TYPOGRAPHY

Part I.—Historical.

TYPOGRAPHY (writing by types) is the art of print­ing (cast-metal) movable types on paper, vellum, &c. It is quite distinct, not only from writing, but from xylo­graphy or wood-engraving, *i.e*., the art of cutting figures, letters, or words on blocks of wood and taking impressions from such blocks, by means of ink or any other fluid coloured substance, on paper or vellum.

Possibly the earliest attempt to describe the art of typography is that in the *Donatus* issued by Peter Schoeffer, perhaps before 1456, the colophon of which says that it was finished “Arte nova imprimendi seu caracterizandi [from *character* = letter] . . . absque calami exaratione.” Fust and Schoeffer in the Mainz psalter of 1457 said that it was formed by an “adinventio artificiosa impri­mendi ac caracterizandi absque calami ulla exaratione. ” The colo­phon of the *Catholicon* of 1460 is more precise, and says that the book was printed “non calami, stili, aut pennæ suffragio, sed mira patronarum formarumque concordia, proportione, ac modulo.” In 1462 Albrecht Pfister had “gedrucket ” the *Four Histories.* In the *Liber Sextus Decretalium,* published in 1465, Fust and Schoeffer say that it was completed “non atramento [“atramento communi,” in the Justinianus of 1468 and 1472], plumali canna neque ærea, sed artificiosa quadam adinventione imprimendi seu caracterizandi,” a phrase which they slightly varied in Cicero’s *Officia,* issued in the same year: “non atramento, plumali canna neque ærea, sed arte quadam perpulcra.” The edition of St. Jerome’s *Epistles* of 1470 is said to have been completed by an “ars impressoria,” the *Decretum Gratiani* of 1472 by an “ars quædam ingeniosa impri­mendi,” the *Dyalogus* of 1478 by an “ars magistra.” We find further—“ars sancta” or “divina,” “nova ars scribendi,” “novum exscribendi genus prope divinum,” “sculptoria archetyporum ars,” “ars mirifica formandi,” “ars excusoria,” “nova imprimendi ratio,” “ars pressuræ,” “ chalcotypa ars,” “chalcographia” (1472 and later), “chalcographia excusoria impressoriaque,” “libraria im­pressio,” “ empryntynge ” (Caxton, 1482), “prenterei” (Schoeffer, 1492), “truckery” (1505), “impression des livres” (1498), and “ prenten.”

The early printers called themselves, or were called by others, “libronim prothocaragmatici ” *(Gramm. Rhythm.,* 1468), “impres- sores libronim,” “exsculptor libronim” (Jenson, 1471), “chal- cographus” (1473 ; Hain, 13036), “magister artis impressoria?,” “ boeckprinter ” ; and during the 16th century we find them still frequently called “ chalcotypus ” and “ chalcographus. ”

The types were at first designated more by negative than positive expressions. In 1468 they were called “caragma,” later on “car- acter" or “character,” “archetipæ notæ” (1473 ; Hain, 13036), “ sculptoria archetyporum ars,” “ chalcotypa ars, ” “formæ,” “ar- tificiosissimæ imprimendorum librorum formæ.” We soon hear also of the process and material by which they were produced. The *Grammatica* of 1468, published by Schoeffer, says that it was “cast” (sum fusus libellus). In 1471 “æneæ formulæ” are spoken of ; and Bernardus Cenninus and his son say that they had printed the Virgil “expressis ante calibe caracteribus et deinde fusis literis” (with letters first cut into steel and then cast). In 1473 Friedrich Creusner at Nuremberg says that he had “ cut ” (sculpsit) the work of Diogenes (Hain, 6192). Johan Zeiner of Ulm says in 1474 that he had perfected a book, not with the pen, but with letters of metal (stagneis caracteribus). In 1474 Joh. Ph. de Lignamine speaks of “metallicæ formæ.” In 1476 Husner of Strasburg represents the Nider as being printed with “ letters cut of metal (litteris sculptis artificiali certe conatu ex ære).” Nicolas Jenson printed in 1480 with letters “cut and cast” (sculptis ac conflatis).

The word *typographus* does not seem to occur before 1488, when it was used in the preface of P. Stephanus Dulcinius Scalæ to the *Astronomicon* of Manilius, printed in that year at Milan by Antonius Zarotus ∙,@@1 in 1498 Erasmus uses it in a letter (dated 13th Feb.) to Christianus, a Lübeck merchant;@2 and in 1517 Johan Schoeffer applies the word to himself in the colophon of the Æneas Sylvius published by him. But of the use of the word *typographia* no earlier instance is known than 1520, in which year Gerardus Novio- magus (=Geldenhaurius) in his *Lucubratiuncula de Batavorum Insula* (pref. to Nicol. Buscoducensis, dated 1520) says: “inventa Germanorum . . . bombarda videlicet, typographia, pyxis char- taque nautica ;” and Johan Schott, a printer of Strasburg, in the *Geogr. Ptolem.* published by him, describes his grandfather, Johan Mentelin, as “primus typographiæ inventor.” Gerardus, it may be added, borrowed the whole passage from Pet. Montanus (li. 1 *Adam,* published *a.* 1504), who has chalcographia instead of typo­

graphia. Meerman indeed@@3 speaks of a use of the word typographia (or at least of typographus) earlier than 1520, and refers to the preface of Bernardinus Veronensis in the edition of Tibullus, Catullus, and Propertius published at Venice in 1493 by Symon Bevilaqua, “at least,” Meerman adds, “as it (the preface) is read in the *Annal. Typogr.* of Maittaire, i. 560, 2d ed.” But on page 560 Maittaire quotes the first two lines of Bernardinus’s preface (till *dicit)* and then adds : “ Gratis characteribus destitutus, typographus necesse habuit hiatus in commentario hic illic relinquere,” which is evi­dently Maittaire’s own remark, not that of Bernardinus. The pre­sent writer at least has been unable to find such a passage in the Tibullus.

Although the art of writing and that of block-printing both differ widely from printing with movable metal types, yet this last process seems to have been such a gradual transition from block-printing, and block-printing in its turn to have been such a natural outcome of the many trials that were probably made to produce books in some more expeditious manner than could be done with hand­writing, that a cursory glance at these two processes will not seem out of place, all the less as a discussion on the origin and progress of typography could hardly be under­stood without knowing the state of the literary develop­ment at the time that printing appeared.

The art of printing, *i.e.,* of impressing (by means of certain forms and colours) figures, pictures, letters, words, lines, whole pages, &c., on other objects, as also the art of engraving, which is inseparably connected with printing, existed long before the 15th century. Not to go back to remoter essays, there is reason to suppose that mediæval kings and princes (among others William the Conqueror) had their monograms cut on blocks of wood or metal in order to impress them on their charters. Such impressions from stamps are found instead of seals on charters of the 15th century. Manuscripts of the 12th century show initials which, on account of their uniformity, are believed to have been impressed by means of stamps or dies.@@4 But the idea of multiplying representations from one engraved plate or block or other form was unknown to the ancients, whereas it is predominant in what we call the art of block­printing, and especially in that of typography, in which the same types can be used again and again.

Block-printing and printing with movable types seem to have been practised in China and Japan long before they were known in Europe. It is said that in the year 175 the text of the Chinese classics was cut upon tablets, which were erected outside the uni­versity, and that impressions were taken of them, some of which are said to be still in existence. Printing from wooden blocks can be traced as far back as the 6th century, when the founder of the Suy dynasty is said to have had the remains of the classical books engraved on wood, though it was not until the 10th century that printed books became common. In Japan the earliest example of block-printing dates from the period 764-770, when the empress Shiyau-toku, in pursuance of a vow, had a million small wooden toy pagodas made for distribution among the Buddhist temples and monasteries, each of which was to contain a dhâranî out of the Buddhist Scriptures entitled “Vimala nirbhasa Sûtra,” printed on a slip of paper about 18 inches in length and 2 in width, which was rolled up and deposited in the body of the pagoda under the spire. In a journal of the period, under the year 987, the expression “printed” book” *(suri-hoñ)* is found applied to a copy of the Bud­dhist canon brought back from China by a Buddhist priest. This, of course, must have been a Chinese edition ; but the use of the term implies that printed books were already known in Japan. It is said that the Chinese printed with movable types (of clay) from the middle of the 11th century. The authorities of the British Museum exhibit as the earliest instance of Corean books printed with movable types a work printed in 1337. To the Coreans is attributed the invention of copper types in the beginning of the 15th century ; and an inspection of books bearing dates of that

@@@1 Maittaire, *Annales Typogr.,* i. 508, note 1.

*@@@2 Opp.,* iii. col. 24.

*@@@3 Orig. Typogr.,* i. p. 32, note *cx.*

@@@4 Passavant, *Le Peintre-Graveur,* i. 18, Leipsic, 1860-64 ; John Jackson, *Wood-Engraving,* London, 1839 ; Bucher, *Gesch. der techn. Künste,* p. 362 *sg.*