
LIGHTNING FASTENER COMPANY, } LIMITED }	}	PLAINTIFF;
AND		
COLONIAL FASTENER COMPANY, } LIMITED ET AL }	}	DEFENDANTS.

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 Feb. 3, 4  
 and 5.  
 April 4.  
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(No. 13145)

*Patents—Infringement—Anticipation—Subject matter*

*Held* that the proper principle to be applied in testing anticipation is that the specification which is relied upon as an anticipation must give the same knowledge as the specification of the invention itself.

*Pope Appliance Corporation v. Spanish River Pulp and Paper Co.* (1929) A.C. 275 referred to.

2. That much of the merit of a new combination depends on the result produced. If a slight alteration turns that which was practically useless into what is useful and important, though the invention may be small yet the result being the difference between success and failure, there is proper subject matter for invention. The art of combining two or more parts, whether they be new or old, or partly new or partly old, so as to obtain a new result in a better, cheaper or more expeditious manner, is valid subject matter, if it is presumable that invention in the sense of thought, design or skilful ingenuity was necessary to make the combination.
  
3. In determining the question of infringement it is necessary to distinguish between the case where an invention is for a mere improvement of an old machine which has been in use for producing a certain result and where the only novelty which could be claimed in the improvement was in the use of certain mechanical means in order to produce in a known machine the same result which had been produced by other mechanical means, and the case where there is novelty in the machine and novelty in the effect and result to be produced thereby. In the latter case the doctrine of infringement by substitution of equivalents applies, and one must look very narrowly upon any other machines for effecting the same object to see whether or not they are merely colourably different contrivances for evading that which has been done before.

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4. That the question is not whether the substantial part of a machine or method has been taken from the specification, but whether what has been done by the alleged infringer takes from the patentee the substance of his invention.

The Court found the patent in suit was not anticipated, had subject matter and was valid and infringed.

ACTION by plaintiff for judgment declaring Canadian patent, no. 212,202, granted to it, good and valid and infringed by the defendants, and for an order of injunction, etc.

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

*O. M. Biggar, K.C.*, and *R. S. Smart, K.C.*, for plaintiff.  
*D. L. McCarthy, K.C.*, and *S. A. Hayden* for defendants.

The facts are stated in the Reasons for Judgment.

THE PRESIDENT, now (April 4, 1932), delivered the following judgment.

The plaintiff, by assignment, is the owner of Canadian patent no. 212,202, which issued in April, 1921, upon an application filed in 1918, the patentee being one Gideon Sundback of Meadville, Penn., U.S.A.; the patentee filed an application for a patent in the United States, covering the same subject matter, in 1916. The plaintiff claims that the defendants have infringed its patent, and the defendants plead the defences usual in infringement actions.

The invention, it is stated in the specification, relates to new and useful improvements in a machine and method of producing straight and curved fastener stringers. It will not be necessary to distinguish between straight and curved fastener stringers; it will be sufficient, I think, for the purposes of the case to have in mind only the straight fastener stringer, and I shall directly explain what that is. Before attempting to explain in detail the construction and operation of the patentee's machine, and the alleged infringing machine, it might be convenient first to state in general terms the purpose of the Sundback machine, and just what it does in actual practice. From a thin flat strip of metal which is fed into the machine, there is automatically formed these small interlocking elements which we see used for

closing apertures in articles of footwear, clothing, etc., frequently referred to as sliding fasteners, and which are made to interlock and unlock by means of a sliding element. I shall hereafter refer to the individual interlocking element as a "unit." The units are, one by one, after being punched out of the metal strip, automatically fastened upon a corded tape, a strip of fabric, which is automatically fed into the machine from a tape supply roll or spool. When a given section of tape is fitted with the required number of units, it can be cut apart to provide stringers of the desired length, according to the purpose for which it was intended, and this completed and separated section of the tape I shall hereafter refer to as a "stringer," to distinguish it from the "tape" while passing through the machine and being fitted with the units. The unit when punched from the metal strip is of U shape, the sides of which I will refer to as "jaws" because they are eventually compressed around the corded tape; the rounded section of the unit, where is located the locking means of the unit, has on one side a small socket or depression, and on the other side a projection or pin, both formed by an operation of the machine prior to the units being attached to the tape. In the result, the machine produces a stringer with identical units attached thereto in predetermined space relation the one to the other, and in predetermined groups, so that the units of one stringer will co-operate with corresponding units in an opposing stringer. A sliding fastener is necessary to put the units in and out of engagement, but with that we are not concerned in this case. The stringers are of course intended to be incorporated one on each side of the aperture in any article to which this method of opening and closing is adaptable. The alleged invention described in the patent in question therefore had for its object, the formation of the unit, its compression on the corded tape, and the production of stringers, by one automatic machine; a further object of the alleged invention was to enable the machine to set the units on the corded tape in predetermined numbers and spacing, and in spaced groups.

I shall now attempt to explain more particularly the construction and operation of the plaintiff's machine, but without attempting to describe all its mechanical details. The

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machine is of course power driven. A flat metal strip is fed from a roll or coil at the back of the machine, first into a guide and then through a pair of feed rollers which are brought together under spring pressure. The metal strip is then advanced, step by step, by means of operating mechanisms, until it comes to the front of the machine where, mounted on a shaft, is a die head to which punches are attached. There the unit is first punched out of the metal strip and pressed down into the die plate where there is a hole the shape of the unit. Then a spring pressed punch, located beneath the hole in the die plate, forces the unit upwards and back into the strip from which it was punched out, and wherein now it is securely held during further operations. The metal strip with the restored unit is then advanced until it comes under another punch which stamps out the small loose piece between the jaws of the unit, and this passes out through a hole in the die plate as scrap. The metal strip is then further advanced a step or two when a third punch comes down and forms a small depression or socket on the top of the unit at the rounded portion; just below that point there is a depression in the die plate, and when the punch forms the socket on the top of the unit it forces the metal down into the depression on the lower plate, thus forming a projection or pin on the other side of the unit. It is this socket and pin which forms the meshing means in a pair of stringers. The unit is then complete but is still firmly held between the edges of the original metal strip. The metal strip is then advanced to a position opposite the tape so that the jaws of the unit encircle the edge of the tape, the tape being fed in the path of the jaws of the unit, under tension, from a roll below. When the jaws of the unit, which diverge at quite an angle, straddle the tape, they are then firmly set on the tape by side pressing tools or pressure members, which are brought into action by means of cranks, etc.; the edges of the side tools contact with the sides of the metal strip with the result that the jaws are securely pressed around the edge of the tape without coming in direct contact with the side tools, thus avoiding it is claimed any tool injury to this portion of the unit. In the same manner other units are formed and attached to the tape. After the jaws are affixed to the tape, the residue of the metal strip is fed out

in one place, and the tape with the units in another place. The tape when fitted with units may be cut off in the pre-determined lengths, as I have already explained. I perhaps should add that the tape is fed upwards from a roll at the side of the machine by mechanical devices, into position between the jaws of the unit as already stated. The tape feed wheel is corrugated or of knurled surface, to give friction contact with the tape. By operating mechanisms the movements of the tape, and of the metal strip are made to synchronize; other mechanisms provide for the spacing of the units and the grouping of the units, but all this, I think, does not call for any description in detail.

The defendants' machine, alleged to infringe Sundback, which I shall hereinafter refer to as Prentice, is in its general make up, similar to Sundback. Prentice employs the ordinary commercial power press into which is built special tools and mechanical movements. The metal strip is fed from a roll into the machine at the left hand side and then passes across the front of the machine, instead of feeding from the back to the front, as in Sundback. In Prentice, the socket and pin, the interlocking means, are first formed in the metal strip before the unit is punched out of the strip, the reverse of the operation in Sundback. The metal strip is then stepped forward the necessary distance when the unit is cut out of the metal strip by a cutting punch, and is pressed right through the die plate to a lower level, into a small cavity in a transverse slide moving from the back to the front of the machine. The means employed in this operation, and the next mentioned, are claimed by the defendants to differentiate Prentice from Sundback so greatly as to eliminate the question of infringement, but this will be discussed later. The unit now being out of the metal strip and held in the transverse slide or platform below, it is pushed by an auxiliary slide, transversely to the path of the metal strip, and thus advanced to the point where it may be attached to the tape. The sliding carrier is advanced until the jaws encircle the edge of the tape, bending the tape outwards somewhat in the advancement. The compressing or fastening of the units on the tape is a somewhat different operation in Prentice from that employed in Sundback. The side tools used to press the jaws about the tape are mounted on vertical axes, one on

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each side of the tape, and they do not move in and out as in Sundback, but rotate in a horizontal plane about their vertical axes, and are so set that their working ends slope in towards the machine where they are held by small springs. They are so spaced apart that, when in their normal position, the working or front edges just come in contact with the outer end of the transverse slide, then, as the unit is moved forward on the slide, the ends of the side tools in effect come together due to their rotation upon their axes and this presses the jaws around the edge of the tape, but lightly it is said. In other words, the transverse sliding member holding the unit, in its forward movement, pushes outwards the side tools until they come in contact with the jaws of the unit, and presses them upon the tape; how firmly the units are attached to the tape I think is not of importance. The method of feeding the tape, generally speaking, is not materially different from that employed in Sundback; by operating mechanisms much as in Sundback, the tape is automatically fed into the desired position from a roll in the front of the machine. Prentice also provides for spacing between the units, and groups of units, but this need not be enlarged upon. After the stringer is removed from Prentice, it is claimed that a further operation takes place in another machine, sizing and aligning the units, but I do not think this is of importance in the controversy. Some further operation is also performed upon the Sundback stringer after it leaves the machine.

The utility of the plaintiff's machine is not susceptible of serious questioning. The machine functions automatically, with great speed yet with accuracy, and its daily capacity and production costs appear to have proven satisfactory. In the result, the machine has been eminently successful in the practical and commercial sense, and as many as 40,000,000 matched pieces of stringers were sold throughout the world, in one year. The machine is an extremely useful one for its purpose. The utility of Sundback was not, I think, questioned during the trial, but its alleged novelty was attacked.

It will be convenient at this stage to refer to the defence of anticipation. In point of time, Sundback is undoubtedly prior to Prentice. Now was Sundback anticipated by the

published prior art, or by any prior user? I think not. I find nothing in the prior art relied upon by the defendants that is at all relevant to the controversy here on the point of anticipation. Subject to what I shall say regarding the Aronson patent, the cited prior art relates to alleged inventions, the object of which was to produce results totally unlike that intended to be produced by Sundback. One can hardly read the cited prior art and conclude that any of them would assist in producing Sundback. The proper principle to be applied in testing anticipation is, that the specification which is relied upon as the anticipation of an invention must give the same knowledge as the specification of the invention itself. *Pope Appliance Corporation v. Spanish River Pulp and Paper Co.* (1). No one confronted with the problem of producing a machine like Sundback could turn to the prior art cited in this case, and there find its solution. And that is the test. The prior art relied upon has to do with machines for the making of carding hooks and eyes, metallic strip fencing, barbed wire, etc. To take something from one patent and then something from other patents, and say "there is Sundback," is to make a mosaic which is not legitimate in law. I feel quite satisfied that no anticipation of Sundback is disclosed in the published art put in evidence by the defendants, unless it be in Aronson. Machines were constructed in conformity with the specification of the Aronson patent (1907) and they were in use prior to Sundback. The object of Aronson was to set channels (units), of the hook and eye type, on tape, but the units were fed into the machine by means of a special carrier, or magazine, where they had been placed and spaced manually, having been separately formed in another machine, or by special tools, or both. The hooks were placed in one magazine, and the eyes in another. After the units were lightly attached to the stringer in the machine, considerable manual work was necessary to finish the stringer which was costly, and the daily production of the machine was small. Aronson was a machine intended only to fasten the units on the tape, and it is said not to have been very successful; it has since, I think, gone out of use altogether. It seems quite clear to me that Aronson

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(1) (1929) A.C. 269, at pp. 275-276.

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does not in any sense constitute anticipation or a prior user of Sundback which automatically performed all the operations I have described, the one machine producing automatically the finished stringer from beginning to end, from the metal strip and tape material.

The next question for determination is whether or not there was invention in Sundback at the date of the patent. The merit of a new combination much depends on the result produced. If a slight alteration turns that which was practically useless into what is useful and important, the courts consider that, though the invention was small yet the result being the difference between success and failure, it is proper subject matter. The art of combining two or more parts, whether they be new or old, or partly new and partly old, so as to obtain a new result, or a known result in a better, cheaper, or more expeditious manner, is valid subject matter, if it is presumable that invention in the sense of thought, design, or skilful ingenuity was necessary to make the combination. This has time and again been held as sufficient to uphold a patent. Many of the most important inventions are inventions which are merely the combination in a new way, of new or old, or partly new or partly old, parts. In this case, some parts of the combination may be old, some, I think, are new, but if they were all old, yet it was a novel combination which produced a new and useful result, and substantial skilful ingenuity was required to produce the combination. I have been using the language of text writers, and the Courts, in discussing combination patents. To describe, as I have done, the result which Sundback produces, and the method by which that result is produced, is alone sufficient in my opinion to hold that there was invention in Sundback and that the patent should be upheld. There is not disclosed in the prior art, as I have already stated, any anticipation of Sundback. It was the first machine to produce the same or similar results, by the method and means described in the specification. I have no difficulty whatever in reaching this conclusion.

In determining the question of infringement it is necessary to distinguish between the case where an invention is for a mere improvement of an old machine which has been in use for producing a certain result and where the only



## *CORRIGENDA*

*Page 70:* The name R. S. Cassels should read R. C. H. Cassels, and the name Erichsen Brown should read F. Erichsen-Brown.

*Page 80:* The name R. S. Cassels should read R. C. H. Cassels, and the names Erichsen Brown K.C. and J. P. E. Brown should read J. E. Taylor.

novelty which could be claimed in the improvement, was in the use of certain mechanical means in order to produce in a known machine the same result which in that machine had been produced by other mechanical means, and the case, where there is novelty in the machine, and novelty in the effect and result to be produced by that machine. The invention in question here, in my opinion falls within the last type of cases. See Cotton L.J., in *Proctor v. Bennis* (1). Sundback was a new and useful machine producing automatically a finished stringer, and nothing of the kind had been done before. In such a case the doctrine of infringement by the substitution of equivalents applies, and as it has often been said, one looks very narrowly upon any other machine for effecting the same object, to see whether or not they are merely colourable contrivances for evading that which has been done before, while in the other case the patentee is substantially tied down to the invention which he claims, and the mode of effecting the improvement which he describes in his invention, and there, one cannot largely extend the interpretation of the means adopted for carrying the invention into effect. Further, the state of public knowledge at the date of the invention of Sundback is also to be considered when dealing with the question of infringement, or in construing the specification and claims. I think I may safely say that the state of public knowledge at the date of Sundback's invention, in respect of an automatic machine for producing stringers, was such, that it required substantial invention to make the step to Sundback. Upon a fair construction of the specification and claims, the monopoly claimed is, I think, for the attainment of a new result, and it was a novel achievement, and the claim therefore covers mechanical equivalents for the mechanism described. The specification states that "the broad principles of the invention can be carried out otherwise than as herein shown and the invention is not to be limited except as required by the scope of the claims." In the claims relied upon by the plaintiff, I do not think the patentee limits himself to the precise mechanism described; it is in the principle or method of construction and operation, in the broad idea of the utiliza-

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(1) (1887) 4 R.P.C. 333, at p. 354.

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tion and arrangement of means substantially as described which automatically produce a finished stringer, wherein lies the essence of the invention, the claim to monopoly, and not in the precise operating mechanisms or means that are described.

In each case the substance, or principle, of the invention and not the mere form is to be looked to. It has been stated in many cases that if an infringer takes the principle and alters the details, and yet it is obvious that he has taken the substance of the idea which is the subject matter of the invention, and has simply altered the details, the Court is justified in looking through the variation of details and see that the substance of the invention has been infringed and consequently can protect the inventor. And the question is not whether the substantial part of the machine or method has been taken from the specification, but the very different one, whether what is done by the alleged infringer takes from the patentee the substance of his invention.

Prentice, it seems to me, is Sundback with some variations, substantially they are the same though not exactly the same. In construction and operation they seem to be in principle substantially the same. I do not think Prentice can be said to be in principle, a new or another combination. Prentice feeds the metal strip into the machine from the left side of the machine instead of from the back to the front, as does Sundback, but that is merely a matter of choice and is unimportant; but having once decided to locate the metal strip feed at the side of the machine and the tape feed in the front of the machine, it became necessary to drop the fastening element when punched out of the metal strip to a lower level, and carry it forward transversely to the path of the metal strip, to the point where it might be attached to the tape. There was nothing to prevent Prentice from feeding the unit to the tape along the plane the metal strip was moving by changing the position of the die plate, or by feeding the metal strip from the back to the front of the machine, but that would be to do exactly what Sundback did, and the two machines would then be practically alike in form. Prentice, having positioned his metal strip feed and tape feed means in the way he did, was obliged to drop the unit when cut out, down

to a lower level; that I think is obvious, and it involved no practical difficulty whatever. Therefore in Prentice the unit is pressed through the die plate upon a movable slide or platform below, and thereon it is automatically fed to the tape. Prentice carries the unit to the tape on the sliding element, while Sundback carries the unit to the tape within the moving metal strip; the former, I think, is but the mechanical equivalent of the latter; even if it was an improvement that would not negative infringement. Other points incidental to the structure of the different parts of Prentice were pointed out differentiating it from Sundback. It was urged that in Prentice, the jaws are lightly attached to the tape, while in Sundback they are firmly attached; and that in Prentice the pin and socket is first formed and then punched out, the reverse order of Sundback. It seems to me that these points of distinction are not of substance and do not call for any discussion. Then it was pointed out that in Prentice the units are cut out of the metal strip with the jaws extending transversely on the metal strip, whereas in Sundback they are lengthwise of the strip; there is no substance in this contention either. Prentice could not do otherwise on account of the direction of the metal strip feed, and the position of the tape feed. In Prentice, what is called the side tools, that is the means for pressing the jaws of the units around the corded edge of the tape, differ somewhat from Sundback; the latter employs what was described by one of the defendants' witnesses as punchers or plungers, which press on either side of the metal strip after the unit encircles the tape, thus in effect pressing against the jaws of the unit, while the former employs what was described by the same witness as swinging pinchers, and which I have already described. They are different arrangements of course, but they each serve the purpose of pressing the jaws of the unit around the tape by a side pressure, directly or indirectly applied to the jaws of the unit. This arrangement of Prentice is plainly, I think, the mechanical equivalent of Sundback; and again I say that even if the arrangement of Prentice possessed advantages over that of Sundback, that would not negative infringement if the substance of Sundback has been taken. It is very easy to alter the details of a machine when once its general construction and purpose is known

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and understood. Other distinctions between the structures of the two machines were pointed out, but any discussion of them is, I think, unnecessary.

The law protects a patented combination machine even if the infringing machine possesses improvements, patentable improvements; that is immaterial, because if one has taken the substance of the invention, or if the essence or substance of the plaintiff's invention is present in the defendants' combination, there is infringement. It is stated by a text writer on the law of patents that it is a very common delusion of infringers that because the infringing article presents some advantages or improvements over the patented article, and is perhaps itself the subject of a patent, this fact negatives infringement; but that is not so. The question still remains, does the alleged infringing article embody the substance of the invention claimed by the plaintiff? The emphasis laid upon the variations in Prentice really strengthens my conviction that they are the mechanical equivalents of Sundback. In substance the two machines are the same, every step in the operation of Prentice is substantially the same as in Sundback and is made for the same purpose. It seems to me that the whole principle, method and arrangement of Sundback is plainly evident in Prentice, and while the machines are not exactly alike, yet they are in substance alike; they are designed to produce the same result, and substantially by the same means or method. Prentice, in my opinion, cannot be said to be a new combination. If I am correct in this, then it follows, and it is my opinion, that the means employed in the combination of Prentice are the mechanical equivalents of those used in the Sundback combination, and there has been infringement.

I am of the opinion therefore that infringement of the plaintiff's patent by the defendants has been established; the plaintiff therefore succeeds and will have its costs of the action.

*Judgment accordingly.*

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