

KEWANEE OIL CO. *v.* BICRON CORP. ET AL.CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR
THE SIXTH CIRCUIT

No. 73-187. Argued January 9, 1974—Decided May 13, 1974

Harshaw Chemical Co., an unincorporated division of petitioner, over a period of years developed certain processes in the growth and encapsulation of synthetic crystals and purification of raw materials, some of which processes were considered to be trade secrets; it eventually succeeded for the first time in growing a 17-inch crystal of a type useful in the detection of ionizing radiation. The individual respondents, former employees of Harshaw who while working there had signed agreements not to disclose trade secrets obtained as employees, formed or later joined respondent Bicon Corp., which competed with Harshaw in producing crystals; Bicon, soon after its formation, also grew a 17-inch crystal. Petitioner brought this diversity action seeking injunctive relief and damages for misappropriation of trade secrets. The District Court, applying Ohio trade secret law, granted a permanent injunction. The Court of Appeals reversed on the ground that Ohio's trade secret law conflicted with the federal patent laws. *Held*: Ohio's trade secret law is not pre-empted by the federal patent laws. Pp. 474-493.

(a) The States are not forbidden to protect the kinds of intellectual property that may make up the subject matter of trade secrets; just as the States may exercise regulatory power over writings, *Goldstein v. California*, 412 U. S. 546, so may they regulate with respect to discoveries, the only limitation being that regulation in the area of patents and copyrights must not conflict with the operation of federal laws in this area. Pp. 478-479.

(b) Abolition of trade secret protection would not result in increased disclosure to the public of discoveries in the area of nonpatentable subject matter, and the public would not be benefited by disclosure of such discoveries. Pp. 482-483.

(c) The federal patent policy of encouraging invention is not disturbed by the existence of another form of incentive to invention such as trade secret protection, and in this respect the two systems are not in conflict. P. 484.

(d) Nor is the patent policy that matter once in the public domain must remain there incompatible with the existence of trade secret protection. P. 484.

(e) Nor is there any conflict between trade secret law and the patent policy of disclosure whether a trade secret concerning patentable subject matter is in the category of discovery which is (1) clearly unpatentable, (2) doubtfully patentable, or (3) clearly patentable. As to the first category, the patent alternative is not available and trade secret law will encourage invention and prompt the innovator to proceed with the discovery and exploitation of his invention, and to license others to exploit secret processes. As to the second category, the risk and cost of eventual patent invalidity may impel the inventor not to seek patent protection regardless of the existence of trade secret law, and the encouragement by the elimination of trade secret protection of patent applications by some with doubtfully patentable inventions is likely to have a deleterious effect on society and patent policy. As to the third category, trade secret law, which affords weaker protection than the patent laws, presents no reasonable risk of deterrence from patent application. Pp. 484-491.

(f) There being no real possibility that trade secret law will conflict with federal patent policy, partial pre-emption as to clearly patentable inventions would not be appropriate and could well unnecessarily burden administration of trade secret law by States. Pp. 491-492.

478 F. 2d 1074, reversed and remanded for reinstatement of District Court Judgment.

BURGER, C. J., delivered the opinion of the Court, in which STEWART, WHITE, BLACKMUN, and REHNQUIST, JJ., joined. MARSHALL, J., filed an opinion concurring in the result, *post*, p. 493. DOUGLAS, J., filed a dissenting opinion, in which BRENNAN, J., joined, *post*, p. 495. POWELL, J., took no part in the decision of the case.

Erwin N. Griswold argued the cause for petitioner. With him on the brief were *Robert J. Hoerner*, *Barry L. Springel*, *Edward P. Troxell*, *Robert P. Mooney*, and *James A. Lucas*.

William C. McCoy, Jr., argued the cause and filed a brief for respondents.*

*Briefs of *amici curiae* urging reversal were filed by *Solicitor General Bork* and *Edmund W. Kitch* for the United States; by *Donald W. Banner*, *Thomas F. McWilliams*, *John C. Dorfman*, and

MR. CHIEF JUSTICE BURGER delivered the opinion of the Court.

We granted certiorari to resolve a question on which there is a conflict in the courts of appeals: whether state trade secret protection is pre-empted by operation of the federal patent law.¹ In the instant case the Court of Appeals for the Sixth Circuit held that there was pre-emption.² The Courts of Appeals for the Second, Fourth, Fifth, and Ninth Circuits have reached the opposite conclusion.³

Chesterfield Smith for the American Bar Assn.; by *Austin F. Canfield, Jr.*, *Maurice H. Klitzman*, *Francis C. Browne*, *Donald R. Dunner*, and *John T. Roberts* for the Bar Association of the District of Columbia; by *Walter A. Porter* and *Bruce Tittel* for the Ohio State Bar Assn.; by *Milton A. Smith*, *Marcus B. Finnegan*, *Douglas B. Henderson*, and *Kenneth E. Payne* for the Chamber of Commerce of the United States; by *John T. Kelton* and *George E. Frost* for the American Patent Law Assn.; by *Charles W. Bradley*, *Thomas P. Dowling*, *Edward Halle*, and *Willard R. Sprows* for the New York Patent Law Assn.; by *Karl W. Flocks* and *Paul L. Gomory* for the Association for the Advancement of Invention & Innovation; by *Tom Arnold* and *Bill Durkee* for the Licensing Executives Society; by *Jeremiah D. Lambert* and *Robert J. DeGiacomo* for the Electronic Industries Assn.; by *Marx Leva*, *Lloyd Symington*, and *John S. Hoff* for the Manufacturing Chemists Assn.; by *Herman Foster* and *Edward M. Farrell* for Budd Co.; by *James M. Clabault*, *Edward G. Fiorito*, and *Edward F. Langs* for Burroughs Corp.; by *Harold C. Hohbach* and *David J. Brezner* for Optical Coating Laboratory, Inc.; by *Irving M. Tullar* and *Grover M. Myers* for R. J. Reynolds Industries, Inc.; by *Patrick J. Schlesinger* for Rohr Industries, Inc.; and by *Van C. Wilks* for Southwire Co.

Briefs of *amici curiae* urging affirmance were filed by *Eric P. Schellin* for National Patent Council, Inc., et al., and by *Mary Helen Sears* and *Edward S. Irons* for SCM Corp.

¹ 414 U. S. 818 (1973).

² 478 F. 2d 1074 (1973).

³ *Painton & Co. v. Bourns, Inc.*, 442 F. 2d 216 (CA2 1971); *Servo Corp. of America v. General Electric Co.*, 337 F. 2d 716 (CA4 1964), cert. denied, 383 U. S. 934 (1966); *Water Services, Inc. v. Tesco*

I

Harshaw Chemical Co., an unincorporated division of petitioner, is a leading manufacturer of a type of synthetic crystal which is useful in the detection of ionizing radiation. In 1949 Harshaw commenced research into the growth of this type crystal and was able to produce one less than two inches in diameter. By 1966, as the result of expenditures in excess of \$1 million, Harshaw was able to grow a 17-inch crystal, something no one else had done previously. Harshaw had developed many processes, procedures, and manufacturing techniques in the purification of raw materials and the growth and encapsulation of the crystals which enabled it to accomplish this feat. Some of these processes Harshaw considers to be trade secrets.

The individual respondents are former employees of Harshaw who formed or later joined respondent Bicon. While at Harshaw the individual respondents executed, as a condition of employment, at least one agreement each, requiring them not to disclose confidential information or trade secrets obtained as employees of Harshaw. Bicon was formed in August 1969 to compete with Harshaw in the production of the crystals, and by April 1970, had grown a 17-inch crystal.

Petitioner brought this diversity action in United States District Court for the Northern District of Ohio seeking injunctive relief and damages for the misappropriation of trade secrets. The District Court, applying Ohio trade secret law, granted a permanent injunction against the disclosure or use by respondents of 20 of the 40 claimed trade secrets until such time as the trade secrets had

Chemicals, Inc., 410 F. 2d 163 (CA5 1969); *Winston Research Corp. v. Minnesota Mining & Mfg. Co.*, 350 F. 2d 134 (CA9 1965); *Dekar Industries, Inc. v. Bissett-Berman Corp.*, 434 F. 2d 1304 (CA9 1970), cert. denied, 402 U. S. 945 (1971).

been released to the public, had otherwise generally become available to the public, or had been obtained by respondents from sources having the legal right to convey the information.

The Court of Appeals for the Sixth Circuit held that the findings of fact by the District Court were not clearly erroneous, and that it was evident from the record that the individual respondents appropriated to the benefit of Bicron secret information on processes obtained while they were employees at Harshaw. Further, the Court of Appeals held that the District Court properly applied Ohio law relating to trade secrets. Nevertheless, the Court of Appeals reversed the District Court, finding Ohio's trade secret law to be in conflict with the patent laws of the United States. The Court of Appeals reasoned that Ohio could not grant monopoly protection to processes and manufacturing techniques that were appropriate subjects for consideration under 35 U. S. C. § 101 for a federal patent but which had been in commercial use for over one year and so were no longer eligible for patent protection under 35 U. S. C. § 102 (b).

We hold that Ohio's law of trade secrets is not preempted by the patent laws of the United States, and, accordingly, we reverse.

II

Ohio has adopted the widely relied-upon definition of a trade secret found at Restatement of Torts § 757, comment *b* (1939). *B. F. Goodrich Co. v. Wohlgemuth*, 117 Ohio App. 493, 498, 192 N. E. 2d 99, 104 (1963); *W. R. Grace & Co. v. Hargadine*, 392 F. 2d 9, 14 (CA6 1968). According to the Restatement,

“[a] trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not

know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers.”

The subject of a trade secret must be secret, and must not be of public knowledge or of a general knowledge in the trade or business. *B. F. Goodrich Co. v. Wohlgemuth, supra*, at 499, 192 N. E. 2d, at 104; *National Tube Co. v. Eastern Tube Co.*, 3 Ohio C. C. R. (n. s.) 459, 462 (1902), aff'd, 69 Ohio St. 560, 70 N. E. 1127 (1903). This necessary element of secrecy is not lost, however, if the holder of the trade secret reveals the trade secret to another “in confidence, and under an implied obligation not to use or disclose it.” *Cincinnati Bell Foundry Co. v. Dodds*, 10 Ohio Dec. Reprint 154, 156, 19 Weekly L. Bull. 84 (Super. Ct. 1887). These others may include those of the holder’s “employees to whom it is necessary to confide it, in order to apply it to the uses for which it is intended.” *National Tube Co. v. Eastern Tube Co., supra*, at 462. Often the recipient of confidential knowledge of the subject of a trade secret is a licensee of its holder. See *Lear, Inc. v. Adkins*, 395 U. S. 653 (1969).

The protection accorded the trade secret holder is against the disclosure or unauthorized use of the trade secret by those to whom the secret has been confided under the express or implied restriction of nondisclosure or nonuse.⁴ The law also protects the holder of a trade

⁴ Ohio Rev. Code Ann. § 1333.51 (C) (Supp. 1973) provides:

“No person, having obtained possession of an article representing a trade secret or access thereto with the owner’s consent, shall convert such article to his own use or that of another person, or thereafter without the owner’s consent make or cause to be made a copy of such article, or exhibit such article to another.”

Ohio Rev. Code Ann. § 1333.99 (E) (Supp. 1973) provides:

“Whoever violates section 1333.51 of the Revised Code shall be

secret against disclosure or use when the knowledge is gained, not by the owner's volition, but by some "improper means," Restatement of Torts § 757 (a), which may include theft, wiretapping, or even aerial reconnaissance.⁵ A trade secret law, however, does not offer protection against discovery by fair and honest means, such as by independent invention, accidental disclosure, or by so-called reverse engineering, that is by starting with the known product and working backward to divine the process which aided in its development or manufacture.⁶

Novelty, in the patent law sense, is not required for a trade secret, *W. R. Grace & Co. v. Hargadine*, 392 F. 2d, at 14. "Quite clearly discovery is something less than invention." *A. O. Smith Corp. v. Petroleum Iron Works Co.*, 73 F. 2d 531, 538 (CA6 1934), modified to increase scope of injunction, 74 F. 2d 934 (1935). However, some novelty will be required if merely because that which does not possess novelty is usually known; secrecy, in the context of trade secrets, thus implies at least minimal novelty.⁷

The subject matter of a patent is limited to a "process, machine, manufacture, or composition of matter, or . . . improvement thereof," 35 U. S. C. § 101, which fulfills the three conditions of novelty and utility as articulated and defined in 35 U. S. C. §§ 101 and 102, and nonobvi-

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fined not more than five thousand dollars, imprisoned not less than one nor more than ten years, or both."

⁵ *E. I. duPont de Nemours & Co. v. Christopher*, 431 F. 2d 1012 (CA5 1970), cert. denied, 400 U. S. 1024 (1971). See generally Comment, Theft of Trade Secrets: The Need for a Statutory Solution, 120 U. Pa. L. Rev. 378 (1971).

⁶ *National Tube Co. v. Eastern Tube Co.*, 3 Ohio C. C. R. (n. s.) 459, 462 (1902), aff'd, 69 Ohio St. 560, 70 N. E. 1127 (1903).

⁷ See Comment, The *Stiffel* Doctrine and the Law of Trade Secrets, 62 Nw. U. L. Rev. 956, 969 (1968).

ousness, as set out in 35 U. S. C. § 103.^s If an invention meets the rigorous statutory tests for the issuance of a patent, the patent is granted, for a period of 17

^s“§ 101. *Inventions patentable*

“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

“§ 102. *Conditions for patentability; novelty and loss of right to patent*

“A person shall be entitled to a patent unless—

“(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

“(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

“(c) he has abandoned the invention, or

“(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

“(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

“(f) he did not himself invent the subject matter sought to be patented, or

“(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

“§ 103. *Conditions for patentability; non-obvious subject matter*

“A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this

years, giving what has been described as the "right of exclusion," R. Ellis, Patent Assignments and Licenses § 4, p. 7 (2d ed. 1943).⁹ This protection goes not only to copying the subject matter, which is forbidden under the Copyright Act, 17 U. S. C. § 1 *et seq.*, but also to independent creation.

III

The first issue we deal with is whether the States are forbidden to act at all in the area of protection of the kinds of intellectual property which may make up the subject matter of trade secrets.

Article I, § 8, cl. 8, of the Constitution grants to the Congress the power

"[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries"

In the 1972 Term, in *Goldstein v. California*, 412 U. S. 546 (1973), we held that the cl. 8 grant of power to Congress was not exclusive and that, at least in the case of writings, the States were not prohibited from encouraging and protecting the efforts of those within their borders by

title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made."

⁹Title 35 U. S. C. § 154 provides:

"Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, for the term of seventeen years, subject to the payment of issue fees as provided for in this title, of the right to exclude others from making, using, or selling the invention throughout the United States, referring to the specification for the particulars thereof. A copy of the specification and drawings shall be annexed to the patent and be a part thereof."

appropriate legislation. The States could, therefore, protect against the unauthorized rerecording for sale of performances fixed on records or tapes, even though those performances qualified as "writings" in the constitutional sense and Congress was empowered to legislate regarding such performances and could pre-empt the area if it chose to do so. This determination was premised on the great diversity of interests in our Nation—the essentially non-uniform character of the appreciation of intellectual achievements in the various States. Evidence for this came from patents granted by the States in the 18th century. 412 U. S., at 557.

Just as the States may exercise regulatory power over writings so may the States regulate with respect to discoveries. States may hold diverse viewpoints in protecting intellectual property relating to invention as they do in protecting the intellectual property relating to the subject matter of copyright. The only limitation on the States is that in regulating the area of patents and copyrights they do not conflict with the operation of the laws in this area passed by Congress, and it is to that more difficult question we now turn.

IV

The question of whether the trade secret law of Ohio is void under the Supremacy Clause involves a consideration of whether that law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hines v. Davidowitz*, 312 U. S. 52, 67 (1941). See *Florida Avocado Growers v. Paul*, 373 U. S. 132, 141 (1963). We stated in *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U. S. 225, 229 (1964), that when state law touches upon the area of federal statutes enacted pursuant to constitutional authority, "it is 'familiar doctrine' that the federal policy

'may not be set at naught, or its benefits denied' by the state law. *Sola Elec. Co. v. Jefferson Elec. Co.*, 317 U. S. 173, 176 (1942). This is true, of course, even if the state law is enacted in the exercise of otherwise undoubted state power."

The laws which the Court of Appeals in this case held to be in conflict with the Ohio law of trade secrets were the patent laws passed by the Congress in the unchallenged exercise of its clear power under Art. I, § 8, cl. 8, of the Constitution. The patent law does not explicitly endorse or forbid the operation of trade secret law. However, as we have noted, if the scheme of protection developed by Ohio respecting trade secrets "clashes with the objectives of the federal patent laws," *Sears, Roebuck & Co. v. Stiffel Co.*, *supra*, at 231, then the state law must fall. To determine whether the Ohio law "clashes" with the federal law it is helpful to examine the objectives of both the patent and trade secret laws.

The stated objective of the Constitution in granting the power to Congress to legislate in the area of intellectual property is to "promote the Progress of Science and useful Arts." The patent laws promote this progress by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research, and development. The productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy, and the emanations by way of increased employment and better lives for our citizens. In return for the right of exclusion—this "reward for inventions," *Universal Oil Co. v. Globe Co.*, 322 U. S. 471, 484 (1944)—the patent laws impose upon the inventor a requirement of disclosure. To insure adequate and full disclosure so that upon the

expiration of the 17-year period "the knowledge of the invention enures to the people, who are thus enabled without restriction to practice it and profit by its use," *United States v. Dubilier Condenser Corp.*, 289 U. S. 178, 187 (1933), the patent laws require¹⁰ that the patent application shall include a full and clear description of the invention and "of the manner and process of making and using it" so that any person skilled in the art may make and use the invention. 35 U. S. C. § 112. When a patent is granted and the information contained in it is circulated to the general public and those especially skilled in the trade, such additions to the general store of knowledge are of such importance to the public weal that the Federal Government is willing to pay the high price of 17 years of exclusive use for its disclosure, which disclosure, it is assumed, will stimulate ideas and the eventual development of further significant advances in the art. The Court has also articulated another policy of the patent law: that which is in the public domain cannot be removed therefrom by action of the States.

"[F]ederal law requires that all ideas in general circulation be dedicated to the common good unless they are protected by a valid patent." *Lear, Inc. v. Adkins*, 395 U. S., at 668.

See also *Goldstein v. California*, 412 U. S., at 570-571; *Sears, Roebuck & Co. v. Stiffel Co.*, *supra*; *Compro Corp. v. Day-Brite Lighting, Inc.*, 376 U. S. 234, 237-238 (1964); *International News Service v. Associated Press*, 248 U. S. 215, 250 (1918) (Brandeis, J., dissenting).

The maintenance of standards of commercial ethics and the encouragement of invention are the broadly stated policies behind trade secret law. "The necessity of good faith and honest, fair dealing, is the very life

¹⁰ 35 U. S. C. § 111.

and spirit of the commercial world." *National Tube Co. v. Eastern Tube Co.*, 3 Ohio C. C. R. (n. s.), at 462.¹¹ In *A. O. Smith Corp. v. Petroleum Iron Works Co.*, 73 F. 2d, at 539, the Court emphasized that even though a discovery may not be patentable, that does not

"destroy the value of the discovery to one who makes it, or advantage the competitor who by unfair means, or as the beneficiary of a broken faith, obtains the desired knowledge without himself paying the price in labor, money, or machines expended by the discoverer."

In *Wexler v. Greenberg*, 399 Pa. 569, 578-579, 160 A. 2d 430, 434-435 (1960), the Pennsylvania Supreme Court noted the importance of trade secret protection to the subsidization of research and development and to increased economic efficiency within large companies through the dispersion of responsibilities for creative developments.¹²

Having now in mind the objectives of both the patent and trade secret law, we turn to an examination of the interaction of these systems of protection of intellectual property—one established by the Congress and the other by a State—to determine whether and under what circumstances the latter might constitute "too great an encroachment on the federal patent system to be tolerated." *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U. S., at 232.

As we noted earlier, trade secret law protects items which would not be proper subjects for consideration for patent protection under 35 U. S. C. § 101. As in the

¹¹ See also *Winston Research Corp. v. Minnesota Mining & Mfg. Co.*, 350 F. 2d, at 138.

¹² See also *Water Services, Inc. v. Tesco Chemicals, Inc.*, 410 F. 2d, at 171.

case of the recordings in *Goldstein v. California*, Congress, with respect to nonpatentable subject matter, "has drawn no balance; rather, it has left the area unattended, and no reason exists why the State should not be free to act." *Goldstein v. California, supra*, at 570 (footnote omitted).

Since no patent is available for a discovery, however useful, novel, and nonobvious, unless it falls within one of the express categories of patentable subject matter of 35 U. S. C. § 101, the holder of such a discovery would have no reason to apply for a patent whether trade secret protection existed or not. Abolition of trade secret protection would, therefore, not result in increased disclosure to the public of discoveries in the area of nonpatentable subject matter. Also, it is hard to see how the public would be benefited by disclosure of customer lists or advertising campaigns; in fact, keeping such items secret encourages businesses to initiate new and individualized plans of operation, and constructive competition results. This, in turn, leads to a greater variety of business methods than would otherwise be the case if privately developed marketing and other data were passed illicitly among firms involved in the same enterprise.

Congress has spoken in the area of those discoveries which fall within one of the categories of patentable subject matter of 35 U. S. C. § 101 and which are, therefore, of a nature that would be subject to consideration for a patent. Processes, machines, manufactures, compositions of matter, and improvements thereof, which meet the tests of utility, novelty, and nonobviousness are entitled to be patented, but those which do not, are not. The question remains whether those items which are proper subjects for consideration for a patent may also have available the alternative protection accorded by trade secret law.

Certainly the patent policy of encouraging invention is not disturbed by the existence of another form of incentive to invention. In this respect the two systems are not and never would be in conflict. Similarly, the policy that matter once in the public domain must remain in the public domain is not incompatible with the existence of trade secret protection. By definition a trade secret has not been placed in the public domain.¹³

The more difficult objective of the patent law to reconcile with trade secret law is that of disclosure, the *quid pro quo* of the right to exclude. *Universal Oil Co. v. Globe Co.*, 322 U. S., at 484. We are helped in this stage of the analysis by Judge Henry Friendly's opinion in *Painton & Co. v. Bourns, Inc.*, 442 F. 2d 216 (CA2 1971). There the Court of Appeals thought it useful, in determining whether inventors will refrain because of the existence of trade secret law from applying for patents, thereby depriving the public from learning of the invention, to distinguish between three categories of trade secrets:

"(1) the trade secret believed by its owner to constitute a validly patentable invention; (2) the trade secret known to its owner not to be so patentable; and (3) the trade secret whose valid patentability is considered dubious." *Id.*, at 224.

Trade secret protection in each of these categories would run against breaches of confidence—the employee and licensee situations—and theft and other forms of industrial espionage.

As to the trade secret known not to meet the standards

¹³ An invention may be placed "in public use or on sale" within the meaning of 35 U. S. C. § 102 (b) without losing its secret character. *Painton & Co. v. Bourns, Inc.*, 442 F. 2d, at 224 n. 6; *Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F. 2d 516, 520 (CA2), cert. denied, 328 U. S. 840 (1946).

of patentability, very little in the way of disclosure would be accomplished by abolishing trade secret protection. With trade secrets of nonpatentable subject matter, the patent alternative would not reasonably be available to the inventor. "There can be no public interest in stimulating developers of such [unpatentable] know-how to flood an overburdened Patent Office with applications [for] what they do not consider patentable." *Ibid.* The mere filing of applications doomed to be turned down by the Patent Office will bring forth no new public knowledge or enlightenment, since under federal statute and regulation patent applications and abandoned patent applications are held by the Patent Office in confidence and are not open to public inspection. 35 U. S. C. § 122; 37 CFR § 1.14 (b).

Even as the extension of trade secret protection to patentable subject matter that the owner knows will not meet the standards of patentability will not conflict with the patent policy of disclosure, it will have a decidedly beneficial effect on society. Trade secret law will encourage invention in areas where patent law does not reach, and will prompt the independent innovator to proceed with the discovery and exploitation of his invention. Competition is fostered and the public is not deprived of the use of valuable, if not quite patentable, invention.¹⁴

Even if trade secret protection against the faithless employee were abolished, inventive and exploitive effort in the area of patentable subject matter that did not meet the standards of patentability would continue, although at a reduced level. Alternatively with the effort that remained, however, would come an increase in the amount of self-help that innovative companies

¹⁴ Doerfer, *The Limits on Trade Secret Law Imposed by Federal Patent and Antitrust Supremacy*, 80 Harv. L. Rev. 1432, 1454 (1967).

would employ. Knowledge would be widely dispersed among the employees of those still active in research. Security precautions necessarily would be increased, and salaries and fringe benefits of those few officers or employees who had to know the whole of the secret invention would be fixed in an amount thought sufficient to assure their loyalty.¹⁵ Smaller companies would be placed at a distinct economic disadvantage, since the costs of this kind of self-help could be great, and the cost to the public of the use of this invention would be increased. The innovative entrepreneur with limited resources would tend to confine his research efforts to himself and those few he felt he could trust without the ultimate assurance of legal protection against breaches of confidence. As a result, organized scientific and technological research could become fragmented, and society, as a whole, would suffer.

Another problem that would arise if state trade secret protection were precluded is in the area of licensing others to exploit secret processes. The holder of a trade secret would not likely share his secret with a manufacturer who cannot be placed under binding legal obligation to pay a license fee or to protect the secret. The result would be to hoard rather than disseminate knowledge. *Painton & Co. v. Bourns, Inc.*, 442 F. 2d, at 223. Instead, then, of licensing others to use his invention and making the most efficient use of existing manufacturing and marketing structures within the industry, the trade secret holder would tend either to limit his utilization of the invention, thereby depriving the public of the maximum benefit of its use, or engage in the time-consuming and economically wasteful enterprise of

¹⁵ See generally Wydick, Trade Secrets: Federal Preemption in Light of Goldstein and Kewanee (Part II—Conclusion), 56 J. Pat. Off. Soc. 4, 23–24 (1974).

constructing duplicative manufacturing and marketing mechanisms for the exploitation of the invention. The detrimental misallocation of resources and economic waste that would thus take place if trade secret protection were abolished with respect to employees or licensees cannot be justified by reference to any policy that the federal patent law seeks to advance.

Nothing in the patent law requires that States refrain from action to prevent industrial espionage. In addition to the increased costs for protection from burglary, wire-tapping, bribery, and the other means used to misappropriate trade secrets, there is the inevitable cost to the basic decency of society when one firm steals from another. A most fundamental human right, that of privacy, is threatened when industrial espionage is condoned or is made profitable;¹⁶ the state interest in denying profit to such illegal ventures is unchallengeable.

The next category of patentable subject matter to deal with is the invention whose holder has a legitimate doubt as to its patentability. The risk of eventual patent invalidity by the courts and the costs associated with that risk may well impel some with a good-faith doubt as to patentability not to take the trouble to seek to obtain and defend patent protection for their discoveries, regardless of the existence of trade secret protection. Trade secret protection would assist those inventors in the more efficient exploitation of their discoveries and not conflict with the patent law. In most cases of genuine doubt as to patent validity the potential rewards of patent protection are so far superior to those accruing to holders of trade secrets, that the holders of

¹⁶ Note, Patent Preemption of Trade Secret Protection of Inventions Meeting Judicial Standards of Patentability, 87 Harv. L. Rev. 807, 828 (1974).

such inventions will seek patent protection, ignoring the trade secret route. For those inventors "on the line" as to whether to seek patent protection, the abolition of trade secret protection might encourage some to apply for a patent who otherwise would not have done so. For some of those so encouraged, no patent will be granted and the result

"will have been an unnecessary postponement in the divulging of the trade secret to persons willing to pay for it. If [the patent does issue], it may well be invalid, yet many will prefer to pay a modest royalty than to contest it, even though *Lear* allows them to accept a license and pursue the contest without paying royalties while the fight goes on. The result in such a case would be unjustified royalty payments from many who would prefer not to pay them rather than agreed fees from one or a few who are entirely willing to do so." *Painton & Co. v. Bourns, Inc.*, 442 F. 2d, at 225.

The point is that those who might be encouraged to file for patents by the absence of trade secret law will include inventors possessing the chaff as well as the wheat. Some of the chaff—the nonpatentable discoveries—will be thrown out by the Patent Office, but in the meantime society will have been deprived of use of those discoveries through trade secret-protected licensing. Some of the chaff may not be thrown out. This Court has noted the difference between the standards used by the Patent Office and the courts to determine patentability. *Graham v. John Deere Co.*, 383 U. S. 1, 18 (1966).¹⁷ In *Lear, Inc. v. Adkins*, 395 U. S. 653 (1969), the Court thought that an invalid patent was so serious a threat to the free use of

¹⁷ For a possible explanation see P. Areeda, *Antitrust Analysis* ¶ 406 (d), pp. 327-328 (1967).

ideas already in the public domain that the Court permitted licensees of the patent holder to challenge the validity of the patent. Better had the invalid patent never been issued. More of those patents would likely issue if trade secret law were abolished. Eliminating trade secret law for the doubtfully patentable invention is thus likely to have deleterious effects on society and patent policy which we cannot say are balanced out by the speculative gain which might result from the encouragement of some inventors with doubtfully patentable inventions which deserve patent protection to come forward and apply for patents. There is no conflict, then, between trade secret law and the patent law policy of disclosure, at least insofar as the first two categories of patentable subject matter are concerned.

The final category of patentable subject matter to deal with is the clearly patentable invention, *i. e.*, that invention which the owner believes to meet the standards of patentability. It is here that the federal interest in disclosure is at its peak; these inventions, novel, useful and nonobvious, are “‘the things which are worth to the public the embarrassment of an exclusive patent.’” *Graham v. John Deere Co.*, *supra*, at 9 (quoting Thomas Jefferson). The interest of the public is that the bargain of 17 years of exclusive use in return for disclosure be accepted. If a State, through a system of protection, were to cause a substantial risk that holders of patentable inventions would not seek patents, but rather would rely on the state protection, we would be compelled to hold that such a system could not constitutionally continue to exist. In the case of trade secret law no reasonable risk of deterrence from patent application by those who can reasonably expect to be granted patents exists.

Trade secret law provides far weaker protection in

many respects than the patent law.¹⁸ While trade secret law does not forbid the discovery of the trade secret by fair and honest means, *e. g.*, independent creation or reverse engineering, patent law operates "against the world," forbidding any use of the invention for whatever purpose for a significant length of time. The holder of a trade secret also takes a substantial risk that the secret will be passed on to his competitors, by theft or by breach of a confidential relationship, in a manner not easily susceptible of discovery or proof. *Painton & Co. v. Bourns, Inc.*, 442 F. 2d, at 224. Where patent law acts as a barrier, trade secret law functions relatively as a sieve. The possibility that an inventor who believes his invention meets the standards of patentability will sit back, rely on trade secret law, and after one year of use forfeit any right to patent protection, 35 U. S. C. § 102 (b), is remote indeed.

Nor does society face much risk that scientific or technological progress will be impeded by the rare inventor with a patentable invention who chooses trade secret protection over patent protection. The ripeness-of-time concept of invention, developed from the study of the many independent multiple discoveries in history, predicts that if a particular individual had not made a particular discovery others would have, and in probably a relatively short period of time. If something is to be discovered at all very likely it will be discovered by more than one person. *Singletons and Multiples in Science* (1961), in R. Merton, *The Sociology of Science* 343 (1973); J. Cole & S. Cole, *Social Stratification in Science* 12-13, 229-230 (1973); Ogburn & Thomas, *Are Inventions Inevitable?*, 37 *Pol. Sci. Q.* 83 (1922).¹⁹ Even

¹⁸ *Water Services, Inc. v. Tesco Chemicals, Inc.*, 410 F. 2d, at 172.

¹⁹ See J. Watson, *The Double Helix* (1968). If Watson and Crick had not discovered the structure of DNA it is likely that Linus

were an inventor to keep his discovery completely to himself, something that neither the patent nor trade secret laws forbid, there is a high probability that it will be soon independently developed. If the invention, though still a trade secret, is put into public use, the competition is alerted to the existence of the inventor's solution to the problem and may be encouraged to make an extra effort to independently find the solution thus known to be possible. The inventor faces pressures not only from private industry, but from the skilled scientists who work in our universities and our other great publicly supported centers of learning and research.

We conclude that the extension of trade secret protection to clearly patentable inventions does not conflict with the patent policy of disclosure. Perhaps because trade secret law does not produce any positive effects in the area of clearly patentable inventions, as opposed to the beneficial effects resulting from trade secret protection in the areas of the doubtfully patentable and the clearly unpatentable inventions, it has been suggested that partial pre-emption may be appropriate, and that courts should refuse to apply trade secret protection to inventions which the holder should have patented, and which would have been, thereby, disclosed.²⁰ However, since there is no real possibility that trade secret law will conflict with the federal policy favoring disclosure of clearly patentable inventions partial pre-emption is inappropri-

Pauling would have made the discovery soon. Other examples of multiple discovery are listed at length in the Ogburn and Thomas article.

²⁰ See Note, Patent Preemption of Trade Secret Protection of Inventions Meeting Judicial Standards of Patentability, 87 Harv. L. Rev. 807 (1974); Brief for the United States as *Amicus Curiae*, presenting the view within the Government favoring limited pre-emption (which view is not that of the United States, which believes that patent law does not pre-empt state trade secret law).

ate. Partial pre-emption, furthermore, could well create serious problems for state courts in the administration of trade secret law. As a preliminary matter in trade secret actions, state courts would be obliged to distinguish between what a reasonable inventor would and would not correctly consider to be clearly patentable, with the holder of the trade secret arguing that the invention was not patentable and the misappropriator of the trade secret arguing its undoubted novelty, utility, and non-obviousness. Federal courts have a difficult enough time trying to determine whether an invention, narrowed by the patent application procedure²¹ and fixed in the specifications which describe the invention for which the patent has been granted, is patentable.²² Although state courts in some circumstances must join federal courts in judging whether an issued patent is valid, *Lear, Inc. v. Adkins, supra*, it would be undesirable to impose the almost impossible burden on state courts to determine the patentability—in fact and in the mind of a reasonable inventor—of a discovery which has not been patented and remains entirely uncircumscribed by expert analysis in the administrative process. Neither complete nor partial pre-emption of state trade secret law is justified.

Our conclusion that patent law does not pre-empt trade secret law is in accord with prior cases of this Court. *Universal Oil Co. v. Globe Co.*, 322 U. S., at 484; *United States v. Dubilier Condenser Corp.*, 289 U. S., at 186–187; *Becher v. Contoure Laboratories*, 279 U. S. 388, 391 (1929); *Du Pont Powder Co. v. Masland*, 244 U. S. 100, 102 (1917); *Dr. Miles Medical Co. v. Park & Sons Co.*, 220 U. S. 373, 402–403 (1911); *Board of Trade v. Christie*

²¹ See P. Areeda, *Antitrust Analysis* ¶ 407, p. 329 (1967).

²² See Judge L. Hand's lament in *Harries v. Air King Products Co.*, 183 F. 2d 158, 162 (CA2 1950).

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Grain & Stock Co., 198 U. S. 236, 250-251 (1905).²³ Trade secret law and patent law have co-existed in this country for over one hundred years. Each has its particular role to play, and the operation of one does not take away from the need for the other. Trade secret law encourages the development and exploitation of those items of lesser or different invention than might be accorded protection under the patent laws, but which items still have an important part to play in the technological and scientific advancement of the Nation. Trade secret law promotes the sharing of knowledge, and the efficient operation of industry; it permits the individual inventor to reap the rewards of his labor by contracting with a company large enough to develop and exploit it. Congress, by its silence over these many years, has seen the wisdom of allowing the States to enforce trade secret protection. Until Congress takes affirmative action to the contrary, States should be free to grant protection to trade secrets.

Since we hold that Ohio trade secret law is not preempted by the federal patent law, the judgment of the Court of Appeals for the Sixth Circuit is reversed, and the case is remanded to the Court of Appeals with directions to reinstate the judgment of the District Court.

It is so ordered.

MR. JUSTICE POWELL took no part in the decision of this case.

MR. JUSTICE MARSHALL, concurring in the result.

Unlike the Court, I do not believe that the possibility that an inventor with a patentable invention will rely

²³ The Court of Appeals below relied, in part, on *Kendall v. Winsor*, 21 How. 322 (1859), a case decided nine years before trade secret law was imported into this country from England by means of the landmark case of *Peabody v. Norfolk*, 98 Mass. 452 (1868).

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on state trade secret law rather than apply for a patent is "remote indeed." *Ante*, at 490. State trade secret law provides substantial protection to the inventor who intends to use or sell the invention himself rather than license it to others, protection which in its unlimited duration is clearly superior to the 17-year monopoly afforded by the patent laws. I have no doubt that the existence of trade secret protection provides in some instances a substantial disincentive to entrance into the patent system, and thus deprives society of the benefits of public disclosure of the invention which it is the policy of the patent laws to encourage. This case may well be such an instance.

But my view of sound policy in this area does not dispose of this case. Rather, the question presented in this case is whether Congress, in enacting the patent laws, intended merely to offer inventors a limited monopoly in exchange for disclosure of their invention, or instead to exert pressure on inventors to enter into this exchange by withdrawing any alternative possibility of legal protection for their inventions. I am persuaded that the former is the case. State trade secret laws and the federal patent laws have co-existed for many, many years. During this time, Congress has repeatedly demonstrated its full awareness of the existence of the trade secret system, without any indication of disapproval. Indeed, Congress has in a number of instances given explicit federal protection to trade secret information provided to federal agencies. See, *e. g.*, 5 U. S. C. § 552 (b)(4); 18 U. S. C. § 1905; see generally Appendix to Brief for Petitioner. Because of this, I conclude that there is "neither such actual conflict between the two schemes of regulation that both cannot stand in the same area, nor evidence of a congressional design to preempt the field." *Florida Avocado Growers v. Paul*,

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373 U. S. 132, 141 (1963). I therefore concur in the result reached by the majority of the Court.

MR. JUSTICE DOUGLAS, with whom MR. JUSTICE BRENNAN concurs, dissenting.

Today's decision is at war with the philosophy of *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U. S. 225, and *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U. S. 234. Those cases involved patents—one of a pole lamp and one of fluorescent lighting fixtures each of which was declared invalid. The lower courts held, however, that though the patents were invalid the sale of identical or confusingly similar products to the products of the patentees violated state unfair competition laws. We held that when an article is unprotected by a patent, state law may not forbid others to copy it, because every article not covered by a valid patent is in the public domain. Congress in the patent laws decided that where no patent existed, free competition should prevail; that where a patent is rightfully issued, the right to exclude others should obtain for no longer than 17 years, and that the States may not "under some other law, such as that forbidding unfair competition, give protection of a kind that clashes with the objectives of the federal patent laws,"¹ 376 U. S., at 231.

The product involved in this suit, sodium iodide synthetic crystals, was a product that could be patented but was not. Harshaw the inventor apparently contributed greatly to the technology in that field by developing processes, procedures, and techniques that produced

¹ Here as in *Lear, Inc. v. Adkins*, 395 U. S. 653, 674, which held that a licensee of a patent is not precluded by a contract from challenging the patent, for if he were, that would defeat the policy of the patent laws: "enforcing this contractual provision would undermine the strong federal policy favoring the full and free use of ideas in the public domain."

much larger crystals than any competitor. These processes, procedures, and techniques were also patentable; but no patent was sought. Rather Harshaw sought to protect its trade secrets by contracts with its employees. And the District Court found that, as a result of those secrecy precautions, "not sufficient disclosure occurred so as to place the claimed trade secrets in the public domain"; and those findings were sustained by the Court of Appeals.

The District Court issued a permanent injunction against respondents, ex-employees, restraining them from using the processes used by Harshaw. By a patent which would require full disclosure Harshaw could have obtained a 17-year monopoly against the world. By the District Court's injunction, which the Court approves and reinstates, Harshaw gets a permanent injunction running into perpetuity against respondents. In *Sears*, as in the present case, an injunction against the unfair competitor issued. We said: "To allow a State by use of its law of unfair competition to prevent the copying of an article which represents too slight an advance to be patented would be to permit the State to block off from the public something which federal law has said belongs to the public. The result would be that while federal law grants only 14 or 17 years' protection to genuine inventions, see 35 U. S. C. §§ 154, 173, States could allow perpetual protection to articles too lacking in novelty to merit any patent at all under federal constitutional standards. This would be too great an encroachment on the federal patent system to be tolerated." 376 U. S., at 231-232.

The conflict with the patent laws is obvious. The decision of Congress to adopt a patent system was based on the idea that there will be much more innovation if discoveries are disclosed and patented than there will be when everyone works in secret. Society thus fosters a

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free exchange of technological information at the cost of a limited 17-year monopoly.²

A trade secret,³ unlike a patent, has no property dimension. That was the view of the Court of Appeals, 478 F. 2d 1074, 1081; and its decision is supported by what Mr. Justice Holmes said in *Du Pont Powder Co. v. Masland*, 244 U. S. 100, 102:

“The word property as applied to trade-marks and trade secrets is an unanalyzed expression of certain

² “The holding [of the Court of Appeals] in *Kewanee* seems correct. If it is permissible for an inventor to use the law of unfair competition as a substitute for patenting, certain categories of inventions would receive privileged protection under that law. Thus a new laser, television set, or airplane could not be protected because inventions which by their nature cannot be put into commercial use without disclosure, are not eligible for trade secret protection after they are put on the market. Those that can be maintained are eligible. But as the basic economic function of the patent system is to encourage the making and commercialization of inventions, there seems to be no justification for providing incentives beyond those provided by the patent law to discriminate between different categories of inventions, i. e., those that may inherently be kept secret and those that may not. Moreover, state rules which would grant such incentives seem to conflict with the economic *quid pro quo* underlying patent protection; i. e., a monopoly limited in time, in return for full disclosure of the invention. Thus federal law has struck a balance between incentives for inventors and the public's right to a competitive economy. In this sense, the patent law is an integral part of federal competitive policy.” Adelman, *Secrecy and Patenting: Some Proposals for Resolving the Conflict*, 1 *APLA Quarterly Journal* 296, 298-299 (1973).

³ Trade secrets often are unpatentable. In that event there is no federal policy which is contravened when an injunction to bar disclosure of a trade secret is issued. Moreover, insofar as foreign patents are involved our federal patent policy is obviously irrelevant. S. Oppenheim, *Unfair Trade Practices* 264-265 (2d ed. 1965). As respects further contrasts between patents and trade secrets see Milgrim, *Trade Secret Protection and Licensing*, 4 *Pat. L. Rev.* 375 (1972).

secondary consequences of the primary fact that the law makes some rudimentary requirements of good faith. Whether the plaintiffs have any valuable secret or not the defendant knows the facts, whatever they are, through a special confidence that he accepted. The property may be denied but the confidence cannot be. Therefore the starting point for the present matter is not property or due process of law, but that the defendant stood in confidential relations with the plaintiffs, or one of them. These have given place to hostility, and the first thing to be made sure of is that the defendant shall not fraudulently abuse the trust reposed in him. It is the usual incident of confidential relations. If there is any disadvantage in the fact that he knew the plaintiffs' secrets he must take the burden with the good."⁴

A suit to redress theft of a trade secret is grounded in tort damages for breach of a contract—a historic remedy, *Cataphote Corp. v. Hudson*, 422 F. 2d 1290. Damages for breach of a confidential relation are not pre-empted by this patent law, but an injunction

⁴ As to *Goldstein v. California*, 412 U. S. 546, the ruling of Mr. Justice Bradley concerning the distinction between patents and copyright is relevant:

"The difference between the two things, letters-patent and copyright, may be illustrated by reference to the subjects just enumerated. Take the case of medicines. Certain mixtures are found to be of great value in the healing art. If the discoverer writes and publishes a book on the subject (as regular physicians generally do), he gains no exclusive right to the manufacture and sale of the medicine; he gives that to the public. If he desires to acquire such exclusive right, he must obtain a patent for the mixture as a new art, manufacture, or composition of matter. He may copyright his book, if he pleases; but that only secures to him the exclusive right of printing and publishing his book. So of all other inventions or discoveries." *Baker v. Selden*, 101 U. S. 99, 102-103.

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against use is pre-empted because the patent law states the only monopoly over trade secrets that is enforceable by specific performance; and that monopoly exacts as a price full disclosure. A trade secret can be protected only by being kept secret. Damages for breach of a contract are one thing; an injunction barring disclosure does service for the protection accorded valid patents and is therefore pre-empted.

From the findings of fact of the lower courts, the process involved in this litigation was unique, such a great discovery as to make its patentability a virtual certainty. Yet the Court's opinion reflects a vigorous activist anti-patent philosophy. My objection is not because it is activist. This is a problem that involves no neutral principle. The Constitution in Art. I, § 8, cl. 8, expresses the activist policy which Congress has enforced by statutes. It is that constitutional policy which we should enforce, not our individual notions of the public good.

I would affirm the judgment below.