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BETWEEN:

THE P. & M. COMPANY ET AL.....PLAINTIFFS; 1924 Dec. 10.

AND

THE CANADA MACHINERY CORPORATION LIMITED ET AL..... } DEFENDANTS.

*Patents—Infringement—Mechanical equivalents.*

*Held:* That a principle *per se* cannot be the subject of a patent, but that a patent may be taken for a principle coupled with a mode of carrying the principle into effect.

2. Where two devices work under the same principle, both arriving at the same result, but by different and new ways of achieving the end contemplated, there is no infringement.

3. That a device constructed and operated on mechanical principles and laws of operation distinct, separate and unlike the mechanical principles and laws of operation embodied in another's device does not infringe the same.

Judicial observation on expert evidence.

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In comparing defendants' device with the plaintiffs', the court should guard against being carried away by the testimony of witnesses of theory, who scrutinize with specious ingenuity, sharpened by inordinate desire to discover in it some elements existing in plaintiffs' device, and overlook the positive and striking facts of the case.

ACTION in infringement of patent and for damages.

Toronto, October 20, 1924, and following days.

Case now heard before the Honourable Mr. Justice Audette.

*Arthur Anglin K.C.*, and *R. C. H. Cassels, K.C.* for plaintiffs.

*George Wilkie, K.C.* and *J. G. Gibson* for defendants.

AUDETTE J., now this 10th day of December, 1924, delivered judgment.

This case narrows itself down to the question of an alleged infringement, by the defendants, of the plaintiffs' Patent of Invention No. 122,715 (exhibit No. 1), bearing date the 21st December, 1909; subject, however, to the following reservation.

The action, as formulated by the pleadings, involves, as recited in the statement of claim, the charge of infringement of three patents; but the plaintiffs have abandoned all issues raised with respect to patents No. 175,551 and No. 180,360, and have elected to narrow the charge of infringement as against their Canadian Patent No. 122,715, relying upon claims one and four thereof.

The defendants, on the other hand, declared at bar, by their council, that they do not press the questions of utility or want of utility, invention or want of invention, public user, usefulness, sale and importation,—all such questions so raised by the pleading now standing aside, but the defendants' counsel contends that claims 1 and 4 of the patent No. 122,715 are invalid because the patent does not fully describe the invention (Par. 6), and because it was anticipated by prior patents and publications, raising the two issues that: 1. The patent is void for want of definiteness, and: 2. The patent is void because of anticipation.

The defendants admit paragraph No. 1 of the statement of claim and the plaintiffs' title to the patent in question as exclusive licensee in Canada.

Now the grant covered by plaintiffs' patent of invention No. 122,715, and alleged to have been infringed, is

for an alleged new and useful improvement in anti-creeping devices for railroad rails,

as substantially set out in the said claims Nos. 1 and 4, which read as follows:—

What we claim as our invention and desire to secure by letters patent is:—

1. In an anti-creeping device for railroad rails, the combination, with the rail, of a part engaging one side of the rail foot flange, a cross bar extending beneath said flange, and provided with means on one end thereof for engaging one side of said flange, means on the other end of said bar for engaging said part, the part-engaging means on the bar being held in engaging position by the spring action of said bar in tending to assume a position from which it was sprung, and tie-engaging means acting upon said bar, substantially as described.

4. In an anti-creeping device for railroad rails, the combination, with the rail, of a shoe engaging one side of the rail foot flange, a cross bar extending beneath said flange, and provided with means on one end thereof for engaging one side of the flange, a head on the other end of said bar holding said shoe in engagement with said flange, means on said bar for engaging said shoe, the shoe-engaging means on the bar being held in engaging position by the spring action of said bar in tending to assume a position from which it was sprung, and tie-engaging means acting upon said bar, substantially as described.

The creeping of rails in a railroad track consists of a longitudinal movement—much like the movement of a snake—caused by the wave motion of the rail under moving loads, the pounding of the wheels of the locomotive, the application of brakes on moving trains, the expansion and contraction of the metal rail arising from climatic changes, etc., resulting in side buckling of rails, etc. This tendency to creep varies in different portions of the road depending upon grades, swamps and the various conditions of the road bed and the condition of the traffic over it, and would obviously be different on a single track from a double track,—where in the latter it might to some extent work to correct itself.

In other words at the point where the wheel of the locomotive or other cars pass, the rail is being depressed, with the result of a rise on each side, and the wheels have to climb this rise, as it were, the result being that there is an ironing out or a tendency to shove the rail forward.

This phenomenom of rail creeping, we are told, has been known ever since the first rails were used and inventors were at work endeavouring to face the problem and overcome this creeping.

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Mr. Gutelius, a witness of considerable experience and repute, testified that from the early days, long before 1909, devices of all kinds were submitted to railway authorities by so-called inventors, and that he had personally occasion to examine a number of them. Mr. Haines, another witness of excellent standing, with, in addition, a large experience in patents of invention, testified that after having studied the prior art in respect of creeping devices, he found that a

> very large number of patents had been granted on various types and kinds of rail anchors

of which he said, he might safely state there were about between 900 to 1,000 patents.

From this extensive field of the prior art witness Haines has condensed the treatment of the prior art by selecting a restricted number of patents going to show that the development of the anchor art, from an early date, naturally divided itself into three important groups:

Group No. 1: The bolted anchor type;

Group No. 2: The wedge type;

Group No. 3: The torsional twist type.

The plaintiffs have filed, as sample of their devices, three exhibits marked respectively, exhibits 10, 11 and 5c. They also filed, as samples of the defendants' devices, exhibits 2, 3 and 4. And in dealing both with the prior art and the question of infringement, it will be necessary to bear these exhibits in mind.

Dealing with Group No. 1 above mentioned, reference may be had for proper understanding, to exhibit S,—a card prepared by witness Haines to illustrate and summarize, by way of samples and demonstration, some of the patents of the prior art which are filed. Neither the devices of the plaintiffs nor of the defendants belong to that first group, yet we find, in these few patents of the early days, some mechanical devices that have been retained in the other groups, such as the cross bar with either one jaw or two jaws gripping the edge of the base of the rail. In the first group, however, are found those anchors which are bolted to the rail and in some cases to the cross tie.

The Smith, Pope and Laas & Sponenburg patents exhibits B., C. and D. display good illustrative examples of the first group. Suffice it to say that exhibit C, the Pope

Patent, shows a cross bar or member extending under the rail, with a hook at one end engaging one edge of the rail base and an abutment extending transversely at the edge of the other end of the rail base.

In dealing with Group No. 2, reference must be had to the large cards, exhibits S. and T.

This second group of anchors is known as the *wedge group* and includes those patents of the prior art wherein the cross member has a hook at one end and a hook of somewhat larger dimension at the other end to engage over the wedge surface of the wedge, one portion of which bearing against the edge of the rail base when the parts are in assembled relation.

The Sponenburg patent, exhibit E. of 1901, may be regarded as an early crude type of the wedge anchor, showing the principle of a wedge action, with a cross bar.

The Stewart British patent of 1886, exhibit Q. shows an early type of pure wedge anchor, having a cross bar type or member with a hook on the base rail at one end, passing under the rail and hooking at the other end by a larger hook, having there a wedge interposed between the hook and the edge of the rail and driven to place to bind the parts together.

The whole of the parts being adapted to be constructed of *steel* or other suitable metal or mixture of metal or alloys,

as recited in the patent. Therefore, we find in this patent a cross bar with double hook, locked into position by means of a wedge, with a cross bar, which may be constructed of steel; three important elements in view of the position taken at bar by the plaintiffs and the several elements entering in the defendants' anchor.

The Sponenburg patent of 1903, exhibit F., has also a cross bar having a hook at one end to engage one edge of the rail base flange, having a larger hook at the opposite end between which and the edge of the rail is interposed a wedge. When the wedge, which is slightly tapered endwise, is driven home in the devide, the clamping action of the cross member is affected by the increasing size of the wedge as it enters the larger hook end of the cross bar which is hooked over it. Figure 3 of the patent also shows the wedge provided with teeth.

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The Dorpmuller Patent, No. 716,207 (exhibit J.) of 1902 (not on cards S. and T.), is another device of the type of wedge anchor, which is provided with a cross bar with a hook at each end and a wedge which is introduced between the rail base at each side of the rail, so that two wedges are employed on each side or co-operating with each jaw or hook. The wedge is introduced between the cross bar and the bottom of the rail.

Next is another Dorpmuller Patent No. 791,139 of 1905, exhibit K. (shewn on card exhibit S.) which is an improvement on exhibit J. This device can be put on without raising the rail, and has a cross bar with a hook at one end which passes over the edge of the rail base flange. The cross member extends under the base of the rail, and is provided with an enlarged hook at the other end which embraces a wedge member. This wedge member has a downward extending abutment which bears against the face of the cross tie.

The drawings of this patent show a ledge at each side of the rail entering the hook of the cross bar; but in fig. 7 it dispenses with one of the wedges at one side of the rail, thus making the anchor substantially in all respects identical with the hook on the defendants' anchor Exhibit No. 2, and it shows practically the same construction working under the same principle, and with undoubtedly the same elasticity, notwithstanding that the patent does not ask for a steel cross bar, but witness Haines contends that since it has a hook at each end it calls for steel.

Then comes the Murray patent No. 803,776 of 1905 (exhibit G.) for a wedge anchor device composed of a cross bar with overturned ends adapted to hold on the rail base flange and a wedge which is interposed between the edge rail and on the hook of the cross bar, with also an abutment.

The Leighty patent No. 809,193 of 1906 (exhibit I.), is another wedge anchor type substantially identical in all material respects with defendants' exhibit No. 2. It has a cross bar with hook at one end engaging the edge of the rail base, then, passing under the rail, the other end is provided with a larger hook which is engaged by a wedge with a tie abutment portion. The cross bar has also the depressed

portion for forming a space for the lower flange of the wedge which has the same construction and utilized for same purpose, as defendants' anchor exhibit No. 2.

One more patent of the wedge type granted to Lien, bearing No. 816,296 of 1906, exhibit H. has this usual cross bar with a hook at one end to hook over the edge of the base flange of the rail and a larger hook at the other end which takes the wedge with its abutment bearing against the base of the tie. Here again, all the features of the defendants' device exhibit No. 2, are substantially present in this anchor.

This closes the review of the prior art in respect of the second group or the wedge type anchor.

Coming to the third group, which, embodying the plaintiffs' patent No. 122,715, consists of a *torsional spring anchor*. A new anchor by itself, working under this new torsional spring device.

Witness Haines taking the plaintiffs' patent exhibit No. 1, pointed out, both in the specification and in claim Nos. 1 and 4, what belonged to the prior art and what was new.

Dealing with claim No. 1, he contended that using in their broad sense the terms and language of that claim, abstracted from all other considerations, all that is described is to be found in the prior art. That is:

a cross bar extending beneath the flange—provided with means on one end thereof for engaging on side of said flange

and

means on the other end of said bar for engaging said part.

And last

the part engaging means on the bar being held in engaging position by the spring action of said bar in tending to assume a position from which it was sprung.

In dealing with this last sentence, it is quite questionable whether the court could hearken to such view. It has, however, another meaning; but the language is hardly consistent with the article defined.

Claim 4 practically repeats claim 1, with the substantial changes of the word *shoe* for *part* in the second line, and the words "a head on the other end of said bar holding said shoe in engagement with said flange, means on said bar for engaging said shoe." This last sentence is material

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and clearly describes the plaintiffs' anchors exhibits Nos. 10 and 11. I will subsequently deal with exhibit 5c, another of the plaintiffs' devices.

Exhibits Nos. 10 and 11 are practically built alike, with the exception of the difference in the head of the cross bar. The construction of these two exhibits is a fair reproduction of what is described in the Vaughan patent. The rounded cross bar flattened through part of its length, witness Gutelius has never seen, and is not quite as elaborately described in the patent as the bar with the head.

According to the plaintiffs' patent, in exhibit No. 11, the cross bar is provided with a spud engaging on the shoulder of the socket provided with a contracted entrance, and held in position by the torsional spring action of the cross bar, thus locking the bar and the shoe together. The portion of the cross bar which extends through the socket and includes the spud has transverse dimensions in one direction sufficient to prevent it from passing through the walls of that entrance and it has also transverse dimension in another direction which will permit it to pass between the walls of the entrance.

In applying the device a special shoe (that is a shoe quite different from the one used on 5c) is placed into engagement with one side of the rail foot flange and the hook of the cross bar is placed in engagement with the other side of the rail foot flange, then the other end of the bar is sprung into the socket of the shoes by a combined torsional and upward pressure upon the head of the bar, with a wrench or other suitable tool.

Of the type like exhibits Nos. 10 and 11, the plaintiffs manufactured but a very small quantity and the device which they extensively manufacture and sell is similar to exhibit 5c.

Exhibit 5c has been called by the plaintiffs the commercial device and its construction is very different from exhibits 10 and 11 and the construction described in the Vaughan patent as will be readily ascertained on merely looking at it.

At one stage of the trial, after much time and energy had been used in describing and speaking to exhibits No. 10 and 11, exhibit No. 5c was brought to attention and we

were told that 7,900,000 of the same had been manufactured and sold by the plaintiffs, while a very small quantity of exhibits Nos. 10 and 11 had been manufactured and the Vice-President of the plaintiff company stated he had no knowledge of selling devices like exhibits 10 and 11, and that 5c was the only form he had sold. I was so much struck by the difference of 5c with Nos. 10 and 11 that I asked plaintiffs' witness, Mr. Gutelius, whether a mechanic, from the information and description of the devices in the patent, could manufacture a device such as exhibit No. 5c, and his answer was that he could not without some additional instructions, and in that view he is corroborated by witness Haines. Witness Gutelius being shown exhibit 5c and asked:

Q. Is that a form of the Vaughan anchor?—Answered: I presume it is. I don't know.

This exhibit 5c, the plaintiffs' commercial device, could hardly be said to be within the detailed disclosures and illustration of the Vaughan patent. It would seem quite apparent that the plaintiffs do not in that respect comply with the requirements of section 13 of the Canada Patent Act which enacts that the specification

shall correctly and fully describe the mode or modes of operating the invention, as contemplated by the inventor; and shall state clearly and distinctly the contrivance and things which he claims as new and for the use of which he claims an exclusive property and privilege. * * * In case of a machine, or in any other case in which the invention admits of illustration by means of drawings, the applicant shall also, with his application, send in drawings . . . showing clearly all parts of the invention.

Plaintiffs' counsel at bar, in answer to the question from the court as to how could that exhibit 5c come within the ambit of the patent, contended that claim No. 1 would cover this commercial device 5c if read with the specification at foot of page 6:

The bar 6 (cross bar) may be of any shape and size for its intended purpose and the cross sectional shape of the body of the bar, when the spring action described takes place may be varied to suit different conditions.

But that would be too vague—it would be too indefinite as stated by witnesses Gutelius and Haines. And the latter excerpt seems to apply to exhibits 10 and 11 and not to 5c.

Is not this exhibit 5c, the commercial device, in its somewhat complex aspect as compared with Nos. 10 and 11, an

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afterthought of the plaintiffs and which has not been protected by the patent? However, either course makes no difference in the view I take of the case.

Exhibit 5c differs in great many respects with the constructions disclosed in the Vaughan patent and also shewn in the defendants' anchor. The cross bar is of flat steel which has no part corresponding to the head mentioned in the plaintiffs' patent,—it has but one jaw. The shoe is quite a modified and different device in its structure from what is found in the patent.

Dealing still with the prior art in respect of the third group, we have the Guthridge patent, No. 867,359, of 1907 (exhibit L.), which shows a rail anchor with a cross member having a hook engaging on one side the edge of the rail base and on the other end it is connected to the opposite edge of the rail base by a shoe and a threaded bolt. The specifications, at line 23, state that

> as a consequence when the nut is tightened there will be a certain spring or resiliency between the two parts which will act to lock the nut and prevent its loosening in the bolt.

This result found in prior art is also found in the defendants' devices and cannot be claimed by the plaintiffs and if there is any spring or elasticity in the defendants' anchor it is the same spring and elasticity which is present in every cross bar of the wedge type or other types of the prior art and more especially in the British Patent of 1886.

Then the Clawson patent No. 852,927 of 1907 (exhibit M.), at line 75 disclosed also *an elastic steel member*.

All metals regardless of what kind have some elasticity inherent to them, and as put by witness Gutelius there is resiliency in railway rails, fish plates, spikes, etc. There is resiliency in steel no matter in what form it happens to be made. Witness Haines contends further that there is less elasticity in the defendants' device, because it is made of malleable casting wherein the metal is much softer, more ductible than steel.

The new feature disclosed by the Vaughan patent, as compared to the prior art, is to provide a torsional spring cross bar, which by its torsional action through the special shoe brings the device into locking engagement for holding the anchor loosely on the rail, a principle and a mechanical device entirely different from the defendants' device.

Coming to the defendants' device, exhibits 2 or 3, and placing it near any of the plaintiffs' devices, primarily from mere ocular observation, it will appear and convey the notion that they are materially, if not totally, different and that notion will become more and more confirmed as one pursues the examination in detail.

As stated by the plaintiffs' witness, Mr. Gutelius, there is no socket (fig. 11) in the defendants' device. There is no spud (fig. 17), no shoulder (fig. 18) corresponding to the plaintiffs' anchor, no torsional twist or spring action, which has been described as the *meat of the Vaughan patent.* No lock bar and shoe together (bar fig. 6 and shoe fig. 12). He further says that there is nothing in the defendants' devices which can be qualified by the use of the term lock or locking. He adds that the spring in the cross bar has a locking effect, but I would not call it a lock. In the Vaughan anchor, the spud acts like a latch.

The construction and mode of operation of the plaintiffs' anchor rest on mechanical principles and laws of operation distinct, different, separate and quite unlike the mechanical principles and laws of operation embodied in defendants' anchor.

The plaintiffs' cross bar has but one jaw or hook taking the edge of the rail base; the defendants have two and one much larger than the other. Both of these cross bars function differently.

The defendants' device, working under the wedge principle, is entirely different from the plaintiffs' anchor which works under the torsional twist or spring action. The application of each device to the rail is entirely different and done with a different tool. There is no torsional pressure nor twisting, as in the Vaughan, when applying the defendants' device, and no need of anything to prevent it from turning; the defendants' cross bar does not go into a socket, no lock; no wedge in plaintiffs' patent, all of this as stated by plaintiffs' witness, Mr. Gutelius.

The yoke or cross bar in the defendants' device is perfectly straight, whilst in the plaintiffs' device, it is torted before being used.

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The early anti-creeping devices, according to witness Gutelius, produced the toggle effect, mentioned at times in the course of the trial. He said:

> the jaws were not opposite, they were fully the width of the jaw apart and the shoe extended down. When a tie pressed against it, it tightened with a toggle effect.

A principle *per se* cannot be the subject of a patent, but a patent may be taken for a principle coupled with a mode of carrying the principle into effect, and it may be carried into effect under several patents operating in different ways and by different means.

I have come to the conclusion that the defendants' device is entirely and totally different from any device of the Vaughan patent belonging as it does to the wedge type or second group while the plaintiffs' anchor belongs to the third group—the torsional type, and that they are both resting on mechanical principles and laws of operation wholly different and distinct from one another. I refrain pursuing any further my review of the multitude of elements showing the different characters of these devices, notwithstanding there are many others than those above mentioned; but they are sufficiently striking for the purpose of arriving at the determination of the present controversy. The plaintiffs' device, it would seem, cannot include the defendants' device, without also including all the prior art.

The defendants' device was at the hand of one learned expert witness scrutinized with specious ingenuity, sharpened by inordinate desire to discover in it some of the elements, distant or apparent, to those existing in the plaintiffs' device. But the present controversy must be approached with a just temper and one must guard against being carried away by the mere witness of theory and overlook the positive and striking facts of the case.

That theoretical and technical evidence has been directed in a learned manner, after scientific experiments, wide of practical results, more especially to find, in the defendants' device, some spring, elasticity, resiliency, toggle effect, some lock (contrary even to witness Gutelius' view), etc.; but if the defendants' anchor did embody any such element, be they inherent to the metal used in its construction or otherwise, it becomes of no importance—it is labouring for

naught—since these elements belong to the prior art, and more especially to the wedge type and they cannot under any conceivable pretence be claimed by the plaintiffs who are limited by the ambit of their patent and the prior art. If such elements are found in both the plaintiffs' and the defendants' devices, they cannot be claimed or appropriated by either, since they belong to the prior art and the public. Were also the two devices working under the same principle, if the defendants' device arrived at the same result by a different and a new way of achieving the end contemplated, there would still be no infringement. *Consolidated Car Heating Co.* v. *Came* (1).

The question of infringement is an issue of facts. It has been shewn from the above what was known at the date of the plaintiffs' patent alleged to be infringed. That is the prior art. Then what, having regard to what was then known, is the area of the patentee's monopoly and what finally the defendants have done.

The Vaughan specifications must be construed in the light of the prior art, that is taking it not to be the pioneer patent in that art, but an improvement on the prior art, as stated in the patent itself.

The defendants' anchor does not imitate and does not infringe the plaintiffs' anchor. Even if the forces acting in the defendants' device were similar in principle to the forces displayed in the plaintiffs' device, as stated by one witness—provided that is done in a different manner, it is quite allowable. The defendants' device appears to me to be meritorious, of extreme simplicity, practical, with good grip, working in an easy way and devoid of any torsional twist of spring, spud and shoulder locking device. Is it not better than the plaintiffs'?

One may get spring pressure in several manners, and because by one patent spring pressure is obtained, the way is not closed to an inventor to get a spring pressure or a locking device in a different manner, although arriving at the same result.

In re *Consolidated Car Heating Co.* v. *Came* (ubi supra), where two couplers of pipes or hose attached to two railway cars were in all material respects the same, but for

(1) [1903] A.C. 509.

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the respondent omitting the use of one particular feature called a "rib" or hinge-joint, it was held that there was no infringement for the respondent's coupler *was shewn to have been a different and a new way of achieving the end contemplated by the appellant's coupler.* If it was so held in that case, *a fortiori* would that law be more applicable to the present case, since the differences between the two anchors are so material and so numerous: the mechanical devices being different and the mode of operating being also different. The defendants have a different and new way of achieving the end contemplated by the plaintiffs' device and even under a different principle. See *Chamberlin Metal Weather Strip Co.* v. *Peace* (1); *Brooks* v. *Lamplugh* (2); *Maxim-Nordenfelt* v. *Anderson* (3); *Mitchell* v. *The Hancock Inspirator Co.* (4).

Having regard to the state of the art, the date of the plaintiffs' patent, I find that the defendants have not infringed any part of the substance and essence coming within the ambit of the plaintiffs' patent and that there is no infringement. Nicolas 158.

Of the defendants' patent mentioned in par. 3 of the statement in defence, suffice it to say it is no defence to the plaintiffs' patent.

The action is dismissed with costs in favour of the defendants.

*Judgment accordingly.*

Solicitors for plaintiff: *Blake, Lash, Anglin & Cassels.*

Solicitors for defendant: *Gibson & Gibson.*

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(1) [1905] 9 Ex. C.R. 399; 37 S.C.R. 530.
(2) [1898] 15 R.P.C. 33.
(3) [1898] 15 R.P.C. 421 H.L. (E.).
(4) [1886] 2 Ex. C.R. 539.