

AS TO DESIGN PATENTS. These rules also apply to design patents. "The law applicable to this class of patents does not materially differ from that in cases of mechanical patents. * * * The same general principles of construction extend to both."¹ "An inventor is not permitted to exhibit his skill and taste in decorative art by the publication of elegant designs through a course of years, and then debar the public from any further use by obtaining letters patent for the same."²

It will be observed that I have simply collated the authorities, and made but few comments and no criticisms. The language of some of the cases, particularly when they speak of the inventor's "consent and allowance," should be understood with reference to the law then in force or governing the decision; but this does not affect their bearing on the general question of experiments. As to this question the following principles may be considered as fully established: (1) The law permits and encourages proper experiments to test and determine the practical utility of an invention; (2) these experiments must be made with reasonable diligence, considering all the circumstances of the case; (3) they may be made secretly or in public, by uses or sales, and by the inventor personally or through others; (4) they must not be for profit, but for the honest purpose of testing and perfecting the invention; and (5) where improvements are added within the two years, the patent cannot be allowed to relate back and cover forms previously given to the public.

EPHRAIM BANNING.

Chicago, March, 1884.

¹Brown, J., in *Northup v. Adams*, 2 Ban. & A. 588; *Blodgett, J.*, in *Western Electric Manuf'g Co. v. Odell*, 18 Fed. Rep. 322.

²Nixon, J., in *Theberath v. Celluloid Harness Trimming Co.* 15 Fed. Rep. 250.

DOYLE v. SPAULDING and others.

ILLINGWORTH v. SAME.

(Circuit Court, D. New Jersey. March 15, 1884.)

1. PATENT—INFRINGEMENT.

Infringement of patent for the manufacture of combined ingots of iron and steel by means of moulds and a mechanism producing a variable cavity in the moulds.

2. SAME—INVENTION IN A FOREIGN COUNTRY.

The use or knowledge of the use of an invention in a foreign country by persons residing in this country will not defeat a patent which had been granted to a *bona fide* patentee who, at the time, was ignorant of the existence of the invention or its use abroad.

In Equity.

J. C. Clayton, for complainants.

Francis Forbes, (with whom was A. Q. Keasbey,) for defendants.

NIXON, J. These two cases will be considered together, for reasons which will hereafter appear. On March 5, 1881, the complainant, Illingworth, commenced a suit in this court against the defendants for infringement of letters patent No. 166,700, dated August 17,

1875, for "improvements in moulds for ingots." The defendants answered, setting up, among other things, that said letters patent were void (1) on account of prior knowledge and use of the alleged invention; (2) because every substantial and material part of the invention was described and claimed in letters patent No. 99,299, and granted to one Patrick Doyle, February 1, 1870, for "improvement in moulds for making combined ingots of steel and iron," and in English letters patent No. 3,801, issued to William Moore by the queen of Great Britain and Ireland, dated November 21, 1873, and sealed May 19, 1874; and (3) denying the right of the complainant to recover, because the defendants were the assignees and owners of letters patent No. 240,727, granted to one Alfred E. Jones, and were entitled to use the invention therein described and shown, notwithstanding the letters patent of complainant, on which the suit was brought.

It appears in the testimony that for several years previous to the filing of the bill, two of the defendants, Fitzsimmons and Jennings, were in the employ of the complainant's firm, and these became familiar with the use of moulds made under the Doyle patent, which is set up as anticipating the alleged invention of Illingworth. It also appears that the complainant used the Doyle patent for several years previous to 1875, in the manufacture of iron and steel ingots, the inventor Doyle, during the time being in business with the complainant; that the above patent was obtained by Illingworth in view of the fact Doyle was about going out of the firm, after which, it was supposed, that the continued use of his patent would not be allowed; and that he went out and remained away from the complainant from 1875 to 1880, when he returned and became the superintendent of his works.

On the seventh of May, 1881, Patrick Doyle began his suit against the defendants for the infringement of the letters patent, which had been set up in the former action as anticipation of the Illingworth patent. The answer of the defendants denies (1) that Doyle was the original and first inventor of the improvements therein claimed, and (2) alleges that every substantial and material part of the invention was known to several persons now residing in this country, and by whom it had been used in Sheffield, England, during their residence there.

Pending the taking of testimony in these suits, two applications were made to the court by the respective parties—one by the defendants in the Illingworth suit, asking that they might be allowed to amend their answer by inserting the allegation that the invention claimed by Illingworth was known to certain persons residing in this country, who used it in the city of Sheffield, England, before coming hither; and the other by the complainant in the Doyle suit, who moved to strike out the said allegation in the answer filed therein. The questions involve the interpretation of the clause, "not known or used by others

in this country," in section 4886 of the Revised Statutes, which first appeared in section 24 of the act of July 8, 1870, and which had never received judicial construction. Being willing to afford the parties an opportunity, without embarrassment, to correct any mistake which the court might fall into in deciding a matter of first impression, we allowed the allegation to stand in the answer in the Doyle suit and to be inserted in the Illingworth answer, and directed the parties to make their proofs of the facts and to present their views more fully at the final hearing. See *Illingworth v. Spaulding*, 9 FED. REP. 611. After a careful consideration of the provisions of the three sections of the patent act which bear upon the subject, (sections 4886, 4920, and 4923, Rev. St.) we are of the opinion that the use, or a knowledge of the use, of an invention in a foreign country by persons residing in this country will not defeat a patent which has here been granted to a *bona fide* patentee who at the time was ignorant of the existence of the invention or its use abroad.

When the parties began to take the proofs they united in a stipulation that the evidence should be entitled in both causes, and that the two should be argued together. The defendants also admitted in writing, in each of the cases, that before the commencement of the suits, and since the granting of the letters patent, respectively, they had manufactured combined ingots of iron and steel in the following manner and for the following purposes:

(1) By means of a mould made in conformity to letters patent of the United States, No. 240,727, granted to them April 26, 1881, as assignees of Alfred E. Jones, a copy of which is hereto annexed, marked Complainants' Exhibit "Jones' Patent."

(2) By means of a mould made with two covers, in all respects like that shown in the above-named letters patent, except that there were two covers instead of one, and the slide was omitted. The covers are so made that a part of the cover first used projects into the mould. The process is as follows: The mould being clamped together, the first metal to be cast is poured into it, and, when sufficiently set, the cover is removed and a second one, perfectly flat, is inserted in its place. When this is done there remains a space between the newly-cast metal and the side or cover of the mould into which is cast the remaining part of the ingot. The mould is shown in the model, complainants' Exhibit E, where both covers are used and the slide is omitted—one cover having a projection into the mould and the other being flat.

(3) By means of a mould of three parts, each part being composed, as usual, in two-part moulds, of three sides rising from a closed base. The operation of the mould is as follows: The two parts of the mould are joined together in the usual manner by rings and wedges, and an ingot is cast therein in the usual way. Immediately that the metal is set, one side of the mould is removed and another, a little larger, is fixed by rings and wedges in the place of the side removed. Into the space, thus made, adjacent to the glowing ingot of metal, the molten metal, to complete the ingot, is poured. When sufficiently cooled the combined ingot is removed, as is usually done in ingot moulds of two parts. This mould is represented by complainant's Exhibit F. The size and proportions of the parts, however, are not correct; only the arrangement and operation of the parts are intended to be illustrated.

(4) By means of a mould of two parts, in which one of the parts is like the

ordinary two-part mould, viz., with three sides and a bottom, the other part being made flat on one side, and with a projection on the other, so arranged as to project between the sides and into the other part, when the two are joined together. The operation of the mould is as follows: The two parts of the mould being joined together by rings and wedges, in the usual way, (the projecting part of one side extending into the recess in the other,) the metal is cast into it; and when the metal is set, the side with the projection is removed and turned so that its flat side is towards the center of the mould; there is thus left an open space in the mould into which is cast the metal which is intended to complete the ingot. The combined ingot is removed in the ordinary way of removing single ingots. This mould is represented by complainant's Exhibit G. The same limitation is made in regard to this exhibit as to Exhibit F, above.

(5) By means of a mould similar to that last described, with the exception that instead of one cover there are two—one being flat, and one having a projection on its inner surface, as just described. The operation is the same as of Exhibit G, with the exception that instead of turning the cover so that the projection shall be outermost, the flat cover is used. This mould is represented by Exhibit H. The same limitation is made to this exhibit as to Exhibit F, above.

FRANCIS FORBES,

Solicitor for the Defendants in the Above Causes.

Newark, New Jersey, October 8, 1881.

The subject-matter of the controversy has reference to the use of moulds in casting combined ingots of iron and steel. The patent oldest in date for the employment of mechanism for such a purpose was granted to Patrick Doyle on February 1, 1870, and numbered 99,299. The patentee says that his invention relates to improvements in moulds for making ingots of iron and steel in a manner so as to dispose of the one metal on one or more sides of the other, and to secure a perfect union of the two; and that it consists of a vertical mould of four or other number of plain sides, one or more of which may be detachable and clamped to the others by strong bands, in which a strong thick plate of metal is arranged to fit near one side, from top to bottom, snugly, to occupy a part of the space when the metal, of which the greater part of the ingot is to be composed, is poured in, and to remain until the same has solidified sufficiently to retain its position, when it is withdrawn, leaving a space for the other metal, which, being poured in, unites perfectly with the first, and forms the required composition ingot.

In introducing his specifications, the patentee speaks of his invention as an *improved* mould for making combined iron and steel ingots, thereby implying that other moulds were in use, of which he regarded his as an improvement. Not only the scope of this patent, but the validity of the subsequent issues to Illingworth and Jones, must be determined by the state of the art at the time when the Doyle patent was granted. The evidence on this subject is meager. After looking through the testimony with care, we fail to find anything relating to the state of the art, except the statement of Mr. Illingworth, that he had been engaged in the steel business for 17 years; that prior to Doyle's invention he had never seen any moulds or other

mechanism with which skate metal, which was a combination of steel and iron, could be made; that the only mode of manufacturing such a combination, of which he had any knowledge, was to weld together the iron and steel into one bar, and then rolling it out; and that this was the only method then in use at his works. Accepting this as the state of the art at this time, it must be conceded that there was novelty and value in the Doyle improvement. It was a step from the mere mechanical combination by welding, to a chemical one resulting from the fusion and union of the two metals when in a heated state. It was the introduction of the variable cavity, whereby the amount of the one metal or the other could be accurately adjusted and obtained by the exercise of ordinary mechanical skill. We are confirmed in our view of the novelty of the Doyle patent by the fact that as late as 1873 a patent was granted in England to William Moore, for substantially the same device for making combined ingots of iron and steel, securing the variable cavity by the use of a slide, which would hardly have been applied for if such a method of casting ingots had previously been in use in England as the defendants so earnestly contend.

On the argument, the counsel for the defendants insisted that the complainant had failed to prove any infringement. The reason why specific proof was not offered was doubtless owing to the circumstance that the defendants admitted the performance of acts and the use of instrumentalities which the complainant assumed would be sufficient to satisfy the court of the fact of infringement. For instance, the defendants filed in the cases an admission that they had manufactured combined ingots of iron and steel by means of a mould made in conformity to the letters patent No. 240,727, granted to them April 26, 1881, as assignees of Alfred E. Jones. If we understand the argument of counsel, it is that there was a failure of expert testimony to inform the court whether or not such an act was an infringement of the several patents of the complainants. We fail to see how experts' testimony would be of service. Numerous experts could, undoubtedly, have been found both by the complainant and the defendants who would respectively maintain the views of their employers on a question of that sort, but their evidence would not greatly help the court in deciding what is simply a question of mechanical equivalents. Having in our hands the respective letters patent, the models, and the moulds used, we trust it will not be set down as presumption to add that we have quite as much confidence in our own judgment as we should have in the opinion of experts whether the use of the one was an infringement of the claims of either of the others.

It need not be claimed that Doyle was the first person who used moulds in casting ingots of iron or steel; but the evidence shows that he was the first who manufactured combined ingots of these metals by the use of mechanism which produced a variable cavity in the

moulds. The several patents of Illingworth and Jones reach the same result as to the variable cavity, but Illingworth has changed and, as we think, improved the mechanism. In the Doyle patent the cavity for one of the moulds is made by the use of an iron or steel slide, and in the Illingworth by two covers—one with a plain or straight surface, and the other recessed. If such a substituted instrumentality of the mechanism is not a mere equivalent for the metal slide of Doyle, the patent may be held good for the improvement, although it is valueless except in combination with Doyle's invention, and can no more be used without his consent than Doyle can use Illingworth's improvement without his consent.

The *first* admission of the defendants is their use of moulds made in conformity to the Jones letters patent. We regard this as a clear infringement of the Doyle patent. Their *second, third, fourth, and fifth* admissions embrace the use of instrumentalities which not only infringe the Doyle invention, but also the improvement of the Illingworth patent. There are differences in construction and mode of operation shown, but these are not radical or independent enough to take them out of the category of mechanical equivalents.

Let a decree be entered in favor of the complainant in both cases for an injunction, and the usual order of reference be made for an account.

HICKS v. OTTO and others.

(Circuit Court, S. D. New York. March 18, 1884.)

1. PATENT—VALIDITY OF REISSUE—CLINICAL THERMOMETER.

The original patent for a clinical thermometer, in place of which reissued letters No. 10,189 were taken out, was broad enough to cover a tube in which the mercurial column is magnified by means of a raised ridge having a sharper curvature than the main shaft, even though the column is not placed beyond the mechanical center of the main tube. The reissue, therefore, more specifically describing this device, is valid.

2. SAME—PRIOR USE—LOCATION OF THE BORE.

The characteristic of this patent is that the bore is back of the mechanical axis of the curved surface through which it is viewed. Prior use of a so-called magnifying tube, with the bore at the center or in front of it, does not defeat the patent.

In Equity.

Frost & Coe, for plaintiff.

Briesen & Steele, for defendants.

WALLACE, J. Infringement is alleged of the first and second claims of reissued letters patent No. 10,189, granted August 29, 1882, to L. Peroni, assignor of James Joseph Hicks, for an improvement in thermometers. The invention of Peroni was patented in England, January 24, 1878, and the original patent here was issued December 9,