BETWEEN:

FIBERGLAS CANADA LIMITED.....PLAINTIFF;

AND

SPUN ROCK WOOLS LIMITED AND THE CUSTODIAN ..... } DEFENDANTS.

1942
April 14, 15
1942
July 2

Patents — Infringement action — Anticipation — Novelty — Invention — Patentability.

The action is one for infringement by defendant, Spun Rock Wools Limited, of a patent, the plaintiff being the licensee of the patentee. The invention relates to new and useful improvements in the production of Fibres or Threads from Glass, Slag and the Like Meltable Materials The defendant admitted that its method of manufacturing rock wool is quite similar to or the equivalent of the method described and claimed in the patent in suit. The defendant pleaded that plaintiff's patent was invalid and alleged lack of novelty and lack of invention.

Held: That since none of the prior publications cited by the defendant has so presented to the public the method of manufacture or the device for producing fibres from molten glass, slag and the like meltable material which is described in the invention in question, so as to put it out of the power of any subsequent person to claim the invention as his own, the plea of anticipation was not substantiated.

2. That the method of manufacture described in the patent in suit was something new and useful and possessed certain marked improvements and advantages over anything that had earlier been disclosed or used in this particular art and required that degree of inventive power to merit a patent.

ACTION by plaintiff herein to have it declared that a certain patent to the use of which the plaintiff is licensed by the patentee, is valid and has been infringed by defendant company.

The action was tried before the Honourable Mr. Justice Maclean, President of the Court, at Ottawa.

R. S. Smart, K.C., and *Christopher Robinson* for plaintiff.

W. D. Herridge, K.C. and *W. A. MacRae* for defendant, Spun Rock Wools Limited.

The facts and questions of law raised are stated in the reasons for judgment.

THE PRESIDENT, now (July 2, 1942) delivered the following judgment:

This is an action taken by the plaintiff for a declaration that, as between the parties hereto, letters patent No.

1942

FIBERGLAS CANADA LIMITED v. SPUN ROCK WOOLS LIMITED AND THE CUSTODIAN.

Maclean J.

333,788, granted on July 4, 1933, is a valid one, and has been infringed by the defendant Spun Rock Wools Limited, and for the remedies usual in such an action.

The defendant, Spun Rock Wools Limited, is a body politic and corporate carrying on business in Thorold, Ontario, and the second named defendant, the Custodian, is the officer whose duties and rights are defined by the Consolidated Regulations respecting Trading with the Enemy, 1939 (P.C. 3959 and 5353 of 1939).

The plaintiff is licensed, by various agreements, to use and exercise the rights granted by the said letters patent, No. 333,788, to N.V. Mij. tot Beheer en Exploitatie van Octrooien (otherwise known as Maatschappij tot Beheer en Exploitatie van Octrooien) as assignee of Frederich Rosengarth and Fritz Hager, the inventors, in respect of the new and useful improvements in the production of fibres or threads from glass slag and the like meltable materials. It was contended by the defendant that the conditions of these licensing agreements had not been fulfilled and that therefore the plaintiff acquired no rights thereunder, but in any event, this allegation of fact was not established by the defendant, and upon it rested the burden of doing so.

It perhaps should be stated that the said N.V. Mij. tot Beheer en Exploitatie van Octrooien is a company incorporated under the laws of Holland, with its principal office at The Hague, in the Kingdom of Holland, and in the month of May, 1940, became an enemy, whereupon its interest in the said patent and under the agreements hereinbefore referred to became vested in The Custodian by virtue of the provisions of section 21 of the Consolidated Regulations respecting Trading with the Enemy, 1939.

The object of the invention in question, which relates to certain new and useful improvements in the Production of Fibres or Threads from Glass Slag and the Like Meltable Materials, is set forth in the early paragraphs of the Specification as follows:

> The production of fibres or threads from molten glass, so-called glass silk, is hitherto performed by means of spinning machines on which the threads are drawn from prepared glass rods or from the molten mass through nozzles, while in the manufacture of slag wool the threads are produced by the aid of steam or air blowers
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> It is the object of the invention to provide a novel method and device for making fibres or threads of the kind stated According to this

invention, the hot liquid glass or slag mass is flown in a continuous and uniform thin stream onto a rapidly rotating body, such as a disc of suitable material. On the disc the liquid mass is scattered into minute drops, which are thrown off by the centrifugal force and simultaneously formed into thin threads which sink down in the space around the rotating disc and can be collected as a uniform fibrous web.

Owing to the higher momentum imparted to heavier particles, such as thicker drops and threads, these are thrown off the disc to a greater distance and thus can be easily separated from the threads of the normal or desired thickness.

The Specification then proceeds to state that in order to allow of the invention to be more clearly understood, an embodiment of a device for carrying the invention into effect is shown in accompanying drawings. The description of such device which follows might usefully be recited, and I think the same may be readily understood and followed, without a reproduction of the drawing. The Specification describes the device for carrying the invention into effect as follows:—

1 designates a furnace for melting the working material, such as glass or slag, the furnace being heated by burners 2. 3 is an opening for filling in fresh material and 3^1 is a cover for the said opening. 4 designates the outlet of the furnace with which co-operates a plug 5 which is adapted to be raised and lowered for regulating the quantity of material discharged through the outlet. The outlet mouth 4 is surrounded by a rim 6. The annular space between the mouth 4 and rim 6 is designed to be heated by gas flames or the like for regulating the temperature of the glass or slag discharged through the mouth. The space below the outlet 4 is enclosed by annular guard walls 7 and 8 which reduce the outward radiation and avoid premature cooling of the down flowing mass. A narrow gap 9 is left between the two walls 7 and 8. Arranged below the outlet 4 at a predetermined distance therefrom is a centrifuging disc 10 This disc consists of a circular plate 11 of a suitable, preferably refractory material and of a metal ring or casing 12 holding and encircling the plate 11 in such a manner as to prevent breaking of the latter due to the high number of revolutions. The disc 10 is mounted on a shaft 13 which has the required high speed imparted to it from an electromotor or other source of power through a pulley 14 and belt 15 or any other suitable drive. The upper edge of the wall 8 lies substantially on the same level as the top surface of the centrifuging disc 10, so that the glass or slag particles which are too heavy will be thrown over and beyond the said edge into the gap 9. They are thus separated from the fibres or threads which have the prescribed weight. The particles entering the gap 9 fall into a collecting gutter 16 from which they can be returned to the melting furnace 1.

The liquid mass flowing out of the mouth 4 is scattered on the disc 10 into minute particles and thrown off the disc in horizontal direction forming a kind of gloriole of thin threads which sinks down between the disc 10 and the guard wall 8. This sinking mass constantly increased by the succeeding fresh threads surrounds the shaft 13 as a jacket-like envelope which deposits on an inclined bottom plate 17.

The fibrous envelope is continuously or intermittently severed by means of cutting shears 18, which may be operated mechanically, and

1942

FIBERGLAS CANADA LIMITED v. SPUN ROCK WOOLS LIMITED AND THE CUSTODIAN.

Maclean J.

then glides down over the inclined bottom 17 to a winding device, not shown. The fibrous web produced by the cutting corresponds in width to the circumference of the fibrous jacket formed about the disc 10 and shaft 13.

The thickness of the fibres can be regulated in various ways, such as by working with more or less high temperatures of the liquid mass, by changing the distance between the disc 10 and the mouth 4 or by controlling the quantity of liquid mass discharged through the outlet 4.

The centrifuging disc 10 which is shown in the drawing with a vertical axis, may for certain purposes be arranged so as to have its axis in an inclined or horizontal position. The other structural parts are then changed accordingly. In this case, the liquid mass may be flown onto the circumference instead of onto the top surface of the disc.

The plaintiff, in its Particulars of Breaches, states that it will rely on Claim No. 1, and that Claim reads as follows:

> 1. A method of producing fibres from molten glass, slag and the like meltable material, consisting in setting-up a flow stream of molten material, delivering this stream onto a rapidly rotating surface and causing it to be thrown off the said surface by centrifugal force in the form of fine fibres

The defendant in its statement of defence admits "that it produces fibres by delivering a stream of molten material on to a rapidly rotating surface as stated in claim 1 of the patent in suit", but it further adds "that it has not thereby infringed the rights of the plaintiff because the said patent and particularly claim 1 thereof, is and always has been invalid for the reasons stated in the particulars of objections delivered herewith". The defendant's particulars of objections allege lack of novelty, and lack of invention.

In view of the admission made by the defendant in its statement of defence, and the evidence adduced on this phase of the case, it would appear clear that the defendant's method of manufacturing "rock wool" is quite similar to or the equivalent of the method described and claimed in the patent in suit, and it therefore becomes unnecessary to pronounce upon the question of infringement.

There remains therefore to consider only the question as to whether or not the invention in question was anticipated by any of the pleaded prior published art, and also whether or not it contained subject-matter for a patent of invention, and I shall direct myself to the question of anticipation. First, I might observe that the test of anticipation has been dealt with in many cases, but I need refer

to but a few of them. In the case of *Pope Appliance Corporation* v. *Spanish River Pulp and Paper Mills Ld.* (1), Viscount Dunedin, in discussing the defence of anticipation, said:

It will be convenient to examine anticipation first, as much of the argument on want of invention is bound up with what was disclosed by the patents which are said to anticipate The test of anticipation has been dealt with in many cases. They were enumerated in the very recent case of *British Thomson-Houston Co* v. *Metropolitan-Vickers Electrical* Co. (1928) 45 R P C. 1. At page 23 the judgment runs thus· "In *Otto* v. *Linford* (1881) 46 L T, N S 35, at page 44, Lord Justice Holker expresses himself thus· 'We have it declared in *Hill* v *Evans,* 31 L J. Ch 457, as the law and it seems very reasonable, that the specification which is relied upon as an anticipation of an invention must give you the same knowledge as the specification of the invention itself' And in *Flour Oxidizing Company* v. *Carr & Co.* (1908) 25 R.P.C, at page 457, Mr Justice Parker (afterwards Lord Parker) says "When the question is solely a question of prior publication, it is not, in my opinion, enough, to prove that an apparatus described in an earlier specification could be made to produce this or that result; it must also be shown that the specification contains clear and unmistakable directions so to use it". I may add that my own remarks in *Armstrong Whitworth & Co* v. *Hardcastle* (1925), 42 R.P.C. 543, at page 555, are quite in line with these dicta' In the same case the test is stated at page 22, and, turning the particular instance to the general, may be expressed thus—Would a man who was grappling with the problem solved by the patent attacked, and having no knowledge of that patent, if he had had the alleged anticipation in his hand, have said "That gives me what I wish".

Then, in the case of *Canadian General Electric Co.* v. *Fada Radio Ld.* (2), their Lordships of the Judicial Committee in discussing the subject of anticipation by a prior publication stated the law in the following words:

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

In support of the defence of anticipation the defendant pleaded a large number of prior publications, and they appear in the record as Exhibits A to O inclusive. Without attempting to discuss these several publications in detail, but after a perusal of all of them, it is my opinion that in none of them is to be found the disclosure described

(1) (1929) 46 R P C. 23 at 52. (2) (1930) A.C 97 at 103.

1942

FIBERGLAS CANADA LIMITED v. SPUN ROCK WOOLS LIMITED AND THE CUSTODIAN.

Maclean J.

in the patent in suit, and in many cases they are utterly irrelevant. In no case do these prior publications give the same information, knowledge or directions to be found in the specification of the invention in question, in other words, they do not disclose that which is described in the patent which is here attacked on the ground of anticipation. It cannot be said, I think, that any of the prior publications cited have so presented to the public the method of manufacture, or the device for producing fibres from molten glass, slag and the like meltable material, which is described in the invention in question so as to put it out of the power of any subsequent person to claim the invention as his own. All the prior publications, in my opinion, fell far short of meeting the test of anticipation laid down by the authorities to which I have just referred, and from which I have quoted.

Now, I come to the final question for decision and that is whether or not the patent in suit contains subject-matter and is a valid patent. I think it may fairly be said that the art here involved is old, and that the invention in question is a narrow one. Broadly stated, any alleged invention must be new and useful, that is the statutory requirement, and it is always a question of fact if any patent fulfills those requirements. There must be a substantial exercise of the inventive power or inventive genius, though it may in cases be very slight, and slight alterations or improvements may produce important results, and may disclose great ingenuity. On the evidence, I think that the method of manufacture described in the patent in suit was something new and useful, and it possessed certain marked improvements and advantages over anything that had earlier been disclosed or used in this particular art. The rotating disc was earlier known but the invention in question was the first to direct the use of a rotating disc for the purpose of disintegrating or atomizing the molten material in order to form the desired fibres. It was explained by Mr. Slater that owing to this invention the drawing speed of the fibres was increased eight or ten fold. In none of the prior publications was the process of manufacture there described a continuous one as in the patent in suit; in other cases the fibres had to be drawn to a drum to start winding; and in order to get the material off the drum, the drum had to be stopped. In the inven-

tion in question the process is automatic and continuous. The specification here in question for the first time disclosed the importance of regulating the temperature of the glass or slag discharged through the outlet, thus preventing any premature cooling of the down flowing mass, and the specification describes just how this is done. Then, besides these improvements and advantages, the product produced under the invention in question was made immediately ready for use for insulation purposes because of what was called in the evidence the "jack straw arrangement" of the fibres, which avoided the necessity for carding or mixing the fibres and this was, I think, a very substantial improvement over any prior practice and this resulted in a much higher volume of production, a saving of time, and a reduction in manufacturing costs. In the spinning process under earlier known methods of manufacture the fibres were drawn in parallel on the drum, and these had to be mixed or carded, to ensure the desired insulation qualities, and this, as already stated, involved considerable labour and time which was obviated by the invention in question. The invention in question may be a narrow one, but I think it disclosed such new and useful improvements and required that degree of the inventive power as to merit a patent.

At the trial Mr. Smart made a formal application for leave to join the Owens-Corning Fiberglas Corporation as a plaintiff herein, which leave is granted, upon the filing of the appropriate consent.

It will follow from what I have said that the plaintiff succeeds, and it will have its costs of the action.

Judgment accordingly.