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ALPHABETS OLD & NEW





TEXT BOOKS OF ORNAMENTAL DESIGN

# ALPHABETS OLD & NEW

CONTAINING OVER ONE HUNDRED AND FIFTY  
COMPLETE ALPHABETS, THIRTY SERIES OF NU-  
MERALS, AND NUMEROUS FACSIMILES OF ANCI-  
ENT DATES, ETC., FOR THE USE OF CRAFTS-  
MEN, WITH AN INTRODUCTORY ESSAY ON  
"ART IN THE ALPHABET."

BY

LEWIS F. DAY,

AUTHOR OF "EVERY-DAY ART," "NA-  
TURE IN ORNAMENT," AND OTHER  
TEXT-BOOKS OF ORNAMENTAL DESIGN.

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## P R E F A C E.

THIS is a book of Alphabets; but of alphabets selected with a purpose—that, namely, of, in the first place, showing the development of letter-forms, and the shape they took at different periods; and, in the second, of suggesting the endless variations which may yet be played upon shapes more or less fixed for us by custom.

The ancient lettering illustrated in these pages has been taken, as far as might be, from original sources, and drawn with every care to keep the spirit of the original. I have not scrupled, however, to supply the letters missing in old manuscripts or inscriptions. For, presumptuous as this may appear to the scholar, he is not likely to be perplexed by it, knowing well the letters which would not occur in the original script; on the other hand, the practical workman, to whom this volume is addressed, will be thankful perhaps for alphabets as complete as possible. No pretension is made to paleographic learning; and, even on the point of design, it should be understood that I do not

presume to lay down the law, but am only expressing personal opinions, which the reader must take for what they are worth to him.

The old examples have been in great part chosen, and many of the modern ones designed, with the purpose of showing the influence of the implement employed by the workman, and of the material in which he worked, upon the character of his lettering—a point upon which sufficient stress has not hitherto been laid by compilers of alphabet-books.

Sixteen pages are devoted to the illustration of Numerals, old and new. These do not, for obvious reasons, exactly correspond with any given Alphabets ; but, by comparing letters with figures, observing of course the dates of each, it should not be difficult to determine which numerals would best go with a particular alphabet.

The present volume deals with the Alphabet, that is to say, with the forms of letters. The consideration of the use of Lettering in Ornament is a question apart, and is reserved for a separate and quite independent book, which has long been in hand.

LEWIS F. DAY.

13 MECKLENBURGH SQUARE, LONDON :

*August, 1898.*

### NOTE.

*Thanks are due to Mr. George Clulow for the use of his valuable collection of old Writing Books, etc.; to Messrs. Matthew Bell, W. J. Pearce, J. Vinycomb, Brindley & Weatherley, Marcus Ward & Co., F. Bassermann, and others, who have kindly permitted the reproduction here of alphabets drawn or copyrighted by them; and to the artists who have designed alphabets especially for this book.*



## DESCRIPTIVE LIST OF ILLUSTRATIONS.

1. GREEK ALPHABET—From an MS.—characteristic of the pen.  
Compare the B with 32 and 34, and observe the likeness  
of the Ω to W. 9th century.
2. COPTIC MS.—10th century or earlier. }
3. COPTIC MS.—12th century. } Compare with Greek.
4. COPTIC MS.—14th century. }
5. MOESIAN MS.—Characteristically penwork. 4th century.
6. ROMAN MS.—Penwork. A has no cross-stroke. Upstrokes  
thick and thin. Compare 30. 4th century.
7. MS.—Penwork. Round D and M. G has a tail. 7th century.
8. ROMAN UNCIALS—Penwork. 8th century.
9. "RUSTIC" ROMAN—Penwork. A has no cross-stroke. F and  
L rise above line. E, I, T not easy to read. 5th century.
10. ROMAN CAPITALS—Penwork. R has thin upstroke. 6th  
century.
11. ROMAN CAPITALS—Penwork. Compare square O with 17, 18,  
36. Note "dilation" of strokes. 6th century.
12. BYZANTINE CAPITALS—7th century.
13. ENGLISH INSCRIPTION—From a monument to the sister of  
William the Conqueror. 1085.
14. FRANCO-GALLIC CAPITALS—Heading of an MS. Penwork,  
of which the curly quirks are indicative. 7th century.
15. VISIGOTHIC MS.—Moresque influence perceptible. Note long  
and short letters. 10th century.

16. SAXON ILLUMINATION (Caroline)—9th century.
17. ANGLO-SAXON engraved forms.
18. ANGLO-SAXON pen-forms—9th century.
19. LOMBARD—From the Baptistery at Florence, incised in marble and inlaid with cement. Compare 41, 85, 86. 12th century.
20. ITALIAN MS.—Compare with 74. Beginning of 13th century.
21. LOMBARD WRITING of about 1250. Freely rendered.
22. CAPITALS—15th century.
23. GERMAN GOTHIC minuscule or black letter—Rounded form. 15th or 16th century.
24. GERMAN GOTHIC minuscule or black letter—Squarer form. 15th or 16th century.
25. BLACK LETTER—Squarer form. 15th or 16th century.
26. ROMAN CAPITALS cut in stone—Wetzlar. About 1700.
27. MINUSCULE ITALICS—16th century.
28. GREEK—From an Athenian stele. Marble. Cut in with a chisel. Characteristically right-lined. Certain strokes fall short of the full length. The two sides of the stroke not always parallel, but inclining occasionally to wedge-shape. The top stroke of T is not stopped by cross-cut, but runs out. 394 B.C.
29. GREEK INITIALS—From a book printed at Basel. Wood engraving. The serif fully developed. 16th century.
30. ROMAN—From fragments in the British Museum. Cut in stone. In E, F, L, P, R, T strokes run out. Note variety in rendering the same letter. 2nd and 3rd centuries.
31. ENGLISH, IRISH, OR ANGLO-SAXON—From illuminated MSS. Curves inclined to take a spiral direction. Considerable freedom of penmanship. Various forms of the same letter. Note long tails and unequal length of letters. 6th century.
32. FROM A CODEX in Latin—Written between ruled marginal lines. Considerable variety in the form of the same letter. Note the square C and G, and the deep waist of the B and R, which compare with alphabet I. 7th or 8th century.



33. SAXON AND ANGLO-SAXON MSS.—The outline penned and filled in with various tints. The scribe has not made up his mind as to any logical use of thick and thin stroke. Note square C and S, and looser T and U. 7th, 8th, 9th centuries.
34. GALRICAN CAPITALS—MSS. Compare B and R with alphabets 1 and 32. 8th century.
35. IRISH—From the Book of Kells. Illuminated. Note square forms of certain letter—the curious D-shaped O and the general thickening of the upright strokes at the starting-point. Various forms of same letter. 8th century.
36. ANGLO-SAXON—Various MSS. Forms sometimes rigidly square, sometimes fantastically flowing. Strokes developing occasionally into spirals, or into interlacing, which ends perhaps in a grotesque head. 8th and 9th centuries.
37. IRISH MSS.—Fantastically flowing initials. 9th century.
38. MS. LETTERS—More nearly resembling the orthodox Roman character, with exception of D, E, G, P, U, in which Gothic characteristics begin to appear, and perhaps a hint of future minuscule forms. 10th century.
39. FRENCH MS.—Initials in colours. More Gothic than Roman, flourishing into tails of foliation. 12th century.
40. GERMAN MS.—Initials. Distinctly penwork. Departing again widely from the square Roman form. 12th century.
41. FRENCH—From the doors of the cathedral at Le Puy. Wood, simply grounded out. Several varieties of letter. The curved lines characteristically cusped. Probably 12th century. Compare with 19.
42. MS. LETTERS—Typically Gothic capitals. "Closed" letters. Sportive finishing strokes. 14th century.
43. PENWORK—Severe and straight beginning of a type which eventually becomes excessively flowing and florid. 1420.
44. ITALIAN CAPITALS—Drawn by J. Vinycomb. 14th century.
45. INCISED GOTHIC CAPITALS—From Italy, Spain, and south of France. About 1350.

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- 46 and 47. GOTHIC INSCRIPTIONS—From Nordhausen. Cut in brass. 1395-1397.
48. ENGLISH INITIALS—From MS. in the British Museum. On a background of delicate ornament penned in red. About 1400.
49. GOTHIC MINUSCULE—From the Church of St. Francesco at Prato. Simple forms incised in marble and filled in with cement. About 1410.
50. ENGLISH—Gothic inscriptions. Stone. From monument of Richard II. in Westminster Abbey, and others of same date. About 1400.
51. GERMAN MSS.—Gothic initials. 15th century.
52. GERMAN MSS.—Gothic initials. The thickening of the curved strokes is characteristic. The swelling is not gradual, but sudden. This occurs in other German MSS. of the same period. 1475.
53. GERMAN—From an inscription on a monument to Greoricus de Lewenstein in the cathedral at Bamberg. Cut in brass. Something of a compromise between majuscule and minuscule lettering. 1464.
54. MS. INITIALS—The terminations again rather frisky. But letters of this kind (compare also 42, etc.) being usually in colour, most often red, their tails etc. do not cause the confusion in the ranks of writing which they would do if they were in black. About 1475.
55. FRENCH—From an inscription on a picture-frame in the Louvre. The slight but characteristic curling and twisting of the points of serifs comes of the use of the brush. Note the recurrence of the square C, more characteristic of an earlier period. 1480.
56. FROM AN INSCRIPTION on a brass to Duke Albert of Saxony, Meissen. Something of a compromise between Roman and Gothic types. 1500.
57. FLEMISH MINUSCULE—From a memorial tablet at S. Jacques, Bruges. Cut in stone. There is a suggestion of turning over and interlacing the strokes of the letters, which was very usual in engraving of the period, whether on brass or stone. 16th century.

58. and 59. **GOthic MINUSCULE**—From monumental frames. Severe and simple forms. End of 15th century.
60. **GERMAN INITIALS**—From a book published at Augsburg by J. B. Boccatus. The outline printed, the colour filled in by hand. An example of the common practice of clothing letters in foliage, or even making foliage or grotesque animal forms take the form of lettering, more or less. 1473.
61. **GOthic CAPITALS**—16th century.
62. **INITIALS**—Framed in delicate ornament, pencilled in red. 16th century.
63. **ITALIAN**—Gothic initials. From a circle at Monte Cassino. Framed in penwork in colour. 16th century.
64. **ITALIAN INITIALS**—Broad penwork of late Gothic character, neither so rigid nor so florid as the typical German writing of the period. 15th and 16th centuries.
65. **GOthic CAPITALS**—By Albrecht Dürer. Penwork. (Compare with 67 and with 66, opposite.) Early 16th century.
66. **ITALIAN GOthic CAPITALS**—After Ludovico Curione. Penwork. (Compare with German, opposite.) 16th century.
67. **GERMAN MINUSCULE**—Albrecht Dürer. (Compare with Italian, opposite.) Early 16th century.
68. **ITALIAN MINUSCULE**—By Vicentino. From the original Writing Book. The penmanship is florid, but not quite in the way of German flourish. (Compare with German, opposite.) 16th century.
69. **ITALIAN GOthic CAPITALS**—After Vespasiano. Penmanship. 16th century.
70. **ITALIAN MINUSCULE**—From the original Writing Book, by Ludovico Vicentino. A good specimen of the so-called "ribbon letter." When once the carver or engraver began to consider the broad strokes of his "black letter" a catastrophe, and to suggest by ever so slight a cut that they were turned over at the ends (compare 57), it was inevitable that he should arrive eventually at this kind of thing. Florid indeed, but fanciful. Any form of letter might be so treated, but the treatment is peculiarly suited to the black-letter form. 16th century.

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71. ITALIAN MINUSCULE—From the original Writing Book by Vespasiano. These letters are exceedingly well shaped. Observe the second variety of the letter *r*. 16th century.
72. ITALIAN GOTHIC MINUSCULE—From the original Writing Book by Palatino. Straight-lined, with elaborately flourishing extremities. It suggests the engraver. 1566.
73. ITALIAN CAPITALS—From the original Writing Book by Lud. Vicentino. The outline of the letters deviates into interlacings. But the knotting occupies approximately the natural thickness of the letter; and, though the outline is thus broken, the form of the letter is sufficiently preserved. This splitting of the letter, as it were, into ribbons in its thickest parts was not uncommon in 16th-century initials. It is obvious that any form of letter might be elaborated after this fashion. 16th century.
74. ITALIAN INITIALS—From the original Writing Book by G. F. Cresci. This is a fanciful and rather elegant elaboration of forms common in Gothic writing. The familiar outline is, as it were, ornamentally fretted. (Comp. with 20.) 1570.
75. ITALIAN GOTHIC CAPITALS—From the original Writing Book by G. F. Cresci. Apparently to some extent influenced by the Roman character. 1570.
76. ITALIAN MINUSCULE—From the original Writing Book by G. F. Cresci. Roman in character. 1570.
77. SPANISH GOTHIC CAPITALS—From the Writing Book by Juan Yciar. The forms of the K and Y are unusual. 16th century.
78. GOTHIC INITIALS—Woodcut. Used with printed type. End of 16th century.
79. GERMAN CAPITALS—By Daniel Hopfer. Renaissance or “Roman” in character, but not without traces of lingering Gothic influence. 1549.
80. TYPICALLY ITALIAN RENAISSANCE—“Roman” capitals, by Serlio. 16th century.
81. GERMAN—From inscriptions at Bingen and other towns. Cut in stone, showing some licence on the part of the mason. 1576, 1598, 1618.

82. **ITALICS**—The sloping form came, of course, from the use of the pen, but it was largely adopted by the masons of the 17th and 18th centuries, who copied even the most elaborate flourishes of the writing-master. (Compare 83.) 17th century.
83. **ENGLISH ITALIC WRITING**—From inscriptions on monuments in Westminster Abbey. Stone-cutting in imitation of penwork, not characteristic of the chisel. 1665.
84. **ENGLISH ROMAN LETTERING**—From engraved stone slabs at Chippenham and elsewhere. 1697.
85. **GERMAN CAPITALS**—From the Germanisches Museum, Nuremberg. Painted on the wooden drug-drawers of an old apothecary's shop. Brushwork. Observe the bulging of the curved strokes. (Compare with 86 and 10.)
86. **GERMAN CAPITALS**—By J. H. Tiemroth, of Arnstadt. Penwork. From the titles of a series of water-colour paintings of botanical specimens. Observe the swelling of the curved strokes, and compare with 85 and 19. Here and there a letter shows an inclination to fall into Italics. 1738-48.
87. **GERMAN MINUSCULE** Roman letters—From Bamberg, engraved on brass, the background cut away. Observe the spur on the edge of the long strokes, designed to accentuate the parallelism of the line of lettering. 1613.
88. **GERMAN LETTERING**—From inscriptions at Osnabrück. Halting between majuscule and minuscule forms. Incised in stone. 1742-56.
89. **GERMAN MINUSCULE**—From a monument at Würzburg cathedral. Incised in slate. 1617.
90. **GERMAN**—From a monument at Würzburg. Incised in slate. Occasional capital letters are mixed up with the minuscule. 1784.
91. **ROMAN CAPITALS**—From the lace-book of Giovanni Ostaus, adapted to working on a square mesh. Characteristic of the method of execution, and not of any period. (Compare 142.) 1590.
92. **ITALIAN CAPITALS**—A survival of Gothic forms, not characteristic of the period. 17th century.

93. FRENCH—Of the period of Louis XV., by Laurent. This is a case in which Rococo scrollwork and flowers are compelled to take the form of lettering, more or less—in this case the form of current writing. 18th century.
94. FRENCH—A more reticent example of the period of Louis XV., by E. Guichard, in which it would, perhaps, be more accurate to say that the shape of the letter is broken up into ornament. 18th century.
95. ENGLISH COURT HAND—From Andrew Wright's "Court Hand Restored," a book designed to assist the student in deciphering old deeds, etc. This book was published in 1815; but the character is at least as early as the 14th century, and may have been in use a century or more before that.
96. HEBREW ALPHABET.
97. HEBREW ALPHABET—Ornamental version. From Sylvestre's "Paleographie." Almost identical with an Italian version of the 16th century.
98. ENGLISH—Roman capitals and numerals, by William Caslon. Printed type, "old face." 18th century.
99. ENGLISH—Roman lower case, and italic upper and lower case, by W. Caslon. Printed type, "old face." 18th century.
100. MODERN ROMAN, MAJUSCULE AND MINUSCULE, of French type, elegantly shaped and spurred. Drawn by J. Vinycomb.
101. MODERN ROMAN CAPITALS of French type, elongated. This one instance is enough to illustrate the way in which variations are made upon any given type by elongating or compressing the letter. Such elongation or compression is seldom an improvement upon the normal proportion; it is a too convenient way of adapting an inscription to the space it has to occupy.
102. MODERN ROMAN, MAJUSCULE AND MINUSCULE, sans serif. These thin letters, all of one thickness, are sometimes described as "skeleton."
103. MODERN ROMAN CAPITALS—A version of the French type (100). L. F. D.

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104. MODERN ROMAN ITALICS, majuscule and minuscule, as used by printers call "revived old style."
105. MODERN ROMAN ITALIC CAPITALS, with something of a cursive character. L. F. D.
106. MODERN MAJUSCULE AND MINUSCULE Lettering and numerals, with more curvature in the strokes than in the typical Roman character. J. W. Weekes.
107. MODERN ROMAN CAPITALS, not quite of the usual character and proportion. (Compare No.) L. F. D.
108. MODERN ROMAN CAPITALS AND NUMERALS—Suggestive rather of the chisel than of the pen. J. Cromar Watt, architect.
109. MODERN ROMAN CAPITALS AND LOWER CASE—Rather further removed from orthodoxy than the last. J. W. Weekes.
110. MODERN GERMAN version of Roman capitals. Otto Hupp. From "Alphabete und Ornamente."
111. MODERN ROMAN "BLOCK," or sans-serif, majuscule and minuscule, miscalled "Egyptian." J. W. Weekes.
112. MODERN VARIATION UPON ROMAN CAPITALS—Plant brushwork. L. F. D.
113. MODERN CAPITALS—Twisted, Plant brushwork. Could easily be worked in "carved" copl. L. F. D.
114. MODERN "BLOCK" CAPITALS—Based chiefly on Roman. W. J. Pearce. From "Painting and Decorating."
115. MODERN CAPITALS—Inspired by Gothic. W. J. Pearce.
116. MODERN GERMAN BLACK LETTER, majuscule and minuscule—By Otto Hupp. From "Alphabete und Ornamente."
117. MODERN GERMAN GOTHIC capitals. Otto Hupp. From "Alphabete und Ornamente."
118. MODERN VARIATION OF MINUSCULE GOTHIC—Intentionally rather fantastic, but not intentionally departing so far from familiar forms as to be difficult to read.
119. MODERN GOTHIC CAPITALS—Again meant to be fanciful, but not to do any great violence to accepted form. An alphabet in which there is the least approach to design is always in danger of being considered illegible. Legibility is for the

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most part the paramount consideration ; but there are cases, however rare, in which it is permitted even to hide the meaning so long as it is there, for those whom it may concern.

120. MODERN CAPITALS AND NUMERALS—Patten Wilson.
121. MODERN CAPITALS—More or less playful variations upon familiar forms of lettering. L. F. D.
122. MODERN CAPITALS derived from Gothic, yet more playfully treated than 121. L. F. D.
123. MODERN CAPITALS—Rather Gothic than Roman, which break out (as was common in old work) into foliation which forms a sort of background to the letter. L. F. D., designed for Mr. Matthew Bell.
124. MODERN GERMAN MINUSCULE—Fancifully treated. After Franz Stuck, compiled from various designs by him, in "Karten und Vignetten."
125. MODERN CAPITALS AND MINUSCULE drawn straight off with the pen. L. F. D.
126. MODERN VERSION OF EARLY GOTHIC CAPITALS—Adapted for engraving on metal. L. F. D.
127. MODERN VERSION OF EARLY SPANISH LETTERS—Adapted for cutting with a single plough of the graver. L. F. D.
128. MODERN CAPITALS adapted for engraving. L. F. D.
129. MODERN CAPITALS adapted for execution with single strokes of the pen. L. F. D.
130. MODERN LETTERS of fanciful character adapted for direct execution with the brush. L. F. D.
131. MODERN TWISTED LETTERS adapted for cutting with a single plough of the graver. L. F. D.
132. MODERN ROMAN majuscule and minuscule Penwork. Roland W. Paul, architect.
133. MODERN RATHER GOTHIC CAPITALS—Penwork. R. K. Cowtan.
134. MODERN ARCHITECT'S ALPHABETS, majuscule and minuscule, with numerals and wording, to show the adjustment of each letter to letters adjoining. Designed to be characteristically penwork. A. Beresford Pite, architect.



135. MODERN MAJUSCULE AND MINUSCULE—R. K. Cowtan.
136. MODERN MAJUSCULE AND MINUSCULE, approaching to running hand. R. K. Cowtan.
137. MODERN GERMAN GOTHIC CAPITALS (Factor-script)—Penwork. Otto Hupp. In the later German character penmanship can writ. The lettering is often quite inextricable from the tangle of flourishes in which it is involved. Here Hupp has avoided the utmost extravagance of the national style. To any one acquainted with the German character, it is clear enough which of his sweeping strokes mean business, and which are merely subsidiary penmanship. The happy mean is, of course, to make ornament against which the letter tells plainly enough. That is attempted also in 123.
138. MODERN MAJUSCULE AND MINUSCULE, directly written with the simplest stroke of a quill pen. Walter Crane.
139. MODERN GOTHIC CAPITALS, executed also with a quill. The forms designed for execution with two strokes of the pen. Walter Crane.
140. MODERN CAPITALS, shaped with deliberate view to direct and easy expression with the chisel, the cuneiform character of the Assyrian inscriptions being taken as a suggestion that a wedge-shaped incision was about the easiest thing to cut in stone. (See p. 28.) Alfred Carpenter and L. F. D.
141. MODERN CAPITALS, designed for wood-carving, the ornament typical of the Elizabethan, Jacobean, and Henri II. periods being taken as evidence of the ease with which strap-like forms may be cut with a gouge. L. F. D.
142. EMBROIDERED ALPHABET, founded upon some letters in an old English sampler. The peculiar angularity of the forms follows naturally from working on the lines given by the mesh of the canvas, and is characteristic of a certain class of very simple needlework. L. F. D. (Compare with 91 and 146, and with what is said in reference to 144.)
143. MODERN CAPITALS AND LOWER CASES—Scratched straight off in moist clay, afterwards baked. The form of the letters is such as could be most easily incised with a point or stylus, and is characteristic of the way of working out of which it comes. L. F. D. (Compare with 112, 113, 127, 131.)

144. MODERN CAPITALS, suggested by the facility with which they could be traced with a brush (compare 112, 113). The brush in this case was charged with gesso, and the bluntness of the forms—a natural consequence of the thick creamy composition of glue and plaster used—is characteristic of the method of work. To have tried for sharp lines would have been futile. Such lettering might equally well be executed in needlework with stout corded silk or gold thread, “couched.” There is good reason for the avoidance of square lines in embroidery, which does not (compare 142) follow the weaving of the material embroidered. The flowing line is here dictated by the conditions, and curls and flourishes are excusable. L. F. D.
145. MODERN CAPITALS EMBOSSED on thin sheet-metal, the form and fashion of the letters suggested by the ease with which they could be beaten up. L. F. D.
146. MODERN ALPHABET IN RIGHT LINES, suggested by the square form of Chinese writing. L. F. D. (See p. 29. Compare with 142.)
147. MODERN ALPHABET, expressive of the brush, suggested by brush forms in Japanese writing. L. F. D. (See p. 29.)

#### AMPERZANDS.

148. AMPERZANDS from various MSS., dating from the 7th to the 15th centuries.
149. AMPERZANDS—Free renderings of instances dating from the 16th century to the present day. In the top row may be traced the connection between the accepted & and the letters ET, of which it is a contraction.

NOTE.—Other examples of amperzand occur in illustrations

83. A.D. 1665.  
 98. CASLON TYPE.  
 100. MODERN FRENCH.  
 101. „ „ „ ELONGATED.  
 104. „ „ „ “OLD STYLE” ITALIC.  
 109. „ „ J. W. Weekes.  
 120. „ „ Patten Wilson.  
 125. „ „ L. F. D.

NUMERALS.

150. GERMAN. CUT IN STONE.—The peculiar form of 4 is of the period; the 7s have, as is usual, tails forward.—1477.
151. VARIOUS 15TH-CENTURY DATES.—*Flamish and German.* 1491 is carved in wood and grounded out. 1479 is cut in stone, 1470 in brass.
152. FIFTEENTH CENTURY.—*German.* Cut in wood.
153. DATES FROM 1520-1545.—Chiefly cut in brass or bronze. The figures in relief and grounded out.
154. FIFTEENTH CENTURY Numerals, 1520-1531, etc. *German.* Cut in bronze or brass.
155. NUREMBERG.—Bronze. About 1550.
156. GERMAN.—Bronze. 1560.
157. ITALIAN.—Painted on *filence*. Brushwork. 1560.
158. BRUSHWORK.—16th or 17th century.
159. ITALIAN.—From a corale. Penwork. Compare 64 and 71. 16th century.
160. ONLY FIGURES on a dark ground.—Brushwork. 1548.
161. INCISED IN WOOD.—1588.
162. BRASS, GROUNDED OUT.—16th century.
163. PAINTED ON GLASS.—16th century.
164. BRUSHWORK.—16th or 17th century.
165. ROTHEMBERG.—Cut in stone. The 4 suggests the origin of the 15th-century shape. It is an ordinary 4 turned partly round. 1634.
166. ROMAN NUMERALS.—From a bronze *lib.* Scales. Figures in relief, grounded out. 1647.
167. CUT IN STONE.—1692.
168. VARIOUS DATES.—1633, wood in relief. 1625, wood incised. The rest on brass (grounded out) or cut in stone. The 4 of 1679 resembles the letter *d*—a not uncommon occurrence in 17th-century German inscriptions.

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169. VARIOUS 18TH-CENTURY NUMERALS—The complete series from an English writing-book (Curtis), 1732. The Dates incised in stone.
170. PROBABLY SWISS—Inlaid in wood. 1664.
171. DATES FROM MONUMENTS—Stone and brass. 18th century.
172. NUMBERS FROM AN OLD MEASURE—Inlaid in brass wire on hard brown wood. 1740.
173. VARIOUS DATES—1573, Flemish, engraved on steel. 1747, German, twisted brass wire inlaid in wood.
174. FANCIFUL NUMERALS. L. F. D.
175. MODERN.
176. MODERN—(Compare with 113, 144.) L. F. D.
177. MODERN—(Compare with 119.) L. F. D.
178. MODERN GERMAN—(Compare 116.) Alois Müller.
- Other numerals occur in illustrations—

83. A.D. 1665.
84. A.D. 1697.
98. CASLON TYPE.
106. MODERN. J. W. Weekes.
108. „ J. Cromer Watt.
120. „ Patten Wilson.
134. „ A. Beresford Pite.

## ART IN THE ALPHABET.

THERE are two conditions on which the artist may be permitted to tamper with the alphabet : whatever he does ought, in the first place, to make reading run smoother, and, in the second, to make writing satisfactory to the eye. Neither of these desirable ends should, however, be sought at the expense of the other.

The way to make reading easier is to mark whatever is characteristic in the letter ; to develop what is peculiar to it ; to curtail, or it may be to lop off, anything which tends to make us confound it with another ; to emphasize, in short, the individuality of each individual letter, and make it unmistakable. At the same time, there is no reason why reading should not be made pleasant as well as easy. Beauty, that is to say, is worth bearing in mind. It must not, of course, interfere with use ; but there is not the least reason why it should. Beauty does not imply elaboration or ornament. On the contrary, simplicity and character, and the dignity which comes of them, are demanded in the interests alike of practicality and of art.

It is impossible judiciously to modify the letters of the alphabet as it is, or as at any given time it was, without thoroughly understanding how it came to be so. The form and feature of lettering are explained only by its descent.

All writing is a sort of shorthand. It is inevitable that the signs used to represent sounds should be reduced to their simplest expression. They become in the end mere signs, as unlike the thing which may have suggested them in the first instance as a man's signature, which is yet honoured by his banker, is unlike his name: enough if writing convey what we are meant to understand: the business of a letter is to symbolize a definite sound.

We arrive, then, by a process of what has been termed "degradation" of such natural forms as were first employed in picture-writing (call it rather adaptation), at an alphabet of seemingly arbitrary signs, the alphabet as we know it after a couple of thousand years and more. So well do we know it that we seldom think to ask ourselves what the letters mean, or how they came to be.

The explanation of these forms lies in their evolution.

Our alphabet is that of the Romans. We speak of it to this day as Roman, to distinguish it from Gothic or black letter. The Romans had it from the Greeks, or, if not immediately from them, from the same sources whence they drew theirs.

Certainly the Greek, Etruscan, and old Roman

alphabets were all very much alike. They resembled one another in the number of letters they contained, in the sound-value of those letters, and in the form they took. There were sixteen letters common to Greeks, Etruscans, and Pelasgians: ΑΒΓΔΕΙΚΛΜΝΟΙΠΡΣΤΥ; and this number sufficed always for

ΑΑΒΒΒΓΔΕΕΕΕΖΖ

ΗΘΘΙΚΚΛΜΜΝΝΟ

ΟΠΡΡΡΤΥΥΦΧΧΨΩ

I. GREEK MS. 9TH CENTURY.

the Etruscans, the race dying out before ever it had need of more. The Greeks had no longer (as the Egyptians had) any signs to represent syllables, that is to say combinations of vowels and consonants, but they grafted on to the old Pelasgian or native alphabet (whencesoever that may have been derived) sundry new letters necessary to express new words, borrowed from the

ΕΩΩΠΤΕΔΕΟ  
 ΕΡΩΑΝΖΕΝ  
 ΜΗΝΩΕΠ  
 ΜΑΤΟΙ, ΗΗ  
 ΑΝΟΥΡΩΕ  
 ΚΩΤΕΕΥΠΟ  
 ΛΙΣΕΡΟΕΙΣ  
 ΕΡΟΣ,

2. COPTIC MS. 5TH TO 10TH CENTURY.

Phœnicians. Naturally they took the letters also from them. These same Phœnicians had probably adopted from the Egyptians signs to express foreign sounds new to their own language, without knowing or caring anything about the pictorial origin of such signs. There was thus no reason why they should not modify what they regarded as arbitrary expressions of sound-values, and every reason why they should reduce them to the very simplest and most conveniently written shape—which they did; and so it comes about that we to-day are in all probability directly indebted to ancient Egypt for at least a portion of our alphabet, far removed as it may be from the hieroglyphics



of the Pharaohs. That, however, is by the way, and, besides, a long way off. For present purposes we need not go further back than to ancient Greece. The four Phœnician letters first incorporated with the Greek alphabet were Ζ, Θ (*th*), Φ (*ph*), Χ (*ch*), and eventually there were added also the letters Η (*ee*) Ω (*oo*), Ψ (*ps*), Ξ (*ks*).

The Romans dropped all compound consonants, using at first the two consonants which most nearly expressed the sound equivalent to that of the Greek double letter; for example, PH in place of Φ. But they proceeded also to devise single letters for sounds which until then had been expressed by two; F, for example, instead of PH, and Q for CV.

ΦΗΕΘΗΛΣΟΒΤ  
 ΠΩΙΤΗΛΧΩΚ  
 ΠΗΡΩΟΥΦΗ  
 ΕΒΟΛΓΙΠΥΛΥΕ  
 ΚΤΕΦΩΙΤΩ  
 ΣΩΟΥΤΕΝΝ  
 ΠΩΥ

Ⲑⲟⲩⲁⲡⲟⲥⲟⲩⲁ  
ⲉⲙⲟⲩⲧⲉⲙⲱ  
ⲉⲛⲉ ⲟⲩⲟⲩⲁⲩⲉⲁ  
ⲭⲛⲉⲙⲁⲩⲉⲃⲟⲁ  
ⲃⲉⲛⲧⲉⲕⲛⲛⲛ  
ⲛⲧⲉⲧⲱⲉⲧⲱⲉⲃ  
ⲣⲉⲉⲩⲭⲱⲛⲱⲛ  
ⲭⲉⲉⲁⲭⲛⲉⲙ  
ⲛⲉⲛⲱⲛⲣⲱⲛⲉⲁ

A Greek alphabet of the year 394 B.C. is given in alphabet 28, and a 16th-century version in 29. The more cursive form employed by the 9th-century scribe is shown in the manuscript letters (1) on page 3.

It is interesting to compare with these the Coptic writing (2, 3, 4), which is obviously only a variant upon the Greek; for the Christianized Egyptians, when they accepted Christianity, adopted the Greek alphabet, just as the Turks took the Arabic character at the time they accepted the Koran; and when, in the 6th century, the new faith was firmly established at Alexandria, Coptic writing supplanted the old Egyptian. So it happens that the Coptic alphabet is Greek, except for seven extra signs, taken from the ancient demotic alphabet, to express Egyptian sounds for which the Greeks had no equivalent.

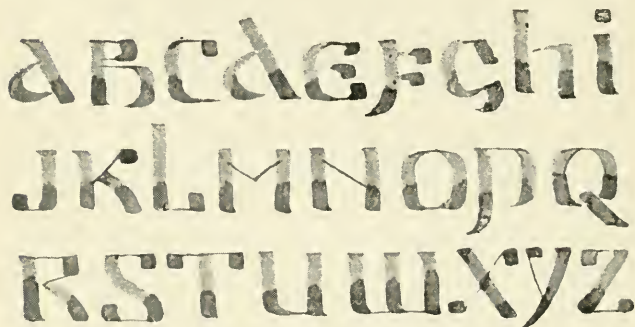
Akin to the Coptic lettering is the Moesian alphabet of the 4th century (5), which bears on the face of it the evidence of the broadly cut pen with which it was written.

The early Roman or Latin alphabet differed very little from the Greek. The latest comers in it were G H K Q X Y Z.

In its adaptation to the Latin language, Greek gamma or G becomes C. G is, in fact, almost equivalent to *hard* C. To the not too subtle ear the two sounds are like enough to pass one for the other, just as *soft* C may be made to do duty

for S. When G came to be used as a separate letter, distinct from C, then C in its turn was used for K, though K did not go quite out of use.

The Greek H (*heta*) stood for EE; but at the



5. MOESIAN MS. 4TH CENTURY.

beginning of a word it answered the purpose of the aspirate. The Romans used it for the aspirate only; that is to say, practically just as we use it now, for H.

The letter J did not exist either in the Greek or in the ancient Roman alphabet. It is equivalent to II. Place one I over the other and you get a long  $\text{I}$ . Eventually the initial developed a tail, and became J. Towards the 15th century the initial I was pretty generally written J.

The Greek Y (*upsilon*) becomes the Roman V—whence the confusion, until modern times, of the letters U and V, long used indiscriminately. They

were considered as interchangeable; one or other of them might be used, or both at once in the same word in the same sense. It was not until the 10th century that the custom arose of reserving V for the beginning of a word, and elsewhere using U.

Ω (*omega*) stood for OO, and in the minuscule form, ω looked like it, thus *showing* its derivation; but in the end it was used for UU, or W. It appears that in some Greek dialects it is used for OU. It is quite certain that in the 9th century (see p. 3) omega was *written* precisely like a W. When you come to think of it, the sounds are very nearly alike. Take any word beginning with W, change the double U into double O, and then try and pronounce it—say, for example, not WHY, but OOHY. Is it not much the same thing?

The alphabet, as we know it, owes something also to Scandinavia. The Runic writing, as the script of the Scandinavian and other Northern European priesthood was called, dates back to legendary days. It was the invention, they say, of Odin himself. If so, Odin, to judge by internal evidence, must have derived it from some earlier Greek or Roman source. What we know is, that it was in use from the time of the first intercourse between Scandinavians and Romans. The Christian Church forbade its use, and with the triumph of Christianity it passed out of currency; but it

A B C D E F G H I L M  
N O P Q R S T U V

6. ROMAN MS. 4TH CENTURY.

lived long enough to affect in some degree our Anglo-Saxon writing.

It will be well now to mark the more decided steps in the progress of the alphabet. The type we use takes, as every one knows, two forms—a larger and a smaller, a major and minor, or as printers put it, “capitals” and “lower case” or the small letters which, being most continually in request, it is convenient to keep near at hand, in the lower part of the case from which the compositor, so to speak, feeds himself. Our written character takes the form of a “running” hand, and is known by that name, or by the more high-sounding title of “cursive.”

Now, the printer’s “lower case,” or “minuscule,”

A B C D E F G H I L M  
N O P Q R S T U V X Z

7. MS. 7TH CENTURY.

A B C D E F G H I K L M  
N O P Q R S T U V Y

S. ROMAN UNCIAL. 5TH CENTURY.

as it is also called, is practically the book form of running hand, except that the letters are quite separate, not conjoined as they are in what pretends to be only the hand of the ready writer and does not claim to be beautiful at all.

The earlier form, whether of Greek or Roman letter, was the capital, the square shape, with relatively few curved lines, which could conveniently be cut in stone or engraved on metal. This is, in fact, the *monumental* style—adapted to, and, what is more, inspired by, the chisel or the graver. You have only to look at it (28, 30) to see how

A B C D E F G H I L A A  
N O P Q R S T V Y

9. ROMAN "RUSTIC" WRITING. 5TH CENTURY.





10. ROMAN MS. CAPITALS. 6TH CENTURY.

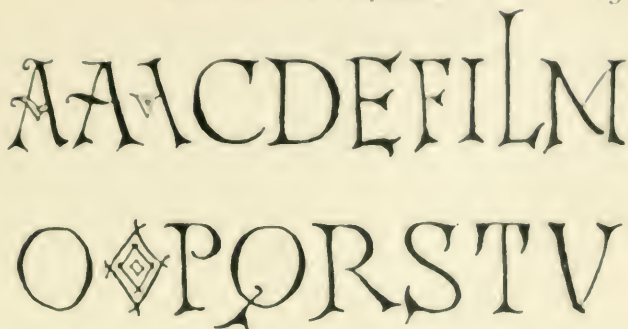
precisely fit it is for its purpose. There is no mistake about it, it is incision.

Manuscript writers adopted for book writing a different character, or rather they adapted the square capital letter to more ready execution with the pen, and so evolved a rounder kind of letter which is known by the name of *uncial*—not that it was invariably inch-long, as the term is supposed to imply.

The uncial form of writing is intermediate, you will see (8), between the monumental writing and the “current” hand of the ready writer. It is, if not the step between the two, a compromise between them—no matter which ; what it concerns us to know is that calligraphy took that direction, which goes to explain many a later form of letter widely differing from the original square type. The relationship between these uncial letters and the cursive Greek (1) is obvious.

The uncial character does not so much affect the modern printer ; but it is the form of letter from which the artist who prefers his own handiwork





11. MS. CAPITALS. 6TH CENTURY.

to that of the printing press has perhaps most to learn.

A squarer form of capital employed by the Romans in manuscripts of the 5th and two following centuries, is known by the name of "rustic;" not that there was anything rustic about these capitals in our sense of the word; but the Latin word was used in the sense of free and easy, *sans gêne*. The character of the writing is not so formal as was supposed to befit the town. It is a kind of country cousin; it stands, let us say, for the Roman capital in a loose coat and a soft hat. The characteristic points about it (9) are that the vertical strokes are all very thin, and the cross-strokes broad. These cross-strokes take the form of a kind of tick, tapering at the ends; and similar ticks are used to emphasize the finishing of the thin strokes. That all of this is pen-work is self-evident. But, as before said, the more usual form of penmanship at that time was the uncial letter.

# ABCDEFGHIK LNOPRSTVX

12. BYZANTINE CAPITALS. 7TH CENTURY.

Even when the Roman manuscript writers used, as they sometimes did, the square capital form, they did not confine themselves (11) to the severely simple shapes which came naturally to the lapidaries. The unequal strength of the lines, the thickening of the strokes at the ends, and the spurred or forked shapes they take, all speak of the pen ; not the steel pen, of course, nor yet the more supple quill, but the reed pen—rather blunter than a quill, but pliant enough, and not given to spluttering. Moreover, it did not tempt the writer to indulge in unduly thin upstrokes.

Capitals, Greek and Roman alike, represent, roughly speaking, the first accepted shapes, engraver's or carver's work. Uncials stand for MS. writing, scribe's work, growing by degrees rounder and more current. The smaller minuscule was evolved out of the running hand of the mercantile, as distinguished from the literary, scribe. It was not used by the ancient Romans, and it was not until towards the 8th century that running hand was thus reduced to order. The greater part of what is called cursive writing scarcely concerns

# ABCDEFGMN OPQRSTVX

13 INSCRIPTION CUT IN STONE. A.D. 1085

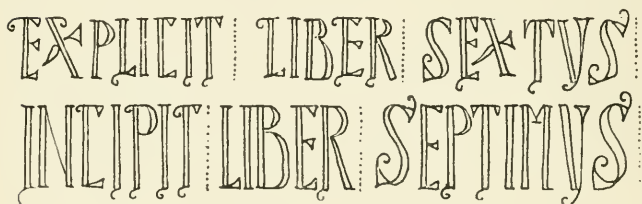
the calligrapher ; it might equally be called discursive, so apt is it to run wild, in which case it tells less of the progress of writing than of the caprice or carelessness of the individual writer.

That was not the case with the various ceremonial versions of running hand employed by the writers of Papal Bulls and Royal Charters. Such "diplomatic" hands, as they are styled (because diplomas were written in them), and the so-called "Chancery" hands, are highly elaborate, and in a sense ornamental, but they are so unlike our writing as to be, practically speaking, illegible. They are very suggestive for all that. A specimen of English Court hand is given in Alphabet 95.

With the decline of the Roman empire came naturally the demoralization of the Roman character, capital or uncial ; and just in proportion as Rome ceased to be the one centre of the world, and other nations rose into importance, so their writing began to show signs of nationality. At the loss of some refinement, we get thenceforth

variety of character. By the beginning of the 8th century distinctly national styles of lettering were evolved.

To subdivide these styles so minutely as the learned do, is rather to bewilder the poor student by their multitude. The important European races were, the Latins, the Franks, the Teutons and Anglo-Saxons, and the Visigoths ; and from them we get respectively the Lombard, the Frankish,



14. FRANCO-GALLIC MSS. HEADLINES. 7TH CENTURY.

the Teutonic and Anglo-Saxon, and the Visigothic types of writing, all of which eventually merge themselves in what we call Gothic, in which, nevertheless, we still find traits of nationality, English, French, Italian, German, Spanish, as the case may be.

First as to the Lombardic character, which prevailed in Italy from the 8th to the 11th century. It was not, as its name might be taken to imply, the invention of the Lombards. They were just long-bearded conquerors, and invented nothing. The character was not even confined to Northern

Italy ; only it happened first to be developed there, and so all later Latin writing (after the Empire) came to be called "Lombardic."

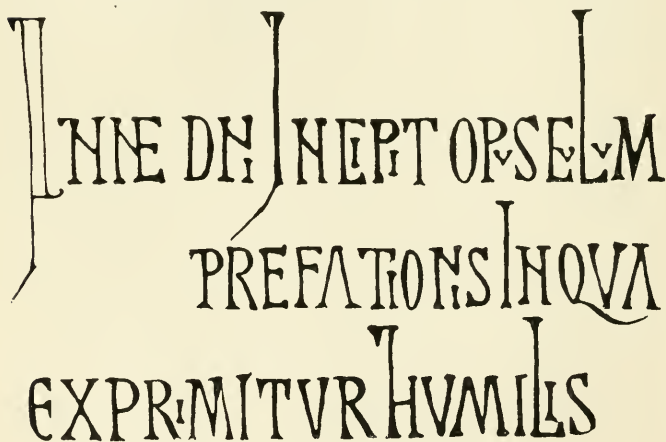
It has already been explained how uncial writing was transitional between square "caps" and rounder pen-forms. The Lombardic shows a further stage of transition. The penman had not quite made up his mind between straight lines and curved ; he hesitated between the square-lined M and N and the rounded forms (19, 20, 40). Eventually he decided in favour of the bulging shapes, which in their later development we distinguish by the name of Lombardic capitals (42).

There is a broken-backed version of the Lombard minuscule, "*Lombard brisée*" the French call it, which, though not intrinsically beautiful, is interesting as foreshadowing the later form of Gothic "lower case" which we call "black letter."

Our own "lower case" we get more or less directly from Charlemagne. He found, perhaps his friend the Pope told him, that writing had degenerated by the time he came to the throne (A.D. 800) to a state unworthy of a mighty emperor. Accordingly he ordained its reformation. He went so far as to compel bishops and other important personages who could not write decently, to employ scribes who could. In this way he revived the small Roman character, which we eventually adopted for our printed type.

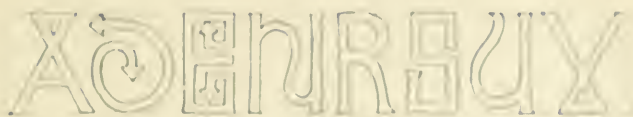
The scribes of Charlemagne (and for some time

after him) did not yet manage to fashion very satisfactory capitals. They still mixed up letters all of one thickness with others in which thick and thin strokes, or diminishing strokes, were used in a most illogical and awkward way (33)—indicative, of course, of a period of change. But they did arrive at a satisfactory and very characteristic rendering



15. VISIGOTHIC MS. 10TH CENTURY.

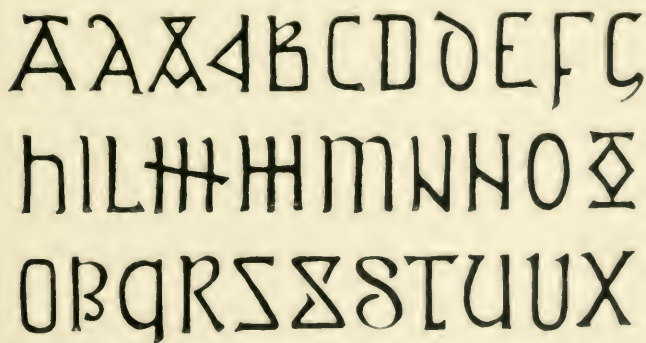
of minuscule lettering. A conspicuous feature in it was the elongation of the longer limb of the l p g q f d—*tails*, that is to say, came into fashion, and long ones, as much as four or five times the length of the body of the letter. The letter s took also the long form, f. The letter t, on the other hand, does not rise much above the line, sometimes not at all.



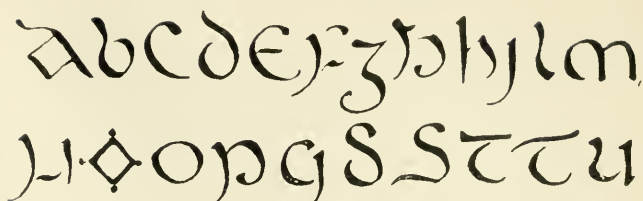
16. SAXON ILLUMINATION (CAROLINE). 9TH CENTURY.

That elongation of up-and-down strokes is characteristic of Frankish and Visigothic lettering generally. It occurs even in the case of capitals, as in the headlines of the 10th-century MS. on p. 18. There the I, the H, and the L rise high above the heads of their fellows, whilst, on the other hand, the V-shaped U in the word OPVSCVLVM is reduced to more than modest proportions.

There appears to be in Visigothic lettering, of which that is a good example, usually a trace of Moorish influence, betraying itself in the liberties taken with the *proportion* of the characters; the Moors had by that time overrun Spain.



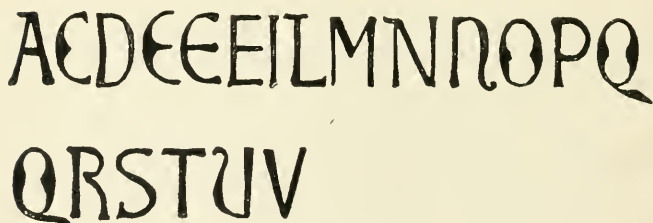
17. ANGLO-SAXON.



18. ANGLO-SAXON MS. 9TH CENTURY.

There is something very whimsical about the character of Anglo-Saxon capitals; at times mechanically square in form, at others exceptionally flowing and even frisky (16, 17, 36, 37). Anglo-Saxon lettering was affected by lingering traces of an obsolete alphabet derived perhaps at some remote period from the Gauls, which, to judge by internal evidence, must have been something like the Greek. In the minuscule character (18) there is a curious twist in the long stroke of the b and l.

By the 13th century the Gothic style had formed itself. In the next hundred years or more it was perfected. At the end of the 15th century it was



19. FLORENTINE, INCISED AND INLAID. 12TH CENTURY.



still flourishing—flourishing was the word literally—in the 16th letters were sometimes nearly all flourish: it takes an expert to read them.

The Gothic variations upon the Roman capital form are characteristic: the thick strokes are not even-sided, but expanded at the two ends or narrowed towards the centre; the curved strokes do not swell so gradually as before, but bulge

ALDDDEHL  
IMNDOPRSY

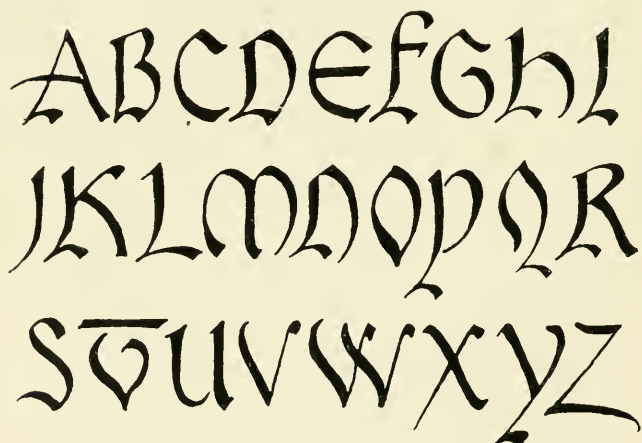
20 ITALIAN MS. EARLY 13TH CENTURY.

more or less suddenly; the tails of sundry letters break insubordinate from the ranks; and the extremities are often foliated or otherwise ornamented (30, 40-42). Markedly characteristic of Gothic of the 13th and 14th centuries are also the "closed" letters, of which examples occur in Alphabets 45, 46, 47, 48, etc.

What are called Lombardic capitals were used, not only as initials, but for inscriptions throughout. In fact, it was not until the 15th century that

inscriptions were commonly written in minuscule letters. In many cases these Lombard capitals were not written with a pen, but with a brush, from which results something of their character. The brush lines were fatter than pen strokes.

Gothic characteristics, however, only gradually



21. FREE RENDERING OF LOMBARD MSS. ABOUT 1250.

asserted themselves, and individual scribes clung tenaciously to the older forms. The alphabet opposite, for example, though of the 15th century, only mildly represents the period to which by date it belongs.

Gothic letters lend themselves to more variety in design than Roman, not being so perfect in themselves. To some, perhaps, they are more

interesting on that very account : perfection palls upon us. Anyway, the Gothic forms are often very beautiful. The Roman letter is classic, and therefore fixed—or, should it rather be said, it is fixed, and therefore classic?

With regard to the Gothic minuscule character (23, 24, 25), the even perpendicularity of the broad, straight strokes gives at a glance the character distinguished as "black letter," because it is rela-

A B C D E F G H I L M  
N O P Q R S T V X Z

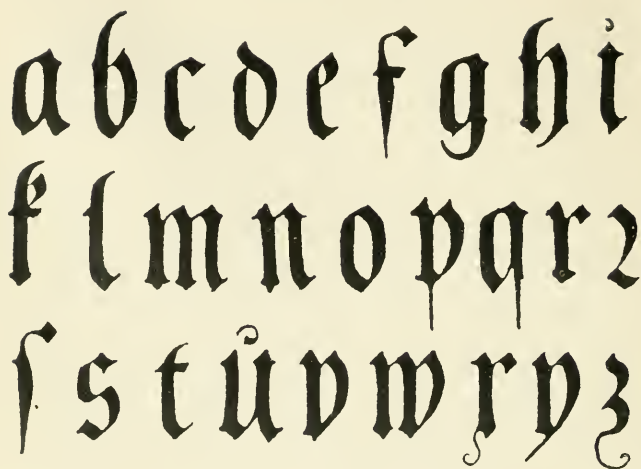
22. CAPITALS. 15TH CENTURY.

tively much heavier than the Roman minuscule. You have only to compare the two to see that the "black letter" *is* blacker.

The Germans marked this form of lettering for their own, and persevered in its use long after the rest of the world, in pursuance of the fashion of classicism prevailing in the 16th century, had abandoned it for the Roman style of lettering.

The mediæval German version of black letter was stronger than that of other countries, the French more fanciful, the Italian more refined, more perfect, but perhaps never so Gothic.

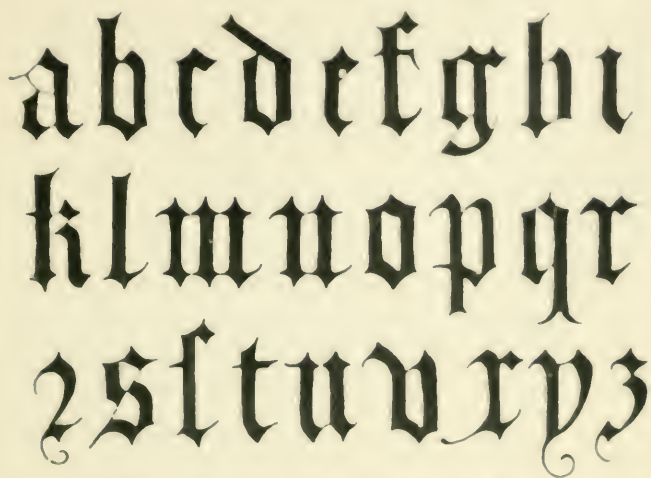
The old "black letter" varied, as will be seen,



23. GERMAN GOTHIC MINUSCULE.

very much in character. The rounder form (23) is freer, easier to write, more cursive. The more regular and straight-backed letter (24, 25) went rather out of fashion for a while; but it was revived by the printers, who saw in it what they could best imitate.

The type we use nowadays has shaped itself in a more or less accidental way. In the first place, it was a copy of manuscript forms. That was inevitable. Possibly printers were anxious to palm off their printed books as manuscripts. But, apart from any such intent on their part, their text was bound to follow the written page, or no one would have been able to read it. And as, at the time of



## 24. GERMAN GOTHIC MINUSCULE.

the introduction of printing, two styles of writing were in use for manuscripts, there arose naturally two styles of printed type—"Roman" and "black letter." In printing, as in manuscript, however, black letter gave way to the Roman character, but not all at once; there was a period of transition during which some very interesting and characteristic types were used. We in our day have arrived, by a process of copying the copies of copies of copies, from which all the virtue of vitality and freshness has died out, at a Victorian type (look at the newspapers), which compares most unfavourably with the early printing. The modern form of letter is in a measure fixed for us by



25. GOTHIC MINUSCULE.

circumstances ; we cannot conveniently depart far from it ; but something may be done. There is no need to revive mediæval lettering, no occasion to invent new lettering all out of our own heads, if that were possible ; any new departure of ours must be very much on old lines ; but at least we might found ourselves upon the best that has been done, and go straight to that for inspiration.

Type, as before said, was based on manuscript forms. These manuscript forms had been shaped with a view always to easy writing. What was difficult to pen dropped out of use, and lettering became what the scribe made it. The considerations, however, which guided the writer no longer concern the printer. It is time, perhaps, he took stock of the alphabet—looked over it with a view

to its perfection, since one shape is about as easy to *print* as another. The changes which have taken place in our printed type during the last three hundred years or so may very likely have been on the whole in the direction of easy reading, but they have not been in the direction of beauty; and it is quite likely that it may be worth while restoring some obsolete forms of letter now that we have not to write them. There is inconvenience in departing in any appreciable degree from the accepted form of letter; but we have arrived to-day at a period when everyone is so familiar with the printed page that, prejudiced as we may be against any modification of it, there is no danger of our finding any real difficulty in reading an improved type. Lettering is none the more legible because it is ugly: beauty is compatible with the very sternest use.

The earliest writing was most probably scratched with a point upon whatever came handiest to the scribe—skins, palm leaves, or the bark of trees, and especially upon clay, a material which had only to be burnt to become more lasting than stone.

If, in scratching upon firm clay, the writer begins his stroke with a dig and then drags out the tool, it results in a wedge-shaped scratch. That seems to be the way the cuneiform character came about; but the lettering upon the early Babylonian "bricks," as they are called, is so precisely defined that it must have been done with a sharp graver-

like point. These "wedge-shaped" or "arrow-headed" characters came to be copied, as we know, in stone, in which again they were about the simplest thing to cut. Three, or at most four, direct cuts give the Ninevite character, as we know it in the famous bas-reliefs. It is descended from clay forms, but its own mother was the stone out of which it was cut. The chisel was its father. Even in inscriptions as late as the eighteenth century or thereabouts, the stone-cutter lapses, as may be seen opposite, into more or less wedge-shaped incisions; the chisel tempted him, and he yielded to its persuasion.

From the cuneiform character to simple Greek (28) or Roman (30) capitals, as square as well could be, is not far; and the clear-cut inscriptions on classic monuments are still typically chisel work. Very early Greek inscriptions are, however, not much more than scratched in the granite or whatever it may be. The small Greek character on the famed Rosetta stone is *mere* scratching.

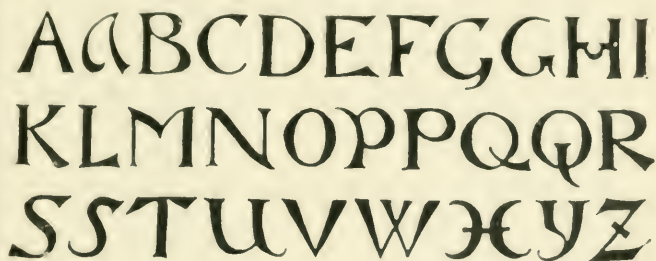
Writing done with a stylus on tablets of wax was naturally blunt. Penwork at first was also much blunter than modern writing—owing partly, no doubt, to the use of the reed pen, partly to the texture of papyrus, and partly to the consistency of the ink. The strokes of early lettering in Egyptian, Greek, and Latin manuscripts alike, are rather thick, and rounded at the angles, not sharply turned.

It was a reed pen with which the Arabs wrote,



holding it more or less horizontally so as to retain the ink, and sloping the paper or papyrus at a convenient angle ; and it was in writing the Roman letters with a reed pen that the mediæval scribes gave it its Gothic character. It was not until the quill (which held the ink better) came into use that the Italians developed their minuscule letter with its thick and thin strokes.

A glance is sometimes enough to tell whether an early Egyptian manuscript was written with a pen



20. FROM INSCRIPTIONS CUT IN STONE. ABOUT 1700.

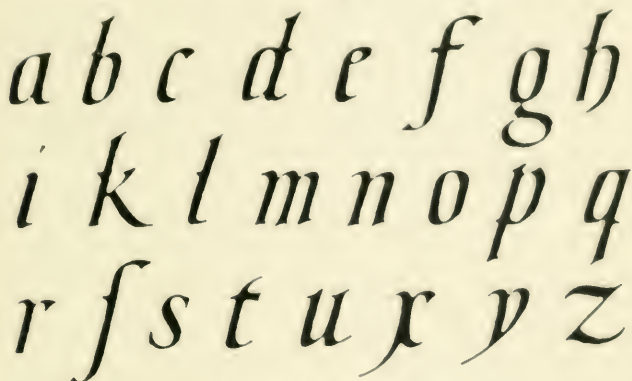
or with a brush. The Arab penmen, who took great pride in their art, wrote with a wonderfully elastic pen, and got out of the reed forms which remind one at times of brushwork ; but the *neskhi* character is as obviously the pen form of writing as the squarer *cufic* is the monumental. So also we find among the Chinese and Japanese one form of lettering which is characteristically brushwork, and another almost rectangular, which last is clearly the monumental manner.

Even in late Gothic lettering we find a minuscule which is of the pen (23), and another (24, 25) which is monumental, adapted, that is to say, to precise and characteristic rendering with the graver upon sheets of brass. It is curious that out of this severe form of writing the florid ribbon character (70) should have been evolved. But when once the engraver began to consider the broad strokes of his letters as bands or straps, which, by a cut of the graver, could be made to turn over at the ends, as indicated in Alphabet 57, it was inevitable that a taste for the florid should lead him to something of the kind. The wielder of the brush was in all times induced by his implement to make flourishes (55), in which the carver had much less temptation to indulge. The sloping or "italic" letter (27) is, on the face of it, the product of the pen.

We find, then, that the implement employed, stylus, reed-pen, brush, or whatever it may have been, goes far to account for the character of ancient lettering. So soon as the writer ceased to be satisfied with mere scratching or blunt indentation, and took to the use of the chisel, he felt the need of a square cross-cut to end the stroke of his letter. If that was broad, there was no occasion for the cut to go beyond the width of the stroke itself. If it was narrow, the easier thing to do was to anticipate the danger of overshooting the mark, and frankly extend the end cut. This method of finishing off the broad line

by a projecting cross-line is technically called truncation, though literally that only means cutting off. Slight but appreciable difference in character results from the angle at which the strokes are truncated or cut off.

In working with a pen, this difficulty of ending the stroke occurs only in the case of very bold lettering. In small writing the strokes naturally



27. ROMAN ITALICS.

take pen-shape. They start square and gradually diminish, or *vice versa*, or they thicken in the middle, according to the pressure of the pen, which it is difficult to keep quite equal from end to end of the stroke.

It should be observed that the pressure is not naturally in the middle of the stroke, but at one end; the penman does not naturally get the symmetrical Roman O, but the Gothic O (71).

That is the pen-born shape. The even-sided O was, if not easier to cut in stone, at least as easy ; there was nothing to prevent symmetry, which was accordingly the rule in sculpture. It is rather futile to aim at that kind of thing with a pen ; much better let the pen have its way ; and its way is otherwise (129, etc.). We get so much more out of our tools by going with them, that it is rather stupid to strive against them.

In very bold writing, even with a pen, the necessity for truncating the thick strokes occurs. You cannot easily, with one stroke of the pen, make a thick line which begins and ends square. It wants trimming ; and the easiest way to trim it is by means of a fine cross-stroke extending beyond its width. This cross-stroke **T** helps to preserve and to accentuate the regularity of the *line* of lettering, for which a writer worth the name naturally has a care. The broad stroke being rather loaded with ink, the fine cross-stroke is inclined, in crossing it, to drag a little of the ink with it, rounding one angle of it. The obvious way of rectifying that is to round the opposite angle also—and so we have the familiar finish **T**, which is equivalent to the “spur” of the chiseller mentioned just now (100).

The angle at which the cross-line joins the stroke may be softened until it disappears, and the stroke appears to be curved on either side—“dilates,” to use another accepted term, at the

ends. Historically, we arrive at that in Lombardic and other writing as early as the 8th century (34).

Anticipating this dilation, the penman eventually made strokes in which the elementary straight line altogether disappears (54). Further elaborating, he arrived at the rather sudden swelling of the curved back of the letter, familiar in work of the 13th century and later (51, 52). With the forking of the terminations, and the breaking of the outline in various ways (20), we arrive at fantastic variation to which there is no conceivable end (46, 47, 51, 52, 74). Few examples, therefore, of the elaborate ornamentation of lettering are here illustrated (60, 73, 93, etc.), preference having been given to alphabets in which the ornamental design is in the construction of the letters themselves.

With the use of thick and thin strokes comes a difficulty. Which shall be thick, and which thin? The scribes were a long while making up their minds on that point, and they contrived some very awkward combinations (33). The solution we have at last come to is probably the best that could be found. We need scarcely bother ourselves about trying to improve upon modern practice in that respect; it has been a case of the survival of the fittest.

Out of the use of thick and thin strokes arises the necessity for graduated strokes, there being no other way of treating the *curved* lines intermediate between the two. Then, if the thick strokes are

truncated, the thin lines appear to want corresponding accentuation at the ends; and so the "serif" runs all through the alphabet (80, 100, etc.).

The further influence of the writing tool upon the form of the letter is illustrated in various Alphabets, and particular reference to it is made in the descriptive list of illustrations. A number of these Alphabets have been deliberately designed with a view to execution in a specific material.

With regard, now, to Numerals. Until the 15th century, the letters M, D, C, L, X, V, and I were in general use to express numbers.

The Arabic numerals, as they are called, found their way into Europe some time during the 12th century, but did not come into general use before the 15th, nor indeed much before the introduction of printing, which diffused the knowledge of them. Their adoption in England was more tardy than on the continent, the beginning of the 17th century being given as the date of their universal acceptance here. The numerals, as we know them, or even as they were written in the 15th century, do not bear any marked resemblance to the genuine Arabic; numbers 1 and 9, and the all-important cypher, 0, are the only Eastern figures which seem to claim direct oriental ancestry.

The figures of the 15th century are not always at first sight very easily legible; the 7, for example (150), presents anything but a familiar appearance, but upon examination that inverted V proves

to be really an equal-limbed 7 placed (as it would naturally fall) so as to rest upon its two ends: it is not the figure that is changed, but its position. Much more puzzling is the early form of 4 (150, 151, 152), a loop with crossed ends upon which it stands. The popular explanation of the figure as "half an eight," is anything but convincing, and it appears to have no Eastern prototype. There is a 17th-century version of it, however, in the Franciskaner Kirche, at Rothenburg (165), which, had it been of earlier date, might have been accepted as a satisfactory explanation. There the loop has a square end, and the figure rests, not upon its two loose ends, but partly on its point. Imagine this figure standing upright, one point facing the left, and it is seen to be a 4 of quite ordinary shape. This may not be the genesis of the form; but, if not, it is ingeniously imagined by the 17th-century mason.

Writers have from the first made use of contractions, the ready writer in order to save time and trouble, the caligrapher, sculptor, and artist generally, in order to perfect the appearance of his handiwork, and, in many cases, to make it fit the space with which he has to deal. The ends of art are not satisfied by merely compressing the letters, or reducing them to a scale which will enable the writer to bring them all into a given line (101). We, in our disregard of all but what we call practicality, have abandoned the practice of contraction, except in the case of diphthongs, and in



the exceptional instance of the word "et." The "amperzand," as printers call it (143, 149) still lingers in his founts of type, and is used even more habitually by the ordinary penman of to-day.

To what does all this investigation of the alphabet lead? It is of no use trying to evolve brand-new alphabets out of our inner consciousness. No one would understand us, and we want to be read. Originality is what we all desire; but it is scarcely the thing to seek consciously, least of all in lettering; it comes of its own accord if ever it comes. We are original or we are not.

While the alphabet is alive there will be changes in it, but they must inevitably be gradual; we can only creep on to new forms. Practically, what we have to do is to take an alphabet and modify it according to our wants or inclinations, without, as a rule, interfering much with its legibility. A man may, if he knows what he is about, make it more legible, as well as in other ways bettering it. But to do that intelligently, he should know something of the descent of the lettering on which he founds himself. That is why it has been thought worth while to discuss the subject at such length here.

An important consideration in the design of an alphabet—if design be not too pretentious a word to use in speaking of what can scarcely be much more than a variation upon orthodox forms—is



that the letters should be systematically treated. They are more likely to be all of one family if we derive them from one source. But there is no reason why we should not cross the breed in lettering, if thereby we can improve the stock. An alphabet, however, should not *look* hybrid. The artist is free to do what he can; but the test of success is that his creation should look as if it must be so, and could not have been otherwise.

Why, it is asked, should any one trouble himself about hand-drawn lettering, when he has ready to his use type, which is so much truer and more perfect? Truer, perhaps, it may be, in the sense of being more mathematically exact, but it is not necessarily so truly uniform in effect; for the unyielding letters of the type-founder come together as best they may, and if they come awkwardly he can't help it. The writer can, and indeed he should.

There is no denying that many an artist who ventures to introduce lettering into his design, does it ill, does it so carelessly, or is so easily satisfied with very indifferent penmanship, that of the two evils hard and fast letterpress would have been the lesser. None the less true is it that an artist who has been at the pains to learn to write, can, if he aim at what pen or brush will do, and refrain from entering into foolish and ineffectual rivalry with the printing press, do what that cannot do, and do better.

Looking at an early printed book, you are

astonished, each time afresh, at the beauty of the page. But if you go from that straight to a fine manuscript, you realize that, after all, printing, even such printing as was done by the great printers, is a makeshift. It is a makeshift we have to put up with, and we may as well make the best of it; merely petulant complaint is childish; but when occasion does occur, let us have the real thing, and don't let us be persuaded by readers so greedy of print as to have lost all appetite for beautiful writing, that there is no flavour or artistic savour in it. It is not good manuscript, but their spoilt palate, which is at fault.

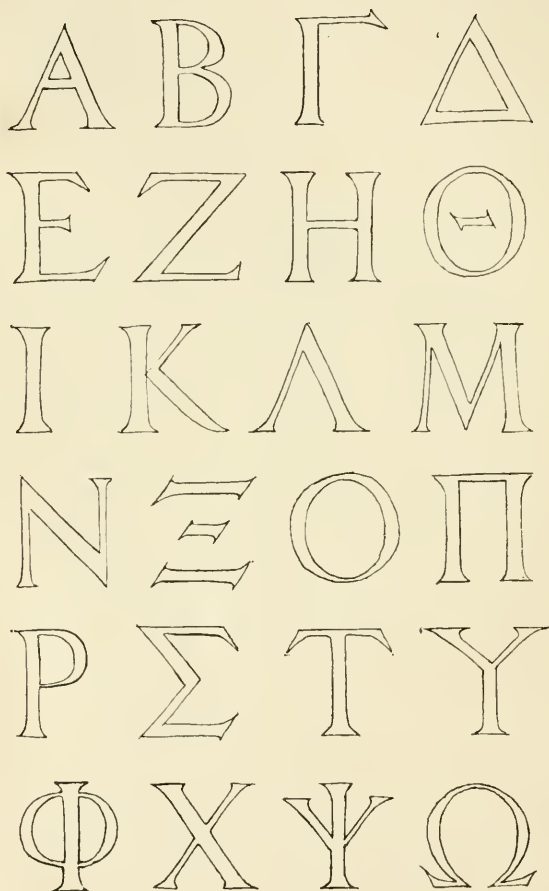
Having perfected machinery, we are doing our best to make ourselves into machines. Until that happens—which God forbid!—man's hand is still the best, in art at all events; and were it not the best, it would still have the charm of character, that individual quality for which a public brought up exclusively on printed type has no relish. Print, with its mechanical smoothness and precision, has gone far to distort the modern ideal of lettering, just as photography, with its literalness, has degraded the ideal of art. There are people who resent as a sort of impertinence anything in lettering which the printing press cannot do. They are ready to take offence at whatever is unfamiliar. Really the impertinence is in a makeshift thing like type usurping any kind of authority in a matter quite beyond its scope.

The great difference between old lettering and new is that in days before stereotyping the scribe was free to play variations on the well-known alphabetical air, whereas our print is monotonous as the tune of a barrel organ.

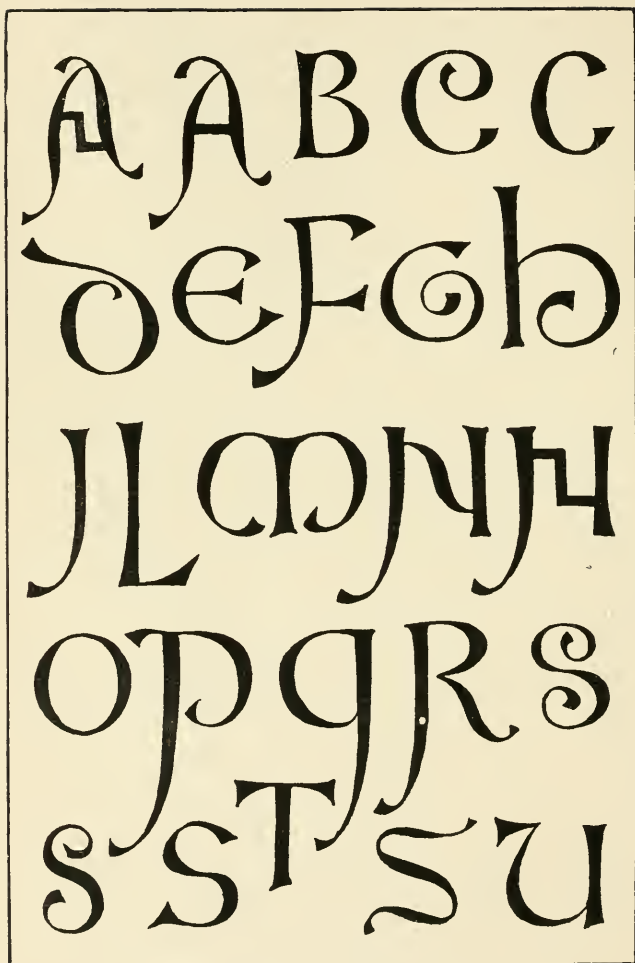
Pedants are never happy until everything is fixed. But nothing is fixed until it is dead. Life is in movement. Philosophy has long since given up the search for perpetual motion, but that is the secret of it—life ; and that is the evidence and sign of life—motion. The question is : Are we alive ?



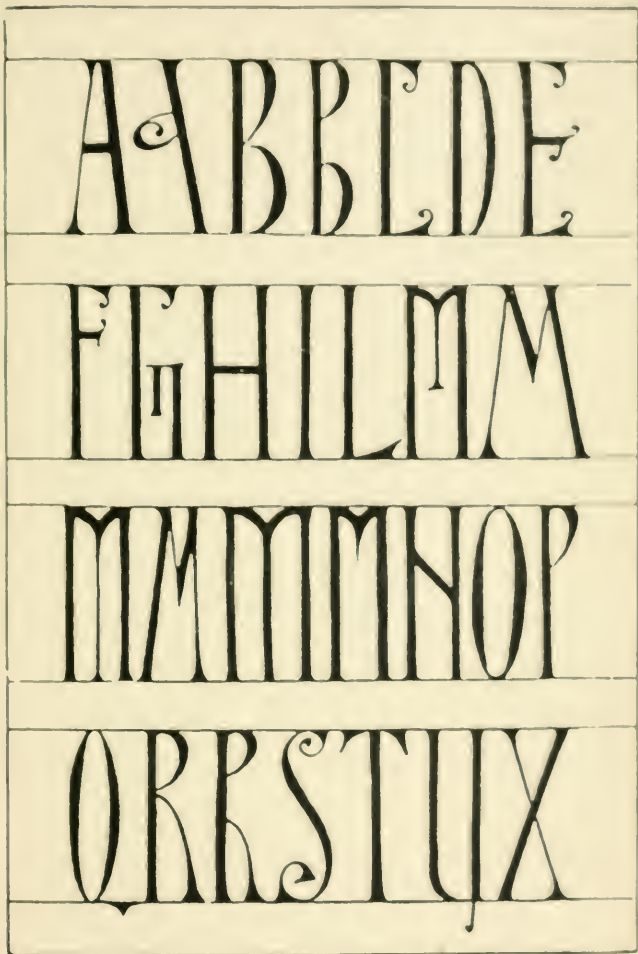


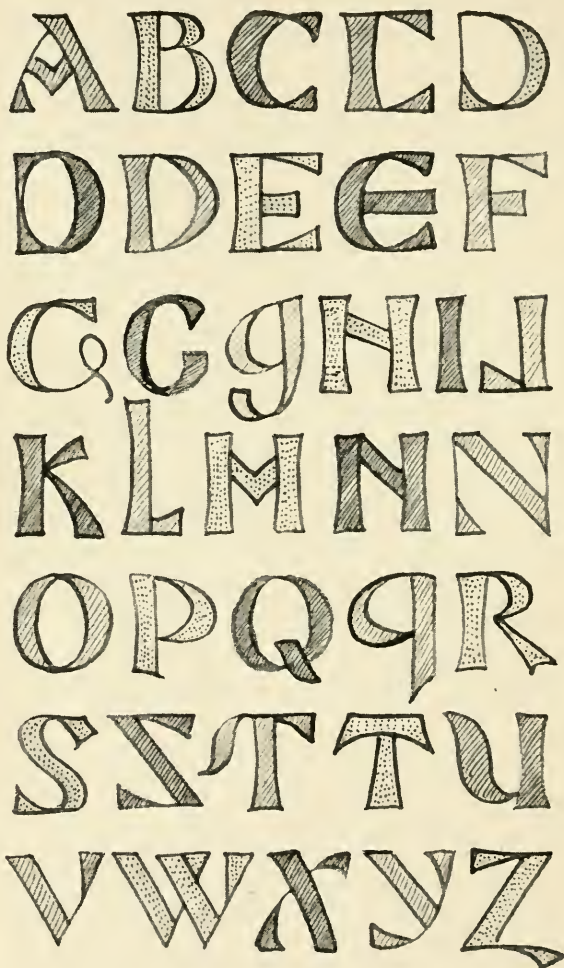


A A B C C D E  
F G E F G H I L  
M L M L M N  
X N O P P P P  
Q R R R S T R R  
S T V X V X Y







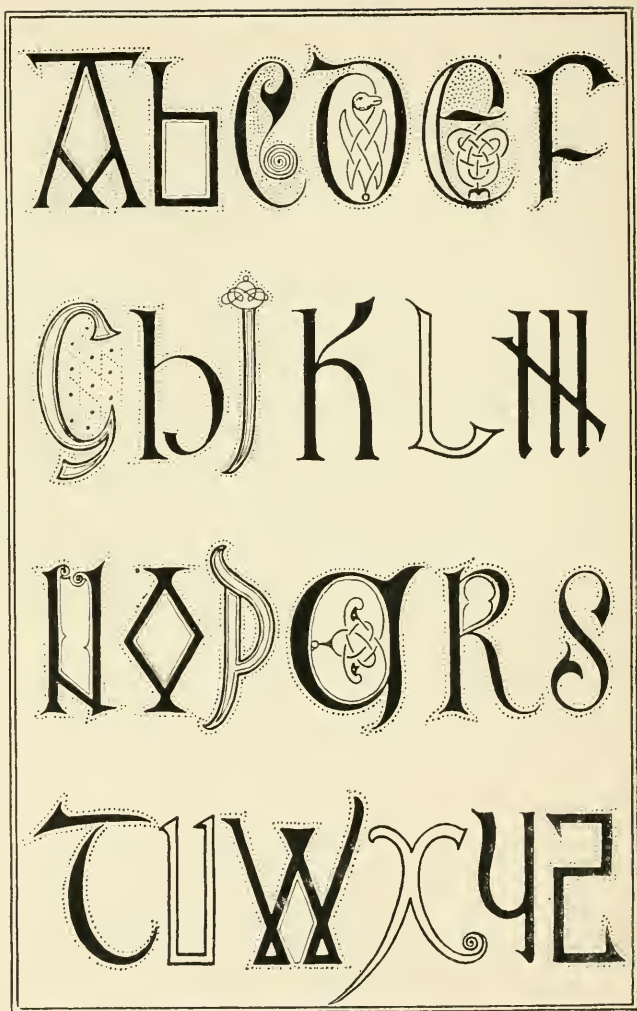


33. SAXON AND ANGLO-SAXON MSS.  
7TH, 8TH, AND 9TH CENTURIES.

A A B C D  
E E F G H  
I J K L M N  
O P Q R  
S T U V W  
X Y Z

A A A A A B  
U E E E E E  
h R I K L H  
N H N O D  
P T S T C U





A B C D E F G

H I K L M N

O P Q R S T

U V W X Y Z





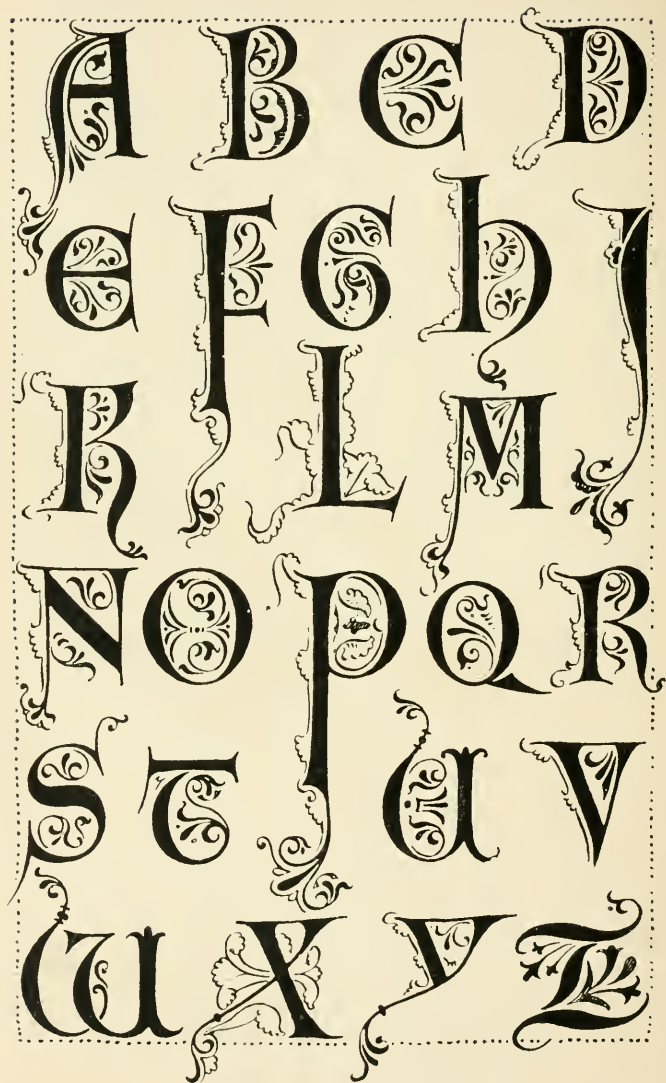
A B C D E

F G H I J K

L M N O P

Q R S T U

V W X Y Z



A A B B C  
D E F G h  
I j K L L  
M M N O  
P P Q R R  
S T T U V  
W X X Y Z

A A A A B B

C C C C D E

F F F G G H I

L M M N N O

P R S S S T

T U U V X Y

A B C D  
 E F G H  
 I K L M  
 N O P Q  
 R S T U  
 V X Y Z



A B C D E  
F G H h  
I J K L M  
N O P  
Q R S T U  
V W X Y Z



45. INCISED GOTHIC CAPITALS. ABOUT 1350.



A B C D E F G H I

J K L M N O P Q R S T

V W X

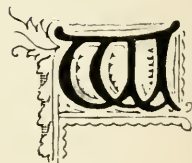
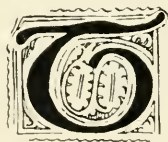
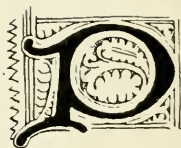
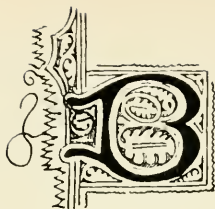
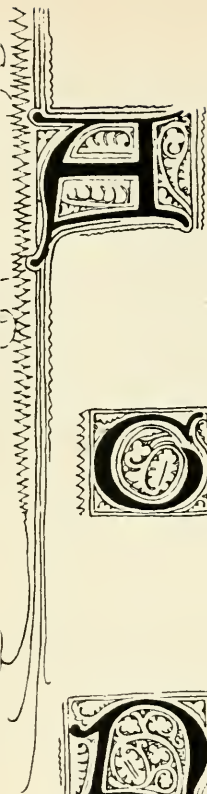
46. NORDHAUSEN. FROM  
A BRASS. 1395.

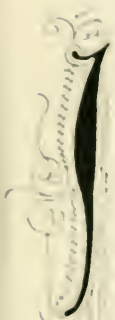
A B C D E F G H

I K L M N O P Q

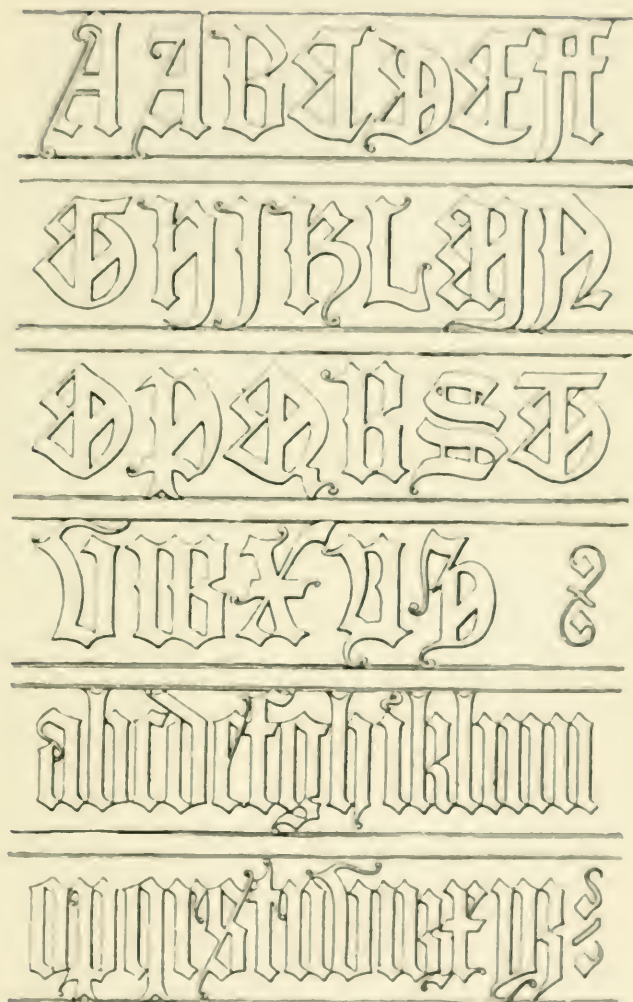
R S T U V W X

47. NORDHAUSEN. FROM A BRASS. 1397.





abcdefghijklmnopqrstuvwxyz  
· m n o p q r ·  
s t u v x y z z z





A B C D

E F G H

I K L M

N O P Q R

S T U V

W X Y Z



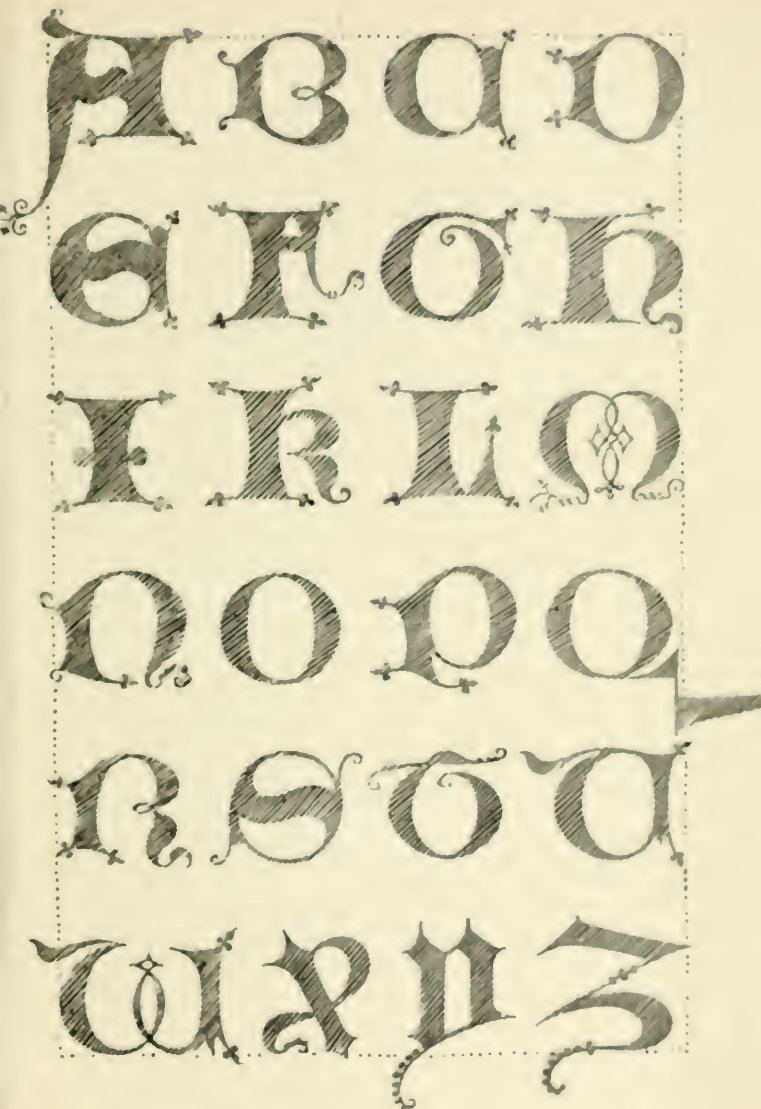
A B C D E

G H I J L M

N O P R S

T V W X





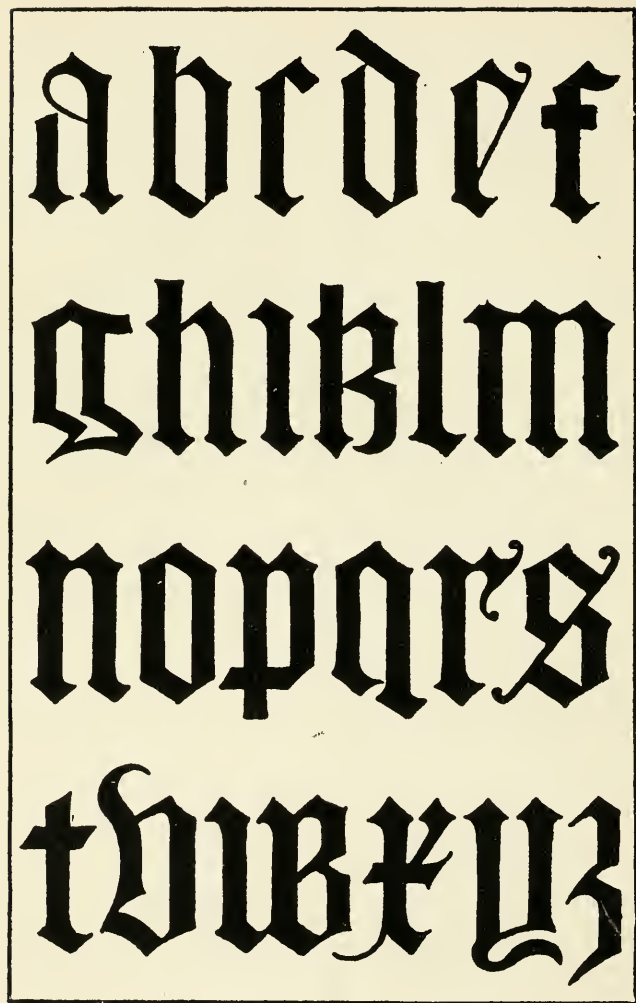


A B C L D E E F G  
 G H H I K L M N N  
 O P R S T V W Z

56. MEISSEN. FROM A BRASS. 1500

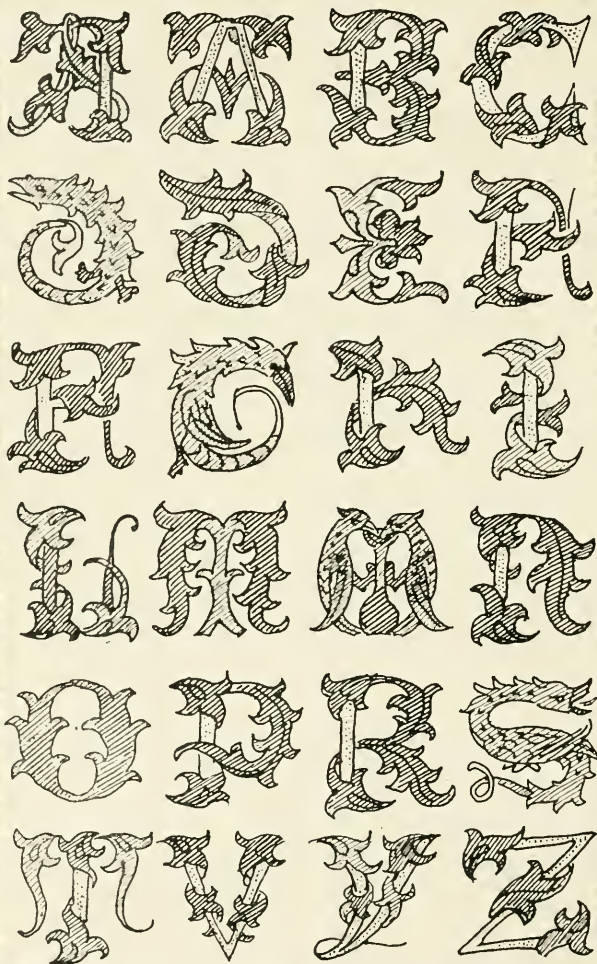
a a b b b c c d e e e f g  
 g h h i j k l m n n o r  
 z s t u v w x x y z

57. FLEMISH. STONE. 16TH CENTURY



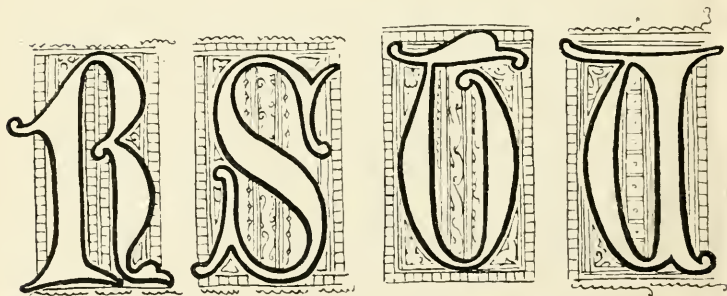
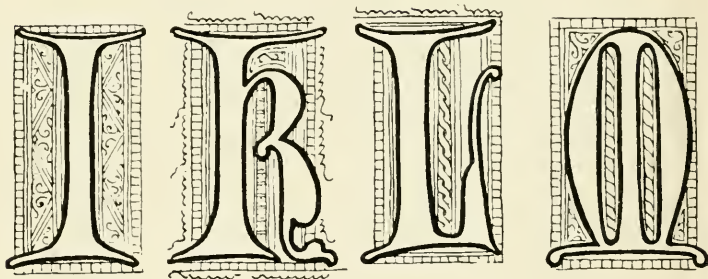
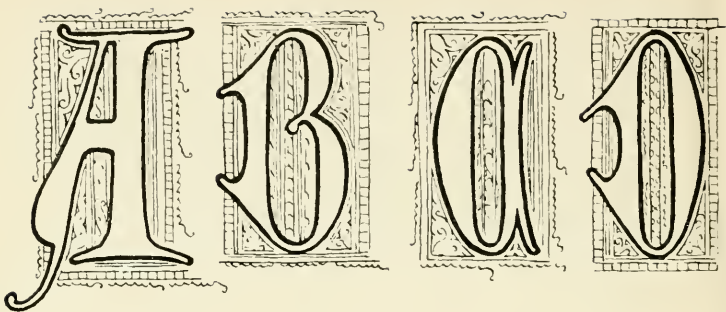
58. FROM A BRASS. END OF 15TH CENTURY.

a b c d e f  
g h i k l m  
n o p q r s t  
u v w x y z

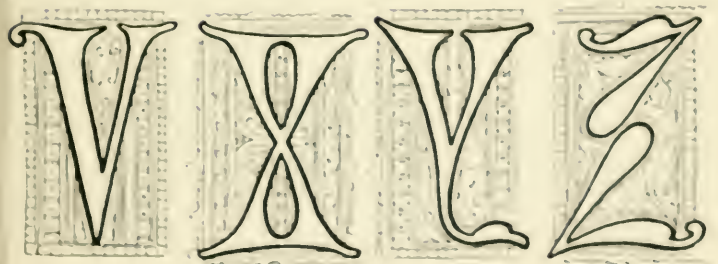
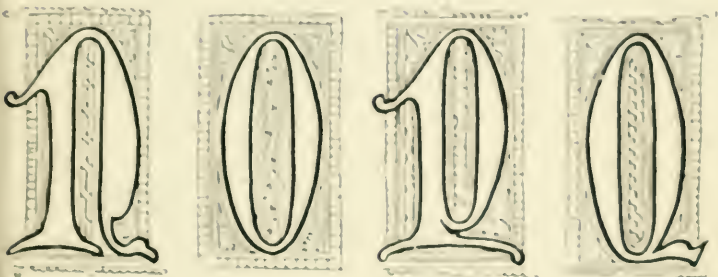
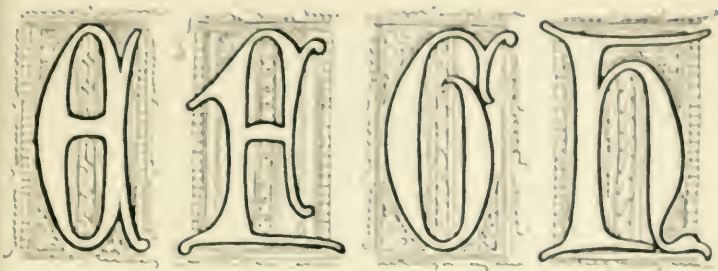


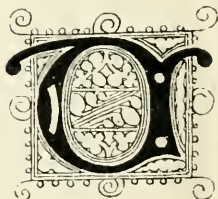
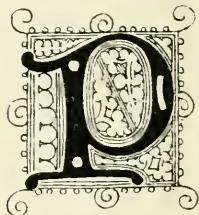
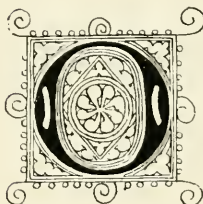
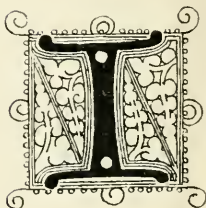
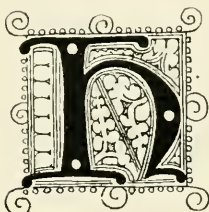
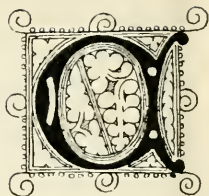
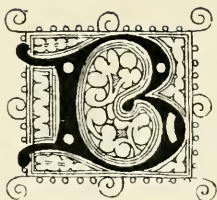
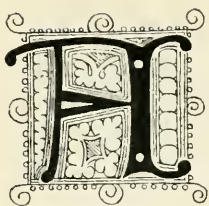








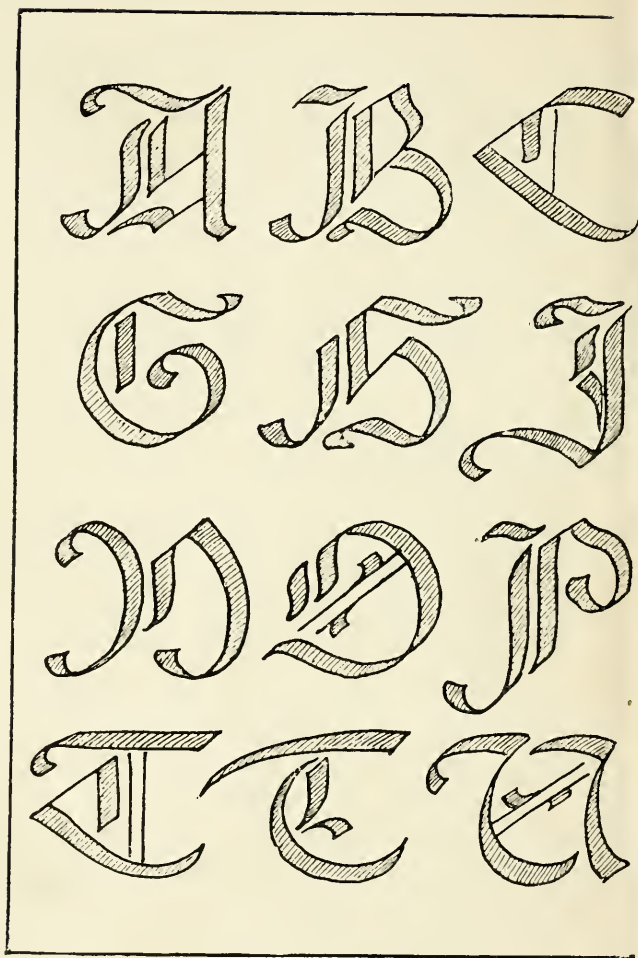


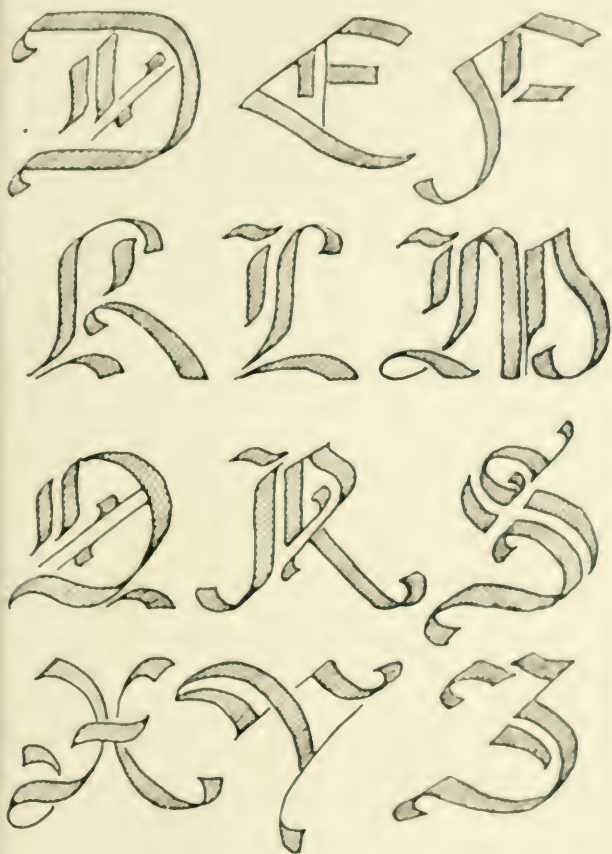


A B C D E  
 F G H I J  
 K L M N O  
 P Q R S  
 T U V W  
 X Y Z

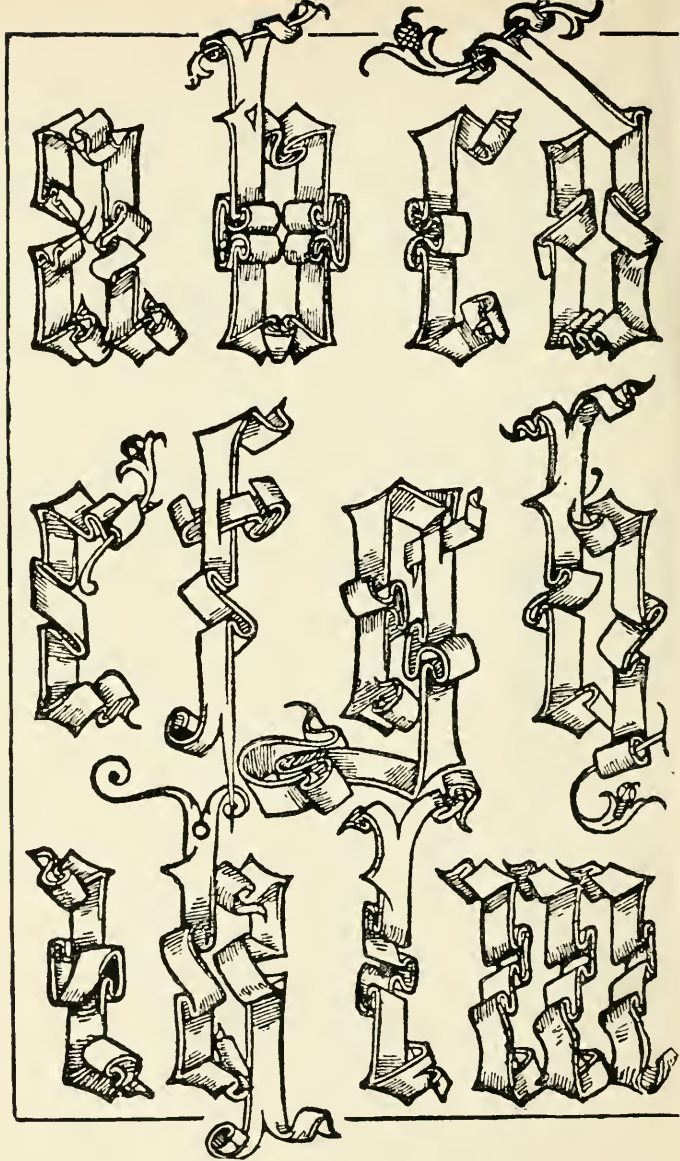
a b c d e f  
g h i j k l  
m n o p q  
r s t u v  
w x y z

a b c d e  
f g h i k  
l m n o p  
q r s t u v x y z

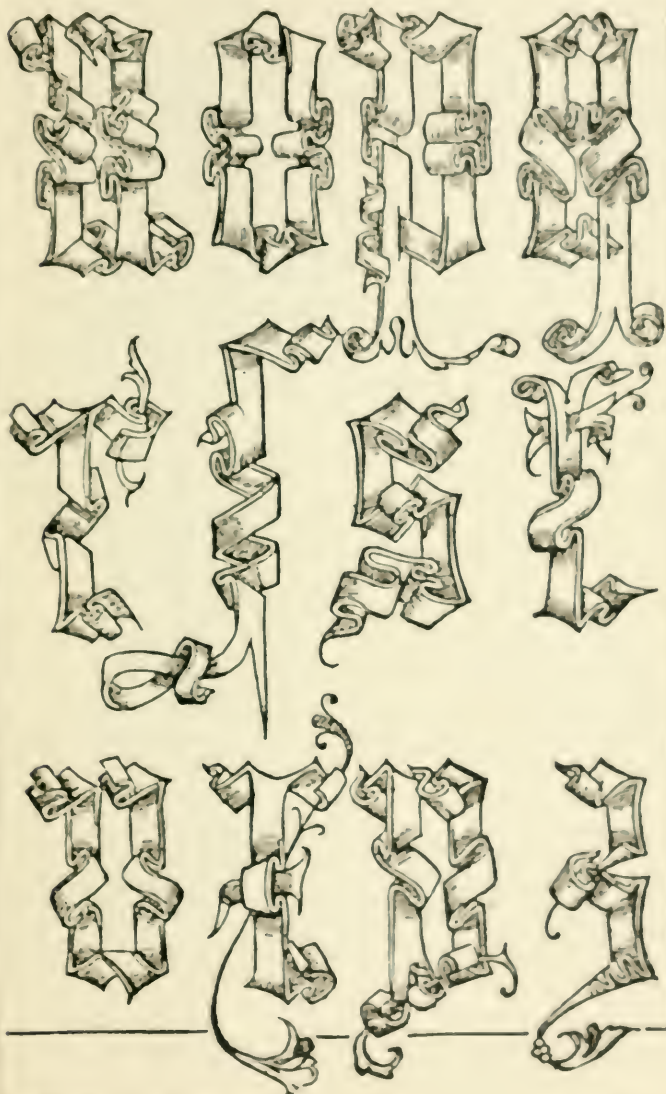






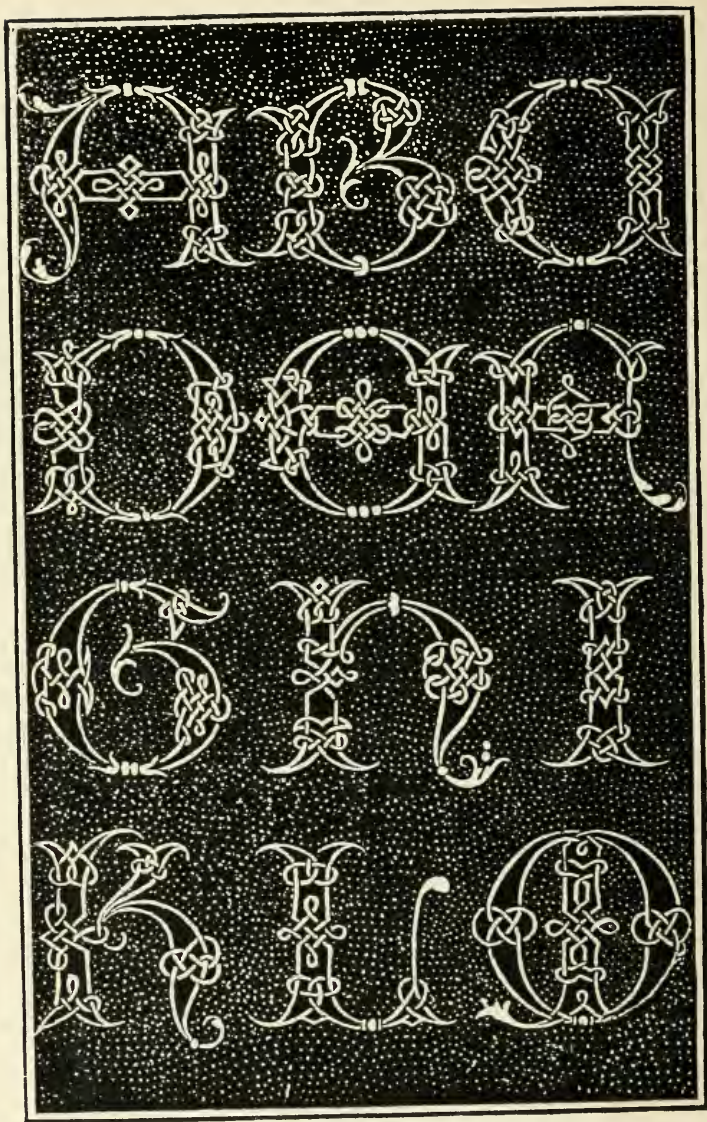






a b c d o  
e f g h i k  
l m n o p  
q r s t s  
t u x y z





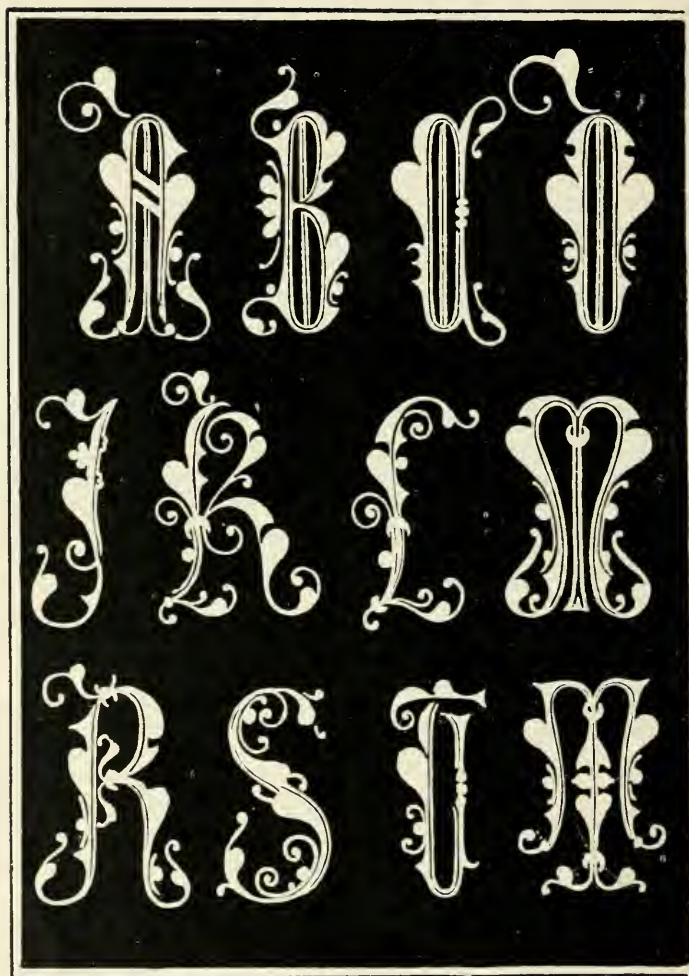


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RE

RE

Vicentinus  
Romae Scribat



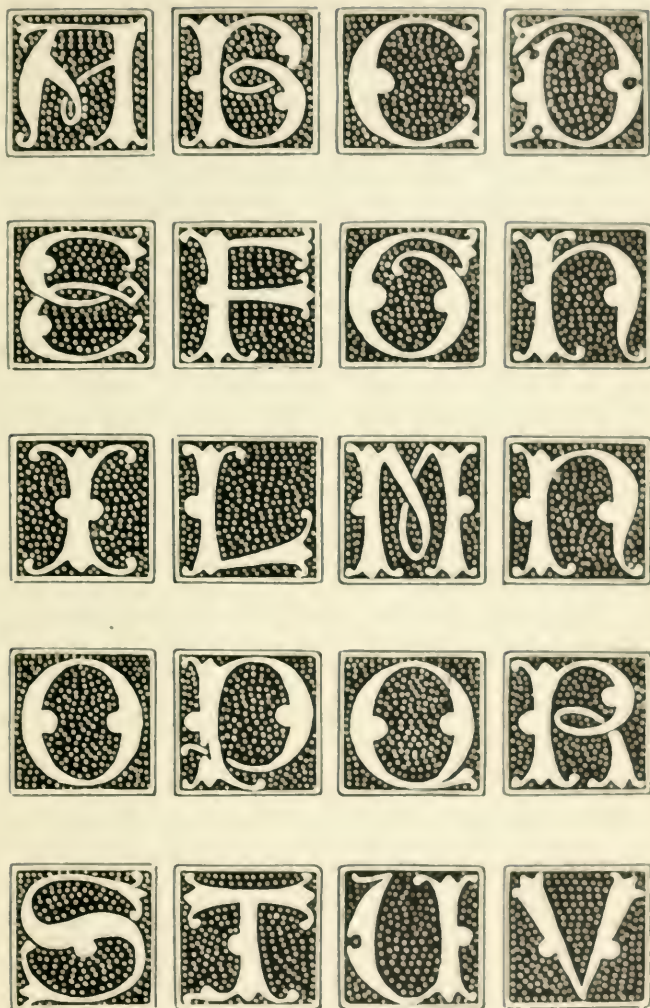


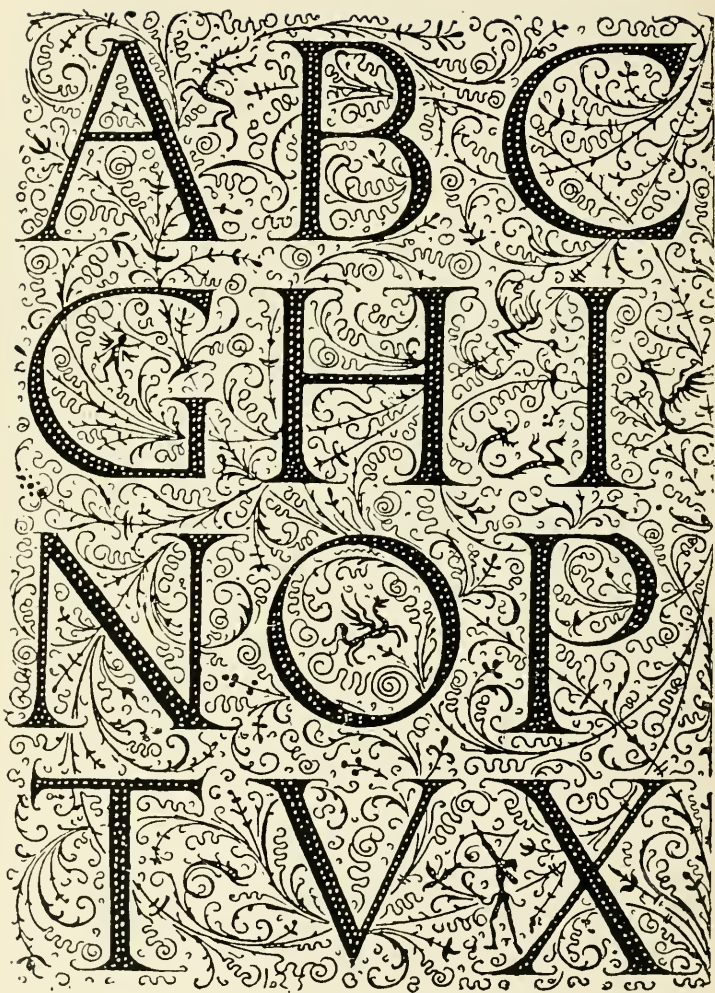




A a b c  
d e f g h  
i l m n o  
p q r s t  
u x y z











A B C  
G H I  
N O P  
T V W

D E F

K L M

Q R S

X Y Z

A B C D E  
F G H I J K L  
M N O P Q  
R S T U V  
W X Y Z



A B C D  
E F G H  
I J K L M  
N O P Q  
R S T U V  
W X Y Z

A B C D E F G H

I J K L M N O P Q

R S T U V W X Y

Z. & a b c d e f g

h i j k l m n o p q r s t u v

w x y z A<sup>o</sup> D<sup>m</sup> 1665.

A B C D E F G

H I J K L M N

O P Q R R

S T V W X Y Z

· a b c d e f g h i j k l m n

o p q r s t v w x y z.

Anno Domini 1697

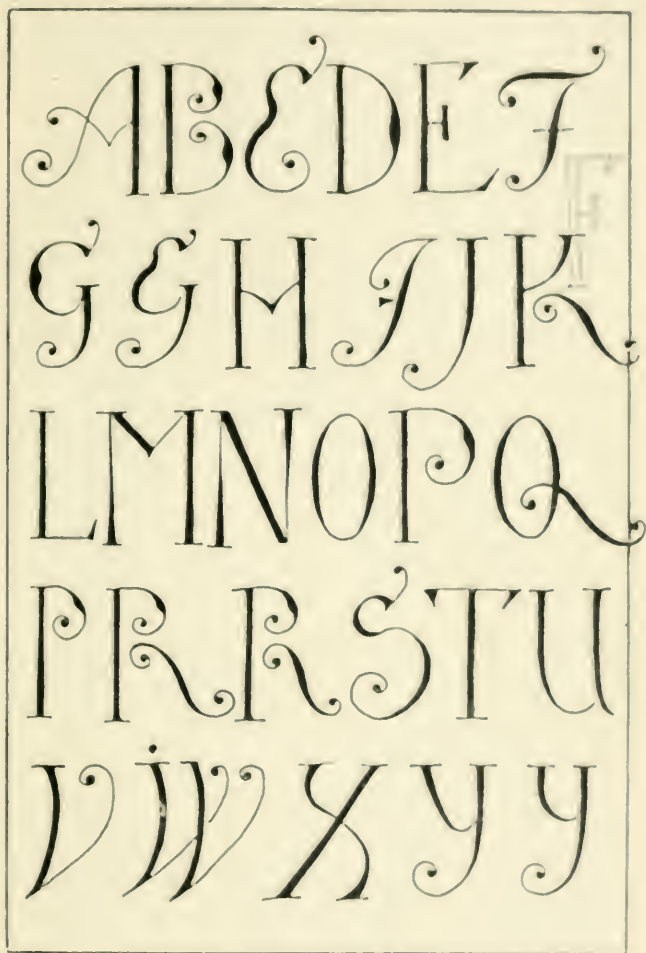
A B C D E

F G H I J

K L M N O

P Q R S T U

V W X Y Z



a b c d e  
f g h i  
t m n  
o p q r  
s t u y

a b c d e  
e f g h i  
k l m n  
o p q r s  
s t u v x

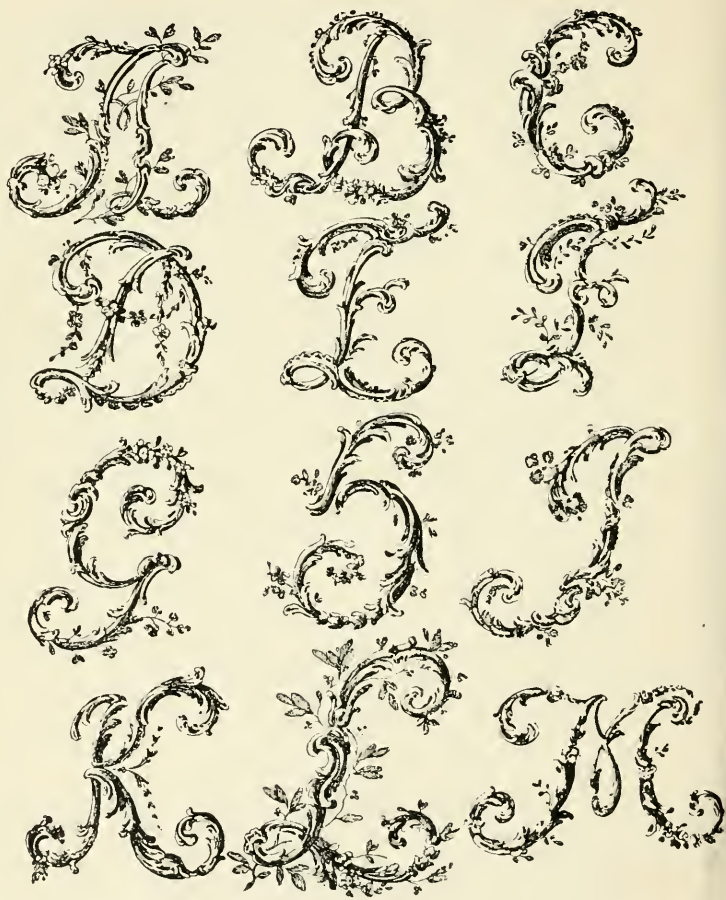
a b c c c d e  
f g h i j l m  
m m n o p  
p q r r r s t  
s t u v x

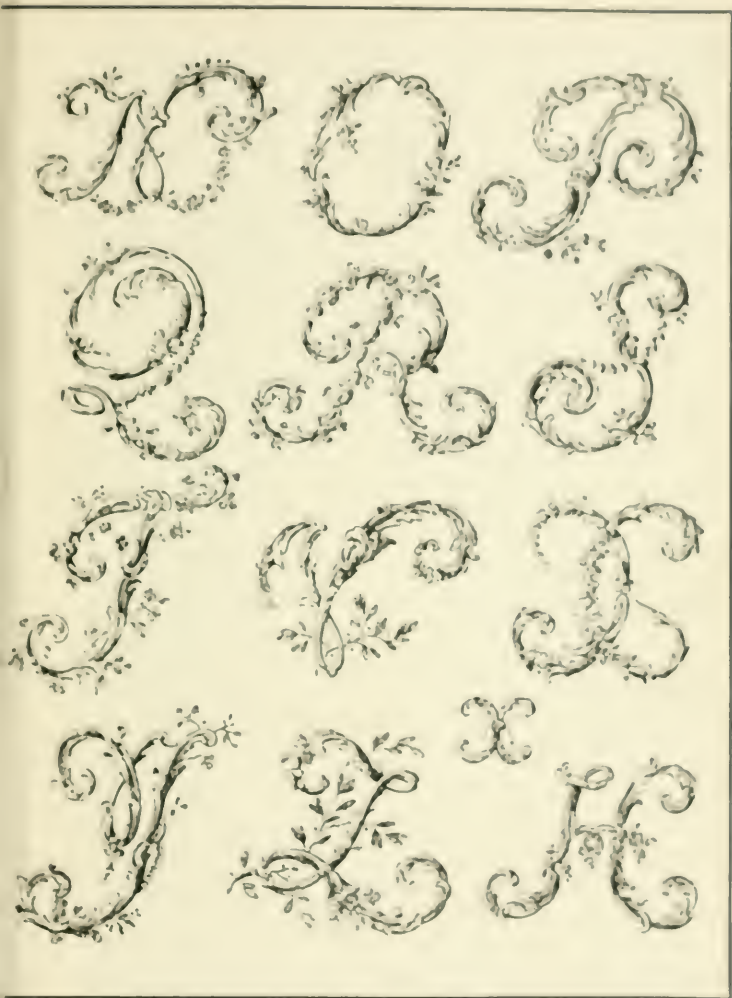


a b c d e  
e f g g h i  
j l m n o p  
q r s t f  
u v v x z



A B C D  
 E F G H  
 I K L M  
 N O P Q  
 R S T U  
 V X Y Z

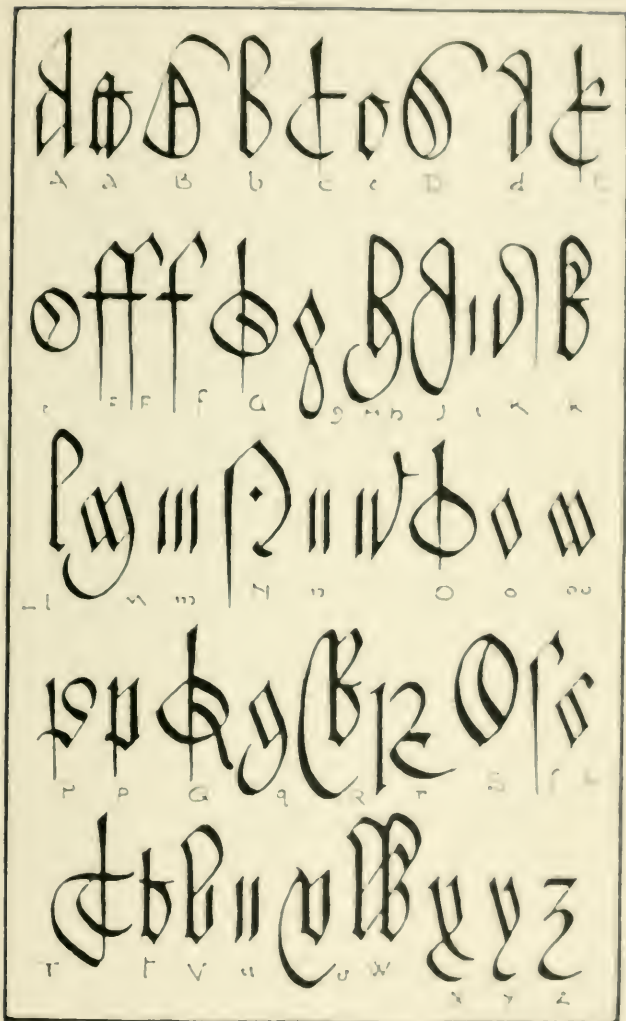




PERIOD OF LOUIS XV.







95. ENGLISH COURTHAND. FROM A WRIGHT'S "COURTHAND RESTORED," 1515





א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת

Beth Aleph

י כ ל מ נ ס ע פ צ ק ר ש ת

י כ ל מ נ ס ע פ צ ק ר ש ת

י כ ל מ נ ס ע פ צ ק ר ש ת

י כ ל מ נ ס ע פ צ ק ר ש ת

י כ ל מ נ ס ע פ צ ק ר ש ת

A B C D E F G

H I J K L M N

O P Q R S T U

V W X Y Z &

1 2 3 4 5

6 7 8 9 0

abcdefghijkl

mnopqrstuv

wxyz *ABCD*

*EFGHIJKL*

*MNOPQRS*

*TUVWXYZ*

*abcdefghijklmn*

*opqrstuvwxyz*

A B C D E F  
G H I J K L  
M N O P Q R  
S T U V W  
X Y Z & E

a b c d e f g h i j  
k l m n o p q r  
s t u v w x y z

A B C D E F  
G H I J K L  
M N O P Q R  
S T U V W  
X Y Z & E

A B C D E

F G H I J K

L M N O P

Q R S T U

V W X Y Z

a b c d e f g h i

j k l m n o p q r

s t u v w x y z

A B C D E

F G H I K

L M N O P

Q R S T U

V W X Y Z

*A B C D E F*

*G H I J K L*

*M N O P Q*

*R S T U V*

*W X Y Z &*

*a b c d e f g h i j*

*k l m n o p q r*

*s t u v w x y z*



A B C D E  
F G H I K  
L M N O P  
Q R S T U  
V W X Y Z

A B C D E F G  
H I J K L M M N  
N O P Q Q R R  
S T V W X Y Z

a b c d e f g h i j k l m n

o p q r s t u v w x y z.

1 2 3 4 5 6 7 8 9 0.

A B C D E

F G H I K

L M N O P

Q R S T U

V W X Y Z

A B C D E F

G H J K L M

N O P Q R S

T U V W X

Y Z · 1 2 3 4

5 6 7 8 9 0

A B C D E F

G H J K L M

N N O P P Q

R R S S T U

V W X Y Y Z

a b c d e f g h i j k l m n

o p q r s t u v w x y z . & .

A B C D  
E F G H I  
J K L M  
N O P Q R  
S T U V  
W X Y Z

A B C D E F

G H I J K L

M M N O P Q

R R S S T U

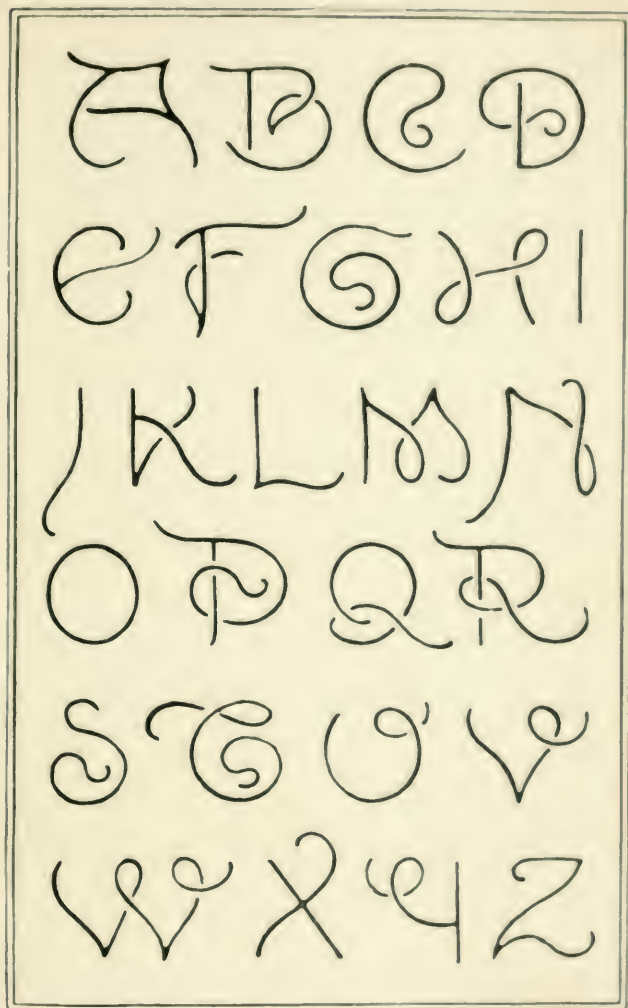
V W X Y Y Z

a b c d e f g h i j k l m n

o p q r s t u v w x y z z.

A B C D E  
F G H I J  
K L M N  
O P Q R  
S T U V  
W X Y Z





A B C D E F

G H I J K L

M N O P Q

R S T U V,

W X Y Z <sup>Q</sup><sub>5</sub>

**A B C D E**  
**F G H I J**  
**K L M N O**  
**P Q R S T**  
**U V W X Y**  
**Z**

A B C D

E F G H

I J K L

M a b c d e

f g h i j k

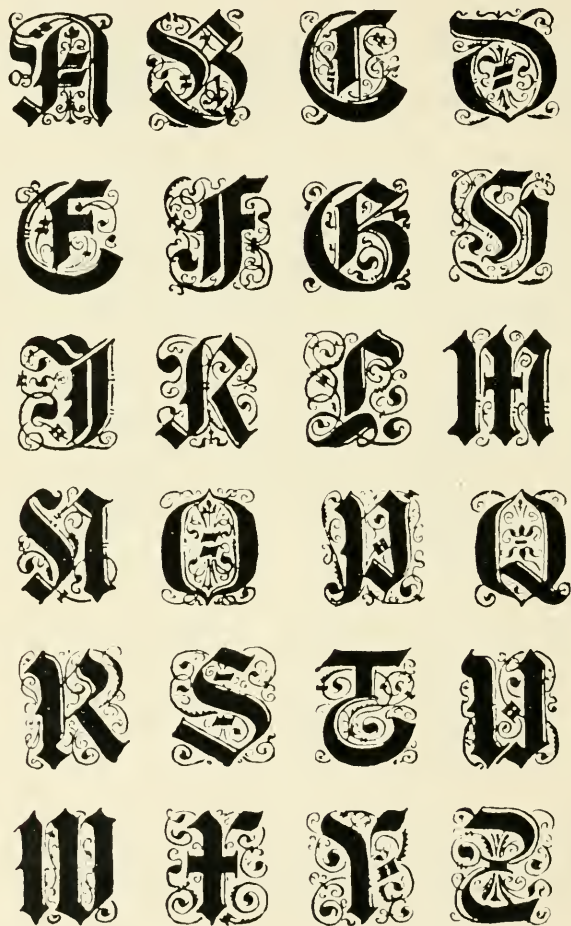
S S S S

T O W Q

V SS SX B

f g h i k l m n

w x y z



a b c d e  
f g h i j k  
l m n o p  
q r s t u v  
w x y z

A B C D

E F G H

I J K L



E F G H

I O P Q

U V Y Z

A·B·C·D.  
H·I·J·K·L  
Q·R·S·T.  
X·Y·Z.  
E·F·G·H·I·J·K·L  
U·V·W·X·Y·Z. 12

E·F·G·  
M·N·O·P·  
U·V·W·

&· A B C D  
M N O P Q R S T  
3 4 5 6 7 8 9 0 .

A B C D

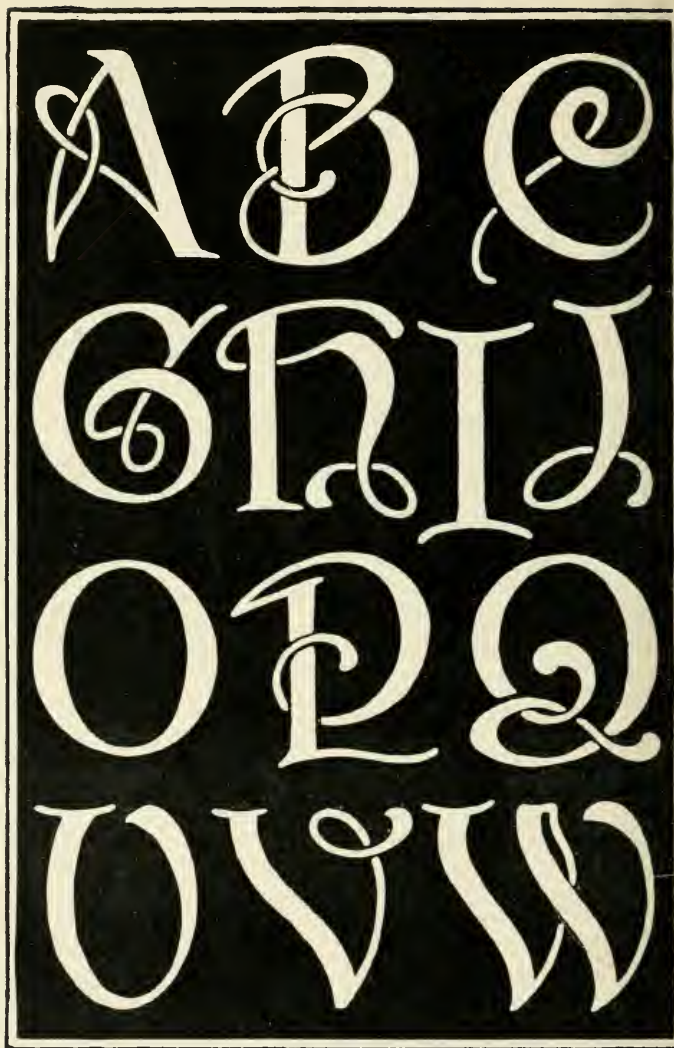
K L M N

S T U V

E F G H I

O P Q R

W X Y Z



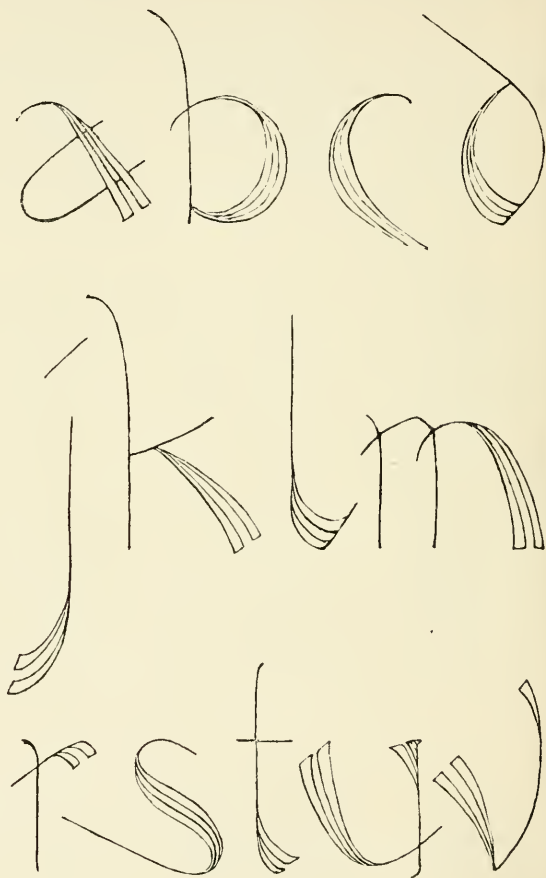












e f g h i

n o p q

w x y z

A B C D

I J K L

Q R S T

X Y Z &

j k l m n o p q

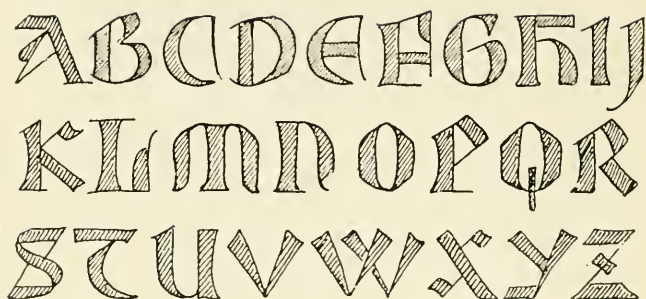
E F G H

M N O P

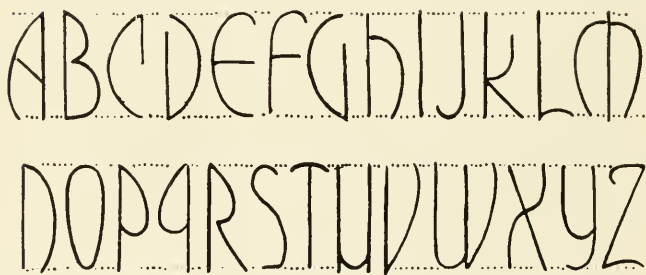
U V W

a b c d e f g h i

r s t u v w x y z



126. ENGRAVING. ADAPTED FROM MEDIEVAL GOLDSMITH'S WORK.  
L.F.D.



127. SCRATCHING. ADAPTED FROM OLD SPANISH. L.F.D.

A B C D E F G H I J  
K L M N O P Q R  
S T U V W X Y Z

128. DESIGNED FOR ENGRAVING ON METAL: BUT NOT  
UNSUITED TO PENWORK. L.F.D.

A B C D E F G H I J  
K L M N O P Q R  
S T U V W X Y Z

129. PENWORK. L.F.D.

A B C D E F G H I J  
K L M N O P Q R  
S T U V W X Y Z

130. BRUSHWORK. L.F.D.

A B C D E F G H I J K L M  
N O P Q R S T U V W X Y Z

131. SCRATCHED. L.F.D.



A B C D E F G H I  
 J K L M N O P Q R  
 S T U V W X Y Z  
 a b c d e f g h i j k l  
 m n o p q r s t u v  
 w x y z.

*Roland W. Faul*

132. PENWORK. ROLAND W. FAUL, ARCHITECT. 5

A B C D E F G H I J  
 K L M N O P Q R  
 S T U V W X Y Z

133. PENWORK. R. K. COWTAN

A B C D E F G  
H I J K L M N  
O P Q R S R S  
T V W X Y Z Z

AN ARCHITECT'S  
LINE ALPHABET  
FOR PENWORK.



a b c c d e f f

g h i j k l m n o p

q r s s t u v u u x

Design letters  
into words.  
123 45 67890



A B C D E F

G H I J K

L M N O P

Q R S T U

V W X Y Z

abcdefghijklmnopqrstuvwxyz.

"The curfew tolls  
the knell of parting day."



A B C D  
E F G H I J  
K L M N O  
P Q R S T  
U V W X Y Z

a b c d e  
f g h i j k  
l m n o p  
q r s t u v  
w x y  
z

A B C  
G H I  
D O P  
T U V

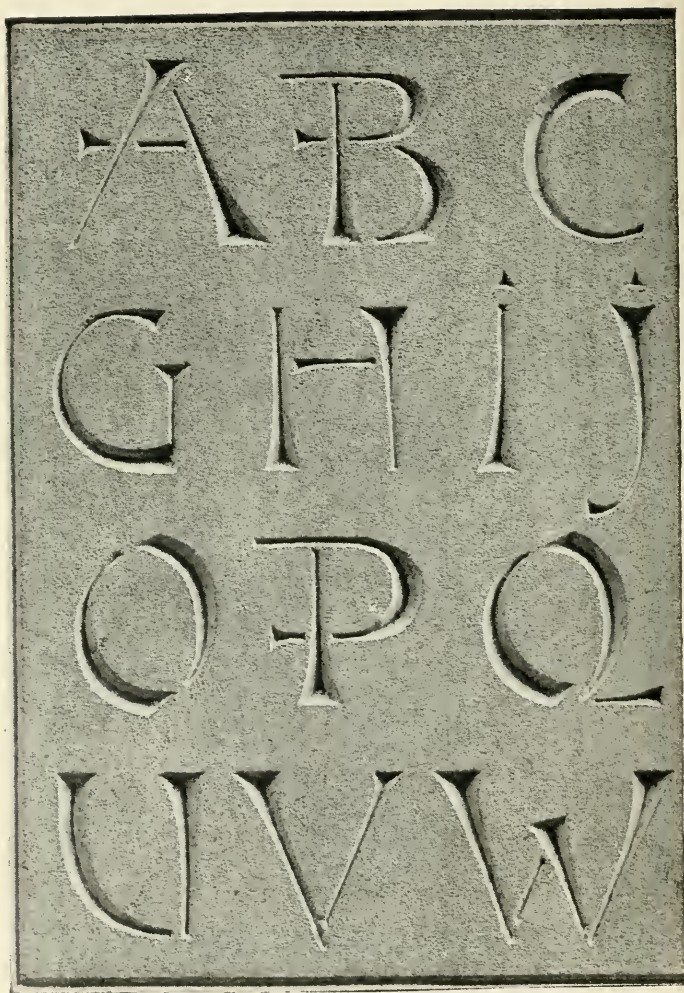


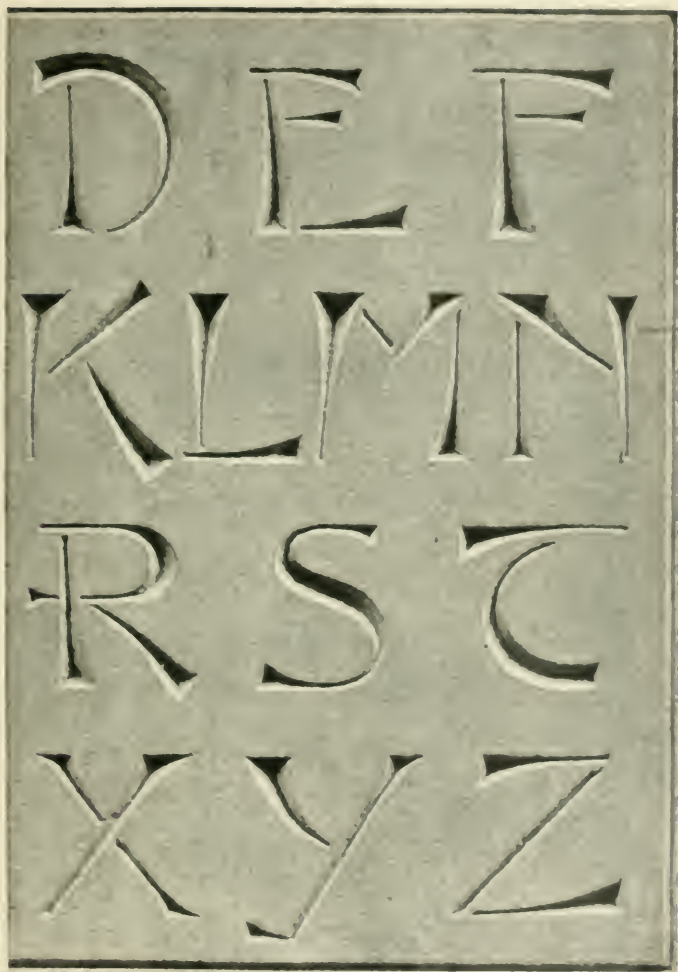
D E F

K L M

O R S

X Y Z



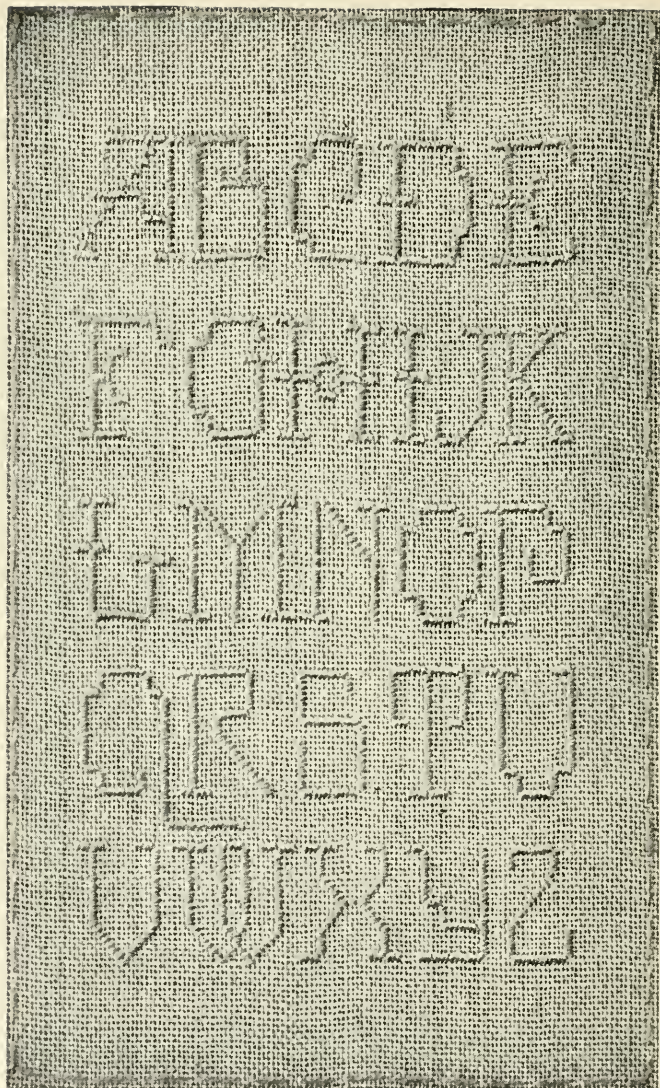








CARVING. L.F.D.



(A) B (C) D (E) (F)

(H) I J K L M N

(O) P (Q) R S (T)

U V W X Y Z

a b c d e f g h i j k l m  
n o p q r s t u v w x y z

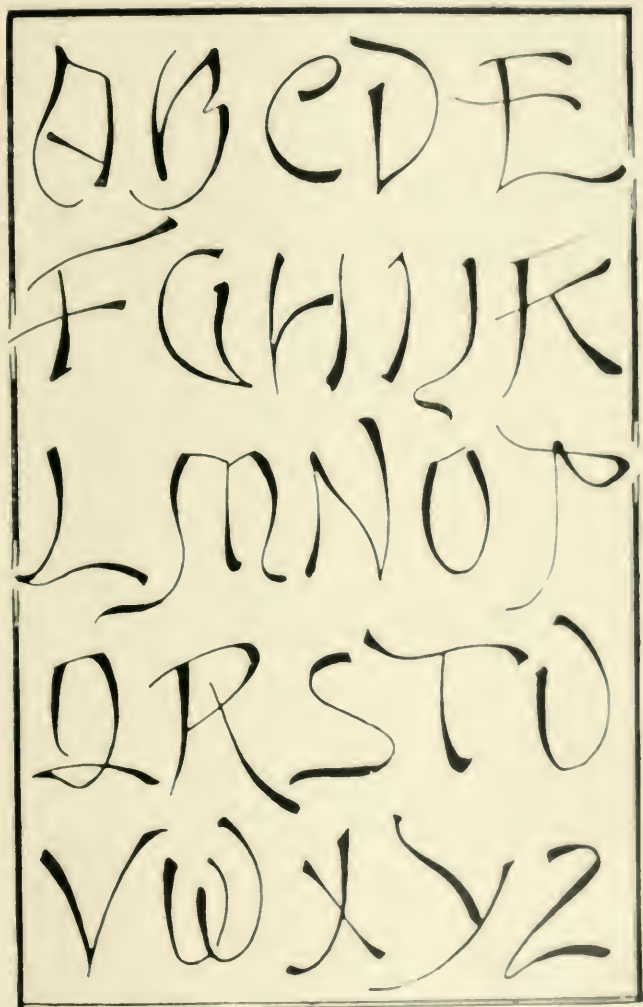






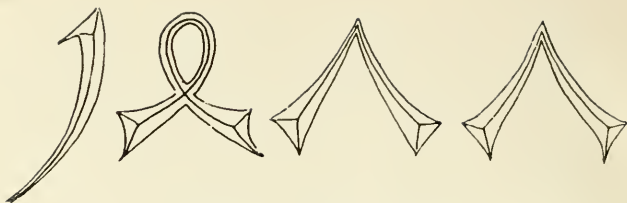


146. SQUARE-CUT. L.F.D.

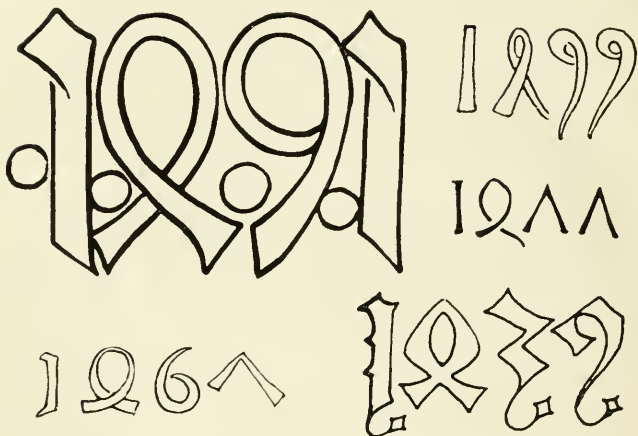




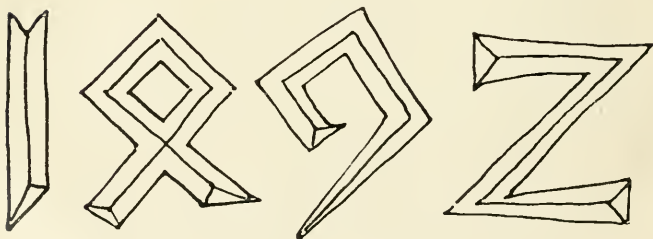
e ee e  
 s se s  
 G G G  
 z z z  
 G G G  
 t t t  
 v v v



150. CUT IN STONE. 1477.



151. STONE AND BRASS. 1439-1491.



152. CUT IN STONE. 1492.

1. 5. 2. 0. 1522

1520 1522

1521 1522

1531 1542

1531 1543

1533 1543 1544

1539 1545

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5



6 7 8 9 0

6 7 8 9 0

6 7 8 9 0

6 7 8 9 0

1 2 3 4 5  
6 7 8 9 0

155. BRONZE. ABOUT 1550.

1 2 3 4 5  
6 7 8 9 0

156. BRONZE. ABOUT 1560.

1 2 3 4 5

6 7 8 9 0

157. BRUSH-WORK. 16TH-CENTURY FINESS.

1 2 3 4 5

6 7 8 9 0

158. BRUSH-WORK. 16TH OR 17TH CENTURY.

1 2 3 4  
5 6 7 8 9 0

159. ITALIAN MS. 16TH CENTURY.

1 2 3 4 5  
6 7 8 9 0

160. GILT, ON BLACK, BRUSH-WORK. 1548?

1 2 3 4 5  
6 7 8 9 0

161. INCISED IN WOOD. GERMAN. 1588.

1 2 3 4 5  
6 7 8 9 0

162. BRASS. 16TH CENTURY.

1 2 3 4 5  
6 7 8 9 0

163. BRUSH-WORK. 16TH CENTURY.

1 2 3 4 5  
6 7 8 9 0

164. ABOUT 1700.

i. 6. 3 X.

165. CUT IN STONE. 1634.

1 2 3 4 5 6 7 8 9 10 11 12

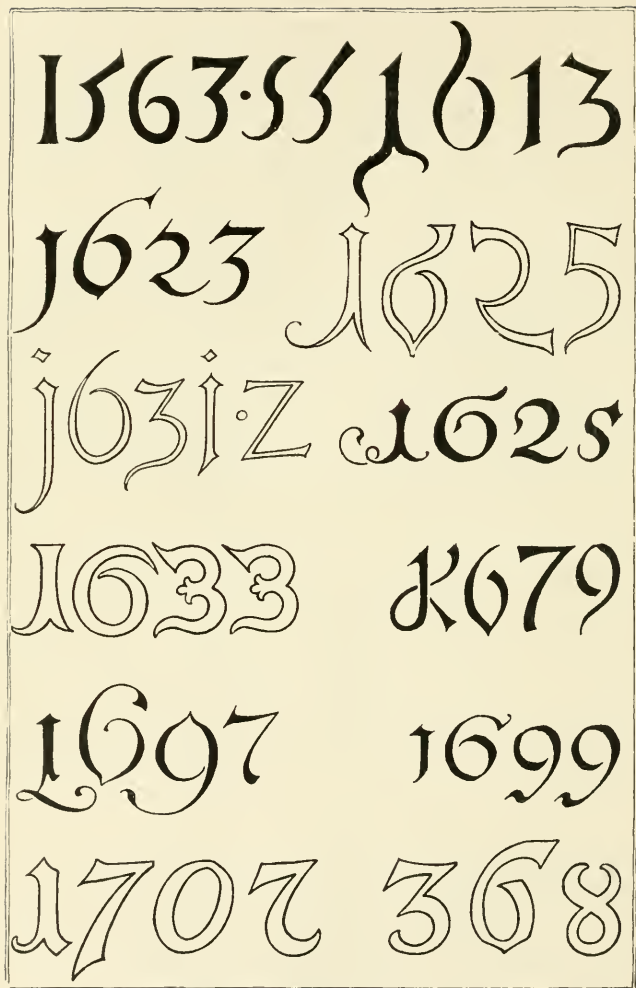
13 14 15 16 17 18 19 20

166. RELIEF IN BRASS OR BRONZE. 1647.

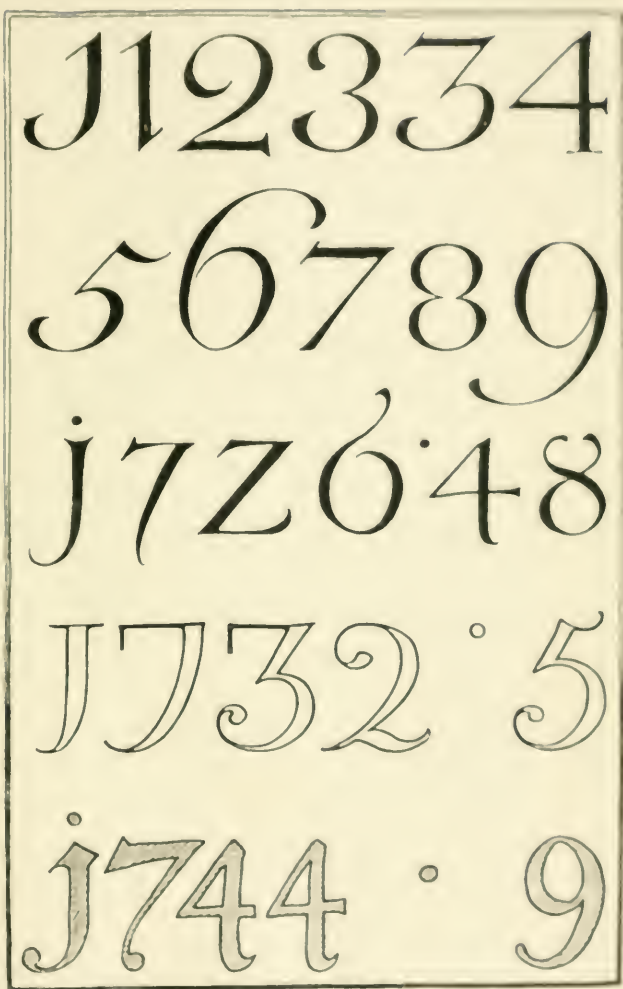
i z 3 4 5

6 7 8 9 0

167. STONE. 1692.









170. WOOD



INLAY. 1664.

1716·294 ð7i9

ð7Zð j723

1724 J725

1735·Z i738

1755·486 J763

1774·695 J783

171. BRASSES, ETC. 1716-1783.

1 2 3 4 5 6 7 8

9 10 11 12 13 14 15

172. BRASS WIRE INLAY ON WOOD 1740.

1573 1593

1649 1747

173. ENGRAVED ON STEEL, OR INLAID IN WIRE ON WOOD

1573-1747

1 2 3 4 5  
6 7 8 9 10

174. L.F.D.

1 2 3 4 5  
6 7 8 9 0

175. MODERN.

1 2 3 4 5  
6 7 8 9 0

176. L.F.D.

1 2 3 4 5

6 7 8 9 0

177. I. F. D.

ı 2 3 4 5 6 7

8 9 ı0 ıı ıı ı2

178. ALOIS MILLER.

















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