Neutral Citation Number: [2007] IEHC 409

**THE HIGH COURT**

**[1999 No. 4190 P]**

**BETWEEN**

**THOMAS WRIGHT AND WILLIAM WRIGHT**

**PLAINTIFFS**

**AND**
**AIB FINANCE LEASING LIMITED AND GEARY'S GARAGE LIMITED**

**DEFENDANTS**

**AND**
**JOHN DEERE LIMITED**

**THIRD PARTY**

**Judgment delivered by Ms. Justice Irvine on the 5th day of December 2007**

1. Mr. Denis Scollard was born on the 23rd November, 1972 and was injured in the course of his employment with the plaintiffs, Thomas Wright and William Wright, on the 24th June, 1995.

2. The plaintiffs are agricultural contractors and in the month of June of 1995 were involved in collecting silage for various farmers in County Limerick. At that time Mr. Scollard had been employed by the plaintiffs for approximately four years. In the course of his employment Mr. Scollard was regularly asked to clear blockages which occurred in the plaintiff's harvester. It was in the course of clearing one such blockage that Mr. Scollard received devastating injuries to his left hand.

3. The harvester at the heart of the within dispute is one which was manufactured by John Deere Limited and bears Model number 6810. In 1994 the plaintiffs decided to trade in their existing John Deere harvester for this more powerful model which was supplied to them by Geary's Garage Limited the second named defendant, and financed by way of a leasing agreement entered into as between the plaintiffs and the first named defendant, Allied Irish Bank Financing Lease Limited. The harvester the subject matter of the controversy was manufactured in 1993 and imported by the second named defendant into Ireland for supply to the plaintiffs for use in their agricultural contracting business. The plaintiffs took possession of the harvester in May 1994. It is accepted by all parties that a substantial manual running to in excess of 400 pages was delivered to the plaintiffs with the harvester and that stapled into the manual was a one page summary sheet containing sixteen points prepared by the second named defendant to assist their purchaser in dealing with the new harvester. Point No. 14 of that sheet advised the purchaser not to work on the machine while the engine was running or if someone was in the cab.

**Mr. Scollard's claim**

4. Having sustained his injury, Mr. Scollard instituted proceedings against his employers, the plaintiffs, under record No. 1995 No. 8526 P. In that action Mr. Scollard claimed that he was asked to undertake a dangerous task i.e. that of clearing a blockage within a harvester and contended that his employers were neglectful of his safety. Mr. Scollard alleged that he was given no training or supervision. He further asserted that the equipment supplied to him for the purposes of his work was defective and dangerous.

5. Mr. Scollard's employers, the plaintiffs in this action, settled his claim for a sum of €476,152 together with costs in the sum of €68,349 which were paid respectively to Mr. Scollard and his solicitors on 10th June, 1998 and 21st April, 1999.

6. The plaintiffs in this action now seek contribution and indemnity in respect of the aforementioned sums together with their own costs of defending Mr. Scollard's action namely €51,541 paid to their solicitors on 30th June, 1998 together with Courts Act Interest.

7. In these contribution proceedings the plaintiffs maintain that it was an express or in the alternative an implied term of their agreement for the purchase of this harvester that the same would be of merchantable quality, fit for the purposes for which it was required and safe for use by their employees without risk of injury or damage.

8. By order of the court dated 20th December, 1999 John Deere Limited, the manufacturer of the combine harvester, was joined by the defendants as a third party to these proceedings. The claim made by the defendants against John Deere Limited is that if they were in breach of contract in supplying a harvester to the plaintiff which was defective or unsafe for use by the plaintiff's employees that they must be entitled to a complete indemnity from the manufacturer.

9. It is not necessary to embark upon any real consideration of the pleadings between the parties in these contribution/indemnity proceedings as the same are uncontroversial and effectively take the form of the standard pleas that might be expected in a claim of this nature.

10. The within proceedings were heard before this court over a period of eight days and the proceedings between the defendants and the third party were dealt with at the time of the plaintiffs action as against the defendants. Following the conclusion of the evidence each of the parties furnished to the court submissions in writing which have been considered by the court in coming to the conclusions set out below.

**The John Deere Harvester Model 6810**

11. Prior to embarking upon the areas of contest in this action, and principally because of the technical nature of the evidence the court has decided that it would be of some assistance to try to set out in text some of the uncontested facts in relation to the harvester and the process which was being undertaken by Mr. Scollard at the time he sustained his injuries. I propose to do this by reference to the material produced to the court and which has been retained by the court as the exhibits in the action.

12. The first exhibit produced to the court in the course of Mr. Wright's evidence was a coloured technical diagram showing the major features of the harvester which caused Mr. Scollard's injury. Starting at the left hand side of the diagram the first pair of inwardly rotating feed rollers are those designed to pick up the silage from the ground. The grass is thereafter fed into a pair of smaller rollers prior to entering a large cutter drum. The cutter drum shreds the grass which is then propelled from that drum into a further drum known as the blower drum via a short chute. The kernel processor shown on the diagram is not a feature on the harvester at issue in this claim.

13. The purpose of the blower drum is to drive the grass up and out of the harvester through a lengthy chute from whence the grass is ultimately discharged onto a trailer which is driven alongside the harvester.

14. The blower box has four paddles which, when the engine is running and the clutch is engaged, rotate 30 times per second. The

grass is then propelled into the lengthy exit chute by reason of the fact that there is a deflector plate at the point where the blower box meets the chute and this deflector plate diverts the grass into the chute rather than permitting it to travel around the blower box. In other words, on the diagram presented, and using the dial of the clock for assistance, the grass enters the blower box at approximately 7.00 o'clock and leaves it at approximately 1.00 o'clock.

15. It was accepted by all parties that harvesters of this nature do experience blockages. In this particular case Mr. Wright marked the areas where such blockages were most likely to take place on the first exhibit. These blockages can be seen just prior to where the cut grass enters the blower box and immediately beyond the blower box at the start of the exit chute. Red Xs on the diagram reflect the positions referred to by Mr. Wright in his evidence. The method used for clearing such blockages was described by Mr. Wright and was not disputed by any of the parties.

16. Leaving aside the appropriate steps to be taken in relation to the engine prior to clearing any blockages the court received evidence as to how the respective blockages would be cleared. Blockages of grass in the chute entering into the blower box would be cleared by the operative opening up the hatch of the blower box itself. The blower and its opening mechanism are shown best in photograph No. 4 in the photographs attached to the report of Mr. Foy, Consulting Engineer. The hatch in its open position is shown in photographs 5, 6 and 7. The same blower box is also seen in the photographs of Mr. O' Keefe's, Consulting Engineer, which photographs were taken shortly after the accident and which are marked with the letters B and C. The four paddles which rotate within the blower box are noted to have a somewhat studded appearance and the paddles themselves are clearly depicted upon the diagram. Each paddle measures 475mm in length is 65mm in depth and is approximately 10mm wide. The paddles are secured to the rotor by use of 6 bolts for each paddle and hence the studded appearance of the paddles. These are clearly seen in photographs 6 and 7 of the Mr. Foy's photos.

17. Additional information in relation to the blower box which is of relevance to this action is the fact that the blower box, when the engine is running and the clutch engaged revolves at a speed of 1,800rpm with each paddle rotating 30 times per second. Very late in the day and in the course of the evidence given by the second last witness in this trial evidence emerged on cross examination that the front rollers could be engaged in a reverse motion and that if this occurred that the blower box would be operating at 540rpm. Various tests were conducted by Mr. Foy to establish the run down time of the paddles when power was withdrawn. Depending upon whether or not the engine was switched off or alternatively was left idling with the clutch disengaged the times recorded were no greater than 39 seconds. Mr. O'Keeffe, on the other hand found that the time lag between the isolation of the blower drum and the coming to rest of the shaft which drives the rotor blower was some 62 seconds.

18. Blockages above the blower were cleared by accessing two inspection chambers. The first of these inspection chambers can be seen in the photographs of Mr. Foy and in particular in photograph No. 4. The panel immediately above the blower can be removed and the grass taken out. The same access panel, referred to as the front service cover, can be seen in schematic representations of the blower and chute at pp. 6 and 7 of Mr. Foy's report. Access to this hatch is difficult with the operator having to climb in over the feed rollers and under the cab to the area immediately under the John Deere logo as shown in photograph No. 1 attached to Mr. Foy's report, the view of the operator once he climbs into this area is better shown in photographs 3 and 4 of the same set of photographs. The panel which is some distance above the blower can then be removed and the grass taken out.

19. The inspection hatch most regularly used for the purposes of clearing a blockage in the chute beyond the blower box is that which is located on the same portion of the chute which contains the front service cover hatch shown on pp. 5 and 6 of Mr. Foy's report. However, this access panel, described as the rear access hatch, is on the opposite side of the chute and its location is depicted in the schematic diagram at p. 5 of Mr. Foy's report. As can be seen from the diagram the same is positioned much lower down than the front inspection cover and is significantly closer to the blower box.

20. To gain access to the rear inspection hatch the operative must bend down and crawl between the two side wheels of the harvester. The operative will ultimately reach the position shown in photograph No. 7 in Mr. O'Neill's photographs and photograph No. 4 in Mr. O'Keeffe's photographs. Photograph 8 attached to Mr. Foy's report shows a view of the rear inspection hatch from the underside of the vehicle. The access chamber is seen in the latter photograph slightly to the left of centre at the top of the photograph. Further views are depicted at photos 9, 10, 11, 12, and 13 of Mr. Foy's report. It was whilst placing his hand into this aperture for the purposes of removing a grass blockage that Mr. Scollard sustained his injuries.

21. The plate which acts as a shield to the rear access hatch was, as a matter of high probability, held in place with two removable knobs. These are depicted in a rather out of focus photographs bearing letters D and E taken by Mr. O' Keefe shortly after the accident. These removable knobs are also shown at paragraph 90-5 and 90-6 of the manufacturer's manual. Similar knobs were found by Mr. O'Keeffe on the harvester examined by him for the purpose of giving evidence in this case in April 1997 at which time the original harvester could not be located. It is pertinent to note that whilst much of the engineering given to the court related, not to the actual harvester purchased by the plaintiffs but to the inspection of an equivalent model harvester the actual harvester purchased by the Wright's from Geary's Garage was located prior to trial and was available for inspection by all parties.

22. The manoeuvre to be performed to clear out the chute commences with the removal of the two knobs either side of the inspection plate. The operator is then faced with the aperture shown in photograph No. 12 of Mr. Foy's report. The operator must then reach with his hand into the aperture and the fingers of this hand once even partially inserted can go directly into the blower box which contains the rotor and attached paddles. The location of the inspection hatch vis-à-vis the blowing mechanism is shown in the schematic layout at p. 5 of Mr. Foy's report. The manoeuvre concerned is best demonstrated in the photographs taken by Mr. O' Keefe very shortly after the plaintiff's accident and in particular photographs B and C which show the introduction by Mr. O'Keeffe of a ruler into the blower box through the rear inspection hatch. These photographs show a ruler being introduced between the paddles and the deflector plate. Mr. O'Keeffe's finger can also be seen in photograph C.

23. It is important for the court to note for the record that Mr. O'Keeffe, the consulting engineer acting on behalf of the plaintiffs in this action, brought to court a scaled down model of the blower box containing its four paddles and the deflector plate which forces the grass particles into the chute. Some of the component parts of this model are shown in Mr. O'Keeffe's photographs of 1997. The nature and rotation of the paddles was demonstrated to the court. Further, the model included the wall of the adjacent exit chute containing the inspection hatch into which Mr. Scollard had placed his hand so that the court could see the proximity of the inspection hatch to the blower box, its paddles and deflector plate.

**The incident as outlined by Mr. Scollard**

24. Mr. Scollard gave evidence that on the day of his accident the harvester had clogged on several occasions, maybe as often as seven to ten times. At roughly 5.00 pm a further blockage occurred causing him to leave his tractor as it was his job to clear the blockage. Mr. Scollard advised the court that he got off the tractor and trailer which he had been driving alongside the harvester and proceeded over towards the harvester at which stage he saw Mr. Tom Wright on the steps outside of the cab. Mr. Scollard confirmed

that it would have taken him a couple of minutes to get from his tractor to the point underneath the harvester. Mr. Scollard stated that it would have taken him some moments to realise that there was a blockage. Thereafter, he would have brought his tractor to a standstill and then would have walked over and climbed under the harvester prior to endeavouring to deal with the blockage which operation was commenced by the removal of the knobs retaining the inspection plate.

25. Mr. Scollard stated that the hatch was at eye level and that when he had removed the panel he was faced with a solid wall of grass. He then commenced pulling out the grass which was causing the blockage with his hands. Mr. Scollard stated that the grass was tightly packed and was difficult to disengage. He told the court that he was pulling away with both hands and had been working in this fashion for approximately four to five minutes when he felt something come down and squash his left hand which he then pulled out of the chute. All of the fingers were badly crushed but were intact.

26. Mr. Scollard stated that he believed the engine was running i.e. idling at the time he approached the harvester to clear the blockage. He also gave evidence to the court that he was satisfied that the blower box was switched off, i.e. that the clutch was not engaged. He stated that he knew the different sounds of the engine and the blower and said that he would have known if the clutch at any time had been engaged or reengaged. Mr. Scollard advised that there would have been a big booming noise if the clutch had been reengaged and the blower box restarted whilst he was under the harvester.

27. Mr. Wright's account of events was that when the blockage occurred he left the engine idling and disengaged the clutch. Thereafter he got down from the harvester while Mr. Scollard went to free the blockage. Mr. Wright gave evidence that he spoke to two farmers who had entered the field including a Mr. McCarthy who later gave evidence to the court. These were farmers who were awaiting Mr. Wright's attendance at their farm for the purposes of harvesting their silage. Mr. Wright was talking to these two farmers when Mr. Scollard emerged from under the harvester with his injured hand. Mr. Wright was adamant that he did not get back into the harvester for the purposes of reengaging the clutch and neither did he carry out the manoeuvres necessary to reengage the engine for the purposes of putting the front rollers into reverse mode.

28. The only other witness to give evidence referable to the accident was Mr. McCarthy who was one of the two farmers who had come into the field looking for Mr. Wright. He gave evidence that he was standing with Mr. Wright adjacent to the harvester at the time Mr. Scollard emerged from under the harvester with his injured hand.

**The onus of proof.**
29. The onus of proof in this action is on the plaintiff to prove that the defendants to the action are the parties either wholly or partly responsible for the injuries sustained by the plaintiff. The burden which rests upon the plaintiff is to establish, on the balance of probabilities, that the plaintiffs injuries result from the breach of contract on the part of the defendants in the supply of them of the John Deere Harvester. It is for the defendants whilst defending their position to the plaintiffs claim to establish what if any liability rests with the third party should the court decide that the plaintiff's injuries do arise by reason of their beach of contract. The third party is correct in its written submissions that there is no onus upon either the defendants or the third party to rebut their responsibility for the plaintiffs injures.

**Causation**
30. This is a case where there has been a great deal of conflict between the parties as to how as a matter of probability, Mr. Scollard sustained his injuries. The technical evidence was complicated and the injury itself occurred whilst the plaintiffs hand was in an unsighted chamber. The court has had to assess each and every witness as to fact for the purposes of deciding upon whether it is safe to ascribe accuracy and/or truthfulness to their testimony and has had to evaluate the weight to be attached to the varying expert engineering evidence proffered in the case. Unusually, this is a case where the causation is also dependant to a significant extent upon an analysis of the precise nature of the plaintiff's injuries.

31. What is certain, having regard to the nature of Mr. Scollard's injuries, is that the paddles within the blower box moved, for whatever reason, so as to cause a series of injuries to both surfaces of Mr. Scollard's hand. The plaintiffs and the defendants contended that the high probability was that Mr. Scollard's hand became trapped between the moving paddles and the deflector plate at a point in time when Mr. Scollard managed to at least partially release the blockage within the chute thus causing the paddles to move notwithstanding the fact that the clutch was not engaged.

32. The third party, whilst under no obligation to seek to establish how Mr. Scollard sustained his injuries, cross examined the relevant witnesses called by the plaintiffs and defendants for the purpose of seeking to prove that the injury occurred when the engine was re-engaged such action causing Mr. Scollard's hand to be thrust back by force out of the blower box whilst being knocked against various internal components of the machine. There has never been any suggestion by the parties to these proceedings that Mr. Scollard was in any way negligent in the manner in which he approached his task of clearing the blockage in the harvester. Hence, the four major issues that fall to be determined in this case are:

A. What was the probable cause of the movement of the paddles in the blower box that led to Mr. Scollard's injuries?

B. Was the potential for an injury of such a nature foreseeable to the parties?

C. Was the harvester of merchantable quality and fit for the purpose for which it had been purchased by the plaintiff?

D. If the harvester was not of merchantable quality or if the plaintiff's injuries were foreseeable who should bear responsibility for the damages and costs occasioned by all of the parties in these and Mr. Scollard's earlier proceedings?

**Operation of harvester**
33. The paddles in the blower box are operated from a switch in the cab of the harvester. This switch operates both the paddles in the blower box and the cutters in the cutting box and both of these components are driven by the belt and pulley mechanism depicted in fig. 3 attached to Mr. Foy's report. When the clutch is engaged a number of belt tensioners are brought into contact with the drive belt. If the clutch is disengaged the tensioners are retracted from the belt and no power is transmitted to the cutter or blower box. An operator wishing to disengage the blower box and/or cutter box can do so in two ways namely by turning the engine off, which will automatically remove the power source thus bringing the moving parts to a stop or alternatively the engine can be left idling and the clutch can be disengaged to bring about the same result. However, it is common case that the manufacturers, John Deere Limited, in the safety section of their extensive manual and in particular at Section 05-9 advise "always disengage main clutch, shut off engine and remove key before servicing or unclogging machine." Similarly, at 05-8 the manufacturer advises "always disengage main clutch, shut off engine and remove key before removing any guards or shields." There are however, other safety

directions contained in the same manual which are much less clear as to the level of care to be adopted by operators. At 05-6 the manufacturer advises the operator to "never open cutterhead or fan housing doors while cutterhead is turning." This type of advice could be deemed to be consistent with advice to the operator that injury cannot occur if the engine is running once the clutch is disengaged and the paddles in the blower box and/or cutting box have come to standstill.

34. Whilst there is no onus upon the third party to establish how Mr. Scollard came to sustain his injuries in circumstances where the third party has sought to impress upon the court the likelihood of Mr. Scollard's injuries resulting from the clutch remaining engaged or being re-engaged it is necessary for the court to determine as a matter of fact whether or not Mr. Wright left the clutch engaged at the time Mr. Scollard was sent to clear the blockage or alternatively whether having initially disengaged the clutch, he re-engaged the clutch either in forward or reverse mode so as to restart the movement of the paddles within the blower box.

35. The court has had the benefit of seeing all of the witnesses who might have been available to assist the court on this particular issue. The court has noted the evidence given by Mr. Wright, Mr. Scollard and Mr. McCarthy. The court was impressed by Mr. Wright's evidence for a number of reasons. Firstly, Mr. Wright accepted at all times that he left the engine running at the time when Mr. Scollard was undertaking the clearance of the blockage. This evidence was clearly against his own interest and the court noted favourably Mr. Wright's willingness to accept that he did not comply with the manufacturer's instructions contained in the manual and that neither did he act in conformity with the advices set out at point 14 of the instruction sheet provided by Geary Garage. The court also noted that on several occasions Mr. Wright, when challenged by counsel, stated that he could not recollect precisely what occurred and he seemed to take seriously his obligations to only recall what he felt he could actually remember. For example, Mr. Wright admitted that he lost sight of Mr. Scollard and his whereabouts when he was talking to the other farmers in the field and that he did not see him again until he presented with his injuries. Further, Mr. Wright was willing to forthrightly admit that he had given Mr. Scollard no training in relation to this particular harvester. The court also noted the evidence of Mr. O'Keeffe, Consulting Engineer, to the effect that the account of Mr. Scollard's accident as given to the court by Mr. Wright was exactly the same as that which was given to him in the course of his meeting with Mr. Wright on 28th April, 1997.

36. Mr. Wright's evidence that he disengaged the clutch was corroborated by Mr. Scollard's own evidence. Mr. Scollard advised the court that the noise from the blower box was extremely loud and that he would certainly have known if its paddles were rotating as he went to clear a blockage under the harvester. Mr. Scollard was certain that the blower box was not operating when he got under the harvester to clear the blockage. Further, the fact that Mr. Wright and a number of farmers were having a conversation beside the harvester, whilst Mr. Scollard was attempting to clear the blockage is once again consistent with the clutch having been disengaged by Mr. Wright prior to Mr. Scollard proceeding to clear the blockage. The court further heard evidence from Mr. O'Keeffe that the sound of the blower box whilst engaged was akin to the sound that would come from an aeroplane jet. Mr. Foy described the sound of the rotating paddles as "unmistakeable" and it appears to the court that having regard to the fact that Mr. Scollard regularly cleared blockages that it would be difficult for the court to conclude that he would have commenced clearing a blockage whilst knowing that the paddles were rotating and in the presence of such an ongoing oppressive sound.

37. As to the possibility of the blower box paddles remaining running at the time Mr. Scollard's sustained his injuries the court finds as a fact that the paddles initially jammed and were stationary consequent upon the blockage at the time Mr. Scollard reached into the rear inspection hatch. The court further concludes that if Mr. Wright had failed to disengage the clutch that the blockage would have led to the engine cutting out of its own motion very shortly after the blockage as advised by Mr. Wright in his evidence. The court accepts Mr. Wright's evidence that if the clutch had been left engaged at the time the harvester became blocked that a loud screeching and vibrating sound would have been audible, such sound evidencing damage to the belt mechanism which would then have been under significant pressure. It is difficult to believe that Mr. Wright would have operated his harvester in a manner destined to cause damage to such a valuable piece of equipment.

38. For all of the aforementioned reasons the court concludes that the paddles were stopped, the clutch disengaged and the engine idling at the time Mr. Scollard commenced clearing the blockage.

39. The court further accepts Mr. Wright's evidence that he did not, having dismounted from the harvester, re-engage the clutch so as to cause the paddles in the blower box to rotate. Mr. Scollard himself confirmed that he did not hear the clutch being re-engaged or the paddles recommencing their movement. Further, Mr. Wright gave evidence that he did not get back up on the harvester which he would have to have done had he re-engaged the clutch. He stated the at all times he was standing with the farmers on the ground when Mr. Scollard emerged from behind the harvester with his injured hand. This evidence was corroborated by Mr. McCarthy.

40. As to whether or not Mr. Wright may have gone back to the harvester to place the mechanism in reverse, the court further accepts Mr. Wright's account that he did not embark upon this process. The engineering evidence led, and which was not contested, was that engaging the front rollers into reverse mode would serve no useful purpose when faced with a major blockage. Further, Mr. McCarthy confirmed that Mr. Wright did not carry out such actions and the court accepts Mr. Wright's evidence in this respect. The court carefully assessed the witnesses called in relation to this issue, and finds as a fact that at the time Mr. Scollard sustained his injuries that Mr. Wright had not re-engaged the clutch so as to place the front rollers into reverse mode, an action which would have engaged the rotation of the paddles in the blower box.

41. As to whether or not Mr. Wright simply went back to the cab and reengaged the clutch simplicitor, the court also accepts Mr. Wright's evidence that he did not reengage the clutch in this manner. Once again, this assertion on Mr. Wright's part was supported by the independent testimony of Mr. McCarthy. Further, in reaching it conclusions on the issue as to whether or not the clutch was engaged at the time Mr. Scollard sustained his injuries the court is supported by the independent expert testimony of Mr. O'Shaughnessy, consultant plastic surgeon, who gave evidence to the court confirming that the fingers on Mr. Scollard's left hand were not severed by the paddles in the blower box but were crushed at three different levels. The court noted that Mr. O'Shaughnessy's evidence was in complete conformity with the written report prepared by him dated 4th September, 1995 referable to his treatment of Mr. Scollard wherein he described the plaintiff's injuries as follows:

> "1. Severe crush injury at three different levels involving the index middle ring and little fingers, the levels of injury corresponded approximately to that of the metacarpal phalangeal joints (MCP joints) (knuckle joints), the proximal phalanges (bones), and the distal inter phalangeal joints (DIP joints) (most distal joints). All fingers were completely de-vascularised (no blood supply) and had associated disruption of most of the nerves, tendons and bones.
>
> 2. There was a double level crush injury involving the left thumb. The levels corresponded approximately to that of the MCP joint and to the inter phalangeal joint. Again the thumb was completely de-vascularsied with associated injury to the nerves, tendons and bones."

42. In concluding therefore that the paddles were not operating under power at the time Mr. Scollard sustained his injuries the court

is not solely relying upon the evidence of Mr. Wright, Mr Scollard and Mr. McCarthy, but relies heavily upon the expert opinions of Mr. Foy, Mr. O'Sullivan, Mr. O'Keeffe and Mr. O'Shaughnessy to the effect that the high probability was that had the paddles been rotating under power that the plaintiffs fingers and arm would probably have been amputated due to the speed and method of rotation of the rotor paddles.

**What was the cause of the plaintiff's injury?**

43. The court has considered all of the engineering evidence proffered to the court by the parties to these proceedings. A significant number of expert reports, photographs and statutory regulations were opened to the court. In addition, the entirety of the manufacturer's manual was also made available as were various documents pertaining to health and safety issues both in Ireland, the United Kingdom and Germany.

44. One of the many difficulties that faced the court in this case was that nobody, not even Mr. Scollard could state precisely how the injury occurred. Mr. Scollard could see nothing from where he was standing at the time of his accident, he having placed his hand through an inspection hatch twelve inches tall by seven inches wide where his hands entry beyond the hatch was met by a wall of grass and where the lower side of the hatch was only two inches above the top of the blower paddles. Mr. Scollard had no visibility as to what it was that caused the injury to his hand.

45. The engineering evidence advanced by Mr. Tony O'Keeffe, Consulting Engineer, on behalf of the plaintiffs, was to the effect that Mr. Scollard's hand must have become trapped when the blower box paddles rotated in the course of endeavouring to release the blockage. He advised the court, that this could happen otherwise than with the clutch engaged. Mr. O'Keeffe expressed himself qualified to express the professional opinion that the injury occurred to Mr. Scollard because of the unsafe design of the harvester. His criticism of the design of the harvester, whilst not confined to the following matters, concentrated upon:

> (a) the small size of the inspection chamber,
>
> (b) the perilous location of the inspection chamber vis-à-vis the adjacent paddles in the blower box,
>
> (c) the lack of a locking mechanism to ensure that the paddles did not voluntarily move whilst a blockage was being cleared and
>
> (d) a failure on the part of the manufacturer to provide a tool for releasing blockages so as to avoid the operators hand entering between the blower paddles.

46. Mr. O'Sullivan and Mr. Foy, between them, furnished evidence to the court that the plaintiff's injuries could have arisen in a number of ways namely:

> (a) a movement of the blower box blades following upon clearance of the grass blockage brought about as a result of retained tension in the harvester's components, these components having been stopped suddenly whilst under power,
>
> (b) that the paddles, the blockage having been removed, moved due to the release of retained tension in the drive belt,
>
> (c) some physical force, other than retained tension within the components or the drive belt, perhaps as a result of movement of a weight of grass falling upon a paddle, clearance of grass etc. which when individually or combined would have generated the physical effort required to rotate the paddles. In other words a combination of actions by Mr. Scollard whilst moving grass which may have resulted in the paddles rotating.
>
> (d) a combination of two or more of the causes set out at (a) – (c) above.

47. In the course of the evidence significant information was furnished to the court regarding the operation of each of the components of this particular harvester. It was explained to the court that all of the rotating components were operated by the drive belt and that movement of any one of these components of necessity resulted in the drive belt being moved thereby causing all other component parts to move. The court also received clear evidence that it was physically possible to move the component parts of this harvester whilst the engine was either switched off or idling with the clutch disengaged. With the engine idling a mere force of 5 to 6kgs applied tangentially to the rotor paddles brought about movement. Similar movement, according to Mr. Foy, was possible with the engine off. It appears to the court that, in the absence of any impediment, one operative deciding to physically move a paddle at the inspection chamber identified at photographs B and C of Mr. O'Keeffe's earlier photographs could end up amputating the fingers of another operative who might be unsighted to him in the position in which Mr. Scollard was in, at the time of his accident. Similarly, a movement of any other of the component parts attached to the drive belt would consequently cause a rotation of the paddles in the blower box causing the potential for significant injury to occur to an individual such as Mr. Scollard who could be under the vehicle, unsighted with his arm in through an inspection plate a mere two inches from the paddles.

48. Impressive evidence was given to the court, by Mr. O'Neill, consulting engineer, acting on behalf of the third party John Deere Limited. The third party produced evidence which the court has carefully considered including evidence to the effect that:

> (a) 9,000 harvesters with a similar blowing box mechanism had been manufactured and that to the knowledge of John Deere no equivalent injury to that occasioned to Mr. Scollard had occurred as a result of the design.
>
> (b) That the John Deere harvester concerned was certified by the National Federation of Agricultural Employment Accident and Insurance Funds, in Germany, such certification being valid until December, 1996.
>
> (c) That retained tension in the component parts of agricultural machinery was not considered to be a source of agricultural accident injury.
>
> (d) That this particular harvester continued to be used by the plaintiffs and subsequent owners without complaint and without modification after this particular accident.
>
> (e) Investigations into the operation of the harvester concerned by the second named defendant in the aftermath of this accident did not establish any defect in the operation of the harvester.
>
> (f) That a component known as Kevlar, having a tensile strength of some five times that of steel and which was threaded through the drive belt, made it impossible to suggest that retained tension could have remain in the belt following upon

the stoppage of the components due the grass blockage.

(g) That there was no scientific basis to suggest that the components themselves having been stopped whilst the harvester was under power, could retain tension that could be released so as to cause the paddles to rotate on the blockage being cleared.

(h) That grass had no tensile strength and consequently in the opinion of their engineer the development of retained tension in the blower box consequent upon a blockage of grass therein was impossible.

49. The third party contended that the high probability was that Mr. Scollard sustained his injuries whilst attempting to clear the blockage from the chute of the harvester at a time when the plaintiff had left the engine running with the clutch engaged. Alternatively the third party proffered evidence supporting the possibility that Mr. Wright, having initially disengaged the clutch, either re-engaged the same so as to put the harvester into forward motion or alternatively operated the controls so as to engage the front rollers in a reverse fashion, either action being one which would lead to the recommencement of the paddles in the blower box.

50. Notwithstanding the strength of the evidence of the third party on the issues referred to above the court finds the most persuasive evidence as to how the injury occurred and why it occurred to be the evidence off Mr. O'Keeffe, Consulting Engineer, through his production of the model of the offending blower box and adjacent rear inspection hatch. In the face of his evidence nothing that has been proffered by the third party has convinced the court that the design of the inspection hatch on this John Deere model was one which was safe. Any operative accessing this inspection hatch had no view of the area into which he was placing his hand. The operative was obliged to place his hand into an aperture two inches from paddles which were capable of trapping and amputating his fingers. The blades and paddles can be moved, albeit in the absence of a blockage with 5 to 6kgs of force. Leaving aside how Mr. Scollard sustained his injuries in this case it is clear that a worker clearing a blockage at this inspection hatch can be injured by a fellow workmate interfering with the harvester by moving any of the components attached to the drive belt at a number of other locations any such movement bring about the consequential turning of the paddles in the blower box. Alternatively, the owner or driver of a harvester might simply climb into the cab and turn it on and engage the clutch without being aware of the presence of an individual such as Mr. Scollard clearing a blockage at the rear inspection hatch and thus bring about a potential limb amputation with immediate effect.

51. The court does not believe that it is necessary to determine as an absolute certainty precisely how the injury to the plaintiffs hand occurred. The court can determine that the injury happened to Mr. Scollard whilst the engine was idling, and the clutch disengaged when he was attempting to clear the blockage at or adjacent to the paddles in the blower box. The court believes that having regard to the fact that the plaintiff was unsighted at the time of his injury that it is sufficient to conclude that these injuries fell within the range of injuries that ought to have been anticipated and foreseen by John Deere Limited, potentially resulting from the design of the harvester which has placed this inspection hatch far too close to the blower box and provided no mechanism for ensuring that access could not be obtained to the blades at a time when they had any potential to move.

52. Whilst the court accepts the evidence of Mr. O'Neill to the effect that the presence of Kevlar in the drive belt ruled out the probability of any significant retained tension in such belt the court does not accept the third party's contention that Mr. Foy and Mr. O'Sullivan are not adequately qualified to furnish to the court their expert opinion that the component parts of this harvester were capable of restoring retained tension on being stopped suddenly under power at the time of a blockage. The fact that Mr. Foy and Mr. O'Sullivan have not themselves investigated accidents known to have been caused by retained tension in agricultural machinery does not in any way, in this courts opinion, negate their evidence as to how such retained tension arises. The fact that neither Mr. Foy nor Mr. O'Sullivan produced any scientific documentation in support of their opinion and knowledge again does not diminish in any way their testimony. They have ample professional qualifications to assert that harvesters such as the one as the subject of this claim, if stopped under power can store retained tension in its components. Whilst the third party concluded that it would have been possible for two engineers in the course of one day to test the harvesters components for retained tension following upon a blockage and criticised Mr. O'Sullivan and Mr. Foy for not having done so, the court notes that the third party itself refrained from carrying out any such testing on the harvester which was available at the time of the trial of the action and which might have somewhat strengthened their case.

53. The court concludes as a fact that the high probability is that a combination of retained tension in the blower box combined with the release of grass and the potential movement of a significant weight of grass within the chute was the likely cause of the paddles crushing Mr. Scollard's hand. The court heard evidence that 40kgs of grass was introduced into the harvester every second and that at a time a blockage might occur that the harvester could stop with some 200 – 250kgs of grass within its components approximately one third would have been trapped in the exit chute. Even if the court is incorrect in its conclusion as to how precisely Mr. Scollard sustained his injuries the court believes that the third party should have foreseen the potential for disaster for workers accessing a rear inspection hatch so close to a blowing box the location of which, this court concludes, was a danger zone within the meaning of Regulation 18 of S.I. 44 of 1993.

54. The court concludes that it should have been foreseeable to John Deere Limited that in placing an inspection hatch as close as it did to the blower box that it was exposing any potential worker to a risk of injury from those paddles. There was no purposeful reason for the hatch being placed so close to the blower box as its purpose was to allow for the clearance of grass within the chute rather than within the blower box. If it was the manufacturers belief that it was necessary to have the chute as close as it was to the blower box, and this is clearly not so having regard to the fact that the design has been altered in subsequent models, a locking mechanism was necessary so as to allow the operative who accessed this chute ensure that nobody or nothing could physically cause the paddles to move when they were accessing the blower box. The court accepts the engineering evidence proffered by the defendants that either a manual locking device which could be engaged by the operative wishing to work on the chute or a mechanical/electrical device which would ensure that the blower box could not be operated whilst the access panel was removed would have obviated such a danger to worker such as Mr. Scollard. The court accepts the evidence of Mr. Foy that such devices exist on other agricultural machinery. The court further concludes that there was nothing to preclude the harvester being designed in such a fashion so as to ensure that the inspection hatch was sufficiently far removed from the blower box so as to make it impossible for a workers fingers inadvertently to reach the paddles where they might become trapped in the event of any unanticipated movement thereof. However, if there was, the onus was on the manufacturer to provide a system whereby the paddles could not be moved if the guard to the inspection hatch was removed.

55. In terms of liability between the parties therefore the court concludes:

(a) that the vehicle sold to the Wrights was not fit for purpose within the meaning of the Sale of Goods and Supply of Services Act 1980 and that therefore the defendants were in breach of contract to the plaintiff. Any agricultural machinery such as this harvester must be capable of being used safely by an employee in the course of their employment

without the risk of injury to comply with the Sale of Goods and Supply of Services Act 1980. The court therefore concludes that there was a breach of contract on the part of the defendants upon which the plaintiff's are entitled to rely. The court does not accept the contention that merely because the harvester the subject matter of this claim has continued to be used, initially by the plaintiff and thereafter by other purchasers without complaint necessarily means that the vehicle was fit for the purpose for which it was purchased. One of the major obligations on any supplier of machinery is to ensure that any such machinery supplied is safe and will not cause injury to those who are likely to be working same.

(b) It is undoubtedly the case that the plaintiffs were technically negligent as employers in that they failed to give their operative any instructions as to how to carry out his work and further were negligent in failing to turn off the engine and take out the key prior to asking Mr. Scollard to work on the blockage. However, these breaches, having regard to the courts findings, had no causative effect on the occurrence of Mr. Scollard's injuries which the court concludes might just as easily have occurred had the engine been switched off and the key removed. Further, the Wrights were not advised that the paddles could ever move with the clutch disengaged. Hence they were not in a position to advise their employees of any potential risk of injury to them whilst they were working with their hands through the inspection hatch concerned to clear blockages. There was nothing in the manual regarding how blockages should be cleared or any instructions or warning to the owner of the vehicle that the paddles might be moved in the circumstances outlined by Mr. Foy earlier in this judgment. For these reasons the plaintiff is entitled to succeed in full as against the defendant.

(c) Insofar as the defendants are concerned they are entitled to a complete indemnity as against the third party on the basis that the accident subject matter of these proceedings, in the opinion of the court, arose from a defective design of the inspection chamber in this particular case, the inspection chamber being too close to the blower box in circumstances where no mechanism was provided to ensure that the paddles could not be moved whilst the inspection hatch concerned was open. The manufacturer was obliged to ensure that an appropriate locking mechanism was part of the design feature of this harvester or alternatively ought to have provided an alternative location for the inspection chamber which was sufficiently far removed from the blower box so as to protect a worker from accidental injury whilst clearing a blockage in the chute.