men are defeated, and wages remain as they are, a rise in price is inevitable, provided the strike continues for a month or two. The cessation of production in all the great iron districts in the United States for several weeks, would give time for the exhaustion of the stocks on hand. Last year, as we have already said, over 9,000 miles of railway were made, and this year the rate of construction so far is still more rapid. Besides, there were at the end of last year more than 103,000 miles of railway in the United States, and this vast mileage requires constant renewals, which use up a large amount of iron. But if production is suspended for several weeks, while railway building and railway repairing go on, and stocks are thus greatly reduced, prices must rise ; and a rise of prices will open the door to foreign imports, and will thus give an impetus to the British iron trade."

With the prospect of the wholesale blowing-out of furnaces and shutting down of mills, which the flooding of the country with British iron would imply, the victory of the men would be a barren one indeed. It is a subject of infinite regret to right thinking men that there should be no better plan of adjusting differences between employees and employers than the destructive and suicidal resort to the strike. In the vast majority of cases, the strikers fail in their object, and the misery, wretchedness and suffering it entails, fall with terrible severity upon the dependent families of the wage earners.

If half of the executive ability and zeal displayed in organizing lodges, unions and the like, were spent in devising plans for the equitable arbitration of disputes and differences, the strike would be a thing of the past.

THE PROGRESS OF OUR TIME.

The prediction made for the last twenty-five years, by all well informed scientists, that we were standing on the threshhold of an advance in science and in its practical applications, greater than the world has ever seen, has commenced to be realized. Thanks to the astounding advance in electrical science we send instantaneous communications, over distances of thousands of miles, even when oceans separate the stations ; we converse by mouth and ear with our friends several miles distant and that by help of only a metallic wire, undisturbed by intervening noises, which would entirely destroy ordinary sounds. We can convey light and heat over such wires, and even motive power, all disguised in what we call electric currents, which, notwithstanding their essential nature is still a mystery to us, we have learned to generate, to manage and make subservient to our purposes. The practical accomplishment of the last mentioned transformation, is wholly due to the providential abundance of coal and the consequent cheapness of steam power, all the electricity needed for the lights, which illuminate our cities and buildings being produced by this agent.

There never could be a more striking practical illustration of the correctness of the new doctrine of the conservation and correlation of forces than these facts. This doctrine teaches that the amount of force (motion of matter) in the universe is a constant quantity, in other words that force is indestructible, and that what we commonly call a loss of force is only a conversion into a special form of motion, which may be heat or electricity. It is the pride of our age to have demonstrated this as a truth.

If we trace the operations involved in electric illumination backward to its primary origin, we have to go back to the solar light. This was the cause of the growth of forests, of which the remnants form our coal beds, in which the solar light and heat is as it were stored up. It is this solar heat which evaporates water, and forms clouds from which rain descends, originating rivers and streams and all our water power ; this power may move machinery directly, but if we use the heat which was stored up in coal we must set the heat free by combustion, and either expand air or evaporate water, and use the expanding air or water vapor to act upon proper machines so as to move them. This motion is applied to the ingenious combination of iron cores surrounded by copper coils, which we call a dynamo. The iron having been slightly magnetized causes electric currents in the coils, which react on the iron, increasing its magnetism, while this mutual action and reaction between the magnetic iron and the current in the coils evolves at last electric currents strong enough to produce a light which is the nearest approach yet made by man to the sunlight, from which it has its primary origin. Or we may, in place of making a light, cause the electric current to act upon a similar combination of iron cores and copper coils which we call an electro motor, and cause this to move. In this case we reproduce the motor of the dynamo, and it gives a ready method of transmitting power to a distance, and that over a mere telegraph wire.

The fancy in which many indulge, that electricity will become a motive power, has, as matters look at present, no hope of realization, because the cheapest source of electricity as yet known is motive power, and this we must have first to begin with, in order to generate the electricity. It has been proposed to utilize the motive power of great cataracts such as Niagara, drive dynamo machines with the same, conduct the currents generated over wires to distant localities, and use them for illumination, or power, and such a plan is perfectly practical. Millions of horse power now running to waste can thus be utilized, and this is one of the improvements in store for us in the future.—*Industrial News.*

TECHNICAL EDUCATION.

Writing of technical education in England, the American Consul at Bradford says that more than twenty years ago the Swiss Government established in Zurich a general scientific institution, instructing in applied mechanics, physics, and the arts. The cost is $100,000 a year, which is cheerfully borne by a population not larger than dwell within five miles from the City Hall in this city. After other Continental countries had maintained such schools many years, the subject was taken up in England. The Consul sums up his idea of these schools as being intended to supplement the education of the ordinary school by that especially calculated to increase knowledge of each man's trade or business, so that he may contribute more largely to the general wealth ; this, he thinks, should form a large part of national education, and pupils should consist largely of boys and girls drafted from the elementary schools, and no school in any important commercial center would be complete without an industrial museum, the advisers of the Livery Companies' Committee unanimously saying that laboratories and a collection of technical works, etc., are indispensable. As English manufacturers acknowledge that their most successful rivals are in those countries or localities where technical education has been carried to the highest point, the Consul is glad to know that a few technical schools have already been established in the United States, principally in the engineering and iron trades, and he earnestly hopes ere long to hear that a system of thorough technical education has been adopted for the whole country, there being no other means so effective for developing the resources of the country and improving its manufactures.

There will, of course, be no dissent anywhere as to the importance of this subject. The most skillful labor, although nominally high-priced, is really the cheapest; it is always found, also, in countries where the use and development of machinery are greatest, and although machinery, being cheaper than human labor, may seem to render the latter less necessary and to narrow the demand for all but the ruder class of labor, in practice it is not so, for there is an apparently indefinite field for the best labor in anticipating, contriving and adapting machinery. The more machinery becomes the servitor the more the most skillful men seem needed to be its directors. It is also a suggestive fact that tastefulness in goods is fast becoming regarded as an indispensable adjunct of utility, if not as an actual part of it. In this matter American wares are already second to none except, perhaps, those of France, and the character of labor here gives the highest warrant for training it. Moreover, the most prudent educational fact is the marked tendency toward special education shown not only in the establisment of a few technical schools, but in the changes in the curriculum of old institutions, this visibly affecting even the upper classes.