

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 forty 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 press work. It created press work. 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 gamsaid. 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 one-half the work that is now done in printing offices is done, and must always be done, by thinking, trained, and intelligent men, who do not work by rote, as the machine does. Men of this class will always be in demand; will always be more efficient in their field than any machine. That these men will get better pay, more steady employment and higher consideration, goes without saying, but these improvements of condition will not be made in a year, or even in a few years. It must be in the growth of time.

The improvements that are now temporarily damaging to the compositor have been felt and are now felt in the same way, and often to a greater extent, by their employers. Three times

within the last thirty-three years our house has had to turn out its machinery. Presses that cost \$3,000 were often sold for \$500; they were not worn out, they were still capable of doing good service, but they were too small and too slow for the altered conditions of business. No doubt these changes will go on indefinitely. Content as we may be with the types and machinery that we now have, the time is coming, and is not far off, when most of our cylinders will have to be supplanted by those that are more efficient. It is even possible that on some forms of composition the art of typesetting will be practically abolished. It may be that in the coming century all our children will be taught shorthand along with the Roman alphabet. It may be that the authors of books, or editors of newspapers, instead of writing out their copy, may talk to the phonograph, and this phonograph may be transcribed by typewriters into a readable shorthand, and this shorthand may be photo-engraved and electrotyped and sent to press and printed without the use of a single type. Stranger things have happened. I can even imagine the possibility of the Web press and all forms of presswork being abolished, and the typewritten copy printed by some cheap and quick system of photography. When Mr. Bellamy's Paradise on earth is established, we surely shall have all the improvements. Perhaps the operators of typesetting machines and the compositors of the next century may join with their employers, and all go on a strike for the restoration of their discarded art. Perhaps they may petition the Legislature for a pension. I hope not, for I must continue to think that under all circumstances the man will be more than the machine, and will adapt himself to any emergency.

THE RICE PAPER TREE IN FLORIDA.

The rice paper tree, one of the most interesting of the entire flora of China, has recently been successfully experimented with in Florida, where it now flourishes with other sub-tropical and Oriental species of trees and shrubs. When first transplanted in American soil, the experimenters expressed doubts of its hardiness, fearing that it would be unable to stand the winters. All these fears have vanished, however, and it is now the universal opinion that it is just as well adapted to the climate of this country as that of the famed Flowery Kingdom.

It is a small tree, growing to a height of less than fifteen feet, and with a trunk or stem from three to five inches in diameter. Its canes, which vary in color according to season, are large, soft and downy, the form somewhat resembling that noticed in those of the castor-bean plant.

The celebrated rice paper, the product of this queer tree, is formed of thin slices of the pith, which is taken from the body of the tree in beautiful cylinders several inches in length.

The Chinese workmen apply the blade of a sharp, straight knife to these cylinders, and, turning them round, either by rude machinery or by hand (in which latter operation they display much skill and dexterity), pare the pith from circumference to centre. This operation makes a roll of extra quality paper, the scroll being of equal thickness throughout. After a cylinder has thus been pared, it is unrolled and weights placed upon it until the surface is rendered uniformly smooth throughout its entire length. It is altogether probable that if rice paper making continues an industry in the United States, these primitive modes of manufacture will all be done away with.