wide use.

T. Matthews, West Smithfield, England, was the manufacturer.

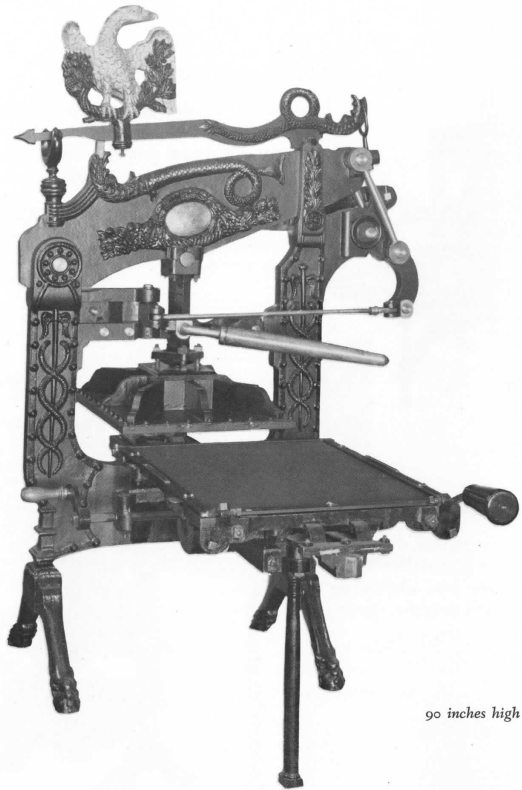
30 inches high

**10 x 15 ALBION HAND PRESS, CIRCA 1860**

A copy of Cope's original, this table model Albion was manufactured in Scotland by D. & J. Grieg of Edinburgh. The Albion was adopted by many firms and manufactured well into the 1900's.



39 inches high



90 inches high

### 22 x 33 COLUMBIAN HAND PRESS, 1838

The first iron printing press was built in England around 1800 by Lord Stanhope. John Clymer built the second in Philadelphia in 1813. The Columbian was not very well received in America, probably because of its great weight. So Clymer went to England where he manufactured and sold his press successfully. The massive cross beam, advantageously linked to the operating handle, is the principle unique to the Columbian. After pulling the impression, the counterweighted lever (most often weighted with an iron eagle) returns the platen to open position.

The fantastic decoration peculiar to the Columbian was not a reflection of the taste of the times, but an intentional effort on the part of Clymer to make the press unforgettable. The serpents, eagle, caduceus, etc. were a sales technique. Lord Stanhope's press has an extremely austere and modern appearance compared to the Columbian.

Decoration aside, the Columbian was a fine press and was held in such high regard by pressmen that its manufacture continued for a century. As late as 1913 Harrild's still listed new Columbian presses in their catalog. This press was manufactured by Clymer's first competitor, Wood & Sharwoods of Aldersgate Street, London.



Maker's identification plate.



**24 x 35 WASHINGTON HAND PRESS, CIRCA 1870**

The Washington press differs from the Columbian and Albion in that a very simple toggle joint provides pressure to the platen and on each side of the platen are coil springs which raise it to open position.

The Washington hand press is the invention of Samuel Rust, an American who first produced his press in 1821.

In 1834, R. Hoe & Company took over his firm and continued to make the Washington. Many firms manufactured the Washington, some well into the 1900's. It was the last style of hand press made in the United States.

This press was made and sold by Palmer & Rey of San Francisco, the first successful far-west typefounder.



*71 inches high*



**20 x 26 WASHINGTON HAND PRESS, CIRCA 1880**

Typical of the last hand presses to be made in the United States, this Washington was made by R. Hoe & Company, who in 1834 took over the manufacture of this style press from its inventor, Samuel Rust.

*74 inches high*



**16 x 21 WASHINGTON HAND PRESS, CIRCA 1885**

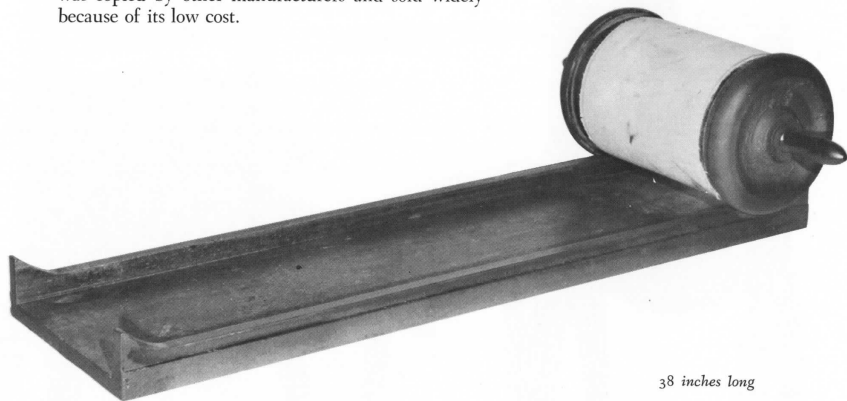
At the time this press was manufactured the hand press was being used almost exclusively for proofing. The burgeoning trade of process engraving adopted this style press for proofing and some were still used for this purpose into the 1950's.

Twentieth Century Reliance is the utilitarian name of this press manufactured by Paul Schniedewend & Company, Chicago.

*68 inches high*

**GALLEY PROOF PRESS, CIRCA 1860**

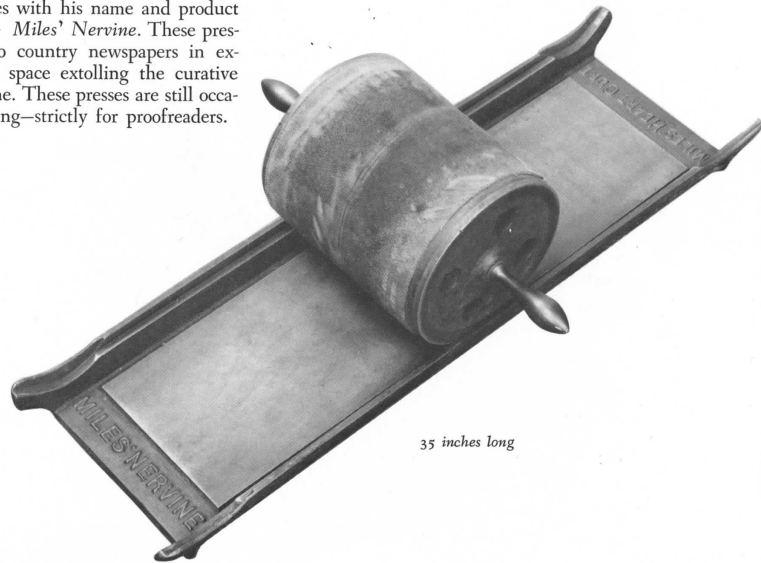
Early in 1850 R. Hoe & Company devised this style of proof press which, along with the hand press, handled most proofing until the advent of the self-inking proof press in the late 1890's. This style proof press was copied by other manufacturers and sold widely because of its low cost.



38 inches long

**GALLEY PROOF PRESS, CIRCA 1870**

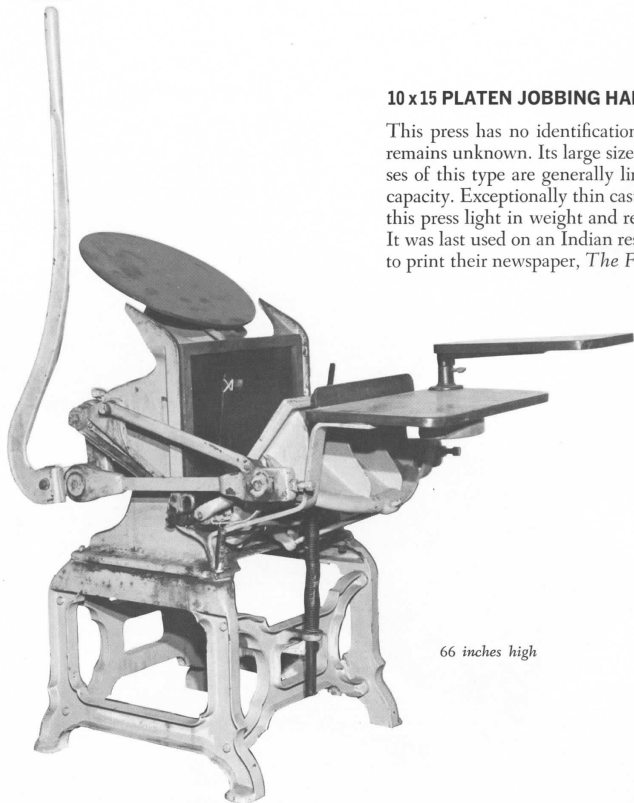
Around 1870, Hoe's improved proof press appeared with a larger diameter but lighter weight cylinder. A patent medicine doctor named Miles had Hoe make a number of these presses with his name and product cast into the frame — *Miles' Nervine*. These presses were distributed to country newspapers in exchange for advertising space extolling the curative powers of Miles Nervine. These presses are still occasionally used for proofing—strictly for proofreaders.



35 inches long

### 10 x 15 PLATEN JOBBING HAND PRESS

This press has no identification marks and its maker remains unknown. Its large size is uncommon, as presses of this type are generally limited to a 6 x 10 inch capacity. Exceptionally thin castings throughout make this press light in weight and readily portable. It was last used on an Indian reservation in Oklahoma to print their newspaper, *The Falling Leaf*.

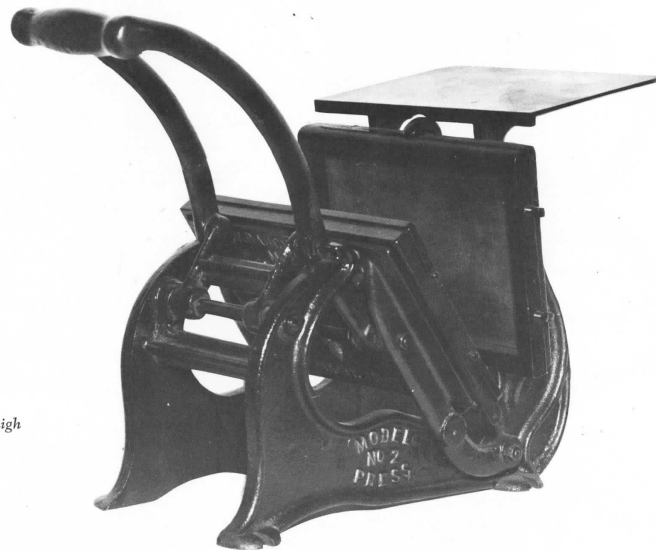


66 inches high

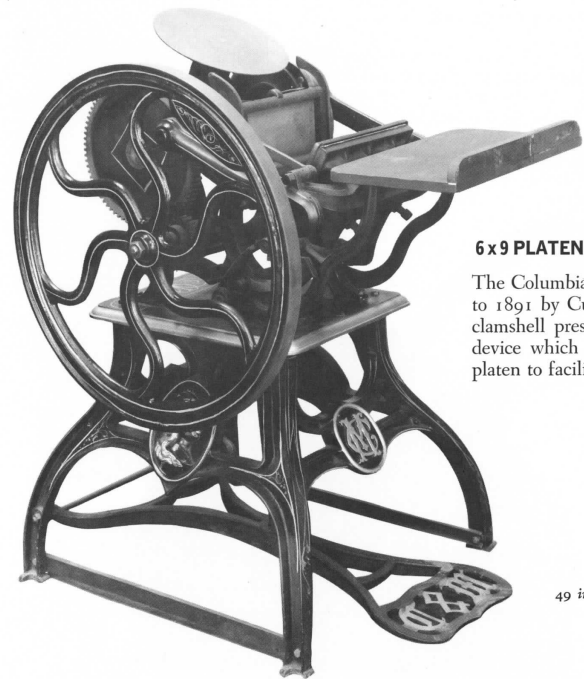
### 6 x 9 PLATEN JOBBING HAND PRESS, CIRCA 1900

This table model, hand-operated press is typical of those printing presses popular with amateur as well as small specialty printers. Presses of this type have been manufactured consistently for over a hundred years.

This Daughaday Model 2 appears to be an economy model in that the printer has to ink the type for each impression. J. W. Daughaday & Company manufactured a variety of presses in the later part of the nineteenth century.



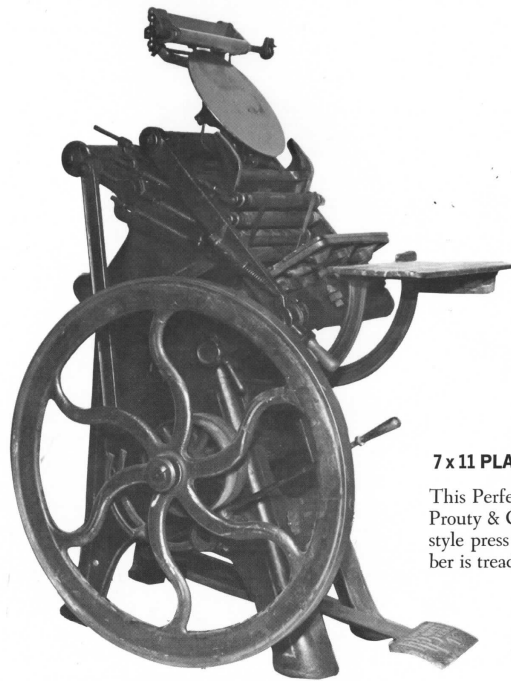
13 inches high



**6 x 9 PLATEN JOBBING PRESS, CIRCA 1880**

The Columbian jobber was manufactured from 1878 to 1891 by Curtis & Mitchell of Boston. Although a clamshell press, this Columbian No. 2 jobber has a device which provides a pause in the action of the platen to facilitate feeding.

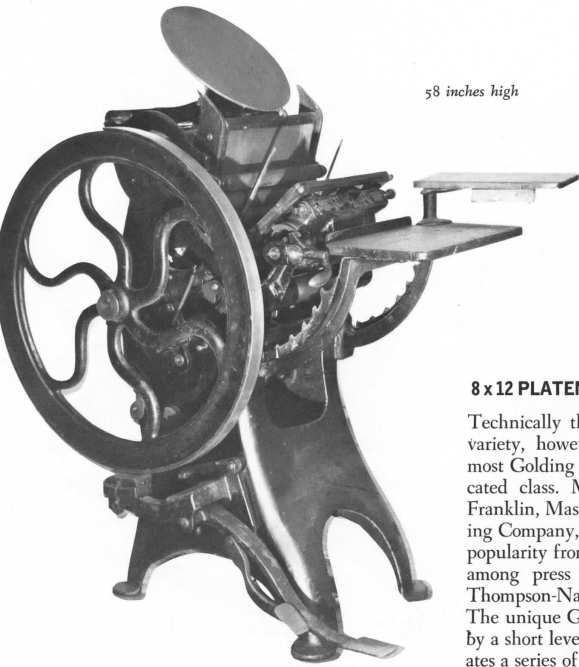
*49 inches high*



**7 x 11 PLATEN JOBBING PRESS, CIRCA 1890**

This Perfected Prouty Press was made by George W. Prouty & Company of Boston who manufactured this style press from 1878 until 1926. This clamshell jobber is treadle powered.

*55 inches high*



58 inches high

**8 x 12 PLATEN JOBBING PRESS, CIRCA 1890**

Technically this Golding No. 6 is of the clamshell variety, however the unique levering employed in most Golding presses puts them into a more sophisticated class. Manufactured in Boston and later in Franklin, Massachusetts, by the Golding Manufacturing Company, the Pearl and Golding presses enjoyed popularity from 1874 to 1927. (An enviable duration among press makers) The company was sold to Thompson-National, makers of the Colt's presses. The unique Golding throwoff mechanism is operated by a short lever on the side of the platen which activates a series of wedges that raise or lower the platen.

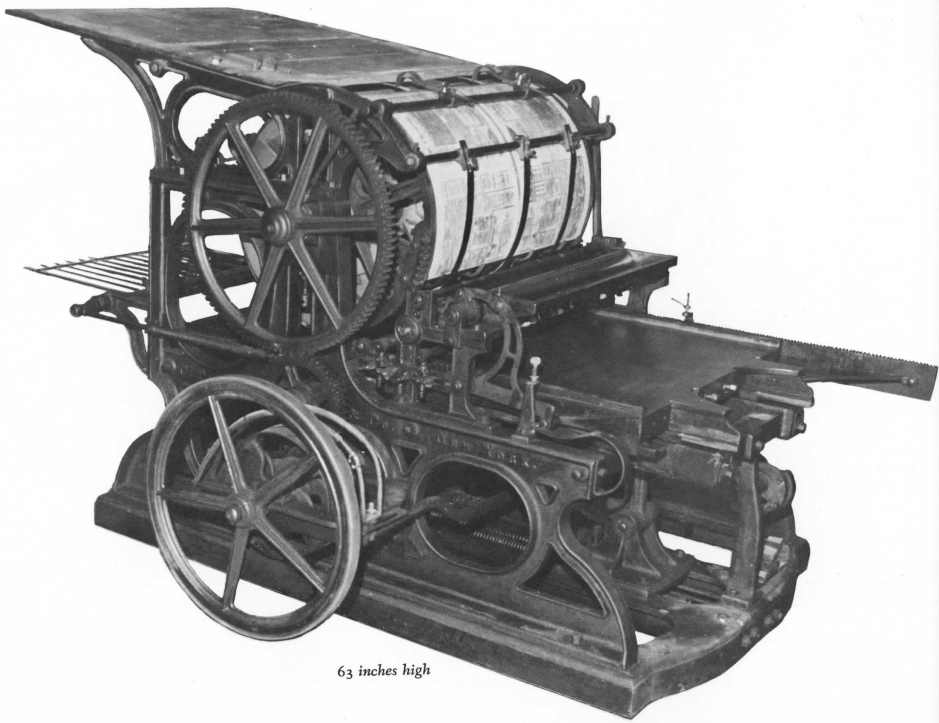


**AUTOMATIC CARD PRESS, CIRCA 1900**

Made by A. Magand, Paris, this press automatically feeds, prints, and delivers business cards when the hand crank is turned.

22 inches high





63 inches high

#### **24 x 36 DRUM-CYLINDER PRESS, CIRCA 1870**

This typical "News and Job" press, of the English Napier style, had various manufacturers from the 1860's to about 1910. These drum-cylinder presses operated on the single-revolution principle, in that only half the cylinder is utilized for impression while the other half clears the type during the return movement of the bed, hence the large drum-like cylinder. The complete printing cycle takes one revolution of the cylinder, and since the cylinder does not have to be raised to clear the type on the return move, as in a two-revolution press, there is no throw-off mechanism.

This early Potter uses a complex of levers and springs to buffer the reversals of of the bed. Later models employed air cylinders. Delivery is to the rear of the cylinder, printed-side-down, "bob tail" style. The printed-side-down feature alleviates turning over the sheets for backing-up. Since the cylinder packing was usually of felt, this type of press was not intended for quality work such as the two-revolution presses could provide.

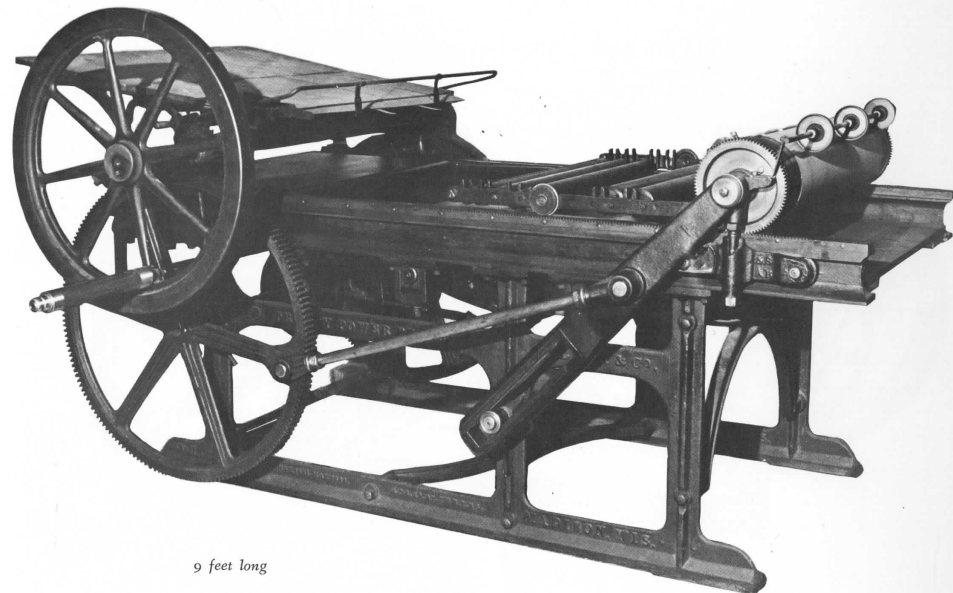
From the 1900's on, country newspapers graduated to small web-fed presses such as the Cox. Nevertheless, some drum-cylinder presses survived, as did this C. W. Potter, Jr. which was printing the Cucamonga Times in California as recently as 1964.

**25 x 38 COUNTRY NEWSPAPER PRESS, CIRCA 1887**

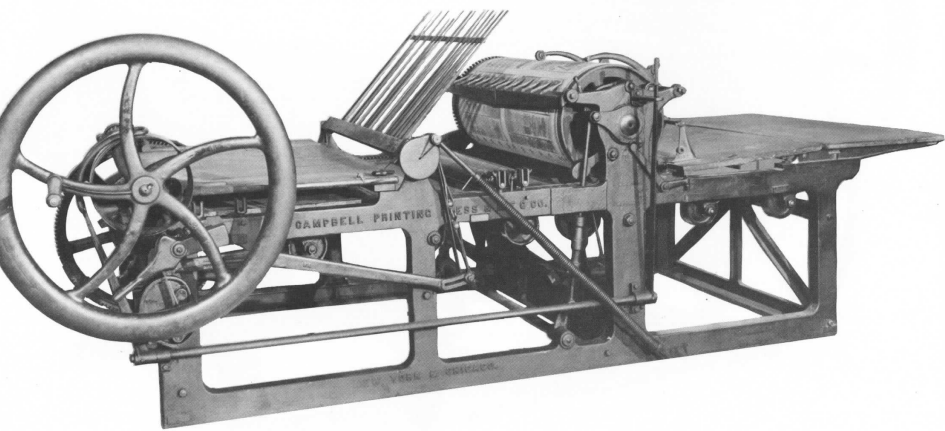
This press was nicknamed "Grasshopper" because the cylinder, traveling the length of the bed, is activated by two slotted bars which swing back and forth resembling the legs of a grasshopper. The press is extremely light-weight, considering the size sheet it can handle. Seven, eight, and nine column presses invented by Enoch Prouty were manufactured in the eighties by the Wisconsin firm of D. G. Walker & Company, who continued this style press, with modifications, into the early twentieth century.

Enoch Prouty was a Baptist minister desirous of printing a temperance paper and, not being able to afford any presses available, he designed his own. Prouty had his press manufactured and, because of its modest price, light weight, and ready source of power (hand), it was adopted by country printers.

The cylinder picks up the sheet from the feed-board, travels the length of the bed, releases the sheet, and returns to the feed-board similarly to the action of a modern proofpress. The throw-off is in the bed which descends before the return of the cylinder. Impression is effected by wheels locked underneath the bearers.



*9 feet long*



13 feet long

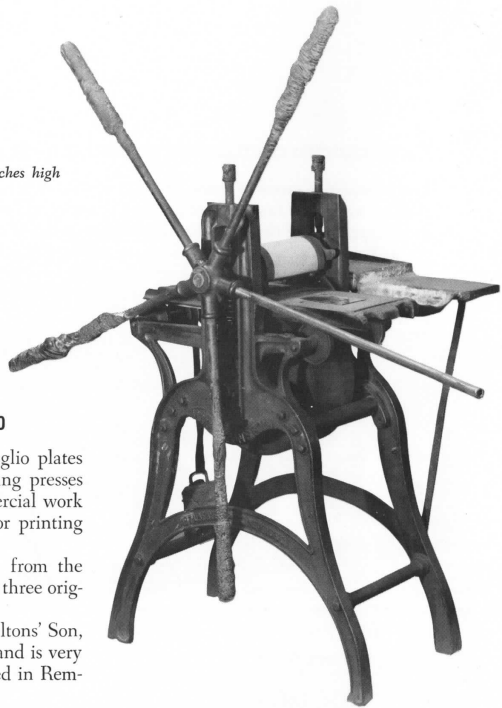
### 33 x 48 COUNTRY OSCILLATING NEWSPAPER PRESS, CIRCA 1865

The Campbell Company made a variety of presses into the twentieth century including one of the first web-fed country presses to print from flat type forms.

In the operation of this early hand cranked Campbell, the sheet is fed to grippers on the bottom of the cylinder and moves under the cylinder for printing. When the complete form is printed, the cylinder is thrown off impression, and a quadrant gear reverses its rotation. The sheet, still held by the grippers, is pushed onto the fly which delivers it printed side down.

This press has been printing the same Kansas country-newspaper since 1871, when it is believed to have been purchased used. In 1970 the Howard Courant Citizen gave up its faithful Campbell and changed, somewhat abruptly, to the offset process.

54 inches high



**9 x 10 COPPERPLATE PRESS, CIRCA 1890**

This kind of press was used to print intaglio plates such as wedding announcements. Engraving presses of this style are not much used for commercial work today and have been adopted by artists for printing etchings.

An accumulation of dried ink and alum from the hand of the pressman is in evidence on the three original handles.

This press was manufactured by M. M. Keltons' Son, New York, in the late nineteenth century and is very little different from copperplate presses used in Rembrandt's time.

59 inches high



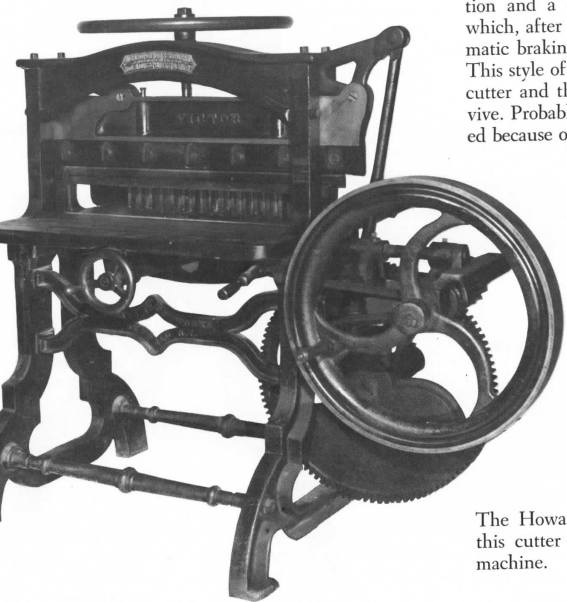
**18 x 22 LITHOGRAPHIC HAND PRESS, CIRCA 1880**

Manufactured by D. & J. Greig, Edinburg, this press embodies all the principles of a typical scraper-style press. Early lithograph presses attempted to employ a cylinder for impression such as had been in long use on copperplate presses, but these early cylinder presses had a tendency to break the stones. The scraper press is a continuation of Senefelder's earliest attempts at lithography. By 1850 the lithographic hand press was perfected, and all innovative efforts were devoted to the development of powered lithography. Today hand presses survive as artist's tools for fine lithography.

**32" FLY-WHEEL PAPER CUTTER, CIRCA 1895**

This cutter uses a hand cranked flywheel instead of the customary lever. The hand wheel is put into motion and a clutch is engaged activating the blade which, after effecting one cut, is stopped by an automatic braking mechanism.

This style of cutter represents a cross between a lever cutter and the full power cutter, both of which survive. Probably this cutter and others of its type expired because of their hybrid nature.



*59 inches high*

The Howard Iron Works of Buffalo manufactured this cutter which was advertised as a "low price" machine.



**LINOWRITER, CIRCA 1920**

This typewriter with a linotype keyboard arrangement was sold by the Empire Typefoundry, Buffalo. Very few of these machines were made and today their exact purpose is obscure. Possibly this kind of typewriter was intended for the small newspaper office where the editorial staff also operated the linotype.

*9½ inches high*



62 inches high

#### **UNITYPE TYPESETTING MACHINE, CIRCA 1900**

Developed by Joseph Thorne around 1887, this machine was marketed with successive improvements under the names: Thorne, Simplex, and Unitype. From 1894 until its demise around 1906, the American Type Foundry Company owned Unitype, undoubtedly to support their declining foundry type market. The Thorne, Simplex and Unitype were the only machines to actually set and distribute foundry type which achieved a large measure of popularity. Around the turn of the century these machines competed successfully with the Linotype and Monotype. It has been estimated that 2000 of these machines were in operation in the United States and Canada.

Operation of the keyboard releases individual foundry type contained in vertical channels of the cylindrical magazine. The type is assembled in a galley and justified by hand. Distribution is effected by key-notches cut or cast into the type. Although advertised as a "one-man typesetter," it was more efficiently operated by two men—one operating the keyboard and the other justifying. In 1904, when new speed records for typesetting machines were novel, the Inland Printer announced that at the Paducah Sun, Kentucky, two men operating a Simplex set 315,700 ems of 8 point type in one forty-eight hour week. Competition from the Linotype and specifically from the inexpensive Linotype Junior finally closed the doors of the Unitype Company. The Unitype is rare today because machines taken in trade by competitors were immediately destroyed.

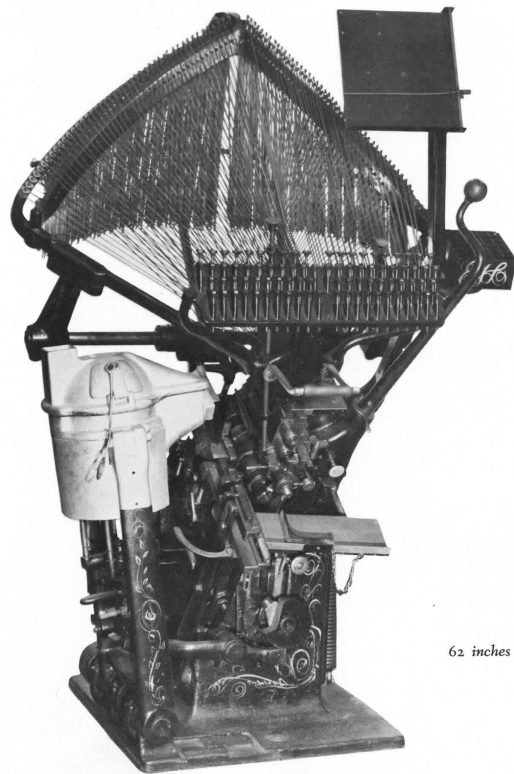


### **TYPOGRAPH LINECASTING MACHINE, CIRCA 1890**

The Typograph machine was developed during the same period as Mergenthaler's and is technically a linotype in that it casts a type slug. The matrices are suspended on wires, and when activated by the keyboard, slide by gravity into casting position. Circular wedge justifiers spread the line before casting. After the slug is cast the mold opens on three sides, eliminating the trimming operation. Manual tilting of the matrix frame causes the matrices to distribute. Each line must be distributed before assembling another.

John R. Rogers' Typograph was introduced in 1890 and because of its simplicity and light weight was considered a fine machine. The Rogers Typograph was involved in a patent infringement battle, as were many new fledged typesetting machines of this period. An injunction was secured against its manufacture in the United States, and only a year after the debut of the Typograph, Rogers' company and its important patent rights to the double-wedge justifier were sold to Mergenthaler. The Typograph was a direct predecessor of the Linotype Junior, introduced by Mergenthaler in 1902.

The bizarre, antiquated appearance of this machine belies the fact that, in a slightly streamlined version, it is still being manufactured in Germany and can be had equipped with such up-to-date type faces as Helvetica.



62 inches high

### MODEL 1 LINOTYPE LINECASTING MACHINE, CIRCA 1894

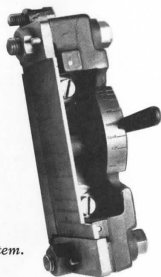
This was the first of Mergenthaler's machines to take on the characteristic linotype appearance continued to this day. The largest type this machine can set is 11 point as the magazine is 2 inches narrower at the escapements than the standard width adopted in 1902.

This model, serial number 160, is one of 225 machines made to use Mergenthaler's "step justification" spaceband and thereby circumvent patents on the double wedge band then in litigation. J. D. Schuckers was finally awarded the patent rights to the double wedge justification system after long litigation. The Mergenthaler Company later acquired these rights for \$416,000 and resumed the double wedge system.

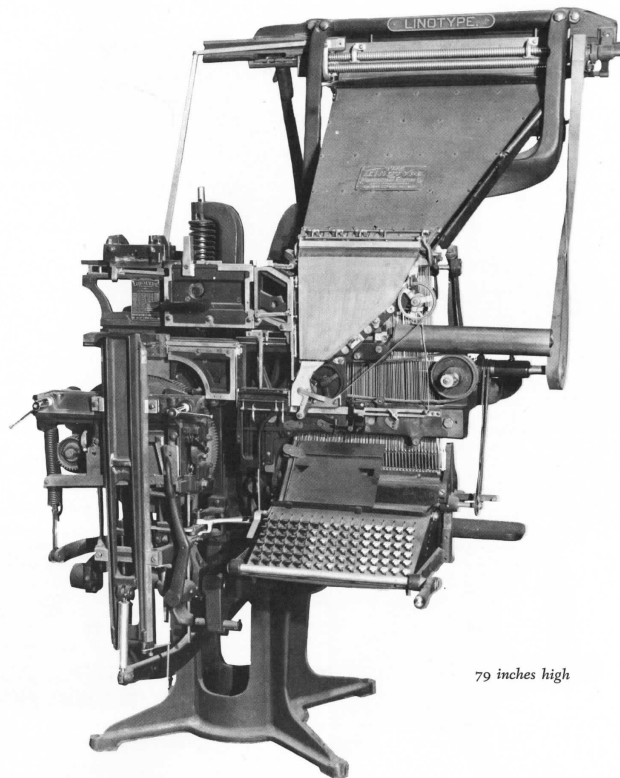
There is a large complement of brass parts on this machine, and it differs from later models particularly in the pump spring and the line delivery air cylinder seen protruding from under the assembler belt. The knife block adjustments are designated by name, from *Ruby* to *Small Pica*.



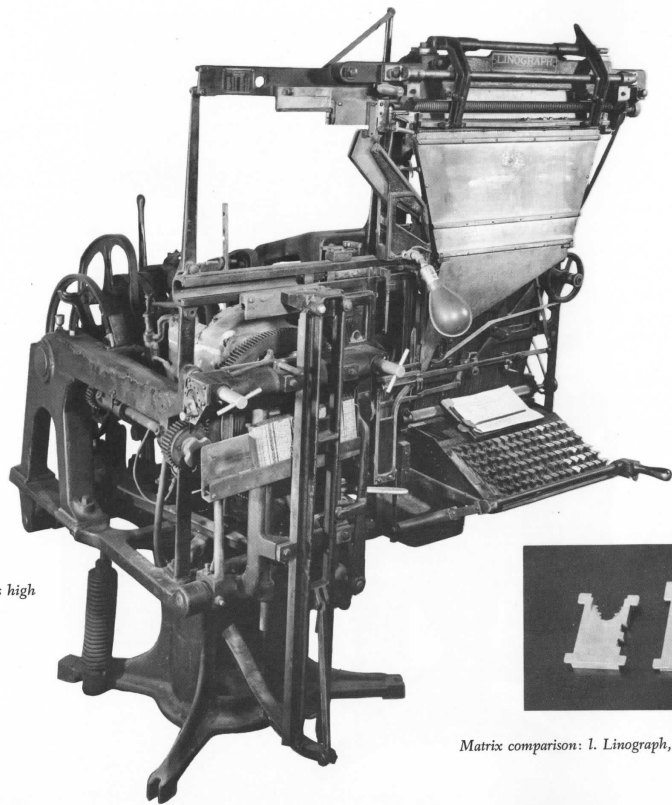
Name-plate showing serial number.



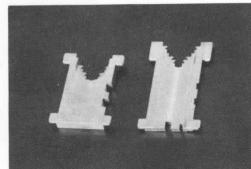
Knife block, pre point system.



79 inches high



71 inches high



Matrix comparison: l. Linograph, r. Linotype.

#### MODEL 1 LINOGRAPH LINECASTING MACHINE, CIRCA 1912

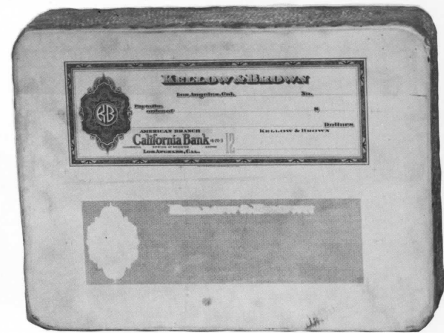
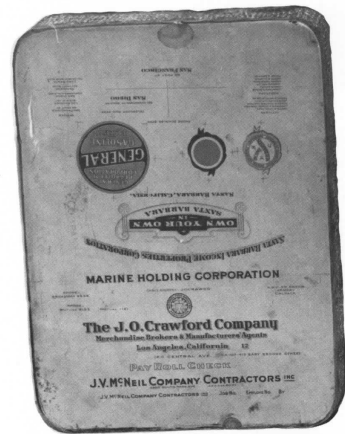
In 1910, in anticipation of the imminent expiration of the Mergenthaler patents, Hans Petersen and his two brothers began to design an inexpensive line-casting machine using all the important principles of the Linotype. The machine was introduced in 1912 as the "Linograph" and because it cost about half as much as a Model 5 Linotype it quickly became a favorite of country printers. The serial number of this machine is 32.

Although the Linograph functions on the same principles as the Linotype and Intertype, it differs in construction. Petersen's Linograph has a vertical magazine and a single elevator not unlike Mergenthaler's early "Blower" machine. When a distributor jam happens, the operator merely stands up, and the bar, screws and distributor box are at eye level and are easily accessible. Linograph matrices were unique until 1923 when the machine was converted to use Linotype and Intertype matrices. The early matrices were somewhat smaller and had the advantage of having their faces deep-set which eliminated the need for routing slugs. The Linograph improved its flexibility to the point where it could produce sixty point type and one model had a twelve magazine capacity.

Hans Petersen, inventor and leader of the company, died in 1924, but the business continued, and in 1938 the new model 50 was received enthusiastically. But a number of factors, including under-capitalization and World War II, led to the sale of the Company in 1944 to the Intertype Corporation.



Type Punches, French, nineteenth century. Largest size about 144 point.



Lithograph stones, twentieth century.



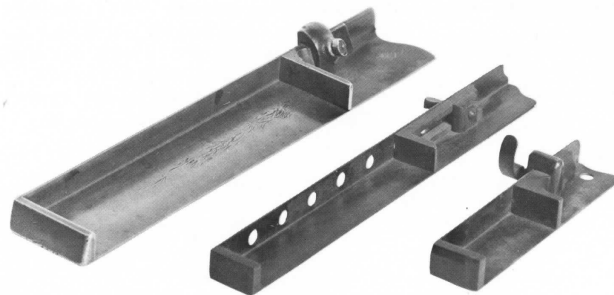
Case Duster, wood, nineteenth century. (To eradicate type lice.)



Bookbinders' gold stamping tools, nineteenth century.



Newspaper composition sticks, 13 pica. (top to bot.) Brass, cast iron, and wood and metal. Nineteenth century.



Job composition sticks, nineteenth and early twentieth century.

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