

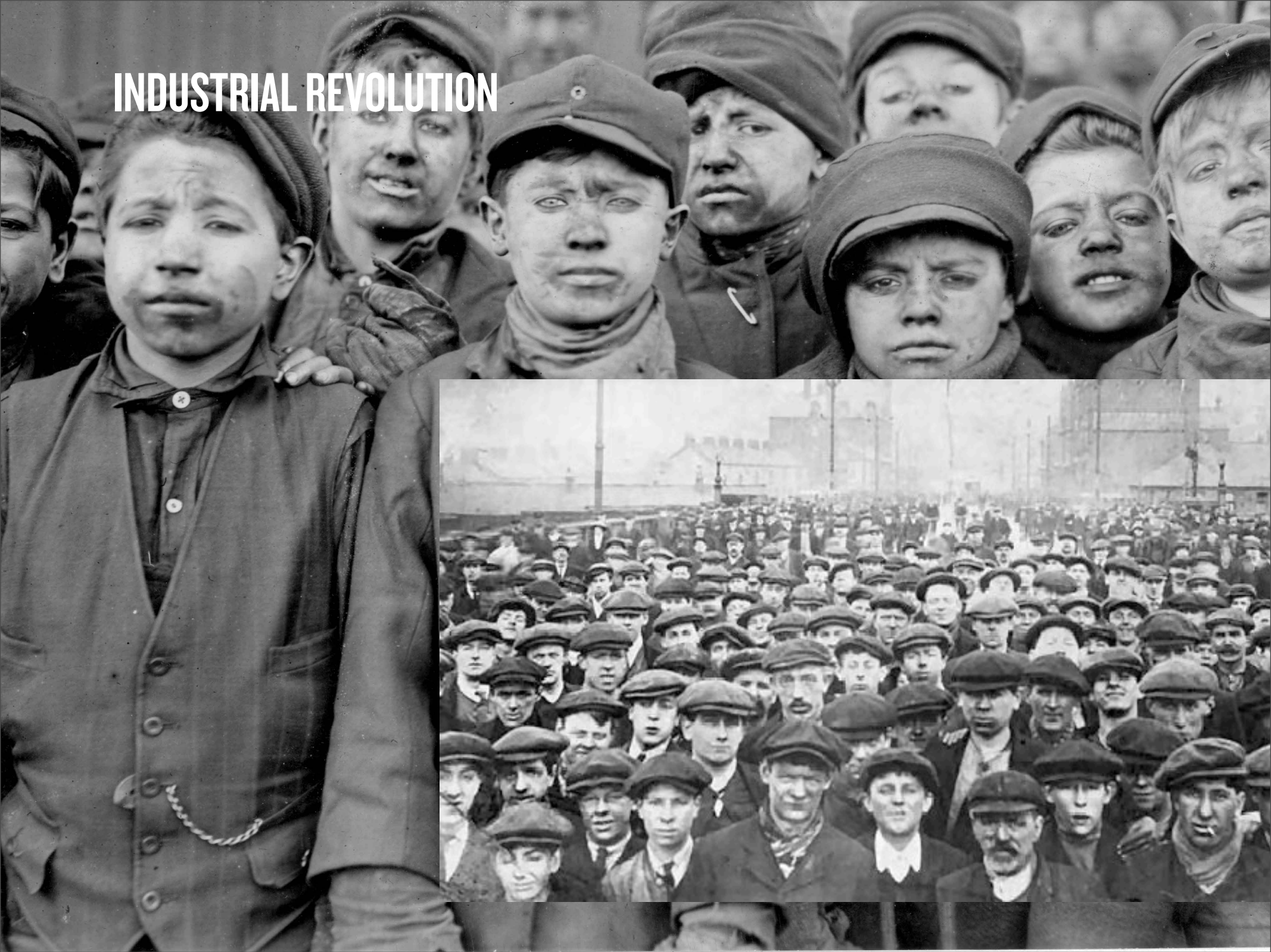
**INDUSTRIAL
REVOLUTION
BIRTH OF GDP**

INDUSTRIAL REVOLUTION



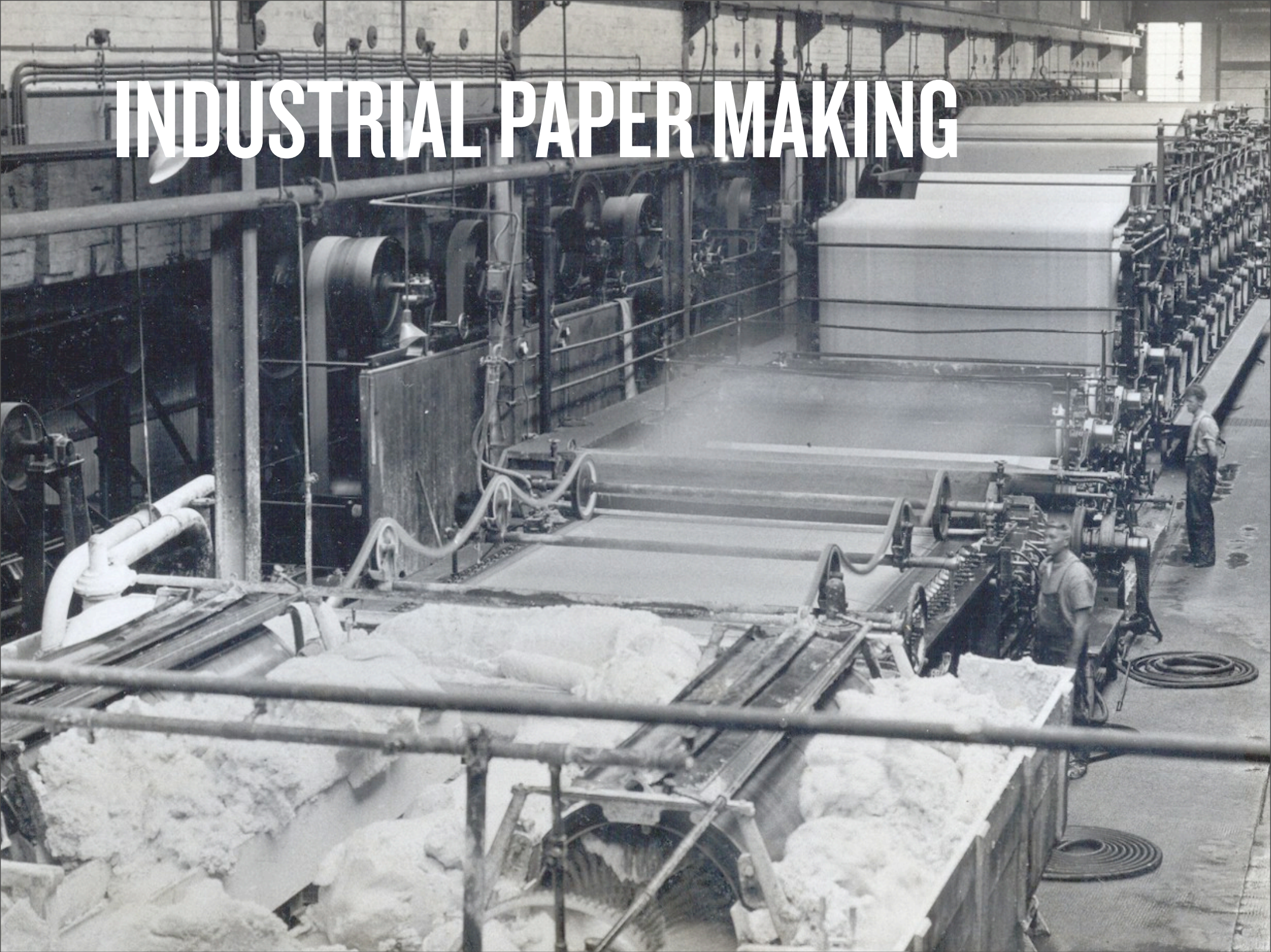
The Industrial Revolution was a period from roughly 1750 to 1850 where changes in agriculture, manufacturing, mining, transportation, and technology had a profound effect on the social, economic and cultural conditions of the times. There was a large migration from rural to urban settings and a large growth in population overall.

INDUSTRIAL REVOLUTION



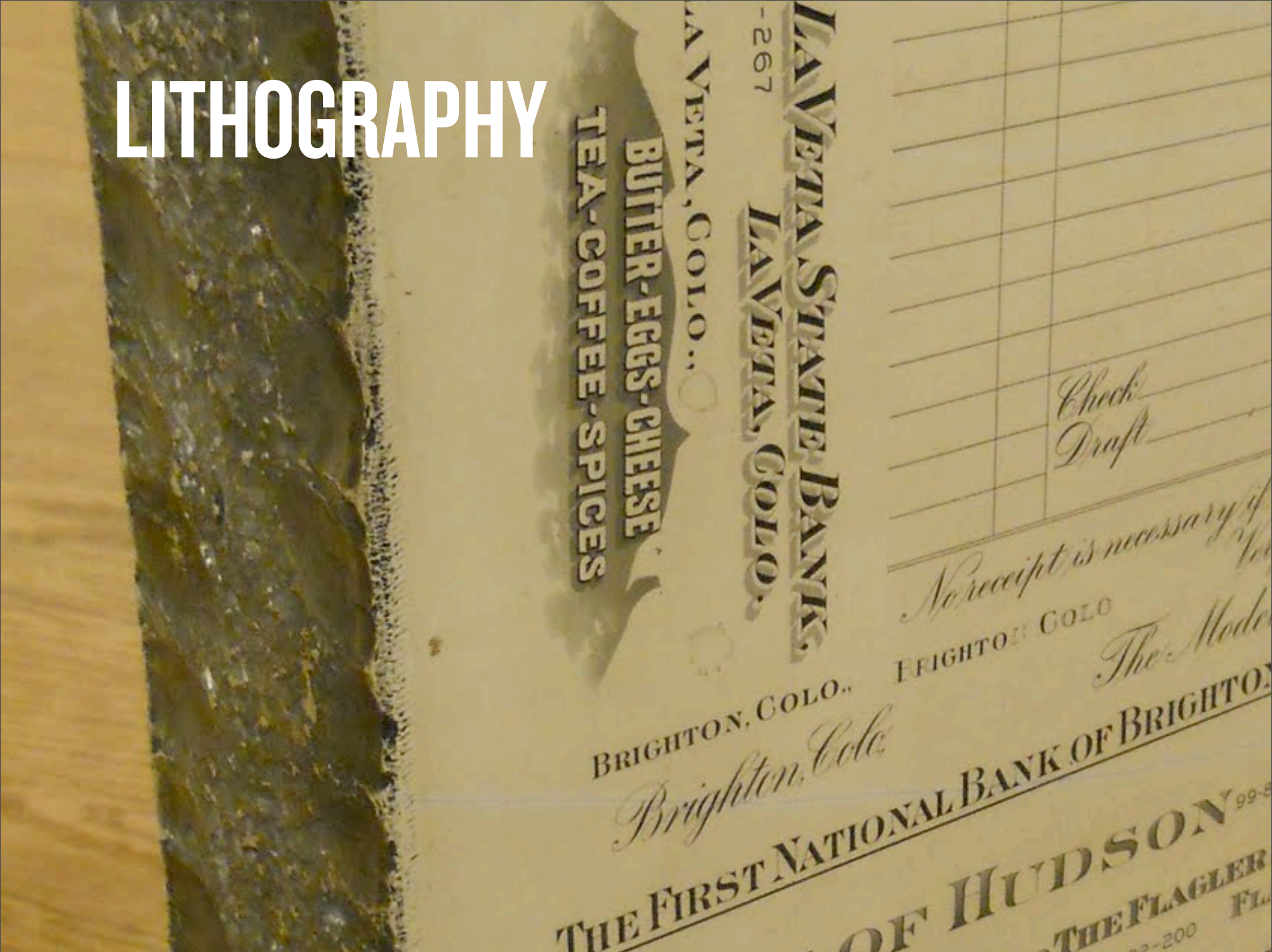
There was a large migration from rural to urban settings and a large growth in population overall. There was also a relative rise in the standard of living.

INDUSTRIAL PAPER MAKING



Just before the turn of the century a machine for making a continuous sheet of paper on a loop of wire fabric was patented in 1798–1799 by Nicholas Louis Robert who worked for Saint-Léger Didot family in France. The paper machine is known as a Fourdrinier after the financiers, brothers Sealy and Henry Fourdrinier, who were stationers in London. Although greatly improved and with many variations, the Fourdrinier machine is the predominant means of paper production today.

LITHOGRAPHY



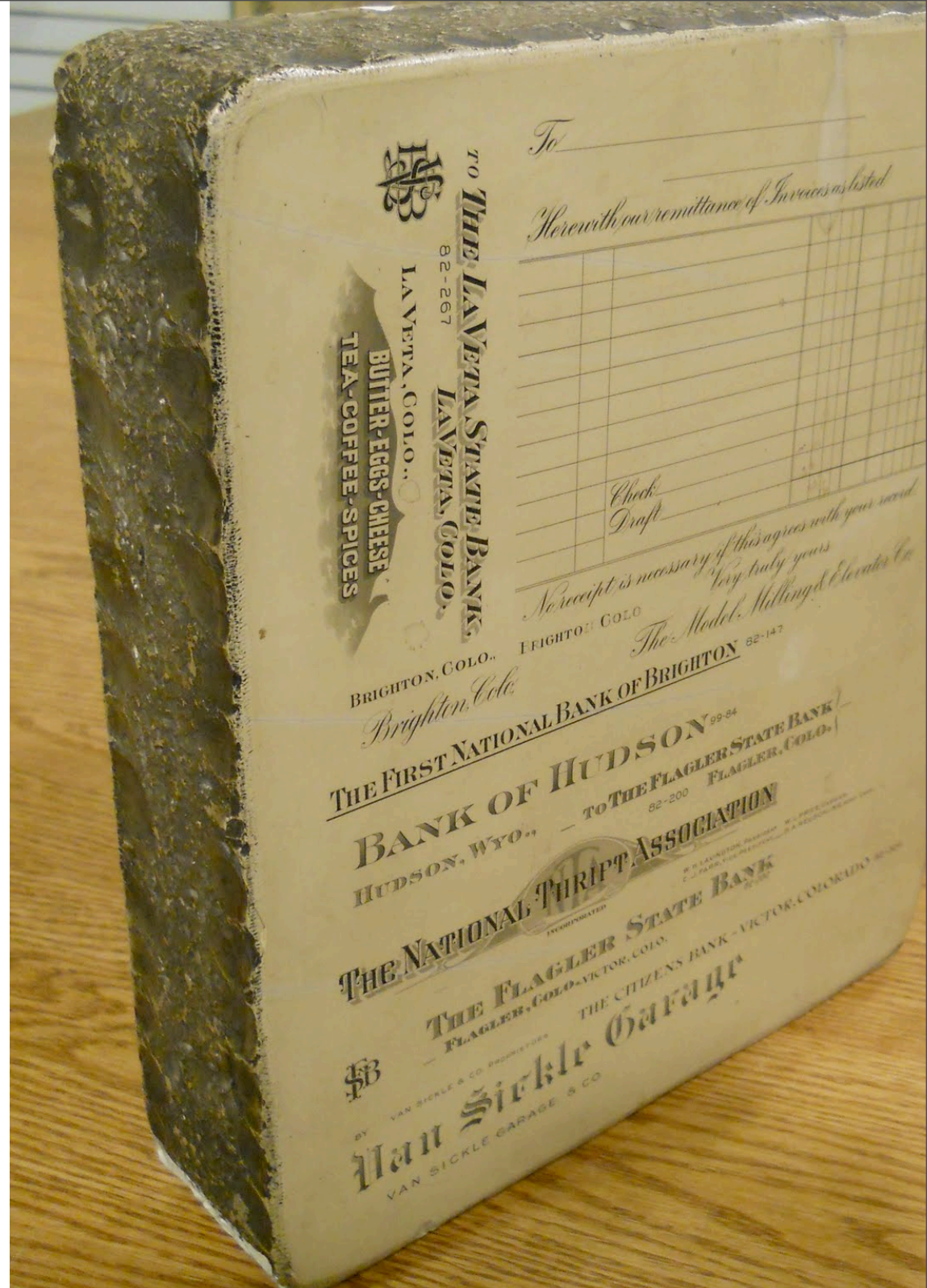
Invented in 1796 by Bavarian author Alois Senefelder as a cheap method of publishing his own theatrical works, lithography can be used to print text or artwork onto paper or other suitable material. He was trying to make a relief printing plate by etching away stone around a grease pencil drawing. In reality in lithographic printing the image is neither raised as in relief printing or incised as in intaglio printing.

LITHOGRAPHY

LITHOGRAPHY IS A METHOD OF PRINTING THAT USES A STONE OR METAL PLATE.

THE WORD IS DERIVED FROM THE GREEK LITHOS (STONE) AND GRAPHEIN (TO WRITE).

THE IMAGE IS DRAWN OR TRANSFERRED DIRECTLY ONTO THE STONE USING A OIL BASED MEDIUM. THE PROCESS IS BASED ON THE PRINCIPLE THAT WATER AND OIL DO NOT MIX.



Lithography (from Greek lithos, 'stone' + graphein, 'to write') is a method for printing using a stone (lithographic limestone) or a metal plate with a completely smooth surface. This method would allow an artist to draw or transfer a drawing directly to a stone.



An image is drawn on a flat stone with an oil based crayon or pencil. Water is spread over the stone to moisten all areas except the oil-based image. An oil-based ink is rolled over the stone adhering to the image but not to the wet areas of the stone. A sheet of paper is placed over the image and a printing press is used to transfer the image to the paper.



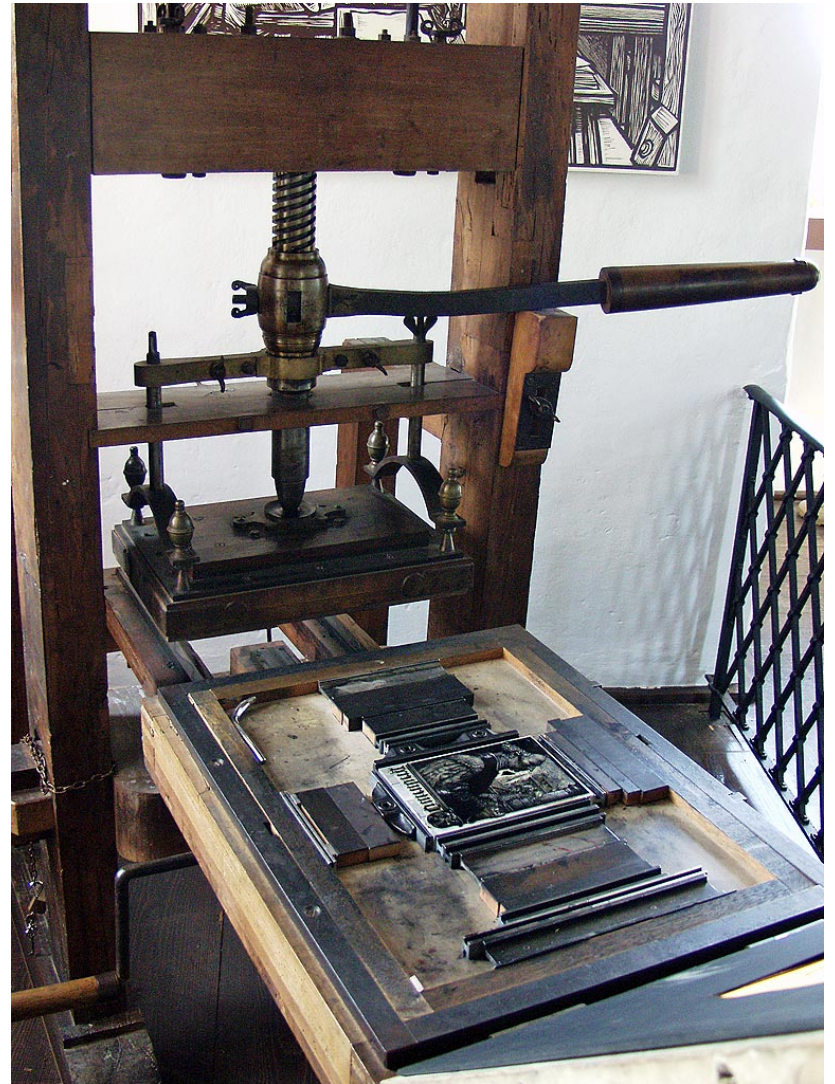
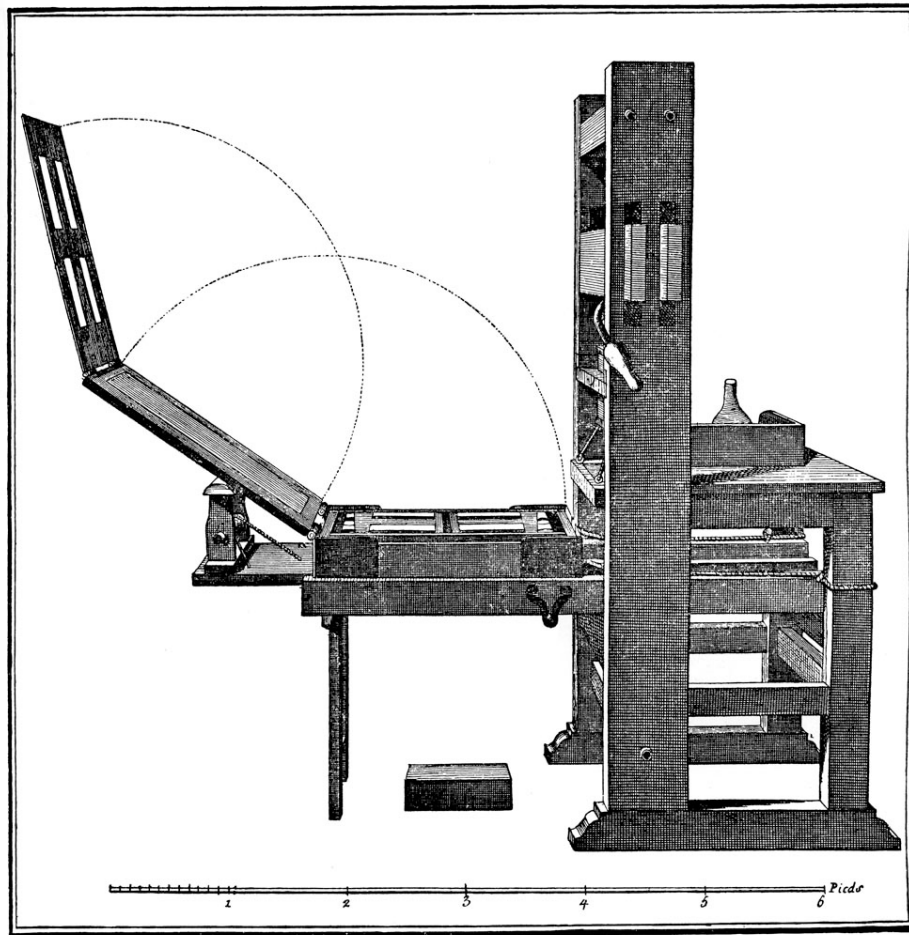
The image is printed directly from the stone plate (the orientation of the image is reversed)

1800-1810

So many things happen in such a relatively short time between 1800–1900 I have framed the discussion in smaller periods. Some context for what is going on in the world on one hand we have Napoleon being crowned Emperor in France while Beethoven completes his Fifth Symphony.

PRINTING PRESS INNOVATION

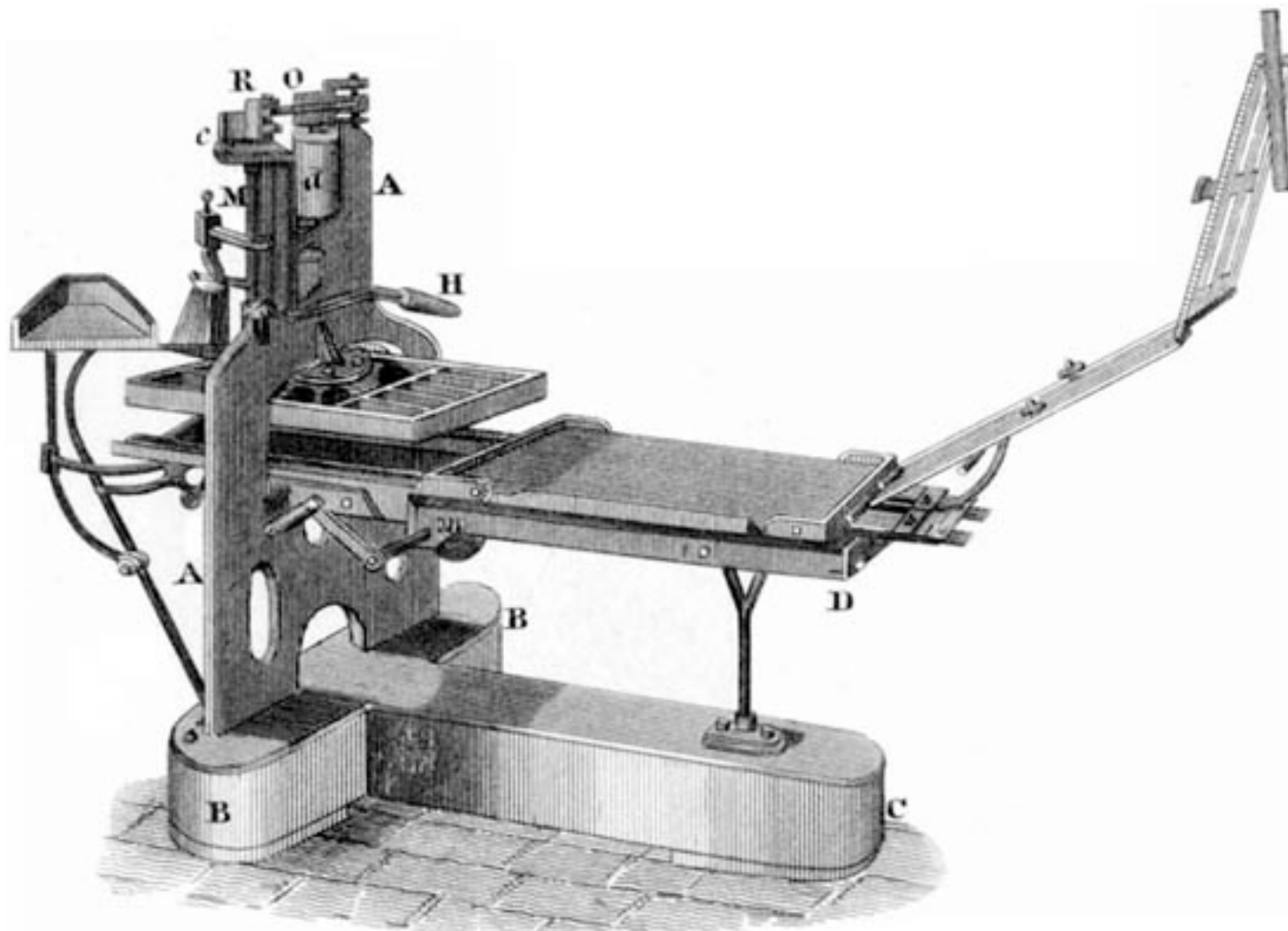
GUTENBERG PRESS EXPERIENCED LITTLE CHANGE UP TO 1800



The modified wine press Gutenberg while having been refined a great deal over the centuries experience very dramatic change.

PRINTING PRESS INNOVATION

STANHOPE CAST IRON PRESS



In 1800 Lord Charles Stanhope created the first cast iron press.

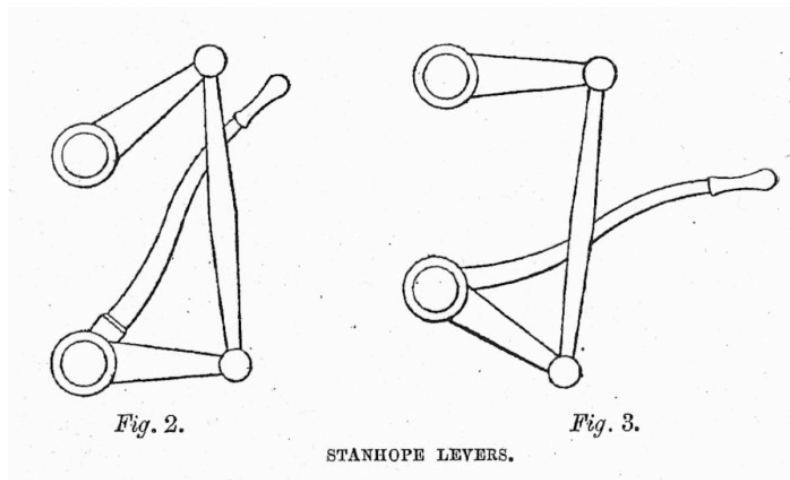
PRINTING PRESS INNOVATION

STANHOPE CAST IRON PRESS

A MORE DURABLE MATERIAL

REQUIRED 1/10 OF THE FORCE OF A WOODEN PRESS

DOUBLED THE PRINTABLE AREA



250 sheets per hour.

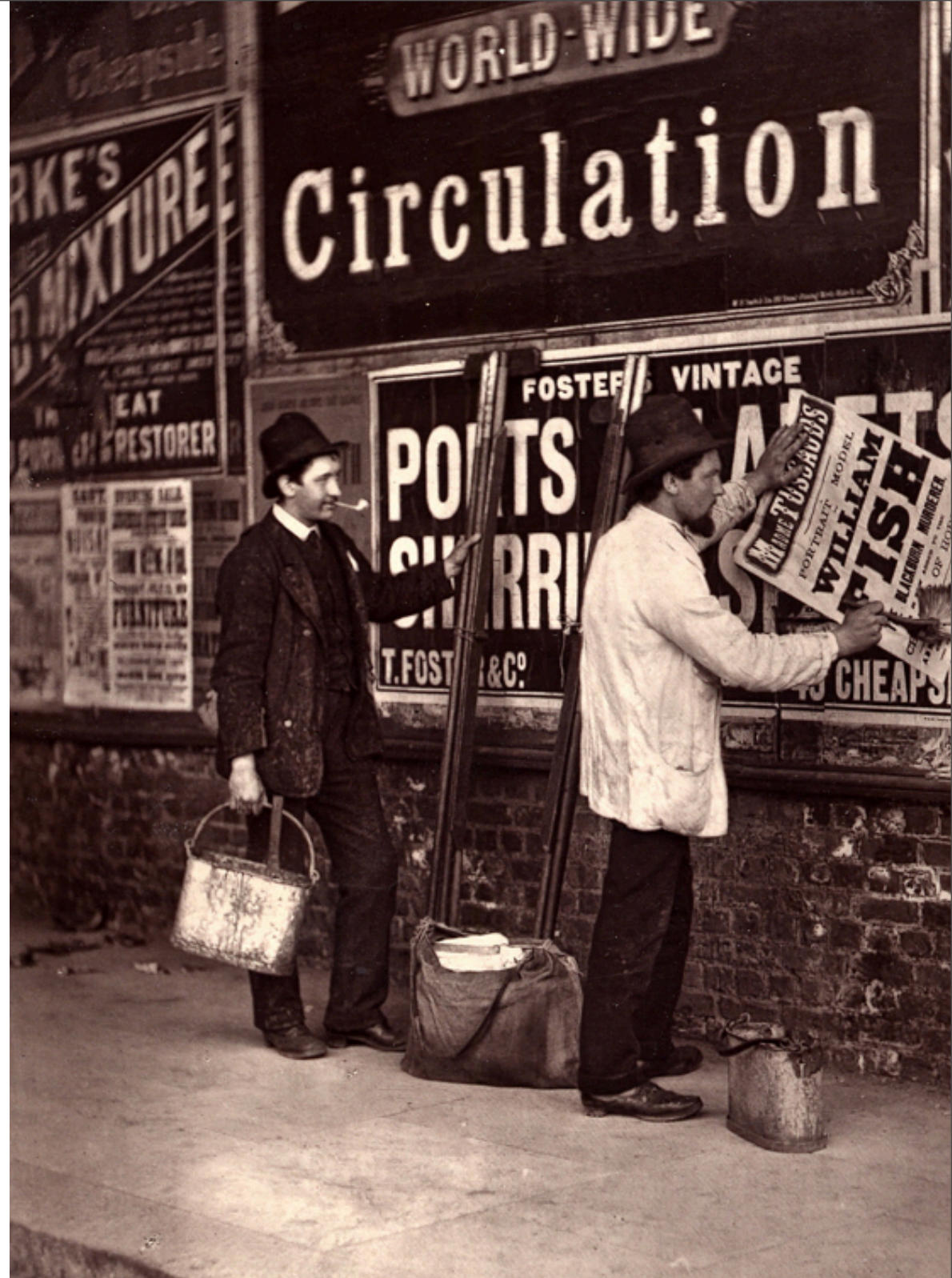
THE POSTER & DISPLAY TYPE

GREATER SIZE WAS NEEDED TO FUNCTION
WITHIN A NEW SIZE AND CONTEXT

GREATER COMPLEXITY AND EXTREME
CONTRAST IN TYPE FORMS WERE USED TO
ATTRACT ATTENTION

LETTERPRESS PRINTERS WERE ALREADY
FACING COMPETITION FROM LITHOGRAPHY
AND TURNED TO TYPEFOUNDERS TO PROVIDE
AN EXPANDED PALETTE TO WORK WITH

THE COMPOSITION WAS A CHAOTIC MIXTURE
OF TYPE SIZE AND STYLE DRIVEN BY
EXPEDIENCY OPPOSED TO AESTHETICS



The size of most printing up to this point was determined by the size of the press and standard sizes of the book. The larger printing area afforded by innovations in printing allowed for and expansion that matched a new need. The Industrial Revolution drove a huge migration of people from rural to urban locals in search of work in manufacturing. This growth in the of cities also created a new context for visual communication to exist. The Poster rose to be the dominant form of cheap advertising in the city. It was so pervasive that some neighborhoods designated areas for posting handbills and posters called hoardings.

FAT FACE

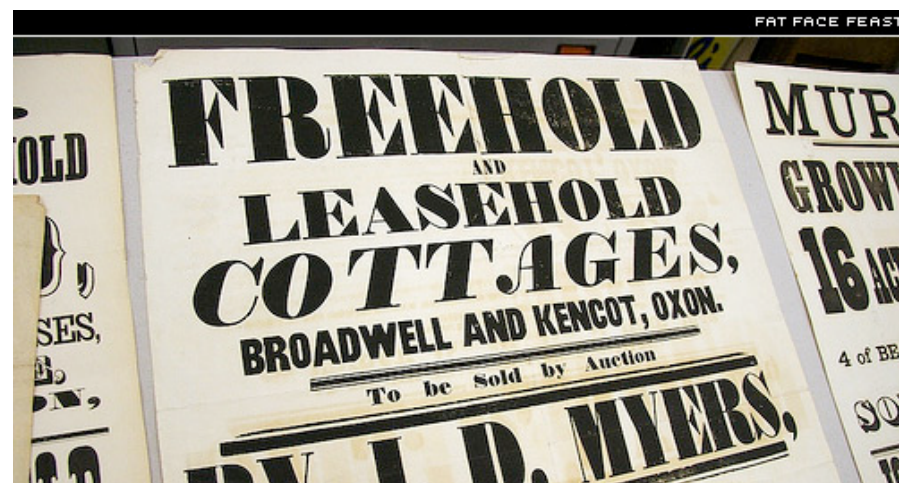
FIRST DEVELOPED BY ROBERT THORNE IN 1803

A ROMAN FACE WHERE THE CONTRAST AND WEIGHT
HAVE BEEN INCREASED BY EXPANDING THE THICKNESS
OF THE HEAVY STROKES.

**MINT
main.**

**Quousque tandem abutere,
Catilina, patientia nostra?
quamdiu nos etiam furor is
te tuus eludet? quem after**

**CONSTANTINOPLE
£1234567890**



1810-1820

SLAB SERIF TYPE

EARLIEST METAL SLAB SERIF TYPE CREDITED
TO VINCENT FIGGINS IN 1815

EVEN STROKE WEIGHT

VERTICAL STRESS

UNBRACKETED SERIF

Archer

Serifa

Rockwell

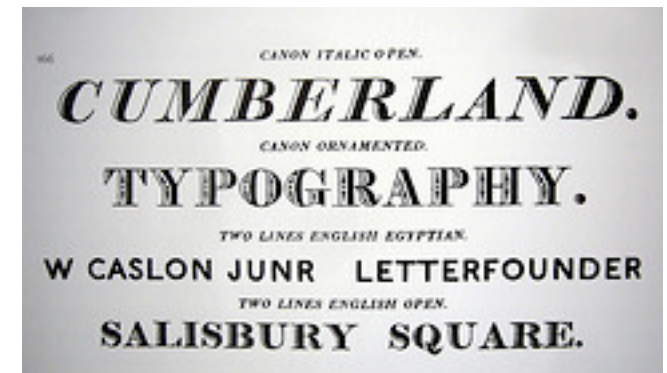
Also referred to as egyptian or antique. Egypt was such a strong point of fascination due to Napoleons campaigns there that even though it had no basis in Egyptian art it was still given that classification.

SAN SERIF TYPE

FIRST SAN SERIF TYPE IS CREDITED TO
WILLIAM CASLON IV IN 1816

EVEN STROKE WEIGHT

VERTICAL STRESS



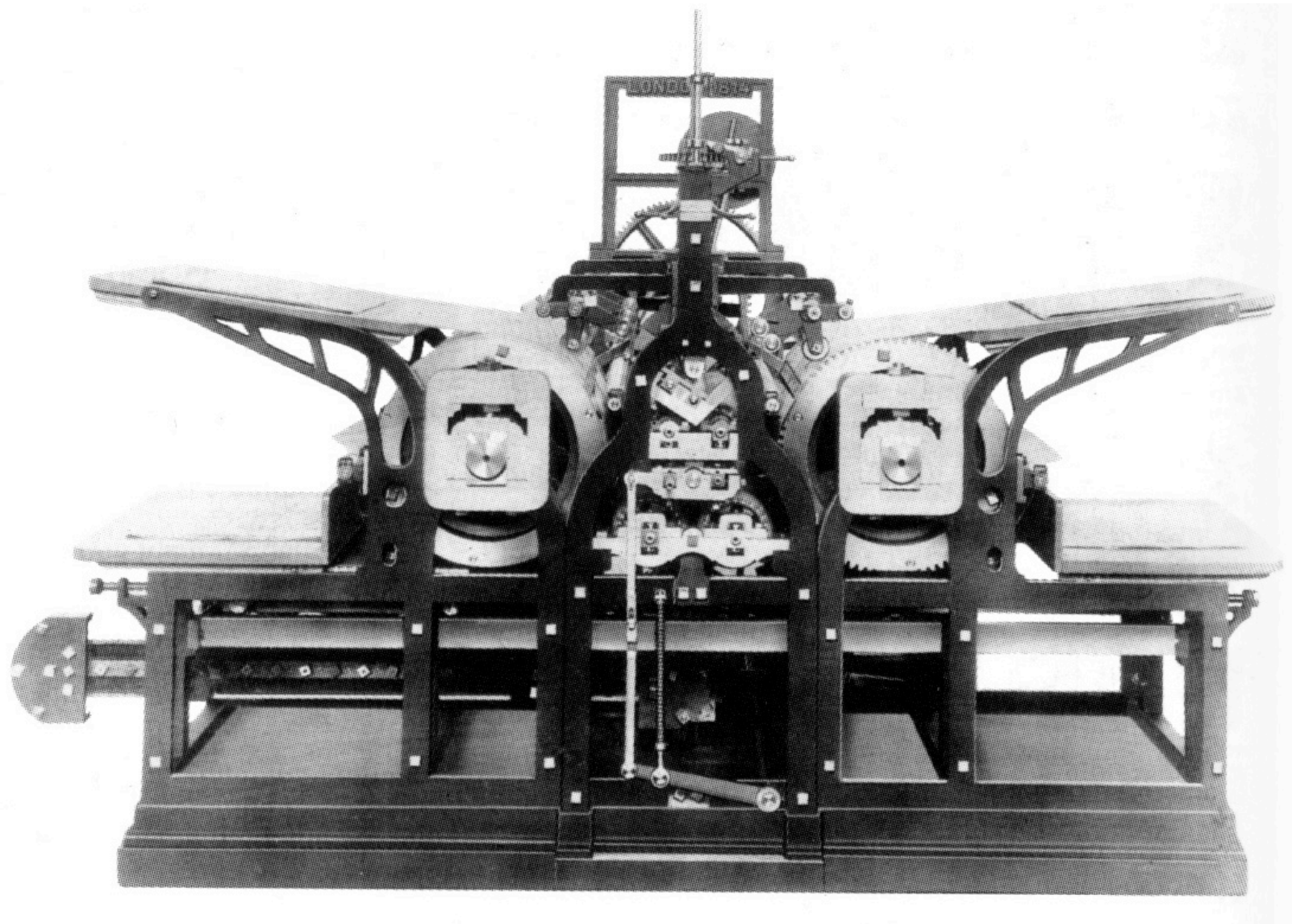
CASLON JUNR
LETTERFOUND

In the back of an 1816 type specimen book issued by William Caslon IV mixed with a collection of display type is one line of medium weight san serif capitals. It was most likely a slab serif face with the serifs removed.

Caslon's san serif is too small to work well on posters and too big to be effective in a book text format. Vincent Figgins San Serif specimens first showed the greatest range of sizes. He is credited with making san serif a workable type.

PRINTING PRESS INNOVATION

KOEING STEAM POWERED TWO CYLINDER PRESS



Created by Frederick Koeing between 1804–10. Printed 400 sheets per hour. Koeing was commissioned by John Walter II of The Times of London to develop a two cylinder press, which is pictured here. It was capable of printing 1,100 impressions an hour. The Times was using the press by 1814.

Other innovations attached to this press was a new method for applying ink to type via rollers instead of by hand with a ink-ball.

1820-1840

The Victorian era of British history was the period of Queen Victoria's reign from 20 June 1837 until her death on 22 January 1901. It was a long period of peace, prosperity, refined sensibilities and national self-confidence for Britain.

WOOD TYPE



In 1827 American Darius Wells invented a lateral router that enables the economical mass production of wood type.

<http://www.youtube.com/watch?v=Tk4QmaU4Jlg&feature=related>

Astley's
Monday,
 APRIL 2ND 1834
 AND BEING THE WEEK.

SIEGE
TROY
 OF THE
GIANT
Horse
 OF SINON.

The Siege and Capture of the Horse.
 Exhibition of the Horse.
 CONTENTS OF THE WEEK.
 THE SIEGE OF THE TROJAN HORSE.

Chariot
RACING!
 45 Highly Trained
STEEPS!
 OF THE HINDU NATIONS. THE
STUD OF
Wild Zebras
 AND TROOP OF
Fairy Ponies!
 THE GREAT
TROJAN
Circus!
Water Arena.
DYING
Gladiators!
LIVING
IND SCENE
DIORAMA!
PROCESSION
And Entree
Giant Horse
 THE BROTHERHOOD OF THE HORSE.
 THE GREAT
REAL
Zebras
 THE GREAT
 PERSIAN STEEDS OF BLOOD.
CHARIOT OF OXEN
 THE GREAT
 THE GREAT
 THE GREAT

THE
Scenes
CIRCLE
Cupid
SOOT-BAG!
Fox Hunter!
Ducrow
Miss WOLFORD
Fisherman
Naples,
Market Girl
PORTICI!
GREAT
German
FEDER!
Lodoiska
FOREST
Astropol
Castle of Lorinski
COURT YARD WITH
Battlements and Prison Keep.
THE LAST SCENE
BLAZING
Turret!
Floriska's
STEED



ances by 55,754 persons.

FIRST PART.

INDIA

The new and elegant Drop Scene represents the

MADRAS,

With its noble buildings and charming scenery, which carries at a
 mind a vivid impression of the manners and customs of Asia.

Representation of Hindo

Shewing distinctly those important places which have arrested
 continue to absorb so much of the public attention.

VIEW OF THE

City of Calcut

The metropolis of British India, truly and emphatically termed the
 Palaces," is here displayed with all its charms and glories of architecture,
 glittering in the sun,—with the ramparts of Fort William in the foreground,
 which, with the vehicles and animals as they pass in front of the Metropolis,
 the varied and characteristic dresses of the Natives and Europeans,
 coup d'œil at once striking and magnificent.

VIEW OF AGR

The capital of Akbar, and at one time the capital of India. This
 on the left bank of the river Jumna, and presents more beautiful
 Mogul dynasty than any other city in India. The most beautiful
 the world, the Taj Mehal stands close to the town.

VIEW OF THE

FORT OF ALLAHABAD

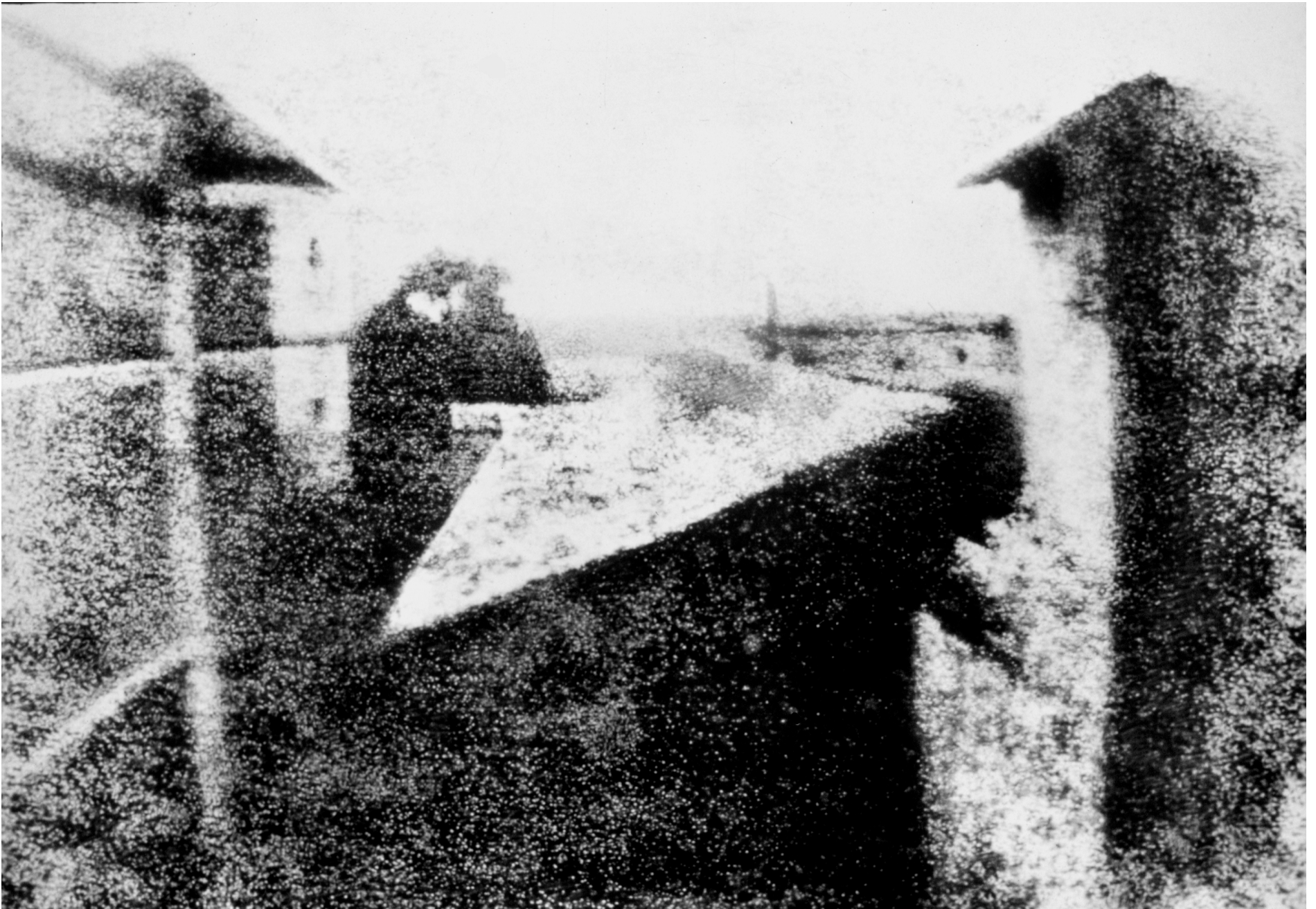
In 1834 William Leavenworth combined the router with a pantograph and continued to foster and explosion of wood type that fed into hunger for mass communication and advertising. There was a tremendous about of new type generated during the 1800's. This proliferation of type did not guarantee quality. A great number of typefaces were created by inexperienced amateurs employed by print shops. We see this happen again in the late 1980's and early 1990's with the advent of digital technologies.

PHOTOGRAPHY

JOSEPH NIEPCE WAS ATTEMPTING TO FIND AN AUTOMATIC WAY TO TRANSFER DRAWINGS TO A PRINTING PLATE. HE WAS THE FIRST TO PRODUCE A PHOTOGRAPHIC IMAGE.



One of the two earliest known pieces of evidence for seminal photographic activity, made by Nicéphore Niépce in 1825 by the heliograph process. This illustration is of an etching printed from a metal plate that was etched following alteration of the ground by sunlight; the image is of a 17th-century Flemish engraving showing a man leading a horse.



Nicéphore Niépce's earliest surviving photograph of a scene from nature taken with a camera obscura. The exposures would last all day.

Starting in 1829 he began collaborating on improved photographic processes with Louis Daguerre, and together they developed the physautotype, a process that used lavender oil. The partnership lasted until Niépce's death in 1833.



Daguerre continued and in 1839 perfected his process and presented it to the French Academy of Sciences. A Daguerreotype had limitations. For each plate was a one of a kind image of predetermined size. The process required a great deal of craft in preparation.

"Boulevard du Temple", taken by Daguerre in 1838 in Paris, includes the earliest known photograph of a person. The image shows a street, but because of the over ten minute exposure time the moving traffic does not appear.

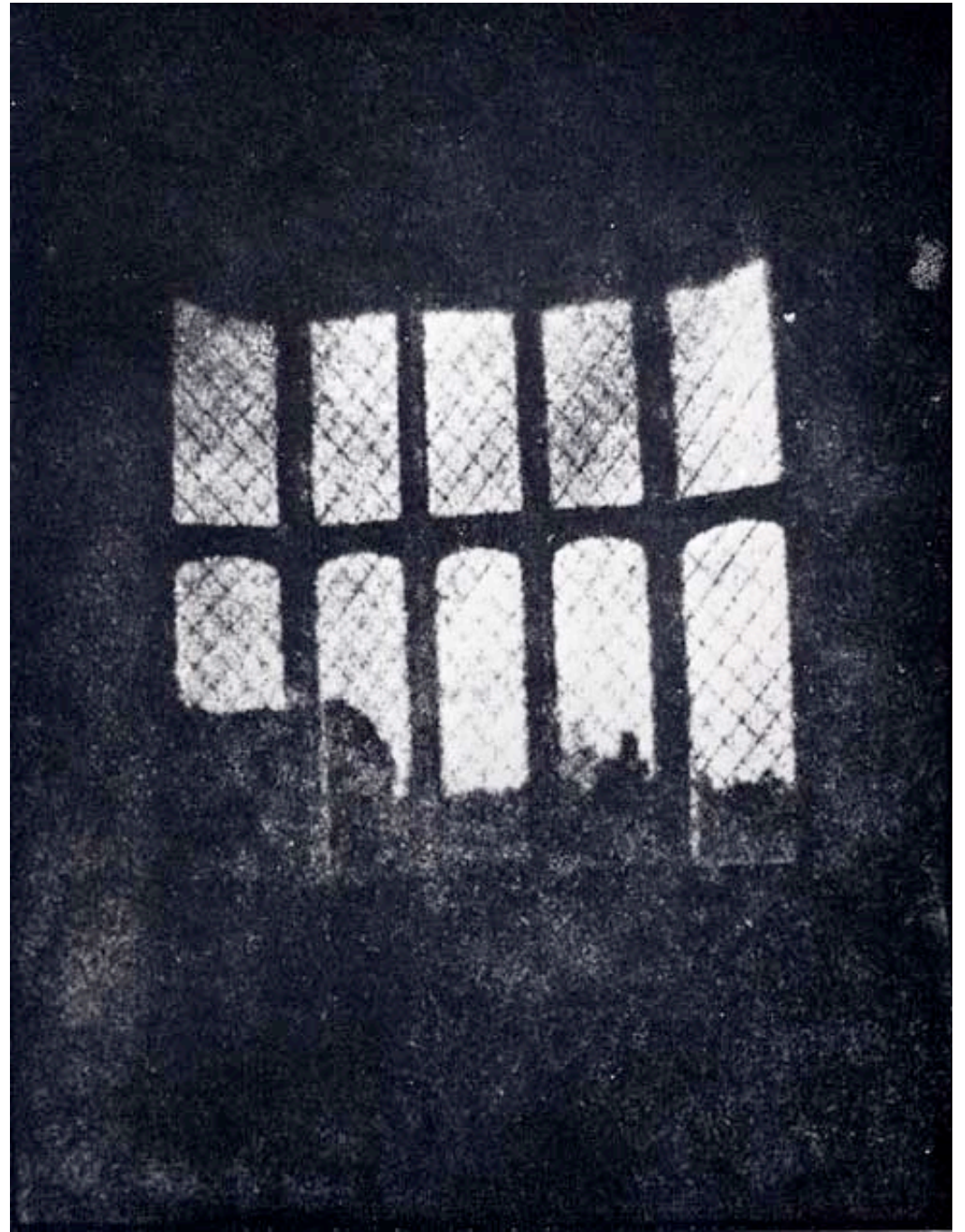


At the lower left, however, a man apparently having his boots polished, and the bootblack polishing them, were motionless enough for their images to be captured.

PHOTOGRAPHY

**WILLIAM HENRY FOX TALBOT OF ENGLAND
DEVELOPED THE CALOTYPE PROCESS.**

**THIS WAS THE PRECURSOR TO MOST
PHOTOGRAPHIC PROCESSES OF THE 19TH
AND 20TH CENTURIES**



William Henry Fox Talbot was a British inventor and a pioneer of photography. He was the inventor of calotype process, the precursor to most photographic processes of the 19th and 20th centuries. Pursuit of light sensitive paper. One of Talbot's original contributions included the concept of a negative from which many positive prints can be made. The daguerreotype, although stunningly beautiful, was rarely used by photographers after 1860, and had died as a commercial process by 1865.

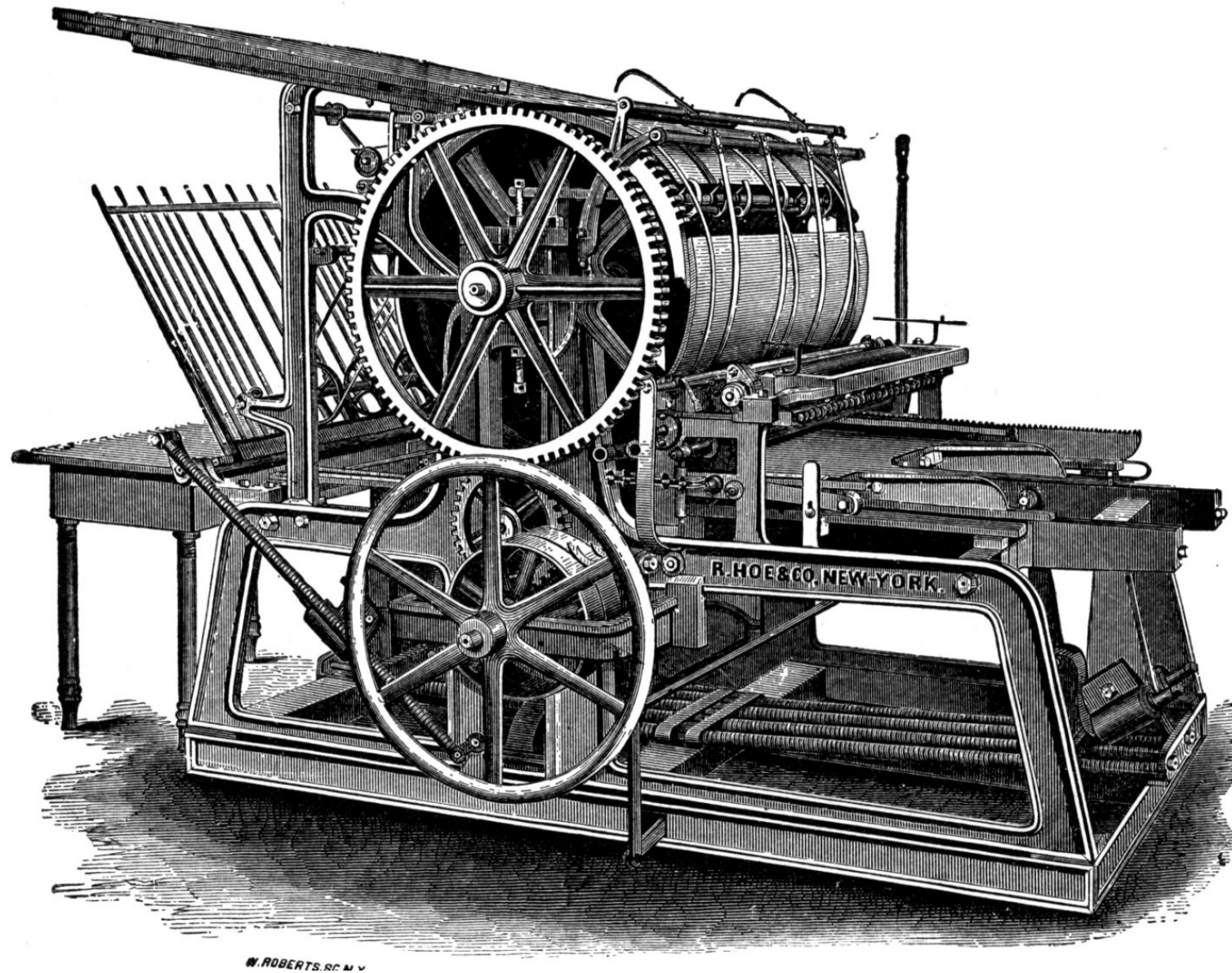
Latticed window in Lacock Abbey in 1835 by Talbot is a print from the oldest photographic negative in existence.

1840-1860

During this period we have Morse inventing the Telegraph in 1844 and Marks and Engels Communist Manifesto is published in 1848.
Melville finishes Moby Dick in 1851 and in 1859 Darwin publishes the Origin of Species establishing evolution as a theory.

PRINTING PRESS INNOVATION

ROTARY LITHOGRAPHIC PRESS



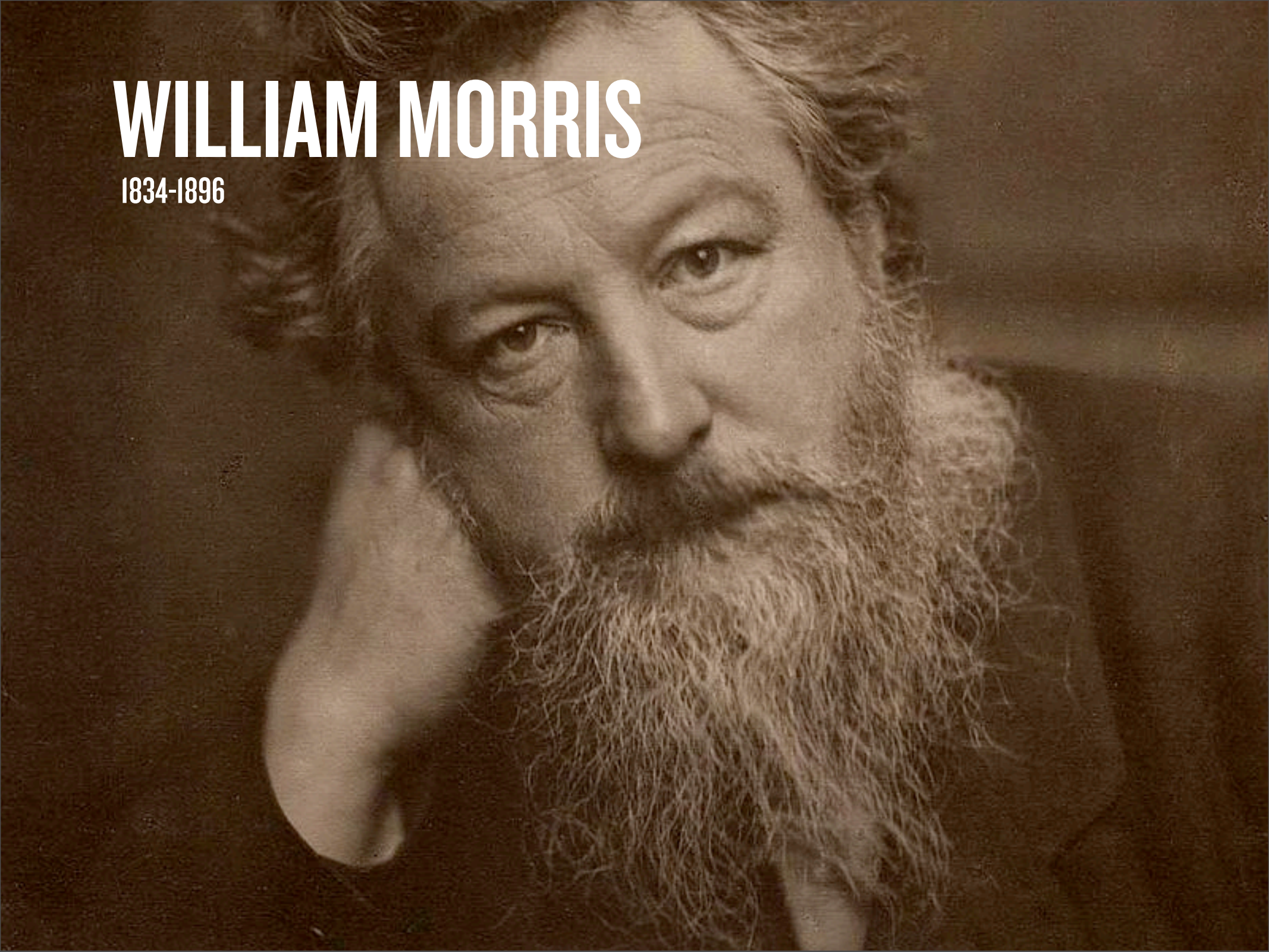
In 1843, American born Richard Hoe perfected the lithographic rotary printing press, nicknamed the “lightning press” that placed the type on a revolving cylinder, a design 6 times faster than a flatbed printing press. This innovation was an important boost in lithography’s competition with letterpress.

1860-1870

During this decade the U.S. Civil War begins and Lincoln is assassinated.

WILLIAM MORRIS

1834-1896



William Morris was an English textile designer, artist, writer, and utopian socialist associated with the Pre-Raphaelite Brotherhood and the English Arts and Crafts Movement.



In 1861 he founded a design firm in partnership with the artist Edward Burne-Jones, and the poet and artist Dante Gabriel Rossetti which profoundly influenced the decoration of churches and houses into the early 20th century.

In 1861, the decorative arts firm of Morris, Marshall, Faulkner & Co.

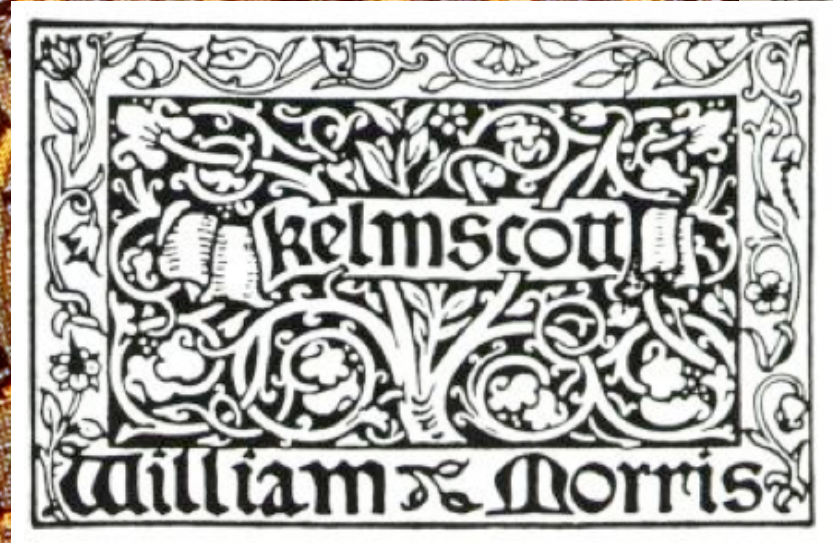
ARTS & CRAFTS

1860-1910

It developed first and most fully in the British Isles, but spread to Europe and North America. It was largely a reaction against the lack of craft and consideration in the quickly growing industrial mass produced economy. It stood for traditional craftsmanship using simple forms and often applied medieval, romantic or folk styles of decoration. A large influence on the movement and William Morris came from John Ruskin. He asserted that the utilitarian decorative arts had a greater transformative power on day to day living than fine art. He also held Architecture as the highest form of art due to its all encompassing nature.



They idealized the place of the workshop in medieval times and unrealistically tied their efforts to champion the individual or small group craftsmanship to the distribution of quality art and products for all. The cost of a majority of the work they produced though was well out of the reach of those people they claimed they wanted to help by transforming their mundane visual existence.



What heeth reyned loves for to bere?
 Lo here, of Payens corsed olde rytes,
 Lo here, what alle hir goddes may availle;
 Lo here, these wrecched wordes appetytes;
 Lo here, the fyn and guerdon for travaille
 Of Jove, Appollo, of Mars of swich rascaille!
 Lo here, the forme of olde clerkes speche
 In poetrye, if ye hir bolkes seche.

O moral Gower, this book I directe

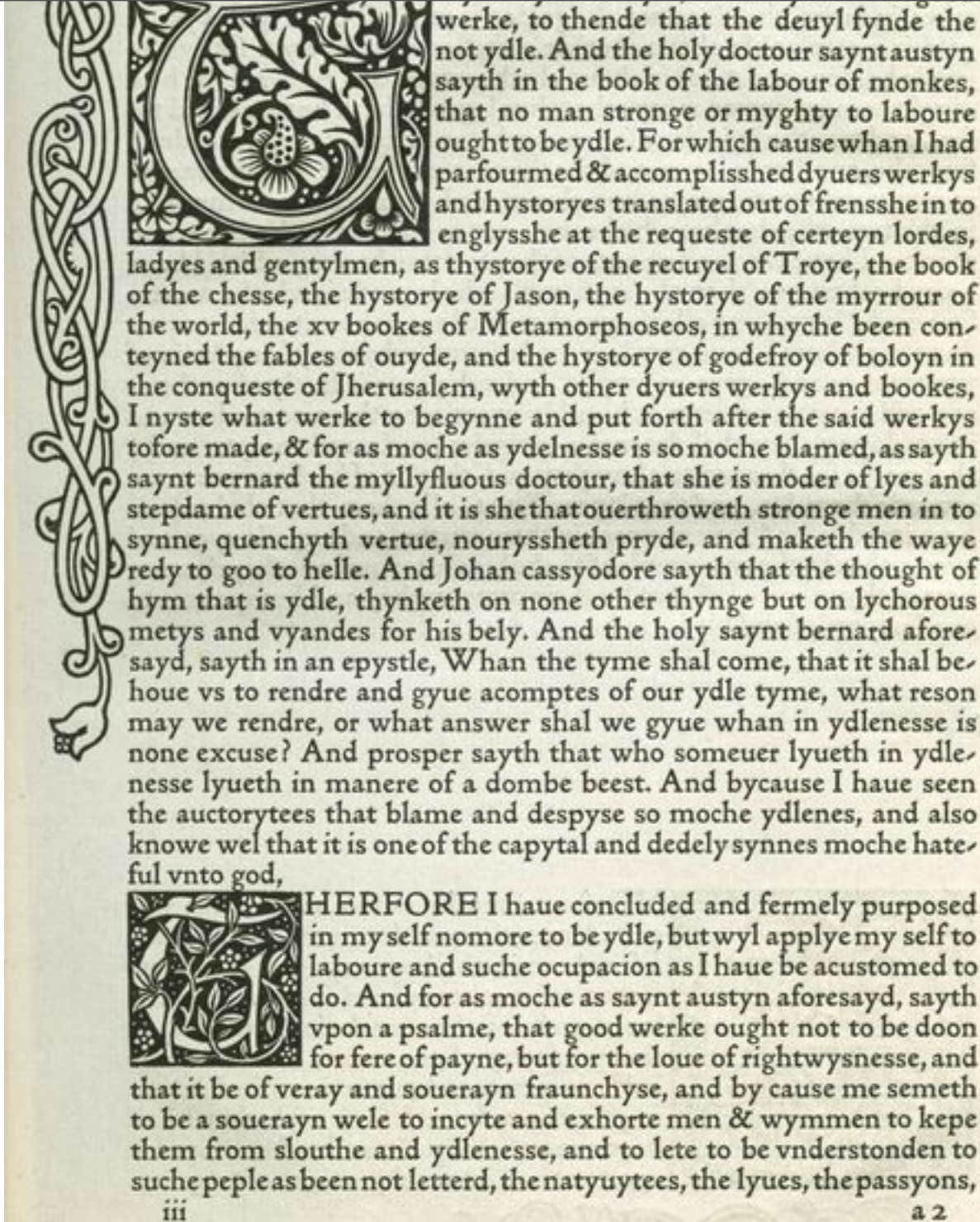
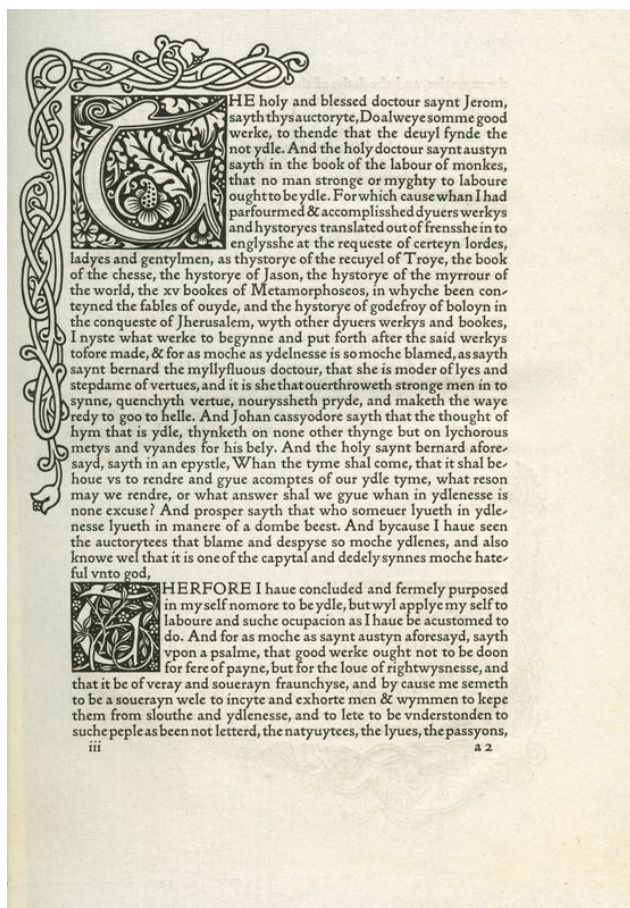
And to the Lord right thus I aperte and seye:
 Thou oon, and two, and three, eterne on lyve,
 That regnest ay in three and two and oon,
 Uncircumscrip, and al mayst circumscrip,
 As from visible and invisible foon
 Defende; and to thy mercy, everichoon,
 So make us, Jesus, for thy grace digne,
 For love of mayde and moder thyn benigne!

Amen.

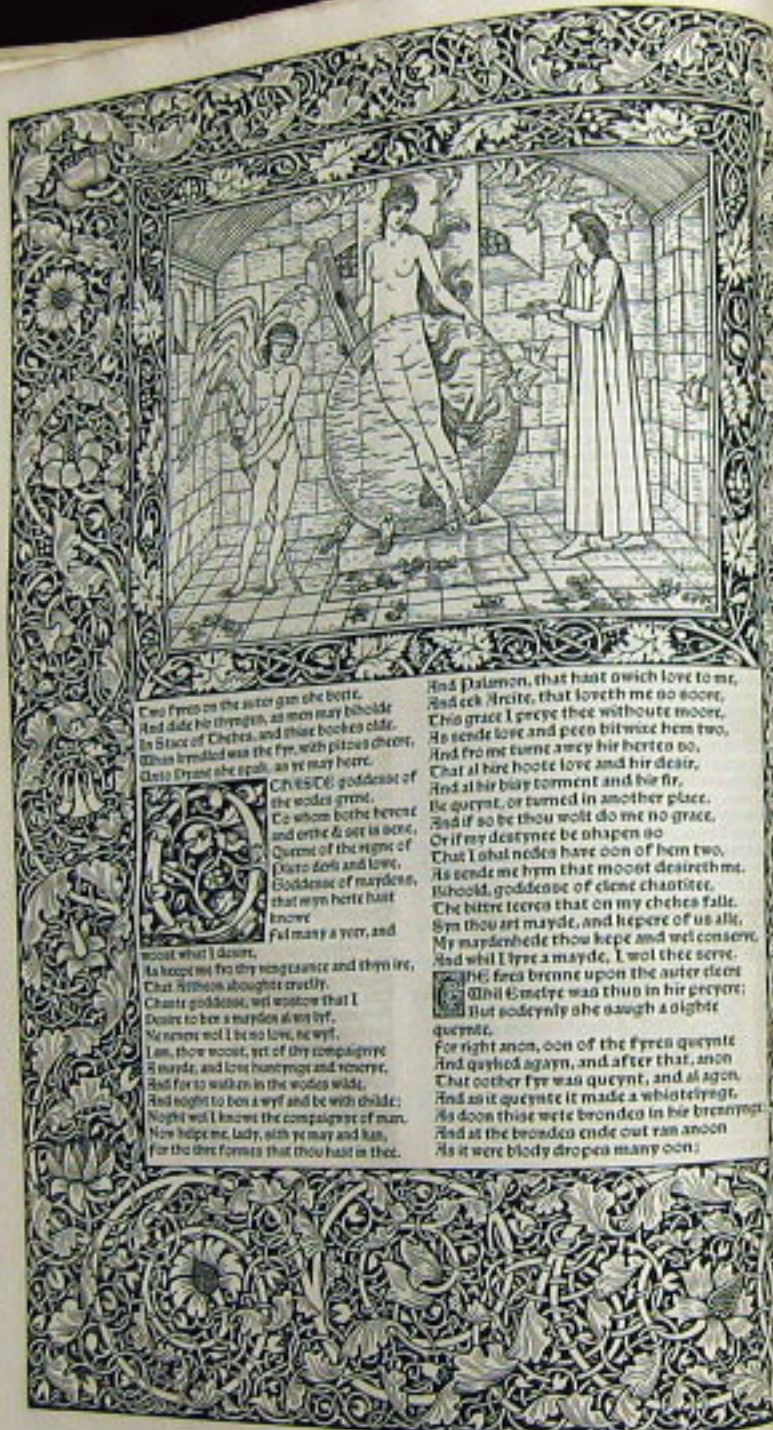
Explicit Liber Troili et Criseydis.



In 1891 Morris expanded his business to include book and type design. Taking inspiration from a lecture by Emery Walker on book design and printing during an early event by the Arts and Crafts Exhibition Society. Advocating unity in design Walker told his audience “The ornament, whatever it is, picture or pattern-work, should form part of the page, should be part of the whole scheme of the book.” Walker considered book design similar to architecture. Where every aspect – paper, ink, type, spacing, margins, illustration and ornament should result in design unity.



Morris designed his first typeface Golden in 1888. It was based on Nicolas Jensen's venetian roman face from the 1400's. From 1891 to the time it was disbanded in 1898 two years after Morris' death, over 18,000 volumes of 53 different titles were produced.



Two fyres on the auter gan she sette,
And dide his thynges, as men may biholde.
In stact of Chere, and thise booke olde,
Whan brenned was the fyr, with pitous chere,
Gode Dreme she spak, as ye may here.

CHIVRE: goddess of
the wodes grene.
Ce whom bothe herent
and orthe & oge is oone,
Quene of the regne of
Outo-dole and love,
Goddess of mayden,
that myn herte hast
knowe
Ful many a yere, and

moost what I desire,
As hope me fro thy vengeance and thyn ire,
That synners abought cruelly.
Chante goddess, wep wostow that I
Desire to be a mayden al my lyf.
Ne never wol I be no love, ne wyf.
I am, thou wost, art of thy compaignye
A mayde, and lowe huntinge and veynye,
And for to walken in the wodes wilde,
And toght to be a wyf and be with childe;
Nought wol I knowe the compaignye of man.
Now helpe me, lady, with y may and han,
For the thre formes that thou hast in the.

And Dalemone, that hast swich love to me,
And eek Arcite, that loveth me no more,
This grace I praye thee withoute moore,
As sende love and peen bitwixe hem two,
And fro me turne away hir herte so,
That al hir boote love and hir deir,
And al hir blay torment and hir fir,
Be quynt, or turned in another place.
And if so be thou wolt do me no grace,
Or if my destynce be shapen so,
That I shal nedes have oon of hem two,
As sende me hym that moost desirith me.
Bihold, goddess of clene chautitee,
The bitre teeres that on my cheser falle.
Syn thou art mayde, and hepere of us alle,
My maydenhede thou kepe and wel conserve,
And wil I lyve a mayde, I wol thee serve.

THE fire brenne upon the auter deit
Whil Emelye was thus in hir preyere;
But sodenly she saugh a dylite
quene,
For right anon, oon of the fyres quene
And quyked agayn, and after that, anon
That oother fyr was quynt, and al anon,
And as it quynte it made a wheteyng.
As doon thise wite brendes in hir brennyng,
And at the brendes ende out ran anon
As it were bloody dropes many oon:



for which so soore agast was Emelye,
That she was wel ny mad, and gan to crye,
For she ne wiste what it signified;
But oonly for the feere thus hath she cried,
And wepte, that it was pitee for to heere.
And therewithal Dyane gan appeere,
With bowe in honde, right as an huntressour,
And acyde, Doughter, stent thyen hevynous.
Among the goddesses hye it is affermed,
And by eteme word writ and confermed,
Thou shalt ben wedded unto oon of tho
That han for thee so muchel care and wo;
But unto which of hem I may nat telle.
Farwel, for I ne may no longer dwelle.
The firen which that on myn auter brenne
Shulle thee declaren, or that thou go home,
Thyn aventure of love, as in this case.

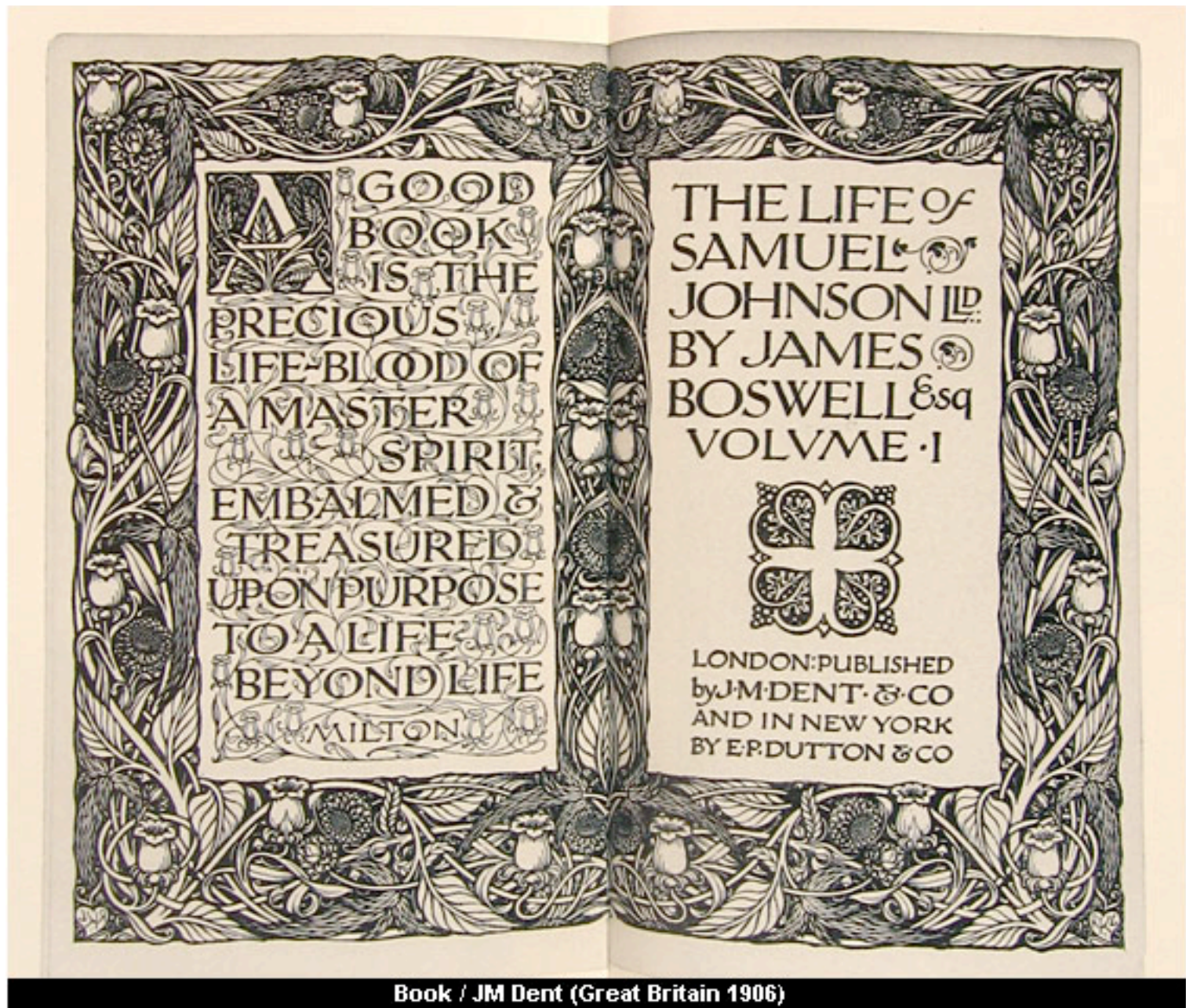
NAD with that word the arrow in the case
Of the goddesse clateren faste & ryngre,
And forth she wente, and made a van-
ysshynge;
For which this Emelye astoned was,
And acyde, What amounteth this, alas!
I putte me in thy protectioun,
Dyane, and in thy disposicioun.
And hom she goth anon the nexte weye.
This in theffet, ther is namoure to seye.

THE nexte houre of Mars folowynge this,
Arcite unto the temple walked is
Of fiers Mars, to doon his sacrifice,
With alle the ryttes of his payen wyse,
With pitous herte and heigh devocioun,
Right thus to Mars he seyde his oracioun:

STRONGE god, that
in the regnes colde
Of Crace honoured art
and lord yholde,
And hast in every regne
and every lond
Of armes al the beydel
in thyn hond,
And hem fortunat as
thee best devyse,

Accepte of me my pitous sacrifice,
If so be that my youthe may deserve,
And that my might be worthy for to serve
Thy godhede, that I may ben oon of thyne,
Thanne preyre I ther to rewe upon my pyne,
For thilke peyne, and thilke boote fir,
In which thou whilom brendest for desir,
Whan that thou usedest the beautee
Of faire, yonge, fresche Venus free,
And haddest hire in armes at thy wille,
Although ther onen on a tyme myselfe.

The Arts and Craft movement received criticism as early as 1893 as "the work of the few for the few". It failed to address the problems associated with mass production. And while some designers went on to reject Morris' use of historical styles as inappropriate for a new urban society, his work went on to inspire a great revival in fine book making.



Book / JM Dent (Great Britain 1906)

His type design based on exceptional earlier models, his application of design unity, his focus on the smallest detail relating to the entirety of the book inspired a whole new generation of book designers in both the private craftsman based presses as well as commercial printing.