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General Compulsory Patent Licensing in the United States: Good in Theory, But Not Necessary in Practice

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The tension between the patent laws and the need for free competition has always surrounded the United States patent system. In particular, this tension has been quite evident in the area of compulsory patent licensing. Although some forms of compulsory licensing exist in the United States, such involuntary licensing has been limited to specific circumstances and particular patented subject matter. Unlike a number of foreign countries, no “general” compulsory licensing statute, applicable to all patents that have not been practiced or have been used for anticompetitive purposes, exists in this country. Proponents of such licensing argue there is a need for laws to ensure that the public receives the benefit of innovation and that the exclusive rights granted under the patent laws are not abused.¹ Opponents, on the other hand, assert that mandatory licensing destroys the research incentive that is a fundamental objective of the U.S. patent system.²

This article scrutinizes this debate by first evaluating whether there are any potentially positive effects to be achieved from general compulsory licensing. The article then assesses whether general compulsory licensing is compatible with the fundamental purposes of the American patent laws. In this effort, the constitutionality of compulsory licensing is considered along with whether compulsory licensing is consistent with congressional intent in establishing the patent laws. Based on this analysis, the article next evaluates the likelihood of attaining substantial positive outcomes from general compulsory licensing. It is concluded that although well-drafted legislation authorizing compulsory licensing based on non-use or

I. THE POTENTIAL POSITIVE ASPECTS OF A GENERAL COMPULSORY LICENSING LAW

Although some people support compulsory licensing purely out of a distaste for the patent system, there appears to be a number of positive effects that could potentially result from compulsory licensing. First, general compulsory licensing could help put unused or unmarketed patented products in the consumers' hands when patentees have not made efforts to practice their inventions. Several foreign countries have adopted compulsory licensing laws based on this rationale. Many of these countries have employed a "working requirement" under which mandatory licenses are granted if a patent is not worked during the three years after the patent's issuance. The Paris Convention permits its members to adopt this type of provision. Moreover, the concept of a "working requirement" is not unknown to U.S. intellectual property law. Section 337 of the Trade Act generally provides a mechanism by which articles that violate U.S. intellectual property laws can be excluded from entry into the U.S. However, the most recent amendments to the U.S. trade laws added provisions limiting relief for patent, copyright, trademark, and mask work violations to articles that exist or are "in the process of being established." Although this law does not mandate compulsory licensing, it effectively does so to an extent because

6. See 19 U.S.C. § 1337 (a)(2). Section 1337 gives further guidance on how the International Trade Commission is to make this determination:

[A]n industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, or mask work concerned—

(A) significant investment in plant and equipment;
(B) significant employment of labor or capital; or
(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

Id. § 1337 (a)(3) (emphasis added). The working requirement instituted by this law is not as restrictive as such requirements found under foreign compulsory licensing provisions. Unlike the foreign provisions, actual production of the article is not required and substantial investment is sufficient. See H.R. Rep. No. 40, 100th Cong., 1st Sess., pt. 1, at 157-58 (1978); S. Rep. No. 71, 100th Cong., 1st Sess., 129-30 (1987).
the intellectual property owner's remedy through the U.S. International Trade Commission is unavailable unless he works—including licenses—his invention. The main purpose of this provision is to provide greater assurance that a complainant has a substantial investment to protect and is not just asserting frivolous charges against a competitor-importer. Nonetheless, this provision may also encourage inventors to practice their invention so that products protected by intellectual property are available to the public. However, section 337 only institutes a working requirement for patentees who want to enforce their rights against infringing importers, but no such requirement exists for patentees enforcing their rights against a domestic infringer. A general working requirement in the U.S. applicable to patentees suing any infringer, might further encourage patentees to practice their inventions.

A second potential benefit of compulsory licensing is it might combat patent suppression. Some patent holders use their patents just to block competitors. For example, they may obtain an improvement patent to prevent competitors from entering their market without any intention of practicing or licensing the improvement patent. As a consequence, consumers may not receive the benefit of an improvement patent for seventeen years simply because a patentee prefers to sell the product based on his original patent rather than marketing the improved product. Compulsory licensing could encourage the patent owner to bring his innovation to the market in order to avoid forced licensing.

A third potential benefit of compulsory licensing is that it could reduce wasted energy on "invent around" products. Significant amounts of time and effort are expended to create imitation products by inventing around patents. Granted, this conduct re-

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7. In one study in which a number of German patent owners were interviewed, forty-three percent stated that they viewed their unutilized inventions as reserve patents (6.7% of all patents) or blocking patents (3.9% of all patents), whose purpose was to retain exclusive rights during delayed exploitation or to deny use by competitors. K. Grefermann, K. Oppenlander, E. Peffgen, K. Rothlingshofer & L. Scholz, Patentwesen und Technischer Fortschritt 78 (1974) [hereinafter PATENT AND TECHNICAL PROGRESS].

8. One practitioner, Leroy Whitaker, has asserted, however, that attempts to invent around patents bring significant advances in technology. Whitaker, Compulsory Licensing — Another Nail in the Coffin, 2 APLA Q.J. 155, 165-66 (1974). Although Whitaker is correct that valuable discoveries have been made while trying to imitate patents, compulsory licensing should not prevent such discoveries. Researchers would continue to seek new patentable discoveries related to prior inventions because of the potential value of an exclusive right over a new invention. This incentive would include seeking improvement patents for which a cross license might be obtained. For that matter, competitors might even continue to try to imitate patented products just to avoid paying royalties under the compulsory license. With a compulsory licensing scheme, the competitor would have to decide whether the investment to
results in price reductions to consumers, but it serves no technical progress. Compulsory licensing could lower prices for consumers and make duplicative inventions unnecessary.

One final potential benefit of compulsory licensing is that it could be used as a remedy for patent misuse and antitrust violations. Compulsory licensing based on anticompetitive use of patents has been statutorily mandated in a number of countries and judicially endorsed in the United States. This remedy can serve as an alternative to complete patent forfeiture when necessary to restore the market to normalcy.

II. COMPULSORY LICENSING'S COMPATIBILITY WITH THE FUNDAMENTAL PURPOSES OF THE PATENT LAWS

A. Is Compulsory Licensing Constitutional?

Regardless of whether compulsory licensing legislation could provide positive results, such legislation could not be enforced in the United States unless it could pass constitutional muster. Article I, section 8, clause 8 of the Constitution is the primary source of Congress' authority to enact laws concerning intellectual property. That clause, generally known as the Patent and Copyrights Clause, states that Congress has 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."

One author, B.R. Pravel, has asserted that the intended meaning of "exclusive" in clause 8 is that Congress may confer exclusive rights, but not more limited ones. His interpretation would exclude the granting of a nonexclusive patent such as would result with compulsory licensing. Although Pravel acknowledges that the government has the power to take patents under eminent develop an imitation that does not infringe the patent would be less than the cost of licensing. If the competitor uses good business judgment, the consumer will benefit from lower prices and inefficient duplicative research would be reduced as well.

domain, he stresses that such power is limited to takings for the "public benefit" and that compulsory licensing results in the confiscation of private property only for the benefit of a private citizen, the licensee.14

The granting of a general compulsory license under a working requirement would, however, be in the public interest. Such a provision would ensure that the public receives the benefit of an innovation as soon as possible rather than only after seventeen years. Moreover, the word "exclusive" in clause 8 should not be interpreted as establishing the only type of intellectual property right that Congress may grant, but instead only as emphasizing the greatest extent of the rights it may grant.15

Pravel's interpretation is also flawed by his limited view of the public purpose of the patent grant. He perceives that the public purpose is satisfied entirely by an inventor's disclosure of his invention.16 The Supreme Court has interpreted the framers' intent of the Patent and Copyrights Clause more broadly, however, as authorizing the granting of intellectual property rights when to do so will establish a "positive effect on society through introduction of new products into the economy."17 More recently, the Court has stated that "[a]s the text of the Constitution makes plain, it is Congress that has been assigned the task of defining the scope of the limited monopoly that should be granted to authors or to inventors in order to give the public appropriate access to their work product."18 Thus, the framers' intent has been interpreted not merely to ensure disclosure of inventions, but also to encourage innovation so that society can enjoy and benefit from the disclosure of inventions. This intent includes ensuring that patents are practiced for the public benefit. Accordingly, it would appear that it is within Congress' province to institute measures to ensure that the public receives the

14. Pravel, supra note 2, at 191.
16. Pravel, supra note 2, at 190.

The Supreme Court stated in the Paper Bag Case that patent non-use is permissible under the current patent laws. Nonetheless, the Court did not say that Congress could not alter the present law. See Continental Paper Bag Co., v. Eastern Paper Bag Co., 210 U.S. 405 (1908); Schecter, supra note 15, at 292-93; see also infra text accompanying notes 43-45.
benefits of new inventions soon after disclosure. Congress could do this through compulsory licensing provisions.

A further indication that the framers did not intend the Patents and Copyrights Clause to authorize Congress only to grant exclusive rights is evidenced by the concepts of patent property prevalent at the time the Constitution was written. Under the then-existing English law, the public's welfare was considered paramount to that of the patentee. Consequently, it is unlikely that the framers intended to limit Congress' authority to grant unconditional rights even when to do so would not serve the public interest.

Another indication that a general compulsory licensing statute would be constitutional is the fact that a number of limited compulsory licensing statutes already exist for intellectual property rights in the United States, and have not been struck down on constitutional grounds. Provisions permitting compulsory licenses have been included in the Atomic Energy Act of 1954, the Plant Variety Protection Act, the Clean Air Act of 1970, and the Copyright Act of 1976. All of these acts contain provisions directed at

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19. See Statute of Monopolies, 21 Jac. 1, ch. 3 (1624) (providing an exception to an outright ban on monopolies if the invention was not "contrary to the law or mischievous to the State by raising prices of commodities at home or hurt trade or ... generally inconvenient"); Schecter, supra note 15, at 299-301; see also Mirabito, supra note 12, at 407 (stating that "early common law recognized that the patentee's rights were not absolute but were permissible for so long as they did not contain certain undesirable aspects").


21. 7 U.S.C. §§ 2402-2404 (1988). This provision authorizes the Secretary of Agriculture to declare a novel variety of an asexually reproduced plant covered by plant variety protection open to use if he finds that the public must have access to the protected variety in order to ensure an adequate supply of fiber, food, or feed in the United States. The Secretary may designate the owner's compensation, presumably on a reasonable royalty basis. Id.

22. 42 U.S.C. § 7608 (Supp. IV 1986). This provision permits the EPA Administrator to recommend to the Attorney General that a compulsory license be granted because a patented technology concerning the reduction of emissions is not "reasonably available" to prospective licensees. Upon certification by the Attorney General a federal district court can compel the patentee to license the technology on terms that the court finds reasonable. Id. See generally Gerber & Kitson, Compulsory Licensing of Patents Under the Clean Air Act of 1970, 54 J. Pat. Off. Soc'y 650 (1972).

23. 17 U.S.C. §§ 111, 115, 116, 118 (1988). These provisions permit the granting of compulsory licenses on the following copyrighted materials: cable television, phonorecords,
specific intellectual property subject matter and permit the granting of involuntary licenses to private individuals. None of these laws has been successfully challenged on a constitutional basis.

B. Congress' Intent as to the Patent System

Although the Patents and Copyrights Clause of the Constitution appears to grant authority to enact general compulsory licensing provisions, Congress need not, and apparently has not, expressly endorsed such a law. Nevertheless, compulsory licensing does not appear to be at odds with the general purposes for which Congress has established the patent laws. This is evidenced by judicial imposition of limited compulsory licensing schemes as consistent with congressional intent.

1. Compulsory Licensing as an Antitrust/Misuse Remedy

The first and most common type of limited compulsory licenses adopted by the courts are those ordered as a remedy for patent misuse or antitrust violations. Both reasonable royalty and royalty-free compulsory licenses have been ordered. Both types of remedies have withstood constitutional challenge. See supra notes 11-12 and accompanying text. Even as of 1959 it was estimated that between 40,000 and 50,000 patents had been affected by antitrust/misuse compulsory licensing judgments. See, e.g., Coal Research and Development Act, 30 U.S.C. § 666 (1982); Helium Act, 50 U.S.C. § 167b (1982); Tennessee Valley Act, 16 U.S.C. § 831r (1988); 28 U.S.C. § 1498 (1982). These provisions have characteristics of eminent domain, and therefore even opponents of general compulsory licensing consider them constitutional. See Pravel, supra note 2, at 199-201.


When antitrust violations have been found, the courts have generally ruled that the patentee’s exclusive right cannot prevail:

When the patent holder so far overreaches his privilege as to intrude upon the rights of . . . the public . . . and does this in such a way that he cannot further exercise the privilege without also trespassing upon the rights thus protected, either his right or the other person’s and the public right, must give way. It is wholly incongruous in such circumstances to say that the privilege of the trespasser shall be preserved and the rights of all others which he has transgressed shall continue to give way to the consequences of his wrongdoing.\(^{28}\)

In these circumstances the antitrust laws are deemed paramount to the exclusive rights granted under the patent laws. The objective here is compatible with the primary objectives of the patent laws; in these cases the antitrust laws encourage innovation by eliminating barriers to free competition.\(^{29}\)

2. Compulsory Licensing in the Public Interest

A second type of judicially endorsed compulsory licensing occurs when courts refuse to grant injunctions based on findings that to do so would be injurious to the public interest.\(^{30}\) In these cases, a governmental entity is normally infringing the plaintiff’s patent and cites as its defense the public’s health and safety. Aside from any governmental tort immunity,\(^{31}\) these governmental bodies argue


\(^{29}\) ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, RESTRICTIVE BUSINESS PRACTICE RELATING TO PATENTS AND LICENSEES 6 (1973); see also S. REP. No. 492, supra note 25, at 2 (stating that “[i]n preventing monopolists from illegally dominating or blocking access to markets, the antitrust law also encourages innovation”).

\(^{30}\) E.g., City of Milwaukee v. Activated Sludge, Inc., 69 F.2d 577, 579, 21 U.S.P.Q. 69 (7th Cir. 1934) (finding that the public safety would be jeopardized without the use of the plaintiff’s patent for irradiating water); Bliss v. City of Brooklyn, 3 F. Cas. 706, 706-07 (C.C.N.Y. 1871) (No. 1,544) (reasoning that the citizens’ safety was at stake without the use of plaintiff’s patented fire hose coupling).

Additionally, Vitamin Technologists v. Wisconsin Alumni Research Found., 146 F.2d 941 (9th Cir. 1945), is often cited as a “public interest” compulsory licensing case. In Vitamin Technologists, the plaintiff had refused to license a process for making Vitamin D so that the defendant could use it in making oleomargarine. The defendant infringed and was subsequently sued. At trial, evidence was offered to show that margarine with Vitamin D had health benefits and that the plaintiff had not licensed or used his patent for margarine. The Ninth Circuit declared the patent unenforceable in the public interest. However, the patent was held invalid on other grounds, and consequently the court’s statements as to public interest are dicta. See id. at 945. More interestingly, the court was willing to make the public interest conclusion even though the defendant was not a governmental body.

\(^{31}\) See Belknap v. Schild, 161 U.S. 10 (1896) (denying both an injunction and damages based on sovereign immunity). But see Hercules, Inc. v. Minnesota State Highway Dep’t, 337
that infringing for such purposes is acting under its police power for the benefit of its citizens.\textsuperscript{32} They have also been successful in arguing that because under the patent statute a court "may" grant an injunction consistent "with the principles of equity," a court can decide not to grant an injunction against a governmental entity infringer.\textsuperscript{33}

In denying injunctions against local governmental bodies in such cases, courts have ordered royalties be paid to infringed patentees.\textsuperscript{34} In this way, the "taking" is justly compensated. Moreover, by permitting public access to inventions crucial to the public health and safety, this relief is compatible with the patent statute's emphasis on the public's benefit.

3. Compulsory Licensing Because of Patent Non-Use

The third type of judicially approved compulsory licensing occurs when a patentee has not practiced his invention.\textsuperscript{35} The analysis underlying this case law would appear to rationalize a general compulsory licensing scheme under which any patent, no matter what subject matter, could be subjected to licensing because of non-use.

In \textit{Foster v. American Machine & Foundry Co.},\textsuperscript{36} the Second Circuit upheld the granting of a compulsory license to a private manufacturer because the plaintiff patentee had not worked his patent.\textsuperscript{37} A subsidiary of American Machine, Thermotool Inc., manufactured welding machinery that included a component which embodied the process protected by Foster's patent. The component covered by the patent was necessary for the machinery to operate, and Foster had not made a product covered by his patent or licensed his patent. The Second Circuit stated:

\begin{itemize}
  \item F. Supp. 795 (D. Minn. 1972) (denying damages based on immunity but holding an injunction was proper).
  \item A similar argument can be made under the eminent domain statute, 28 U.S.C. § 1498 (1982). Under section 1498, any patent may be used "by or for the United States." This statute is consistent with the fifth amendment because it allows a "taking" for the "public use." It is also consistent with that amendment because it provides for "just compensation."
  \item \textit{See}, e.g., \textit{City of Milwaukee v. Activated Sludge, Inc.}, 69 F.2d at 579, 21 U.S.P.Q. at 71; \textit{Bliss v. City of Brooklyn}, 3 F. Cas. at 706-07.
  \item 492 F.2d at 1319.
\end{itemize}
An injunction to protect a patent against infringement, like any other injunction, is an equitable remedy to be determined by the circumstances. It is not intended as a club to be wielded by a patentee to enhance his negotiating stance. . . . In the assessment of relative equities, the [lower] court could properly conclude that to impose irreparable hardship on the infringer by injunction, without any concomitant benefit to the patentee, would be inequitable.

Instead, the District Court avoided ordering a cessation of business to the benefit of neither party by compensating appellant in the form of a compulsory license with royalties. . . . Here the compulsory license is a benefit to the patentee who has been unable to prevail in his quest for injunctive relief. To grant him a compulsory royalty is to give him half a loaf. In the circumstances of his utter failure to exploit the patent on his own, that seems fair.38

This last type of judicially endorsed compulsory license appears to be an anomaly. Foster cites federal court precedent,39 but none of the cases cited involved non-working by the patentee.40 Moreover, Foster ignores the Supreme Court’s holding in the Paper Bag Case41 that the patent laws permit non-use.42

In the Paper Bag Case, the Eastern Paper Bag Company was the owner of a patent for a bag making machine it did not commercially use. The district court found that the defendant infringed the patent and issued a permanent injunction. On appeal, the defendant argued that a court of equity had no jurisdiction to restrain the infringement of a patent that was being suppressed. The Supreme Court stated, “We dissent entirely from the thought thus urged,” and held that the right of a patentee not to use his invention is within the exclusive right granted under the patent laws.43 The Court noted that Congress had likewise consistently refused to enact a general compulsory licensing statute.44

The Supreme Court did, however, leave open the possibility that there might be a situation in which non-use of a patent would

38. Id. at 1324, 182 U.S.P.Q. at 6 (citations omitted).
39. See citations accompanying the opinion in Foster, 492 F.2d at 1324, 182 U.S.P.Q. at 6.
40. For an in-depth review of each of the cases cited as precedent in Foster, see Morton, Compulsory Licensing: An Unplanned-for Addition to the United States Patent System, 2 APLA Q.J. 171, 176-182 (1974); Pravel, supra note 2, at 196.
42. Id. at 423-24.
43. Id.
44. Id. at 429. The Court opined that Congress could not have been ignorant of the fact that many foreign countries have provisions for compulsory licenses when a patentee has
prevent issuance of an injunction against an infringer. Emphasizing
that it was not deciding the issue, the Court noted that the "public
interest" might create a justification for a court of equity to with-
hold relief to a patentee.45

Although it could be argued that Foster fits within the Supreme
Court's dicta in the Paper Bag Case, the facts of Foster are indistin-
guishable in any material respect from those in the Paper Bag Case.
Any argument that Foster's invention was vital to the welding in-
dustry would not likely satisfy the Supreme Court's public interest
requirement, just as the Supreme Court was not moved by the de-
fendant's claim that the public would be deprived of a new paper
bag making machine unless a compulsory license was ordered. In-
stead, the Court is likely to have intended, by its reference to the
"public interest," that the need for the practice of a patent would
have to rise to a high level of concern for the public's health and
safety. Despite the weak support behind the decision, the Supreme
Court denied certiorari in Foster.46 The case may serve as prece-
dent for judicially ordered compulsory licensing when a patentee
has failed to work his patent.

The weight that Foster carries today, however, appears to be
quite minimal. Congress has repeatedly refused to enact a working
requirement47 and very recently it enacted legislation that appears
to overrule Foster.48 In 1988, Congress amended section 271(d) of
title 35 in an effort to minimize the scope of the patent misuse do-
ctrine. That section now states, inter alia, that "[n]o patent owner . . .
shall be denied relief . . . [for having] refused to license or use
any rights to [his] patent."49

Unfortunately, the legislative history of the amendment reveals

failed to practice his invention. The Court, therefore, concluded that Congress has con-
sciously refused to enact such legislation. Id.

It should be noted that Congress established a working requirement for alien patentees
in 1832. That act required aliens "to introduce into public use in the United States the inven-
tion or improvement" within one year of patent issuance or forfeit their patent. Act of July
13, 1832, ch. 203, 4 Stat. 577. Congress repealed this act, however, expressly denouncing a
working requirement. See Act of July 4, 1836, ch. 357, § 21, 5 Stats. 117, 125.

45. The Paper Bag Case, 210 U.S. 405 at 430; see also Special Equip. v. Coe, 324 U.S.
370, 383, 64 U.S.P.Q. 525 (1945) (questioning, "How may the words 'to make, use, and vend'
be read to mean 'not to make, not to use, and not to vend?'").


47. See Hartford-Empire Co. v. United States, 323 U.S. 386, 433 & nn. 26, 27, 64
U.S.P.Q. 18, clarified in 324 U.S. 570, 65 U.S.P.Q. 1 (1945), for a list of bills presented
between 1897 and 1943 proposing a working requirement. For the most recently rejected


49. Id.
a dearth of information on this particular provision. Congress appears to have been more concerned with the judicial presumption of market power being attached to patent owners using tying arrangements with patent licenses. The only statement about the non-use/no license provision was that it was a codification of the "current caselaw [sic] and makes sense as a matter of policy." Although a patentee's intentional non-use of a patent might have been challenged as patent misuse, no American court, not even *Foster*, has ever upheld such an assertion. Consequently, this provision appears to have slipped into the amendment without extensive discussion.

In amending section 271(d), Congress seems to have overlooked the fact that the promotion of the sciences and arts is not advanced by allowing a patentee to suppress intellectual property for the preservation of an old inferior market. In such a manner, the patentee is not deriving his profit from promotion of a market, but from manipulation of the market. It is not part of the constitutional scheme, and it was not part of the patent law scheme before the amendment to section 271, that inventors should be able to profit from suppression of their creations. It therefore follows that the institution of compulsory licensing to combat non-use is compatible with the fundamental purposes of the patent system and that Congress could enact such legislation if it so desired.

III. THE EFFICACY OF A GENERAL COMPULSORY LICENSING STATUTE

Although a number of benefits can be cited as likely to result from general compulsory licensing and that such legislation would be constitutionally permissible, there is little evidence that any substantial outcome would occur from such a law. Moreover, although general compulsory licensing is theoretically consistent with the fundamental purpose of the patent laws, to encourage in-

52. The unobtrusiveness with which this provision became part of the amendment is further evidenced by its legislative history's silence in comparison to the previous vocal legislative attempts at similar laws. See supra note 47.
54. See supra sections I and II A.
novation for society’s benefit, its implementation could actually frustrate that very purpose.

A. Potential Problems with General Compulsory Licensing

As Justice Fortas stated, “those who believe they are attacking the abuses of the [patent] system may inadvertently damage the system itself.”

Similarly, opponents of compulsory licensing argue that such licensing provisions would destroy the research incentive that is so integral to the patent system. This position would appear to be most valid if the royalties granted under a compulsory licensing system were not comparable to those that would be obtained under voluntary licensing. If, through compulsory licensing, an investor or inventor is not going to recoup his investment or is going to receive less profit, he would have less incentive to devote time and money to creating new innovations than he would if he could anticipate an unconditional exclusive right.

This risk appears quite real as the experience of courts here and abroad demonstrate. The U.S. courts have struggled to determine reasonable royalties in patent infringement suits, and under foreign compulsory licensing schemes inadequate royalties have been granted. In particular, when a license is granted because of non-use, there is no voluntary license royalty to look to for guidance. Moreover, substantial debate exists as to whether the investment in unsuccessful research, in addition to the cost of research that actually resulted in discovering the invention which is the subject of the patent being licensed, should be included in the royalty assessment. On one hand, why should the licensee pay for the

58. See F. SCHERER, supra note 9, at 44-45 (noting that the $336/kg compulsory license royalty granted in Britain in Hoffmann LaRoche & Co. A.G.’s Patent, 1969 R.P.D. & T.M. 504, was substantially less than the monopoly royalty estimate of $800 to $1,100). See generally Henry, Multi-National Practice in Determining Provisions in Compulsory Patent Licenses, 1977 J. Int’l & Econ. 325, 329-37, 338-43 (describing the process of royalty determination under a number of foreign licensing statutes).
patentee's failures? On the other hand, failures are a cost of doing business when research and development is the business.

In addition to the risk of inhibiting the research incentive, general compulsory licensing is also problematic because of the added pressure on the patentee to quickly market a new invention. If the patentee does not immediately market his invention, under a compulsory licensing scheme, he must risk having an incipient or actual infringer compel voluntary licensing regardless of his good faith effort to practice his invention.\(^{60}\) Such duress may result in license royalties that do not fully recoup research and development costs, and as a consequence may deter future investment. Furthermore, such a statute would likely foster litigation for those patentees who resist licensing.\(^{61}\)

B. How Great a Need is There?

Although several opponents of compulsory licensing assert that there is no patent suppression,\(^{62}\) there is evidence that it does exist.\(^{63}\) What suppression there is appears quite minimal, however. Consequently, there is a significant question as to whether there is any great need for general compulsory licensing.

The specialized compulsory licensing statutes that currently exist in the United States have rarely been utilized which may indicate that even those in the marketplace do not feel a need to obtain compulsory licenses. Since the enactment of the Atomic Energy Act of 1954, only one compulsory license has been issued.\(^{64}\) That license was issued only after a dispute between the patentee and the

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On the other hand, Canada does not. See Hoffmann-LaRoche Ltd. v. Frank W. Horner Ltd., 64 C.P.R. 93, 106 (1970).

60. Grace periods may partially reduce this problem. However, strict time limits would likely present problems to some inventors.

61. See Pravel, supra note 2, at 208.

62. See Whitaker, supra note 8, at 155-57; Sease, supra note 56, at 252.


licensee/applicant arose as to the appropriate royalty.\textsuperscript{65} The license did not, therefore, result from patent suppression.

No licenses have been issued under the Plant Variety Protection Act.\textsuperscript{66} However, this provision was only intended for use during a major disaster, e.g., a corn blight affecting all types of corn except a patented variety that the patentee is unwilling to license. Consequently, because this licensing provision was contemplated only for a national emergency, and no such emergency has occurred since the law was enacted, licensing under it may not be representative of what might occur under a general licensing law.\textsuperscript{67}

Under the compulsory licensing provision of the Clean Air Act of 1970,\textsuperscript{68} no applications have been filed or licenses granted.\textsuperscript{69} Apparently this provision was enacted as part of the 1970s' fervent drive for increased government regulation, particularly in the area of environmental protection. Substantiated suppression does not appear to have been a motivating factor for its enactment.

Numerous compulsory licenses have been granted under the Copyright Act of 1976, but the situation surrounding these provisions is unique. These provisions have been established to protect the copyright owners in enforcing their rights rather than to aid in ensuring that the public receives the benefit of intellectual property.\textsuperscript{70} For example, a standard compulsory license is granted to jukebox owners because it is difficult for the owner of the copyright on the songs played on the jukebox to know how often they were heard.\textsuperscript{71} Because copyright protection presents unique problems that are not found in patent law, the prominent use of compulsory licenses for copyright material is not indicative of the need for such licensing under the patent laws.

Further evidence that general compulsory licensing provisions may not be needed in the United States is the frequency of use of such provisions in foreign countries possessing these laws. Under

\begin{itemize}
\item \textsuperscript{65} Mirabito, supra note 12, at 418.
\item \textsuperscript{66} Id. at 418-19.
\item \textsuperscript{67} See id. at 419.
\item \textsuperscript{68} See supra note 22.
\item \textsuperscript{69} Telephone interview with Richard Wilson, Director of Mobil Sources Div., Environmental Protection Agency (Dec. 12, 1989); telephone interview with John Rasnik, Deputy Director of Stationary Sources Div., Environmental Protection Agency (Dec. 11, 1989); see also Mirabito, supra note 12, at 418.
\item \textsuperscript{71} Cf. H. REP. No. 1476, 94th Cong., 2d Sess. 112, reprinted in 1976 U.S. CODE \& CONG. ADMIN. NEWS 5659, 5727.
\end{itemize}
the British general compulsory licensing statute, only two licenses were granted out of sixteen applications filed. Under Canada’s general compulsory licensing provision, only eleven licenses were granted between 1935 and 1970. These numbers appear minimal compared to the number of voluntary licenses that were most likely granted.

The need for a general compulsory licensing statute is questionable because of the alternative mechanisms that already exist for those situations in which compulsory licensing might be needed. First, courts can apply “principles of equity” under section 283 of the Patent Act when the public needs the use of an invention for its health and safety. Second, if a situation arises in which the public welfare requires that private parties have the ability to practice an invention, Congress can draft emergency legislation. Furthermore, antitrust laws already exist to combat the misuse of patents for anticompetitive behavior, and therefore a general compulsory licensing law imposing involuntary licenses in such situations would be duplicative.

IV. Conclusion

A general compulsory licensing law designed to ensure that the public receives the benefit of innovation as soon as possible would be constitutional and consistent with the fundamental purposes of the patent system. However, the need for such a law is questionable. Such a law could have a negative effect on the research incentive provided by the United States patent system. Moreover, for the situations in which the public health is at risk or the abuse or the misuse of patents is great, there are already statutory and judicial mechanisms to resolve such problems. Accordingly, the economic

72. British Patents Act, 1949, 12, 13 & 14 Geo. 6, ch. 87, § 37.
73. ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, RESTRICTIVE BUSINESS PRACTICE RELATING TO PATENTS AND LICENSEES 27 (1973).
75. ECONOMIC COUNCIL OF CANADA, REPORT OF INTELLECTUAL AND INDUSTRIAL PROPERTY 68 (1971) (reporting 53 applications filed).
76. But see Goldsmith, supra note 1, at 146 (suggesting that the small number of compulsory licensing grants is not a sign of significance, but rather an indication that meaningful voluntary license negotiations have been stimulated).
77. Courts can act much as the Activated Sludge and Bliss courts did. See supra notes 30-34 and accompanying text.
78. For those who do not believe that the normal economic incentives to license are sufficient, they can be reassured that Congress is unlikely to stand idly by should, for example, a patentee of the cure for cancer refuse to license and not meet the demand. Also, in such a circumstance, the government itself could get into manufacturing and use 28 U.S.C. § 1498 to appropriate the patent.
incentive to voluntarily license appears sufficient to avoid patent non-use for the most part, and the institution of a general compulsory licensing statute in the United States would not be worth the risk to the system as it now stands.