

Case No. 3,645.

DAVIS v. PALMER.
SAME v. M'CORMICK.

[2 Brock. 298; 1 Robb, Pat. Cas. 518; Merw. Pat. Inv. 218.]¹

Circuit Court, D. Virginia.

May Term, 1827.

INTERPRETATION OF PATENTS—PROVINCE OF COURT AND
JURY—INFRINGEMENT—COLORABLE ALTERATIONS—SUFFICIENCY OF
SPECIFICATIONS.

1. An inventor obtained a patent for certain improvements made in the construction of the

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plough, and brought suit for an alleged violation of his patent-rights. In the description of those improvements which is annexed to, and made a part of the patent, after reference to the imperfections of the mould-boards formerly in use, the specification proceeds: "In order to meet and remedy the inconveniences arising from this form of structure, I form my mould-board into a different shape, and instead of working the moulding part or face of the mould-board to straight lines, my improvement is to work it to circular or spheric lines. By repeated experiments, I have ascertained that in one direction, viz.: from a, fig. 4, (the point of the share) inclining to the back part of the mould-board, the circle or segment to which the mould-board is wrought, should have about three times the radius of the smaller segments, represented by the letters c. c. &c, the former being about thirty-six inches, the latter twelve." After a detailed description of the new mould-board, the specification proceeds: "This being thus worked off, uniformly forms a section of a loxodromic or spiral curve, and when applied to practice, is found to fit or embrace every part of the furrow-slice far more than any other shaped plough, &c." *Held*, that this patent must be construed, not as extending to all mould-boards whose faces are worked to circular or spheric lines, forming a segment of a loxodromic or spiral curve, (which general description would apply to mould-boards already in use, and under that construction the patent would, consequently, be void,) but as applying only to mould-boards whose faces are worked upon transverse circular lines, whose radii are in the exact proportion of thirty-six to twelve. The word "about" must be rejected for uncertainty.

[Cited in *Winnns v. Denmead*, 15 How. (56 U. S.) 343, 345.]

2. It is the province of the court to construe the patent and determine what improvements are intended to be patented, and of the jury to decide whether those improvements are described in the patent with sufficient clearness to enable a skillful mechanic to construct a machine thereby. In deciding this question, the jury should give a liberal common sense construction to the directions contained in the specification.

[Cited in *Brooks v. Bicknell*, Case No. 1,944; *Hogg v. Emerson*, 6 How. (47 U. S.) 482, 484, 486; *King v. Gedney*, Case No. 7,795.]

3. So much of the patent as relates to the face of the mould-board, is not violated, unless the same circular lines are adopted as are described in the specification, but if the imitation be so nearly exact as to satisfy the jury that the imitator intended to copy the model, and to make some almost imperceptible variation for the purpose of evading the right of the patentee, this may be considered as a fraud on the law, and such slight variation be disregarded.

4. A particular description of the mould-boards formerly in use, is not necessary to give validity to the patent; a reference to them in general terms, which are not untrue, or a reference to a particular mould-board generally known, accompanied by such an intelligible description of what is new, as will enable a workman to distinguish it from the old, is sufficient.

5. Although the act of congress declares, "that simply changing the form or proportion of any machine, shall not be deemed a discovery," yet, when the change of form or proportion produces a new effect, of which the jury must judge, it is not simply a change of form or proportion, and does not come within the inhibition of the statute.

[Cited in *Smith v. Pearce*, Case No. 13,089; *Re Fultz*. Id. 5,156; *Teese v. Phelps*, Id. 13,819; *Milligan & Higgins Glue Co. v. Upton*, Id. 9,607.]

The plaintiff, Gideon Davis, brought his several actions on the case against the defendants, to recover treble damages under the statute, for an alleged violation of the plaintiff's patent-rights, as the inventor of certain new and valuable improvements in the plough. See the act of congress "to extend the privilege of obtaining patents, and to enlarge and

define the penalties for violating the rights of patentees,” section 3, passed 17th of April, 1800, 1 Story’s Laws, 753 [2 Stat. 37]. The declarations, which are identical, contained various counts. The first count charged the defendants with having made and sold divers improved ploughs upon the said improved plan, and in imitation of the said invention of the plaintiff. The second count charged, that the defendants had made and sold diver ploughs, partly upon the said improved plan, and partly in imitation thereof. The third count charged, that the defendants did counterfeit and did use and put in practice, the improvement and invention of the plaintiff. The fourth count charged, that the defendants did make divers ploughs, on the improved plan and in imitation of the invention of the plaintiff. And the fifth count charged, that the defendants did make divers ploughs, partly on the improved plan, and partly in imitation of the invention of the plaintiff. On the 1st of October, 1825, letters patent were issued to the plaintiff, granting to him for the space of fourteen years, the exclusive right of constructing, &c, ploughs upon his improved plan, and to the patent was annexed a diagram and schedule, which were made a part thereof, descriptive of the improvements which the plaintiff claimed to have discovered. The specification describing the face of the mould-board of the new plough, is as follows: “The general principle heretofore concurred in by all scientific men, who have turned their attention to this subject, is, that as the furrow-slice is detached from the solid ground, at a straight line parallel to the surface, at such depth as may be required, that it should be raised and turned over, so as to retain as far as possible the same flat shape. In order to accommodate the face of the mould-board to this idea of raising the furrow-slice up and turning it over, it has been so constructed as to form straight lines lengthwise, either horizontal or a little inclined, and also to correspond with another set of straight lines at right angles with the land-side, or nearly so, commencing at the point touching the edge of the share, and lower edge of the mould-board. These last mentioned straight lines, as they recede from the point of commencement, gradually change from a horizontal to a perpendicular direction, and even pass beyond the perpendicular so far as to give the proper over-jet behind. It has been thought that mould-boards so constructed would fit and embrace every part of the furrow-slice in the operation

of turning it over, not observing that the furrow-slice must necessarily acquire a convex form on the under side, during the operation by which it is raised up and turned over. The truth is, however, that in raising and turning over the furrow-slice, it always either acquires a convex form on the under side, or else it is broken off into pieces, and thrown over; as might therefore be anticipated, it will be found that all these mould-boards which are constructed on these principles, wear through in the operation of ploughing about midway, while the upper and lower edges are scarcely rubbed. It also necessarily results, that ploughs of this construction work hard, and are of heavy draught, because the mould-board, not being adapted to the convex form which the furrow-slice is disposed to assume, lifts the furrow-slice at a single point, and that in the middle, instead of being equally applied throughout the entire operation. In order to meet and remedy the inconveniences arising from this form of structure, I form my mould-board into a different shape; and instead of working the moulding part, or face of the mould-board to straight lines, my improvement is to work it to circular or spheric lines. By repeated experiments, I have ascertained, that in one direction, viz.: from a, (the point of the share) inclining to the back part of the mould-board, the circle or segment to which the mould-board is wrought, should have about three times the radius of the smaller segments, represented by the letters c, c, &c, the former being about thirty-six inches, the latter twelve. In order, then, to shape the moulding part, or the face of the mould-board, having obtained a suitable block, I begin by laying off the bottom, (figs. 3 and 4,) by circular or spheric lines at a, a, a, a. If I intend to construct a plough of the proper size to cut and turn a twelve inch furrow, I strike this segment of a circle of thirty-six inches radius, (fig. 1,) and at twenty-four inches back from the point to b, at right angles with the land-side, this circle will intersect the angle line. The circle is extended out from the land-side. Then I work the block to fit the same segment inclined from a, (fig. 4,) at the point of the share to a, at a perpendicular raised twelve inches from the horizon, with the circle extended in towards the land-side. Then, having wrought the shape of these two lines, I apply the circular part of the smaller segment, (fig. 2,) and work the face of the mould-board until that segment will have an equal bearing on all parts, corresponding with the cross-lines c, c, &c, which, if produced, would all terminate at a point at d, which is about thirty-six inches from the perpendicular where the line a, a, crosses the line d, b. This being thus worked off, uniformly forms a section of a loxodromic, or spiral curve, and when applied to practice, is found to fit or embrace every part of the furrow-slice, far more than any other shaped plough. The plough may be made larger or smaller, suited to deep or shallow ploughing, by enlarging or diminishing the radii of the segments which it is wrought by. Believing that this mode of shaping the moulding part, or face of the mould-board is an original invention of my own, not heretofore used or known, and that it is a most important improvement in the shape of the plough, I claim the exclusive privilege of mak-

ing, using, and vending the same.” The defendants pleaded “Not guilty,” and on the trial, moved the court to give the jury a series of instructions, which are stated and discussed in the following opinion.

MARSHALL, Circuit Justice. These suits are brought by the plaintiff, to recover damages for the alleged violation of his patent, for an improvement on the plough. His improvement is, in part, made on the face, throat, and hind part of the mould-board. The counsel for the defendants have moved the court (1) to declare the patent void, because the specification, so far as it regards the improvements in the mould-board, does not describe this part of the improvement with the certainty required by the act of congress. See Act Feb. 21, 1793 (1 Story’s Laws, 301, § 3 [1 Stat 321]). Should the patent be submitted to the jury, they then move that it be accompanied with the following instructions: 1. That so much of the patent as respects the face of the mould-board is not violated, unless the defendants have adopted the same spheric lines as are described in the plaintiff’s specification. 2. That the jury must be satisfied that the former mould-board is described with sufficient certainty, to distinguish between it and the improvement claimed. 3. If the jury shall be satisfied that M’Cormick has made and used mould-boards, worked out by transverse and concave circular lines, before the plaintiff obtained his patent, or made his alleged improvement, then the particular spheric lines described in his specification constitute only a change of form and proportion, and is not an invention capable of being patented.

In the course of the argument, the counsel have also contended that the same uncertainty exists in that part of the specification which describes the throat and hind part of the mould-board, as in that which describes its face.

1. We will first consider the proposition, that the patent is void for uncertainty. It is, undoubtedly, the province of the court to construe every written instrument offered in evidence; and it results from this duty, that if the instrument be so uncertain in its terms as to have no meaning; if it be insensible, or have no application to the case, it may be rejected. Is the patent, on which the present actions are founded, of this description.

The specification, No. 1, relates to the face of the mould-board. It consists, first, of a general, and then of a more particular description of this part of the improvement. The defendants contend that these descriptions are uncertain in themselves, and that there is also a fatal uncertainty which of them describes the improvement for which the plaintiff claims his patent. The plaintiff, after a general description of the mould-board then in use, and the inconveniences arising from its form, proceeds thus: "In order to meet and remedy the inconveniences arising from this form of structure, I form my mould-board into a different shape, and, instead of working the moulding part, or face of the mould-board to straight lines, my improvement is to work it to circular or spheric lines." The specification then proceeds to a more particular description of the lines used, and of, the manner in which they are applied, in order to form the face of the mould-board.

The counsel for the plaintiff seem disposed to consider this general description, as constituting the essential part of the specification, and the subsequent more particular description, as merely an illustration of the general principle, as one mode of carrying it into execution. If the specification will admit of this construction, then the subsequent and particular description may be expunged without affecting the patent. A principle remains the same, whether it be accompanied by any case put for illustration or not. It may be comprehended more easily, but is not varied by the illustration. If we consider this general part of the specification as standing alone, and as describing this part of the improvement, it is not liable to the charge of uncertainty. It claims, as an improvement, "to work it (the mould-board) by circular or spheric lines." Every mould-board worked by circular or spheric lines, however those lines may cross each other, and whatever may be their relative proportions, is within the plaintiff's patent. If the face of no mould-board previously in use will fit this description, the plaintiff's patent may, perhaps, legally cover the broad ground it would occupy. But if any mould-board previously in use would fit this description, then the plaintiff would claim, as his invention, that which was previously known, and his patent would be void. But we do not think the specification will admit of this construction. It proceeds to say, "By repeated experiments I have ascertained that in one direction, viz.: from a, fig. 4," (which is the point of the share) "inclining to the back part of the mould-board the circle or segment to which the mould-board is wrought, should have about three times the radius of the smaller segments represented by the letters c, c, &c, the former being about thirty-six inches, the later twelve." This is intended for a plough which will turn a furrow-slice of twelve inches. The specification then proceeds to detail minutely the mode of operation by which these fines are to be applied, in order to give the face of the mould-board the required shape, and says: "The plough may be made larger or smaller, suited to deep or shallow ploughing by enlarging or diminishing the radii of the segments which it is wrought by." "Believing," the specification adds, "that this mode of shaping the moulding part or face of the mould-board, is an original invention of my own,

not heretofore used or known, and that it is a most important improvement in the shape of the plough, I claim the exclusive privilege of making, using, and vending the same.” This claim applies conclusively, we think, to the particular and laboured description of the mould-board which immediately precedes it. The language seems to us to require this construction; and the subject seems also to require it. If the patent were to extend to all mould-boards worked out to circular lines, crossing each other in any direction, or in any proportion, it would be unnecessary to describe with so much labour and minuteness, the direction of the longitudinal and perpendicular circular lines, by which the face of the mould-board should be worked out and the proportions those lines should bear to each other, and the size of the plough. It is obvious, then, that the person who makes his improvement to consist in the peculiar shape given to the face of his mould-board, and who describes the lines and their several proportions, which will give that peculiar shape, must mean to appropriate the shape produced by the application of those new lines. We are then decidedly of opinion, that a mould-board conforming to the particular description contained in the specification, is the invention which the plaintiff claims, and that instead of being a mere illustration of the principle stated in the introductory part of the specification, it is itself the essential improvement, of which only a general idea was given in the introductory part.

It is contended on the part of the plaintiff that, if the patent be limited to the more particular part of the specification, still the claim is not confined to mould-boards worked out by segments of circles of the exact form and proportions mentioned in the specification. To support this argument, counsel rely on the word “about” which is introduced into the description; he has found, Mr. Davis says, by repeated experiments, that the segment of the larger circle should have about three times the radius of the smaller segments, &c. The claim, therefore, is not for a mould-board of the precise shape described, but for one “about” the shape described. It will at once be perceived, that unless the extent of this word “about,” be limited, it introduces all the uncertainty which it was supposed would be fatal to the patent, according to the general description contained in the introductory

part of the specification. If, instead of thirty-six inches and twelve, the proportions may be thirty-seven and eleven, thirty-eight and ten, why not forty and eight, or thirty-five and fifteen? The proportions may be enlarged or diminished, and with every change of proportion, the shape of the mould-board will be changed. If this be the construction of the patent, then it covers all the various forms of mould-boards which may be made under this latitudinous exposition of its terms; and if any mould-board has been previously used, whose face may be formed by transverse segments of circles, whose radii bear to each other "about" the proportion of thirty-six to twelve, the patent is void. Will it be said that it may be left to the jury to determine, what is "about" the proportion particularly designated? This expedient will not remove the difficulty. We doubt how far it may consist with the principle that the court is to construe every written instrument. But, waiving this doubt, if the word has any limits, they must be always the same. When applied to a mould-board, it cannot be endowed with an elastic, principle, to expand or contract itself according to circumstances. It cannot admit of being varied to a certain extent, if no mould-board has been in use of the shape which that degree of variation would produce, and at the same time of being restricted, if a mould-board of such a shape has been in use. The word "about" cannot be equivalent to a general claim of the exclusive right to all concave mould-boards, varying in any degree from those previously in use. The definiteness of the shape, which the specification professes to give to the mould-board, cannot be sacrificed by this loose word. It is further observable, that where the specification describes the process of the workman, it drops the word "about." It has been supposed that the precise proportion required between the radii of the larger and smaller segments of circles, may be relaxed under the concluding part of the description. After giving the mode of operation, the specification adds: "This being thus worked off, uniformly forms a section of a loxodromic or spiral curve, and when applied to practice, is found to fit or embrace every part of the furrow-slice, far more than any other shaped plough."

The argument is, that it is a mould-board whose face forms a section of a loxodromic or spiral curve that is patented, and that any lines which will give such a surface, are within the specification, and consequently, within the patent. Without noticing the difficulties growing out of this construction, it is sufficient to say, that the specification does not claim the loxodromic or spiral curve as the invention, but states it as the result of the prescribed application of the transverse circular lines, the application of which, in the relative proportions prescribed, is the invention. The language of this part of the specification, tends to confirm, we think, the opinion already indicated, that the plaintiff intended to claim a mould-board of the precise and definite shape prescribed, not one about that shape. He says his mould-board, "so worked off," "when applied to practice, is found to fit or embrace every part of the furrow-slice, far more than any other shaped plough." In construing this specification, we must keep in view the notice of the improvement which

Mr. Davis claims to have invented and to describe. It is an improvement in the shape of a machine which has been in common use a great number of years, and in a great variety of shapes. The concave mould-board has been long considered as the most eligible shape that part of the plough can assume, and multiplied essays have been made to perfect it. Mr. Davis has recently added to their number; he professes to have discovered that precise concavity in the surface of the mould-board, which will better than any other fit every part of the furrow-slice, and, consequently, turn it over with less labour. For this discovery he claims a patent; we may reasonably expect, that a specification for such a patent, will give a precise and definite shape to the improvement to be patented. We are then decidedly of opinion, that in construing this specification, the word "about" must be disregarded, and the patent be restricted to the mould-board as described, independent of that word. If we consider the particular part of the specification as describing the object to be patented, the defendants insist that the description given in that part is not sufficiently clear to enable a skilful mechanic to construct the machine. It may not, perhaps, be easy to draw a precise line of distinction between a specification so uncertain, as to claim no particular improvement, and a specification so uncertain as not to enable a skilful workman to understand the improvement, and to construct it. Yet, we think, the distinction exists. If it does, it is within the province of the jury to decide, whether a skilful workman can carry into execution the plan of the inventor. In deciding this question, the jury will give a liberal common sense construction to the directions contained in the specification. See the able opinions of Mr. Justice Story, in *Ames v. Howard* [Case No. 320], and of Mr. Justice Baldwin, in *Whitney v. Emmett* [Id. 17,585].

If the patent be submitted to the jury, the defendants request the court to give the several instructions which have been already mentioned. 1. The first is, that so much of the patent as relates to the face of the mould-board is not violated, unless the defendants have adopted the same circular lines as are described in the specification.

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This instruction will be given. But it may perhaps be understood with some slight modification. The patent, undoubtedly, covers only the improvement precisely described. But if the imitation be so nearly exact as to satisfy the jury that the imitator attempted to copy the model, and to make some almost imperceptible variation, for the purpose of evading the right of the patentee, this may be considered as a fraud on the law, and such slight variation be disregarded. 2. The second instruction is, that the jury must be satisfied that the former mould-board is described with sufficient certainty, to distinguish between it and the improvement claimed. "We do not think a particular description of the former mould-board is necessary. A general reference to it, either in general terms which are not untrue, or by reference to a particular mould-board, commonly known, accompanied by such a description of the improvement as will enable a workman to distinguish what is new, will be sufficient. 3. The court is also requested to instruct the jury that, if M'Cormick has made and used mould-boards, worked out by transverse circular lines, so as to produce a concave surface, before the plaintiff obtained his patent, or made his alleged improvement, then the particular lines described in his specification, constitute only a change of form and proportion, not an invention capable of being patented. It is stated on both sides, that the clause in the statute, to which this instruction refers, is one of considerable doubt It is in these words: "And it is hereby enacted and declared, that simply changing the form or the proportion of any machine, shall not be deemed a discovery." Act 1793, before referred to (1 Story's Laws, p. 301, § 2 [1 Stat 321]). In construing this provision, the word "simply," has, we think, great influence. It is not every change of form and proportion which is declared to be no discovery, but that which is simply a change of form or proportion, and nothing more. If, by changing the form and proportion, a new effect is produced, there is not simply a change of form and proportion, but a change of principle also. In every case, therefore, the question must be submitted to the jury, whether the change of form and proportion, has produced a different effect With respect to the throat and hind part of the mould-board, the court need only say, that the description of the specification is general, not giving the particular shape of those parts of the "mould-board. If either the throat or hind part of a mould-board, was in use before, which answers the description contained in this specification, then the plaintiff has patented what belonged to the public, and his patent is void.

NOTE. After the opinion of the court was delivered, both suits were dismissed agreed; each party paying his own costs.

¹ [Reported by John W. Brockenbrough, Esq. Merw. Pat. Inv. 218, contains only a partial report.]