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BETWEEN:—

1926  
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 Dec. 13.

SHERBROOKE MACHINERY COM-  
 PANY, LIMITED .....

} PLAINTIFF;

AND

1927  
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 Feb. 17.

HYDRAULIC MACHINERY COM-  
 PANY, LIMITED .....

} DEFENDANT.

*Patents—Infringement—Patentability—Invention—Improvement—  
 Abandonment*

The alleged invention involved in the patent in suit consisted in the arrangement of a number of machines known as “deckers,” used for the thickening of the ground pulp fibre as it comes from the grinders, and so arranged in rows that they are conveniently related to each other. Between the rows there is a common supply trough and a

common discharge trough. At the side of each row of tanks is a drive shaft common to the whole row. The shafts of the rotatable cylinder molds are mounted in their respective tanks, in suitable bearings. There is also an auxiliary shaft in alignment with and adjacent to the cylinder mold shafts, which cylinder shafts may be connected by jaw couplings, and when so connected form one shaft. For each tank there was a sprocket wheel on the driving shaft connected thereto by hand controlled clutch so that any one of the tanks could be disconnected from the general driving shaft without stopping any others, which is claimed to be the important thing in the invention. The whole construction was of iron. Prior to this invention the machines then in use were so designed that if two cylinders, not adjoining one another, were to be put out of operation, the intermediate cylinders would also have to cease operation. Such machines were largely built from suggestions of one F. and upon his plans, and the only departure in the patent in suit from such plans was in the driving means, so arranged that any one tank could be put out of action. In 1904 machines constructed upon the plans of F. were installed by the patentee in the mills at Berlin, N.H., and in 1907 similar machines in another mill. Applications for patent were made in the United States and in Canada in 1909 and 1911 respectively by the plaintiff's inventor.

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*Held*, that though there might be some advantage in being able to put out of operation any one of the cylinder molds, where the economies effected were negligible, where there was no substantial increase in efficiency, and no new result was thereby obtained, the structural variations in the driving means from the prior art, necessary to do this did not denote inventive skill.

2. That public user of the patented machines in the Berlin mills, for five years before making application for patent in the United States, was an abandonment of the invention to the public.

*Semble*: Where a specific machine already exists producing certain effects, and where additions have been made to such machine to produce the same effect in a better manner, a patent cannot be taken for the whole machine, but for the improvement only.

ACTION for infringement of a patent for invention, in which the defendant denies infringement, and asks that the patent be declared invalid for want of subject matter.

Action tried before the Honourable Mr. Justice Maclean, President of the Court, at Montreal.

*Russell S. Smart, K.C.*, for plaintiff.

*Warwick Chipman, K.C.*, for defendant.

The facts are stated in the reasons for judgment.

THE PRESIDENT, this 17th day of February, 1927, delivered judgment.

This is an action for infringement of a patent of a machine known as a "decker", and which is used in the paper making industry. The function of this machine is to thicken the ground pulp fibre after it comes from the grinders, and

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before it proceeds to the next machine in the process of paper making. The proportion of ground pulp in the water, upon entering the decker would be only about one half of one per cent, and upon leaving it, about five per cent, the balance of course being water, the whole being known in the industry as "stock." The machine alleged to be infringed was patented in 1911.

The decker involves a rectangular vat or tank, in which rotates a cylinder shell, called a cylinder mold, which has its periphery covered with wire. The stock enters the tank through a supply trough, flows through the wire periphery of the cylinder, thence through the cylinder and out through an opening at the side of the tank, into a discharge trough. The wood fibre adheres to the wire covered cylinder, and is carried upwardly above the level of the stock in the tank, when it comes into contact with a second and smaller roller immediately above the cylinder mold, and which is usually a felt covered roller, and known in the art as a couch roller. The couch roller picks up the fibre from the cylinder mold, then a scraper or doctor blade as it is usually called, removes the fibre from the couch roll, and it then falls into a discharge chamber which delivers it at the place where the next operation takes place in the sequence of paper making.

The invention said to be involved in the patent in suit consists in the arrangement of a battery, or a large number of these tanks, so that they will be conveniently disposed and related to each other, and to simplify the construction and operation of the machine. The drawing fig. 1, indicates a battery of ten of these tanks, two rows of five tanks each. Between the two rows of tanks, is a common supply trough into which flows the stock from the source of supply, and is placed at such a level that the stock lying within it may flow into the several tanks. Between each tank and the supply trough, is a gate, which may be lowered or raised to determine the flow from the common supply trough into each tank. Then the discharge from each tank, is into a common discharge trough, which is located directly beneath the supply trough, into which is discharged all the waste water, or as it is usually called, the "white water." In the machine as constructed under the patent, the floor of the supply trough is the top of the discharge

trough, and the inner sides of the tanks are also the side walls of the supply and discharge troughs.

Then generally as to the means for driving the various cylinders. At the side of each row of tanks is a drive shaft common to one row of tanks. The shafts of the rotatable cylinder molds are mounted in their respective tanks in suitable bearings. The specifications describe what is called an auxiliary shaft, in alignment with and adjacent to the cylinder mold shafts, and provision is made whereby the cylinder shafts may be connected by jaw couplings, and the cylinder shafts to all purposes may be regarded as one shaft, when thus connected. This, however, is not practised in the plaintiff's commercial machine, each cylinder being operated individually. By means of sprocket wheels for each tank on the driving shaft, and also on the cylinder mold shafts, and a driving chain for each cylinder mold, the cylinders are driven at the desired speed. Each sprocket wheel of the driving shaft is connected thereto by a hand controlled clutch so that it can be rendered idle without stopping the driving shaft. Without stopping the turning of the drive shaft, it is thus possible to put out of action any one or more of the cylinders in the tanks by disconnecting any sprocket wheel from the drive shaft, thus making stationary the corresponding cylinder without affecting the rotation and operation of the remaining cylinders, and this is claimed to be the important thing in the invention.

It is not necessary I think to devote much time to the infringing machine. There is to be found in the drawings of this machine, a battery of tanks, four in a row, a waste water trough and a supply trough common to all the tanks, with an inlet to the several tanks from the supply trough and a spout leading from the side of the tank into the common discharge trough; a cylinder roll and couch roll; a common drive shaft for each row of tanks, the organization being such that any tank may be put out of action without preventing the operation of the remaining tanks. Plainly, the defendant's machine is the same as the patented machine, and I am quite satisfied that the design of the former was taken from the latter with slight variations, and in the circumstances stated in the evidence. The fact that the common supply and waste troughs have their side

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walls independent of the tank, and other slight but unimportant variations in structure, do not distinguish the machines. If the patent in suit is valid, then beyond question there is infringement.

The defendant claims that the plaintiff's patentee, Parker, was not the inventor of its machine, if there was invention, but another person altogether; that it is void for want of subject matter; and that it was in public use in the United States for several years prior to the date of application for the patent in Canada. The defendant's principal witness at the trial was a Mr. Ferguson, a person experienced in designing paper making machines and paper mills, and admittedly of high reputation in that respect. In 1899 he became chief engineer of the Great Northern Paper Company at their mills in Maine, U.S.A., and so continued for many years, though still engaged in private practice as well. He described the form of deckers which were then in use in such mills, but which he had not designed himself. The deckers he states were rectangular vats or tanks each containing a cylinder covered with wire cloth with a couch roll braced on the top, and they were erected in rows. Between each row there was a spout, separate from the tanks, built of wood, through which the stock came that was supplied to the individual tanks, each tank being connected with the spout by a gate through which passed the supply of stock. At the end of each tank was an outlet through which the waste water from the tank passed away, these outlets being connected by pipes to a main pipe underneath the floor into which all the water from the several tanks flowed. Each tank had its own cylinder with shaft and pulleys connected with belts to pulleys on a shaft running centrally between each two lines of deckers, and suspended from the ceiling above. That is to say each cylinder was operated singly, there being belt connections for each cylinder, and when it was necessary to stop any one cylinder the belt was pulled off. Deckers of this type had been in use for many years prior to this time. In 1903 Ferguson was employed to design a paper mill for the Berlin Mills Company, at Berlin, New Hampshire, and he thought that a different type of decker might be designed to avoid the multiplicity of pipes and driving

belts. This mill was built upon designs prepared by Ferguson and was completed in 1904. His idea was to group the tanks and have a common supply and discharge trough. He also had in mind the idea of coupling together all the cylinders in a given row, thus making a continuous shaft from end to end with jaw couplings, that is to say the ends of the cylinder shafts in a given row were abutting one another, and they were to be connected at the abutting ends by means of clutches or couplings, thus making a continuous shaft from end to end. Any cylinder might be put out of action if it was so desired by disconnecting it from the adjacent cylinder, suitable means being provided for so doing. The cylinders in each row of tanks when coupled together could be driven from either end or both ends, by means of pulleys and belts and a driving shaft. It was only, however, adjacent cylinders in the centre of the row or anywhere between that and the two end cylinders that could be put out of action, while the remaining cylinders would be in operation, that is to say if two cylinders not adjoining one another were to be put out of operation, the intermediate cylinders would also have to cease operation. This contemplated design was based upon wooden construction.

He then prepared a drawing, showing the details of construction of one vat, according to his ideas as just outlined, and the connections to the adjoining vats. This drawing, dated August 15, 1903, was produced at the trial. A general drawing was then made showing the installation of this arrangement, and as it would appear in the building to be constructed. A blueprint of this original drawing was put in evidence also, and bore date September 12, 1903. Parker, the plaintiff's patentee, connected with the Improved Paper Machinery Company of Nashua, New Hampshire, builders of pulp and paper machinery came to Ferguson with a view of submitting proposals for the construction of the deckers of this proposed mill. Ferguson says he discussed with Parker his views about grouping the tanks and arranging them with common supply and discharge spouts, and the continuous drive through the line of deckers, and generally made him acquainted with what he wanted done. He stated that Parker suggested that the tanks and supply troughs or spouts be made of iron instead

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of wood with which view he concurred if it were not too costly. He says he gave Parker some free hand sketches of what he wanted and discussed the details of his idea with Parker, but could not remember positively if he showed to Parker the two plans referred to. He stated that Parker approved of his ideas and returned to his place of business to prepare a plan of construction embodying such ideas. In the course of time Parker submitted his drawings, and a formal proposal to the Berlin Mills Co., for the installation of the deckers, and in 1904 they were installed by the Improved Paper Machine Company. In 1907 the Great Northern Paper Company constructed a new paper mill at East Millenocket, Maine, and it purchased from the Improved Paper Machine Company deckers that embodied all the features of the deckers installed at Berlin by the same company.

Referring first to the origin and construction of the Berlin machine, I accept fully the evidence of Ferguson as to the particular construction of deckers that he suggested to Parker, and which was substantially the Berlin machine. There was no invention in suggesting that iron should be substituted for wood, and this change in material would naturally suggest some variations in construction from the deckers in use prior to that time, which were made of wood. For instance, when it was determined to construct the deckers of iron, this would suggest that the wall of the vats would also form the wall of the supply trough. There could not possibly be any invention in structural variations of this nature. I am of the opinion therefore that the decker installed by the Improved Paper Machinery Company in the Berlin mills in 1904 was not the invention of Parker, if invention there was, but was made upon a plan or design outlined and conveyed to him by Ferguson. Whether the Berlin machine required inventive skill, or whether it is a mere aggregation of parts, in my view of the case, is not now important. It is not necessary to refer to the East Millenocket installation, because that was the same installation as in the Berlin mills. Assuming, however, that the Berlin machine involved invention, I do not think that Parker or any one else would be entitled to a patent in Canada covering this machine had he or they there applied as

of the dates of Parker's American or Canadian applications for patent, August, 1909, and April, 1911, respectively, because whether or not there was invention or whoever the inventor was, the same was five years previously abandoned to the public by public user in the Berlin mills. That is the evidence before me.

The whole question for decision here then seems to be whether the difference in construction between the Berlin combination machine and the combination machine described in the Canadian patent, required inventive skill, the distinction in the two combinations being limited to the driving means and the means of putting out of operation any one cylinder in the manner already indicated and which is peculiar to the Canadian patent. There may be some advantage in being able to put out of operation any one of the cylinder moulds, in the manner disclosed in the plaintiff's specifications, without affecting the operation of the remaining ones, and this the Berlin machine as arranged could not wholly do. But did it require invention to do this? I think not. No new result was obtained. I do not think it can be said that the Canadian Parker is substantially more efficient than the Berlin machine. The economies effected are negligible, while the additional convenience, it seems to me, does not denote inventive skill. The use of the sprocket wheel and clutch on the driving shaft to disengage any tank unit from the continuous drive shaft, was not new in the field of mechanics, and if suggested, could have been carried out by any skilled mechanic. This particular mechanical device or means, Ferguson stated, was well known in paper-making machines, to effect the very same end, and it was not I think contended that the use of the clutch for such an analogous purpose was new. Combining it with other well known elements did not require inventive skill. Altogether, I am of the opinion that the patent in suit is void for want of invention.

I do not think it is necessary to give any consideration to the United States patent granted to Parker. The Canadian patent and the American patent are different things entirely, although some of the claims may be practically the same. It cannot be said that the patents are for the same invention. In the American patent no claim was

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made for the driving means. It is to be remembered that Parker applied for his Canadian patent long before he secured his American patent, and therefore he was not relying upon sec. 8 of the Patent Act, Chap. 69, R.S.C., 1906, which permits one, patenting abroad, to apply for a patent in Canada for the same invention within one year after the patent issues in the other country. Parker obtained his Canadian patent before his American patent, and as I have said they are not the same invention. The Canadian application and patent in my opinion therefore must be considered altogether regardless of the American patent or the application for the same, and therefore sec. 8 of the Act does not I think in any way apply to this case. If the American and Canadian patents were for the same invention, and the Canadian application was made within one year after the date of issuance of the American patent, that would conceivably present a different point for determination. Another and more difficult point would arise, where it had been clearly proven in an action on the Canadian patent, involving its validity, that there had been public user of the American patent, in the United States, for a longer period than two years prior to the application for patent there.

I am also inclined to the view that if there was here invention, it was a mere improvement of an existing machine, and the claim in such a case must be for the improvement only, and must not include a claim to the whole machine which would render the patent void. I think it is well settled law that where a specific machine already exists, producing certain effects, and mere additions are made to such machine to produce the same effect in a better manner, a patent cannot be taken for the whole machine but for the improvement only. In the patent in question, it is not the improvement only that is claimed, and by improvement I have reference to the means of disconnecting the cylinder shaft of any tank from the driving shaft by means of the sprocket wheel and clutch on the main driving shaft. However, I do not rest my opinion upon this ground because this point was not discussed at the trial by counsel, and I did not myself during the argument

suggest the point, and for that reason I do not express a definite opinion upon the point, and it is not necessary to do so.

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The plaintiff's action is therefore dismissed, and the defendant will have its costs of action, together with its costs on the plaintiff's motion to amend its particulars of breaches.

*Judgment accordingly.*

Solicitor for plaintiff: *R. S. Smart, K.C.*

Solicitors for defendant: *Brown, Montgomery & McMichael.*