

third of Iowa, combined. The climate is remarkably salubrious, the death rate is low, and epidemic diseases are rare. Means of intercommunication consist of 692½ miles of finished railway and 8,012 miles of telegraph wire, and 561 additional miles of railway are projected. The telegraph is under government control, and a message of ten words may be sent to any part for one shilling. The Post Office includes a system of government savings banks. The public debt is not more than three years' revenue. Land for settlement can be obtained of the government in any area between 40 and 320 acres for \$4.84 per acre, payable on easy terms.

The present mainstay of Australian prosperity is live stock, and this is conspicuously true of New South Wales. The value of cattle, horses, etc., in the colony in 1875 was over \$35,000,000, and the wool export is very large. There is no part of the country where sheep and cattle will not thrive; and with the improvements which are constantly being made in the preservation of meat, it is likely that before long the rearing of live stock for consumption in Europe will become a great and valuable industry. The soil is suitable for the cultivation of all northern cereals, coffee, tea, tobacco, cotton, sugar, olives, cinchona, indigo, and rice, besides the fruits of the temperate and semi-tropical zones. The demand for agricultural laborers is therefore especially marked. There are abundant coal resources, the approximate coal area being 24,840 square miles. The gold mines are believed to be extensive, but labor must be had before they can be developed. Tin and copper are largely mined, and a fine quality of iron is obtained. There is a diamond area of 500 square miles, and in gems of all kinds the country is remarkably rich. The larger manufacturing industries include ship and boat building, brick making, milling, tanning, engineering, foundry work and pottery—all of which are carried on in extensive establishments. Of the minor industries, nearly all are represented as in a flourishing condition. The eight hour rule in labor is generally followed. Taxes and rents are low, while wages are fair. A bricklayer, for example, can earn in Sydney from \$2.50 to \$2.75 per day. Building laborers get from \$1.50 to \$1.75. In the iron trades the pay for eight hours' work ranges from \$2 to \$3 per day. Painters receive from \$8 to \$15 per week. In the gold mines, a day's wages is, for eight hours, \$1.87 to \$2.08; in copper mines, same time, \$2.08 to \$2.60; in coal mines, five hours' work, \$2.35; in iron mines, nine hours' work, \$1.75 to \$3.50. As regards the cost of living, a house containing 6 rooms may be hired in Sydney for from \$3.50 to \$5 per week; in the suburbs this rent falls as low as \$2.50 to \$3.50 per week. Smaller houses ranging down to three rooms are proportionately lower in price. In the matter of food, beef sells for 8 cents per lb., flour 3½ cents, bread the same, sugar 6 to 8 cents. Generally the prices are high, in some respects notably so, as butter is quoted at 50 cents per lb., milk 16 cents per quart, and bacon 25 cents per lb.: but these are Sydney rates, and the cost of living appears to be somewhat less in the country, while wages out of the city average rather higher.

Of course the chief advantage offered to the immigrant is steady work, which is to be supplied both by private enterprise and by the expenditure of some \$20,000,000 of surplus public revenue for the construction of railways.

THE WORLD'S POPULATION.

The present population of the world is somewhere between fourteen and fifteen hundred millions, the latest and perhaps most trustworthy estimate, that of Drs. Behur and Wagner, placing it about midway between the limits we have mentioned. The impossibility of estimating the number more closely will be apparent when it is remembered that only in a comparatively small part of the world have careful censuses, or indeed censuses of any kind, ever been made. A systematic enumeration of the inhabitants of India a year ago discovered that the population of that great empire had previously been under-estimated by upwards of 25,000,000, or as many nearly as the population of England, Scotland, and Wales. The census returns of Europe are tolerably complete, the leading States standing in the following order in point of numbers:

Russia.....	1870	71,731,000
Germany.....	1876	42,723,000
Austro-Hungary.....	1876	37,700,000
France.....	1872	36,103,000
Great Britain.....	1876	33,450,000
Italy.....	1875	27,482,000
Spain.....	1870	16,552,000
European Turkey.....	—	8,500,000
Belgium.....	1874	5,337,000
Roumania.....	1873	5,073,000

Sweden and Portugal slightly exceed 4,000,000 inhabitants each; the Netherlands fall a little short of that number; Switzerland fails to reach 3,000,000; while Denmark and Norway fall somewhat below 2,000,000. Greece and Servia fall short of a million and a half each, and the smaller States together add less than half a million more. The aggregate population of Europe is thus a little over 309,000,000, giving a density of 82 to the square mile.

The population of Asia, according to the same authorities, is about 824,500,000, or 48 to the square mile. The most populous nation is China, with over 400,000,000 people. British India has about half as many; Japan over 33,000,000; Turkey in Asia about 13,500,000; Asiatic Russia about 15,000,000. Africa has a population close upon 200,000,000, America about 85,520,000; Australia and Polynesia less than 5,000,000. The density of the African population is 17½ to

the square mile; of America, 5½; of Australia and Polynesia, about 1½ to the square mile.

There are ten cities in the world that have a population of a million or more, namely: London, with 3,490,000; Paris, 1,852,000; New York (with Brooklyn), 1,596,000; Constantinople, 1,075,000; Berlin, 1,045,000; Vienna, 1,001,000; and Canton, Seangtan, Shanchowfu, and Siangfu, in China, with 1,000,000 each. There are twenty-nine cities with 500,000 or more each; and 215 with 100,000 or more people.

PATENT RIGHTS AND PATENT WRONGS.

The old saying, "out of the frying pan into the fire," is always worth heeding. The single circumstance that a degree of mischief is the outcome of any custom or law is not in itself a sufficient reason for the condemnation of such law or custom. As this world of ours is constituted, good and evil ever go together. There is nothing so beneficent that it may not sometimes do harm. Even the Gospel of Peace has more than once brought discord and the sword. Reform is always in order; but before it is undertaken in any case, it should first be made clear that something better is possible, and that the harm likely to be done in the process of substitution will not be greater than will result from leaving things as they are.

We have little sympathy with those who persist in regarding the patent system of the United States as the source of unalloyed good. We are equally far from sympathizing with those who cry "away with it," or would change its provisions at a venture simply because it is, or appears to be in some cases, the instrument of "oppression." Like everything else we have to do with, it is something experimental, aiming to secure the greatest good to the greatest number, but making no pretence to infallibility or absolute beneficence.

That strong *ex parte* arguments can be brought against its workings in some particulars is undeniable; but on the other hand, the advantages directly traceable to it are enormous, vastly overbalancing, we believe, the evils wrought by it or in its name. The part of true statesmanship therefore seems to be, not to abolish the system outright as some demand, nor to emasculate it as others would like to do; but to determine the sources of the evils which attend its workings, and then, if possible, modify the system so as to obviate those evils without opening the door for the entrance of greater evils.

The charges against the patent system as it now stands are certainly serious, or, more correctly, some of them are. Others, like the following from a late issue of the *Chicago Times*, are simply ridiculous, to wit: "That the patent system is an oppressive nuisance; that it has proved itself the reverse of a stimulant to the inventive faculties of the American people; that its original purpose, to secure to inventors a reasonable recompense for their study and ingenuity, has been prevented, and that not one inventor in a thousand receives any substantial benefit from his invention."

The patent falsity of charges of this sort prevents their imposing upon anybody capable of observation or honest thinking. Not so, however, the charges based upon truth and experience: for example, that a patent right is for a time the monopoly of the possessor; that it allows the patentee to restrict the liberty of all other men to the extent of denying them the privilege of using something they want except on such terms as he may dictate; that it allows a patentee to prevent absolutely, if he will, the use of a patented device or process, for a term of years, to the manifest detriment of the common wealth; and that it allows the owner of a patent or a combination of patents to levy enormous taxes on the country's industrial or natural resources, while the inventors, for whose benefit the patents were issued, get little or nothing for their rights.

Let such charges—the worst that can be brought against the patent system—be granted as true. Does it follow that the system should be abolished? Certainly not, whatever the *Chicago Times* or others of the anti-patent school may demand, unless it be first clearly demonstrated—

That the patent system as a whole has been no help, but rather a hindrance to the development of the country:

That the owners of patents have been more favored by law than the owners of other species of property:

That the admitted evils of the patent system are inseparable from it, and that no mitigation of them is possible except with the abolition of the system.

Touching the first very little need be said. The verdict of history, of common sense and common fact, is against it. Even in the case of the patents which have given rise to the most "oppressive" monopolies—mowing machines, cultivators, sewing machines, vulcanized rubber, telegraphy, railways, and the rest—it is easy to show that they have been of enormous advantage to the country, and have added vastly more to the wealth of the people who have been "oppressed" by them than they have taken away. It is true that the owners of such patents have often been greedy of gain and have amassed great wealth; but what are their fortunes compared to the aggregate wealth of those who owe what they have almost entirely to the aid they have received from the very patents they complain of?

The chief opponents of the patent system are the Western Grangers, whose narrow views have been represented in the recent anti-patent enactments of their State legislatures and also in the bill now pending in the United States Senate. Have those same Grangers ever seriously asked themselves the question where their organization and the wealth it represents would have been—where they personally would have

been—had there been no patent system to encourage inventions, and no fruits of such a system to make the cultivation of the interior wilderness possible, or to enable its pioneers to send its products to a profitable market? We hazard the assertion that the "obnoxious" patent system, and the inventions it has encouraged, have done more for the Grangers than they have ever done for themselves.

But, it is objected, on their part, the owners of patents have been and are unduly favored in the struggle for existence. They have been too much protected, to the grievous injury of the users of their inventions, particularly the agricultural classes.

Let us see: Let M., a mechanic, represent the patentees, inventors, and owners of patents, as a class. Similarly let F., a farmer, represent the Grangers. F., strong in hope and health and muscle, goes to the wilderness and clears a farm. For the work so done, or for a merely nominal payment, the general government grants him a section of land. The grant is absolute and for all time. Meanwhile M. is devoting his energies to the perfecting of some useful device. He succeeds, and the general government gives him the right to make and sell his invention—for all time? No; but for a period of a few years only. So far, certainly, the inventor is not unduly favored.

We will suppose that the invention is so important and useful that, before the life of the patent expires, the inventor has amassed a noble fortune; or better, suppose that the inventor, unaware of its importance, sells it at the current rate for patents, according to the opponents of the system, "a song," and the property passes into the control of a scullion corporation, which is enabled thereby to monopolize an extensive line of manufacture, and so acquire no end of riches. Better still, suppose this grasping corporation, which owns something that the multitude cannot afford to be without, and charges accordingly, becomes so rich that before the expiration of the patent it is able to secure a renewal of it, and so continues for another term of years to "prey upon the people." The end comes at last, and then the invention becomes a portion of the common wealth. The patentee or his successors have been greatly favored truly; but is their case entirely unique?

Let us see how our pioneer Granger has fared meanwhile: The title made out, the land is his to use or let alone as he will. He can let it lie unproductive, not merely for seventeen years (like an undeveloped patent), but for any time he may choose; and he can keep anyone else from cultivating it except on such terms as he may dictate. His monopoly is, then, as complete while it lasts as a patentee's, and it lasts for ever. Suppose he has made a happy selection and has chosen a valuable site for water power, or that the land is found to contain precious metals, or that it happens to be where a great commercial center is destined to be. He, unlike the inventor, has added nothing to the world's wealth, yet purely through the necessities of others he may gain great wealth by what is called the natural rise in value of real estate; and the law of the land defends his title.

To parallel the case of M., suppose F. to be ignorant of the present or prospective value of his homestead, and that he sells it, as M. did his patent, for a song. The buyer may improve the property or let it lie fallow, just as he pleases. He may leave it for generations, a serious bar to the development of the surrounding community, who may sorely need the water power, the useful minerals, or the advantage of the commercial situation it covers; or he may turn their necessities to his advantage and charge enormously for what owes its real value not to the owner's efforts but to the labors of others who have been hindered rather than helped by his negative action. We might point as an illustration to one of the oldest cities of New England, which from its natural advantages might have been one of the most prosperous, but is now a tenth-rate place simply because those advantages have been monopolized by a family that would neither develop them or allow them to be developed by others. The vast fortunes that have come to the Astors and similar owners of landed property, which has been made valuable through the energy of other men, tell the same story.

The worst possible cases of patent "oppressions" are trivial compared with the burdens which rising communities have had to bear through speculations in land. Shall we say, therefore, that private ownership of land is injurious and ought to be abolished? Or, because the great landed fortunes have not fallen to the working pioneers, that the land laws of our country have not encouraged emigration or hastened the development of the country?

The inventors, if they would, could make out a far stronger case against the landowners than the latter against the patentees; but only by overlooking, as the Grangers do, the very important circumstance that, however great the local evils of either system may have been, the good has preponderated enormously. And the charge of favoritism can be returned with interest, for the patentee's monopoly is limited, and in a few years his invention becomes public property, whereas the landowner's monopoly is perpetual.

There remains the question whether the patent system can be modified so as to mitigate the alleged evils of its workings without impairing in any serious degree its efficiency as a stimulant to invention. We are inclined to think it may; but the case is not as clear that sudden or reckless changes are advisable. This question, however, is too important to be discussed at the tail of a long article. We reserve it, therefore, for subsequent consideration.