A STUDY IN PRODUCTS LIABILITIES

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ABSTRACT

Product liability cases are prevalent among the countless number of court cases tried in the United States each year. In the majority of them, the plaintiff claims that the defendant was, in some way, negligent, causing an injury to the plaintiff. Some ways a defendant may be negligent are through design, manufacture, or upkeep. A plaintiff must be certain, when bringing a suit, that he is not in any way responsible for his own injury. Product liability is something that every business needs to be aware of, so that it can take steps to ensure that it will never be involved in one of these cases.

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LITERARY REVIEW OF AN ENGINEER IN THE COURTROOM BY WILLIAM J. LUX

Introduction

When one considers the many job settings of the average engineer, the courtroom does not typically come to mind. Although usually not involved in the legal process, it can often prove helpful for an engineer to be educated about proper legal etiquette and to know what to expect when confronted with a structured legal situation. In this way engineers, like any professional, may benefit through an understanding of the often complex and confusing intricacies of law and the courtroom process, thereby allowing them to perform more effectively in matters of litigation. More importantly, such a focus would serve by allowing an individual to avoid those potentially dangerous circumstances that often lead to legal proceedings.

Through a basic introduction to the modern legal system, today's engineer may be better poised to identify the specific causes associated with a number of varied legal situations. By developing a specific, scientific understanding of exactly what accidents are and how they are caused, one may learn about how these specifics affect the litigation process, including a detailed realization of the impact that an engineer in the courtroom may have on a given trial. By knowing what functions an engineer will be expected to perform throughout the three main stages of the courtroom process; discovery, deposition and trial; one will undoubtedly gain an insight of how to best conduct themselves in each situation so as to most effectively assist an attorney.

By the very nature of their jobs, the litigation that engineers are most commonly involved with revolves around machinery malfunction. For any such malfunction to be

legally deemed an accident, it must meet a specific set of legal criteria. Said criteria dictates that circumstances surrounding the event must first be of an unexpected nature and secondly, must have directly caused a loss or injury resulting in economic repercussions. Some examples of these types of accidents are motor-vehicle collisions, airplane crashes, and many instances of mechanical failure.

Disputes over these sorts of accidents are the main reason why many engineers are called to the courtroom. In a more utopian society, there would be no disagreements over the cause of an accident and the negligent party would simply take responsibility. Sadly however, this is obviously an idealistic notion. Subsequently, through a myriad of different viewpoints and legal positions, we are often forced into litigation in order to mediate these disagreements.

To limit disagreements and to avoid unnecessary litigation, the expected production requirements should always be met. These requirements are meant to insure that the product meets the expectations of both the buyer and user, with attention being paid to a number of specifics regarding any product. First and foremost, the product must not be unreasonably dangerous nor can production result in a product that is in any way defective. Additionally, the information supplied with the product must specifically warn of any hidden or unexpected dangers associated with the ownership or proper use of the product. Therefore, the product must be manufactured according to exacting specifications, and must not in any way be misrepresented, with proper instructions for safe use and operation accompanying the product at sale.

Also it should be stated that, in order to protect against legal action, the conditions of use must always be followed. These conditions call for the proper use of the product

according to instructions and warnings, and specifically guard the manufacturer against damages resulting from the negligent misuse of the product. Also, they often state that the owner is solely responsible for any maintenance, repairs and general upkeep required by the product for continued safe operation.

Litigation

Litigation is technically defined as the process of "filing suit, naming claims, and eventually arriving at a settlement or going to trial before a judge." Therefore on the most basic level, litigation can be defined as a legally binding method for two parties of opposing opinions to reach a conclusion. When litigation involves product liability or a defective component, engineers are often called in for their expertise or technical knowledge. Often an engineer can resolve the issue by explaining the specifications or appropriate uses for the product. Sometimes though, such a simple explanation simply will not suffice. In this case an engineer must become more involved in the litigation process. Because this process is highly involved and often quite foreign to the engineer, specific suggestions will now be introduced to provide some helpful technical insight.

Avoiding Litigation

The simplest and most foolproof method of handling litigation is to avoid it entirely. This can be done in a number of ways. One technique that the engineer can use is to design his product such a matter as to avoid any possible accidents entirely. Obviously this is not always feasible, and so realistically the engineer should design in the safest manner possible, attempting to protect the operator or other persons from an

accident in the event that one should occur. The most mechanical tactic for incorporating this idea into a design requires making sure that any probable accidents would be as "safe" as possible; most commonly entailing that the engineer design some type of warning system to alert the individual of an impending problem.

Even with careful attention being paid to every detail, it would be unrealistic to assume that any design, no matter how scrupulous the engineer, could ever have every potential hazard accounted for. With knowledge that nothing infallible, the engineer must strive to meet the objectives for the safest design and create a well-balanced product.

In order for a product to be considered balanced, it must first satisfy a number of conditions. First, the invention must satisfy the specifications for the design; that is, the machine must fit all size, power, and other quantifiable specifications required by the consumer. A balanced product must also meet any performance requirements. I.E., it must do the proper amount and type of work for which it is intended. Other important considerations for a balanced product are the serviceability, durability, and although not a technical consideration, cost often surfaces as a very important aspect. If the cost of production and maintenance are too high, the machine is over designed and unobtainable for the end user. Last but certainly not least is the general reliability and overall safety of the machine. These are the most important concerns in the design of the machine, at least insomuch as the hope is to avoid unnecessary litigation.

As long as the engineer meets all specification and objective targets, and designs the product to meet safety requirements, there is little room for any accidents resulting in courtroom proceedings to afflict the product.

A few ways to add extra assurance to the safety of a product is to run both "Failure Mode - and - Effect" analysis and "Accident, Probability, Effect and Severity" studies when ascertaining the success level of a particular design. When performing these tests, the engineer should look for ways in which the design is faulty, including scrutinizing any areas in which the strength in material of the prototype can be improved. Also the environment in which failure occurs, and signs that it is in any way deteriorating should be carefully recorded and analyzed, noting any possible room for improvements.

Upon the results of the testing and analysis, the engineer will want to audit his design, and to write down the life span and reliability predictions of the machine. It may also be advantageous to bring the new design to a product safety review team.

In summation, to avoid litigation an engineer should specifically consider safety factors and let them guide the product design. Careful consideration should be given to who the end user of the product is, and what environment they will be working in. The design should be well documented; a list of the reasons and decisions for accepting the final product design should be included with the final drawings and drafts. Instructions should also accompany the design to indicate the correct usage and maintenance of the product. In addition, hazard warnings should be recorded on the machine, on the drawings and in the instructions. Lastly, it is beneficial for the engineer to provide a way for the end user to give any additional feedback that may be needed regarding the product.

When Litigation Cannot be Avoided

Sometimes, even after appropriately addressing all of the steps to ensure that a design is safe and reliable, a product receives bad feedback and controversy may arise.

These disputes usually result from those hidden or unavoidable hazards that simply could not be eliminated, and still other conflicts tend to arise over misuse of the product by the consumer. When disputes result in legal action over a design, the technical expert involved must obtain a whole new vocabulary. It is the language of litigation, and it must be understood well by the engineer in the courtroom. The following are the most common, yet important words that an engineer entering into the legal process must know:

Adverse witness: a witness that has been summoned by the attorney for the other party.

Answer: the response to a question.

Appearance: the involvement of an individual in litigation.

Arbitration: a panel of individuals who attempt to help two parties reach a non-binding decision.

Balance of evidence: the amount of believable evidence of one party versus another.

Bar: 1. The place where legal activity commences.
2. A grouping of attorneys in a certain place of legal activity.
3. To deter or stop.

Bench: the position of authority where the judge is seated in the courtroom.

Best evidence: the "acceptability and admissibility" of the facts in the trial.

Breach: the failure to execute.

Care: accepted manner in which to conduct oneself in the courtroom.

Charge: an indictment or instruction by the judge.

Civil law: the division of law concerning the relationships of individuals, not corporations.

Complaint: the formal demand for a court resolution.

Due process: the formal and correct steps in a court proceeding.

Duty: the responsibility that an individual accepts in every court case.

Evidence: the correct information involved in the case.

Exhibit: the evidence submitted in court.

Expert witness: an individual who has been asked to testify or appear at court because of their background, education, or special training, that can give the jury greater understanding of the situation.

Facts: information on which both parties agree to.

Forensic: "belonging to the law"

Forseeability: to anticipate a future situation.

Good faith: the requirement to perform at the highest level and the best effort possible at a job.

Hearsay: the acknowledgment of truthful evidence of a witness.

Hidden defects: a concealed problem that cannot be detected by common inspection.

Hostile witness: a witness who has become enraged at the questioner.

Hypothetical question: an inquiry about a possible situation, with stated conditions.

Impeach: to prove that evidence proposed to the court by a witness is false.

Inadmissible: information that will not be allowed in trial.

Irrelevant: extraneous or impertinent information.

Judicial discretion: decision of the court upon procedures not described by law.

Jury trial: a court proceeding involving a panel of common peers who deliberate and reach a formal decision on the case.

Lay witness: an individual with no specialized background in the material pertaining to the case but is somehow otherwise involved.

Liability: the accountability to provide reimbursement to the other party.

Litigation: the total process of filing a lawsuit, pursuing the discovery and other pre trial actions, the trial, appeals and other post- trial activities.

Mediation: when a third party aides in the resolution of an issue before it goes to trial.

Mistrial: when the trial has been concluded without a resolution.

Negligence: the failure to exert the proper and prudent amount of care in a situation.

Oath: a promise in honor to the truthfulness of words.

Preponderance of the evidence: possessing more weight of evidence.

Proximate cause: reason attributed to initiating the accident.

Prudent person: individual who was wise and used "common sense."

Puffery: the overstatement used to sell a product.

Punitive damages: when the plaintiff receives more than he is due in order to greatly punish the defendant.

Question of fact: disputes concerning the facts in a case.

Question of law: a contention pertaining to litigation and the process of court proceedings.

Reasonable care: the responsibility and pride that a well - trained person displays in his tasks.

Red herring: a diversion used to interrupt court proceedings.

Side bar: a private meeting between the judge and the attorneys.

Summons: a request notifying an individual that a complaint has been filed against him.

Testimony: an individual answers to interrogatories made by attorneys.

Tort: a legal wrong committed against a person.

Warning: an alert notifying an operator that a machine is performing a potentially dangerous task.

Weight of the evidence: the volume of the evidence, its importance to litigation, its truthfulness and its pertinence.

Work product: the labors that the lawyer has applied to developing his case and presentation of evidence.

Along with the legal vocabulary, it is also beneficial to the engineer to learn some of the likely techniques that lawyers will use to present their case.

In the courtroom, a lawyer will do everything to make the evidence appear as if it was in his favor. He will often not ask the engineer for all of the information that he knows, as it may prove to be detrimental to his argument. In practice, an attorney will only ask those questions to which they already know the answers, and in support of their argument. A good lawyer will relay a short and simple story for the jury; he will make his point using answers and information given and will let the court make the decisions.

It should also be noted that these techniques are not only used inside of the courtroom, but in all litigation. This is so the testimony during interrogatories or depositions can be spoken about in court, and will be in favor of the questioning attorney.

With a greater understanding of litigation in general, an engineer's role in the legal system can be further examined.

How Engineers Help in Litigation

Although engineers are usually quite foreign to the courtroom, the knowledge they posses can be of great importance to the outcome of a trial.

Technical Knowledge

Engineers are used in litigation because they posses information that is not readily known to the jury. This knowledge of common practices and standards in engineering design may often be quite relevant to a specific case. With this in mind, it becomes clear

that the engineer and his information could potentially prove integral to the outcome of the trial.

An engineer's knowledge of common standards and practices can determine if a machine has malfunctioned due to a faulty design. If the engineer considers the design to be faulty, the plaintiff's attorney may claim to have evidence of neglect. If the design was found to be in accordance with common practices, procedures, and standards, the defense will use this information to show that the machine was safe and that it did not directly cause the accident.

For either party in a lawsuit, any technical information supplied by an engineer will be considered evidence, and as such can greatly affect the outcome of the case.

Accident Reconstruction

Another instance of technical information leading to the development of evidence is through accident reconstruction. In essence, the proposal is "to take all of the available information and to use it to determine the most likely scenario of the incident." By modeling the accident an engineer can state the most probable scenarios in which an incident would occur. When determining the most probable scenarios no evidence or testimony can be ignored.

The first step in accident reconstruction is to determine the starting point, or most common situations under which the product will be used. The conditions: weather, placement of people, and type of machine are all potentially important and relevant to the creation of a good scenario. With the starting point known, witness testimony can then be analyzed in an attempt further formulate possible scenarios. Physical evidence such as

measurements, photos, tire tracks and marks on the ground, must all be factored into the reconstruction of the accident. The final positions of the machine, parts, people, and debris are also relevant to creating an informed hypothesis regarding the incidents surrounding the accident. Finally, with the addition of physics, practical mechanics and engineering science, the possible scenarios are all formulated.

There are of course many problems that may arise when devising reconstruction scenarios. For instance, information given by witnesses will often contradict evidence received by other means. Also, not all pertinent evidence will be available. Some evidence could be missing or could have been destroyed during the accident. To further complicate the reconstruction, testimony from witnesses may change while the formulation of scenarios is occurring. Furthermore, some information will appear to be completely incorrect, and often times evidence will not fit into any logical forms.

It is at this point that the reconstructionist will have to look to science for logical information to fill in the blanks. As new information is found, scenarios will be eliminated. Of the remaining scenarios, some will seem more probable than others, and only a very small number of both possible and probable scenarios can coexist. It is even likely the reconstruction may arrive at a single possible scenario.

There are a number of rules that the most probable scenario will satisfy if it is to be considered believable. It must be in sync with all laws of physics and engineering. Also, the most probable scenario must be in agreement with a great deal of the information. A good reconstruction should coincide with a time line and should not be biased. It also must be able to be understood by the common person. Perhaps most importantly, a good reconstruction will stand up against disputes proposed by an attorney.

How the Engineer Can Help the Attorney

Engineers are not only used to support a model of how an accident happened or for their precise knowledge; they aid the attorney in many other instances. General engineering statistics about products, systems and parts can be incredibly helpful to the attorney. Also, engineers can often explain why a design was made in the way it was, how a product is developed, in what manner it was evaluated and what tests it went through.

When an engineer works on a particular product he can tell you the reasons for its success or failure, explaining its general uses as well as what the literature on the product really means. He can translate that information into common language, explain complex problems, analyze the product and make demonstrations and evidence.

Engineers familiar with the legal system may also evaluate probabilities and risks involved with a certain product and provide reports and materials to explain their professional opinions.

From a purely legal perspective, engineers can assist in examinations, interviews and depositions. Engineers can also testify in both trial and depositions. Also, the engineer may suggest questions to ask other witnesses. This is beneficial because an engineer can listen and react both as a technical person and as a layman as testimony is heard.

As an individual concerned with technology and design, an engineer can be an extreme asset to a legal team. However in order to be truly useful, the internal

knowledge that the engineer may offer must then be turned into useful evidence by a process known as examination through inquiry.

Assistance Through Questioning

It is helpful for engineers to pose questions for lay witnesses, but what happens when the engineer is questioned about his own involvement with the accident? Although the engineer has a wealth of knowledge, it is almost certain that everything will not be revealed. Lawyers want specific information, and it is problematic when the engineer speaks in greater detail than may be necessary.

Replying to the questions posed by lawyers is an art that any witness must perfect. Sometimes the way in which the question is answered is more important than the response itself. In this manner any attitude projected by the engineer can sway the jury to either accept his testimony as believable, or conversely reject its implications entirely.

Before analyzing how questions should be answered, the actual questions to be asked should be studied.

Information Needed from the Engineer

It has been discussed previously that engineering information can be absolutely vital in some lawsuits. From the beginning of the litigation process, if the accident is assumed to involve a malfunctioning piece of machinery, designers and other engineering staff working on that particular invention will be questioned.

Engineers can expect to answer a wide type and range of questions. These questions can be either specific or general, formal or casual, simple or complex. Open,

narrative questions may be asked, as well as closed questions, where a "yes" or "no" answer will suffice. Leading questions, or those questions that suggest an answer or attempt to limit or control the response, will often appear in the courtroom. Rhetorical questions will also be used in court to reiterate a statement or in an attempt to induce a specific reaction regarding any expert witnesses within the jury.

How and where the interrogatories are asked is an outlined process that the engineer should be made aware of.

Stages of Questioning

The initial contact between the lawyer and the engineer will be in the discovery process. At this point, lawyers seek common information such as the drawings, as well as any testing reports and analyses done on the product, so that they themselves may better understand the case. This is also the stage during which the requests for production and request for admissions will occur. A request for admission is simply a statement of admittance made by an engineer stating that the company for whom he is employed designed and manufactured the machine involved in the case. A request for production is a request for engineering literature, and can include operator's manuals, parts books, service and technical manuals and reports. Other forms of discovering information include inspection, library, trade journals, competitors, and machine users.

The deposition is a more formal procedure of questioning, yet there is no courtroom involvement. This is where the attorney for the opponent will question the engineering witness under oath and before a court reporter. Any information given during a deposition can be referred to in a court of law. The reason for holding a

deposition is to establish facts and to determine the opinion of the engineering expert witness. A deposition is a good way to learn the plans or strategies of each attorney.

Following the deposition, if needed, is the trial questioning. The engineer will be answering questions for both his and the opposing attorney. The engineer's attorney will interrogate first, and the engineer will most likely be given the opportunity to state why he is relevant to the case and his professional opinion on the subject of the trial. Immediately following this, the attorney for the opposing party will cross-examine the engineer. He or she will try to find fault or discrepancy within the information stated, and will often use attitudes and emotions to get an undesirable and harmful reaction or answer out of the engineer, thereby making his testimony seem to hold less weight.

Rules to Answering Questions

There are a few simple rules in the questioning process that, if followed, will make it easy for the engineer to maintain his integrity and not be dissuaded from his opinion by high emotional levels.

In addition to the relevant information divulged in the courtroom, the attitude with which an answer is given could actually convince a jury and therefore is highly significant. The way in which it is spoken and the number of ideas that are linked in a single sentence can both potentially affect the way the response is construed. It is best to formulate an answer slowly, and to answer the question in a polite, professional manner. The engineer must not let the emotions of the courtroom catch him of guard. By following these unofficial rules the engineer will have a better general idea of how to respond to any question under a given set of circumstances.

Also, it is often beneficial in trial questioning to speak in layman's terms. This way the jury will have no problem understanding exactly what the engineer's opinion is. Engineers are considered experts in technical fields, but juries will often respond negatively if the witness comes off as a know-it-all.

To avoid argument with the opposing attorney, it is good practice to understand the question thoroughly before it is answered. Don't plainly accept a definition that is varied from an accepted or understood definition. Clear up misunderstood questions as quickly as possible. To avoid argument over non-important specifics, the engineer should give very specific ranges to his answers instead of using descriptive words such as 'big,' 'little,' or 'dull.'

Most importantly of all, professionalism must be maintained at all times. Never argue with a lawyer, even if they argue with you. Stay patient, as an overly excited reaction is almost always detrimental. It is in the best interest of your attorney and the overall case to be polite, and it is considered good taste to leave the courtroom when done testifying.

Conclusion

Engineers find themselves involved in litigation for a multitude of reasons. When dealing with questioning and other parts of the litigation process, there are a proper code of conduct and set of norms to which the engineer must conform. The rules are both simple and fundamental, requiring little additional effort but ultimately making all the difference on the road to a successful trial.

In summary, the engineer should use his common sense and best judgment. Common professionalism, politeness and respect should not be dependent on the situation, but rather a constant state throughout the course of the proceedings.

Also, always bear in mind that a technical witness is chosen on his basis of expertise. The engineer chosen is knowledgeable, and therefore should project that in his attitude. The way in which an expert carries himself will give his lawyer and the jury confidence in his testimony. Furthermore, if the information is explained well in lay terms, it will provide the client and attorney a good base of information to expand upon.

More often than not however, the engineer's fear does not reside in a lack of confidence in his or her knowledge, but in a general discomfort with their legal surroundings. Although the courtroom is a foreign area, it should not be frightening, if one simply follows the instructions given by the judge and gives specific and well formed answers to all questions posed by the lawyers.

In answering these questions, it is imperative that the golden rule of being an expert witness is followed. ALWAYS TELL THE TRUTH. The engineer should never, ever say what he does not believe himself, even if the truth is detrimental to his client's position.

With this preparation and advice, the engineer can do a proper and professional job, and be effective and helpful in litigation.

VIDEO REVIEW OF "ART OF ADVOCACY SKILLS IN ACTION" VIDEO SERIES, HOSTED BY JAMES W. JEANS

Introduction

The *Art of Advocacy Skills in Action* video series, hosted by James W. Jeans, gives an in depth look into the separate components of a trial. The videos are used to show the proper approach to each component. The videos examine a variety of elements, including the opening statement, direct examination, cross examination, and summation. The examples that are used in the series are actual cases presented by the actual lawyers. The cases are all product liability trials where the plaintiff suffered some type of loss as a result of the defendant's negligence. The series thoroughly explains each part of a trial and gives the viewer insight into how a product liability trial should be conducted.

Opening Statement

The first two videos in the series deal with the Opening Statement. The purpose of the opening statement is to introduce to the jurors the overall reason for the case that they are going to decide upon. The attorney does not go into specific details, but will establish the reasons his client is suing the defendant. The attorney will also try to incorporate himself into the jury, so the jurors feel as though he is part of them. Not long ago, lawyers did not take the opening statement seriously, and sometimes waived the right to even give one. If they did decide to give a statement, it was most often trite, apologetic, tentative, and unimaginative. After a Chicago study, however, it was shown that 80% of jurors appraised the case at the end of the opening statement the same way that they

appraised it at the end of the trial. This study proved that the lawyer must use the opening statement to his benefit. There are two cases that are presented in the first video, and there are two more in the second video. All four will be reviewed and compared to show some of the ways that an opening statement can be presented.

Leonard Decof gives the first opening statement in an Attractive Nuisance case from Providence, Rhode Island. An eight-year-old boy is suffocated when a pile of gravel collapses, and he is buried underneath. Decof tells the jury that they must try to understand the case from a child's point of view; they must know how a child thinks and acts. Decof's manner when approaching the jury is very soft spoken and intimate, which draws in the jurors.

Decof must then approach the topic of liability and the negligence of the defendant in the case. He talks about how the construction company and the owners of the land knew that these children were playing near the gravel pit. In fact, on this particular day, a bulldozer operator actually waved at the young boy and his friends. If either company had been responsible, then the children would have been told not to play on the property, and the landowner could have put up a fence to keep trespassers out. Decof also brings up some facts that the defense might use in their case. Facts that he says should not be held true, especially because one statement was made by one of the young boy's friends who thought that they had caused the avalanche, and he did not want to get into any trouble. He also wants to be sure that the jury does not believe the defense when he states that the boys were trespassers. Young boys cannot anticipate danger, and it will be shown that the angle at which the gravel was dug was an unsafe angle and that

it was just a matter of time before it collapsed. Unfortunately, it had to happen when there was a little boy in the nearby vicinity whose life was taken.

Decof does an excellent job of showing the jury that his client was simply acting as any child would act. The defendants in the case are the ones that are responsible for this horrific accident because they are adults and they knew about the conditions of the pit. The landowner and the construction workers are the liable parties in the case because they should have taken initiative by putting up a barrier between the pit and the next door plaza, or by telling the boys that they were not allowed to play in the area.

The second opening statement on this video is much more brief. Bill Colson gives it in a Child Pedestrian Knockdown case. The facts of the case are that a seven-year-old boy was crossing the street when he was struck by a cement truck. The boy sustained a major head injury, and now suffers from retrograde amnesia, which is why he will not recall anything that happened on the day of the incident. There are three major factors that Colson wants to establish to the jury; the ownership of the truck, the agency of the driver, and that there was no evasive action by the driver. If he is able to prove that the driver did not do anything to try and avoid the accident, then his case will be successful.

Colson is careful not to give any specific details about the case in his opening statement. He does, however, give the jury hints on how the boy's life has changed since the incident, and how difficult his life will be during the next seventy years, his life expectancy. Colson alludes to the testimony of the medical experts about the injuries that the boy sustained and also the treatment that he will have to undergo. After he proves that the negligence of the driver was the reason for the accident, Colson must then show the

jury the difference in the boy. This difference is what will help them decide on a proper settlement for the boy.

Now that the two cases in the first video have been reviewed, the third and fourth cases will be examined. Again, some of the background facts will be presented to help the viewer understand the reasons for each statement that the attorneys make. There is a specific purpose of each part of the opening statement, and it will be more thoroughly inspected in the next two cases.

The first case concerns a man, Al Duke, who was injured while riding a material hoist at a construction site. The attorney, Leonard Decof, is quick to show the jury that he is on their side. One of his first statements is "I will be asking the questions that I think you would want the answers to". When he says this, he makes the jury feel as though he is doing them a favor by getting all of the pertinent information. Decof also must establish his credibility to the jury so that they trust the information he is giving to them. He does this by stating "I promise I will never mislead you". This makes the jury comfortable with his character, and they trust him.

The second part of Decof's opening statement develops the character of the plaintiff before this incident occurred. He says that he was a caring, intelligent man, who thoroughly enjoyed his job. Later in the statement, after discussing the injuries sustained by the plaintiff, and his long hospital stays, Decof states that Duke can no longer work at his job, and had to take a job as a ticket taker at a movie theater. He is trying to show the jury that the plaintiff is simply a victim of negligence who is courageously trying to get his life back together. The attorney cannot anticipate the doctor's testimony, so he simply asks for "100% justice: nothing more, nothing less". Leonard Decof is showing the jury

that the plaintiff is not trying to be greedy; he simply wants what is appropriate for his client for the injuries he sustained in the accident. This is one method for presenting an opening statement.

The second case concerned an 11-year-old boy who was injured by a baseball-pitching machine that was left unattended in a park. The attorney, Bill Colson, presents a dispassionate opening statement. He does not want to show the jury emotion, he wants them to know that he is interested in giving them only the necessary facts. Colson first talks about the boy's experience in the sport of baseball. He tells the jury that the boy did not play little league, and that it wasn't baseball season. This testimonial is the first to introduce the jury to the negligence of those in charge of the park and its equipment. He talks about the position in which the machine was left, and then about how a slight touch of the machine set it off, and when the iron arm swung over, the points on it stuck into the young boy's head. The negligence of the park supervisors is not the only negligence he discusses. Colson goes on to talk about the manufacturer of the pitching machine and how the company knew it was dangerous before this incident occurred. He said that six years prior to the incident, the company entered an agreement stating that they would put safety guards on the machines they were presently manufacturing, and also on the ones that had already been sold. However, the company only partly followed through on that agreement; they went on to put guards on the machines presently being manufactured, but advertised the guards for sale ($45.00 each) for the machines that had already been sold. This new information also places blame on the machine manufacturer, which means that there is very little blame, if any, left to place on the boy.

The rest of Bill Colson's statement is similar to Decof's from the first example. He describes the boy before his incident; a happy kid, who got good grades in school and had a lot of friends. The attorney then talks about how courageous the boy was when this incident happened; how he didn't lose consciousness after the arm depressed in his skull. Colson then goes on to describe the victim after this incident. He tells the jury that the boy has a numb left side, how his IQ dropped severely, and how he finally had to drop out of school. The boy's life has completely changed because of this one incident. It is much harder for him to fit in with the children his age; he can no longer be normal. The two parts of Colson's opening statement try to prove the innocence of the 11-year-old boy and how his injury was caused by the negligence of two separate parties, the park supervisors and the pitching machine manufacturer.

The two different approaches to the opening statement, one somewhat emotional and the other somewhat dispassionate, succeed in getting their point across to the jury. They attempt to place the blame away from their client and onto the defendant. This is the purpose of an opening statement, and both attorneys have accomplished this goal.

Direct Examination

The next videotape in this series concerns direct examination. The attorney's job in direct examination is to know what information he wants to get from the witness, getting that information, and then concluding the examination. There is always a specific order in which the attorney goes about the examination because "we remember best that which we hear first, but remember longest that which we hear last", as stated by James W. Jeans.

An attorney is most likely to question an expert witness first, so the jury will remember the plaintiff's testimony the longest. In examining an expert witness, the attorney most often establishes the credentials of the witness first by discussing his educational background, including any publications he may have. The purpose of this is to make the jury believe that the witness' testimony is credible. Rule 705 permits the opinion of an expert witness before the preliminary groundwork of the case has been given. When the attorney is questioning the plaintiff about the specific incident, he is often more passive and more patient than with other witnesses. One of the two main purposes of this witness' testimony is to establish the difference between the 'before' incident condition and the 'after' incident condition of the witness. This difference is used to determine the plaintiff's losses later on in the trial. The other main purpose of the plaintiff's testimony is to make the jury believe that the defendant is the person liable for the accident, and that the witness was just an innocent victim. The attorney must be careful that the witness does not become too emotional, because the defense attorney may ask for a mistrial and the judge may grant it.

The use of exhibits is another way to get the attorney's point across. Some exhibits that an attorney may use are blackboards, photographs, doctor's reports, etc. The expert witness is also permitted to use a blackboard if it is necessary for him to explain any figures or calculations. Often though, an attorney or witness will use an easel instead because it can be saved and brought into the jury deliberation room. The most important factor when using an exhibit is that the jury must be able to see it, and they also must be able to hear whoever is explaining it. The usual method is to make a triangle between the witness, the attorney, and the jury, ensuring that the most important people can hear the

explanation. The most crucial aspect of using exhibits is the pace at which they are introduced. For this reason, the attorney's pre-trial procedure is very important. The attorney must place the exhibits so that they can be seen by all of the necessary people, but he does not want to take time to adjust these objects in the middle of his questioning. If he mistakenly does this, then the jury is likely to be distracted by the movement of the exhibit, instead of concentrating on the actual questioning.

Direct examination is crucial in the trial procedure. The attorney must be sure that he is able to convince the jury that the plaintiff was not at fault for the incident. He must also be certain that he has proven that the victim should receive the settlement that he is asking for. This settlement figure (wages lost, pain and suffering, etc.) can, in part, be shown by figures from an expert witness, but it also relies on the feelings on the jurors toward the plaintiff, to determine how much he should receive for the pain he has gone through because of the difference in his 'before' and 'after' conditions. It is not an easy task to be sure that the jury completely understands this difference, but the attorney has to be positive that he can get the appropriate settlement for his client.

Cross Examination

The cross examination of non-medical experts is the subject of the next two videos in this series. The purpose of a cross examination is to urge the defendant's witness to, in some way, agree with what the plaintiff's attorney is trying to prove. If an attorney is well prepared and organized, then the expert's testimony can be used to support the attorney's theory. In the first of the two videos, there are two separate cases, and these will be examined first.

The first case is a cross examination of a civil engineer in a premises liability case. The case concerns an older woman who tripped and fell over a step that was located on a private walkway. The jury will need to determine whether the owner of the property should have had some notice about the steps, or whether it was not his responsibility. The plaintiff's attorney, Henry Miller, first introduces the witness by asking him about his prior experience with the defense attorney. The witness states that he has worked for the attorney before, which means that the attorney was satisfied with his previous testimonies. Miller then familiarizes the jury with the fact that this particular expert witness has only had two weeks to become acquainted with this case. During these two weeks, the witness took notes about the incident, but incredulously he threw them away. Miller uses both of these details to establish the integrity of the expert: if the data that he collected was going to help the defendant, why was it thrown away? How reliable can he be? The jury must answer these questions.

Henry Miller also questions the witness about the safety codes that are used in design and construction. He claims that they are just a minimal requirement as a result of compromise. Instead of just doing the bare minimum to pass inspection, Miller suggests that the owner might have considered the general safety of the pedestrians. For about $10.00, the owner could have put a strip of color on the first stair, alerting the woman that they were there. The witness claims that this is not necessary under the building codes, and this causes the attorney to call if the "orphan step", because one step gets a change in color and three or more steps gets a handrail. It is clear that this particular witness is experienced, because when asked what the owner relied on when deciding if there should be any notice, he stated that he relied on standard engineering practice that a person can

see steps from a distance of eight to ten feet away; the attorney probably expected him to say nothing. This particular witness is not necessarily helping the plaintiff's case because he is proving that the owner simply abided by the regulations that were already established. He is, however, helping the plaintiff's case by proving how easy it would have been for this incident to be avoided, if the owner had only used his common sense. It is now up to the plaintiff's attorney to prove to the jury that common sense should outweigh these minimal regulations that have been established.

Incorporating the jury in the cross-examination is also important. The attorney should be looking and talking to them consistently. Miller acts as though he is benefiting the jury when he looks for affirmation from the witness and states "so that there is no dispute, and this jury doesn't have to spend an extra second thinking about it". This particular attorney is very good at controlling the cross-examination as well. He does the three most important things very well: 1. Controls the content of the questioning, 2. Controls the pace of the questioning, and 3. Creates a pattern of response for the witness. The attorney wants this responsive pattern to continue throughout the examination.

The second case in the cross-examination video concerns the questioning of an accident reconstruction expert in an automobile accident case. This attorney, Robert Conason, is very different than the attorney from the previous case. He is very calm, non-judgmental, and asks the witness open-ended questions. He begins his examination by asking the witness first about the fee that he is charging, and then about the amount of time he spent on the case before the trial. An attorney would not normally ask a witness a question that he did not know the answer to, but either way, it will probably go in the plaintiff's favor; if the attorney spent too few hours, then his testimony is somewhat

inadequate, and if he spent too many hours on the case, then his testimony might seem prejudice or bias. After Conason asks the witness a few more questions, it is determined that he sought very little information about the case: he did not even go to the accident scene, he only used the information that was given to him by the defense. Even this information was not properly looked over, because when asked how fast the driver said he was going at the time of the accident, the witness replied "25 miles per hour", however when asked to read the police report, it is revealed that the driver stated he was going 30 miles per hour. It does not take long for the attorney to establish that the witness' testimony is not based on a thoroughly investigated case by any means.

Bill Conason is careful not to simply place the blame on the witness' lack of motivation, but also on the defense. He confirms that the defense gave the witness very little information about the accident, and what was given to him was hardly enough for a conclusion to be drawn about who was actually negligent in this case. Conason uses phrases like "the lawyer didn't tell you" and "wouldn't you have liked to know that", to show the jury that the defense is also at fault for the inadequate testimony, and most likely for the accident as well.

Although the two attorneys have different approaches, they are both able to use the witness' testimony to their own benefits. One witness is used to prove the negligence of the defendant, and the other is used to show the negligence of the entire defense, which are both advantages for the plaintiff. The cases in this video can be used along with the two cases in the following video as good examples of how to conduct a cross-examination.

The attorney in the first case, Robert L. Habush, is cross-examining an agricultural design expert in a farm machinery case. The plaintiff is a worker who lost a hand in a farm machine. The witness is an expert who has testified for the defendant several dozen times. After establishing the credibility of the deposition signed by the witness, the next thing that Habush does is ask specific questions that were already asked during the deposition. He is looking for inconsistencies in the witness' testimony and it does not take long for him to find some. After asking the witness how often the farmer is at fault in these types of accidents, the witness comes up with a different answer than the ninety percent given in his deposition. To prove his point, Habush presents the witness with the deposition and has him read the answer that he had previously given. The attorney also gives the witness information that states how often the defendant believes that the farmer is at fault, only one-third of the time. Habush is proving to the jury that the witness cannot be seen as credible because his answers are not consistent and the defendant does not share his opinions. There are also several more times when the attorney has to present the deposition to the witness to remind him of his previous responses.

Habush continues to question the witness about the case, and he soon gets to the testimony of the farmer. The witness is unaware of what the farmer said during his questioning, and Habush again uses this against the defense. First he portrays the defendant to be at fault by saying, "Didn't he tell you that?" Then he shifts the blame to the witness by stating, "Didn't you make inquiry about the farming conditions?" The attorney and the members of the court are now questioning the professional conduct of the witness. Not only did he not ask questions about the testimony, but he also had no

report, and the tape recorder that he used was inadvertently erased. The purpose of this witness was to help the jury understand the machinery, and now he was cheating the jury out of facts that they needed to make a proper judgment, or at least that is what Habush wants them to think.

Habush continually makes the witness look inappropriate as an expert by creating a series of contradictions. The expert contradicts first himself, then farmers, an eyewitness, the defendant's operation manual, and the defendants own theory ("Not even your own lawyer agrees"). These inconsistencies cast a shadow of a doubt on the defendant's case and make the jury wonder how sure the expert is about the facts of the case. This method of cross-examination is successful in this particular case.

The second case concerns a man who was electrocuted by 13,800 Volts of electricity while painting. The witness is an Electrical Engineer being examined by attorney J.D. Lee. This second example is used to show that a cross-examination does not have to be confronting, as in the last case. The attorney begins by establishing the standard clearance and safety codes that are used by the defendant (ACME Aluminum) and the National Electrical Safety Code handbook. These are facts that cannot be disputed, and the plaintiff's case will benefit from them. Lee also gets the witness to state that the codes in the handbooks are simply the minimum codes, and also that much less than 13,800 Volts would kill a man.

J.D. Lee then obtains knowledge of whose fault it was that the electricity had not been shut off. The aluminum company was responsible for scheduling the painting time; therefore, it was their responsibility to shut off the electrical power and to give the

plaintiff knowledge about the situation. These facts are proving the deceased plaintiff's case and portraying him as the victim.

As in the previous case, Lee uses the witness' deposition to attempt to prove that he is an unreliable witness in this case. He first establishes the importance of these documents by saying that the witness "signed them, swore to them, sent them to court, and reviewed them with more than one lawyer". He then asks the witness specific questions that were previously asked, trying to show the jury that he is an inconsistent witness.

This latter video is very similar to the previous video in the series. Both discuss the cross-examination of non-medical experts, however, the latter portrays two different ways to question a witness. The two methods are both effective, and it is up to the lawyer to determine which is the more appropriate for the witness and for the plaintiff's case. Although there are many different examples, both videos show that the purpose of the cross-examination is for the plaintiff's attorney to destroy his opponent's theory, and to use the testimony of the witness to build his own for the jury.

Preparing for a Deposition

The sixth video in the series discusses how a witness should prepare for a deposition in a business case. A deposition is used by the opponents to find out what you know about the case and also to search for weaknesses in a company's case. It commits the witness to a position that they must hold for the rest of the trial procedure. It is usually held in a conference room with only few people present, the witness, his lawyer, the opponents' lawyer, a court reporter who takes down everything that is said, and any

other people relevant to the deposition. This video instructs the witness on how to handle certain aspects of the attorney's questioning and what type of things he needs to look out for so that he doesn't get trapped into saying something that he did not mean.

The first rule is to not volunteer any information that is not specifically asked for. The attorney is responsible for asking the questions. The witness should keep his answers short and specific, not giving the attorney anything else. It is especially important that the witness does not disclose any privileged information that may have occurred between him and his lawyer, because the opposition may have the right to force the witness to finish any statement that he may have started. Volunteering information will most likely prove detrimental to the company's case, so the witness must be aware of what he is saying.

The witness must also be aware that he does not get caught with a tricky question. Attorneys will often try to trick a witness by asking a question that implies that the company was up to no good since the very beginning. A witness must listen clearly to the questions and if he is in doubt about anything, he should ask the attorney for a clearer question, which is the third rule that a witness should follow. If a witness is unclear about a question, and he answers unsurely, it will quite possibly arise at the trial. The inconsistencies in his testimony will cause the jury to be unsure about his credibility and therefore lend little weight to his answers.

The fourth rule that a witness should concentrate on is only testifying to what he is sure of. He is under oath throughout his entire deposition, which means that he has sworn to tell the truth. He cannot be afraid to say that he does not know or that he doesn't remember what happened. Incorrect answers will only hurt his case in the end.

All of these rules are very important in the deposition procedure. A witness needs to be in control of his answers. Pausing before answering helps the witness be calm, and it also gives his lawyer a chance to interject if he feels that the questioning is unfair. A lawyer is there for guidance and advice, and the witness should take advantage of that. The deposition is a very important part to the trial procedure. If the witness wants to be sure that it will be beneficial to his case, then he needs to follow the four simple rules stated above, which also means that the opposition will not be able to use his own statements against him.

Summation

The last two videos concern summation. This is the time when an attorney collects all of the facts of the case and presents them, in summary, one last time to the jury. Because the jury is already acquainted with the case and the attorney, he does not have to repeat any of the preliminary information, as in the examinations. The attorney is able to get right to the case, and asking for the proper settlement for his client. If the attorney is able to finalize the case properly, and remind the jury of the important facts in the case, then he should succeed; if not, then he will most likely fail. Between the two tapes, there are four summations that are given by two different attorneys; the first by Robert Cartwright and the last three by Bill Colson.

The first summation is taken from a case concerning a young man who lost an arm and a leg when a forklift rolled on top of him. Robert Cartwright begins by thanking the jury for their attention to him and their attention to the details of the case. He wants the jury to decide a settlement based only on the details and evidence presented in the

case; evidence that the accident was preventable and avoidable if only the manufacturer had thought of people and not profits. A safety device, a rollover bar, could have been put on the machine for only $50, and this device would have prevented the plaintiff from being crushed under it. He states that the manufacturer has four basic responsibilities when creating a new machine: 1. They have the duty to foresee uses of the product, 2. The duty to think and anticipate risks and hazards that might exist, 3. The duty to guard and protect whenever economically feasible and technologically possible, 4. They have no right to make the consumer's safety and accessory. The consumer should be able to expect safety and not danger when purchasing a machine. There is no excuse for injuries, and Cartwright wants to be sure that the jury understands that the defendant put the consumer's safety after their own profits.

The next thing that the attorney must be certain to do is state why the jury should believe his witnesses' testimony. Some attorneys only restate the witnesses' testimony without giving a reason that it is the correct version of the story. It is easier for Robert Cartwright to accomplish this for this case because there is no dispute about the facts from either party. When presenting his summation to the jury, Cartwright does not use any notes, or the podium that is available. The reason for this is so that there is no barrier between him and the jury. His presentation is based on his own credibility, which will help when he goes on to ask for just and fair compensation for the plaintiff. The attorney restates the jury's pledge to award compensation if they find liability. He is showing the jury that he remembered their pledge to the plaintiff, and he wants them to remember everything he said he would do for his client.

Probably the most difficult part of the summation is when the attorney must ask the jury for the proper compensation for the plaintiff's injuries and other losses. In this case, the damages that Cartwright focuses on are the medical damages, along with the pain and suffering associated with them. The plaintiff's life expectancy is forty-five years, and as the doctor stated in his testimony, he will need many prosthetics for both his arm and his leg during this time. Not only does the doctor suggest compensation for the prosthetics, but he also suggest a fifty thousand dollar "slush" fund for future medical research and knowledge. Robert Cartwright also must ask the jury for pain and suffering compensation. He describes the plaintiff's personality and life before and after the accident so that the jury can see the difference because of this tragedy. The plaintiff's wife now plays a crucial role in his well-being. She must assist him with his prosthetics along with other daily necessities such as showering. He asks the jury what they think the plaintiff would do if something were to happen to his wife, or if they were to become divorced. This is something that the jury is going to have to attempt to put a price on, especially because Cartwright makes it clear that he is not asking a dime for the nurses' fees that the plaintiff has incurred. The attorney attempts to get the jury to put a price on the loss of enjoyment of life. There are three distinct ways in which he claims that the jury can compute this sum of money: 1. The lump sum method where the jury takes the damages and comes up with a grand total, 2. The 'by guess and by golly" method where the jury looks at the big picture and comes up with a large compensation, and 3. The jury can calculate the sum scientifically by thinking of the present value of his damages plus the future value.

The last and most important feature in Cartwright's summation comes at the end. He turns the case over to the jury by telling them of their duty, obligation, and the finality of their decision. They are acting as a conscious for the entire community and hopefully whatever they decide will help protect future consumers from such a horrible incident. Their decision will be final, and the plaintiff will never again be able to claim his injuries as a result of the defendant's negligence. He states that it is very important what they are about to do, and they need to take it very seriously, and award the plaintiff what he is entitled to for all of the losses that he has suffered.

Attorney Bill Colson gives the next three summations. They will be summarized together, because the way they are delivered is very similar, even though they are very different cases, indeed. One case concerns a quadriplegic, another concerns a serious burn victim, and the third is a wrongful death case. In each case, Colson wants to conjure up images in the jurors' minds. He gives specific details of how the victims looked and also how they or their families felt about the incidents. He talks of the pain and disfigurement that two of the plaintiffs have gone through, not only in the past, but in the present and the future as well. Colson also tells the jury how the families dealt with the situation; in one case the family abandoned the quadriplegic victim, and in another case, there are five children left without a mother.

Bill Colson also must ask the jury for the proper compensation for the tragedies that have occurred. He says that the fate of the case now rests in the hands of the jurors and that they must decide what the proper settlement will be. Colson assures the jury that he is not there to generate sympathy for the victims, but rather to make them understand

the severity of each case. Just as Cartwright had, Colson reminds the jury of the finality of their decision, and also the consequences that decision will have.

All of the summations are very similar, besides the facts of the cases, because both are attempting to award the plaintiff for damages he received because of the defendant's negligence. The reminder to the jury of the finality of their decision is effective as well, because the jury realizes that it is up to them to produce a definite amount to grant the plaintiff in each case. Because the summation is the last time an attorney is allowed to remind the jury of the facts and also of their duty, the attorney must be certain he gives them a reason to favor his case over the defendant's. Both attorneys in these cases did a superior job in presenting their summation to the jury, and most likely, they were both successful.

As it has been shown, there is more to a trial than attorneys asking questions and blame being passed back and forth. There are specific ways that an attorney must approach each case in order to ensure that his client will receive the appropriate settlement. Each separate part of the trial is as important as the previous or the following part. The attorney must be consistent throughout the trial in proving that his case is the true version of the incident. The videos in this series clearly define the most important concepts of each component, and also the manner in which the attorney must approach them. If he is successful in delivering his statements and his examinations then the attorney will accomplish his goal of proper compensation for his client.

A Classic Cover-up?

The following story has recently brought upon an actual product liability case. The story aired on August 17, 1999, and 60 Minutes II. On July 15, 1999, a sixteen-year-old boy names Harold as driving his prized possession, a 1966 Ford Mustang. His car hydroplaned, crossed into oncoming traffic, and hit another car. The Mustang then burst into flames and he was killed.

With just these facts, the case does not seem anything but an accident, but a more in depth look finds a defect in the car that has been under scrutiny for over thirty years. It has been found that the 1964 through 1970 Classic Ford Mustangs were fitted with a drop-in gas tank. The top of the tank was level with the floor of the trunk. The biggest problem with the location of the tank is that there is no solid barrier between the passengers and the gas. In rear-end crashes, the gas can splash all the way to the passenger compartment, which means that fire would spread much easier throughout the car. Ford safety engineers were concerned with the tank, and abandoned it in 1971, after only a few years of use.

Not all Ford associates who worked for the company then believed that there was a problem with the tank. Lee Iacocca, president of Ford Motor Company when the Mustang was first introduced, says that he is stunned that the drop-in tank was a problem. Contrary to what the engineers have stated, he says that there were no discussions of the fuel tank safety during this time. People tend not to believe Iacocca, especially after a tape was released of him stating, during a meeting in the late 1960's, "Safety was killing the American car business". This statement makes many believe that Iacocca was willing to overlook the known hazard of the tank because Ford was not violating any laws or

safety standards, and any acknowledgment of the defect may cause a recall in his best selling car.

There is a strong case against the Ford Motor Company, however, that begins with information from over thirty years ago. After a 1966 Ford crash test (titled Ford Crash Test 301) it was shown on videotape that in a rear end collision, the gasoline that was in the tank would spray all over the passengers. This test was withheld from the Department of Transportation, which proves that Ford knew about the problem before it caused so many deaths, and certainly before Ford was sued over seventy times for negligence. Engineers, who worked at the Ford Motor Company, have been speaking out about this problem since the 1960's. One engineer, Sherman Henson, warned about the eruption of the tank and went on record stating, "a fuel tank rupture during a rear end collision would result in gasoline inside the vehicle". All of this evidence points a finger at the Ford Motor Company and confirms that its negligence has resulted in the death of many passengers.

In the particular case of the sixteen-year-old Harold, his case is strengthened by the coroner's report, which declared that he did not die because of the impact, but rather that he was burned to death after the accident. Harold's parents are going onward with the case against Ford, and also continue to educate others on the safety problems of these cars. With all of this evidence to back their case, it shouldn't be difficult for Harold's parents to get the settlement that they deserve for the death of their son. Their case may also, surprisingly, be assisted by a recent statement by Lee Iacocca, "After thirty-five years, its time to dump that old Mustang". Advice that people should follow if they wish to avoid similar tragedies.

This case is presently being researched for an actual suit against the Ford Motor Co. It is a perfect example of a product liability case in present day circumstances. There is a great deal of evidence that shows the negligence of Ford because they were more interested in profits than in the safety of their customers. It is obvious that Harold's parents will not be able to get back the life of their son, but hopefully with the exposure that this case will receive, other parents, and teenagers, will be aware of the danger of these classic Mustangs.

LITERARY REVIEW OF PRODUCTS LIABILITY IN A NUTSHELL BY JERRY J. PHILIPS

Introduction to Products and Products Liability

The subject of law as a whole is both complex and complicated. Products liability law, perhaps one of the most prominent and intricate parts of the law, is no exception to this. The size and importance of product liability law is caused by the standardization and regulation of manufacturing.

Advancement in technology constantly changes the rules of product liability. These variations in technology and practice, coupled with the ever – changing needs and wants of consumers, will cause product liability law to continue its change and development.

Although perpetually redefined, one dealing with litigation must understand the basis, concept and background of product liability law. With this basic knowledge of established ruses, one can begin applying them to product liability cases.

Terminology, Extent, and Area of application involving Products Liability

To understand in detail what product liability is and how it came about, we must break down the legal terminology and look at the basics.

The word product is defined as "a good that is manufactured or obtained." A producer will design and manufacture a good to be bought by the consumer.

Product liability comes about when the product does not function as promised by the manufacturer or it cannot complete a task for which it was designed. A product must

be fit for traditional purposes, and must serve the ordinary consumer, defined as one where no expert opinion or advanced knowledge is needed, according to the conditions stated in the warranty. When a product cannot perform up to these reasonable conditions and expectations, it is said to be defective. A defective product can be any product that is imperfect, faulty, and have less than normal performance. Product liability law applies to the sale of a defective product, where the product sold is dangerous to an extent beyond that which is expected by the purchasing consumer with common knowledge.

Not every non-functioning product is a defective product. How then, does the law define a faulty good? Four common types of defects defined by law are manufacturing or production flaws, design defects, defective warnings and instructions and misrepresentation. These categories cover instances where the manufactured good departs from its intended design, where warnings are not adequate to comply with safety standards, where misrepresentation is evident, and where foreseeable design problems could have been avoided. The types of defect categories also apply when, without proof, a product causes harm that is of a kind that ordinarily occurs as a result of a product defect.

Product liability law may seem simple to apply; it seems that if a non- working product falls into one of the defect categories, then it should be considered a faulty product. This, however, is not so. The "failure of courts to settle on a single definition for design, warning and production flaws show the ... uncertainty regarding the proper scope of the law of products liability."

Due to the differences within the courts, there are many problems and limitations that are upheld by courts all across the country.

The first common limitation is backed by our constitution. It states that according to "freedom of speech and press" literature cannot be considered by itself in product liability litigation. Another limitation to product liability pertains to service industries. The nature of a service industry is not to manufacture a good, but rather to provide a service tot he consumer. Service businesses cannot be brought to court for product liability because there is no physical good to litigate over. There are also limitations when it is difficult to prove causation for an accident.

Many state courts feel that the law should be changed to include the prevention of injuries and other policy concerns like freedom of speech and difficulty of proof.

With the limitations and exceptions made in products Liabilities, we must further examine the exact and multiple causes of action and damages resulting in Products Liability Litigation.

Grounds for Claims

Products liability law is an ever – changing field, and thus causes for action against a manufacturer for a defective product are constantly redefined. This makes it difficult to target areas for liability. Because of the dynamic effect of this law, it has evolved into a number of general classifications, although it was classically based on only warranty law, including notice of breach, disclaimers and limitations.

One such category or area of liability is negligence. Negligence may arise a number of ways; they include inadequate inspection, processing, packaging, and

inadequate care resulting in injury to a consumer. Negligence may be clamed against the seller of the product as well as the repairer of the product.

An additional area is statutory violations. Statutory violations are those that apply on a state level and have the consequences mandated by that state. They are different for every state, and not every state will even cover or have laws in existence about certain issues.

Other areas involving products liability are reckless misconduct, concealment and deceit. Any intentional concealment or misrepresentation can counteract what would otherwise be adequate warnings. Reckless misconduct can justify recovery damages for solely emotional distress.

A very well defined area in liabilities is strict liability. Strict liability was the first type of liability claimed and is the basis upon which all other areas were created. Strict Liability includes warranties, obvious defective products, implied obligations, and misrepresentation. Strict Liability also deals with, in detail, merchantibility requirements, fitness of a product for a particular purpose, and abnormal danger.

Sometimes these areas or categories may overlap. When this happens, a plaintiff may plead and prove as many causes and counts of action as he or she wishes. Although this is allowed, it rarely happens in court, as most counts of liability are extremely interrelated and have the same proof or evidence, resulting in a case of combined causes.

Damages must also be noted when dealing with actions resulting in product liability. In general the plaintiff is usually entitled to all damages of a defective product, given that the damage was foreseeable. Most damages are recovered in a warranty suit,

with the exception of punitive damages. Emotional distress may also be claimed in a product liability case. There is a division on whether or not recovery for emotional distress alone is allowable, where there is no accompanying physical injury, and a distinction is drawn between recovery for fear of future injury and recovery for the risk of the injury itself. In the case of punitive damages, only a few cases result in punitive damages. When awarded, it is done so based on the wealth and conduct of the defendant.

Parties

Also important to product liability law are the people involved. The focus shall be on types and categories of defendants, although the plaintiff position should be noted. The plaintiff does not need to be a purchaser, user of consumer, and may blame liability on any company for any reason.

Because a plaintiff has so much freedom when claiming product liability, there are many types of defendants. One group that product liabilities may be claimed against are sellers of new products. This group includes manufacturers, middlemen and retailers. Manufacturers can be sued for final assembly and for component parts if found that they were made defective due to manufacturing processes. Furthermore, a manufacturer may be liable for the "downstream, misassembly" of a product by a dealer. The dealers (middlemen and retailers) are drawn into the case because they were involved in the selling. Also, the retailer may be held liable if they do not undertake to inspect, test and assemble a product.

Another grouping of defendants are defendant successor corporations. There are two laws concerning this type of grouping. One is called the "Continuity of Enterprise" or "Mere continuity" and the other is called the "Product Line Theory". Under the Continuity law, successors to a company are liable if staffing, location, assets and general business are the same, the predecessor is completely dissolved, the successor claimed all liabilities of the dissolved company, and there was a "holding out" of information by the successor as to the faultiness or defectiveness of a dissolved company product. The product line theory applies when the successor acquires all or a substantial amount of manufacturing assets and undertakes the same manufacturing operation as the predecessor. Liabilities may be disclaimed when the successor company owns only one division or product.

Lessors, bailors, and licensers of products may also bring up Products Liability charges. Long - term lessors may be held liable if a defect occurs involving the product that they leased. It is said that the lease "necessarily carries with it a representative that the product being leased is fit for operation." These laws also apply to another defendant group, namely real estate suppliers, which include builders, venders, hotels, etc.

A group worth noting is also the defendant employer – supplier of product. This classification of defendant deals with the employees suing their employers for failed warning of a known danger.

The last grouping of defendants are the providers of services. This is perhaps one of the least rigid and most controversial and debated area of defendant liability. Liability depends if one is predominantly dealing with services or predominantly with goods.

They include professional services like dentists and doctors, and pure services like transportation.

One or more defendant groups may be accused of defect at a time. This idea is called Contribution and Indemnity. When dealing with multiple defendants, a plaintiff may claim degrees of fault or the fault may be divided equally between all defendants. When grounds of liability differ, most often [in concept] companies are awarded different degrees of fault.

Factors affecting choice of remedies, jurisdiction, and procedure

There are many categories associated with product liability law because of disclaimers, reliance, damages, and immunity limitations that permeate it. Warranty litigation, misrepresentation, and design and warning litigation are some of the categories.

If a plaintiff is trying to recover damages for conscious misrepresentation, negligent misrepresentation, and innocent tortuous misrepresentation, then proof of reliance is necessary. Where proof of reliance is not required, the plaintiff may still lose if the evidence shows that he did not rely on the defendant or the procedure in the manner that he implied. The plaintiff must also be sure that he knows of and has read all warnings concerning the product, or else it could be detrimental to his case.

In order to claim and recover from misrepresentation, the plaintiff must prove that he relied on the representations in using the product. These assumptions, however, must

prove to be above and beyond ordinary expectations; otherwise they will not be admissible.

Many courts have decided that a plaintiff cannot recover when he has suffered solely economic loss from a defective product. Economic loss is typically defined as loss in value, loss of use, cost of replacement, lost profits, and damage to business reputation where no physical accident is involved. The important rationale is the ability to disclaim. Some courts determine the validity of a disclaimer based on the theory on which the suit is brought. If the plaintiff is in an inferior bargaining position, then any disclaimer should be ineffective in the lawsuit. In the case that the parties are equal bargainers, privity may be required, and recovery denied if there is no privity.

A buyer of a product must notify, in a reasonable amount of time, the seller of a breach once he has discovered the breach or else he could be barred from any recovery. The purpose of this notice requirement is to enable the defendant to have knowledge of a possible claim so that he can investigate and attempt settlement. The plaintiff is excluded from receiving any type of compensation if timely notice is not given.

In order for a federal question jurisdiction to be created, the federal law "must be in the forefront of the case and not collateral, peripheral, or remote." Even after its creation, the court retains the power to review the decision of a federal issue in a state cause of action. There are four different types of class action: 1. Risk of inconsistent or varying adjudications, 2. Where adjudications of some claims will as a practical matter be dispositive of the claims of others not a party to the litigation, 3. Where the defendant has acted or refused to act on grounds generally applicable to a class, 4. Where questions of

fact or law common to the members of the class predominate over questions affecting only individual members.

There are two different types of specification defenses, non - government and government. Non - government specifications state that a company who manufactures a product in agreement with the conditions on a non - government purchaser is not strictly liable for a defect in design unless there is an obvious danger. Government specifications state that the contractor (usually the defendant) is protected from liability for injuries caused by a defectively designed product supplied to the government in accordance with government contract provisions.

Statutes of limitations are necessary in court cases, especially in product liability cases, where there may be two or more statutes that can apply to a cause of action. One is to allow the plaintiff to rely on a warranty statute for a warranty claim, and a tort or personal injury statute for a tort claim. The other includes statutes of repose for improvements to realty. The date of accrual means the time at which the period of statute of limitations begins to run. This date usually begins from the time the product is delivered, sold, or consumed. A product's extended warranty makes a manufacturer liable longer, but there is also a time limit associated with that. There is a time extension, however, when a product does not perform as expected. Now, states are starting to protect companies because of the enormous number of product liability cases. This protection varies from state to state, but it does include all types of liabilities.

Production and Design Defects

There are many types of defects that a product may have. One type is a production defect, which is distinctly different than a design defect. To determine if a product is defective, it is compared to a similar product of the same kind by the same manufacturer. Its performance is tested, and if it differs greatly from the other product, then it is termed defective.

Determining whether a product's design is defective involves a risk utility analysis. Although this analysis is not a negligence test, it can still prove beneficial to the plaintiff. If the prosecution can establish that the product failed to perform safely when used in an intended or reasonable manner, the product may be said to be defective. The plaintiff may also benefit if it is proven that the product's design caused the plaintiff's injury. However, there can be a problem with the extremely complex designs. If a product's design has very technically complex components, the common knowledge of the jury is insufficient during trial.

Design defects are also closely related to the warnings associated with the product. The placement, content, and form of written warnings, labels, and notices, may involve a close collaboration with engineers or engineering design decisions. While attempting to comply with a warning, redesigning the product several times may be necessary.

In a typical design lawsuit, the plaintiff will not only plead defective design, but also inadequate warning. This warning claim can be upheld whenever the plaintiff is able

to convince the jury that a warning would have prevented injury. However, if a plaintiff's only claim is failure to warn, he may only proceed with litigation if the product contains a danger which thee consumer should be warned about. The danger of a product is not easy to identify, and while an extremely obvious danger should be eliminated through redesign, it is unlikely that the court will find a duty to warn about it. It is the responsibility of the manufacturer to determine whether the product needs a warning.

Crashworthiness is also important when manufacturing a product. The term describes the capability of a product to protect against increased injury from an accident caused by something or someone other than the product. The early approach of the court was that there was no duty of a manufacturer to design a product to protect against an accident caused by a source other than the product. After many years and many court cases later, the courts have recognized that the manufacturers have a duty to reasonably design against foreseeable accidents. This does not mean that the manufacturer will be held liable for any increased product related injuries, only for the ones that are foreseeable.

Manufacturers have an extremely difficult time, not only designing a product, but also testing it enough to prove that it is safe. It is the responsibility of the company to warn consumers about possible dangers that may occur when using the product. If the producer is not careful, the purchaser may file a negligence lawsuit in which he may prove that the company did not do everything it could to ensure the safety of the user. Redesigning a product to get rid of its defects if the greatest, but most important, challenge that a manufacturer faces. In order to be successful, however, it must overcome this difficulty.

Warnings and Instructions

There are usually two types of labels that can be placed on a product, a warning and an instruction. The two differ because an instruction is designed primarily to secure the efficient use of a product, while warnings are designed to ensure safe use. Warnings are more often used because they describe the nature and the extent of a danger that may be associated with a product. When creating warnings, a manufacturer needs to take into account the environment in which the product will be used. Repeatedly, a warning is required for the consumer to use the product in such a way that will prevent injury. An obvious danger is the only case where a warning is not required.

Testing is very important in the creation of warnings. A manufacturer may still be liable for an unknown danger if it is found that the research and testing was insufficient. Testing, however, can be problematic if a company is working with state of the art technology, because testing all of a product's capabilities can be difficult.

The manufacturer may not always be at fault if someone is injured while using its product. If the consumer is assumed to be an expert in the product area, then warnings may not be required. When the product is used in a field where there is common knowledge that is held by most experts, then the manufacturer will most likely not put warnings about known dangers. The problem with this approach is that when an injury

occurs, it needs to be determined whether the manufacturer, consumer, or even the consumer's employer is at fault. It is the responsibility of the manufacturer to determine what type of warning is needed and where they should be placed, if necessary. These decisions could be the difference in a lawsuit.

The manufacturer may not always be completely clear when issuing warnings. While it must warn about dangers, it does not want to deter customers from purchasing the product. Countervailing representations are used to downplay a danger or mislead the consumer on the extent or nature of a danger. The appearance or pictures of safety may counteract the warning on the product. The packaging and marketing of a product are important to its overall appeal. A product's appearance may neutralize any warnings placed on it.

A manufacturer is not only responsible for warnings on new products, bit also for all the products it has created. It a defect is found after a product has been marketed and sold, the manufacturer must warn about the danger post-sale. This warning includes any type of repairs, recall of parts, etc. that may cause injury to the user.

Misrepresentation can be detrimental to any manufacturer in a product liability case. This claim can be based on deceit, negligence, warranty, and/or liability. The prosecution does not need to show that there is a defect, other than proving that misrepresentation is present. Many product liability cases are associated with the misrepresentation of a product and it's dangers.

Problems of Proof

Generally, in a product liability case, it is the responsibility of the plaintiff to not only prove that the defendant's product was defective and that the product caused his injuries, but also that the defective condition existed when it left the defendant's control. If the prosecution is able to establish a defect associated with the defendant, then a court may be more willing to allow an assumption of causation compared to times when no defect is shown. The shorter time that a product has been on the market, the better chance the plaintiff will have to make a case based on circumstantial evidence of defect, where there are few, if any, intervening causes. In a warning case, the necessary proof of causation may be inferred. If it is likely that the causation of damages is within the realm of common knowledge, then it can be assumed. There is no need for the plaintiff to go into too much detail about the causes. The plaintiff will most likely be able to recover the full claim if he can show that the defendant's conduct was a substantial cause of his injury.

The terms lack of proximate cause and unforeseeability are often seen as interchangeable, and, in fact, one term does reinforce the other. An example of these terms could be when a car unequipped with airbags is not defective because a consumer knows that in the event of an accident, airbags will not deploy. This case can be translated as the absence of airbags was not a proximate cause of the accident, or that the occurrence of the accident was unforeseeable. The difference between the two is that the concept of foreseeability is used to describe things that can be anticipated, while proximate cause is used to describe occurrences that are a "direct" of "probable" result of another event. Essentially, the terms are interchangeable for most applications.

Another burden sometimes placed on the plaintiff in a product liability lawsuit is to show the absence of misuse, while it is treated as an affirmative defense by some courts. If misuse can be attributed to the plaintiff, rather than a third person, it is closely related to contributory negligence and assumption of risk. In many circumstances, misuse relates only to causation of the accident rather than tending to prove the absence of a defect in the product manufacture. Before bringing the lawsuit, the plaintiff must be certain that he used the product properly or he himself may be held liable for injuries or damages.

A special consideration when misuse is brought up in a case is alteration. If there is a substantial alteration that causes an accident, it may be unforeseeable, unless the alteration is anticipated because the product required the change. If a defendant produces a defective product, it is foreseeable that the item could be defectively modified in an attempt to correct the original defect. If an alteration is made, it is the responsibility of the plaintiff to prove that there was a defect there in the first place.

Damages and the collection of damages are an important part of a product liability lawsuit. A manufacturer can still be held liable if its conduct was a significant factor in bringing harm to the consumer, even if it did not or could not have foreseen the harm. A defendant may not be held liable if it can be shown that the harm brought upon the plaintiff occurred in extraordinary circumstances.

There are three major types of plaintiff misconduct that can limit the recovery: contributory negligence, assumption of the risk, and misuse including alteration of the product. Contributory negligence is defined as the failure of the plaintiff to take reasonable care for his own safety. Assumption of the risk is a knowing and voluntary

confrontation of an appreciated risk. When a product is used in an unintended or unforeseeable manner, it is classified as misuse. Contributory negligence and assumption of the risk are most often treated as defenses, which means that the burden of proof is placed on the defendant. When the defense uses the assumption of risk method, the danger is frequently obvious. This obviousness should not be a separate basis for denying recovery, but only goes to the defense of assumption of risk.

Workplace injuries are inappropriate for the assumption of risk defense because of workplace pressures and the worker's need to retain his job, which make exposure to known dangers involuntary. One particular type of recovery that is barred for professional rescuers is recovery for injuries caused by the negligence of someone creating the need for the rescue.

Unforeseeable misuse of a product is a bar to recovery for injuries proximately caused by such misuse, either by the plaintiff or another. The only way for a plaintiff to recover from a manufacturer is to prove that the product was defective and the proximate cause of his injury.

Comparative fault may also allow the plaintiff some type of recovery. There are three principal methods of comparison that the plaintiff may use in a product liability lawsuit: 1. If her fault is less that that of the defendant, 2. If it is not more than that of the defendant, or 3. If the defendant is at fault in any degree. The plaintiff is excluded from regaining any compensation if his fault equals or exceeds that of the defendant. If the plaintiff is able to collect, then the recovery will be proportionally reduced according to his at-fault percentage. A jury, however, may be instructed to bar the plaintiff from any compensation, depending on the percentage he is at fault.

If a product has a history of unsafe use or prior accidents, it is admissible for a variety of purposes, including magnitude of danger, foreseeability of user conduct, and causation. The plaintiff can use this past history to benefit his case.

Spoliation occurs when a person willfully or negligently gets rid of evidence that is vital to a litigant's case. The disposer could be held liable for the damages that the plaintiff may have recovered if not for the disposal. The defectiveness of a product may also be assumed if it can not be proven without aid of the disposed materials. On the other hand, if the plaintiff disposes of important evidence, he can be prohibited from filing a claim against the defendant.

Expert testimony is not always needed to prove the defectiveness of a product. It is often used to establish a case of causation or damages. An expert's testimony may not be permitted, however, if what he says is common knowledge or if he lacks the requisite qualifications of an expert in that field.

Proving a case is not only the responsibility of the plaintiff, but also of the defendant. The litigants must provide information that shows that their cases have truthful basis. Recovering for damages is essentially the reason for a product liability lawsuit, which is why the burden of proof is placed on the plaintiff.

Conclusion

Products liability will undoubtedly continue to be a controversial field of law, because it cuts across so many fundamental issues in our society. It will also remain a stimulating field of study and practice, since it combines a healthy mixture of the

practical and the theoretical. The subject will certainly continue to change, both by statutory and by common law modification.

Products liability implicates many of the basic values of our society. It is a test of the ability of private industry to accommodate competitiveness and safety. It tests the fairness and the workability of the tort system of recovery, and of the jury system as a method of resolving disputes. It is perhaps not inappropriate to view the law of products liability as a microcosm and a distillation of the entire system of civil litigation in this country.

ROBERTO ORTIZ VS. MANUFACTURERS AND DISTRIBUTORS OF THE B.M. ROOT VERTICAL MULTIPLE BORER MACHINE (MODEL NUMBER C-311)

On September 7, 1993, Roberto Ortiz was involved in a life-changing accident. While operating and/or cleaning a vertical boring machine, Mr. Ortiz caught his hand on one of the boring spindles, and the middle finger of his dominant hand was dismembered. This left Mr. Ortiz unable to work, and with an astronomical amount of medical bills to be paid, his financial future was uncertain.

Although accidents by nature are never intentional, ultimately someone must be held liable. Roberto Ortiz claims that the machine malfunctioned and was not of safe design. He brought suit against B.M. Root Company, the producer of the boring machine; Diehl Machines, parent company of B.M. Root; and Boshco Incorporated, distributor for B.M. Root machines and products. The companies objected to these allegations, stating that Mr. Ortiz did not execute proper care or follow the posted safety rules.

The conflict between Roberto Ortiz and B.M. Root, et. al, proceeded further into litigation. Depositions were documented and Requests to Produce were adhered to. It is the topic and goal of this case study to come to a consensus of who was at fault and to argue said liability.

Description of Accident

The most important information for this study will come from a detailed account of the incident. As a detailed and accurate account of the accident is formulated, the

majority of pertinent information will be discovered. Discovery occurs because the details are definite, and founded upon first- hand information that has been determined by all parties as unambiguous and logical. This description of the accident is the principle information upon which a case is built. Preliminary assessment and analysis of accident aftermath and acknowledgement from eye- witnesses will help to formulate a sound description of the occurrence. It is also helpful if the injured party is able to give a valid portrayal of the accident.

In the case of Ortiz vs. B.M. Root, Diehl Machines, and Boshco Incorporated, the injured party was able to describe the occurrence in detail. A deposition conducted by B.M. Root asks Roberto Ortiz to describe the accident. Mr. Ortiz claims that sometime between 3:00 pm and 3:30 pm, on September 7, 1993, he was working with a B.M. Root Vertical Multiple Boring Machine. He drilled a few pieces of wood, and as he completed the drilling, he lifted the spindles off of the table. The spindles were supposed to stop, but they were still rotating off of the table. Mr. Ortiz stated that there was some sawdust on the machine, so he picked up an air hose to clean it off. (Mr. Ortiz also states that the air hose was not attached or related in any way to the B.M. Root Boring Machine.) This air hose was lacking a functioning pressure system to create airflow, so Mr. Ortiz tried unsuccessfully to create artificial pressure with his bare hands. Although the airflow was improved, it was not enough to sufficiently clean off the Root machine. The plaintiff then put on gloves and tried again to artificially create pressure in the air hose by pressing harder on the piston of the air hose.

With the aid of the gloves was enough to make the air hose function. A few seconds later, as Mr. Ortiz was cleaning off the boring machine (which still had spindles

in rotation), the air hose twisted, and Mr. Ortiz's dominant hand slipped off of the air hose, and his glove caught on one of the boring spindles. Mr. Ortiz lost the middle finger of his right hand as a result.

Only Mr. Ortiz witnessed this accident. His statements concerning the conditions and actions directly before the accident are assumed factual and true. This accurate account has proven that the events were clearly unintentional. Yet, is it fair to expect Mr. Ortiz to suffer physical and mental anguish, and pay for substantial medical bills without a source of income?

Defendants

The injured party seeks damages as a remedy for the aforementioned accident. Mr. Ortiz filed a complaint, and has begun pursuing litigation against those who he feels are at fault; namely B.M. Root, Diehl Machines, and Boshco Incorporated.

Roberto Ortiz is suing for breach of warranty and negligence. The breach of warranty complaint contains accusations of the defendants failure to hold true to promises made at the time of purchase. The claim of negligence states that the product was not of good design or manufacture. It also claims negligence concerning inspection and safety audits, primarily focusing upon Diehl Machines. The complaint also targets Boshco for negligence in the marketing, distributing, and selling of B.M. Root machines.

In each of the accusations, all defendants state that Mr. Ortiz did not display reasonable care or follow posted safety rules. Therefore, the companies of B.M. Root, Diehl Machines and Boshco believe that the plaintiff solely caused his injuries.

The defendants maintain their innocence and lack of liability, as does the plaintiff. A vast difference of opinion exists between the two parties. Because of this difference in asserted facts, each element of the accident will have to be studied and evaluated objectively to determine the innocence of one side. In determining the fault or innocence of the defendants, key items must be discussed thoroughly.

Key Items and Arguments

There are four main items for discussion in this case. The outcomes of these discussions, and the amount and type of support they receive will help to determine the party at fault in this case.

Gloves

The earliest controversial detail of this accident was the admittance of the plaintiff to wearing gloves. Warning signs, supplied by B.M. Root Company, were put in highly visible places by Kimball Company. They clearly state that when operating the B.M. Root Machine, "Remove or fasten loose articles of clothing." Perhaps more interesting is the fact that Kimball Company, the workplace of the plaintiff, actively warns against the use of gloves near machinery. The Vice President of Operations for Kimball, Gerard Dejardins, makes reference to this in his deposition, dated April 2, 1998. Dejardins states "...employees are not allowed to wear gloves at any boring or drilling machine." Further proof that Mr. Ortiz knew the glove safety rule resides in the statement made by Robert Dialessi, Wood Production Manager for Kimball Company. Mr. Dialessi says, "Roberto Ortiz was warned before the accident not to wear gloves near machinery."

Not only did B.M. Root provide and encourage posted safety rules against certain clothing, the plaintiff's place of employment strongly warned against the use of gloves anywhere near the machines. The plaintiff was made fully aware of the correct precautionary measures that should be taken. Mr. Ortiz failed to comply with the rules. Although it has been established that the plaintiff was not wearing gloves when using the machine to cut wood, he was wearing gloves around the machine. This clearly goes against warnings made by the defendants, and releases them from fault.

Air hose

The next point for discussion is the air hose used to clean the machine. In the B.M. Root Model C-311, there is a chip blower that hooks up to the factory airline; the chip blower is synchronized with the boring stroke to remove chips just after boring. This makes cleaning of sawdust by hand- held air hoses unnecessary. The reason that the chip blower on the Root Machine was not working was because Kimball Company did not have it hooked up to their factory airline. In fact, some of the employees thought that "...there [was] no vacuum system or dust collection system for the machine." This was stated by Robert Dialessi, who has twelve years of experience working with the Wood Department and the Root Machine for Kimball Company.

Due to the fact that the chip blower was not hooked up at Kimball Company, the plaintiff was using a different, external air hose to clean the sawdust off of the machine. This air hose was non functional, as Mr. Ortiz had to use the force of his hands instead of a pressure system to create the airflow. The lever that usually creates the pressure to induce airflow was disposable, and could have been both easily and cheaply replaced.

The Root Company was in no way related to the producers of this external air hose; therefore, it was the fault of Kimball Company that the external air hose was not working.

It was the responsibility of the Kimball Company to attach the chip blower to the factory airline. They failed to do this. The accident could have been prevented easily by installing the correct air hose. Furthermore, when the external air hose was broken, it was the responsibility of the plaintiff to report it to his supervisor. Because Mr. Ortiz did not relay the information to his superior, he is the one at fault. In no way can the Root Company or its associates be at fault in this matter.

Rotation of Spindles

Another item for discussion is the rotation of the spindles during the accident. Mr. Ortiz claims that he lifted the spindles off of the table and they continued to rotate.

There could have been a number of reasons for this. Without proper care of maintenance, the machine cannot maintain correct operating procedure. Proper maintenance includes changing the oil in the machine, and hooking up a shut – off release. As stated by B.M. Root in posted safety rule number one, "it is the responsibility of the owner or user to install a disconnect switch while adjustments, repairs or setups are being made. The switch was very likely the cause of the "malfunction" that this case is based upon; if this switch was in place by Kimball Company correctly at the time of the accident, the spindles would have stopped rotating.

An additional point that must be made is in reference to posted safety rule number eight, composed by B.M. Root Company and posted by Kimball Company. This safety

rule states that the operator must "stop machine before making adjustments or cleaning chips from the work area." It should have been inherent to Mr. Ortiz, common sense even, to not tempt fate and clean the machine while it was in operation. Mr. Dejardins agrees with this rule, saying in his April 2, 1998 deposition, "The machine should never be cycling during cleaning." Once again, Mr. Ortiz failed in his responsibility to report a problem to his supervisor, which was careless of him and added to his cause of injury.

Guarding

Perhaps the biggest controversy and cause for discussion stems from the protective guarding on the B.M. Root Model C-311. The purpose of this guarding was to enclose all portions of the bit and chuck above the material worked. The guard designed by the B. M. Root Company, available for purchase and in circulation in 1986 provided operators with that safety and was designed according to the OSHA law.

At the time of the accident, the guarding had been removed. This seemed silly, and upon further investigation, the reason why Kimball Company removed the guarding was revealed.

In the deposition made by Roberto Ortiz, it is stated "... the guard offered in 1986 was improper, because it actually increased the danger by obscuring the operator's view of dangerous boring tools." It was also said that there was "...no point of operation guarding [as] it exposed [the operator] to risk of serious injury during normal and expected use of the machine."

The final decision to remove the guarding from the B.M. Root Machine was made by Gerard Dejardins, Vice President of Operations for Kimball Company. In a letter to

OSHA, Mr. Dejardins writes "... the guard is a hazard in itself... after several small accidents and after investigation... the lower guard was removed."

The first refutation against the "guarding" argument is that the guard served the purpose that it was meant to. It was in compliance with OSHA safety standard that "all machines with boring bits must be guarded."

Furthermore, the posted safety standards warned against operation of the B.M. Root Machine without all of the guards or covers in position. The Kimball Company failed to report the guard's shortcomings to B.M. Root, and is to blame for not being responsible. Instead of removing the guarding, B.M. Root and Kimball could have modified the guard and improved upon its design before the accident occurred.

Due to the guarding being removed, the tips of the tools were exposed to contact. Had the guard been in place, Mr. Ortiz's hand would have simply hit the guard instead of getting caught on the spindles.

Response to Arguments made by Igor Paul

On March 10, 2000, Igor Paul, the expert witness for the prosecution, concluded his research and examination of the Boring Machine case and gave his professional opinion in the form of a deposition. Professor Paul's involvement in the Boring Machine case began on November 3, 1994, when he was contacted by the prosecution to formulate a statement based on the circumstances of the accident and the design of the boring machine.

Igor Paul learned of the machine mainly through brochures, photos, and a discussion with the plaintiff. He never inspected the machine with the guard

configuration or setup that was present at the day of the accident, and did not conduct testing of any kind on the machine. In fact, Professor Paul has no testing experience with boring machines and has only operated a boring machine once.

In the deposition, Igor Paul seemed concerned only with the guarding of the machine. He never asked the plaintiff about the nozzle or the air hose, stating that they were "red herrings" and did not contribute to the accident. It was also of interest that he stated there was a "question of what warning signs, if any, were on the machine" at the time of the accident, and that Mr. Ortiz was not aware that he needed to turn off the machine to blow the chips away.

Although Igor Paul has worked as an expert witness for a substantial length of time, he has virtually no experience with this type of machinery. In fact, he admittedly did not bother to inspect the machinery until the day of the deposition, almost seven years after the accident happened. There were many documented changes to the machinery at this point, and there was no way that the accident conditions could have been recreated for the inspection.

It is the opinion of the group that Igor Paul is ill informed and should not affect the opinions of the defense in any manner. His entire deposition focused on the guarding only. He seemingly ignored the other factors in this accident, and is basing his position on the faultiness of a guard that followed regulations, a guard that he himself never even examined.

Conclusions

In the case of negligence and breach of warranty against B.M. Root Company, Diehl Machines and Boshco Incorporated, the aforementioned arguments point to the defendants' innocence.

There was failure by the plaintiff and his place of employment, Kimball Company, to follow posted safety rules and to use common sense. As it is stated by B.M. Rot, "no amount of adherence to safety rules or precautions will protect the careless operator from injury to himself."

This unfortunate accident could have been completely prevented with the use of proper attention and care, and the defendants should not have to take blame for the ignorance and blatant disrespect for safety rules put in place by B.M. Root Company.

ROBIN AND KEVIN LAFLAME VS. MAINE LINE AUTO CENTER AND CHRYSLER CORPORATION

At approximately 1:30 p.m. on October 25, 1995, Robin Steeves (LaFlamme) was approaching a stop sign where several cars were already stopped. As she applied the brakes, the driver side seat slid backwards prohibiting her from reaching the pedals. As a result, her 1994 Plymouth Voyager minivan rear-ended Teresa Bootter's 1995 Geo.

This was not the first time that the LaFlamme's had claimed the seat had slid back, but because of the accident, they have filed a lawsuit against Maine Line Auto Center, Inc. and Chrysler Corporation. After all of the testimony and documentation was heard, it is the responsibility of the jury, as in any product liability case, to decide who is at fault and also the amount of compensation the victim may recover.

Evidence in the Product Liability Lawsuit

Background

Kevin and Robin LaFlamme were married on May 7, 1994. She owned her own cleaning business, and he was working as a carpenter. The two lived together in a small house in Maine, and on July 16, 1994, they decided to purchase a new vehicle. They went to Maine Line Auto Center and chose a 1994 Plymouth Voyager minivan. They were to pay a total of $24,810.20 for the vehicle over the next five years. The vehicle was actually registered under Kevin LaFlamme, but his wife was the primary driver of the vehicle.

According to Mrs. LaFlamme, it was not long after the purchase of the vehicle that the driver's side seat began sliding back. Prior to the accident, she claims that the seat had slid back a minimum of ten times, including one incident where she was almost broad sided when pulling out of a street leaving her father's house. She also stated that the seat did not always slide all the way to the back of the tracks, sometimes it only slid a few notches. The seat was never removed from the vehicle, and the LaFlamme's never placed anything under the seat that could hinder its proper operation.

Kevin LaFlamme was skeptical the first time that his wife made the claim about the seat. He thought that it was probably her fault for not adjusting it right. However, his opinion changed when he actually witnessed the condition for himself. He said that there was two times where the seat slid all the way back, once was when she was backing out of the driveway, and the other occurred when they were pulling out of a restaurant. He also saw the seat slide back only a few notches several times prior to the accident. The first time that his wife claimed the seat was faulty, he brought mentioned it to the mechanic, Dirk, and Maine Line Auto. At this time, he had never seen the seat slide back, so he could only ask Dirk to look at it.

On the morning of the accident, Mrs. LaFlamme picked the vehicle up from the dealer after they called to say it was ready, and she drove to Cape Elizabeth for a cleaning job. At the time of the accident, she believes that she was traveling at approximately twenty-five to thirty miles per hour, and that the separation between vehicles was about three to four car lengths. Immediately after the accident, she adjusted the seat back to the correct position, and then got out to talk to the other driver.

The day after the accident, Mr. LaFlamme took the vehicle to the dealership and demonstrated to Dirk how the seat had slid back when the brake was applied. He got in and shook the seat, but it didn't move. When the brake was applied, however, the seat slid all the way back. Dirk tested the driver's seat in the same manner and received the same results as well.

The van was then brought back to the LaFlamme house, where Gerald Byron and Chuck Briggs removed it a few days later. Gerald Byron was the man in charge of investigating the LaFlamme case for the Chrysler Corporation. Mr. LaFlamme spoke with the men the day that they came to his house, but had no contact after they removed the vehicle and brought it back to the dealership. He was unsure what they were going to do to the van, but he did know that his wife refused to drive the vehicle again.

The LaFlamme's were given a loaner car while the dealership had their van. They were unaware of the fact that there were going to be repairs to the van that Chrysler was going to pay for. They did not want the vehicle to be repaired because they were not going to drive it. The dealership fixed the vehicle and told the LaFlamme's that they wanted to rental car back. After the LaFlamme's refused to take the vehicle back, the Chrysler Corporation decided that they would help them get another car. Peter Starr contacted them about choosing a new vehicle from the dealership. They were told that they would be able to select a car from several that would be available, but when they got to the dealership, the paperwork was already filled out for them to take a Plymouth Breeze. Peter Starr was not there, so they took the vehicle because they needed another car.

Kevin and Robin LaFlamme feel that both the Maine Line Auto Center dealership and the Chrysler Corporation treated then unfairly. They are suing the two companies for damages such as loss of wages as a result of the car accident.

Gerald Byron's Report for Chrysler Corporation

In his initial report, Gerald Byron, an investigator contracted by the Chrysler Corporation found several important pieces of information. On November 1, 1995, Byron inspected the vehicle and after talking to Mr. LaFlamme, he agreed to take the van back to the dealership for further investigation. In his deposition, he states that he specifically told Mrs. LaFlamme that he was going "to take the vehicle back to the dealership to investigate the allegation of the seat not staying in position." He states that the dealership service manager, Chuck Briggs, was told not to make any repairs to the vehicle, and that Chrysler would be in touch.

Mr. Byron had also been in touch with Robin LaFlamme before and after the vehicle had been taken to the dealership. She explained the condition to him as: the seat would not lock, and then it would slide back, which prohibited her from reaching the pedals. She has made it clear to him that the seat had started sliding back on her less than six months after they bought the van. She informed him that she had been seeing a doctor for approximately five weeks before the accident occurred because the seat was causing her back pain. She also stated that she suffered more severe injuries due to the accident, but his report does not go into these details.

When the minivan was taken to the dealership, both Mr. Byron and Mr. Briggs were able to duplicate the condition described by the owners. As far as Mr. Byron knew,

no repairs had been made to the vehicle because Prime Auto was unable to duplicate the condition of the seat. The two men were unable to say that it slid they way that she described it, but they were able to say that "the customer is right". Both of the men took turns attempting to get the seat to slide back, and both men were successful regularly. Each would adjust the seat to a certain position, wiggle it to make sure that it was locked in, and then he would accelerate the vehicle and attempt to come to a rapid stop. The seat slid back just about every time this test was performed. When they were satisfied that they had found the condition, the minivan was taken into the dealership where the driver's seat and the adjuster were removed. Mr. Byron then asked the mechanic if there was any type of bulletin out on the seat or the adjuster. The technician went to the computer to look, and was able to find a technical service bulletin for the seat that was in the van. He swore that he had never seen it before, and Byron said that he was "almost in tears". In Mr. Byron's opinion, he believes that if the technical service bulletin had been found before, then the seat could have been fixed before the accident occurred, therefore preventing it. It would have been very simple for someone to look to see if there was a bulletin, but apparently no one thought of that. Mr. Briggs was also "miffed that people under him had not done their job".

Mr. Byron was an investigator hired by one of the defendant's to examine the claim of the LaFlammes against Chrysler. In his investigation, he was able to experience the condition that Robin had complained about many times. He also proved that the mechanics had not completely done their job by forgetting to look for the technical service bulletin. Mr. Byron's testimony will surely prove detrimental to the defendant's case.

Repair Invoices

There are two documented repair invoices for the LaFlamme's minivan prior to the accident. The LaFlamme's only brought their vehicle back to Maine Line Auto for repairs. The first, Invoice 81229, is from October 2, 1995. It states that the customer reports that the driver's seat slides back when the car is in motion. Although the dealer was unable to duplicate the condition with the seat, they ordered parts to repair it. The second invoice, documented the day before the accident, the 24th of October, again states that the driver's side seat slides backwards on its own. The dealer claims that the mechanic fixed the condition, using part #4705727. The condition obviously was not fixed, however, if it occurred just the day after.

Technical Service Bulletins

A technical service bulletin is a document that is put out by Chrysler when they find a something that may cause a problem in one of their vehicles. Not only is the condition described, but also the method in which it should be fixed by a mechanic. All of the technical service bulletins that are created are sent in hard copy and electronically to every dealership that may fix a Chrysler Corporation vehicle.

The technical service bulletin (tsb 23-23-94) that was put out for the minivan owned by the LaFlammes and similar minivans was created March 18, 1994. It was an updated version of a previous technical service bulletin that was put out for 1991 –1993 minivans. This bulletin stated that the symptom was that one side if seat adjuster did not latch as smoothly as the other side. This condition forced the rider to shift his weight in

order to lock the seat in place. The repair to be made by a mechanic was to modify the inboard seat riser, which would eliminate this condition. Not only did the mechanics not realize that this bulletin was out, but they made no attempt to even look for it. It is not completely the fault of the mechanics, however. If this condition existed up to three years prior to the purchase of the LaFlamme vehicle, then Chrysler should have gotten rid of the problem altogether. There was another technical service bulletin (tsb 23-24-94) out at the time that may also have been related to the LaFlamme case. This bulletin stated that the front seat squeaked where the seat back met the seat cushion. Although Robin never complained of this problem, she did complain that the seat slid back when she lead on the back of the seat, mostly when she was breaking or accelerating. If the mechanics had seen this bulletin, then it may have led them to the more important one.

Chrysler Performance and Testing

Chrysler Corporation has a performance standard that is applied to all parts and vehicles that they manufacture and use. The mechanical seat adjuster is any device that anchors the seat into the vehicle. It is required to be able to withstand a static load of twenty times the weight of the seat (an acceleration of 20g). The adjuster must move smoothly and uniformly. The latching mechanism also must engage positively without hesitation and in a consistent manner without any external force other than the latch return spring. The purpose of this standard is to ensure product integrity. The supplier is responsible for the performance of all requirements specified within this standard.

A standard method of test for the seat is adjuster is as follows: first, a horizontal longitudinal force is applied (a minimum of twenty-four times the weight of complete

seat system. Then, a horizontal longitudinal acceleration is applied to the same seat assembly in both a forward and rearward direction. The seat system is positioned in furthest forward seating position when forward force is applied, and vice versa for rearward force. After the test, the manual releases must be capable of being locked after the test is complete.

Chrysler also does crash tests that examine the product integrity of the parts that they use. On April 21, 1993, the manual seat adjuster was tested in a frontal barrier crash. During the test, the front driver seat adjuster released, allowing the seat to move forward. The test was then deemed unsuccessful due to the driver's dummy left femur results, which were too high. After the test, it was found that the driver's side adjusters were not at the current production level. They decided that they were going to scrap all of the old seat adjusters after the failed test.

National Highway and Transportation Safety Administration

The NHSTA is an administration that has an auto safety hotline that receives complaints about problems that consumers are having with their automobiles. The following complaints are all similar to that of Robin and Kevin LaFlamme, with similar vehicles made by Chrysler or a Chrysler company. Four of the complaints were from owners of early nineties edition of the Dodge Caravan, and one was from a 1994 Plymouth Voyager owner.

The owner of a 1994 Dodge Caravan made the first vehicle owner's questionnaire on July 14, 1994. The problem with the vehicle, occurring on June 15, 1994, was that the

driver seat position slider does not engage properly, causing sudden movement through several notches.

The second complaint was received on August 17, 1994 about a 1994 Plymouth Voyager, the same van as the one that the LaFlammes owned. The driver was accelerating from stop sign, and the driver's seat adjuster failed. The seat slid backwards breaking the driver's wrist bone. The vehicle was only traveling at no more than five miles an hour.

A third complaint was received on August 17, 1995 concerning a 1994 Dodge Caravan. The problem that the owner complained about was that after a new driver adjusted the seat, it appeared to be in a locked position. However, when the vehicle is put in motion, the seat slides back, and on one particular occasion his wife almost lost control of the vehicle and she had a hard time stopping.

Another vehicle owner's questionnaire was received on November 24, 1995, and it also concerned a 1994 Dodge Caravan. The driver's seat in this vehicle also slid backwards and injured the driver's back. The doctor instructed him not to drive the vehicle anymore, because he feared that it could cause more harm to the owner.

The last documented complaint was taken on April 6, 1995, and it concerned a Dodge Caravan, model year 1992. The driver's seat in this van also disengaged, causing the seat to jerk backwards, which then caused the car to rear-end another car that was at a standstill. This accident then was the cause for another accident as well.

The NHSTA also tested, for themselves, the seat in the Dodge Caravan. This seat was the same seat that was put in the Plymouth Voyager that the LaFlammes owned. They detected driver's seat movement, and more in depth, that the driver's seat shifted to

the forward most position on impact. This movement caused the driver dummy to crash both of its knees against the instrument panel.

These complaints prove that the LaFlammes were not the only caravan owners that were having difficulty with the driver's seat adjuster. Other owners were complaining about the seat, yet Chrysler had still not done anything to remedy the situation. The test concludes that the seat was not safe, and that it should not have been put into any van. If the NHTSA was able to come to this conclusion, then Chrysler should also have been able to determine it.

Evidence Leading to Recovery

Doctor's Reports

There are two doctor's reports on record that show that Robin LaFlamme was having back and neck troubles as a result of the seat sliding back in her van. The first report was taken on October 5, 1995. She told the doctor that she was experiencing pain in the upper neck and shoulder area. Mrs. LaFlamme believed that when the seat moved into a reclining position on its own, that it was jerking her hard enough to cause these problems. Upon examination, the doctor came to the conclusion that there was some paravertebral muscle spasm in the cervical and upper dorsal area.

The second report is from a visit on November 2, 1995, about a week after the accident. The patient claims that the seat came loose causing her car to rear-end another car. That same day, she went to the emergency room because her back was hurting. This doctor's report is from follow-up visit after the collision.

Inability to Work

Prior to the rear-end collision, Robin LaFlamme worked daily cleaning residences and commercial buildings. She is the owner of her own cleaning company, but since the accident she has not been able to work a full week. At the present time, she is only able to work a few hours a day, sometimes not at all, depending on how she is feeling. Her oldest son has had to work every night for her, and her younger son works at least a few nights a week helping out. Kevin LaFlamme and Robin's sister also help out whenever they can.

Before the accident, the business was making approximately ten to twelve thousand dollars a year, but that figure has dwindled since the collision. Much of her income has gone to medical bills because she does not have any health insurance, and she has not received any social security benefits, state or federal welfare benefits, social service agency disability benefits, or anything of that kind. Mrs. LaFlamme is also in debt to her father because, since the accident, she has borrowed approximately $8,000 from him.

Since the accident, Kevin has been spending the majority of his time working at the cleaning business. He does, however, spend some time working as a carpenter doing side jobs for Dan Desvergnes. His work ability is also limited because of a work related accident that occurred around 1993 or 1994. He was injured carrying a beam while working for Horizon, a construction company.

The inability of Robin LaFlamme to work has put a large financial burden on her family. Because she cannot work a full forty-hour week, her husband must pick up the slack. The smaller household income restricts the family from any type of recreational

fun. The injury caused by the seat is not a short-term injury. It will last for the rest of her life, and inhibit Robin from working as she had before the accident.

Relationship Changes

It is somewhat obvious to say that the relationship of the LaFlammes is not going to be the same after an accident like this. Before the accident, they had a healthy physical relationship, meaning that they had intercourse approximately three or four times a week. After the accident, however, their relationship drastically changed. For approximately six months after the accident, the couple had no relations because of the severe pain that she was in. Even after this, intercourse was very sparing because Robin was undergoing therapy for her back, which was very painful. In his deposition, Kevin LaFlamme stated that his wife was not able to be the same companion that she was prior to the collision. The couple could not do the same things that they could do before, things such as going on road trips and vacations. Robin LaFlamme is not the only one who has suffered emotionally, but the rest of her family has as well. Some type of compensation needs to be made to this family, and it needs to come from the negligent parties involved with the case.

Conclusion

In conclusion, Robin LaFlamme has already suffered a great deal because of this accident, from the aggravation to the physical pain. It has been shown that Chrysler Corporation and Maine Line Auto Center were both negligent when it came to fixing the problem with the seat. Both parties knew that there could be a problem, yet neither

attempted to solve it. Many aspects of Robin LaFlamme's life have been affected by this collision, and she should receive some compensation for all of the pain that she has gone through. The basis for product liability cases is that someone needs to take responsibility for the problem that has occurred, and they need to rectify that situation. The LaFlamme family was in no way negligent, which has been shown in all of the written documentation. The jury will surely find that the negligent party needs to pay for the accident, and in this case, it is the Chrysler Corporation and Maine Line Auto Center.

MICHAEL HEATH VS. VERMEER MANUFACTURING: THE TREE SPADE CASE

Foreword

The Case of Michael Heath vs. Vermeer Manufacturing was a hard one to resolve. Both sides of the case had excellent arguments and solid evidence. We will attempt to relay both sides of the case without bias, and come to a conclusion or decision at the end of the paper.

Plaintiff's Arguments

Complaint

It was April 1, 1996 at Stewart's Nursery in Turners Falls, MA. The plaintiff, Michael Heath, was digging trees out of the ground, roots and all, so that they could be moved to a different area of New England for transplanting due to landscaping. Michael was attempting to complete this task with aid from a crew of four men and a machine, identified as the "Diggin' Dutchman" TS40 Power Tree Spade, Model Number M-485, manufactured by the Vermeeer Manufacturing Company.

While performing his task that morning, Michael was involved in an accident. He was severely injured as a portion of his left hand was traumatically amputated, when it was caught in an unguarded nip point while the hydraulic spade was being raised. The plaintiff has sustained severe bodily injury and has suffered extreme physical and mental pain including exorbitant scarring to the hand, loss of motion to the fingers, numbness, and amputation of the left index finger. In fact, the only part of the left hand that was not injured was the thumb.

The plaintiff, Michael Heath, believes that if the defendant company would have taken reasonable care with their products, they should have or would have known that the product was defective and would result in a dangerous product. He also states that the plaintiff was negligent in design and manufacturing of the tree spade, and that the defendant failed to warn of foreseeable dangers inherent in the usage of the machine. He also believes that the defendant breached the implied warranty of "fit for the purpose of which it was intended."

Deposition of Michael Heath

Much of what was discussed during the deposition of Mr. Heath was what was already contained in the complaint, and information that was personal and irrelevant to this case. Mr. Heath did, though, did describe his injuries and their severity, and gave a quick overview of what occurred directly before the accident.

"...So then the tree is lowered. He's [the operator, Mr. Stafford] raising the blades. Now, I'm on my feet now. I'm no longer on my knees. So once the tree is in the basket, I can stand back up. So now he's lowering the tree into the final, you know, depth of the basket. Now I have to reach in, hold the tree, because as the blades are coming up, it's gonna wiggle... I'm standing in the front of the gate where it opens and closes... I'm outside the square or platform."

Although Mr. Heath had not read the operations manual himself, the procedure that he was taught to use was the correct one. (Compared with his description and the directions outlined in the manual). Also, he specifically states that at no time before the

accident was he on the platform. He only says that after and perhaps during the accident he jumped onto the platform, only to free his hand once he felt it being pinched.

He also emphatically states that at no time did he rest his hand on top of the tree spade on purpose, and he does not know what caused his hand to get on top of the tree spade.

Defendant's Arguments

Deposition of Ivan Brand

One of the key witnesses for the defense is Ivan R. Brand, an employee at Vermeer Manufacturing Company. He began working for Vermeer in 1976, as a machinist's apprentice. Only a short while later, he became Product Safety Manager, and in 1989, he was appointed Director of Product Safety. His job is to work with the two engineering departments, industrial and agricultural, to assist in the development of high quality products. He also is in charge of product design reviews during design development, and then he must act on these results, whether it is formally or informally.

According to Mr. Brand, the TS-40 tree spade, the model involved in Mr. Heath's accident, was not defective, but rather it was used improperly, causing the incident. He claims that the interface between the top of the spade and the top of the tower was not only out of reach vertically, but it was also in an awkward position for someone to rest their hand in. Safety distance guarding, he insists, guarded this particular area, which means that warnings and other guards were not necessary. During the time of the incident in question, there were two or more people involved in the removal of the tree. The only time that the second person should be involved in the removal is when the tree is being placed into the wire basket. The dirt on the bottom of the tree must be leveled off to fit in

the basket. Mr. Heath should not have been near the interface of the top of the tower and the top if the spade.

After reviewing Mr. Heath's deposition, Brand was unsure how his hand could have gotten caught. Brand calculated that the interface would be approximately 92" off of the ground. From foot to fingertip, even the 95th percentile male is only 89". Mr. Heath, being approximately 5 feet 10 inches tall, unless he had extremely long arms, would have been unable to reach the edge.

Another discrepancy in Mr. Heath's story is that there would have to have been several things that happened in order for his hand to get caught. First, Mr. Heath would have had to climb up onto the machine, and then put his hand into the spade as it was rising. After placing his hand in the area, he would have had to leave it there until the spade reached the top, even though he felt it moving. It is extremely improbable that anyone would not be able to feel the machine moving or that they would not have enough time to remove it from the machine.

In his deposition, Mr. Brand also describes the documentation that was provided with the machine. When a machine is purchased, an operator's card and an operator's manual, which contains information about maintenance and parts, is supplied to the buyer. In the operator's manual, there is no specific warning about the interface that caused Mr. Heath's injury, however there is a statement that says "Keep hands, feet, and clothing away from all moving parts."

As Mr. Brand has proven, the machine was not defective, but rather it was improperly utilized. There is no reason for anyone to be standing on the machine while it is being used. The supposed "pinch point" is out of reach when the spade is being used.

These facts prove that Mr. Heath should not have been that close to the machine, which means that he is at fault for his accident.

The statements made in this deposition are further discussed in the interrogatories answered at a later time by Ivan Brand.

Answers to Interrogatories made by Plaintiff to Defendant Vermeer Manufacturing

The interrogatories focused upon the safety engineering considerations and safety testing done on the "Diggin' Dutchman" by Vermeer. The Product Safety Manager, Ivan Brand, provided answers and information concerning the case.

Mr. Brand stated that the safety signs and instructions that were recommended for the machine had been implemented. When asked how many tests were done on the machine for hand safety, Mr. Brand stated that no tests had been performed related to user hand safety. He was also unaware of document discussing, analyzing, or in anyway dealing with risk of hand injury. He also states that no similar injuries or prior claimed defects have occurred.

Also, he states that the design of the machine places the area where Mr. Heath was injured to be higher than a foreseeable zone of reach when using the machine as described in the Operator's Manual. In addition, Mr. Brand states that Vermeer could not foresee the combination of concurrent actions required to bring about a hand injury at the top of the tree spade.

The final and perhaps most important statement made by Ivan Brand on behalf of the Vermeer Manufacturing Company was that the accident was entirely the fault of the Plaintiff's Company.

"Jay Stafford (Machine Operator, Stewart's Nursery) allowed Michael Heath to climb inside the machine platform. At the time, the spades were raised, allegedly causing injury to the plaintiff's hand. Discovery is still active and ongoing, but, preliminarily, it is unclear whether Stafford was aware of the plaintiff's location, or the location of his hand, or whether either the plaintiff or Stafford was aware of the intended activities of the other."

Other Relevant Information

Operator's Manual

Some key rules and regulations on the machine operation are outlined here. On pages two and three, there are a few rules that are pertinent to the outcome of this case. They are stated as "keep all others... away from the machine", "be sure everyone is clear before opening or closing the rear of the tree spade", "keep hands, feet, and clothing away from all moving parts", and "never allow anyone to work under a raised tree spade".

If these rules have been broken, the plaintiff would not be able to blame fault on Vermeer, as he would have been using the machine improperly.

Videos

There were also three videos that documented how the machine worked, and the location and orientation of the interface between the top of the blade and the top of the tower. The first video was the demonstration video. After the tree spade encloses the tree, the blades are then lowered into the ground under it. When the blades are in the correct

position, the blades retract to pull the tree out of the ground. At no time, up to this point, has it been necessary for another worker, besides the driver, to get close to the tree spade. A worker may sometimes have to tell the driver if he must center the blades, but he does not need to be near the machine. After the tree is out of the ground, the driver retracts the blades slightly so that the dirt under the tree can be leveled off to fit into the wire basket. A second worker then places a basket in the vicinity of the tree and helps the driver drop the tree into it. The tractor then backs away, and the second worker wraps the tree. At no time during this demonstration was it necessary for the second worker to get anywhere near the moving parts of the machine.

All three of the videos also showed how out of reach the top of the tower is for a worker standing on the ground. In the demonstration video, they measure the distance from the ground to the interface of the tower and blade, and it is almost eight feet (96 inches), just as Mr. Brand said in his deposition. The other two videos, one being the first inspection of the spade for this case, show that the outstretched arm of an average male is at least six to seven inches away from the edge. That distance is only in the vertical direction. The orientation of the area would also make it difficult to get your hand caught. The frame of the spade is a square with all the interfaces facing into the center. A worker would have to reach into the spade and around the frame in order to place his hand in that area.

Conclusion

The outcome of this case is not an easy one to predict. Both the plaintiff and the defendant have valid cases, and we shall explore and piece together facts to come to a resolution.

Perhaps the hardest thing to establish was whether or not Mr. Heath was in fact standing on the platform or if he was simply steadying the tree. We have a series of questions that must be answered before the correct judgment can be made.

Because there were no eye – witnesses except the plaintiff himself, who was in a state of panic, how could the plaintiff be sure that it was the metal – on – metal crushing his hand, instead of a branch and metal? Also, in the video, it shows that it would be "hard" to place one's hand on the top of the tree spade, because of it's angular location, but when there is a tree inside of a machine, and you are attempting to work around the base of the tree and branches, is there any way to really put your hand straight in?

Let's also look at a piece of evidence that was in no way documented in the depositions or complaints. The accident occurred on an early spring morning, when all New Englanders know that the ground is still soft and wet from the cold temperatures and perhaps even the melting snow. The measurement of 92" could be easily taken, if the machine was on a hard concrete floor, where no ditches, holes, or soft ground existed. Also, did anyone ask Mr. Heath what type of footwear he had on that day? A good pair of work boots could give someone an extra one or two inches easily. No one asked Mr. Heath if he had been standing on his tip – toes steadying the tree either.

Even without the discussion of the platform, there is another question that we must answer when making a judgment on this case. There exists a document published

by the American Society of Mechanical Engineers, titled the "Safety Standard for Mechanical Power Transmission Apparatus". This standard applies to sources of mechanical power, and also to pulleys gears, and other mechanical components. The document also states safety requirements that shall be met after development of effective safe guarding methods to protect people from injury due to inadvertent contact with a mechanical power transmission apparatus is completed. One such requirement states "All personnel having access to the area where the motion hazards exist should be protected by safeguarding means, from contact with moving parts (mechanisms) by preventing personnel from walking into, reaching over or under, *or other inadvertent contacts*." Although Ivan Brand had mentioned that the machine was "height" safety guarded, there could have been a number of circumstances when that couldn't have been good enough, like those circumstances named above.

Also, there was no warning on the machine of pinching. We feel as though if the safety tests preformed by the defendant company included evaluating the process outlined in the instruction manual, and if safety tests were done a number of times in a correct environment, the pinching hazard would have been noticed. For example, step eight in the planting manual, published by the defendant company, states that it is necessary to steady the tree (step 8 in the operations manual). With a large tree inside of the machine, it could be very easy not to notice the particular location of the hand relevant to the hydraulically driven spade. Also, the leaves, branches, and other things relating to the tree may not only camouflage the metal but may, perhaps, even prevent or impede the hands from being in a safe location.

For the reasons of inadequate testing and failure to comply with ASME standards, we believe the plaintiff is entitled to all recoveries.

JURY DECISIONS ON CASE STUDIES

In the case of Roberto Ortiz vs. B.M. Root and Boschco, Inc., the jury sided with the defendants. They found no defect associated with the Root Vertical Boring Machine, and they stated that they believed the plaintiff contributed to his own injuries. They ruled that no compensation should be given to the plaintiff in this case.

Concerning the case of Robin and Kevin LaFlame vs. Maine Line Auto Center and Chrysler Corporation, the jury ruled for the plaintiff. They found the seat to be defective and they laid no blame on Mrs. LaFlame for the accident. The liability was split between Chrysler (2/3 liability) and the Maine Line Auto Center (1/3 liability). Jury number two felt that the total award should amount to around one hundred thousand dollars.

In the third case, Michael Heath vs. Vermeer (The Tree Spade Case), the jury felt that the plaintiff was at fault and contributed to his own injuries. They did not find the tree spade to be defective. They felt that no retributions should be awarded to the plaintiff Michael Heath.

IQP TRIAL PRESENTATIONS
SUNDAY, APRIL 29, 2001
HL 102, PRICE CONFERENCE ROOM
HIGGINS LABORATORY, WPI

JUDGES: PROFESSORS R. HAGGLUND AND M. DIMENTBERG

JURY DECISIONS ON THREE CASES

CASE 1: BORING MACHINE
ROBERTO OTIZ vs B.M. ROOT AND BOSCHCO, INC.

1. WAS THE BORING MACHINE DEFECTIVE? YES (NO)

2. DID MR. ORTIZ CONTRIBUTE TO HIS OWN INJURY? (YES) NO

3. HOW MUCH MONEY SHOULD BE AWARDED TO MR. ORTIZ? $ 0

A. WHAT SHOULD BE B.M. ROOT'S CONTRIBUTION? $_____
B. WHAT SHOULD BE BOSCHCO'S CONTRIBUTION? $_____
C. WHAT SHOULD BE ORTIZ'S CONTRIBUTION? $_____

CASE 2. PLYMOUTH VOYAGER SEAT
ROBIN AND KEVIN LAFLAME vs. MAINE LINE AUTO CENTER AND CHRYSLER CORPORATION

1. WAS THE DODGE CARAVAN SEAT DEFECTIVE? (YES) NO

2. DID MRS. LAFLAME CONTRIBUTE TO HER OWN INJURY? YES (NO)

3. HOW MUCH MONEY SHOULD BE AWARDED TO MRS. LAFLAME?
$ NO SPECIFIC AMOUNT / $100,000

A. WHAT SHOULD BE MAINE LINE AUTO CENTER'S CONTRIBUTION? $ 1/3 / 30%
B. WHAT SHOULD BE CHRYSLER'S CONTRIBUTION? $ 2/3 / 70%
C. WHAT SHOULD BE MRS. LAFLAMME'S CONTRIBUTION? $ 0

CASE 3. THE VERMEER TREE SPADE

MICHAEL HEATH vs. VERMEER

1. WAS THE TREE SPADE DEFECTIVE? YES (NO)

2. DID MR. HEATH CONTRIBUTE TO HIS OWN INJURY? (YES) NO

3. HOW MUCH MONEY SHOULD BE AWARDED TO MR. HEATH?

$_____0_____

A. WHAT SHOULD BE VERMEER'S CONTRIBUTION?_ $_____

B. WHAT SHOULD BE MR. HEATH'S CONTIBUTION?_ $_____