John Lewis RICARDO

(17 juin 1851)

Brought from the Lords, 4 July 1851.

REPORT

AND

MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE OF THE HOUSE OF LORDS

APPOINTED TO CONSIDER OF

THE BILL,

INTITULED,

"AN ACT further to amend the Law touching LETTERS PATENT for INVENTIONS;"

AND ALSO OF

THE BILL,

INTITULED,

"AN ACT for the further Amendment of the Law touching LETTERS PATENT for INVENTIONS;"

AND TO REPORT THEREON TO THE HOUSE.

Session 1851.

Ordered, by The House of Commons, *to be Printed,*
4 *July* 1851.

APPENDIX.

APPENDIX A.

QUESTIONS addressed by the Committee to JOHN LEWIS RICARDO, Esquire, a Member of the House of Commons, and his Answers thereto.

Die Martis, 17° Junii, 1851.

ARE you a patentee?
I am, a very large one.

Have you watched the working of the present patent system?
I naturally have done so, having been very much interested in patents of various kinds; I have watched their operation as well as I could; I have always fancied that some change would be required in respect to the law of patents; and, with a view to the question coming into debate in the House of Commons, I have taken some trouble with it.

Will you state to the Committee the result of your experience?
The result of my experience and my observation has been a conviction that the whole system of granting patents at all is very injurious to the community generally, and certainly not of any advantage whatever to the inventor; I consider that it is in a great measure a delusion upon the inventor to suppose that the patent privileges which are granted to him render his invention more valuable than it would be, supposing there did not exist any monopoly with regard to it.

Do you know of other persons who would support that view of yours?
I believe it is generally supposed, and I have heard it said, that all authorities, both legal and economical, are in favour of a departure, so far as regards patents for inventions, from the strict rule of political economy, which inculcates that there should be no such thing as a monopoly; but I have taken some trouble to look into the question, and I do not think that that opinion is borne out by what is exactly the truth. M. Say, who is one of the greatest French political economists, says, that "he considers a patent as a recompense which the Government grants to the inventor at the expense of the consumer." He says further, "Ce qui fait que les Gouvernements se laissent entraîner si facilement par ces mesures, c'est d'une part qu'on leur présente le gain sans s'embarrasser de rechercher par qui et comment il est payé, et d'une autre part que ces prétendus gains peuvent être bien ou mal, à tort ou à raison appréciés par des calculs numériques, tandis que l'inconvénient, tandis que la perte affectant plusieurs parties du corps social, et l'affectant d'une manière indirecte, compliquée et générale, échappent entièrement au calcul." Then there is the opinion of Lord Kenyon, which I would also quote, that was expressed in giving judgment in the case of Hornblower against Bolton: he says, "I confess I am not one of those who greatly favour patents; for although in many instances, and particularly in this, the public are greatly favoured by them; yet, on striking the balance on this subject, I think that great oppression is practised on inferior mechanics by those who are more opulent." Lord Erskine stated that the "ideas of the learned Judges had been very different as to the advantages to the public since the statute giving those monopolies." And Lord Bacon, in that part of his works entitled "Advice to Sir George Villiers," says, "Especial care must be taken that monopolies, which are the canker of all trading, be not admitted under the specious pretext of public good." I have ventured to quote these authorities, because I know it is generally stated that all authorities, economical and legal, are in favour of the system of granting patents for inventions.

Will you describe your own practical experience as to how you think the present system affects the public?
The most obvious way in which it affects the public is, that during the term of a patent a patentee can charge a higher price for the article which he manufactures than will give him a fair trade profit. Naturally his object in obtaining a patent at all is that he may have the whole control of the market. Of course he uses that control to charge a very high price for an article which otherwise would be manufactured for a much lower sum.

How does the system affect the question with respect to the competition between foreigners and the manufacturers of this country?
I am speaking, of course, of patents as they regard this country. The system affects this country, in my opinion, very injuriously, because, if a thing here is worked under a patent, whereas abroad it is worked under a system of free competition, naturally the article would be much cheaper abroad than it is here. That tells more particularly in any process of manufacture. Supposing there be a patent for only one part of a manufacture, all the manufacturers of that article abroad may use the process of the patentee; whereas only one

manufacturer in this country, the man who holds the patent, is enabled to use that particular process in making the article in which the whole trade competes with foreigners in third markets.

Having that opinion, probably you approve of the clause in Bill (No. 2), the Government Bill, which would prevent an importer of foreign inventions being protected by a patent in this country?

I would rather not give any opinion upon these Bills; I do not consider that I am competent to give an opinion upon the Bills themselves; it is upon the system, the principle, rather, that I would prefer to offer any evidence. My opinion is, that there should be no patents allowed to be taken out at all. Certainly, it follows naturally, in answer to your Lordship's question, that my opinion must be still stronger that no invention should be imported into this country and used as a monopoly, because I conceive that the only possible excuse (though it is one the validity of which I do not admit) for granting a monopoly would be that it encourages English inventors. I do not know whether it is worth while to call the attention of the Committee to a circumstance which happened long since, showing how the course which I have just mentioned in respect to competition in any particular trade works. When the French East India Company was first established, they had a monopoly for trading with the Indies; they found, notwithstanding that they had the whole trade in their hands, they failed altogether. It was rather a ruinous undertaking; accordingly they gave it up, to a certain extent—not formally, but the trade was allowed to be open, and many people traded to India, and made very great profits; but when this French East India Company saw that profits were made by individuals, though they themselves as a company had not made any, they wanted to get that monopoly back again. They therefore again claimed their charter, and prevented all ships arriving from the Indies from landing their cargoes in French ports. At this time a ship arrived at St. Malo, commanded by a man of the name of Captain Lamerville, with an Indian cargo, but he found that he could not get admission to the harbour; they would not allow him to land this cargo, because of its infringement of the monopoly of the company; he therefore sailed away to Ostend, and there sold his goods at a great profit. The Governor of Antwerp heard of this, and he commissioned him to go back to India for another cargo. Accordingly he sailed again for India; other people of the country did the same. The whole East Indian trade was directed upon the Netherlands, and France lost the trade completely, which went into the hands of her competitors. That is an instance showing how free trade will always work cheaper, better and with greater advantage than a trade under a monopoly of any description.

That affects rather the question of general monopolies than the monopoly granted to an inventor, does not it?

I look upon the question of a monopoly with respect to a particular trade as being in exactly the same situation as a monopoly respecting any particular invention. The object of a patent is to monopolize a particular trade; any charter granted to a company for any particular trade, in my opinion, is in exactly the same position as a patent granted to an individual for any particular machine or manufacture.

Some witnesses, who have had great experience in the working of the patent system in this country, have stated to the Committee that inventions are never bought up for the purpose of suppression; have you any experience upon that subject?

I cannot say that I have any personal experience of inventions being bought up for the purposes of suppression; but I think the evidence of Mr. Newton, a patent agent, who was examined before the Committee of the House of Commons on the Patent Laws, which sat in 1829, was very strong to that effect; he said, "he was aware of a great many patents having been taken out where the invention was not carried into effect; there was no mode of setting aside those patents, but it was desirable to provide the means, for he knew some very valuable inventions which, if they were in the hands of the public, would spread far and wide, and be very useful, but which for some cause or other were lying dormant." I can easily conceive that it should be so in many cases; if the patentee has a very large plant and very expensive machinery, by which he is enabled to carry out a particular process of manufacture, it is far more advisable for him, and far more to his interest, to purchase a patent which would supersede all that machinery, with a view of avoiding competition, and suppress it, than to destroy his machinery and replace it by new machinery altogether.

You stated that you yourself were possessed of a great many patents; are all those patents which you use beneficially for the purposes of the public?

No. I am speaking now more particularly of the company of which I am chairman, the Electric Telegraph Company, in which I have a large interest. Many of those patents have been bought by us simply to avoid litigation; it is always much cheaper to buy a bad thing, and have it as one's own, than it is to litigate it when it is brought into competition against you, because though it may be a worse thing than you have already, yet still, in other hands, it interferes very much with the monopoly you have in respect to your patent. It is necessary for a patentee to litigate the infringement immediately that it is put into practice, and therefore he makes this calculation: as it will cost me 3,000 *l.* to bring an action against this man for an infringement of my patent, and he offers to sell me his patent for 2,000 *l.*, I think I had better buy it of him than incur the expense of the action.

It is difficult, is not it, to form any estimate of the sums spent by inventors in obtaining patents?

There is a Return to the House of Commons, which I have with me, by which I find that between

between the years 1837 and 1848, there were on an average 450 patents taken out every year, for which a sum was actually paid at the offices for taking out the patents of 217,160*l.* The average now is upwards of 500 patents a year, which will make something like 250,000*l.* paid in 10 years for patents; this does not of course include the expense of experiments and getting up specifications, and the enormous amount which is expended upon law, and paid to patent agents, and in defending patents afterwards. It is impossible to estimate this even approximately, but it must be very enormous.

How is that money to be recovered by the patentee?

It can only be recovered by taxing the community to that extent. A man always calculates his profit according to what it cost him to manufacture the article; if he has paid 10,000*l.* for his patent, it is quite clear he must receive interest upon that 10,000*l.* before he can make any profit; and if he has invented half a dozen things, five of which have failed, and the sixth succeeded, he must take the whole of the six into his calculation before he can fix such a price upon his article as would give him a profit. It seems to be admitted by the Government, and by all Governments, that it is not fair to allow anybody to fix his own price for an article which he sells: there is, I believe, generally a clause in most grants of patents by which the public service is exempted from the operation of that particular patent, so that one injustice, the injustice of allowing the seller to fix his own price, is met by another, which allows the Government, as the buyer, to fix its own price in anything relating to the public service. I will take, for instance, the case of the marine glue, and Morton's patent slip, and several other cases, in which the Government have paid not the slightest attention to the rights of the patentee, but reserved to themselves the power of fixing their own price, which seems to me to be a kind of admission that the whole system is one which is not quite fair to the public, as it is shown by that, that they do not consider it fair to themselves. I wish to call the attention of the Committee to this fact, that it is generally supposed that the clause in the Act of James, by which patents for inventions were not exactly instituted, but continued, was introduced with a view of encouraging invention. It seems to be rather an anomaly that the Act which abolished all other monopolies should have instituted and recognized this one. I have taken some trouble to look into the matter, and I think it is quite clear that the object of continuing the patent privilege to inventors only, was for the purpose of raising revenue, and not for the purpose of encouraging invention. There were certain exemptions which were made in respect to monopolies which were already in existence: there was one exemption which had, in respect to certain charters, been granted for printing; I believe there is one monopoly still in existence for the printing of bibles and prayer-books. There was an exemption in respect of saltpetre, gunpowder and cannon-balls. Now those manufactures belonged to the King, and he sold gunpowder to the public at his own price, and maintained his monopoly simply for the purpose of revenue. There was another monopoly of alum: the monopoly with regard to alum was granted, originally, in the time of Henry VII.; it was granted for the importation of alum; but after that, a discovery was made by which they were able to manufacture alum in this country, and the King took the monopoly of this trade into his own hands. In 1608 there was a patent granted for manufacturing it in England, and he of course exempted that, when he abolished all other monopolies. The glass monopoly, which was another exemption, was one granted to one of the King's favourites; and also that for smelting iron with coal; that was granted to Lord Digby. And there was another monopoly granted in 1625, the year afterwards, to the Duchess of Richmond for making farthing tokens, which could have nothing to do with encouraging invention. Immediately on the passing of the Act of 1624, a great many of the most absurd inventions were brought out; patents were granted for every one of them. There was one "for making compound stuffs and waters extracted from certain minerals to prevent ships from burning in fights at sea;" for that grant 40*s.* a year was paid into the Exchequer. There was another "to multiply and make saltpetre in any open field of four acres of ground sufficient to serve all our dominions." There was another "to raise water from pits by fire." There was another "to make hard iron soft, and likewise copper tough and soft." There was then "an instrument called the Windmate, very profitable when common winds fail, for a more speedy passage of vessels becalmed on seas and rivers." There was one called "the Fish-call, or Looking-glass for Fishes in the Sea, very useful for fishermen to call all kinds of fishes to their nets or hooks, as several calls are needful for fowlers to call several kinds of fowls or birds to their nets or snares." I give these as a specimen of the sort of things for which patents were granted. I could give 50 more equally if not more ridiculous. All these paid a yearly rent into the Exchequer, more or less. It seems to have been almost arbitrary what amount should be paid, but those patents were granted on payment of a yearly rent; so much so, that it was supposed, and it is stated by Macpherson in his "Annals of Commerce," that the King derived 200,000*l.* a year from those patents which he had granted. Not only did he grant patents for inventions so absurd as these, but he granted patents, among other things, for publishing lists of the prices of different articles; a patent for importing horses, another for exporting dogs, another for bringing water to London; and there was one, I believe, for letting out sedan chairs, and various monopolies of that kind; so much so, that there was a great deal of discontent in the public mind with respect to all those monopolies and privileges which were granted. Accordingly, in the year 1639, there was a proclamation—the date of the Act being 1624—in 1639, fifteen years after the Act was passed, there was a proclamation abolishing a great many of those privileges and patents. The preamble of the proclamation states, that "Whereas divers grants, licenses, privileges and commissions had been procured from the

King on pretences for the common good and profit of his subjects, which since, upon experience, have been found to be prejudicial and inconvenient to the people, and in their execution have been notoriously abused, he is now pleased to declare these following to be utterly void and revoked." Then there follows a long list of privileges and commissions which had been granted, and among others, it states, "all patents for new inventions not put in practice within three years from the date of their respective grants;" so that it seems quite clear that the object of the patent privilege for inventions, which was enacted in 1624, was not so much for the encouragement of inventions as for the purpose of raising a revenue independent of Parliament altogether.

Will you state what you meant, at the beginning of your evidence, by saying that patents work injuriously for inventors?

I believe the first patent on record is one which was granted by Edward III. It was a patent granted to two aldermen and a friar for making the philosopher's stone; I believe that is a type of the whole thing; I do not think any body makes an invention who does not imagine he has found the philosopher's stone. There is a great deal more disappointment than there is success; and, I believe, while regular competition is prevented, a no less dangerous but at the same time an unnatural and more formidable competition is engendered. If the invention be valueless, of course the inventor loses the large expense which he has been put to for experiments and the cost of taking out the patent; but, if it be valuable, no sooner has he got over his first difficulties, than up start 50 competitors—competitors who very likely would not have appeared if there had been no such thing as a patent. With the specifications of the invention before them, those men also take out a patent; they do not work it in exactly the same way; their object is to try and avoid the previous patent, by doing the same thing under another form, but very nearly in the same way as the original patentee, and there begins a war of patents which is accompanied by litigation to an extent which is far more costly and disadvantageous than the natural and regular competition which exists in all trades and manufactures which are not under any particular law. I have here only one leaf of Mr. Carpmael's index, but if your Lordships will take the trouble of looking over that, you will see how the thing works. There are no less than 21 patents taken out for making bricks; you will find them always together. The moment a patent is taken out, whatever it is for, out come 30 or 40 more of the same description; that is to say, if there be the least success attending the original patent. There are no less than 35 patents here for making boilers; probably some inventor took out a patent for a boiler which was very successful, and he sold a great many of them; accordingly every body set to work to make patent boilers; it is possible that those who are in the trade may know which is the best, but every boiler being patented, a man who has to buy a boiler can scarcely ascertain which is the best patent. There is no particular name renowned for ingenuity; the man has not any advantage in being the first inventor, because nobody inquires about it; they say we must get one of these patent boilers; there are 35 new boilers patented, which shall we get? Then every one of the patentees describes how much better his boiler is than any body else's, and it is very difficult for the purchaser to describe which is the best, but the first patent has no better chance than the last. In the meantime the competition is exactly the same, and as if no one of the 35 patentees had a monopoly, every body comes at last to what is the natural result of competition, who can do the thing cheapest. There is just the same competition exactly, with the additional drawback that here each one is liable to be attacked at law by the others.

Has it ever occurred to you to consider whether this great evil of vexatious litigation could be diminished at all, by obliging the patentee to obtain some sanction before he brought his action; for instance, requiring that an action should not be brought without the consent of the Attorney-general, advised by certain parties?

I have heard of a great many plans to avoid law expenses; I have myself been engaged in, and had the management of, very large undertakings, where the object has been in every possible way, and by any practicable arrangement, to avoid legal expenses. I have always found lawyers enter most readily into any such arrangements, because they are quite satisfied that your attempts to avoid law generally end in more litigation than you would have in the natural course of things.

Supposing, for instance, there was some enactment to this effect, that a patentee, having obtained a monopoly, should be subject to this rule different from all other persons, that he should not commence his action unless he had permission to do so?

I presume then he would have to begin by convincing the Attorney-general that he had a just right to commence his action; I presume that the parties opposed to him would also have a *locus standi* to show that he had no right to commence his action. That very argument, to begin with, would be in fact a lawsuit, and when it was decided, if the Attorney-general gave permission for a patentee to try his action, he would be where he was before; but, if not, he would simply have lost that action which he would have otherwise lost in a different way.

Supposing the Attorney-general were permitted to call to his aid any parties whom he pleased, and at once to make his decision, and say to the patentee, "You shall not proceed further," the patentee having obtained a monopoly, would have obtained it, knowing that he was subject to that peculiar rule; if that plan were assented to, would it meet the difficulty to any extent?

I am afraid I cannot perceive that it would do so, for the reasons which I ventured to give before. The very fact of arguing before the Attorney-general whether you have a right

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to bring your action or not, is in itself a lawsuit; it appears to me that it is, in itself, litigation.

Does not the plan suggested in the last question really amount to this, the substitution of the Attorney-general for the Judge, and the substitution of the proposed council for the jury; is not it, in reality, only the suggestion of another mode of trying a litigated case?
That is what struck me when his Lordship asked me the question.

Does the law inculcate that patents should be granted for useful inventions?
I believe that is stated in the Act to be the only condition upon which a patent shall be granted; I believe, however, that a very small proportion of the patents which are granted for inventions are granted for useful inventions; in point of fact, if patents were granted for every thing at a very cheap rate, I do not believe there would be a single article in the country which was manufactured under anything but a patent; it appears to me, that either one of two things must happen; either the law would be inoperative, and people would pay the same disregard to patents which they do pay in the United States and on the Continent generally; or the confusion and the litigation would be so great, that trade would be impeded to such an extent, that it would be absolutely necessary to abolish the system.

The check upon the multiplication of patents is, now, the expense incurred by an inventor seeking for a patent; but if there were some other check, not consisting wholly of a money payment, though partly so, but also a previous examination by a Board, composed of some high legal functionaries, assisted by scientific persons of great eminence, who would not allow any patent to be granted for inventions which were not perfectly novel, would not that prevent the very great and injurious multiplication of patents to which you have just alluded?
I have no doubt that in proportion to the higher price which you impose, and the greater difficulties you throw in the way of obtaining a patent, would the number of patents taken out be diminished; I have thought a great deal about it, but I cannot imagine any way in which you can distinguish good inventions from bad ones; I have heard of so many inventions which have been looked on as perfectly wild and ridiculous, which have turned out afterwards to be most advantageous to the public, and most useful; and on the contrary, I have known many which have looked as if they were going to do very great wonders, and be of the greatest possible public service, which have turned out to be empty bubbles; so that I really think it would be almost impossible for any tribunal to distinguish a good invention from a bad one.

Admitting that you are right, and that it would be impossible for any tribunal to decide what were good and what were bad inventions, would not the mere fact of having a tribunal competent to decide upon the question, whether there was any novelty in the invention or not, go very far to diminish the injurious multiplication of patents?
I think there is great difficulty in ascertaining what is a competent tribunal. I have found in my experience that any improvement or alteration in any particular manufacture has, generally speaking, been treated with contempt by the manufacturer himself. I have frequently found that the party who has opposed any improvement, and who has thought least of the improvement which has been suggested, has been the party who is engaged in the particular manufacture to which it relates, and therefore I cannot conceive where you could obtain a competent tribunal. The first thing an inventor does is to take the invention to a party who is engaged in the trade to which his invention refers. In nine cases out of ten he sends him away; he then shows to somebody who does not understand anything at all of the trade; that has happened to myself. The parties who take it up are not in the trade, and they bring out the invention in opposition to the trade themselves. They have great difficulties to contend with, and it must be a very good invention if it succeed. I think experience will show that in most cases where any very large and extensive improvement in manufactures has taken place, it has not been through people engaged in the trade, but people totally distinct from the trade itself.

Would not that show that there is a certain advantage in the obtaining of patents; that the trade itself being so opposed to the introduction of any very novel invention into their processes, it requires the stimulus given by patents to inventors to force improvements as it were upon manufacturers?
No, I think not; I think the improvement generally comes in a wrong and unnatural manner. The natural way in which an improvement should be made should be by gradually going from one step to another; but under the present system a workman never attempts to improve upon anything which his master is using, but he attempts to make something quite different from what his master has; he then tells him, "Now, I will not show you this; but here is an improvement by which I can do so and so; if you will buy it of me, you shall have it for so much; if you will not buy it of me, I shall take it to your competitor, and see if he will not buy it of me." Therefore, by means of the patent system you create two distinct interests, the interest of the workman in opposition to the interest of the master. The natural course would be, and what I think is the fair and proper relation between master and servant, that when the workman sees any improvement in any part of the machinery, he should tell his master of it; and if it is adopted, I think in 99 cases out of 100, certainly in every case in my experience a reward has been given to him, in proportion to the utility of his invention or his improvement; if his employer will not do that, he refuses at his own peril, for it soon gets known that this workman has improved this or invented

invented the other, and therefore he is put at his real value. Every manufacturer is anxious to get him into his employ, and he would command exactly what is the real and proper value of his ingenuity in the labour market. As the case now stands, instead of working in that fair and more agreeable manner both to the master and to the workman, the system is, that the workman is always setting his wits against his master to supersede something that his master has got. Everything is now done by machinery, and unfortunately nearly everything under patent, and there is no patentee and very few manufacturers who do not hate the very sight of anybody who can improve or invent; they discharge a workman sooner for inventing an improvement than for anything else; they do not want any improvement made; they want to work by the machinery they have, and they do not want any improvements, because they know they will have to pay for those improvements a monopoly price, or if they do not, they will be taken from them, and sold to some one else to come into competition with them.

In the hope of obtaining a patent, do workmen ever employ their time unprofitably in invention?

It is incredible the number of inventions which are made which have been invented before. In the case of the Electric Telegraph Company, the company hold a very large number of patents, because they make it a rule, if a man offers reasonable terms, to buy any invention, however bad it may be, sooner than litigate it. They find it is much cheaper to pay black mail than to litigate an invention which may be set up against them. It has happened to us, not once, but I think 20 times, that a man has brought to us an instrument of great ingenuity for sale; we have taken him to a cupboard, and brought out some dusty old models, and said, "That is your invention, and there is wheel for wheel, generally." Nevertheless he has, in fact, invented it. The ideas of several men are set in motion by exactly the same circumstances. A man sees around him systems of various kinds, and he makes a combination of those systems, and men who are in the habit of putting things together very often have the same ideas at the same time. A man has positively invented something; he has spent a great deal of time and labour, and neglected his proper and regular business to do it, and then he finds the thing has been invented before; but the misfortune is, though it is human nature that he will not admit his error, he will not admit that he has wasted his time, and that the thing has been done before. He cannot make up his mind, after all the trouble he has taken, to throw it all aside; he knows he did really invent it, and he goes away and still hangs upon this invention. He takes it to somebody else who has never seen it, or knows nothing about it, or anything that has been done before. He buys it of him; he thinks it a very clever thing, and does not know that there is exactly the same thing in the possession of some one else. He buys it, then, and it is established against the original patent; then begins the litigation. Or perhaps it may be more wise and philosophical for the original inventor to purchase it back when he finds it in the hands of people who are likely to litigate it with him.

Would not that ignorance, of what has been done before, be very much obviated by having published specifications and indices of all previous patents which have been obtained?

It is a very difficult thing indeed to judge from a specification exactly what an invention is. I have seen an apparatus, and I have seen the specification of it, and I could not recognize one in the other very frequently.

Does it ever happen that a specification is drawn up purposely rather to conceal the mode in which the invention is carried out?

There is no doubt about it; that is the rule instead of the exception, I believe.

The objection which you stated to the suggestion of forming some tribunal to which the invention should be submitted before the patent was granted, was that it would be impossible to discriminate between bad and good inventions; suppose, practically, scientific bodies, by their councils, are daily doing it, and doing it in a way which gives great satisfaction, does not that afford presumptive evidence that the same thing might be done with respect to inventions?

I do not know whether the Committee examined Mr. Carpmael upon that point; I have had some conversation with him upon the subject, and he related some very curious instances to me, in which men most competent to know have utterly repudiated the possibility of some of the best inventions which have been made. I think he related an instance with respect to gas, and with respect to electrotyping. I thought it very probable he might have given those statements in evidence.

A great deal must depend upon the parties to whom the question is submitted; in the case of the Royal Society, which takes the range of all science, worthless papers are sent to the archives, where they remain, and never see the light again unless something should occur which shows that a mistake has been committed, and then the paper is taken out of the archives; suppose, with respect to that society, who are doing the work of separating the bad from the good, ranging over the whole extent of science, that for a number of years no instance occurred of such a paper being taken out of its archives, does not that afford presumptive evidence that if proper measures were taken the thing could be done?

It may be possible that there are those who could do it. I can only give my opinion with respect to the question, that I think it is very difficult indeed for anybody to judge till the thing is practically tested, whether an invention is a good or a bad one. I repeat, that I

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I have known many inventions which have had every possible appearance of being invaluable, and which have turned out to be utterly valueless. I have known others which seemed to be the merest speculations in the world, which have turned out to be of the greatest possible interest and public benefit. I will not, at the same time, venture to assert that the Royal Society, or gentlemen of great scientific attainments, might not be able to discriminate in such matters. I think those gentlemen themselves are far more entitled to reward than many of these inventors; those great scientific men are generally the originators of all great inventions which are made. They undergo a great deal of labour, and are at great expense of time, and they discover certain scientific principles, which principles they disseminate without fee or reward. They are published in Mechanics' Magazines, and all the papers which mechanics read. Those men adapt them, and then come for a patent to obtain the reward.

Take the following case. Supposing a patent assumes something which is palpably false; supposing it is impossible, without a violation of the law of nature, to carry it out; would not that be a clear case for refusing a patent?

An invention was brought, for purchase, to the Electric Telegraph Company; there was no model brought with it, but simply a description of the apparatus; I have not scientific knowledge enough to enable me to describe it; but it was on a principle which was received by electricians as impossible, and the men of science connected with the company declared it to be impossible. Nevertheless, the model was brought, and it was found that the thing was practicable against all rule by which hitherto we had been guided in the matter.

Did not Dr. Lardner demonstrate, almost mathematically, that it was impossible for a steamer to cross the Atlantic?

So I have heard.

Is not there a wide difference between determining upon the merits of abstract scientific principles and the merit of inventions applicable to the varied practical purposes of life?

I think a very considerable difference.

Do you think the analogy between the one and the other is sufficiently strong to justify legislation upon the latter subject, founded upon experience derived from the former subject?

Certainly not; I cannot think that it is justifiable at all.

Do you think, considering the great variety of character and of feeling which pervades the whole body of inventors in this country, their confidence could be obtained to the decision of any scientific body?

I think that where, in one case, you would get an advantage from the appointment of a scientific body, in a hundred others you would suffer a great disadvantage from the want of a practical application of scientific knowledge.

If the Committee has understood your evidence correctly, you look upon patent rights as a species of bounty acting as a strong artificial encouragement for the production of other inventions upon the same subject?

Of changes in inventions.

A patent right upon any given subject acts as a bounty to encourage, artificially, a multiplicity of inventions having reference to the same subject?

Quite so.

You think that inventions so springing out of the original patent are in many cases merely a re-discovery of a previously existing discovery, and, therefore, entirely useless to the public, and a waste of time to the inventor?

Quite so.

That in other cases the inventions are really and substantially the same, but varied and modified in shape and form, for the purpose of evading the letter of the existing patent?

Quite so.

And, further, that many of those inventions are brought forward for the sole purpose of facilitating litigation against the original patentee?

In very many cases.

The result of all this is a great waste of time and of money on the part of inventors, subjecting the original and real and meritorious patentee to great inconvenience, to great uncertainty and much litigation, and to heavy expense?

So I have stated.

And, further, that the result of that is, that in a great majority of cases the second and inferior patents are bought up by the original patentee, not on account of their merits, but solely on account of their artificial power of subjecting him to litigation?

Exactly so.

That is the result both of your personal experience and of your general knowledge of the way in which the patent system works?

Your Lordship has very concisely stated my meaning.

Do you think the stimulus of the patent system necessary for the purpose of producing inventions useful to the community?

I must say I do not think so at all. If one looks back to the times when the most important inventions were produced, they were all made without any patent at all, so far as we can discover; for instance, arithmetic, writing, and all the first great inventions to which we are all so habituated, that we scarce think they have been invented any more than the flowers or the trees: they were mighty inventions in their time. All those were produced without any stimulus of patents. Paper was invented in the year 1200; that was before there was such a thing as a patent law for inventions. Oil painting in the year 1297; there was no patent law then. Glass was invented in 1310; there was no statute of privileges at that time. Gunpowder was invented in 1450; printing was invented in 1430; and I could mention a great many more, but all those inventions, or very many of them, were made by men without artificial stimulus, often at the peril of their lives, when their reward was not a monopoly, but perhaps the stake or the gibbet. It appears to me that it is the natural bias of man's mind to go on improving; improvements do not come all of a sudden; an invention does not come on a sudden; it is born of the various elements by which a man is surrounded. If a man lives in a factory, his mind is naturally turned to the improvement of every process he sees, and no manufacturer would fail to improve that process; no mechanic would fail to make suggestions to his master for the improvement of that process, even supposing there were no patents at all. All the great inventions now are made without patents. I have alluded to the scientific discoveries which have been made without any stimulus of the kind; I may say again that the great mechanical discoveries are made without patents. There is no patent for Stephenson's tube across the Menai Straits; but there is a patent for Nicholl's paletot; this last is the sort of thing which is encouraged. You encourage the invention of paletots and that sort of thing, but you do not encourage the great mechanical improvements which are made every day. Mr. Stephenson has had for all his great engineering achievements nothing but the regular remuneration of his profession, and the honour which he has obtained from his practical improvements and scientific knowledge in engineering. But I do not believe that if you were to promise to Mr. Stephenson or Mr. Brunel a monopoly in engineering inventions, you would stimulate them one bit more than they are now stimulated by the honourable rivalry which they have one with another. You stimulate the making of bedsteads, and beer, and belts, and bands, and blocks, and bedding, mentioned in the Index to Patents, and all that kind of thing, but you will seldom find a patent taken out for any wonderful and extraordinary public improvement; it is simply those trivial things which patents are obtained for. If your Lordships will take the trouble of looking over Carpmael's Index, you will find the absurd things which patents do encourage; and it is something humiliating to know that people think it worth their while to take out patents for them at all, and that there should be a law to enable them to do it.

Do not you think that any tribunal would set those aside immediately? If an application for a frivolous patent came before any tribunal, would not they at once say, it shall not be granted?

I cannot see exactly where you would draw the distinction. It would be a very difficult thing to draw a distinction on the subject. If a man's trade is making bricks, and he invents a new plan for making bricks, I do not see why you should refuse him a monopoly any more than to a man who invents a new plan for making locomotives, or any more important manufacture. It would be very difficult indeed to draw the line. It is the principle against which I contend. If once you admit the principle that a man is to enjoy a monopoly against the public as a reward for his ingenuity, then I think you cannot separate one species of ingenuity from another.

The only ground upon which a distinction could be drawn would be that of novelty and utility; but you think that you could not define or distinguish between different degrees of utility?

I think it would be impossible.

Utility applied to a purpose of very inferior importance must entitle a party to a patent, just as much as if applied to a more important matter?

Certainly.

The question of novelty is one which, of course, enters into the consideration of every paper presented to a scientific body, and one upon which daily decisions are taken?

Yes.

So far as a decision upon the question of novelty is concerned, is not there a fair presumption that it might be possible to get over the difficulty?

The Attorney-general is presumed now to decide in respect to the novelty of an invention; but it is very seldom that a patent is refused in the first instance. As respects the employment of a scientific body in such cases, you may in some instances, no doubt, derive a very great advantage from their assistance; in anything relating to scientific matters, I have no doubt it would be of very great service. At the same time, I think it would be a very great hindrance and impediment when they came to enter into those small matters which I have mentioned to your Lordships; those inventions as to brewing and brick-making, and so on.

The question of novelty is practically dealt with in this way by scientific bodies: a paper about

about which there is any difficulty is always referred to two parties, who are known to be thoroughly acquainted with the subject. They cannot be thoroughly acquainted with it unless they know every thing upon that subject which has been done by others. They dispose of the question of novelty. If it is not a novelty, they at once perceive that it is not so; or where a paper contains an obvious and palpable error, it is at once disposed of. Where would the difficulty be, in case of patents, in subjecting them to the same kind of scrutiny?

If you admit patents at all, I have no doubt that there are many tribunals far more competent to judge of the merits of a patent than those before whom they are now argued. I have not been able to make up my mind what description of tribunal would be an efficient one, inasmuch as I have adopted the other principle altogether, of considering that patents are an impediment to trade generally, and that they are not the best means of encouraging invention, or remunerating inventors; I am not competent to give an opinion exactly upon what would be the proper tribunal to discuss such questions.

Do you think that the improvements which every day are being introduced into all mechanical and scientific operations in the world are far too varied, far too minute, and far too complicated, to be safely submitted to the arbitration and decision of any previously constituted tribunal?

I confess, if I am to give an opinion upon the subject, I think the best tribunal you could have for judging upon the subject of patents would be a body of gentlemen who are totally unconnected in any way with the matters on which they are to judge. The subjects upon which patents are asked for are so varied and so complicated, that where you obtained a tribunal competent to judge of one question, that very competency would render it incompetent to judge of another.

Have you brought many of the patented improvements, which in the case of the Electric Telegraph Company you say you have bought, into use?

We have adopted a good many, in combination with others. The patents which we have bought are in most cases valueless in themselves, but in combination with others which we have, they may be made useful. We have found, after every possible experiment, that the original system of the needles is by far the best for all practical purposes; it is clear, it is our interest to have the best we can find. There is not one invention which is not brought to the company before it is started against the company, and we have expended nearly 200,000*l.* in buying patents and litigating them; but we find, after all, that the original patent is by far the best, and the most suitable for practical purposes.

You gave a large sum for that patent, did not you?

Yes, 140,000 *l.*

As far as the public are concerned, the whole of the money which you have spent in buying up those patents, and in trying them, has been completely thrown away?

Entirely so; I should have considered the thing more valuable if I had originally started it, having no patent at all, than it is with the enormous number of patents with which we have been hedged round in every possible way.

Would not some of those patents which you have been compelled to buy, though useless in themselves, have operated as great obstructions to you if you had not possessed yourselves of them?

No doubt they would; we generally look rather more to the parties in whose hands they are than to the patents themselves. If we find a very strong party has a very bad patent, and they have persuaded some railway company that it, on the contrary, is a very good invention, and they are going to set it up in preference to setting up our telegraph, we buy the patent as a means of getting rid of the opposition, though we do not use it, because we know it is perfectly useless; if, on the contrary, it is not likely to injure us, we leave it.

Among those patents which you say are useless in themselves and alone, have not you found some which you have applied to your own advantage?

Yes; there is one patent of Mr. Bains, for which we gave 8,000 *l.* or 9,000 *l.*; although it did not quite come up to the expectation we formed of it, it has proved useful in combination with other patents.

That patent standing alone, and not being useful, was, till you acquired it, an obstruction to improvement?

The Witness withdraws.
