

The Printed Book

Week 1

Gutenberg
and his
medieval context



incunable, incunabula

“cradle books”= books printed in the first 50 years of printing in the West with movable type (up to 1500)

the hand-press period

ca. 1450-early 19th c., the era when printers used manually-operated presses and handmade paper

Key components of Gutenberg's invention

1. MOVABLE METAL TYPE

MOVABLE:

Individual pieces can be reused ad infinitum to set new texts. Works best with an alphabetic system.

METAL:

- Pieces of type are cast in metal from molds which allow the replication of many identical pieces of type.*
- Metal stands up to the pressure of the press through many, many reuses, unlike wood.
- Type metal (lead + tin + antimony) melts easily and hardens almost instantly.

Key components of Gutenberg's invention, cont'd

2. A **PRESS** adapted to bring even pressure down on paper or parchment over pages laid out in metal type
3. **INK** that would work with the above system

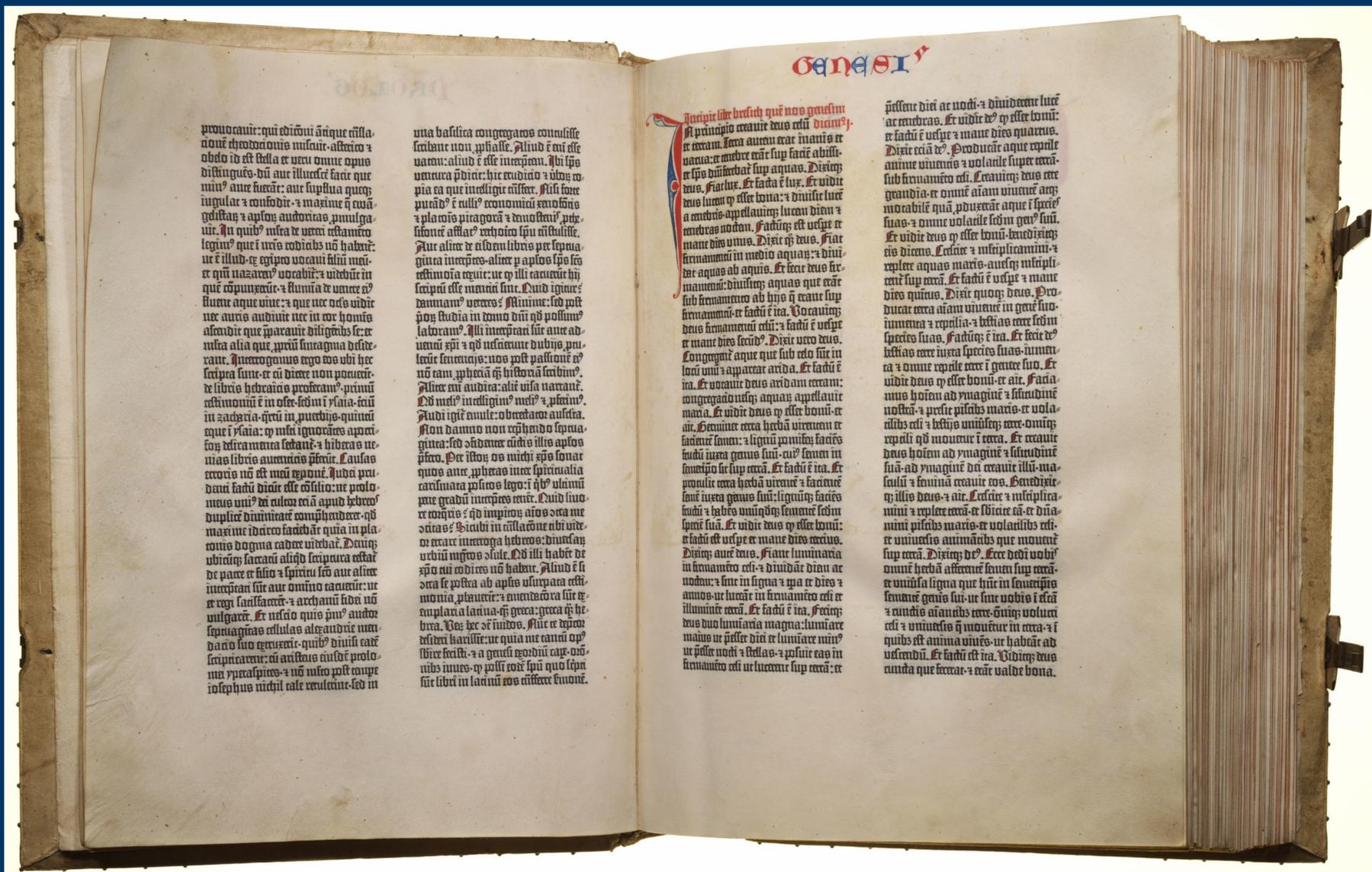
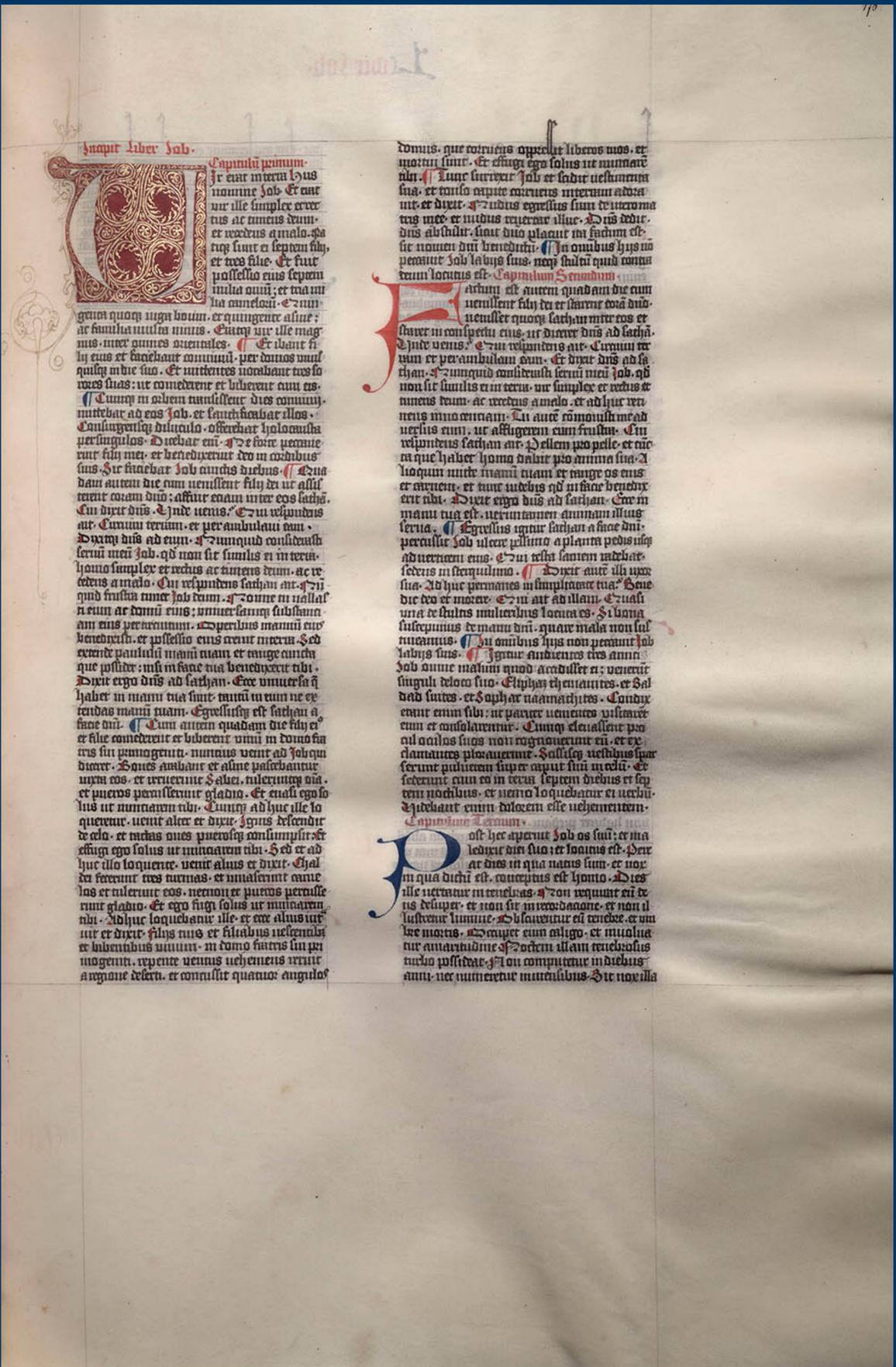
The Context for Early Printing

Knowing what books looked like in the 15th century and what the book trade already looked like gives us the context for Gutenberg's invention:

- Books: script choices, layout
- Large and growing readership in all the languages.
- Trade: multi-craft process of professionals in cities, organized through stationers who coordinated the multiple components
- Urban context: not only the multiple book arts, but many other trades and merchants

Left: the Giant Bible of Mainz, 1452-53 (pages 23 x 16 in)

Below: Library of Congress copy of Gutenberg's Bible, ca. 1450-1455 (pages 17 x 12 in)



Johannes Gutenberg, ca. 1400-1468

- Family were goldsmiths who worked in the mint of the Archbishop-Elector of Mainz
- By 1450: Fust and Schoeffer (who would soon form a printing firm of their own) invest in bible project.
 - ☞ *Note the huge up-front investment required to set up in printing.*
- Work on the Bible was probably under way by 1452.
- Earliest surviving printed item from Gutenberg's press is an indulgence printed in 1454.
- Bible (The 42-Line Bible, the Gutenberg Bible) was finished in 1455.

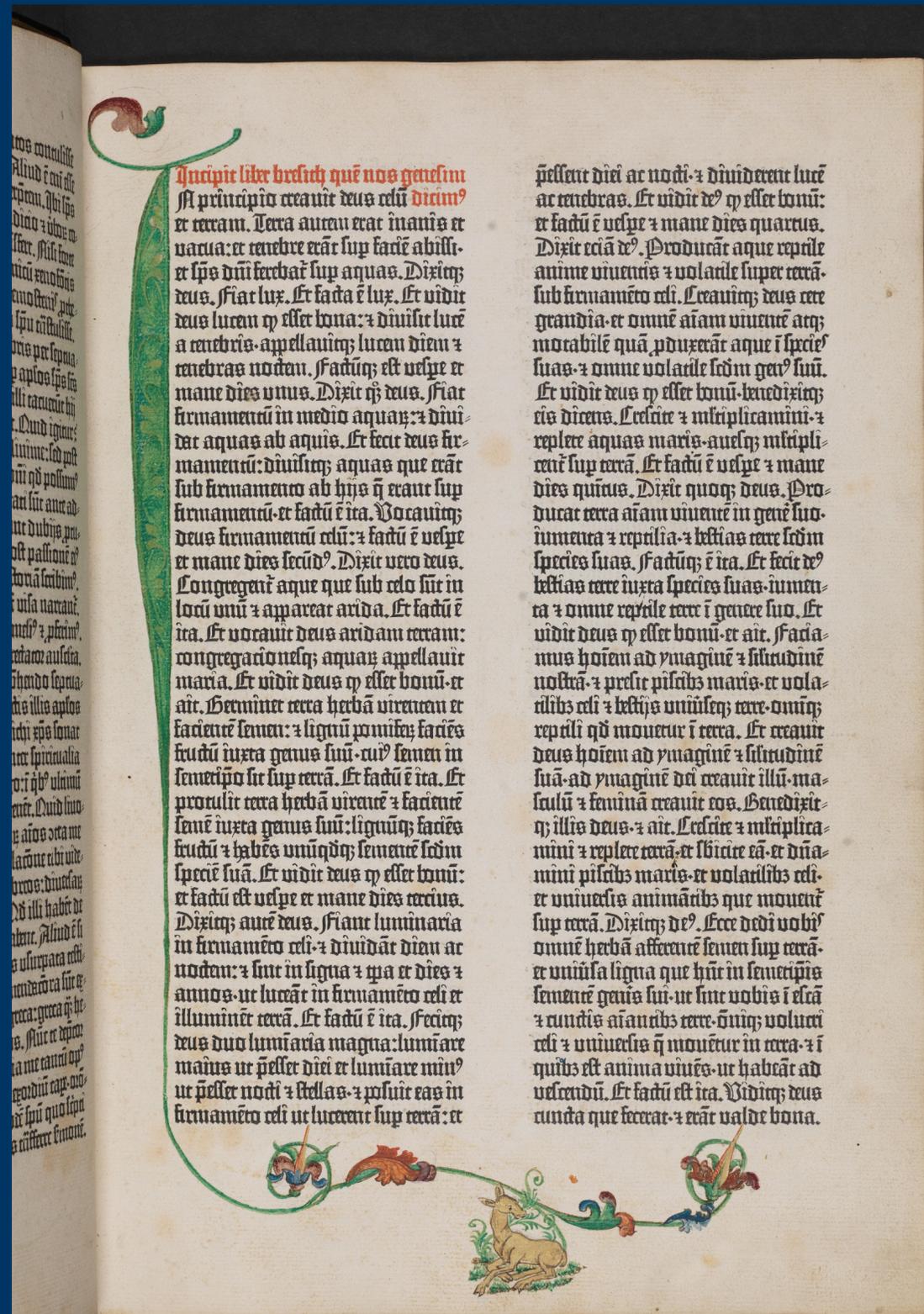
The Gutenberg Bible: diversity of copies

- About 160-180 copies were printed.
- 49 survive in whole or in part, ¼ of them on vellum
- Most copies were bound in 2 vols; parchment copies may be in 3 vols. (We have a few in 15th-c. bindings.)
- Gutenberg changed his mind about several things in the course of the print run:
 - whether to print the red parts
 - how many lines per page (switched from 40 to 42)
 - the size of the print run
- All copies were hand-decorated to some extent.

ON 12 MARCH 1455, Aeneas Silvius Piccolomini, soon to be Pope Pius II but then bishop of Siena, wrote to his friend Juan de Carvajal, a Spanish cardinal in Rome, describing a ‘viro mirabili’ (miraculous man) he had seen in the market in Frankfurt. The man was selling Bibles in numbers too large to have been the work of manuscript production:

I have not seen complete Bibles, but several quires belonging to different books [of the Bible], exceedingly clean and correct in their script, and without error, which Your Grace could read effortlessly, even without glasses. I learned from numerous witnesses that 158 copies have been completed, although some others say the number is 180. Of the quantity I am not entirely certain; of their completion (if one can have faith in informants) I have no doubt . . . I shall try, if possible, to buy a copy on your behalf and have it brought here. But I fear it will not be possible, both because of the distance and because they say that ready buyers had all been found even before the volumes had been finished. I can imagine Your Grace’s desire to know how matters stand from the fact that the messenger you sent was quicker than Pegasus! But that’s enough joking.

Stuttgart copy on paper, left; Vatican copy on vellum, right



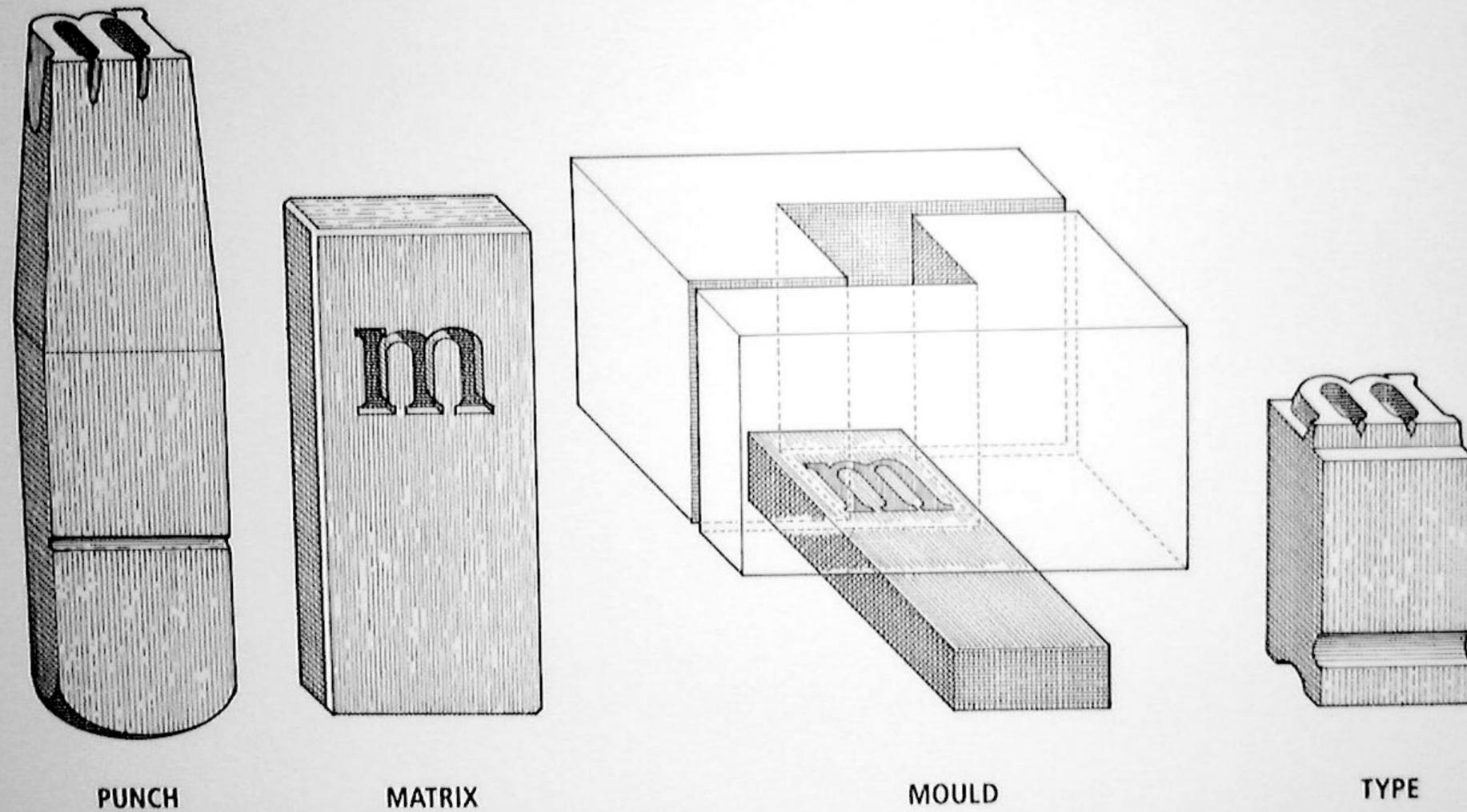
Details: Ransom left; Vatican top right; Stuttgart bottom right

Gen
id est.
Incipit liber bresith que nos genesios
A principio creauit deus celum **dicim⁹**
et terram. Terra autem erat inanis et
uacua: et tenebre erant super faciem abissi:
et spiritus domini ferebatur super aquas. Dixitque
deus. **Fiat lux.** Et facta est lux. Et uidit
deus lucem quod esset bona: et diuisit lucem
a tenebris. **Appellauitque** lucem diem: et
tenebras noctem. **Factumque** est uespere et
mane dies unus. **Dixitque** deus. **Fiat**
firmamentum in medio aquarum: et diui-
dat aquas ab aquis. **Et fecit** deus fir-
mamentum: diuisitque aquas que erant
sub firmamento ab hijs que erant super
firmamentum. **Et factum est ita.** **Vocauitque**

Gen
A principio creauit deus celum
et terram. Terra autem erat inanis et
uacua: et tenebre erant super faciem abissi:
et spiritus domini ferebatur super aquas.
Dixitque deus. **Fiat lux.** Et facta est lux.
Et uidit deus lucem quod esset bona: et
diuisit lucem a tenebris. **appellauitque**
lucem diem et tenebras noctem. **factum**

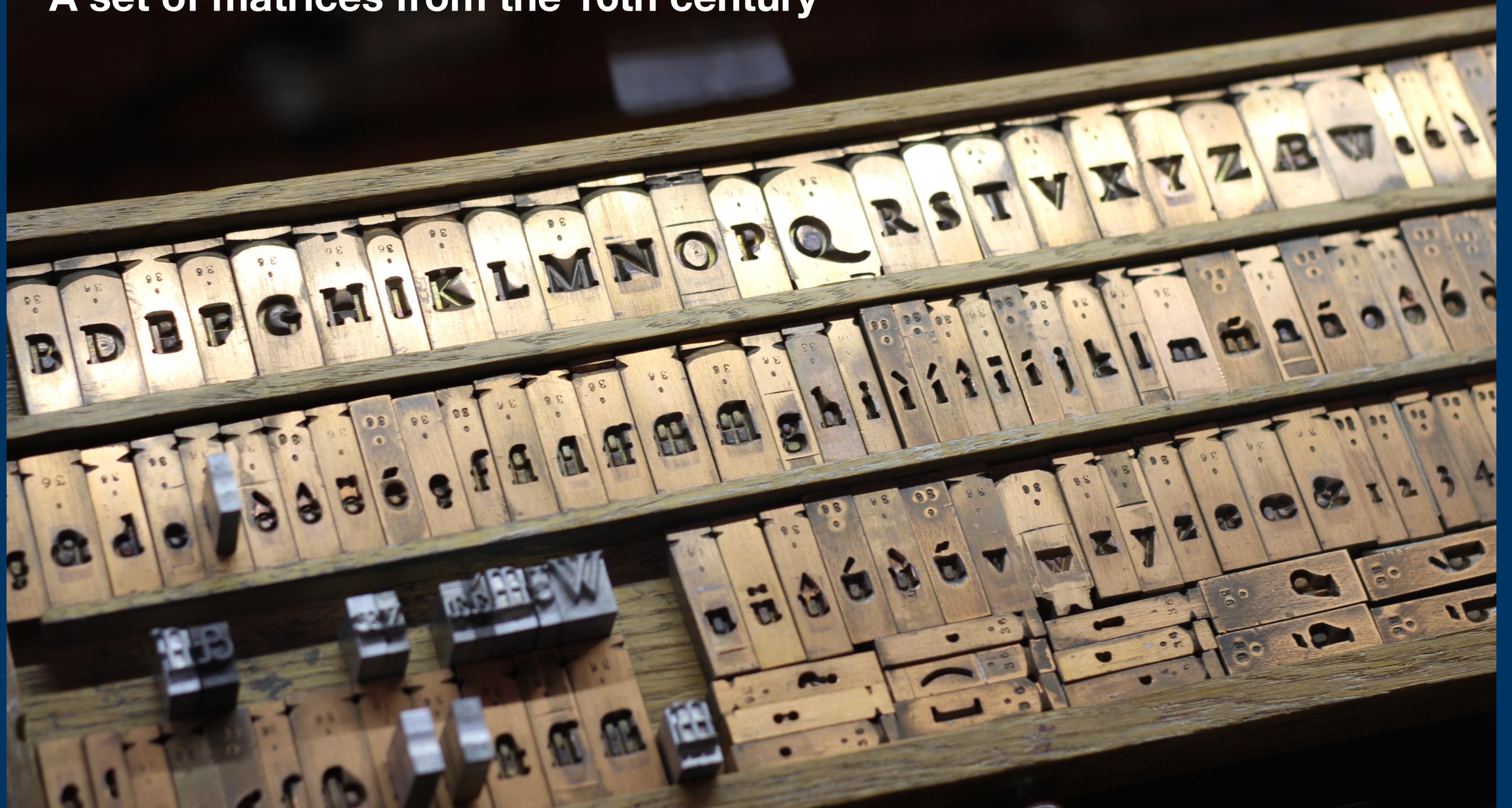
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Making metal type: punch, matrix, and type

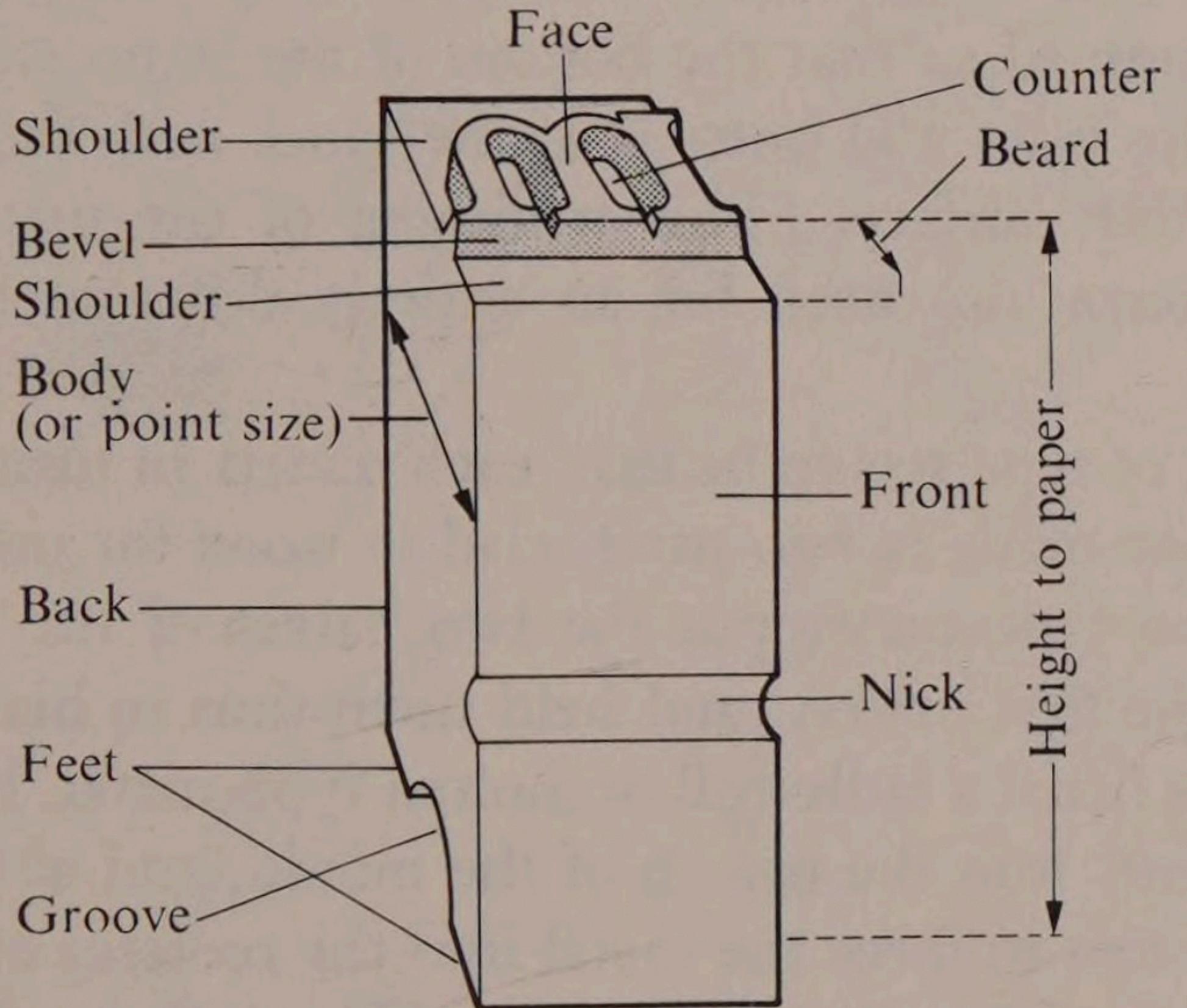


1. Punchcutter carves the steel punch.
2. Punch is struck into the copper matrix.
3. Matrix is inserted into a hand mold.
4. Hot typemetal is poured into the mold.

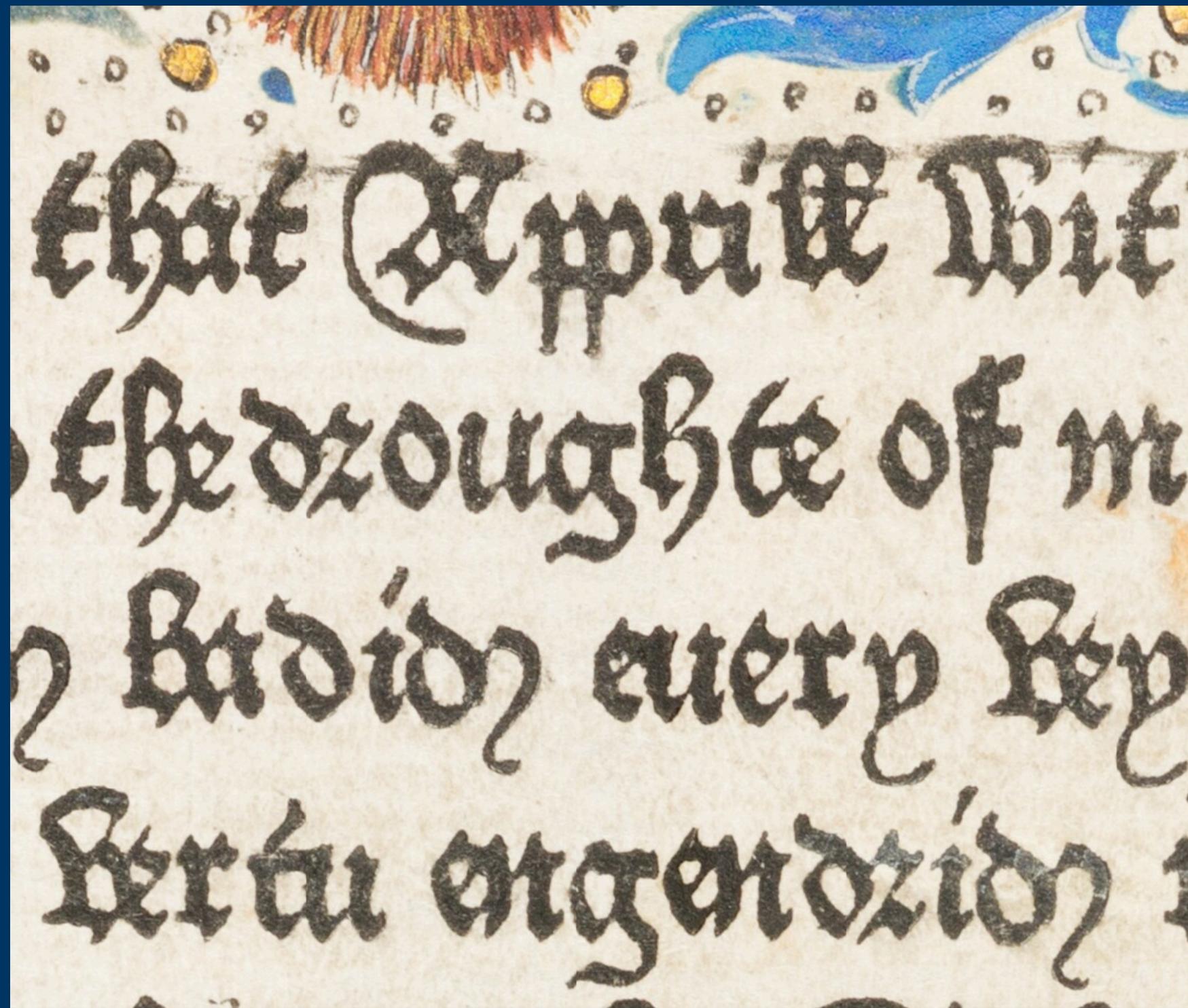
A set of matrices from the 16th century



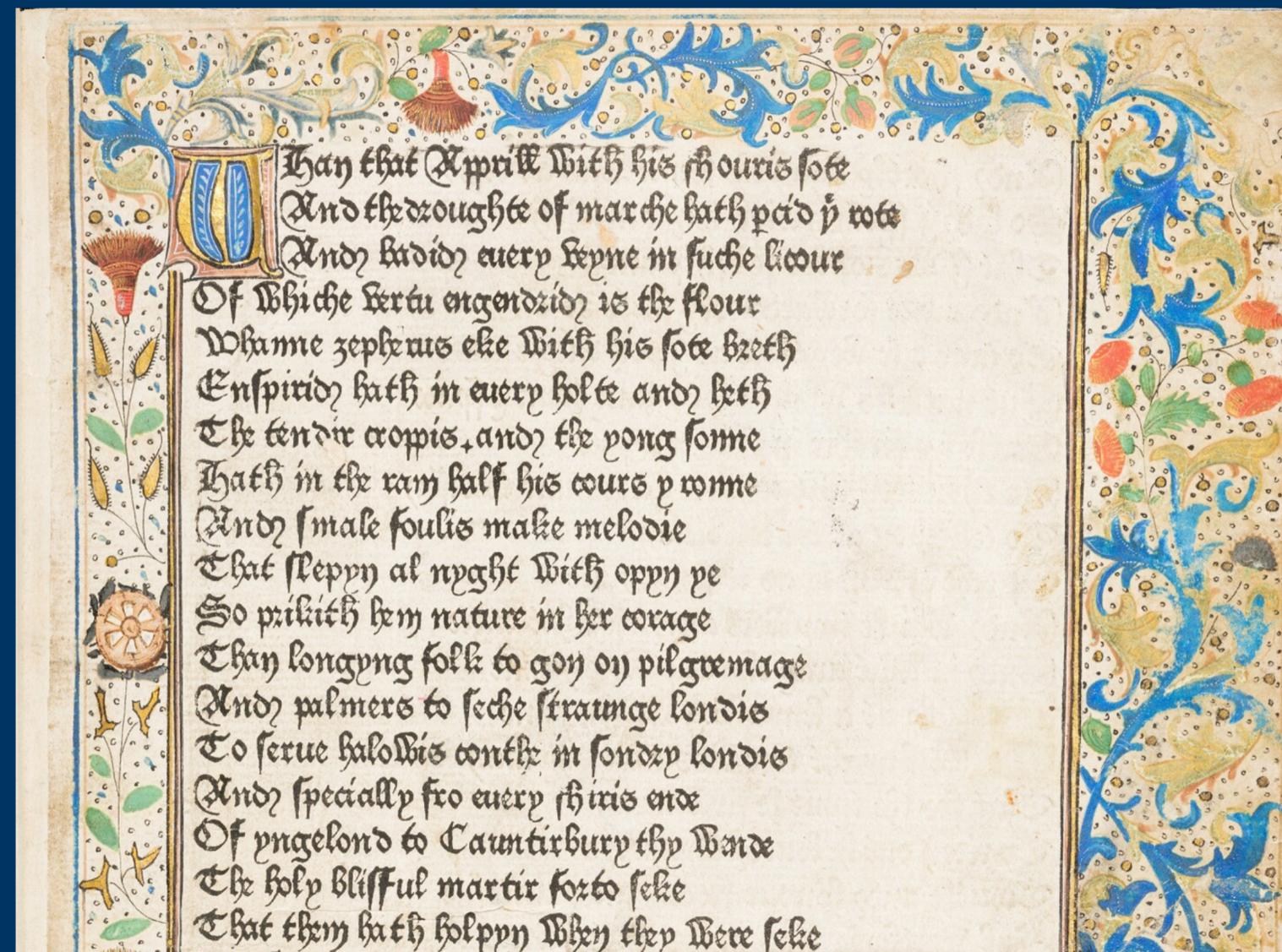
Anatomy of a piece of metal type



Caxton's 1476/7 Chaucer from Merton College's library; opening of the Canterbury Tales, with detail left. Note ligatures and bitings that must have been separate sorts in the font.



that Aprill with
the droughte of m
And badid every seyn
Vertu engendrid



Uhan that Aprill with his shouris fote
And the droughte of marche hath pced y rote
And badid every seyne in suche licour
Of whiche vertu engendrid is the flour
Whanne zepheus eke with his fote bresth
Enspird hath in every holte and heth
The tendre crosis, and the yong some
Hath in the ram half his cours y come
And smale foulis make melodie
That sleppn al nyght with oppn ye
So prikith hem nature in her corage
Than longyng folk to gon on pilgremage
And palmers to seche straunge londis
To serue halowis conthe in sondry londis
And specially fro every shiris ende
Of yngelond to Cauntirbury thy Wande
The holy blissful martir for to seke
That them hath holppn when they were seke

Gutenberg's Press



**Wooden
screw**



**Wooden
platen the
size of
one page**





**ONE page
printed
at a time**



(see video of operation of
a replica press)