

Isambart Kingdon BRUNEL

(22 mai 1851)



Brought from the Lords, 4 July 1851.

R E P O R T

AND

MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE OF THE HOUSE OF LORDS

APPOINTED TO CONSIDER OF

T H E B I L L,

INTITULED,

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

AND ALSO OF

T H E B I L L,

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.*

I. K. Brunel, Esq.

22d May 1851.

ISAMBARD KINGDON BRUNEL, Esquire, is called in, and examined,
as follows :

1767. WHAT is your occupation ?

That of Civil Engineer.

1768. Have you had any experience as to the operation of the patent law ?

Yes, I think so ; ever since I first entered my profession, I have seen a great deal of the operation of patents.

1769. Have you yourself invented anything, or been mixed up with others who have invented ?

I was for many years, when my father was alive, engaged with him, and he invented many things and took out many patents ; I was much employed by him in making experiments connected with those inventions, and in preparing drawings and other documents for patents connected with them. Since then I have been frequently engaged in questions of patents in advising others, and have been frequently engaged in disputes respecting patents.

1770. Of what nature were these disputes ?

Disputes as to priority of invention, and as to the similarity of, or the difference between, machines or other subjects of patents, both of which may have been patented, or else as to infringements of patents.

1771. Have you had to defend yourself against alleged infringements of patents ?

I have had frequently to negotiate for the purpose of defending myself against parties who have taken out patents for things I was using, or wished to use.

1772. How long have you had experience upon this subject ?

I think since 1823 ; I have been very constantly engaged in it, therefore, for 28 years.

1773. Can you state generally, what is the result of your experience ?

One result has been, that I have never taken out a patent myself, or ever thought of taking one, or, I hope, ever shall take one ; and certainly, from the experience I have had, and all that I have seen of the operation of patents, I believe them to be productive of almost unmixed evil with respect to every party connected with them, whether those for the benefit of whom they are apparently made, or the public.

1774. Does not the present patent law encourage inventions to be made ?

I believe that at present it practically discourages them, for that, while it appears to offer protection and ultimate gain to parties who are inventors, it leads to a considerably smaller number of inventions than would otherwise be brought out for the benefit of the public ; and I believe that, practically, it involves very great loss upon the class of inventors as a body, a loss which, I think, they would not sustain, if there were no patents or no exclusive privileges at all granted to them.

1775. Will you state in what way you think that the operation of this law has prevented the production of new inventions ?

I will endeavour to do so ; but it is rather a complicated network of causes, and though I see it very plainly in operation, yet until lately, when I began to think on the subject, I had hardly explained to myself how it operated, and, therefore, I may have some difficulty in explaining the matter clearly to your Lordships, but I will endeavour to do so ; I wish, however, to have it understood that I limit my observations to the present state of things. I do not wish to express any opinion as to what might have been formerly the effects of patents, or whether they did originally encourage inventions or not. I believe that in the first place, they are very prejudicial, on the whole, to a large class supposed to exist of inventors, and principally from these circumstances : the present state of things is this, that in all branches, whether in manufactures or arts of any sort, we are in such an advanced state, and every process in every production consists of such a combination of the results of the improvements which have been effected within the last 20 or 30 years, that a good invention now is rarely a new idea ; that is, suddenly propounded or occurs by inspiration, but it is simply

simply some sensible improvement upon what was last done. In 999 cases out of 1,000, it is some small modification which may produce very important results, but still only a modification of something which is the result of a great number of previous inventions and improvements. The consequence of this is, that to produce a good thing you must be well acquainted with all that is done up to the present day in any particular branch. Anything you do that is good, in a vast majority of cases, is dependent entirely upon the success of previous steps which, under the present system are already exclusively belonging to individuals by patent or otherwise, and consequently, it is very difficult to bring out anything, however new it may seem, that does not depend almost entirely upon something which is already either the subject of a patent, or already the property of the public, and for which, therefore, you cannot properly claim an exclusive privilege. In the present day, when a man thinks that he has some good idea, whether it is improving the parts of a machine, or some new mode of constructing an article, or some new article itself, his first idea is, immediately, a patent, and a fortune resulting from it. He shuts himself up, and if he is a workman or a man of the poorer class, in nine cases out of ten he deserts his ordinary occupation, and he dares not consult his fellow-workmen or anybody else likely to know if the thing is new, or how much better it might be done in some other way, or whether it is at all feasible; but he shuts himself up and works at this idea, and incurs by that means great expense and loss of time and money in no way connected with what is ordinarily talked of as the expense of taking out patents, which forms but a small portion of the cost of working out an invention; but he loses a great deal of time and money in the elaboration of this idea in secret. That is the only way which he is taught to believe that he has of making anything by his inventive faculties, or his ideas; and the chances are 100 to 1, that if he does succeed in taking out a patent, he discovers the next day, that the thing has been better done before, or that if he had consulted a workman more immediately engaged in the branch to which his supposed invention relates, he would have found that it was impracticable, or was too costly, or that there was no demand for the particular article produced. I see that going on round me every day, that the poorer class of inventors ruin themselves by the attempt to work out some idea for the sake of getting a patent, while, in all probability, if the man had gone to his master, and said, "Well, it strikes me, that by such a means, we should be able to get through more work and do something better; what do you think about it?" The chances are that most masters would, if they saw that it was a good idea, give the man 1*l.*, or a 5*l.* note; and the man the next day would be at work at something else, and you would have out of that man's brains an immensely greater portion of invention, and, I believe, he would get much better paid by it. I believe he would really make money, whereas now everybody acquainted with these men know that they lose money by it, and that an inventor, a schemer, is a poor man who is more likely to go to the workhouse than anything else.

1776. You are talking of the reward that he would get from the master, supposing the master was liberal?

Yes, but if not, the result would be this, that a man who is an intelligent workman of that sort, even though he happens then to be working for a master who has not the sense to reward him, becomes more valuable as a workman; and it is a principle that is quite well enough understood in this country, that he will be paid more, and employed accordingly, like a clerk who writes a good hand, as compared with one who writes a bad one, and in the end he will get better paid. And, unquestionably, among manufacturers, where there is a workman who is useful to his master, constantly seeing how things can be done better than before, even if it does not lead to the master giving actual premiums, it makes that man a more valuable workman; and if there were no patents, these men would become necessary parts of any large establishment.

1777. Do you think that the expectation of uncertain remuneration from the master would act as an equal incentive as compared with that of obtaining an exclusive patent, and induce a workman to turn his attention to improvements in machinery?

I think it would be a much more active cause, and for this reason, that at present it is a false and fictitious hope that excites him; he does not think how

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cheaply he can make a good thing, but how best he can appropriate something, and from that moment I look upon him as a ruined man; he is dreaming for ever after that, how he can keep his idea to himself, and take out a patent for it, which shall be so worded, and which shall be brought out in a manner to escape another patent, rather than seeing how quickly he can make something good. I do not believe that you would have the same class of men working at inventions, but I think it would be a great benefit to the public, and that the class of men at present called schemers, who I believe are a pest to society, would be got rid of; and I think that intelligent workmen would really turn out a great deal in the course of the year of what is good in the shape of ideas, and on the whole get well paid for it.

1778. You think that few valuable inventions have proceeded from that class of men whom you call schemers?

I think so.

1779. From what class of persons should you say that the most advantageous improvements have proceeded?

I think you must draw a distinction between those who appear as inventors, and the parties from whom the ideas have really proceeded; I think they come generally from men of observation rather than inventors. Circumstances attract his attention; he sees a result produced which did not occur to him before, and being an intelligent man, he sees how it may be applied, and some opportunity occurs, by accident, by which he can apply it, or suggest it to other intelligent men, and that is how the best inventions have come about; they have not been certainly through what may be called professional inventors.

1780. Should you say that the greater number of inventions have proceeded from practical operatives, or from scientific men?

I think that the greater number of inventions have really originated with practical operatives.

1781. Do you think that there would be an equal inducement for a man to turn his attention to improvements if there were no patent laws, as compared with the present state of things, which lead him to the expectation and hope that he will obtain some exclusive advantage from the discovery of some new improvement?

I feel certain of it; I have felt it very strongly, and it always struck me as surprising that it was not seen by everybody else; but we have so long been in the habit of considering, that the granting of an exclusive privilege to a man who invents a thing is just and fair, that I do not think the public have ever considered whether it was, after all, advantageous to him. My feeling is, that it is very injurious to him.

1782. Is it not usually the case with the ordinary class of inventors, that they are compelled to sell their inventions for a sum of money to some one who is better able to give effect to them than themselves?

Yes, I believe this to be amongst the reasons, as far as the poorer class are concerned, why patents are of no advantage to them, that almost invariably when the patents come before the public, the beneficial interest in them is not held, to any great extent, by the original inventor, but that it has changed hands many times before it comes out before the public. I should say, that in the majority of cases, the original inventor gets little or nothing.

1783. Does not the original inventor generally obtain some remuneration when he parts with his invention to a person who possesses the necessary means of bringing it out?

Yes, he generally has some consideration for which he does it; but looking at what I know to occur, my recollection of cases is this, that in most cases the original inventor has a very small beneficial interest left in it, and in most cases I doubt whether even in patents that are saleable he is much the gainer on the whole, taking into account his previous loss of time and money.

1784. You have looked principally at the operation of the law as affecting inventors of the lower class; but as regards the interest of the public, it is clearly for the interest of the public not only that an invention should be made, but that it should be divulged; and do you think that leaving those who have the first advantage of an invention without any protection whatever would be likely to induce

induce them to communicate to the public the details of that invention, in order to enable others to use it? *I. K. Brunel, Esq.*

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No; there must be of course, to a certain extent, that drawback; there will be a tendency, where it can be done easily, to keep it secret, but I believe that the cases in which that can be done are so few that even that evil would amount to very little; but there is a much greater evil at present, not only are there numerous cases where, although patents are taken out, the parties keep secret certain processes connected with the operation, by which they still keep the exclusive application of the thing in their own hands; this will probably happen more frequently, but the chances of the few cases in which the parties will be able to keep the secret, I do not think will at all balance against the cases in which new inventions are not fully developed on account of the exclusive privilege, because there is a very great clog put upon improvements, now, of patented things, by the possession of that monopoly by the patentee, and which, I think, deprives the public of more good things than the secrecy of unpatented things would do; it acts in this manner; it is very difficult now, with the immense number of patents that exist, to take out a patent in such words as to secure the privilege; the utmost precision must be used, as general terms would include something that has gone before; when once it is taken out, the patentee, even if he saw that a most material improvement could be effected by a slight change, but that such a change is not precisely foreseen by the words of his patent, he not only does not introduce the improvement, but he is obliged to profess strongly that the thing is perfect as it was described, and so he impedes the introduction of such an improvement; if, for instance, I take out a patent for a book, and a particular mode of binding it, in the specification it is very constantly the practice so to specify as to make it new, and if I happen to introduce into my description something of this kind, that the book was red, and I found that another sort of cover that would happen to be blue would make the whole thing a great deal better, not only I dare not use the blue thing, but I am obliged to declare that the blue is very bad, and that the red is the right thing, and to stick to that to the last, in order not to risk my privilege. There are several things before the public, and I would mention one; take the Electric Telegraph Company; I believe we should have had that telegraph much improved, and that it would be working much cheaper, and that we should have had it all over the country, but for the misfortune they laboured under of having patents which they were obliged to protect, and they were obliged to buy up everybody's inventions, good or bad, that interfered technically with theirs; I firmly believe that they have been obliged to refrain from adopting many good improvements, which they might have introduced themselves, but did not, because they were afraid that it might shake their patent, and I believe that the stoppage put to inventions by this state of things is far greater than would result from secrecy.

1785. The evils which you have pointed out seem in a great measure to depend upon the great difficulty of taking out and renewing patents; supposing a different system were established, which enabled a capitalist, under such circumstances, easily to renew and extend his patent, would not that remove the objections you have mentioned?

Not at all; I think it would simply increase all the evils in quantity; the greater facility you give to patents, the greater will be all those evils; the quantity of them; that is my view; I admit that I am a great advocate for cheap patents, and for giving every possible facility.

1786. Do the original inventors of the electric telegraph derive much benefit from the present patent?

That depends upon whom your Lordship calls the original inventors; Messrs. Cooke & Wheatstone derived, I believe, a large sum of money from the electric telegraph; and I believe you will find 50 people who will say that they invented it also; I suppose it would be difficult to trace the original inventor of anything.

1787. Were they not the persons who first took out a patent for the use of the electric telegraph?

I think there was a question of priority in that case, and that more than one patent was taken out at about the same time.

1788. They were the first that put it into practical operation, were they not?

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They were the first; but there have been plenty of persons who have claimed, whether rightly or wrongly I cannot say, subsequent modifications of it; and the vast variety of apparatus which may be patented connected with the electric telegraph has led to their being under the necessity of buying up an immense number of patents.

1789. Was a patent taken out in the United States for the use of the electric telegraph?

I think they have taken out a patent in America; I am not quite sure, but I do not think that Messrs. Cooke & Wheatstone have laid down any lines in America.

1790. Can you state under what laws or regulations the electric telegraph is used in America?

No, I cannot.

1791. Do you know whether the electric telegraph is under the operation of the patent laws in America or not?

I do not know: in America, it has happened that there were several distinct companies, and it really amounted therefore to there being no patent.

1792. Did they not obtain a license from the patentee for the use of it?

Probably; but if there are a number of various patents for nearly the same thing, in different hands, sufficient to cause competition, then I admit that it does no harm, or rather the exclusive privilege does not then exist.

1793. Are you aware that an Act of Parliament was passed, giving a special monopoly to the Electric Telegraph Company?

I recollect their getting an Act renewing certain powers, but it cannot have given them a complete monopoly, or any greater than their patents gave them, for there are other companies which have been formed; I have been concerned in negotiations with parties for laying down a totally different telegraph, independent of that company. The other companies may not probably have succeeded in possessing themselves of patents which enabled them to work clear of the patents of the old company, for they possess so many, that it is almost impossible now to erect a telegraph which shall not interfere with some of their patents; but otherwise they have no recognized monopoly. There is one party, Mr. Brett, who was only the other day in negotiation with a railway company, in which negotiation I was concerned, for laying down a line distinct from the Electric Telegraph Company.

1794. Does not it appear, if in this country, where we have a very cumbrous system of patent law, there has been that monopoly established, and if in America, where there is quite a different system, whatever that may be, the electric telegraph has been developed and made extensively useful, that it is not the mere patent law which is the obstacle to that?

I do not quite see that; if in America, in spite of the patents, but owing to fortunate circumstances, ten or a dozen individuals, either possessing separate licenses or having some distinct patents, have succeeded in producing competition enough really to throw the thing open, that is a fortunate remedy of the evil; but here, unfortunately, it has not been so remedied; the system of the patent laws has enabled the company to buy up every possible shape in which the thing can be made, so that if you introduced to-morrow a very decided improvement, the chances are 100 to 1 against your being able to make it clear to others that your improvement could be introduced.

1795. These patents operate, in your opinion, as a great obstacle to further improvement?

Yes; I think the Electric Telegraph Company, from my knowledge of them, have been prevented from adopting improvements which they themselves would have been anxious to adopt.

1796. You stated, did you not, the difficulties that in your experience have arisen with regard to the electric telegraph being patented, and being the subject of various patents in this country; with regard to the American system, you are called upon to answer questions as to a supposed state of things of which you know nothing?

Yes, I wish to confine myself to that which is familiar to me.

1797. The

1797. The original objection which you raised to the existence of the patent laws, and to support your objection to their operation, you stated that the electric telegraph in this country had been very much impeded by the existing patent laws. If it should appear that in America, where patent laws exist, but of a different nature, the patent laws do not prevent the general introduction of the electric telegraph, and to a much larger extent than in this country, is it not a fair inference to draw, that it is not the existence of the patent law which has been the obstacle in this country, but rather to some defects in the English patent law, which do not exist in the American law?

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I do not think so. I am told that there are patent laws in America, and, nevertheless, there are telegraphs extensively employed. I really do not know the circumstances, and I cannot pretend to state the reasons; but I do know, of my own knowledge, that, in England, the existence of a great number of patents for different forms of telegraphic instruments, the majority of them not being good, but still capable of being patented, has first of all involved the Electric Telegraph Company in an enormous outlay for the purchase of patents, and this buying-up has been to secure to themselves a monopoly; and, secondly, that state of things has, to my belief, prevented them from actually introducing improvements of their own, because they might have endangered their own privilege.

1798. In reference to the question put to you last, respecting America, may there not be local reasons, or social reasons, which have prevented the great multiplication of patents in that country which have taken place in this country; or may it not have happened that the first invention was fortunately more successful than the first inventions in this country were, and that in that respect America has not been exposed to that competition of inventions which has been so prejudicial here?

I should think it very probable; and I should think that as yet, in America, they have not got into the extraordinary complicated state in which we have got in England, where really now people not only take out patents for what they conceive to be good inventions, but they take out rambling patents to cover every possible shape of the same thing, in order to protect themselves. That is one class of people; and there is another class who make a trade of it, by which they take out patents that are very comprehensive; they rarely have the ideas themselves, but they include so many other ideas in their patents, that you cannot move without dealing with them for the use of their patents. There is, I say, a practice which has grown up in this country, of taking out a rambling patent for a variety of things very similar, to cover some other thing for which they have taken out a patent. Take, for instance, railway wheels. There are patents for every conceivable fashion of railway wheels taken out, and rather to cover some possible shape of a wheel than because that the man believed there was any particular advantage in it.

1799. Do not you think that the expense has been one great inducement to persons to take out these comprehensive patents, in order to include as great a number of things as possible?

No; I speak of separate patents. A man will take out several different patents for different things, most of which are really useless; and if you ask him in private, he will admit that it is for the sake of covering and better protecting some single idea or manufacture in which he is interested. There are people who take out patents very comprehensive, but without a single good idea in them, and for things which ought not, for their own sake or for the good of the public, ever to have been patented; but, because they are very comprehensive, we are obliged to deal with them.

1800. This is an evil incidental to the caveat system, is it not?

No, I think it is incidental to the system of patents. I do not assume any particular mode of taking out patents; I will assume that the best possible scheme is devised by which you do what I suppose is thought to be right, namely, give an exclusive privilege to a man who appears to be the inventor of something. I will suppose no caveat or previous specification; that all that is passed over, and you get a patent; still you would have just the same interests at work. For instance, I want to be a manufacturer of wheels; I do not care much about a patent; I take out a patent for what I think would be a pretty good shape, but

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I take out several others for other shapes, in order to comprehend a great variety of forms of wheels, so that no one else can manufacture any of those shapes except me. Surely that is of no good to the public, because if after that a third party has really some good idea with respect to a wheel, not only he cannot get a patent for it, if it has been included in the first patent, but he is deterred from doing anything in the matter.

1801. Do you think that there would be the same inducement to parties, if there were no patent laws, to incur great expense and labour to improve and bring out a perfect invention?

I really believe that there would. I do not think that they would be exactly the same parties, but that they would be parties much more capable, manufacturers and others, like myself, would do it, who had means at their hands for trying experiments; they would do it a great deal more than at present; at present I dare not take a step in introducing any change in the manufacture of anything, because I am pounced down upon by one person or other who has patented something that resembles it.

1802. In your own case, if you have any workman in your employ who thinks that he has made a discovery, can he communicate it to you, and leave it to you to work out, or will he take it to somebody else who may enable him to obtain a patent for it, and so get an exclusive advantage?

In most cases it is as your Lordship last suggested, that the man's only idea is this, "Oh, I must take out a patent for this;" and if he came to me, I certainly should say, "I will have nothing to do with patents, and cannot help you." The chances are, and in practice it is so, that he immediately tries to find out some people who deal in patents, and to assist him in bringing this out as a patent, but always only if it can be patented.

1803. If no patent laws existed, do you think that at the time the discovery presented itself to the mind of this man, he would communicate it freely to you, and that you would make all the necessary exertions in your power to bring it into effectual operation?

I believe I should. I do not say that everybody would do the same; I think it would amount to this, that the man would think over it a little, and get it into a shape to do him credit, and then, if he had a good master, he would show it to him, and if he thought he could make anything of it, he would give the man a pound or two, which would be really earned, instead of hundreds being dreamt of but never touched. Eighty or ninety out of a hundred so-called inventions, at present are worth nothing; a man thinks he has made a discovery, and goes to work, and never ascertains whether it is good or bad, till much time and money is wasted upon it, and a patent is taken out. I believe that one per cent. is very much beyond the proportion of patents that are good for anything.

1804. If there were a better system of indexes and printed specifications, and if the poorer inventor were able provisionally to register his design, so as protect himself, would not that obviate some of the inconveniences to which you have alluded?

I do not think it would, for this reason; the number of them is already immense, and they will increase. The more you improve the patent laws, the greater the number that will be taken out. The number would be so great, that it would be impossible for any verbal description to be able to form an idea whether your invention is included in what another man has patented or not. You must look at the drawings, and you must look at the description, to see whether it really includes the idea that occurs to you. The labour of doing that would be worse than what a poor man goes through now. The way in which the things are patented over and over again by persons who now have the means of inquiring, really is quite extraordinary. There are a few striking instances of it in the Great Exhibition, where there are very beautiful examples of the oscillating engine, which has been patented by several persons. Mr. Penn is a great manufacturer of them, and also Mr. Maudslay. I remember Mr. Joseph Maudslay, when he invented it a good many years ago, and he took out a patent for it, yet you may see at the Exhibition a very beautiful example of one of Penn's oscillating engine of the present day, and alongside of it, on the top of Messrs. Bolton and Watts' large engine, a little model of an oscillating engine patented by Mr. Murdoch, of Messrs. Bolton and Watt's establishment, in 1785, and

and it has been patented, I dare say, a dozen times since. Mr. Maudslay, at all events, was a party who had as good an opportunity of discovering whether the thing had been previously patented or not; but the number would be immense, and the difficulty very great, of ascertaining, without reading through the patents and looking through the drawings, whether or not your idea had been patented or not.

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1805. Are you not aware that there has been the greatest difficulty in ascertaining, for want of proper indexes, what patents were in existence?

Yes, still patent agents have the means of doing that, and you must always be in the hands of agents. No man himself could, any more than he could determine points of law, ascertain whether a thing has been patented or not; you must go to a man in practice.

1806. With reference to those cases in which you speak of a person taking out a patent, in order to exclude others, do you not consider that that would be in some measure obviated by requiring a payment at a subsequent period after taking out the patent, so that if a man desired to continue the exclusive advantage of that patent, he should be forced to make an additional payment?

But he would desire to continue it. Suppose a man takes out a patent, which accidentally—it is very generally intentional—is rather comprehensive, and embraces something which he has never fully worked out, but which I next day come and bring into successful operation, without knowing what he had previously done. I believe that that would increase immensely the evil, and you would have fifty fishing patents where you now have one. At present a trader taking out a fishing patent to cover several things, has to pay a large sum of money; if you give a power to take it out at first very cheaply, and then enable him to renew his lease, they will be taken out in swarms, and it would be a very safe trade. I will mention a case. A man would take out a patent for an improvement in railway carriages, good general terms, and introduce a good many things into it of various forms and shapes, many would probably be very impracticable in shape. I, in the meantime, happen to be at work upon something of the sort, and I succeed in making a good spring; that, to a certain extent, is included in his patent. If he could renew his patent after that at a small annual sum, he would do it, and make me pay a royalty for taking his invention.

1807. Do not you think, that if there were no patent laws in this country, there would be greater inducements to parties making discoveries to take them to America and France, where patent laws do exist, and so give those countries a priority in the use of discoveries that might be advantageous to the manufacturing arts in this country?

I think that might operate for a year or two, but only for that time, other countries must drop their patent laws too, if we do, as we should, by the next post, get the thing free; the patent must be in America as well, and as clearly defined, as in England, and which, according to our laws, must be sufficiently clear that a workman can make an apparatus, or a commonly intelligent chemist can follow the description in the specification; if that is done in America, in the same definite way, we should soon have the thing in England.

1808. You think that no considerable time would pass by before we had it here?

No, the next post would bring it; and, as far as the English public is concerned, it would be a benefit.

1809. Has it not been stated, that one effect of our patent laws is, to lead persons in different parts of the world first to attempt to introduce their patents into England?

England is the best market for inventions, and I quite admit the fact that foreigners, generally speaking, endeavour to sell their patents first in England; the recommendation given to it by its being sold in England is conclusive everywhere else; there are very few inventions indeed for which England is not, in fact, almost the only market, and England is the market almost always for which the invention was made; I do not recollect at this moment how the patent law stands in England and in France as to priority, whether having taken out a patent in England, you can patent it in France; I do not know how that is; I believe the fact is, that patents are taken out first in France.

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1810. Is it the fact that in France no patent will be granted if an invention has been published in this country previously?

(*Mr. Webster.*) I believe that if it has been published in this country it will not be granted, it may be patented here first.

1811. (*To Mr. Brunel.*) Would not that operate as an additional inducement to a party to take his invention first to France?

He patents it first in France now, but I believe it would come to England first, because it is the best market.

1812. It appears to be your opinion, that, generally speaking, the patent laws are not necessary in order to encourage inventions; does your observations only apply to those discoveries which may be made by scientific men, or to those improvements and processes likely to be discovered by manufacturers or workmen, or does it extend also to certain inventions which require a long time to bring to maturity, much thought and much labour, but being brought to maturity are of easy manufacture, so that they can be easily adopted by any other class of persons?

My impression is, that in every class of inventions you would practically in the end have a more rapid supply and increase of inventions than you have now; I believe that men of science, and all those who do it for pleasure as well as for profit, would produce more, they would be less interfered with by existing patents, and they would really produce more; I believe that the working class, the smaller class of inventors, would introduce very much more. With respect to that class of inventions, which I believe to be very few in number, though they are talked of very much, which really involve long-continued expenses, I believe they would probably be brought about in a different manner; that instead of incurring expenses, and continuing a long series of experiments in order to produce something perfect which you endeavour to bring out in a shape to be patented, and to make a good deal of money by; I believe the ideas of inventors would be communicated at a much earlier stage; that 50 people would be following the same track, and producing results much sooner, and much better, and much more perfect, than the one man who now works at it for years to produce it. I feel very strongly a case in point, where, for 12 years (it was one of those few cases where a long series of experiments has been continued and money spent), I continued for my father, at very considerable expense, a long series of experiments for applying condensed gases as a motive power. Now, I believe, that if instead of working at it myself, it had been the subject of discussion, and had been talked of more generally in the world, it would either have failed a great deal sooner, and my father would have saved his money, or some good would have come out of it, instead of its becoming a dead letter.

1813. Would it not have been as likely that you would have proceeded with the experiments in the hope of obtaining an invention which you could keep secret?

I do not think that the same class of people would; a manufacturer who discovers some chance effect of a dye, or a little improvement of that sort, will keep his secret as long as he can, but the class of persons who work systematically at a series of experiments are, generally speaking, men who, I think, would not do so; the same turn of mind does not lead those sort of men to be keeping a thing secret in hopes of excluding it for ever from the public. My father was in the same position as workmen are; they know no other way of deriving a benefit from a thing than working it, to produce a patent; therefore, a good deal of money, and a number of years were spent, and, as it proved, wasted upon this series of experiments, which, most likely, many others would have done better than I did, and perhaps something might have come of it, whereas it was left, in consequence of my father's engagements, almost solely in my hands; mine was the head that it profited by, and the thing failed.

1814. Do you think that your father would have been disposed to expend so much money, and to embark in such a series of experiments, unless he had expected some great benefit to result?

No; but I believe that some good result might have been produced without the same expense.

1815. Do you think that some good result might have been produced by the direction:

direction of many minds to the carrying into effect of certain partial discoveries or certain partial contrivances, which you say otherwise failed?

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Yes; that is what I mean.

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1816. Do you think that the same money would have been expended upon it, and the same experiments carried out?

No; I do not think it would, because the blunders that I made would probably not have been made, and the thousands of pounds that were spent would have been saved, and which produced no effect; better ideas would have occurred to others, and simpler modes of trying the experiments.

1817. Still though but of rare occurrence, are there not some cases in which very considerable expenditure would be involved in carrying to perfection some improvements?

There are a good many of such cases, but I think they arise very much from this circumstance, that it is one head and one mind that is devoted to a thing, and therefore, of course, a great many mistakes are committed, and the best mode is not always adopted to arrive at a point; but if it were more generally discussed, I believe that the point would be arrived at at much less expense, and in a much shorter time.

1818. Supposing the present state of the law to be amended by a system of granting a privilege to be continued, do you see any necessity for protecting foreign inventions brought into this country, or do you think that an invention, being once used and published abroad, no monopoly should be granted in this country?

I do not exactly understand how that can be provided for, without at the same time endangering the patent that is taken out by an inventor in England. If publication abroad is publication in England, then publication abroad may damage a *bona fide* invention in England; and I think, if justice is sought to be done, that that is rather hard. If a man is permitted to take out a patent on the ground that it is new to him, and has not been in operation amongst those parties over whom you give him the exclusive privilege (because you cannot give him an exclusive privilege abroad), to say that because somebody has published it abroad, he not knowing it, his patent in England is to be damaged, I think, would be perhaps an injustice, and might be dangerous.

1819. Is not the most plausible reason put forward by those who support the system of patents, that it is an encouragement to persons to invent something new, although it may be useless as an invention; does it in your opinion encourage the introduction of things which are now used abroad?

I think it does, to this extent; if a thing is known abroad, but has not been used in England, it must be because that knowledge has not reached England, or that there is some other impediment to its being used; and therefore a man who imports it, really produces the same benefit to England as if he had newly invented it; the only cause in England of its not being known is, that it has not been usefully employed, or published in any way to make it useful.

1820. Is not that inconsistent with what you stated just now, that supposing the United States were to encourage English inventors to invent for that country, instead of their own, the inventions would come back to this country by return of post?

So I think they would; and I believe that anything that would destroy patents in England, would be good for the public; but assuming that patents are granted, I must assume that it is done from a sense of justice to persons, and for the encouragement of inventors. I disapprove of this, but I was bound to assume what your Lordship put before me, and to carry out the principle, you must, I think, of necessity include the man who brings from any country, or any part of the world, something that has not been published in England; but it is all against my view of what is the interest of the country.

1821. Do you think that in the case, not of an obscure invention, the use of which had not been known in France, but of some very recent invention in France, patented there or not patented there, but imported by a traveller into this country who had seen it in use, that there is any reason why he should have a patent for that as if it was his own invention, at the expense of the public?

I think not, as a question of justice; but I go further than that; I do not see

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any reason why a man who has an idea excited in his mind by circumstances around him, which are in all probability producing the same ideas in other persons' minds, and in many of them producing much better results, has any right to an exclusive privilege for that idea.

1822. Is it the fact that there is great concurrence in inventions?

Invariably; and it is a very curious fact, that almost in every case you will find, if you happen to get at a knowledge of the circumstances, that the same idea is occurring, as it naturally would, to various people at the same time, and I may say that there is no such thing as inventions, but they are mere observations that a man makes of things that he sees before him; he sees their applicability to other circumstances, and makes what is called an invention, and if there happens to be a demand for the thing at the time, it becomes a useful invention, and in 99 cases out of 100, it requires various circumstances to be brought into operation to bring out an invention.

1823. Does it not very frequently happen that conflicting claims to inventions arise out of some previous communications, and the knowledge of one party having been acquired by several others?

Not of the good ideas: all that sort of thing occurs very much with the inferior things, which ought never to be patented; not so with regard to the screw and other things which are really useful to the public.

1824. Was not it the case with one of the greatest improvements of our time, namely, steam navigation; do you suppose Fulton to have been the original inventor?

I have no reason to suppose that he was, or was not. There were many people at the same time, and soon after, who were proposing those things, and very many of them very distinct from each other. These things are all so progressive, that it is impossible to decide when was the first, and when, exactly, each succeeding step. Long after Fulton's time, within my own recollection, I remember when my father succeeded in persuading the Admiralty to allow him, partly at his own, and partly at their expense, to make an experiment with a steam-boat that he asserted would go to sea. He succeeded, with difficulty, in getting permission to fit up a boat with a small steam-engine and paddles, because he asserted that it would be able to go to sea; and I remember the Admiralty being dissuaded from trying it, because it was said that the paddles could not properly work at sea; yet it had been previously invented, and perhaps done; but all these things are progressive.

1825. That was after steam had been applied to the propelling of ships, was it not?

Yes, but the thing was so little advanced, one can hardly say that anybody was the originator; I believe that hardly anything is ever invented. Long before Fulton, we have all heard that such things had been done; that vessels were made to move by paddles worked by men.

1826. Then you think it is extremely difficult to estimate the amount of merit due to any inventor as to any new invention?

Yes, I believe it to be quite impossible.

1827. Speaking of concurrent inventions, you would say that that was by no means the best invention which wins the race?

I believe it is rarely so; the chances are entirely against it: I believe it is rare that the man most able to work it out, and who really has arrived at the best collection of ideas upon the subject, is the patentee.

1828. He generally finds himself anticipated by some more rapid projector?
Yes.

1829. Then he is prevented by a patent, then existing, from perfecting his invention?

He ceases to feel any interest in the thing, and rather throws cold water upon it.

1830. Are the Committee to infer, from your evidence, that supposing a system of patent law were established, including a tribunal for the purpose of determining whether an applicant was entitled to a patent on the ground of the novelty

novelty of his invention, there would be great difficulty in determining whether it had existed before? *I. K. Brunel, Esq.*

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It would be impossible, I believe, to determine whether it did not previously exist; if there are five or six people doing the same thing at the same time, and having the same ideas, it would be impossible for anybody to determine that one should have priority over the other; one may live in London, and may have the better opportunity of taking out a patent, and the others may be in the country, but he is not therefore the first inventor.

1831. Supposing a patent were applied for, and the invention were shown to have been in use elsewhere, you would not grant a patent in that case, would you?

No; but who is to have the power to sweep the whole country to ascertain that it is so?

1832. It was stated the other day by a witness, that invention was more rife in America, and that fact was attributed to the greater facility of obtaining patents; do you coincide with that view of the matter?

I would not venture to speak with respect to America; I cannot see any reason to suppose that invention is more rife in America than here, because everything good ultimately reaches England, and we therefore know here all that was invented of good in America up to within a few months, and we know all that has been invented in England, and taking the total number of good things which thus comes to one's knowledge, although a vast number of beautiful inventions come from America, yet the great majority of the whole are English.

1833. Do you think that there are new processes very applicable to the manufactures in this country, which are known in France or the United States, and which are not introduced into this country?

I have no doubt there are many in France and on the Continent, and I suppose we are better acquainted with what is done in America than on the Continent.

1834. It is the case, is it not, in different parts of the United Kingdom, that there are certain processes used in one establishment which are not used in another?

Yes, to a very great extent; in travelling about from one manufactory to another, it is curious to observe the very great difference in many processes; the manufacturers do not seem to know so much as you would expect what is done at other manufactories.

1835. The result of your evidence is, that you are very decidedly of opinion that the whole patent system should be abolished?

Yes, I think it would be an immense benefit to the country, and a very great benefit to that unfortunate class of men whom we call inventors, who are at present ruined, and their families ruined, and who are, I believe, a great injury to society.

1836. And you think that those consequences, such as ruin to inventors, and evils of that description, would subsist equally though the patent law were made simple and more effective?

Yes, I think that they would be much increased; and, if patents are continued, I hope that the principle will be carried out thoroughly, and then it will not stand for two years; I think that would put the principle to the test; if it is a right principle, it should be carried out fully; make patents cheap, and have plenty of them.

1837. Is there any additional information which you could give to the Committee upon this subject which has not been elicited by the questions that have been put?

I do not remember any at the present moment.

The Witness is directed to withdraw.

Ordered, That this Committee be adjourned till Monday next,
One o'clock.