

Case No. 5,982.

HAMILTON V. IVES ET AL.

[6 Fish. Pat. Cas. 244;¹ 3 O. G. 30.]

Circuit Court, E. D. Michigan.

Jan. 16, 1873.²

PATENTS—COMBINATION—DRAWINGS—ATTORNEY FEE.

1. The claim of Hamilton's patent, granted December 5, 1865, for "improvement in sawmills," being, "giving to the saw, in its downward movement, a rocking or rolling motion, by means of the combination of the cross-head working in curved guides at the upper end of the saw, the lower end of which is attached to a cross-head, working in straight guides and pivoted to the pitman below the saw, with the crank pin, substantially as described," and the defendants using a like combination, but in which the upper guides are set with the lower ends two inches forward of a perpendicular line, let fall from the top ends—the charge of the judge "that the plaintiff is entitled to the protection of his patent, no matter whether the ocrved slides are set in one line or another, provided the combination is otherwise complete, that it is a mere matter of adjustment, which any competent mechanic skilled in the art would understand and adopt" is without error.

[See note at end of case.]

2. The fact that in the drawings of the patent the curved guides are shown set in a perpendicular position, is not of itself sufficient to limit the claim of the patentee to that position of the guides.

[See note at end of case.]

3. The drawings are, no doubt, a part of the description of the thing patented, but they must be considered in connection with the specification.

[Cited in *Steam-Gauge & Lantern Co. v. Ham Manufg Co.*, 28 Fed. 619.]

4. When the invention patented consists of a combination of old elements to produce a new result, mere matters of adjustment of the individual elements are not limited or controlled by the drawings, unless (1) they are expressly so limited by the specification as well; or (2) such limitation and control are necessary to maintain the integrity of the specifications, taken as a whole, or of some essential part thereof; or (3) such limitation and control are essential to produce the result claimed.

[See note at end of case.]

5. The description in the specifications, of the operation and effect of each separate element or part of a patented combination, must be read and construed with reference to the entire combination and its results, and the effect which the operation that each element or part has upon that of each of the others.

[See note at end of case.]

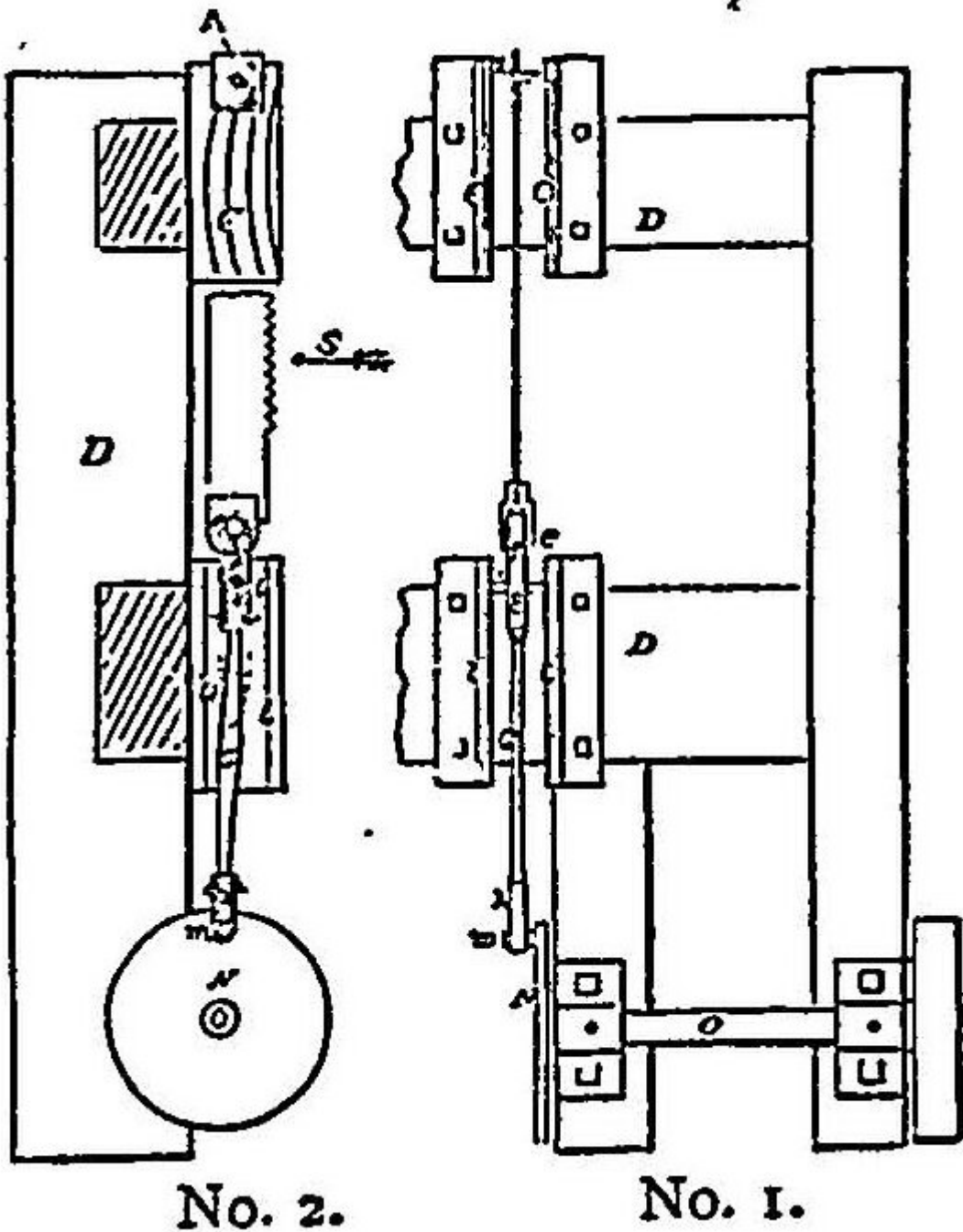
6. It is well established that in the effort to ascertain the intention and meaning of the specification and claims, they are to be viewed in a liberal spirit, that, if possible, the object of the inventor or patentee may be carried out. Mere rigid technicalities are to be set aside, unless there is clear legal necessity for sustaining them. The cases on this point cited.

[Quoted in *Brush Electric Co. v. Electric Imp. Co.*, 52 Fed. 974.]

[See note at end of case.]

7. The motion being overruled, an attorney fee of ten dollars is allowed the plaintiff.

In equity—Motion for a new trial. Suit brought upon letters patent for “improvement in saw-mills,” granted Palmer Hamilton,



December 5, 1865, No. 51,310. In the engravings, Fig. 1 represents a front elevation and Fig. 2a vertical section of a portion of a saw-mill, containing the patented improvements. D, D is the frame-work, to which the guides are fastened; C, C, the curbed upper guides; t, t, the straight lower guides. The patentee states in his specification that the object of his invention is to impart to the saw of a saw-mill a rocking motion while it is cutting, so that the movement of its tooth edge assimilates to that of

the pit-saw operated by hand. His claim is: "Giving to the saw, in its downward movement, a rocking or rolling motion, by means of the combination of the cross-head working in curved guides at the upper end of the saw, the lower end of which is attached to a crosshead, working in straight guides and pivoted to the pitman below the saw, with the crankpin, substantially as described." The defendants [Caleb Ives and George B. Green] used a combination substantially the same, but in which the upper guides were set with the lower ends two inches forward of a perpendicular line let fall from the top ends. At the trial the defendants' counsel asked the court to charge the jury "that if the face of the slides are not placed so that the top and bottom of the slides are in the same perpendicular line, there is no infringement" The court refused to charge as requested, and charged the jury as follows: "That the plaintiff is entitled to the protection of his patent no matter whether the curved slide be set in one line or another, provided the combination is otherwise complete. It is a mere matter of adjustment which any competent mechanic, skilled in building sawmills and adjusting the saw for the most effective service, would readily understand and adopt." The jury found for the plaintiff, and the defendants moved for a new trial on the ground (1) of newly discovered testimony, which was disposed of on the hearing adversely to the motion; and (2) on the ground of erroneous instruction to the jury, which is decided in the present opinion.

G. O. N. Lathrop, for plaintiff.

Chas. J. Hunt, for defendants.

LONGYEAR, District Judge. The action in this case was for an alleged infringement of a patent, No. 51,310, granted to the plaintiff December 5, 1865, for an improvement in saw-mills. The device patented consists of a new combination of old elements as a means of producing a certain result, and is set up in the claim in the following words: "Having thus described the best mode with which I am acquainted of embodying my improvements, what I claim as my invention, and desire to secure by letters patent is giving to the saw in its downward movement a rocking or rolling motion, by means of the combination of the cross-head working in curved guides at the upper end of the saw, the lower end of which is attached to a cross-head, working in straight guides and pivoted to the pitman below the saw with the crank-pin, substantially as described. In the drawings the curved guides are represented as set with their concave facing in the same direction as the cutting edge of the saw, and consequently toward the approach of the log, which is represented in the drawings by an arrow marked "S," and they are referred to in the specifications as being so set. Nothing whatever is said in the specifications as to whether the curved guides are to be set with the lower end perpendicularly under the upper end, or in an inclined position, they being entirely silent upon the subject In the drawings, however, they appear as if set in a perpendicular position, and on this account it was claimed at the trial that any other position of the guides was not covered by the patent and that because

in the combination, as used by the defendant these guides were set with the lower end about two inches forward of a plumb line let fall from the upper end (as to which there was no dispute), there was no infringement The defendants' counsel asked the court to charge the jury as follows: "That if the faces of the slides are not placed so that the top and bottom of the slides are in the same perpendicular line, there is no infringement" The court refused to charge as requested, and charged the jury as follows: "That the plaintiff is entitled to the protection of his patent, no matter whether the curved slides be set in one line or another, provided the combination is otherwise complete. It is a mere matter of adjustment, which any competent mechanic, skilled in building saw-mills and adjusting the saw for the most effective service, would readily understand and adopt"

This refusal to charge, and the charge as given, are claimed to be erroneous, and constitute the only grounds of the present motion, as I construe the three several subdivisions or grounds of motion, as spread upon the record. The grounds of motion, as stated upon the record, are as follows: "(1) In this, that the judge charged the jury that the patent of Hamilton did not require the slides to be set perpendicular. (2) In this, that the judge charged the jury that, under Hamilton's patent the slide could be set in any position, at the choice of the mechanic who set them up. (3) In this, that the judge charged the jury that if the slides of Ives and Green fell back from a straight line drawn from one end of the slide to the other, that it was an infringement on the Hamilton patent"

The first and second, although not in the language of any charge as given, clearly have reference to the charge above quoted. But, on a careful examination of the whole charge, which was in writing, I am unable to find any portion of it which authorizes the statement contained in the third subdivision. No such charge was given. I do not intend to accuse counsel of intentional misstatement; but that there was a misapprehension on the part of the counsel there can be no doubt The fault of the counsel is that he evidently made his statements as to what charges were given without resort to the written charge to ascertain their correctness.

The question of decision, then, is as to the correctness of the instructions above quoted. It is claimed that because the curved guides at the upper end of the saw are represented

in the drawings as set in a perpendicular position, no other position of the guides, even if the combination be the same in all other respects, is covered by the patent; and that therefore the use by defendants of a like combination, but in which the upper guides are set with the lower ends two inches forward of a perpendicular line let fall from the top ends, is no infringement of the plaintiff's patent.

It is to be observed: (1) That the curved guides are not themselves claimed as new, and of course they are not covered by plaintiff's patent (2) That it is only the position and office of the curved guides in the combination that are patented. (3) That the only respect in which the position of the curved guides in the combination is made specific, or is at all essential, is their location in reference to the saw—that is, at its upper end, and with their concave sides toward its cutting edge, or, as it is expressed in the specifications, “to the advance of the log.” (4) That the only office to be filled by the curved guides is to carry the top end of the saw backward of its general line of movement, or, as substantially expressed in the specifications, in the same direction as the advance of the log during the first half and forward or toward the log during the last half of its downward motion, while at the same time, by another part of the combination, the lower end of the saw is being carried in the opposite directions, thus doing their part in imparting to the saw the “rocking or rolling motion” mentioned in the claim as above quoted.

We see, then, that so far as the specifications are concerned, nothing is specified as to whether the curved guides are to be set perpendicularly, or inclined, and if inclined, at what angle, or how much. So far as the specifications are concerned, then, this matter was certainly left to be adjusted according to the judgment of the builder, for the most effective service. This being the case, and it being the intention of the patentee so to leave the matter, the curved guides could not be represented in the drawings in any other than a perpendicular position, because that is the only initial or starting-point, or line, from which any divergent or inclined position could be calculated. The drawings are intended to represent the positions of the individual parts in the combination, and not mere matters of detail. For instance, the saw is as much a part of the combination as the curved guides. In the drawings, the saw is represented as hung in a perpendicular position. The evidence of all the experts shows, and it is in disputed, that no saw-mill, no matter what combinations or devices used are in other respects, will do effective work without what is called “overhang” of the saw, or its equivalent. That is, the saw must be so hung that, when its downward stroke is completed, the upper end shall overhang the lower end with reference to a perpendicular line. Now, it might as well be said that a saw-mill, built after plaintiff's device, is not an infringement of his patent, because the saw has the necessary overhang, as to say it is not an infringement because the curved guides are not set perpendicularly. In fact, the testimony of the experts tended to show, that, setting the lower end of the curved guides forward, was but one method of giving the saw the necessary

overhang. The matter as to how the curved guides shall be set, is left unlimited and undefined, like a score or more of other matters of detail, such as their length and degree of curvature, the length and thickness of saw-plate, the length and, number of saw-teeth, length of stroke of the crank, length of pitman, length of leverage at the upper end of the pitman, between where it is pivoted to the lower cross-tree and where the saw is pivoted to it, etc. All these are clearly mere matters of adjustment, and may be varied in different cases, according to the intelligence, judgment, or even caprice of the builder, and still the combination be the same, and in each case equally covered by the plaintiff's patent *American Hide, etc., Hach. Co. v. American Tool & Mach. Co.* [Case No. 302].

The drawings are no doubt a part of the description of the thing patented, but they must be considered in connection with the specifications. Where the invention patented consists, as in this case, of a combination of old elements to produce a new result, mere matters of adjustment of the individual elements are not limited or controlled by the drawings, unless (1) they are expressly solimited by the specifications as well; or (2) such limitation and control are necessary to maintain the integrity of the specifications, taken as a whole, or of some essential part or parts there of; or (3) such limitation and control are essential to produce the result claimed. As to the first, we have already seen that the perpendicular position of the curved guides, as represented in the drawing, are not expressly limited to that position by the specifications. As to the second, it is claimed, on the part of the defendant, that the perpendicular position of the curved guides, as represented in the drawings, is necessary to maintain the integrity of the following clause in the specifications, viz.: "As the upper guides are concave to the advance of the log, the effect upon the upper end of the saw is, that, while it is descending, it also moves in the direction of the arrow S ('the arrow S indicates the advance of the log'), and it continues this movement as it descends until about half of the stroke is accomplished; then, during the remainder of the stroke, it moves in a direction the reverse of that indicated by the arrow S." It is claimed, that inasmuch as the advance of the log is in a horizontal line, the curved guides can not be concave to it, in a strictly mathematical sense, unless the curves be so set that a straightline drawn from one end of the curves to the other, representing the chord of

an arc of a circle, be perpendicular to such horizontal lines. In order to have this true, even in a strictly technical sense, it is necessary that the curve of the guides should be in the exact form of an arc of a circle. But it is not so described in the specifications, neither is it necessarily so in order to maintain the integrity of any portion of the specifications, nor is it essential in order to produce the result claimed. All that is specified, and all that is essential, is that the upper guides shall be curved. The degree of curvature, and the shape or form of the curve, whether an arc of a circle or otherwise, are non-essentials, but are mere matters of adjustment, like the length and proportions of the connecting or pitman rod, etc. The foundation of the argument in that regard is therefore lacking, and the argument falls to the ground. But however this may be, the clause quoted does not purport to be, and it is not any part of the description of the combination, or of any portion of it These had been already described. It is simply a description of the office or operation of this particular element, viz., of the curved guides.

It is claimed, however, that in order to maintain the integrity of the description of the office, or operation of the curved guides, as stated in the specification above quoted, it is essential that the guides be set perpendicularly. In order to maintain this claim, it is assumed that in order to have the upper end of the saw move in the direction indicated (in the same direction as the advance of the log), during the first half of its downward stroke it must fall back of a plumb-linelet fall from its starting-point, and that it can not be made to do this if the-lower ends of the curved guides are set forward of such plumb-line. The fallacy of this assumption appears from the following propositions: (1) The description is not that the upper end of the saw is made to move the one way or the other with reference to a plumb-line. (2) While it is true that, taken by itself, and without making any allowance for the operation and effect of the movement of the lower end of the saw in the opposite direction, the movement of the upper end, in order to be in the same direction as the advance of the log, must be a falling back from a plumb-line, as claimed, yet, when taken in connection with and as affected by that other movement, it is not necessarily so, even with the curved guides set perpendicularly. In this connection it must be borne in mind that the movements of the saw, here spoken of, all have direct reference to its operative effect upon the log, and, of course, when the "saw" is spoken of, it must have reference to its operative or toothed edge, and the "upper" and "lower" ends of the saw must be understood to mean those ends of that edge or side, which, in practice, as is well known, always terminates several inches below and above the fastenings or hangings at the respective ends of the saw-plate.

It will be remembered that, while descending, the two ends of the saw are moved back and forward in opposite directions at the same time-the upper end back by operation of the curved guides during the first half, and forward during the last half, and the lower end by operation of the lever connecting-rod or pitman, forward during the first half and

back during the last half of its downward stroke. Each of these movements, of course, affects the saw throughout its entire length, but with a gradually diminishing effect.

The description in the specifications of the operation and effect of each separate element or part of a patented combination must be read and construed with reference to the entire combination and its results and the effect which the operation that each element or part has upon that of each of the others. *Cahoon v. Ring* [Case No. 2,292], So construing the description of the operation and effect of the curved guides, now under consideration, it is evident that while of course the crosstree operating in the guides and to which the upper end of the saw-plate is pivoted, must fall back of a plumb line in the first half of the descent of the saw, the upper end of the saw itself—that is, the upper tooth or teeth of the saw—may be carried so far forward by the forward motion of the lower end as not to fall back of such line, but may, on the contrary, actually move in the opposite direction, dividing, of course, upon the degree of curvature of the guides and the extent to which the lower end is thrown forward. This was, in fact shown to be the case by experiments at the trial with a model constructed after the plaintiff's patent, the correctness of which was not disputed. But as paradoxical as it may seem at first view, this does not prove, as claimed, that the statement in the specifications that the upper end of the saw, in the first half of its downward stroke, moves in the direction of the advance of the log, is untrue. It simply proves that while it must necessarily so move, yet, on account of another simultaneous movement it is not there by caused necessarily to, and does not in fact, fall back of a plumbline, even with the curved guides set perpendicularly, as represented in the drawings. This theory of there being a backward motion as the result of an individual cause, and an absolute forward motion as the result of compound causes, is well illustrated by the familiar example of a man starting on the bow of a moving ship and walking back along the deck to its stern. Now, suppose the ship to be moving forward at the rate of five miles per hour, and the man to move toward the stern at the rate of three miles per hour, the man will have actually gone forward of a plumb line let drop to the ground from where he started, and yet with reference to the ship, he actually moved the other way.

The backward movement of the upper end of the saw is caused, as we have seen, by the cross-tree, to which the upper end of the

saw-plate is pivoted, following the curve of the guides. A completed downward movement of the cross-tree is, I think, correctly represented by a straight line drawn from the starting-point of the pivot to the point of the termination of the movement. Now, I think it evident that if the curved guides are so set, no matter what their position may be in other respects, that this pivot, or operating cause, falls back of such straight line during the first half of its downward movement, the call of the specification in that respect is answered. The fact is, however, that this statement in the specifications as to the operation and effect of the curved guides upon the upper end of the saw, is not descriptive of any part of the combination itself. It is a statement merely of the patentee's theory in that regard; and even if he was mistaken in that particular, it would not invalidate his patent, because it is immaterial; provided, of course, that the entire combination actually produces the result claimed for it, as to which there is no dispute. *Foss v. Herbert* [Id. 4,957]. "It is well settled by the courts," says Judge Leavitt, "that in the effort to ascertain the intention and meaning of the specifications and claims, they are to be viewed in a liberal spirit, that, if possible, the object of the inventor or patentee may lie carried out. Mere rigid technicalities are to be set aside, unless there is a clear legal necessity for sustaining them." *Goodyear v. Berry* [Id. 5,556]. I entirely concur in the proposition. See, also, *Imlay v. Railroad Co.* [Id. 7,012]; *Goodyear v. Railroad Co.* [Id. 5,563]; *Page v. Ferry* [Id. 10,662]; *Judson v. Cope* [Id. 7,565]; *Burden v. Corning* [Id. 2,143]; *Beard v. Egerton*, 8 Man., G. & S. 165; *Ames v. Howard* [Case No. 326]; *Blanchard v. Sprague* [Id. 1,518]; *Ryan v. Goodwin* [Id. 12,186]; *McCormick v. Seymour* [Id. 8,726], affirmed, except as to rule of damages, 16 How. [57 U. S.] 486.

It appears, therefore, that the claim on behalf of the defendants, that the curved guides at the upper end of the saw must be set perpendicularly in order to maintain the integrity of the specification above quoted, has no foundation. It remains to consider the third and last condition, viz.: whether it is essential to limit the curved guides at the upper end of the saw to a perpendicular position, as represented in the drawings, in order to produce the result claimed for the entire combination. The result, as stated in the claim, is "giving to the saw in its downward movement a rocking or rolling motion."

These curved guides at the upper end of the saw, it must be borne in mind, perform only a part of the work of imparting to the saw the motion claimed to be imparted by the entire combination. How it performs that work, we have already seen. Now, it is evident that any practical inclination of the guides from a perpendicular position—that is, any inclination that will allow the saw to respond to the entire revolution of the crank, and to do effective work, which was shown in practical use to be from one to two inches only—would not destroy the effect of the curve of the guides upon the motion of the saw. It would no doubt somewhat modify, and slightly diminish, that effect, but it must be borne in mind that the motion claimed as the result of the combination, is in no manner limited to any

particular degree or extent It is in kind only, and so long as the kind of motion claimed is produced by the combination described, the combination is protected by the patent.

It follows, therefore, that there was no error in the instruction complained of, and the motion for a new trial must be denied, with costs to the plaintiff, including an attorney fee of ten dollars.

[NOTE. From this ruling the defendants went to the supreme court upon writ of error, where, in an opinion by Mr. Justice Bradley, the judgment of the circuit court was affirmed. 92 U. S. 426. It was held that the substitution of guides made crooked by a broken line, instead of a curved line, was a transparent imitation. Nor was the attaching of the lower end of the saw to the pitman below the crosshead instead of above it a change in principle. The combination was held to be a close copy of the plaintiff's invention. "The essence of the improvement has nothing to do with the precise position of the guides. It is a combination of mechanical means to produce a rocking motion of the saw; and this combination is just as applicable to guides that have a slight inclination as to guides that are perpendicular. The description in the patent is sufficiently specific."

[For other cases involving this patent, see [Hamilton v. Rollins, Case No. 5,988](#); [Hamilton v. Kingsbury, Cases Nos. 5,984, 5,985, 4 Fed. 428.](#)]

¹ [Reported by Samuel S. Fisher, Esq., and here reprinted by permission.]

² [Affirmed in 92 U. S. 246.]