

*Privy Council Appeal No. 74 of 1928.*

The Canadian General Electric Company, Limited - - - *Appellants*

*v.*

Fada Radio, Limited - - - - - *Respondents*

FROM

THE SUPREME COURT OF CANADA.

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JUDGMENT OF THE LORDS OF THE JUDICIAL COMMITTEE OF THE  
PRIVY COUNCIL, DELIVERED THE 15TH OCTOBER, 1929.

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*Present at the Hearing :*

LORD BUCKMASTER.

VISCOUNT DUNEDIN.

LORD WARRINGTON OF CLYFFE.

[*Delivered by* LORD WARRINGTON OF CLYFFE.]

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The action in which the present appeal arises is one for the infringement of the Canadian Patent No. 208,583, the application for which was made on the 17th September, 1920. The application was made by the inventor, Ernest Alexanderson. The Patent was dated the 15th February, 1921, and was granted to the present appellants as assignees of Alexanderson.

That the patent was infringed by the respondents is admitted, but they dispute its validity on several grounds, including those hereinafter specifically mentioned.

The trial Judge Maclean in the Exchequer Court of Canada held that none of the grounds of defence was established, and on the 14th April, 1927, he pronounced a decree whereby it was declared and adjudged that the patent was valid and that it had been infringed by the respondents, and an injunction with ancillary relief, including an enquiry as to damages, was granted.

The respondents appealed to the Supreme Court of Canada, who, on the 7th February, 1928, made an order allowing the appeal, reversing the judgment of the Exchequer Court, and dismissing the action with costs.

The present appeal is brought by special leave of His Majesty in Council, granted by Order in Council dated the 30th July, 1928.

Among the grounds of defence raised by the respondents it is necessary to mention the following only, viz., (1) lack of subject matter having regard to the state of the art as shown by earlier patent specifications; (2) lack of utility; (3) anticipation by a specification of a German patent granted on the 23rd June, 1919, to Schloemilch and Von Bronk on an application made on the 9th February, 1913. The specification, however, remained unpublished until the grant of the patent; (4) A defence founded on Section 7 of the Patent Act of 1906, which provides that the invention claimed shall be one which, amongst other things, "was not known or used by any other person before the claimant's invention thereof."

A further defence was raised founded on the fact that Alexanderson's declaration in support of his application stated, contrary to the fact that he had not applied for or obtained a patent for the invention in a foreign country.

It will be convenient to deal with these defences in order, except that No. 2 (want of utility) may be disposed of at once, inasmuch as it was not seriously pressed before the Board.

The patent relates to wireless telegraphy, or, rather, to wireless telephony, and in particular to the selection in a receiving apparatus of oscillations of a given wave length from mixed oscillations. This quality of a receiving apparatus is conveniently referred to as "selectivity." Speaking generally, the object of the inventor was to increase the selectivity of the apparatus and at the same time to avoid loss of strength in the selected oscillations.

The chief elements in a radio receiving apparatus, their functions and operation, are so fully described by Maclean J. in his judgment (Record, pp. 390-391), that it is unnecessary to repeat them. It is sufficient to say that at a receiving station it is necessary to eliminate from the infinite number of waves reaching the antennæ or aerial all except those of the desired wave length, and that this is achieved by the use of a tuned circuit containing a condenser. The condenser contains two sets of plates, one of which may be made movable or variable with respect to the other, thus varying the capacity of the condenser and adjusting the resonant frequency so as to correspond to the frequency of the desired wave. A variable condenser is conventionally distinguished in drawings of an apparatus by an arrow drawn through the lines representing the condenser. Another conventional sign is an arrowhead pointing to the secondary of the induction coil. This indicates that the number

of turns of the coil may be changed, thus varying the inductance or the voltage of the induction circuit, and as a consequence the resonant frequency thereof.

It will be convenient, in the first instance, to deal with the two questions of subject matter and novelty or anticipation as they stand under the general law of patents without reference to the particular provisions of the Canadian Patent Act, and then to consider how far, if at all, that Act alters the position.

First, as to subject matter. The question here is one of fact, whether, having regard to the conditions of the art, there is sufficient invention in that which the patentee claims to justify the granting of a patent.

The law on this subject is, in their Lordships' opinion, accurately summarised by Maclean J. in his judgment at p. 393 of the Record. His statement is as follows :—

“There must be a substantial exercise of the inventive power or inventive genius, though it may in cases be very slight. Slight alterations or improvements may produce important results, and may disclose great ingenuity. Sometimes it is a combination that is the invention: if the invention requires independent thought, ingenuity and skill, producing in a distinctive form a more efficient result, converting a comparatively defective apparatus into a useful and efficient one, rejecting what is bad and useless in former attempts and retaining what is useful, and uniting them all into an apparatus which, taken as a whole, is novel, there is subject matter. A new combination of well-known devices, and the application thereof to a new and useful purpose, may require invention to produce it, and may be good subject matter for a patent.”

It is now necessary as shortly as may be to consider in what manner Alexanderson describes his alleged invention and what it is that he claims.

His general description is as follows :—

“In accordance with the present invention, selective tuning is secured by the use of a plurality of resonant circuits arranged in cascade in such a manner that the selectivity of the system increases in geometric ratio with the number of circuits employed. The selective circuits are respectively interlinked by a relay controlling a separate source of energy to initiate oscillations corresponding to potential oscillations impressed upon the relay. As each tuned circuit is more or less opaque to disturbing oscillations differing in frequency from the oscillations to be selected, a certain percentage of the disturbances is eliminated in each circuit of the series, so that the purity of the incoming train of oscillations progressively increases as it is successively relayed. The relay preferably used for this purpose is an electron discharge tube having an incandescent cathode, an anode and a grid.”

It is unnecessary to explain the drawings at length. It is sufficient for the present purpose to say that in each case the condenser on the input circuit—that is to say, the circuit connected with the cathode of the electron discharge tube—is indicated as being a variable condenser by the use of the conventional sign of an arrow, and the circuit is thus shown to be a tuned circuit capable of adjustment according to the particular wave length which it is desired to select. The drawings and the

detailed description referring to them deal only with the employment of three tuned circuits, but the patentee points out that he does not limit himself to three, but that other tuned circuits may be added and the disturbing impulses suppressed in the same degree, viz., in geometric ratio with the number of circuits employed.

Claim 3 (the only claims to which, in their Lordships' opinion, it is necessary to refer) is as follows :--

" A tuned circuit receiving system for detecting sustained oscillations of a given frequency comprising a plurality of circuits resonant to the frequency of the oscillations to be detected and arranged in cascade, relay devices joining each of said circuits to another comprising an evacuated envelope, an electron-emitting cathode, a co-operating anode, and a grid, said devices being connected to one of said circuits at the cathode and grid and to another circuit at the cathode and anode and a local source of energy in the second circuit."

The question as to subject matter was not dealt with by the Supreme Court because having decided, as they did, against the appellants on other grounds, it was unnecessary to consider whether the plan proposed by Alexanderson disclosed such a degree of invention as would justify the granting of a patent.

There is one circumstance which on this point cannot be neglected, though it is not of cardinal importance, viz., the fact, stated by the appellants and not denied, that Alexanderson's system when published was generally accepted and adopted in the art.

It is true that the fact that increased selectivity was apt to result in a diminution of signal strength had been realised by others, and certain devices had been suggested for overcoming it, *e.g.*, the employment of a relay in a mechanical or acoustic form by Lorenz. For this purpose Alexanderson suggests the use of the vacuum tube for coupling the several circuits together at each relay. In their Lordships' opinion, following that of Maclean J., and assuming for this purpose that Alexanderson's suggestion had not been anticipated, the assembling by Alexander-son in one device of the instrumentalities which furnished means for providing selectivity, progressively improving from circuit to circuit, and at the same time preserving the signal strength, displayed sufficient invention to support his patent. It is true that the vacuum tube which in Alexanderson's invention performs the function of keeping up the signal strength, was not itself new, but the particular use of it for the purpose described in combination with the other elements of the system, and producing the advantageous result, is, in their Lordships' opinion, a sufficient element of novelty to support the patent. It may be only a small step, but it is a step forward, and that is all that is necessary so far as subject matter is concerned.

But then there arises the much more serious question of anticipation. The answer to this question ultimately involves a consideration of the special provisions of the Canadian Act, but

for the present their Lordships propose to deal with the matter without reference to those provisions.

The law on this subject is, in their Lordships' opinion, accurately stated by Maclean J. He says (Record, p. 393):—

“Any information as to the alleged invention given by any prior publication must be for the purpose of practical utility, equal to that given by the subsequent patent. The latter invention must be described in the earlier publication that is held to anticipate it, in order to sustain the defences of anticipation. Where the question is solely one of prior publication, it is not enough to prove that an apparatus described in an earlier specification could have been used to produce this or that result. It must also be shown that the specifications contain clear and unmistakable directions so to use it. It must be shown that the public have been so presented with the invention that it is out of the power of any subsequent person to claim the invention as his own.”

The only prior publication which it is necessary to consider is the specification of Schloemilch and Von Bronk for their German Patent No. 299,300, which was dated the 9th February, 1913, but was not published until the issue of the patent on the 23rd June, 1919, prior, therefore, to the specification of Alexanderson, which was filed with his application on the 17th September, 1920. Does then the specification of Schloemilch and Von Bronk describe the invention claimed by Alexanderson?

It is well settled that this is a question of construction and that parol evidence is only admissible for the purpose of explaining words or symbols of art and other such-like technical matters, and, of course, of informing the Court of relevant surrounding circumstances. The learned Judge who delivered the leading judgment on this point in the Supreme Court rightly, in their Lordships' opinion, considered that the question turned on whether Schloemilch and Von Bronk intended the input circuit, viz., the circuit between the grid and the filament in the vacuum tube, to be tuned. Unfortunately, however, in their Lordships' view, he rested his conclusion, not on the true construction of the document as alone revealing the intention, but on the intention of the authors of it, derived partly from conversations between them and what they actually did, and partly from a blue print drawing not reproduced in the specification. In their Lordships' opinion, neither the parol evidence nor the blue print was properly admissible for the purpose for which they were used. As to the blue print, moreover, it should not have been relied upon for any purpose. Except that it came from a file in the possession of the German Company to which Schloemilch and Von Bronk belonged, no evidence was given as to the person who prepared it, nor any other evidence which would make it admissible. Except that it bore the date “6th February, 1913,” which might have been put upon it at any time, there was no sufficient evidence as to when it was actually made.

As to the specification itself, it is fairly clear from it that the main object of the invention was amplification and not selectivity.

The only reference to a tuned circuit is in the description of the detector circuit, where the writers state that "it may be preferable to provide an intermediary circuit tuned to the oscillations," and this intermediary circuit is on the drawings duly furnished with a variable condenser identified as such by the conventional arrow. In Fig. 2 other condensers are shown, one on the input and one on the output circuit, but neither of these is represented as variable. The reference to tuning in regard to the intermediary circuit above referred to and the absence of any such reference in the other cases is, in their Lordships' opinion, most significant. Some reliance was also placed by the respondents upon an arrow-head shown on the drawings in connection with the secondary of the transformers, but their Lordships agree as to this with the view of Maclean J. that this indicated a voltage tap rather than a tuning device, especially as the circuit on which it appears had on it the variable condenser above referred to, and both would not be required for tuning purposes. Treating then the question of anticipation as one to be solved only by ascertaining the true construction of the document containing the alleged prior publication, their Lordships have come to the conclusion that the respondents have failed to make out their case, and that the attack on the appellants' patent on this ground fails.

But so far their Lordships have been considering the matter without reference to the special provisions of the Canadian statute on the subject, and its construction and effect must now be dealt with.

Chapter 69 of the Revised Statutes of 1906 is the statute applicable to this case. Section 7 is as follows:—

"7. Any person who has invented any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement in any art, machine, manufacture or composition of matter, which was not known or used by any other person before his invention thereof, and which has not been in public use or on sale with the consent or allowance of the inventor thereof, for more than one year previously to his application for patent therefor in Canada, may, on a petition to that effect, presented to the Commissioner, and on compliance with the other requirements of this Act, obtain a patent granting to such person an exclusive property in such invention."

This section raises several important and difficult questions, some of which have been determined by authority. It was decided in *Pope Appliance Corporation v. Spanish River Pulp and Paper Mills, Ltd.* [1929], A.C. 269, that the public use or sale for more than a year previously to the application must be public use or sale in Canada, these words applying not to the application but to the public use or sale.

On the other hand, it has been decided by the Supreme Court in *Wright & Corson v. Brake Services, Ltd.* [1926], S.C.R. 434, that the words "which was not known or used by any other person before his (the applicant's) invention thereof," are not qualified by the words "in Canada," and accordingly if it can be shown that the invention was known or used by any other

person in any part of the world before the invention in Canada, that fact alone would render the patent invalid.

This is a very far-reaching pronouncement. It undoubtedly overturns patent law as understood in England, for it is quite certain that in English law if A applied for and took out a patent it would be neither here nor there for B to come forward and say, "I will show that I had already made the discovery, but I kept it to myself." A had made a contribution to the public by showing them how to practise the invention. B had made no such contribution, and therefore he had no rights in the matter. Also it obviously opens the door to defeat any invention, it may be after a long space of time when it has shown itself to be really valuable, by parole evidence which may be hard to check. Nevertheless, as a mere question of construction of the section, their Lordships are not prepared to differ from the Supreme Court on this point.

The present case is a good instance of what may be called the danger of the matter. In accordance with what has already been said, their Lordships hold that Alexanderson's specification was not anticipated by the specification of Schloemilch and Von Bronk. Alexanderson had been enjoying the profits of his patent for many years, yet now it may be set aside not by Schloemilch and Von Bronk's specification but by what from the parole testimony may be held to be their knowledge. It must be clearly kept in view that the date of the knowledge or use by any other person is a date before the *invention*, not before the patent. This therefore lets in parole evidence to uphold, just as it has let it in to cut down. Now, taking the knowledge of Schloemilch and Von Bronk, as the Supreme Court has done, as at least 10 or 14 days prior to the 9th February, 1913, the date of the application for the German patent, how stands it here as to Alexanderson's invention? On the 4th February, Alexanderson wrote a letter to Davis in which he describes "the new system of tuning which I have devised," and he clearly sets out his method of tuning, as he expresses it, by geometrical progression. A copy of that letter was sent to Dr. Langmuir, who had had conversations with Alexanderson in January, and this is what he says about it, and the conversations he had: "Q. I would ask you to state whether or not, as one skilled in the art, at that time, the letter formed a disclosure to you of the subject matter of the Alexanderson patent later in suit in this action? A. This letter covers practically the same ground as the conversations that I had had with Mr. Alexanderson during the preceding weeks. It gives a very clear summary of Mr. Alexanderson's ideas and describes the principles involved in the idea of tuning in geometrical progression, so clearly that it would have been sufficient even if I had not had any previous conversation with Mr. Alexanderson, to have enabled me to build the device and obtain the advantages of geometrical tuning which Mr. Alexanderson foresaw. Not only is the theory of the operation of this system

described in this letter, but the means of accomplishing it by use of the audion is clearly described." The respondents' expert witness, Mr. Hazeltine, is asked as to this letter, and he criticises the use of the word "rectify" used in it, but in cross-examination he admits that the writer is really referring not to a rectifier but to a type of audion which De Forest invented and which he expected Langmuir to improve.

The question really comes to this, and it is the root of the matter. The letter taken owing to Langmuir's evidence as being a mere reproduction of the conversation in January, shows the whole method, but indicates that one of the necessary parts of the contrivance must be of a certain quality. That is indicated by this sentence: "The device necessary to accomplish this is some form of high frequency relay which enables one high frequency current to control another high frequency circuit without the first circuit being influenced by the phenomena in the second circuit. Such a relay is the incandescent rectifier where the flow of current in the local circuit is controlled by a potential introduced in the path of the radiating energy." The well-known relay was that of De Forest. It was suspected, though not actually proved, that it might prove too sluggish for a high frequency relay, but Langmuir improved on the De Forest relay and that was the relay that was included in the specification for the patent. Now, the Supreme Court has held that Alexanderson's invention was not completed till May, when, to quote their words, Dr. Langmuir had constructed audions which when tested were found to give a frequency in the relayed current equal to the incoming oscillations. The point is a narrow one, but their Lordships think that what is meant in the section by using the word "invention" instead of "application" or "patent" is that what is to be considered is the description whether spoken to or put in writing which really gives the means of making the desired thing which is to be the subject of the patent. In other words, the arrangement as to the audion was complete. The invention was a tuning by geometrical progression associated with a suitable audion which the modification of the De Forest audion proved to be. De Forest's audion might do. If it did not, then a modification of it would. It is just analogous to saying that a certain part of a machine should be of a strength capable to bear such-and-such a strain, without an indication of what the exact strength should be. Their Lordships are therefore of opinion that, fairly read, the evidence shows that Alexanderson had discovered his "invention" in January, 1913, and therefore he is not hit by the fact which is assumed that Schloemilch and Von Bronk also discovered it in February, 1913, though they did not proceed to make practical use of that discovery.

There remains one contention on the part of the respondents to be disposed of. The application for the present patent was made on the 17th September, 1920, and more than a year before this date, viz., on the 22nd February, 1916,



there had been issued to the applicant a patent for the same invention in the United States, and he was accordingly not entitled to the protection afforded by Section 8 of the Act of 1906, and under this Act his patent would have been void. Moreover, in the declaration required by Section 10 he had falsely stated that "the invention has not been patented to me or to others with my knowledge or consent in any country." By Section 29 it is provided that a patent shall be void if any material allegation in the petition or declaration of the applicant in respect of such patent is untrue. The appellants relied on this fact as destructive of the patent.

But in the meantime there had been passed an Act of 1921 containing the following section :—

"7.—(1) A patent shall not be refused on an application filed between the first day of August, 1914, and the expiration of a period of six months from the coming into force of this Act, nor shall a patent granted on such application be held invalid by reason of the invention having been patented in any other country or in any other of His Majesty's Dominions or Possessions or described in any printed publication or because it was in public use or on sale prior to the filing of the application, unless such patent or publication or such public use or sale was issued or made prior to the first day of August, 1913."

The application for the present patent was made during the period mentioned in the Act and accordingly it cannot be held invalid by reason of the earlier patent in the United States, and the mis-statement in the declaration has become an immaterial allegation. The Act is clearly retroactive so far as regards the fact of the issue of a foreign patent, and it would be somewhat strange if it were held to have no retroactive effect as regards a false declaration as to that fact. The matter came before the Supreme Court in *Fada Radio, Ltd., v. Canadian Electric Company, Ltd.* [1927], S.C.R. 520, and the question was decided in favour of the patentee on the ground that the statement had become immaterial. The only distinction between that case and the present is that there it was not, in the opinion of the Court, established "as conclusively as might be," that the issue of the foreign patent was known to the declarant, whereas in the present case he himself obtained the foreign patent. But, in their Lordships' opinion, this ought to make no difference in the result. The issue of the foreign patent becomes by the operation of the Act of 1921 an immaterial circumstance, and the allegation as to it is therefore also immaterial, and it becomes no less so though made by a person who knew, or at all events ought to have known, the truth.

All that is in question now is the validity of the patent; whether the declarant personally may be under any liability, criminal or otherwise, for his mis-statement is another matter. In their Lordships' opinion, this objection fails.

Their Lordships will therefore humbly advise His Majesty to allow the appeal and restore the judgment of the Exchequer Court, the appellants to have their costs before this Board and in the Courts below.

In the Privy Council.

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