

Now, the sum actually awarded is small but I do not think the question between the parties as it went to the jury was really a question of amount at all. The defenders might have made it a question of amount by making a tender. They did not think fit to do so, but, on the contrary, they maintained vigorously, as they were quite entitled to do, that they were not answerable for any fault whatever, but that they had exercised all reasonable care and prudence in taking precautions for the safety of their workmen. That was the question, and on that the jury found a verdict against them. That was a question of fact well fitted for jury trial, because it depended on conflicting evidence which was mainly circumstantial, and although I am quite satisfied with the verdict of the jury, the facts as presented to them might have suggested different views to different minds. It is therefore quite possible that if the case had gone to the Sheriff his judgment might have been appealed to the Sheriff-Depute, and his judgment again to this Court, so that there might have been three discussions instead of one. It is therefore by no means certain that the course now recommended to the pursuer would have been less expensive than that which he chose for himself. But then I am of opinion that it was for his advisers to consider which course should be taken, and that the pursuer had a right under the statute, if so advised, to say whether he preferred the verdict of twelve average jurymen to settle the matter once for all, or to have the judgment of a single Judge subject to a first and second, and possibly even to a third appeal, if any question of law could have been extracted from the findings of fact.

On the whole case therefore I am of opinion that there is not sufficient ground for depriving the pursuer of the small amount of damages awarded to him by the jury by the process of depriving him of the expenses of obtaining the award. I think the pursuer has been successful, and is therefore entitled to his expenses, and that there is no special reason for diminishing his claim.

The LORD PRESIDENT, LORD ADAM, and LORD M'LAREN concurred.

The Court applied the verdict and gave decree for the amount of the award with expenses.

Counsel for the Pursuer and Appellant—Gunn. Agents—Mackay & Young, W.S.

Counsel for the Defenders and Respondents—Hunter. Agents—W. & J. Burness, W.S.

Tuesday, November 8.

SECOND DIVISION.

[Lord Kyllachy, Ordinary.]

BROWN v. JOHN HASTIE & COMPANY, LIMITED.

*Patent—Patents for Inventions—“Master” Patent—Construction of Specification—New and Unknown Result Obtained by Mechanical Device Described in Specification—Mechanical Equivalent—Infringement.*

In steamship steering engines, which are only intended to run when the ship's helm is altered, it is necessary that the control valve should move easily, and it therefore cannot fit so tightly as to prevent the constant escape and waste of steam when the engine is at rest. Prior to 1897 devices were known for economising steam in continuous running engines when in motion, but there was no known means of preventing the escape of steam through the loose fitting control valve of steering engines when the engine was at rest.

In 1897 a patent was taken out by A for an apparatus whereby a cut-off valve actuated in unison with the control valve by the movements of the wheel excluded the passage of steam into the casing of the control valve when the wheel was in a neutral position and the steering engine at rest, the connection between the two valves being by a certain device described in A's specification.

In 1902 B obtained a patent for an apparatus which achieved the same result as A's patent, by a cut-off valve working in unison with the control valve of steering engines, the two valves being connected by a well-known device which was the mechanical equivalent of the device described in A's specification.

In an action brought by A against B for infringement of patent, *held (aff. judgment of Lord Kyllachy, after a proof)* that A's invention achieved a new and important result not previously effected, that his patent was not limited to the particular mode of actuating the cut-off valve described in his specification, but was a “master” patent fully covering his invention, and that B's patent was an infringement of A's.

In 1897 a patent was granted to Andrew Betts Brown, Rosebank Iron Works, Edinburgh, for an invention relating to improvements in connection with the valves of steering and the like engines.

In steering engines the valve which is controlled by the movements of the wheel is necessarily sensitive and cannot be made to fit tight; in order that it may move easily it has to fit so loosely as to allow a constant escape of steam when the engine is at rest.

Prior to the date of Brown's patent there was no known means of preventing this escape of steam through the loose fitting control valves of steering and the like engines, though devices were known for economising steam in continuous running engines.

The object and substance of Brown's invention was "the prevention of leakage of steam in steering and the like engines by the introduction into the steam feed pipe of a casing which contained a cut-off valve, operated from and acting in unison with the controlling valve of the engine." The device by which the control valve and cut-off valve were made to act in unison was described in Brown's specification.

In August 1903 Brown and his firm of Brown Brothers & Company brought against John Hastie & Company, Limited, Kilblain Engine Works, Greenock, an action (1) to have it declared that improvements relating to the controlling valves of steering engines made in accordance with specifications relative to letters-patent granted in favour of Robert Richardson in 1902, and in accordance with specifications relative to letters-patent granted in favour of Walter Graham, director of the defenders' company, in 1903, were infringements of the pursuers' patent; (2) to interdict the defenders infringing the pursuers' patent by making, selling, or using during its currency mechanism constructed in accordance with the specifications of Richardson and Graham; (3) to ordain the defenders to deliver up to the pursuer all mechanisms or parts constructed in breach of the pursuers' patent; and (4) to ordain the defenders to pay the pursuers £2000 as damages.

The pursuers averred—The mechanisms described in the defenders' specifications are infringements of the pursuers' invention. They are themselves identical in principle and mode of working, and embody the substance of the pursuers' invention, so as to produce the same results in practically the same way by the substitution of well-known mechanical equivalents for certain parts of the pursuers' mechanism. The substance of the pursuers' invention is the operating of a cut-off valve by the action of the controlling valve of the steering engine. Whenever the steersman operates the controlling valve to port or starboard the helm, that valve in turn operates the cut-off valve and admits steam to the steering engines. The pursuers achieve this result by the direct action of the spindle of the controlling valve upon the end of the cut-off valve, which, for ease of lifting, is made a double-beat valve. Richardson and Graham in the said specifications substitute for the double-beat cut-off valve used by the pursuers a balanced cut-off valve, which is a well-known mechanical equivalent. On the spindle of their cut-off valve there is a piston working in a cylinder. Steam is admitted on both sides of this piston, and so the valve is balanced. This cut-off valve is operated from the controlling valve through the intervention of a small valve operated directly by the con-

trolling valve. This small valve, in the case of Richardson's patent, is operated by the thrust of the end of the controlling valve spindle; and in the case of Graham's patent, by an eccentric or lever working on the spindle of the controlling valve. When this small valve is opened the balance of the cut-off valve is destroyed, and the steam acting upon the piston opens the cut-off valve. This method of opening a balanced piston valve is old and well known; the modes of working the small valve from the controlling valve are mechanically the equivalents of those employed by the pursuers to lift their double-beat valve. The whole combination is a variation of the pursuers' invention complicated to produce an appearance of dissimilarity."

The defenders denied that they had infringed the pursuers' patent, and averred—"The patent founded on by the pursuers and the patent founded on by the defenders both relate to steering and such-like engines, and have the same object in view, viz., to save leakage of steam. This object is aimed at by every designer and maker of steam engines. The patent of the defenders attains this object by different means and upon a different principle from those covered by the pursuers' patent. In the mechanism of the pursuers' patent the controlling valve of the steering engine is fitted with inclined planes acting directly on corresponding inclines fitted on the stop-valve. When the controlling valve is opened, the inclines on it bear upon those of the stop valve and open it, and when the controlling valve is returned to its neutral position the inclined planes on it are withdrawn from those on the stop-valve and allow it to close. In the defenders' construction the stop-valve is placed in the steam pipe, but instead of being operated by the control valve, it is operated by varying the steam pressure on the top side of the piston attached to the valve spindle. In this way the stop valve may be absolutely closed when the steering engines are not required to operate, and that independently of the position of the control valve, which may remain more or less open without waste of steam."

A proof was allowed; the nature of the evidence is disclosed in the Lord Ordinary's opinion.

On 25th March 1904 the Lord Ordinary (KYLACHY) granted decree in terms of the conclusions of the summons.

*Opinion.*—"The pursuers in this case are proprietors of a patent dated in 1897, which relates to improvements in connection with the valves of steering and like engines; and speaking generally, the improvement which the patentee claims may be said to consist in a certain contrivance for stopping or reducing to a minimum the waste of steam formerly found inevitable, during the periods (constantly recurring and often prolonged) when the steering engine is at rest, but when, nevertheless, there exists a constant pressure of steam upon, and consequent leakage through, the controlling valve of the engine.

"There is no dispute as to the merit and

novelty of the invention. The question is simply as to an alleged infringement by the defenders, who are said to make, sell, or use certain similar apparatus, having the same object, for which they hold certain patents of subsequent date. And, as not infrequently happens, the controversy comes really to turn on the construction of the specification filed with reference to the pursuers' patent, dated, as I have said, in the year 1897.

"The pursuers contend that on the just construction of that specification, read, as it falls to be read, with reference to the state of prior knowledge, the essence and substance of the invention consisted in the introduction for the first time into steering engines of what I may call a separate stop valve formed in the steam casing through which the steam enters the controlling valve, this stop valve being arranged to move in unison with the controlling valve, by means of suitable mechanism, one form of which the patentee fully describes.

"The defenders on the other hand say that the pursuers' patent, properly construed, is a patent only for the particular method described of actuating the stop valve, viz., the motion of opposite inclines fitted on the stop valve acted upon by counter-part inclines fitting on the controlling valve. On that assumption they say, and I think truly, that their (the defenders') apparatus (the alleged infringing apparatus) actuates the stop valve in a different way, viz., indirectly by variations of steam pressure instead of directly by the direct mechanical contact of counter inclines. And that being so they contend that there is no room in this case for what is called the doctrine of mechanical equivalents—a doctrine which applies only where, the essence of an invention being taken, some part of the described mechanism,—essential to its working, but not an essential part of the invention—has substituted for it by the alleged infringer some known different but equivalent mechanism, to produce the same result.

"It is, I think, clear that the question thus sharply raised cannot be solved upon the mere language of the specification or of the specification and claim. It has first to be ascertained what, having regard to the state of prior knowledge, was the field open to the inventor? and how far what I may call his total apparatus was at its date new—new particularly in the sense of achieving a new and important result. In other words, it is necessary to know whether the invention was what has been called a 'pioneer' or 'master' invention, or was only in truth a new and improved mode of achieving an already achieved result. It is obvious and has been repeatedly decided that in determining what is essential and what is not, that is always a most important and generally a crucial consideration—*Consolidated Heating Co. v. Came*, [1903], App. Cas. p. 516, and cases there cited.

"Now, it appears to me to be the just result of the evidence that the pursuers' invention was of the former class, and not of

the latter. Steering-engines were of course well known in 1897. And in such engines there were of course, besides the usual distributing valves near the cylinder, what was known as a controlling valve—a valve which, being operated by the usual hand-wheel, determines the passage of the steam in different directions, according as it is desired to move the helm to port or to starboard, and which as each motion is completed comes back to its neutral position, and thus, at least theoretically, shuts off steam for the time. The difficulty, however, was, that this controlling valve was necessarily loose. It had to be sensitive and to work easily, and it could not therefore be tight. Hence leakage and consequent waste of steam was inevitable, and in large vessels was serious; and at the date of the pursuers' patent no method had been devised, or even proposed, for curing this leakage—this waste of steam—when the engine was not at work. In particular, it had not occurred to anybody that the problem might be solved by the introduction of a separate valve—a separate stop valve, working automatically in connection with the controlling valve, and which, while leaving the latter valve loose, was in itself absolutely tight. Of course stop valves and cut-off valves were old and well-known contrivances. So also as applied to ordinary engines (continuous going engines like locomotives) were cut-off valves working automatically. They were used for promoting economy of steam, or more effective expansion of steam when the engines were working. But it had not occurred to anybody to use either a stop or cut-off valve in connection, not with the ordinary distributing valves common to all engines, but with the controlling valve peculiar to steering engines, or to use such valve for the purpose, not of economising steam when the engine was working, but of preventing the waste of steam when it was not working. It was left for the pursuer Mr Brown to make for the first time this new and useful application of the automatic stop valve, and by doing so to achieve a result which was much desiderated, and has been a great commercial success.

"Plainly therefore it must, I think, be taken that the pursuers' invention was in the most real sense what is called a 'pioneer' invention. It was not of the kind in controversy in such cases as *Curtis v. Platt*, 3 Ch. Div. 135, or *Dudgeon v. Thomson*, 3 App. Cas. 34. It belonged, on the contrary, to the class of patented inventions which were the subject of such cases as *Proctor v. Bennis*, L.R., 36 Ch. Div. 740; *Thomson v. Moore*, 6 P.C. 426, 7 P.C. 325; *Aktiebolaget Separator Co. v. Dairy Outfit Co.*, 1898, 15 P.C. 327.

"Having this in view, the question at issue is really this, Whether it can be held on the fair reading of the pursuers' patent, that having in fact made this new and valuable invention, he (the patentee) has yet for some reason claimed only—or what comes to the same thing, put forward as the essential or an essential part of his protected invention—the particular mode

which he describes of actuating his stop valve by the action of counter inclines. Of course such a thing is possible. The patentee may have failed to recognise the true nature of his discovery; or he may have so expressed his specification as to make the suggested reading inevitable. But the question is whether that is so, or whether reading the specification fairly, and in the light of the state of knowledge at the time, it is not sufficiently manifest that the invention described and claimed is just the invention which the patentee made.

“Now as to this, all I can say is, that I see no sufficient ground for reading the specification in the narrow sense for which the defenders contend. It may be true that it would have been better, as it certainly would have been quite easy, for the framer of the specification to state expressly that while fully describing, as he required to do, an effective method of actuating the stop valve, he did not confine himself to that method, but only to that or some equivalent method. But that is, I am afraid, an observation which might be made in most patent cases which come before the Courts. It is the leaving of things to implication which as a rule makes construction necessary. And applying here what I conceive to be proper principles of construction, I have, on the whole, come to the conclusion that the pursuers' construction of the specification is the correct one. I consider that the essential feature—the essence and substance—of the patented invention consists simply in the application to steering and the like engines, for the purpose of preventing leakage of steam while the engine is not working, of a separate stop valve working in unison with the the controlling valve. And as it is not disputed, or at least is clear, that the defenders' apparatus embraced those elements and employed them for the same purpose and with the same result, I am of opinion that the pursuers are entitled to judgment.

“With regard to damages, that is, of course, a jury question. The actual profit made by the defenders, and presumably lost to the pursuers, upon the manufacture and sale of the ten valves specified, seems to have been about £100. Something, however, must be added in respect of profit presumably lost to the pursuers by the defenders obtaining the orders for the steering engines fitted with the pursuers' valves, which orders, it is said, would but for the defenders' competition have come to the pursuers. It seems to be decided that this is a legitimate element to be considered, and the pursuers claim in respect of it an additional sum of £600. I think, however, this is excessive, inasmuch as it assumes as a certainty what was hardly of that character. I think I shall do justice sufficiently by fixing the total damage at £300.

The defenders reclaimed, and argued—The pursuers' rights were limited to the method of connecting the control and cut-off valves, which was described in their

specification; the defenders' patent, though cognate was not an infringement—*Dudgeon v. Thomson & Donaldson*, December 22, 1876, 4 R. 256, July 10, 1877, *ibid.* (H.L.) 88, 14 S.L.R. 175; *Consolidated Car Heating Company v. Came* [1903], A.C. 509; *Gwynne v. Drysdale & Company*, March 5, 1886, 13 R. 684, 23 S.L.R. 465. The object attained by the pursuers' patent was not new, but only the means of attaining that object; the patent was therefore to be read strictly—*Curtis v. Platt*, 1863, 3 Ch. D. 135, *note*; *Proctor v. Bennis*, 1887, 36 Ch. D. 740; *Nobel's Explosives Company v. Anderson*, 1894, 11 Pat. Cas. 115; *Stewart & Briggs v. Bell's Trustee*, December 5, 1883, 11 R. 236.

Argued for the pursuers and respondents—The essence of the pursuers' patent was in the result obtained, which was new. The device by which it was obtained was not essential. The defenders' patent, which obtained the same result by mechanical equivalents, was therefore an infringement—*Thomson v. Moore*, 1889, 6 Pat. Cas. 426, 1890, 7 Pat. Cas. 325; *Proctor v. Bennis, cit. sup.*; *Boyd v. Horrocks*, 1892, 9 Pat. Cas. 77; *Consolidated Car Heating Company v. Came, cit. sup.*; *Aktiebolaget Separator v. Dairy Outfit Company*, 1898, 15 Pat. Cas. 327; *Presto Gear Case and Components Company v. Simplex Gear Case Company*, 1898, 15 Pat. Cas. 635; *Automatic Weighing Machine Company v. National Exhibition Association*, 1892, 9 Pat. Cas. 41; *Pilkington v. Massey*, 1904, 21 Pat. Cas. 421. Though in the pursuers' specification only one method of obtaining the new result invented by him was described, it covered all methods of obtaining the same result.

At advising—

LORD JUSTICE-CLERK—The invention of the pursuer in this case had for its object so to control the apparatus for passing steam into ship-steering engines that escape and waste of steam might be prevented when the engine was at rest, the use of the engine being necessarily intermittent, as it was only intended to run when the ship's helm required to be altered. It had been found necessary in the case of the control valves of ship-steering apparatus that the valves should not be tight in their seating, as otherwise there might be great risk of danger from the steering apparatus not being set in motion the instant it was necessary to do so, and as it was plain that if a steering apparatus control valve should remain fast when it was desired to move it the most disastrous consequences might ensue. The pursuer's invention consisted in so associating a cut-off valve with the control valve that when the control valve was in the neutral position the cut-off valve was closed and the passage of steam into the casing of the control valve stopped, thus preventing escape of steam past the loose-fitting control valve.

I am satisfied upon the evidence that this was a new invention to effect a purpose which had not been effected by any previous apparatus. It is true that in some

earlier devices a cut-off arrangement had been used to modify the effect of steam pressure in the casing so that at certain points in the stroke of the engine-piston the pressure should not be so great as at other parts of the stroke. In one case this was done to give greater freedom to the slide valves admitting the steam into the cylinders at the moment at which these slide valves were being moved in their seats by the eccentric. In another case a cut-off was used to check the entrance of steam into the cylinder at a certain stage of the stroke so as to allow the steam already in the cylinder to expand. But these devices did not act with the purpose of stopping all flow of steam into the control valve casing when the engine was not in motion; they only controlled the steam which was passing in by the open control valve. The pursuer's arrangement had a different purpose—the exclusion of steam from the control valve casing when the engine was not working.

In my opinion the pursuer secured a master patent for effecting a useful purpose which had not been previously effected. That being so, the question is whether the defenders' apparatus intended to effect the same purpose is an infringement of the patent of the pursuer.

The pursuer in his apparatus as he applies it in practice uses a sliding control valve. Upon its shaft he places two slopes or slides, with a horizontal space between their lower ends. In this horizontal space when the control valve is closed there rests the end of a valve which when it is in that position shuts off the steam from entering the valve casing. When the control valve is moved so as to open the passage to the engine, one of the slides pushes the cut-off valve out of its seat and thus allows the steam into the control valve casing and so on to the engine. On the control valve being brought back to zero the cut-off valve once more comes into action and stops the passage of steam into the casing.

The defenders' arrangement consists of a rocking valve, which by being turned to one side or other opens a port to admit steam to one end or other of the cylinder. Upon the spindle of this valve there is an eccentric, the rod from which closes a valve in a small pipe into which steam can enter, and which steam holds a cut-off valve in the closed position, the steam from the boiler pressing equally on both sides of the valve. When the control valve is moved the eccentric is also moved, with the effect that the small pipe which was full of steam has a port open to the air, and the pressure being thus relieved from one side of the cut-off valve, it is opened and the steam to drive the engine is free to pass on by the control valve to the cylinder. On the control valve being again turned to the neutral position, the small pipe is again sealed, and the steam entering it under pressure the cut-off valve is once more held in position and steam shut off from the control valve casing.

It appears to me that the apparatus of the defenders is only an equiva-

lent for that of the pursuers, effecting the same purpose by well-known means, and only substituting one detail device for another without any real difference. On the whole matter I agree with the Lord Ordinary in his reading of the pursuers' specification, and in holding that the pursuers have established their claim against the defenders as infringers of their rights under their patents. As regards the question of damages, I do not see any sufficient ground for interfering with the Lord Ordinary's decision on that matter.

LORD YOUNG concurred.

LORD TRAYNER—*I concur.* The validity of the pursuers' patent is not in dispute. The question is, has it been infringed by the defenders. I agree with your Lordship and the Lord Ordinary in thinking that it has.

LORD MONCREIFF—*I am of the same opinion.* I agree with and adopt the reasons clearly and concisely given by the Lord Ordinary.

The novelty and value of the pursuers' invention being indisputable the only question is whether the defenders' specification constitutes an infringement of it.

I am of opinion with the Lord Ordinary and your Lordships that it does. The methods adopted by the defenders are not identical, but for all that they are equivalents, more complicated, but calculated and intended to attain the same result as the pursuers' invention, and thus deprive the pursuers of the profits to which they are entitled under their patent.

The Court adhered.

Counsel for the Pursuers and Respondents—Salvesen, K.C.—Sandeman. Agents—Steedman & Ramage, W.S.

Counsel for the Defenders and Reclaimers—Ure, K.C.—Hunter. Agents—Miller & Murray, S.S.C.

Tuesday, November 8.

## SECOND DIVISION.

[Lord Low, Ordinary.]

M'DOWALL & NEILSON'S TRUSTEE  
v. J. B. SNOWBALL COMPANY,  
LIMITED

*Sale—Stoppage in transitu—Duration of Transit—Construction of Agreement—Sale of Goods Act 1893 (56 and 57 Vict. c. 71), secs. 44 and 45.*

By c.i.f. memorandum of agreement a firm of Glasgow timber merchants purchased from a firm of timber merchants at Chatham, New Brunswick, certain timber at a price "including freight and insurance to Glasgow." "The goods," the agreement provided, "are deliverable in the usual and customary manner at Miramichi (a New Brunswick port)