

**MACHINE VERSUS HAND COMPOSITION.**

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**T**HERE appears to be a good deal of speculation as to the relative cost of composition done by hand and of that done by machines. On the one side, the makers of type-setting machines very naturally, but foolishly, exaggerate the capacity of their machines, while old-fashioned printers, on the other, just as weakly seek to disparage the machines and their undoubted advantages. It is proposed here to give an impartial view of the situation as it exists now, calculations being based upon the assumption that there are three or four different makes of machines already on the market which are almost equally successful.

In estimating the cost of composition it is necessary to calculate as nearly as possible the proportionate share of every expense involved in running the whole business, from interest on capital to the wages of errand boys. Unless this is done no reliable basis of calculation can be formed. Here is where the manufacturers often err in stating the cost of machine composition from their standpoint. At the same time those who advance the theory that machines are not yet proved to be money savers must also add these proportionate expenses to the cost of hand composition, or their statements will be worthless.

In last month's issue of the Bookmaker there appeared an article on this subject in which these proportionate expenses were clearly shown, and therefore it may not be necessary to repeat them here. However, the conclusions drawn were such as to give the impression that the writer had started out to prove that machines were not yet a success, whereas the intention probably was merely to throw some light on the subject and set printers thinking, but with a slight bias toward the assumption that hand composition was almost as profitable as that of machines.

From time to time employing printers have met and discussed the subject of cost of composition, and have published the results of their deliberations, until it has come to be pretty generally recognized that at least 100 per cent. must be added to the price paid to the compositors per thousand ems in order to cover the gross cost, including proof reading, rent, interest, wear and tear, etc. Some have maintained that even a higher percentage than this is necessary, but it is perhaps safe to take that as a fair basis for calculation. This is for hand work; but when machine work is considered the percentage is too high. It is true that the machines cost money on which an allowance must be made for interest and also for wear and tear; but when it is considered that a machine will do as much work as five compositors and only occupy one-half the floor space, and when an allowance is made for the fact that cases and stands are dispensed with for this part of the work, it will be found that the matter of increased interest and wear and tear are about set off.

Supposing that a machine with two men and a boy as operators will produce 50,000 ems in a day of ten hours, and that the men receive \$20 a week each and the boy \$6, the cost of labor will be about 16 cents per 1,000 ems. Now, if we add 100 per cent. to cover general expenses, the total cost would be about 32 cents per 1,000 ems. This, however, would not be a fair calculation, for the reason that although the actual composition was done cheaper, the proof reading, making up, imposition, etc., would cost the same as if the composition was done by hand.

Therefore, the fairest and most equitable way of getting at a comparison of cost would be as follows:

Hand composition at, say, 40c. per 1,000 ems	.40
Add for general expenses	.40
	.80
Machine composition at, say, 16c. per 1,000 ems	.16
Add for general expenses	.40
	.56

This makes machine composition about 30 per cent. cheaper than hand composition. Of course the price of hand composition varies in different parts of the country, but machine compositors' wages will vary in about the same proportion, so that the percentage of saving would be the same.

It is not every printer who will be able to put in machines to advantage; but a great many can. Probably fifty offices in the city of New York might safely put in from one to six each, and these offices would do about all the straightforward composition which needs to be done. Perhaps some offices could use more than six machines, and there may be more than fifty offices (out of about 700) in New York where machines could profitably be used; but there can be no doubt at all about a certain number of printers being able to put in machines to great advantage.

With regard to the quality of the work which can be done on machines it can safely be said that several of them are capable of setting type which can be used on the highest grades of work, and, while newspapers have been the first to take hold of machines to any extent, the largest field for their use will ultimately be found among book and magazine printers. Hundreds of thousands of dollars have been spent on perfecting type-setting machinery during the past half century, and it is probable that during the next five years more money will be paid by printers in return than has been spent during the whole of that time.

Different machines may show different results, but a conservative estimate of the saving to be effected by them as compared with hand composition may be safely taken as being from 25 to 30 per cent.

**A LITTLE EMBARRASSED.**

He had just entered the editorial sanctum way down from Pokumville. He wanted to be polite and complimentary, but the great editorial presence embarrassed him. He timidly sidled up to the editor, and tried to speak the little piece he had composed:

"Mister Editor, I--I am a constant value of your readable paper."

"Eh?"

"Sister Meditor, I am I am a readable constant of your valued paper."

"Eh?"

"I am a papered valuable of your readable constant."

"Eh?"

"I am a valuable reader of your constant paper, begosh!"

"There must be some mistake, Mr. Smith, somewhere. You are three years behind in your subscription. Nothing very valuable to our constant paper in that."