movable; or that an arm is not radial, extending centrally down in a machine to operate upon an interior cam; or that levers extend over and are actuated outside of instead of inside the periphery of the carriage; or that a spring is shown without means of adjustment for greater or less tension, such means being well known; or that a radial arm extends outward a considerable distance beyond the periphery of the carriage, and has its outer dog not pivoted to, but integral with it; or that a radial arm does not extend over and beyond the inner dog; or that a dog is adapted to be released beyond the periphery of the carriage instead of by an interior cam; or that a rectangular frame is employed instead of an arm; or that a cam instead of a spring is used to push a dog into place. It is testified, and perhaps would be evident without proof, that of these various forms of construction and arrangement of parts, while one may be better than another, the differences are not such as to affect the question of invention.

Of the claims for spalting devices, the special feature of the first -No. 26-is "two movable sections, side by side, and forming part of said tracks, adapted to be displaced from normal positions under the bolt." In the O'Connor patent there is a single movable section in one of the two tracks, and it follows that "two movable sections, side by side," can be regarded only as a duplication, unless their being adapted to be displaced from normal position under the bolt is a novel and patentable improvement. That cannot be conceded, because it is a mere matter of adjustment whether the displacement shall be in advance of or directly under the moving bolt. As examples of movable sections in parallel or concentric tracks, reference is made in the testimony of Mr. Bates to the store railway or cash carrier, as illustrated in the Holbrook patent, No. 282,320, the machine for sorting and loading lumber, shown in the Davies patent, No. 238,220, and to the well-known movable sections in rail-If, therefore, there is patentability in this feature of way tracks. the Perkins patent, it must be found in the other claims.

The twenty-seventh claim adds to the twenty-sixth hinged posts to support the movable sections and lever mechanism connected to the posts, whereby the sections may be swung radially in opposite directions, substantially as stated. The one section of the O'Connor patent is moved in a radial direction by means of a lever mechanism connected to it. It is not supported on hinged posts, but, as Bates testifies, hinged posts were old devices, of which harvester reels and buggy tops were examples, and therefore it would require no invention to mount the O'Connor movable section on hinged posts like the harvester reel or buggy top, so that both ends of it would move equally, instead of pivoting it at one end, so that one end moved more than the other. Swinging gates, if supposed to move in perpendicular instead of horizontal planes, afford a familiar illustration.

The additional features of the twenty-ninth claim are "a movable bar, outside the rotating carriage," connected to the movable section of the way, and "a trip on the carriage," adapted for the purpose stated. There are corresponding parts in the O'Connor machine, except that the operation is reversed, the lug or trip being made adjustable, and the bar stationary, instead of the bar adjustable and the lug stationary. "The function, operation, and purpose," the expert says, "are the same, and the use of the one or the other is merely mechanical expediency."

The thirtieth claim adds to the twenty-ninth "a stop on the frame in position to throw the trip out of operative position"; but that there was no novelty in that feature is clear. Stops and trips are "old and well-known devices for all sorts of purposes."

The thirty-first claim differs from the twenty-ninth and thirtieth in that the block-supporting way is described as "consisting of two tracks," with a section of each in advance of the saw made movable. This, at most, is mere duplication.

Without further pursuit of details, it is evident that the important feature of both the O'Connor and Perkins patents is the movable As between the two section or sections in the tracks or guideways. certainly, and, upon the evidence here adduced, as against the world, O'Connor is the pioneer, and the question is whether the Perkins patent shows a patentable improvement or advance in the art. If so. it must be found in the fact that his movable section or sections in the process of operation are withdrawn from the track, not in advance of the approaching block, but under it, at the instant of passage, so that the spalt, or remnant of the block, will drop squarely through the opening, and not be tilted or turned sidewise, as in the O'Connor machine. The invention is not to be looked for in the hinged posts, levers, lugs, trips, and cams, or combinations thereof, employed to move the sections. Those, as set forth, were mere expedients, open alike to the use of every inventor. The single movable section of O'Connor was pivoted at one end, and it is plain that large pieces were liable to be caught, and made the means of retarding or obstructing the operation of the machine; but it is not true upon the evidence that the invention of O'Connor was a failure. On the contrary, it was as compared with anything before it a great improvement, and, to say the least, was so far successful as to require that the invention be accorded full significance in the prior art. It is not invention to improve a defective contrivance by the exercise of merely mechanical skill, however great the success. It is clear in fact as well as in law that, a movable section having been introduced into one of the two rails, constituting the track of a shingle-machine, it required no invention to introduce a like section in the other rail, side by side with the first; and it is equally clear as matter of fact that it involved nothing patentable to make the section in O'Connor's rail, singly or in duplicate, movable equally at both ends; and we have already seen that it was a mere matter of expediency to so adjust the movement that the sections should be withdrawn when immediately under, rather than in advance of, the block. We are therefore forced to the conclusion that these claims are invalid.

It remains to consider the forty-third claim, the essential feature of which is a wooden bearing block, seated in an oil-retaining trough. The specification, it is to be observed, says that these pieces are preferably blocks of wood cut to present the edge of the grain toward the wheel which rests on them; that the blocks are inserted in troughs,

each of which has a lubricating cup attached to and connected with it; and that the cup may be filled with oil, which will pass into the trough around the bottom of the block, and will be carried up the pores of the block by capillary attraction, so that the surface of the block will be constantly lubricated. The cup, it will be noticed, is not mentioned in the claim, implying a trough of different construction from the one specified, to the extent, at least, that it should be without openings at the bottom to admit oil from the cup, and leaving it to be presumed, though unexplained, that there must be in the trough itself a space, not filled by the block, capable of use as The claim departs from the specification in the an oil receptacle. further particular that it does not require the block to be so placed as to present the end of the grain to the wheel to be supported. It is, therefore, not an essential feature of the claim that the oil shall be carried to the surface of the block by force of capillary attraction. But with that feature eliminated, there remains no reasonable pretense of patentability. It is conceded that the O'Connor patent shows bearing blocks used for the same purpose as those of the Perkins machine, but without stating of what substance they should be made. The use of wood for that purpose was certainly free to all, and it required no invention to provide a metal receptacle, socket, or trough, in which the block of wood should be placed and held in position, and, when in place, to oil it; and if by accident or design there was room in the receptacle for the accumulation of oil and an accumulation happened and capillary attraction was brought into effective play, it could hardly be said to have been invention, because, the operation of capillary attraction being well known, the result, to the extent possible in the particular kind of wood used, was just what was to have been and by a man of ordinary understanding would have been ex-We are of opinion that none of the claims here pected to happen. brought into question contain patentable novelty. The decree below is, therefore, reversed.

## CLARK et al. v. DEERE & MANSUR CO.

## (Circuit Court of Appeals, Seventh Circuit. May 3, 1897.)

## No. 351.

The Clark patent, No. 369,163, for an improvement in disk harrows, must be limited, by its own terms as well as by force of the prior art, to the particular construction described.

8. APPEAL-ASSIGNMENTS OF ERROR.

Upon an appeal from a decree which simply dismissed a bill for infringement of a patent, the assignment of error read that the court erred "in holding that respondents had not infringed upon the patent in suit, and it erred in declining to grant a provisional injunction, with reference for accounting in damages and profits." *Held*, that the assignment was contrary to rule 11 of the circuit court of appeals (21 C. C. A. cxii., 78 Fed. cxii.), in that it embraced two distinct propositions; and that it was also improper and unavailing, in that it was predicated, not upon the ruling of the court, but upon the reason given for the decision.

<sup>1.</sup> PATENTS-LIMITATION OF CLAIMS-DISK HARROWS.

Appeal from the Circuit Court of the United States for the Northern Division of the Northern District of Illinois.

This was a suit in equity by Clemontine I. Clark and the Cutaway Harrow Company against the Deere & Mansur Company for alleged infringement of a patent. In the circuit court a decree was entered dismissing the bill on the merits, and the plaintiffs appealed.

This appeal seeks to bring under review a final decree, the entry of which reads as follows: "On this 20th day of March, 1896, this cause having been heard at final hearing upon the pleadings and proofs, \* \* it is ordered, adjudged, and decreed that the bill of complaint herein be, and the same is hereby, dismissed at the complainants' cost, to be taxed in favor of the defendant and for the amount of which the defendant shall have judgment and execution; the ground of dismissal being that defendant's harrow does not infringe the claims of letters patent of the United States No. 369,163, granted to George M. Clark, August 30, 1887, the court, however, not expressing any opinion upon the validity of the claims of the said letters patent."

The patent in controversy is for improvements in disk harrows. The specification, after recognizing the existence and pointing out the defects of prior revolving disk harrows and revolving toothed harrows, says: "Among the many prior harrows heretofore patented are some which embody what may be termed 'revolving bladed disks,' because of their general disk-like form and the presence of a series of blades which have not only a cutting capacity, but also the function of harrow teeth; and there are other forms of harrows embodying disks which have corrugated edges, and still others which have teeth which are not cutting blades. As compared with any prior harrow known to me, a harrow embodying my invention has soil-working devices, each of which in its best form possesses all of the following characteristics, viz.: First, a central circular earth-working face, which may be flat, but which in its best form is concave; second, cutting blades which have their forward edges sharpened, and also their outer ends, and said outer ends occupy a circular line concentric to the axis of the disk; third, said forward edges are substan-tially tangential to said central circular working face, and in its best form each blade as a whole is substantially tangential to the axis of the disk; fourth, at the junction of the edges of any two adjacent blades their lines are merged, so that no wedging crevice is afforded into which a root or stalk can be forced and retained therein; fifth, when employed in gangs angular to each other and retained therein; nith, when employed in gangs angular to each other and to the line of draft, my bladed disks of one gang must be 'rights,' and those of the other 'lefts,' as distinguished from any prior harrow known to me, whether it had either toothed or bladed devices, with the single exception of a certain special type of prior harrow embodying an angular frame, and having at each side thereof individual earth-working wheels provided with spade-like blades, which were twisted substantially parallel with the axis, and then at their outer ends bent or curved in the line of the periphery of the wheel and hence and blades were specially hent in each wheel for corrige at wheel, and hence said blades were specially bent in each wheel for service at one particular side of said frame. \* \* \* Although for obtaining the best results the bladed disks should be formed and arranged substantially as shown. it is to be understood that it will be within certain portions of my invention if the disks be flat, instead of concavo-convex, provided they be otherwise constructed as shown and described."

The claims in issue read as follows: "(1) In a harrow the combination of angularly arranged gangs of bladed disks, each disk having a circular central earth-working face, and also cutting blades, each having a forward or front cutting edge tangential to said central working face, and a cutting edge at its outer end in a line concentric to the axis of the disk, substantially as described. (2) A harrow disk having a central circular earth-working face, and blades having front cutting edges which are tangential to said central face, substantially as described. (3) A harrow disk having a central circular concave earth-working face, blades having front cutting edges which are tangential to said face, and cutting edges at their outer ends which occupy a line concentric with the axis of the disk, substantially as described."