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THE LIMITED NATURE OF PATENTS.

We think, beyond doubt, that the practice of making grants for the sole use of inventions originated in England, and that this English system of rewarding inventors has since been adopted by all civilized nations. Among the earliest grants of which we have any record, was that of Edward III., of England, who was persuaded by two friars and two aldermen, that a philosopher's stone might be made; the king, therefore, granted a patent privilege, that they and their assigns should have the sole making of the philosopher's stone. It was early contended that inventors were not entitled, as of right, to Letters Patent, but as a matter of grace and of favor. If an inventor was entitled to the exclusive use of his discovery as a right, merely, there could be no good argument against the enjoyment of this right in perpetuity, the same as other species of enduring property.

The idea of a limited right was early adjudged to be based upon sound philosophy, and, as a matter of public expediency, a term of fourteen years was fixed as the proper duration of exclusive privilege. Our statute was based upon this limitation to which was also added the right of extension for an additional seven years in case it could be made to appear that, without fault of his own, the patentee had failed to receive a sufficient reward for his discovery during the first term of the patent.

It was the intention of our patent law, that the real inventor of any valuable improvement should be liberally rewarded for his time and ingenuity, under the expectation that it would stimulate an eager search after improvements in the useful arts.

If an inventor could maintain his right to a patent in perpetuity, or if the grant of a patent conferred exclusive privilege for a half-century or more, it is very evident that such grants would operate as a bar to all improvements in the same branch of invention, as they would compel every subsequent patentee to pay tribute to the original inventor and patentee. The justice and expediency of limited patents will therefore be apparent to all reflecting minds. The public welfare requires such limit, and the practice of extending patents under our liberal system had been so frequently perverted that Congress enacted a law limiting the grant of Letters Patent to a period of seventeen years, without the privilege of an extension. We do not doubt that, under this very liberal term of protection, some cases of extreme

hardship—very exceptional in their character—will arise, which would justify an extension, but the law abridging the right of extension was deliberately enacted by Congress, and was intended to subserve the general good, and not to meet merely such exceptions as might happen to exist.

The recent action of the House of Representatives, in regard to the extension of patents, points to the theory that Congress will not directly extend patents. The SCIENTIFIC AMERICAN has uniformly opposed such special legislation. We have regarded it, in a general sense, as unwise and unjust, and especially when it was attempted to revive expired patents.

We have always held to the reasonable doctrine that, after a patented invention had become public property, the right of all to use the invention, without let or hindrance, was fully assured; and, furthermore, that Congress had no right to deny to the whole public, thereafter, the free use of such invention.

The proposition of the House Committee on Patents is to authorize the Commissioner of Patents to hear and decide upon testimony, such cases as do not come within the intent of the general law, and, therefore, beyond his legal jurisdiction. We much prefer this course to a special act of extension by Congress, and are free to say that some of the cases reported in our last number are meritorious and worthy of the attention bestowed upon them, but we still most seriously question the propriety of allowing the Commissioner to extend expired patents.

If this system is to obtain, Congress will have plenty of such cases, and the Commissioner of Patents will have his whole time taken up in considering them. We suggest, therefore, before this proposition is carried into effect, that Congress establish a new office entitled the "Bureau for the Resurrection of Dead Patents," with a dead house or "Morgue" attached, where parties interested could view the subjects to be operated upon.

HOW FAST DOES THE WORLD MOVE.

Now-a-days it is very easy to go a great way without knowing it. It is a common thing, for example, to be asleep in New York or near by, and wake up in Boston, Albany, or Washington. Those who go to sea in ships have a custom of now and then making an observation and a reckoning in order to determine how far they have sailed and where they are. Those who sail with the current or drift with the tide, unless they watch the landmarks or make some mathematical calculation, may not be aware of the motion, it is so gentle. How few people think or even know that they are whirling about the axis of the earth at the rate of a thousand miles an hour, and around the sun at the rate of a million miles a day. If people would only think, there might be less complaint of slowness and dullness.

Some people find that we get on very slow in the arts and sciences, and there is nothing new under the sun, that all the inventions are trivial or worthless. Such sailors have lost their reckoning and do not look out for the landmarks.

The fact is that every civilized man carries about with him some evidence of recent progress in the arts. He does it unconsciously perhaps, for improvements may come on by such small degrees that it is not easy to fully appreciate their amount or their value. We would suggest, as a profitable exercise to the reader, to enumerate and fix the value to himself and to the world of the novelties he uses. This exercise will show him perhaps that there is not an article of clothing or of household use, or of use in his avocation, which is not in some respects better than what his grandfather possessed, and that the latest perfections of all these things have been recorded at the Patent Office within his life time.

A useful art may be compared to a tree which, from a small beginning, becomes by degrees a stately form. An art always originates from some isolated fact, which at first may seem insignificant; the finding of such a fact is what we call a scientific discovery. The discovery may be announced in the societies or the newspapers in a few uninteresting words, and it soon becomes forgotten by the world. But the inventor gives nourishment to the germ and out of it grows the useful art. When the art has reached to large proportions, those who do not ob-

serve carefully, do not take notice that new buds and new twigs are being constantly added. What a bright vision it would have been to the discoverers of the expansive force of steam, or of new substances like phosphorus, chlorine, iodine or chloroform, if they had but the slightest glimpse of what has grown from their discoveries in the nineteenth century!

We are often told by those who cynically criticize new inventions that in a machine, for example, it is only that another screw is put in, or that a part is made straight which before was crooked. The test of an invention is the improvement; if the addition of a single screw makes the machine better, let us have it, and let us thank the inventor. Some wise man has said, that he who makes two blades of grass grow, where was only one before, is a benefactor of mankind; might not the wise man with as much grace pay such a compliment to the inventor?

EXHAUSTION OF BRITISH COAL FIELDS.

The idea of a possible exhaustion of the coal fields of England is a subject that now excites apprehension in the minds of English statesmen and manufacturers.

The Right Hon. J. Stuart Mill, the able writer upon political economy, in a recent speech in the House of Commons, the delivery of which occasioned great interest, spoke as follows upon this subject:—

"The termination of our coal supplies, though always certain, has always, until lately, appeared so distant, that it appeared quite unnecessary for the present generation to occupy itself with the question. The cause of that was that we had calculated upon the then rate of consumption; but the fact now is that our consumption of coal increases with such extraordinary rapidity from year to year that the probable exhaustion of our supplies is no longer a question of centuries, but of generations. I hope there are many members in this House who are acquainted with a small volume written by Mr. Stanley Jevons, entitled 'The Coal Question'; and it appears to me that Mr. Jevons's treatment of the subject is almost exhaustive, for he seems to have anticipated everything which it is possible to be said against the conclusion at which he has arrived, and to have answered it; and that conclusion is, that if the present rate of consumption of coal continues, three generations at the most, or very possibly a much shorter period, will leave no workable coal nearer to the surface than 4,000 feet in depth; and that depth will entirely put it out of the power of the country to compete in manufactures with the richer coal fields of other countries. I think, then, if there be any one in this house or out of it, who knows anything that will invalidate these conclusions of Mr. Jevons, it will be right of him to come forward and make it known. I have myself read several attempts to answer Mr. Jevons, but I may say that every one, admitting the truth of everything said, has only made out that our supplies will continue a few years longer than Mr. Jevons has assigned."

Mr. Gladstone, Chancellor of the Exchequer, in a recent speech of wonderful power, perhaps never before excelled in the British Parliament, fixes the time when this anticipated calamity will be nearly reached, and bases thereon an argument that it is the duty of the government, as representing an industrious and honest people, to provide now for the gradual extinguishment of the national debt. He argues that whenever the period is reached that the coal fields can no longer be worked profitably, the country will not be able to bear the taxation necessary to support so large a public debt. It is quite certain that whenever Great Britain reaches the point of dependence upon other nations for her supply of coal, that moment will witness the rapid decline of her industrial resources and political power. The ratio of annual consumption of coal must continue to be very great.

PROF. CHARLES A. SEELY, the distinguished practical chemist, has removed his laboratory from Canal street to No. 26 Pine street, New York. We would recommend any of our readers who may desire to obtain analyses of any substance, to communicate with Prof. Seely. We have known him for many years, and can bear testimony to his extensive knowledge of the chemical arts.