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PATENT OFFICE PERFORMANCE IN PERSPECTIVE*

George E. Frost†

“. . . the only patent that is valid is one which this Court has not been able to get its hands on.”¹

JUSTICE Jackson's note of despair reflects all too accurately the treatment patents have seemingly received in the hands of the courts since the "new trend" of recent years.² It has become the legal fashion to characterize letters patent as something the Patent Office issues and the courts strike down. Statistical support for this conclusion can be readily assembled.³

*The author acknowledges the help of Mr. John Verhoeven of the Illinois bar in the preparation of this article.

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¹Jungersen v. Ostby & Barton Co., 335 U.S. 560 at 572, 69 S.Ct. 269 (1949) (dissenting opinion).

²See, e.g., Picard v. United Aircraft Corp., (2d Cir. 1942) 128 F. (2d) 632 at 636; Trabon Engineering Corp. v. Direkes, (6th Cir. 1943) 136 F. (2d) 24 at 27. But cf. Falkenberg v. Bernard Edward Co., (7th Cir. 1949) 175 F. (2d) 427 at 428.

³E.g., Lang and Thomas, "Disposition of Patent Cases by Courts During the Period 1939 to 1949," 32 J.P.O.S. 802 (1950); Walter, "A Ten Year Survey of Design Patent Litigation," 35 J.P.O.S. 389 (1953); Davis, "The Impact of Recent Supreme Court Cases on the Question of Patentable Invention," 44 ILL. L. REV. 41 (1949). At page 47, Davis comments on the statistics respecting the patent cases to conclude, "This is a sharp drop, greatly more than could reasonably be explained by any difference in methods of compilation or in deciding question of infringement. It must be partly, if not largely, due to the more critical application of the tests of invention, in other words, a higher standard of invention."

A particularly significant recent statistical study is found at pages 176 to 185 and 287 to 293 of the Hearings Before the Senate Subcommittee on Patents, Trademarks and Copyrights, 84th Cong., 1st sess. (1955), pursuant to S. Res. 92, entitled American Patent System. This study was prepared by Mr. P. J. Federico of the Patent Office. It includes data covering all available district court and court of appeals decisions on patents in the seven-year period from 1948 to 1954. Federico reports that 53% of the patents before the district courts were held invalid and 63% of the patents before the courts of appeals. He also includes long term tables indicating that in the 1925-1954 period the percentage of patents held invalid by the courts of appeals increased from about 33% in the 1925-1929 period to a peak of about 64% in the 1945-1949 period. His data for the Supreme Court covering the 1925-1954 era are surprisingly indecisive in terms of trend.

The Federico study also covered 50 recent cases where patents were held invalid by courts of appeals. Consistently with the views expressed herein, he found comparatively

Some judicial expressions have taken a more ominous turn. With marked impatience some members of the judiciary have pointed to the Patent Office as failing to hold fast to the standards it is charged with applying. Thus we have Justice Douglas declaring:

"The patent involved in the present case belongs to this list of incredible patents which the Patent Office has spawned. The fact that a patent as flimsy and as spurious as this one has to be brought all the way to this Court to be declared invalid dramatically illustrates how far our present patent system departs from the constitutional standards which are supposed to govern."⁴

And in a more recent case, where a jury had held the patent valid and infringed, Judge Hastie protests:

"This patent of the obviously unpatentable and indications that the category of patented unpatentables is a large one, cause us to express a final word of regret that the Patent Office in analyzing and disposing of patent applications does not more consistently use that expertise with which courts credit it along with other specialized administrative agencies."⁵

With this apparent unanimity of contrary expression one must be bold indeed to question the proposition that the courts are in fact following a stricter standard of invention than the Patent Office.⁶ Yet such doubt finds considerable support in the cases and raises the question of how far impatience with individual factual situations has led to general conclusions contrary to the overall facts. Consideration of this question at the present time is especially timely in view of current judicial divergencies re-

few cases holding patents invalid on the art before the Patent Office (six out of the 40 patents in the group held invalid on prior art). He also reports that the cases of actual "anticipation"—where the prior art is exactly what the patent claim states—were "very few." And of the ten most recent Supreme Court decisions holding patents invalid Federico's data indicate that where prior art has been decisive it has generally been art not considered by the patent examiner.

The Federico study did not attempt to determine the extent expansive patent constructions have influenced holdings of patent invalidity.

⁴ Great A. & P. Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147 at 158, 71 S.Ct. 127 (1950) (concurring opinion).

⁵ Packwood v. Briggs and Stratton Corp., (3d Cir. 1952) 195 F. (2d) 971 at 974. Compare Williams Mfg. Co. v. United Shoe Machinery Corp., (6th Cir. 1941) 121 F. (2d) 273 at 277, aff'd. 316 U.S. 364, 62 S.Ct. 1179 (1942).

⁶ It should be noted that some commentators have found in the decisions a trend toward earlier and stricter views on patentability. See, e.g., Smith, "Recent Developments in Patent Law," 44 MICH. L. REV. 899 (1946).

specting the statutory definition now expressed in section 103 of the Patent Code.⁷ This consideration—coupled with observations on the so-called “file wrapper estoppel” doctrine—also sheds some light on the most promising directions for improvements in Patent Office procedure.

The heart of the problem lies in making a meaningful comparison between court determinations on the issue of invention, on the one hand, and the Patent Office determinations, on the other. To be sure, both are directed to resolution of the same statutory question—and in both the test is whether “. . . 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 the subject matter pertains.”⁸ But when the circumstances of the respective determinations are considered, important differences become apparent.

Perhaps the most significant factual showing usually available in court proceedings and not generally available before the Patent Office is evidence respecting the commercial impact of the invention. Extreme cases aside, it is virtually impossible to make an abstract determination of whether a particular change is or is not within the “skill of the art”—for the level of such skill is itself highly indefinite. As Judge Learned Hand has stated, “. . . [invention] is as fugitive, impalpable, wayward, and vague a

⁷ 35 U.S.C. (1952) §103. A number of courts have concluded that the code makes no change in the standard of invention. E.g., *General Motors Corp. v. Estate Stove Co.*, (6th Cir. 1953) 203 F. (2d) 912, cert. den. 346 U.S. 822, 74 S.Ct. 37 (1953); *New Wrinkle v. Watson*, (D. C. Cir. 1953) 204 F. (2d) 35, cert. den. 346 U.S. 820, 74 S.Ct. 35 (1953). On the other hand Judge Learned Hand has recently found in §103 a restoration of the more liberal patent decisions of a generation ago. *Lyon v. Bausch & Lomb Optical Co.*, (2d Cir. 1955) 224 F. (2d) 530 at 535, cert. den. 350 U.S. 911, 76 S.Ct. 193 (1955). Cf. *Pacific Contact Labs. v. Solex Labs.*, (9th Cir. 1954) 209 F. (2d) 529 at 533, cert. den. 348 U.S. 816, 75 S.Ct. 26 (1954).

⁸ 35 U.S.C. (1952) §103. This test is an approximation of the “skill of the art” test first applied by the Supreme Court in *Hotchkiss v. Greenwood*, 11 How. (52 U.S.) 248 (1850). There (at 265) the Court affirmed a jury charge that if “no more ingenuity or skill [was] required to construct the knob in this way than that possessed by an ordinary mechanic acquainted with the business, the patent was invalid. . . .” In the report on the bill that became the patent code it is stated with respect to §103: “This paragraph is added with the view that an explicit statement in the statute may have some stabilizing effect, and also to serve as a basis for the addition at a later time of some criteria which may be worked out.” H. Rep. 1923, 82d Cong., 2d sess., p. 18 (1952), to accompany H.R. 7794 And in the general comments on the code the report states that §103 “should have some stabilizing effect and minimize great departures which have appeared in some cases.” *Id.*, p. 7. See Federico, “Commentary on the New Patent Act,” 35 U.S.C.A. pp. 19-23 (1954); Harris, “Some Aspects of the Underlying Legislative Intent of the Patent Act of 1952,” 23 GEO. WASH. L. REV. 658 (1955).

phantom as exists in the whole paraphernalia of legal concepts."⁹ To resolve the indecisive situations, the courts have looked to the commercial history of the invention—usually fully developed by the time the infringement suit must be decided. Commercial success of products embodying the invention,¹⁰ a long felt want satisfied by the invention,¹¹ recognition of the invention by licenses taken by the industry,¹² and similar considerations have weighed heavily in the judicial decisions.¹³ Conversely, lack of success in the market place has been used to support findings of lack of invention.¹⁴ All of these commercial considerations find their logical basis in the proposition that the industry itself is the best measure of what is normal "skill of the art."

A second broad area of difference between court and Patent Office determinations of invention relates to proof of some segments of the prior art. The patent law defines certain prior patents, publications, uses, knowledge, sales, and other matters which are to be considered as part of the "prior art."¹⁵ It is with respect to the combined effect of all of these that the test of "invention" must be made.¹⁶ As a matter of practical necessity the Patent Office largely confines its attention to those portions of the prior art represented by documents.¹⁷ In consequence, items such as prior knowledge, prior public use, and the like often do not come to the attention of the office. Defendants in patent suits are under no such disability and can locate and prove these elements of the

⁹ *Harries v. Air King Products, Inc.*, (2d Cir. 1950) 183 F. (2d) 158 at 162.

¹⁰ E.g., *The Goodyear Tire and Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275, 64 S.Ct. 593 (1944); *Wahl Clipper Corp. v. Andis Clipper Co.*, (7th Cir. 1933) 66 F.(2d) 162.

¹¹ E.g., *Hunt v. Armour and Co.*, (7th Cir. 1950) 185 F. (2d) 722; *The Goodyear Tire and Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275, 64 S.Ct. 593 (1944).

¹² E.g., *Eibel Process Co. v. Minnesota and Ontario Paper Co.*, 261 U.S. 45, 43 S.Ct. 322 (1923).

¹³ Thus, in the *Ray-O-Vac* case, 321 U.S. 275, 64 S.Ct. 593 (1944), the Court emphasized the successful practice of the patentee of offering to replace a complete flashlight upon leakage of the patented battery.

¹⁴ ". . . but failure is an almost infallible test of non-invention, and for all practical purposes Sarazin's disclosures were failures, and indeed confessed failures." *Clark v. Wright Aeronautical Corp.*, (2d Cir. 1947) 162 F. (2d) 960 at 966. And see *Bostitch, Inc. v. Precision Staple Corp.*, (2d Cir. 1949) 178 F. (2d) 332 at 336 (lack of problem of long duration or unsuccessful efforts to solve the problem noted in finding no invention).

¹⁵ 35 U.S.C. (1952) §102.

¹⁶ E.g., *Detrola Radio & Television Corp. v. Hazeltine Corp.*, 313 U.S. 259, 61 S.Ct. 948 (1941).

¹⁷ The office does, however, use documents as at least prima facie proofs of the facts they state as well as "printed publications." Thus in a line of decisions the office has taken published articles as prima facie proof of knowledge of their contents in the United States as of the dates the manuscripts are indicated as received by the publisher. E.g., *Ex parte Ordas*, 104 U.S. P.Q. 74 (Board of Appeals, 1954).

prior art, in which event a court may strike down as noninventive what the Patent Office has found to be invention. In such instances the difficulty is not one of Patent Office judgment but rather one of inherent limitations on available proofs.

Still another substantial area of departure between the courts and the Patent Office resides in the interpretation of the patent itself. In a surprising number of practical cases the patent owner applies an expansive patent interpretation in an effort to reach the activity of the alleged infringer. In so doing he may take undue license with the patent itself and in any event takes a position in court that various differences between the patent and the accused structure or process are unimportant details. Similar differences between the patent and the prior art are then—by the patentee's own test—unimportant. As an early decision points out "that which infringes, if later, would anticipate if earlier."¹⁸ Here again we have an area of inquiry closed to the Patent Office for the expansive claim interpretation bringing the prior art into play is not made until the infringement problem arises.¹⁹

When the decisions on invention are considered in the light of these factors, a surprising pattern emerges. Far from repudiating the Patent Office, the courts, in the presence of showings of commercial success, have displayed a tendency to find invention in the most simple changes. And, even more impressively, a significant number of instances can be found where courts sitting in direct

¹⁸ *Knapp v. Morss*, 150 U.S. 221 at 228, 14 S.Ct. 81 (1893).

¹⁹ *Smith v. Hall*, 301 U.S. 216, 57 S.Ct. 711 (1937), vividly illustrates this effect. There the patent had been involved in an earlier case, at which time the patentee successfully urged that the claims were of scope to cover egg incubators regardless of the arrangement of the eggs. *Waxham v. Smith*, 294 U.S. 20, 55 S.Ct. 277 (1935). In the *Waxham* case the Court had rejected the argument of the defendant there that the patent claims were limited to the use of "staged" incubation wherein the eggs were arranged in stages in accordance with their age. In the subsequent *Hall* case the defendant relied upon a public use where the eggs were not arranged in stages but otherwise the process of the patent was used. The Court logically insisted that the construction given to the patent in the earlier litigation must hold in the later suit and accordingly found the patent invalid for prior public use.

The reverse took place in *Union Carbide and Carbon Corp. v. Graver Tank & Mfg. Co.*, (7th Cir. 1952) 196 F. (2d) 103, cert. den. 343 U.S. 967, 72 S.Ct. 1059 (1952), 344 U.S. 849, 73 S.Ct. 6 (1952). At an earlier stage in the case the patentee had emphasized the argument that the components of the patented welding flux were fully reacted. *Linde Air Products v. Graver Tank*, (7th Cir. 1948) 167 F. (2d) 531 [mod. 336 U.S. 271, 69 S.Ct. 535 (1949) and 339 U.S. 605, 70 S.Ct. 854 (1950)]. In the later proceedings the court insisted that the patent be construed in a manner consistent with the earlier representations and accordingly found no infringement in the use of a flux with partially, as distinguished from fully, reacted components.

review of Patent Office refusals to issue patents have overturned the Patent Office rulings.²⁰

Consider the fact situation of the *Ray-O-Vac* case.²¹ There the "invention" lay in encasing an ordinary flashlight cell in a steel jacket. The concept was the utmost of simplicity. If flashlight cells expand and jam when exhausted, enclose them in an unyielding steel jacket. Of course some degree of ingenuity must be exercised—for the jacket must not short circuit the cell itself. But this could be and was solved by interposing a cardboard sheath underneath the steel jacket, a material which had long previously been used in flashlight cells. The result was a non-jamming construction which went into almost universal use. The Supreme Court characterized the patent as "a very narrow one in a crowded art."²²

²⁰ E.g., Application of Hudson, (C.C.P.A. 1953) 205 F. (2d) 174; Application of Schechter, (C.C.P.A. 1953) 205 F. (2d) 185; Application of Horvath, (C.C.P.A. 1954) 211 F. (2d) 604; Application of Sutton, (C.C.P.A. 1954) 211 F. (2d) 582; Application of Stanley, (C.C.P.A. 1954) 214 F. (2d) 151; Application of Twomey and Schilling, (C.C.P.A. 1954) 218 F. (2d) 593; Application of Hotchkin, (C.C.P.A. 1955) 223 F. (2d) 490; Application of Gartner, (C.C.P.A. 1955) 223 F. (2d) 502; Application of Van Deventer, (C.C.P.A. 1955) 223 F. (2d) 274; Application of Krodel, (C.C.P.A. 1955) 223 F. (2d) 285; McCashen v. Watson, (D.C.D.C. 1955) 131 F. Supp. 233. The patent involved in *Helene Curtis Industries v. Sales Affiliates*, (D.C.N.Y. 1954) 121 F. Supp. 490 (appeal pending), was initially rejected by the Patent Office examiner and that rejection was made final. The Board of Appeals of the Patent Office affirmed. On bill in equity brought by the applicant the court granted the bill, thus ordering the Commissioner to issue the patent. The Patent Office took its own appeal from that decision. While the appeal was pending the applicant presented more limited claims which met the approval of the examiner. The appeal was accordingly dismissed and the patent issued. The patent was held invalid in the subsequent declaratory judgment proceedings brought by alleged infringers. The Patent Office took its own appeal in *Weeks v. Warp*, (D.C. Cir. 1955) 221 F. (2d) 108. There the office had rejected the claims in question as lacking invention and on the further ground that the earlier decisions of the Court of Customs and Patent Appeals in *In re Warp*, (C.C.P.A. 1946) 154 F. (2d) 658, and *In re Warp*, (C.C.P.A. 1946) 154 F. (2d) 661, were res judicata. After this Patent Office rejection the applicant filed bill in equity in the District Court for the District of Columbia, which held that some of the claims were allowable. The Patent Office thereupon took its appeal from the district court judgment, at which time the court of appeals reversed the district court to affirm the Patent Office ruling.

Over a 10-year period the Court of Customs and Patent Appeals in ex parte cases has affirmed the Patent Office in 79.9% of the appeals and the District Court of the United States for the District of Columbia in ex parte cases has affirmed the Patent Office in 78.3% of the cases. Hearings Before the Senate Subcommittee on Patents, Trademarks and Copyrights, 84th Cong., 1st sess., p. 174 (1955), pursuant to S. Res. 92, entitled American Patent System.

The case of *Hayes Industries v. Watson*, 108 U.S.P.Q. 201 (1955), affords another interesting illustration of the Patent Office examining activity. In this case the court upheld Patent Office refusal to grant a patent on the same disclosure for which the British patent office had granted a patent.

²¹ *The Goodyear Tire and Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275, 64 S.Ct. 593 (1944).

²² *Id.* at 276.

As might be expected, the patent examiner initially rejected the patent application to the Ray-O-Vac battery. He repeated the rejection after a written argument by the applicant. After an interview with the attorney, at which time the matter of commercial success was emphasized, the examiner allowed the patent.²³ Significantly, the Ray-O-Vac policy of guaranteeing replacement of the flashlight in the event of battery damage—later emphasized in court opinions—was emphasized before the patent examiner.

In the subsequent patent infringement suit major emphasis was placed upon the efforts and failures of the past and upon the element of commercial success. The district court found the patent valid and infringed.²⁴ Similar arguments prevailed in the unanimous decision of the Court of Appeals for the Seventh Circuit.²⁵ On certiorari, a majority of the Supreme Court—again placing emphasis upon commercial success, coupled with concurrent fact findings of invention below—upheld the patent and placed the final word of approval upon the action of the Patent Office.²⁶ The contention that the patent was directed to nothing more than a steel container was rejected by the majority of the Court with the observation: "Viewed after the event, the means Anthony adopted seem simple and such as should have been obvious to those who worked in the field, but this is not enough to negative invention."²⁷

Similar decisions of an earlier day readily come to mind.²⁸ For example, in the *Eibel Process* case²⁹ the Court found invention in doing what would, in retrospect, seem most obvious, namely, making slurry flow more uniformly onto a moving belt by inclining the belt slightly downward. The decision is of particular interest in its emphasis upon the narrow character of the invention as an improvement upon the old and well known Fourdrinier paper-making machine and upon the acceptance of the invention by the industry.

²³ Patent Office file, patent 2,198,423. This file was not in the record before the Supreme Court.

²⁴ (D.C. Ill. 1942) 45 F. Supp. 927.

²⁵ (7th Cir. 1943) 136 F. (2d) 159.

²⁶ 321 U.S. 275, 64 S.Ct. 593 (1944).

²⁷ *Id.* at 279.

²⁸ E.g., *The Barbed Wire Patent*, 143 U.S. 275 at 277, 283, 12 S.Ct. 443 (1892); *Expanded Metal v. Bradford*, 214 U.S. 366 at 381, 29 S.Ct. 652 (1909); *Keystone Mfg. Co. v. Adams*, 151 U.S. 139, 14 S.Ct. 295 (1894); *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U.S. 428, 31 S.Ct. 444 (1911). For an analysis of some of the leading decisions of the past sustaining patents issued over very close prior art, see *Dodds and Crotty*, "The New Doctrinal Trend," 30 J.P.O.S. 83 (1948).

²⁹ *Eibel Process Co. v. Minnesota & Ontario Paper Co.*, 261 U.S. 45, 43 S.Ct. 322 (1923).

Court decisions on direct review of Patent Office refusals to grant patents furnish further examples. The 1944 decision of the Court of Customs and Patent Appeals in *In re Shortell*³⁰ is particularly noteworthy. The patent sought was to a hacksaw blade having teeth on both edges, the teeth on one edge having less set than the teeth on the other edge. The prior art included saw blades generally with teeth on both edges, together with one prior art patent showing planing teeth of one set on one edge of the blade and cutting teeth of different set on the other edge. The margin of novelty was plainly small, yet the court reversed the Patent Office and held that invention was present.

The *Shortell* decision rests in part on the showing of commercial success and upon the fact that the best reference was some sixty years old. As to the latter point the court stated, "If this improvement was obvious to one skilled in the art, as held by the Patent Office tribunals, it seems to us that sixty years would not have elapsed before it was made."³¹

A second theme of broader importance runs through the *Shortell* opinion. The court specifically noted the "flash of creative genius" requirement expressed by the Supreme Court in the *Cuno* decision,³² and the related expressions of other courts that there was a "new doctrinal trend" toward higher standards of invention.³³ The court nevertheless adhered to earlier standards of invention, stating:

"While recognizing, of course, that it is the duty of this court to follow the law as declared by the Supreme Court, we do not conceive it to be our duty to change our basis of decision merely because some courts assume that there is a 'new doctrinal trend' with regard to the standards required for invention.

"In our opinion it is not within the province of the courts to establish new standards by which invention is to be determined. It seems clear to us that the creation of new standards for the determination of what constitutes invention would be judicial legislation and not judicial interpretation.

"It follows, from the foregoing, that until Congress shall otherwise legislate, or the Supreme Court shall otherwise specifically hold, this court will continue to hold that if a

³⁰ (C.C.P.A. 1944) 142 F. (2d) 292.

³¹ *Id.* at 294.

³² *Cuno Eng. Corp. v. The Automatic Devices Corp.*, 314 U.S. 84 at 91, 62 S.Ct. 37 (1941).

³³ Especially *Picard v. United Aircraft Corp.*, (2d Cir. 1942) 128 F. (2d) 632.

process or thing constitutes patentable subject matter, is new and useful, and the process performed or thing produced would not be obvious to one skilled in the art, invention should be presumed and a patent may properly issue therefor."³⁴

More recently, in *Pattinson v. Marzall*³⁵ the Patent Office refused to allow a patent application to a method of storing natural gas in underground salt cavities. The prior art included instances of using underground cavities generally for this purpose. Thus the purported invention differed from the prior art only in the use of salt cavities as distinguished from other cavities, a difference considered by the Patent Office to be within the skill of the calling. On bill in equity to review the Patent Office decision the district court concluded that the salt cavities had special advantages for the purpose, that simplicity and obviousness formed no criteria of invention, and that the Patent Office erred in refusing the patent application.

The ammoniated dentrifice litigation is also illuminating. In *Ex parte Kesel*,³⁶ the Patent Office Board of Appeals held that claims directed to a dentrifice having "at least about 1% by weight of a nontoxic salt of ammonia" were not allowable because the prior art showed the use of ammonium salts as a dentrifice and there was nothing to indicate that the particular proportion was critical. A claim specifying a range of one percent to seven percent was similarly held not to define invention. Kesel thereupon filed bill in equity to have the Patent Office refusal reviewed. During the pendency of the bill the patent examiner became satisfied that a claim to "not less than 2%" dibasic ammonium phosphate was allowable. In a recent decision, the Kesel-patent as thus issued was upheld as directed to invention.³⁷

To be sure, these examples do not dispose of the apparently critical recent Supreme Court decisions. Of these the *Cuno* case³⁸ is most well known, especially for the statement of Justice Douglas that, ". . . the new device, however useful it may be, must reveal the flash of creative genius, not merely the skill of the calling. If it fails, it has not established its right to a private grant on the

³⁴ (C.C.P.A. 1944) 142 F. (2d) 292 at 296.

³⁵ (D.C.D.C. 1951) 100 F. Supp. 787.

³⁶ 103 U.S.P.Q. 103 (1952).

³⁷ *The University of Illinois Foundation v. Block Drug Co.*, (D.C. Ill. 1955) 107 U.S.P.Q. 159.

³⁸ 314 U.S. 84, 62 S.Ct. 37 (1941).

public domain."³⁹ As presented to the Supreme Court, however, the case involved a contention that, ". . . degree of invention or ingenuity is not a test contemplated by the Constitution and the patent laws to determine whether or not an invention or discovery shall receive protection. . . . Congress could have entailed limitations as to the degree of invention to be rewarded by patents but it has never done so."⁴⁰

In substance, the Court was being asked to overrule the doctrine laid down in *Hotchkiss v. Greenwood*⁴¹ almost a century earlier. The statement of Justice Douglas appears to have been made more as an emphatic answer to this extreme contention than as establishing a new standard of invention. There is some indication that he himself so regarded it.⁴² In any event, as the concurring opinion in the *Cuno* case points out, there was a deviation between what was shown in the patent and the structure said to be an infringement and the case clearly entailed a rather broad patent interpretation making the prior art structures particularly relevant.

The *A. and P.* case⁴³ and its sequel, the per curiam *Crest Specialty* decision,⁴⁴ are likewise frequently referred to as recent Supreme Court decisions indicating that the Patent Office deviated from the proper standards of invention. Yet each case reached the Supreme Court after unanimous and concurrent fact findings of the lower courts that invention was present, and this alone would seem sufficient vindication of the Patent Office actions. More importantly, the *A. and P.* decision, in listing examples of cases where the Court had sustained combination patents, mentioned two decisions upholding extremely minor changes as "invention."⁴⁵ One of these cases contains the classic statement:

³⁹ *Id.* at 91.

⁴⁰ Brief for Petitioner, No. 6, Oct. Term 1941, pp. 42-43.

⁴¹ 11 How. (52 U.S.) 248 (1850).

⁴² In a note to the concurring opinion in *Great A. & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 at 154, 71 S.Ct. 127 (1950), Justice Douglas lists some six earlier cases using the term "genius" to describe patentable invention. The text referring to the footnote reads, "through the years the opinions of the Court commonly have taken 'inventive genius' as the test."

⁴³ *Great A. & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 71 S.Ct. 127 (1950).

⁴⁴ *Crest Specialty v. David C. Trager*, 341 U.S. 912, 71 S.Ct. 733 (1951).

⁴⁵ *Keystone Mfg. Co. v. Adams*, 151 U.S. 139, 14 S.Ct. 295 (1894); *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U.S. 428, 31 S.Ct. 444 (1911). The *Keystone* case related to a patented corn shelling machine. The machine was identical with the prior art machine save only that the direction of rotation of a winged shaft was reversed. In the prior art machine the shaft turned oppositely to the movement of the corn and thus tended to throw the corn back and thereby contribute to clogging. The reversal

“. . . Knowledge after the event is always easy, and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtle conjectures of what might have been but was not. . . .”⁴⁶

Any attempt completely to reconcile all of these decisions would be futile. They do show, however, that the Patent Office is hardly as anxious to “spawn” a list of “incredible patents” as has been suggested. Rather, the record indicates that the office is steering a middle course, not as liberal as some of the decisions might justify and more liberal than the statements that can be taken from others. Contentions that a particular application shows “invention” of the level of the *Eibel* and *Ray-O-Vac* cases, for example, are not likely to be successful at the Patent Office level, at least until supported by a factual showing of the unusual commercial circumstances of those cases. On the other hand, the office does not rely upon a literal “flash of genius” requirement such as is expressed in the *Cuno* decision, particularly since the 1952 patent code now expressly negatives that test.⁴⁷

File Wrapper Estoppel

Patent Office examining activity has an aspect somewhat apart from the question of invention. When the applicant files the application he makes “claims” specifying the scope of the patent desired. The Patent Office is charged with the duty of examining the application and of issuing the patent only if “it appears that the applicant is entitled to a patent under the law.”⁴⁸ In practice the examination consists of collecting the closest prior art and, in

of shaft rotation tended to cause the corn to be thrown in the direction of movement through the machine and thereby reduced the problem of clogging. The *Diamond* case involved a solid rubber-tired wheel construction wherein the wheel rim had outwardly inclined sides. The prior art included like solid rubber-tired wheel constructions where the sides of the rim were not inclined and wherein the sides inclined inwardly rather than outwardly. Drawings of the respective constructions are reproduced in the opinion, at 432 and 438.

⁴⁶ *Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 U.S. 428 at 435, 31 S.Ct. 444 (1911).

⁴⁷ “. . . Patentability shall not be negated by the manner in which the invention was made.” 35 U.S.C. (1952) §103. See notes 7 and 8 supra.

⁴⁸ 35 U.S.C. (1952) §131.

most instances, of rejecting the claims one or more times as not defining invention over that art. To overcome such rejections the patent applicant of necessity must argue that the claims are allowable and point out wherein invention is defined over the specific prior art located. This process of argumentation, and particularly the cancellation or amendment of claims, results in a Patent Office file which frequently includes a "file wrapper estoppel" of importance in fixing the scope of the patent as issued.

The file wrapper estoppel doctrine is of major importance in cases where the patentee must have the benefit of some liberality in the construction of patent claims. Such occasions arise frequently because it is often possible to appropriate the principle of an invention and at the same time escape the literal language of the claims—an opportunity seldom overlooked by an infringer. In consequence, the patentee must argue that the infringement is the "equivalent" of the invention as claimed. Recognizing this practical problem "on proper occasions courts make [the claims] cover more than their meaning will bear" to hold as an infringement a structure which does not respond to the literal claim language.⁴⁹ This is the "doctrine of equivalents."

The doctrine of equivalents is itself limited by the file wrapper estoppel doctrine. Its nature is best illustrated by the *Ace Patents* case.⁵⁰ There the patent related to a bumper switch of the type commonly used in pinball games. The switch consisted of a pendulous helical spring which, when struck by the ball rolling down the table, is flexed sideways to make contact with a fixed contact and thereby actuate the electrical mechanism of the game. As filed, the patent claims recited that the fixed contact need only be "carried by the table." In this form the claims were rejected on prior art patents. In a successful effort to overcome the rejection the applicant substituted the more restrictive expression that the fixed contact be "embedded in" the table. The subsequent patent infringement suit involved two accused structures. In one of these the fixed contact was in fact embedded in the table. In the other the defendant had made the rather obvious and superficial change of providing a separate cover plate to carry the fixed contact over an opening in the table so that, while carried by the table, the contact was not embedded in it. The patentee

⁴⁹ *Royal Typewriter Co. v. Remington Rand, Inc.*, (2d Cir. 1948) 168 F. (2d) 691 at 692.

⁵⁰ *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 62 S.Ct. 513 (1942).

argued that the construction with the separate cover plate was "equivalent" to embedding the contact in the table and that in any event there was a literal evasion of the claim without alteration of result or mode of operation.

The Court held that the patentee could not utilize the doctrine of equivalents to hold as an infringement the construction wherein the fixed contact was not literally "embedded in" the table. It assumed that "the patentee would have been entitled to equivalents embracing the accused devices had he originally claimed a 'conductor means embedded in the table.'" ⁵¹ However, looking to the language of the claims as filed, and especially to the phrase "carried by the table," the Court concluded, "By striking that phrase from the claim and substituting for it 'embedded in the table', the applicant restricted his claims to those combinations in which the conductor means, though carried by the table, is also embedded in it. By the amendment, he recognized and emphasized the difference between the two phrases and proclaimed his abandonment of all that is embraced in that difference."⁵² The Court went on to conclude that from the standpoint of claim construction "the difference which [the applicant] thus disclaimed must be regarded as material, and since the amendment operates as a disclaimer of that difference it must be strictly construed against him."⁵³ Accordingly, the Court found infringement as to the structure with the contact literally embedded in the table but not the structure wherein the contact was only "carried by" the table.

In a more recent case⁵⁴ the Court of Appeals for the Seventh Circuit summarized the file wrapper estoppel doctrine in even more farreaching terms to hold that: ". . . a patentee who has changed the form of his claim during its prosecution disclaims the scope of the claim in its earlier form, and the change effected by the amendment must be construed against the patentee. He is not permitted thereafter to recapture what he has disclaimed or assert the claim against any equivalents that would respond to the claim in its earlier form but which do not respond expressly to the claim as issued."

The file wrapper estoppel doctrine finds expression in com-

⁵¹ Id. at 136.

⁵² Ibid.

⁵³ Id. at 137.

⁵⁴ Dixie Cup Co. v. Paper Container Mfg. Co., (7th Cir. 1948) 169 F. (2d) 645 at 648.

paratively early patent decisions.⁵⁵ It finds its roots in the rules governing the construction of documents generally. Thus an analogy has been drawn to the construction of contracts.⁵⁶ Similarly, legislation has been construed in the light of what was proposed and not passed.⁵⁷ Additional analogy may be found in court insistence that a patentee follow a consistent interpretation of a patent in successive patent infringement proceedings.⁵⁸

The file wrapper estoppel doctrine is of particular interest because of the absolute finality it imparts to Patent Office rulings. The courts have consistently refused to go behind the Patent Office action upon which the estoppel is based. The plausible, and sometimes sound, argument that the rejection should not have been made in the first place has been discarded. As stated in the *Ace Patents* case, "as the question is one of construction of the claim, it is immaterial whether the examiner was right or wrong in rejecting the claim as filed."⁵⁹ In substance the courts have insisted that the patentee make his case before the Patent Office or forever be silent.

To be sure, the file wrapper estoppel doctrine goes to the scope of the patent—not to its validity. It is nonetheless of importance in the practical operation of the patent system. The scope of a patent determines its influence upon competitive enterprise as significantly as the fact of the patent. Thus in the *Ace Patents* case the Court drew a sharp line between the machines with conductors "embedded in" the table—which were held to infringe—and the competitively equivalent machines with conductors only "carried by" the table—which were held not to infringe. So far as conductor means were "carried by" the table are concerned there might just as well have been no patent at all. There is thus good reason to believe that through the file wrapper estoppel doctrine the Patent Office examining activity has served a useful purpose in defining strictly the scope of the grant.

⁵⁵ E.g., *Sargent v. Hall Safe and Lock Co.*, 114 U.S. 63, 5 S.Ct. 1021 (1885); *Hubbell v. United States*, 179 U.S. 77 at 83, 21 S.Ct. 24 (1900); *Shepard v. Carrigan*, 116 U.S. 593, 6 S.Ct. 493 (1886).

⁵⁶ E.g., *Knick v. Bowes "Seal Fast" Corp.*, (8th Cir. 1928) 25 F. (2d) 442; *Power v. Mola Washing Machine Co.*, (8th Cir. 1931) 49 F. (2d) 1009; *Magic Light Co. v. Economy Gas-Lamp Co.*, (7th Cir. 1899) 97 F. 87.

⁵⁷ E.g., *Federal Security Administrator v. Quaker Oats Co.*, 318 U.S. 218, 63 S.Ct. 589 (1943); *Schwegmann Bros. v. Calvert Distillers Corp.*, 341 U.S. 384, 71 S.Ct. 745 (1951).

⁵⁸ *Union Carbide and Carbon Corp. v. Graver Tank & Mfg. Co.*, (7th Cir. 1948) 196 F. (2d) 103, cert. den. 343 U.S. 967, 72 S.Ct. 1059 (1952), 344 U.S. 849, 73 S.Ct. 6 (1952).

⁵⁹ 315 U.S. 126 at 137, 62 S.Ct. 513 (1942).

The file wrapper estoppel doctrine, like all legal principles, has its own limitations. One is that its full application requires that the patent examiner locate the best prior art. Secondly, there is a line of decisions, principally in the Second Circuit, holding in effect that the doctrine does not apply unless claims are cancelled or formally amended.⁶⁰ Also one can point to decisions where the courts, apparently impressed with the significance of the invention, have seemingly refused to apply the doctrine.⁶¹

Finally, it should be noted that the patent applicant can avoid a file wrapper estoppel. If he knows the prior art and is modest in his claims as filed, he may never be forced to make the limiting arguments and claim amendments that give rise to the estoppel.⁶² Even as thus limited, however, the doctrine is a factor in a substantial proportion of the patent cases and should not be overlooked in evaluating the work of the Patent Office.

It cannot be denied that the statistical record—early and late—indicates that an issued patent is one thing and a valid patent another. The tendency to equate this record with Patent Office error is, it is submitted, a dubious generalization. Rather, the more complete prior art available in an infringement suit, the intervening period of commercial experience with the patented product or process, the differences between the patent interpretation urged before a court and that in the Patent Office, and other factors all combine to make court scrutiny of a patent something far different from that possible in the Patent Office.

It follows that mere strictness in the examining function is not likely to dissipate the uncertainties. To be sure, the Patent Office could follow a severe rule that would preclude patent issuance in the presence of any lingering doubt that a court would uphold the patent. But few patents would issue under such a rule and the office would doubtless face an unreasonable number of reversals by the courts on direct review. More importantly, such a rule would cut off many patents destined to be upheld in court, and surely the patent law contemplates the issuance of such patents. It would seem that the only practical approach is an intermediate one along the lines of that now being followed.

⁶⁰ E.g., *Spalding & Bros. v. John Wanamaker*, (2d Cir. 1919) 256 F. 530; *Keith v. Chas. E. Hires Co.*, (2d Cir. 1940) 116 F. (2d) 46.

⁶¹ E.g., *Hunt v. Armour & Co.*, (7th Cir. 1950) 185 F. (2d) 722.

⁶² It has been suggested that this occurred in *Graver Tank v. Linde Air Products*, 339 U.S. 605, 70 S.Ct. 854 (1950). See dissenting opinion of Justice Black at 616.

There is opportunity for improvement in a different direction. Current Patent Office prior art files include millions of items. The process of classification and search is staggering. The office is engaged in a losing task of keeping current with the items being added to its files. There is reason to believe that automatic techniques may permit a complete and rapid collection of all the prior art items without laborious searching. Interim measures also offer great promise in this direction, provided the necessary financial support is made available.⁶³ With more complete collection of the prior art, the resultant Patent Office proceedings are likely in a greater proportion of cases to lead to a file wrapper record of a type precluding the elastic patent interpretations that are one cause of difficulty.

At best, however, we shall continue to experience substantial patent mortality in the courts. In like measure the outcome of patent controversies will remain unpredictable. But this condition is not unique, as practitioners in the field of personal injury and antitrust law can attest. Rather, this uncertainty is the price that must be paid for the test based on the fictitious ordinary man skilled in the art, which to the present date appears to be the only reasonably adequate measure of what should be rewarded by patent grant and what should not.

⁶³ For a review of the current problems of the Patent Office, see 37 J.P.O.S. 769 (1955). The problem of classification and search is discussed at p. 801 et seq.