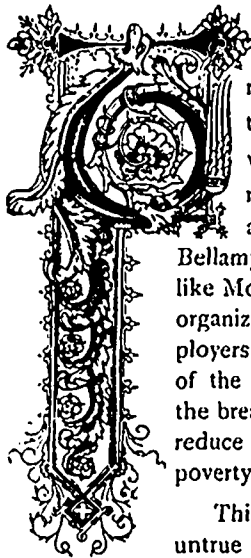


## MACHINERY IN PRINTING.

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HERE are philanthropists and society reformers who look upon machinery as of the devil. To Ruskin, who looks on the world from an artistic point of view, railroads, steam-engines and factories are abominations; to dreamy idealists like Bellamy, to socialists like Marx, to anarchists like Most, the employment of machines for the organization of industry, in the relation of employers and employed, is the crowning outrage of the century. They say that machines take the bread out of poor men's mouths; that they reduce workmen to practical slavery and poverty.

This is a formidable indictment, but it is untrue; yet I shall not now undertake to traverse it. The subject is too vast. Allow me to confine myself briefly and imperfectly to the points that affect the printing trade. How much has machinery hurt us or our employes?

At the outset, let us consider the impropriety of throwing stones by people who live in glass houses. All of us live by machines. The types and the paper we handle were made by machines, the printing presses, that give life to our art, are the most formidable of machines. It would be a sad day for us, and for compositors and pressmen, if we had to print without the aid of machinery. For the drudgery (if I can so call it) of our art is purely mechanical, and it is the putting of this drudgery on machines that enables us to do more and better work, and enables our employes to earn better wages.

At its invention, printing was stigmatized as a mechanical art. No artist of the present day despises imitations of painting by photography and lithography more heartily than did the copyists and illuminators of the fifteenth century despise books printed from types. In Nuremberg and Florence, they petitioned the authorities for the suppression or limitation of typography. They said printing was a vile art, every way inferior to copying. What was worse, it threw them out of employment; it would ruin them, and destroy their guild. But printing had come to stay.

This was in the beginning. In time, the printers themselves took up the cry of the copyists, and denounced every attempt at improvement that saved manual labor. Stereotyping was delayed nearly 50 years by what Moses calls the "supererogatory villainy" of the printers, who battered the plates of the inventor, William Ged. Composition rollers, self-inking machines for hand presses, machine-made paper, machine-made types, cylinder presses and rotary machines have run a similar gauntlet. I cannot tell you how many strikes and how many smashings of machines were made by the workmen who contended that the improvements were ruining them, but there were many, especially in France and England. All this opposition was needless.

The machines and improvements are here yet, but the workmen are not ruined. Would they not have been comparatively ruined without them? What would be the condition of printing without electrotypes and machine-made paper and types

and cylinder and rotary printing presses? Put back our art to old conditions and there would be but ten printers where we now have more than a hundred. Nor is this all. The ninety men kept out of the trade would be working a deal harder at more unpleasing work and for half the pay. For the ten men who did find work there would also be half pay and harder work. The offices that now pay best wages are those that have the most machinery; the offices that pay smallest wages are those that have little or no machinery. The pressman, and even the compositor, who is now earning twice and thrice the sum that was paid for harder work 60 years ago may think that his improved wages are due to his connection with a trade union, but the facts of the case are all against him. His larger wages are due to the machinery that he is taught to hate as his great enemy.

The employer's troubles from opposition to machinery in the pressroom are about over. No pressman now thinks of going on a strike when a new and faster press comes in the house. The value to able pressmen of faster and better machinery is no longer a debatable question. It is the man who does not know how to work an improved machine, and who won't take the trouble to learn its mechanism, who hates machinery.

In the composing-room our troubles are about to begin. For more than 400 years types have been set up by hand, and, until quite recently, compositors have been firm in the belief that composition could never be done to profit by machinery. This conclusion has been reached from a knowledge of the failure of not less than 40 machines that have been offered to the trade since 1830. But the tide seems to be turning. There are, at least, six typesetting machines that have done, and promise to do, composition with more economy than by hand. These machines are to be found in the newspaper offices of many large cities, and their number will probably increase. To the ordinary compositor these machines seem a menace. He looks on this form of improvement as the mediæval copyist looked on printing; as the old-fashioned hand-pressman and compositor looked on stereotyping and cylinder presses; he thinks that they mean the destruction of his art and the driving of him out of business. He is unable to see that as long as typesetting is done there is, and always will be, a large amount of work that must be done by hand that can never be done by machines; that increasing facilities for production will always increase production; that the machines will really create demand for new work. We have a right to expect that the same result will follow from the use of the same means. Cylinder presses did not diminish presswork. It created presswork. Typesetting machines will not diminish composition. It will bring into existence new forms and new applications of typesetting. That here and there the introduction of machines may be the means of putting compositors temporarily out of employment is not to be gainsaid. This result is much to be regretted, but its beneficial effect on the entire trade will ultimately be for good. Not the least of its many benefits will be the check it will give to amateur composition, and to the competition of offices that now try to thrive on poorly-paid labor. It will certainly diminish the tendency of boys and girls to learn composition in poorly-equipped offices. It will certainly keep half-taught graduates out of the well-equipped offices, for the new conditions will compel the compositor of the future to be a better workman than the compositor of to-day. More than