AIRCO, INC. *v.* SIMMONS FIRST NATIONAL BANK, Guardian, et al

82-12 638 S.W.2d 660

Supreme Court of Arkansas
Opinion delivered July 12, 1982

1. DAMAGES — PUNITIVE DAMAGES — PROOF REQUIRED. — Before punitive damages can be imposed, the jury must find that defendant knew or should have known, in the light of the surrounding circumstances, that its conduct would naturally or probably result in injury and that it continued such conduct in reckless disregard of the circumstances from which malice may be inferred.
2. DAMAGES — PUNITIVE DAMAGES — SUBSTANTIALITY OF EVIDENCE. — There was substantial evidence to support a punitive damage award where the proof, consisting mainly of expert testimony, tended to show that defendant designed, manufactured, sold and persisted in selling a selector valve on a ventilator used in giving artificial respiration during surgical operations, even though defendant should have

realized originally and should also have learned before 1980, when the accident occurred which resulted in serious lung injury and irreversible brain damage to appellee guardian's ward, that the device was so inherently dangerous that it ought never to have been put on the market.

Appeal from Saline Circuit Court; *John W. Cole,* Judge; affirmed.

Wright, Lindsey & Jennings, for appellant.

Whetstone & Whetstone, by: *Bernard Whetstone,* for appellees.

GEORGE ROSE SMITH, Justice. On May 14, 1980, Georgia Huchingson underwent surgery at a hospital in Little Rock. In connection with the operation, certain drugs had impaired her ability to breathe during the surgery; so the anesthetist had to provide artificial breathing for the patient. During the operation the artificial breathing procedure malfunctioned for several minutes, causing Mrs. Huchingson to suffer serious lung injury and irreversible brain damage. This action for compensatory and punitive damages was brought by Mrs. Huchingson's guardian and by her husband against various local defendants and against the appellant, Airco, Inc., which had manufactured a machine used in the artificial breathing procedure.

A day or two before trial, liability for compensatory damages was admitted both by Airco and by the partnership of doctors that had provided the anesthesiological services. The plaintiffs then dismissed all their causes of action except the admitted claims and the cause of action against Airco for punitive damages. The jury awarded compensatory damages of $1,070,000 against the partnership and Airco and punitive damages of $3,000,000 against Airco, whose net worth had been shown to exceed $607,000,000. The compensatory award has been paid.

For reversal Airco argues only that there is no substantial evidence to support a punitive damage award. The pivotal issue was submitted to the jury in AMI 2217, which

includes this admittedly correct statement of the law: "Before you can impose punitive damages, you must find that Airco, Inc. knew or ought to have known, in the light of the surrounding circumstances, that its conduct would naturally or probably result in injury and that it continued such conduct in reckless disregard of the circumstances from which malice may be inferred." AMI Civil 2d, 2217 (1974). Specifically, it is insisted that the proof does not show that Airco should have known that injury was natural or probable or that Airco, instead of being merely negligent, continued its conduct in reckless disregard of the consequences. The case comes to us as involving products liability. Rule 29 (1) (m).

We need not describe the artificial breathing apparatus in complete detail. Two machines are used, side by side near the operating table. The anesthesia machine, not in issue here, provides, through a system of similar black hoses, a continuous flow of mixed gases that serve as fresh air. The air travels in a circuit. It enters the patient through a mask, equipped with valves, that is held against the patient's face. When the air leaves the patient's lungs, it returns to the mask and travels through a different hose back to the anesthesia machine, which has an absorber to remove carbon dioxide.

The flow of air to the patient's lungs must have alternate positive and negative pressure, so that the lungs will expand and contract as in natural breathing. That alternating pressure is provided, during a typical operation, part of the time by a flexible bag which an anesthetist squeezes and releases by hand and part of the time by the second machine, a ventilator that also creates alternating pressure.

For various reasons it is usually necessary to switch back and forth from the bag to the ventilator. The Airco ventilator used in Mrs. Huchingson's case had two ways for the anesthetist to make the switch. One method was entirely manual: To change, for example, from the bag to the machine, the anesthetist would simply remove the bag from the absorber, connect a hose in its place, and start the

ventilator machine. That method takes about ten seconds and involves no substantial hazard to the patient.

The other method eliminates the manual procedure, using instead an optional accessory called a selector valve. This small device is to be attached to the ventilator. It has three "ports" of the same size, open pipes over which a hose or the neck of a bag may be slipped. When properly used, hoses are attached to the two ports on the sides of the device and a bag may be attached to the middle port, which extends downward. The device has a straight handle with two possible positions, pointing down when the bag is in use and horizontally when the ventilator is in use. The anesthetist turns the handle to make a desired switch.

What happened during Mrs. Huchingson's surgery was this: Before the operation began, a hose had been properly attached to the right-hand port on the selector valve, with the other end of the hose open for later connection to the absorber. Someone, however, had incorrectly put another hose on the middle port, where only a bag was meant to be connected. When the nurse-anesthetist, an employee of the partnership, decided to stop using a bag at the absorber, she removed it and by mistake attached in its place the hose hanging from the middle port. The effect of the improper connections was to permit the anesthesia machine to continue to pump air into the patient's lungs, with no way for the air to escape. The ensuing build-up of pressure and lack of oxygen resulted in serious damage to the patient's lungs and brain.

The plaintiffs' proof, consisting mainly of expert testimony, tended to show that Airco designed, manufactured, sold, and persisted in selling the selector valve even though Airco should have realized originally and should also have learned before 1980 that the device was so inherently dangerous that it ought never to have been put on the market. The foreseeable danger was just what happened during Mrs. Huchingson's surgery — human error brought about by the presence of several identical black hoses and by the necessity for connecting them correctly to three similar ports that were too close together and that lacked adequate

labels and warnings. The danger would have been eliminated had Airco substituted for this particular selector valve either of two available alternatives: the manual system for which the ventilator was designed or a selector valve having only two ports instead of three.

The plaintiffs called as their first witness Wayne Hay, an Airco staff engineer, who had designed both the ventilator and the selector valve in 1973 when Airco decided to manufacture its own ventilators instead of selling one made for it by another company. From the beginning Hay was aware of the hazard in the use of the selector valve: "[S]ince you have a choice now, you can make the wrong choice." Before the ventilator and selector were marketed, they were field tested at about 30 representative sites throughout the country. Reports were unfavorable. One said that no one liked the bag/ventilator valve; it could have killed the patient. Other reports said the selector was dangerous and could kill people. Nevertheless, the company manufactured and sold the selector valve. Hay testified that since the users would be professional people, they should have common sense enough to learn all the hazards before using the selector. Hay also defended the company's action because the selector was offered as an optional accessory. "The user can buy it or not as he chooses. If he chooses to buy it, the choice is his, not mine. That's a professional choice of his. I see no reason why we should refuse to sell it if he wants it, and there is an obvious market for it." Hay had seen a 1977 article about an incident similar to the Huchingson case. He said he probably read follow-up letters to the editor saying that the selector valve was dangerous and shouldn't be on the machine, but they didn't tell him anything he didn't already know. Since no other employee or officer of Airco testified, the jury doubtless accepted Hay's testimony as stating the company's position.

Another witness was Dr. Susan Dorsch, an experienced anesthesiologist from Florida. She believed strongly that the selector valve should not be on the market. She approached the matter by using a "benefit to risk ratio." She believed that the risks were overwhelming as compared to the benefit of convenience. She said it was easy to make a misconnec-

tion, because the ports were the same size and close together. Such a misconnection could kill the patient or cause irreparable damage to the lungs and brain within a very short time. Dr. Dorsch also pointed out that while using the ventilator the nurse-anesthetist has a lot of things on her mind: She must regulate the amount of anesthesia, watch the blood pressure, check the cardiac monitor, squeeze the bag to ventilate the patient, and watch the patient's chest. Dr. Dorsch also cited a 1972 article that referred to accidents similar to the Huchingson incident, involving an increase in breathing pressure resulting from a misconnection.

Two members of the defendant partnership testified (one by deposition) that the selector valve was dangerous. They did not learn until after the Huchingson incident that the ventilator could be used without the selector valve, which they said they would never use again. One of them said that the selector valve "is absolutely a time bomb, and anybody that sits there and connects it a few thousand times, they're going to misconnect it sooner or later." Dr. Drinker, a bio-medical engineer from Boston, testified that the selector valve is lethal. He did not think that the selector fulfills any necessary function, but it introduces the risk of an accidental connection resulting in death or serious injury.

Another witness, Dr. Leslie Ball, was a safety engineer with 43 years' experience. He had read the depositions, had examined the operating room and equipment, and in other respects had familiarized himself with the Huchingson case. His purpose was to determine the foreseeability of the injury that occurred. He testified: "And it was very clear that what did happen was just exactly the sort of thing the safety engineer, through predictive analysis, would expect, not very often, but everything that did happen, each event, both what happened to the equipment and what happened to the people, was foreseeable by a reasonably competent engineer." Dr. Ball believed that the risk presented by the selector valve was catastrophic and should have been eliminated by the manufacturer, either by not selling it or by making it completely safe. He thought that the first time a similar accident happened, as reported in the trade lit-

erature, the selector valves should have been recalled. The witness concluded that the selector valve is "grossly in violation of safety engineering principles and never should have been put on the market."

There was other testimony, with very little to the contrary, but the proof we have narrated brings the case within the requirements of AMI 2217. A jury question was presented.

Airco argues that it took a combination of nine separate acts of negligence (most of which are attributed to the nurse-anesthetist) to bring about Mrs. Huchingson's injuries; so that consequence is said not to have been natural or probable. The exact combination of circumstances is immaterial. What does matter is that serious injury to *someone,* brought about by human error attributable to the design of the selector valve, was both a natural and a probable consequence of Airco's conduct. Certainly the jury could have so believed, with substantial evidence to support its conclusion. Moreover, that possibility of injury could have been eliminated had Airco simply put the ventilator on the market without the optional but lethal selector.

It is also argued that Airco, like the tortfeasor in *Forrest City Machine Works* v. *Aderhold,* 273 Ark. 33, 616 S.W.2d 720 (1981), was guilty only of simple negligence rather than of that persistent reckless disregard of consequences that is essential to liability for punitive damages. The two cases are decidedly dissimilar. Airco knew that the patient's very life always depended upon the artificial breathing supplied by the ventilator. Consequently the marketing of an optional, unnecessary, and lethal selector valve is not comparable to the sale of farm machinery which, in *Aderhold,* did not necessarily involve a similar continuous possibility of death or serious injury. Furthermore, it does not appear that in the *Aderhold* case there was proof similar to that now before us — that the manufacturer knew from the outset, by its own testing, that an unnecessary component of the product was so deadly that it should never have been made available to the public. On the record as a whole we hold that the issue of punitive damages was properly submitted to the jury.

Affirmed.

PURTLE, J., not participating.

HICKMAN, J., concurs.

DARRELL HICKMAN, Justice, concurring. I agree in every respect with the majority opinion and concur simply to point out I believe the plaintiffs in *Forrest City Machine Works* v. *Aderhold*, 273 Ark. 33, 616 S.W.2d 720 (1981) had as strong or stronger case for punitive damages which the majority found wanting.

HAYS, J., joins in this concurrence.