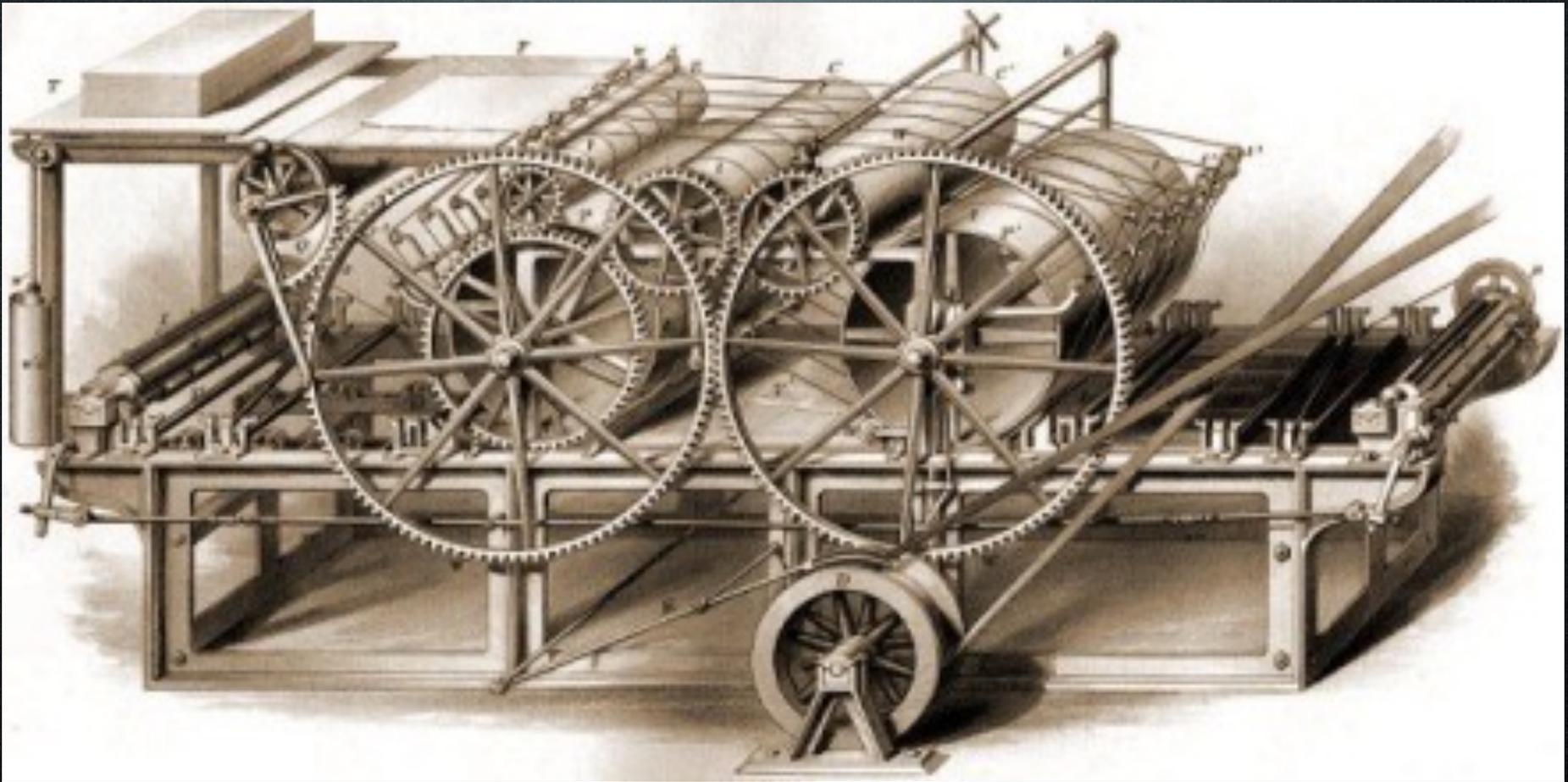


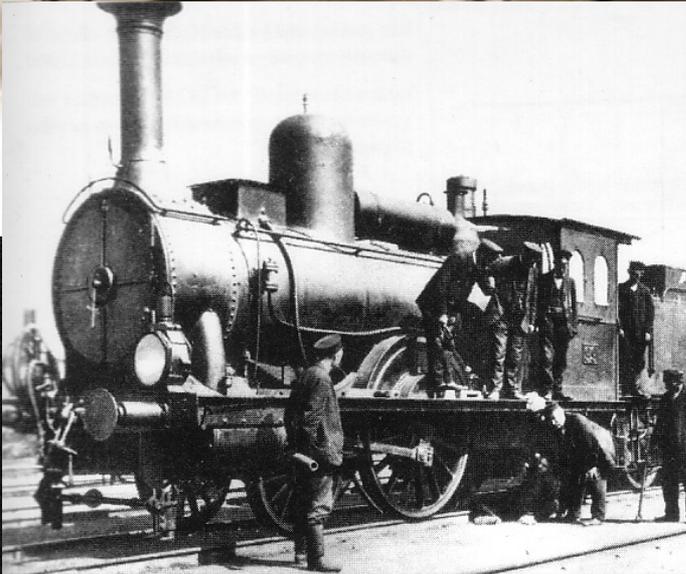
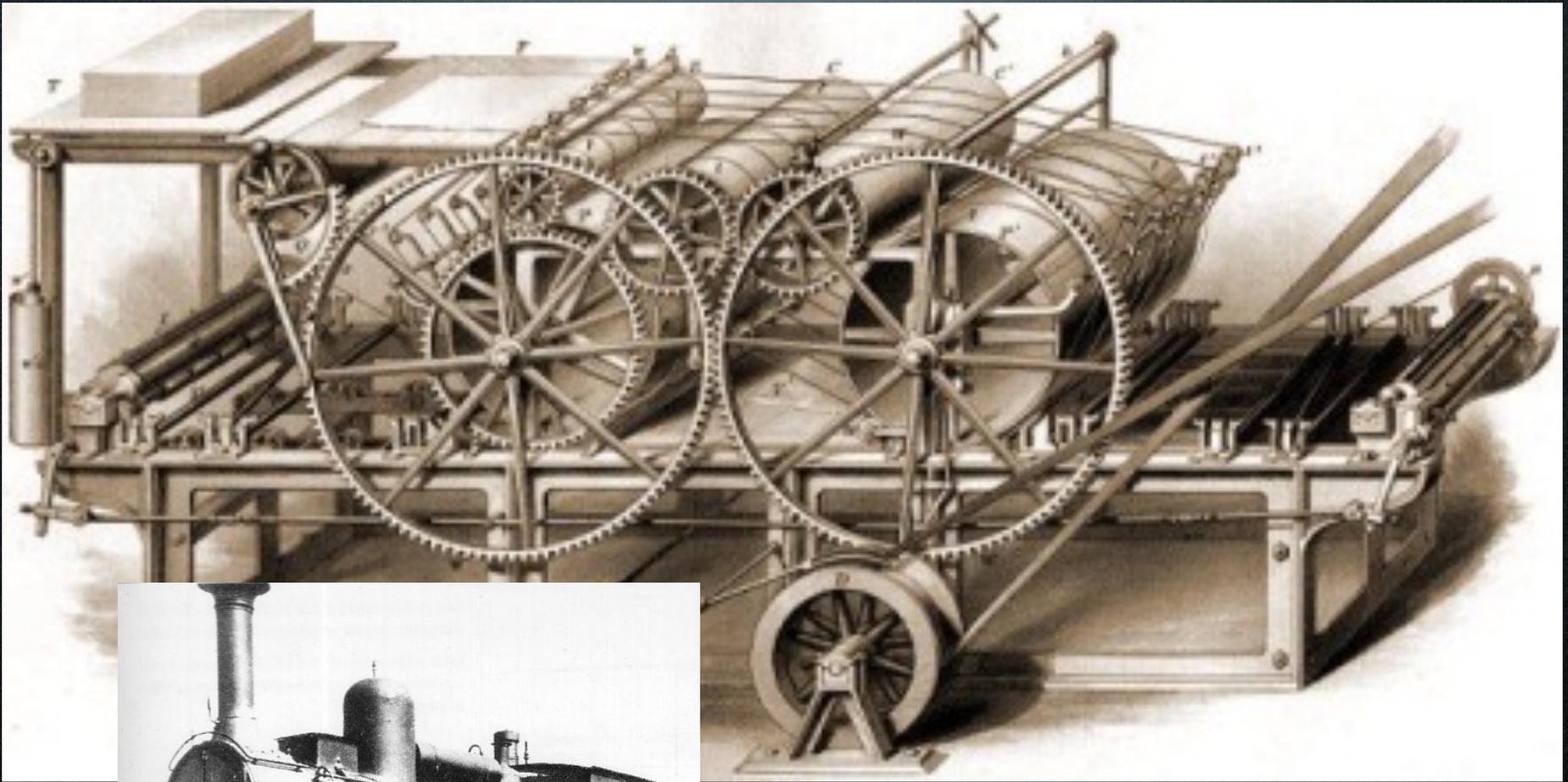
GRAPHIC DESIGN & THE INDUSTRIAL REVOLUTION





The Industrial Revolution

From the 18th to the 19th century, major changes in agriculture, manufacturing, mining, and transportation brought change first England, and then Europe, North America and eventually the world.



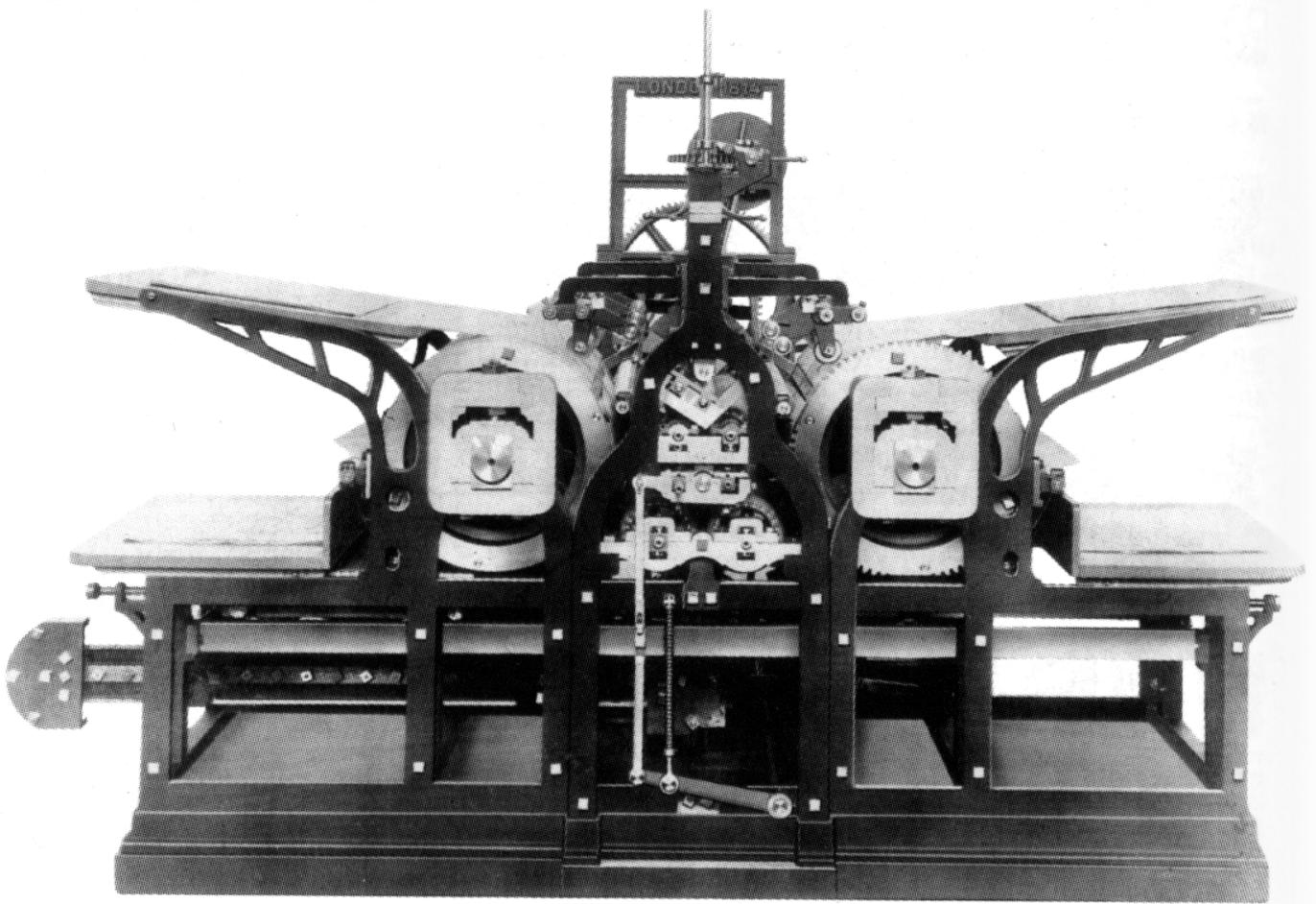
The Industrial Revolution

The steam engine was developed to pump water from mines in England, and later revolutionized transportation with the locomotive engine.



Iron making

Methods of smelting ore led to the development of manufacturing machines capable of ever-increasing production. The original hand press built from wood was replaced by the more durable iron press in 1800.



Steam power –
The steam engine was applied to power other types of machines. In 1814, Friedrich Koenig developed the first steam-powered printing press.



The Industrial Revolution

People left the rural countryside for jobs manufacturing goods in the cities. The period saw growth in commercial wealth, a growing middle class, and the rise of industrialists and businessmen over the ruling nobility and landowners.



The Industrial Revolution

But the bulk of the population suffered miserable living conditions. Cities were crowded, there was air pollution, urban filth, bank failures, unemployment and low wages.



The Industrial Revolution

Child labor was commonplace. Children worked in the mechanized textile mills requiring little strength or skills to perform the work at 10% - 20% of an adult's already low wages.



The Industrial Revolution

Children as young as four worked in the mills, picking up spools and material that fell under machinery. Workers in factories were exposed to chemicals, unsafe buildings, burns and explosions. Orphans were sold into “pauper apprenticeships” to pay their wages.



The Industrial Revolution

The Industrial Revolution came a little later in Continental Europe where trade unions and socialist reforms were firmly in place. Here is an example of worker housing provided in France from 1838-1853.

SLAB SERIF / EGYPTIAN

BUSINESS
PREMISES,
SITUATE IN THE BEST PART OF THE
Corn Market Street, Oxford
To be Sold by Auction
BY MESSRS.
T. MALLAM & SON
On the Premises, on **FRIDAY, the 21st of OCTOBER, 1853,** at 5 o'Clock
By direction of the Mortgagees in Possession,—ALL THOSE VALUABLE
FREEHOLD BUSINESS PREMISES
For many years occupied by the late Mr. Stacey, Engineer, &c. and for the last 10 years by Messrs. Hotel de Mr. G. Driskiller.

As in many other aspects of the Industrial Revolution, England played a pivotal role in the new design of typefaces. Designers created fatter letters, bolder typefaces and much larger type was carved from blocks of wood.

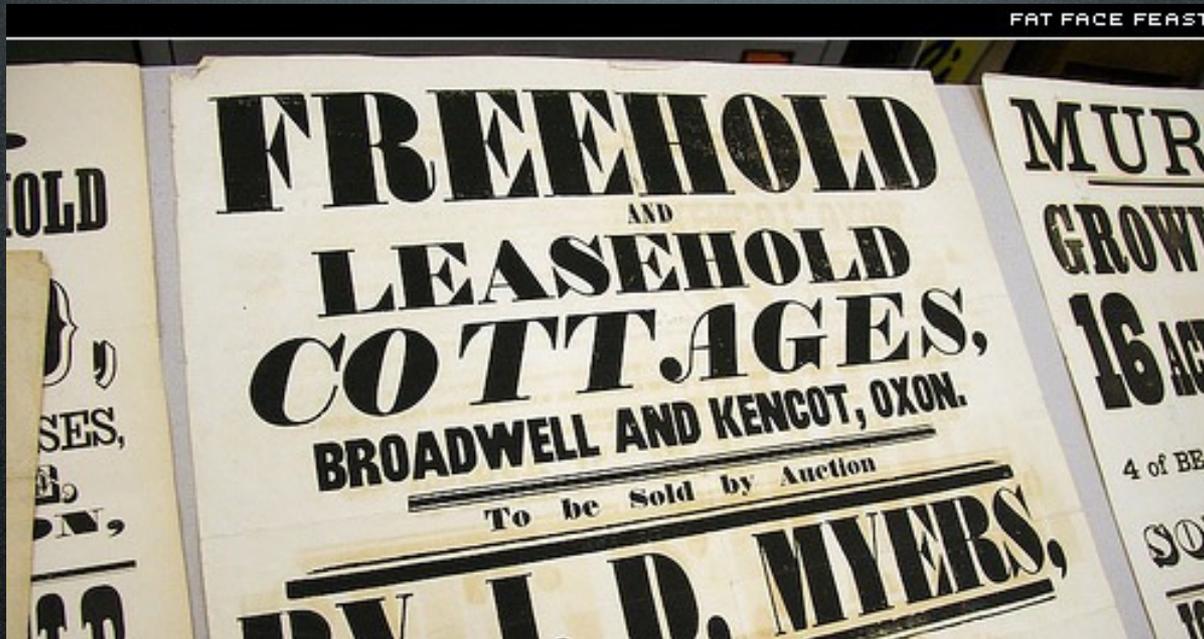
FAT FACE

NORMANDE

FAT FACE

BODONI ULTRA BOLD

Robert Thorne developed a popular
line of **fat-face** types.



Fat Faces were popular and typesetters would often combine a variety of fonts and weights to gain attention.

**ABCDEFGHIJ
KLMNOPQR
STUVWXYZ&,;.-
£1234567890**

The 1800s gave birth to the *slab serif*: also known as **Antique**, **Egyptian**, **Square Serif** and **Mechanical** – words associated with the industrialized age and the popularization with all things Egypt.

BUSINESS
PREMISES,
SITUATE IN THE BEST PART OF THE
Corn Market Street, Oxford
To be Sold by Auction
BY MESSRS.
T. MALLAM & SON
On the Premises, on **FRIDAY, the 21st of OCTOBER, 1853,** at 5 o'Clock
By direction of the Mortgagees in Possession,—ALL THOSE VALUABLE
FREEHOLD BUSINESS PREMISES
For many years occupied by the late Messrs. ...

Slab-serifs mixed in with **fat faces** and **textura** type.



Tuscan type played
around with
ornamental serifs in
varying widths.



Antique Tuscan
simplified the serifs
but added more
curves and points.

The first sans serif



William Caslon IV was credited for developing the first sans-serif typeface in 1816. His two-line **English Egyptian** was so-called because it resembled the even-width strokes of an Egyptian slab-serif font *without* the serifs.

CANON ITALIC OPEN.

CUMBERLAND.

CANON ORNAMENTED.

TYPOGRAPHY.

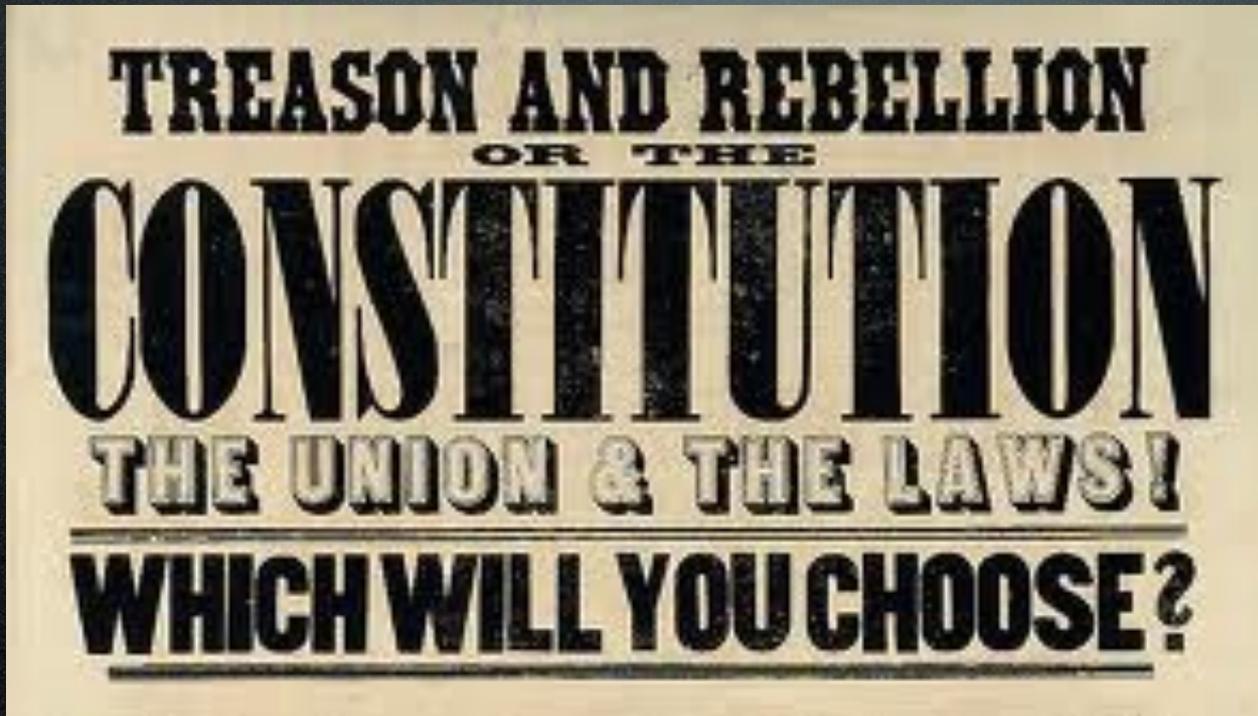
TWO LINES ENGLISH EGYPTIAN.

W CASLON JUNR LETTERFOUNDER

TWO LINES ENGLISH OPEN.

SALISBURY SQUARE.

William Caslon IV's two-line **English Egyptian** became a major typographical milestone that later influenced graphic design throughout the 20th century.



San serifs and *three-dimensional* decorative fonts became a part of the Industrial Revolution's legacy during the mid 1800s.

FOR

CALIFORNIA!

DIRECT

EXTRAORDINARY INDUCEMENTS!!

THIRTY-FIVE DAYS TO THE GOLD REGIONS!

The "California Steam Navigation Co."
Will dispatch their first vessel from New-York, the **NEW** and **SPLENDID**

STEAMSHIP!

NICARAGUA

DAVID JERROLD, Master, positively

On FRIDAY, MARCH 23d, 1849,
Via the River St. Juan and Lake Nicaragua, across the Isthmus of Leon.

Capt. BRONSON, of the U. S. Topographical Engineers.

200 JACK ASSES!

The Quickest, Safest and Cheapest!!

Price of Passage Through Ninety Dollars!
To be paid in SPECIE, Dimes and half Dimes, taken only.

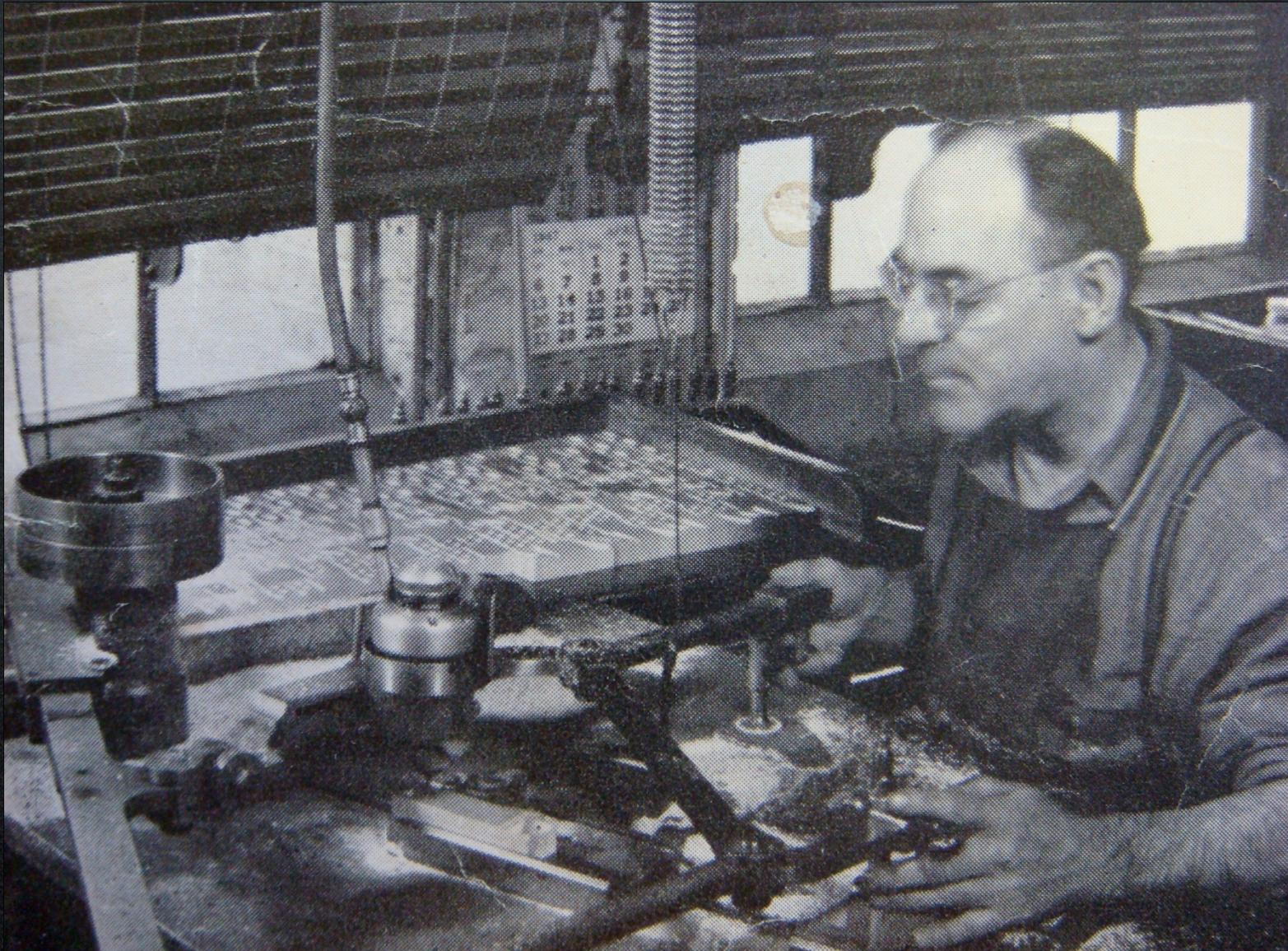
For further particulars apply on board, at the foot of South Street, E. H. or to the undersigned Agents for the Company. Applications by mail, to meet attention, must be *post paid*, addressed to the Company's Agents.
HOBSON, BROTHERS & Co., 127 Wall Street, (opposite the Bull-head.)

Display type
Customers wanted typefaces that stood out from the crowd. Thus was born the *display face* – huge type sizes, fancy letters used for short bursts of copy on such printings as posters, handbills and signs.



Wood type

These huge display fonts were carved from wood. A router was invented to economically mass produce new and ever-changing typefaces.



Wood type

Combined with a pantograph for tracing designs to scale, the *router* carved a wider range of sizes and styles from wood.

FULL MOON.

ST. MICHAEL'S
TEMPERANCE BAND!

Prof. V. Yeager, Leader, will give a

**GRAND
MOONLIGHT**

EXCURSION

On the Steamer

BELLE!

To Osbrook and Watch Hill,
On Saturday Evening, July 17th,

Leaving Wharf at 7½ o'clock. Returning to Westery
at 10½ o'clock. Kenneth will be at Osbrook.

TICKETS, - FORTY CENTS.

G. B. & J. H. Utter, Steam Printers, Westery, R. I.

The wood-type poster

Poster designs went crazy. Fonts were mixed together to build words in condensed and extended widths. Important words got the most emphasis.

HISTORICAL

Administration Program



Authentic Museum Exhibits

FEATS OF STRENGTH

Keeping Your Eyes Open During Three Hour Long Lectures

AMAZING HOURS

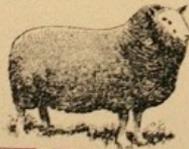
Sleeping in Booth Library

Thrills, Chills & Excitement

Enlightening Architecture Tours, Gold Showers, Cheap Motels

Absolute Terror

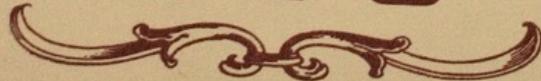
- COURTHOUSE BASEMENT
- GRAVESTONE RUBBINGS
- DEC ARTS FINAL



Shocking Scenes

- STUDENT HOUSING
- AMATEUR BROOMMAKING
- THE LINCOLN STATUE

20 YEARS
E I U



The wood-type poster

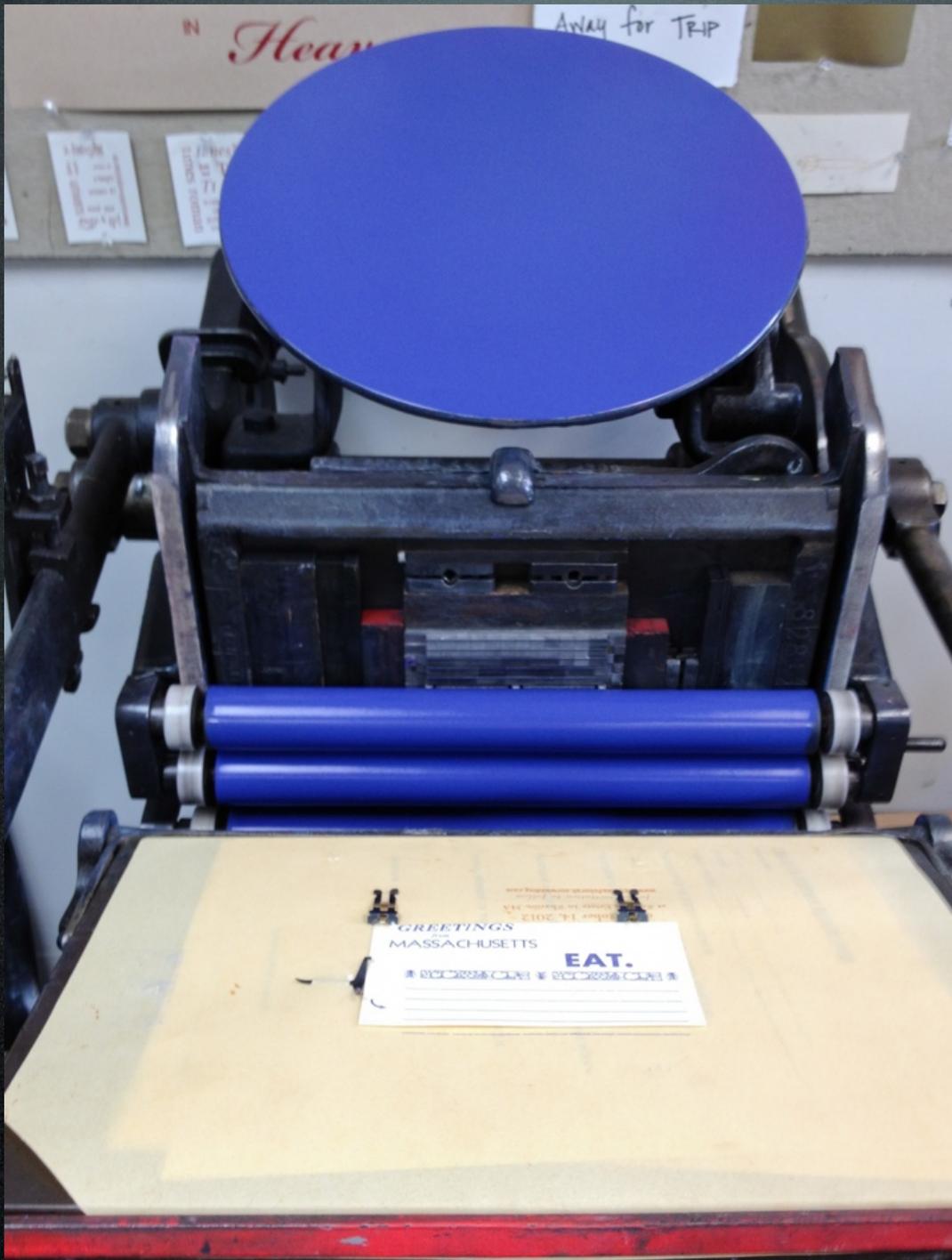
This 1859 poster combines *Egyptian* slab serifs, decorative type, and *Antique Tuscan* with pointed slab serifs.

Small ornaments and wood engraved illustrations would be added. Colors were usually limited to one or two to hold down the cost.



The wood-type poster

Though mechanized, wood type printings were done by *letterpress*: typography was locked in frames and imprinted on paper a sheet at a time.

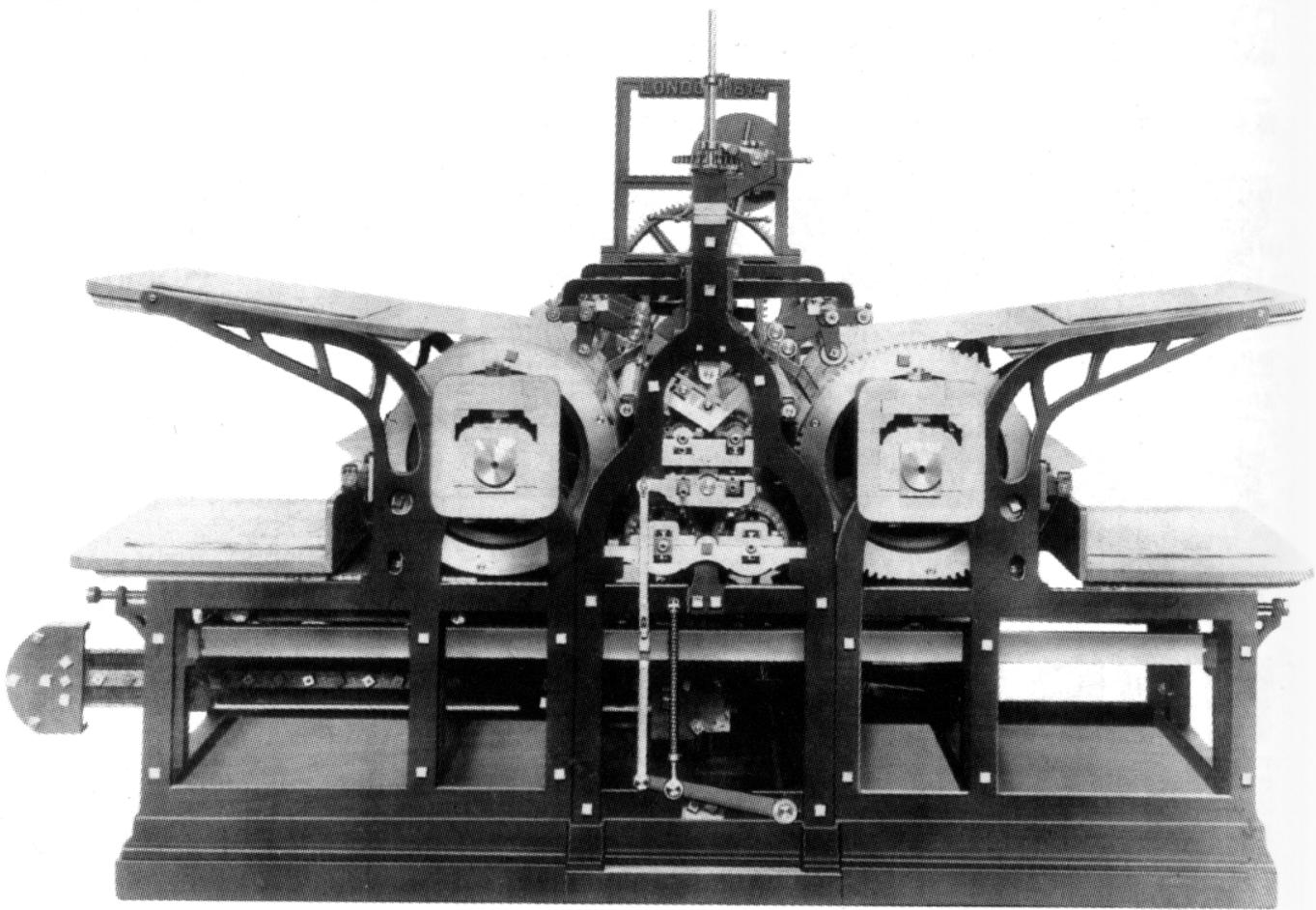


Letterpress

Ink was dabbed onto the round disc at top. The rollers came up and were evenly coated with ink and transferred to the metal (or wood) frame with type.

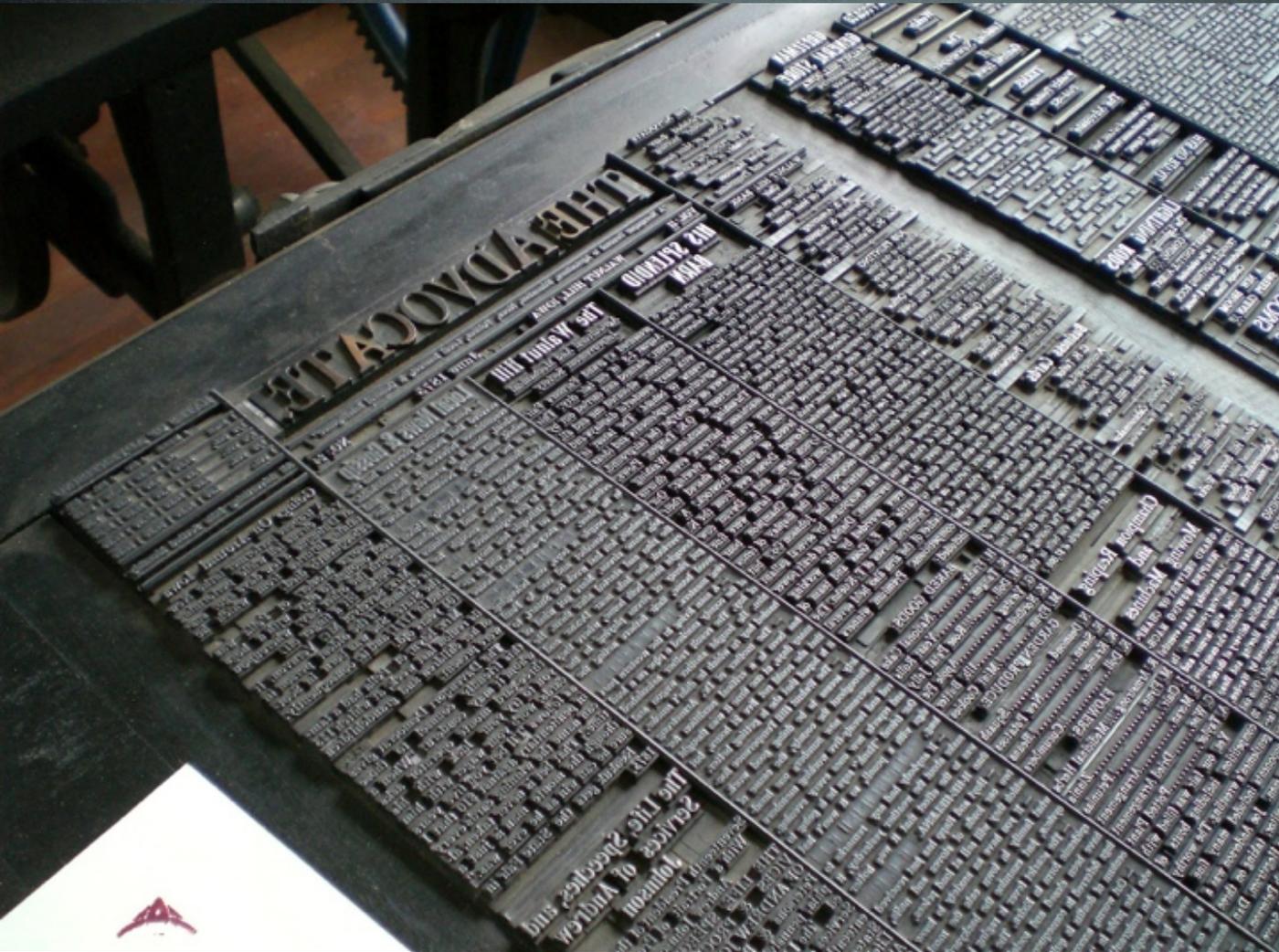
Paper was fixed to the platen (plate) and raised to press against the type.

[See the video here](#)



Letterpress

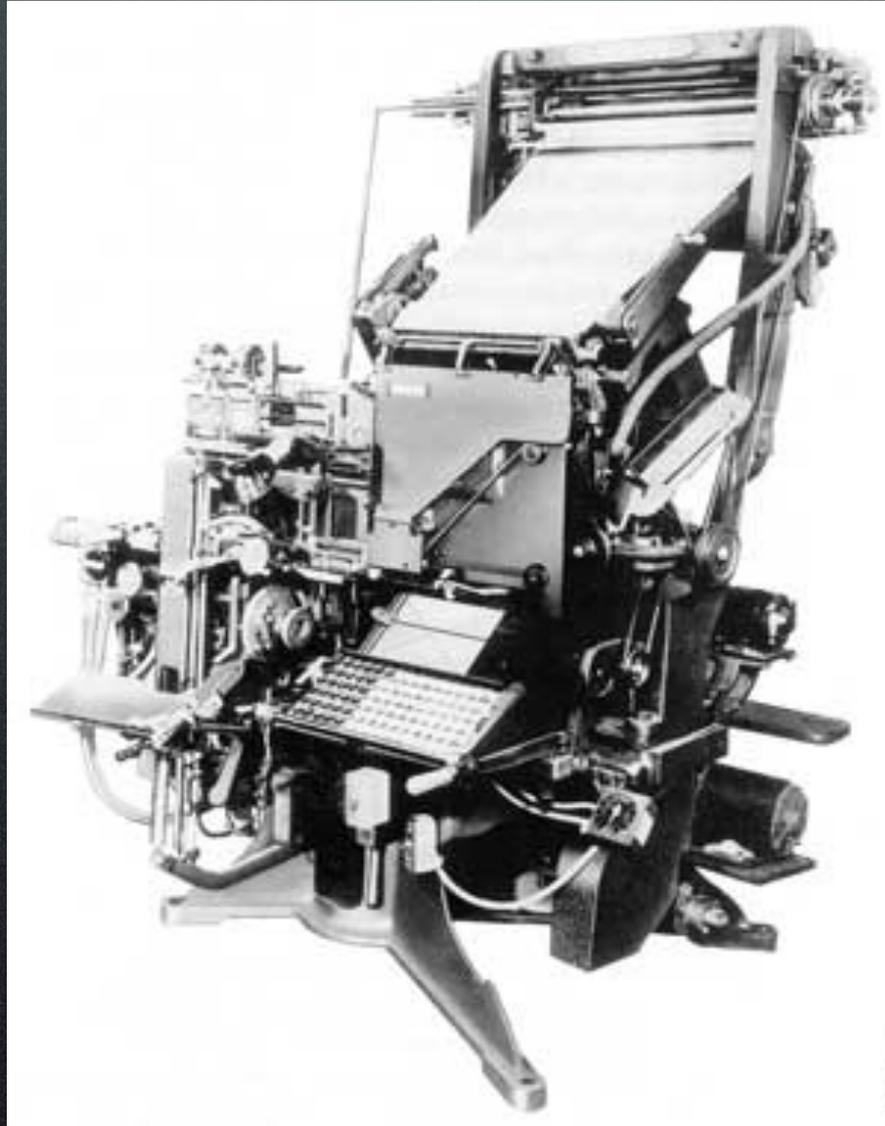
By 1814, the *Times of London* commissioned Koenig's double cylinder steam-powered press which was capable of printing 1,100 impressions an hour.



Letterpress

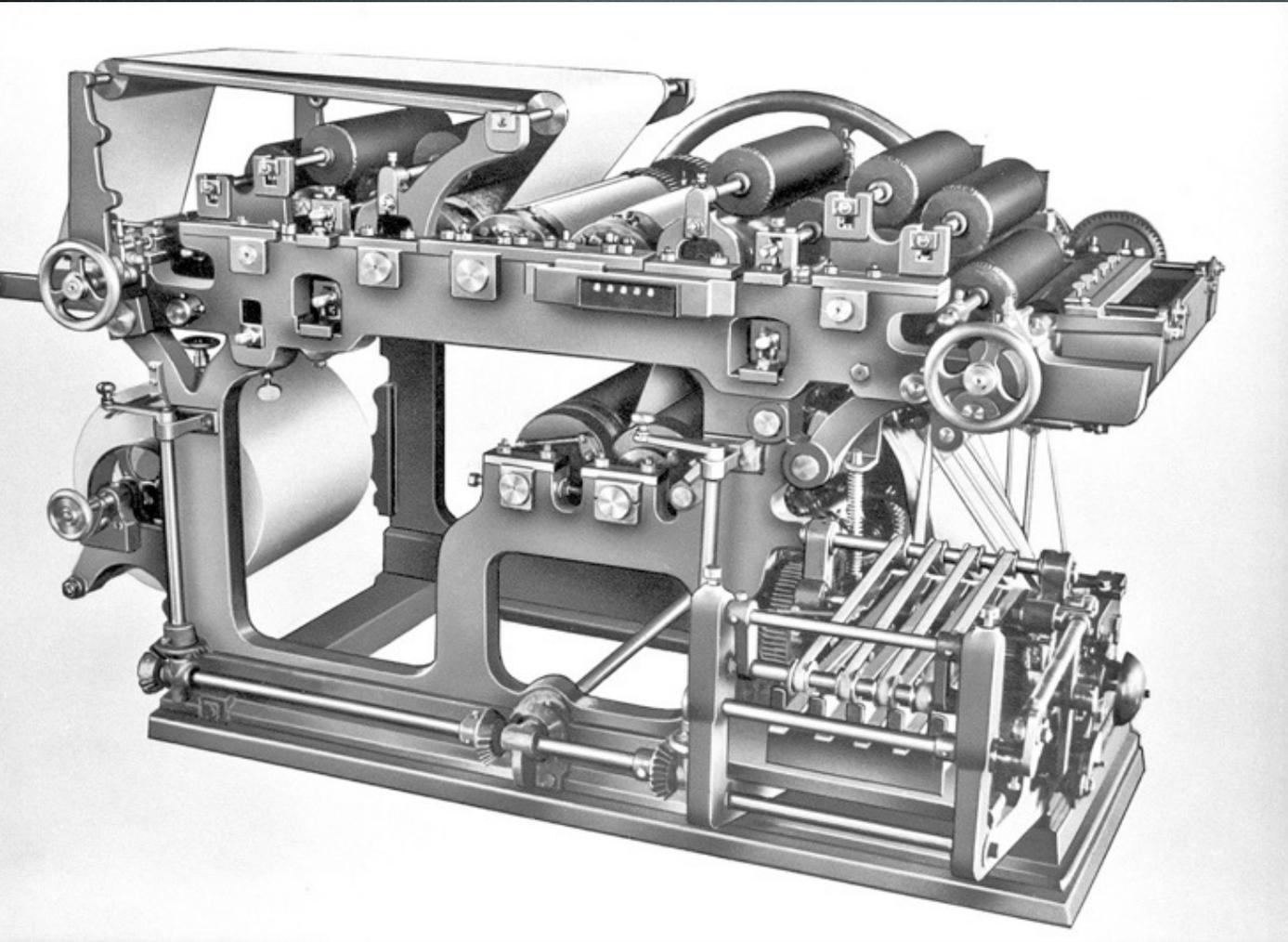
But type still had to be set by hand. The most pages any newspaper had was eight.





The Linotype machine, 1886

Ottmar Mergenthaler perfected a machine that automatically typeset copy a line at a time with the tap of a keyboard.



**The first
newspaper press,
1889**

The massive expansion of newspaper and popular book publishing reinforced rising literacy and demands for mass political participation.

The invention of photography



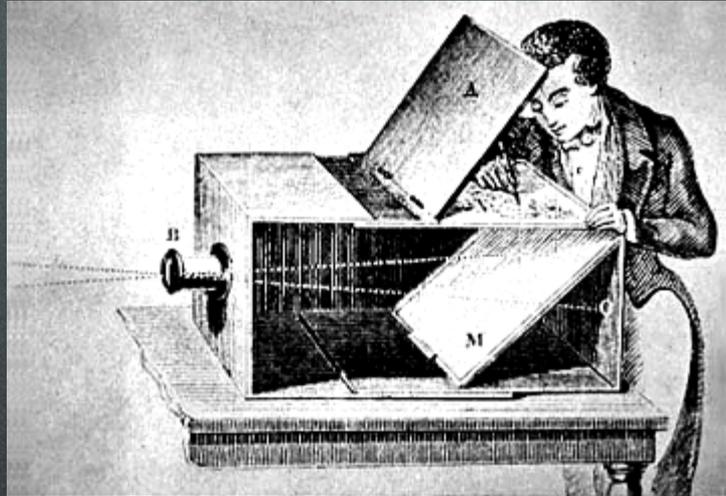
French printer and inventor, Joseph Niépce was looking for another way to make printing plates directly from drawings and skip the engraving part.

He contact-printed a drawing which had been oiled to transparency and exposed it to sunlight. A pewter plate was coated in light-sensitive asphalt called *bitumen of Judea* that hardens when exposed to sunlight.



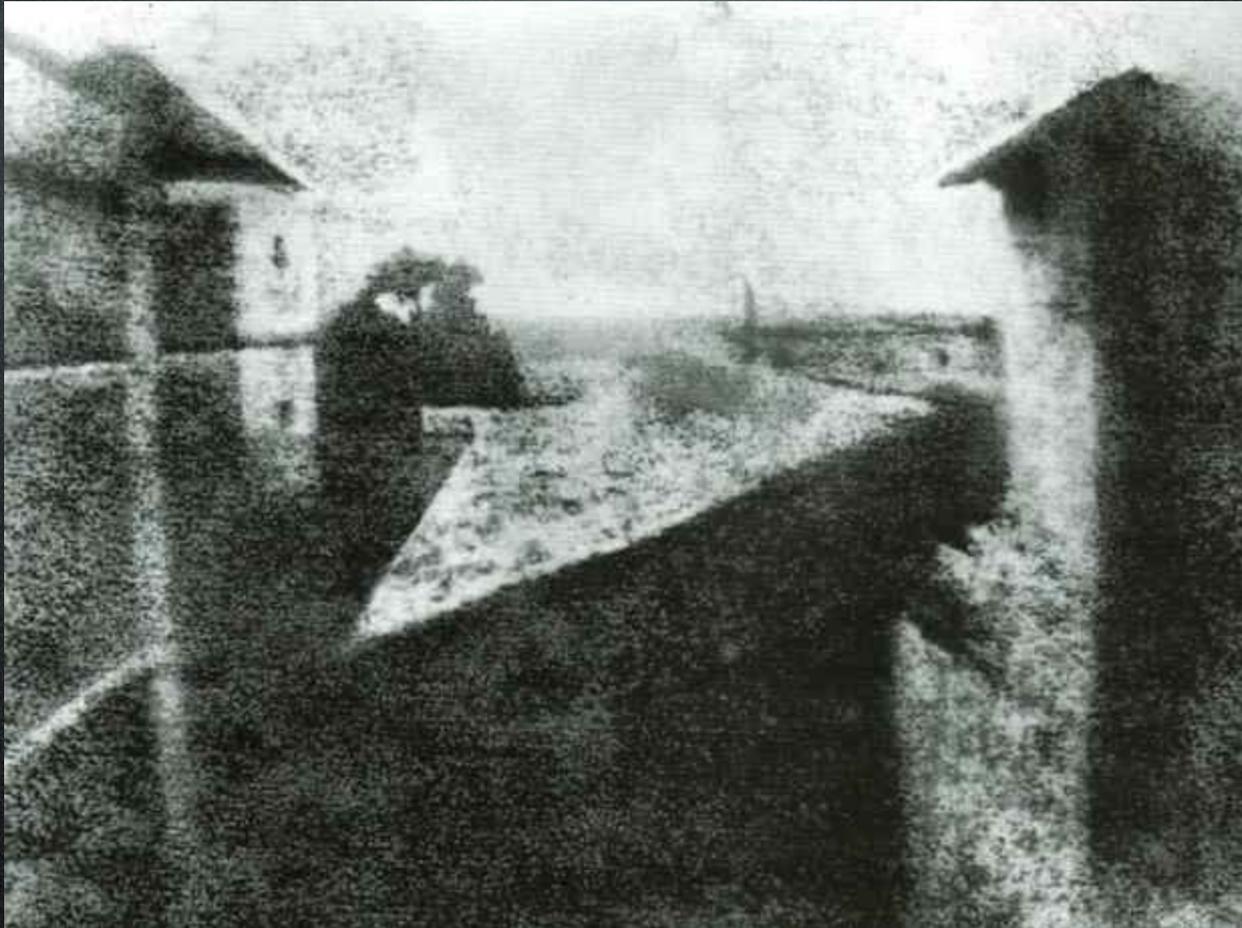
The pewter plate was washed with lavender oil to remove the parts not hardened and etched with acid to reveal an incised copy of the original. He called the process *heliogravure* –sun engraving. This was the beginning of **photo-engraving**.

The first photograph



He put this same pewter plate into the back of his *camera obscura* and voila! He captured the very first *photograph from nature*.

The first photograph from nature



The view from his *camera obscura* pointed out his window over the rooftops.



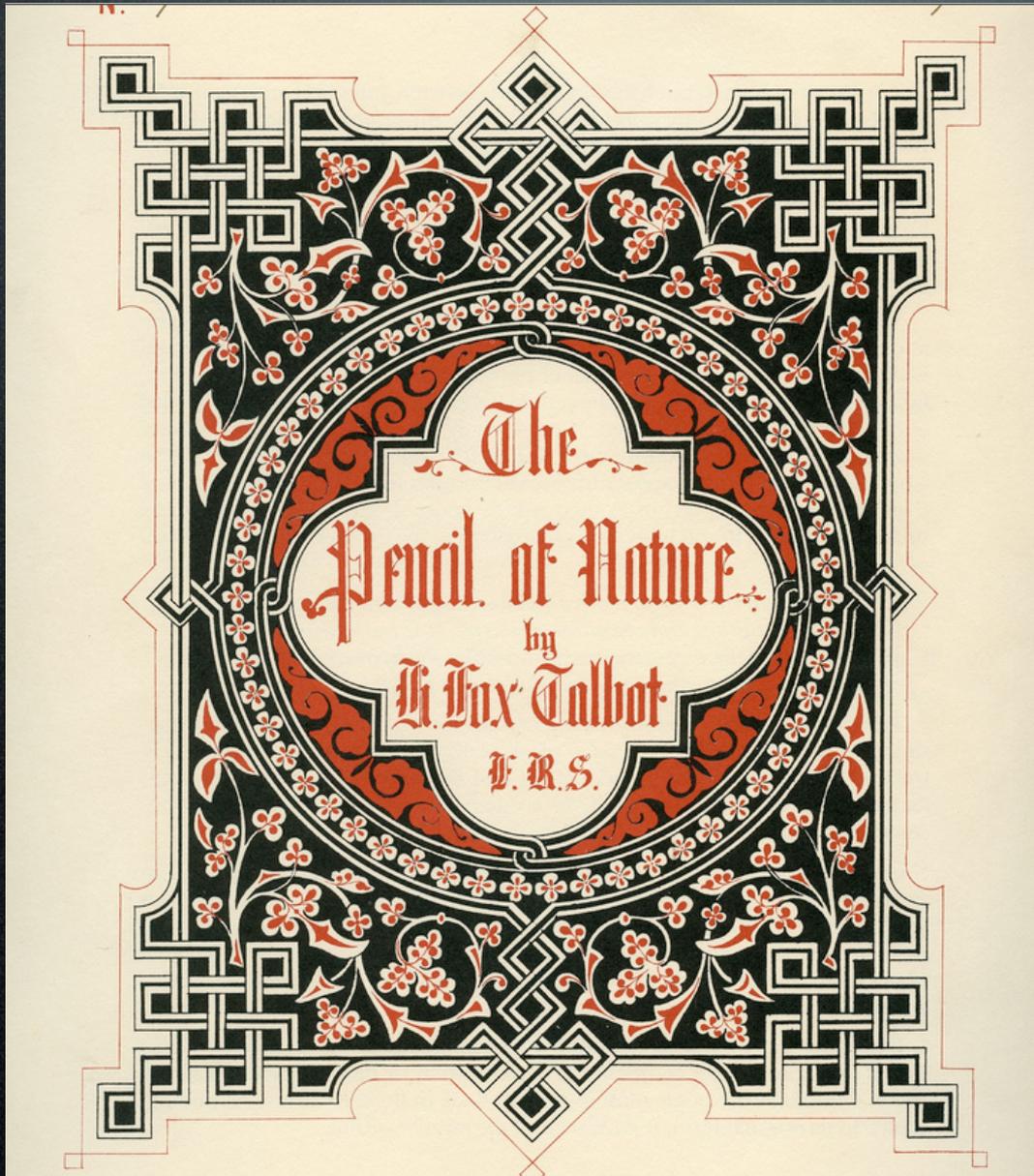
The daguerreotype

Louis Daguerre perfected the technique in 1839 using longer exposures of light to produce greater detail. This exposure took 10 minutes.



The Victorian era

A time of strong moral and religious beliefs, proper social etiquette, patriotism and sentimentality.



The Victorian era

It was a time of aesthetic confusion that led to a number of contradictory design approaches. The title page for the book *The Pencil of Nature* shows the fondness for gothic type mixed with Celtic interlaces and baroque plant designs.



PLATE VII.

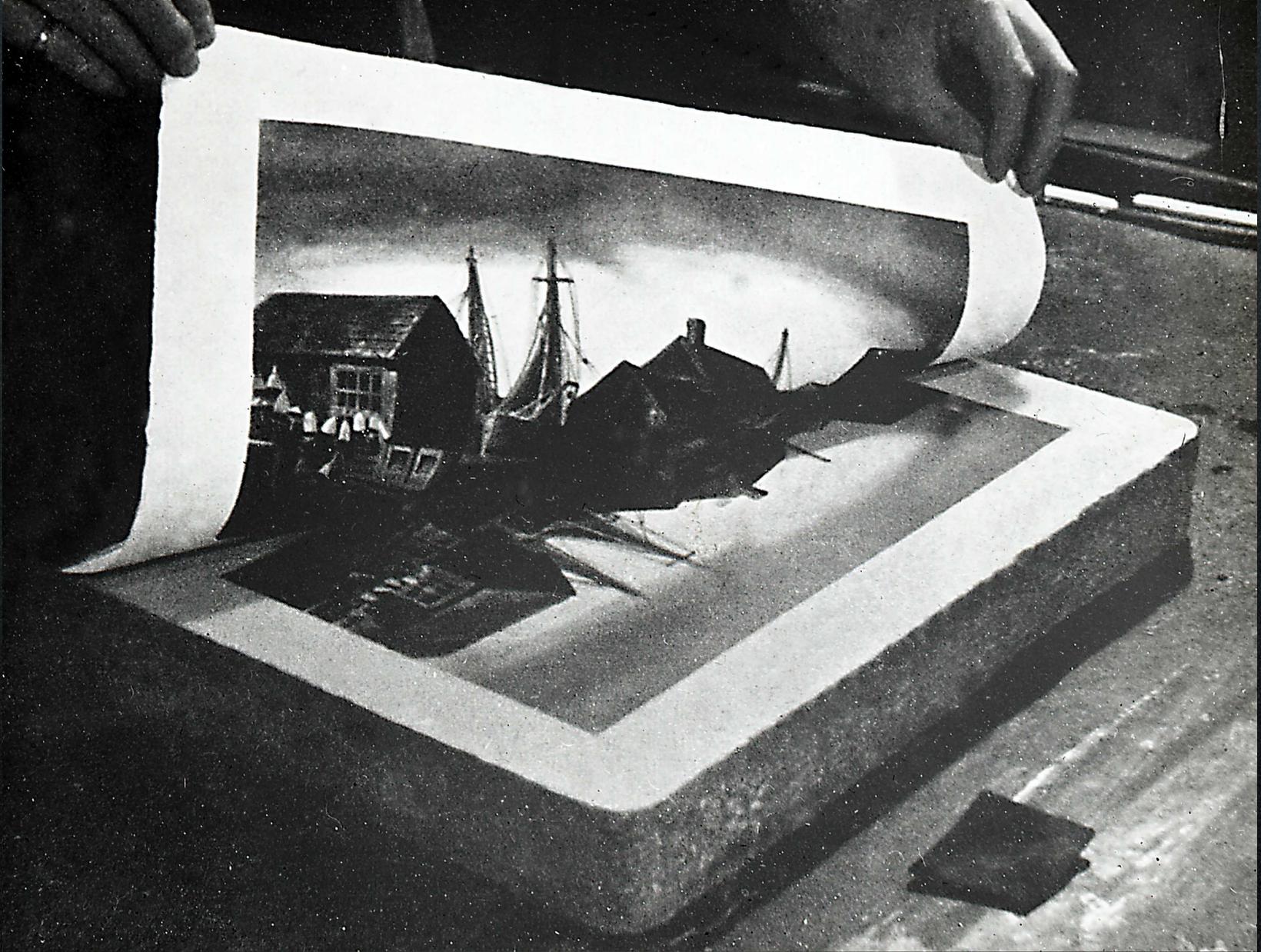
LEAF OF A PLANT.

HITHERTO we have presented to the reader the representations of distant objects, obtained by the use of a Camera Obscura. But the present plate represents an object of its natural size. And this is effected by quite a different and much simpler process, as follows.

A leaf of a plant, or any similar object which is thin and delicate, is laid flat upon a sheet of prepared paper which is moderately sensitive. It is then covered with a

The Pencil of Nature

Printed in 1844, *The Pencil of Nature* was the first book illustrated entirely with photographs. The original prints were actually mounted on the pages.



Lithography means “stone printing” and is based on the principle that oil and water don’t mix.



BY C. W. BRIDGES PAIR OF
BROWN-BREADED RED GAME.

COCK, 18" AT BARRON, 1871. HEN, 16" AT BIRMINGHAM & MANCHESTER, 1870
WITH UPWARDS OF A DOZEN SILVER PUPS AT VARIOUS PLACES

Chromolithography

was patented in France in 1837 and took the industry by storm.

[Watch the video here](#)



American Chromolithography started in Boston. Color plates could be shaded in remarkable depth using crayon-style grease pencils and colored inks applied in layers of registered impressions.

THE STETSON'S SEEDLING PEACH.



Chromolithography opened up unlimited opportunities in graphic design. Designers could invent any letterform, color could easily be applied to any printing.



Labels and packages became hot prospects for **chromolithography**. The first tin chromolithographs were printed in reverse on thin paper and pressed onto sheets of tin. The paper was washed away and the ink impression remained.

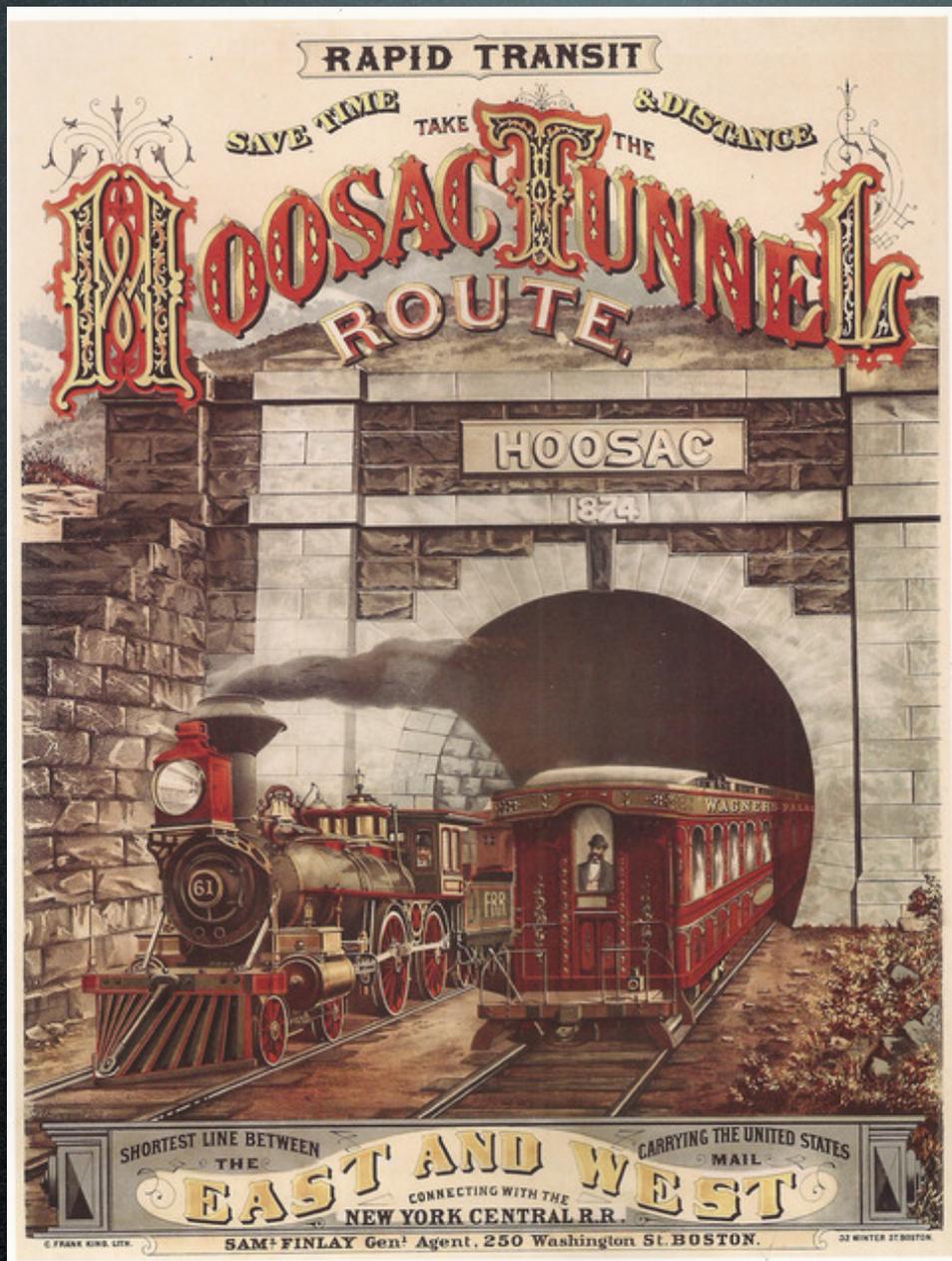


In 1875, Robert Barclay patented his **offset lithography**: the inked stone transferred the image to a non-absorbent cardboard cylinder and immediately transferred to the tin.



Victorian typography

Without traditions and lacking the limitations of letterpress, Victorian designers could invent any letterform or illustration that suited their fancy.



Victorian typography

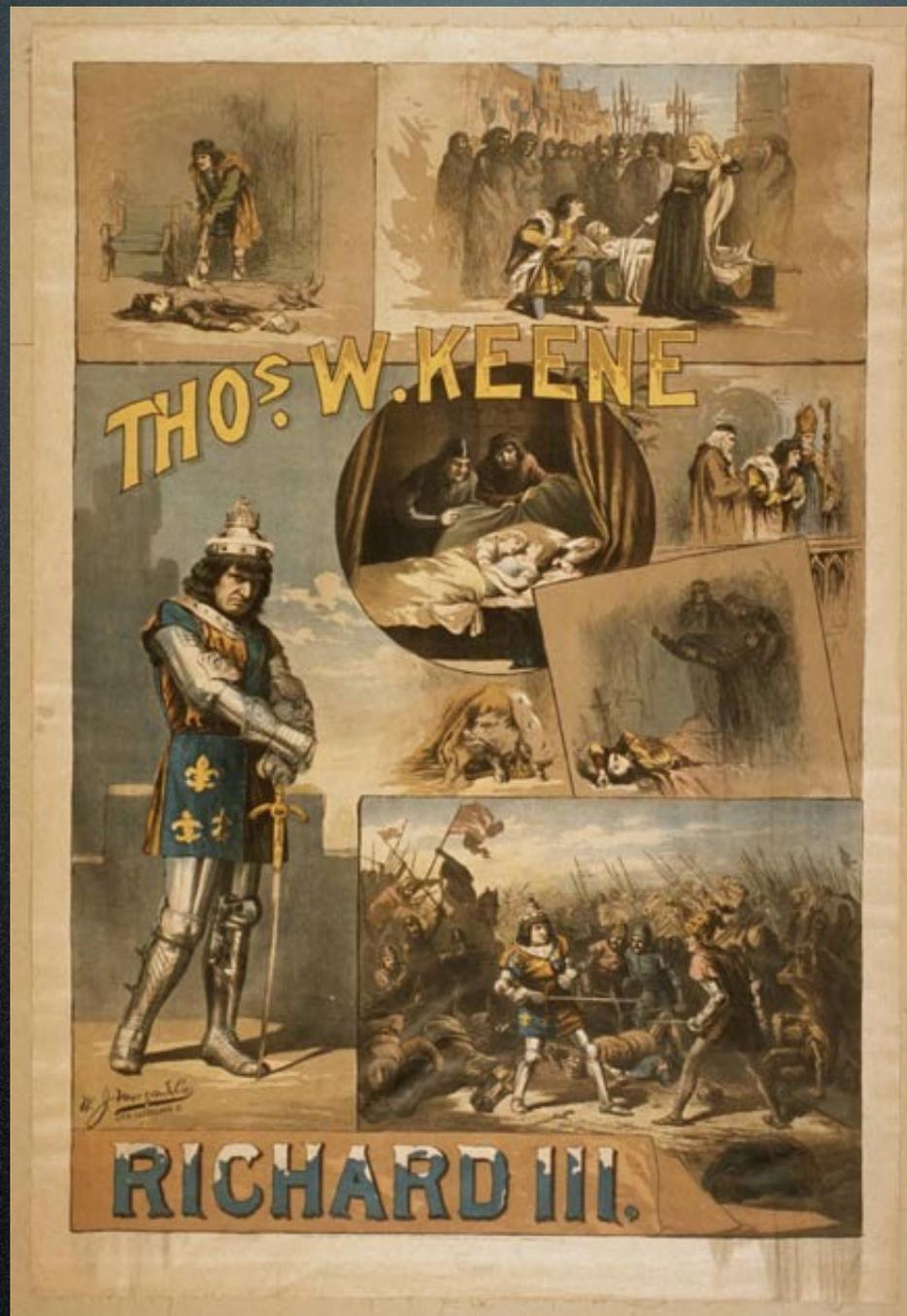
Ornate typefaces could be drawn in arches and letterforms curved.

Images could be overlapped and detailed borders and ornaments could be added anywhere.



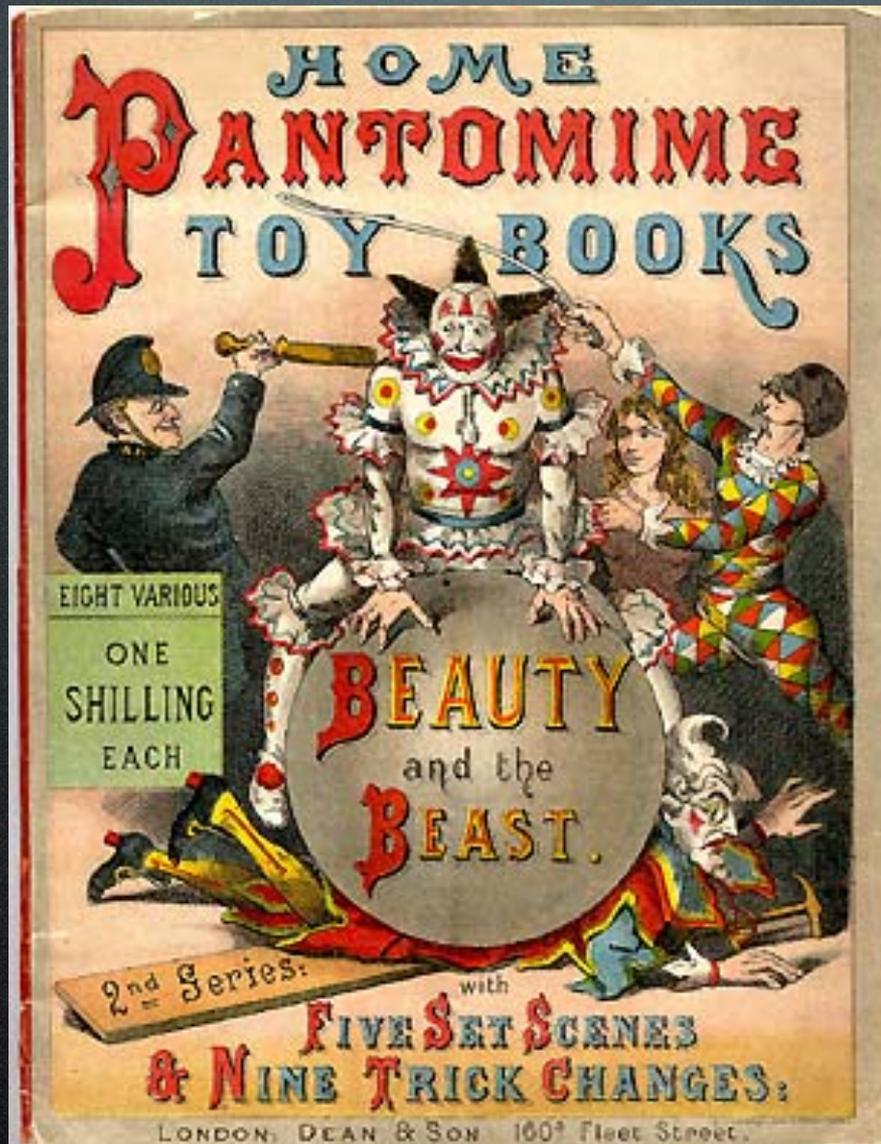
Victorian typography

Banners, ribbons and flags were used to integrate type with artwork.



**Victorian
typography**

Montages made abundant use of overlapping images and type.

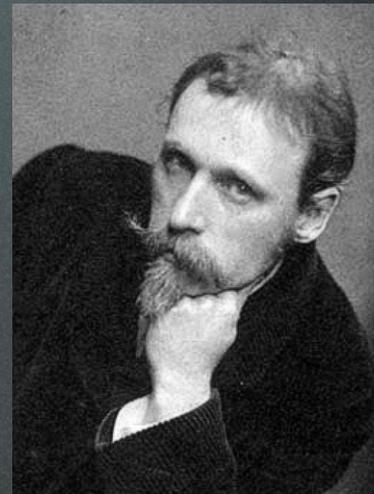


Victorian graphics
Victorians developed a more tender attitude toward children and created colorful picture books for preschool children called *toy books*.



The Golden Age of Illustration

Improved printing technologies created a demand for illustrations.



Walter Crane was a leading illustrator in the day for breaking with tradition and choosing to entertain children instead of preaching to them.



One morn, said the Cat to his Master, "I pray
You to go and to bathe in the river to-day;
The Marquis of Carabas, too, you must be,
And leave all the rest of the business to me."
Now, while the King down by the river passed by,
He heard dismal cries of—"Help! help! or he'll die!
The Marquis of Carabas drowns!—O my master!"
The King sent his guards to avert the disaster.
The Miller's son finds himself pulled out, and drest
In all that his Majesty had of the best;



Randolph Caldecott was another illustrator who developed a passion for drawing and possessed a unique sense of the absurd. His humorous style became the prototype for children's books and animated films to this day.



The prestigious **Caldecott Award**, named in his honor, is annually presented to the best illustrator of a picture book.



BRADLEY, PRAY & CO.
Carriage Manufacturers
 633 BROADWAY,
 NEW YORK.

WHOLE AND RETAIL DEALERS OF CARriages
 AND THE BEST KINDS OF HARNESS
 AND SADDLERY.

BRUNNEN, LINDEN,
 COFFIN, BERGHOFF,
 Patent Sleighs, Road Carts, and
 Landstrolchers.

ALL OF THE BEST QUALITY AND AT THE
 LOWEST PRICES.

SLEIGHS.
 WE HAVE IN STOCK THE BEST AND
 MOST DURABLE SLEIGHS OF WOOD
 AND IRON, AND ALSO A COMPLETE
 ASSORTMENT OF HARNESS, AND
 SADDLERY, WHICH WE WILL
 GUARANTEE TO BE THE BEST AND
 MOST DURABLE.

H. H. MACY & CO.



TOYS, DOLLS,
 HOLIDAY TRADE

Brilliantly Illustrated
 H. H. MACY & CO.
 American Central Ice Co.
 of ST. LOUIS.

Editorial and advertising design

As printing became more efficient and photography spread, printers began using *halftone screens* to reproduce images.

Texas, McLean & Co.
 4 Madison Lane,
 FINE FANCY GOODS,
 Rich Jewelry,
 Sets & Half Sets
 FRENCH CLOCKS AND BRONZES
MUNN & COBB

HOLIDAY ATTRACTIONS.



LORD & TAYLOR,

BLOOD'S PATENT NEEDLE TABLETS



HAVANA LOTTERY



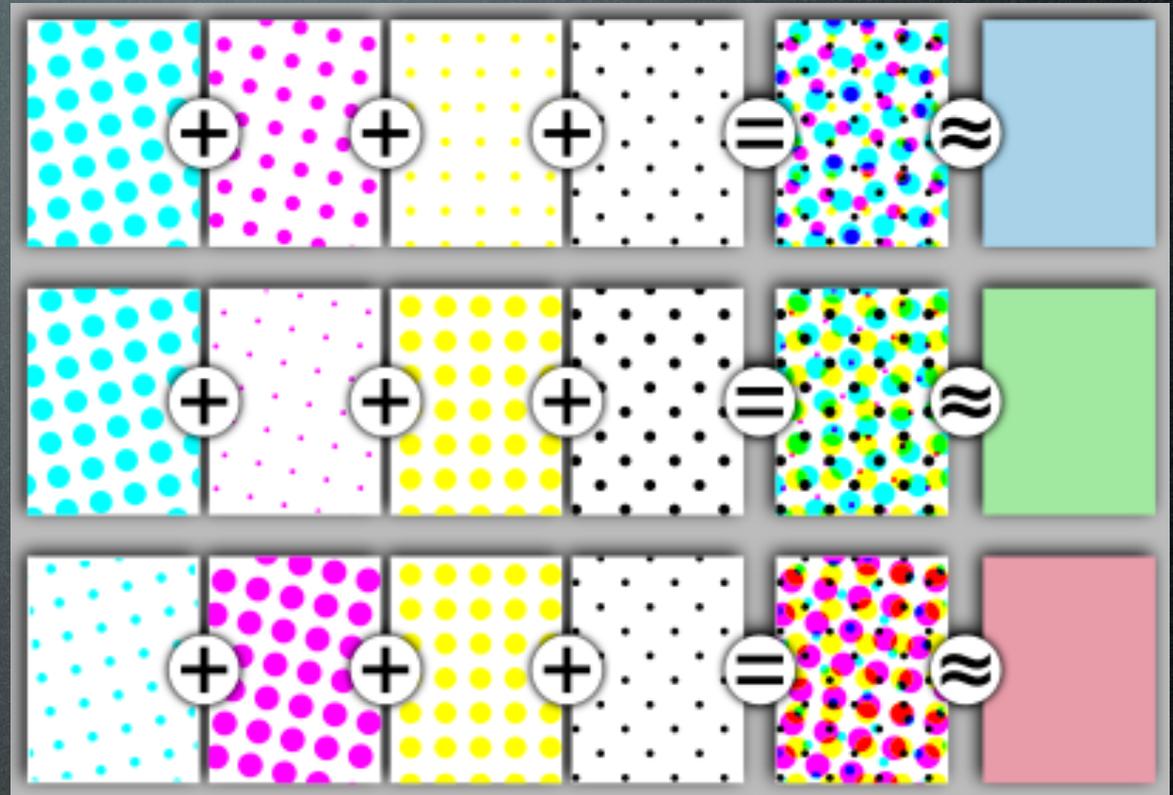
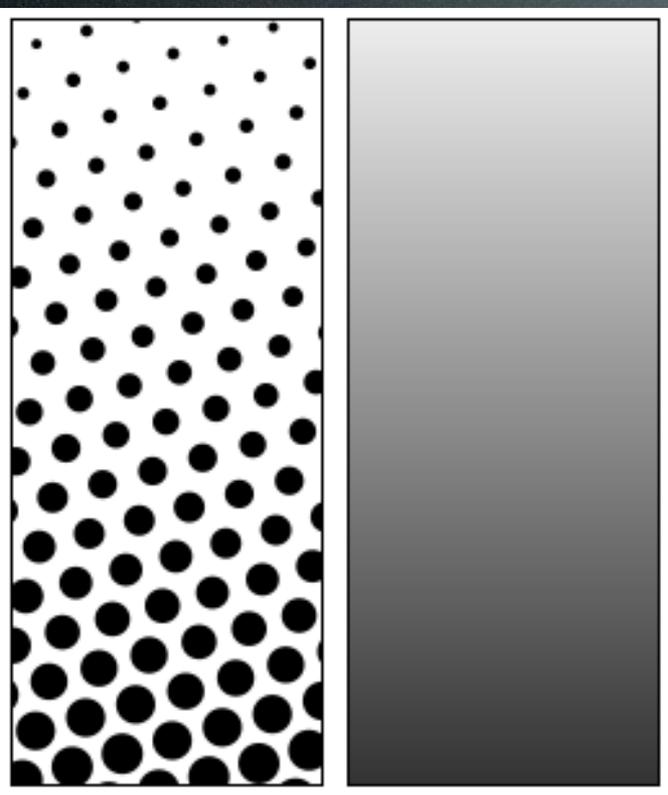
SOLID SILVER WARE AT RETAIL



CHAMPAGNE



Where to get Street Lamps.
 THE FINEST PRIZE MEDALS
LONDON



Halftone screens

A dot screen etched on glass plates (and later on high-contrast film) was used to expose light from an image onto metal or stone plates. Varying sizes of dots created an illusion of continuous tone.

First tri-color lithography



First lithograph with primary colors (red, blue, and yellow) is one of four that reproduce the original color photograph.



First lithograph, 1868, in its primary color of color. With blue, yellow, by use of Vogel-Karte. The original process is natural color.

Paris, July 1868.

L. Pouché & Co.

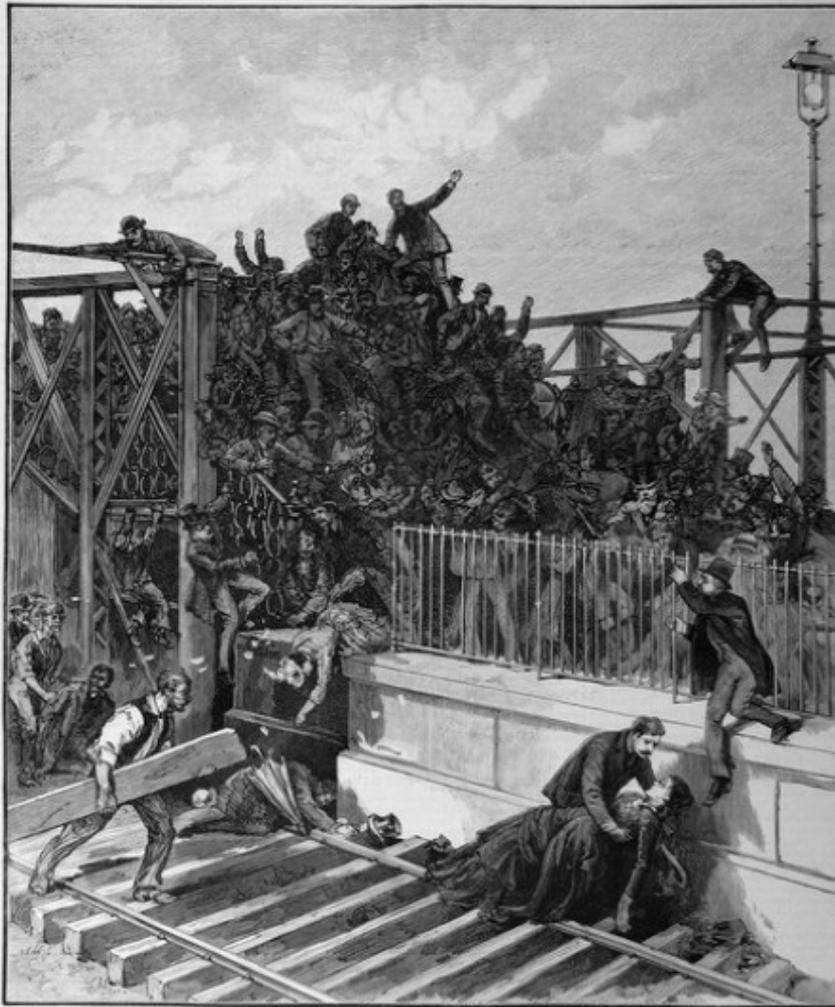
HARPER'S WEEKLY.

JOURNAL OF CIVILIZATION.

Vol. XXVII—No. 181
Copyright, 1883, by Harper & Brothers.

NEW YORK, SATURDAY, JUNE 9, 1883.

TEN CENTS A COPY
WITH A SUPPLEMENT.



THE TRAGEDY ON THE BROOKLYN BRIDGE, MAY 20.—Drawn by C. Curran and W. A. Rogers.—[See Page 100.]

James and John Harper launched a New York printing firm in 1817 and by mid-century, the Harper Brothers had become the largest publishing firm in the world. In 1859, they began the era of the *pictorial magazine*.



THE CAMPAIGN IN VIRGINIA--ON TO RICHMOND!

Thomas Nast began his career as an illustrator for a weekly magazine. He later produced battlefield sketches during the Civil War for *Harper's Weekly*.



Thomas Nast was called the “Father of American Political Cartooning” by demonstrating political activism through his cartoons.



Thomas Nast

His political cartoons brought such icons as the Democratic Donkey and the Republican elephant.

"STRANGER THINGS HAVE HAPPENED"
HOLD ON, AND YOU MAY WALK OVER THE SLEIGHED ANIMAL IF THERE YET.



Thomas Nast

He created the original Uncle Sam (U.S.)

Uncle Sam, don't play with it,—be a Man. Monopolists' soap-bubbles soon burst.

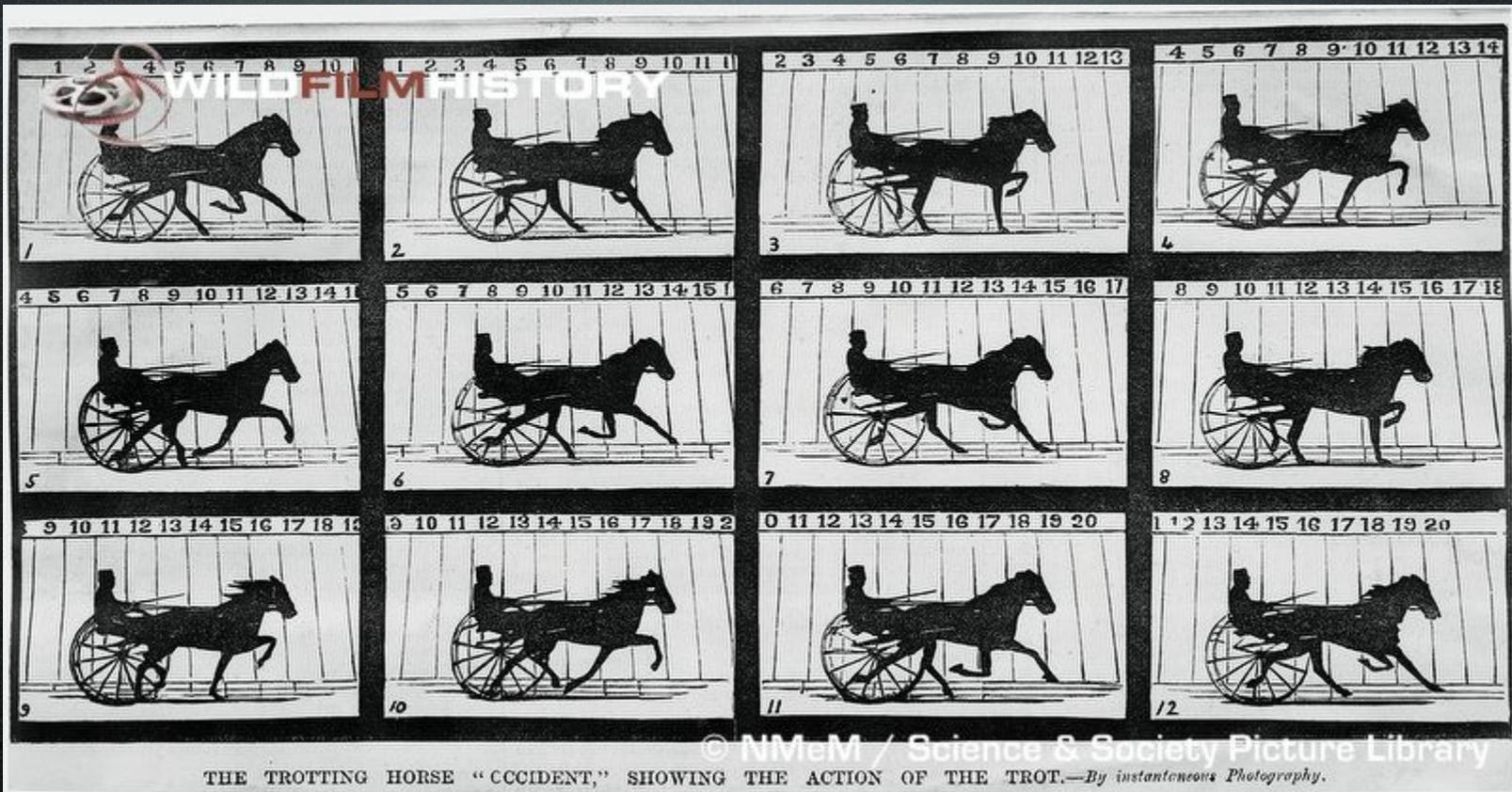


Thomas Nast

He also gave us
Victorian
images of Santa
Claus.



Eadweard Muybridge was a San Francisco photographer who captured images of Yosemite, Alaska and Central America.



Eadweard Muybridge

In 1877-78, he helped to settle a \$25k bet by photographing a trotting horse in motion to prove that the horse lifted all four feet off the ground at once. This innovation led to development of motion picture photography. [Watch the video here.](#)

