

SENATOR JOHN RUGGLES,

Author of the Acts of Congress 1836, 1837 and 1839, which created the U. S. Patent Office.

Born October 8th, 1789; Died June 20th, 1874.

(Portrait taken from a painting made 1834.)

THE PATENT FRANCHISE

IN THE

UNITED STATES.

By G. H. KNIGHT,

Temple Court, New York.

"No one can deny, however, that it is the **psychical** endowment of a tribe or people which decides fatally its luck in the fight of the world."

(Brinton; Races and Peoples, 51)

APRIL, 1891.

THE SITUATION AND ITS LESSONS.

A witness of the intellectual and industrial activity now so conspicuous in portions of our country, and among kindred populations of North-Western Europe, finds it hard to realize that but three consecutive life-spans of four score years and ten take us back to a time when the whole of what is now the United States was in the possession of hordes of wandering savages still in the Stone Age. He will find it yet harder to realize that the Britain of that date, so far from being a manufacturing country, was, for the most part, in that pastoral stage of culture which, in the march of civilization, has customarily intervened between the feral and the agricultural, and had, for her most important export, raw wool, a part of which came back from the continent in the forms of worsted and woven fabrics.

And, by-the-way, wool seems to have been as perplexing an element with the legislators of mediæval England as, in one form or other, with their descendants on this side of the ocean. How this excellent staple survived our forefathers' tinkerings, cossetings and regulatings, is a wonder. Now, a tax was levied on wool of foreign growth; next, its importation was a penal offence; again, lest it should benefit Flemish weavers, exportation of British wool was taxed and subsequently altogether forbidden and made penal. To bury your grandmother without a shroud of British woolsey subjected you to a heavy mulct. Then, in

an excess of patronage, it was, so to speak, sanctified by an ordinance which required the very seat and throne of English jurisprudence to be cushioned by a British woolsack, as it is to this day. It is fearful to contemplate the possible effect on the British Constitution should some irreverent Yankee surreptitiously substitute for the historic cushion one stuffed with shucks or excelsior.

From the care taken to foster the wool industry, one would have sworn that Westminster Close was a sheep pasture, with lords and commoners for shepherds.

Of late years, British legislation has, as all know, let this unlucky staple severely alone, and yet the industry survives!

In agreeable contrast to the wool-regulating folly of earlier times was the great and wise "Statute of Monopolies" of which we have now to speak.

THE FIRST PATENT LAW.

At the time spoken of, an inspired statesman prepared, and A. D. 1623 got enacted, the statute destined to be the instrument of revolutionizing modern industry, and of converting a land mainly devoted to sheep husbandry into a busy hive of farms, orchards and factories.

At the date of this peaceful revolution the surviving settlers of Plymouth Rock had just entered the third year of their heroic struggle with wild nature and wilder men; continental Europe was in the midnight of its dreary Thirty Years' War; one Oliver Cromwell, an obscure country squire, in his twenty-fifth, and one John Milton, a law student, in his sixteenth year, were alike unconscious of coming greatness; William Shakespeare (equally oblivious of fame) had, seven years before, been laid to rest in the little parish church of Stratford; George Fox

was, if possible, even more oblivious, as he was not born until the following year. In the journal of the latter worthy, a quarter of a century later, we find a suggestion of the then refinement of woven garments in the nickname "Leather Breeches," given by the folk of the country-side to the primitively attired founder of the Society of Friends.

In a surprisingly short time after the enactment referred to, the scene became changed as though by a magician's wand. Our mother land soon reached and long held the most advanced rank with respect to the twin arts of Agriculture and Manufactures and their hand-maiden Commerce.

More recently our own country, which has for three generations enjoyed a patent code of exceptional liberality, or, if you prefer the phrase, of exceptional justice, to inventors, is now confessedly in the van in not a few world-renowned and lucrative departments of manufacturing industry, all of them directly traceable to our patent polity, and especially to the Act of July, 1836, which gave birth to the system of technical examination.

Following in the trail of these achievements, our age has witnessed a material, intellectual and social revolution for which history affords no precedent.

ASSAULTS ON THE PATENT SYSTEM.

Yet, in the face of these acknowledged facts, we find, even among its beneficiaries, those who begrudge invention the privilege of gathering its own first fruits. Some, for sake of a temporary advantage, would even enact the role of Æsop's peasant and kill the bird that laid the golden eggs. These thrifty objectors sometimes, however, deign to render a reason, as, for example, they say, and say truly, that, in the majority of instances, the patentee is only a little the swiftest in a race, failing in which, others

would shortly have come forward and achieved the desired result. But they overlook the fact that had there been no goal there would have been neither race nor racers. "They who run a race run all, yet but one receiveth the prize." Inventors' full knowledge of this rule of the modern Olympia is well known to be one of the most effective incentives to activity.* Another equally illogical objection sometimes urged is that patentees take advantage of their brief monopoly to charge extravagant prices for their planters, reapers, threshers, and other labor-saving miracles. These worthy farmers overlook the fact that the creator of a successful art is entitled to something for his *risks*† in the lottery of industrial speculation, whose prizes are far outnumbered by its blanks; nor does it occur to them that there was no compulsion of purchase, and that their very act of adoption and continued and increasing use belies their declarations.

The situation cannot, however, be viewed with indifference which permitted a recent representative convention of "Grangers"—sustained by even more extreme views of a Congress of "Labor-Unionists"—to adopt a resolution "that the term for which patents for inventions are hereafter granted be restricted to ten years." It does not appear to have occurred to our worthy bucolic (or bucholoric) friends to extend such restrictions to patents for *land*. Yet what is good sauce for the gander is said to go equally well with the goose, and who knows but these patriotic citizens (and citizenesses, for ladies, God bless 'em, take part in the deliberations) might consent to extend their platform by this one additional plank!

The Grangers' attitude towards intellectual property will,

* The industrial stagnation seen in non-patenting countries falsifies the complacent assurances of certain shallow socialists that invention would flourish although denied the hope of recompense.

† "Of patents granted, probably not more than five per cent. remunerative." *Address Ex-Com'r Butterworth*, 10 *Ap.*, 1891.

perhaps, be better understood by approaching the question from the opposite direction.

Among feral tribes there can be no property in an animal until the creature is wounded or slain, and then it belongs to the slayer. With the hunter a cow is only a kind of buffalo, and he spears or shoots it without the slightest hesitation. This summary appropriation of his most treasured property the keeper of herds strenuously resents; while, on the other hand, the hunter has at last found himself confronted with a totally alien code and mode of life, and conflict is inevitable.

Precisely the same kind of incompatibility of creed, code, and custom occurs at a later stage of civilization when the ranchman, whose flocks and herds had, from time immemorial, roamed with absolute freedom, finds himself fenced out of the settler's cornfield. To him, the proposition that ownership can exist in the earth's surface seems as preposterous as that in a living cow did to his Indian antagonist.

To carry the simile one step farther, the farmer, who has been taught to regard ownership in land as the one "*real* property," cannot understand how there can be ownership in an *idea*. All property heretofore known to him has been at least tangible. He has never consciously himself originated an idea which he believed to possess market value,—a belief in which he had probably been entirely correct,—and the same man, who would be outraged by a proposition to confiscate broad acres held by him and his heirs in perpetuity, feels no compunction in proposing to lop seven years from the short-lived tenure of a patent franchise! It never enters his head that this principle of confiscation may prove "a kicking gun" at a not distant future.*

* That the body of citizens composing the Farmer's Alliance feel able to enforce whatever they shall determine upon, is shown by their attitude in a late national convention, where it was resolved "to demand that Agricultural Interests shall be represented by a Cabinet officer." —They **got** him!

The human law, however just or beneficent, has never yet been framed that was not liable to abuse, and, were our rural friends cornered on the question, even *they* would have to admit that ownership of land is not an exception.

It must, however, be confessed that the objectors have had their provocations. The tiger, who fears no other inhabitant of the jungle, may be driven stark mad by a swarm of mosquitoes. Possibly nothing has raised more bad blood and downright hostility to patents than the small and persistently prosecuted claims by the holders of certain patents (since invalidated by the Supreme Court) for driven-well processes. The surprised victim at first demurred, but the claimants well knew they had their trout safe on the line, and that Hodge, rather than leave his crops for a lawsuit at the distant city, to which "the President of the United States—witness the Honorable Salmon P. Chase"—had summoned him, would cut the knot of the dilemma by going to the old stocking and abstracting therefrom the hundred dollars demanded for a "license." When, a few years subsequent to this trageo-comedy, he learned that some more obstinate or more opulent defendant had beaten the patents and patentees in the court of last resort, the wrath of the victim, wounded both in pride and pocket-book, knew no bounds. The immediate offenders having long since "skipped," the very system fell, with these honest farmers, into a disrepute from which it has not yet recovered.

The hopelessness of movements for any marked legislative progress in the present *mis*-information, even in high places, may be gathered from a communication in the *North American Review* of November last, from a distinguished member of Congress. The cap-sheaf of his charges of extravagance against his political adversaries is thus stated: "In the Patent Office,

thirty of the highest salaried officials participate in the general raid upon the public treasury." Verily!—a few "Tracts for the Times" might do some good in even the enlightened vicinage of Floyd County, Georgia.*

THE PROPOSED DIGEST.

The Constitution of the United States manifestly contemplates a governmental organization whose powers extend to other fields of action than the repression of crime—notably the institution and maintenance of conditions favorable to genius and industry, and the execution of public works beyond the scope or ability of private enterprise. Now, each annual report of the Commissioner of Patents has, for a long time past, urged upon the attention of Congress, the absolute necessity, for the effective exercise of the duties of the Examining Corps, of a carefully indexed digest or abridgement of the drawings and specifications of patented devices. The total issue of the labor of our Federal Legislature on this pregnant subject was the appropriation, some fifteen years ago, of over $10,000.

The adequacy of this sum may be appreciated by a statement of the experience of a private publisher of a greatly more restricted work in the same direction. To prepare and place on the market the *American Dictionary of Mechanics* required an expenditure of over $100,000.

In proof that the general public, although the chief beneficiary, would not be put to a penny of expense, I am in receipt of the written assurance of the Honorable E. R. True, Acting Assistant Treasurer of the United States, that at this very moment the Patent Office stands credited with $3,872,745.24. The excess

* Even such distinguished feudal proprietors as Prince Bismarck and the late Lord Derby have professed inability to perceive any inherent or inalienable right of the inventor in that which he has created.

of each succeeding year's receipts of the bureau over its expenditures being a steadily growing one, the aggregate credit, by the time the present Congress could act, may be expected to approximate $4,250,000. Hence, an appropriation of $500,000, needed to initiate a digest, would leave untouched something like $3,750,000. Although it is believed that it would prove of high utility outside the Patent Office, the primary use and object of the publication would be in the Examining Department of the office itself. The work, if ever undertaken, must be a national one, and it is difficult to conceive of a more appropriate application of some part of this fund taken from the pockets of applicants

Once established, the work might be expected to find its staunchest advocates among such as, abandoning the hope, (or perhaps the wish) to see the patent system abolished, yet object to the issue of patents that fail to survive the ordeal of judicial investigation.

The *number* of applications would probably not be greatly affected, the easing of the path of inquiry to one class of inventors being balanced by the deterrent effect on such as should find themselves engaged in "threshing old straw." **The legal status of American patents would be greatly raised.** As an aid to exhaustive technical examination, the effect would be wholly critical, sifting and discriminative. Acquiescence in patents would be the rule instead of, as it is now, the exception.*

PROPOSED ADDITIONAL TAX ON INVENTION.

There is one point which I approach with reluctance. It is a delicate matter, a family secret, in fact, and must go no further. Like other domestic controversies, it grows out of differences in

* To reach its highest possibilities of usefulness, it should be a judicious digest of **devices** rather than of patents, as such.

the individual members. First; we have that rare creation, the many-sided all-round inventor, who combines fertility in expedients of a true genius with the unflagging executive force of a one thousand horse-power steam-engine. We all know of a few such. He is generally one who don't need a "*guardeen.*" He can take care of "NUMBER **1**" pretty well. Second; there is the studious man, having the initiative faculty, and who, aided perhaps by his solicitor, puts on record such a description of his invention that one skilled in the art could embody it in an operative machine or process. From one of a variety of causes, such as poverty, sickness, diffidence, total lack of the business faculty, or simple bad luck, the inventor may himself never have so embodied it, yet, if no applicant appears for a patent for the same invention during the pendency of his application, his patent stands good against all men, be they one-sided, two-sided, or many-sided. Third, there is a numerous and very useful class of inventors, well in touch with the public, whose genius takes the more humble but greatly more profitable direction of putting NUMBER **2's** creations in commercial shape. NUMBERS **1** and **3** have not always to NUMBER **2** (whom they call a "paper inventor") those fraternal sentiments that Dr. Isaac Watts assures us "birds in their little nests" display. This worthy divine had, it may be feared, never studied the habits of the *Cuculus canorus.*

Some thirteen years ago, when a bill like the now defunct House Bill 10,639 of the 51st Congress for increasing the official charges to patentees, was before Congress, I wrote to a gentleman whose already large contributions to the patent-fund as an applicant would, I thought, give his word weight with the committee, and was answered that in his opinion "a considerable increase in Government charges, either in application or subse-

quently, would be additional misery to inventors, who have now a hard enough time to pay for patents at the present rate, and that such additional tax would operate as a check on inventive progress." Such were the views of this already famous, but as yet struggling, inventor in the year of grace 1878. Wishing to know whether the millionaire of Anno Domini 1890 bearing the same name still held to the opinion above expressed, I again wrote to him, and, although the busiest of men, he again promptly replied. This second reply, however, showed that a change had come o'er the spirit of his dream, for it assured me that he now favored the additional tax for the very reasons given by its advocates, namely, that it would tend to vacate unworked patents. Notwithstanding this reversal of the decision of "Philip" sobered by adversity, by "Philip" intoxicated with success, I believe a majority of authorities still hold to the views of "the court below."

Among objections that may be cited to the imposition of additional, and especially deferred, patent fees (merely to add to the "unearned increment" in the public treasury) are:

1. It would do violence alike to the spirit and to the letter of the Constitution—Article I., Section 8—whose expressed object was "to **promote** the progress of science and the useful arts," not to levy "a tax" upon such progress.

2. It would be both vexatious and repressive, in that the deferred payments would fall due when such franchises in this country often become distributed among more or less numerous and distant holders, personally strangers to one another, and who would be under no obligation to recoup one of their number who should have the forethought and generosity to pay the mulct out of his own pocket.

3. It aims, through a special and impolitic exaction, to cure by a remedy worse than the disease, and largely preventable

by a more perfectly equipped and better salaried examining bureau.

4. In view of the large yearly excess of the Patent Office receipts over its expenditures, both justice and good policy would dictate a reduction rather than an increase of the existing charges.

5. Finally; it is un-American, in that it assumes to burden such grants with conditions, as if they were a royal favor instead of the legalization of a right.

OPINIONS OF PUBLICISTS.

Of many weighty testimonies to these views that might be cited a few may be quoted.

In the famous "India-Rubber case" of Goodyear *vs.* Day, Daniel Webster, "the expounder of the Constitution," said:

"The American Constitution does not attempt to give an inventor a right to his invention, or an author a right to his composition; it recognizes an original, pre-existing, inherent right of property in such invention or composition, and authorizes Congress to secure to the inventor or author the enjoyment of that right, but the right exists before the Constitution and above the Constitution, and is, as a natural right, more than that which a man can assert in almost any other kind of property."

The presidential message of General Ulysses S. Grant to 43d Congress, 1st Sess., Ex. Doc. 27, proclaims the inherent right of inventors in the products of their genius in language as follows:

"The patent system of the United States is, in many respects, radically different from that of any other country. Inferentially, at least, the purpose of the Constitution appears to have been to recognize property in a new invention as a right belonging to the inventor, not a favor conferred by Government. This is their language: 'The Congress shall have power to pro-

mote the progress of science and the useful arts by securing, for limited times, to authors and inventors the exclusive right to their respective writings and discoveries.' "

A great constitutional lawyer, Senator William E. Seward, in an argument before Justices Nelson and Conklin, forty-seven years ago, said :

" The productions of my mind are, confessedly, as really property or the subject of property as the fabrics of my hands. Indeed, they are far more exclusively my own. The patent is a contract by which I convey my invention to the Commonwealth forever, in consideration of the exclusive enjoyment of it by myself during a limited period."

Professor Nat. Shaler (the brilliant Kentuckian who occupies the chair of Agassiz), in his treatise on " The Nature of Intellectual Property," says :

" The title to intellectual property rests upon an even higher level of right than can be assigned to any mere material possession. Indeed, the arguments for the rights of inventors may go further than this ; for it may reasonably be urged that, owing to the custom of limiting such property to a brief term of years, there should be a special exemption of it from burdens which may fairly be borne by possessions held in perpetuity. But half of a generation—scarce one-fourth of the reasonable expectation of human life—is possession given to the creator of property, which is the only absolute contribution to the store of human goods. Surely this should be an argument against making it bear the burden of special disabilities such as our thoughtless marplots of society would put upon it."

Professor Sedgwick :

" The discoveries of physical science are a part of the nation's strength and glory. The inventions of mechanical skill are, or ought to be, the poor man's honor and blessing."

Charles Dickens' "Poor Man's Tale of a Patent:"

"But I put this: Is it reasonable to make a man feel as if, in inventing an improvement meant to do good, he had done something wrong?"

In the very infancy of patent jurisprudence, Lord Chief Justice Parker (Insts., 181), adjudicating under the Statute of 1623, held:

"As a new invented art, nobody can be said to have a right to that which was not in being before; and therefore it (the patent) is a reasonable reward to ingenuity and uncommon industry."

Sir Edward Coke (Insts., 184) held:

"The reason wherefore such a privilege is good in law is because the inventor bringeth to and for the Commonwealth a new manufacture by his invention, costs and charges, and therefore it is reason that he should have a privilege for his reward and the encouragement of others in the like, for a reasonable time."

W. M. Hindmarch (Hindmarch on Patents, 2), says:

"The whole community is benefited by the promotion of the useful arts, and therefore it is for the public good to hold out the promise of rewards to inventors of new and useful arts and manufactures who may first put the public in possession of them. In some cases, where meritorious inventors could not be otherwise adequately rewarded, sums of money have been granted to them out of the public purse; but such a mode of recompense, it is clear, could not be generally adopted.

"It is true that, by such a grant, every other person is restrained, during the continuance of the monopoly, from using the patented invention, even if he makes a similar discovery himself. But, at the time the grant is made, it is by no means certain that the invention will be given to the public, or even made by any other person, and, by the temporary suspension of their right, the

people acquire the certainty of being able to use the invention at the expiration of the monopoly. The reward which the inventor thus obtains will, in general, be in proportion to the benefit which he confers upon the public."

McCulloch (Com. Dict., vol. ii., 274) said:

"The expediency of granting patents has been disputed—though, as it would seem, without sufficient reason. Were they refused, the inducement to make discoveries would, in many cases, be very much weakened; at the same time it would plainly be for the interest of every one who made a discovery to endeavor, if possible, to conceal it; and, notwithstanding the difficulties in the way of concealment, they are not insuperable, and it is believed that various important inventions have been lost from the secret dying with their authors."

Senator Ruggles, the organizer of the Patent Office, said:

"There appears to be no better way of measuring out appropriate rewards for useful inventions than, by a general law, to secure to all descriptions of persons, without discrimination, the exclusive use and sale, for a given period, of the thing invented. In this way they will generally derive a just and appropriate encouragement proportioned to the value of their respective inventions. It is not, at this day, to be doubted that the evil of temporary monopoly is greatly overbalanced by the good the community ultimately derives from its toleration." (Report of Senator Ruggles introducing the draft of the organic act of July, 1836.)

The Chevalier Bally, the Swiss Commissioner to the United States Centennial Commission, said:

"We (the Swiss) must introduce the patent system. All our production is, more or less, a simple copy. The inventor has no profit to expect from his invention, no matter how useful it may be. * * * The want of protection is a disadvantage to us. The State ought not to hesitate to add to its resources this

new resource ; but, at the same time, we must remember that an invention is valuable in proportion to the facility with which it can be made available ; and so it is essential that the grant of patents be accessible to inventors of the most moderate fortunes."

Mr. Badeau, U. S. Consul-General at London, writing in 1876, said :

"I beg to call attention to the portion of the *Times'* article referring to the United States, in which it is distinctly admitted that American manufactures of tools, locomotive engines, and many other kinds of hardware, are now obtained, in Canada and Australia, almost exclusively from the United States ; while it is also stated that that country not only produces at home all the manufactured goods she at one time brought from England, but that she has been able to exclude British goods from foreign markets."

Said Henry Ward Beecher :

"It is the reaper that has made it possible for a thin population to deal with such an enormous acreage of grain. Step by step the reaper has been improved, until now it cuts the grain, binds it in sheaves with wire or string, and casts it aside ready for the cart, and all with the help of but a single man to drive, doing the work of four men on the old machines. The reapers that bind with wire are justly criticised by millers for leaving scraps of iron wire in the grain, which, when it passes through the stones, damages both the flour and the mill. A new reaper, binding with strips or strings of vegetable make, has proved successful this summer, and will probably supersede all others. It is possible to manage farms of hundreds and thousands of acres of wheat only by improved machines. With a sparse population, and only the cradle, and, still less, the sickle, there could be no possibility of securing the grain of these vast grain-fields before it perished. But now the forehanded farmer has a plow rigged with a regular seat, and rides as if in a chariot ; then comes the seed-drill, with its

cushioned seat; and at length the reaper clears the field, with the farmer riding on it, like a gentleman that he is. Fifty years ago there was more backache in handling one acre of wheat than to-day there is in fifty acres."

Said the writer Bushnell:

"It is not in great cities nor in the confined shops of trade, but principally in agriculture, that the best stock or staple of men is grown. It is in the open air, that in communion with the sky, the earth, and all living things, the largest inspiration is drank in, and the vital energies of a real man conserved. The modern improvements in machinery have facilitated production to such a degree that when they become diffused through the world only a few hands, comparatively, will be requisite in the mechanic arts; and those engaged in agriculture, being proportionately more numerous, will be more in a condition of ease. Here opens a new and sublime hope. If a State can maintain the practice of a pure morality, and can unite with agriculture a taste for learning and science and the generous exercises I have named, a race of men will ultimately be raised up having a physical volume, a native majesty and force of mind such as no age has yet produced."

Said Professor Wolowski:

"A patent gave the inventor the right of working individually, in derogation of the chartered monopoly of the guild. Patents are even now granted in Austria admittedly for the same object. Thus the dawn of the right of inventors has been actually coeval with the destruction of monopolies odious to the common justice of men; and the common sense of mankind has marked a distinction between such monopolies and the exclusive rights conceded to inventors. Their rights, under patents, are called "monopolies" only from the poverty of language, which has failed to express in words a distinction which no less clearly exists."

Said Professor Bowen:

"Invention is the only power on earth that can be said to

create. It enters as an essential element into the process of the increase of national wealth, because that process is a creation and not (like that of individual or corporate wealth) a mere acquisition. It does not necessarily enter into the process of the increase of individual wealth, because that may be simply an acquisition, not a creation. Hence, the most frequent cause of the increase of national wealth is the increase of the skill, dexterity and judgment of the mechanical contrivances with which national labor is applied."

These words of Professor Bowen impel the inquiry : In this view, how can the exclusive right in an invention be compared with a monopoly of a trade ? How can the exclusive privilege to sell salt in Elizabeth's time, which added not one bushel to the production, but which enriched the monopolist and robbed the community (as was the fact, by raising the price from sixteen pence a bushel to fifteen shillings), and the exclusive right of Whitney to his invention of the cotton gin, which has added hundreds of millions to the products and exports of the country, be both branded, with equal justice, with the odious name of monopoly"?

Said Dr. Richardson :

" For the present, the status of intellectual property is so insecure that great concessions have to be made by the owners of such property to popular barbarism.

" The gross injustice done to inventors, as in Whitney's case, is to be charged to an undeveloped moral sense on the part of the community, and not to any radical defect in the patent system. Even material property is not yet entirely secure against invasion amongst us."

Even Mr. John Stuart Mill, although a strong opponent of monopoly, frankly admits the reasonableness of granting patent rights :

"The condemnation of monopolies (says Mill) ought not to extend to patents, by which the originator of a new process is permitted to enjoy, for a limited period, the exclusive privilege of using his own improvement. This is not making the commodity dearer for his benefit, but merely postponing a part of the increased cheapness (or excellence) which the public owe to the inventor, in order to compensate and reward him for the service. That he ought to be both compensated and rewarded for it will not be denied; and also, that if all were at once allowed to avail themselves of his ingenuity, without having shared the labors or the expenses which he had to incur in bringing his idea into a practical shape, either such expenses would be undergone by nobody, except by very opulent and very public spirited persons, or the State must put a value on the service rendered by the inventor and make him a public grant. This has been done in some instances (as when Parliament offered a reward of £20,000 for a method of finding a ship's longitude at sea), and may be done without inconvenience in cases of very conspicuous public benefit; but, in general, an exclusive privilege, of temporary duration, is preferable, because it leaves nothing to any one's discretion; because the reward conferred by it depends upon the invention being found useful, and the greater the usefulness the greater the reward; and because it is paid by the very persons to whom the service is rendered, the consumers of the commodity."

Dr. Lardner, writing of the steam-engine, said:

"To enumerate its present effects would be to count almost every comfort and every luxury of life. It has increased the sum of human happiness, not only by calling new pleasures into existence, but by so cheapening former enjoyments as to render them attainable by those who before could never have hoped to share them. The surface of the land and the face of the waters are traversed with equal facility by its power; and by thus stimulating and facilitating the intercourse of nation with nation, and the commerce of people with people, it has knit together remote

countries by bonds of amity not likely to be broken. Streams of knowledge and information are kept flowing between distant centres of population, those more advanced diffusing civilization and improvement among those that are more backward. The press itself, to which mankind owes, in so large a degree, the rapidity of its improvement in modern times, has had its power and influence increased in a manifold ratio by its union with the steam-engine. It is thus that literature is cheapened, and, by being cheapened, diffused; it is thus that reason has taken the place of force and the pen has superseded the sword; it is thus that war has almost ceased upon the earth, and that the differ ences which inevitably arise between people and people are for the most part adjusted by peaceful negotiation."

The lamented and witty Locke, editor of the *Toledo Blade*, said:

"We don't like to be irreverent, but would like to ask, what did our forefathers know? What, for instance did George Washington know? He never saw a steamboat; he never saw a fast mail-train; he never held his ear to a telephone; he never sat for his picture in a photograph gallery; he never received a telegraphic dispatch; he never sighted a Krupp gun; he never listened to the *'fizz'* of an electric pen; he never saw a pretty girl run a sewing-machine; he never saw a self-propelling engine go down the street to a fire; *he never heard of* **"evolution";** he never took laughing gas; he never had a set of store-teeth; he never attended an international exposition; he never owned a bonanza mine; he never knew **'Old Prob.'** He—but why go on? No; when he took an excursion it was on a flat-boat. When he went off on a train it was a mule-train. When he wanted to talk to a man in Milwaukee he had to—go there. When he wanted his picture taken it was done in profile with a piece of black paper and a pair of shears. When he got the returns from the back counties they had to be brought in by a man with an ox-cart. When he took aim at the enemy he had to trust to a

crooked barreled old flint-lock. When he wrote it was with a goose-quill. When he had anything to mend, his grandmother did it with a darning-needle. When he went to a fire he stood in a line and passed buckets. *When he looked at a* **clam** *he never dreamed that it was any relation of his!* When he went to a concert he heard a cracked fiddle and an insane clarionet. When he had a tooth pulled he sat down and never stopped yelling. When he got out of teeth he mummed his victuals." * * *

Herbert Spencer, speaking of England in the year 1891, says:

"There has been a conspicuous progress from the fifteenth century, when even an ordinary gentleman's house was commonly without wainscot or plaster on its walls, down to the present century, when every cottage has more rooms than one and the artisans' usually have several, while all have fire-places, chimneys, and glazed windows accompanied mostly by paper hangings and painted doors. This progress has been still more marked within our own time. Any one who can look back sixty years, when the amount of pauperism was far greater than now were, and beggars abundant, is struck by the comparative size and finish of the new houses occupied by operatives—by the better dress of workmen, who wear broadcloth on Sundays, and that of servant girls, who vie with their mistresses—by the higher standard of living which leads to a great demand for the best qualities of food by working people; all results of the double change to higher wages and cheaper commodities. The lowering of the death rate, again, proves that the average life is less trying.—(From Freedom to Bondage, by Herbert Spencer, Pop. Sci. Monthly, April, 1891.)

"On all the hearthstones of the civilized world for thousands of years the kettle had boiled and lifted its lid by the expansive power of its steam, yet to none had this seemingly trite and ever recurring incident been significant, to none had it announced that measureless power of which it was the humble, but distinct exponent. At length, the movement caught the eye of a lonely student of nature, then a prisoner in the Tower of London, and,

in the soil of his prolific mind, it proved the rapidly expanding germ of that steam-engine whose triumphs have changed the social, political and commercial aspects of the globe.

(Com'r Joseph Holt in x. p. Goodyear 14 June, 1858, vol. 3, ms. 421.)

"From the very foundation of this Government, it has been its settled policy to secure a just reward to all inventors, and it is to the inflexible maintenance of this policy that we are indebted for the unparalled advancement which, as a people, we have made in the useful arts. All that is glorious in our past or hopeful in our future is indissolubly linked with the course of human progress of which inventors are the *preux chevaliers*. It is no poetic exaggeration of the abiding sentiment of the country to say that they are the true jewels of the nation to which they belong, and that a solicitude for the protection of their rights and interests should find a place in every throb of the national heart. Sadly helpless as a class, and offering in the glittering creations of their own genius the strongest tempation to unscrupulous cupidity, they, of all men, have most need of the shelter of the public law, while, in view of their philanthropic labors, they are of all men most entitled to claim it."

(Ibid, 425.)

A SUGGESTION.

A more generous attitude towards patented inventions might be expected to follow the circulation of short and trenchant articles by competent writers whereby the public at large—which is the chief beneficiary of all these conquests of the material world—may be led to see that it is through these that industry has become scientific and science has become industrial; that it is through these that we are indebted, not only

for such wondrous arts as that which makes light depict for posterity the very features and expression of the life it once illumined; or for the kindred art whereby scenes in the most remote regions are made to pass in realistic panorama before the pleasantly cheated vision; or for the instrument which, having analyzed the sunbeam and revealed the chemical constituents of distant constellations, becomes, in the hands of the metallurgist, the means of determining the precise instant at which to arrest conversion in the Bessemer steel manufacture; but that it is also through invention alone that the masses of our day are better fed, better clothed, and better housed than the princes of mediæval times; that it is to invention that man is indebted for possession of every comfort and refinement; nay, for the very necessaries of modern life; for the arts of spoken, written and printed speech; for the means of transmitting the very voice to distant generations, or for flashing it around the terrestrial globe; that it is to it that he is indebted for the home, the fireside,* the garden, the orchard, the arts of music, poetry, architecture, locomotion by sea, by land, and even through the circumambient air; for the gift of soothing with healing wings the bed of anguish;—all the treasures of mind in all the ages, the god-like in form and feature, the angelic in thought and deed;—a vision and power of enjoyment multiplied ten thousand fold, and reaching out from this tiny speck of earthly life into the eternities of time and space.

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* Mankind's earliest attempts to mold nature to his use—in the production of fire for example,— were as noteworthy for their day as the invention of the Spectroscope or of the Telephone for ours.