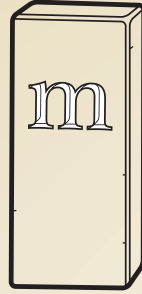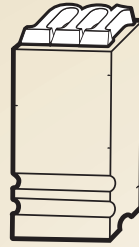# 3. Early Printing Methods

PUNCH   MATRIX   TYPE

The individual pieces of type were cast from a design engraved in relief onto a punch of hard metal, usually steel, which was driven into a block of copper to make the matrix. The part of the matrix carrying the character was held firm in a mould, into which was poured a molten blend of tin, antimony, and lead.

Two cases (an upper case for capitals and lower case for small letters) held the finished type, each character having a compartment of its own. A line at a time was assembled in a composing stick, and spaces inserted between the words to justify the line to the required length. After printing, the type was taken apart, cleaned, and distributed into its compartments in the cases.

The earliest printing machine was like a wine- or cheese-press. A vertical wooden screw raised and lowered the platen, the flat plate which pressed the paper onto the bed of type. On such a press, which was used by Gutenberg, 300 impressions could be made in a day.

In early modern Scotland there were effectively two kinds of book merchant: the printer, who may also have been a bookseller, and the bookseller, who may also have been a book binder. The burgh councils of Edinburgh, Aberdeen, and Glasgow controlled the admission to craft burgess or merchant guild membership. Apprentices joined the trade mainly for five or seven years, probably from the age of 17. Because of the restrictions on entry, the involvement of women was mainly informal: they helped in the family business, and sometimes inherited it.

Left: Device of Jodocus Badius Ascensius (1462–1535), Belgian born humanist and printer.

A new kind of press, developed in Germany and in use in Scotland in the early 1580s, enabled 200 impressions an hour to be made. The screw was now metal, and a sliding bed allowed the type tray to be run in and out. The type, with leads added between the lines to space them apart, was held firm with wedges and locked in a metal (or sometimes wooden) frame called a chase. A frisket held the paper in place on the tympan, which folded onto the type.