

CHAPTER X.

THE PRACTICAL ART OF COMPOSING—The Compositor—How he should work—
Learning the lay of the Cases—How to set up a Head-line.

COMPOSING is the art of arranging types in such order, that when inked, and pressure is employed, they form, on paper or other material, such words and sentences as maybe required. The workman who performs the operation is called a *Compositor*.

Composing is also called “type-setting,” a compositor is a “type-setter,” and literary matter duly composed is said to be “set up.” A case of type which has been nearly exhausted by being composed is referred to as being “set out.” Indeed, in the everyday language of the printing office, the two-syllable word “compose” is nearly always superseded by the simpler monosyllable, “set,” as, “set it in long primer.” We sometimes hear of “picking up stamps,” and the Americans talk of “type-slinging;” but neither is a very dignified expression, and will be used only by those who admire slang.

We shall pursue the same plan in describing the process of-composing that we have already adopted in describing materials. We may suppose that the reader knows nothing whatever about printing, yet is desirous of knowing all that can be imparted by direction and precept. We would caution him, however, on the threshold of this operative section of our work, that mere reading and study cannot possibly render him a good workman; they must be supplemented by patient and protracted practice. Written instructions may point out to him the best way to go to work, and may save him from many bad habits which experience shows young printers are liable to acquire, but they can do little more. Their usefulness, though circumscribed, is, notwithstanding, very great; so we shall at once “begin at the beginning” and in the simplest language at our command endeavour to lead the reader onwards to the most complicated branches of his business.

The beginner should select a frame that is suited to his height.

It is all important that he should learn not to stoop over his work. The pulmonary weakness of compositors is usually owing to the contraction of the chest induced by bending the body over a low case. Stooping, too, is a habit that, if once acquired, is seldom or never got rid of. Especially do we urge young girls—some of whom may adopt this work as a handbook to the printing business—to *stand up straight* or they will be unable to retain either their health or their good looks.

On the other hand, the frame should not be too high, or the compositor will be compelled to throw out his arms or to stretch himself to such a degree that he will be unnecessarily fatigued, and his energy will become exhausted before his working time is nearly expired. Neither will he be able to work with such dexterity as he would if the frame were properly proportioned to his height.

Reference has already been made to this subject on page 41; but as a general rule it may be taken that the height of the frame should be such that the front bar just reaches the compositor's elbow. Any difference more or less must be neutralized by raising the case or elevating the compositor, by putting a box or board under his feet.

Before we go any further, we would offer another caution. Let the young compositor not, at first, trouble himself about *speed* in working. If he does everything he has to do properly, speed will come naturally; but if he seek it by doing things carelessly, he will never attain the maximum of rapidity, while his work throughout will be of an inferior character. In learning any art, the first steps are of paramount importance: "Well begun is half done."

The preceding paragraphs will have suggested the three chief qualifications of a good compositor—that he does what is required of him with EASE, with EXPEDITION, and with ACCURACY. The man who cannot pursue his vocation in this manner is a trouble alike to himself and his employer.

Now place a lower case moderately filled with letter on the frame, laying it down gently, otherwise the types will be jerked out

of their boxes, or get into those of their neighbours. Take up an upper case and place it on the frame, higher up than the lower case. The two will slope, desk fashion, but the upper one will be inclined more than the lower, as provided for by the top back bar of the frame.

In taking a case out of a rack, draw it out only a few inches—say half-way. Then grasp it by the sides, not by the top and bottom. The direction may seem unnecessary, but we have known beginners to require being so instructed.

If the cases are in their proper position, the first thing to do is to learn the “lay.” Several plans have already been given. Go carefully over the different boxes, and see if their arrangement corresponds with that first described in our pages; if there is any variation—and the probability is that there will be—note it particularly, or you may make serious mistakes.

Here we may initiate the reader into the signification of a word which is, unfortunately, very frequently required in the printing office, but which we have not as yet had occasion to mention. It is “pi,” or “pie,” the spelling being various, and it signifies types in the wrong place or in the wrong condition. If a case is violently shaken up, and the letters get into wrong boxes, the case is said to be “in pie;” if composed matter gets thrown off its feet and into a state of confusion, it is “pie.” A little heap of letters, spaces, and quads will be called “pie.” To get anything into “pie” is to get it into disorder and confusion, and the amount of “pie” there is in an office is the gauge of the regularity and care of the work people engaged in it, and of the system under which it is managed.²⁰

In taking a general survey of the letters contained in the respective boxes, it will be noticed that some of them are either alike, or appear so to the inexperienced. Thus a small-capital o appears similar to a lower-case o; but if the one were used for the other in printing, the difference would be at once apparent. The

²⁰ Floor-pie is, as the words indicate, pie made by letting types fall on the floor of the office and remain there.

same may be said of the cipher 0 and the capital letter O; the small capital v and the lower-case v; the small capital w and the lower-case w; the small capital x and the lower-case x; the small capital s and the lower-case s. As already stated, it is the custom now to give those small capitals liable to be thus mistaken, an extra nick on the back of the shank.

Owing to the form of the letters being necessarily reversed in the types, there are some of them which may confuse the beginner. They are the n and the u, the p and the q. He should mark carefully the difference, and will soon learn to know “which is which.” The experienced compositor detects the difference instantaneously, and almost as if by intuition.

The young compositor must, at the very outset, accustom himself to read the types upside down²¹—that is to say, in such a position that the nick is uppermost. The reason for this is, that in the English and most of the other languages, the lines are read from left to right, and types being necessarily set up in the composing stick in a similar order, they have to be placed there upside down, or the impression taken from them would read from right to left.

There are several ways of crossing the “pons asinorum” of the young compositor; that is to say, “learning his cases,” or “learning the boxes.” He may learn them by rote, from a plan, such as we

21 Several typographical reformers, who have not possessed a practical acquaintance with printing, have proposed that types should be composed with the faces downwards in the stick, the types having an impression in intaglio of the face on the foot of their body, and this impression being of the direct form which the type would make on the paper. If this plan were adopted, the compositor need not read upside down, or the reverse way. The types of Major Beniowski, which attracted so much attention a few years ago, and those of Col. Tomline, shown at the London Exhibition of 1872, were of this description. Any one who trains an apprentice, or whoever learns the art by himself, will notice how slight is the difficulty which amateurs lay so much stress upon, and how soon the reversed form and arrangement become as easily read as the ordinary one. The advantages of setting types in the ordinary way, over those proposed by inventors such as we have named, are simply incalculable.

have given, or he may learn them experimentally, by actually beginning to compose. Our own experience leads us to the conclusion that the latter is the better one, but it is advisable, for several reasons, that a printed plan of the lay of the case that is adopted should be given to the beginner.

In some printing offices, however, boys are taught to compose in a different manner to that upon which we are now entering. A handful of letters is given to them, and they are told to put each in its proper box in the case. When they can do this with some degree of readiness, they are shown how to “distribute;” that is, they are given a portion of regularly composed matter and told to return the different types of which it is made up into their respective places in the case. We hold that both of these plans are injudicious. In the first place, they tend to get the cases into “pie,” for mistakes must occur, and every letter deposited in a wrong box requires, at the cost of some trouble, to be taken out again, or it results in an error which must be rectified when the process of composition begins. Beyond this, there is good reason for first making the young compositor acquainted with the constitution of the matter he has in hand, with its component parts, and the manner in which they have been brought together. This he can only do by actually setting it up, by putting the letters in position, with the necessary spaces, points, and the other types which are used in making lines and sentences.

Let him, therefore, be at once provided with a piece of reprint copy²², and be shown how to set up one line. The preliminary operation of “setting the stick to the measure”²³ should be done

22 *Copy* is the literary matter to be printed. It is of two kinds—manuscript and reprint. Manuscript copy is written with the hand; reprint is copy that has already been printed and in that form given to the compositor.

23 “Setting the stick” is adjusting the space between the slide and the head, so that the line of type composed between them will be of the proper length. The slide must be unloosed, and pica quads to the proper number required set in the stick; then the latter must be tightened up again. Leads or rules may be used as gauges instead of pica quads, but they are not generally so trustworthy. The measure should be a little wider than the quads, so that

for him. It is advisable that a type of a moderate standard, such as long primer or bourgeois, should be given to him at first. A smaller letter is inconvenient to read and to handle; the ability to work on such small type as nonpareil should be left as an after acquirement.

Having got your cases in position (we take up the colloquial style, on account of its directness and simplicity), and your copy resting on the lower bar of the upper case, over a portion of that side occupied by the small capital letters,²⁴ take up the composing stick in the left hand. Grasp it firmly, yet lightly, in the hollow of the hand, the thumb extended so as to rest on the end of the slide. The stick must be sloped so that a letter may rest against the slide on one side and the flange on the other. Now take a lead of the proper measure and put it into the stick, close up to the flange.²⁵ Follow it with the setting Rule, but this must be so arranged that the neb, or ear, is away from your body, and projecting over the head-piece of the flange. You are now ready to begin setting up the copy.

We will suppose that your copy begins thus:—

JOSEPH M. POWELL, LONDON, E.G.

Here is a line composed entirely of capital letters and the necessary punctuational points. The first letter is J, so with the forefinger and thumb of the right hand pick that letter out of its box and place it in your stick, with the nick uppermost. Acquire the habit of turning the letter during its journey from the box to the stick, so that it will be in its proper position when it arrives there. Try to select from among its fellows, at a glance, the exact

they can be easily lifted out; if it is very tight, and leads are used, the locking up will not secure the matter as firmly as is desirable, as the leads, &c., will “bind.” These points will be understood better after the reader has gone through this and the succeeding chapter.

24 This is not in all cases the best position for the copy, as will be shown hereafter.

25 Experienced compositors work without the lead, but it assists beginners in emptying their sticks.

letter that you intend to pick up; the slightest hesitation causes a loss of time, which, multiplied by the number of times the hand travels to the boxes in the course of a day, is a very serious affair. Let the stick follow the right hand, to some extent, so as to diminish the space to be traversed before depositing the type. If these simple directions are followed, and resolutely adhered to, the art of setting type will be readily and pleasantly acquired.

The next letter is O; place that in the stick like the J, and then do the same with all the succeeding letters till you have put in the H, being careful all the time that the stick is not held in such a clumsy position that the types fall down. You will notice now, that between the H and the first letter of the next word (which is here *abbreviated* down to its initial) there is a blank. This must be made by inserting a *space*. In the line that is being set up, the space seems equal to an en quad. Insert an en quad, and then set the letter M, after which place the full point, and then another en quad, then on to P and the rest of the letters. Between the E. and C. of the contraction of East-Central district there is no space; the full point alone is used. This is always done where the contraction consists of more than one letter to represent only one term. Thus, the degree, Bachelor of Arts, is set B.A., and manu-scriptum (manuscript) M.S. At first you must notice how the words are composed, and imitate the original; afterwards you will set them mechanically in the proper manner. People who think they are acquainted with all the peculiarities of the language are often surprised, when they come to learn to compose, how many things there are that they never noticed before.

When the line is all set up, you may fairly claim to have started on the road that leads to a complete knowledge of practical printing. But what a long journey has yet to be taken! For instance, you will find that the line does not fill up the space in the stick. That space is called the measure, and it is always adjusted according to a certain number of pica ems, just as leads and rules are cut, as has already been described. Your line is "short," and it requires to be exactly in the middle. In order to

show you what is to be done, we will require you to fill out the line with em quads. Probably it cannot be exactly filled with them, and leaves an empty space, but that does not matter for our present purpose. There is room for seven ems, and these, equally divided between the two ends, would leave three and a-half or three ems and one en for each. Instead of putting three separate or single ems, put in a two-em quad and an em quad at each end. You might put in a three-em quad at once, hut that would not illustrate the principle we are now about to lay down. In doing this, follow the rule always acted upon by a good compositor, and let the largest space be on the outside. Thus the two-em quads should be at the two extremities; next to them, inside, the em quads, and for the same reason the ens will come another remove inside; in short, as the thinnest space, it will be nearest to the type. If the line is still slack, or loose in the stick, try what sized space would tighten it. If an en quad, then take two spaces and place one at each end, always remembering to have the smallest space nearest the type. The reason for this precaution is twofold; the thinnest spaces being the weakest, are most secure inside, where they are protected by their stronger neighbours, and thin spaces at the extreme end would be very inconvenient to handle when several lines are composed, and be liable also to slip out of their places.

Perhaps, after all, the line is “loose,” although one thin space would make it tight. You are afraid of putting this in at one side lest the line should not be in the middle, and look one-sided. Well, if all your ingenuity in devising spacing at each end is exhausted, you may give a little more on one side. But let that side be the one opposite to the side which contains the full point at the end. The latter itself causes the line to have an appearance of being slightly one-sided, and the odd space may be inserted at the other corresponding end without detracting from the appearance of the work.

You have now learned to set up a line. In book or newspaper work it would be called a “head-line;” in jobbing work a

“displayed” line; in either case, to distinguish it from a line of text or “*run-on*” matter, the composition of which will be the subject of our next chapter.

Before beginning the next line, run your eye over what you have done. See that all the letters are turned the right way; that none are standing with their feet where their faces ought to be; that all the nicks are turned to the same direction, so that they form a continuous groove through the entire line.²⁶ See that the types are straight-upright, and close up to the composing stick throughout their length; that the space between the words is all alike; and that the largest spaces in the margins are outside and the smallest inside. If all these points have been attended to, the line is as well set as anyone could make it, and you are ready to begin another, of a more complicated character.

²⁶ It is not, however, necessary, in practice, to keep the spaces and quadrats all turned the same way, but to show the principles of composition, the learner may be told to place them in the same order as the type.