where they are plentiful to districts where they are scarce.

It was much the same with the steamboat. When Brunel drove the first boat by steam up the Thames, he became so unpopular that London hotels refused to give him lodging. Compare Brunel's wheezy tub with the modern floating palace with its telegraphic news service, theatre, gymnasium and bank.

Last July the people of Boston celebrated the hundredth anniversary of the birth of Elias Howe. It is less than sixty years since a mob in the same city broke up his first sewing machine, claiming it to be a device of the devil, craftily conceived to take the bread out of the mouths of poor seamstresses.

Many of the reforms and inventions which we now take for granted passed through equally trying ordeals before they gained a permanent place in our civilization.

The harvester is another example. McCormack preached his gospel of efficient harvesting for fourteen years before he sold his first hundred machines. To-day there is scarcely a town or village in Manitoba that does not sell a hundred harvesting machines a year, and farmers now are on the look out for improved, labor-saving machinery.

It is but thirty-six years since Bell invented the telephone through his efforts to make it possible for his wife to hear. The invention received scant consideration then. It was looked upon as a scientific toy of no commercial value. To-day there are more than fifteen hundred millions of dollars invested in telephone equipment on this continent. During the strike last summer many looked upon the operators who left their posts as criminal, maintaining that the lives of sick people were in danger because of the lack of telephone communication between their homes and those of their physicians. That is a great change, is it not?

There is just as great a change in the formative stage of industrial training. You will pardon me for taking printing as an example as I am more familiar with it than with the other branches, and I believe that what applies to one branch either applies now, or before long, will apply to all other branches.

In less than twenty years the old-time one-man print shop has become a factory, and with this change has come an important apprenticeship problem.

Under the old system many printing offices did not represent a great financial investment. A printing plant which turned out commercial work could be had for as little as $600, and it could be operated by a journeyman and an apprentice. As it grew, one or two more boys were employed and later another journeyman.

The boys served an apprenticeship of from five to seven years and were given the opportunity of learning every branch of the trade practised by the shop. In those days men in moderate circumstances considered it desirable for their sons to learn a trade. As a rule, the boy who was graduated from a small shop had a firm grasp of the principles of the trade.

In the more pretentious offices, which were usually union shops, the number of apprentices was limited. For the first year of his apprenticeship the boy swept floors, ran errands, washed rollers, and sorted pi. In his his second year he was allowed to learn the case and was given reprint copy to set. A little later he was taken charge of by a journeyman, and as a reward for lightening the labors of the journeyman, the boy was given homeopathic doses of advice. Towards the end of his third year if he were bright, industrious, and really interested in his work, the boy was used by his employer as a means of cutting the prices on work which his competitors were bidding for.

While the business methods of the trade were often bad, there was usually that pride of craft which makes good workmen, and the price rivalry between shops made for speed.

These conditions have been changed by the introduction of labor-saving machinery. The old-time printing office represented an investment of about $500 per man. Today it may run into several thousand dollars for each man employed. Many of the operations are specialized. Where the printer was once a real craftsman he is now gradually becoming part of the machine he operates, and, owing to the heavy investment the machine represents, he is constantly urged to keep the machine in operation so that overhead expenses may be kept down. This results in a narrower knowledge of the trade. In departments where hand work is done the constantly increasing wages are also used as a spur for greater output, and the journeyman of to-day is too busy trying to earn more money for his employer to bother with boys.

So, between the present lack of craft ideal and the demand for output, boys are being attracted to the trade in constantly decreasing numbers, and the few who are dependent on the shops for training are not receiving the trade education their predecessors did. Neither the employer nor the employee under the existing competitive system is inclined to look after the welfare of the apprentice.

Then again, shops are inclined to specialize on certain kinds of work, which in turn limits the possibilities for the broad training which the old shop gave when it proudly advertised its ability to print anything from a visiting card to a three-sheet poster.

Specialized work is also bringing about an unlooked for condition. The old-time workman was thorough; he understood the business in every branch, and that knowledge enabled him to turn out a maximum amount of work with a minimum amount of effort when he was called upon to specialize.

The lack of that general training is now quite apparent to the employer who keeps comparative records of the cost of production. He finds that work done in five hours two years ago, required six last year and will take seven this, and he is faced with the problem of a steadily increasing demand for printing and a steadily decreasing supply of workmen. So he is beginning to look to the