

it, he is disposed to discover the readiest and the most effective means of obtaining that end. This theory partly explains the fact that so many of our inventions and mechanical improvements have had their origin in the minds of laborers or operatives. According to Adam Smith, the greatest improvements in the productive powers of labor seem to have been the effects of the division of labor. But not all inventions nor improvements of machinery have been originated by operatives or those who had to use them. Those who have spent much time in making a certain kind of machinery, whether it was their own invention or not, have discovered wonderful improvements and applied them successfully. Then again, we have those great thinkers, with superior powers of observation, bringing into practice machines made from the combinations of the most unlike elements.

Among the important discoveries and inventions made during the past century, the development of electricity is the most noticeable. In the nineteenth century its applications were advanced to such a notable degree that this period has been called the "Era of Electricity." Since electricity has been brought under control, it has been used for telegraphic, telephonic and lighting purposes, as well as for heat and motive power. At the same time, it is generally believed, that the area of its practical applications has been scarcely entered upon. This discovery together with the numerous other labor-saving machines have aided largely in bringing about the present happiness and wealth of the people.

The advantages of machinery are evident. Its chief usefulness is found in the lightening of labor and making natural forces supplant the work of man. In ancient times the toiling requisite to produce the absolute necessities of man was wearisome and humiliating. When corn had to be ground by hand, imagine the length of time necessary to produce sufficient quantities of meal. When the soil was cultivated with the rudest instruments such as the hoe or spade, the amount of production could not have been very great. These and many other kinds of labor, which in the early ages were performed by the hand, are now worked by the ingeniously devised machinery, to a supreme degree of perfection. The force of an ordinary watermill is now calculated to be equal to that of one hundred and fifty men. Now since the work of a machine is so powerful, it naturally follows that the amount of products will be increased, and consequently their price will be