

## Syllabus.

GRAVER TANK & MFG. CO., INC. ET AL. v. LINDE  
AIR PRODUCTS CO.CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR  
THE SEVENTH CIRCUIT.Nos. 184 and 185. Argued January 5-6, 1949.—Decided February  
28, 1949.

1. Certain flux claims of Jones patent No. 2,043,960, for an electric welding process and for fluxes, or compositions, to be used therewith, *held* valid and infringed. Pp. 273-276.

(a) This Court, being a court of law rather than a court for correction of errors in fact finding, cannot undertake to review concurrent findings of fact by two courts below in the absence of a very obvious and exceptional showing of error. Pp. 274-275.

(b) While the ultimate question of patentability is one of meeting the requirements of the statute, the facts found by the two courts below with respect to these claims warrant a conclusion by this Court as a matter of law that those statutory requirements have been met. P. 275.

(c) The two courts below found that these claims were infringed and this Court finds no cause for reversal. Pp. 275-276.

2. Certain other flux claims of the same patent *held* invalid as being too broad and comprehending more than the invention. Pp. 276-277.

(a) While vain repetition is no more to be encouraged in patents than in other documents, and claims like other statements may incorporate other matters by reference, their text must be sufficient to "particularly point out and distinctly claim" an identifiable invention or discovery. P. 277.

(b) When claims overclaim the invention to the point of invalidity and are free from ambiguity which might justify resort to the specifications, they are not to be saved because the latter are less inclusive. P. 277.

3. All process claims of the same patent *held* invalid. Pp. 277-279.

4. Both courts below having found that the patent had not been abused so as to forfeit the right to maintain an infringement suit based on the claims held valid, this Court affirms their judgment on that point. Pp. 279-280.

167 F. 2d 531, affirmed in part and reversed in part.

In a suit for infringement of a patent, the District Court held that certain claims were valid and infringed and had not been forfeited by misuse, but that certain other claims were invalid. 75 U. S. P. Q. 231. The Court of Appeals affirmed in part and reversed in part. 167 F. 2d 531. This Court granted certiorari. 335 U. S. 810. *Judgment of the Court of Appeals reversed insofar as it reverses that of the District Court and judgment of the District Court reinstated in toto.* P. 280.

*Thomas V. Koykka* argued the cause for petitioners. With him on the brief were *John F. Oberlin*, *Ashley M. Van Duzer*, *James R. Stewart* and *Charles L. Byron*.

*John T. Cahill* and *Richard R. Wolfe* argued the cause for respondent. With him on the brief were *James A. Fowler, Jr.* and *Loftus E. Becker*.

MR. JUSTICE JACKSON delivered the opinion of the Court.

Writs of certiorari have been granted, 335 U. S. 810, to review two judgments of the Court of Appeals for the Seventh Circuit involving the same patent. What we shall call the Jones patent was No. 2,043,960, issued to Lloyd Theodore Jones and others, for an electric welding process and for fluxes, or compositions, to be used therewith. The patent is now owned by The Linde Air Products Company, which brought an action for infringement against the Lincoln and two Graver companies.

The District Court held four of the flux claims valid and infringed and concluded that the patent owner had not misused the patent so as to forfeit its claims to relief therefor. It held certain other flux claims and all of the process claims invalid. 75 U. S. P. Q. 231.

The Court of Appeals affirmed the findings that four flux claims were valid and infringed and that the patent had not been abused, but reversed the trial court and held valid the process claims and the remaining contested flux claims. 167 F. 2d 531.

The petitioners contend not only that the Court of Appeals' judgment should be reversed, but that we should also reverse the District Court's finding of partial validity and should declare the patent entirely invalid and not infringed.

At the trial the electric welding prior art and the nature of the Jones invention were explored at length, and opinions of the two courts below, already in the books, adequately discuss the technology of that art and the scientific features of the claims involved. We shall confine this opinion to a statement of the legal principles which lead to our decision.

#### I. FLUX CLAIMS 18, 20, 22 AND 23, HELD VALID, AND INFRINGED, BY TWO COURTS BELOW.

Electric welding was an established art before this invention but one with serious limitations which the industry sought to overcome. The known method was slow and laborious and permitted welding of only relatively thin plates. It was of different types, but each had such deficiencies as a dazzling open arc, smoke and splatter, which made operation unpleasant and somewhat hazardous.

Three scientifically trained individuals, Jones, Kennedy and Rotermund, set out purposely to discover a cure for the deficiencies and inadequacies in the method of flux welding, then the most successful method known. They collaborated for some six months in conducting a series of about 500 experiments in the course of which they compounded 75 different flux compositions. They finally produced the invention for which a patent was sought.

The trial court noted that the results produced by their invention contrasted with those possible under all prior methods in that "there is no glare, no open arc, no splatter, and very little, if any, smoke in the Jones, et al. method."

"The truly remarkable difference, however, between what Jones, Kennedy and Rotermund invented and what had gone on before is perhaps best manifested by the performance achievements of their invention. For instance, only through its use can plates as thick as two and one-half inches be welded in a single pass. Furthermore, the welding speeds made possible by it dwarf those of any other method, and the welds produced by it are of the highest quality in contrast to the great amount of porosity contained in the welds produced by the so-called clay flux process."

The trial court continued: "Since the patentees did invent something patentable over the prior art of electric welding, the collateral questions of what constitutes their invention, and what are its boundaries, become pertinent." He concluded that what was really invented was that which was claimed and bounded by the composition claims Nos. 18, 20, 22 and 23. His findings and conclusion were affirmed by the Court of Appeals. We are now asked to hold that there has been no such invention.

Rule 52 (a) of the Federal Rules of Civil Procedure provides in part: "Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses." To no type of case is this last clause more appropriately applicable than to the one before us, where the evidence is largely the testimony of experts as to which a trial court may be enlightened by scientific demonstrations. This trial occupied some three weeks, during which, as the record shows, the trial judge

visited laboratories with counsel and experts to observe actual demonstrations of welding as taught by the patent and of the welding accused of infringing it, and of various stages of the prior art. He viewed motion pictures of various welding operations and tests and heard many experts and other witnesses. He wrote a careful and succinct opinion and made findings covering all the factual issues.

The rule requires that an appellate court make allowance for the advantages possessed by the trial court in appraising the significance of conflicting testimony and reverse only "clearly erroneous" findings. These are manifestly supported by substantial evidence and the Court of Appeals found them supported by the weight of the evidence—indeed found the evidence to warrant support of the patent even in matters not found by the trial court. A court of law, such as this Court is, rather than a court for correction of errors in fact finding, cannot undertake to review concurrent findings of fact by two courts below in the absence of a very obvious and exceptional showing of error. *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U. S. 275; *District of Columbia v. Pace*, 320 U. S. 698; *Williams Mfg. Co. v. United Shoe Machinery Corp.*, 316 U. S. 364; *Baker v. Schofield*, 243 U. S. 114, 118.

No such showing is made. While the ultimate question of patentability is one of meeting the requirements of the statute, R. S. § 4886, as amended, 35 U. S. C. § 31, the facts as found with respect to these four flux claims warrant a conclusion here that as matter of law those statutory requirements have been met. Accordingly, we affirm the judgment insofar as it holds claims numbered 18, 20, 22 and 23 define an invention for which patent has validly issued.

Turning to the question of infringement, the District Court found that the Lincoln Electric Co. made, and the

other petitioners used and sold, a flux substantially identical with that set forth in the valid composition claims of the patent in suit and which could be made by a person skilled in the art merely by following its teachings. The petitioners introduced no evidence to show that their accused flux was derived either from the prior art, by independent experiment or from any source other than the teachings of the patent in suit. The court found infringement of each of the four claims and concluded that the respondent was entitled to a permanent injunction against future infringement and to an accounting for profits and damages. These findings and conclusions were affirmed by the Court of Appeals and we find no cause for reversal.

## II. FLUX CLAIMS HELD INVALID BY THE DISTRICT COURT AND VALID BY THE COURT OF APPEALS.

The District Court held invalid claims to a flux for use in the process, numbered 24, 26 and 27. The Court of Appeals reversed as to these and held them valid. Remaining flux claims, numbered 19, 21, 25, 28 and 29, were not in issue, and claim 27 we consider along with the process claims.

The difference between the District Court and the Court of Appeals as to these findings comes to this: The trial court looked at claims 24 and 26 alone and declined to interpret the terms "silicates" and "metallic silicates" therein as being limited or qualified by specifications to mean only the nine metallic silicates which had been proved operative. The District Court considered that the claims therefore were too broad and comprehended more than the invention. The Court of Appeals considered that because there was nothing in the record to show that the applicants for the patent intended by these claims to assert a monopoly broader than nine metallic silicates named in the specifications, the court should have con-

strued the claims as thus narrowed and limited by the specifications.

The statute makes provision for specification separately from the claims and requires that the latter "shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery." R. S. § 4888, as amended, 35 U. S. C. § 33. It would accomplish little to require that claims be separately written if they are not to be separately read. While vain repetition is no more to be encouraged in patents than in other documents, and claims like other statements may incorporate other matter by reference, their text must be sufficient to "particularly point out and distinctly claim" an identifiable invention or discovery. We have frequently held that it is the claim which measures the grant to the patentee. See, for example, *Milcor Steel Co. v. Fuller Co.*, 316 U. S. 143, 145; *General Electric Co. v. Wabash Co.*, 304 U. S. 364, 369; *Altoona Theatres v. Tri-Ergon Corp.*, 294 U. S. 477, 487. While the cases more often have dealt with efforts to resort to specifications to expand claims, it is clear that the latter fail equally to perform their function as a measure of the grant when they overclaim the invention. When they do so to the point of invalidity and are free from ambiguity which might justify resort to the specifications, we agree with the District Court that they are not to be saved because the latter are less inclusive. Cf. *General Electric Co. v. Wabash Co.*, 304 U. S. 364, 373-374; see *McClain v. Ortmyer*, 141 U. S. 419, 424-425; *Cimiotti Unhairing Co. v. American Fur Refining Co.*, 198 U. S. 399, 410.

We think the District Court correctly applied this principle to claims 24 and 26.

### III. PROCESS CLAIMS.

All process claims were held invalid by the District Court; those numbered 1, 3, 4, 7, 8 and 9, because they

make no specific reference to the essential chemical constituents of the welding composition to be used in the claimed welding process, a conclusion with which we agree. Process claim 2 was held invalid for the reason applicable to flux claims 24 and 26, with which we also agree. Others, namely 5, 6, 11, 12, 13, 14, 15, 16 and 17, and composition claim 27 were held invalid because they erroneously import that the sole conductive medium through which electric current passes from the electrode to the base metal is the welding composition, which is in a molten state, and that no electric arc phenomenon is present.

The court found that the procedural steps in the process taught by the patent are identical in all respects with those followed in prior automatic electric welding processes and that the only invention or discovery resides in the use of a different welding composition. It sustained the patent for the composition, as we have shown, but denied its validity insofar as it claimed the old procedure.

The trial court gave extensive consideration to the process claims. It agreed that a radically new process would have been discovered if it could be said that the electric current passed between the electrode and the base metal through a welding composition in a liquid state and that no electric arc is present. All of the previous art had used the electric arc. But with full appreciation of the critical nature of the inquiry and after long litigation of the technology of the art, the court concluded that no such finding of departure from the prior art could be made and said that the evidence is persuasive that no such basic difference in phenomena is present in the Jones method.

The District Court reinforced its conclusion by pointing out that the inventors themselves initially did not conceive their invention to embody any such radical de-

parture from known phenomena and that their first application for a patent was replete with references to the presence and use of an electric arc in the new method. It was only after they had assigned their rights to the respondent that the suggestion of a basically new phenomenon, other than an arc, was made. Just what happens in the Jones method admits of controversy, for there is no visual evidence of an electric arc after the welding operation commences because what actually occurs between the electrode and the metal base is hidden from view by the flux. The court concluded that it is impossible to say with complete certainty that there is not an arc and one of the plaintiff's expert witnesses gave substantial support to the idea that the arc is still present, although it is shielded by the flux in the Jones patent.

The same deference is due to the findings of the trial court which overturn claims as to those which sustain them. Technicians may and probably will continue to debate with plausible arguments on each side as to what this obscure process really is. But the record in this case, while not establishing to a certainty that the findings are right, fall far short of convincing us that they are clearly erroneous. We think that the rules that govern review entitle the trial court's conclusions to prevail and that the process claims are invalid under the statute.

#### IV. ABUSE OF PATENT.

Contentions are made that the patent has been abused through efforts to broaden the patent monopoly by requiring the purchase of unpatentable material for use in connection with it. The trial court found, however, that the plaintiff does not impose on licensees, either as a condition of a license or otherwise, any requirement, condition, agreement or understanding as to the purchase or use of unpatentable commodities and that its licensees are free to buy and use any materials and equipment

BLACK, J., concurring.

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from any source. The court recognized that an appearance of such freedom is not conclusive if it conceals a subterfuge and that there is a real, although informal, restraint. But examining the conduct of the plaintiff, it found no such obstacle to the maintenance of an action for infringement on that part of the patent which was valid. The Court of Appeals affirmed, and we accept the conclusion of the two courts below on this branch of the case.

Our conclusion is that the judgment of the Court of Appeals, insofar as it reverses that of the District Court, should be reversed and that the judgment of the District Court be in all things reinstated. To that extent the judgment below is reversed.

*It is so ordered.*

MR. JUSTICE BLACK, with whom MR. JUSTICE DOUGLAS joins, concurring.

I concur in the Court's judgment in this case and in parts II, III and IV of the Court's opinion. But my concurrence in the holding that Claims 18, 20, 22 and 23 are valid does not rest merely on findings of the District Court and the Court of Appeals that those claims were valid. While accepting the findings of those two courts on what I consider to be questions of fact, it is my view that determination of the ultimate question of patentability cannot properly be classified as a finding of fact. I would adhere to this Court's earlier pronouncement that "whether the thing patented amounts to a patentable invention" is a question of law to be decided by the courts as such. *Mahn v. Harwood*, 112 U. S. 354, 358; and see dissenting opinions in *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U. S. 275, 280, note 1, and *Williams Manufacturing Co. v. United Shoe Machinery Corp.*, 316 U. S. 364, 383.

I agree, however, that the facts found here justify the holding that Claims 18, 20, 22, and 23 do show patentable discovery when measured by the standards announced by this Court in *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U. S. 84. For this reason I concur in affirming the judgment to the extent that it held these claims valid.

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FOLEY BROS., INC. ET AL. v. FILARDO.

CERTIORARI TO THE SUPREME COURT OF NEW YORK, NEW YORK COUNTY.

No. 91. Argued December 15, 1948.—Decided March 7, 1949.

The Eight Hour Law, 40 U. S. C. § 324, as amended by 40 U. S. C. § 325a, which provides, in effect, that every contract to which the United States is a party shall contain a provision that no laborer or mechanic doing any part of the work contemplated by the contract shall be required or permitted to work more than eight hours in any one day upon such work unless he is compensated at the rate of one and one-half times the basic rate of pay for all work in excess of eight hours per day, is not applicable to work done under a contract between the United States and a private contractor on construction projects for the United States in Iraq and Iran. Pp. 282-291.

1. There is nothing in the language of the Act that indicates a congressional purpose to extend its coverage beyond places over which the United States has sovereignty or some measure of legislative control. *Vermilya-Brown Co. v. Connell*, 335 U. S. 377, distinguished. Pp. 285-286.

2. The legislative history of the Act reveals that Congress was concerned with domestic labor conditions. Pp. 286-288.

3. Administrative interpretations of the Act tend to support the conclusions here reached. Pp. 288-291.  
297 N. Y. 217, 78 N. E. 2d 480, reversed.

In a suit by an American citizen for overtime pay for work done in excess of eight hours per day for an American contractor on a construction project in Iraq and Iran