

UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

Panduit Corp. v. Stahl Bros. Fibre Works, Inc.

197 U.S.P.Q. 726 (6th Cir. 1978) · No. No. 75-2417 · Decided April 25, 1978

SUMMARY

The Sixth Circuit addresses damages for infringement of a patent covering electrical wiring duct. The court affirms the denial of lost profits but holds that the 2.5% reasonable royalty was improperly determined, particularly because the district court relied on an erroneous finding concerning acceptable noninfringing substitutes. The case is remanded for redetermination of the reasonable royalty.

CASE DETAILS

COURT	United States Court of Appeals for the Sixth Circuit
WRITING FOR THE COURT	Howard T. Markey, Chief Judge of the Court of Customs and Patent Appeals, sitting by designation; Phillips, Chief Circuit Judge; Celebrezze, Circuit Judge
JURISDICTION	Federal
DECIDED	April 25, 1978
DOCKET	No. 75-2417
DISPOSITION	reversed_and_remanded
PROCEDURAL POSTURE	Panduit appealed from a district court judgment adopting a special master's report awarding patent-infringement damages based on a 2.5% reasonable royalty.
STANDARD OF REVIEW	Clearly erroneous review of the master's and district court's factual findings under Fed. R. Civ. P. 52(a); abuse-of-discretion review for the master's refusal to require a particular accounting statement under Fed. R. Civ. P. 53(d)(3).
PRECEDENTIAL VALUE	published precedential federal appellate opinion
PARTIES	Panduit Corp. v. Stahl Bros. Fibre Works, Inc.

TOPICS

- patent infringement
- damages
- commercial litigation
- appellate procedure
- standard of review

PRACTICE AREAS

intellectual property

patent law

patent infringement

patent damages

commercial litigation

appellate procedure

QUESTIONS PRESENTED

1. Whether Panduit proved entitlement to lost profits on sales it allegedly would have made absent infringement.
2. Whether Panduit was entitled to damages for profits allegedly lost because Stahlin reduced its prices.
3. Whether the district court correctly determined a reasonable royalty of 2.5% under 35 U.S.C. § 284.
4. Whether the absence of acceptable noninfringing substitutes and other economic factors required reconsideration of the reasonable royalty.

HOLDINGS

1. A patent owner seeking lost profits on sales made by an infringer must prove demand for the patented product, the absence of acceptable noninfringing substitutes, manufacturing and marketing capability, and the amount of profit the owner would have made. Panduit failed to prove the amount of profit because its evidence did not adequately account for fixed costs.
2. Panduit was not entitled to damages for profits allegedly lost because of Stahlin's price reduction where the factfinder determined that the price reduction increased Panduit's sales volume and produced a net increase in Panduit's profits.
3. When actual damages such as lost profits cannot be proved, the patent owner is entitled to at least a reasonable royalty under 35 U.S.C. § 284. A post-infringement reasonable royalty cannot be determined as though the parties had engaged in an ordinary voluntary license negotiation before infringement.
4. An acceptable noninfringing substitute must be a product that customers would have been willing to buy in place of the infringing product during the relevant period, with the inquiry focused on the date infringement began. A later ability to switch customers to another product does not establish that an acceptable substitute was then available.

KEY QUOTATIONS

“To obtain as damages the profits on sales he would have made absent the infringement, i. e., the sales made by the infringer, a patent owner must prove: (1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made.” (¶ 12)

“The setting of a reasonable royalty after infringement cannot be treated, as it was here, as the equivalent of ordinary royalty negotiations among truly “willing” patent owners and licensees.” (¶ 31)

“On remand, the following factors must also be considered: (1) the lack of acceptable noninfringing substitutes, (2) Panduit's unvarying policy of not licensing the Walch patent, (3) the future business and

attendant profit Panduit would expect to lose by licensing a competitor, and (4) that the infringed patent gave the entire marketable value to the infringed duct.” (¶ 73)

FACTUAL BACKGROUND

Panduit owned the Walch patent covering electrical wiring duct and maintained a policy of excluding others from making and selling the patented product. Stahlin manufactured and sold infringing ducts beginning in 1957 and continued after the patent issued in 1962, after Panduit filed suit, and after entry of an injunction. Panduit could not establish the amount of profits it would have made on lost sales because of insufficient evidence concerning fixed costs, but Stahlin made infringing sales totaling \$1,788,384 during the relevant period. The patented duct had functional advantages that created substantial customer preference, and the record did not establish acceptable noninfringing substitutes at the date infringement began.

PROCEDURAL HISTORY

Panduit previously obtained a judgment that Stahlin infringed the Walch patent, an injunction, and an accounting. After a damages proceeding before a special master, the district court adopted the master's findings and awarded \$44,709.60 based on a 2.5% royalty. Panduit sought lost profits or, alternatively, a substantially higher royalty, and also sought damages for profits allegedly lost because of Stahlin's price cut. The Sixth Circuit affirmed the denial of lost-profit damages and price-cut damages, but reversed the reasonable-royalty determination and remanded for recalculation.

DISPOSITION

reversed_and_remanded

REMAND INSTRUCTIONS

The district court must redetermine the reasonable royalty. The master must determine Panduit's actual profit margin in March 1962 and the customary profit allowed licensees in the electrical-duct industry, and must consider the lack of acceptable noninfringing substitutes, Panduit's policy of not licensing the patent, the future business and profits Panduit would lose by licensing a competitor, and that the patent supplied the entire marketable value of the duct.

CASES CITED

- Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 298 F. Supp. 435 (W.D. Mich. 1969), aff'd, 430 F.2d 221 (6th Cir. 1970)
- Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 338 F. Supp. 1240 (W.D. Mich. 1972), aff'd, 476 F.2d 1286 (6th Cir. 1973)
- Aro Mfg. Co. v. Convertible Top Replacement Co., 377 U.S. 476, 507 (1964)
- Coupe v. Royer, 155 U.S. 565, 582 (1895)
- Yale Lock Mfg. Co. v. Sargent, 117 U.S. 536, 552 (1886)
- Livesay Window Co. v. Livesay Industries, Inc., 251 F.2d 469, 471 (5th Cir. 1958)

- General Electric Co. v. Sciaky Bros., Inc., 415 F.2d 1068, 1073, 1075 (6th Cir. 1969)
- McSherry Mfg. Co. v. Dowagiac Mfg. Co., 163 F. 34, 35 (6th Cir. 1908)
- Enterprise Mfg. Co. v. Shakespeare Co., 141 F.2d 916, 920 (6th Cir. 1944)
- Egry Register Co. v. Standard Register Co., 23 F.2d 438, 442-443 (6th Cir. 1928)
- Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co., 95 F.2d 978, 984 (6th Cir. 1937)
- United States Frumentum Co. v. Lauhoff, 216 F. 610, 617 (6th Cir. 1917)
- Georgia-Pacific Corp. v. U.S. Plywood-Champion Papers, 318 F. Supp. 1116, 1123, 1127 (S.D.N.Y. 1970),
aff'd, 446 F.2d 295 (2d Cir. 1971)
- Troxel Mfg. Co. v. Schwinn Bicycle Co., 465 F.2d 1253, 1257 (6th Cir. 1972)
- Lear, Inc. v. Adkins, 395 U.S. 653, 670 (1969)
- United States v. Dubilier Condenser Corp., 289 U.S. 178, 186 (1933)
- Seymour v. Osborne, 78 U.S. (11 Wall.) 516, 533 (1871)
- Hughes Tool Co. v. G. W. Murphy Industries, Inc., 491 F.2d 923, 930-931 (5th Cir. 1973)
- Cugley v. Bundy Incubator Co., 93 F.2d 932, 934 (6th Cir. 1937)
- Rude v. Westcott, 130 U.S. 152, 164 (1889)
- Tights, Inc. v. Kayser-Roth Corp., 442 F. Supp. 159, 166 (M.D.N.C. 1977)

OPINION

MARKEY, J.

575 F.2d 1152 197 U.S.P.Q. 726 PANDUIT CORP., Plaintiff-Appellant,v.STAHLIN BROS. FIBRE WORKS, INC., Defendant-Appellee. No. 75-2417. United States Court of Appeals,Sixth Circuit. Argued Nov. 29, 1977.Decided April 25, 1978. Roy E. Petherbridge, Petherbridge, Lindgren & Gilhooly, Chicago, Ill., Charles R. Wentzel, Tinley Park, Ill., for plaintiff-appellant.

A. James Valliere, Hill, Gross, Simpson, Van Santen, Steadman, Chiara & Simpson, Chicago, Ill., for defendant-appellee. Before PHILLIPS, Chief Circuit Judge, CELEBREZZE, Circuit Judge, and MARKEY, Chief Judge of the Court of Customs and Patent Appeals.* MARKEY, Chief Judge. 1 Appeal from a judgment of the district court, Panduit Corp. v. Stahl Bros. Fibre Works, Inc., C.A.

Nos. 4935 and G293-71 (W.D.Mich. Sept. 15, 1975), adopting, with an unpublished opinion, the report of the special master awarding plaintiff, as damages for patent infringement, a reasonable royalty of 21/2%. We reverse and remand. Litigation Background 2 In 1964 plaintiff Panduit Corp. (Panduit) sued defendant Stahl Bros. Fibre Works, Inc. (Stahl) for infringement of Panduit's Walch patent No. 3,024,301, covering duct for wiring of electrical control systems.

In 1969, the district court found claim 5 valid and infringed by the "Lok-Slot" and "Web-Slot" ducts made and sold by Stahl, enjoined Stahl from further infringement, and ordered an

accounting. 298 F.Supp. 435, 162 USPQ 114 (W.D.Mich.1969). That judgment was affirmed on appeal. 430 F.2d 221, 166 USPQ 524 (6th Cir. 1970), cert. denied, 401 U.S. 939, 91 S.Ct.

932, 28 L.Ed.2d 218, 168 USPQ 673 (1971). 3 Thereafter, the district court adjudged Stahlin in contempt of the court's injunction, because of Stahlin's making and selling the "Tear Drop" duct, a colorable imitation of the infringing "Lok-Slot," 338 F.Supp. 1240, 172 USPQ 650 (W.D.Mich.1972). That judgment was also affirmed on appeal. 476 F.2d 1286, 178 USPQ 12 (6th Cir.

1973). 4 In 1971, the district court appointed a master to determine Panduit's damages pursuant to 35 U.S.C. § 284,1 to take evidence, and render a report on the issues of treble damages, interest, costs, and attorney fees.

The district court, in adopting in toto the master's report, considered the master's findings of fact not clearly erroneous, and stated that "the Master had correctly applied the law to the circumstances of this case."

The report recommended \$44,709.60 in damages, based on a royalty of 21/2% of gross sales price, the percentage being calculated on Stahlin's testimony that its normal profit on all of its products was 4.04% and the concept that a "reasonable royalty" entailed some level of profit to the "licensee." Horvath v. McCord Radiator and Mfg. Co., 100 F.2d 326 at 335, 40 USPQ 394 at 403 (6th Cir.

1938), cert. denied, 308 U.S. 581, 60 S.Ct. 101, 84 L.Ed. 486, 43 USPQ 520 (1939). Fact Background 5 The duct manufactured by Panduit was invented by its president, Jack Caveney. Panduit began to make and sell the duct in 1955, and Caveney applied for a patent in 1956.

In an interference proceeding in the Patent Office, it was determined that Walch, an employee of General Electric, was the first inventor of the duct. A patent issued to General Electric, as Walch's assignee, on March 6, 1962. Panduit then acquired the Walch patent from General Electric and established a firm policy of exercising its right to that patent property, i. e., of the right to exclude others from making and selling the patented duct.

6 Stahlin began to manufacture and sell the "Lok-Slot" and "Web-Slot" ducts in 1957, and continued to do so after issuance of the Walch patent and its sale to Panduit in 1962. On January 1, 1963, Stahlin introduced a price cut of approximately 30% on its "Lok-Slot" and "Web-Slot" ducts. 7 Panduit seeks \$808,003 as damages for lost profits on lost sales over the period March 6, 1962, the date of first infringement, to August 7, 1970, the effective date of the initial injunction;2 or, alternatively, a 35% reasonable royalty rate yielding \$625,940.

In addition, Panduit seeks \$4,069,000 in profits lost on Panduit's own sales because of Stahlin's price cut. Issue 8 The dispositive issue is whether the master's determination of a reasonable

royalty was in error. OPINION 9 The statute, 35 U.S.C. § 284, requires that the patent owner receive from the infringer "damages adequate to compensate for the infringement."

In *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476 at 507, 84 S.Ct. 1526, 1543, 12 L.Ed.2d 457, 141 USPQ 681 at 694 (1964), the Supreme Court stated: 10 But the present statutory rule is that only "damages" may be recovered. These have been defined by this Court as "compensation for the pecuniary loss he (the patentee) has suffered from the infringement, without regard to the question whether the defendant has gained or lost by his unlawful acts."

Coupe v. Royer, 155 U.S. 565, 582, 15 S.Ct. 199, 39 L.Ed. 263. They have been said to constitute "the difference between his pecuniary condition after the infringement, and what his condition would have been if the infringement had not occurred." *Yale Lock Mfg. Co. v. Sargent*, 117 U.S. 536, 552, 6 S.Ct. 934, 29 L.Ed. 954.

The question to be asked in determining damages is "how much had the Patent Holder and Licensee suffered by the infringement. And that question (is) primarily: had the Infringer not infringed, what would Patent Holder-Licensee have made?" (Citing *Livesay Window Co. v. Livesay Industries, Inc.*, 251 F.2d 469, 471, 116 USPQ 167, 168 (5th Cir., 1958).) 11 Panduit argues that the district court erred (1) in denying Panduit its lost profits due to lost sales, or, in the alternative, a 35% reasonable royalty; and (2) in denying Panduit its lost profits from its own actual sales due to Stahlin's price cut.

Lost Profits Due to Lost Sales 12 To obtain as damages the profits on sales he would have made absent the infringement, i. e., the sales made by the infringer, a patent owner must prove: (1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made.

3 R. White, *Patent Litigation: Procedure and Tactics* § 9.03(2). See, e. g., *Bros. Inc. v. W. E. Grace Mfg. Co.*, 320 F.2d 594 at 598, 138 USPQ 357 at 358 (5th Cir. 1963) and *Electric Pipe Line, Inc. v. Fluid Systems, Inc.*, 250 F.2d 697, 116 USPQ 25 (2d Cir. 1957). 13 It is not disputed that Panduit established elements (1) and (3). Regarding (2), the master found that: "The evidence clearly shows the existence of acceptable non-infringing substitute ducts which would have permitted the defendant to retain its customers."

That finding, as discussed below, was in error. However, Panduit is not entitled to its lost profits on lost sales in this case because of its failure to establish element (4). 14 The district court upheld as not clearly erroneous the master's finding that "there was insufficient evidence from which a fair determination could be made as to the amount of profit plaintiff would have made on such sales."

15 Panduit's Achilles heel on element (4) is a lack of evidence on its fixed costs. Panduit alleges that its omission is overcome by other evidence and by *General Electric Co. v. Sciaky Bros., Inc.*, 415 F.2d 1068, 163 USPQ 257 (6th Cir. 1969). Sciaky is distinguishable and therefore not controlling on fixed costs.

The accounting presented by Sciaky's expert witnesses included some overhead expenses, but omitted others which those witnesses testified were general and "paid by Sciaky during the years in question and would not have been greater if these additional machines had been produced and sold by Sciaky." 415 F.2d at 1075, 163 USPQ at 262. General Electric (the infringer) disputed that theory, but offered no testimony to contradict it.

The court held: 16 Whether Sciaky's accounting method was accurate or not was a matter to be decided on the basis of testimony in the hearing before the Master. This was the specific function of that hearing. We do not believe that this issue can properly be decided as a matter of law before this court on appeal. 17 415 F.2d at 1075, 163 USPQ at 262. 18 In the present case, Stahlin did dispute Panduit's accounting theory, presenting its own expert witnesses to contradict it.

Under Sciaky, the accuracy of the patent owner's accounting method is "a matter to be decided on the basis of testimony in the hearing before the Master." The master here found, on the basis of the evidence before him, and the district court agreed, that Panduit's accounting theory was deficient.

As was said in Sciaky: 19 (W)here the District Court adopts the Master's findings of fact, Fed.R.Civ.P. 52(a) provides that such findings "shall be considered as the findings of the court" which cannot be set aside unless "clearly erroneous." 20 415 F.2d at 1073, 163 USPQ at 260. 21 We realize, as noted in Sciaky, that Panduit's theory is "by no means novel in patent damage cases."

415 F.2d at 1075, 163 USPQ at 262. Nevertheless, there is no evidence of record sufficient to support a conclusion that the master's findings respecting Panduit's omission, whether of certain fixed costs or of certain variable costs, were clearly erroneous.³ 22 Panduit's argument that the master was required by Fed.R.Civ.P. 53(d)(3)⁴ to require a statement taking into account its omitted costs is without merit.

The rule is discretionary, not mandatory, and it was not an abuse of the master's discretion to refuse the requested statement. 23 On the issue of Panduit's lost profits on lost sales, we affirm the district court. Stahlin's Price Cut 24 The district court upheld as not clearly erroneous the master's finding that: "Any loss in (Panduit's) profits due to the price reduction was more than compensated by the gain in profits due to the increase in plaintiff's sales volume because of the price reduction.

Thus, the price reduction resulted in a net increase in profit to the plaintiff." 25 The right to damages caused by price reduction stands on the same ground as that to damages caused by lost sales. *McSherry Mfg. Co. v. Dowagiac Mfg. Co.*, 163 F. 34 at 35 (6th Cir. 1908).

Having accepted the master's evaluation, that the testimony of Stahlin's accounting and economic experts was more credible and persuasive than that of Panduit's, we are bound, in the absence of clear evidence to the contrary, to accept as not clearly erroneous the master's finding that the price reduction in this case produced a net increase in Panduit's profits.

26 We affirm, therefore, the district court's refusal to award damages on the basis of Stahlin's price cut. Reasonable Royalty 27 When actual damages, e. g., lost profits, cannot be proved, the patent owner is entitled to a reasonable royalty. 35 U.S.C. § 284. See also *Enterprise Mfg. Co. v. Shakespeare Co.*, 141 F.2d 916 at 920, 61 USPQ 201 at 204 (6th Cir.

1944); *Egry Register Co. v. Standard Register Co.*, 23 F.2d 438 at 442 (6th Cir. 1928); *Wm. Bros Boiler and Mfg. Co. v. Gibson-Stewart Co., Inc.*, 312 F.2d 385 at 386, 136 USPQ 239 at 240 (6th Cir. 1963). A reasonable royalty is an amount "which a person, desiring to manufacture and sell a patented article, as a business proposition, would be willing to pay as a royalty and yet be able to make and sell the patented article, in the market, at a reasonable profit."

Goodyear Tire and Rubber Co. v. Overman Cushion Tire Co., 95 F.2d 978 at 984, 37 USPQ 479 at 484 (6th Cir. 1937) (citing *Rockwood v. General Fire Extinguisher Co.*, 37 F.2d 62 at 66, 4 USPQ 299 at 303 (2d Cir. 1930)), appeal dismissed on motion of counsel for petitioners, 306 U.S. 665, 59 S.Ct. 460, 83 L.Ed. 1061 (1938). 28 The key element in setting a reasonable royalty after determination of validity and infringement is the necessity for return to the date when the infringement began.

In the present case, that date is March 6, 1962. On that date, Panduit possessed the particular property right found to have been infringed by Stahlin. On that date, Panduit had a particular profit margin, and the property right to exclude others from making, using, or selling the patented product. 35 U.S.C. § 271.5 At that point Stahlin chose to continue the making and selling of the patented product.

29 As a result of Stahlin's election to infringe its property right, Panduit has suffered substantially. See *United States Frumentum Co. v. Lauhoff*, 216 F. 610 (6th Cir. 1917). Though unable to prove the actual amount of lost profits or to establish a damage figure resulting from Stahlin's price cut, Panduit was clearly damaged by having been forced, against its will, to share sales of the patented product with Stahlin.

Further, Panduit has been forced into thirteen years of expensive litigation, involving \$400,000 in attorney fees, a trial, a contempt proceeding to enforce the court's injunction, a hearing on damages, and three appeals.

For all this, the "damages adequate to compensate for the infringement," 35 U.S.C. § 284, have thus far been found to total \$44,709.60.6 30 Having elected to continue the manufacture and sale of the patented duct after the patent issued, and having elected to manufacture and sell a second

infringing product in the face of the court's injunction, Stahlin was able to make infringing sales, as found by the master, totalling \$1,788,384.

31 The setting of a reasonable royalty after infringement cannot be treated, as it was here, as the equivalent of ordinary royalty negotiations among truly "willing" patent owners and licensees. That view would constitute a pretense that the infringement never happened. It would also make an election to infringe a handy means for competitors to impose a "compulsory license" policy upon every patent owner.

32 Except for the limited risk that the patent owner, over years of litigation, might meet the heavy burden of proving the four elements required for recovery of lost profits, the infringer would have nothing to lose, and everything to gain if he could count on paying only the normal, routine royalty non-infringers might have paid.

As said by this court in another context, the infringer would be in a "heads-I-win, tails-you-lose" position. *Troxel Mfg. Co. v. Schwinn Bicycle Co.*, 465 F.2d 1253 at 1257, 175 USPQ 65 at 68 (6th Cir. 1972), cert. denied, 416 U.S. 939, 94 S.Ct. 1942, 40 L.Ed.2d 290 (1974). 33 On the date a patent issues, a competitor which made no investment in research and development of the invention, has four options: (1) it can make and sell a non-infringing substitute product, and refrain from making, using, or selling a product incorporating the patented invention; (2) it can make and sell the patented product, if the patent owner be willing, negotiating a license and paying a reasonable (negotiated) royalty; (3) it can simply take the invention, running the risk that litigation will ensue and that the patent will be found valid and infringed, or (4) it can take a license under option (2) and thereafter repudiate its contract, challenging the validity of the patent.⁷ Determination of a reasonable royalty, after election of option (3), cannot, without injustice, be treated as though the infringer had elected option (2) in the first place.

34 Determination of a "reasonable royalty" after infringement, like many devices in the law, rests on a legal fiction. Created in an effort to "compensate" when profits are not provable, the "reasonable royalty" device conjures a "willing" licensor and licensee, who like *Ghosts of Christmas Past*, are dimly seen as "negotiating" a "license." There is, of course, no actual willingness on either side, and no license to do anything, the infringer being normally enjoined, as is Stahlin, from further manufacture, use, or sale of the patented product.

35 The amount of a reasonable royalty after infringement turns on the facts of each case, as best they may be determined. Among the relevant facts are: "what plaintiff's property was, to what extent defendant has taken it, its usefulness and commercial value as shown by its advantages over other things and by the extent of its use," *United States Frumentum*, 216 F. at 617, and the commercial situation, *Egry*, 23 F.2d at 443.

36 In determining that a reasonable royalty rate here was 21/2%, the master found: (1) there were present in the market on the date of first infringement acceptable noninfringing substitutes and competing duct producers, (2) Panduit could not have maintained a high price differential in the face of competition from the substitute ducts, (3) on the hypothetical negotiation date, both Panduit and Stahlin would have been aware of the competitive state of the market, and of the probability of future price cuts, including Stahlin's, (4) the testimony of Stahlin's patent law expert, Scofield, was "more credible and persuasive and more in line with the factual realities of this case" than the testimony of Panduit's patent law expert, and (5) Stahlin's profit on gross sales of all its products for the relevant period was 4.04%, and there was "no evidence to indicate that the profit on its duct sales was significantly higher than the profit on its total sales generally."

The district court held those findings not clearly erroneous. We disagree. 37 In adopting the master's report, the district court stated: 38 The Master based his finding that noninfringing substitutes were available principally upon the additional finding that defendant was markedly successful in switching its customers to noninfringing products when that became necessary.

The latter finding is not clearly erroneous, and although defendant was not actually selling the principal noninfringing substitute... during the relevant time period, it is not erroneous to conclude that the substitute was available. Cf. *Hughes Tool Co. v. G. W. Murphy Indus., Inc.*, 491 F.2d 923, 930-931 (5th Cir. 1973). 39 The district court also found the master correct in defining an acceptable noninfringing substitute as "a product which customers are willing to buy in place of the infringing product."

40 In concluding that error occurred with respect to substitutes, we are mindful of the comments of this court in *Enterprise Mfg.*, 141 F.2d at 920, 61 USPQ at 205: 41 The appellee, by infringing use, has paid tribute to the utility of the device infringed.

As was said by Judge Hickenlooper for this court, in *Seymour v. Ford Motor Company*, 6 Cir., 44 F.2d 306, 308 (7 USPQ 182, 184): "The patent is itself evidence of such utility, and the use of the patented device by the defendant has long been recognized as an admission of this fact, and as creating an estoppel upon the defendant to deny such utility. (Citing numerous cases.)" 42 There can be no doubt that, as found by the District Court, the substantial value of the Case patent was recognized by the infringer in its catalogues and other advertisements.

The advantages proclaimed in these advertisements carry more forceful recognition of the value of the patent infringed than belated denial of its value rejects. Compare *Cugley v. Bundy Incubator Company*, 6 Cir., 93 F.2d 932, 934 (36 USPQ 524, 526). 43 Also pertinent are the comments of the court in *Georgia-Pacific Corp. v. U.S. Plywood-Champion Papers*, 318 F.Supp. 1116 at 1123, 166 USPQ 235 at 241 (S.D.N.Y.1970), *aff'd* 446 F.2d 295, 170 USPQ 369 (2d Cir.

1971), cert. denied, 404 U.S. 870, 92 S.Ct. 105, 30 L.Ed.2d 114 (1971): 44 Noteworthy is the fact that, despite the allegedly fierce competition between the Weldtex (the patented goods) and other decorative plywoods, GP (plaintiff-infringer) deliberately decided to duplicate Weldtex notwithstanding the caveat of GP's own counsel that an expensive infringement suit was inevitable.

GP's calculated infringement of Weldtex is an admission by conduct that it regarded Weldtex as occupying a uniquely favorable position in the market. (Emphasis added.) 45 In the present case, the master's finding that Panduit had competitors was not erroneous, but the implication drawn therefrom was. At the time the patent issued, there were four competitors, but they were recognized as making and selling not substitutes but infringing ducts.

Competition between those selling infringing ducts was admittedly fierce. Infringer Stahlin, however, cannot expect to pay a lesser royalty, as compensation for its infringement, on the ground that it was not the only infringer. Cf. Bros Inc. v. W. E. Grace Mfg. Co., 320 F.2d at 598, 138 USPQ at 358-59 (patent owner awarded lost profits). 46 Illustrative of the absence of acceptable substitutes is Stahlin's inability to avoid infringement, even if it had ever wanted to.

Having begun manufacture of the duct in 1957, Stahlin continued after the patent issued in 1962, after Panduit instituted its infringement suit in 1964, and after the district court's injunction in 1969.⁸ 47 At the time of the first injunction, virtually all of Stahlin's sales of electrical duct were of the infringing type. Stahlin's early-but-grudging recognition of the unique advantages of Panduit's patented duct was evidenced by an intra-company memo.

Dated June 21, 1957, it was issued in the earliest stages of Stahlin's manufacture of the "Lok-Slot:" 48 It seems that some of our customers have preferred a full-slotted channel; one that permits slipping the wire in place rather than threading the end through an opening. Its advantages are questionable but we always try to give our customers even more than they want.

Thus, we have developed the Lok-Slot construction. 49 Lok-Slot construction is evident in the name. Like any slot, Lok-Slot permits easy entry of wires. Unlike any other slot, Lok-Slot keeps the wires from readily popping up all over the place while connections are being made.

The reason is Lok-Slot's slim throat construction which allows single wires in and out easily enough but "chokes up" on "mass exits." 50 Using Panel Chanel with Lok-Slot construction, wires don't have to be threaded through the channel openings.... 51 The Lok-Slot construction is not a cure-all. Frankly, it is not quite as easy to remove and put on the covers with this construction.

In any event, there are some customers who prefer the full-slotted construction... and Lok-Slot is the best design approach yet to this form of channel. 52 In other words, don't push this construction... but if there is customer preference in this direction, you have the best design to offer. 53 The district court opinion following the infringement trial recognized the same

advantages over non-infringing ducts: 54 General Electric produced a steel grille which had perforated round holes through which wires were threaded (PX 63A).

This device was patented in the 1930's (PX 67-6A and PX 62, at 50-53). Another product in use in the early 1950's was a U-shaped wiring duct (PX 2) which incorporated multiple openings in the side walls through which wires were threaded and then connected to the electrical components. 55 However, ducts with holes also had shortcomings. When these ducts were filled with wires, the wires were rather inaccessible and it was difficult to trace individual wires or to revise the wiring.

For example, to remove any wire from the duct, it was necessary to disconnect the wire and thread it back through the hole. If the wire was not near the top of the duct, it was frequently necessary to remove a number of wires to gain access to the wire being traced or rerouted. 56 Mr. Walch, in 1953 as a senior advance engineer at General Electric, was given a broad assignment to improve wiring practices, including the improvement of wiring duct design.

Four desirable functions or results were stressed by Mr. Walch in his work on the design of an improved wiring duct: 57 (1) Easy insertion of wires in the duct; 58 (2) Prevention of accidental removal of wires from the duct; (3) Provision of maximum useful space for leading wires out of the duct; and 59 (4) Facilitation of intentional removal of wires from the duct.

60 298 F.Supp. at 437-38, 162 USPQ at 116-17. That evaluation was affirmed on appeal by this court. 430 F.2d at 225, 166 USPQ at 525. 61 Proof of the absence of noninfringing substitutes: 62 (I)nvolves some of the same evidence as that which was introduced in support of the validity of the patent.

The patent owner who had proved a long-felt need for a particular invention has a lighter burden in establishing that his customers, as well as the infringer's customers, were in fact seeking to obtain the patented solution to such need or problem.

The other side of the coin involves a strong showing by the infringer that although the patent may have embodied some trifling improvement which was patentable to a narrow extent, such improvement did not create any preference for the patented product rather than a noninfringing substitute.... 63 3 R. White, § 9.03(2).

The prior district and appellate court opinions leave no doubt that the patented product filled a waiting need and met with commercial success due to its merits. Stahlin's own intra-company memo (PX 58), and its \$1,788,384 sales of infringing ducts during the period when allegedly acceptable noninfringing substitutes are now said to have been available, leave no doubt that the patented improvement created a substantial customer preference.

A product lacking the advantages of that patented can hardly be termed a substitute "acceptable" to the customer who wants those advantages.⁹ The post-hoc circumstance that Stahlin, when finally

forced to obey the court's injunction, was successful in "switching" customers to a noninfringing product, does not destroy the advantage-recognition attributable to the patent over the prior 15 years.

Those preferred advantages were recognized by Stahlin itself, by other infringers, by customers, by the district court, and by this court. That Stahlin's customers, no longer able to buy the patented product from Stahlin, were willing to buy something else from Stahlin, does not establish that there was on the market during the period of infringement a product which customers in general were, in the master's words, "willing to buy in place of the infringing product."

Moreover, Stahlin's "switching" occurred years after the date on which the determination of available substitutes must focus, i. e., the date of first infringement. 64 Hence, the 21/2% royalty rate recommended by the master and adopted by the district court is clearly erroneous on its face, the master's recommendation having been based in large part on erroneous finding (1), that there were "acceptable" noninfringing substitutes during the relevant period.

65 The master's finding (2), that Panduit could not have maintained its high price differential (allegedly 30%) because of competition from substitutes, and his finding (3) that in March 1962 the parties were aware of the probability of a future price cut, must also fall. Evidence is lacking, as we have said, that acceptable substitutes were on the market on the focus-date of first infringement.

For some five years after Stahlin began manufacture of its "Lok-Slot" duct, purchasers of the patented product were willing to pay a substantial differential. It was not until January 1, 1963, some nine months after the hypothetically "willing" licensor and licensee are supposed to have negotiated a royalty, that Stahlin made its price cut.

We find no evidence in the record to support the master's supposition that the parties would have had that future price cut in mind in March 1962. On the contrary, the hypothesis is that Stahlin was a royalty-paying licensee on January 1, 1963, and nothing of record indicates an expectation that a licensee would cut its price or that any particular room existed to accommodate both a price cut and royalty payments.

66 Section 284 of the statute authorizes the use of experts in determining a reasonable royalty. However, the master's reliance on Scofield's testimony, and the district court's acceptance thereof, were clearly erroneous. That testimony was in substantial conflict with case law established in this circuit and elsewhere. Scofield testified that a reasonable royalty could be equated to the average value of all negotiated royalties, which in his experience was "between 1 and 5 per cent of the net selling price of the products,"¹⁰ and concluded that a reasonable royalty in this case would be 21/2%.

He specifically testified that his experience was in the negotiation of licenses generally, and that he had no experience in the determination of a reasonable royalty after infringement under § 284. Scofield specifically assumed, for purposes of his testimony, that there existed in the present case acceptable noninfringing substitutes. He further ignored evidentiary facts considered relevant by this and other circuits.

The analysis of this court in *Egry*, 23 F.2d at 443, is instructive: 67 In fixing a reasonable royalty, the primary inquiry, often complicated by secondary ones, is what the parties would have agreed upon, if both were reasonably trying to reach an agreement. This must be modified by the commercial situation, and when the result is to interfere with a patent monopoly, which the patentee was in position to and desired to keep, by retaining the entire market himself, his compensation for parting against his will with that opportunity must take due account of the loss to him of anticipated profits on the business which the licensees will thus get away from him.

It is a step further, and we think a necessary one, to say that, when the patentee's business scheme involves a reasonable expectation of making future profits by the continuing sale to the purchaser of the patented machine, of supplies to be furnished by the patentee, which future business he will lose by licensing a competitor to make the machine, this expectant loss is an element to be considered in retroactively determining a reasonable royalty; and this is so even though the expectation of such future business was not the result of any system of contract obligations, but was only expectation reasonably based on established business methods and customs.

68 In *Georgia-Pacific*, *supra*, the appellate court affirmed the analysis made by the district court at 318 F.Supp. at 1127, 116 USPQ at 243-44: 69 The amount of profits that USP (patent owner) was making and could (in February 1955 (when the infringement commenced)) reasonably expect to continue to make on its sales of Weldtex by licensing no one to sell Weldtex in the United States is of major relevance to the determination of the amount of royalty that USP would accept from GP and that GP would offer.

USP was enjoying the profits of a readily salable product. USP was in a position to retain the entire market on striated fir plywood for itself. The result of GP's infringement was to interfere with that monopoly and, as planned, to put GP in direct competition with USP's Weldtex throughout the period of infringement.

The hypothetical license would have been one whereby GP would have been permitted to market striated fir plywood through the United States (as GP infringingly did). 70 In the hypothetical negotiations, USP would have been reasonable in taking the position that it would not accept a royalty significantly less than the profit it was making by its policy of licensing no one to sell striated fir plywood in the United States.

71 Attorney Scofield may well have been "persuasive," but his testimony was based on general experience and invalid assumptions. There was clear error therefore in finding (4), that Scofield's testimony was "in line with the factual realities of this case." 72 Finding (5) was erroneously based on Stahlin's actual overall profit in all its products and on absence of proof of Stahlin's actual profit on its infringing sales.

The infringer's profit element, in the post-judgment "reasonable royalty" equation, is not related to the infringer's actual profit; nor is it designed to insure the anomalous result of guaranteeing an actual profit to an infringer (or the profit it would have made if there had been no infringement).

The licensee-profit element is but one of the measures applicable in March 1962, and should be based on the customary profit allowed licensees in the industry at that time. Whether, as events unfurled thereafter, Stahlin would have made an actual profit, while paying the royalty determined as of March 1962, is irrelevant. If there had been no infringement, and if Stahlin had actually agreed to pay a royalty in March 1962, and if that royalty rate had then proven onerous, Stahlin might have renegotiated the royalty rate or canceled the license.

But those options are no longer available to Stahlin, and their consideration in a formula for setting the royalty rate which would have been reasonable in March 1962 was error. Conclusion 73 Elements necessary to the determination of a reasonable royalty in the present case Panduit's actual profit margin in March 1962, and the customary profit allowed licensees in the electrical duct industry,¹¹ were not determined by the master in his report and cannot be discerned from the record.¹² They therefore must be determined on remand.

On remand, the following factors must also be considered: (1) the lack of acceptable noninfringing substitutes, (2) Panduit's unvarying policy of not licensing the Walch patent, (3) the future business and attendant profit Panduit would expect to lose by licensing a competitor, and (4) that the infringed patent gave the entire marketable value to the infringed duct.¹³ 74 For the reasons stated, we reverse the district court's determination of a reasonable royalty, and remand the case for further proceedings consistent herewith. * Honorable Howard T. Markey sitting by designation 1 35 U.S.C. § 284 reads in pertinent part: Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances. 2 To "simplify" the appeal, Panduit limits the period for damages, disregarding Stahlin's sales made in contempt of the court's injunction 3 In *Horvath v. McCord Radiator and Mfg. Co.*, supra, the omission of costs in an accounting, 100 F.2d at 333-34, 40 USPQ at 401, related to profits of the infringer 4 Fed.R.Civ.P 53(d)(3) Statement of Accounts.

When matters of accounting are in issue before the master, he may prescribe the form in which the accounts shall be submitted and in any proper case may require or receive in evidence a statement by a certified public accountant who is called as a witness. Upon objection of a party to any of the items thus submitted or upon a showing that the form of statement is insufficient, the master may require a different form of statement to be furnished, or the accounts or specific items thereof to be proved by oral examination of the accounting parties or upon written interrogatories or in such other manner as he directs.

5 Patents must by law be given "the attributes of personal property." 35 U.S.C. § 261. The right to exclude others is the essence of the human right called "property." The right to exclude others from free use of an invention protected by a valid patent does not differ from the right to exclude others from free use of one's automobile, crops, or other items of personal property.

Every human right, including that in an invention, is subject to challenge under appropriate circumstances. That one human property right may be challenged by trespass, another by theft, and another by infringement, does not affect the fundamental indicium of all "property," i. e., the right to exclude others 6 We express no view respecting the applicability of rules governing willful infringement, treble damages, or attorneys' fees, none of which have been made of issue here 7 Because of "the important public interest in permitting full and free competition in the use of ideas which are in reality a part of the public domain."

Lear, Inc. v. Adkins, 395 U.S. 653 at 670, 89 S.Ct. 1902, 1911, 23 L.Ed.2d 610, 162 USPQ 1 at 8 (1969). All ideas are "part of the public domain." "Ideas" are not patentable. Only particular physical embodiments, i. e., particular "uses," of ideas are subject to patenting. Hence, one physical embodiment of an idea may be patentable, while a second embodiment of the same idea may not, because the first embodiment met the statutory requirements of novelty, usefulness and nonobviousness, and the second did not.

Similarly, two physical embodiments of the same idea, if each meets the statutory requirements, may each be patented. Before a patent issues, throughout its life, and after it expires, the idea embodied, never having left the public domain, remains alive and well and may find itself reembodyed in other physical embodiments which, if they be new, useful and nonobvious, may themselves be patented.

When a patent expires, as all must do in 17 years, the particular physical embodiment claimed therein enters the public domain 8 Stahlin says its election to make and sell its "Tear Drop" duct after the initial injunction was to insure that Panduit "was not going to have a monopoly." It is not uncommon for an infringer-contemnor to wrap itself in the mantle of public defender against "monopoly," in reliance on an unthinking monopolophobia it mistakenly hopes to find in the courts The loose application of the pejorative term "monopoly," to the property right of exclusion represented by a patent, can be misleading.

Unchecked it can also destroy the constitutional and statutory scheme reflected in the patent system. If the patent be valid, it takes nothing from the public, as does the "monopoly" against which our anti-trust laws are directed.

On the contrary, it gives to the public, by definition, that which the public never before had. That a patent, like stocks, bonds and other property, may be misused in a plan violative of an anti-trust law does not render the property right in the patent a monopoly in the anti-social, anti-competitive sense, any more than it does the property right in stocks and bonds.

Absent the incentive to disclose provided by the patent system, the public might never learn of many inventions, all of which reside first in the inventor's mind and over which he could maintain a permanent "monopoly" by simply telling no one, or, if the invention permits, by keeping it a trade secret forever.

As explained by the Supreme Court in *United States v. Dubilier Condenser Corp.*, 289 U.S. 178 at 186, 53 S.Ct. 554, 557, 77 L.Ed. 1114 (1933): Though often so characterized, a patent is not, accurately speaking, a monopoly, for it is not created by the executive authority at the expense and to the prejudice of all the community except the grantee of the patent.

Seymour v. Osborne, 11 Wall. 516, 533, 20 L.Ed. 33. The term 'monopoly' connotes the giving of an exclusive privilege for buying, selling, working or using a thing which the public freely enjoyed prior to the grant.

Thus a monopoly takes something from the people. An inventor deprives the public of nothing which it enjoyed before his discovery, but gives something of value to the community by adding to the sum of human knowledge. (Footnote and citations omitted.) 9 The "acceptable substitute" element, though it is to be considered, must be viewed of limited influence where the infringer knowingly made and sold the patented product for years while ignoring the "substitute."

There are substitute products for virtually every patented product; the availability of railroads and box cameras should not of itself diminish royalties payable for infringement of the right to exclude others from making and selling the Wright airplane or the Polaroid camera 10 The master's determination was based on gross selling price 11 A royalty, if any, resulting from settlement of an infringement suit between Panduit and a third party, should not be considered evidence of an "established" royalty and thus a measure of adequate damages here.

License fees negotiated in the face of a threat of high litigation costs "may be strongly influenced by a desire to avoid full litigation. *Rude v. Westcott*, 130 U.S. 152, 164, 9 S.Ct. 463, 32 L.Ed. 888 (1888)." *Tights, Inc. v. Kayser-Roth Corp.*, 442 F.Supp. 159 at 166, 196 USPQ 750 at 755. (M.D.N.C.1977). See also *R. Stroup, Patentee's Monetary Recovery from an Infringer*, 59 J.P.O.S.

362 at 384 (1977) 12 The master properly considered "that the sale of duct is accompanied by the sale of covers" in computing the royalty product base. See *Egry*, 23 F.2d at 443. The royalty base was not challenged here 13 The patent expires in less than one year, on March 6, 1979, when the claimed invention will become the property of all