

contribute its portion to the grand result aimed at. Scientific principles, practically applied, should guide every position and movement.

In beginning to compose, the first thing to be attained is an easy position; one in which we can remain the longest time with the least fatigue. If we consult nature, which is always the best guide, we shall find that to gain this, we must stand erect, with the arms down, at rest, and perfectly free. This being the easiest position in which it is possible to stand, it follows, that the further the body or limbs be removed from it, the greater is the inconvenience experienced. For instance, if the hand be raised to the stomach, the first position will be but little altered, but it will be so much so as to ensure a corresponding degree of inconvenience. If, from this position, the elbow be raised to the height of the shoulder, the first position will be further altered, and the alteration will be attended with still greater inconvenience. Presuming on the correctness of this view, it must be evident that the nearer we approach the first position, the longer shall we be able to maintain it with ease and comfort. Here we have three positions for standing, one of which we must choose for ourselves and apply it to composing. If this be done, it will be at once seen that the second position, which requires the hand and the elbow to be raised no higher than the stomach, is the best; because, in this position, the hand may pass over any necessary part of the lower case without the least inconvenience to the compositor.

Having got into an easy position, our next object is to save time in composing. This being our object, the principle upon which it must be accomplished must be either to bring the type quicker to the composing stick, or to reduce the distance between them. Either will produce the result proposed; but, let us look at present and see what is the result of one hand doing all the work. In doing so, let the composing stick be held close to the body while the word "the" is composed, and the distance from the stick to the box of each letter will be found, on reference to a lower case, to increase respectively. With the stick thus held, the right hand must travel sixty inches, as follows:

10 inches to and from the "t" box;
20 inches to and from the "h" box;
30 inches to and from the "e" box.

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60 inches; or 5 feet.

Applying the principle that a part is less than the whole, and bringing the stick as near to the "h" and "e" boxes as it was to the "t" box in the above instance, the distance over which the hand will move, in conveying the same word to the stick, will only be thirty inches, as follows:

10 inches to and from the "t" box;
10 inches to and from the "h" box;
10 inches to and from the "e" box.

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30 inches; or 2 feet 6 inches.

If this amount, thirty inches, be taken from the first, sixty inches, it will be seen that the actual distance saved in composing this word by the left hand keeping close to the right, will be thirty inches—two feet six inches. This difference of space saved in a word of three letters, being sufficient to set the word up again, must, of course, produce a corresponding saving in time. That is, if sixty inches traversed by the hand in picking up three letters, occupy six seconds of time, it follows that one-half of that space (thirty inches) must only occupy one-half the time, or three seconds, supposing the hand to move at one uniform rate of speed in both instances. Whether any more time be saved must depend upon the velocity at which the hand moves in picking up the types, and the certainty with which they are raised and brought to the composing stick. To take up, indeed, every letter for which the attempt is made, is very important, and any system that does not secure it is incomplete. It can be no advantage to a compositor, however much time he may save in one way, if he lose it in another.

Though such be the essentials of a good system, there are other conditions, without which its advantages will be lost, or, to a certain extent, neutralized; and these are, that it be properly understood and rigidly followed. In explaining our views for the benefit of those who may wish to know, it is important that we make the matter plain; but how far it may be approved and practised, must rest upon the judgment and peculiar views of others.

We will return to this subject again; but, in closing for this time, we would urge upon compositors to try the matter out faithfully for themselves, and if they do not better their condition in a short time, we are greatly mistaken. We will be glad to have those who may try it inform the readers of the *Miscellany* as to the particulars of the trial and the results.