

Scientific American.

MUNN & COMPANY, Editors and Proprietors.

PUBLISHED WEEKLY AT NO. 37 PARK ROW (PARK BUILDING), NEW YORK.

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"The American News Company," Agents, 121 Nassau street, New York. "The New York News Company," 8 Spruce street. A. Asher & Co., 20 Unter den Linden, Berlin, are Agents for the German States. Tuhner & Co., 60 Paternoster Row, London, are also Agents to receive subscriptions. Messrs. Sampson, Low, Son & Marston, Booksellers, Crown Building, 188 Fleet street, London, are the Agents to receive European subscriptions or advertisements for the SCIENTIFIC AMERICAN. Orders sent to them will be promptly attended to.

VOL. XX., No. 5... [NEW SERIES]... Twenty-fourth Year.

NEW YORK, SATURDAY, JANUARY 30, 1869.

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OBSTACLES IN THE WAY OF THE SUCCESS OF INVENTORS.

The difficulties which want of means and influence places in the way of inventors, the compulsory exactions of poverty and the discouragements of those who should stand ready to aid with their influence any attempt to relieve the onus of labor and increase the return of capital employed, seem to be enough to dishearten those who hope by their improvements to benefit themselves while adding greatly to the advantage of their fellows. But these difficulties overcome, there are others still greater in the path to pecuniary success, which must be removed before the benefit intended can be realized by the mass. We allude more particularly to the jealousy with which any improvement, deserving the name, is viewed by those whom it will most directly and certainly benefit.

Possessors of capital, whether it is invested in mechanical enterprises or not, view with more than a critical eye any device which proposes to aid them in the increase of their capital or its advantageous investment. To them the inventor appears as a harmless visionary, annoying and verbose, impractical and troublesome, well got rid of by a few words of milk-and-water encouragement, or perhaps by a bluff notice that their time is too valuable to waste on him. In consequence of these rebuffs, perhaps often repeated, the disappointed and disheartened inventor ceases effort, sees afterward his invention reproduced by another, made one of the grand inventions of the age, and spends the remainder of his life in legal squabbles, out of which he will consider himself fortunate to secure the crumbs of the feast at which the capitalist and the plagiarist fare sumptuously.

Singularly enough it is that those whose experience has driven them through a similar course, and who by a lucky stroke have achieved pecuniary independence are among the last to recognize the value of an invention or the claims of the inventor. And those whose fame, if not fortune, has been attained by their persistence seem ashamed to make their virtue of perseverance glorious by encouraging followers in the same path. It is almost as difficult for an inventor to procure even an interview with the men whose inventions and discoveries have made their names famous as to achieve a presentation to Queen Victoria or the Emperor Louis Napoleon. But these notable men are not ignorant or forgetful of the means that gave them fame; for at dinners given in their honor and in sketches or biographies of their lives they are not ashamed to rehearse the circumstances of annoyance, the obstacles, the difficulties that faced them and troubled them before success was assured. But they seem to suppose that their inventions and their value to the world absolve them from any further concern about the welfare of the race or the well-doing of individuals. The old British doctrine, "Once a subject always a subject," is entirely applicable to the realm of invention. No man who has worried through the annoyance, and trouble, and travail, and agony of discovery, and come out successful against great odds, has any right to repudiate his allegiance to the great republic of improvers and refuse his aid to those who strive to reach his eminence.

But these are not the worst obstacles in the way of the inventor. His patent secured, the favorable opinion of experts and influential persons obtained, and even a fair trial having proved the superiority of his device over others used for a similar purpose, he must meet the unreasonable objections of unreasoning or captious men. He may have considered his path easy after having demonstrated by fair experiment the absolute value of his invention, but the road is still rough.

Introducing his device and procuring the assent of the party to whom he wishes to dispose of a machine, or right, he is not certain that he has made a success, even in a single instance. Although no direct objection can be urged against the facts adduced or the demonstration shown by experiment, not unfrequently the purchaser and user will bring forward some objection not really tenable, and without logical argument to support it, but which, to him, is all-sufficient. It is difficult to manage such cases. It is hard to combat prejudice. Attachment to old forms of tools, to machinery perfectly understood, to familiar methods, is hard to overcome. With all their faults the mechanic loves his own tools and own methods the best. Only the all-powerful influence of interest can avail to overcome this sentiment.

This conservatism—vulgarly called old-fogyism—among mechanics, is the hardest difficulty met by the inventor and introducer of new tools, appliances, and methods. Is there not too much of it; too much of a disposition to give the cold shoulder to all projected, or even perfected improvements; too much of the old time sneer of "visionary" directed to the inventor, too much of an adherence to the old and not enough attention to the new, by our mechanics and manufacturers? Would it not be better, not only for the inventor or discoverer, but for the mechanic and the manufacturer to look fairly, try impartially, test honestly, and judge rightly, than to allow prejudice to work injury to themselves and produce disappointment to the inventor?

DOES AMERICAN INDUSTRY NEED PROTECTION?

The man who undertakes to answer the question which stands as the caption of this article, must be one of broad views. A mere superficial observer must necessarily err in his conclusions upon a subject, which has puzzled the minds of careful and thorough thinkers. It is not our intention to definitely answer this question here, but to call attention to a point, which, in all that we see written or hear spoken upon the subject, seems to be in a measure overlooked.

Commissioner Wells has told us in his able report, that a tariff is a tax.—Admitted. He also asserts that a tariff on imports is a tax that, under all circumstances, is paid wholly or in part by the consumer. Granted also

The general argument against protection based upon this well understood and admitted fact, is that the imposition of protective duties on special articles of manufacture raises the price of these articles to the entire mass of consumers, while a few are enriched by their production. The general answer to this argument which is as old as the idea of protection itself, is, that the advantages which accrue to the commonwealth from the protection of special industries, by the wise imposition of duties, compensate for the increased price of the taxed products. We believe this position is sound, but without rehearsing the arguments usually put forth in its support, we will at once state our proposition. The political health of any commonwealth demands a diversity of industries. The cheap lands and the high rates of labor prevalent in the United States, as compared with Europe, naturally tend to unduly develop agriculture, at the expense of many industries of vital importance to the general good. These latter, fostered by a judicious legislation, can be sustained without detriment to the agricultural interest.

It is unwise to be dependent upon foreign sources for any important production. The history of the world teaches us that the relations between nations are liable to frequent and serious disturbance, and that the increase of values upon articles of import consequent upon war is often enough to make the domestic manufacture of such commodities remunerative for a decade, if distributed equally during such a period.

But especially is it dangerous to fail in the protection of such industries as furnish material for national defence. All governments have recognized this fact, and have either taken full control of them or have made it certain that the cutting off of a foreign source of supply would not prove a source of embarrassment. The same principle can and ought to be applied to such productions as are essential to the comfort of the people at large. It is easy to imagine the distress which would be felt in some European states if the importation of breadstuffs should be suddenly stopped. Our own land is so wide and its products so diversified that it would be difficult to name a commodity which, if its importation should at once cease, would now seriously embarrass the Government, or materially detract from the comfort of the people; but it is easy, we think, to see how improper legislation might so dwarf the home production of—say iron, for example, and so stimulate its importation, as to render such a contingency as we have named not only possible but probable.

There is another reason why national prosperity is dependent, among other things upon diversified occupations. It is by this means only that the full mental power of the population can be developed. All are not adapted to pursue the same calling, and different pursuits are as necessary to the health of a nation as different articles of diet to bodily health.

The danger of enriching a few at the expense of the many, is, in this country, limited by a free competition; and we are not in sympathy with those who view a proper protective tariff as the parent of monopolies.

CENTRAL LAKE NAVIGATION.

The grand chain of lakes occupying the center of the North American Continent together affords navigation almost oceanic in its proportions. The improvement and development of these great waters have, with the increased settlement of the fruitful regions surrounding them, become a matter of necessity, and the public will be interested to know something of what is now being done in this direction.

General T. J. Cram, of the United States Corps of Engineers,

is now directing the improvement of what is known as St. Clair Flats. The improvement consists in the construction of a canal, one and one-half miles in length and three hundred feet wide, and of sufficient depth to permit the passage of vessels drawing thirteen feet at low water, and is built with a view of increasing its depth to eighteen feet in future if required. The bank is flanked by dykes of timber to be filled by the excavated earth. The timbers are to be saturated with creosote to retard decay. Few unacquainted with the subject will realize the great increase of facilities for navigation which this canal will afford. An examination of a map of the lakes will however show at once the importance of the work. At Chicago, other improvements worthy of notice are progressing under the direction of the Chicago Dock and Canal Improvement Company. These improvements consist of a system of piers and canals having for their object the increase of dock facilities at the above named city and a huge breakwater for increased safety of the harbor. The canals are to extend into the town, twelve hundred feet from the shore line.

The breakwater is to be a very extensive structure. It is to be built in sections three hundred feet in length, to be sunk to the water line; and it is contemplated to build thereon an immense storehouse covering the entire length, if experiments shall demonstrate the safety of such a structure. The entire area the storehouse will cover, from which also the size of the breakwater can be estimated, is one hundred and fifty-six thousand feet.

The canals are to be divided by cribwork consisting of two rows of piles driven as closely together as they can be set, and capped longitudinally with timbers. The space between is to be filled with stone, and planked. The docks are to connect with every railroad in the city by special tracks and switches, so that goods can be transferred directly from the cars to the vessels. The expense of the work is estimated at two million dollars, and when completed will be as complete and convenient as any system of inland dockage in the world.

IS LABOR-SAVING MACHINERY THE ENEMY OF LABOR?

The old, old fight, almost interminable, and persisted in notwithstanding the recorded verdict of history—and the events now transpiring, shortly to become a portion of history—is still going on. It is between ignorance and enterprise, dull conservatism and wide awake improvement. Will this absurd conflict never be ended? Will our would-be social theorists ever be willing to accept facts as better than their theories? Will ever the Malthus philosophy cease to affect social relations and the opinions of those philosophers whose thoughts intend to "shake mankind" and mold the ideas of the active ones who strive to make these thoughts a reality? Is the advance of the race by means of new scientific discoveries and new mechanical improvements to be checked by the bugbear of a plus of laborers over the work to be done? Have we reached the point where we must either stay the progress of labor-saving, and time-saving, and brain-saving, to allow the muscle as wielded by the puny arm of man to exploit us and prevent all progress by brain-muscle, or allow the serfdom and feudal lordliness of the past ages to return? Must all our boasted improvements in the arts and the sciences be considered only as toys for the intellect, unaffecting the well-being of the race? Shall we return to the laws of Lycurgus, and immolate our progeny upon the altar of national advantage, as understood by the fearful disciples of Malthus?

Such would seem to be the idea of some theorists. A gentleman of culture—æsthetic and literary—called upon us a few days ago to make inquiries relative to the subject of supply and demand as concerning the progress of the race. He seemed to be devoted to the idea that the supply of labor exceeded the demand, and that labor-saving contrivances were only laborer-slaying devices. The information we might give him in relation to this subject as shown by the record of patents, and their aggregate or proportionate usefulness, he supposed might be available to sustain what was his plainly preconceived view, that the laborers were many and the harvest small. He alluded to the destruction of labor (life) in our late war as something like a "providential dispensation," to weed out and lessen the choking growth of laborers in our social garden. We could not give him encouragement.

That some of the centers of manufacture and commerce are overcrowded proves nothing in favor of the idea that the laborers are too many. It proves only that this labor is misdirected, either by its possessors or others. Commerce, or rather the mercantile branch of business has grown to be a fungus on our industries. It was once used and is now calculated to be a support and aid to productive industry, but that it has proved to be either a parasite or a fungus, garroting the growth and sapping the life of industry, alluring by its temporary or periodical luxuriance, does not prove that labor is less in demand, only that other means of living than that of direct labor make seemingly fairer offers. If the cities are crowded, the country is open; if it is hard to procure even indifferent shelter and precarious living in crowded cities, both are easily obtained outside. Take the State of New York, for instance, and go through the nearest one hundred miles from the metropolis, what acres upon acres, miles upon miles of fertile soil which one passes on the line of a railroad, may be seen from the window of the swiftly gliding car, that seemingly have never felt the magnetic and magical touch of the laborer's hand! This State alone has unoccupied and unused land enough to give good homes and profitable or comfortable incomes to all the possessors of muscle and brain, however uneducated, that come to our shores from foreign lands in a twelvemonth.

Do the improvements made by researches in science or experiments in art add to the difficulties of labor in seeking its reward? We cannot see it. On the contrary, every advance,