

case, and that the conclusion reached by the court is abundantly justified by the evidence in the case. A decree may therefore be prepared, dismissing the bill, as before stated.

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OHIO RAKE CO. v. DAYTON FARM IMPLEMENT CO.

(Circuit Court, S. D. Ohio, W. D. July 22, 1895.)

No. 4,587.

1. PATENTS—NOVELTY AND UTILITY—DISK HARROWS.

An arrangement of the two gangs of disks in a disk harrow, having outwardly curved disks, whereby one gang is placed in advance of the other, and the innermost disk of the rear gang travels between the tracks of the two inside disks of the other gang, so as to leave no ridge between the gangs, and cultivate the ground evenly, which result had never before been attained, *held* a novel and useful invention.

2. SAME—INFRINGEMENT.

A claim for a disk harrow, having the ends of the two gangs of disks overlapping, with the innermost disk of one gang "working between the innermost two of the other, substantially as herein described," is not restricted so as to require that such disk should revolve bodily between the other two, but is infringed by a harrow in which the innermost disk of the rear gang follows between the tracks of the inner two disks of the other, though not so near as to have any part of it between them.

3. SAME—HARROWS.

The Dorsey patent, No. 344,950, for an improvement in disk seeders and cultivators, *held* not anticipated, valid, and infringed.

4. SAME.

The Little patent, No. 418,199, for an improvement in disk harrows, and relating especially to the construction of a hinge for coupling the gangs of disks to the main frame, is void, as involving merely mechanical skill.

This was a bill by the Ohio Rake Company against the Dayton Farm Implement Company for alleged infringement of two patents relating to disk harrows.

Joseph G. Parkinson, for complainant.

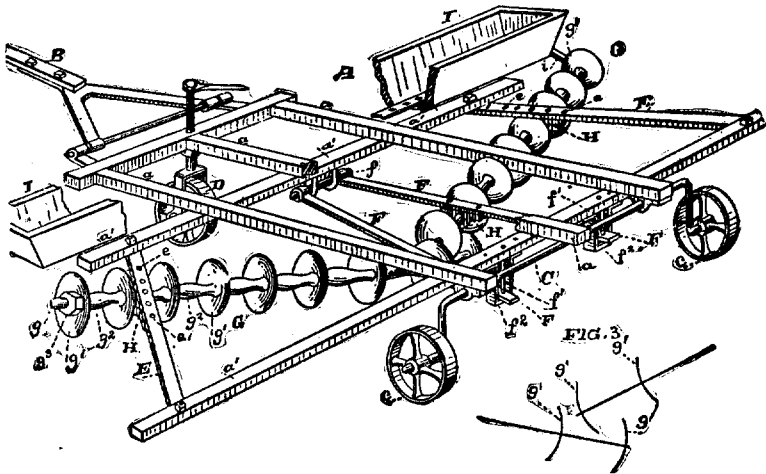
Stem & Allen, for defendant.

SAGE, District Judge. This is a suit on two patents, owned by complainant,—No. 344,950, issued July 6, 1886, to Basil C. Dorsey, for an improvement in disk seeders and cultivators; and No. 418,199, issued December 31, 1889, to P. E. Little, for an improvement in harrows. The Dorsey patent relates to a construction of disk harrows wherein two gangs of disks are pivoted to the main beam, one in advance of the other, and one gang arranged to overlap the other. The Little patent relates to a particular construction of hinge for coupling the gangs of disks to the main frame of the harrow. The only claim alleged to be infringed in the Dorsey patent is the first, which reads as follows:

"The disk gangs, G, the disks or cutters of which are cupped or concaved outwardly to throw the dirt from the center, said gangs having their inner or adjacent ends overlapping, with the innermost cutter or disk of one working between the innermost two of the other, substantially as herein described."

The defenses are (1) noninfringement; (2) lack of novelty, if the claim is to be broadly construed. Counsel for defendant call attention to diagram in Fig. 3 of the letters patent, to which the patentee in his specification refers as "a diagram showing the overlapping feature of the disk gangs," and contends that the two gangs of disks, as shown in the diagram, in addition to merely overlapping, bear a peculiar relation to each other, in that the innermost cutter of one gang is located bodily between the innermost two cutters of the other gang. He also calls attention to his claim that the construction of the harrow shown is such that no change of angle of the gangs to the line of draft can alter this peculiar relation of the innermost disks, which determines the place of the one actually and bodily between the other two.

FIG. 1.



The Dorsey patent is for an improvement in "disk seeders and cultivators." The invention consists of a frame upon the under side of which are adjustably secured at an angle to each other two shafts carrying disks. These disks are concaved or cupped outwardly, and held in position by intervening spool-like castings surrounding the shaft, the whole construction being called a "disk gang." These gangs are so placed that they overlap at their inner ends, the innermost disk of one gang tracking between the innermost two of the other. In operation, as the machine is drawn across a field, the disks enter the soil, and, partly sliding therein, turn it over, and thoroughly pulverize it, their convex faces, inclined to the path of travel, tending to raise and throw from them in a shower the earth they encounter. This is claimed to be a great improvement—First, over the old method of cultivating by first plowing and then harrowing the soil; second, over all previous methods of using rolling disks to cut and pulverize it. Many devices have been invented and patented for accomplishing this result by the use of rolling disks. Among the first was to use disks dished or saucer-shaped. The

next step was to provide two shafts and sets of wheels or gangs, placed at an angle to each other, the tendency of one gang to make the machine go in one direction being counteracted by the tendency of the other in the opposite direction, so that the machine could be drawn straight across the field. Sometimes one gang was set in front of the other, but generally they were placed abreast, and so connected with the frame as to yield to the inequalities in the surface of the ground. But then, if the disks were cupped outwardly, there would be a strip of untilled land between the two gangs, and, if they were cupped inwardly, a ridge would be thrown up between them, which could not be leveled by the next passage of the machine without lapping more than half its width, and doing more than one-half its work the second time. The next improvement was to make the frames carrying the disk-gangs overlap a little, but this did not remove the difficulty. It only resulted in making the ridge narrower. Then—and this was as early as 1876—it was attempted to remedy this defect by abandoning the end to end arrangement of the gangs, and placing them tandem instead of abreast. The result was to reduce by one-half the width of the strip harrowed, without reducing appreciably the draft of the machine; so that arrangement was abandoned, and the gangs continued to be constructed abreast, with their disks cupped towards the center, which involved the objectionable ridge in the middle.

It is claimed that no remedy that was not fatal to the practical success of the machine was provided by any of the numerous inventors working in the art until Dorsey, by his patented machine, presented a simple and effective one. He, it is claimed, discovered that by placing the gangs at proper counterbalancing angles and approximately abreast, so as to work over an area as wide as their aggregate space, but with one gang slightly ahead of the other, and the ends overlapping just enough to enable the innermost disk of one gang to do its work between the innermost two disks of the other, the ground would be equally and evenly tilled, without leaving any ridge or uncultivated strip. The invention is described in the specification as follows:

"The disks are concave or cupped outwardly, so that they throw the dirt from the center. The inner or adjacent ends of the disk gangs, it will be specially observed, overlap; the end disk of one gang operating between the end two of the other gang. This is an important feature of my invention, as it effects a result which, so far as I am aware, has never been done by a disk cultivator. Generally, the disk gangs abut as near as possible. If the disks are cupped outwardly, the innermost of each gang, throwing from the center, leaves a strip of uncultivated ground, while, if they are cupped inwardly, they throw up a ridge in the center, by reason of not being adapted, on account of their shape, to be brought close together; but by overlapping them, as I have shown, and cupping them outwardly, neither of these results follows, but the center is cultivated equally with the sides."

The court is of opinion that upon the record the complainant's device is novel and useful, and that it is patentable. That it is patentable seems to be conceded on behalf of the defense, which rests upon the proposition that the claim is not to be broadly construed, and is good only for the particular construction described and claimed; that is to say, to cover only a harrow showing two gangs of disks, not merely overlapping, but so adjusted that the innermost

cutter of one gang is located bodily between the innermost two cutters of the other gang. It is claimed for the defendant that the alleged infringing harrow is not of this particular construction; that, while the disk gangs overlap, so that in operation the cut or track of the innermost disk of one gang is between the cuts and tracks of the innermost two disks of the other gang, the innermost disk of one gang is not located between the innermost two disks of the other gang.

The defendant's machine is provided with two diagonally arranged disk gangs, the disks being cupped or concaved outwardly to throw the dirt from center. The inner ends of the gangs overlap. The innermost disks of the rear gang work between the innermost two of the other gang. As it is expressed in the brief for defendant: "In operation, the cut or track of the innermost disk of one gang is between the cuts or tracks of the innermost two disks of the other gang, but the innermost disk of one gang is not located between the innermost two disks of the other gang." Now, say counsel, if the words, "the innermost cutter or disk of one working between the innermost two of the other," are merely words of description of the operation of the harrow, if they are merely for further explanation, as contended for complainant, and the claim is to read as if these words were omitted, then defendant's harrow infringes; but if these words are words of limitation, and are intended to limit the structure to the peculiar one shown in the drawings, in which the innermost cutter of one gang is bodily located between the innermost two disks of the other gang, then defendant's machine does not infringe; and this entirely irrespective of the question whether Dorsey was the first to invent, and therefore entitled to a patent for, an overlapping disk harrow, broadly considered.

The defendant's contention is that the limit of Dorsey's patent is to a disk harrow in which the innermost cutter of one gang is located bodily between the innermost two disks of the other gang. Counsel call attention to the fact that the application as originally filed contained three claims intended to cover the overlapping features of Dorsey's harrow, as follows:

- (1) "The disk gangs, G, overlapping at their inner or adjacent ends substantially as herein described."
- (2) "The disk gangs, G, the disks or cutters of which are cupped or concaved outwardly, to throw the dirt from the center; said gangs having their inner and adjacent ends overlapping, substantially as herein described."
- (3) "The disk gangs G, the disks or cutters of which are cupped or concaved outwardly, to throw the dirt from the center; said gangs having their inner or adjacent ends overlapping, with the innermost cutter or disk of one working between the innermost two of the other, substantially as herein described."

These claims were objected to in view of patent to Nishwitz, December 7, 1869, for revolving harrows. Claims 1 and 2 were then erased by Dorsey, but he insisted that, as to the third claim, it was not met by Nishwitz's patent, because that patent "does not describe or show the gangs so arranged that the innermost cutter or disk of one gang works between the innermost two of the other gang. This claim, which specifies the location of the parts so clearly, should receive favorable action." Thereupon the patent was al-

lowed with original claim 3, which became claim 1. I do not think that the complainant's patent is subject to the limitation sought to be placed upon it. The language relating to the operation of the disk gangs is, "With the innermost cutter or disk of one working between the innermost two of the other, substantially as herein described." That refers, in its true construction, to the placing of the first disk mentioned so that it works between the paths in which the other two work. It is a perversion to construe it as referring to the transverse distance between the axes of the disks, or the distance which one will travel in advance of the other. The defendant's machine is practically a copy of the patented machine in respect to the subject-matter of this claim, and, if the claim is valid, is an infringement.

Various patents are introduced in anticipation of the patent sued upon. The first to which defendant's expert refers is the Nishwitz patent of 1869. That has nothing in common with the patent in suit, except the concaved disks, and they are concaved outwardly, instead of inwardly. The gang frames overlap, but the innermost disk of one does not work or track between the innermost disks of the other, and the object of the Dorsey invention is in no respect attained.

In the patent to J. F. Pond of May 9, 1871, two series of cutters focus to each other, but do not overlap. Neither is set in advance of the other, and therefore they cannot overlap. The cutters are plain, flat disks, not cupped, having no capacity to throw the dirt in any way except by the mere angle of their planes to the line of travel. There is no anticipation in this device.

In the patent to F. Bramer, June 24, 1873, there are two disk gangs, but the disks are cupped outwardly and the gangs do not overlap each other, although the beams do overlap. The same may be said of the patent to S. G. Randall, March 18, 1873. Bramer's patent (185,209) of December 12, 1876, shows two gangs arranged one in front of the other, to give a double harrowing over one path of the machine, the inventor's invention being that one gang operating on the soil should move the dirt in one direction and the following gang should move it in the reversed direction. The Bramer patent of July 2, 1878, is not an anticipation. It has a double gang disk harrow in which the gangs do not overlap, and in which the disks are cupped outwardly.

In the Naramore patent of April 19, 1881, there are no disks at all, but mere quadrants, which are really cutting teeth, strung on shafts. There is nothing here in anticipation of the complainant's patent; nor is there in the patent issued to Wilson on the 30th of December, 1884, for revolving harrow, which shows two gangs, separated from each other endwise, and having disks cupped inwardly. The two gangs converge to a focus, rendering overlapping impossible. My conclusion is that the complainant's patent is valid, and that the defendant infringes.

The Little patent relates to hinges for gang frames of disk harrows, and, as stated by the patentee in his specification, "it consists in a peculiar construction of the hinge which connects the gang beam to the frame bar, whereby the united pivot serves both as the

pivot for the vertical play of the gang beam and for its angular adjustment." The hinge is a combination of the following elements: A plate having upturned ears, and rigidly secured to the gang beam; two angle brackets secured to the frame bar, from which depend two flanges, which lie by the side of the upturned ears, one of the flanges having an eye through it and the other a horizontal slot, and a movable bolt which passes through the slot, the two ears, and the eye, and is held there by a split cotter passing through its end or otherwise. The two angle brackets may be made in one, thus making a channel bracket; or in their place may be substituted simply a flat plate having the two depending flanges. The object of this hinge is to allow the gang beam to swing horizontally for the variation of its inclination to the line of draft, and also to swing or tilt vertically so as to follow the undulations of the ground.

The claims alleged to be infringed are:

"(1) The combination, substantially as hereinbefore set forth, with the double-jointed hinge, one member of which has an eye at one side and guide slot at the other, and the other member of which carries ears, of the removable pin or bolt passing through said guide slot, ears, and eyes to unite the members together and serve as a pivot pin.

"(2) The combination, substantially as hereinbefore set forth, of the plate, F, having ears, the lug, h, provided with an eye, the flange, l, provided with a horizontal guide slot, ears, and eye."

Except as to its alleged novelty with respect to the eye and slot, there is nothing new about the Little hinge. It was common to use substantially this kind of joint, even in disk harrows, prior to the date of the Little invention, and for the same purposes; but usually the horizontal swing of the disk beam and the gang was accomplished by providing one pair of ears with a vertical shank, which could operate in one or the other of the beams.

Patent No. 138,301, issued April 29, 1873, to Augustus C. Tower, for improvements in machines for pulverizing soil; patent No. 146,224, to Edwin Bayliss, January 6, 1874, for improvement in wheel harrows; patent No. 413,539, issued October 22, 1889, to William H. Nauman, for disk harrow; and patent No. 312,722, issued February 24, 1885, to E. Fowler Stoddard, for wheel harrow,—are relied upon as anticipations of the Little invention. It is only necessary to refer to the feature of the Stoddard patent, which relates to a hinge joint for the purpose sought to be attained by the Little joint. The construction of the joint of the Stoddard patent is as follows:

"To the under side of the main beam, at each end, where the joint is to be, a plate is bolted, having at its front and rear a pendent ear. One of the ears is narrow, and the other is wide, and represents a segment of a circle of which the short ear is the center. A spindle engages these two ears. The end which engages the segmental ears is at liberty to move horizontally through the spindle as a center of the sweeping motion. To the top of each beam which carries disks a plate is bolted at an intermediate point in the length of the beam. This plate is united to the spindle, and is incapable of any motion with reference to the spindle except the pivotal motion on a horizontal axis. The two plates are therefore articulated to each other by means of the spindle, and a universal hinge joint is formed. The spindle, as a spindle, forms the axis on which the tipping motion takes place, and the sweep of the spindle in the segment of the upper plate provides the vertical axis on which the adjustment for obliquity takes place."

Fig. 2.

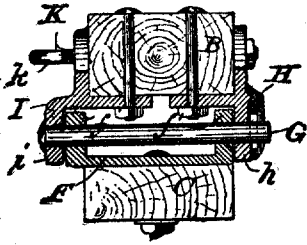


Fig. 3.

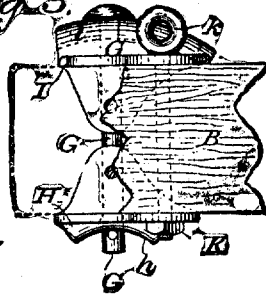


Fig. 1.

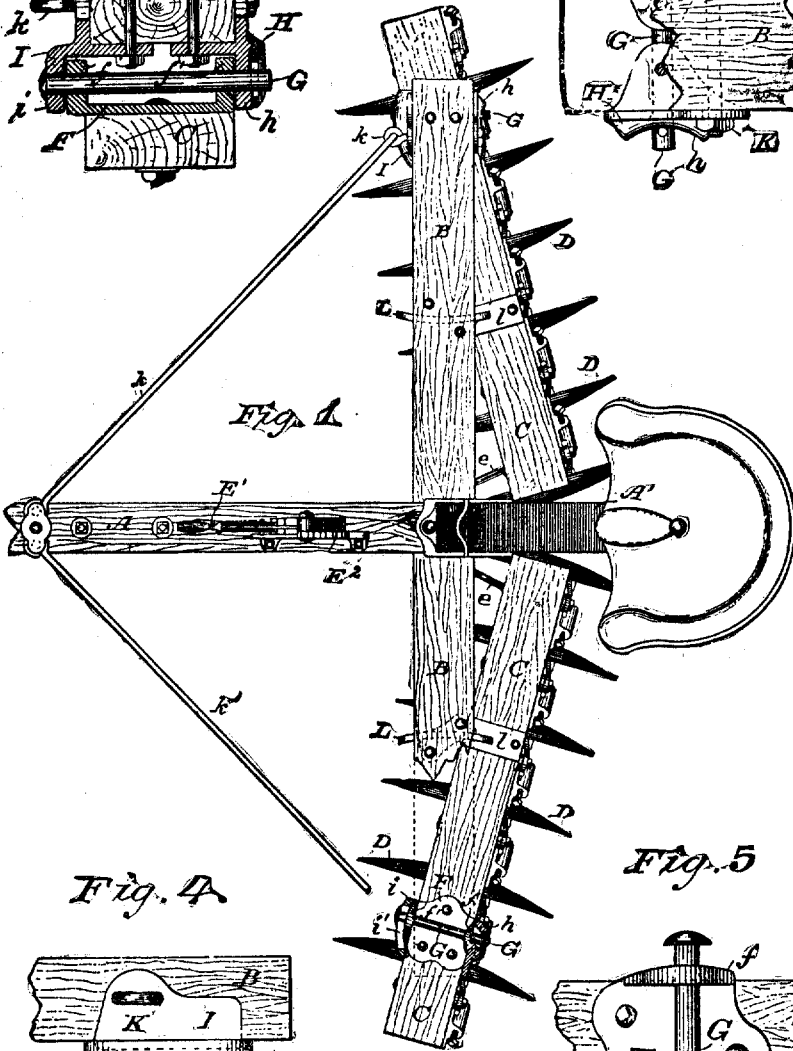


Fig. 4.

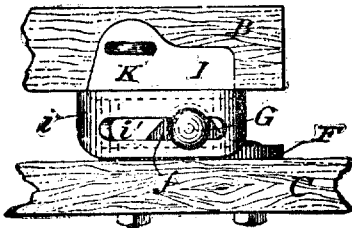
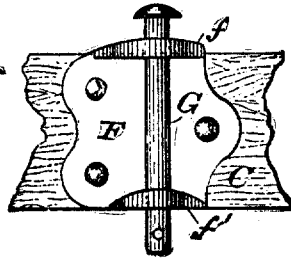


Fig. 5.



This description, which is taken from the testimony of the defendant's expert in a former case, described the Little hinge, with only the difference that in the Little hinge the spindle is not united to the plate which is bolted to the gang beam, although the plate is so connected to the spindle that it "is incapable of any motion with reference to the spindle except the pivotal motion on a horizontal axis."

In the hinge joint of the Little patented device, the lower plate carries the spindle as in the Stoddard patent, except that in the patent the spindle is formed integrally with the spindle plate, while in the Little patent the spindle plate has a hole to receive the spindle. In the Little patent the upper plate has a narrow ear for one end of the spindle, and the segmentally recessed wide ear for the other end of the spindle. The performance of the parts in furnishing a universal hinge joint is the same in the two devices. In the Little device the segment-carrying plate—that is, the upper plate—is formed in two pieces. In the Stoddard patent it is formed in one, which the expert for the defendant, from whose testimony in the former case the above statement is taken, justly characterizes as "a mere formal expedient to avoid the necessity for cores in forming the casting."

The expert seeks in this case to break the force of this view of the two patents by claiming that, while the Little hinge infringes the Stoddard patent, it is yet a patentable improvement over Stoddard. As he expresses it: "It was a case of Little's saddle on Stoddard's horse, the ownership of the saddle conferring no special rights to ride the horse." The answer to this is that the change made by Little from the spindle fixed on the lower plate to the loose pivot pin, and from the section plate to the slotted plate, involved only mechanical skill, and not invention. The court therefore holds the Little patent invalid.

Let the decree be prepared, in accordance with this opinion, against the defendant for the infringement of the Dorsey patent, and for an injunction and account, and dismissing the bill as to the Little patent.

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MULLER v. LODGE & DAVIS MACHINE TOOL CO.

(Circuit Court, S. D. Ohio, W. D. July 22, 1895.)

No. 4,633.

PATENTS—LIMITATION OF CLAIM—INFRINGEMENT OF COMBINATION—TOOL HOLDERS FOR LATHES.

The patent No. 272,304, for a tool holder for lathes, is limited as to claims 2 and 4 by the language thereof, and especially, by the use of reference letters, to the particular devices described; and the combination is not infringed by a device which is without some of the parts named, or any equivalent thereof.

This was a suit by Conrad Muller against the Lodge & Davis Machine Tool Company for infringement of a patent for a tool holder for lathes.

George M. Finckel, for complainant.

George J. Murray and Wright & Wright, for defendant.