PATENTS ACT 1977

0/176/93

IN THE MATTER OF an application by
British Railways Board for the revocation
of Patent No 2115462 in the name of
Franz Plasser Bahnbaumaschinen
Industriegesellschaft m b H:

DECISION

Application 8205776 was filed on 26 February 1982 claiming a priority date of 9 February 1982 and naming as inventors Johann Hansmann, a mechanical engineer and then head of the patent department of Franz Plasser Bahnbaumaschinen Industriegesellschaft m b h (Plasser), and Frederick Fawcett, a retired former employee of the British Railways Board. The patent, No GB2115462, was granted in September 1985.

The British Railways Board (BR) filed the application for revocation on 14 August 1990 and asserted in the accompanying statement that the invention was "not new or involves no inventive step" and that "the specification of the patent does not disclose the invention clearly enough and completely enough for it to be performed by a person skilled in the art."

Plasser filed a counterstatement on 28 January 1991 denying all allegations but offering unconditional amendment to claim 1.

BR filed a supplementary statement on 21 May 1991 maintaining the same objections against the amended claim 1, and adding that the amendments would (a) result in the specification disclosing matter which extends beyond that disclosed in the application for the patent as filed and (b) extend the protection conferred by the patent. They also contended the amendments should not be allowed in view of the time which has elapsed since grant of the patent.

Plasser, in a supplementary counterstatement filed on 10 July 1991, deny all the allegations and contend the amendments are essentially merely by way of clarification. In a further

supplementary counterstatement filed 29 September 1992 they make a conditional offer to amend claim 1.

BR, in a second supplementary statement filed 7 October 1992, maintain all previous objections against the conditionally amended claim, and say the Comptroller's discretion should not be exercised to permit the amendment.

Following the normal periods for filing evidence, a hearing was appointed for 17 June 1993 but Plasser indicated in a letter from their agent dated 7 June 1993 that they would not be attending the hearing. I inspected the papers and formed the provisional view that the patent should be revoked. Both parties were informed of this in an official letter dated 10 June 1993 which also stated:

> "In view of this, the office has decided to abandon the hearing, on the basis that it will be reappointed:
>
> > (a) if on a closer perusal of the papers the hearing officer considers that his provisional view might be wrong;or
> >
> > (b) if either party so requests before 17 June."

Neither party requested reappointment of the hearing and this decision is based on the papers already on file.

The invention concerns a method of railway track levelling using a machine which travels along the track and has means which measures the track level "in the vicinity of" the sleeper to be underfilled, compares this with the prescribed level, gauges the quantity of ballast needed to raise it to the prescribed level and places that measured quantity beneath the sleeper by pneumatically blowing it through tubes inserted into the ballast. It has for its stated object:

"…..to provide a method ….. which guarantees rapid and complete placement of the particular quantities of additional bedding material required for exactly restoring the track to its prescribed level….." (emphasis added).

Claim 1 as granted reads:

"A method of relevelling a railway track by lifting the track, pneumatically placing additional bedding material, such as ballast, chippings or the like, below the raised sleepers and subsequently lowering the track by means of a travelling track relevelling machine, characterised in that the level of the track is measured in the vicinity of the sleeper to be underfilled, the difference between the measured values representing the actual level and the prescribed level is formed, the track is then raised to beyond the prescribed level and a quantity of bedding material, gauged according to the difference between the measured actual/prescribed level values, is placed beneath the sleeper at its intersection with the associated rail."

Claim 1, incorporating both the unconditional amendments proposed in the counterstatement, and (underlined) the conditional amendments offered in the supplementary counterstatement, are as follows:

"A method of relevelling a railway track by means of a travelling track relevelling machine, comprising: causing the track relevelling machine to travel in a single direction along the track and performing the following steps, measuring the actual track level in the vicinity of an individual sleeper to be underfilled in the course of the said travel by means of a measuring system provided on the machine and thereby determining the difference between the measured actual track level in the vicinity of the said sleeper and a prescribed track level and also in the course of said travel raising the track to a level above the said prescribed level, thereby forming a void under the said sleeper, determining a quantity of bedding material corresponding to the difference between the actual and prescribed track levels at the said sleeper,

pneumatically injecting the determined quantity of bedding material from the machine into the said void beneath the sleeper at its intersection with the associated rail, lowering the track onto the injected bedding material and repeating the aforesaid steps at further sleepers in the course of said travel."

The main effect of the unconditional amendments is to make it explicit that the measuring system is provided on the machine and the measurement on the track is carried out "in the course of" the machine's travel. The conditional amendments have the further effect of explicitly restricting the invention to a single-pass method.

I am satisfied that the specification in suit describes a railway track levelling machine which in a single pass along the track measures the track level at individual sleepers, raises the sleeper concerned and injects a measured quantity of ballast under it, the quantity being proportionate to the height by which the sleeper is below the desired height, as measured by the measuring system on the machine, and then allows the sleeper to fall back on the ballast. The machine optionally carries an attachment for consolidating the track immediately after this operation. This supports the claims as granted, the amended claims filed in January 1991 with the counterstatement and the further amended claims filed in September 1992 with the supplementary counterstatement. It follows that I reject BR's submission that single pass operation was not disclosed in the specification as filed.

My view is that single pass operation is implicit in the claims as granted, and it is this that distinguishes them from the prior art. The amendments are in my view unnecessary for the purpose of distinguishing the invention from the prior art, though they are unobjectionable in that they make single pass operation explicit. It follows that I reject the objection based on lack of novelty.

Much of BR's evidence is directed to showing that the single pass operation in the patent in suit will not work as described and stresses the problems with adequately measuring the track profile in a single pass operation. It also shows that they did not describe a single pass machine until 1991, nine years later than the patent in suit. These considerations satisfy me

that it would not have been obvious to the skilled worker in 1982 to devise a single pass stone blowing method and I find the objection based on lack of inventive step also fails.

The central issue however is whether the specification discloses the invention clearly enough and completely enough for it to be performed by a person skilled in the art. BR's objection, supported by several expert witnesses, is that the track measuring system that is described would not operate satisfactorily.

The system relies on track level detectors at the front and rear of the machine, that is, one on the uncorrected track at the front, and one on the corrected track at the rear. BR's case is that the measuring system is one that is conventionally used in tamping machines, and fails to take account of the fact that whereas a tamping machine sets the track to the desired level, so that the rear measuring point is reliable, a stone blowing system requires the track to be consolidated before it is at or near the prescribed level. BR's expert witnesses, Mr Johnson, Mr Bradshaw and Mr Chrismer say there is little correlation between the height of the track immediately after the levelling operation and its height after consolidation by traffic, so that the rear level detector is thoroughly unreliable. There is evidence that the optional consolidating equipment produces half the necessary consolidation, but the expert evidence on BR's side is that the rear level detector is for practical purposes unreliable.

In addition it is said that the level detector at the sleeper being operated on will not detect any void below the sleeper because the track is not loaded at that point. In contrast, the front and rear level detectors are described as being close to the front and rear axles of the machine, so that in practice the track will drop into any void at that point because of the weight of the machine. Further errors are said to be introduced by the rail's stiffness which, when a preceding sleeper is raised and underfilled, will raise the track at the sleeper being operated on so giving a false reading of its pre-treatment level. Two of BR's witnesses go so far as to say that the machine would leave the track in a worse state than it found it.

Dr Riessberger, for Plasser, dismisses these objections, and endeavours to show that the factors that are mentioned are not large enough to have a serious effect on the accuracy of the machine and could be overcome by modifications to the method disclosed which would

have suggested themselves on the basis of what was already known in the art at the time of making the invention. This must however be a matter to be resolved primarily by reference to expert evidence. Plasser have been asked to produce Dr Riessberger for cross-examination, and cannot do so. It follows that I must give greater weight to BR's experts' opinions, and since I find them credible, I accept that as a practical matter the specification does not give sufficient information to enable the skilled person to measure the track satisfactorily.

One possible amendment to claim 1 would be to restrict the method to wherein the machine incorporates a track consolidator. On the evidence this would go half way towards meeting one of the objections to the measuring system, but the evidence is that that would still be unsatisfactory.

In summary I find that the specification of the patent does not disclose the invention clearly enough and completely enough for it to be performed by a person skilled in the art. The application therefore succeeds and I hereby revoke the patent.

BR have incurred expense in preparing their evidence and preparing for a hearing, even though this was abandoned. I therefore award the applicants British Railways Board £750 as a contribution to their costs and direct that this sum be paid to them by the proprietors Franz Plasser Bahnbaumaschinen Industriegesellschaft m b H.

The period in which any appeal must be lodged is six weeks from the date of this decision.

Dated this 5th day of July 1993

PATENT OFFICE

W J LYON
Superintending Examiner, acting for the Comptroller

THE PATENT OFFICE