15

IN THE HIGH COURT OF AUSTRALIA.

Drain

v.

Butcher + anor

REASONS FOR JUDGMENT.

Em'd ROB
15.10.37

No. 45 of 1936

Judgment delivered at Melbourne

on 14th October 1937

H. J. Green, Govt. Print., Melb.

C.11235

BUTCHER & JUPE'S PATENT EX PARTE DRAIN

STARKE J JUDGMENT

This is a petition on the part of Percy James Drain to revoke Letters Patent No. 13454 of 1933 granted to Edwin George Butcher and William Edmund Jupe for improvements in railway and tramway/rail and wheel flange lubrication. The grounds upon which the revocation is sought are that the petitioner was the actual inventor of the invention included in the claims of the patentees and that the Letters Patent were obtained in fraud of the rights of the petitioner.

The evidence given in the case is somewhat volumnious but the facts may be summarised :- The petitioner was an Engineering Draftsman in the employ of the Railway Commissioners of New South Wales who had given some attention to the lubrication of the flanges of wheels and the sides of rails on curves in order to minimise flange and rail wear. In 1929 one of his superior officers directed him to design an apparatus which would eject oil onto the side of rails. The petitioner experimented and ultimately designed an apparatus which is Exhibit "G". The nature and a general description of his apparatus is set forth in a Provisional Specification lodged by the petitioner in the Patents Office in May of 1930. "This invention relates to Railway Track Rails and consists of an ejecting apparatus driven by the vibratory energy generated in the rail and track by the train or vehicle as they pass along the track, such apparatus being adapted to eject oil or other lubricant on the side of the rail so as to minimise rail and wheel flange wear as the vehicle ran along curved tracks"

In one form the apparatus consists of a pump the cylinder of which (which need not necessarily be round) is relatively massive and not rigidly connected to the rail, and a piston works in the cylinder. The piston is preferably firmly attached to a bracket, which bracket is firmly attached to the rail. In action as the wheels of the train are passing over the spot where the apparatus is located the rail vibrates rapidly and works the piston rapidly. The cylinder is filled with oil or other fluid. The speed at which the rail is vibrating is much too fast for the massive cylinder to follow. Naturally and in consequence the cylinder remains practically stationary in space whilst the piston is travelling

in and out. One or more escapement orifices connected with the fluid in the cylinder are provided. When the piston travels in the cylinder great pressure is generated in the fluid in the cylinder and a small quantity is ejected with great velocity through the orifices and directed on to the side of the rail which it lubricates. Valving to maintain the proper direction of the flow of the fluid is provided. "Arrangements to maintain a supply of oil to the suction side of the pump are provided" Further I should add that a spring was provided the function of which as I understand was to support the cylinder against the pull of gravity exerted upon it when the ~~pull~~ direction of its movement was in a downward direction. Cf. Exhibit "T" Complete Specification and Figure 1. Its function is more fully explained by the witness Reynolds at page 259 of the Transcript.

In August 1930 the petitioner prepared a drawing of his apparatus (Exhibit "R") which substantially represents Exhibit "G". Exhibit "G" was placed on the Milson's Point Railway line and worked there. It was bolted to the railway line at the joint of two rails. Oil was ejected to on the side of the rail by the vibratory energy or oscillation of the rail caused by the passing of trains along the track. It is not disputed that the apparatus Exhibit "G" would not work at mid-rail or at any other position on the rail other than at a joint. But the petitioner insists that his apparatus would work at any position on the rail if suitable mechanical clearances were arranged and if the spring itself were lengthened and its position inverted so as to tune in to the natural frequency of the vibrations in the rail. It is enough to say that the petitioner has not satisfied me that his view is correct. It seems to me, as the witness Reynolds, a Consulting Engineer, said, that a spring could not be designed to make the petitioner's apparatus function satisfactorily at mid-rail. "The inertia of the cylinder is such that it would not follow the frequency of the rail and the amplitude of the movement is so small that the cylinder .... would .... stay in one position."

Again the petitioner claims that his apparatus would work with a lubricant of high viscosity such as grease. He asserts that it did so with a"graphite curd" and he gave me a rough demonstration of the use of grease in his apparatus. But I cannot think that the apparatus would work satisfactorily with a lubricant of high viscosity such as grease

It might be forced through the orifices of the apparatus, but that it would be ejected on the side of the rail so as to accomplish the object of the petitioner appears to me improbable. In my judgment the witness Reynolds was right when he said the petitioner's apparatus would only work with a fluid lubricant and not with a lubricant of high viscosity. I understood him to mean work effectively and for the purpose for which the apparatus was designed. The idea of using the oscillations of the rails on a railway track induced by the passing of trains over the rails as a means of generating energy in an apparatus for the purposes of ejecting oil and so lubricating the rails and the wheel flanges of railway vehicles was new and was I think the petitioner's idea.

He also designed a novel apparatus for so lubricating the rail, but it would only work effectively at the rail ends and with a fluid lubricant. Unfortunately for the petitioner the Railway Department was not satisfied with the safety of fluid oil lubrication. Oil got on the top of the rails and on to the brake blocks which created a dangerous condition causing the wheels of railway vehicles to skid or slip and trains to get out of control. The petitioner did not pursue the application he made in 1930 for Letters Patent for he was satisfied that the Railway Department would not use it and that it would be useless to him. When he applied again in 1934 for Letters Patent he was met with the Letters Patent No.13454 of 1933 granted to Butcher and Jupe which he now seeks to revoke, and it is the invention claimed in these Letters Patent which must now be considered.

Butcher was a Divisional Engineer in the Railway Department and Jupe was in charge of the Railway Workshops at Lidcombe. Butcher had devoted his attention to the design of oil lubricators for rails and Jupe joined him about the year 1932 in his efforts in that direction. Butcher saw the petitioner's apparatus Exhibit "G" attached to the rail at Milson's Point and knew that it was actuated by the oscillation of the rails caused by the passing of trains along the railway track. But I am satisfied that he never saw the internal arrangement of the parts. But in August 1930 he saw the petitioner's drawing Exhibit "R" and understood from it the mechanism of the petitioner's apparatus Exhibit "G" and how it was actuated. Jupe saw Exhibit "G" on the rails at Lidcombe about the year 1930 but I am satisfied that he never supervised its construction nor saw the internal arrangements of the parts, though as he says it was

"clearly indicated to me that the rolling stock was striking it down and that each knock of the wheel would deflect the rail downwards and at that moment the oil squirted out. It went into the air and the air pressure of the train coming along broadcasted it all over the track"
Neither Butcher nor Jupe saw the petitioner's Provisional Specification of 1930. It was never opened for inspection in the Patents Office.

Towards the end of 1932 Butcher and Jupe had satisfied themselves, I think, that a fluid oil lubricant was unsatisfactory. Butcher conceived the idea that a cylinder with a weighted piston balanced against a lubricant of high viscosity grease could be effectively agitated by the passing of the trains along the railway and the piston thus worked down so that grease would be delivered on to the rail. After some experiments the apparatus described in the Complete Specification and the invention the subject of the Letters Patent granted to them was designed and constructed. It proved successful and could be worked at any position on the rail, and with some immaterial alterations is now in use on the Railways of New South Wales and apparently elsewhere as well.

The apparatus may be described as a rail and wheel flange lubricator comprising a cylinder or container for holding the lubricant or grease, a weighted piston or plunger within the container for forcing the lubricant towards the delivery mouth, a delivery mouth of the container so arranged as to discharge the lubricant near the wheel flange side of the rail and an attachment so arranged as to transmit the vibration or oscillation of the rail to the container.

In my judgment this apparatus is essentially different in form and in function from the petitioner's apparatus, namely Exhibit "G" and that shown in the drawing Exhibit "R". Thus as the witness Reynolds says the petitioner's apparatus is a pump - a displacement pump. The lubricant is ejected dynamically from a port or ports and passes through a certain distance in the air to impinge on the flange side of the wheel. Whereas Butcher and Jupe's apparatus is not a pump: it operates by virtue of the potential energy of the plunger above the lubricant and the lubricant is static and is retained right up to the flange side of the rail head and is held there to be wiped off by the action of the wheel flange as it passes.

Again it is said that the petitioner's apparatus only functions with a downward deflection of the rail and not by the vibration or shaking of

the rail caused by the movement of vehicles over the railway track. It is true I think that the petitioner's apparatus will only function effectively with a downward deflection of the rail whilst Butcher and Jupe's will function not only in the case of a downward deflection of the rail but also in the case of a vibratory or shaking movement in the rail. But after all vibration is merely an oscillatory movement of the rail and the fact that the petitioner's apparatus requires in fact a stronger oscillation caused by a downward thrust rather than that caused by the vibration of the rail would not I think so alter the functions of the competing apparatus as to constitute them separate and independent inventions.

Again it is said that the petitioner's apparatus will not work with a lubricant of high viscosity and that I think is true. But that confirms the view that the competing apparatus differ in construction and that Butcher and Jupe's apparatus involved some further ingenuity.

In my judgment therefore the petitioner is not the actual inventor of the apparatus designed and constructed by Butcher and Jupe, nor have they obtained Letters Patent for that apparatus in fraud of his rights. It follows in my judgment that the claims 3 to 15/inclusive in their Complete Specifications are not open to objection on the grounds taken by the petitioner.

This leaves the first and second claims for consideration. These are claims for a method. But is the method on the proper construction of these claims defined and restricted by the apparatus described in the Specification? The only method described in the Specification is that effected by the specified means or apparatus and normally the claim should be construed as referring to that method unless the claim makes it clear that the patentee is claiming something larger or different. The main object of the claiming clause is to restrict and not to extend the monopoly:

Claim 2 clearly refers to a method effected by the specified apparatus because it claims a method in which a weighted plunger resting on the lubricant within the container is adapted to be vibrated by the vibration of the rail. Claim 1 is more difficult and is so generally stated that it may be wanting in subject matter. But that objection is not taken in the petition and I need not consider it. But I think Claim 1,restricted as it is to a method of supplying a lubricant of high viscosity indicates that the method is set forth in the Specification and that the means or apparatus required for effecting it is that described in the Specification.

Cf. Gammons v. Battersby 21.R.P.C. at page 332 and British Motor etc. Ltd. v. Friswell 18 R.P.C at pages 505-6. So construed these claims are not open to the objection that the petitioner was the actual inventor of the inventions claimed in Claims 1 and 2 or that the Letters Patent in respect of these claims were obtained in fraud of his rights.

The petition is dismissed with costs, including the costs of the shorthand writer.