BASIC PRINTING

Letterpress for the beginner

The beginner's guide to printing at home

EDITED BY
PETER B. LINDLEY
AND
DEREK R. MAGGS

REVISED BY
R.T. ALLENBY
AND
K.HARDACRE

BRITISH PRINTING SOCIETY
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INTRODUCTION

Every year, hundreds of amateurs take up printing, for a variety of motives. Some are drawn to the craft as a hobby; many are attracted by the prospect of a spare-time income leading possibly to a full-time business of their own; others feel that the acquisition of a press will help some enterprise or organisation in which they are interested, such as a school, youth club, or church group.

The difficulties they face are formidable. Almost certainly they have to teach themselves to print. Probably they have no-one to turn to for advice when faced with the inevitable problems. If they bought their equipment second-hand, they may even lack the instruction manual which comes with a new machine — or if they have a manual they may be baffled by the technical terms it uses. Presumably the large number of 'almost unused' presses which appear on the second-hand market are an indication of how many novices are unable to solve the initial problems.

This book is connected solely with letterpress — the simplest method of printing, and in essence little different from that used by the pioneers of the craft in the fifteenth century. The type or block to be printed is inked and a sheet of paper is pressed against it with an even overall pressure sufficient to transfer the ink from the printing surface to the paper. This would appear to be straightforward, given a machine of the required accuracy and strength. But in fact to achieve the desired effect is seldom as easy as it would seem, at least where the newcomer to printing is concerned.

This book sets out to explain and solve the difficulties in terms which will be readily understood by someone with no previous experience of printing or its terminology. It is the first of a series of books which eventually will cover the whole range of operations at the small printer level ('small' in this sense signifying a printer who works on his own, probably part-time and without any formal training behind him).

PETER B. LINDLEY

DEREK R. MAGGS

Introduction to the revised edition

Basic Letterpress has served for over a decade as the instruction-manual of students of the art of traditional printing. With the passage of the years, some of the advertisements which appeared in the original volume have become out-of-date: indeed some of the firms who advertised in the first edition are no longer in business.

With the introduction of metrication in the United Kingdom, paper substances are now measured in grams per square metre (gsm or, more correctly, gm^2).

The change of title to *Basic Printing: Letterpress for the Beginner* necessitated many minor alterations to the text, and one chapter which dealt with more advanced presses has been omitted as being outside the scope of the beginner.

1 hope that this revised edition of *Small Printers' Guide No. 1 will* give pleasure and much useful information to all who read it.

Reg Allenby

ACKNOWLEDGEMENTS

The chapters of this book first appeared in *Small Printer,* the monthly magazine of the British Printing Society. Our thanks are due to the writers and artists for their co-operation. We also thank those BPS members who have suggested improvements and whose competition entries have been used as examples of display printing.

Chapter 1

TYPE AND SPACING
by D.R. Maggs

Drawings by M. F. Elliston

The point system

The first thing to grasp about type is the point system. The quaint old names by which the various sizes of type used to be known (Pica, Bourgeois, Brevier, Nonpareil, Pearl and so on) were long ago supplanted by the point system. There are approximately 72 points to the inch.*

The smallest type in common use is 6 pt, twelve lines of which 'set solid' (i.e. with no space between them) would occupy about 1 in. depth. Other common sizes are 8, 10, 12, 14, 18, 24, 30 and 36 pt. Larger sizes up to 72 pt (and bigger still for poster work) are available, but the newcomer to printing will not normally have any need for them. The same may be said of the 'irregular' sizes such as 5, 7, 9, 11, 13 and 16 pt. Type up to 12 pt is known as composition or body type; 14 pt and larger is display type.

The point size refers not to the depth of a letter as it is printed, but to the depth of the metal body on which the type is mounted, and there can be a surprising difference between the impressions printed by two typefaces§ of the same point size.

The width of printed matter is measured in ems. An em is the square of any point size, but unless otherwise specified it is always assumed to be the 12 pt (or pica) em, which is 12 pt square and of which there are six to the inch. Thus, if you want lines approximately 4 in. long, you set the type to a measure of 24 ems.

Type and typecases

Type is supplied in founts (often still pronounced in the traditional way as

* More precisely, the Anglo-American point is .0138 in. The Didot point, used in Continental countries, is .0 148 in.

§ See Chapters 6 and 9 for guidance on the selection of suitable typefaces from the enormous range available, and on sources of supply.

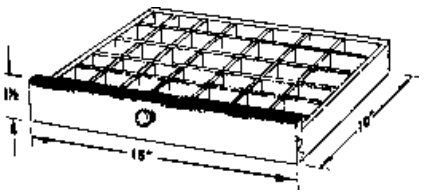
24pt Times 24pt Perpetua

Some typefaces (e.g. Times Roman) are 'big on the body'; others, like Perpetua, are so small on the body that they might be mistaken for a different point size.

'fonts'). If you want a large quantity of one size of type, you buy your fount by weight. For example, a 10 lb fount of 10 pt type would be the minimum for setting a page of a book or a leaflet.

As a newcomer to printing, you may have to make do with very small founts, called card founts because they were originally intended to provide enough characters to set a small job such as a business card. These founts have the advantage of being reasonably cheap (though they cost a good deal more *per pound* than larger founts) and of being easy to store, but they have the overriding disadvantage of an extremely limited number of each character — perhaps only one each of rarely used letters like Q and Z, and only three of frequently occurring letters like D and G.

The composition of a fount of type is indicated by the number of capital A's and small a's that it contains: e.g. 5A 10a. Other characters are supplied in proportion, as set out in the manufacturer's synopsis. Founts which have no small letters are known as titling founts. Capitals are often referred to as 'upper case', and small letters as 'lower case'. This derives from the time when all typesetting was done by hand, and consequently large founts of type were required — so large that each fount was accommodated in two cases, one for the capitals and one for the small letters. When these were pulled out of the frame where they were stored and put on brackets at the top so that the compositor could set type from them with a maximum speed and ease, the capital case was higher than the other case, and thus they became known as 'upper' and 'lower' — and so did their contents.



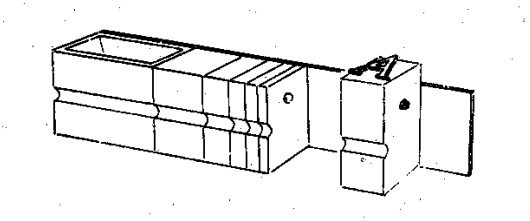
A typical card fount case

Obviously, even a small fount contains a great many types (figures and punctuation marks, as well as upper and lower case alphabets) and must be stored in such a way that each character can be found easily. When you take up printing, you will probably have only small founts, and will be able to make do with appropriately small typecases. These usually are divided into 42 or 49 'boxes' of equal size. They can be bought, or knocked up quite easily if you are reasonably handy. Later, as your printing becomes more ambitious and you need larger amounts of type, you will probably graduate to full-size typecases with ‘boxes’ of different capacities — big ones for common letters like c and o, and small ones for the less-used characters. An advantage of these full-size cases is that they also accommodate spaces.*

Spacing materials

Each size of type has its own range of spaces based on the em. As has already been explained, an em is the square of the type size in question; thus a 10 pt em is 10 pt × 10 pt. Printers sometimes call an em space a ‘mutton’ to distinguish it from the en (or ‘nut’) which is half an em. Other spaces are: thick (three to the em), middle or mid (four to the em), and thin (five to the em). The thinnest spaces of all are called hair spaces. They can be bought ready-made in brass (1 pt thick) or copper (½ pt), or you can cut them yourself from card.

Larger spaces are manufactured in multiples of the em. They are called quadrats, or more commonly quads, and come in 2, 3 and 4 em lengths. They are invaluable for filling out short lines and centring display lines. Quads are cast in solid metal; above 24 pt, hollow metal spaces, in the same multiples of the em, are used: they are called quotations, or ‘quotes’ (rather misleadingly, as quotation marks may also be referred to as ‘quotes’).

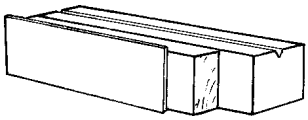


A lead with a two-em quote, and em, en, thick, mid and thin spaces.

So much for spaces for use between words and for filling out lines. Now, what about space between lines? For this you need leads (pronounced ‘leds’) - strips of metal 1, 1½, 2 or 3 pt thick. Every printer, on however small a

* See Appendix 1, page 63 for case lays.

scale, needs a plentiful stock of leads. They are supplied in 18 in. or 24 in. lengths for cutting down to the required size. Unless you have an efficient cutting machine which will not distort the ends of the leads, you would be well advised to ask the supplier to cut them for you to the lengths that you find most useful (e.g. 12, 18, 24, 30 and 36 ems). It is best to standardise on a few lengths, and one or two thicknesses*, as the more different kinds of leads you use, the more complicated becomes the problem of storing them separately from each other, and of recognising them at a glance. Accurate cutting is essential, as leads which are a fraction short will permit thin characters, such as full stops and commas, to drop out of line, and leads which are slightly too long will prevent the secure locking-up of type matter ready for printing. In addition, accurately cut leads can be combined to provide spacing for very long lines (e.g. two 24 em leads can be used if you are setting to the full width of a quarto sheet).§



Reading from the front: lead, reglet, furniture

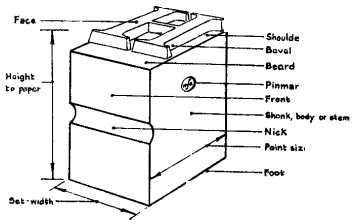
Above 3 pt, metal inter-line spaces are known as clumps: the common sizes are 6, 12 and 18 pt. Alternatively you can use wooden strips, called reglets. Larger spacing is known as furniture. The cheapest and least durable is made of wood, but you should consider investing in a selection of the more expensive but far more satisfactory plastic or lightweight metal furniture. This is available in an enormous range of lengths and widths, and your particular requirements will depend largely on the size of your press. We shall go into this subject more fully later on.

The important thing to remember with all spacing is that it dimensions must be accurate and uniform. In the interests of economy, you may be tempted to buy a sackful of old wooden furniture for a few shillings, but you will certainly regret doing so if you find — as is quite likely — that it

* Since nearly all type in common use is of an 'even' points size, it simplifies matters to stick as far as possible to an 'even' thickness of leads, i.e. 2 pt.

§ Recently, plastic strip material has become available as an alternative to leads. It is made in the same thicknesses as leads, and each thickness is immediately identifiable by its colour — 1 pt yellow. 1½ pt red, 2 pt white, 3 pt green, 6 pt blue.

has been roughly cut into innumerable different lengths, and probably has also had its edges damaged by careless handling over the years. Wooden furniture may well be adequate for your needs, but it should be new and precision-cut by machine.



The anatomy of type: The face, which receives the ink, is raised from the shoulder. The slope between the face and the shoulder is the bevel. The beard is the space between the base line (an imaginary line at the foot of upper case characters) and the front. The front, or belly, is the side with the nick; the opposite side is the back. The whole is a sort, or a type. In the composing stick a sort lies on its back; in the chase, it stands on its foot. Between the shoulder and the foot is the stem, or shank, or body. Height-to-paper, the distance from foot to face, is 0.918 in.

A note on illustration

Not all your printing will be from metal type and although you may not use other reproduction methods for your letterpress printing until considerably later, this may be a convenient point at which to refer briefly to some of the simpler illustration processes.

The easiest way for the small printer to produce an illustration is by means of a lino-cut. The material is fairly easy to use and often some of the simpler designs can be very effective. The kind of lino used is the thick hessian-backed cork pulp, about one eighth of an inch thick, obtainable at handicraft shops or printers' suppliers in flat sheets or mounted to type height in small blocks of up to several inches square.

A more demanding material for the production of a relief image is wood, in the form of a wood-cut or a wood-engraving. The wood must be prepared so that the printing surface is perfectly level and exactly type-high.

For the reproduction of drawings (in the form of line blocks) and photographs (in the form of half-tone blocks) you will need to have

recourse to a commercial block-maker and to take considerable care over any original art-work. You should consult your local Yellow Pages for the names and addresses of process-engravers, who will give you advice and their minimum-area charges.

A recent development in process-engraving is the 'Nyloprint' block, to which more and more small printers are turning. A nyloprint plate consists of a photosensitive polymer layer, bonded to an aluminium backing. It is cheaper than other process-engraving and possesses built-in make-ready advantages. Many small commercial printers have installed the comparatively simple equipment required to produce their own nyloprint blocks and one of your local printers may well be able to do this work for you. See also the list of suppliers in Chapter 9.

Linocut by F.G. Freeman of his printshop