TYPE FOR PRINT

or what the beginner should know about typefounding, letter-design, and type faces: with a synopsis of the best faces now available shown family by family for the convenience of users of print

BY

DAVID THOMAS

SECOND EDITION

LONDON
JOSEPH WHITAKER & SONS
12 WARWICK LANE, E.C.4

FIRST EDITION, SEPTEMBER MCMXXXVI
SECOND EDITION REVISED, SEPTEMBER MCMXXXIX

SET AND PRINTED IN GREAT BRITAIN
BY SANDERS PHILLIPS & COMPANY, LIMITED
THE BAYNARD PRESS
IN MONOTYPE TIMES NEW ROMAN
TEN ON TWELVE POINT
ON PAPER BY LEPARD & SMITH

PREFACE TO THE SECOND EDITION

The exhaustion of the first edition enables me to bring the work up to date and to correct a few slips. The period 1937-38 saw a certain diminution in output on the part of the founders, though not in any particular direction. Gaps in the library of historic type designs continue to be filled. For bookwork we welcome a new Garamond, Janson, Van Dyck, and Ehrhardt ; also Fontana and Bulmer, though these last were cut for private use. In jobbing faces, the greatest activity has been in the field of script types, though several interesting early nineteenth century faces have been revived. Altogether the tendency has been more to add to or to complete existing series and ensembles than to create new designs.

The ascription of the first roman type has now been emended, and I must plead guilty to culpable misrepresentation. I mention this fact here as Dziatzko's attribution to Rusch (1464, Strassberg) was still being countenanced by Mr A. F. Johnson in his *Type Designs* (1934) and by Mr D. B. Updike in the last edition of his classic *Printing Types* (1937), although it had been upset nearly a decade previously by Gustav Binz in the course of an article on early printing in Basle published in the *Gutenberg Festschrift* (1925). For this reference I am indebted to the kindness of Mr Philip James.

Besides a number of slight alterations in the text,

the only other considerable change is in the section on the caroline minuscule. My doubts as to my necessarily-condensed description of the origin of this script were confirmed by an interesting communication from Mr Hellmut Lehmann-Haupt ; so I have modified my remarks about Alcuin, and further corrected an unwitting slip about Caxton's types which Mr. Lehmann-Haupt very kindly pointed out. The section on figures and signs, together with the index, is new.

I have added an example of Trajan lettering in a size not usually reproduced, at the same time increasing the scale of the showings of two notable modern ' translations ' of these majuscule forms into type. It has not been practicable to include other large-sized showings, but I would refer any who may seek further examples to my **Printed Alphabets,** which is in fact, though not in name, the second volume of the present work.

My friends, the typefounders, as ever have co-operated (some of them, I fear, not without trouble and inconvenience) by supplying showings of types ; my obligations are specifically acknowledged on a later page.

August, 1939

PREFACE TO THE FIRST EDITION

This book is offered to the public as a reasonably priced, handy guide to the thousands of different printing types in use to-day. The number of printing types of varying cut and style has increased enormously during the past hundred years—it has been estimated that over 1,200 new designs have appeared since 1900 alone—and is so continuing to increase every year that only the expert can hope to keep abreast with the new letters ever appearing in the latest printed matter ; it is therefore impossible for the plain man to risk choosing the right types for any given job from bulky type specimen books without expert knowledge or advice.

The purpose of this book is to give sufficient grounding in type knowledge to enable a customer to understand what advice a printer is proffering ; it tries to say in simple language exactly what type is and what makes a type design good and what bad ; and it shows as many specimens as possible of the *best* printing types now in everyday use.

Every one to-day is a potential buyer of letterpress printing. Every one needs a letter-heading ; the business man wants stationery, leaflets, catalogues, and publicity matter ; publishers and authors want books printed ; and all of these want value for their money. This book has been written for the casual or infrequent print buyer who wishes to know something

about what he is going to pay for ; and to know something about the foundation of all good printing—good printing types.

March, 1936

CONTENTS

PART II.—TYPE FACES

INTRODUCTION

A certain eminent scholar once returned the proofs of a book with the remark that they looked very nice—but would the printer please make the type of the finished work just a little larger !

Presumably like thousands of ordinary people, the scholar took the appearance of the daily newspaper on his breakfast table as something for granted ; he thought that print, like Topsy, 'just growed'. But anyway most people do find printing a mystery, and the key to this mystery is a knowledge of the nature, design, and processes of manufacture of the movable letters without which the production of tens of thousands of copies of a book or a newspaper would be impossible.

The subject matter of the book has been divided into two parts : (1) typefounding, or the mass-production of identical types generally, and (2) type faces, or the shapes and styles of the printed letters ; but the reader is warned that there are places where the division is more convenient than real. For this reason, and also to avoid repetition, certain basic principles of letter-design as applied to type faces are included in the section on typefounding, where they are best dealt with in a work of this kind. Very heavy pressure on space precludes any discussion as to the choice or best use of the best printing types. The subject of this work is not typograph layout but its raw materials, type characters.

TYPOGRAPHICAL PRINTING-SURFACES

To obtain a printed impression four things are necessary : something to print from, or the printing-surface (a block, a plate, type) ; ink to print with ; something with which to apply the ink (a roller, ink balls) ; and something to take the impression (paper, cloth, metal, in fact almost any smooth surface).

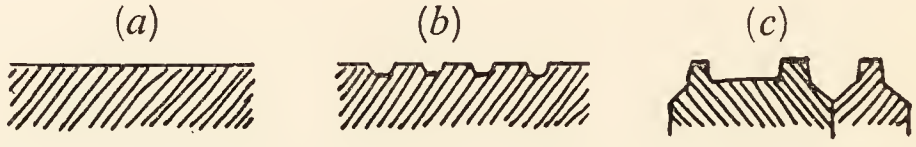


Fig. 1. Sections of the three kinds of printing-surface : (*a*) planographic, (*b*) intaglio, (*c*) typographic.

Surfaces from which a multiplicity of inked impressions can be taken are, in practice, either the plane or the cylinder, and may be of three kinds : (1) smooth (planographic), as in lithography where the ink is repelled by the wet areas of the stone and adheres to the greasy ; (2) recessed (intaglio), as in etching or engraving where the print is only taken after the ink has been wiped away from all but the sunk portions of the plate ; and (3) relief, or typographical, where the ink is directly applied to the printing-surface alone, the sunk portion of the surface, which cannot take the ink, forming the white parts of the print, as (*a*) with blocks, whether cut by hand in wood or produced by process engraving in line or half-tone, and (*b*) with type (Fig. 1).

Though equivalent to a solid plate, the letterpress surface, therefore, is built up, or, as it is said, ' composed ' of innumerable little blocks, those with actual printing-surfaces being type characters, and those with no characters being spaces.

Printing types are perhaps the greatest marvel of mass production. Each little block must be exactly rectangular in section so that tens of thousands of type characters, whatever the size of letter, can be assembled and then locked together under lateral pressure into a composite surface that is transportable from the composing room to the machine ; to secure alignment each letter must occupy a uniform position on top of the block ; and to ensure the even ' colour ' of the impression each type must stand exactly the same height, otherwise those too high will take too much ink, and those too low too little.

For centuries the type page has been laboriously assembled by hand, letter by letter, but ' composing ', as this process is called, is now carried out more expeditiously by machine. The working principles of the important machines will be described later.

Whether the printing-surface is composed mechanically from single letters cast separately, or whether from slugs containing a whole line of matter, the single movable type nevertheless remains the basic unit, since all the letters designed for slug-casting machines follow, with certain unavoidable exceptions, models similar to those on movable types.

The Two Aspects of Type

The first and most important thing for newcomers to type to remember is that founders and printers

speak about a piece of type as if it were two distinct things : (1) as something flat, that is to say, as the shape of the letter or character as printed, and (2) as a small block or stem of metal, rectangular in cross-section, with or without a stamped letter on its upper surface.

To the plain man type is just the printed letter and nothing else ; but while printers use the word in more senses than one they normally think of type as a mass of solid type-bodies. This view is very natural, for printers spend much more time handling types than reading print, and to them, moreover, a type character is a solid body cast to a definite shape and to a definite size to an accuracy of split thousandths of an inch.

Unfortunately for the easy comprehension of printers' technical terms the same words are used to describe these two different aspects of type with resulting ambiguity to the uninitiated. Thus printers speak, for instance, of the ' height ' of the body and the ' height ' of a letter (or the type face), and they are not measurements in the same direction at all. But the meaning is usually clear, and if the true meaning is not clear from the context, the newcomer must just ask himself whether the term in question refers to type as a solid, to the ' body ', or simply to the flat shape and form of its character, to the ' face ' on top of the body. Moreover printers not only use the word ' body ' as a synonym for the main stem of the type character, but also as the measure of size of any particular type character, or ' sort ', the measurement being that of the depth of the body from back to front, i.e. in the direction of the vertical axis of the printed character.

Thus the faces of long letters like Q J *f* are said to fill or ' charge ' the body ; the height, or ' gauge ', of the letter approximating to the ' depth ' of the body.

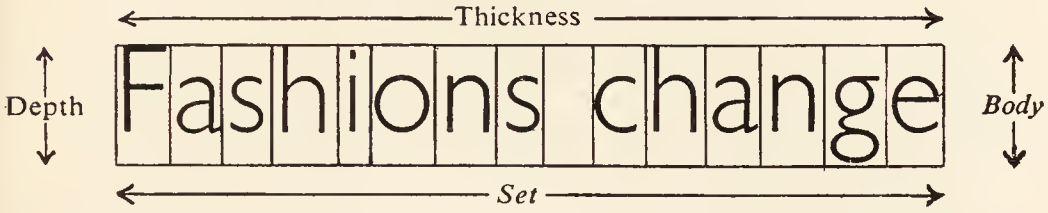


Fig. 2. The two directions of measurement parallel with the printing-surface or type face.

But while the bodies of any one size of character are uniform in depth, measured ' body-wise ', they vary in thickness, ' set-wise ', owing to the variations in width of the different letters (Fig.2). Thus i l and punctuation marks (' points ') are cast on the thinnest bodies and W and *M* on the thickest.

To avoid ambiguity, therefore, the terms ' height ' and ' width ' will, as far as possible, be applied to face (printing-surface) only, and depth (body-wise) and thickness (set-wise) to the body ; height and depth being corresponding measurements in one direction, and thickness and width in another.

The remaining direction in which a measurement can be taken, which is at right angles to these two last, is also called ' height ', being ' type-height ' or ' height-to-paper ' : the height to which every type stands ; but ambiguity is unlikely as this measurement is invariable.

The same words are not only used by printers to express different meanings, but different shades of meaning, and the reader is particularly directed to

attend to the following words : ' body ', ' set ', ' face ', whose meaning may be general or specific according to the context. Thus body may mean ' body-size ', an exact measurement in points (the point, which is described on pp. 37-41, is the typographical unit of measurement), and set the exact thickness of any given type-body, instead of the lateral spacing of letters.

The ambiguity of the terms ' height ', ' width ', and ' depth ' has already been touched on. Similar groups of ambiguous words are : ' fat ', ' extended ', ' bold ' ; ' head ', ' foot ' ; and ' thin ', ' lean ', ' condensed '.

THE TYPE CHARACTER AND ITS PARTS

What exactly is a printing type ? A printing type, then, is a small six-sided, rectangular block (parallelepiped), cast in metal, having on its upper end a raised letter or character in high relief from which an inked impression can be taken on paper or other smooth surfaces (Fig. 3). ' Script types ' (those whose characters resemble handwriting) are usually cast on rhomboidal bodies, and large types such as those used for posters are not cast but cut in wood (woodletter).

Apart from denoting any particular piece of type, the word ' type ' denotes types collectively (' set up in type ') and also the impression printed therefrom. In these senses the word ' letter ' is strictly synonymous and interchangeable.

Printers call any single type a ' sort ', and the complete muster of sorts, made up in the correct proportions of characters, is known as a ' fount '.

For purposes of nomenclature typefounders and

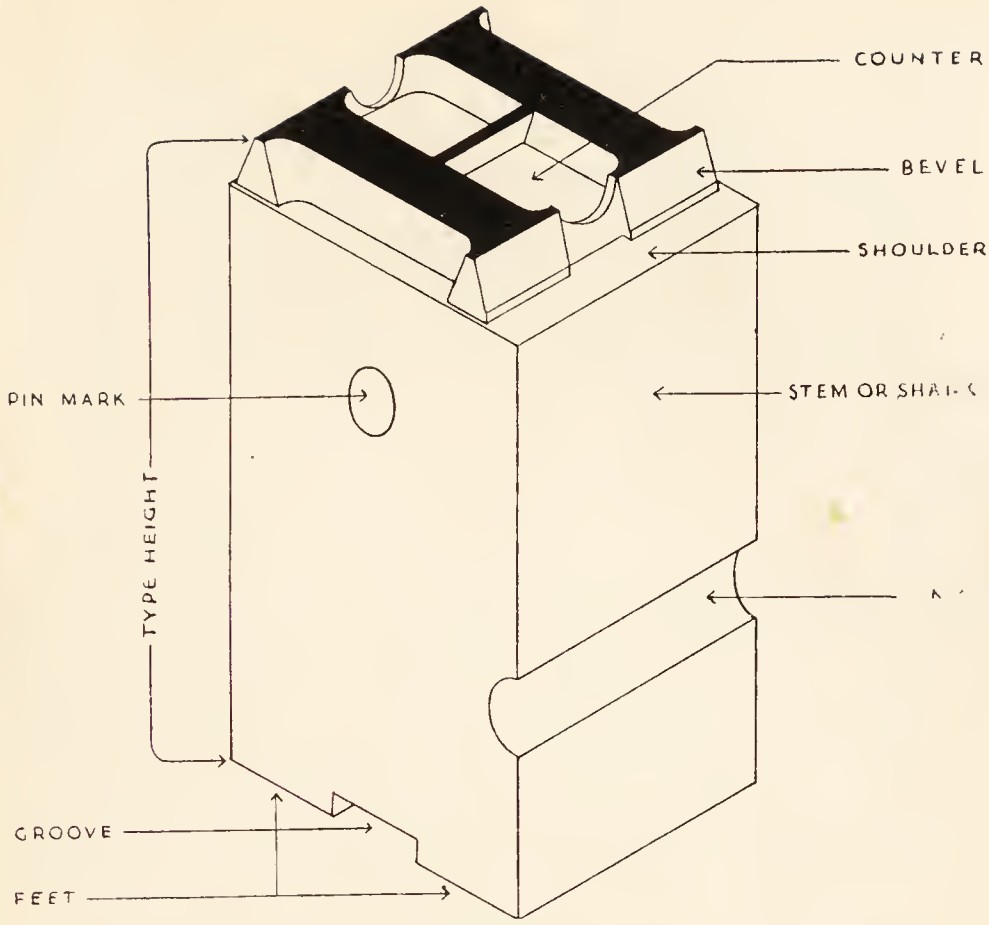


Fig. 3. Isometric drawing of a printing type.

printers have always regarded the single movable type character as a human being standing erect, each type having a body (but no head), a face, beard, neck, shoulder, back, belly, and feet. These parts fall into three divisions : the shank (or stem), the shoulder, and the face ; the shoulder and shank together comprising the body.

The Body

The SHANK, or STEM, is the main body of the type ; exactly rectangular in cross-section, it consists of belly, back, sides, pin-mark, nicks (or grooves), feet, and heel-nick (or groove).

The BELLY is the front of the body.

The BACK is the surface parallel with the belly. The distance separating the back from the belly is the depth of the body, or body-size. The distance between the two remaining sides is the thickness of the body, or the ' set ', and corresponds with the width of the face.

The NICKS (or GROOVES) are cast or cut on the belly, and these may number as many as five or six as founders have their own sets of nicks for each size and face. Certain sorts, the small capitals C O S V W X Z, and I in ' old style ', often have a supplementary nick to distinguish them from the same lower-case sorts, and the figure 1. The object of nicks is to enable the compositor to set type right way up without looking at the face, and also to know at once when a wrong sort has come to hand.

The PIN-MARK is a small depression on one side of the body ; it is due to the pin which ejects the types from the moulds of certain casting machines, and it sometimes bears the number of the body-size of the fount.

The FEET are formed by the HEEL-NICK (or GROOVE) which runs set-wise across the bottom surface of the body. It is made when the ' casting-jet ' (or ' tang ') is removed after casting, and the bottom of the shank dressed so that each type will stand to exact type-height.

The Shoulder

This is the top of the shank ; its parts are the bevel (or neck), the beard, the line, and the side-bearing. Most usually it is a flat surface, the middle part of which bevels up steeply to the face.

The BEARD is all that part of the shoulder that slopes down from the face, head and foot, to back and belly ; but more particularly that portion sloping from the bottom serifs of the face to the belly.

The BEVEL (or NECK) is that part of the shoulder immediately sloping down from the face. The distance from the face to the bottom of the bevel is known as the ' depth of strike '.

The LINE is the imaginary base-line, running set-wise, on or about which all the characters are positioned. The distance from ' line to back ', known as the ' line ', is that used for measuring a fount, that of m and H usually being taken as standard. The distance from line to belly is known as the ' depth of beard ', or ' beard ', and this is sometimes made a definite number of points in direct relation to the size of body (' point line '). The line may be ' common ', ' titling ', or ' script '.

The SIDE-BEARING is the amount of shoulder on either side of the face ; it controls the amount of white space left between characters when composed into lines. The ratio of thickness of body to the width of the face is known as the ' set of the fount '.

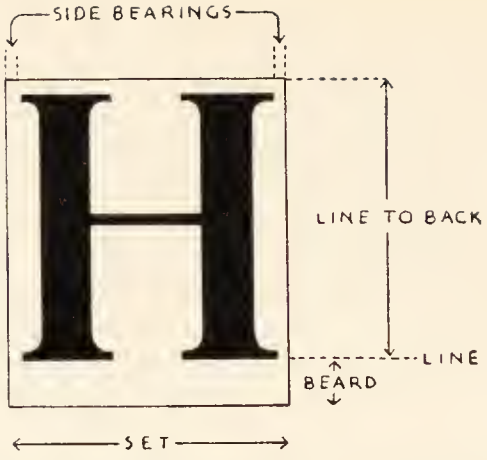


Fig. 4. Plan of the top of a type-body.

The Face

This is the actual printing-surface of the type ; its parts comprise stem, bowl, serif, counter, crotch, and kern. The term ' face ' is also used to speak of the general characteristics of the letter-design. Measured set-wise, a face may be condensed (compressed) or extended (expanded). And measured body-wise, a face may be small, ordinary, medium, or large, according to the actual size of the short and long letters.

The STEM is any straight main-stroke of a letter.

The BOWL is any curved main-stroke enclosing a closed counter.

The COUNTER is the interior 'white' of a letter ; it may be entirely enclosed by a bowl as in O or it may only be the sunken part of the face as in M E n. The name derives from the counter-punch—used in preference to a graver—for forming enclosed portions of a letter on the punch. The angular corner of a counter is known as a CROTCH. The distance from the face to the bottom of the counter is known as the ' depth of counter '.

The KERN is any part of the face which extends over the edge of the body and rests on the shoulder of the type adjacent to it (Fig. 5).

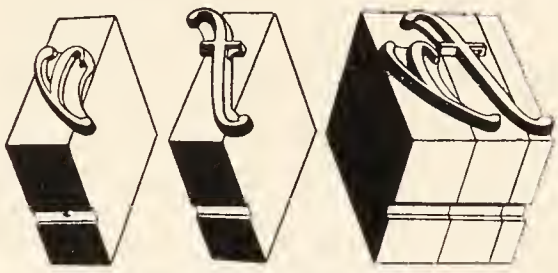


Fig. 5. Kerned types.

The SERIF (or HAIR-LINE) is the little finishing stroke, or grace, at the end of a stem (Fig. 6).

Fig. 6. The type face and its parts. The serifs are black, and the stems and bar shaded. The counters are the partially enclosed whites above and below the bar, and the sharp rectangular corners of the counter where the bar joins the stem are crotches.

The GAUGE is the height of a letter measured from head to foot of the character, and is so called from the metal gauges used by the punchcutter. Letters are of four gauges : long letters which fill the body ; short letters which occupy only the middle of the body ; ascenders which align with the short letters but parts of which ascend above them ; and descenders which align with the short letters but parts of which ascend below them.

The Nomenclature of Letter-Forms

The shapes of the type face only concern the founders in as far as the face is the shape of a cutting or a casting, and in consequence the words ' stem ', ' bowl ', ' counter ', ' kern ', ' crotch ', ' serif ', ' cat's ear ', and ' tail-dot ' are insufficient to delimit the smaller differences in the cut of faces of similar family. The imperfect list of founders' and printers' terms is here completed by the following nomenclature now current amongst lettering artists and typographers.

Stems, or straight main-strokes, which may be vertical, horizontal, or oblique and vary in thickness from ' full ' to ' short ' (thick to thin), are subdivided into :

1. Stems proper, as in I l j y.
2. Arms, or horizontal or upward sloping stems, as in E F T C G K.
3. Bars, or closed arms, as in A H e.
4. Cross strokes, as in f t.
5. Tails, or downward oblique strokes, as in K R *Q k*.

Bowls which may vary from circular to oval, as in O O **O** o g, are curved main-strokes with a ' white ' centre ; and the term is also applied to the curved portion, enclosing a counter, as in B C D G P R a g e *g w*. The curves of the stems in m n and similar letters are known as ' arcs of the stem ', and the straight portion of the bowl in B D P R is known as the ' straight of the bowl '.

The curved stem of S s is known as the ' spine '.

The position of the thickest and thinnest parts of the bowl corresponds with the position of maximum

and minimum emphasis, and this may be horizontal or biassed, according as the distribution of the shading follows the form drawn with a broad-nibbed pen held at a constant angle.

Curved, serifless stems are known as terminals. These comprise :

1. Sheared terminals, where the normal O-curve is cut by a straight line, as in C G S s.
2. Tails, as in R Q *k*.
3. Swashes or flourished tails as in Q.
4. Ears, as in g r.
5. Loops, as in the lower ' bowl ' of g, the connection being known as a ' link '. The loops of ct st are ' ligatures '.
6. Ordinary terminals as in J j c a t ; the curved beginnings or endings of many italic sorts, as *u v n m*, are ' pot hooks '. The thickening at the end of the stems of f j y is sometimes known as the ' tail-dot '.

The serifs on straight stems may be either slab

Fig. 7. Varieties of serif-formation in printing type. (*a*) hair, (*b*) fine slab, (*c*) heavy slab, (*d*) hair, full-bracketed, (*e*) fine slab, fine-bracketed.

(heavy or fine), wedge, hair ; and bracketed or unbracketed. The bracketing may vary from full to fine (Fig. 7.)

Serifs outside these connotations are known as beaks, as in the arms of L E T ; and barbs (' cat's ears '), as in C G S. Excrescences on the outer edge of the straight stem of G and on the upper edge of arms of T are known as ' spurs '.

TYPEFOUNDING

Type is cast from an alloy of lead, tin, and antimony, called typemetal, mixed in proportions which vary according to the sizes of type, and as to whether the metal is required for the foundry, for composing machines, which cast single types, and for slug-casting (Fig. 8).

	Lead	Antimony	Tin	Copper	
(*a*)	58·5	20	20	1·5	per cent.
(*b*)	64	24	12	—	,,
(*c*)	67	15	8	—	,,
(*d*)	86	11	3	—	,,

Fig. 8. The constituents of typemetal : (*a*) foundry type ; (*b*) case type, Monotype ; (*c*) composition, Monotype ; (*d*) slug, Linotype.

The chief advantage of this alloy, which is used for no other purpose, is that it takes the exact shape of the mould and does not shrink on cooling. The antimony gives hardness and sharpness to the face ; it expands in cooling. The tin gives toughness and hardness, amalgamating well with lead and antimony. Moulds for casting type consist of many components but two essential parts : (1) the mould, and (2) the matrix.

The Mould

This determines the body-size of the type. It consists of two steel counterparts, made from many small

components, so that when brought together the two counterparts form a long, narrow box-shaped cavity open at either end. Each body-size of type needs a special mould, and the adjustment of the counterparts is a matter of extreme delicacy as characters of the same body vary irregularly in width and require shanks varying in thickness, or ' set ', from the 1 to the *W*. Thus the variations in set may entail as many as seventeen different casting positions of the two counterparts.

The Matrix

This is the ' mould ' for the printing-surface. It is a rectangular strip of metal, usually copper, bearing the sunk impression (struck from a punch) of the type character. The mould is closed at one end by the matrix and at the other by a gate through which the molten metal is injected, the shape of the orifice forming the casting-jet which is broken or cut off before dressing.

While one mould suffices for a given fount of letter there must be a matrix for each character, and the real art of the typefounder consists in his ability to cut the punches, to strike all the matrices uniformly, and to trim or ' justify ' the matrices when struck—for the shape of the blanks alter under pressure—in order that each matrix when fitted to the mould shall cast a letter whose face is correctly positioned on the top of the body and whose surface is uniformly at right angles to the long axis of the stem. Modern typefounders now work with precision gauges accurate to split thousandths of an inch—a very far cry indeed from

the rough and ready methods of their predecessors in the craft—so critical is the untutored eye of the reader of the slightest irregularity in alignment.

The Punch

This is a shank of steel the tapered end of which is fashioned into the shape (in reverse) of the character as it will appear when printed. After the punch has been cut it is tempered so as to withstand being struck into blanks of copper or bronze. The punch is either made by hand with counter-punches, files, and gravers, or is cut on a reducing machine from a large model, and the master pattern of any 'sort' is therefore either a punch or a drawing.

Whether the punch be cut by hand, or by machine, as is usual nowadays, the product is the same, and work cannot be begun before the gauge and the size of counter has been decided upon, for it is these two factors that decide the general style of the face.

The Line

This is the imaginary line on which the letters are positioned, and this positioning varies according to the design and family of letter. Thus the line of a titling fount (all capitals) falls nearer the belly than would that of a complete fount with a normal line, and script types have a line nearer the back than the preceding. All British and American foundry type is cast to 'point line' so that the beard always measures an exact number of points which is determined by body-size. But manufacturers of composing machines are very properly abandoning this vicious practice which cramps the style of the letter-designer. The line should

be determined by design of face, though italic and bold-face letters are legitimately designed to align with roman.

The proportions of the various sizes of letters in an old-face pica is roughly that given by dividing the body into seven equal parts, three for the short letters, five for ascenders and descenders, and seven for the long letters. Capitals combine better with lower-case if made not to rise quite to the same height as the other ascenders (Fig. 9).

Fig. 9. The fundamentals of letter design. The dotted lines show the gauges of the different kinds of letters (long, short, ascender, descender). The straight lines head and foot show the depth of body. The distance between the ascender line and the back of the body is the head-space, and that between descender and belly the foot-space. In order to show these clearly the depth of body has been increased.

This general proportion of short to long letters, sometimes called ' x-height ', holds good for the middle and higher ranges of a series, but in the smaller sizes the gauge of the short letters should be increased sometimes at the expense of descenders only ; more rarely at that of both descenders and ascenders, with of course a proportional increase in the fatness of the face. Thus many different sizes of face can be cast on the same body, and further faces which look the same

size and each of which was designed for its body may be found on close examination to have been cast on different bodies, the largest-looking face (optically) often being cast on the smaller body (Fig. 10).

Telegrams Telegrams

Fig. 10. The optical size of a face depends on the proportion of short letter to long letter. Each of these words is set in 18 point (Monotype Times New Roman and Garamond).

In hand punchcutting the first punches cut are the counter-punches for forming the counters of H o m p, the design of which determines the character of the fount, and according to the width of these letters a face is said to be normal, condensed, or extended. Several counter-punches are required, but some of these serve for more than one letter, the counters of b d p q for instance, being struck from one punch, and another serving for h n u. Of course counter-punches cannot be used for founts above about 18-point size, the counters of which are cleared with a graver.

Pantographic Punchcutting

Nowadays an increased number of matrices is needed for composing and typecasting machines, and punches are in consequence no longer cut by hand—except in extremely rare instances—but by machine. The process is as follows. First, a large-scale drawing about 10 in. high, of the proposed character is made on paper, from which a model is made in high relief reduced to about $2\frac{1}{2}$ in. high. This model, or ' former ', is then put on a special punchcutting machine, and

while the operator traces round the edge of the former, with a blunt rod, a revolving cutter, whose positioning varies proportionately with that of the rod, or ' follower ', reproduces the contours of the former on the end of the punch to the required size. About seventeen successive cuts are needed to finish each punch, and these can be turned out at the rate of about twenty to thirty a day.

This process is perfect for producing a facsimile of an existing design ; but it is unsatisfactory for the creation of new book faces as many drawings may have to be made, and as many punches cut, before all the different sorts of a fount prove satisfactory in combination.

Justification of Matrices

After the punches have been cut and tempered they are ready for striking, and when the blanks have all been struck each strike must be trimmed, or ' justified ', to become a matrix. Justification needs great care and attention for upon it depends the success of the fount as a printing-surface. First of all m is justified as a standard, but thereafter the process is not entirely routine for although all the letters must align, the alignment is not geometrical, but optical, to accomplish which many matrices must be justified out of the vertical. In roman F j P d f p r should slope backward a little and L b h i l g t 4 should lean a little forward ; and in italic while most sorts follow the standard justification of *I* or *H* to *m*, the pot-hook forms *i h m f* should have a greater angle of slope from the perpendicular than the rest of the sorts.

To-day matrices are no longer struck by hand but in special power presses, and the minimum of justification is required, the face of each punch having been accurately positioned on the shank.

The Set

This is the amount of lateral spacing between letters and depends on the thickness of body apportioned to each character. The correct set is obtained by so apportioning the body-thicknesses to the characters that they appear regularly spaced when composed. The thickness of any sort is determined by the ' register ', or casting position, of the mould.

In roman the characters should be spaced so that the letters have rather less white between them than the counters of m, and letters with upright stems, as h n u fl fi ffi, all have the same side-bearing. When composed together the space between ilf should equal that of m. But round letters, as c e o d p b q g, are allowed less side-bearing on the round sides in order to look equally spaced when combined with straight-stemmed characters, and pointed letters, as v w y, are made as thin as the serifs allow. Capitals are more widely spaced than lower-case, and small capitals than capitals. Figures are cast on one set only, usually the en or two-thirds of the em. Italic is thinner in set than roman.

Large-face letters are normally set closer than small and normal-face founts, but considerable variations occur. Theoretically speaking, type cast on a larger body than normal should be cast on a wider set ; and the difference in appearance of the same face

cast on two different sets may be observed in several Monotype series. Of course with pantographic punch-cutting the set of each character corresponds with that calculated for on the original drawing, and the amount of side-bearing is planned in the light of any mechanical limitations of the composing machine. Thus an original design may need slight adjustments for inclusion in certain matrix-case arrangements or the set of roman matrices (on slug-casting machines) vary according as they are ' duplexed ' with italic or bold face.

Typecasting

To cast a sharply defined face it is essential for the molten metal to be forcibly impacted against the matrix. Though foundry type are now cast in machines with pumps to force the molten metal against the matrix, for several centuries founders only used small hand moulds which could be shaken so as to force the metal into every nook and cranny of the matrix. Some letters, notably kerned sorts, were very difficult to cast, and the requisite twist or ' shake ', which was made by the caster, and which is difficult to acquire, has been described not inaptly as like to the writhings of a madman.

Dressing

After type have been cast they must be trimmed, or ' dressed ', so that they will stand to exact type-height. This process, by which the feet are produced, is no longer done by hand, but mechanically, each type or slug being trimmed just before being ejected

from the caster. Slugs are trimmed square, without a heel-nick ; as also the characters cast on the Monotype.

A Bill of Type

After types have been dressed, they are made up into pages, which measure about 8 by 4 in. and weigh from eight to nine pounds, and are then ready for the printer. The printer buys type by weight, and the founder makes up the type according to a ' bill of fount ' or ' fount scheme ' which determines the proportion that each character bears to the whole. If the order is for a certain weight of type, and not for a sum total of characters, the typefounder works out the number of lower-case m's normal to a fount of such weight, and adjusts the quantities of the remaining characters proportionately. Of course the proportions, which are supposed to represent the average recurrence of the different letters, differ from language to language, English fount schemes differing from the French or the German.

A Fount of Type

This is the name given to a complete muster of sorts made up in a given size and in the proper proportions of letters and spaces, adequate for printing books or newspapers. Originally a fount was the whole number of letters cast, or ' founded ', at any one time ; but now with mechanical composing machines the term fount connotes the number and variety of characters—really, ' matrices '—available at any given moment on the machine. A book fount, if supplied by a foundry, may consist of as many as 275 sorts,

exclusive of spaces ; it comprises upper- and lower-case (capitals and small letters), small capitals, accents, points, figures, fractions, peculiars, and commercial signs, in roman ; and upper- and lower-case, accents, points, and figures, in italic. Small capitals are usually supplied with book founts only. Fount schemes on composing machines are smaller than a founder's fount. A synopsis of the matrices from which the text of this work has been cast is as follows :

ABCDEFGHIJKLMNOPQRSTUVWXYZÆŒ&
abcdefghijklmnopqrstuvwxyzæœfiffflffiffl
ABCDEFGHIJKLMNOPQRSTUVWXYZÆŒ
1 2 3 4 5 6 7 8 9 0
¼ ½ ¾ ⅓ ⅔ ⅛ ⅜ ⅝ ⅞ ⅙
. , ; : - ‘ ’ ! ? ( ) [ ] ... —
* † ‡ § ¶ ‖
£ $ × + — a/c = ′ ″ %

ABCDEFGHIJKLMNOPQRSTUVWXYZÆŒ&
abcdefghijklmnopqrstuvwxyzæœfiffflffiffl

A typefounder thinks of the characters of a fount not as alphabetical signs, but as type faces of different sizes cast on different positions on the top of type bodies. He divides the various sorts, therefore, into six classes :

1. Long letters, as J *f*
2. Short letters, as a c e
3. Ascenders, as A B b
4. Descenders, as p y
5. Kerned letters, as f j
6. Double letters, fi ff fl ffi ffl

Long letters are those which fill the body. Short letters are the small letters which align with the capitals. Ascenders are those which align with the short letters but have parts rising above them. Descenders are those which align with short letters but have parts descending below them. Double letters comprise the five f-ligatures (as opposed to the diphthongs æ and œ) which alone remain after the abolition of the long s. These ligatures, or logotypes as they are variously called, derive from the early days of printing when letter was cut to resemble formal handwriting, and they have been retained to avoid the unsightly juxtaposition of the single sorts f i ff fl ffi ffl, which frequently spatter the pages of many an English book printed on the Continent, and to lessen the risk of damage to kerned sorts. Some old-face founts still include the old ſt-ligature (and a new st) in roman, whilst many special ligatures are occasionally available in italic. Of these the chief are

as ct et fr qz gy is ll nt ſp ſæ ſſ ß ſt st tt ta us Ex

Kerned letters are those sorts with faces overhanging the body and resting on the shoulders of the adjacent letters. They are usually J f j in roman, and most italic sorts. Nowadays letters are only very rarely kerned head and foot, but this is unavoidable with accented capitals, now practically obsolete, and with certain swash italic capitals. Like the ligatures shown above, these sorts are calligraphic in origin, and provide alternatives to some but not all of the normal upper-case italic. They comprise

A B C D E H J M P T U Y

but sorts as *N Q R* on account of their invariable conjunction with certain vowels are often cast as logotypes in the following combinations to avoid excessive kerning :

Na Ne No Nu Qu Ra Ri Ru

whilst in addition to medial *v w*, now used (but wrongly) as equivalent to *v w*, the following lower-case swash sorts are occasionally found *k m e*.

Series and Families

Founts of different bodies, but of faces designed to look similar, are said to form a ' series '. When a number of series of type faces differ only in width and weight of letter, or derive from a common ancestor, they are said to belong to the same ' family '.

TYPE MEASUREMENTS

The Em and the En

These are the typographical units of width. The em is that width equal to the depth of body, and the en is half the width of the em. In other words the em is the thickness of a space or character cast on a square body. The names of these units probably derive from the fact that originally M was cast on a square body and n on half the body, but this interpretation has been disputed.

Typographical units of width are used for stating the length of line, or ' measure ', to which type is set, and for computing the amount and cost of composition. But while the depth of line is equal to the body-size of the letter there is no fixed measure of width of

the different characters in a fount or of the relative fatness or leanness of different founts. The standard of measurement—and it is only rough and ready—used for comparing the relative widths of different founts is the length of the lower-case characters set side by size from a to z ; this standard is often referred to as the a—z measurement of a fount and is measured in points. A fount is called fat, if the a—z length greatly exceeds 13 ems of its body, and lean, if considerably less than 13 ems. Fat faces are said to ' drive out ', and lean faces to ' take in ', copy, and actually the set of a face for copy-fitting purposes is not something absolute, like the body-size, but a variable depending on the relative frequency of occurrence of the various sorts of the language in which the copy is set. Although the mean set of a fount in bookwork composition is somewhat thinner than the en, all calculations setwise for purpose of price computation are calculated in ens, and a higher rate is paid for setting lean faces.

Type-Height

Types are cast so that they will stand in the forme to a certain height, and this height, which is as near as possible the same for every sort and every fount, regardless of body-size, is known as ' type-height ' or ' height-to-paper ', wrong sorts being known as ' low to paper ' or ' high to paper '. For a long time every foundry cast type to its own type-height, but each country now has an agreed height-to-paper which is adhered to by all founders, so that there is no impediment to using founts from different foundries

in the same forme. Type-height has been standardized in England at 0·918 in. (roughly the diameter of a shilling), but to allow for wear on the matrices, type from some mechanical composing and typecasting machines is cast to 0·920 in.

Spacing material and furniture is cast to a lower height, usually 0·75 in., but sometimes up to 0·88 in. when stereos are likely to be taken.

Body-Sizes of Type

Although some measure of agreement was reached early regarding uniformity of type-height in various countries, type still continued to be cast to a diversity of systems, or lack of systems, of body-sizes, so that whatever the foundry it never happened by any manner of chance that all the different sizes of body in any given range were *exact* multiples or submultiples of any one body-size. The confusion incident on accidental mixing of two founts of the same body from different foundries and the impossibility of disposing of type to printers who patronized other countries can well be imagined. Complete uniformity of body-sizes still does not obtain in England to-day !

THE POINT SYSTEM

The standard of typographical measurement in use to-day in England and America is the point (abbreviated pt.) which equals 0·013837 in., and 72 points measure approximately 1 in. (Actually 0·9962 in. equals 72 points.) Every body-size, therefore, is an exact multiple or submultiple of every other body, but

most unfortunately the point was never tied to a standard linear measure. This was actually the case for a time with the Didot point, the standard in various continental countries, when it was tied to the old *pied du roi*, but it is not, of course, tied to the metre.

The Em and the Pica

Printers have always used their own standards for measuring type, adopting in practice the pica em, or that depth of body which occupies about the middle of the range of body-sizes ; the pica measured very approximately one-sixth of an inch, so that each typefounder had his own pica, and that pica differed from every other typefounder's pica. Since, therefore, the pica was used as the standard of measurement for all measurements dealing with all the other sizes of founts, it is obvious that the pica measure should have been standardized as a fraction of an inch, and the point made a submultiple accordingly. But when the opportunity arose the chance was let slip, and one of the many *existing* picas was chosen on the ground that it was used more than any other, and the new standard of measurement, the 12-point em, or simply ' the em ' (which is still incorrectly referred to as the pica), measures 0·166044 in., six picas being just less than one inch. This is a matter for some regret as even now, on account of the awkwardness of the standard, the Monotype 12-point size measures 0·1660 in. The present point system originated in the United States of America in 1878, and had secured general, but not complete, acceptance in Great Britain by 1907.

Type Calculations : The Measure

This is the width of page to which type is set, and it is always a stated number of 12-point ems, or simply ' ems ', whatever the body-size of the type in which the matter, or ' copy ' as it is called, is being set, the cost being reckoned in ' ens of the body '. Thus straightforward machine setting, as in a novel, might be charged up as, say, ' 1s. 9d. a thousand ', 3,000 ens being the minimum chargeable ; but complicated work is charged for extra, and display setting priced on a time basis.

The advantage of the point system is obvious, as, for instance, the depth taken up by 12 lines of 6-point type is the same as that of 6 lines of 12 point, and, if the measure be known, only a rule-of-three sum is needed to find to what depth of area approximately the size of a type-area of copy set in one body will reach if set to a different measure in another body size ; and so forth.

Fount Series

Metal type is cast in a wide range of body-sizes, the normal limits of which are 5 and 72 point, though some series are cast as small as $3\frac{1}{2}$ or as large as 96 point (Fig. 11). But not all series range throughout this scale, and founts, even of the same series, are called body or display according to the positions they occupy in the range. Body faces are those in which the text, or body-matter, of books and newspapers is set, and display faces comprise the large-size letters used for title-pages, newspaper headlines, and advertisements. No definite position in the range divides

the two classes, but the division may be arbitrarily made at 18 to 24 point, above which sizes a lectern Bible or a children's book would not be set. Body-type is cut in most if not all the following sizes : 5, 5½, 6, 6½, 7, 7½, 8, 9, 9½, 10, 11, 12, 14, 16, 18, and 24 point. The normal display sizes are 30, 36, 42, 48, 60, 72, and more exceptionally 84 and 96 point.

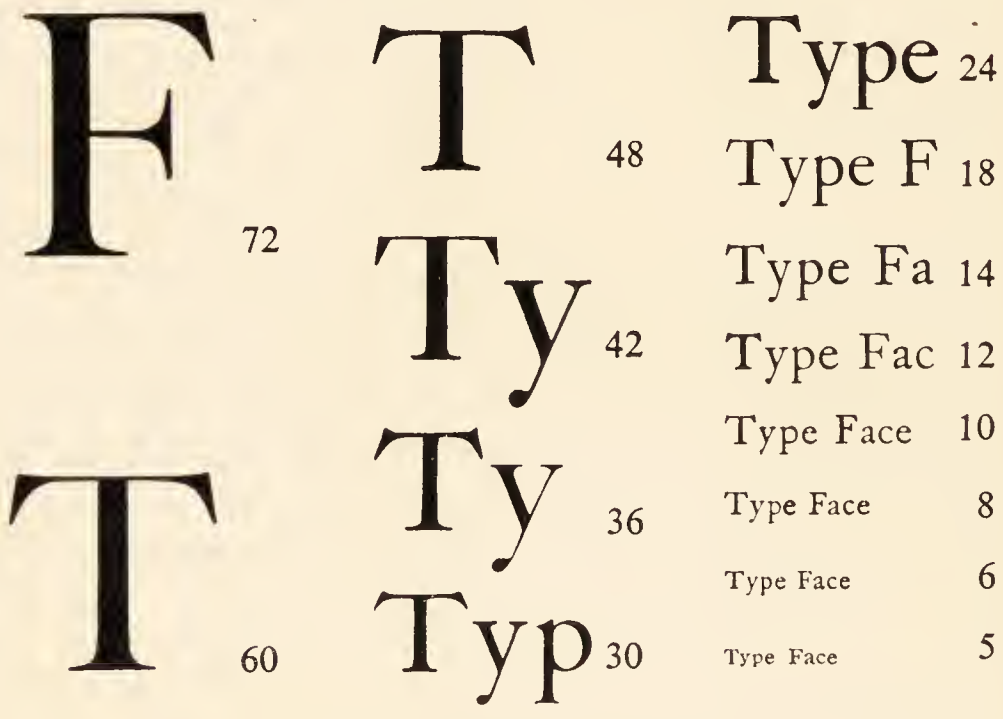


Fig. 11. Point body-sizes.

English Body-Sizes

Figure 12 shows the variations between the point sizes and one of the many ranges of the English body-sizes, which last should all have been abandoned long ago. The original English bodies were Pearl, Nonpareil, Brevier, Long Primer, Pica, English, Great Primer, Double Pica, two-line English, and French Canon. The precise explanation of the names of the various bodies are one of the many unsolved mysteries

of lexicography. It is possible that many of the names derive from certain classical or liturgical books, which were originally printed in certain sizes of letter, as Brevier from breviary, but the question is further complicated by the fact that each country has its own names, Paragon being the only size which is called by the same name in all countries.

English	*Point*	*English*	*Point*
Minikin ..	3	Small Pica ..	—
Brilliant ..	3½		11
Gem ..	4		12
Diamond ..	4½	Pica ..	—
Pearl ..	5	English ..	—
Ruby or Agate	5½		14
	—	2-Line Brevier	—
Nonpareil ..	6		16
	7	Great Primer	—
Minion ..	—		18
Brevier ..	—	Paragon ..	—
	8		20
Bourgeois ..	—	Double Pica	—
	9		22
Long Primer	—		24
	10	2-Line Pica ..	—
		2-Line English	—
			30

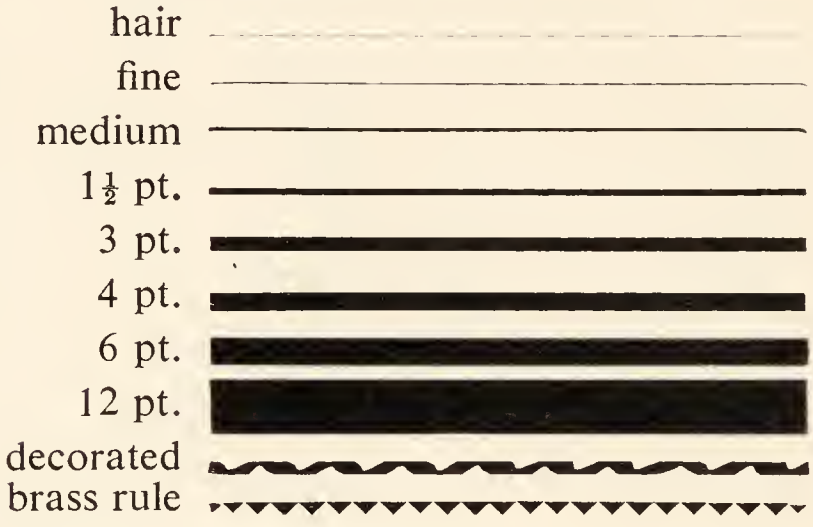
Fig. 12. English and Point body-sizes compared.

Point System : Further Advantages

A further advantage of the point system is that all the many components of a printing-surface like rules, flowers, braces, and the hundred-and-one odd symbols used for mathematics, botany, music, medicine, astronomy, maps, games, genealogy, heraldry, and so on, in addition to spacing material and furniture, can be manufactured to standard dimensions with great saving of time and labour in their use.

Rules

These are strips of metal of type-height of varying thickness and patterns. All sizes are available in brass and typemetal, and zinc is used for very thick rules. Specimens of rules are shown below :



Spacing Material

This consists of three kinds : (1) spaces and quadrats (' quads ') used for spacing set-wise between letters and words and for ' white lines ', (2) leads and clumps used for increasing the white between lines of type, and (3) quotes and furniture used for filling out pages containing only a few lines of type or none at all.

Spaces and Quadrats

The spaces supplied with every fount are five in number ; in width they are multiples of the em. They comprise :

■	em quadrat (or ' mutton ' quad)	the body
▌	en quadrat (or ' nut ' quad)	½ body
▌	3-em (or ' thick ' space)	⅓ body
▌	4-em (or ' middle ' space)	¼ body
▏	5-em (or ' thin ' space)	⅕ body
▏	hair space	1/12 body approximately

These are the spaces for the middle ranges of a fount series ; but in 6 point the hair space is ½ point ; a hair of 12 point is 1½ point ; of 18 point, 2 point ; and of 24 point, 3 point.

Em quads are usually supplied separately ; and also in widths twice, thrice, and four times that of the body.

Leads

The space between lines of type can either be increased by casting type on a body larger than normal (' long-bodied ' type) or by inserting inter-linear spacing material. Leads, as the name implies, are made of lead and not of typemetal on grounds of cheapness ; they are made to given point thicknesses as follows :

	1 point
Thin	1½ point
Middle	2 point
Thick	3 point

Clumps

These are similar to leads, but thicker, being cast in regular body-sizes between 6 and 18 point.

Quotations and Furniture

Quadrats of 24-point or larger body are known as quotations. To save on the metal these are cast hollow, and in inferior metal. Quotations are usually supplied to the following dimensions in 12-point ems : 2 × 3, 4, 5, 6 ; 3 × 3, 4, 5, 6 ; 4 × 4, 5, 6 ; 5 × 5 ; 6 × 6, 9.

Furniture is usually cast to the following lengths and widths : 4, 5, 6, 7, 8, 9, 10, 12, 14, 15, 16, 18, 20, 22, 24, 25, 30, 35, 40, and 45 ems, by 2, 3, 4, 6, 8 ems.

TYPESETTING AND TYPECASTING MACHINES

Machines which do away with all the waste of time and drudgery of hand-composition (picking for sorts, justifying, i.e. spacing out to the correct measure, and distributing) by casting fresh, sharp, clean type for each job, are worked from keyboards and are of two main kinds : (1) those that cast lines of type, or slugs, and (2) those that cast single types and spaces of the correct width, sort by sort.

In the former the line of type is cast from a line of closely-fitting matrices and adjustable spaces assembled over a single mould, and in the latter the mould is mechanically adjusted to the correct set-width for each sort (mechanical justification), and the appropriate matrix is positioned over the mould each time a type is cast. In each case the depression of any given key sets in train a complicated train of mechanism which assures the positioning or assembly of the appropriate matrix.

The Linotype

In this machine the matrices and spaces are mechanically assembled until the line is nearly full ; the matrices and spaces are then positioned over the mould, the spaces expanded to fill out the measure, the line being then cast and the matrices distributed to the magazines to which they belong. Of course each letter is cast from a separate matrix, and each channel of the magazine contains sufficient matrices of any given sort for any line of print.

The latest model has eight magazines, and matrices from any four of these can be assembled direct from the keyboard without changing over magazines. Slugs can be cast from any one of four moulds as required.

The Linotype normally casts slugs ranging from $5\frac{1}{2}$ to 36 point (and 48 point capitals) up to a maximum measure of 30 or 36 ems.

The Intertype

This machine only varies in points of detail from the Linotype. It sets from $5\frac{1}{2}$ to 36 point to a maximum measure of 30 or 42 ems. There is also an automatic centring and quadding device (a similar mechanism is also available on the Linotype), and a hand composing-stick attachment is provided for casting lines in over 36 point.

Kerned letters are not available from the keyboard of slug-casting machines, and the appearance of these sorts can only be obtained by the use of special double-letter matrices inserted by hand from the keyboard. Slug-casting machines are in general use for newspaper composition ; but on account of the difficulty of

casting a whole line of type quickly slug metal is necessarily softer than that of foundry type.

The Ludlow

This is a slug-casting machine for jobbing and display setting only. As in the Intertype display-casting attachment the matrices are assembled by hand in a special composing-stick from which new slugs of type can be cast. All composing-sticks and matrices are of uniform size and the machine can be used by as large a group as six compositors working in rotation. The facility of composing and distributing conveniently-sized matrices and the saving of space for cases in the composing room are obvious. There are also other devices facilitating easy handling and make-up. All slugs from 6 to 48 point are usually cast on a 6-point body, and a special interlocking device for rule slugs does away with the necessity for vertical rules in tabular composition ; and rhomboidal matrices are used for italic to give the appearance of kerned letters.

The Monotype

This consists of two parts : keyboard and caster, the latter being operated like a pianola by the holes in a spool of paper punched on the keyboard. The operator sits at the keyboard and taps out his copy. The width of every sort is registered automatically, and as soon as the line is nearly full, a warning bell rings. The operator then looks at a scale and depresses two justifying keys, whose numbers are those indicated on the scale, and as a result the space still required to

fill out the measure is distributed equally amongst the variable spaces in the line so that the line when cast will be accurately justified.

When the copy has been tapped out in this way, the spool, or spools, are then put through the caster in the opposite direction to that in which it was punched on the keyboard. The typefounding mechanism consists of a mould and a movable matrix-case, or square frame containing 225 matrices, every character from the same horizontal row of which casts on the same set, the positioning of matrix to mould being controlled by the location of the holes in the paper spool. At the same time as the spool unwinds in the machine, the holes, by means of compressed air, set in train the mechanism which controls the casting-position of mould.

A hole may be punched in any one of 31 separate locations, and two holes only are required to position any given matrix, one hole determining the row, and the other the position of the matrix in that row. As the spool is wound through the caster backwards the first holes of each line are those made by the justifying keys which set the mould width of the variable spaces to the exact width necessary to justify the line. This width is the same, of course, throughout the line.

Justification is only possible because each sort is accurately cast to a definite thickness, measured in units, set-wise, as opposed to the depth of body, point-wise. The 18-unit thickness forms the ' em ' of the fount, and according to design of face this may be less than, or more than, the square of the body. The set-number of the fount, therefore, is only the width

of the ' em of the fount ' measured in points. Thus if a 12-point fount is $10\frac{1}{2}$ set, the em is less than the square of the body, and each unit measures $\frac{1}{18}$ of $10\frac{1}{2}$ points.

Varied combinations of matrix-case lay-outs are available sufficient for book and jobbing requirements ; and complicated tabular work is further facilitated by multiple justification. The normal composition range is from $4\frac{1}{2}$ to 14 point (though composition in larger sizes up to 18 and 24 point is possible in some series) up to a maximum measure of 60 ems. Display type can be cast on the ordinary caster in all sizes up to 48 point, and this range is extended to 72 point on the super caster. The super caster, which virtually makes a printer his own typefounder, also casts rules, strip borders, leads, and quotations. The Monotype is the only composing machine which normally casts kerned type ; it is particularly used for better class bookwork. Monotype metal is harder than that used in slug machines, but it is not quite so hard as that of foundry metal.

LETTER-FORMS AND TYPE DESIGN

Although the alphabet contains but twenty-six letters printers use an extravagant number of characters to convey even the simplest printed message. In book-work and in periodicals five alphabets is the minimum customary equipment for expressing the nuances and inflexions of the spoken word. Technical books, sedately made-up newspapers, and catalogues require extra founts of bold roman upper- and lower-case (to which italic is sometimes added); and the whole welter of modern display faces, together with the display sizes of the book face proper, hardly suffice for the news and advertisement columns of the national daily newspapers. All these faces derive from a common ancestor, but the why and the wherefore of their different styles cannot be understood without a knowledge of the early history of printing types.

Founts of type are divided by printers into two classes: (1) body, and (2) display; body-types are sub-divided into (*a*) book, (*b*) news, i.e. 'newspaper', and jobbing. Originally the only display faces were the larger size of book-founts, but these began to be supplemented by special advertising and poster faces at the beginning of the nineteenth century when manufacturers realized that print was a potent way of selling goods. And as a result the printing trade separated into two bodies, book printers, and jobbing printers, the latter undertaking all the ephemeral

non-book printing, which had now grown too large and varied to be conveniently handled by the book printer proper.

Thus the typefounder now has two kinds of printing offices to cater for, and the modern punchcutter and letter designer is faced with two separate tasks, each of which is attended by special difficulties. He has to design (1) book faces that will be readable, and (2) display faces that will attract attention. The latter must be clamorous, the former unobtrusive.

Book Faces : Readability and Legibility

The ' readability ' of book faces depends on the ' colour ' of the page. The colour, which should be uniform, neither too light nor too heavy, depends (1) on design of face, on how well the letters combine into lines, and on how well the lines knit together into pages ; and (2) on the measure, spacing, leading, inking, margins, and paper. The ' legibility ' of a face is something objective, and it depends on the adequacy of the design of each single letter, for if each single unit is not unmistakeably satisfactory in design, the units will not combine into the groups which are so essential for fast, economical, ' visual ' reading. In other words, every letter of an alphabet, especially those liable to be misread (as e for c and o, h for b, n for u, i for l, and a for s), must conform to certain definite standards of letter-design which the eye of the common reader has grown accustomed to accept unconsciously. Thus the e with a flat bar is accepted as more legible than the e with a tilted bar.

A fount of type, therefore, must be designed as a

series of regularly constructed, harmonious shapes, which are at the same time both symbols and decorative patterns, so that the regularity of the construction of the inessentials of the pattern serves but to emphasize the essential individuality of any given member of the alphabetic series ; and provided that each symbol retains its proper shape, the combining power of the symbols can only be vitiated by irregularity of construction, or over-emphasis, of the inessentials of the symbol. Naturally the limits of these allowable differences of construction are far wider for those faces designed for display than those for bookwork.

The problem of legibility—that is to say of specific typographical legibility—did not arise with early printed books for the first printers only aimed at making facsimiles of manuscripts. As soon as printed books engendered new and quicker reading habits, the reduplication of written models on punches, by means of counter-punches, files, and gravers, proved unsatisfactory, and the letter-cutters turned to the creation of a new style of face—and more important still, a new and greater range of letter sizes—suitable for the smaller sizes of the printed book. It follows then, that the history of type design is nothing, as it were, but the epilogue of the history of formal handwriting, and that the aims and problems of the type designer cannot be discussed without reference to the formal book-hands from which the first type faces derive.

Commercial considerations controlled the size of the early printed book, and the size of letter, instead

of being governed as heretofore by the writing materials of the scribe and the most convenient methods of using them, was dictated by the desire to get the same amount of legible print on an octavo or quarto page as had previously been written on the bulkier folio. (At this time the average folio page measured about 15 by 10 in. The octavo page is one quarter, and the quarto page one half the area of that of the folio.) Apart from the greater 'handiness' of the small book it seems probable that paper supplies had something to do with the reduction of the normal book format.

The first book faces in roman were rarely cut below about 12 to 14 point in size, the normal size being about 16 point, and while roman type was being cut within this range the major limits in the possible variations of the roman face were decided. This experimentation took place during the period 1470-1500 ; but even then thirty more years or so elapsed before the appearance for the first time of a lower range (6 to 12 point) each size of which was an ocularly perfect reduction of the standard 16-point roman. As soon as this range of bookwork faces (6 to 18 point) had been achieved the production of further readable book faces, which could be striking and original, became restricted within very narrow limits. Thus fifteenth-century book faces still in use to-day for jobbing work are now unsuited for normal bookwork —except in the original sizes (16 to 18 point) and in the contemporary format (quarto or folio), or when so reduced in colour in the smaller sizes as virtually to have become new faces.

The successful book face, therefore, is that whose basic letter-forms do not depart from certain accepted models. Of the five alphabets in a standard bookwork fount three alphabets (roman capitals and small capitals, italic capitals) derive from the roman inscriptional letter ; the small roman letters from the formal fifteenth-century Italian ' humanistic ' book-hand ; and the small italic letters from the scholar's informal hand contemporaneous with the preceding. Although ignorance of type design is no bar to appraising printing (press-work) or the disposition of types in the mass (lay-out), the *design* of no *readable* book face can be criticized without some knowledge of these two hands and their common ancestor—the classic inscriptional capitals.

Display Faces

These are either book faces writ—or rather cut—large, or else bold free-hand adaptations of engraved, script, or book letters. They vary from rigid geometric forms to brush-drawn vagaries ; and from light, fanciful, delicately engraved ' open ' letters to stark forms: embodiments of stygian gloom (see pp. 120-37).

THE FUNDAMENTALS OF LETTER-DESIGN

The following account, necessarily condensed, only attempts to deal with the history of the letter-forms of the Latin alphabet in as far as certain of these became the models for the printed version of roman letter—the standard face in use in English-speaking and

Latin countries throughout the world to-day. Unfortunately limitations of space preclude discussion of other designs of face in the Latin alphabet still in use (gothic, italic, script, and sanserif), and also of the ' exotics ' (greek, russian, and orientals), together with their relation to antecedental book-hands.

The Latin Alphabet

The shapes of the letters of the alphabet are known to all, but understood by few ; and for every ten thousand people who can read and write not one perhaps could make a tolerable large-scale drawing of a small g or a large M. The key to the development of the forms of the Latin alphabet is handwriting, and now that calligraphy, or fine handwriting, has ceased to be a polite accomplishment, a knowledge of lettering is regrettably confined almost exclusively to letter-cutters, designers, and ' lettering artists '.

Letters differ in shape according to the tools with which they are made. Letters were probably first scratched on some hard substance with a sharp point before they were written with a pen or a brush. Inscriptional and other engraved letters were only cut with the grace and subtly swelling curves of the pen-forms when stone carvers (and still later, punchcutters) became very experienced.

The ancestry of roman capitals cannot be traced here. The Romans borrowed the alphabet from the Greeks, and the Greeks had it from no one knows whom—but from further East—and the letters, which were originally rude and angular, passed through many

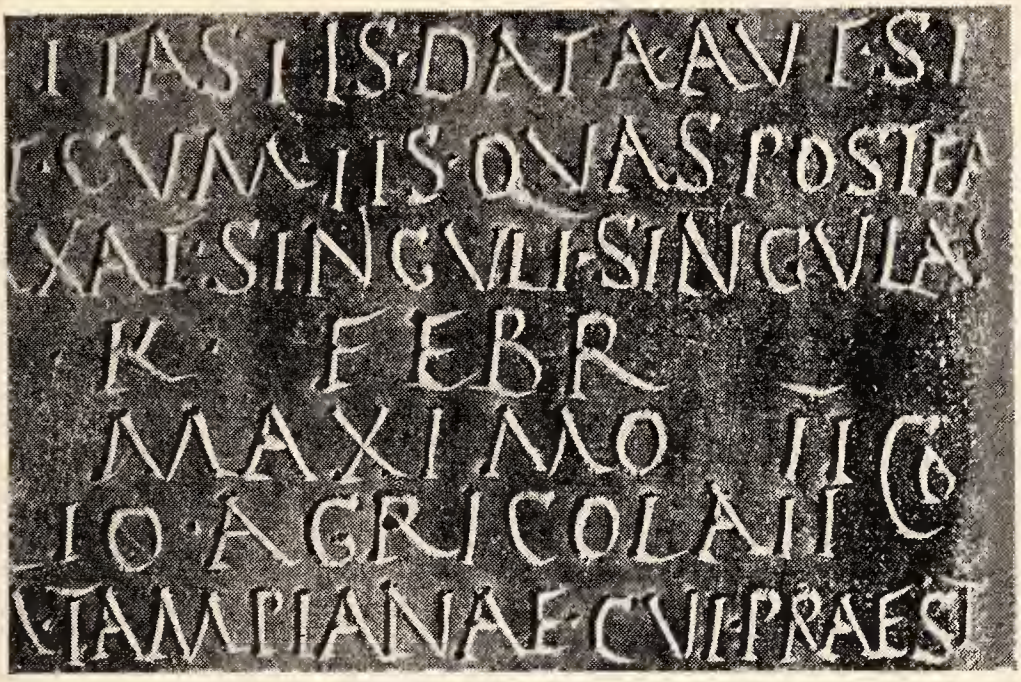


Fig. 13. Engraved roman capitals, showing calligraphic influence ; from a bronze diploma, or soldier's discharge certificate of good service, issued by the Emperor Trajan in A.D. 105 ; size of original (British Museum).

stages before they became a series of simple harmonious, geometrically regularized, aligning symbols.

It is a curious fact that a highly artistic people like the Greeks neglected the decorative possibilities of fine lettering, and that it was left to the relatively inartistic Romans to crystallize the forms of the inscriptional letters still standard to-day.

The period of development of the letter-forms relevant to this survey lasted from about 100 to 1700 A.D. It starts with roman capitals and ends with modern-face type, and during this period the history of lettering is nothing but the history of a continual modification of established letter-forms by the tools with which they were made—the pen, the brush, the chisel ; and the graver, the file and

Fig. 14. Primitive inscriptional letters compared with pen-written forms.

counter-punch (Fig. 14). Stated concisely, the purpose of this historical introduction is to try and explain why we should use, wherever possible, good letters like these,

TITLING SANSERIF

in preference to monsters like these,

TITLING SANSERIF

Capitals, or Roman Letters

These large letters, or ' majuscules ', are the archetypes, in varying degrees of directness, of all majuscule and minuscule (small) letters, except J U W, which together with abbreviations, points, and figures derive from other sources. Their standard forms were crystallized in the first century A.D. Basically, these letters form a series of symbols constructed from the straight line and the circle (Fig. 15), but although elaborate rules have been devised for their construction with ruler and compass on a ground of small squares the results lack the life of the best free-hand versions. Nor has this method been resorted to again for modern pantographic punchcutting. But few uppercase alphabets are definitely inscriptional in cut (Fig. 16);

Fig. 15. The basic forms of the roman alphabet (Monotype Gill Sans-Serif).

the basic proportions usually owe something to the pen (Fig. 17).

Roman capitals, except J and Q, all range to the same height, between two imaginary lines, a foot- (or base-) line (the ' line ') and a head- (or cap-) line, the distance between which is the height of the square letters E F H I K L M N X Y Z ; the round letters are made slightly larger so as to look exactly the same size when aligned with the square letters ; and pointed letters, like A M N V, are made of intermediate size so that when aligning head or foot with the square forms (E F X Z) the apexes cut the base- or cap-lines (Fig. 18).

The stems vary in thickness, so that one thick stem never connects with another at right angles, while verticals and diagonals are thicker than horizontals. This variation is particularly subtle in the curved

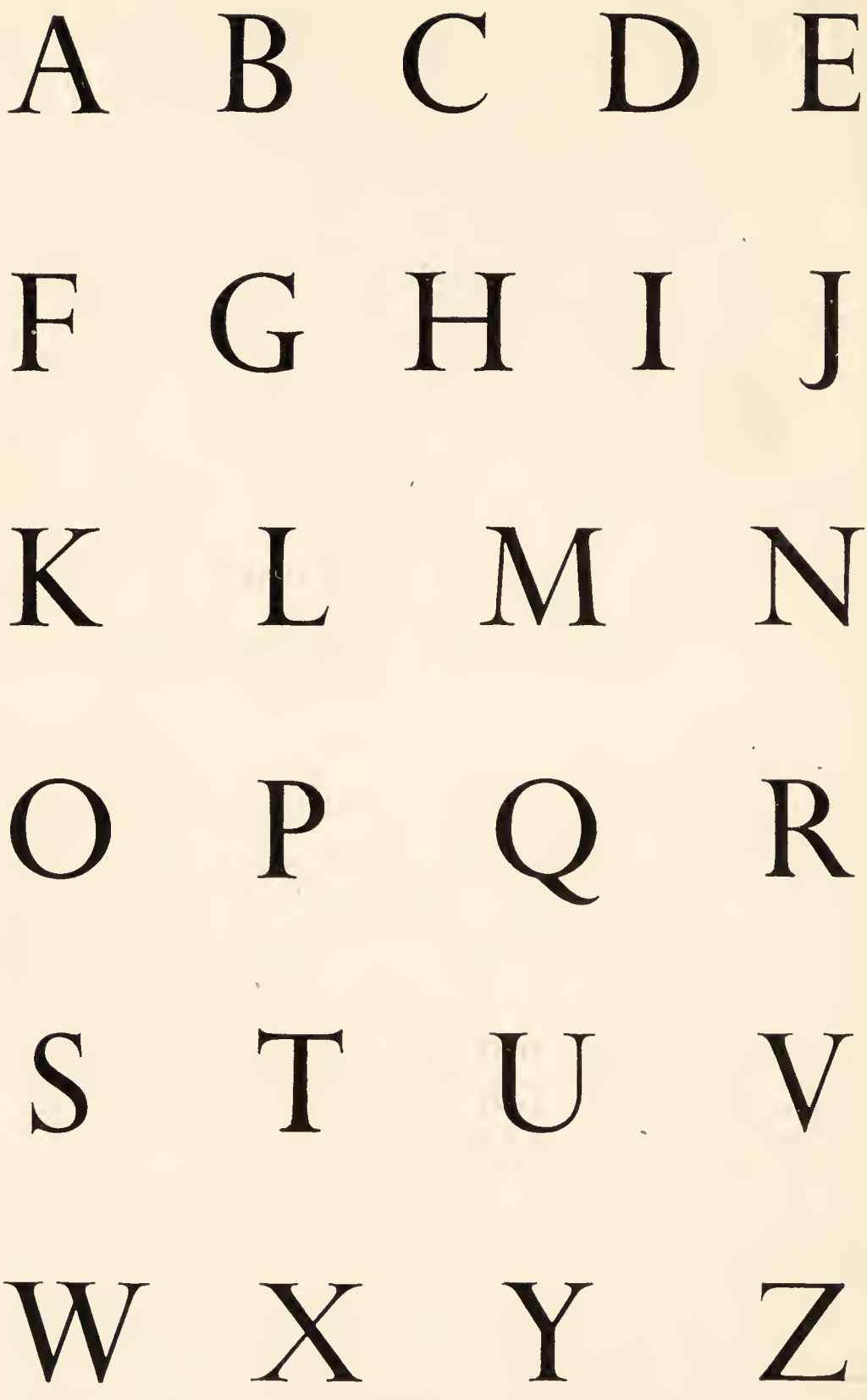


Fig. 16. Inscriptional roman capitals (Perpetua, Monotype).

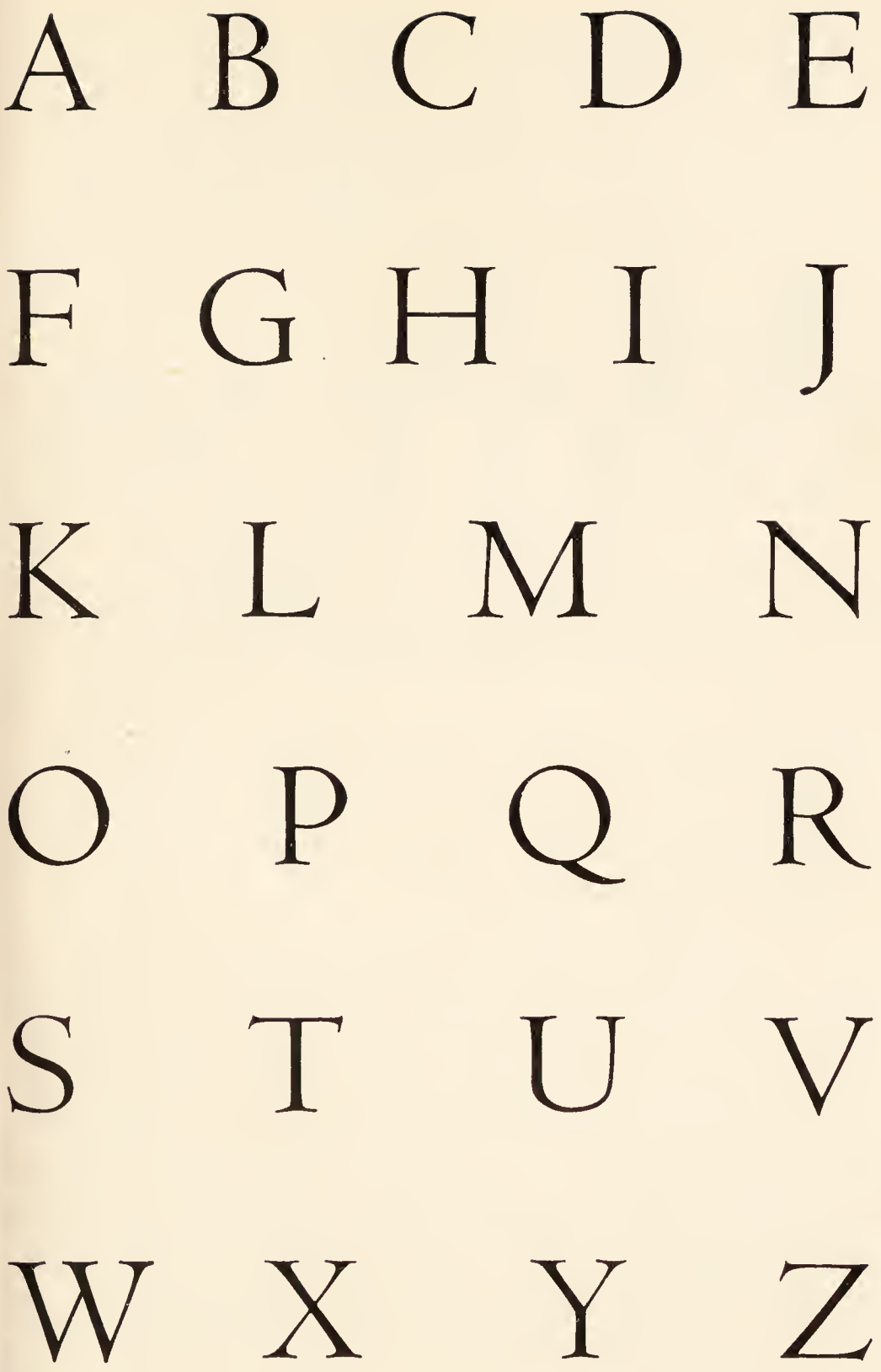


Fig. 17. ‘ Calligraphic ’ inscriptional capitals (Centaur, Monotype).

forms where the stem imperceptibly swells from thick to thin, and from thin to thick again. Though probably first drawn on stone with a brush and then cut with a chisel, the best versions of roman capitals still owe as much to the pen as to the chisel, for the chisel is only rationalizing the basic relation of thick to thin

Fig. 18. Drawing of letters showing the head and base lines of serifs, and centre line. The arrows indicate where geometrical precision has been discarded for optical effect.

given by the stroke of a broad-nibbed pen held at a constant angle. Thus the thick strokes of A and V slope down from left to right, and the O is tilted on a corresponding axis (Fig. 19).

But in capitals the variation from thick to thin no longer exactly corresponds with one pen-angle as many of the characters have been slightly ' reorientated ' and the thickness of diagonals adjusted letter by letter to achieve better individual shapes and greater combining power and evenness of colour in the mass. Further, in the engraved versions the disposition of the angles and the proportion of thick to thin in forms like K M N V Y Z, together with the drawing of the arcs of the bowl in B D P R and the shapes of the crotches, which are all determined by ' eye ' rather than the compass and ruler to ensure ' optical ' alignment with

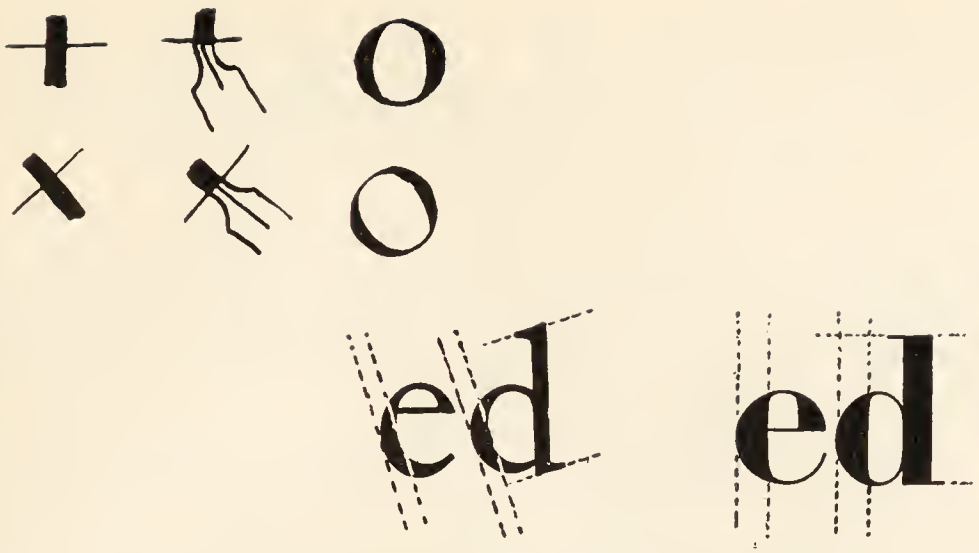


Fig. 19. The shape of a letter depends on the angle of nib to paper.

the rest of the letters—all these minutiae distinguish the good alphabets from the mediocre. But this 'rationalizing' of pen-, or brush-drawn, forms by the letter-cutter has proceeded further with capitals than with lower-case.

Considerable variation in the geometric proportions of capitals is possible without undue departure from accepted standards. This deviation is further conditioned by size of letter, and by size and shape of serif, but the amount of deviation must be uniform throughout the alphabet. Thus in Fig. 20 all of the A-shapes partake of the quality of A-ness (as distinct, say, from V-ness), but only the last is well proportioned ; and even here the ' best shape ' is sometimes sacrificed and the bar positioned relative to the arms of E F K Y, the bar of H, and the straight of the arc of B P R. And even so the positioning is not identical : the letters would not combine together, as evenness of formation (or ' optical ' regularity) is

Fig. 20. What is the best shape for an A ?

only obtained by such minute adjustments. Further, the angles of A V and W must agree optically, and no one of these can be designed without reference to the combining power of the letters.

Similarly the width of the letters E F H L M N may be variously but consistently proportioned, and the round letters vary from the circle to the ellipse. The design of capitals also varies if not designed as a titling letter but to mate with the smaller letters of the alphabet.

From these observations it can be seen that there are almost innumerable ways of constructing roman capitals and that provided the individual letter design is not too startling no one style is intrinsically better than any other. Thus the letters on the Trajan column are cut to roughly seven different widths, the widest being the square, and this is about the number normal with upper-case ; but following the set of calligraphic capitals, punchcutters and typefounders improved the combining power of upper-case letters without increasing the number of body-thicknesses on which upper-case are cast.

While thickness of stroke determines ' weight ' of letter, the ' colour ' of letters in the mass is determined by the angle of emphasis, which may follow either that of the pen or the graver, and by the construction of the serif. The serifs, or finishing strokes added to the ends of main strokes, vary according to the tool

by which they are made. The normal serif of the inscriptional letter is the full-bracketed serif to point given by the chisel ; but should the same letter be

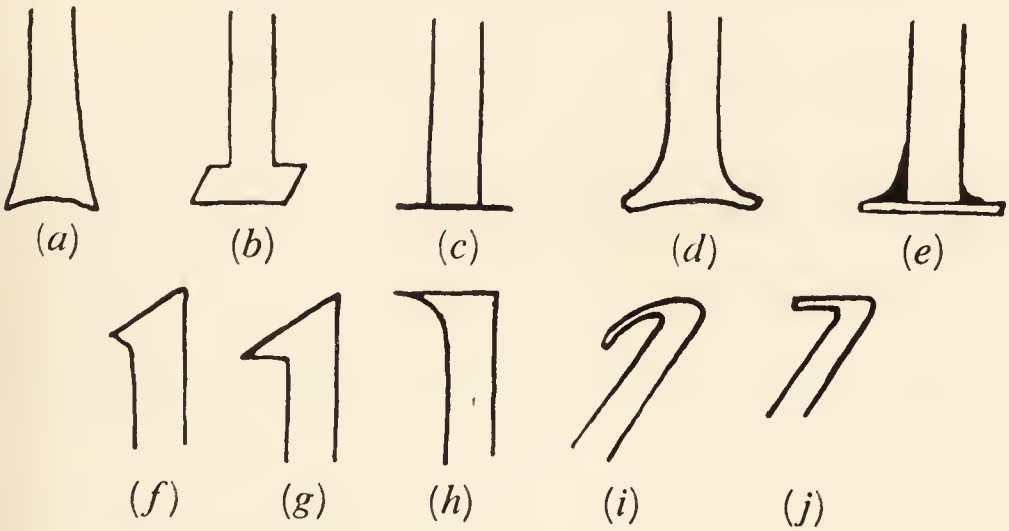


Fig. 21. Varieties of serif-formation :
(*a* and *h*) inscriptional and engraved,
(*b*, *c*, *f*, and *i*) pen-drawn,
(*d*, *e*, *g*, *j*) mixed.

drawn with a pen the normal serif is unbracketed and ' slab ' or ' beaked ' in form according to the position of main-stroke and style of pen. Thus the bracketed serif of printed letters is a synthesis, often symmetricalized, of the pen-drawn and stone-cut forms (Fig. 21).

Minuscules

Strange as it may seem, the small letters, or ' minuscules ', are only distortions, but consistent distortions, of the roman capitals. This change, which was slow and gradual, taking several centuries to complete, had been fostered by the development of an informal cursive roman, and had been hastened by the superseding of the roll by the book, and of papyrus by

vellum. As vellum chanced to be the best of all writing surfaces the tendency to write the old capitals more quickly in a round hand was irresistible, and the

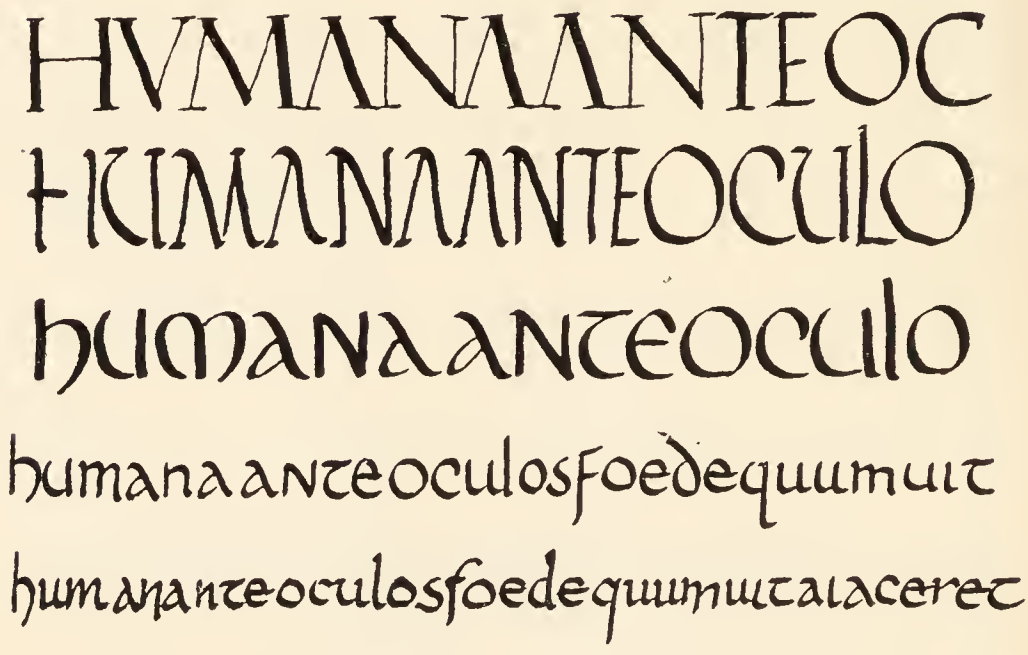


Fig. 22. From square capitals to minuscules.

minuscule was the result, and these, moreover, being ' lean in face ', took up much less expensive vellum than the old ' fat ' capitals which could not be conveniently written in small sizes.

This process of modification began about the second century A.D., and by the year 750 very many different forms of minuscule hand had developed, the Spanish, or Visigothic, differing from the Italian varieties, and the French, or Merovingian, from the Irish and North British.

The development was through distinct changes, from square capitals to ' rustic ' capitals (a condensed form of the preceding), from more rounded rustic capitals to uncials (round-hand capitals, as ∈ ϻ), and

then from the uncial to the half-uncial, and the half-uncial to the minuscule proper. With the minuscule, the gradual differentiation into long, short, ascending, and descending letters, which began with the uncial, is complete (Fig. 21).

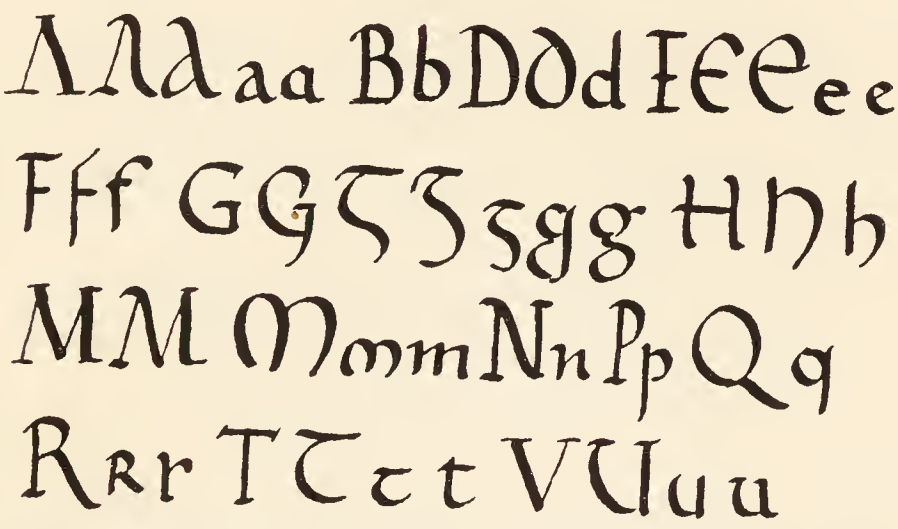


Fig. 23. How the small letters evolved from the large.

Not every majuscule changed its individuality in this process. Minuscule c i o s x z are only the majuscules writ small ; r is the capital lacking the tail and half the bowl ; h m n are substantially uncial in form ; while a b d f g p t have changed out of recognition. Evolution of typical forms shown in Fig. 23.

The Caroline Minuscule

The first lower-case roman letters are modelled on the small letters, or minuscules, of fifteenth-century Italian ' humanistic ' manuscripts, and these minuscules derive from the caroline minuscule, a formal book-hand which was developed in France towards the end of the eighth century during the reign of the Emperor Charlemagne (768-814). Whether this hand

was evolved at Tours under the direction of Alcuin, who came over from England, from York, at the invitation of Charlemagne to supervise his educa-

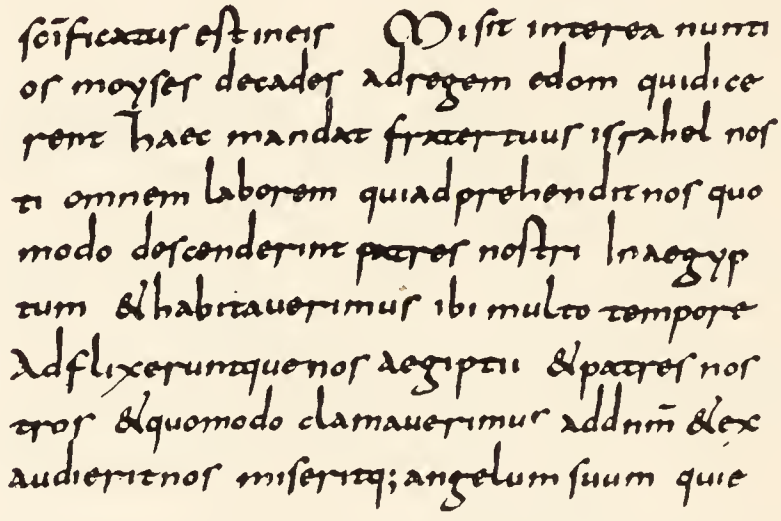


Fig. 24. Small and very carefully written caroline minuscules from a ninth-century Latin Vulgate Bible written probably at Orleans, and not before A.D. 810 (British Museum).

tional system, is a matter of controversy which will probably be never settled. At any rate the distribution of the hand is fairly widespread ; a typical specimen, which was not written at Tours, is shown in Fig. 24.

The caroline book-hand is a slightly slanting, 'round' hand with only occasional serifs which at best are but slightly 'clubbed' forms occurring at the beginning and endings of down strokes, particularly the ascenders. This hand, though easily the simplest, the most harmonious, and of all the western book-hands, that most capable of being written quickly in small sizes and of still being kept legible, only became, almost by accident as it were, the prototype of the normal lower-case roman. For on

the break up of his empire the separatist national tendencies, which Charlemagne had wished to destroy, soon reasserted themselves, and in the course of the next four centuries the reformed minuscule was perverted and then superseded by the older local hands, and these luxuriated into the many national gothic hands, formal, semi-formal, and cursive, which were copied by the early printers. Thus it happens that Gutenberg, the generally acknowledged inventor of movable types in the West, took as his model a formal German text-hand (' *lettres de forme* ', or ' church-text '), whilst Caxton not only printed in text, or ' black-letter ', but in ' secretary ' (' *lettres batardes* ', or ' bastard '). His first type was a Flemish secretary, as he was working in Bruges ; but his subsequent secretary types were based on English models. What *English* is to roman so secretary is to black-letter, and intermediately between them come the more rounded, fluent gothic type faces (' rotunda ' and ' fere-humanistica '), based on one or other of the many semi-formal hands (' *lettres de somme* '). Though this last family of letter was popular on the Continent, it had no vogue in England and need not detain us here.

The Neo-Caroline Book-Hand

Fortunately, however, for the eyesight of Western Europe a reaction against things gothic set in, and when the first people to print in Italy, the two Germans Sweynheim and Pannartz, crossed the Alps with their press and black-letter sometime before 1464, they found that for the last generation all the best books

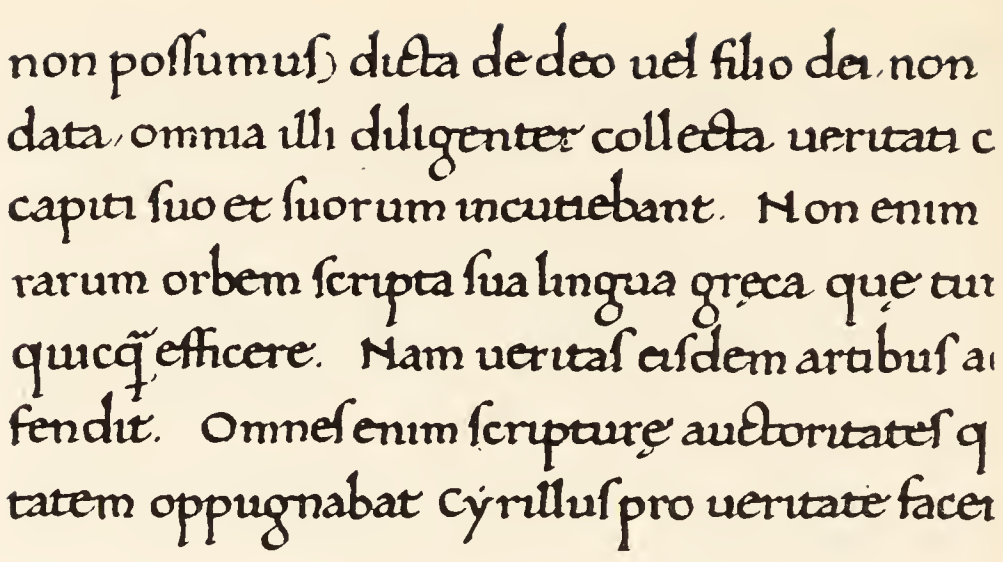


Fig. 25. Neo-caroline minuscules from a manuscript Thesaurus of Cyril of Alexandria, written in the latter half of the fifteenth century (Victoria and Albert Museum).

had been written in a new hand, the *littera antiqua* or neo-caroline minuscule. This hand had found favour because it was that of the earliest—and consequently the best—Latin manuscripts then obtainable in quantity, which were being so much sought after, and in respect for the past the leaders of the classical revival insisted on their own new copies being written in a hand resembling the old. As a result this hand which soon secured such universal acceptance in Italy for practically all educated needs—liturgical and legal books alone being excepted—differed only in matters of detail and finish from its carolingian model. The humanist scribe wrote with a rather finer pen, and the serifs were added consistently to ascenders and descenders, and when square capitals had been revived in place of the majuscule uncials, the pages of the best manuscripts had become the models for the early letterpress imitations by which they were to be superseded (Fig. 25).

The chief difference between the printed and written versions of the neo-caroline minuscule lies in the serifs which were now consistently added by the punchcutter to all the short letters, especially the feet of f h i k l m n r, where only an occasional

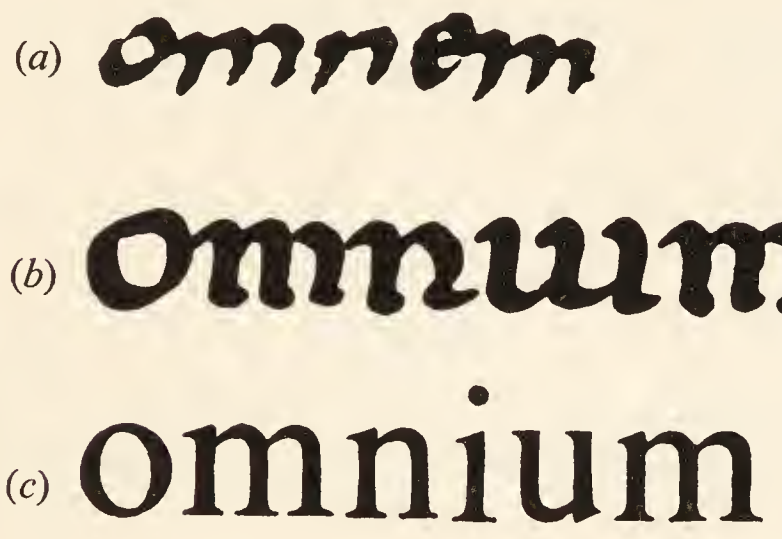


Fig. 26. Archetypal book-hands compared with type, and all enlarged four times. (*a*) Caroline from Fig. 22, (*b*) neo-caroline from the manuscript of Fig. 23, (*c*) the type in which the present work is set. It should be noticed that the book-hands are written on very deep ' bodies '. While the type is 10 point, the caroline hand is written, as it were, on 12 point, and the neo-caroline on 18 point.

rudimentary serif or 'pot-hook' had been made previously (Fig. 24); and of course in the dot on the 'i', a gothic legacy.

These serifs were added to counteract the extra lateral white necessitated by casting single letters on type-bodies. It is noticeable that the finest extant manuscripts written with consistently serifed minuscules are all subsequent to the cutting of roman types.

The story of how the roman letter gradually ousted the older national founts of gothic letter almost everywhere is not the history of letter-design as such, or even part of the early history of publishing, but rather that of the civilizing influence of the Italian Renaissance on Western Europe. But it was mere accident that the neo-caroline minuscule of all other book-hands was capable of reduction in type to sizes far smaller than those in which any book could be written conveniently.

HOW TO IDENTIFY TYPE FACES

The bewildering glut of type faces of similar design is now so large that not even the skilled typographer can hope to name a face on sight with certainty. The only convenient way, therefore, is to adopt some sort of ' natural-history ' classification which divides faces into families, and families into species. The best clue to the different families and the main sub-families is not that of pure letter-structure—a classification that would have to take into account all the possible variations and combinations of thickness of stroke, emphasis, serifs, and basic letter-forms—but a broad knowledge of the history of the printed character. Generally speaking, the trained eye recognizes types in the mass, from a glance at their weight or colour, and such recognition does not presuppose an ability to draw a large-scale drawing of the letters, or even an acquaintance with each letter individually. But minute details of letter construction can alone be trusted to differentiate between bewilderingly similar series.

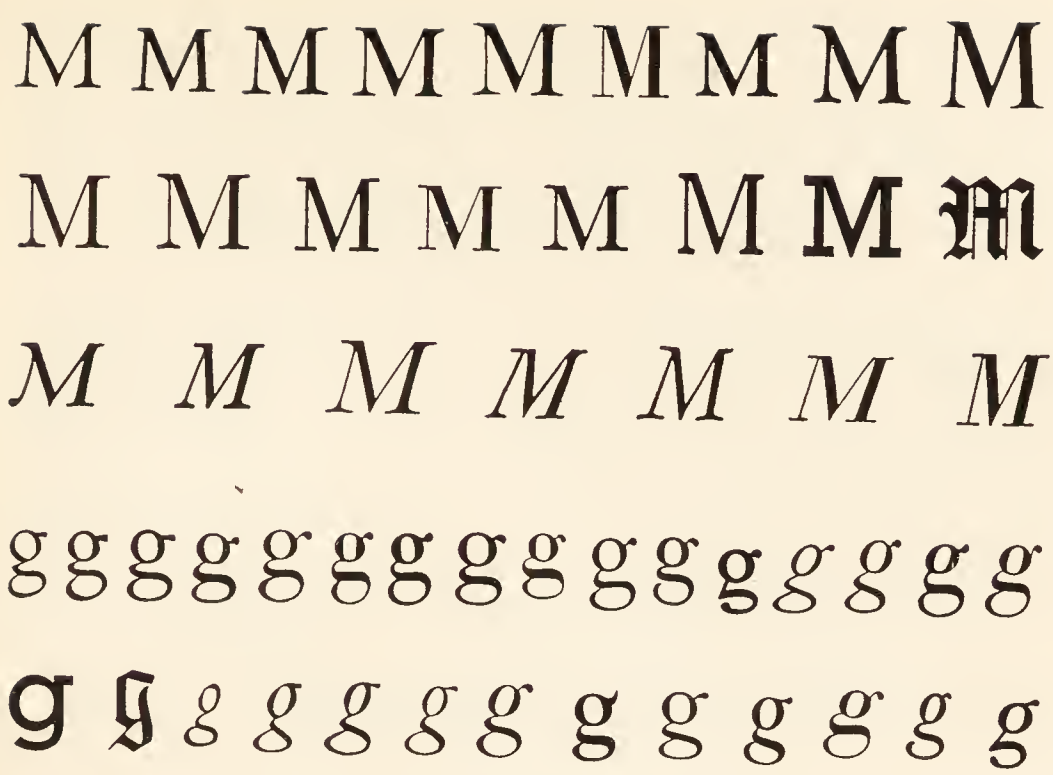


Fig. 27. M and g are the most individual sorts of a fount.

The differences in letter-structure that must be particularly attended to are as follows : (1) thickness of stroke, or ' weight ' of letter, (2) angle of emphasis of the round letters (horizontal, oblique), which ' calligraphic ' angle determines, with the serifs, the colour of the face (relation of thick to thin stroke), (5) shape of counter (angularity of crotches), (6) serif-formation (style, weight, bracketing), (5) agreement with accepted letter shapes (relation of face to body, x-height).

Typical ' spot ' letters should be scrutinized where ascription is difficult. The most individual letters of a fount are perhaps g and M (Fig. 27), and examples of other letters where differences depend on serif-formation are shown in Fig. 28.

AAAAAAAAAA aaaaaaaaaaa

bbbbbbbbbbb CCCCCCCCC

EEEEEEEEEEEEE

eeeeeeeeeeeee JJJJJJJJ

NNNNNNNNN OOOOO

RRRRRRRR rrrrrrrrrr

TTTTTTTTTTT ttttttttttt

WWWWWWWWWWW wwww

wwww

Fig. 28. Typical 'spot letters'. The irregularity is due to the variation in line.

The relation between styles of handwriting and type families may be epitomized in tabular form as follows:

UPRIGHT		*SLANTING*
FORMAL	Semi-Formal	*Cursive*
Black Letter		
Old Face	Schwabacher	
Modern	Fraktur	*Italic*
Egyptian	*Script Types*	
Typewriter		
Sanserif		*Sanserif*

Many series of letters may be 'open face', i.e. may have hollowed-out stems, or 'shadow' (in perspective, three-dimensional); and further any given style of letter may be cut in different weights (medium, light, bold, extra-bold) and widths (extended, condensed) and in combinations of the two (extra-bold condensed) according to thickness of stem and width of face. Typical examples of very closely related series are Cheltenham, Gill Sans-Serif and Times New Roman (Fig. 29).

TIMES NEW ROMAN
TIMES BOLD ROMAN
TIMES TITLING
TIMES BOLD TITLING

Fig. 29. A few of the very numerous Times ensemble.

A brief historical account of the chief type-families now follows in chronological order; examples of the originals will not be reproduced, but instead their general style will be illustrated from the more faithful modern revivals related to these archetypes, and where necessary deliberate deviations from the originals, prompted by modern necessities, will also be shown.

TYPE-FAMILIES, THEIR HISTORY AND DEVELOPMENT

Gothic (*circa* 1455)

This family is calligraphic in style, and written with a broad, slightly-slanted pen, the colour of the formal letter deriving from the perpendicularity of the thick

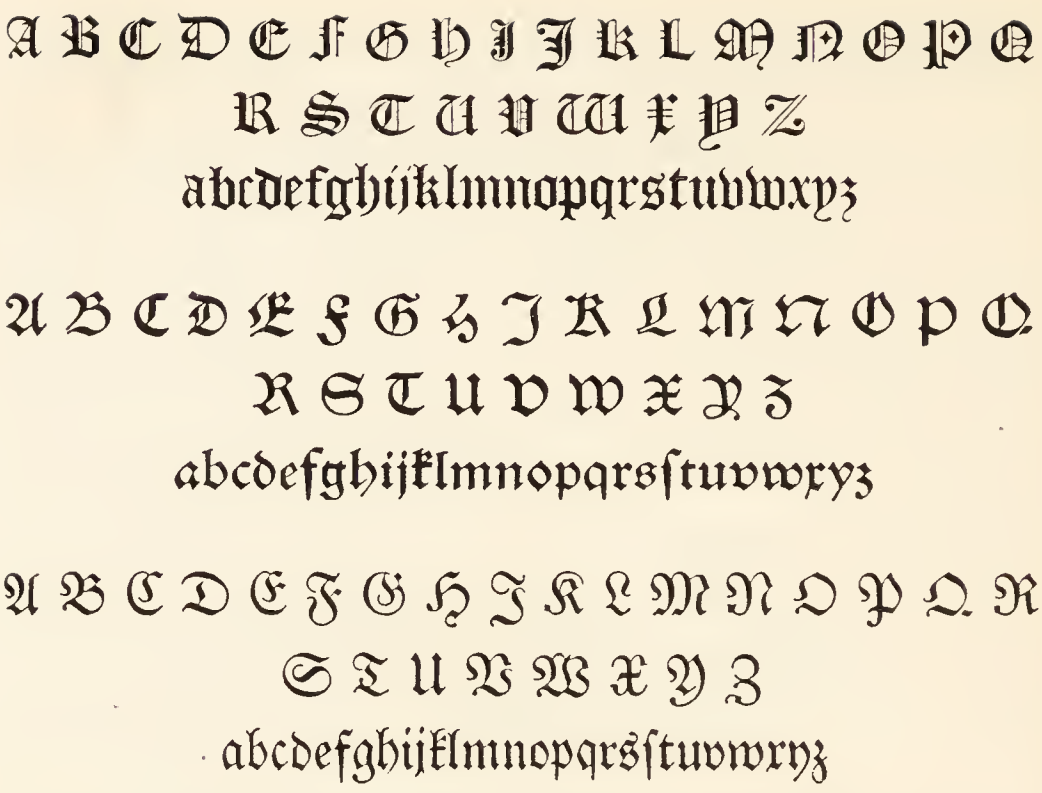


Fig. 30. Modern Gothics: Black Letter (Ancient Black, Stephenson, Blake); Schwabacher (Monotype No. 102D); Fraktur (Monotype No. 256D).

stems which preponderate. In England the formal kinds are known as black-letter (as compared with ' white letter ', or roman), and the cursive as secretary. The latter is rounded in form with a more equable distribution of colour, and both letters, as compared with roman, are serifless.

Gothic type is mainly used to-day for the headings of daily newspapers, and practically never for body-matter, except in Germany where—in spite of all attempts at abolition—it still remains the national body-type. The chief present-day versions are known as *Schwabacher* and *Fraktur*; they derive from sixteenth-century semi-formal hands. Some modern gothics are shown in Fig. 30.

Roman (1464)

These faces—at least the body-faces—may be divided in order of appearance into three main classes : venetian, old face, and modern. Venetians are quite unmistakeable from old faces on account of the difference in colour, but the dividing line between old face and modern is not one that can be comfortably made by analysing the different constructional elements of the two families of letter. It is not too much to say that there is a family of letter transitional between the two.

The first roman type was cut probably at Subiaco or Rome *circa* 1467, when it appears in books printed by Sweynheim and Pannartz in Rome. Apparently the type was given the name ' roman ' by the French. The type of the first book printed in France is roman, and this is said to have been modelled on a Roman type. The Germans, however, call roman faces Antiqua, keeping the original name.

Venetian (1468)

These faces tend to be heavy in colour. They are characterized by thick main strokes, heavy slab-serifs, fine-bracketed or unbracketed, and an oblique calligraphic emphasis in the round forms. The bar of the e is tilted. The design of certain letters, particularly e g y, and M N with slab-serifs, seem crude to modern eyes.

This family of letter gets its name from Venice because it was there that *circa* 1469 a Frenchman, Nicholaus Jenson, cut what is considered to be the best version of all the early romans. The venetians were usually cut in sizes ranging between 14 and 18

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 31. Venetians: Cloister Bold, Venezia (Linotype); Cloister Old Style, Centaur (Monotype).

point. The design looks heavy when cut in smaller sizes.

The revival of this letter was due to William Morris, and various versions were cut thereafter for the owners of private presses. The versions now generally available are Veronese, Venezia, Nicholas Jenson, and Cloister (Fig. 31). Although as compared with old-face types the venetians are a bold letter, still heavier versions have been designed for advertising purposes. A light-face version more suitable for the octavo page is Mr Bruce Roger's Centaur, which—though still based on Jenson's letter—becomes virtually a new face. Of course the original venetians lack companion italics, but special cursives have been designed to mate with some modern versions.

Old Face (1495)

This family of letter is characterized by oblique emphasis, lightness of colour, comparatively small differences between thick and thin stroke, and fairly substantial bracketed serifs. As compared with the

venetians it is a new face, but like them it still remains essentially a calligraphic letter.

Old face was the first family of letter to become available in the modern range of sizes. The first complete range was cut in France *circa* 1535, probably by Claude Garamond (died 1561), and the

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 32. Archetypal ' old faces ' (1495-1550) : Aldine Bembo (Monotype) ; Garamond No. 3, and Granjon (Linotype).

design, it has been suggested, was inspired by Aldus's second roman cut in one size only (approximately 16 point) about 1494. The Garamond series was an achievement of the highest importance as it established a new standard in punchcutting, and demonstrated the superior legibility of roman to gothic in small sizes (Fig. 32). The ' Garamond ' roman, improved versions of which appeared *circa* 1550, remained a standard letter until the eighteenth century and the model for the subsequent versions within this family of face. The famous Caslon Old Face was based on Dutch versions, and most old-face letters, however different in cut and set, all owe something to Garamond.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXY
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyx

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 33. Representative old-face types, 1621-1770 : Garamond (Monotype) ; Van Dyck (Monotype) ; Janson (Linotype) ; Ehrhardt (Monotype) ; Fournier (Monotype) ; Caslon Old Face (Stephenson, Blake) ; Baskerville (Stephenson, Blake ; from the Fry punches imitated contemporaneously from the original) ; Monotype Imprint and Linotype Georgian.

ABCDEFGHIJKLMNOPQRSTUVWX
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWX
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 34. Old Styles, *post* 1852 : Miller & Richard's, the original ; Old Style No. 10, Bookprint (Linotype).

The modern revivals of classic design of this type-family are as follows : Aldine Bembo (1495), Poliphilus (1499) ; Linotype No. 3 Garamond and the *soi-disant* ' Granjon ', an earlier reproduction of Garamond's design (*circa* 1550), the various ' Garamonds ' (1621), which are really Jannon ; Van Dyck (*circa* 1650) ; ' Janson ' (*circa* 1670) ; Ehrhardt (*circa* 1700) ; Caslon (1726) ; Fournier (1742) ; Baskerville (1758). Other ' period ' designs of indeterminate ascription are Imprint (1650-1730) and Georgian (1760-80).

The nineteenth century, which gradually witnessed the resuscitation of the old faces, also produced newer versions which are known as old style. Although these are simply regularized versions of the older letters they are distinctly new faces. They comprise the several Old Styles, of which the first and most famous is from the foundry of Miller & Richard, and the various innominate series known by numbers only (Fig. 34).

And then there is a host of related bold faces : Garamond Bold, Plantin, Plantin Heavy, Old Style Antique, Caslon Bold, Goudy Bold, and the rest, all which must be grouped as old face on account of their oblique emphasis (Fig. 35).

Modern Face (1702)

This family of face, which remained standard throughout the nineteenth century, is characterized by a vertical emphasis and fine-bracketed hair-serifs. It is an 'engraved' as opposed to a calligraphic letter (Fig. 35). The first modern face is French and dates from 1702, but this style of letter did not become generally popular until after the Revolution, when versions cut by Didot (1783) in France ; by Bodoni (1787) in Italy ; and by Figgins (1798), Thorne (1800), Fry (1800), and others in England, served as models

ABCDEFGHIJKLMNOPQRSTUVW
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXY
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWX
abcdefghijklmnopqrstuvwxyz

Fig. 35. 'Old Face' Bold Faces ; Old Style Antique, Goudy Bold, Goudy Catalogue (Monotype), Caslon Bold (Stephenson, Blake)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz**

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 36. Transitional and Modern romans, 1784-1830 : Bell (Monotype, based on that of Richard Austin) ; Scotch romans (Miller & Richard's, the original, and Monotype) ; Bodoni ; Didot ; Walbaum ; Modern, Nos. 25 and 80 (Monotype).

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz**

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz**

Fig. 37. ' Modern ' bold faces : Century Bold, Bold Latin (Linotype). The latter style of letter is often called ' Clarendon '.

for the hosts of imitations and distortions still unhappily with us to-day.

The chief disadvantage of modern-face type is its inferior legibility in the smaller sizes, due to the weakening of the serifs and to too great distinction between thick and thin stroke. But certain designs, like the Bell-Austin letter (1788) and possibly Scotch Roman (1808), transitional between the British old-face and modern-face romans, do not suffer from these disadvantages to the same degree. Numerous nineteenth-century bold-face moderns are available ; they range from the Clarendons and Latin Antiques to Bodoni Bold and various fat-face poster monstrosities.

Italic (1500)

This family of letter, which is now used chiefly for quoted matter with roman, was originally a body-type.

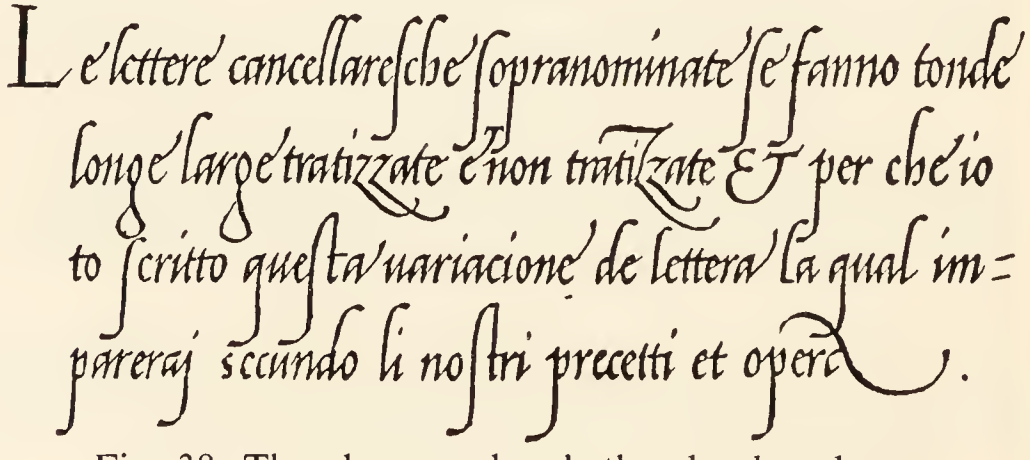


Fig. 38. The chancery hand, the developed neo-caroline, humanist cursive, from a wood-cut in the 'Writing Book' of G. A. Tagliente, Venice, 1524. (Victoria and Albert Museum)

The first version was cut for Aldus Manutius and appeared in 1500 ; it is based on the 'chancery hand', the contemporary informal 'humanistic' cursive, and

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz (*a*)

ABCDEFGHIJKLMNOPQRSTUVWXYZ&
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz (*b*)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUV
abcdefghijklmnopqrstuvwxyz (*c*)

Fig. 39. Italics :
(*a*) ' Chancery '—Arrighi, Blado (Monotype).
(*b*) ' Old face '—Garamond Bold (Ludlow—the nearest in feeling to Granjon's), Monotype Garamond (i.e. Jannon), Fournier, Baskerville.
(*c*) Modern—Bell, Scotch (Monotype).

was used for the famous Aldine octavos—the first series of cheap classics—because no small roman of suitable design was available. Subsequent versions of superior design (Fig. 39) were cut *circa* 1523-30 from finer calligraphic models. The first italics cut to align and mate with roman (Garamond's) would

appear to be those of Robert Granjon (*floruit* 1540-80), whose old-face italics were never surpassed even by the best German and Dutch letter-cutters of the seventeenth century. The eighteenth century old-face italics of Fournier and Baskerville are preponderantly influenced by the calligraphy of their time ; and a little later modern-face italics were consciously adapted to their companion romans.

Italic upper-case consisted originally of small roman capitals, but about 1524 these began to be superseded by the slanted majuscules ranging with the ascenders.

Script Types (*circa* 1550)

In one sense all lower-case types are script types, but this term is now applied to any face, other than italic, cut to resemble a contemporary informal hand.

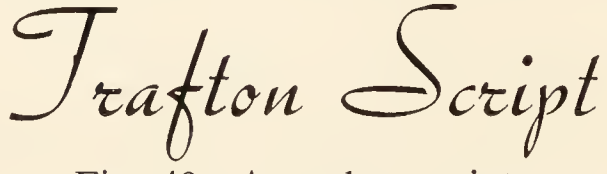


Fig. 40. A modern script.

The earlier script types were gothic, the most famous of which was the *Civilité* cut by Granjon (1557), but these were superseded by latin scripts resembling current handwriting. These first appeared in France (1643) and were followed by other cursorials in Germany and England. Script types are not cast with kerns but on special bodies, rhomboidal in cross-section, to give the effect of continuous writing. This family of face is now popular once more, and contemporary scripts are extensively used in advertisement settings (Fig. 40).

Decorated Types (*circa* 1680)

These comprise all the 'non-calligraphic' faces which cannot be said to belong to any of the preceding families (Fig. 41). Their shapes echo either painting, etching, or engraving on wood, metal, or stone ; and

Fig. 41. Decorated Types.

amongst them may be included 'open-letter' and 'shadow' faces of classic design. These began to appear about the middle of the seventeenth century, but the decorated letter—perhaps over-decorated would be more appropriate—is essentially a nineteenth-century creation for advertising purposes. Showings of popular series are given on pp. 120-37.

Egyptian or Antique (1815)

This family, which is characterized by thick slab-serifs and heavy main-strokes with little or no variation in thickness, first appears about 1815, but the host of nineteenth-century horrors are now being superseded by post-War versions of superior design. These are available in many related series, the chief of which are shown in Fig. 42.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxy

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrsttuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnnnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 42. Egyptians: Karnak (Ludlow), Cairo (Intertype), Beton (Bauer), Memphis (Caslon), Luxor (Ludwig & Mayer), Scarab (Stephenson, Blake), Rockwell (Monotype), Linotype Egyptian.

A particular kind of egyptian, known as ionic, illustrates the difficulties of division into type-families according to emphasis, serif, or basic letter-forms. This letter, whose ancestry may be said to be ' by an old face out of egyptian ' appeared *circa* 1821, and has been much used latterly for Bibles and newspapers, where a small bold letter is desirable, and a special modern version has been cut specially adapted for modern printing conditions. It is a heavy face with bracketed serifs, the basic geometric letter-forms being old face rather than modern. The ascenders and descenders have been reduced, so as to give greater legibility, and the counters enlarged to avoid clogging during stereotyping and machining on high speed rotary presses (Fig. 43).

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 43. ' News ' faces: Ionic (Monotype No. 342); Excelsior (Linotype); Ideal News (Intertype). Faces such as these, which are designed for the body-matter of newspapers, are rarely cut larger than 9 pt., in which size these are accordingly shown here.

Sanserif (1816)

This family, which is characterized by the absence of serifs and the construction of the letters from strokes of equal thickness, is nothing more than a regularized form of the oldest inscriptional letters. No

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnnnopqrstuvwxyz

ABCDEFGHIJJKLMNOPQRSTUVWXYZ
aabcdeffghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Fig. 44. Recent Sanserifs : Tempo (Ludlow), Vogue (Intertype), Futura (Bauer), Cable (Klingspor), Erbar (Ludwig & Mayer), Guildford (Stephenson, Blake), Gill Sans-serif (Monotype), Granby (Stephenson, Blake), Metrolite (Linotype).

sanserif types are known before 1816, but the family soon became popular on account of its obvious display qualities, and a welter of ' Gothics ', ' Plate Gothics ', ' Grotesques ', and ' Spartans ', of every size and set, were cut without regard for basic letter proportions throughout the nineteenth century ; and many of these are still unfortunately in use (Fig. 42). The worst species of sanserif have now been superseded by the post-War sanserifs inspired by the poster types designed for the Underground by Mr Edward Johnston. The new designs are available in different weights of letter. Amongst these are the Erbar, Cable, Futura, Gill, Tempo, Metro, Vogue, Guildford, Nobel, and Granby series (Fig. 44).

FIGURES AND SIGNS

So far we have only considered type designs with reference to alphabet design, that is to say, with reference to the cutting of majuscule and minuscule characters based on those of Latin scripts. It is now necessary to say something of the remaining sorts available with all composition founts : figures, fractions, symbols and reference marks. These were omitted from the illustrations to facilitate comparison of cognate designs ; though their design is subordinated to that of the lower-case they still merit notice.

Points

The design of points is entirely subordinate to the colour of lower-case ; in shape, points are mostly

engraved, especially in modern-face designs, though individual old-face points betray their calligraphic origin. The detailed history of the different points, both as regards design and use, is yet to be written.

Figures

Neither the figures which we call arabic nor our decimal system of notation was known to the Romans. With the exception of the cipher (nought, or zero), which is a European invention, it would appear that our figures originally came from India, being of Hindu origin, and that they were brought to western Europe by the Arabs. At any rate, arabic figures are found in Europe as early as the eleventh century, and were in fairly general use by the thirteenth century. Figures were not included in the earliest printers'

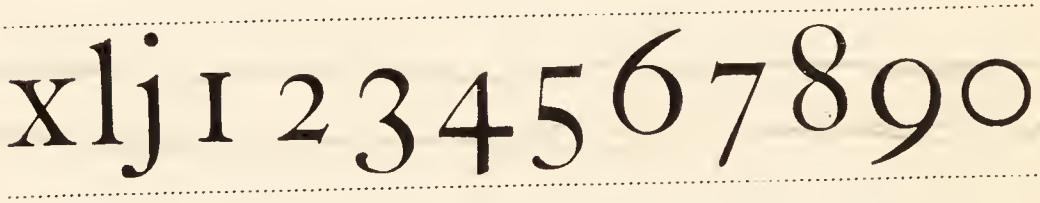


Fig. 45. The basic proportions of arabic figures (Caslon Old Face).

founts, not being cut till *circa* 1478. The earliest figures show considerable divergencies in the design of individual symbols, but the most noticeable feature of their design, their irregular principle of construction as a series, was retained, when their typographical form was crystallized in the first half of the sixteenth century. The design of figures is predominantly calligraphic, though to avoid confusion with o the design of the cipher was geometricalized (Fig. 45).

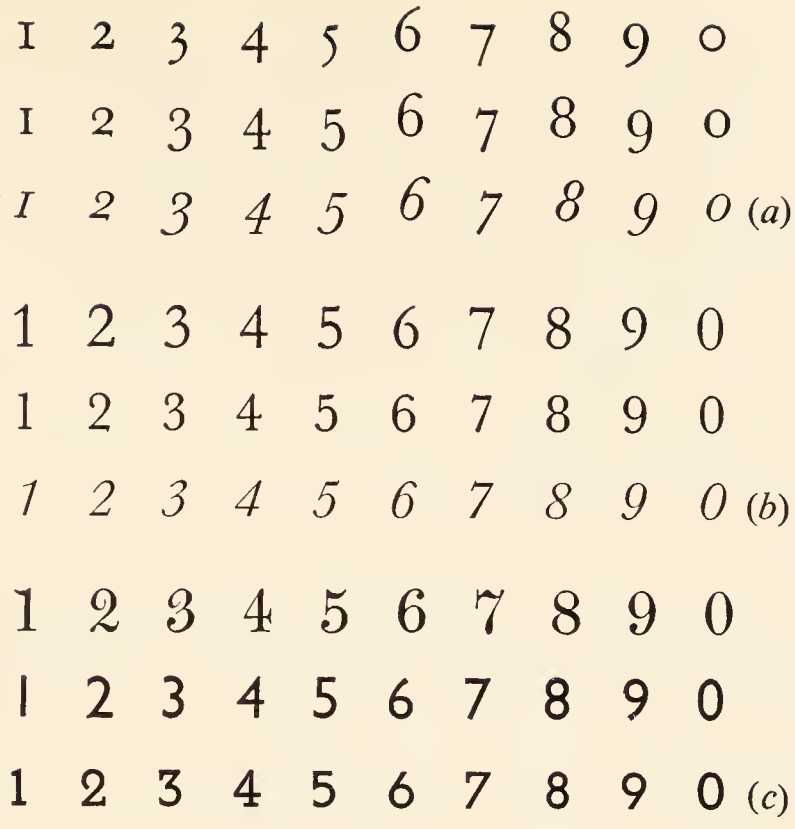


Fig. 46. Arabic numerals : (*a*) old style (Garamond, Baskerville) ; (*b*) lining, or modernized old style (Garamond, Baskerville) ; (*c*) modern (Scotch Roman, Gill Sans-serif, Beton).

Printers' figures are classified in three ways : (1) old style or modern, (2) non-lining or lining, and (3) roman or italic (Fig. 46). Old-style figures are non-lining, though the irregular placing of the character on the body does not produce an exact congruence with ascending and descending sorts. Old-style figures appear very ragged when ranged with capitals ; to obviate this they are usually only so used with small capitals ; when evenness is required in a display line, capitals may be ranged with figures of a larger body. To obviate this, alternative lining old-style figures are sometimes cut. Modern figures

are lining figures which range with upper-case ; they were first cut to mate with modern-face types towards the end of the eighteenth century. Modern figures, in spite of their regularity, would appear to be more illegible than old-style figures for many kinds of figure work. The first old-style figures were used with both roman and italic. The first italic figures appear, it would seem, during the seventeenth century. Whatever their style, figures are cast on the same set, either the en or two-thirds of the body.

Ten standard fractions, as illustrated in Part I, are supplied with every fount. If additional fractions are required they are either made up by means of the ' shilling mark ' or else by means of split fractions. Split fractions, which are rather illegible, are made up of two parts cast on half the en body.

Small figures, known as superior or inferior figures, ranging either below the ' x-line ' or just below the ' cap line ', are used for references or for mathematical or scientific work. Both old-style and modern faces are available.

Reference Marks

Six reference marks are normally supplied. They comprise the asterisk, dagger or obelisk, double dagger, parallel, the section and the paragraph (Fig. 47). For long these were used to indicate reference from text to notes, but nowadays superior figures are generally used. Two marks, the section and the paragraph, are sometimes used in the body of the text for display purposes. Little is known about the exact history of reference marks, but they should not

be entirely despised since a particular fount may have a specially pleasing asterisk or paragraph mark which can be used quasi-decoratively.

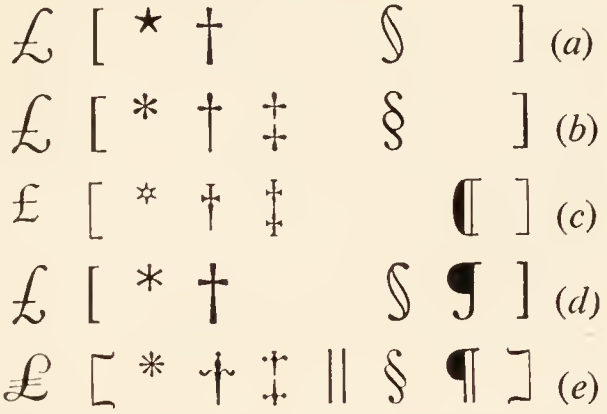


Fig. 47. Reference marks and symbols : (*a*) Aldine Bembo ; (*b*) Baskerville ; (*c*) Centaur ; (*d*) Garamond ; (*e*) Bell.

Symbols

Apart from scientific symbols, which we cannot consider, the most frequently used are those designating money (£ $.) and the ampersand (Fig. 48). The ampersand (' and *per se* and ') or ' short and ', as it is often called, is just a contracted form of ' *et* ' ; it recalls, like the f-ligatures, the calligraphic origin of

Fig. 48. The ampersand or ' short and '.

roman and italic lower-case. The italic ampersand, which can be used with roman as well as italic capitals, is more varied in design than the roman, often being a symbol of great elegance.

Flowers

Typographical ornaments are known as flowers, These are floral, arabesque, geometric, or pictorial designs which can be used singly or combined to make strips, borders, head-and-tail pieces, and so on. The simplest combinations are those constructed from the asterisk, which may be regarded as a flower. The design of some of our best flowers derives from arabesque bookbinders' stamps, which in turn are based on oriental motifs. Flowers were first used in the fifteenth century in Italy ; thereafter they appear in some profusion in France about the middle of the sixteenth century, and others follow from German and Dutch founders during the next two centuries. Eighteenth century flowers are essentially rococo in design, and thenceforth printers' ornaments show a progressive degeneration from which we are only beginning to recover.

BOOKS FOR FURTHER READING

Typefounding and Type Measurements

LEGROS (L. A.) and GRANT (J. C.). Typographical Printing-Surfaces : the technology and mechanism of their production. London and New York, 1916.

MOXON (J.). Mechanick Exercises or the Doctrine of Handy-works. Applied to the Art of Printing. London, 1683 ; reprinted (ed. De Vinne) 2 vol. New York, 1896 ; and as supplement to Caxton Magazine, London, 1901.

FOURNIER (S. P.). Manuel typographique. 2 vol. Paris, 1764, 66 ; English translation by Harry Carter, London, 1930.

DE VINNE (T. L.). The Practice of Typography : plain printing types. New York, 1900.

PRINTING METALS. London, 1936. Privately issued by Fry's Metal Foundries, Ltd.

SLATER (W. H.). What a Compositor Should Know. Pt. 1. 2nd ed. London, 1932.

Type Faces

REED (T. B.). A History of the Old English Letter Foundries, with notes historical and bibliographical on the rise and progress of English typography. London, 1887.

Updike (D. B.). Printing Types. Their History forms and use. 2nd ed., revised. 2 vol. Cambridge [Mass.], 1937.

Morison (S.). On Type Faces. London, 1923.

Morison (S.). Type Designs of the Past and Present. London, 1926.

Johnson (A. F.). Type Designs : their History and Development. London, 1934.

The Fleuron, a Journal of Typography. 7 vol. London, 1923-30.

The Monotype Recorder, the Monotype Corporation, London, in progress, quarterly ;

The L. & M. News, Linotype & Machinery, Ltd., London, in progress, monthly.

Waite (H. E.). Alternative Type Faces. London, 1937.

Letter-Design

Johnston (E.). Writing, and Illuminating and Lettering. 18th ed. London, 1939.

Thomas (D.). A Book of Printed Alphabets. London, 1937.

Thompson (E. M.). An Introduction to Greek and Latin Palaeography. Oxford, 1912.

Layout

Jones (H.). Type in Action. London, 1938.

Tarr (J. C.). How to Plan Print. London, 1938.

Printing Prices

ESTIMATING FOR PRINTERS. Issued by the Costing Committee of the British Federation of Master Printers. London, 1936.

MILLS (H.). The Printer's Estimator. London, 1938.

Libraries

The above-mentioned works, together with many others on printing, and type specimens and periodicals may be consulted daily at the

St Bride Foundation Library
(Librarian, W. Turner Berry),
Bride Lane, E.C.4.

This is the only library in England devoted solely to printing and allied subjects ; Bride Lane is but a stone's throw from Ludgate Circus and Fleet Street.

Museums

At the BRITISH MUSEUM, Bloomsbury, there is a permanent exhibition in the King's Library of finely printed books of all periods ; books in manuscript are on view in an adjoining saloon.

The VICTORIA AND ALBERT MUSEUM has a large gallery devoted to book production, with special sections devoted to manuscripts, book illustration, jobbing printing, and the history of type design.

TYPE SPECIMENS

These are arranged family by family so as to facilitate comparison of different cuttings of the same style of letter. The body-sizes are practically all 12 *point and set solid; the display faces are as far as possible* 18 *point. Settings entirely in capitals are titling series.*

VENETIANS

Centaur (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to

Venezia (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Veronese (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations

OLD FACES

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to

Aldine
Bembo
(*Monotype*)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Granjon
(*Linotype*)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typo-

Estienne
(*Linotype*)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.—JOSEPH MOXON, *Mechanick Exercises,*

Poliphilus
(*Monotype*)

OLD FACES

Garamond (American Type Founders)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgment, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical opera-

Garamond (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Garamond (Ludlow)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to the end, all the handiworks and physical operations relating to typography.—JOSEPH

Garamond (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography. By a typographer I do not

OLD FACES

Garamond No. 3
(Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgment, from solid reasoning within himself, can either perform, or direct others to perform from beginning to the end, all the handiworks and physical operations

Van Dyck
(Monotype)

By a typographer I do not mean a printer any more than Dr. Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to the end, all the handiworks and physical

Janson
(Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgment, from solid reasoning within himself, can either perform, or direct others to perform from beginning to the end, all the handiworks

Ehrhardt
(Monotype)

By a typographer I do not mean a printer any more than Dr. Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginnnig to the end, all the handiworks and physical

OLD FACES

Caslon (Stephenson, Blake)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations

Caslon (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Caslon (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Caslon (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typograhy. By a typographer

OLD FACES

Old Face Special (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

No. 45 (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Fournier (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to

Georgian (Stephenson, Blake)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.

OLD FACES

Old Style (Miller & Richard)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect ; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all

Old Style No. 151 (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the

Old Style No. 10 (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect ; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the

Recut Old Face (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect ; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical opera-

OLD FACES

Old Style No. 2 (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all

Dickenson (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end,

Ronaldson (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end,

Bookprint (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks

OLD FACES
Imprint
(Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Period
Old Style
(Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Plantin Light
(Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Plantin
(Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.

OLD FACES

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Baskerville (Stephenson, Blake)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Georgian (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end,

Baskerville (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations

Baskerville (Linotype)

MODERN FACES

Bell (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Scotch Roman (Miller & Richard)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all

Scotch No. 137 (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end,

Scotch (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations re-

MODERN FACES

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the

Walbaum (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations

Bodoni Book (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the

Modern No. 11 (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations

Modern No. 7 (Monotype)

ITALICS

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography. Such a scientific man was doubtless he who

Arrighi (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography. Such a scientific man was doubtless he who

Blado (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to the end, all the handiworks and physical operations relating to typography.

Garamond Bold (Ludlow)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.

Nicholas Cochin (Stephenson, Blake)

BOLD FACES

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and

Cloister Bold (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the

Garamond Heavy (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform

Old Style Antique (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all

Bold Face No. 53 (Monotype)

BOLD FACES

Goudy Catalogue (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all

Goudy Bold (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the

Bold Latin (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end,

Caslon Bold (Stephenson, Blake)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, by solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical

BOLD FACES

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all

Times Bold No. 334 (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from

Plantin Heavy (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to

Bodoni Bold (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handi-

Century Bold (Linotype)

EGYPTIANS

Cairo (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the

Karnak (Ludlow)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from be-

Beton (Bauer)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the

Rockwell (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the

EGYPTIANS

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the

Scarab (Stephenson, Blake)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to end, all the handiworks and physical opera-

Memphis (Stempel)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to end, all the handiworks and physical operations relating to typography.

Luxor (Ludwig & Mayer)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning

Linotype Egyptian Expanded

SANSERIFS
Vogue (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning with himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical

Tempo (Ludlow)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to the end, all the handiworks and physical operations relating to typography.

Erbar (Ludwig & Mayer)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to end, all the handiworks and physical operations relating to

Metrolite (Linotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks

SANSERIFS

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to the end, all the handiworks and physical operations relating to typography.—JOSEPH MOXON, Mechanick Exercises, 1683.

Stellar (Ludlow)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to end, all the handiworks and physical

Cable (Klingspor)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations

Guildford (Stephenson, Blake)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.

Granby (Stephenson, Blake)

SANSERIFS
Futura (Bauer)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to end, all the handiworks and physical operations relating to typography.

Erbar Italic (Ludwig & Mayer)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from beginning to end, all the handiworks and physical operations relating to typography.— JOSEPH MOXON, Mechanick Exercises, 1683

Gill (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.

Gill Italic (Monotype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography.—JOSEPH

EXOTICS Bernhard (Bauer)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations

Locarno (Klingspor)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to

Egmont (Intertype)

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one, who by his own judgement, from solid reasoning within himself, can either perform, or direct others to perform from the beginning to the end, all the handiworks and physical operations relating to typography. By a typographer I do not mean a

Egmont Italic (Intertype)

FORUM TITLING *Stephenson, Blake*

POLIPHILUS *Monotype*

PERPETUA TITLING *Monotype*

PERPETUA BOLD TITLING

Perpetua Bold

KENNERLEY Old Style

KENNERLEY Bold *Stephenson, Blake*

Goudy Old style *American Type Founders*

Goudy Italic

Goudy Bold

Goudy Extra bold

Goudy Extra bold Italic

GOUDY TITLE

Steel — *Klingspor*

Post-Roman — *Berthold*

LIBRA LIGHT — *Amsterdam Type Founders*

LIBRA MEDIUM — *Amsterdam Type Founders*

Marathon — *Klingspor*

Elizabeth Roman — *Bauer*
Elizabeth Italic

WEISS ROMAN — *Bauer*
WEISS ROMAN Bold
Weiss Italic

HEVER TITLING — *Monotype*

ALBERTUS TITLING — *Monotype*

LOCARNO Roman & *Italic*
Bold & *Bold Italic*

Klingspor

Slender
Slender Bold

Ludwig & Mayer

GOUDY Modern

Stephenson, Blake

TIEMANN Old Face & *Italic*
Tiemann Bold

Klingspor

TIMES
HEADING BOLD

Linotype

TIMES WIDE
TIMES BOLD TITLING

Monotype

STENCIL

American Type Founders

Ariston Light — Berthold

Ariston Medium

Ariston Bold

Holla Script — Klingspor

Fanal — Schelter

Samson Script — Ludwig & Mayer

Bernhard Brush Script — Bauer

Penflow — Schriftguss

Pentape — Schriftguss

Allegro — Ludwig & Mayer

Lilith — Bauer

Palette Light — Berthold

Palette Bold — Berthold

Bernhard Tango — American Type Founders

Bernhard Fashion — American Type Founders

Piranesi Italic — American Type Founders

Piranesi Bold Italic — American Type Founders

Romany Series — American Type Founders

Legend — Bauer

Gillies Gothic Light — Bauer

Gillies Gothic Bold — Bauer

Kaufmann Script — American Type Founders

Kaufmann Bold — American Type Founders

Signal Light — Berthold

Signal Medium — Berthold

Signal Black — Berthold

Marina Script — Stephenson, Blake

Caprice — Berthold

Amanda Ronde — Stephenson, Blake

Trafton Script — Bauer

Park Avenue — American Type Founders

Bernhard Cursive — Bauer

Mayfair Cursive — Ludlow

Grosvenor Script — Monotype

Light Script — Monotype

Temple Script — Monotype

Mercury — Stevens, Shanks

Keynote Series — American Type Founders

Monotype Script No. 351

Monotype Script No. 322

CAIRO

Intertype

Light
Bold

KARNAK

Ludlow

Light
Medium

MEMPHIS

Stempel

Light
Medium
Bold

LUXOR

Ludwig & Mayer

Light
Medium
Bold
Bold Condensed
Extra Bold

BETON

Bauer

Light
Medium
Medium Condensed
Bold
Bold Condensed
Extra Bold
OPEN

ROCKWELL

Monotype

Light
Medium
Heavy
SHADOW
Condensed
Heavy Condensed
Italic
Heavy Italic

Bernhard Gothic

American Type Founders

Light
Light Italic
Medium
Medium Italic
Heavy
Extra Heavy

CABLE

Klingspor

Light & *Italic*
Medium
Condensed
Bold & *Bold Italic*
Bold Condensed
Heavy
Shaded

ERBAR GROTESQUE

Ludwig & Mayer

Light
Medium & *Italic*
Medium Condensed
Extra Medium
Bold
Bold Condensed
INLINE

FUSION

Stevens, Shanks

UMBRA

Ludlow

FUTURA

Bauer

Light & *Oblique*
Medium & *Oblique*
Demibold
Bold
Bold Condensed

GILL SANS-SERIF

Monotype

Light & *Italic*

Medium & *Italic*

Bold & *Italic*

Bold Condensed

TITLING

ULTRA BOLD

EXTRA BOLD

EXTRA HEAVY

Shadowline

SHADOW

GUILDFORD

Stephenson, Blake

Light

Medium

Bold

NOBEL — *Amsterdam Type Foundry*

Light
Light Italic
MEDIUM
Medium Italic
Bold
Medium Condensed

TEMPO — *Ludlow*

Light & *Italic*
Medium & *Italic*
Bold
Heavy

VOGUE — *Intertype*

Light
Bold
Extra Bold & Oblique

METROLITE — *Linotype*

METROBLACK

NARCISS Series — *Klingspor*

PHAROS — *Ludwig & Mayer*

ADASTRA Series — *Stempel*

Dominus — *Stephenson, Blake*

Luminous — *Ludwig & Mayer*

Cooper Hilite — *American Type Founders*

TEMPO INLINE — *Ludlow*

PRISMA — *Klingspor*

GALLIA — *American Type Founders*

VESTA — *Berthold*

CHIC — *American Type Founders*

METROPOLIS — *Stempel*

SHADED

MODERNISTIC — *American Type Founders*

OLD FACE OPEN

Stephenson, Blake

OLD FACE Open *Stephenson, Blake*

COLONNA Series *Monotype*

IMPRINT
Shadow *& Italic* *Monotype*

CAMEO & *Italic* *Ludlow*

OLD FACE
Open Heavy *Stephenson, Blake*

Gravure Series *American Type Founders*
Goudy Hand tooled
Goudy Hand tooled Italic

Bodoni Bold Shaded *American Type Founders*
Bodoni Open

Plinth — *Stevens, Shanks*

Playbill — *Stephenson, Blake*

Phenix — *American Type Founders*

City Compact Lean — *Berthold*
Normal
Bold

Onyx — *American Type Founders*

Ultra Bodoni Italic

Ultra Bodoni — *American Type Founders*

Elephant — *Stevens, Shanks*

Elephant Italic

FIGGINS SHADED

Stevens, Shanks

THORNE SHADED

Stephenson, Blake

EDEN Light
EDEN Bold

Ludlow

CORVINUS Light & *Italic*
CORVINUS Medium & *Italic*
CORVINUS Bold
Corvinus Skyline

Bauer

BESSEMER

Stevens, Shanks

SLIMBLACK

Deberny et Peignot

ELONGATED ROMAN

Stephenson, Blake

KOLOSS — *Ludwig & Mayer*

FUTURA Display — *Bauer*

FUTURA Black — *Bauer*

Fanfare — *Berthold*

Fanfare Condensed — *Berthold*

Arpke-Antiqua — *Schriftguss*

MATURA — *Monotype*

ASHLEY CRAWFORD PLAIN — *Monotype*

ASHLEY CRAWFORD

OTHELLO — *Monotype*

OTHELLO SHADOW

CARTOON LIGHT

CARTOON BOLD

Bauer

Thannhaeuser

Schriftguss

Thannhaeuser Italic

Thannhaeuser Bold

Cooper Black

American Type Founders

NEULAND

Klingspor

NEULAND INLINE

BROADWAY

Monotype

ENGRAVED

BRAGGADOCIO

Monotype

ACKNOWLEDGEMENTS

The Author and Publishers have to thank all those who co-operated in the making of this book : to the Trustees of the British Museum for permission to reproduce Figs. 12 and 23 ; to the Director of the Victoria and Albert Museum for permission to reproduce Fig. 36 ; and above all to those Typefounders and their Agents who once again have supplied showings of their types.

Caslon Machinery, Ltd.,
33 Aylesbury Street, London, E.C.1.
(*Agents for Stempel*)

Intertype, Ltd.,
Farnham Road, Slough, Bucks.

Linotype & Machinery, Ltd.,
9 Kingsway, London, W.C.2.

Miller & Richard,
65 Nicolson Street, Edinburgh, 8.

The Monotype Corporation, Ltd.,
43 & 44 Fetter Lane, London, E.C.4.

F. A. Ridgewell & Co.,
37 Furnival Street, London, E.C.4.
(*Agents for Berthold and the Amsterdam Typefoundry*)

Schelter & Giesecke, A.-G.,
Leipsig, W.31.

Schriftguss A.-G. vorn. Bruder Butter,
Dresden, N.6.

C. W. Shortt & Co., Ltd.,
8 Fulwood Place, High Holborn, W.C.1.
(*Agents for American Type Founders*)

Martin J. Slattery, Ltd.,
30 Bouverie Street, London, E.C.4.
(*Agents for Ludlow*)

Soldans, Ltd.,
Burley House,
5-11 Theobald's Road, London, W.C.1.
(*Agents for Bauer, Klingspor, Ludwig & Mayer, Deberny et Peignot*)

Stephenson, Blake & Co., Ltd.,
Sheffield.

Stevens, Shanks & Sons, Ltd.,
89 Southwark Street, London, S.E.1.

INDEX